M.A. Semester –I[st]
ECONOMICS

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INTERNATIONAL ECONOMICS

Units 1 to 23

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Block-I

Need for a separate theory of international trade, Theories of international trade: classical, neo-classical, Heckscher-Ohlin, and factor price equalization theories. Empirical verification of classical and Heckscher-Ohlin theories. Factor reversal and Leontief paradox Emmanuel's theory of unequal exchange.

Block-II

Impact of dynamic factors on international trade: change in tastes, technology, factor endowments Rybeznski theorem and transportation, costs. Derivation of offer curves: Marshall-Edgeworlh, Mill and Meade, Terms of trade and measurement of gains from trade: Secular deterioration in terms of trade of less developed countries. Aid versus trade controversy between the developed and less developed countries..

Block-III

Commercial Policy; Free trade versus protection; theory and effects of tariff's; partial effects and effects on income distribution; Stolper- Samuelson theorem; optimum tariff, nominal and effective tariffs; infant industry tariff Quotas and other quantitative restrictions; state trading; multiple exchange rates; Trade policies of less developed countries. Theory of customs union: trade creation and trade diversion; regional economic groups: the SAARC and WTO framework. WTO and developing countries.

Block-IV

International Monetary Theory: balance of payments and its adjustment, maintenance of internal balance: Elasticities and absorption approaches: Exchange rate determination and adjustments; foreign trade multiplier; foreign repercussions and stability problem; Flexible versus fixed exchange rates system.

Block-V

Foreign capital requirements of LDCs; Development of international monetary system since the 1970s and its reform; International reserves and the problems of liquidity; IMF and the SDRs. Short term international finance its nature, magnitude, merits and demerits for developing countries.

CONTENTS

Unit-01

INTERNATIONAL ECONOMICS: AN INTRODUCTION

STRUCTURE

1.1 INTRODUCTION

Dear Students,

International Economics is a field of study that examines the economic interactions between countries. It encompasses the analysis of international trade, international finance, the effects of international policies, and the role of international organizations. The complexity and interdependence of global economies have made the study of International Economics increasingly vital in understanding how nations can cooperate and compete in the global market. This unit aims to provide a comprehensive introduction to International Economics, its significance and a need for separate study of international trade

1.2 LEARNING OBJECTIVES

After completing this unit, you will be able to:

- Define International Economics and understand its scope.
- Recognize the features and importance of international trade.
- Explain the necessity for a separate theory of international trade.

- Appreciate the role of international trade in the global economy.

1.3 MEANING OF INTERNATIONAL ECONOMICS

International economics is a branch of economic science that deals with how countries interact through trade, finance, and policy. It encompasses the study of the economic interdependencies between nations, analyzing how the global economy operates, and how countries and regions are interconnected. The primary focus is on understanding the flow of goods, services, capital, and labour across borders, and the policies that influence these movements. At its core, international economics seeks to explain the patterns and consequences of transactions and interactions between the residents of different countries. It delves into the reasons behind why trade occurs, the benefits and costs associated with trade, and how trade policies can affect economic outcomes.

International Economics is, therefore, a study of the economic relationships among nations of the world and the problems that arise there from. Trade among nations is an example, par excellence of such relationships. Besides, economic aid, international financial transactions, capital movements, transfer of technology and the brain are some other examples of economic relationships among nations and major regions of the world. International economics deals with the economic activities of various countries and their consequences. In other words, international economics is a field concerned with economic interactions of countries and effect of international issues on the world economic activity. It studies economic and political issues related to international trade and finance.

1.3.1 Definitions

Several economists have defined International Economics, each emphasizing different aspects of the discipline:

- **Jacob Viner**: "International Economics deals with the economic interdependence between countries and the effects of economic policies on this interdependence."
- **Paul R. Krugman**: "International Economics is the study of the causes and consequences of trade and financial flows across international boundaries."
- **Charles P. Kindleberger**: "International Economics encompasses the theories and policies that explain and influence the economic transactions between nations."

These definitions highlight the nature of International Economics, which includes trade theory, policy analysis, and the study of international finance.

Self-Check Exercise 1.1

Q1. What is meant by International Economics?

Q2. Define international Economics.

1.4 SUBJECT MATTER OF INTERNATIONAL ECONOMICS

International economics can be broadly categorized into two main areas: theoretical and descriptive. These aspects are explained below:

(a) Theoretical International Economics

This branch focuses on analyzing international economic transactions within the framework of institutional settings. It is further divided into two key areas:

(i) **Pure Theory of International Economics:** This aspect primarily deals with the microeconomic dimensions of international trade. It examines trade patterns, the influence of trade on production, consumption, and income distribution, as well as its impact on the pricing of goods and services. Additionally, it studies the role of trade in economic growth.

(ii) **Monetary Theory of International Economics:** This macroeconomic segment focuses on monetary aspects of international economics, including balance of payments and the global monetary system. It explores factors causing imbalances in international payments, the mechanisms of international liquidity, and strategies to address payment disequilibrium.

(b) Descriptive International Economics

This area studies the institutional framework within which international transactions occur. It examines the movement of goods, services, financial assets, and other resources across borders. Additionally, it covers the role and functioning of major international economic organizations such as the International Monetary Fund (IMF), the World Trade Organization (WTO), the World Bank, and the United Nations Conference on Trade and Development (UNCTAD).

Core Areas of International Economics

The subject matter of international economics is categorized into five major areas:

(i) **International Trade Theory:** This field examines the fundamental reasons behind trade between nations, the benefits derived from trade, and different theoretical perspectives on trade patterns.

(ii) **International Trade Policy:** This domain focuses on international regulations governing economic transactions. It includes trade restrictions such as tariffs, quotas, and exchange rate policies. It also analyzes the role of regulatory bodies and global trade institutions in monitoring and managing these trade policies.

(iii) **Balance of Payments (BOP):** As nations engage in trade, they must make and receive payments for goods and services. The balance of payments systematically records these transactions between a country and the rest of the world. This area also studies fluctuations in BOP and related policy interventions.

(iv) **Balance of Payments Adjustments in an Open Economy:** Trade imbalances can lead to BOP disequilibrium, where either credits or debits surpass the other. This imbalance requires corrective measures, either through automatic market

mechanisms or government-imposed policies. International economics also examines the external impacts of these adjustments.

(v) International Economic Organizations: Since international trade involves multiple countries and currencies, specific rules and regulations are necessary to govern these transactions. International institutions play a crucial role in monitoring and regulating trade, capital flows, and economic cooperation at a global level.

Among the key concepts in international economics, globalization is particularly significant, along with other essential aspects such as trade benefits, trade patterns, balance of payments, and foreign direct investment (FDI). These elements provide a comprehensive understanding of international economic dynamics.

Check Exercise 1.2

Q1. Explain the subject matter of International Economics.

1.5 MEANING AND CLASSIFICATION OF INTERNATIONAL TRADE

International trade refers to the exchange of goods and services between different countries, playing a crucial role in the global economy. Commonly traded commodities include electronic devices, clothing, machinery, capital goods, food products, and raw materials.

- According to Wasserman and Haltman, “International trade consists of transaction between residents of different countries”.
- In the words of Anatol Marad, “International trade is a trade between nations”.
- Eugeworth defines, “International trade as trade between nations”.

Classification of International Trade

a) **Import Trade:** This involves purchasing goods from a foreign country. Nations import goods that they either cannot produce due to cost constraints, physical limitations, or insufficient production to meet domestic demand.

b) **Export Trade:** This refers to selling goods to a foreign country, where products are shipped out of the domestic market for international consumers.

c) **Entrepot Trade:** This occurs when goods are imported from one country and re-exported to another without being consumed or sold domestically. It involves bringing in foreign goods specifically for re-export purposes.

This system of trade facilitates economic growth, fosters international relationships, and enhances global resource distribution.

1.5.1 Need a Separate Theory of International Trade

In economics we are fundamentally concerned with the question of resource allocation and utilization. Within the boundaries of a country, factors of production, sector of the economy and regions tend to specialize in productive activities in such a way that, ideally speaking, optimum resource allocation is secured, in the international context, different countries try to specialize in the production Of different goods, to

produce which their respective resources and technologies are most suited. These goods are then exchanged between countries so as to ensure an optimum allocation of the world resources. Thus, international trade does not differ from internal trade in any fundamental sense. Both are different forms of the process of optimum resource allocation. Within a country, different regions specialize in the production of different goods (e.g.) Ludhiana in the production of hosiery and Ahmadabad in cotton textiles and Meerut in scissors, and sports goods. At the International level, different countries specialize in the production of different commodities (e.g. India in tea and the U.S.A in machinery). In the former case, goods produced in one region are exchange for good produced in the other regions, while in the latter case, they are exchanged between countries. The former goes by the name of internal trade while the latter by international trade. The difference between the two is then only of degree and not of kind Why then the need for a separate theory of international trade?

Bert Ohlin, in fact, did maintain that, "international trade is but a special case of inter-local or regional trade. He argued that the microeconomic theory of value could be extended to the phenomenon of international trade by developing the dimension in price theory. This, thesis can be built in the theory of pricing by extending it from one' market to a number of closely related markets. The classical economists had earlier held the opposite view. They considered the difference between international and internal trade to be of a fundamental nature, they assumed, labour and capital 'to-be highly immobile between countries but perfectly mobile within a country. This, according to them, provided the basic justification for a separate theory of international trade.

However, neither of the above two positions is perfectly valid International trade, is neither a mere extension of internal trade, without any peculiar problems of its own, nor fundamentally different from the latter. The need for a separate theory of international trade arises on account of two reasons.

In the first place, international trade is a specialized branch of study, just as we have microeconomics and macroeconomics, monetary theory, labour economics and so on. All these are branches of the same discipline yet each of them has a different analytical superstructure from the other.

Secondly, international trade gives rise to some peculiar problems or is carried on under circumstances different from those of internal trade, thus justifying the need for a separate theory to deal with the former. Let us then pauses a little and try to take stock of these peculiarities of international trade. We may enlist the important features of international trade as:

1.5.2 Features of International Trade

(i) Factor Mobility: As noted above, the classical economists assumed that there is a perfect inter-regional mobility of productive factors, while internationally they are perfectly, immobile. It's obvious corollary was that factor prices tended to differ among countries, This classical assumption is at variance with the facts of real life. The truth of the matter is that factors of production are certainly mobile within a country than between countries. Thus there is a difference of degree between the two and the greater the difference in this respect the greater would also be the justification for a separate theory of foreign trade.

(ii) Different Currencies:- While domestic production and commercial transactions take place in terms of the same currency. International trade has to reckon with the difficulties created by the existence of different national currencies and the problems involved in the determination of their exchange rates. These rates also sometimes change in an unpredictable manner thus creating additional problems for buyers and sellers in the international market. The uncertainties created by sudden and unpredictable changes in the exchange rates and the difficulty or procuring foreign exchange are problems almost unknown in internal trade. These difficulties have increased after 1971 since when the major currencies have. been floating.

(iii) National Economic Policies:- In the matter of internal (or interregional) trade government policies normally do not favour one region at the cost of the other. However, in international trade, the trade policies in one country may be precisely aimed at safeguarding national interest at the cost of other countries. Tariff policies are a case in point. This also shows that international trade is carried on under circumstances different from those under which internal trade thrives.

(iv) Separate National Market:- A number of factors prevent international markets from emerging for various commodities. The very distance between countries is an obvious hindrance. Beside, separate national economic policies, legal provisions, customs, languages and lots of others factors may be responsible for trade remaining confined to national boundaries. In other words, there is a free flow of trade among different regions of a country than between countries.

(v) Existence of Separate Political Units:- A country is a single relatively homogeneous political unit with its citizens enjoying a sense of oneness; This partly accounts for the existence of separate national markets and economic policies, for people under a single political system find it easier and more natural to trade with each other than those with whom they do not enjoy a similar affinity, Excessive economic policies, for people under a single political system find it easier and more natural to trade with each other than those with whom they do not enjoy a similar affinity. Excessive economic nationalism and adoption of autarchy may be extreme consequences of the existence of separate political units. This highlights the fact that conflicts may often arise between them internal trade interests of a nation and its trade relations with other nations.

The above factors, therefore, point to the necessity of having a separate theory of international trade so that it could adequately deal with those peculiar problems which normally do not arise in internal trade. This is so despite there being no fundamental difference between the two types of trade. Once we-have established the need for a separate theory of international trade, we next take up the discussion of such a theory. The rest of this unit, we shall familiarize ourselves with the earliest development of this theory.

1.5.3 Advantages of International Trade

(i) Optimal use of natural resources: International trade helps each country to make optimum use of its natural resources. Each country can concentrate on production

of those goods for which its resources are best suited. Wastage of resources is avoided.

(ii) **Availability of all types of goods:** It enables a country to obtain goods which it cannot produce or which it is not producing due to higher costs, by importing from other countries at lower costs.

(iii) **Specialisation:** Foreign trade leads to specialisation and encourages production of different goods in different countries. Goods can be produced at a comparatively low cost due to advantages of division of labour.

(iv) **Advantages of large-scale production:** Due to international trade, goods are produced not only for home consumption but for export to other countries also. Nations of the world can dispose of goods which they have in surplus in the international markets. This leads to production at large scale and the advantages of large scale production can be obtained by all the countries of the world.

(v) **Stability in prices:** International trade irons out wild fluctuations in prices. It equalizes the prices of goods throughout the world (ignoring cost of transportation, etc.)

(vi) **Exchange of technical know-how and establishment of new industries:** Underdeveloped countries can establish and develop new industries with the machinery, equipment and technical know-how imported from developed countries. This helps in the development of these countries and the economy of the world at large.

(vii) **Increase in efficiency:** Due to international competition, the producers in a country attempt to produce better quality goods and at the minimum possible cost. This increases the efficiency and benefits to the consumers all over the world.

(viii) **Development of the means of transport and communication:** International trade requires the best means of transport and communication. For the advantages of international trade, development in the means of transport and communication is also made possible.

(ix) **International co-operation and understanding:** The people of different countries come in contact with each other. Commercial intercourse amongst nations of the world encourages exchange of ideas and culture. It creates co- operation, understanding, cordial relations amongst various nations.

(x) **Ability to face natural calamities:** Natural calamities such as drought, floods, famine, earthquake etc., affect the production of a country adversely. Deficiency in the supply of goods at the time of such natural calamities can be met by imports from other countries.

(xi) **Other advantages:** International trade helps in many other ways such as benefits to consumers, international peace and better standard of living.

1.5.4 Disadvantages of International Trade:

Though foreign trade has many advantages, its dangers or disadvantages should not be ignored.

(i) **Impediment in the Development of Home Industries:** International trade has an adverse effect on the development of home industries. It poses a threat to the survival of infant industries at home. Due to foreign competition and unrestricted imports, the upcoming industries in the country may collapse.

(ii) **Economic Dependence:** The underdeveloped countries have to depend upon the developed ones for their economic development. Such reliance often leads to economic exploitation. For instance, most of the underdeveloped countries in Africa and Asia have been exploited by European countries.

(iii) **Political Dependence:** International trade often encourages subjugation and slavery. It impairs economic independence which endangers political dependence. For example, the Britishers came to India as traders and ultimately ruled over India for a very long time.

(iv) **Misutilisation of Natural Resources:** Excessive exports may exhaust the natural resources of a country in a shorter span of time than it would have been otherwise. This will cause economic downfall of the country in the long run.

(v) **Import of Harmful Goods:** Import of spurious drugs, luxury articles, etc. adversely affects the economy and well-being of the people.

(vi) **Storage of Goods:** Sometimes the essential commodities required in a country and in short supply are also exported to earn foreign exchange. This results in shortage of these goods at home and causes inflation. For example, India has been exporting sugar to earn foreign trade exchange; hence the exalting prices of sugar in the country.

(vii) **Danger to International Peace:** International trade gives an opportunity to foreign agents to settle down in the country which ultimately endangers its internal peace.

(viii) **World Wars:** International trade breeds rivalries amongst nations due to competition in the foreign markets. This may eventually lead to wars and disturb world peace.

(ix) **Hardships in times of War:** International trade promotes lopsided development of a country as only those goods which have comparative cost advantage are produced in a country. During wars or when good relations do not prevail between nations, many hardships may follow.

Self-Check Exercise 1.3

Q1. Why is there a need for a separate theory of International Trade?

Q2. Explain the features of International Trade.

1.6 SUMMARY

International economics provides a framework for understanding the complex and dynamic economic relationships between countries. It combines elements of trade theory, international finance, and policy analysis to explain how nations interact economically. By studying these interactions, economists can develop insights into the benefits and challenges of global economic integration and help formulate policies that

promote sustainable and equitable economic growth. This unit has provided an overview of International Economics, including its meaning, scope, and importance. We explored various definitions, the core contents of the discipline, the unique features of international trade, the need for a separate theory, and the significance of international trade in the global economy.

1.7 GLOSSARY

- **International Economics**: deals with the economic interdependence between countries and the effects of economic policies on this interdependence.
- **International trade**: is referred to as the exchange or trade of goods and services between different nations
- **Entrepot Trade:** When goods are imported from one country and are exported to another country, it is called entrepot trade.
- **Factor mobility:** Factor mobility refers to the ability to move factors of production—labour, capital, or land—out of one production process into another.

1.8 ANSWERS TO SELF CHECK EXERCISES

Self-Check Exercise 1.1

Ans. Q1. Refer to Section 1.3

Ans. Q2. Refer to Section 1.3.1

Self-Check Exercise 1.2

Ans. Q1. Refer to Section 1.4

Self-Check Exercise 1.3

Ans. Q1. Refer to Section 1.5.1

Ans. Q2. Refer to Section 1.5.2

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1.10 TERMINAL QUESTIONS

Q1. Why is there a need for a separate theory of International Trade?

Q2. Explain the features of International Trade.

Q3. What are the advantages and disadvantages of international economics.

Unit-02

CLASSICAL THEORY OF COMPARATIVE COSTS

STRUCTURE

2.1 INTRODUCTION

Why do different countries trade with each other? As trade benefits them, they trade with each other. Why does gain from trade arise? The gain from trade arises because of specialization in production and division of labour. Individuals specialize, firms specialize in certain products. Same is true for the countries. That is why each country is interested in exchanging its own specialized products for non-specialized products. But which products should a country specialize in? Classical economists answered this question. According to classical writers, differences in cost form the basis of trade. Differences in cost may be two types:

(i) Absolute cost difference, and

(ii) Comparative cost difference.

In 1776, Adam Smith argued that the absolute cost difference or absolute advantage is the basis of trade. But another classical economist, David Ricardo, went a step forward in 1817 to search the basis of trade in terms of comparative cost difference or comparative advantage. These two theories will be discussed in this unit.

2.2 LEARNING OBJECTIVES

After reading this unit, you will be able to:

- Critically examine the theory of absolute and comparative advantages.
- Distinguish between the Adam Smith Theory and Ricardian theory of International Trade.

2.3 CLASSICAL THEORY OF INTERNATIONAL TRADE

Adam Smith and David Ricardo gave the classical theories of international trade. Adam Smith argued that a country will export that commodity in which it has an absolute advantage and import that commodity in which it has an absolute disadvantage. According to Ricardo, a country will produce and export that commodity in which it has a comparative advantage and will import that commodity in which it has a comparative disadvantage. According to the theories given by them, when a country enters in foreign trade, it benefits from specialization and efficient resource allocation. The foreign trade also helps in bringing new technologies and skills that lead to higher productivity.

2.3.1 Assumptions

In explaining their trade theory, classicists made the following assumptions:

i. There are two countries, two commodities and one factor; i.e., 2×2×1 model.

ii. Labour theory of value holds. Classicists argued that labour is the only productive input as far as the value of a commodity is concerned. Value of a commodity is determined by the amount of labour embodied in it. Thus, production cost is measured in terms of labour costs only.

iii. Production function obeys constant returns to scale. In other words, output per unit of labour is constant over all relevant ranges of the production function.

iv. Inputs, although mobile domestically, are completely immobile internationally.

v. Transport cost is zero.

vi. Free trade policy is pursued.

2.3.2 Theory of Absolute Advantage

According to Adam Smith, it is the difference in absolute production cost that causes the emergence of trade. A country has an absolute advantage over another country in the production of a good if it can produce it at a lower cost. It would, thus, be advantageous for the country if it specializes in the production of cheapest good. Smith argued that a country would produce and export that commodity in which it has an absolute advantage or lower cost and import that commodity in which it has an absolute disadvantage or higher cost.

Adam Smith wrote in his book ‘The Wealth of Nations’, ”If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which

we have some advantage". He stated that trade would be beneficial for both the countries if country A exports the goods, which it can produce with lower cost than country B and import the goods, which country B can produce with lower cost than it.

An example can be used to prove this theory. Suppose there are two countries A and B, which produce tea and coffee with equal amount of resources that is 200 labourers. Country A uses 10 labourers to produce 2.1 ton of tea and 20 labourers to produce 1 ton of coffee. Country B uses 25 units of labourers to produce 1 ton of tea and 5 units of labourers to produce 1 ton of coffee (Table 1):

Table 2.1: Resources used to produce a ton Tea and Coffee without Trading

	Country A	**Country B**
Tea	10 units of labourers	25 units of labourers
Coffee	20 units of labourers	5 units of labourers

It can be seen from Table that country A has absolute advantage in producing tea as it can produce 1 ton of tea by using less labourers as compared to country B. On the other hand, country B has absolute advantage in producing coffee as it can produce 1 ton of coffee by employing less labourers in comparison to country A.

Now, if there is no trade between these countries and resources (in this case there are total 200 labourers) are being used equally to produce tea and coffee, country A would produce 10 tons of tea and 5 tons of coffee and country B would produce 4 tons of tea and 20 tons of coffee. Thus, total production without trade is 39 tons (14 tons of tea and 25 tons of coffee). Table 2.2 shows the production without the trade between country A and country B.

Table 2.2: Production (in tons) without trade between country A and country

	Country A	**Country B**	**Total Production**
Tea	10 tons	4 tons	14 tons
Coffee	5 tons	20 tons	25 tons
Total			**39 tons**

If both the countries trade with each other and specialize in goods in which they have absolute advantage, the total production would be higher. Country A would produce 20 tons of tea with 200 units of labourers; whereas, country B would produce 40 tons of coffee with 200 units of labourers. Thus, total production would be 60 units (20 tons of tea and 40 tons of coffee). The production of tea and coffee after trade is shown in Table 2.3.

Table 2.3: Production (in tons) after trade between country A and country

	Country A	**Country B**	**Total Production**
Tea	20 tons	0 tons	20 tons
Coffee	0 tons	40 tons	40 tons
Total			**60 tons**

Without specialization, total production of countries was 39 tons, which becomes 60 tons after specialization. Therefore, the theory of absolute advantages shows that trade would be beneficial for both the countries.

2.3.3 Theory of Comparative Advantage

Many questions may come in mind after reading the absolute advantage theory that what would happen if a country has absolute advantage in all the products or no absolute advantage in any of the product. How such a country would benefit from trade? The answers of these questions was given by David Ricardo in his theory of comparative advantage, which states that trade can be beneficial for two countries if one country has absolute advantage in all the products and the other country has no absolute advantage in any of the products.

According to Ricardo, "…a nation, like a person, gains from the trade by exporting the goods or services in which it has its greatest comparative advantage in productivity and importing those in which it has the least comparative advantage."

Let us understand this theory with the help of an example. Suppose there are two countries A and B, producing two commodities wheat and cotton with labour as the only factor of production. Now assume that both the countries have 200 labourers and they use 100 labourers to produce wheat and 100 labourers to produce cotton. Table 2.4 shows the production of wheat and cotton in Country X and Country Y before trade.

Table 2.4: Production in Country X and Country Y before trade

	Country X	**Country Y**
Wheat	20	15
Cotton	40	10

Table 2.4 depicts that country X can produce 20 units; whereas, country Y can produce 15 units of wheat by using 100 labourers. In addition, country X can produce 40 units; whereas, country' Y can produce 10 units of cotton by employing 100 labourers. Thus, country X has absolute advantage in producing both the products. As already discussed, country X employs same number of labourers (100 labourers in production of each good) in producing both cotton and wheat; however, the production of cotton is more than the production of wheat.

It shows that country' X has comparative advantage in producing cotton. Similarly, country Y also employs same number of labourers (100 labourers in production of each good) in manufacturing wheat and cotton; however, its production of wheat is more than the cotton. It indicates that country Y has comparative advantage in manufacturing wheat.

For example, country X has decided to produce 60 units of cotton by employing 150 labourers. It uses 50 labourers to produce 10 units of wheat. On the other hand, country Y has decided to use all the 200 labourers to produce 30 units of wheat. It would not produce any unit of cotton. This data is represented in Table-2.5:

Table 2.5: Production in Country X and Country Y after specialisation

	Country X	Country Y
Wheat	10	30
Cotton	60	0

Now, if country X exchanges 14 units of cotton with 14 units of wheat produced by country Y, then this situation of both the countries after trade is shown in Table-2.6:

Table 2.6: Production in Country X and Country Y after trade

	Country X	Country Y
Wheat	24	16
Cotton	46	14

It can be observed from Table 6 that both the countries have gained from trade. Before trade, country X has 20 units of wheat and 40 units of cotton; however, after trade, country Y has 24 units of wheat and 46 units of cotton. On the other hand, country Y has 15 units of wheat and 10 units of cotton before trade; however, it has 16 units of wheat and 14 units of cotton after trade. Therefore, comparative advantage explains that trade can create benefit for both the countries even if one country has absolute advantage in the production of both the goods.

2.3.4 Limitations:

This theory has been criticized on many grounds. Important criticisms against this theory are:

i. **Unrealistic Assumption of Labour Theory of Value:** Firstly, one of the fundamental assumptions of the classical trade theory is the labour theory of value. This theory states that the relative costs of production are determined by the labour costs alone. The assumption of the labour theory of value seems to be unrealistic in explaining the cause of trade. Modern economists have discarded the labour theory of value and employed opportunity cost theory. Opportunity cost theory rescues Ricardo's doctrine without altering its basic conclusion.

ii. **Differences in Comparative Costs not Explained:** Secondly, Ricardo could not explain why do comparative costs differ between countries. Answer to this question was given by Eli F. Heckscher and B. Ohlin who suggested that differences in factor endowments and factor-intensity give rise to differences in comparative costs.

    Let us assume that the country A uses more capital in the production of a commodity than country B. If use of capital per unit of labour in country A is higher, then country A is a capital-abundant country. On the other hand, let us assume that the country B is a labour-rich country. In our example, we have seen that country A specializes in the production of Y as it has comparative advantage in Y-production. Since country A is a capital-intensive country, Y-

production here becomes more capital-intensive. Likewise, country B has the comparative advantage in the production of X. Being a labour-rich country, country B's production of X becomes more labour-intensive. Heckscher and Ohlin argue that a country will specialize in the production and export those goods whose production requires a relatively large amount of the factor in which the country is relatively well-endowed (i.e., the more abundant factor). As country A, in our case is a capital-rich country, it specializes in the production of Y (comparative costs of Y are cheaper). Since country B is a labour- abundant country, it comparative costs are lower in X-production and, hence, its exports the X for Y. Thus, differences in factor endowments and factor intensity explain the differences in comparative cost. Ricardo simply took for granted that labour cost ratios differ.

iii. **Exact terms of Trade Undetermined:** Thirdly, Ricardo could not determine the exact terms of trade or exchange rate at which trade takes place. Ricardo's terms of trade (TOT) would lie between the countries' pre-trade terms of trade; but the exact ratio was left undetermined. This gap was filled by the classical author J. S. Mill by introducing the concept of 'reciprocal demand' in trade theory. Ricardo's model concentrates on the supply (or cost) side and, hence, it neglects the demand side.

iv. **Zero Transport Cost is Inconceivable:** Fourthly, Ricardo neglects transport, cost just for simplicity. It is true that transport costs are important in determining the exchange rate. Supporters of Ricardo's doctrine have adequately demonstrated that transport costs do not affect comparative cost doctrine.

v. **Trade is Multi-Lateral and Multi- Good:** Fifthly, for simplicity's sake, Ricardo's model is the 2 x 2 x 1 model, But if we apply Ricardo's theory in case of more than two countries and more than two commodities, conclusions of the doctrine remain virtually unaltered.

In analysing his trade doctrine, Ricardo started with the unreal world. Some of the writers fit this theory in the real world without altering its fundamental conclusions. Some of his assumptions were questionable. Modern writers removed those assumptions and refined this doctrine. Only the gaps in the Ricardian model have been filled up by the modern writers. A doctrine propounded about 200 years ago is even now respected by all, possibly because of its originality.

Self-Check Exercise 2.1

Q1. Explain briefly the classical theory of International Trade

Q2. List the important assumptions of the classical theory of International trade?

2.4 SUMMARY

The classical theory has helped economists, the government, society, and industries comprehend international trade in a better way. According to classical theory, each nation must focus on the production of the goods that it manufactures the most. Adam Smith focused on the importance of free international trade to increase the

prosperity of nations. He also states that it is beneficial not only to nations but also to individuals. Even during the period of economic growth, international trade has hampered the domestic markets of various countries. The economists have provided a specific and systematic framework for the issues of international trade. They stated that international trade can be harmful to groups of domestic competitors. They failed to realise that a few trade policies can be for the benefit of the nation as a whole.

2.5 GLOSSARY

- **Comparative Cost Advantage:** The ability of a firm or individual to produce goods and/or services at a lower opportunity cost than other firms or individuals. A comparative advantage gives a company the ability to sell goods and services at a lower price than its competitors and realize stronger sales margins.
- **Absolute Cost Advantage:** An absolute advantage occurs when one person, company, or country is more efficient at producing the same good. or service than another company. If Mark can cut four lawns in an hour and Susan can cut five lawns in an hour, then Susan has an absolute advantage in lawn cutting.
- **Free Trade:** The unrestricted purchase and sale of goods and services between countries without the imposition of constraints such as tariffs, duties and quotas. Free trade is a win-win proposition because it enables nations to focus on their core competitive advantage(s), thereby maximizing economic output and fostering income growth for their citizens.
- **Division of Labour:** refers to the allocation of tasks to individuals or organisations according to the skills and/or equipment those people or organisations possess.
- **Factor mobility:** Factor mobility refers to the ability to move factors of production—labour, capital, or land—out of one production process into another.

2.6 ANSWERS TO SELF CHECK EXERCISES

Self-Check Exercise 2.1

Ans. Q1. Refer to Section 2.3

Ans. Q2. Refer to Section 2.3.1

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2.8 TERMINAL QUESTIONS

Q1. Critically examine the classical theory of international trade.

Q2. What is the difference between Comparative and Absolute Cost Advantage?

Unit-03

NEO CLASSICAL THEORY OF INTERNATIONAL TRADE

STRUCTURE

3.1 INTRODUCTION

In previous units, we have discussed the subject matter and scope of international trade. The classical theory of comparative cost or comparative advantage was also introduced and its drawbacks were briefly discussed. The present unit deals with the neo-classical theory of international trade.

3.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain the Neo-Classical theory of International trade
- Define Production Possibility Curve
- Define Social Indifference Curve
- Explain the Gains from trade

3.3 NEO-CLASSICAL THEORY OF INTERNATIONAL TRADE

The neo-classical economists, among whom the chief names in this context are Alfred Marshall, Edgeworth, Haberler, A.P. Lerner, W.W. Leontief and J.E. Meade, further elaborated and perfected the classical theory of international trade. The main contribution of these economists has been the perfection of tools of analysis with-'which the logic of the classical theory could be demonstrated more satisfactorily. These tools of analysis shall be briefly introduced in this and the following units and it will be shown how the logic of the theory of comparative costs, primarily the pattern of trade and the gains from trade, can be demonstrated with the help of these neo-classical tools of analysis. In the present unit, we shall take up the discussion of, the production possibility curves and the community indifference curves-the two tools of analysis on the supply and demand sides respectively-and with the help of these two, trade equilibrium in an open economy will be shown.

As was noted in the second unit, the classical economists expressed cost of production of a good in terms of single factor of production viz. labour; this was very unsatisfactory measure of costs. Therefore, a new concept of Opportunity Costs was introduced into 'the trade theory by Gottfried Haberler.

Opportunity cost of producing an additional unit of good is the amount of another good that must be foregone to release resources for the production of the former. If a country can produce cither rice or cloth the opportunity cost of rice is the amount of cloth it has to give up producing an additional unit of rice. The concept is relevant in a situation where factors of production are fully employed and if production is to be pushed up in one industry, resources must shift, into it from another line of production. Besides, it must be noted that opportunities cost is neither the ruling or market price nor the accountants cost of a product. It is rather a technical statement of an observed phenomenon. In the analysis of International trade theory, modern economists employ this concept of cost.

3.3.1 Production Possibility Curve

In a pioneering article, W.W. Leontief had introduced the use of indifferences curves technique in the analysis of foreign trade in 1933. The production indifference curve is also called production possibility curves or product substitution curve or a production frontier or a transformation curve. These curves show, the maximum various combinations of alternative goods which a country may produce with given techniques of production and given quantities of factors of production, which are fully employed. These curves may be a straight line, convex or concave to the origin depending upon whether we assume opportunity costs to remain constant, falling or rising. We shall analyze below international trade under each of the three cost conditions, making use of both the concept of opportunity cost and the technique of production possibilities curve.

3.3.2 Production Possibility curve under Constant Cost Condition

Under this assumed cost condition, the marginal opportunity cost of producing additional units of a commodity remains the same, whatever the level of production. Suppose we could empirically establish that if, say the U.S.A. employed all her

resources fully and produce only two/goods A and B, it could produce alternative combinations of the two commodities as below:

Table 3.1: Alternative Outputs of A & B Commodities at Full Employment of Resources (U.S.A)

Commodity A	Commodity B	MRT (Marginal Rate of Transformation)
50	0	-
40	1	10/1
30	2	10/1
20	3	10/1
10	4	10/1
0	5	10/1

The marginal rate of transformation (MRT), as you will notice in the last column of the above Table, is the amount of commodity A that must be forgone in order to release resources necessary to produce one additional unit of commodity B. In the Table 3.1 each unit of the commodity B has the same opportunity cost (i.e. 10 units of A) Thus, the MRT is constant. In other words the constant MRT is that in which each factor of production is equally effective in producing either of the products at different levels of production.

When we plot all the above points on a graph, we shall get a production possibilities curve shown in Fig. 3.1. The MRT at any point on this curve is the slope of the curve; at the point. Because the MRT remains constant throughout, the slope of the curve is also constant and therefore, the production possibilities curve is a straight line.

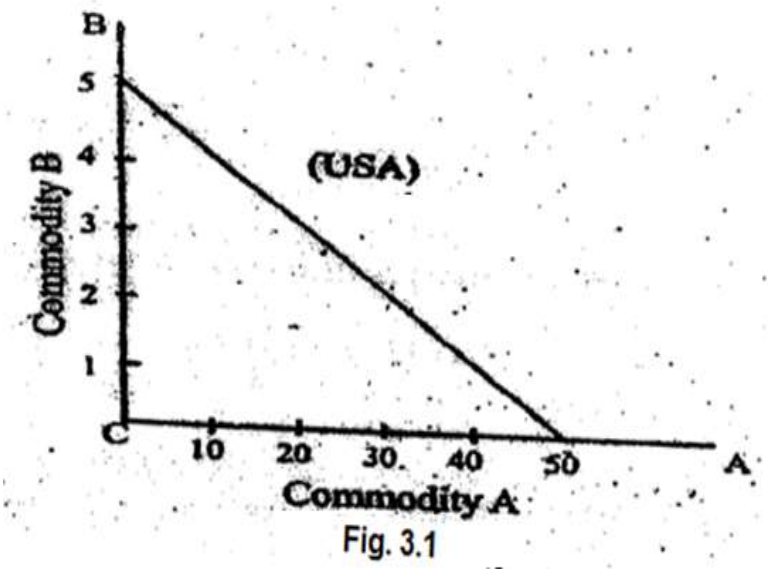

Fig. 3.1

A similar Table 3.2 may be drawn up for another country, say India, again assuming constant cost conditions and retaining the assumptions of only two commodities A and B being produced, as well 'as full employment of resources.

Table 3.2: Alternative Outputs of A and B Commodities at full Employment of Resources (India)

Commodity A	Commodity B	MRT.
25	0	-
20	1	5/1
15	2	5/1
10	3	5/1
5	4	5/1
0	5	5/1

Thus, we have the optimum production possibilities curve for two countries, the U.S A. and India (The word optimum is used to show that with the assumption of full employment of resources the maximum production possibilities of A and B commodities are portrayed by these curves).

It can be noted from the above two diagrams that the U.S.A. would specialize in the production of commodity A, while India in commodity B, in view of (The opportunity cost of 5 units of B' is 50 units in US A but only 25 units of A in India. Therefore, India can produce commodity B cheaper. Apply the same logic to commodity A). Specialization in either country would be complete, since resources can be transferred from one industry to the other without any loss in there, efficiency; as suggested by the constant MRT in both the country may be too large for the smaller country to buy).

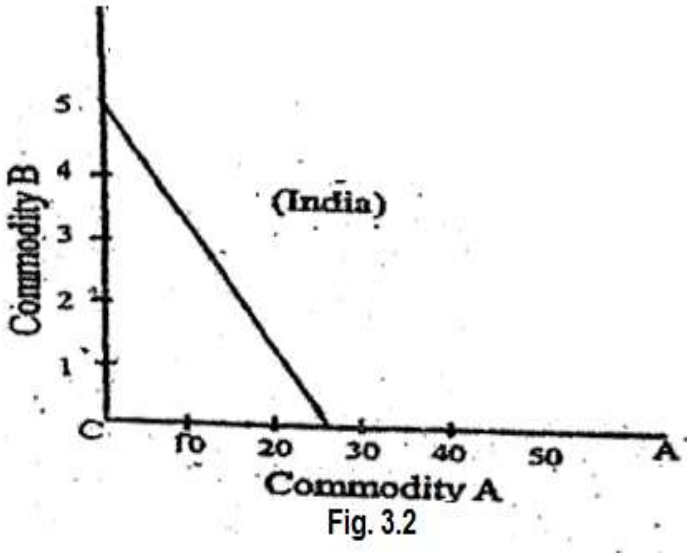

Fig. 3.2

Before the countries are opened up for trade, the domestic exchange ratio between the two commodities would be the one as shown by the slope of the straight line production possibilities curve in each country. Thus in the U.S.A., the domestic exchange ratio between commodities A and B would be 10: 1 and in. India it would be 5:1. (In the U.S.A the opportunity cost of one unit of B is 10 units of A. Therefore within the country, in the absence of foreign trade the price of one unit of B would be the same as the price of 10 units of A).

As the countries are opened up for trade, the U.S.A. commodity B, for its own opportunity cost of commodity B is much-higher. The best terms it could negotiate-with India could be 10 units of A for 2 units of B (Which is the India). Similarly, India would benefit from trade only if it could exchange commodity B in which it specializes, at a rate of more than 5 units of commodity B. She could hope to get" a maximum of 10 units of A for its exports of one unit of B commodity but no-more than that these higher and lower limits on the, international exchange ratio are shown in Fig. 3.3 and 3.4.

The domestic exchange ratios of the two countries (showing what minimum is acceptable to one country from the order in exchange for its exports and the exchange ratio of the other country is prepared to allow) have been shown in the two diagrams. This is done to define the boundaries within which the actual ratio of exchange would lie, as also to show the gain to each country from international exchange of goods.

Take the case of India in Fig. 3.3, where Fig 3.1 has been super imposed upon Fig. 3.2. The EJ production possibilities curves depicts the minimum ratio of exchange between commodities A and B (her domestic 'price ratio) mat would be acceptable to India; JBK curve on the other hand, represents the ratio: of exchange which is the, maximum, India could hope to negotiate with the other country U.S.A. The actual rate of exchange between the two countries would lie somewhere in between the-two and would depend upon their reciprocal demand for each other's product.

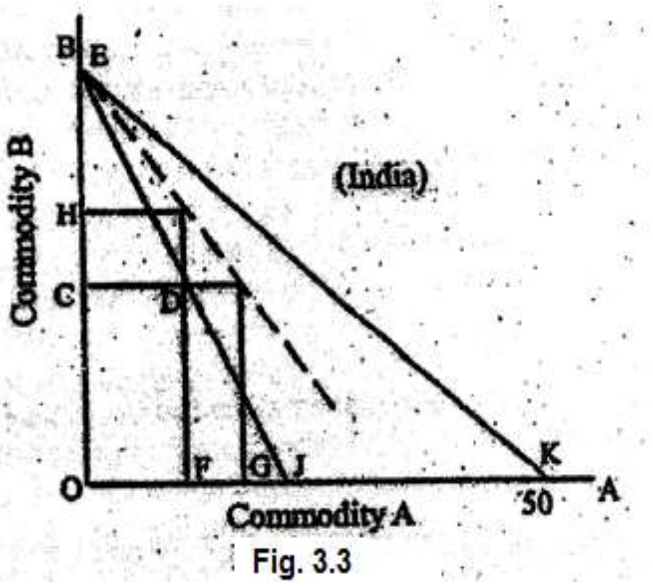

Fig. 3.3

Pending, discussion on how the actual rate of exchange would be determined, let us suppose that the ratio that is finally settled between commodities B and A or the exchange rate which is agreed to between India and the U.S.A. is 1: 8. This is depicted by the broken straight lines shown in the two diagrams.

If this is the international ratio of exchange between the two commodities, what would be the gain from international exchange to India and what would be the quantum of her imports and exports? Suppose that as a closed economy the pattern of India's demand for the two commodities was such that she produced OC of B commodity and OF of A (represented by point D on her production possibilities curve).

Now, when the country is opened up for trade, she completely specializes in the production of commodity R, as noted earlier, Out of OE, which is her total production of the commodity, she retains OC for herself consumption and exports the rest i.e, CE to the U.S.A. At the international price (represented by the broken line), this amount can be exported by her for OG of commodity A, thereby getting FG more the commodity

than what she could produce. This is her gain from international trade. Alternatively, if India needs only OG of the commodity, she could obtain it in exchange for only EH of commodity B, so that she could retain CH more of commodity B for her own consumption. Note that, whether the country opts for one combination of commodities A and B or the other, the coordinates; of both lie outside the production possibilities curve of the country, which in other words means that she is enabled by international.

Trade to consume quantities of the two commodities much, more than she herself could have produced. In the figure for the U.S.A, it may be worked out thus: Take a point on her production possibilities curve LM to represent the pattern of demand and production within the country she enters into trade with India. Find out then the gain, from trade, to her when she does start trade relations with the latter, as also the quantum of her imports and exports.

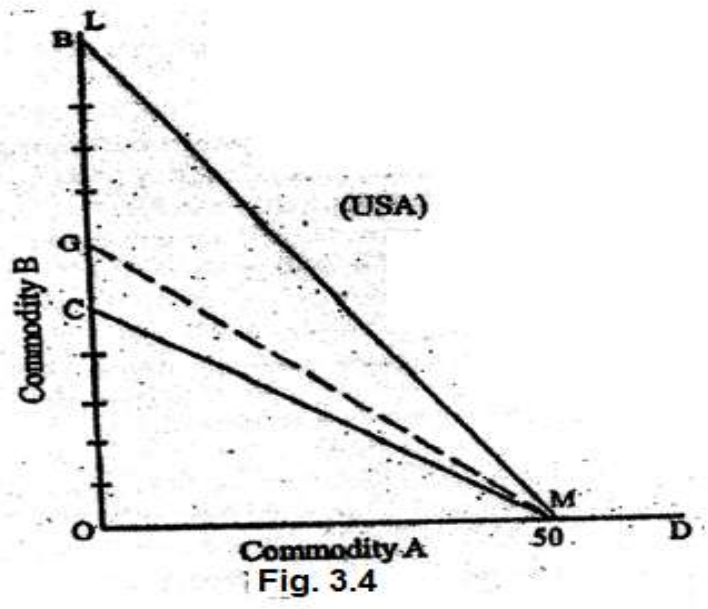

Fig. 3.4

To sum up, if the production of both the commodities is subject to the law of constant cost, the exchange ratio will be determined solely by costs. Relative costs of production of the two commodities remain constant whatever may be the ratio in when the two commodities are demanded.

3.3.3 Production Possibilities curve under Increasing Cost Conditions:

Constant cost implies that factors of production are equally efficient, perfectly substitutable and that their transfer from one industry to the other entails no loss of their efficiency and productivity. This, however, is unrealistic assumption. Resources committed to production in one industry tend to become specific to that use in lesser or greater degree. Therefore, both labour and capital would face the problem of adaptability to a new use, which would essentially means a loss in their productivity upon their transfer to another industry.

Besides when production is increased in one industry by drawing upon productive factors from another industry, initially those resources would tend to shift which are equally productive (or nearly so) in both of them, but as the process of transfer is continued, those resources would progressively be involved in the transfer that are relatively, less adaptable, since they had become specific to the former industry to some extent. Hence, with the increase in production of the expanding industry, the opportunity cost would continue increasing. In other words, more and more output of the contracting industry would have to be sacrificed in order to produce an additional unit of

the product in the expanding industry. This, therefore, is the case of increasing opportunity costs or the increasing marginal rate of transformation (MRT).

The increasing opportunity costs can be illustrated as below: Alternative combinations of commodities A and D, with all resources fully employed:-

Commodity A	Commodity B	MRT.
50	0	-
45	1	5/1
38	2	7/1
28	3	10/1
16	4	12/1
2	5	14/1

The marginal rate of transformation of A for B and consequently the opportunity cost of producing B is increasing. Any such data when plotted on a graph would yield a production possibility curve of the following type: The concavity of the curve to the origin signifies that the MRT is increasing. As noted earlier, it shows that as production of commodity B is increased, every additional unit entails a greater and greater sacrifice of the production of commodity A, since resources released from the latter industry help in increasing the production only by, say, one unit while the same resources were producing a lot more in the former industry. In Fig. 3.5, FT is the production possibilities curve under conditions of increasing costs.

Now, in a closed economy, suppose E was the point of equilibrium production at which the MRT in production was equal to the MRT through internal trade (for an elaboration of this point see any suggested reading). As the country is opened up for foreign trade, the production point would have to shift depending upon the international price ratio. We would discuss the process by which the international price ratio is determined in a later units. Pending that discussion, let us assume that this price ratio is given by the tangent factor price line PP to the production possibility curve at point E1.

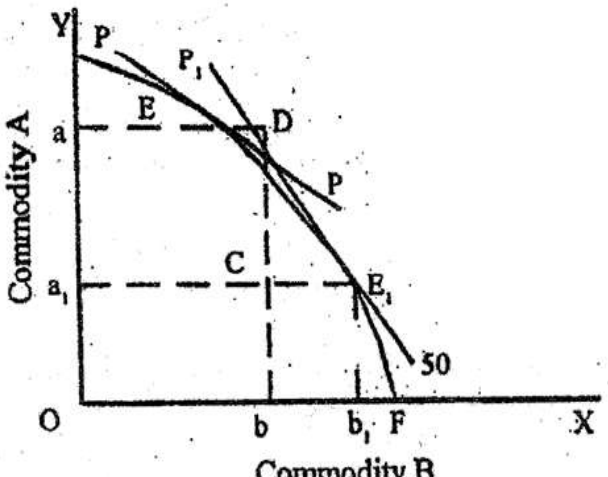

Fig. 3.5

This country will now discover that it is more profitable to shift resources from the production' of commodity A to that of B. The production point on the curve FF now shifts from E to E, the country producing more of commodity B, exchanging a part of it with another country and obtaining in exchange commodity A. It should be noted that the point of production E_1 will be the one where the slope of the international price line P_1P_1 is equal to MRT in production, i.e. the slope of the production possibilities curve. It may, be noted that complete specialization in one commodity is not to the advantage of such a country. The reason is that if resources are entirely shifted to the production of commodity B, the rise in the opportunity cost, would be so great that complete specialization would no longer be worth the sacrifice involved. However, the higher the international price for product B the greater would be the shift of resources for its production. Given the international price ratio represented by the slope of the tangent PP production would settle at E_1, because here the international price line is tangent to this country's production possibilities curve '(or the MRT in production = MRT through foreign trade).

Consumption of the two commodities within this country would take place somewhere along the international price line P_1P_1 to the left of point E_1, at say, point D (as determined by demand conditions). Obviously, the country will produce Oa of A commodity and Ob of B. Out of the latter, Ob. □ will be retained, for domestic consumption and the rest, b_1b of commodity B shall be exported. In exchange for aa_1 of A commodity, so that she could consume Oa_1 of it. The quantity $b_1b(=CE_1)$ is exchangeable for $aa_1(=CD)$ at the international price ratio P_1P_1. The real point to be noted here is that the point of consumption D lies outside the production possibilities curve of this country and were she to produce the two commodities herself, it could not have been possible for her to bring forth this particular combination (at point D) of the, two goods. This therefore, indicates this country gain from international trade.

3.3.4 Production Possibilities curve Under Diminishing cost Conditions:

It is quite possible that a commodity entering international trade might be subject to diminishing cost conditions. Classical economists thought that most of the manufactured goods would fall under this category, but they could not incorporate this possibility into their trade theory.

Diminishing costs, however, cannot coexist with the neoclassical, assumption of perfect competition except momentarily. This is especially so if diminishing costs are a result of some types of internal economies enjoyed by a firm. As such a firm expands output, it finds its costs to be constantly falling which, actuates, it to expand output more to take advantage of those internal economies. Ultimately this firm grows, in size, relatively to its, rivals and the latter would thus be competed out of market. Perfect competition, therefore, yields place to either monopoly or oligopoly. That demonstrates the incompatibility of diminishing costs with perfect competition.

The production possibility curve AB shows diminishing opportunity costs of watches in terms of typewriters and vice versa. The curve is therefore, convex to the origin. Suppose that production takes place, at point C, where the price of watches in terms of typewriters is given by the tangent PP. It is clear that C is a point of unstable equilibrium of the diminishing costs as a result of internal economies and competitive conditions are assumed. This is so because a slight increase in the price of one commodity in terms of the other would disturb, the equilibrium and a movement away from point C would take place.

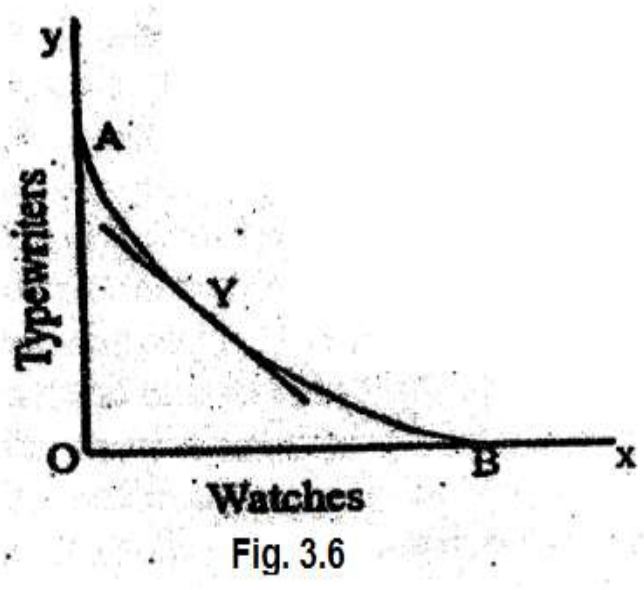

Fig. 3.6

If, for example, the price of watches increases, resources would shift from the production of typewriters to that of watches. This process would continue till point B is reached. Thus, diminishing costs would ultimately mean complete specialization in either of the commodity. On the other hand, if price of type-writers raises production of this good will be encouraged and production point will finally settle at A.

However, Under these assumed conditions, the situation in the depicted above diagram would be a momentary one, since, as resources get committed to the reduction of one commodity alone, labour and capital tend to become increasingly specific to that use and if later these were to be shifted to the alternative use, the opportunity costs of production would increase in terms of the alternative foregone. We would then have a situation as to one depicted under increasing cost conditions. The production possibilities curve would become concave to the origin.

This discussion of diminishing costs, however, yields the result that although theoretically diminishing cost phenomenon might be incompatible with, perfect competition, in a real world situation increasing-return might be one of the explanations of why a country comes to have comparative advantage in the production of a particular commodity.

Self-Check Exercise 3.1

Q1. What is production possibility curve?

Q2. What is production possibility curve under constant cost condition.

3.4 SOCIAL INDIFFERENCE CURVE

The neo-classical economist made the simplifying assumption that the tastes and preferences of a society can be shown in the form of a social or commodity indifference map, similar to the one which we use for portraying the preferences of an individual

consumer. And just as in the case individual consumer, the neo-classical economists assumed that the society tried to attain the highest possible social indifference curve.

These social indifference curves are obviously based on some over simplifying assumptions. In reality we know that no two individuals have identical tastes and preferences. Besides, income distribution is- never even remotely equal. Therefore, while using social indifference curves in trade theory, it is assumed for the sake of convenience that all individuals in country have identical tastes and incomes and that there does not occur a active change in these with changing national income. A family of social indifference curves, 11, 12, 13etc. is shown in Fig 7. The social" indifference curves in combination with the production possibilities curve of n country, can be used to demonstrate equilibrium in trade between countries as well as to portray the gain from such trade.

Self-Check Exercise 3.2

Q1. What is social indifference curve?

3.5 TRADE EQUILIBRIUM AND GAINS FROM TRADE

3.5.1 Equilibrium in Closed Economy

In a closed economy, equilibrium in consumption and production can be analyzed by bringing together the production possibilities curve and the social indifferences curves. Take first the classical case of constant opportunity cost and further assume that this economy can and has to, produce only two goods, say cloth and sugar. On the basis of these assumptions we draw the production possibilities curve AB of the country in the diagram below:

Besides the straight line Production possibilities curve AB, we have in the diagram a social consumption indifference map, with 11, 12, 13 etc. indifference curves which shows different levels of satisfaction to the nation from the consumptions of various combinations of cloth sugar. The production possibilities curve AB being it straight line, its constant slope OA/OB give us a constant give us a constant

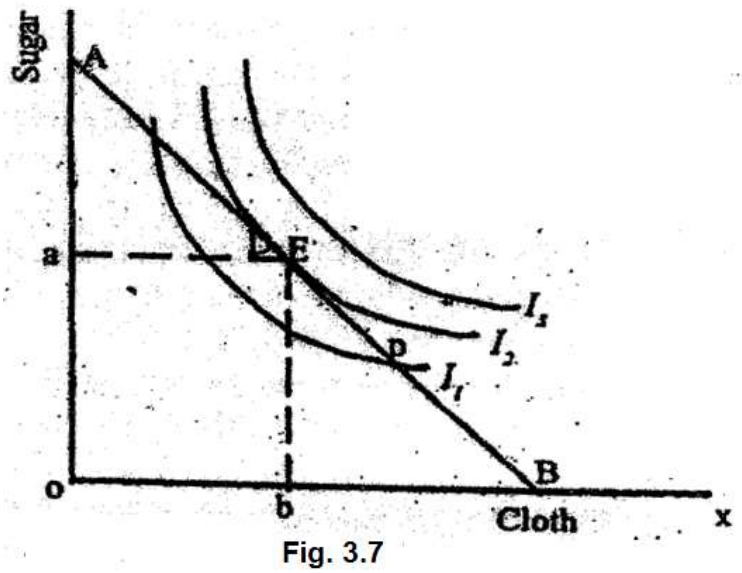

Fig. 3.7

Marginal Rate of Transformation i.e. - $\frac{da}{db}$

In the absence of trade the producers would be m equilibrium anywhere along the AB line, but the actual point of equilibrium, would be determined by consumer, demand. The community would like to reach the highest indifference curve but there is the constraint of limited production possibilities.

Production cannot take place outside the AB production frontier. Therefore, the highest attainable indifference curve is I_2 which production possibilities curve AB a tangent at point E. Therefore, with the given production possibilities curve AB, output of cloth and sugar would be determined by forces of demand and the resultant output would be Ob of cloth and Oa of sugar. B would be a point of equilibrium because at this point the marginal rate of substitution in consumption (as shown by the tangent AB to the indifference curve lat E) is the same as the marginal rate of transformation in production (given by the constant slope of the production possibilities curve AB).

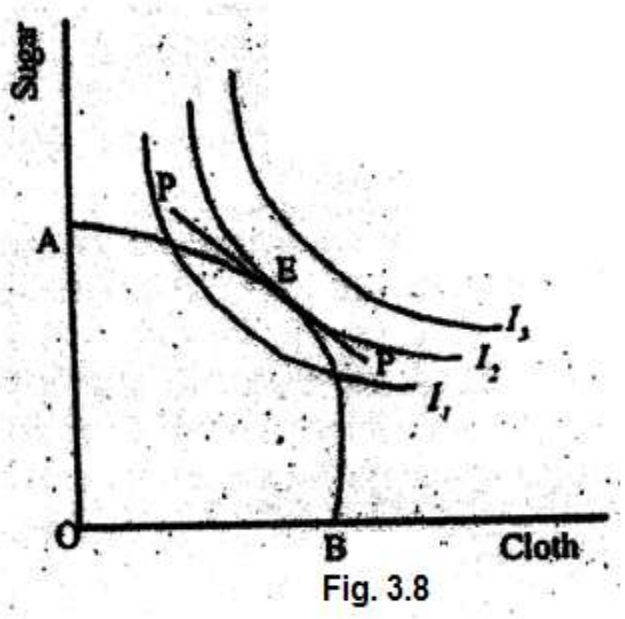

Fig. 3.8

Equilibrium in consumption and production can similarly be discussed under the more plausible cost, condition of increasing opportunity costs. Since the logic; is the same as discussed, above in the context of equilibrium under constant cost conditions, it is hoped that the case depicted by the diagram drawn below would be easily analyzed and understood by you. It is of particular interest to note the significance of the tangent PP' in the diagram. It is expected that you will independently attempt an explanation of the above diagram and draw your conclusions from it.

3.5.2 Equilibrium in an Open Economy

An open/economy is one which is open for trade with the rest of the world with the help of neo-classical, tools of analyses of production possibilities curve and social indifference curves, the equilibrium possibilities of such an economy (i.e. its position of maximum production and consumption) can be shown. For the sake of convenience the analysis of neo-classical theory is usually carried out within a two-country, two commodity model. A further assumption made here is that the price of importable and exportable is given.

First take optimization of production. If the production possibilities curve of the country and the international price of the traded goods, are given, equilibrium in production can be easily shown.

The point of optimum production can be shown with the help of Fig 3.9. FF is the production-frontier or production possibilities, curve of this open economy. The straight line PXPY shows the international price ratio. This line shows that with a given expenditure one can buy in the international market either PX of cloth or PY of sugar, or a combination of the two lying on the straight line.

In real terms it also means that PX of one goodwill exchange for PY of the other good in trade between the two countries. Each of these parallel Straight lies is also an income contour line. The higher the line the larger the quantity of the tradable goods cloth and sugar it represent. As the country moves to a higher income contour line, its national income rises; In Fig. 3.9, E_p is the point of production 'equilibrium because it represents a point on the production frontier which lies on-the highest attainable income contour line.

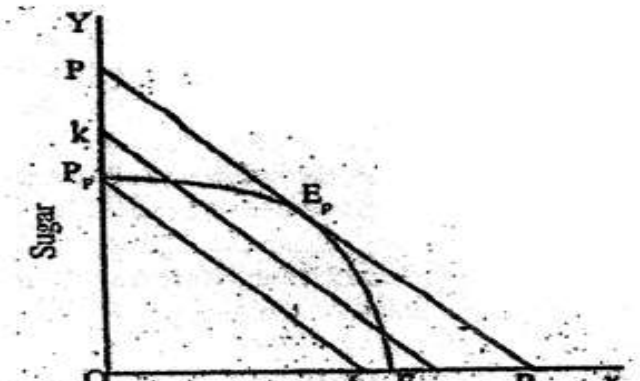

Fig. 3.9

If the country moves from K on its production frontier to point E, its national income rises: Any shift away from E, will only reduce the national income of the country. Next we demonstrate the equilibrium in consumption. It is to be noted in Fig 3.10, that when the economy under discussion is in production equilibrium its optimum national income is on the income contour line PP This line becomes the consumption-possibilities frontier of the country. In other words, it produces an output at point E, and through international price ratio P P(=PXPY), Thus, its consumption can take place at any point on the income contour line PP but which point on this line will give maximum satisfaction to the society? This is shown below, by super, imposing the social indifference map of the country on Fig.3.10.

As is obvious from the microeconomic theory of consumer behaviour, the society would also like to maximize its welfare by consuming on the highest attainable social indifference curve. The limit on consumption is set by the national income. As shown earlier the maximum production at point E_p and the export of its surplus output for the importable goods at PP price ratio, yields PP as the consumption possibility frontier. PP. therefore, sets the constraint on the country's consumption.

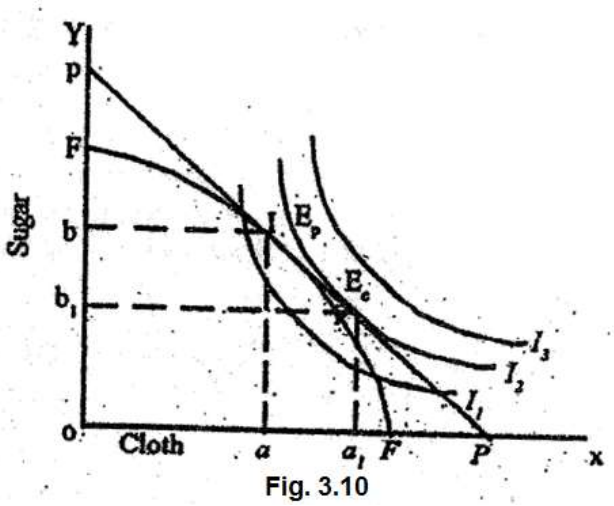

Fig. 3.10

It is obvious that on PP line consumption will be maximized where the line barely touches a social indifference curve. This happens at E_e point. This is thus the point of consumption equilibrium. As the point of consumption equilibrium the marginal rate of transformation (MRT) in production (or the' opportunity cost of cloth in terms in of sugar, as soon by the slope of the production possibility curve the marginal rate of substitution in consumption, as shown by the slope of the indifference curve, and the marginal rate of transformation in trade, as, shown by the slope of the price ratio line PP, are all equal. When we refer to Fig.3.10, it would be noted that at point E_p the country produces O_a of cloth and O_b of sugar, but at point E_e it consumes Oa, of cloth, (i.e. any more than what it produces) and Ob, of sugar (i.e. bb, less than what it produces). Obviously, the country exports bb_1 of sugar and imports in exchange aa_1, of cloth.

3.5.3 Gains from Trade

The gains from trade are at once clear from the analysis of Figure 3.9 and 3.10. It would be seen, for example, in Fig. 3.9 that due to trade with another country, this country can have (with its national income) any combination of Cloth and sugar lying on PP line, so that the line becomes its consumption possibility frontier. In the absence of trade, it could produce only at point E_p of its production possibility curve. Now a wider choice of combinations of cloth and sugar is available. But a more significant point to note is that, except for combination Ep the entire consumption possibility frontier lays outside its production possibility curve. In the absence of trade, the country could not have consumed any combination which lies outside its production possibility curve. And the Fig. 3.10, the point of consumption E_e is one such point which it would not have been possible for the country to reach in the absence of trade clearly, in the absence of trade the country could not have been able to have a combination of sugar and cloth which lies on I_2 social indifference curve. This shows of gain from trade to the country. A further question is how do we explain such a gain from trade to a country? The total gain from foreign trade to a country can be broken up into gain from specialization and the gain 'from improved exchange. The former arises from the production effect and the latter from the consumption effect of the trade. A discussion of these two effects is being left to you to peruse from the relevant reading. Another building block of the neo-classical theory of trade is the offer curve. We shall discuss its derivation in the following units.

Self-Check Exercise 3.3

Q1. What is Marginal Rate of Technical Substitution?

Q2. Explain the equilibrium in an open economy.

3.6 SUMMARY

In this unit you were introduced to neo classical theory of international trade. The neo-classical theory of international trade was developed by Alfred Marshall, Edgeworth, Haberler, A.P. Lerner, W.W: Leontief and J.E. Meade. The next unit will introduce the concept of offer curve to you.

3.7 GLOSSARY

- **Marginal Rate of Technical Substitution:** is the rate at which one factor can be substituted for another while holding the level of output constant.
- **Gains from Trade:** refer to net benefits to agents from allowing an increase in voluntary trading with each other. In technical terms, it is the increase of consumer surplus plus producer surplus from lower tariffs or otherwise liberalizing trade.
- **Opportunity Cost:** The cost of an alternative that must be forgone in order to pursue a certain action. Put another way, the benefits you could have received by taking an alternative action.
- **Social Indifference Curve:** a curve showing the combinations of goods that, when available to a country, yields the same level of social welfare.

3.8 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 3.1

Ans. Q1. Refer to Section 3.3.1

Ans. Q2. Refer to Section 3.3.2

Self-Check Exercise 3.2

Ans. Q1. Refer to Section 3.4

Self-Check Exercise 3.3

Ans. Q1. Refer to Section 3.5.1

Ans. Q2. Refer to Section 3.5.2

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3.10 TERMINAL QUESTIONS

Q1. Explain Equilibrium in consumption and production in a closed and open Economy?

Q2. Write a short note on Gains from Trade?

Unit-04

OFFER CURVE, TERMS OF TRADE AND GAINS FROM TRADE

STRUCTURE

4.1 INTRODUCTION

In the preceding unit, we noted how, given the international price ratio, a trading country would determine the optimum quantities of goods that it should produce and after determining its welfare maximizing consumption, how the quantities of goods to be imported and exported would automatically emerge from the foregoing. In this type of analysis, however, there are two snags: (i) The analysis does not show how the international price ratio was determined in the first instance, and (ii) The other country involved in trade does not figure in such analysis. In order to remove these deficiencies, the neo-classical theory presented another tool of analysis, viz. the offer curve. These curves are a device, to determine the equilibrium price in the international market, i.e. the price ratio, to show general equilibrium, i.e. equality between the imports and exports of the two countries involved in trade, and finally, to demonstrate the change in the gain from trade as the international price ratio changes.

4.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain the meaning and different types of Terms of Trade
- Elucidate the gains from trade
- Explain the concept of Offer Curve
- Derive the Offer Curve

3.2 DERIVATION OF OFFER CURVES:

The chief names involved in the development of this tool of analysis are Marshall, Edgeworth and Meade. The offer curves are indeed a method of geometrically representing Mill's law of reciprocal demand. There are two alternative methods of deriving the offer curves. First, with the help of the production possibilities curves and the social indifference curves, with which you are already familiar, and secondly, with the help of the trade indifference curves. Since the latter method was adopted by J.E. Meade in his book 'Geometry of International Trade', we shall follow that method here.

In order to derive an offer curve, one has to be, first of all, familiar with trade indifference curves. These curves have been directly derived by Meade, from the social indifference curves to which you were introduced in the preceding unit.

Consider figure 4.1 here. In this figure, I_1 $1_2 1_3$ etc. constitute the social indifference map of a country. Moving from origin O upwards we measure the quantity of cloth consumed and towards the left we measure the quantity of sugar consumed in this country. Thus far, the only difference between this diagram and Fig. 3.7 of the preceding unit is that in the latter the origin right side. But all for intents and purpose the logic of the two diagrams is the same.

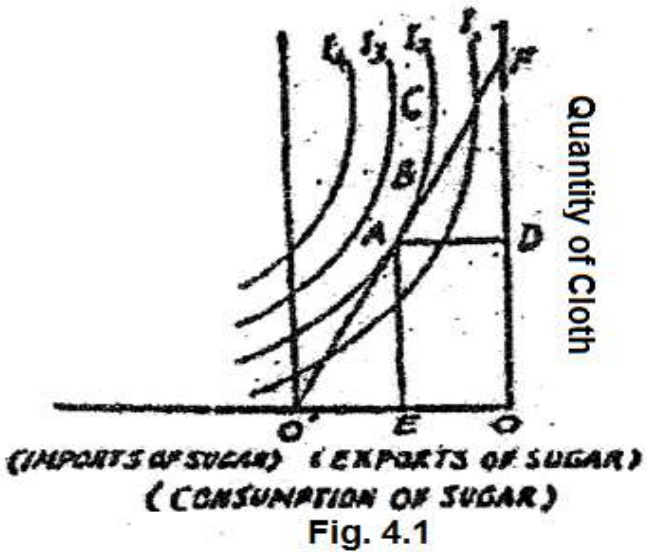

Fig. 4.1

Now, assume that this economy is endowed with only O'O units of sugar. Suppose now that O is the new point of origin. From this point upwards are measured the imports of cloth and to left horizontally are measured this imports of sugar. To the right of 0 are measured the exports of sugar. What are the social indifference curves when viewed from the origin 'O? Each social (consumption) indifference curve now shows the combination, of imports and exports which, with the assumed endowment of O'O of sugar with this country, permit this economy to reach the consumption levels indicated by each of the-social indifference curves with reference to the origin O. So, what is a social indifference- curve when viewed from the origin 0, becomes a trade

indifference curve when viewed from the origin O' A trade indifference curve shows all the combination of imports which yield the same level of satisfaction to the society.

It would be interesting to notice what appoint, such as A, on one of these curves connotes when looked at from O and 'O separately. If we look at A point from origin it shows OD conjunction of cloth and OE consumption of sugar. On the other hand the co-ordinates of point A looked at from origin '0 (i.e. OE and AE) indicate the exports of sugar and imports of cloth. It is also instructive to point out that in the earlier ease A point falls on consumption indifference curve, while in the later case the same point falls on 1_2 trade indifference curve. But in both the cases the levels of social welfare of satisfaction is the same. Similarly with reference to origin O points A, B, and C lie on the same consumption indifference curve and therefore the same levels of satisfaction to the community, while with reference to the origin '0, these three points lie on the same trade' difference curve and therefore yield the some levels of satisfaction to the society from each of these alternative combinations of imports and exports.

How do we interpret the meaning of the straight line O'AF in Fig. 4.1? When viewed from origin O, this line clearly the PP lines of Fig 3.10 of the preceding unit (Look at that diagram carefully and notice what this line meant there). In that diagram P'P was the consumption possibilities frontier. Similarly in Fig 4.1 here OAF is a consumption possibilities frontier and the community is in equilibrium at, point A where this line is tangent to consumption Indifference curve I_2. But when OAF line viewed from origin, it becomes the terms of trade line because on each of such straight lines lie infinite number of combinations of imports and exports which yield the same import-export ratio. Such a ratio can be used to denote the international exchange or price ratio. In other words each of such straight, lines passing through origin O can be termed as the terms of trade line. Now trading on such a straight lines as the terms of trade line's and using their along with the trade indifference curves yields a very interesting result. But before that, look at Fig. 4.2.

In Fig. 4.2 the exportable good has been measured along the OX axis and the importable goods along the OY axis TOT, and TOT_2 are two terms of trade lines (similar to the terms of trade line OAF shown in Fig. 4.1) The TOT, shows a certain exchange ratio between exports and imports, e.g. OA/AC at point C of this line. In other words, if the TOT_1 are the equilibrium terms of trade between any two countries, the none of them will get AC quantity of imports in exchange for OA quantity of its exports. On the other hand; TOT_2 are the equilibrium terms of trade, this country will get only AB quantity of imports for the same quantity OA of exports.

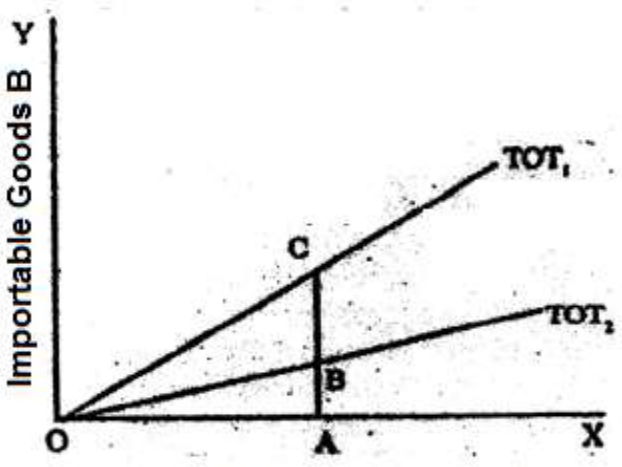

Fig. 4.2

In the other words, this country will prefer TOT, terms of trade in comparison to TOT_2. The opposite will be the case with the other country, This when the terms of trade line moves closer to the axis on which the country's exports have been measured, the terms of trade of the country deteriorate, and when the line moves away from that axis, the terms of trade for the country will improve.

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Now with the foregoing information, let us come back to the question of derivation of the offer curves. From Fig. 4.1 we take the I_1,I_2,I_3 etc. curves, as the trade indifference curves, and from Fig. 4.2, take the different TOT as the terms of trade lines, and bring them together in Fig. 4.3.

You may recall that each trade indifference Curve was taken to be a locus of all those combination of imports and exports which yield to a nation the same level of satisfaction. Now, if a trade indifference map of the country, consisting of I_1,I_2,I_3 shown in Fig. 4.3 here, is given, the welfare maximizing people of this country would like to reach the highest possible trade indifference curve.

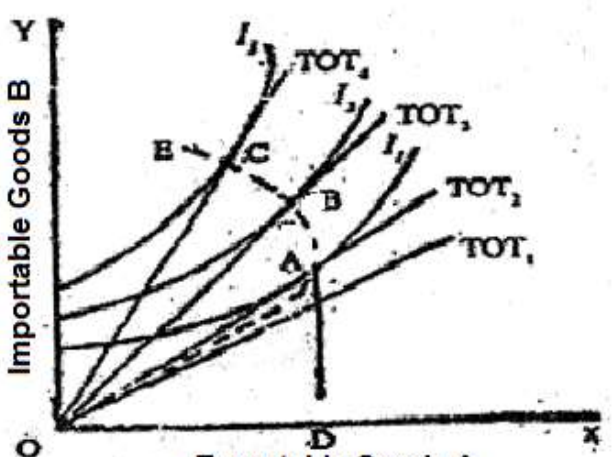

Fig. 4.3

But which trade indifference curve will the country be able to reach depends on the prevailing or mutually acceptable or the equilibrium terms of trade. In Fig. 4.3, with terms of trade line people of the country are not able" to: reach any of the trade indifference curves I_1, I_2, I_3 etc. In other words the exchange rate between the exports of this country and the imports of the other country (or what the other country is prepared to give in exchange for its given exports) is so low or unfavourable for this country that no export-import combination yielding any satisfaction to this country falls on the TOT_1,

line, TOT_1, can also be considered to be, the pre-trade domestic exchange ratio between the two goods under reference. However when the terms of trade improve a little, from TOT_1, to TOT_2 trade between the two countries becomes possible because one combination of exports and imports, at point A lies both on the TOT_2 line and the trade indifference curve I_1, A 'will be the point of equilibrium, where the terms of trade line TOT3 is a tangent to the trade indifference curve I_1, The property of this point is that at this point the-marginal rate of substitution of exports into imports, for the people of the country is the same as the marginal rate of substitution though trade, the international market Given, the terms of trade and the trade indifference map, the people of the country are able to maximize their satisfaction in trade at this point. "This point of tangency in the diagram can also be interpreted to show that, given the terms of trade TOT_2 the people of this country are prepared to offer OD of exports, for AD of imports. Thus, A will be a point on the offer curve of the country. Similarly, when terms of trade improve to TOT_3 the country is able to attain a higher trade indifference cure I_2 and the equilibrium is established at point B. As plying the logic as before B will be now a point on the offer curve of the country. When, terms of trade improve still further.-to TOT_4, C will be the point on the offer curve. If all the possible terms of trade at which trade takes' place are taken and the respective points of offer of exports for imports are taken and joined to each other, the curve so formed will be the offer curve of the country. The offer curve shows all the optimum (or welfare maximizing) Combinations at different terms. In other words, the curve shows the quantities of exports offered by country for imports at the different terms of trade of exchange ratios. In Fig. 4.3, OABCE in the offer curve of a country (shown with the, help of a broken line. The curve starts from the origin O where the exports and imports are zero the two countries and that the ratio of the marginal utilities because of the low and therefore unacceptable terms of trade. But as the terms of trade improve both exports rises up to a point. But as the terms of trade improve both exports rise up to a point. Till point A in Fig. 4.3 more exports are offered for more imports. Between points A and B country offers nearly, the same quantity of exports less quantity for more imports. After point B, the country is prepared to export less quantity and more imports.

We could also similarly draw the offer curve of the other country say B, with which country, say A has trade relation. If we were to draw the offer curve of country B on the above diagram it would be convex to the vertical axis and concave to the horizontal one. That is because country A's exports would be imports to country B and the latter's exports would be the imports to the former. The vertical axis would show exports out of and horizontal axis would show imports into country B.

In Figure 4.4, we bring together the offer curves of the countries A and B. In this diagram we have drawn OA and OB as the offer curves of the countries A and B, respectively. Equilibrium in trade between the two countries is established at point E, where the two offer curves intersect each other. At the point of equilibrium while country A exports Oa, of cloth and imports the latter. On the two offer curves, E is the only point where the quantity of export offered by the one country is also acceptable to the importing country at the same terms of trade. The equilibrium terms of trade are also determined quantities as traded between the two countries at the same terms of trade shown by the price OT_E.

At the equilibrium point E, not only is a trade indifference curve Ia of country A tangent to the terms of trade line OT_2 but the indifference curve I_2 of a country B is also tangent this line at the same point. The common point of tangency at E between the trade indifference curves of the two countries implies that the marginal rate of transformation of exports into imports is the same in the two countries and the ratio of the marginal utilities and exports is also the same.

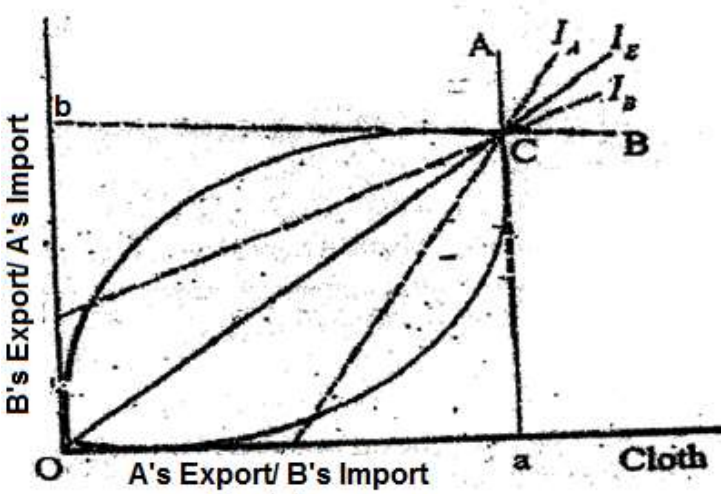

Fig. 4.4

Self-Check Exercise 4.1

Q1. What is meant by offer curve.

Q2. How can an offer curve be driven?

4.4 MEANING OF TERMS OF TRADE

The concept of terms of trade is helpful in the determination of gains from trade and in the discussion on trade equilibrium. Different economists use the concept of the terms of trade to mean different things. Therefore, the following space is devoted to the explanation of the meaning of the different variants of the term.

4.4.1 Net Barter Terms of Trade or Commodity Terms of Trade:

It is the measure of relation between the prices that a country receives for its exports and those that it pays for its imports from the point view of measurement of gain from trade, it is important to know the movement in commodity terms of trade. This movement is measured with the help of index numbers. A base year is selected, for which the average import and export prices of a country are calculated. Similar computations are made for a sub-sequent year. The change in the country's barter terms of trade is ascertained by calculating the ratio of change in export prices to that in import prices.

Therefore: $T_C = \frac{\frac{P_{x1}}{P_{x0}}}{\frac{P_{m1}}{P_{m0}}} \times 100$

Where T_C, is the commodity terms of trade, P index of prices, subscripts x and m stand for exports and imports, and 1 and 0 are the current and the base years, respectively. A rise in the index number represents a favourable movement in the terms of trade.

Thus, for India, taking the base 1958 = 100, suppose the unit value index of exports for 1990 was 177, while the value index of imports for the same year was 151. Therefore, we have:

$T_C = \frac{\frac{177}{100}}{\frac{151}{100}} \times 100 = 1.7 \times 100 = 117.$

This shows an improvement of 17% in the commodity terms to trade of India in 1990 as compared to the year 1958. This means that in the former year given amounts of Indian exports could get in exchange 17% more by way of imports then what the same amount fetched in the year. This therefore is all improvement measure of gain from trade. The value of Tc will be more than 100 if there is a greater rise in the index of export prices than of import prices. This would be referred to as an improvement in the terms of trade of a country. If (here is a greater rise in the index of import prices than of export prices the value of Tc will be less than 100 which will amount to a 'deterioration', in the country's terms of trade.

4.4.2 Income Terms of Trade:- In the event of terms of trade worsening, if the exports remain constant over the years, the country would import a declining amount. However the country might manage to increase its exports volume, there by offsetting the loss in imports to some extent. This is measured in terms of the income terms of trade, which is barter terms of trade multiplied by an index of the change in export volume:

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

where T_y is the income terms of trade, Qx is the index of quantity of exports and P_x is the price index of export..

T_y, therefore is a measure of the ability of a country to pay for its imports with its exports. This concept is slightly modified by Jacob Viner to make it a meaningful measure of the total gain from trade.

In this version $T_g = \frac{Q_{x1}}{Q_{x0}}$

Where Tg is the index of total gain from trade and Q is the volume of trade.

4.4.3 Single Factoral Terms of Trade: sometimes the productivity, of exports industries may improve thus leading to a fall in costs and therefore prices. This would 'result in deterioration in barter terms of trade. Such deterioration may however not involve a reduction in the gain from trade since while the commodity terms of trade are falling, the cost of production of export goods too is falling. These changes in terms of trade due to changes in productivity are taken care of by single factoral terms of trade, which is barter term of trade multiplied by the reciprocal of an index of the change in cost, expressed in terms of the quantities of the factors used per unit of exports.

$T_f = T_c . \frac{F_{x1}}{F_{x0}}$

Where F_x is the quantity of factors used per unit of exports. Such an index according to Jacob Viner "would provide a better guide to the term of gain from trade than the commodity terms of trade index by itself."

Besides these, there are also other concepts such as the gross barter terms of trade, double factoral terms of trade, real cost terms of trade, utility terms of trade etc.

which occur in economic literature. But for practical purpose the term 'commodity terms of trade' is employed.

4.5 TERMS OF TRADE AND GAIN FROM TRADE

The measurement of gain from trade has been matter of controversy. In the preceding, section we made reference to the various concepts of terms of trade Among these, the barter or commodity terms of trade as sometimes used as a measure of the gain from international trade.

In what sense do barter terms of trade provide a measure of gain from trade? You might recall that barter terms of trade which are measured as

Therefore: $T_C = \frac{\frac{P_{x1}}{P_{x0}}}{\frac{P_{m1}}{P_{m0}}} \times 100$

Thus, we compare the relative change in the average level of export prices to that in the average level of import prices occurring in a subsequent year over that. In a given base year. If the former have risen faster than the latter, it is taken to be an improvement in the terms of trade and therefore, a gain from trade. A relatively faster rise in the export prices would mean that-a given quantity of exports would now command a larger quantity of imports. (By a similar logic, you could find out for yourself the consequences of a faster rise in import prices).

However, it has come to be realized that strictly speaking, barter terms of trade are a poor measure, if at all, of either the amount or even the direction of change in the gains from trade. That is because there is a multiplicity of factors underlying any change in the commodity terms of trade of a country. Each of these factors has its own significance from the point of view of gains from trade, some cause them to increase, others; to adversely affect them A few examples would illustrate this point.

Take a rise in the export prices of a country (assuming the import prices[1] to remain constant). The cause if such a rise could lie either on the demand side or on the supply side. In the former case an increase in foreign demand for the exports of a country could cause the export prices to raise, an obviously favourable situation for the exporting country. However, the export prices also could rise because of say an inflationary situation within the exporting country. This, could not be a cheerful situation for the country and would not constitute a genuine gum for her even though her commodity terms of trade improve.

Conversely the export prices may fall because of a fall in foreign demand or an increase in the productivity of factors employed in export, industries. In either case the barter terms of trade would deteriorate but they would constitute a loss to the country only in the former situation. In the latter case although the barter terms of trade would worsen the single factor terms of trade would improve. It is clear that as long as the productivity in export industries is rising' faster than the fall in export prices the real income of the country would be increasing despite worsening of the commodity terms of trade.

Secondly fallacy of using commodity terms of trade as a measure of gains of trade is sometimes illustrated with reference to the underdeveloped countries. G.M, Meier shows that with the development of an export sector in an underdeveloped country, even though productivity in the sector does not rise, yet the terms of trade may deteriorate, while the factor incomes may still be rising. That may be because with the expansion of an export sector, productive factors would 'Withdrawn from the traditional agriculture sector and attracted into the former sector where their marginal productivity would be higher.

Thirdly, there is also the difficulty of measuring terms of trade over a long period. When the base year and the current year lie wide apart overtime, it may be wrong to draw any valid conclusions from such calculations because over a period or time the basket of goods traded changes considerably. The quality of goods also changes. New goods enter trade and the importance of traditional goods declines. It is for this and other reasons stated above that commodity terms of trade, except under the ideal circumstances where nothing changes, save the world price ratios facing the country concerned.

Self-Check Exercise 4.2

Q1. What is meant by terms of trade?

Q2. Distinguish between Net Barter and Single Factoral Terms of Trade.

4.6 OFFER CURVE AND GAINS FROM TRADE

In a preceding section of this unit, we learnt the method of deriving an offer curve and discovered how, with the help of the offer curves of the trading countries, the equilibrium terms of trade are determined. Here we could now also say something useful about the elasticity of international demand. Take the following offer curve.

OA is the offer curve of a country. On the Oa pan of the curve,' elasticity is greater than one but less than infinity, Against a slight increase in imports a much larger quantity of exportable is offered. Beyond point a, elasticity-starts declining so that with every improvement in terms of trade the offer curve, 'of exportable keeps on declining till we reach point, b. Here the curve becomes vertical, implying, that with improvement terms of trade the offer, of exportable remains at the same levels as before.

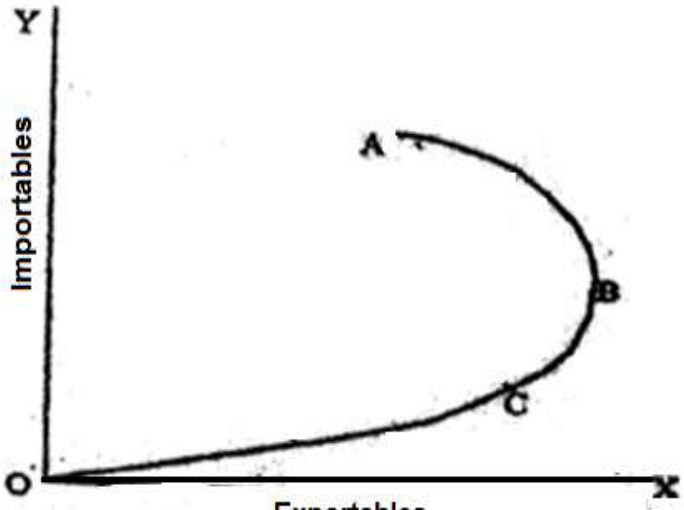

Fig. 4.5

The elasticity of international demand is unity here since the expenditure in terms of exports remains the same as before. After point b the, country offers a declining amount of exportable for every increase in the, availability of the importable. Thus, on this stretch of the offer curve the elasticity of demand of this country for the importable is less than unity.

We noted earlier that equilibrium in trade would be established at the point of the offer curves of the trading countries. Now, if the elasticity's of the offer curves of the trading countries are known and given, how does any change in the reciprocal demand affect the terms of trade and gains from trade? We shall answer this 'question with the help of Fig. 4.6. Suppose. OA is the offer curve of country A and OH the offer curve of be shown by a shift of the curve offer towards the right. The new offer country B. Now the reciprocal demand of country A increases. This would curve could be OA_1. It is clear that the terms of trade of country A worsen. Offer curves OA, and OB intersect at point T_1, and the new terms of trade line OT; is to the right of the original terms of trade line OT. This indicates of worsening of terms of trade of country A. (Now she will get less import for the same exports). However, question, how much will be the deterioration in the terms of the trade country A will depend 'on the elasticity of its own offer curve as well as the elasticity of the offer curve of its trading partners, country and Let us see how.

In the diagram, you will notice that when the offer curve of country shift from OA to OA_1, the deterioration in her terms of trade will be less, the more elastic is the offer curve of B country (such as OB). With B's offer curve being O'B' instead of OB, the terms 'of trade more to only' OT_2, rather than to OAT_1 On the other hand the more elastic the offer curve of country A (such as OA) with given offer curve of, country B (i.e. OB) the greater Will be the deterioration in the former country's term of trade, as shown by the shift of the terms of trade line to OT3 instead of OT_1.

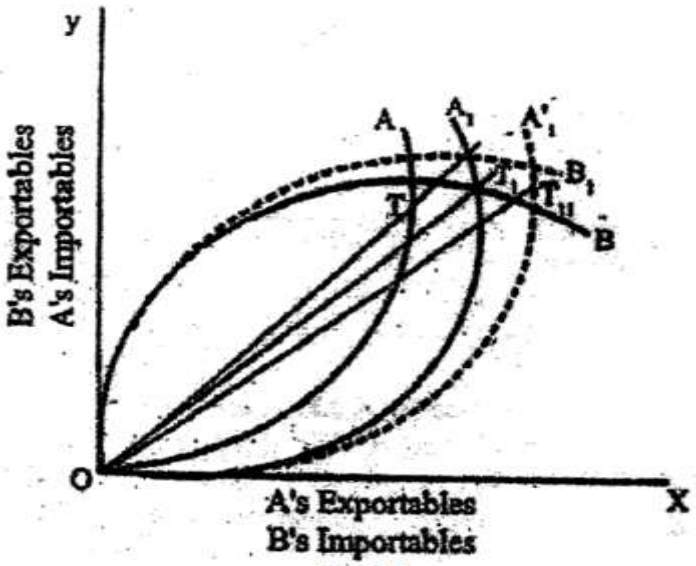

Fig. 4.6

Self-Check Exercise 4.3

Q1. What is meant by gains from trade?

4.7 SUMMARY

In this unit, we introduced you to the offer curve which we derived with the help of the trade indifference curves. We explained you the meaning of terms of trade and the different types of terms of trade namely barter terms of trade, income terms of trade and

single factoral terms of trade. We have also discussed that how gains from trade is measured. In the present unit we completed the discussion of the core of neo-classical theory of international trade. In the following unit we shall be introducing you to the modern theory of international trade.

4.8 GLOSSARY

- **Gains from Trade:** Advantages which a country gets from trading with other countries: firstly the economies of scale when large amounts are produced and secondly the exchange of commodities between countries which means the certain countries can specialise in certain commodities making them cheaper.
- **Offer Curve:** a graph showing the trade which a country can do at various price levels, or where two individuals have the same satisfaction from a good. Compare Edge worth box.
- **Terms of Trade:** The ratio of the average price of a country's exports, to the average price of its imports, is its terms of trade. In theory, an improvement in a country's terms of trade raises its real income (since it can "convert" a given amount of its own output into a larger amount of consumable products through trade) although in practice it depends on how those terms of trade gains are distributed.
- **Unit Elasticity of Demand (unitary elastic):** the change in demand is exactly equal to the change in price.
- **Elasticity of Demand:** is defined as the degree of responsiveness in quantity demanded to a change in price. Thus it represents the rate of change in quantity demanded due to a change in price.
- **Net Barter Terms of Trade or Commodity Terms of Trade:** It is the measure of relation between the prices that a country receives for its exports and those that it pays for its imports from the point view of measurement of gain from trade, it is important to know the movement in commodity terms of trade. This movement is measured with the help of index numbers. A base year is selected, for which the average import and export prices of a country are calculated. Similar computations are made for a sub-sequent year.

  The change in the country's barter terms of trade is ascertained by calculating the ratio of change in export prices to that in import prices.

$$T_C = \frac{\frac{P_{x1}}{P_{x0}}}{\frac{P_{m1}}{P_{m0}}} \times 100$$

  Where T_C, is the commodity terms of trade, P index of prices, subscripts and m stand for exports and imports, and 1 and 0 are the current and the base years, respectively. A rise in the index number represents a favourable movement in the terms of trade.
- **Single Factoral Terms of Trade:** which is barter term of trade multiplied by the reciprocal of an index of the change in cost, expressed in terms of the quantities of the factors used per unit of exports.

$T_f = T_c . \frac{F_{x1}}{F_{x0}}$

Where F_x is the quantity of factors used per unit of exports.

- **Income Terms of Trade:** is derived by barter terms of trade multiplied by an index of the change in export volume:

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

where T_y is the income terms of trade, *Qx* is the index of quantity of exports and P_x is the price index of export.

4.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 4.1

Ans. Q1. Refer to Section 4.3

Ans. Q2. Refer to Section 4.3

Self-Check Exercise 4.2

Ans. Q1. Refer to Section 4.4

Ans. Q2. Refer to Sections 4.4.1 and 4.4.3

Self-Check Exercise 4.3

Ans. Q1. Refer to Section 4.6

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4.11 TERMINAL QUESTIONS

Q1. Write short notes on:

a. Income Terms Of Trade

b. Gains from Trade

Q2. Derive the Offer Curve with the help of the trade indifference curves?

Unit-05

HECKSCHER-OHLIN THEORY OF INTERNATIONAL TRADE

STRUCTURE

5.1 INTRODUCTION

The classical theory of comparative costs, formulated by Adam Smith, David Ricardo, and John Stuart Mill, asserted that a country's comparative cost advantage in trade stemmed from differences in labor productivity (a single-factor approach). However, it failed to adequately explain the underlying reasons for these productivity differences. While variations in relative costs or commodity prices between nations indicate comparative advantage, the classical theory did not address the fundamental cause of these price disparities.

Swedish economists Eli Heckscher (1919) and Bertil Ohlin (1933) expanded upon this concept by offering a more comprehensive explanation of international trade patterns. Their theory did not replace the traditional comparative cost theory but rather reinforced it by clarifying the reasons behind relative commodity price differences and comparative advantages. According to Heckscher and Ohlin, these price variations arise due to differences in factor endowments (availability of production factors) across countries.

5.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain Heckscher Ohlin Theory of International Trade
- List the criticism of the Heckscher Ohlin Theorem
- Elucidate the resource endowment and comparative advantage
- Superiority of Heckscher-Ohlin Theory over the Classical Theory

5.3 HECKSCHER-OHLIN THEORY

The modern theory of international trade is primarily based on the framework developed by Eli Heckscher and Bertil Ohlin. This theory has largely replaced classical and neo-classical trade theories, though it does not imply a fundamental contradiction between the Heckscher-Ohlin model and the comparative cost theory. Instead, the Heckscher-Ohlin approach enhances the traditional perspective by delving deeper into the underlying reasons for differences in relative costs.

Heckscher and Ohlin identified variations in relative factor endowments and factor intensities as the primary determinants of cost differences across countries. Due to this emphasis, their theory is also referred to as the Factor-Proportions or Factor-Intensity Theory. The model suggests that nations abundant in labor will specialize in exporting labor-intensive goods, while those with abundant capital will focus on exporting capital-intensive products.

5.3.1 Assumptions of the Heckscher-Ohlin Theory:

This theory examines a scenario involving two countries, two commodities, and two production factors—labor and capital. While it can be extended to incorporate multiple factors and commodities, such an expansion is only feasible if the number of factors and commodities remains equal.

(i) Production factors are fully mobile within each country but cannot move across borders.

(ii) Both product and factor markets operate under perfect competition.

(iii) Full employment of all production factors is maintained in both countries.

(iv) The production functions for both commodities exhibit linear homogeneity, implying constant returns to scale.

(v) The production techniques in both countries remain unchanged, ensuring stable input-output coefficients in the production functions.

(vi) Consumer preferences and demand patterns for various goods are identical in both countries.

(vii) While the absolute availability of production factors remains constant in both countries, their relative endowments differ. For instance, one country may have abundant capital while the other has a surplus of labor. However, within each country, these factors are qualitatively identical.

(viii) The production functions dictate that the two commodities require different factor intensities—one being capital-intensive and the other labor-intensive. Although

production functions differ across commodities, they remain consistent within each country.

(ix) Factor intensities are fixed and cannot be reversed.

(x) Trade between the two countries is unrestricted and free from barriers.

(xi) Transportation costs are absent, meaning that product prices are solely determined by factor costs.

(xii) Neither country engages in complete specialization in production.

According to the Heckscher-Ohlin (H-O) theory, differences in comparative costs primarily arise due to variations in factor endowments and factor intensities.

5.3.2 Factor Endowments

Regions or countries vary significantly in their availability and distribution of production factors. For instance, Country A might have an abundance of capital but a limited labor force, whereas Country B could possess an ample labor supply but a shortage of capital. In the Heckscher-Ohlin (H-O) model, the concept of 'relative factor abundance' is assessed using two key criteria:

- **The physical criterion of relative factor abundance**
- **The price criterion of relative factor abundance**

5.3.2.1 Physical Criterion

Under this criterion, a country is considered relatively capital-abundant if it has a higher capital-to-labor ratio compared to another country. Thus, Country A is classified as capital-abundant if it meets the following condition:

$$\frac{K_A}{L_A} > \frac{K_B}{L_B}$$

where K and L refer to capital and labour respectively. Bars over K and L signify the fixed factor quantities in each country. The subscripts A and B refer to countries A and B. Similarly the relative scarcity of labour, in physical terms, in country A can be expressed as:

$$\frac{L_A}{K_A} < \frac{L_B}{K_B}$$

For country B, relative labour-abundance can be indicated by:

$$\frac{L_B}{K_B} > \frac{L_A}{K_A}$$

And capital-scarcity in this country can be denoted by:

$$\frac{K_B}{L_B} < \frac{K_A}{L_A}$$

Given the above conditions, H-O theory lays down that country A will produce capital-intensive commodity (say machines) and country B will have a bias in producing labour-intensive commodity (say, cloth). If both the countries produce machines and cloth in the same proportion and production occurs along OR in Fig. 5.1, the country A would be producing at C and country B at D. The points C and D lie on the respective production possibility curves PQ and P_1Q_1 of these two countries.

Since at point C, the slope of country A's production possibility curve is more steep than the slope of the production possibility curve of country B at D, this will imply that MC of producing cloth in country A is higher than the MC of producing cloth in country B. So if the production takes place at points C and D, machines can be produced more cheaply in country A and cloth can be produced more cheaply in country B.

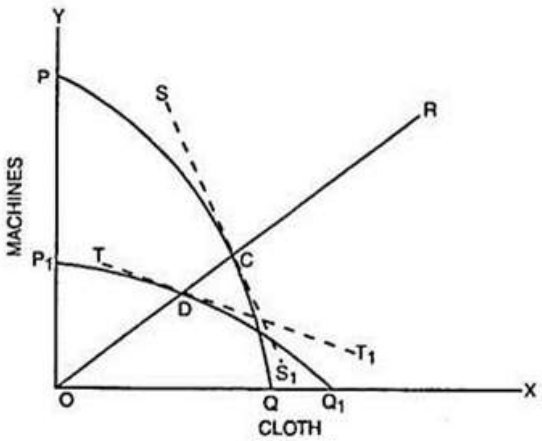

Fig. 5.1

Since country A is capital-abundant and the production of machines is capital-intensive, country A will tend to extend the production of machines. Country B, at the same time being labour-abundant, will tend to extend the production of cloth, which is relatively labour- intensive.

The Heckscher-Ohlin theorem can, however, be valid on the basis of this physical criterion and give the above conclusion only if the consumption pattern in both the countries is identical and the income elasticity of demand for each commodity equals unity. If the demand conditions are different in two countries, the conclusion that capital-abundant countries will export capital-intensive commodity and vice-versa cannot be sustained. This can be shown through Fig. 5.2.

Even in Fig. 5.2, the opportunity cost curves PQ and P_1Q_1 indicate that country A is capital-abundant and country B is labour-abundant. The pattern of demand is different in the two countries. The community indifference curves A_1, A_2 and A_3 indicate demand pattern in country A and the indifference curves B_1, B_2 and B_3 indicate the demand pattern in country B. The iso-revenue curve SS_1 related to country A is less steep than the iso- revenue curve TT_1 for country B, therefore:

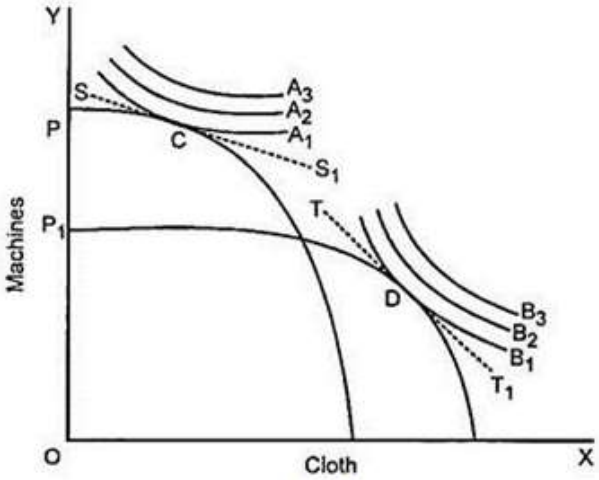

Fig. 5.2

$\frac{Price\ of\ Cloth}{Price\ of\ MAchine}$ in A < $\frac{Price\ of\ Cloth}{Price\ of\ MAchine}$ in B.

Now demand conditions indicate that machines are costly in country A while cloth is costly in country B. Therefore, country A may decide to export cloth and country B may export machines. So the pattern of demand may off-set the Heckscher-Ohlin generalisation that capital-abundant country will export capital-intensive commodity and vice-versa.

5.3.2.2 Price Criterion

The alternative criterion for defining relative factor-abundance is the price criterion. The criterion lays down that a country having capital relatively cheap and labour relatively costly is capital-abundant and vice-versa, irrespective of the physical quantities of capital and labour that they have.

Country A can be called as relatively capital-abundant if $(P_{KA}/P_{LA}) < (P_{KB}/P_{LB})$. Here P denotes prices. K and L signify capital and labour respectively. A and B indicate countries A and B respectively. Similarly country A can be regarded as labour-abundant and capital-scarce, if $(P_{LA}/P_{KA}) < (P_{LB}/P_{KB})$. Now suppose country A is capital-abundant and labour-scarce, the interest rates will be relatively low and wage rates will be relatively higher when compared with interest rates and wage rates in country B. Therefore, country A will decide to produce and export capital-intensive commodity (say, machine) and import labour-intensive commodity (say, cloth). Now this generalization can be proved through Fig. 5.3.

AB is the factor-price line for country A and A_1B_1 is the factor price line for country B. As the slope of AB is greater than that of A_1B_1, capital is relatively cheap in country A and labour is relatively cheap in country B. It signifies that $(P_{KA}/P_{LA}) < (P_{KB}/P_{LB})$. Now the factor price line AB is tangent to the isoquant M of the capital-intensive commodity machine at R. It means country A can produce certain number of units of machine, say 100 machines, by employing OK units of capital and OL units of labour. OL amount of labour is equal to AK amount of capital. In other words, the cost of producing 100 machines in country A in terms of capital is OA.

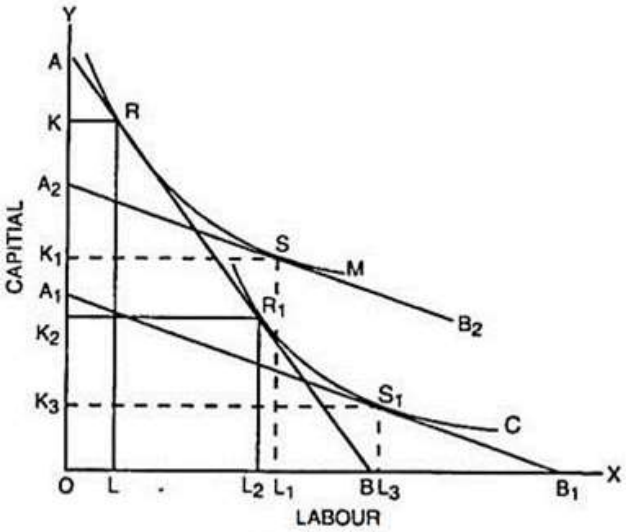

Fig. 5.3

The factor price line A_2B_2 of country B is parallel to A_1B_1. It is tangent to the isoquant M at S. It signifies that country B can produce 100 machines by employing OK_1 units of capital and OL_1 units of labour. It means A_2K_1 units of capital are equal to OL_1 units of labour and the total cost of producing 100 machines in country B is OA_2 in

terms of capital. From this, the conclusion can be derived that the production of machine is more capital-intensive in country A than in country B.

Similarly in the production of one unit of cloth (say, 1000 metres) in country A, OL_2 units of labour and OK_2 units of capital are employed at R_1, the point of tangency between country A's factor price line AB and the isoquant for cloth C representing 1000 meters of cloth. Given this factor combination, OK_2 units of capital are equal to BL_2 units of labour and the cost of producing 1000 metres of cloth in country A in terms of labour is OB.

In country B, given the factor price line A_1B_1, the point of tangency between A_1B_1 and isoquant C is S_1. Country B employs OK_3 units of capital and OL_3 units of labour for producing 1000 metres of cloth. Now the quantity of capital OK_3 equals B_1L_3 units of labour.

The cost of producing 1000 metres of cloth in labour terms is OB_1 in country B. This shows that labour-abundant country B makes more use of labour in producing 1000 metres of cloth than country A. B will specialise in the production and export of cloth while country A will export more capital-intensive commodity machine.

5.3.3 Factor Intensities

The Heckscher-Ohlin theory attributed the comparative differences in costs also to the factor intensities which have been defined by Ellsworth as "relative use made of each one of the two (or more) factors when combined in production." Alternatively, factor intensity means the relative proportions in which two factors, say labour and capital, are combined at each point on a given isoquant. This is explained through Fig. 5.4.

C and M in Fig. 5.4 represent the isoquants of cloth and machine respectively. They are not identical otherwise they would have coincided. They intersect each other at R. That indicates equal factor proportions in producing a given number of units of the two commodities. The portion to the left and above R is capital-intensive and the portion below and to the right of R is labour-intensive. Along isoquant M, the quantities of capital and labour used at R_1 are OK_1 and OL_1 respectively. At R_2, these inputs are OK_2 and OL_3 to have the same output of machines.

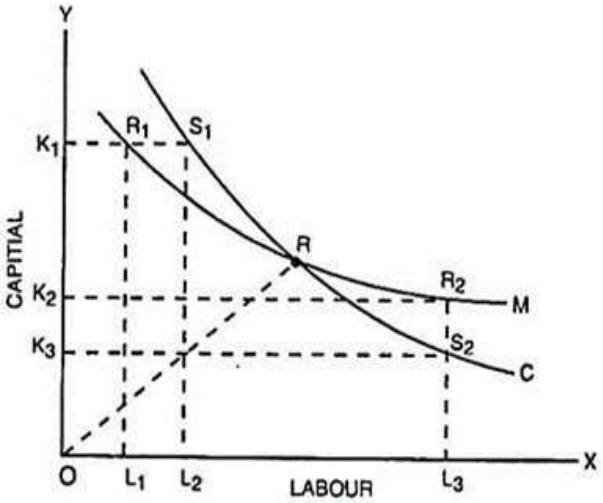

Fig. 5.4

Thus above and to the left of R, the factor combinations involve larger input of capital than labour. The opposite is true on the combinations below and to the right of R. The same applies even in the case of isoquant C. If OK_1 quantity of capital is used, one

unit of machine requires the labour input of OL_1 but one unit of cloth requires OL_2 units of labour along with OK_1 units of capital at point S_1.

Similarly if OK_2 units of capital are employed, one machine can be turned out when labour input is OL_3. At S_2, one unit of cloth needs OL_3 labour input along with a smaller capital input OK_3. It clearly shows that machine is a capital- intensive and cloth is a labour-intensive commodity, throughout the length of isoquants M and C except of course at the point of intersection R.

So the relative factor abundance and factor intensity together determine the comparative differences in costs and accordingly the countries will decide about specialisation and export of specific commodities. On the basis of factor proportions, factor intensities and factor prices, Heckscher and Ohlin made the generalisation that capital-abundant countries will export capital-intensive commodities and labour-abundant countries will export labour- intensive commodities.

Self-Check Exercise 5.1

Q1. Explain the Heckscher-Ohlin theorem?

Q2. Write a short note on Factor Endowment .

Q3. What is meant by factor intensity?

5.4 SUPERIORITY OF HECKSCHER-OHLIN THEORY OVER THE CLASSICAL THEORY:

Heckscher-Ohlin theory does not contradict the Ricardian theory. It rather supplements it as it attempts to investigate the basic forces determining the comparative advantage of one country over the other. However, H-O theory makes some departures from the traditional theory and in the process, effects significant improvements upon the latter in following respects:

(i) **Based on General Theory of Value:** While the classical theory is based upon the labour theory of value, Heckscher-Ohlin model, on the other hand, is necessarily based upon a more general theory of value. It takes into amount both demand and supply forces for determining specialisation and pattern of trade. In contrast, Ricardian theory was very deficient and one-sided. It had relied exclusively upon the supply factors and overlooked completely the demand factors.

(ii) **No Need for Separate Theory:** Ricardo had made a distinction between internal and international trade. On account of factor immobility among different countries, he felt the need for a separate theory of international trade. Even though Heckscher and Ohlin too believe that there are obstacles to international mobility of factors, yet the greater mobility of products tends to neutralise the factor immobility.

In their opinion, the immobility of factors remains only a matter of degree and not of kind and any distinction between international or inter-regional trade is only superficial. In the words of Ohlin, “International trade is but a special case of inter-local or inter-regional trade and there is not substantial difference between

domestic trade and foreign trade. The basis of inter-regional specialisation also follows the principle of comparative cost."

(iii) Ultimate Cause of Trade: The classical theory failed to explain the cause of comparative difference in costs. Heckscher and Ohlin provided a highly plausible cause of comparative differences in costs and consequent international specialisation in production.

(iv) Permanent Basis of Trade: The classical theory implicitly relates the comparative differences in costs to differences in skill and efficiency of labour. Over a long period, there can be international transmission of technical knowledge from one country to another and all differences in costs due to skill, efficiency and technology are likely to be eliminated. It implies that the trade between two countries may come to an end in the long run.

Kelvin Lancaster has, however, pointed out that the trade between countries is not likely to come to an end even if there is perfect transmission of knowledge and techniques because the differences in factor endowments will continue to persist even in the long run. Since the factor movements from one country to the other cannot take place on such a scale that the factor endowment gap can be completely bridged, the comparative cost differences will continue to exist and hence there can be permanent exchange of commodities. It shows that H-O model lays down a permanent basis for international trade.

(v) Two Factors of Production: In the classical comparative costs theory, it was supposed that production involves only one factor of production—labour. The H-O theory, on the opposite, maintains that in a two-country and two- commodity model, production involves two factors of production—labour and capital.

(vi) Stress on Relative Product or Factor Prices: A highly significant difference between the classical and H-O theories is that the former approach consists primarily of propositions related to the relative product prices. The latter, on the contrary, deals with propositions related to the relative factor prices.

(vii) Emphasis on Gains vs. Bases of Trade: The traditional theory emphasises upon the gains accruing to countries from foreign trade. Therefore, the classical theory has useful welfare implication. The Heckscher-Ohlin theory on the opposite, stresses on the analysis of bases of trade between two countries and makes contribution mainly to positive economics.

(viii) Qualitative vs. Quantitative Differences in Factors: The classical theory takes into account only the single factor, labour, and attributes the comparative differences in costs to qualitative differences in labour. The H-O theory, on the other hand, deals with two factors—labour and capital. It assumes an absence of qualitative differences in them. The international trade and specialisation results on account of quantitative differences in factor proportions and factor intensities.

(ix) Production Function: The classical trade theory is based on the differences in the production of specified commodities between the two trading countries. In contrast, the H-O theory gives prominence to differences in their production functions.

(x) Product Specialisation: The comparative costs theory maintains that the comparative advantages of trading countries may or may not lead to complete specialisation in the production and export of respective commodities. On the opposite, the H-O theorem explicitly states that the factor proportions and factor intensities lead to complete specialisation in the production of a specific commodity in the first country and another commodity in the second country. From this viewpoint, the latter theory is more specific and realistic.

(xi) Locational Theory: Haberler points out that the H-O theory gives prominence to the space factor in the international trade through factor endowments of trading countries. He prefers to call this theory as a locational theory. In contrast, the Ricardian-Mill theory treats different countries as a spaceless market. Even from this angle, the H-O theory is an improvement upon the classical theory.

(xii) Distributions of Income and Welfare: Since the classical theory takes into account a single factor of production, the distribution of income remains unchanged. It implies that the welfare of every individual unequivocally increases with trade or else no one is worse off than before. The Heckscher-Ohlin theorem does not make such an unqualified, and unrealistic statement about welfare.

(xiii) Integration between the Theory of Value and Theory of International Trade: The classical theory relies upon the forces of demand and supply in their value theory. But when they come to the trade theory there is a complete neglect of demand factors. So classical approach fails to integrate the theories of value and trade. The Heckscher-Ohlin theory brought about a successful integration between the theories of value and trade.

From the above facts, it becomes clear that the modern theory of international trade does not only make a highly significant break from the traditional analysis but also registers a considerable improvement upon it.

Self-Check Exercise 5.2

Q1. In what respects is it superior to the classical theory?

5.5 CRITICISM OF HECKSCHER-OHLIN THEORY

No doubt, the Heckscher-Ohlin theory has been found to be more exact, precise, scientific and analytically superior to the earlier approaches to the theory of international trade, still it has certain deficiencies for which it has been criticized by many a writer.

(i) Partial Equilibrium Analysis: Haberler although recognized Ohlin's theory as less abstract, yet it has failed to develop a general equilibrium concept. It remains, by and large, a part of the partial equilibrium analysis. This theory seeks to explain the pattern of trade only on the basis of factor proportions and factor intensities, while ignoring several other influences such as transport costs, economies of scale, external economies etc., which too exert influence on the cost of production.

In such a situation, Ellsworth states that "with several causes operating simultaneously upon costs, it becomes a matter of adding up the influence of all cost-reducing and increasing forces to arrive at a net result."

(ii) Oversimplifying Assumptions: This theory is based upon highly over-simplifying assumptions of perfect competition, full employment of resources, identical production function, constant returns to scale, absence of transport costs and absence of product differentiation. Given this set of assumptions, the whole model becomes quite unrealistic.

(iii) Static Analysis: The Heckscher-Ohlin model assumes fixed quantities of factors of production, given production functions, incomes and costs. It means the theory investigates the pattern of international trade in a static setting. The conclusions drawn from such an analysis are simply not relevant to a dynamic economic system.

(iv) Identical Factors: This theory maintains that there are no qualitative differences in factors and that these factors are capable of exact measurement so that factor endowment ratios can be calculated. In the real world, however, qualitative factor differences exist. Moreover, there are more than one variety of each factor. This creates serious complications in the measurement and comparison of costs and the determinations of trade pattern.

(v) Neglect of Product Differentiation: The theory overlooks the role played by product differentiation in international trade. Even when the production agents are identical in two countries, the international trade may still take place due to product differentiation. For instance, the Japanese machines are sold out in the U.S.A. and the American machines are sold in Japan. In this context, Wijanholds opines that factor prices do not determine cost. It is rather the commodity prices that determine factor prices.

Prices of goods are determined by their utility to the buyers (the force of demand) and prices of factors like raw materials, labour etc., are ultimately dependent on the demand and prices of final goods because the demand for them is the derived demand. So Wijanholds states that "prices are the only things we may accept as data. Everything else to be derived therefrom." He regards both Ricardian theory and Heckscher-Ohlin theory as faulty as they related cost to factor prices and neglected the influence of product differentiation on international trade.

(vi) Factor Proportions and Specialisation: The H-O theory suggests that the relative factor proportions (or factor endowments) determine the specialisation in exports of different countries. The capital-abundant countries export capital-intensive goods and labour-abundant countries export the labour-intensive goods. It implies that trade will not take place between such countries or regions as have similar relative factor proportions. But this is not true.

A large part of world trade is between the U.S.A. and the countries of Western Europe despite the fact that all of them have a relative greater capital-abundance and scarcity of labour. The H-O theory cannot provide a complete

and satisfactory explanation of trade in such cases. In fact, the specialisation is governed not only by factor proportions but also by several other factors like cost and price differences, transport costs, economies of scale, external economies etc. The H-O theory was clearly wrong in overlooking these factors.

(vii) **Neglect of Factor Demand:** The H-O theory assumes that the factor prices are determined by the relative factor endowments of a country. It means the rate of interest should be relatively low and wage rates relatively high in a capital-abundant but a labour-scarce country. On this basis, the United States should have a lower structure of interest rate but it is in fact higher because even in that capital-surplus country, the demand for capital too is very strong. In fact, the relative factor prices are influenced not only by their supply but also by the demand for them. The H-O theory failed to take into account the influence of demand for factors on their prices.

(viii) **Factor Mobility:** This theory assumes that there is absence of international mobility of factors. This assumption is not valid. The writers like Williams and Levin have pointed out that the international mobility of factors is actually even more than the inter-regional mobility within the same countries. This is evident from international capital flows from advanced countries to such export sectors in the LDC's as petroleum, minerals, plantations etc.

Similarly the large-scale movement of labour from the Third World countries to the advanced countries has assisted the latter in enlarging their production and export. It is, therefore, clear that H-O theory takes an unrealistic assumption of international immobility of factors.

(ix) **Neglect of Technological Change:** The H-O model assumes identical production function. It implies that the technological conditions in a given country remain unchanged. This assumption again is invalid. There has been continuous improvement in techniques of production both in the advanced and the less developed countries. The neglect of technological change in H-O theory makes this model quite inconsistent with actual reality.

(x) **Factor-Intensity:** This theory gives much prominence to the concept of factor intensity. It is assumed in this model that one good is capital- intensive and the other is labour-intensive. The capital-intensive good remains capital-intensive in both the counties and the labour-intensive good remains labour-intensive in both the countries. It means there can be no reversal of factor-intensity i.e., the same good is capital-intensive in one country while labour-intensive in the other. The empirical evidence on this issue is conflicting. However, if there is reversal of factor-intensity, the whole structure of H-O theory will collapse.

(xi) **Neglect of By-Products:** Sometimes byproducts are even more important than the main final product. The Heckscher-Ohlin theorem, however, provides no explanation how the terms of trade are determined in the case of by-products.

(xii) **Possibility of Trade Even under Identical Proportions:** The factor proportions theory implies that there can be no possibility of international trade when factor proportions between two countries are identical. In fact the identical factor

proportions may not close the possibility of trade if consumer preferences are not identical due to differences in income distribution in two countries.

(xiii) Vague Theory: No doubt H-O theorem attempted to explain the basis reason for comparative advantage of the trading countries, yet the theory is vague and conditional. It depends upon several restrictive and unrealistic assumptions. In the words of Haberler, "With many factors of production, some of which are qualitatively incommensurable as between different countries, and with dissimilar production functions in different countries, no sweeping a priori generalisations concerning the composition of trade are possible."

Undoubtedly, this theory is based upon some unrealistic assumptions, yet Lancaster regards it as of central importance in the theory of international trade because of its objectively and simplicity. According to him, "…model occupies the very centre of international trade theory, for reasons unconnected with its realism, and indeed strengthened by the very properties which have been subject to so much criticism." He goes on further to comment, "It is in fact, the simple model of international trade …just as two-commodity indifference curve is the simple model of consumer's behaviour."

Self-Check Exercise 5.3

Q1. List the points on which Heckscher-Ohlin Theory can be criticised.

5.6 SUMMARY

In this unit, we dealt with the Heckscher-Ohlin theorem which states that differences in factor endowments explain the difference in comparative advantage between countries. A country with relatively more capital than labour would export relatively more capital intensive goods, and another endowed with more labour than capital would export labour intensive commodities. The former would have a comparative advantage in the production of capital using commodities since capital, being more abundant would be a cheaper factor of production in that country. In the next units, we shall discuss price equalisation theorem and some of the attempts at empirical verification of the theories of comparative advantage, classical and Heckscher Ohlin

5.7 GLOSSARY

- **Heckscher-Ohlin theorem:** states differences in factor endowments explain the difference in comparative advantage between countries. A country with relatively more capital than labour would export relatively more capital intensive goods, and another endowed with more labour than capital would export labour intensive commodities. The former would have a comparative advantage in the production of capital using commodities since capital, being more abundant would be a cheaper factor of production in that country.
- **Factor Endowment:** is commonly understood to be the amount of land, labour, capital, and entrepreneurship that a country possesses and can exploit for manufacturing.

- **Comparative Advantage:** The ability of a firm or individual to produce goods and/or services at a lower opportunity cost than other firms or individuals. A comparative advantage gives a company the ability to sell goods and services at a lower price than its competitors and realize stronger sales margins.
- **Labour Intensive:** A process or industry that requires a large amount of labour to produce its goods or services. The degree of labour intensity is typically measured in proportion to the amount of capital required to produce the goods/services; the higher the proportion of labour costs required, the more labour intensive the business.
- **Capital Intensive:** A business process or an industry that requires large amounts of money and other financial resources to produce a good or service. A business is considered capital intensive based on the ratio of the capital required to the amount of labour that is required.

5.8 ANSWER TO SELF-CHECK EXERCISES

Self-Check Exercise 5.1

Ans. Q1. Refer to Section 5.3

Ans. Q2. Refer to Section 5.3.2

Ans. Q3. Refer to Section 5.3.3

Self-Check Exercise 5.2

Ans. Q1. Refer to Section 5.4

Self-Check Exercise 5.3

Ans. Q1. Refer to Section 5.5

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5.10 TERMINAL QUESTIONS

Q1. Explain clearly Heckscher-Ohlin theory of international trade? In what respects is it superior to the classical theory?

Q2. Explain the physical and price criteria related to factor endowment how are they relevant in determining specilasation?

Unit-06

FACTOR PRICE EQUALISATION THEORY

STRUCTURE

6.1 INTRODUCTION

The factor price equalization theory is a significant implication of the Heckscher-Ohlin (H-O) trade model. In a scenario where factors of production can move freely across borders, their prices naturally converge. However, classical economists, along with Heckscher and Ohlin, assumed that factors remain immobile internationally. This raised an important question: how does international trade influence factor prices?

Heckscher argued that trade in goods could serve as a substitute for factor mobility, ultimately leading to the full equalization of factor prices. In contrast, Ohlin acknowledged that trade might only bring about partial convergence in factor prices. Scholars such as Samuelson (1948) and Lerner (1953) further explored the conditions under which factor price equalization could be fully achieved.

6.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain factor price equalization theory of International Trade
- Discuss the obstacles to Factor Price Equalisation Theory

6.3 FACTOR PRICE EQUALISATION THEORY

The factor price equalization theory suggests that a labor-abundant country tends to specialize in exporting labor-intensive goods, as labor is relatively cheaper than capital. Conversely, a capital-abundant country specializes in exporting capital-intensive goods due to the lower cost of capital. As international demand grows, the previously abundant factor becomes scarcer, leading to an increase in its price. Simultaneously, importing goods that require a higher input of the scarce factor helps ease domestic demand pressure, causing its price to decline. Over time, these price adjustments lead to an equalization of factor prices. In this way, free international trade in goods functions as an alternative to the cross-border movement of production factors.

6.3.1 Samuelson's Analysis of Factor-Price Equalisation Theorem:

Paul Samuelson's theory of factor price equalization is based on several key assumptions:

(i) There are two nations, referred to as A and B.

(ii) Both countries produce two goods, labeled X and Y.

(iii) The production of these goods relies on only two factors of production—labor and capital.

(iv) Perfect competition exists in both product and labor markets.

(v) There are no tariffs or transportation costs involved.

(vi) The production function for each good is identical across both countries and exhibits constant returns to scale.

(vii) The two goods have different factor intensities; X is labor-intensive, while Y is capital-intensive. There is no factor intensity reversal.

(viii) The quality of labor and capital is the same in both countries.

(ix) The availability of factors varies between the two nations; country A has an abundance of labor, whereas country B is capital-rich.

(x) Complete specialization does not occur, meaning both nations continue to produce both goods even after trade begins.

(xi) The total supply of production factors remains fixed in each country.

(xii) Both labor and capital are fully employed in each nation.

(xiii) There is no movement of production factors between the two nations.

(xiv) The marginal physical productivity of each factor diminishes.

(xv) Consumer preferences are identical in both countries.

Before engaging in trade, country A has a lower capital-labor ratio, while country B has a higher one. As trade begins, country A, which has abundant labor, exports the labor-intensive good (X), while country B exports the capital-intensive good (Y). The increased export of X from country A leads to a relative shortage of labor, causing wages to rise and increasing the capital-labor ratio.

Conversely, the export of capital-intensive good Y from country B leads to a reduction in the availability of capital, increasing its price (interest rate) and reducing the capital-labor ratio. These adjustments continue until the capital-labor ratios in both nations reach equilibrium. Simultaneously, factor prices also change—wages rise in country A, while interest rates increase in country B—ultimately resulting in the equalization of factor prices across both countries.

6.3.2 Hicksian Analysis of Factor Price Equalisation Theorem:

J.R. Hicks sought to establish a proof for absolute factor price equalization while maintaining the assumptions set forth by Samuelson. According to Hicks, labor costs are lower in the labor-abundant country (A) and higher in the capital-abundant country (B), whereas the cost of capital is higher in country A and lower in country B.

Following trade, country A exports labor-intensive good X, while country B exports capital-intensive good Y. Let lx and ly represent the labor coefficients for X and Y, and kx and ky denote their capital coefficients. Similarly, wa and wb represent wage rates in the two nations, while ra and rb stand for interest rates. It is assumed that trade equilibrium leads to an equalization of unit production costs for both goods across the two countries.

Unit Cost of Commodity X:

$l_x.w_a + k_x\, r_a = l_x.w_b + k_x r_b$

Dividing both sides by k_x

$(l_x/k_x)\, w_a + r_a = (l_x/k_x)\, w_b + r_b$

$r_a - r_b = (l_x/k_x)\, w_b - (l_x/k_x)\, w_a$

$r_a - r_b = (l_x/k_x)\, [w_b - w_a]$ ……..…(i)

Unit Cost of Commodity Y:

$l_y.w_a + k_y\, r_a = l_y.w_b + k_y\, r_b$

Dividing both sides by k_y

$(l_y/k_y)\, w_a + r_a = (l_y/k_y)\, w_b + r_b$

$r_a - r_b = w_b\, (l_y/k_y) - (l_y/k_y)\, w_a$

$r_a - r_b = (ly/ky)(w_b - w_a)$ ……(ii)

From (i) and (ii)

$r_a - r_b = (l_x/k_x)\, (w_b - w_a) = (l_y/k_y)\, (w_b - w_a)$

If trade results in equalisation of factor-intensity in the two products X and Y and $r_a = r_b$, there will also be $w_a = w_b$. It shows that after-trade equilibrium results in the equalisation of factor prices.

The relative factor price equalisation can be explained on the assumption that the value of marginal product (MP) of each factor within each country is equal before trade under the conditions of prefect competition in product and factor markets and constant return to scale.

Country A:

$MPL_{ax} \cdot P_{ax} = MPL_{ay} \cdot P_{ay}$

$$\frac{P_{ax}}{P_{ay}} = \frac{MPL_{ay}}{MPL_{ax}}$$

and $MPK_{ax} \cdot P_{ax} = MPK_{ay} \cdot P_{ay}$

$$\frac{P_{ax}}{P_{ay}} = \frac{MPK_{ay}}{MPK_{ax}}$$

Country B:

$MPK_{bx} \cdot P_{bx} = MPK_{by} \cdot P_{by}$

$$\frac{P_{bx}}{P_{by}} = \frac{MPK_{by}}{MPK_{bx}}$$

and $MPL_{bx} \cdot P_{bx} = MPK_{by} \cdot P_{by}$

$$\frac{P_{bx}}{P_{by}} = \frac{MPL_{by}}{MPL_{bx}}$$

After trade takes place, there is equalisation of MPL and MPK in both the countries.

$MPL_{ax} = MPL_{bx}$, $MPL_{ay} = MPL_{by}$

$MPK_{ax} = MPK_{bx}$, $MPK_{ay} = MPK_{by}$

Hence $(P_{ax} / P_{ay}) = (P_{bx} / P_{by})$ respect of both the commodities in the two countries.

The relative equalisation of factor prices can be explained also through Fig. 6.1. In Fig., the factor-price ratio is measured along the horizontal scale and the commodity-price ratio is measured along the vertical scale. RR is the curve expressing the relation between the commodity price ratio and the factor-price ratio. Before trade, the labour-abundant country A is at the point A on the curve RR where the factor-price ratio P_L/P_K is low at $(P_L/P_K)_A$ and the commodity price ratio is also low at $(P_X/P_Y)_A$ because the labour-intensive commodity X is cheaper than the capital-intensive commodity Y.

On the other hand, the capital- abundant country B is originally at point B on the curve RR. At this point, both the commodity-price ratio and factor-price ratio are high at $(P_X/P_Y)_B$ and $(P_L/P_K)_B$ respectively. Country A has comparative advantage in commodity X and B has comparative advantage in commodity Y. Country A will export the labour-intensive commodity X and B will export the capital-intensive commodity Y.

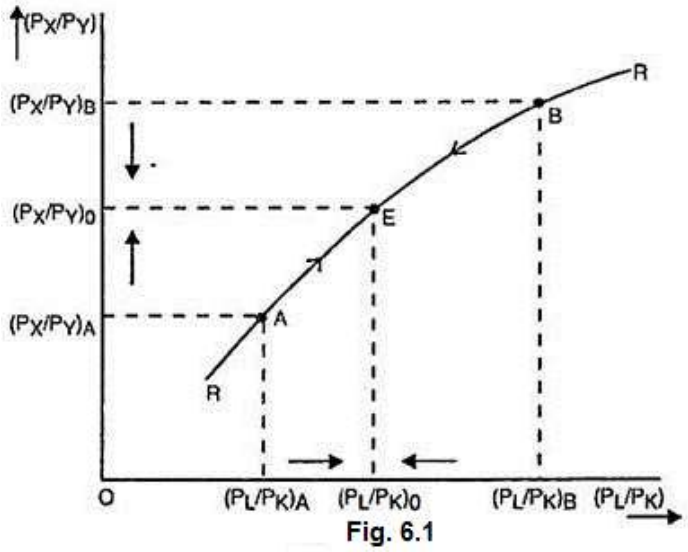

Fig. 6.1

The trade will lead to a rise in K-L ratio in country A and a fall in K-L ratio in country B. The increase in demand for labour relative to capital in A causes a rise in both the ratio of P_L to P_K and the ratio of P_X to P_Y. On the other hand, export of capital-intensive commodity Y by country B causes an increase in the demand for capital relative to labour. It brings about a fall in the ratio of P_L to P_K and also a fall in the ratio of P_X to P_Y.

These changes in factor-price ratio and commodity-price ratio continue until both the countries reach the point E on the curve RR. At this point, the factor- price ratio in both the countries becomes equal at $(P_L/P_K)_0$ and the commodity-price ratio gets equalized at $(P_X/P_Y)_0$. Thus trade results in the equalisation of relative factor prices in the two trading countries.

The relative factor price equalisation can be explained through the use of Edgeworth-type box diagram. First of all the effect of trade on factor- intensity and factor price ratio is analysed in the case of the labour-surplus country A.

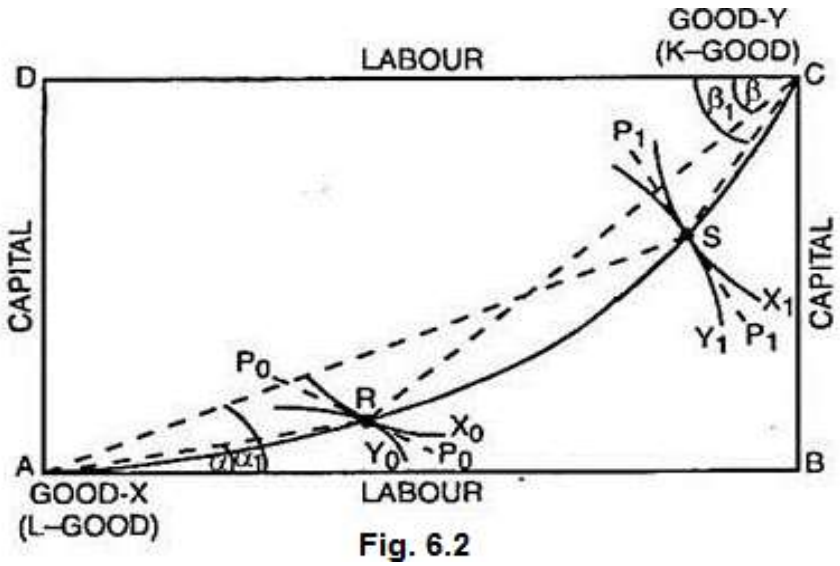

Fig. 6.2

In Fig 6.2, the box ABCD is related to the labour-abundant country A. The longer horizontal scale and relatively short vertical scale signifies that country A is labour-abundant and capital-scarce. AC is the non-linear contract curve. Good X is labour-intensive good (L-good) and good Y is the capital-intensive good (K-good). A is the point of origin for the L-good X and C is the origin for K-good Y. X_0 and X_1 are isoquants related to good X and Y_0 and Y_1 are the isoquants related to good Y. Before trade, equilibrium takes place at R, which is the point of tangency between X_0. Y_0 and the factor-price line P_0P_0.

K-L Ratio in X = Slope of line AR = Tan α

K-L Ratio in Y = Slope of line RC = Tan β

As trade takes place, this country would specialise in the production and export of labour- intensive commodity X. The isoquant related to X commodity shifts to X_1. The equilibrium takes place at S where X_1, Y_1 and the factor price line P_1P_1 are tangent to one another.

K-L Ratio in X = Slope of line AS = Tan α_1

K-L Ratio in Y = Slope of line SC = Tan α_1

Since Tan α_1 > Tan α and Tan β_1 > Tan β it signifies that trade results in an increase K-L ratio in this labour-abundant country in respect of both the commodities. After trade, increased pressure of demand for labour results in an increase in price of labour relative to capital. This is shown by greater steepness of factor price line P_1P_1 than the original factor price line P_0P_0.

The changes in K-L ratio and factor price ratio in a capital-abundant country can be shown through Fig. 6.3. In Fig., the box ABCD shows the capital-abundance of the country B. The vertical scale is longer than the horizontal scale. AC is the nonlinear contract curve. Before trade, the original equilibrium occurs at R where the isoquant X_0 of good X and Y_0 of good Y are tangent to the factor price line P_0P_0.

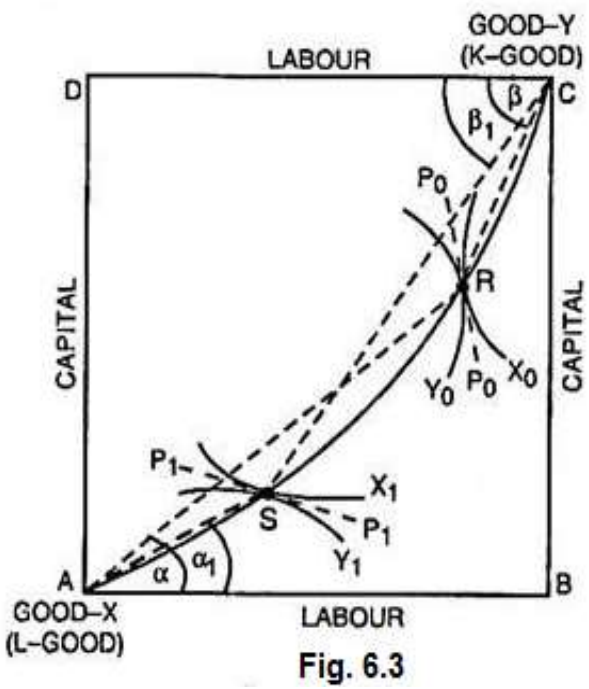

Fig. 6.3

The capital-intensity of two commodities at R is measured as:

K-L Ratio in X = Slope of line AR = Tan α

K-L Ratio in Y = Slope of line RC = Tan β

When trade takes place, this capital-abundant country specializes in the production and export of the K-good Y. As the production of Y is increased, the isoquant concerning this commodity shifts to Y_1. The equilibrium now takes place at S where the isoquants Y_1, X_1 and the factor price line P_1P_1 are tangent to one another.

The capital-intensity of two commodities at S is measured as:

K-L Ratio in X = Slope of line AS = Tan α_1

K-L Ratio in Y = Slope of line SC = Tan β_1

Since Tan α_1 < Tan α and Tan β_1 < Tan β, it signifies that trade results in a decrease in K-L ratio in respect of both the commodities. After trade, increased pressure of demand for capital causes an increase in the price of capital. This is reflected through the reduced steepness of the factor-price line P_1P_1 than the original factor price line P_0P_0. The factor price equalisation after trade can be explained through Fig. 6.4.

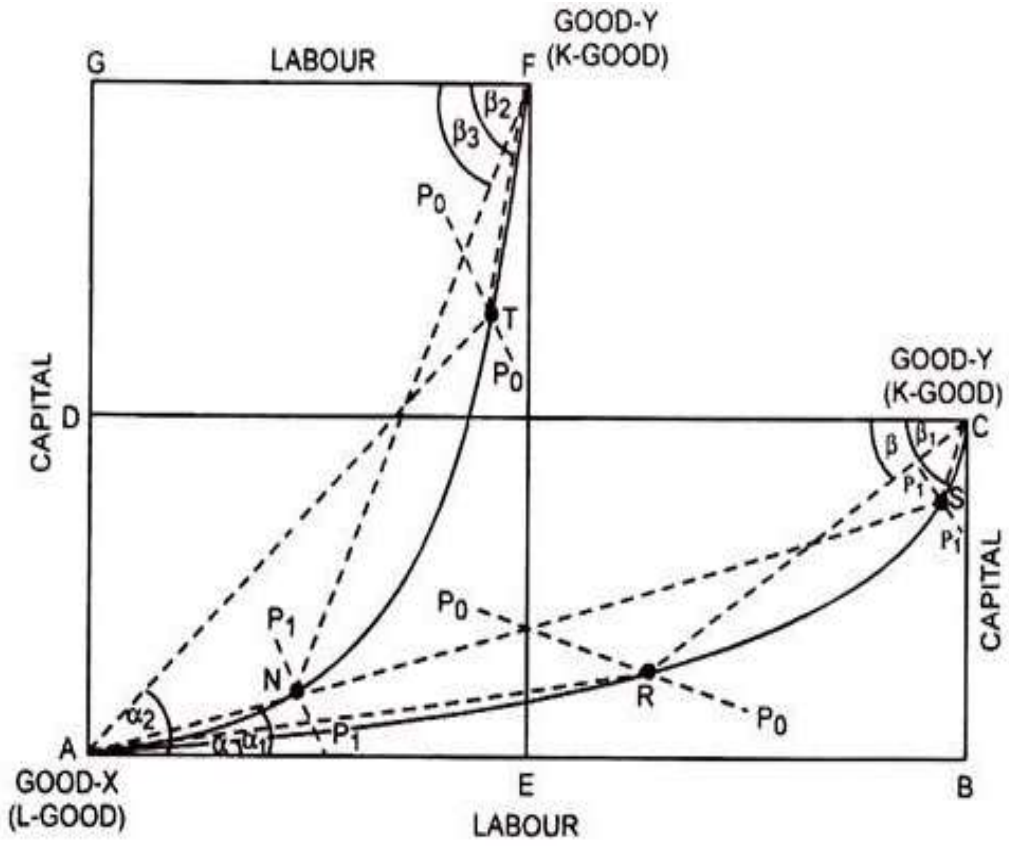

Fig. 6.4

In Fig. 6.4 ABCD is the box related to the labour-abundant country A and AEFG is the box related to the capital-abundant country B. Before trade, the production takes place in country A at R and in country B at T. The capital-intensity of two commodities is measured below.

Before Trade:

K-L Ratio of X in country A=Slope of Line AR=Tan α

K-L Ratio of Y in country A=Slope of Line RC=Tan β

K-L Ratio of X in country B=Slope of Line AT=Tan α_2

K-L Ratio of Y in country B=Slope of Line TF=Tan β_2

When trade commences, the production in country A takes place at S. In country B, it takes place at N.

The capital-intensity of two commodities in two countries can be measured as:

After Trade:

K-L Ratio of X in country A=Slope of Line AS=Tan $\propto_1$

K-L Ratio of X in country A=Slope of Line SC=Tan β_1

K-L Ratio of X in country B=Slope of Line AN=Tan a_1

K-L Ratio of X in country B=Slope of Line NF=Tan β_3

Since Tan α_1 > Tan α and Tan β_1 > Tan β, the K-L ratio increases in both the commodities in country A. At the same time Tan α_1 < Tan α_2 and Tan β_3 < Tan β_2, there is a decrease in K-L ratio in both the commodities in country B.

After trade, K-L ratio in X commodity becomes exactly equal in both the countries because it is measured by the same Tan α_1. It happens because the points S and N lie upon the same line. In case of Y commodity too the capital-intensity is equal in both the countries because the line NF is parallel to the line SC. It means trade leads to equalization of capital-intensity of both X and Y in the two countries.

The increase in capital-intensity in country A occurs because of a rise in the price of labour relative to capital. On the opposite, the decrease in the capital-intensity in country B takes place because the price of capital rises relative to labour. Such changes in prices of the two factors bring about an equality in the factor price ratios in the two countries. In country A, originally the factor price ratio is represented by the slope of the factor price line P_0P_0 which is less steep.

After trade, it becomes steeper as shown by the factor price line P_1P_1. It signifies that there is an increase in price of labour relative to capital. In country B, the factor price line P_1P_1 after trade becomes less steep compared with the original factor price line P_0P_0. It is on account of the fact that capital becomes costly relative to labour. Since the slope of factor price line P_1P_1 at S is exactly equal to the slope of factor price line P_1P_1 at N (these factor price lines are parallel), the factor price ratios have been equalized through trade.

6.3.3 Lerner's Analysis of Factor Price Equalisation Theorem

Lerner analyzed the factor price equalization theorem based on a set of specific assumptions:

(i) There are two countries, A and B.

(ii) Both countries can produce two goods, X and Y, given their respective factor endowments and production techniques.

(iii) The two factors of production are labor and capital.

(iv) The production functions in both countries exhibit linear homogeneity.

(v) Country A has an abundance of labor, while country B has an abundance of capital.

(vi) Perfect competition exists in both countries.

(vii) There are no transportation costs.

(viii) Commodity X is labor-intensive, whereas commodity Y is capital-intensive.

(ix) Factor-intensity reversal does not occur.

Initially, in the labor-abundant country A, the price of labor is lower relative to capital. Conversely, in country B, where capital is more abundant, its price is lower

compared to labor. As a result, country A will specialize in and export the labor-intensive commodity X. With increased substitution of labor for capital, the price of labor will rise while the price of capital will decline, leading to factor price equalization.

Similarly, country B, being capital-abundant, will focus on producing and exporting the capital-intensive commodity Y. The increased use of capital instead of labor will drive up the price of capital, ultimately bringing the factor price ratio to equilibrium in this country as well.

However, if factor-intensity reversal occurs—meaning that commodity X is labor-intensive in country A but capital-intensive in country B—both nations will employ different production techniques for the same good. Since they cannot trade the same product with each other, factor price equalization will not take place.

6.3.4 Kindelberger's Analysis of Factor Price Equalisation Theorem

Kindelberger has explained the factor price equalisation by involving factor proportions, product prices and factor prices. In this regard, he has relied upon the figure given below:

In Fig. 6.5 Part (i), wages and interest are measured along the horizontal scale and capital- labour ratio (K/L) is measured along the vertical scale. The horizontal line AA_1 and BB_1 measure factor proportions in the capital-abundant country A and labour-abundant country B respectively. SS_1 is the schedule related to capital-intensive good steel and CC_1 is the schedule related to labour- intensive good cloth. In Part (ii) of the Fig. 6.5, relative price of cloth is measured along the vertical scale.

The curve PP_1 measures relative price of cloth. The domestic demand conditions determine the production of steel and cloth before trade. Wage rate is lower in country B than in country A, whereas the rate of interest is higher in B than in A. The relative price of cloth in A is R_1D_1 and it is R_2E_1 in country B. As trade takes place, the wage rate will rise in country A and fall in country B. The interest rate, on the other hand, will fall in country A but rise in country B. The relative price of cloth in both the countries will tend to approximate to R_0E_0, when wage-interest ratio becomes equal at R_0.

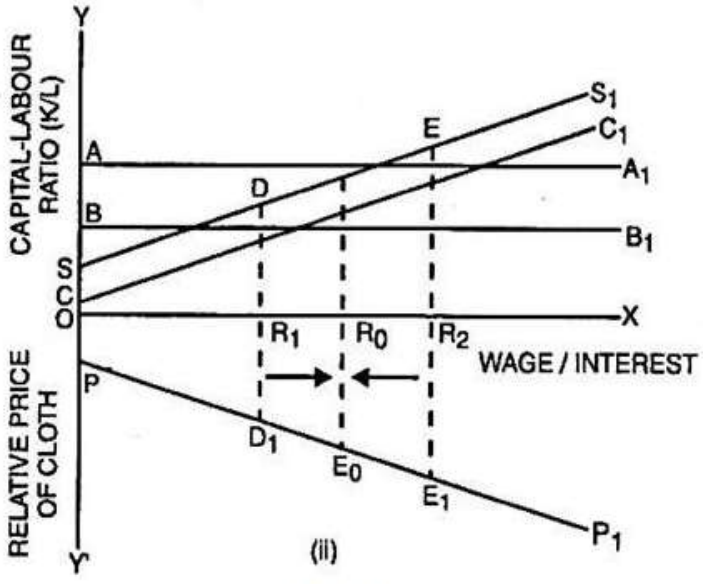

Fig. 6.5

6.3.5 Sodersten's Analysis of Factor Price Equalisation Theorem

Prof, Sodersten recognises that the free trade can lead to the equalisation of relative factor prices in two countries. Neither country specialises completely. It can be explained through Fig. 6.6. In this figure, factor price ratio (w/r) is measured along the horizontal scale. In Part (i) of the Fig, the commodity price ratio (P_x/P_y) is measured along the vertical scale. In part (ii) of the Fig, the factor intensity (K/L) is measured along the vertical scale.

Given that there is absence of complete specialisation in both countries A and B, the line OR in Part (i) of Fig. 6.6 shows a common factor price ratio $(w/r)_0$ and the common commodity price ratio $(P_x/P_y)_0$. In Part (ii) of Fig. 6.6, the lines X and Y represent the capital-intensity of X and Y commodities respectively. The commodity Y has greater capital-intensity $(K/L)_1$ than the commodity X, in case of which capital-intensity is low at $(K/L)_0$.

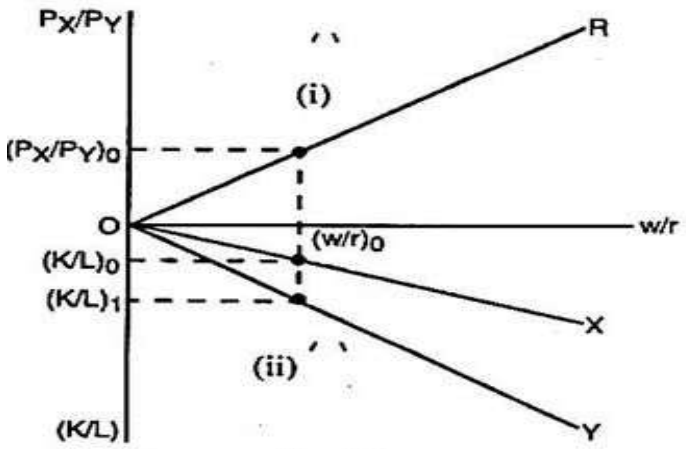

Fig. 6.6

If there is complete specialisation in one or both the countries, there cannot be equalisation of absolute or relative factor prices. It can be shown through Fig. 6.7.

Under autarchy, the range of relative commodity prices for country A is indicated by aa. In case of country B, the range of relative commodity prices is denoted by bb. These two ranges do not overlap; therefore, at least one of the two countries must specialize completely. As both countries specialise completely, the free trade commodity price ratio is α which lies outside the autarchy price ranges. The relative wage rate in country A cannot rise above w_A, whereas that of country B cannot fall below w_B. In such conditions, there cannot be relative factor price equalisation. So there cannot also be absolute factor price equalisation.

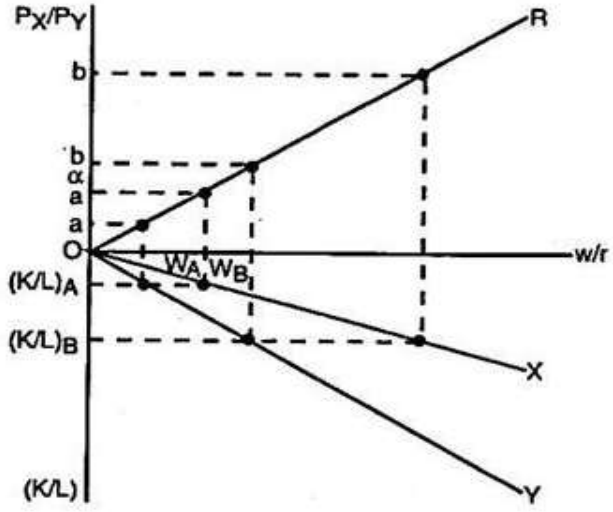

Fig. 6.7

Self-Check Exercise 6.1

Q1. Explain Samuelson's Analysis of Factor-Price Equalisation Theorem

Q2. Discuss in brief Hicksian Analysis of Factor Price Equalisation Theorem

6.4 OBSTACLES TO FACTOR PRICE EQUALISATION THEORY

Paul Samuelson's Factor Price Equalization (FPE) theory has been widely critiqued by economists such as Meade and Ellsworth, who argue that its assumptions are highly restrictive and unrealistic. They contend that only partial equalization of factor prices is feasible, as several significant obstacles prevent complete equalization between trading nations. The key challenges to this theory are outlined below:

(i) Tariff and Non-Tariff Barriers: The theory assumes the absence of trade restrictions, including tariffs and non-tariff barriers. However, in reality, such barriers exist and restrict the free flow of goods and services. Ohlin highlighted this limitation, arguing that these barriers prevent full equalization of factor prices.

(ii) Transport Costs: The FPE theory unrealistically assumes no transportation costs. In practice, the import and export of goods involve transportation expenses, which influence product mobility and impact the comparative advantages of trading nations. These costs create a hindrance to the equalization of factor prices.

(iii) Complete Specialization: The theory is based on the premise that countries produce both traded goods, implying partial or incomplete specialization. However, when countries vary significantly in size, smaller nations may experience complete specialization in a particular product. In such cases, the possibility of full factor price equalization is significantly reduced.

(iv) Differences in Production Functions: Samuelson's theory assumes identical production functions across trading nations. However, even if countries possess similar resources, disparities arise due to variations in technology, natural conditions, and social factors. These differences in production processes further obstruct factor price equalization.

(v) Absence of Perfect Competition: The theory relies on the assumption of perfect competition in both product and factor markets. In real-world markets, competition is often imperfect, with conditions such as oligopoly or monopolistic competition introducing rigidities that prevent equalization of factor prices.

(vi) Economies of Scale: The theory assumes constant returns to scale, meaning production functions are homogeneous of the first degree. However, if increasing returns to scale exist, Meade argues that the theory becomes invalid. This is because economies of scale can lead to monopolistic structures, breaking the assumption of perfect competition, and can also result in complete specialization, further challenging factor price equalization.

(vii) Variability in Factor Supplies: The FPE theorem assumes that factor supplies remain constant in trading nations. In reality, factor supplies fluctuate due to economic growth, migration, and demographic changes. These variations hinder the equalization of factor prices.

(viii) Dynamic Economic Conditions: The theory operates under static assumptions, such as fixed factor endowments, production techniques, and consumption patterns. However, in reality, economies are dynamic, experiencing continuous changes in these variables. According to economists like Kindleberger, Myrdal,

and Södersten, trade between developed and developing countries has often widened, rather than reduced, differences in wages and living standards over time.

(ix) Limitations in Multi-Country and Multi-Factor Trade: The model functions effectively in a simplified framework involving two countries, two goods, and two factors of production. However, in a more complex scenario with multiple countries, goods, and factors, the theory becomes less applicable. If the number of production factors exceeds the number of traded commodities, the model fails to provide clear predictions.

(x) Factor-Intensity Reversal: The theory assumes a fixed relationship between factor abundance and production specialization, meaning a labor-abundant country will always export labor-intensive goods, and a capital-abundant country will export capital-intensive goods. However, if factor-intensity reversal occurs—where a labor-abundant country uses capital-intensive techniques or vice versa—the theory breaks down. The resulting wage changes in both countries may not necessarily lead to factor price equalization.

Self-Check Exercise 6.2

Q1. What are the main obstacles to Factor Price Equalisation Theory

6.5 SUMMARY

The arguments presented indicate that factor price equalization is unlikely to occur in real-world dynamic conditions. However, this does not imply that the theorem is entirely invalid. Rather, it highlights that the theorem's unrealistic assumptions lead to conclusions that do not align with reality. Nevertheless, the exchange of goods between countries can help narrow factor price disparities to some extent. Without trade, these differences would be significantly greater. As Robert Heller aptly stated, international trade acts as a force that "leans against the wind," preventing factor price differentials from becoming even more pronounced in its absence.

6.6 GLOSSARY

- **Factor intensity reversal** means that a good/industry is relatively capital intensive compared with other goods/industries within a country/region but relatively labor intensive com- pared with other goods/industries within another country/region.
- **Factor price equalization:** states that the prices of identical factors of production, such as the wage rate or the rent of capital, will be equalized across countries as a result of international trade in commodities.
- **Edgeworth box,** sometimes referred to as an Edgeworth-Bowley box, is a graphical representation of a market with just two commodities, X and Y, and two consumers.

6.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 6.1

Ans. Q1. Refer to Section 6.3.1

Ans. Q2. Refer to Section 6.3.2

Self-Check Exercise 6.2

Ans. Q1. Refer to Section 6.4

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6.9 TERMINAL QUESTIONS

Q1. Critically examine the factor price equalisation theorem of international trade.

Q2. Discuss the factor price equalisation theorem of international trade. What are the obstacles to factor price equalisation theory?

Unit-07

EMPIRICAL VERIFICATION OF CLASSICAL AND HECKSCHER-OHLIN THEORIES

STRUCTURE

7.1 INTRODUCTION

The last unit was devoted to the discussion of Heckscher-Ohlin Theorem which provide done of the most plausible explanation of comparative advantage enjoyed by a country in international specialization and trade. Another topic that received our attention was the factor Price Equalization theorem which analyses the end result of free trade and international trade relations. The empirical, testing of these theories was done in 1950's to establish their validity. Every theory when subjected to such testing has to establish its empirical validity because although in a theoretical model some degree of abstraction is inevitable, yet its conclusions must come, as close as 'possible to the real world phenomenon.

7.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Empirically verify the Ricardian Comparative Cost Theory
- Explain the Heckscher Ohlin Theory
- Elucidate Leontief Paradox

7.3 EMPIRICAL VERIFICATION OF THEORIES OF INTERNATIONAL TRADE

7.3.1 Empirical Verification of Ricardian Comparative Cost Theory

The pioneering attempt at empirical testing of the international trade theories was made by G D.A. Mac Dougall who in two articles (Economic Journal, December, 1951 and September, 1952), tried to test the classical theory of comparative advantage (cost) by analyzing British and U.S. data for 1937. He devised method of testing the, Ricardian' theory mainly with regard to the pattern of trade, and its proposition that a commodity with lower comparative labour cost would be exported by a country.

Mac Dougall tried to find out pattern of trade of Britain and the U.S.A. with the third countries and to see how far it accorded with, the classical comparative advantage theory. Mac Dougail found that wage rates' in' the U.S. industry were roughly twice as high as, in the British industry. He, therefore, argued that the U.S.A. should be a dominant exporter of these goods vis-a-vis Britain in which her labour productivity was more than twice as high as that in British industry. Britain on the other, hand should be in a happier position in exporting her exports to third countries, vis-a-vis the U.S.A. Where the former's labour productivity was less than twice as high as that in the latter country. It was natural conclude that in the labour productivity was equal to the differential in wage rates between the two countries, their 'share of exports to the third countries would be approximately equal.

In his statistical analysis Mac Dougail discovered that the result in respect of 25 products appeared to be in conformity with the above expectations, since in these cases, the ratio of U.S. to British- exports to third world- countries was higher where the ratio of labour productivity was higher; Mac Dougaill expected the dividing line between the U.S. and British comparative advantage to be difference of 2:1 in their labour productivities. However his analysis revealed the dividing line to be a difference of 2.51 in the U.S... and British labour productivities. This was explained by Mac Dougaill in terms of the imperial preference (the tariff advantage) that Britain enjoyed with some of her political allies.

Jagdish Bhagwati in his 1964 Survey of the Theory of International trade question the relevance of this analysis to the Ricardian theory of comparative advantage, In Mac Dougall's analysis Bhagwati notices two elements:

(a) Unit labour costs (labour productivity) are, correlated to export price ratios.

(b) The relative exports shares of the U.S.A. and Britain in third countries are correlated with relative prices of their exports.

According to Bhagwati the first proposition is clearly based upon the Ricardian "theory', but the second represents a departure from the Ricardian assumption regarding price; trade, relationships.

To test the correctness of position (a) Bhagwati, Marshalls Mac Dougall's data (and that provided by stern and Balassa in later follow up studies and finds- no significant correlation between labour costs and relative export prices. He, therefore, feels that this, amounts to a refutation of Ricardian theory, of comparative advantage rather than its confirmation.

About proposition (b) too Bhagwati observes that there is no theoretical' reason to believe why is a cross section analysis the relative export prices of the country should rise when the relative export pricks of the country fall. 'Different commodities have varying elasticity's of substitution because of different in quality etc.

Ronald Findlay joins issue with Bhagwati on these points, about Bhagwati's-criticism of proposition (a), Findlay says that a final acceptance of either one or the other above results should await further, investigation of this phenomenon. About Bhagwati's criticism of the second proposition Findlay concedes that in its pure form Ricardian theory, stands refuted, though it is not irrelevant to the Ricardian analysis.

Findlay concludes that a single attempt (as that by Mac Dougall) verification is not enough to either confirm or refute a theoretical construct' like the Ricardian theory of comparative advantage.

7.3.2 Heckscher-Ohlin Theory and the Leontief Paradox

In 1953, the Harvard economist Wassily, Leontief read an article before the American Philosophical Society, in which using the input-output analysis developed by himself earlier, he carried out the empirical test of the Heckscher Ohlin theorem. Leontief studied the American export and imports for this purpose.

The general impression is that the U.S.A. being apparently most richly endowed with capital, would export capital intensive goods and import relatively labour intensive ones. However, to everybody's surprise, Leontief study threw up the' conclusion that. In 1947 for which the study was conducted the U.S.A. exported labour intensive products and imported, capital intensive ones. In the words of Leontief "this country, resorts to foreign, trade in order, to economics its capital and dispose of its surplus' labour, rather than vice, versa." This has since come to be known as the Leontief Paradox and has attracted a good deal of attention besides evoking a lot of controversy. The result, of course has 'been an enrichment of 'our knowledge of the whole phenomena. Ronald Findlay half-jokingly ‘One is' almost-tempted to wish for another paradox to be uncovered, so fruitful has been the effect of the first one".

Leontief's methodology of analyzing the problem has also been somewhat novel. He proceeds like this suppose that the U.S.A. reduced its 'total exports' and imports by one million dollars. What would be its effect on the use of her capital and labour (only two factors are taken note of). Third previously imported products would now be replaced With indigenous production and the stop pager of exports of the, same value, would release capital and labour and capital involved in the production of one million dollars’ worth of export and import replacements was estimated.

It was discovered that the stoppage of exports released less capital than was required to produce competitive import replacements (of an equal value), while the former realized more labour than was needed to produce the latter. Thus the capital labour ratio was higher in competitive import replacements than in exports.

Leontief concluded from this analysis that, these figures show that an average million dollars’ worth of pure exports embodies considerably less capital and somewhat, more; labour than would be required to replace from domestic, production an equivalent amount of our competitive imports. America's participation in the international, division,

of labour is based on its specialization on labour' intensive rather than capital intensive lines of production. This was taken by others as refutation of the Heckscher- Ohlin theorem and was given the name of, a paradox. Prof, Leontief based his computations on the 1947 input output table.

Leontief followed up his 1953 study, with another one in 1956 (in the Review of Economics and Statistics). This latter study only confirmed his thesis that American exports were relatively labour intensive.

The Leontief Paradox

While some have tried to criticize Leontief's conclusions (mainly on mythological and statistical grounds), other have offered explanations for his paradoxical findings. We shall briefly refer to them here.

Leontief himself offered an explanation. He in fact refused to take his conclusions as a refutation of the Heckscher Ohlin; theorem. According to him the conventional view about Americans resource endowment rests on the implicit assumption that the relative productivity of labour and capital in the U.S.A. is the same as it is abroad. It is this assumption that has led people to believe that the U.S.A., possessing, a large amount of capital but a relatively small number of workers, would have comparative advantage in-capital intensive goods.

Leontief rejects such an assumption of technological parity and makes the alternative assumption "that in any of American labour is equivalent to Say, three many cars of foreign labour. Then, in comparing the relatively, amounts", of capital and labour possessed by, the United States and rest of the world.....the total number of American workers by three.....

Thus Leontief concluded that he U.S.A. was a relatively labour rich but a relatively capital poor country. "This country resorts to foreign trade to save its capital and to dispose of its relative surplus labour he observed. Though the United States has more capital per labour than other countries, it will be found to be relatively rich in man power and poor in capital.

Leontief thus tried to reconcile his seemingly paradoxical conclusions with the Heckscher Ohlin theorem. However, his explanation of the paradox has been criticized on these grounds. First an important study by Arrow, Chenery, Minha's and Solow on international comparison of production functions established that although international factor efficiency differences did exist, these were neutral between labour and capital. Thus, if American labour is more productive than that abroad, so should also be the case with her capital, and if her capital was more productive to the same degree that her labour was, the paradox would remain unexplained.

Secondly, it is also held that in the absence of empirical evidence to prove that American labour was three times more productive than that abroad, the Leontief hypothesis cannot be accepted.

Thirdly Leontief's Paradox is not logically sound. The Heckscher-Ohlin theorem compares actual imports with actual exports But. Leontief has compared exports with import replacements. He should have compared actual exports with actual imports.

A second attempt to explain Leontief paradox can be traced-to the works of S. Valvanis-Vail, R. Robinson and R.W. Jones. They explain the paradox informs of perverse demand effects. U.S. demand (pattern may, be biased towards capital intensive goods. A higher capital income country may have an income elasticity of demand greater, than unity for such goods while the income elasticity of demand for labour intensive goods may be less than unity. Resultantly, therefore, a capital rich country may have a very strong demand for say, steel (a capital intensive product) so as to make it relatively scare there, thus obliging her to import it from a labour, abundant country, where-weak demand might render it surplus and therefore, cheaper. Hence a capital, intensive product might be exported by a labour rich country while a capital rich country like the U.S.A., might have to export labourintensive goods due to peculiar demand conditions.

This explanation is yet to be proved empirically. Besides, Houthakker has shown in a study that demand, patterns are considerably similar in different countries. It is, therefore, yet to be empirically established that capital rich countries have a disproportionately more intense demand for capital intensive goods so as to force them to import such products.

A third explanation of Leontief paradox is provided by P.T, Ellsworth and is based, upon some empirical studies of B.'S. Minhas. They try to explain it in terms of factors intensity reversals. Thus it is contended that at one set of prices a commodity maybe labour intensive but at another set it might become a capital intensive one. Thus factor endowment alone is not sufficient to explain the pattern of trade. A capital rich country might well be an exporter of a labour intensive good.

It is however important to know empirically whether factor intensity reversals are, a common phenomenon. This question was investigated by B.S. Minhas in 1962- 63. He analyzed the data relating to 24 industries, for which comparable figures for, different countries were available. He could find factor reversals in case of five industries. Besides, in an article in the journal of political Economy (1962) Minhas carried out a ranking of 22 U.S. and Japanese industries according to their intensities. The correlation between the ranking of the two countries should have been significant if strong factor intensity hypothesize was to hold good. However, the correlation was found to be poor, thus indicating the likelihood of factor of reversibility.

Minhas study soon came under sharp attack in a review of Minhas 1963 book, Leontief, using the data from Minhas, found only 17 cases of reversals out of a total of210 possible factor reversals indicated by Minhas within the relevant range of prices. The 1962 article of Minhas was criticized by Ball in 1966, on the ground that the study included industries which are based upon natural resources, in whose case the assumption of identical production- function did not hold well. If these commodities are removed the rank, correlation would become significant Besides, Moroney in 1967 conducted a similar test for some regions ofthe U.S A. and concluded that factor reversibility's were a rare phenomenon. He then concluded that "factor "reversal has much less empirical importance than theoretical interest. Thus factor reversibility is still an open question and cannot be accepted at the moment as a final explanation of the Leontief Paradox.

Another explanation, for which Leontief himself showed some enthusiasm is in terms of the third factor of production 'natural resources', Leontief had conceded in his 1953 study that this third factor was ever present in his analysis, although he stuck to the two-factor case it is felt that the one-time natural-resources rich United States of America is presently relatively poor in this factor. She might, therefore, be importing natural resource intensive goods in order to offset her disadvantage and exporting in return goods that use both capital and labour more intensively. But since, this third and probably the most crucial factor has been excluded from Leontief analysis, it is probable that the U.S. exports are capital and labour intensive but imports are natural resource intensive (the factor in which the U.S.A. is relatively deficient). The import replacements maybe capital-intensive in the U.S.A. but land intensive abroad. U.S. capital may be better substitute for her foreign natural resources than her labour. J. Vanek's empirical "study (1963) had lent support to this thesis. He showed" that capital is complementary with and true gives the appearance of imports being relatively more capital intensive then exports.

The last explanation of Leontief Paradox is in terms of human capital the investment of capital - the, creation of new, skills, and education and training, of labour. Thus labour which is not 'raw' (to use Samuelson's terms) may embody capital. This capital spent on the improvement of labour is human capital as against physical capital (like machines). Leontief, in his 1956 study, (referred to earlier) and some others have found that export industries of the U.S A. accounted for a large proportion of skilled labour than, her import replacement industries. In other words, the former used human capital in larger, quantities, than the latter. Thus if capital is 'defined as both, human and physical exports turn out to be capital intensive, and imports relatively labour intensive and thus the paradox is resolved. Peter Kanen's statistical study of the human capital content in American exports and imports had lent support to this thesis.

7.3.3 Criticism of Leontief's Empirical Study

While there have been attempts to reconcile Leontief's conclusions with the HeckscherOhlin theorem some economists have subjected his study to criticism, mainly on methodological and statistical grounds.

B.C. Swerling had contended that the years, 1947 for which Leontief used U.S. data were an abnormal year as far as tradeflows were concerned. Besides, according to him, the import, and export Figures, were heavily influenced by the capital-labour ratios of a very few industries, which received a dis - proportionately large weightage in the entire picture.

G.A. Leob had pointed out that the difference in capital intensity shown by Leontief analysis between exports and import replacements was hot significant.

N.S. Buchanan had criticized the measurement of capital by Leontief. He says that Leontief takes capital co-efficient in terms of investment, requirement coefficients which do not take into account the durability of capital.

Jagdish Bhagwati points out that in Leontief (as well as other similar studies referred to below) while factor intensities of export and import replacement industries, are carefully analyzed there is no attempt to study the factor endowment of the country

concerned. In his 1956 paper, Leontief had tried to meet some of these criticisms and had considerably refined his analysis, but still the paradoxical remained.

7.3.4 Other Empirical Studies

While the debate on the Leontief findings is still continuing, some other economists have gone ahead with their essentially Leontief type empirical studies to test the validity of the Heckscher Ohlin doctrine. There have been four such studies by R: Bhardwaj based on Indo U.S. trade data, by Stolper and Roshamp for erot-while East Germany, by Tatemoto and Ichimura for Japan and W.F. Wahl for Canada.

In the Bhardwaj study of Indo-U.S. trade, India's exports turn out to be capital-intensive while imports labour intensive—a refutation of Heckscher- Ohlin doctrine and a test support to Leontief analysis. In the Wahl study of Canada U.S. and Canada U.K. bilateral trade, exports are found to be capital-intensive and imports labour-intensive a position which appears to be apparently damaging to the Heckscher Ohlin theorem.

However, the two other studies have lent some support to the Heckscher-Ohlin model Regarding Japan's pattern of trade the two researchers contended that while her exports to the U.S.A. were found to be relatively labour intensive and imports from that country relatively capital-intensive,, this pattern had got reversed so far as Japanese trade with the under-developed countries was concerned. Since Japan at her stage of economic development, stood midway between the under developed economies and the U.S.A. this pattern of trade was' found to be in conformity with factor proportions theory. Similarly were relatively capital-intensive, while her imports were labour-intensive. This, according to them, confirmed the Heckscher Ohlin theory, since East Germany, with major part of her trade with other socialist economies, was more industrialized than her trade partners.

Self-Check Exercise 7.1

Q1. Empirically verify the Ricardian Comparative Cost Theory.

Q2. Criticize Leontief empirical studies?

7.4 SUMMARY

The foregoing discussion clears that the Heckscher Ohlin Theorem stands neither finally confirmed nor completely retired The exercise of testing the theorem empirically is still continuing and the question can be considered to be still very much open. These units provide you a glimpse of the classical, neoclassical and modem theories of trade which have given a broad idea of the supply side of the pure theory of International trade. This case of the trade theory is essentially static in nature. In the following units, we shall introduce some dynamic changes into the trade theory. In the next units we shall discuss the demand side of the theory, so that we may be able to have an integrated picture of all force and factors that have a bearing upon the theoretical framework of trade relations between countries.

7.5 GLOSSARY

- **Leontief Paradox:** a paradox noted in 1954 by the Russian-born US economist Wassily Leontief, that the USA, in spite of being the world's richest country, had exports which were more labour-intensive than its imports. The paradox was

later resolved by showing that in a country which produces more than two goods the high ratio of capital to labour does not imply that its exports are more labour-intensive than its imports.

- **Heckscher-Ohlin Model:** a model of a country's international trade, which shows that a country will export goods which make use of the factors of production it, has in abundance and import goods which use factors of production which are scarce.
- **Principle of Comparative Cost**: states that (a) international trade takes place between two countries when the ratios of comparative cost of producing goods differ, and (b) each country would specialise in producing that commodity in which it has a comparative advantage.

7.6 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 7.1

Ans. Q1. Refer to section 7.3.1

Answer 1. Refer to section 7.3.3

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7.8 TERMINAL QUESTIONS

Q1. Empirically verify the Ricardian Comparative Cost Theory?

Q2. Explain empirical verification of Heckscher-Ohlin theory of international trade?

Unit-08

INTERNATIONAL TRADE UNDER CHANGING CONDITIONS

STRUCTURE

8.1 INTRODUCTION

The theory of international trade that you have been studying must, struck you as somewhat unrealistic, especially in view of its static assumptions. Some of the important variables of the model such as tastes and demand patterns of the consumers, factor supplies, efficiency of the factors of production, techniques of production etc. have been" assumed to be given and unchanging. The lack of dynamic element in the theory limits its usefulness. It has been an important assumption of the trade theory that the factors of production are perfectly immobile between countries. This, therefore, rules out the possibility of changes in factor supplies on account of external causes. The static international trade theory has been; modified in recent years mainly in two directions:

(i) Objection has been raised to free trade (based upon static assumptions) and its alleged advantages have been questioned with the help of mainly dynamic arguments. We shall discuss these arguments in a next unit while analyzing international trade in the context of less developed economies.

(ii) Those variables of the model that were' traditionally assumed to remain constant and fixed have been allowed to change with a view to find out the impact of such a change on the conclusions of the theory. It is with this second type of departure from the present unit is concerned.

8.2 LEARNING OBJECTIVES

After studying this unit you will be able to:

- Explicate the concept of Factor Endowment
- Elucidate the Technological changes
- Describe the International Factor Mobility

8.3 CHANGES IN TASTES

It has been tacitly assumed in the discussion of the trade theory that as a country is opened up for trade, the consumer tastes of the pre-trade period remain unaffected. It is on the basis of such fixed tastes that gain from foreign trade to a country has been demonstrated. However, such an assumption renders the portrayal of the real world situation impossible.

It is a common observation that as a country or community comes into contact with another country or community through trade, the wants of the former undergo a change. This common observation has been formalized into the concept of "Demolition Effect" by Ragnar Nurkse. As the less developed economies are opened up for trade, new goods are imported into them. Their demand for these goods increases. It is thus, that international trade might create new wants. Even in the case of developed economics trade with each other may changes tastes and the pattern of demand.

In the context of unchanging tastes it is quite easy to demonstrate the gain from trade. You must have noted in the next units that as we introduce international trade into a closed economy, we find consumers attaining a higher indifference curve by free trade, yet (and this is important) the consumer indifference map- remains unchanged. However, let we make a more realistic assumption that the consumer tastes do change as we introduce foreign trade into the erstwhile closed economy, we can do longer work with the same indifference map. The change in consumer tastes will mean a change in indifference map itself. Such a change in data will now render it more. difficult to demonstrate the gain from trade which is easy to do when other things including consumer tastes remain unchanged.

Such a demonstration effect of international trade on consumer tastes is important in the context of underdeveloped economics which find themselves to be on the horns of a dilemma when change in consumer tastes pushes up the imports without a corresponding rise the exports of the country. We shall have more to say about it in a latter unit.

Self-Check Exercise 8.1

Q1. What are the effects of change in tastes on international trade?

8.4 CHANGES IN FACTOR ENDOWMENTS

Changes in factor endowments can be classified as

(i) those that result from an autonomous growth in factors of production as a consequence of the increase in capital stock and population, and (ii) the increase in factor supplies as a result of inter-country migration of labour and capital. The first can be termed as internal growth of factors and the latter as growth of factors due to external causes

Take the first type of change in factor endowments. We may analyze such a change under two alternative assumptions: (i) that while the quantity of one factor increases that of the other remains constant, and (ii) that both the factors, grow in the same proportion.

Toanalyze trade under the first assumption we have a neat formulation known as the Rybezynski Theorem. Rybezynski has analyzed the effect of an increase in factor supply on production, consumption and terms of trade. According to him, if the quantity of one factor increases while that of the other is left constant, the output of the commodity using the growing factor more intensively will Increase while that of the one using the other factor more intensively will fall in absolute terms, provided that commodity and factor price are kept constant. It is so because in order to absorb the increased factor at-an unchanged price, it is necessary to get more of the other factor. This can be done only by releasing the other factor from the industry in which it is being used intensively, leading to a decline in the output of such an industry.

This 'happens when, for example, the supply of labour increases all of which goes into the industry being more labour intensive but where production can increase. The latter factor can be attracted only from the capital- intensive industry since its supply is assumed to be constant. Thus, the production will inevitably decline in the capital-intensive industry.

In labour the growing factor of our example above, is more intensively used in the production of exportable the result of the increase in its (labour's) supply would be that the production of exportable would increase while that of the import competing good would decline. Resultantly while the price of the former would fall that of the latter would rise; it is easy to see that in such a situation the terms of trade would move against our country. This can be illustrated with the help of fig. 8.1.

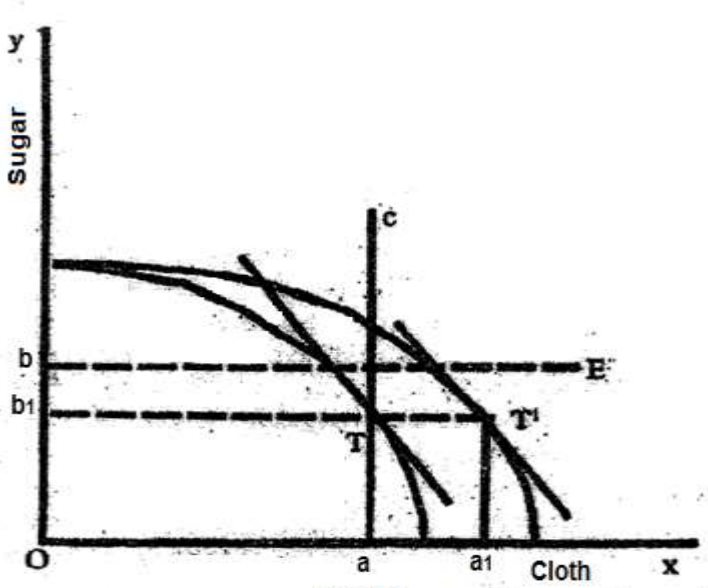

Fig. 8.1

Suppose cloth (the exportable good) is a relatively labour intensive good while sugar is relatively capital intensive. We have assumed above labour to be the growing factor. We have in fig, two production possibility curves, the inner one depicting production possibilities before increase in the supply of labour, and the outer one depicting such possibilities after labour supply has increased. Thus, the growth in labour supply is evidently export biased. (Draw another diagram in which you have the inner curve of the above diagram, to start with. Then suppose that it is capital that might grow and which is used more intensively in the import competing product, sugar. You will, notice that the curve will shift outward but in the import biased fashion).

We have indicated above that factor growth is either import or export biased. However, it can be much more than that. In the Fig. 8.1 above, let us take in point T on (the original production possibilities curve, Draw a right angle with its origin at T point and mark off the boundaries between its two wings. Thus growth along CT is' import-biased, along TE export-biased and in the intermediate zone neutral But if the terms of trade remain unchanged as shown by the new parallel terms of trade line, production will, after the increase in the quantity, of labour take place at 'T, where growth is ultra-export-biased in the sense sugar at T 'than at T point. It is shown by the broken lines that at T point aa_1 more of cloth but bb_1 less sugar is produced. Growth of labour will then lead to a worsening of terms of trade unless the import good is an inferior good for which the demand declines with an increase in the national product If, on the other hand we were to suppose that it is capital which is a growing factor and simultaneously continue assuming that it is used more intensively in the impart competing industry, factor growth could be shown as ultra-import-biased in which case the terms of trade will improve.

Increase in Both Factors-Let us now consider the second type of change in factor supply viz. both the factors, labour and capital, growing in the same proportion other things like technology and consumer tastes. remaining unchanged. In this case it is reasonable to assume that the evenly in all directions as shown in Fig. 8.2. The new production possibilities curve is *AB*. The gain from trade and terms of trade will depend upon the nature of demand. Suppose *P* was the point of equilibrium in production and C in consumption before growth of factors. Therefore, DC represents imports while DP exports. PC is the pre-growth terms of trade.

After the increase in the supply of factors supposes that the terms of trade remain unchanged as shown by the line P'E which is. parallel to PC. Since-there has been a uniform expansion outward in the production possibilities curve, if we draw a ray from origin 0 through P to intersect the curve A'B' the point of intersection will be *P*, the new point of production equilibrium. This is the result of the two assumptions (i) terms of trade remain unchanged and (ii) we have, a linear homogeneous production function (i.e. a given, change in productive factors leads to a proportionate change in output).

So far as demand is concerned, it is quite reasonable to assume that as the production of both the commodities increases more of both of them would be consumed unless one of them is inferior goods. Thus the new consumption point must lie above and to the 'right of G on the PE terms of trade line. 'If, we draw a right angle with its origin at c (say FCG), the consumption point must lie between F and G: Within this segment there are several possibilities,

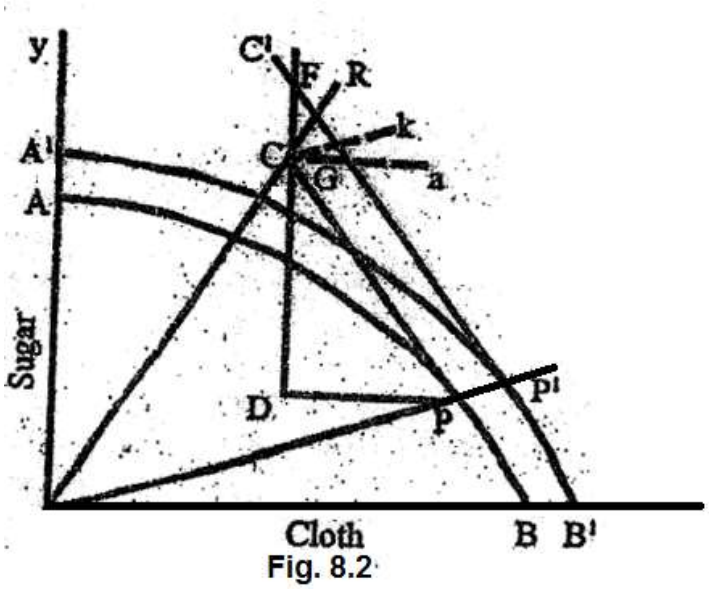

Fig. 8.2

(i) It is quite legitimate to assume that as the price remains unchanged the consumption of both the goods will increase in the same proportion, which would mean that the point of consumption would lie where a ray drawn from the origin and passing through C (the original point of consumption) intersects the terms of trade line PE at K Thus, if the demand is homothetic (i.e. consumption in fixed proportions with expanding income and constant price), the terms of trade are likely to move against the country, since although production and consumption of both the goods increases proportionately yet in absolute terms, while the production of exportable cloth increases more than that of importable sugar, the consumption of the two' increases nearly equally, 'so the exports increases more than imports which amounts to offering much more than accepting from abroad.

(ii) If the demand, is not homothetic, so that the consumption point lies to the left of point AZ the terms of 'trade will deteriorate much more. If we draw a line parallel to PP, say CK' and the point of consumption lies on this line the terms of trade will remain unchanged. If, however, the point of consumption lies, to the right of K' terms of trade will improve; because now consumption favours home-made exportable good more than the importable. The above analysis is based on the assumption that the relative commodity prices remain unchanged.

Self-Check Exercise 8.2

Q1. Explain the Rybezynski's theorem?

8.5 INTERNATIONAL FACTOR MOBILITY

We now take up the second type of change in factors supply viz. that is caused by external factors. You have learnt in the earlier unit that the classical theory, the Heckscher Ohlin theorem and much of the latter-day theoretical discussion on international trade assume factors of production to be internally immobile. However, in an article J.H. Williams had attacked this assumption. He had contended that

international factor mobility being an established fact of actual life could be an important explanation of trade and specialization.

The case of less developed economics is sometimes cited where natural resources for the production of specific goods (such as tea, coffee, rubber etc.) did exist but there was a lack of complementary resources. These were brought by the foreigners, to begin with' It is well-known that foreign capital, enterprise, 'management and labour have, played a significant role in trade between the less developed and the developed countries.

Thus international trade, contrary, to, the orthodox theory, may be given rise to by the international migration of factors. The Heckscher-Ohlin model explains comparative advantage on the basis of resource endowment essentially on static assumptions. But resource endowment can change due to external cause as well. Given sufficient inducement, of higher returns abroad, factors of production do tend to migrate from one country to another.

The effect of factor migration is similar to that of internal growth in that it augments the factor supply in the receiving country. The above discussion on factor growth, whether from internal causes or external, tends to show that a country might gain or lose from trade as its relative factor endowments change depending of course, upon a host of factors. However, it is clear that as we take dynamic changes into account, the impression, erroneously created, that a county possesses a permanent advantage or disadvantage in the production of a good, comes to an end.

Self-Check Exercise 8.3

Q1. Explain the effects of factor mobility on international trade.

8.6 TECHNOLOGICAL CHANGES

The Heckscher-Ohlin model assumed that the production functions in the trading countries are identical. This may be true in, a static world, but in a dynamic world setting innovation and technological changes are continuously taking place. Accordingly that-production function also keeps on changing. Just as in the case of factor growth, technological change can also-be neutral, import-biased or export- biased, depending upon whether the technological change affects all industries equally, only the import competing industry or the export industry, respectively. However the comparative advantage resulting from technical change may not be a permanent one. In the real world a country hitting upon a new production technique may get a head start in a particular line of production but as the rival countries catch up, the comparative advantage of the former declines or completely vanishes.

Technological change generally leads to an increase in output with unchanged combinations of factors inputs or altered combinations of factor inputs increased efficiency of one input in relation to another. Thus, technological change keeps on disturbing the static equilibrium continuously. Such changes are usually more marked in the case of more capital intensive industries.

In order to analyze the effect of technical progress of international trade, it would be useful to understand the meaning of the terms technical progress. It may be defined as an increase in the productivity of the factors so that more output can be produced

with the given inputs, or to put if differently, a given output can be produced with less input.

We have referred to biased (neutral) technical progress above. These may further be analyzed mainly from the point of view of changes in terms of trade and gain or loss from trade. Neutral Technical Changes - Take unbiased or neutral technical change first. We illustrate below the effect of neutral technical changes on the production function.

Neutral or unbiased technical progress may be defined as increase in the marginal productivity of all factors of production in the same proportion as a result of technical change, In other words neutral technological progress in all industries. In the diagram above (Fig. 8.3) iso-quant xx' shows the various combinations of labour and capital needed to produce a certain level of output before technical changes takes place. If factor prices are reflected in the tangential line PP', factors would be combined along ray OA i.e. OC_1 of capital and OL_1 of labour.

After technical progress takes place the new iso-quant (representing the same level of output) would be x^1x^1 which is completely below XX showing thereby that technological progress has economized the use of both labour and capital (cost has decreased.) If after the technical changes, factor prices remain unchanged (i.e. *PP* is parallel to P_1P_1) the factors of production would be combined in the same proportion as before since. The line P_1P_1 is a tangent to the iso-quant x at a point lying along, the ray *OA*. Thus a neutral, technical change implies, employments, of factors in the same proportions as before, provided that factors prices remain constant.

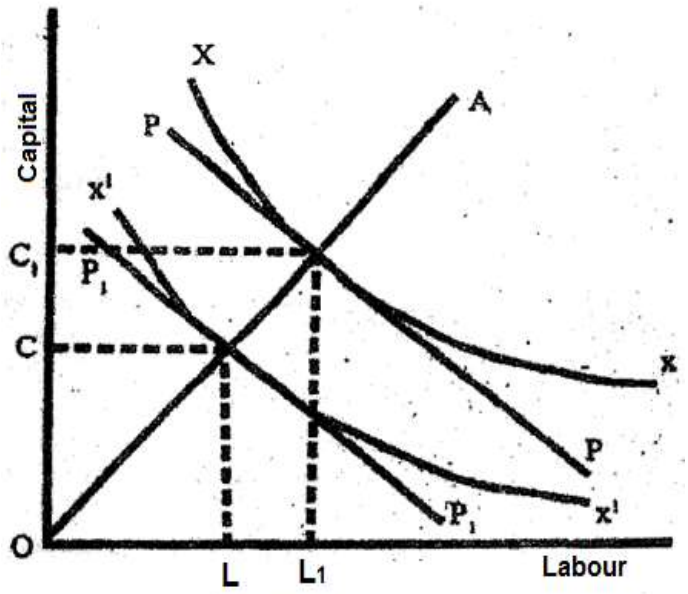

Fig. 8.3

Now the effect of such a technical change on the terms of trade of the country can be illustrated with, the help of Fig. 8.4. Let us take a country which produces two commodities x and y, the former being a capital intensive commodity while the latter a relatively labour intensive one, as shown by the rays OA and OB. The factor prices are shown by the tangential line PP. and xx' and y' are the iso-quants pertaining to commodities x and y respectively.

If now a neutral technical progress place in the industry producing commodity x (manufacturing sector which is capital intensive) the new iso quant will be x_1 x_1 at the unchanged factor prices (P_1P_1 being parallel to PP) the factor proportions in this industry will remain the same as before. Suppose that to start with commodity prices are held constant. That will be feasible only, if the factor prices change. Under the assumed conditions there will be on increase in the price of capital, since the neutral technical change has taken place in a capital intensive industry. As production in this industry is pushed up, the increase in demand for capital raises its prices.

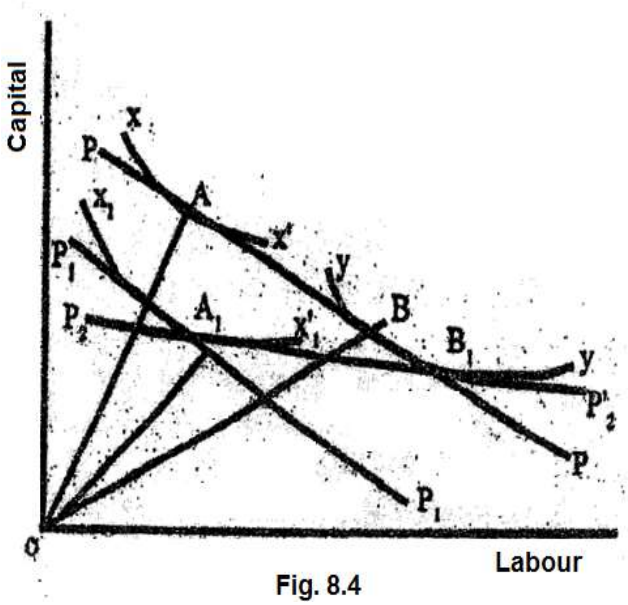

Fig. 8.4

The entrepreneur therefore, try to substitute labour for capital. This happens in both industries and consequently production methods become relatively more labour-intensive. Thus, we have the new factor price ratio shown by the line P_2P_2which is a tangent to the iso- quant x_1x_1 and y_1y_1 at points A_1 and B_1 respectively.

Since technical progress in the capital-intensive x industry leaves the labour-intensive y-industry technically backward, less labour and capital would now be employed in the latter. In the x-industry production will increase because of an increase in the productivity of the two factors. Thus, at constant commodity prices we can expect production to increase in x-industry and to fall in y-industry in the post-neutral technical progress period.

With the quantity of labour and capital remaining unchanged but their efficiency increasing in one industry, national income is sure to rise and with that demand for both x and y goods would increase (unless either of them is an inferior good). As national income increase but production of y commodity fails, there will be an excess of unmatched demand for this commodity. Resultantly, therefore, the relative price of this commodity rises and that of the x-commodity falls.

If the x-commodity is an export product, the terms of trade of the country will deteriorate while if, on the other hand, it is an importable good there will be an improvement in her terms of trade. Thus, neutral- technical change would lend to a deterioration or improvement in the terms of trade depending upon whether' such a change affects the exportable product or the importable one.

8.6.1 Biased Technical change

A biased technological change economizes the use of either of the factors of production. It may be a capital saving innovation or a labour saving one. Similarly, a capital-saving technological change might take place in the "capital-intensive sector of the labour-intensive one.

8.6.2 Capital Saving Innovation

Let us assume that capital-saving technical changed takes place in the capital-intensive industry producing the commodity. Its effects are illustrated in Fig. 8.5. As capital-saving technical change takes place in the capital intensive x-commodity, its effect is shown by a shift of the iso-quant of this commodity in-the diagram So that the new iso-quant is x_1x_1. This means that the production method has become relatively more labour- intensive (OA_1 is to the right of OA). We still assume the factor prices to remain unchanged so that the factor price ratio line P_1P_1 is parallel to PP.

Assume now that commodity prices are initially kept constant and for that the factor prices are allowed to' change. Now since capital becomes more expensive because the technical changes has taken place in the capital intensive industry the new factor price ratio line P_2P_2 is less steep than the original PP line. Resultantly, the production method in both the industries becomes more labour-intensive, as shown by the rays OA_1 and OB_1 which has moved hearer to the horizontal axis on which labour, has been measured.

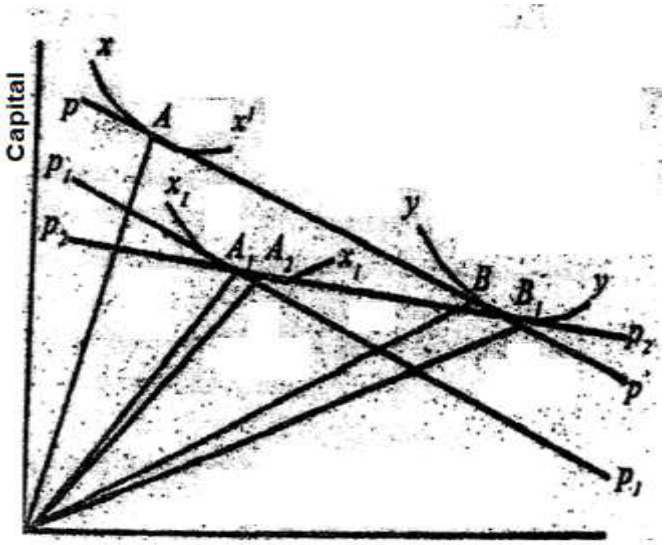

Fig. 8.5

As technical progress has taken place in the x- industry and the- production method has, become more labour-intensive there, production of x-commodity will increase in absolute terms but this will happen at the cost of y-commodity whose production will decline. That happens because labour; moves from the latter to the former, industry. With increase in national income, demand for both the commodities wilt- rise (assuming that neither of the commodities is an inferior good). But since the production of x-commodity has- declined, its price will rise, while that of x-commodity will fall.

It is now clear that if the x-commodity, in 'which technical progress has taken place, is the exportable good, the terms of trade will move against the country. If, on the other hand, it is an importable good the terms of trade will turn in favour of the country. Labour Saving Innovation- If this occurs in the labour-intensive industry producing y-commodity, cost of production in this industry Will decrease and some of the labour would be released. This decrease in cost requires a shift of resources from x-industry to y-industry. Since, you are familiar now with the effects of technical change on different variables of the system. You can yourself trace the effects of a technical change which is labour-saving but occurring in the capital intensive industry.

8.6.3 Transportation Costs

It would be recalled, that while dealing with the Heckscher-Ohlin theory and the Factor Price Equalization theorem, we had assumed the absence of transport costs. In actual world, when goods are imported or exported, shipping, packaging and insurance, charges, which constitute the transportation costs, have to be invariably borne. In such real-world trade two terms f o b and c i f are used. The former, stands, for face on board which tantamount to assuming, that there are no transportation costs while the later stands for cost insurance, and freight' which explicitly takes notice of transportation costs. In trade theory which is essentially static in nature absence of transportation costs is assumed for the sake of convenience.

What happens if we remove the assumption, of absence of transportation costs? It is clear that in the case of the Factor Price Equalization theorem, if there are transportation costs involved in trade between countries commodity trade will not really equalize relative commodity prices in the trading countries. And in the absence of complete commodity price equalization, there would be no equalization of factor prices. Any change in such cost will either reduce the inter-country gap between factor prices (this happens when transportation cost fall) or will raise this gap (obviously when transportation costs increase).

In the case of the Heckscher-Ohlin theory of comparative advantage, the significance of the assumption of transportation costs being absent is equally great. The existence of transportation costs makes the analysis of comparative advantage unnecessarily involved It is to simplify such, analysis that the assumption is made. But such simplification would be assets this sacrifice of a good deal of realism. For, in a dynamic world, where transportation costs not only exist but may change due to technological changes, such Costs may indeed create new trade opportunities where none existed earlier. The example of the opening up of the Sue; Canal for east-west trade, is an example par excellence of how the cheapening of transportation costs between regions of the world gives a strong boost to world trade. The invention of the steam engine and its use in merchant shipping has been considered to be an important influence 'on the growth of intercontinental trade in the last century and the present one.

Self-Check Exercise 8.4

Q1. Elucidate the effects of technological changes on international trade.

8.7 SUMMARY

In the terms of trade theory it can be said that if the transportation and the communications system starts developing (just as in an under- developed country) the transportation cost will fall, the interior of the country will get opened up idle factors of production will get drawn into the productive system, production possibilities will crystallize, and the country will come to have a comparative advantage in trade with other countries in one or some of its products, where in fact none existed earlier because of lack of transportation facilities. With the further development of such facilities, the country's comparative-advantage will become stronger. Similarly, if some geo- political change or a technological change reduces the transportation cost involved

in the inter-country trade; the profile of comparative advantage of different trading countries will change in significant way.

In the present unit we have modified some of the static assumption of the trade theory and tried to find out their effects on terms of trade and trade equilibrium. With that, incidentally we finish the discussion of the pure theory of international trade and allied questions. We shall, in the next unit, turn our attention to the question of trade policy.

8.8 GLOSSARY

- **Comparative Advantage:** being able to produce a good or service at a lower cost than other producers.
- **Rybezynski Theorem:** a theory developed by the Polish-British economist Tadeusz Rybezynski (1923-98) that when considering an economy with two factors of production contributing to two goods, with constant returns to scale, if the input of one factor is increased the output of the good which uses that factor will increase while the output of the other good which uses the other (constant) factor will decrease.
- **Factor Endowment:** the factors of production which a country has available.
- **Capital-Intensive:** (economy or business) which uses a high amount of capital in proportion to labour.
- **Labour-Intensive Industry:** an industry which needs large numbers of workers or where labour costs are high in relation to turnover.
- **Human Capital:** the sum of knowledge and skills in individual people which forms the basis of knowhow and can be increased by training.
- **Iso quants:** An iso quant is the locus of points showing how a given output can be produced with different combinations of inputs.
- **Neutral or unbiased technical progress** may be defined as increase in the marginal productivity of all factors of production in the same proportion as a result of technical change.

8.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 8.1

Ans. Q1. Refer to Section 8.3.

Self-Check Exercise 8.2

Ans. Q1. Refer to Section 8.4.

Self-Check Exercise 8.3

Ans. Q1. Refer to Section 8.5.

Self-Check Exercise 8.4

Ans. Q1. Refer to Section 8.6.

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8.11 TERMINAL QUESTIONS

Q1. "Factor Endowments theory supplements comparative costs theory and does not supplant it." Explain?

Q2. What is International Factor Mobility?

Unit-09

TERMS OF TRADE AND LDCS

STRUCTURE

9.1 INTRODUCTION

Raúl Prebisch's perspective on trade remains one of the most well-known and debated economic concepts. He argued that over centuries, the terms of trade for commodities and food had deteriorated relative to industrial goods. Since developing nations primarily export commodities and food, this persistent decline in value negatively impacts their terms of trade. A decline in the terms of trade implies that if export volumes remain unchanged, these countries experience a reduction in the purchasing power of their exports compared to the cost of imported goods and services.

This idea, commonly known as the Prebisch-Singer thesis, emerged independently but concurrently from the work of Raúl Prebisch and Hans Singer. The thesis is grounded in empirical observations, dating back to the post-World War I period, particularly the 1930s. This trend persisted until the late twentieth century when commodity prices began to show relative improvement.

In this unit, we will explore the Prebisch-Singer thesis on the long-term deterioration of the terms of trade, along with Emmanuel's theory of unequal exchange.

9.2 LEARNING OBJECTIVES

After studying this unit you will be able to:

- Understand the Prebisch-Singer Thesis
- Explain the reasons for secular deterioration terms of trade
- Elucidate the Emmanuel's Theory of Unequal Exchange

9.3 SECULAR DETERIORATION IN THE TERMS OF TRADE

Empirical evidence suggests that the terms of trade have consistently shifted against developing nations. Based on an analysis of the United Kingdom's export data from 1870 to 1940, Raul Prebisch demonstrated a long-term trend where the terms of trade moved against primary commodities and in favor of manufactured and capital goods. This perspective was strongly endorsed by H.W. Singer. The core argument of the Prebisch-Singer thesis is that less developed countries (LDCs) are compelled to export large quantities of primary products to afford manufactured goods from industrialized nations. This deterioration in terms of trade has significantly hindered the economic growth of LDCs.

Prebisch and Singer further argue that although technological advancements have taken place in developed nations, their benefits have not adequately reached LDCs. Additionally, industrialized countries have maintained monopolistic control over the production of manufactured goods, allowing them to manipulate prices in their favor at the expense of LDCs. Apart from the success of OPEC in increasing crude oil prices since the mid-1970s, the prices of agricultural, plantation, mineral, and forest products have seen a relative decline in international markets. As a result, the terms of trade have remained unfavorable for developing countries.

9.3.1 Assumptions in the Prebisch-Singer thesis:

(i) According to Engel's Law, as income levels rise in developed nations, consumer preferences shift from primary commodities to manufactured goods.

(ii) The demand for products in advanced economies grows at a slow pace.

(iii) The export markets for goods from less developed countries (LDCs) are highly competitive.

(iv) In contrast, developed nations have monopolistic control over their export markets.

(v) Wages and prices remain relatively low in LDCs.

(vi) The emergence of substitute goods diminishes the demand for exports from LDCs.

(vii) Manufacturers in developed countries do not pass on the benefits of increased productivity to LDCs through lower prices.

(viii) Economic growth in LDCs is reflected in the income terms of trade.

Singer also highlighted that the growing debt crisis in LDCs has reinforced the long-term deterioration of their terms of trade in two significant ways. First, a substantial

portion of export revenues is allocated to debt repayment rather than being available for imports. Second, due to IMF-driven adjustment policies, LDCs face mounting pressure to increase exports to meet their external debt obligations. This intensifies competition among developing nations, leading to a decline in export prices.

9.3.2 Reasons for Secular Deterioration of Terms of Trade

The persistent decline in the terms of trade for developing nations can be attributed to several key factors:

(i) **Lack of Quality Enhancement in Primary Products:** Raul Prebisch argues that the primary reason for the declining prices of raw materials relative to manufactured goods is that developing countries continue to export commodities like coal, iron ore, tea, coffee, copper, rice, and sugar without significant improvements in their quality. While industrialized nations have made remarkable advancements in the quality of manufactured products, primary goods have remained largely unchanged. This has led to a steady rise in demand and prices for manufactured goods, whereas the value of raw materials has stagnated or declined. However, economists such as Lipsey, J. Viner, and H.G. Johnson challenge this perspective, citing a lack of strong empirical evidence to support it.

(ii) **Unequal Distribution of Technological Gains:** H.W. Singer suggests that technological advancements in developing nations have largely benefited consumers in industrialized countries. Due to competitive pressures, developing nations often export raw materials at lower prices, passing on the benefits of productivity improvements to wealthier nations. Meanwhile, developed countries retain the profits from their technological advancements, benefiting producers rather than consumers. A.M. McLeod attributes this disparity to the weaker bargaining power of developing nations, which allows wealthier economies to maintain monopolistic control over trade benefits.

(iii) **The Phenomenon of Immiserizing Growth:** Jagdish Bhagwati introduces the concept of “immiserizing growth,” which describes a situation where an excessive focus on export-driven growth, without parallel investment in import-substituting industries, leads to deteriorating trade conditions. This results in lower consumption levels and worsening terms of trade for developing countries.

(iv) **Low Income Elasticity of Demand for Primary Goods:** According to Engel’s Law, as incomes rise, the proportion of spending on food and other agricultural goods declines in favor of manufactured products. Since many developing countries rely heavily on agricultural exports, the global demand for these products grows at a slower pace compared to industrial goods. This leads to an oversupply of primary products in international markets, reducing their prices relative to manufactured imports and contributing to unfavorable trade conditions.

(v) **Adverse Effects of Imports on Domestic Industries:** Cheap imports have historically undermined local industries in developing nations. For example, in the 19th century, competition from inexpensive British mill-made textiles devastated India's handicraft sector. As displaced workers turned to agriculture, the reliance

on primary exports increased, further depressing their value in comparison to industrial goods.

(vi) Excess Agricultural Surpluses in Advanced Economies: Industrialized nations often accumulate surplus agricultural goods such as grains, cotton, and dairy products, which are then offloaded in scarcity-stricken regions of Asia and Africa. This practice exerts downward pressure on global agricultural prices, exacerbating the unfavorable trade conditions for developing economies.

(vii) Shortage of Intermediate Goods: S.B. Linder attributes the trade imbalance to the scarcity of intermediate goods in developing nations. Limited access to these essential inputs hampers industrial diversification and expansion. The increasing demand for such goods forces these countries to import them at higher costs, further worsening their trade position.

(viii) Impact of Foreign Investment: Singer argues that trade liberalization and foreign direct investment in developing nations have disproportionately benefited industrialized economies. Investments in primary industries, such as mining and plantations, have not significantly contributed to the development of local manufacturing. This has led to capital outflows, reinforcing the structural trade disadvantages of less developed countries.

(ix) Competition from Synthetic Substitutes: Technological innovations have led to the production of synthetic alternatives to natural products, such as artificial rubber, synthetic textiles, and plastics. This shift has reduced demand for traditional exports from developing nations, lowering their prices and further deteriorating their terms of trade.

(x) Regional Trade Agreements Among Developed Nations: The formation of economic blocs like the European Union has fostered intra-regional trade among industrialized countries, limiting export opportunities for developing economies. This has hindered their trade growth and further exacerbated their unfavorable trade conditions.

(xi) Protective Trade Policies: As some developing nations have started industrializing, developed countries have imposed protectionist measures such as higher tariffs on their manufactured exports. These restrictions have limited market access for developing countries, further worsening their terms of trade.

9.3.3 Criticisms of Prebisch-Singer Thesis

The Prebisch-Singer Thesis has faced several criticisms over time, questioning its validity and applicability:

(i) Lack of a Strong Basis for Inference: The thesis argues that the terms of trade for less developed countries (LDCs) have declined due to their reliance on primary product exports compared to manufactured imports. However, LDCs export a diverse range of goods, including some manufactured products, and they also import primary products. Thus, drawing a firm conclusion based solely on primary versus manufactured exports is problematic.

(ii) **Misrepresentation of Gains and Losses for Primary Exporters**: Economist Jagdish Bhagwati criticized the thesis for underestimating the benefits that primary exporters receive while exaggerating the losses faced by primary producers.

(iii) **Flawed Terms of Trade Index**: The Prebisch-Singer argument relies on an index that is an inverse of the British commodity terms of trade. However, this index does not account for product quality improvements, the emergence of new products, or the role of services such as transportation. Additionally, as Kindleberger pointed out, the conclusions drawn from British trade data between 1870 and 1930 may not be applicable to other European nations.

(iv) **Neglect of Supply-Side Factors**: The thesis primarily considers demand-side influences on terms of trade but fails to acknowledge supply-side changes, which can significantly affect relative prices over time.

(v) **Limited Influence of Monopoly Power**: One of the supporting arguments for the thesis is that industries in developed countries hold more monopoly power than agriculture in developing nations, leading to worsening terms of trade for LDCs. However, empirical evidence does not strongly support this claim, nor does it confirm that monopolies prevent technological benefits from reaching developing countries.

(vi) **Misapplication of Engel's Law**: The thesis attributes the declining demand for primary products in developed countries to Engel's Law, which states that as incomes rise, the proportion of income spent on food decreases. However, this principle applies primarily to food consumption and not necessarily to raw materials, which make up a significant portion of LDC exports.

(vii) **Benefits from Foreign Investment**: The claim that deteriorating terms of trade result from developed countries not passing on productivity gains through lower prices of manufactured goods overlooks the benefits of foreign investment. These benefits include technological advancements, product improvements, and market diversification, which can counterbalance any negative impact on trade terms.

(viii) **Difficulty in Measuring Demand Variations for Primary Goods**: The assumption that declining global demand for primary products caused the deterioration in LDCs' terms of trade between 1870 and 1930 is hard to verify. During this period, global factors such as population growth, industrial advancements, rising living standards, and improved transportation systems influenced demand in complex ways, making it challenging to isolate the impact on trade terms.

(ix) **Export Instability and Price Fluctuations**: While the thesis attributes export instability in LDCs to fluctuations in the prices of primary goods relative to manufactured goods, economist McBeen argued that variations in export quantities, rather than prices, could be the primary reason for this instability.

(x) **Foreign Investments and Domestic Growth**: According to Singer, foreign investments in developing countries expanded the export sector at the expense

of domestic industries. However, this is not always the case. Foreign investment does not necessarily hinder domestic investment, and even if it primarily supports export growth, some economic progress is still better than stagnation. Linking deteriorating trade terms to a lack of domestic growth may be an oversimplification.

(xi) **Questionable Policy Recommendations**: Prebisch advocated for protectionist policies to counteract declining terms of trade. However, imposing tariffs and trade restrictions could lead to retaliatory measures from developed nations, potentially harming LDCs further. In the modern World Trade Organization (WTO) framework, such protectionist strategies are difficult to implement. Instead, LDCs should focus on export promotion, import substitution, favorable trade agreements, and sound fiscal and monetary policies to enhance their trade position.

(xii) **Limited Empirical Evidence**: Studies by economists such as Morgan, Ellsworth, Haberler, Kindleberger, and Lipsey have not consistently supported the hypothesis of long-term deterioration in LDCs' terms of trade. Lipsey observed that although the U.S. experienced fluctuations in trade terms since 1879, there was no clear long-term trend, and post-World War II trade terms remained comparable to pre-World War I levels. While earlier empirical studies challenge the thesis, more recent research provides support for its conclusions.

Self-Check Exercise 9.1

Q1. Explain the Prebisch-Singer Thesis

Q2. List the reasons for secular deterioration of terms of trade.

9.4 EMMANUEL'S THEORY OF UNEQUAL EXCHANGE

There has been a strong opinion among a large group of economists that the international trade has been a source of exploitation of the less developed countries at the hands of advanced countries. Emmanuel attempted to explain the deterioration of terms of trade and consequent exploitation of the less developed country on the basis of unequal international exchange of products between the developed and less developed countries. The basic cause of unequal exchanges between them, other things remaining the same, has been the wide disparities in their wage levels.

In his analysis, Emmanuel has drawn upon the Marxian theory of product pricing which recognises that the workers are paid subsistence wages by the capitalists to generate large surplus value. As there are technological improvements in the developed countries, there is considerable improvement in the productivity per man-hour. The productivity per man-hour in the less developed countries, on the other hand, is far low because of low technical efficiency. These countries have failed to secure the gains of technical progress. It is on account of technical deficiency that the absolute and relative levels of output in the less developed countries remain low.

However, the production costs and product prices in these countries remain low because of the low wage levels. It contrast, the wage levels in developed countries being relatively higher, the costs and product prices are high. In order to import high-

priced products from the developed countries, the less developed countries have to export large quantities of their low-priced exportable goods. In this way, the unequal exchanges between developed and less developed countries arise on account of disparities in their wage levels.

9.4.1 Assumptions of Emmanuel's Theory

Emmanuel's theory of unequal exchange rests upon the following assumptions:

(i) International exchange takes place between two countries A and B. While country A is a developed country, the country B is less developed.

(ii) The exchange is related to two goods, X and Y.

(iii) Capital is mobile between the countries.

(iv) Labour is not mobile between the countries.

(v) While wage level is low in the less developed country, it is relatively high in the developed country.

(vi) Product prices are low in less developed country but these are higher in the developed country.

(vii) The wage levels are independent of product prices.

(viii) The rates of profits are equal in the two countries.

(ix) Each country specialises in the production and exchange of a specific product.

(x) There is free international trade.

(xi) There is an absence of transport costs.

The unequal exchange between A and B and consequent deterioration of terms of trade for the less developed country B may be explained through a hypothetical example. It is supposed that country A specialises in the production of commodity X, whereas B specialises in the production of commodity Y. The people in both the countries consume both the commodities, X and Y.

The wage level in country A is high and it is supposed that people in that country can buy 5 units of X and 5 units of Y, In the low wage country B, people can buy 2 units of X and 2 units of Y. Price in each country is constituted by wage per unit and rate of profit per unit. The rate of profit (π) in both the countries is assumed to be equal. Price of X in country A is denoted by P_{xA} that of Y in country B by P_{yB}.

$P_{XA} = (1+\pi)(5P_x + 5P_Y)$ ……..(i)

$P_{YB} = (1+\pi)(2P_x + 2P_Y)$ ……..(iI)

Dividing (i) by (ii) we get

$$\frac{P_{XA}}{P_{YB}} = \frac{(1+\pi)(5P_X+5P_Y)}{(1+\pi)(2P_X+2P_Y)}$$

$$= \frac{5(1+\pi)(P_X+P_Y)}{2(1+\pi)(P_X+P_Y)} = \frac{5}{2}$$

Or $2P_{XA} = 5P_{YB}$

It shows that country B has to export 5 units of Y in order to import 2 units of X. This signifies that the exchange between the two countries is unequal and the terms of trade are favourable to the developed country A and unfavourable to the less developed country B. It is explained also through Fig. 9.1.

In Fig. 9.1 the terms of trade are measured along the horizontal scale and prices of products in two countries are measured along the vertical scale. Price of product Y of the less developed country B is supposed to be given and it is represented by the horizontal line P_BP_B. Originally price of commodity X in developed country A is expressed through the curve P_{A0} and the terms of trade are T_0.

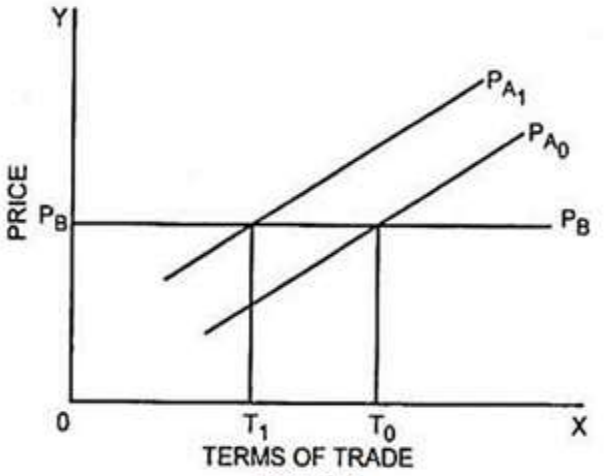

Fig. 9.1

As there is an increase in wages and costs in country A, the price of product X increases and higher price of A is expressed through the price curve P_{A1} and the terms of trade for country B get determined at T_1. Thus there is deterioration of terms of trade for the less developed country owing to the unequal exchange between the two countries.

9.4.2 Criticism of Emmanuel's Theory

The theory of unequal exchange has been attacked on the following main grounds:

(i) Restraints on Mobility of Capital: Emmanuel's theory assumes that capital is mobile between the different countries. In fact, there are several restraints on free international capital flows such as exchange rates, exchange controls, trade and other economic policies as well as the political policies. Therefore, the unequal exchanges can occur not only because of wage differences but also due to differences in the cost of capital in different countries.

(ii) International Immobility of Labour: In this theory, the assumption has been taken that there is lack of mobility of labour among the different countries. It is recognised that continued wage differences are essentially because of labour immobility. No doubt, there are serious obstacles in the mobility of labour internationally but it is a fact that there is substantial movement of both skilled and unskilled labour from the less developed to the developed countries. Although it has led to a small rise in wages in the former, yet there has been no discernible decline in wage levels in the developed countries. The assumption of international immobility of labour taken in this theory is not valid.

(iii) Exploitation of the Less Developed Countries: Emmanuel ascribes the exploitation of the poor countries to unequal exchange. Actually the poor countries suffered from the economic exploitation at the hands of the rich countries on

account of the historical and several other reasons. Despite their exploitation, the unequal exchange could not obstruct their march towards progress.

(iv) Equality of Rate of Profit: Emmanuel's theory assumes the equality of rate of profit in the less developed and developed countries. In fact, the rates of profits are significantly higher in the former due to large size of markets, growth of MNC's and technical advance. In contrast, low rate of capital formation, technical backwards, small extent of market, economic and rigidities and high degree of risk have kept rates of profits relatively low in the less developed countries. So the assumption of equality of rate of profits in the less developed countries is completely unrealistic.

(v) Too Limited Approach: Emmanuel has laid too much emphasis in his theory upon the view that unequal exchange between countries stems exclusively from wage differences between the developed and less developed countries. In fact, unequal exchange between the countries results from a multiplicity of economic, social, technical and institutional factors. All those factors responsible for unequal exchange have been ignored by Emmanuel.

(vi) Restricted Scope: This theory recognises that the unequal exchange between the developed and less developed countries is the outcome of wage difference between them. The wage differences are very little among the developed countries but still unequal exchanges are found among them. In the same way, the wage levels are generally low in the least developed countries but unequal exchanges are present even among them. Emmanuel greatly restricted the scope of his analysis by holding that unequal exchange exists only among the less developed and developed countries.

(vii) No Free Trade: Emmanuel assumes that there are no tariff and non-tariff restrictions upon trade. In fact, both developed and less developed countries take resort to trade restrictions. It was not realistic on the part of Emmanuel to overlook the barriers upon trade imposed by the trading countries.

(viii) Transport Cost: Alike the traditional theorists, Emmanuel too assumes the absence of transport cost. In real life, transport costs are certainly present and they do have considerable effect upon the trade flows among the countries.

Self-Check Exercise 8.2

Q1. Explain the Emmanuel's theory of unequal exchange

Q2. List the assumptions of Emmanuel's theory of unequal exchange

9.5 SUMMARY

Prebisch-Singer Thesis explained that the secular deterioration in terms of trade has been one of the important factors to limit the growth of underdeveloped or developing countries. It assumed that the capacity to import is the main driving force for economic growth in developing countries. He further proved that terms of trade is the most important conduct for transmission of productivity gains from developed countries. Prebisch-Singer Thesis pointed out that on the basis of U.K. terms of trade with poorer countries between 1870 and 1970, there was a secular downward trend in the prices of primary articles relative to prices of final manufactured goods. He explained that in the

developed countries income of the entrepreneurs and other factors of production increased relatively more than their productivity whereas less developed countries have failed not only in sharing productivity gains but also in retaining their productivity gains due to their population pressure, technological backwardness.

Emmanuel attributed the adverse terms of trade in the case of less developed countries only to the unequal exchange resulting from wage differential. However, the writers like Singer, Prebisch and Fleming maintained that historical deterioration of terms of trade of the less developed countries was due to such factors as product improvement in industrial countries, technical progress, surplus production of primary products, low income elasticity of demand, immiserizing growth, impact of imports and foreign investment, growth of synthetic products, regional economic groupings, growth of MNC's and protectionist policies of developed countries. It is too biased to consider wage differences alone as the cause of adverse terms of trade, exploitation and poverty of the less developed world.

9.6 GLOSSARY

- **Terms of Trade**: is the relative price of exports in terms of imports and is defined as the ratio of export prices to import prices.
- **Engel's Law:** states that as household incomes rise, the percentage of income spent on food decreases and more money goes to other goods or services.
- **Immiserizing Growth:** is a theoretical concept introduced by Jagdish Bhagwati in 1958. It describes a scenario where economic growth can paradoxically leave a country worse off than before. This can occur when growth is primarily driven by exports, leading to a deterioration in the country's terms of trade.

9.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 9.1

Ans. Q1. Refer to Section 9.3

Ans. Q2. Refer to Section 9.3.2

Self-Check Exercise 9.2

Ans. Q1. Refer to Section 9.4

Ans. Q2. Refer to Section 9.4.1

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9.9 TERMINAL QUESTIONS

Q1. What is meant by terms of trade. Analysis the impact of adverse terms of trade upon the less developing countries.

Q2. Explain the secular deterioration in the terms of trade of the less developing countries.

Unit-10

TRADE POLICY: FREE TRADE AND PRODUCTION

STRUCTURE

10.1 INTRODUCTION

What should be the appropriate trade policy or commercial policy of a country? The issue was first raised by the classical authors. However, they were the champions of free trade. About two hundred years ago, the giant advocates of free trade—Adam Smith and David Ricardo—argued that free flow of goods and services, i.e., unrestricted trade, would be beneficial. As a result of free trade, each country specialises in the production in which it has a comparative advantage. This will enable each country to reap the gains from trade.

After the World War II (1939-1945), commercial policy underwent a change when the wave of protectionism swept all over the world. It was argued at that time that though some trade is better than no trade, there is no reason to suppose that free trade is the best. A new question, thus, arose: Can protected trade cause a gain from trade? LDCs, by imposing tariff and duties, made an attempt to secure maximum benefits from international exchange of commodities. But the last quarter of the 20th century saw the revival of free trade all over the globe as protection failed to provide enough gains which the countries required.

Actually speaking, a strong wind was then blowing in favour of free trade. International Monetary Fund (IMF) and the World Bank also pampered the free trade philosophy.

10.2 LEARNING OBJECTIVES

After studying this unit you will be able to:

- Understand the term ‘Free Trade’ and ‘Protection’
- Give the arguments for and against Free Trade
- Give the arguments in favour of Protection

10.3 FREE TRADE

International trade that takes place without barriers such as tariff, quotas and foreign exchange controls is called free trade. Thus, under free trade, goods and services flow between countries freely. In other words, free trade implies absence of governmental intervention on international exchange among different countries of the world.

10.3.1 Arguments for Free Trade:

(i) **Encourages Specialization**: Free trade allows countries to take advantage of the international division of labor. Each nation can focus on producing goods in which it holds a comparative advantage, ensuring the most efficient use of resources and cost-effective production.

(ii) **Promotes Economic Growth**: By eliminating trade barriers, global production expands as specialization and efficiency improve. This leads to large-scale manufacturing, reduced costs of goods, and increased access to affordable products. Consequently, free trade raises living standards and contributes to overall global prosperity.

(iii) **Fosters Competition**: A free trade environment promotes a competitive market, compelling domestic industries to enhance efficiency and innovation to maintain their position against foreign competitors. This competition reduces the likelihood of monopolies and prevents consumer exploitation.

(iv) **Access to Essential Goods and Raw Materials**: Free trade enables countries to acquire goods and raw materials that are either unavailable domestically or expensive to produce. This access ensures that nations can procure resources at lower costs and meet their industrial and consumer needs.

(v) **Encourages International Cooperation**: Since free trade discourages monopolization of raw materials by any one country, it fosters economic interdependence and diplomatic stability. This cooperation helps build stronger political and economic relationships among nations.

(vi) **Minimizes Government Interference**: Free trade reduces bureaucratic intervention and minimizes corruption associated with trade restrictions, fostering a more transparent and efficient global market.

Overall, trade restrictions hinder specialization, force countries to rely on less efficient production methods, and lead to higher consumer costs for protected industries.

10.3.2 Arguments against Free Trade:

Following arguments are often cited against free trade:

(i) **Disadvantage for Developing Economies**: While free trade benefits advanced economies, it can be detrimental to less developed countries (LDCs). Historical evidence suggests that free trade often exacerbates economic dependence and underdevelopment, as seen in India's colonial relationship with the UK before 1947.

(ii) **Threat to Domestic Industries**: The influx of cheaper imported goods can outcompete and potentially destroy local industries. This unfair competition weakens domestic businesses, as witnessed during the British colonial rule when India's handicraft industry suffered significantly.

(iii) **Perpetuation of Industrial Inefficiencies**: The principle of comparative advantage encourages nations to specialize in a few industries, leaving inefficient sectors underdeveloped. As a result, free trade does not support the holistic growth of industries within a country.

(iv) **Risk of Economic Overdependence**: A heavy reliance on international trade makes economies vulnerable to global fluctuations. For instance, the Great Depression of 1929–30 in the U.S. had widespread economic repercussions worldwide, impacting even those nations not directly involved in the crisis.

(v) **Infiltration of Harmful Goods**: Free trade may lead to the importation of harmful or undesirable products, such as drugs or other detrimental goods, which can negatively affect public health and safety. Governments may need to impose trade restrictions to regulate such imports.

Due to these concerns, many developing countries have adopted trade restrictions post-World War II to protect their national interests and promote economic stability.

Self-Check Exercise 10.1

Q1. What is meant by Free Trade?

Q2. Give the arguments for and against Free Trade.

10.4 PROTECTION

By protection we mean restricted trade. Foreign trade of a country may be free or restricted. Free trade eliminates tariff while protective trade imposes tariff or duty. When tariffs, duties and quotas are imposed to restrict the inflow of imports then we have protected trade. This means that government intervenes in trading activities.

Thus, protection is the anti-thesis of free trade or unrestricted trade. Government imposes tariffs on ad valorem basis or imposes quota on the volume of goods to be imported. Sometimes, export taxes and subsidies are given to domestic goods to protect them from foreign competition. These are the various forms of protection used by modern governments to restrict trade.

Now an important question arises what forces the government to protect trade? What are the chief arguments for protection? Can protection deliver all the goods that a nation needs?

10.4.1 Arguments for Protection:

The concept of protection is not a post-Second World War development. Its origin can be traced to the days of mercantilism (i.e., 16th century). Since then various arguments have been made in favour of protection.The case for protection for the developing countries received a strong support from Argentine economist R.D. Prebisch and Hans Singer in the 1950s. All these arguments can be summed up under three heads:

(i) Fallacious or dubious arguments;

(ii) Economic arguments; and

(iii) Non-economic arguments.

(i) Fallacious Arguments: Fallacious arguments do not stand after scrutiny. These arguments are dubious in nature in the sense that both are true. 'To keep money at home' is one such fallacious argument. By restricting trade, a country need not spend money to buy imported articles. If every nation pursues this goal, ultimately global trade will squeeze.

(ii) Economic Arguments:

(a) Infant industry argument: Perhaps the oldest as well as the cogent argument for protection is the infant industry argument. When the industry is first established its costs will be higher. It is too immature to reap economies of scale at its infancy. Workers are not only inexperienced but also less efficient. If this infant industry is allowed to grow independently, surely it will be unable to compete effectively with the already established industries of other countries.

Thus, an infant industry needs protection of a temporary nature and over time will experience some sort of 'learning effect'. Given time to develop an industry, it is quite likely that in the near future it will be able to develop a comparative advantage, withstand foreign competition and survive without protection. It is something like the dictum: Nurse the baby, protect the child, and free the adult. Once an embryonic industry gets matured it can withstand competition. Competition improves efficiency. Once efficiency is attained, protection may be withdrawn. Thus, an underdeveloped country attempting to have rapid industrialisation needs protection of certain industries.

However, in actual practice, the infant industry argument, even in LDCs, loses some strength. Some economists suggest production subsidy rather than protection of certain infant industries. Protection, once granted to an industry, continues for a long time. On the other hand, subsidy is a temporary measure since continuance of it in the next year requires approval of the legislature.

Above all, expenditure on subsidy is subject to financial audit. Thus, protection is something like a "gift". Secondly, protection saps the self-sufficiency outlook of the protected industries. Once protection is granted, it becomes difficult

to withdraw it even after attaining maturity. That means infant industries, even after maturity, get 'old age pension'. In other words, infant industries become too much dependent on tariffs and other countries. Thirdly, it is difficult to identify potential comparative advantage industries. A time period of 5 to 10 years may be required by an industry to achieve maturity or self-sufficiency. Under the circumstances, infant industry argument loses force.

In view of these criticisms, it is said by experts that the argument "boils down to a case for the removal of obstacles to the growth of the infants. It does not demonstrate that a tariff is the most efficient means of attaining the objective." These counter-arguments, however, do not deter us to support the growth of infant industries in less developed countries by means of tariff, rather than subsidies.

(b) Diversification argument: As free trade increases specialisation, so protected trade brings in diversified industrial structure. By setting up newer and variety of industries through protective means, a country minimises the risk in production. Comparative advantage principle dictates narrow specialisation in production.

This sort of specialisation is not only undesirable from the viewpoint of economic development, but also a risky proposition. Efficiency in production in some products by some countries (e.g., coffee of Brazil, milk product of New Zealand, oil of Middle East countries) results in overdependence on these products.

If war breaks out, or if political relations between countries change, or if recessionary demand condition for the product grows up abroad, the economies of these industries will be greatly injured. Above all, this sort of unbalanced industrial growth goes against the spirit of national self-sufficiency. Protection is the answer to this problem. A government encourages diverse industries to develop through protective means. However, a counter-argument runs. Politics, rather than economics, may be the criterion for the selection of industries to be protected in order to produce diversification at a reasonable cost. But, one must not ignore economics of protection.

(c) Employment argument: Protection can raise the level of employment. Tariffs may reduce import and, in the process, import-competing industries flourish. In addition, import- substituting industries—the substitution of domestic production for imports of manufactures—develop. The strategy of import-substituting industrialisation promotes domestic industry at the expense of foreign industries. Thus, employment potential under protective regime is quite favourable. In brief, tariff stimulates investment in import-competing and import substitution industries. Such investment produces favourable employment multiplier. But cut in imports following import substituting industrialisation strategy may ultimately cause our exports to decline.

(d) Balance of payments argument: A deficit in the balance of payments can be cured by curtailing imports. However, imports will decline following a rise in tariff rate provided other trading partners do not retaliate by imposing tariff on a country's export. However, import restrictions through tariff may be uncalled for if the balance of payments crisis becomes serious and chronic. In view of this and other associated problems of tariff, it is said that tariff is a second best policy.

(e) Anti-dumping argument: Usually, we hear about unfair competition from firms of low-cost countries. One particular form of unfair competition is dumping which is outlawed by international trade pacts, such as WTO. Dumping is a form of price discrimination that occurs in trade. Dumping occurs when a country sells a product abroad at a low price because of competition and at a high price in the home market because of monopoly power. In other words, dumping is a kind of subsidy given to export goods. This unfair practice can be prevented by imposing tariff. Otherwise, workers and firms competing with the dumped products will be hit hard.

(f) Strategic trade advantage argument: It is argued that tariffs and other import restrictions create a strategic advantage in producing some new products having potential for generating some net profit. There are some large firms who prevent entry of new firms because of the economies of large scale production. Thus, these large firms reap pure profits over the long run during which new firms may not dare enough to compete with these established large firms. Thus, the large scale economies themselves prevent entry of new firms.

But as far as new products are concerned, a new firm may develop and market these products and reap substantial profit. Ultimately, successful new firms producing new products become one of the few established firms in the industry. New firms showing potential for the future must be protected. “If protection in the domestic market can increase the chance that one of the protected domestic firms will become one of the established firms in the international market, the protection may pay off.”

(iii) Non-Economic Arguments:

(a) National defence argument: There are some industries which may be inefficient by birth or high cost due to many reasons and must be protected. This logic may apply to the production of national defence goods or necessary food items. Whatever the cost may be, there is no question of compromise for the defence industry since ‘defence is more important than opulence’. Dependence on foreign countries regarding supply of basic food items as well as defence products is absolutely unwise.

However, objections against this argument may be cited here. It is difficult to identify a particular item as a defence industry item because we have seen that many industries— from garlic to clothespin—applied for protection on defence grounds. Candlestick-maker (for emergency lighting) and toothpick-maker (to have good dental hygiene for the troops) demanded protection at different times at different places. A nation which builds up its military strength through tariff protection does not sound convincing. Thus, tariff is a second-best solution.

(b) Miscellaneous arguments against protection: There are some good ‘side effects’ or ‘spillover effects’ of protection. This means that it produces some undesirable effects on the economy and the basic objective of protection can be attained rather in a costless manner by other direct means other than protection. That is, protection is never more than a second-best solution.

Firstly, protection distorts the comparative advantage in production. This means that specialisation in production may be lost if a country imposes tariff. All these lead to squeezing of trade. Secondly, it imposes a cost on the society since consumers buy goods at a high price. Thirdly, often weak declining industries having no potential future stay on the economy under the protective umbrella. Fourthly, international tension often escalates, particularly when tariff war begins.

Usually, a foreign country retaliates by imposing tariff on its imports from the tariff-imposing country. Once the retaliatory attitude (i.e., 'beggar-my-neighbour policy') develops, benefits from protection will be lost. Finally, protection encourages bureaucracy. Increase in trade restrictions means expansion of governmental activity and, hence, rise in administrative cost. Bureaucracy ultimately leads to corruption.

Self-Check Exercise 10.2

Q1. Explain the term 'Protection'.

Q2. Give the arguments in favour of Protection.

10.5 SUMMARY

The classical golden age of free trade no longer exists in the world. But, free trade concept has not been abandoned since the case for free trade is strongest in the long run. Protection is a short term measure. Thus, the issue for public policy is the best reconciliation of these two perspectives so that gains from trade (may be free or restricted) become the greatest.

In recent times (July 2008), most of the countries (153) are members of the World Trade Organisation (WTO) which favour more free trade than restricted trade. This philosophy gathered momentum in the Dunkel Draft and General Agreement on Tariffs and Trade (GATT) negotiations. The aims of both the GATT (abolished in 1995) and now the WTO are trade liberalisation rather than trade restrictions.

10.6 GLOSSARY

- **Free Trade:** implies absence of governmental intervention on international exchange among different countries of the world. In other words, international trade that takes place without barriers such as tariff, quotas and foreign exchange controls is called free trade.
- **Protection**: means restricted trade. Thus, protection is the anti-thesis of free trade or unrestricted trade. Government imposes tariffs on ad valorem basis or imposes quota on the volume of goods to be imported.

10.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 10.1

Ans. Q1. Refer to Section 10.3

Ans. Q2. Refer to Sections 10.3.1 and 10.3.2

Self-Check Exercise 10.2

Ans. Q1. Refer to Section 10.4

Ans. Q2. Refer to Section 10.4.1

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10.9 TERMINAL QUESTIONS

Q1. What is free trade? Give arguments in its favour and against it.

Q2. Explain the term ‘Protection’. On what ground is it justify.

EFFECTS OF TARIFFS-I

STRUCTURE

11.1 INTRODUCTION

Up till now you have been studying the theory of free trade. It was demonstrated in one of the units how, free trade is better than no trade at all. However, free trade argument has at times been bitterly criticized and state intervention advocated. States intervention can take different forms e.g. protection to indigenous industries through tariffs, quotas and other quantitative trade restrictions, customs, unions etc.

Presently we shall be discussing the effects of tariffs here; leaving the discussion of other forms of commercial policy to later units. Among various forms of state intervention tariffs are the most important. A tariff is a duty or tax imposed on a commodity when it crosses the borders of a country. During the 18th and the 19th centuries, tariffs (import duties) were used mainly to raise government revenues. In

1850's, for example, 90 to 95 per cent of the federal revenues of the U.S.A. came from the tariffs.

11.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Enlighten the effects of tariff on the different economic activities under partial equilibrium
- Understand the effects of tariffs under general equilibrium

11.3 EFFECTS OF TARIFFS UNDER PARTIAL EQUILIBRIUM

When a small country imposes a tariff on an imported product that competes with goods produced by its small domestic industry, the tariff does not influence international prices (due to the country's limited market size) or have a significant impact on the broader economy (since the industry is relatively small). In such a scenario, partial equilibrium analysis, which focuses on the specific market for the product in question, serves as the most suitable approach.

Assumptions:

The effects of tariffs under a partial equilibrium system can be analysed on the basis of the following set of assumptions:

(i) The demand and supply curves of the given commodity are concerned with home country that imposes import tariff.

(ii) The given demand and supply curves remain constant.

(iii) There is no change in consumers' tastes, prices of other commodities and money income of the consumers.

(iv) There is an absence of technological improvements, externalities and other factors that result in changes in cost conditions.

(v) No tariff is imposed by the home country on the import of materials that are required for producing the given commodity.

(vi) Imported product and home-produced product are perfect substitutes.

(vii) There is no change in the foreign price of the commodity.

(viii) There is an absence of transport costs.

(ix) The foreign supply curve of commodity is perfectly elastic.

(x) Domestic production of commodity takes place at increasing costs.

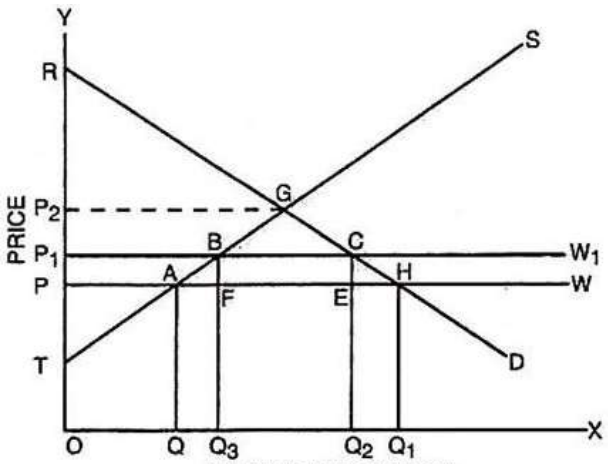
Kindelberger has mentioned eight effects of tariff in a partial equilibrium approach. These include: 1. Production Effect 2. Consumption Effect 3. Revenue Effect 4. Redistribution Effect 5. Terms of Trade Effect 6. Competitive Effect 7. Income Effect 8. Balance of Payments Effect.

These effects are explained below:

1. Production Effect:

Tariffs are often imposed to shield domestic industries from foreign competition. By limiting the influx of imported goods, tariffs create an opportunity for local producers to expand the production of import substitutes. This protective or production effect of tariffs is referred to by Ellsworth as the import-substitution effect. To illustrate the production and related effects using a diagram, it is assumed that the global supply of the given commodity is perfectly elastic, meaning it is available at a constant price. Consequently, the world supply curve remains perfectly elastic. On the other hand, domestic production is assumed to occur at increasing costs, leading to an upward-sloping domestic supply curve. Meanwhile, the domestic demand curve, as is typical, slopes downward.

In Fig. 11.1, demand and supply are measured along the horizontal scale and price along the vertical scale. D and S are the domestic demand and supply curves of the given commodity respectively. Originally PW is the world supply curve of the commodity and the pre-tariff price is OP. At the price OP, the domestic supply is OQ and demand is OQ_1. The gap QQ_1 between demand and supply is met through import of the commodity from abroad. If PP_1 per unit tariff is imposed on import, the price rises to OP_1 and world supply curve shifts to P_1W_1. At this higher price, the demand is reduced from OQ_1 to OQ_2 whereas the domestic supply expands from OQ to OQ_3.



DEMAND AND SUPPLY
Fig. 11.1

Thus the domestic production of import substitutes rises by the extent of QQ_3. This is the protective, production or import substitution effect. The increased domestic production reduces the demand for foreign product from QQ_1 to Q_2Q_3. In case the per unit tariff were PP_2 causing the price to rise to OP_2, the domestic production would have expanded large enough to meet fully the domestic demand. In such a situation, imports would have been reduced to zero.

2. Consumption Effect:

The imposition of import duty on a particular commodity has the effect of reducing consumption and also the net satisfaction of the consumers. According to Fig. 15.1 at the free trade price OP, the total consumption was OQ_1. It was constituted by OQ as the consumption of home produced good and QQ_1 as the consumption of foreign produced good. After the imposition of tariff, when price rises to OP_1, the consumption is reduced from OQ_1 to OQ_2.

Out of it, OQ_3 is the consumption of home-produced good and Q_2Q_3 is the consumption of foreign produced good. Thus there is a reduction in consumption by $OQ_1 – OQ_2 = Q_1Q_2$. There is net loss in consumer satisfaction amounting to the area $PHCP_1$. Kindelberger has called the combined protective and consumption effects as the trade effect. Subsequent to the imposition of tariff, the volume of international trade gets reduced from QQ_1 to Q_2Q_3.

3. Revenue Effect:

The imposition of import duty provides revenues to the government. The revenue receipts due to tariff signify a revenue effect. In Fig. 15.1 the original price OP does not include any tariff and no revenue receipts become available to the government.

Subsequently when PP_1 per unit tariff is imposed, the revenue receipts of the government can be determined by multiplying per unit tariff PP_1 (or BF) with the quantity imported Q_3Q_2 or (EF). Thus the revenue receipts due to tariff amount to $PP_1 \times Q_3Q_2 =$ BF × EF = BCEF. This is revenue effect of tariff.

4. Redistribution Effect:

The imposition of tariff, on the one hand, causes a reduction in consumer's satisfaction and, on the other hand, provides a larger producer's surplus or economic rent to domestic producers and revenues to the government. Thus tariff leads to redistributive effect in the tariff-imposing country. The redistributive effect can be shown with the help of Fig. 15.1.

Loss in Consumer's Surplus = $RHP – RCP_1 = PHCP_1$

Gain in Producer's Surplus = $TBP_1 – TAP = PABP_1$

Gain in Revenues to the Government = BCEF

Net Loss = $PHCP_1 – (PABP_1 + BCEF)$

= ΔBAF + ACEH

Kindelberger calls this net loss as the "deadweight loss" due to tariff. It signifies the cost of tariff. It is clear that tariff causes a redistribution of income or satisfaction in the given country. Consumers suffer a loss while producers and government make a gain.

5. Terms of Trade Effect:

Traditional theorists argued that imposing tariffs would enhance the terms of trade for the country implementing them. However, modern theorists challenge this simplistic perspective. They assert that the impact of tariffs on terms of trade is influenced by the demand and supply elasticities of the trading nations.

If the foreign supply of a product is perfectly elastic, meaning suppliers are willing to provide it at a fixed price, imposing a tariff is unlikely to improve the tariff-imposing country's terms of trade. Conversely, if the foreign supply is not perfectly elastic, the effect of tariffs will vary based on the demand and supply elasticities of both trading nations. This concept is illustrated in Figure 11.2.

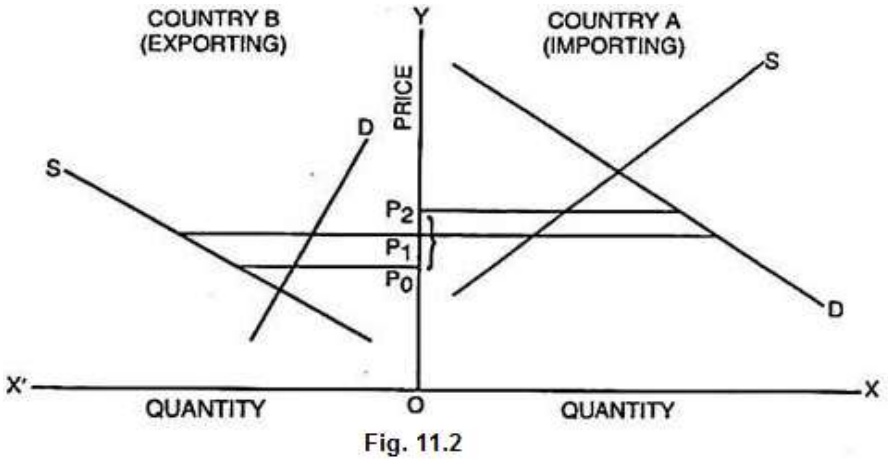


Fig. 11.2

In Fig. 11.2, country A is an importing and country B is an exporting country. The domestic demand and supply curves of the exporting country B are less elastic. Country B imposes per unit tariff of P_0P_2 amount for reducing import of the commodity. Since the domestic demand is inelastic, the surplus product of country B can be disposed of in the other country A. Therefore, the exporters lower the price of the commodity by P_1P_0. So P_0P_1 part of tariff is borne by exporters and P_1P_2 part of it by the importers.

If the tariff burden borne by importers in country A is less than the burden borne by the exporters i.e., $P_1P_2 < P_1P_0$, the rise in price of the commodity in country A is less than the fall in the export price of the commodity in country B. In such a situation, the terms of trade become favourable to the tariff-imposing country A.

In case, P_1P_2 is more than P_1P_0, the rise in price of the commodity in country A being larger than the fall in export price of the commodity in country B, the terms of trade get worsened for country A. It can happen when the elasticities of demand and supply for the commodity in country B are relatively more than in country A.

6. Competitive Effect:

Tariffs can support the development of infant industries that would otherwise struggle against foreign competition. By making imported goods more expensive, tariffs create a protective barrier, allowing domestic industries to grow and strengthen. Once these industries reach a level where they can compete internationally, the tariff may be lifted.

This enhancement of domestic industries' ability to compete due to tariff protection is known as the competitive effect. However, concerns exist that prolonged protection may lead to inefficiency and monopolistic tendencies. Reflecting on this issue, Kindelberger argued that shielding domestic industries from foreign competition through tariffs could make them complacent and inefficient. He remarked that instead of fostering competition, tariffs might have the opposite effect. In his words, “The competitive effect of a tariff is really an anti-competitive effect; competition is stimulated by tariff removal.”

7. Income Effect:

The implementation of a tariff decreases the demand for imported goods. The funds that would have been spent on these imports may instead be directed towards

domestically produced goods or saved. If the home country has surplus productive capacity, shifting expenditure from foreign to domestic products can stimulate production, employment, and income growth.

Alternatively, if the unspent money is saved, it contributes to capital accumulation. Increased savings can finance investments, further enhancing the country's productive capacity and income. The impact of reduced imports on domestic income can be illustrated through Figure 11.3.

In Fig. 11.3, income is measured along the horizontal scale and saving (S), imports (M), investment (I) and exports (X) are measured along the vertical scale. If investment and export are assumed to be autonomous, the investment plus export function (I + X) can be drawn. Assuming saving and import to be positively related with income, saving plus import function (S + M) can be drawn.

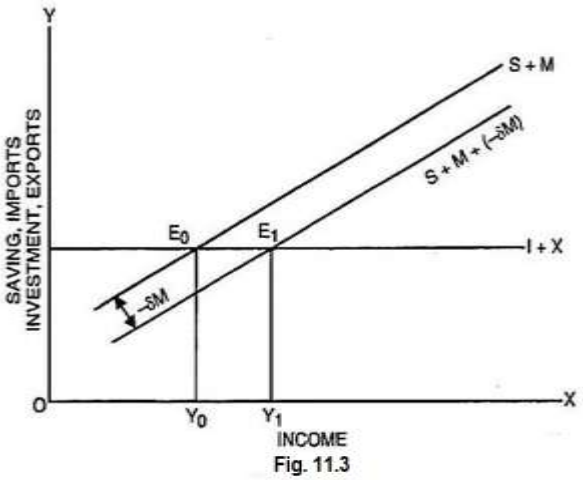


Fig. 11.3

The intersection between 1+X and S + M results in the original equilibrium at E_0 and the original equilibrium income is Y_0. If tariff causes a reduction in imports by δM, the S+M function shifts down to S+M+(-δM). The intersection between 1+X and S+M+ (-δM) function at E_1 determines the equilibrium income at a higher level Y_1. The expansion in income Y_0Y_1 is much more than the change in imports measured by the vertical distance between S+M and S+M+(-δM) curves on account of the reverse operation of import multiplier.

It is sometimes argued that the income effect due to tariff may not actually take place even under a less than full employment situation for two reasons. Firstly, the imposition of tariff by the home country hits the exports of the foreign country. Such a policy, if raises income, has such an effect at the cost of the foreign country, the exports of which decline resulting in a contraction in its output, employment and income. Joan Robinson and many other economists have called such a trade policy as a 'beggar-my-neighbour' policy.

In due course of time, such policies can have adverse repercussion even upon the tariff-imposing country. The reduced exports of a foreign country will lower its income. The foreigners will be able to buy less products from the tariff-imposing country. Thus even the latter will also experience a decline in the demand for its products and consequent decline in its income. Secondly, the foreign countries may adopt retaliatory tariff and other counterveiling measures and neutralise any advantage obtained by the home country and the desired income effect may fall to materialise.

If the home country is in a state of full employment, the tariff causing a reduction in imports and switch of expenditure to the home-produced goods, will not contribute in

raising the output. Consequently, the inflationary pressures alone will be felt. There may be an increase only in money income and the real income, output or employment will remain unaffected.

8. Balance of Payments Effect:

When a country imposes a tariff on foreign products, domestically produced goods become relatively more affordable compared to imported ones. This price impact of the tariff leads to a decline in imports while simultaneously encouraging higher production and consumption of locally made goods. As a result, the country's balance of payments deficit decreases. This concept can also be demonstrated using Figure 11.1.

Before the imposition of tariff, the quantity imported was QQ_1. The price being OP or AQ, the value of import or payment for import was $AQ \times QQ_1 = QAHQ_1$. After the imposition of tariff, the price is OP_1 or BQ_3 and quantity imported is reduced to Q_2Q_3. The value of import is Q_3BCQ_2 out of which BFEC is the revenue receipts of the government of the tariff- imposing country so that the net payment to foreigners for import is Q_3FEQ_2, which is less than the payment for imports before tariff. Needless to say that tariff can cause a reduction in the balance of payments deficit of the tariff-imposing country.

In the regard, some doubts are raised that tariff may fail to improve the balance of payments deficit. Firstly, if the demand for imports in the tariff- imposing country is inelastic, tariff may not reduce the volume of imports despite the rise in the prices of imported goods consequent upon the imposition of tariff.

Secondly, if the balance of payments disequilibrium is caused by the export surplus, the imposition of tariff will further aggravate rather than adjust the balance of payments disequilibrium. Thirdly, tariff can, at the maximum, bring about some adjustment in temporary disequilibrium of international payments. There is no possibility of adjusting the fundamental disequilibrium in the balance of payments through tariff restrictions.

Self-Check Exercise 11.1

Q1. Explain the consumption effect of tariff

Q2. What are the income effects of tariff

11.4 EFFECTS OF TARIFFS UNDER GENERAL EQUILIBRIUM

In the general equilibrium analysis, a study is made of the effects of tariff on consumption, production, trade and welfare. When a country imposes a tariff, not only a specific product or sector but practically every sector of the economy gets affected in one way or the other, until the economic system reaches a new equilibrium position.

In this connection, Kindelberger remarked that a tariff is "…likely to alter trade, prices, output and consumption, and to reallocate resources, change in factor proportions, redistribute income, change employment and alter the balance of payments." The general equilibrium analysis of tariff is made from the viewpoint of a small country and a large country.

11.4.3 General Equilibrium Analysis of Tariff in a Small Country:

In a small country that imposes a tariff, the domestic price of the imported good increases by the full amount of the tariff for local consumers and producers. However, the global price of the commodity remains unchanged. This difference between the price faced by individual consumers and producers and the overall cost to the importing nation plays a crucial role in assessing the tariff's impact on economic welfare.

Assumptions:

The general equilibrium analysis of tariff in case of a small country can be attempted on the basis of the following assumptions:

(i) The trade takes place between two countries – A and B.

(ii) The home country A is small.

(iii) There are two commodities, cloth and steel, being exchanged between them.

(iv) Cloth is exportable and steel is importable commodity.

(v) The imposition of tariff by A upon importable commodity steel raises the import price of steel for domestic producers and consumers upto the full amount of tariff.

(vi) World price of steel remains unaffected.

(vii) The revenues collected by the government through tariff are spent by the government to subsidies public consumption such as schools, health services etc.

The production and consumption effects of tariff upon country A can be analysed through Fig. 11.4. In the Figure, the production possibility curve related to two commodities cloth and steel is AA_1. In the absence of international trade, the point of consumption and production equilibrium is B. In the conditions of free international trade, P_0P_0 is the international exchange ratio line and the production equilibrium point is E. The consumption equilibrium point is R_1 that lies on the community indifference curve C_2. In this situation, country A exports FE quantity of cloth and imports R_1F quantity of steel. If tariff is imposed but the world prices of commodities remain the same, the international exchange ratio line is P_1B which is parallel to the original international exchange ratio line P_0P_0.

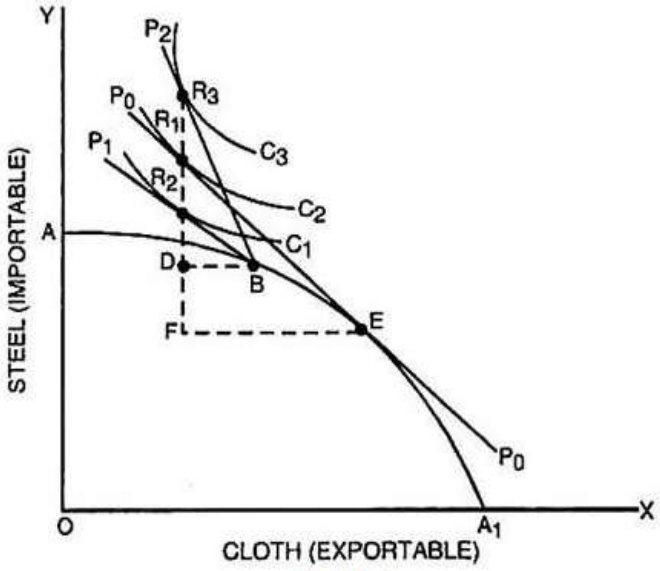


Fig. 11.4

Now production equilibrium shifts to B where country A produces a large quantity of steel (importable good) domestically. This is the production or protective effect of tariff. The consumption equilibrium shifts from R_1 to R_2 where the international exchange ratio line P_1B becomes tangent to a lower community indifference curve C_1. It shows that tariff has caused a reduction in the welfare of tariff-imposing small country. The shift in consumption point from R_1 to R_2 signifies the consumption effect of tariff. After tariff, country exports BD quantity of cloth and imports R_2D quantity of steel.

Thus in the case of a small tariff-imposing country, the import tariff has adverse effects. Firstly, since world prices of exchanged commodities remain unchanged, tariff fails to bring about an improvement in the terms of trade for the home country A.

Secondly, although there is an increased production of import-substitutes within the home country yet the diversion of resources from the production of cloth, in case of which the country was enjoying comparative advantage and was having specialisation, shows the misallocation of resources and consequent loss to country A.

Thirdly, the shift of consumption equilibrium to a lower community indifference curve indicates loss in welfare for the tariff-imposing country.

Fourthly, tariff not only reduces imports but also the exports of the tariff-imposing country. The reduction in the volume of trade is not only a loss to the tariff- imposing country but also for the rest of the world.

11.4.4 General Equilibrium Analysis of Tariff in a Large Country:

If the tariff-imposing country is large, the reduced demand for imports subsequent upon the imposition of tariff may reduce the world demand for the product to such a great extent that the price of importable good falls. In such a situation, the fall in import price relative to export price causes a change in the international price ratio and brings about an improvement in the terms of trade of the tariff-imposing large country. The production effect, consumption effect and terms of trade effect due to tariff can be explained through Fig. 11.4. If tariff causes a fall in the price of importable commodity steel relative to the price of exportable commodity, the international exchange ratio line shifts to P_2B, which is more steep than the exchange ratio line P_0P_0 or P_1B.

In this case, the production equilibrium takes place at B and consumption equilibrium occurs at R_3 where P_2B becomes tangent to the higher community indifference curve C_3. The large tariff-imposing country A imports R_3D quantity of steel and exports BD quantity of cloth. A higher ratio of imports to exports indicates that the terms of trade have become favourable for the tariff imposing-country A. The production or protective effect is in the form of increased domestic production of importable commodity steel owing to shift in the production equilibrium from E to B. No doubt, lesser production of cloth involves misallocation of resources and reduced specialisation in production, yet the country A is better off because of positive consumption and terms of trade effects.

The shift of consumption equilibrium to the highest community indifference curve C_3 signifies a gain in welfare despite reduction in specialisation and diversion of resources towards the production of import-substitute. This is the positive consumption effect. In the case of a large tariff-imposing country, since there is a fall in price of

imports relative to export prices, there is an improvement in the terms of trade. This is the positive terms of trade effect.

Hence the imposition of tariff by a large country, despite the reduction in the volume of international trade, leaves it a net beneficiary from the policy of tariffs.

Self-Check Exercise 11.2

Q1. Analysis the effects of tariffs in case of

(i) Small country
(ii) Large country

11.5 SUMMARY

The impact of tariffs is not evenly distributed. Since a tariff functions as a tax, it generates additional revenue for the government when foreign goods enter the domestic market. Domestic industries gain an advantage as well, as the artificially increased cost of imports reduces competition. However, this comes at a cost to consumers, including both individuals and businesses, who face higher prices for goods. For example, if tariffs raise the cost of steel, consumers end up paying more for steel-based products, while businesses incur higher expenses for the raw material needed in production. Overall, tariffs and trade restrictions tend to favor producers while disadvantaging consumers.

11.6 GLOSSARY

- **Partial equilibrium** is the equilibrium of a restricted area or a portion of the economy, other things remaining the same.
- **General equilibrium** refers to situation of the market where the demand and supply of every single commodity in the market are equal.
- **Tariff** is a tax imposed by one country on the goods and services imported from another country.

11.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 11.1

Ans. Q1. Refer of Section 11.3.1

Ans. Q2. Refer of Section 11.3.7

Self-Check Exercise 11.2

Ans. Q1. (i) Refer of Section 11.4.1

Ans. Q1. (ii) Refer of Section 11.4.2

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11.9 TERMINAL QUESTIONS

Q1. Analysis the effects of tariffs in a partial equilibrium system.

Q1. What are the effects of tariffs in a partial equilibrium system.

EFFECTS OF TARIFFS-II

STRUCTURE

12.1 INTRODUCTION

Dear Students,

In the previous unit, we explored the different effects of tariffs within both partial and general equilibrium frameworks. In this unit, our focus will be on the impact of tariffs on income distribution, as explained by W.F. Stolper and Paul Samuelson based on the Heckscher-Ohlin (H-O) theory. The Stolper-Samuelson theorem illustrates how changes in output prices influence factor prices, assuming positive production and zero economic profit in each industry. This theorem is particularly useful for analyzing changes in factor income when countries transition from autarky to free trade or when tariffs and other government policies are introduced within the H-O model. Additionally, we will cover the fundamentals of optimum tariffs and the effective rate of protection.

12.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Discuss the Stopler-Samuelson Theorem;
- Understand the concept of optimum tariff;
- Work out optimum tariff rate with the help of elasticity of offer curve, and
- Know the term 'Effective Rate of Tariff'.

12.3 TARIFF AND INCOME DISTRIBUTION: THE STOPLER–SAMUELSON THEOREM

The H-O theory determined that the labour- abundant country specialises in the export of labour- intensive commodity while capital-abundant country specialises in the export of capital-intensive commodity. The factor price equalisation theory suggested that the trade would lead towards such movements in the factor prices that the factor price differentials would get reduced and ultimately eliminated.

In what way the international trade and relative changes in the factor prices would affect the distribution of income, was worked out by W.F. Stopler and Paul Samuelson on the basis of the H-O theory. The theorem developed by these writers stated that commencement of free international trade would benefit the relatively abundant factor and hurt the relatively scarce factor of production.

12.3.1 Assumptions of the Stopler-Samuelson Theorem:

The theorem developed by these two writers, called as Stopler-Samuelson Theorem, rests upon the following main assumptions:

(i) One of the two trading countries, considered for analysis, produces two commodities—cloth and steel, and employs only two factors—labour and capital.

(ii) The production function for each of the two commodities is homogenous of first degree. It implies that the production is governed by constant returns to scale.

(iii) Both labour and capital are fully employed.

(iv) The two factors of production are fixed in supply.

(v) The conditions of perfect competition exist both in the product and factor markets.

(vi) The given country is labour-abundant and capital-scarce.

(vii) The cloth is labour-intensive good while steel is capital-intensive good.

(viii) The international terms of trade are fixed.

(ix) Neither commodity is the input in the production of the other commodity.

(x) Both the factors are mobile between two industries or sectors but these are not mobile between the two countries.

(xi) There is an absence of transport costs.

12.3.2 Explanation of Stopler-Samuelson Theorem

Given the above assumptions, the Stopler-Samuelson Theorem can be explained through Edgeworth Box shown in Fig. 12.1

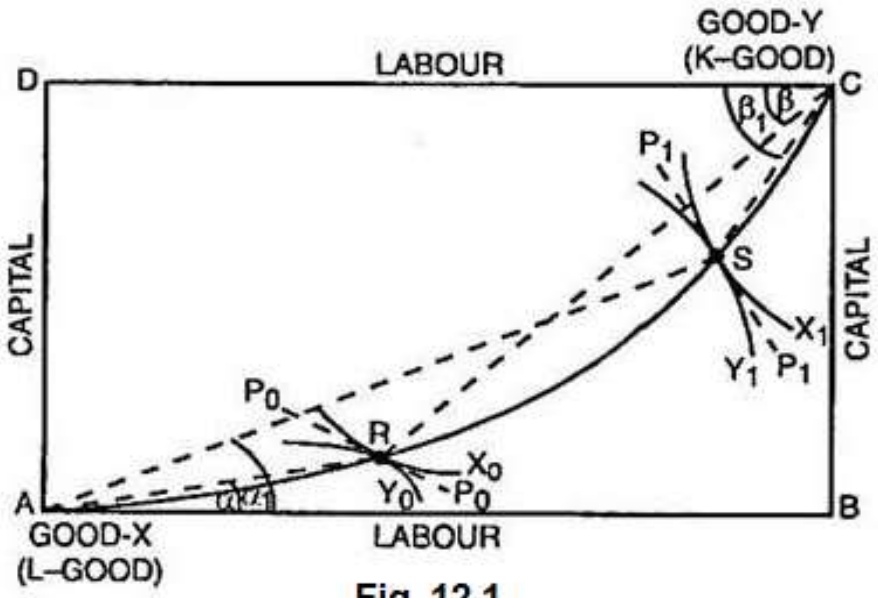

Fig. 12.1

In Fig. 12.1, the Edgeworth box shows that the given country is labour-abundant and capital-scarce. A is the origin for labour-intensive goods—cloth and C is the point of origin for the capital-intensive good—steel. AC is the non-linear contract curve sagging below. In the absence of trade, production takes place at R, which is the point of tangency of isoquant X_0 of cloth, isoquant Y_0 of steel and the factor price line P_0P_0.

K-L Ratio in cloth at R = Slope of line AR = Tan α

K-L Ratio in steel at R = Slope of line RC = Tan β

When trade commences, this labour-surplus country expands the production of cloth (L- good) and reduces the production of steel (K-good). The production now takes place at S, which is the point of tangency of higher isoquant X_1 of cloth, lower isoquant Y_1 of steel and the factor price line P_1P_1.

K-L Ratio in cloth at S = Slope of line AS = Tan α_1

K-L Ratio in cloth at S = Slope of line SC = Tanβ_1

Since Tan α_1 > Tan α and Tan β_1 > Tan β, the K-L ratio rises in both the commodities in this country. The factor price line P_1P_1 is more steep than the original factor price line P_0P_0. It signifies that the price of labour rises relative to the price of capital. As the production of exportable commodity cloth expands, the resources are diverted from the steel industry to the cloth industry. The increased production of cloth and resource diversion to this industry will cause a rise in the price of cloth relative to that of steel. It may be shown through Fig. 12.2.

Fig. 12.2 measures L-good cloth along the horizontal scale and K-good steel along the vertical scale. AA is the production possibility curve. Its slope indicates that this country is labour-abundant and capital-scarce. In the absence of trade (i.e., autarchy), the production takes place at R. This point corresponds with point R in Fig. 12.1. As the production of cloth is expanded after the commencement of trade, production takes place at S. This point corresponds with point S in Fig. 12.1. The slope of the production possibility curve at S is greater than its slope at R. This is represented by more steepness of price line P_1P_1 than P_0P_0.

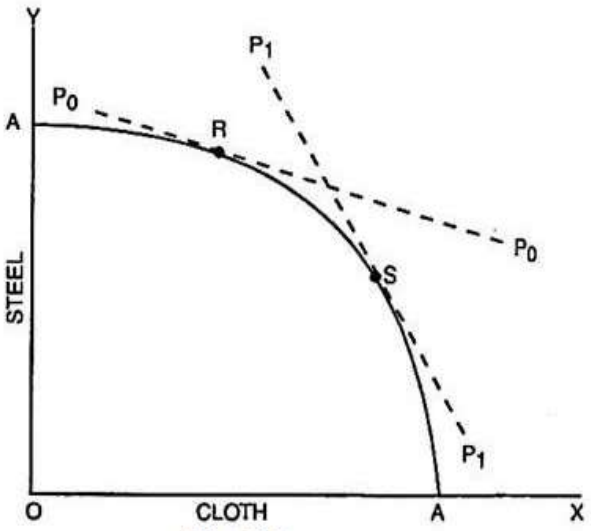

Fig. 12.2

From this it follows that:

$$\frac{Price\ of\ cloth}{Price\ of\ steel}\ at\ S > \frac{Price\ of\ cloth}{Price\ of\ steel}\ at\ R$$

It signifies that price of cloth increases while that of steel falls. Such relative changes in the prices of two commodities promote greater diversion of resources from steel industry to the cloth industry. The expanding cloth industry wants to employ more workers than are being released by the contracting steel industry. This results in the bidding up of the price of labour. At the same time, the steel industry releases capital which the cloth industry can absorb only at the lower price of capital.

The increased employment of labour along with the higher price of labour (wage rate) implies that the absolute income share of labour in the national income rises. On the other hand, the reduced employment of capital along with a fall in its price (rate of interest) lowers the absolute share of capital. From it follows the conclusion of Stopler-Samuelson Theorem that international trade would benefit the abundant factor and hurt the scarce factor.

12.3.3 Implications of the Stopler-Samuelson Theorem

The Stopler-Samuelson Theorem leads to some important implications which are mentioned below:

(i) Increase in Welfare: Trade brings about an increase in welfare of the factor of production that is used intensively in the expanding industry at the expense of the scarce factor. On the whole, there is a net increase in the welfare of the community.

(ii) Improvement in Income Distribution: Since trade raises the share of abundant factor in the GNP, the distribution of income becomes more equitable.

(iii) Strategy of Export Promotion: The theorem leads to an important policy implication that the strategy of export promotion rather than import substitution is more appropriate in the less developed countries for the achievement of twin objectives of growth and equitable income distribution.

(iv) Adverse Effect of Tariff and Other Protective Policies: The theorem suggests that slapping of tariffs and other restrictive or protective measures will reduce imports. That will limit also the opportunities to expand exports. It will keep the real income of the abundant factor relatively lower than that of scarce factor. Consequently, the growth process will get slowed down apart from making the income distribution inequitable.

The Stopler-Samuelson Theorem came to be criticized, modified and elaborated by writers like Kelvin Lancaster, Lloyd Metzler and Jagdish Bhagwati. Metzler dropped the assumption of fixed terms of trade and argued that the imposition of tariff, given an inelastic offer curve of foreign country, will cause improvement in the terms of trade of tariff-imposing country through an increase in internal price of country's export and a fall in the internal price of country's import.

In such a situation, the production of import-substitutes will decline and the income will get distributed in favour of the factor used relatively intensively in the production of exportable commodity. Kelvin Lancaster did not accept the view that protection would result in an inequitable distribution of income. Jagdish Bhagwati did not accept the universal validity of this theorem.

He discussed the possible alternative effects of protection upon the income of more intensively employed factor. In his words, "…protection (prohibitive or otherwise) will raise, reduce or leave unchanged the real wage of the factor intensity employed in the production of good according as protection raises, lowers or leaves unchanged the relative price of that good."

Self-Check Exercise 12.1

Q1. What is Stopler–Samuelson Theorem?

Q2. List the assumptions of the Stopler-Samuelson Theorem

Q3. Write the implications of the Stopler-Samuelson Theorem

12.4 THEORY OF OPTIMUM TARIFF

Tariffs may not always enhance a country's terms of trade, although there is a common perception that they do. This raises an important question: to what extent can a country continue increasing tariffs to improve its terms of trade and maximize economic welfare? While tariffs can benefit the imposing country by improving its terms of trade, they also come with a cost—reducing the volume of both exports and imports. As long as the benefits outweigh these costs, the country's economic welfare improves, making it rational to raise tariffs.

However, if the societal costs of tariffs exceed their benefits, economic welfare may decline, and the terms of trade could deteriorate. In such cases, it would be beneficial for the country to lower tariffs. The optimal tariff level is reached when further tariff increases no longer provide additional net benefits, and economic welfare is

maximized. As Sodersten states, “The tariff that maximizes a country’s welfare is called the optimum tariff.”

The optimal tariff point is identified where the trade indifference curve of the tariff-imposing country becomes tangent to the offer curve of the foreign country, as illustrated in Figure 12.3.

In Fig. 12.3 originally OA is the offer curve of home country A and OB is the offer curve of foreign country B. T_1, T_2 and T_3 are the trade indifference curves of country A. Before the imposition of tariff, the exchange takes place at P. This point lies on the trade indifference curve T_1. As tariff is imposed, the offer curve of county A shifts to OA_1 and exchange takes place at P_1. This point occurs at the higher trade indifference curve T_2.

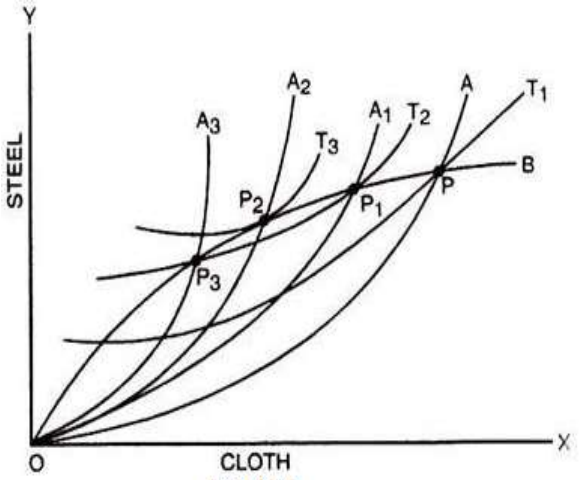

Fig. 12.3

Thus tariff results in an improvement in terms of trade, on the one hand, and increases the level of welfare on the other. If there is a further increase in tariff, country A’s offer curve shifts to OA_2 and given the offer curve OB of country B, the exchange takes place at P_2. This point occurs at the higher trade indifference curve T_3. P_2 is the point of tangency between the trade indifference curve T_3 and foreign country B’s offer curve OB. Compared with point P_1, there is a further improvement in the terms of trade and increase also in the level of welfare.

In case, country A raises the tariff still further, its offer curve shifts to the left to OA_3. Given the offer curve of country B as OB, exchange takes place now at P_3. This point shows that terms of trade improve further but this point lies on a lower trade indifference curve T_2. Although the terms of trade in this situation improve, yet there is worsening in respect of the level of welfare. In such a situation, it is appropriate for the home country to reduce tariff and move back to the point P_2 where the welfare is maximum. Thus P_2 is the point of optimum tariff which corresponds with the maximisation of welfare.

12.4.1 Optimum Tariff Formula

The economists and financial administrators have remained concerned with determining the rate of tariff that can ensure the improvement in terms of trade consistent with the maximization of welfare. They have preferred to call such a rate of tariff as the optimum rate of tariff. The economists, including Robert Heller, Scammel and Kindelberger have attempted to work out a precise formula for specifying the optimum rate of tariff. Kindelberger has stated the formula for optimum tariff in the following form:

$$T_O = \frac{1}{e-1}$$

Here T_O denotes the optimum rate of tariff and e stands for the elasticity of the offer curve of the foreign country at the specific point.

The co-efficient e or the elasticity of offer curve can be measured as below:

$$e = \frac{-(\%change\ in\ Imports)}{(\%change\ in\ Exports)-(\%change\ in\ Imports)} - 1$$

The rate of optimum tariff can be derived geometrically with the help of Fig. 12.4. In the Fig, OA is the offer curve of tariff-imposing home country A and OB is the offer curve of the foreign country B. P is the original point of exchange and P_1 is the point of exchange subsequent to the imposition of tariff. It is assumed that P_1 is the point of optimum tariff. The slope of the offer curve at point P_1 is measured by the tangent drawn to OB at P_1. It meets the horizontal scale produced in the backward direction at Q_1. The optimum tariff at P_1 is (OQ_1/ OQ). As OQ = RP, therefore, the optimum tariff can be expressed as OQ_1/RP_1. Since the Δs SQ_1O and SP_1R are similar, OQ_1/ RP_1 equals OS/SR.

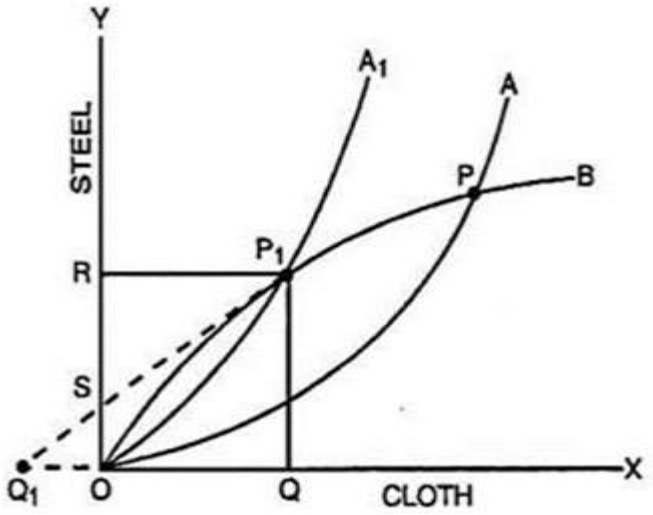

Fig. 12.4

12.4.2 Relationship between Elasticity of Offer Curve and Optimum Tariff

The relationship between the elasticity of offer curve *e* and optimum tariff (To) can be explained by following:

If elasticity of offer curve (e) =1, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{1-1} = \infty$

If elasticity of offer curve (e) =2, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{2-1} = 1\ or\ 100\ \%$

If elasticity of offer curve (e) =3, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{3-1} = \frac{1}{2}\ or\ 50\ \%$

If elasticity of offer curve (e) =4, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{4-1} = \frac{1}{3}\ or\ 33.33\%$

If elasticity of offer curve (e) =5, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{5-1} = \frac{1}{4}\ or\ 25\%$

If elasticity of offer curve (e) =10, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{10-1} = \frac{1}{9}\ or\ 11.11\%$

If elasticity of offer curve (e) =20, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{20-1} = \frac{1}{19}\ or\ 0.53\%$

If elasticity of offer curve (e) =∞, then optimum tariff rate (To) = $\frac{1}{e-1} = \frac{1}{\infty-1} = \frac{1}{\infty}$ *or zero*

The above analysis follows that the optimum tariff rate that can maximise welfare goes on diminishing as the co-efficient 'e' increases and vice- versa. It implies that there is an inverse relation between the elasticity of the offer curve of country B and the optimum tariff rate for country A. In the extreme situation, when the elasticity of the offer curve of foreign country is infinite the tariff-imposing home country will fail to bring about an improvement in its terms of trade. This can be shown through Fig. 12.5.

In Fig., OA is originally the offer curve of country A and OB is perfectly elastic (e = α) offer curve of country B. The exchange takes place at P and country A imports PQ quantity of steel in exchange of the export of OQ quantity of cloth. The TOT at P for country A = (Q_M/Q_X) = (PQ/OQ) = Slope of Line OP = Tan α. As country A imposes tariff, its offer curve shifts to OA_1. In this case, exchange takes place at P_1 where P_1Q_1 quantity of steel is imported against the export of OQ_1 quantity of cloth. The TOT for country A at P_1 = (Q_M/Q_X) = (PQ_1/OQ_1) = Slope of Line OP_1 = Tan α_1.

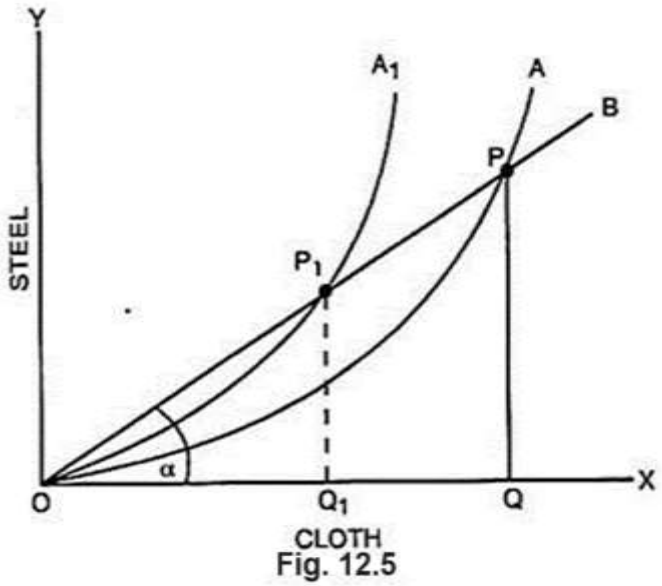

Fig. 12.5

Slope of Line OP_1 = Tan α. Since TOT at P and P_1 are both measured by constant Tan α, the home country cannot improve the terms of trade through tariff. There is only reduction in the volume of trade and consequent decline in the level of welfare. If the above exceptional case is left out, the offer curve of foreign country can assume the elasticity less than unity, equal to unity and more than unity. The implications of such magnitudes of e upon the terms of trade and welfare (or optimum tariff on the whole) can be discussed through Fig. 12.6.

In Fig., OA is originally the offer curve of home country. OB, on the other hand, is the offer curve of foreign country B. The entire span of this curve consists of three elasticity ranges. In the OP_2 range, the elasticity is greater than unity (e > 1). In the P_2P_1 range, the elasticity is equal to unity (e = 1). In the PP_1 range, the elasticity is less than unity (e < 1).

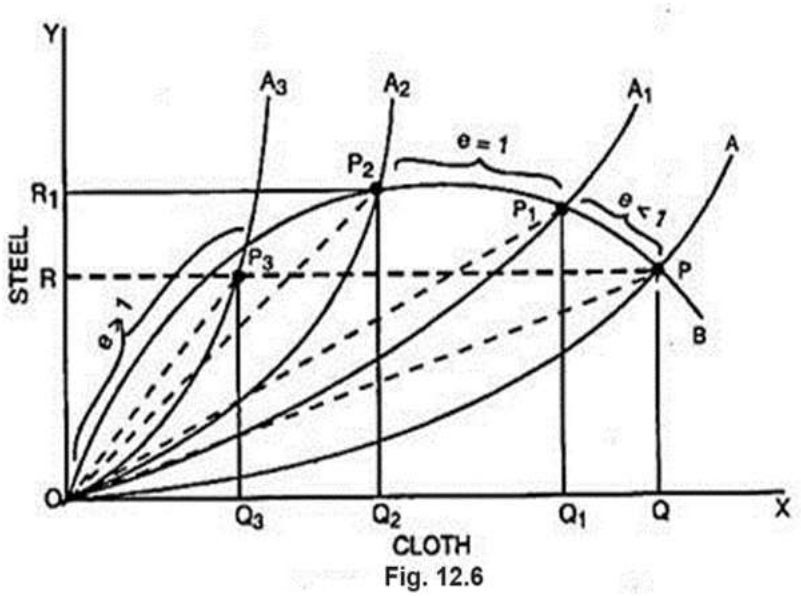

Fig. 12.6

As country A goes on raising tariff, the offer curve of home country continues to shift to the left from OA and OA_1, OA_2 and OA_3. The point of exchange shifts from P to P_1, P_2 and P_3 respectively and there is improvement in the terms of trade for the home country. The point of exchange P_3 is preferable to P because country A can import OR quantity of steel as much as in the pre-tariff exchange position P by exporting only OQ_3 quantity of cloth.

At P, country A was required to export OQ quantity of cloth for importing OP quantity of steel. But compared to P_3, the trade equilibrium point P_2 is preferable. Although the terms of trade at P_2 are worse than at P_3, yet country A is at a higher level of welfare in this position. It implies that the home country should move from the trade equilibrium point P_3 to P_2 by reducing tariff. On the opposite, it is better for the home country to move from P to P_1 where the elasticity of offer curve of country B is less than unity (e < 1). The increase in tariff in this situation, improves the terms of trade, on the one hand and raises the level of welfare, on the other. A move from P_1 to P_2 through further increase in tariff is still better from the point of view of home country. The tariff increase, in the range P_1P_2 where e = 1, ensures a further improvement in the terms of trade along with an increase in the level of welfare.

From the above figure, it follows that as long as foreign country's offer curve is less than unit elastic or unit elastic, it is worthwhile for the home country to raise tariff and thereby improve the terms of trade and increase the level of welfare. As long as the offer curve of the foreign country is more than unit elastic, it is desirable for the home country to lower tariffs; suffer adverse terms of trade but, at the same time, achieve a higher level of welfare. It can now be concluded that the point of optimum tariff lies somewhere over that region of foreign country's offer curve where the co-efficient e is equal to unity.

Self-Check Exercise 12.2

Q1. What is optimum tariff.

Q2. Explain the formula of optimum tariff

Q3. Explain the relationship between Elasticity of Offer Curve and Optimum Tariff

12.5 EFFECTIVE RATE OF PROTECTION

When considering a tariff, one normally thinks of the duty compared to the cost of the import; thus a Rs 25 tax on a Rs 100 item would be a 25% tariff. Economists refer to this as the nominal tariff. However, the actual amount of protection is measured by something called an effective tariff. The effective rate compares the tariff to the value added in the country, not to the total value of the product.

The formula to figure the effective rate of protection is as follows:

$$\frac{(y-b)-(x-a)}{(x-a)}$$

where x = the international price of the finished commodity, y = the domestic price of the finished commodity, including the tariff, a = the international price of the imported component, and b = the domestic price, including the tariff, of the imported component. The formula assumes producers do not substitute cheaper inputs for more expensive ones as tariffs are imposed, and it does not take into account any effect of quotas.

In the vast majority of cases, the effective tariff is positive; that is, the more finished product pays the higher tariffs. Bela Balassa compared average nominal tariffs to average effective tariffs, based on rates before the last major round of tariff cuts. Because effective tariffs are so much on finished goods than they are on raw materials, economists speak of a phenomenon called tariff escalation. The greater the extent of processing, the greater the effective tariff. The tariff system is, in effect, rigged against the developing countries that wish to export more manufactures, or to export their primary products in a more finished form.

Self-Check Exercise 12.3

Q1. What is meant by Effective Rate of Protection?

12.6 SUMMARY

In this unit, we have seen the various effects of tariff in micro and macro perspectives. We have analysed the welfare implications of tariff impositions. The arguments for tariff are based different criteria of welfare. Welfare means different things to the different people, and different countries in different circumstances. The Stolper-Samuelson theorem states that an increase in the price of a good generates an increase in the real earning of the factor used intensively in the production of that good, and should decrease the real earning of the other factor. It shows there is a positive relationship between changes in the price of an output and changes in the price of the factor used intensively in producing that product. Similarly, there is a negative

relationship between changes in the price of an output and changes in the price of the factor not used intensively in producing that product.

12.7 GLOSSARY

- **Optimum Tariff:** A tariff which maximizes a country's welfare, trading off improvement in the **terms of trade** against restriction of trade quantities.
- **Effective Rate of Protection:** is a measure of the total effect of the entire tariff structure on the value added per unit of output in each industry, when both intermediate and final goods are imported.
- **Nominal Rate of Tariff**: The rate of tariff ad valorem on the import of final product was called as the nominal rate of tariff
- **Ad valorem Tariff**: *A tariff rate charged as percentage of the price*.
- **Tariff** is *a tax imposed by one country on the goods and services* imported from another country.

12.8 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 12.1

Ans. Q1. Refer to Section 12.3

Ans. Q2. Refer to Section 12.3.1

Ans. Q3. Refer to Section 12.3.3

Self-Check Exercise 12.2

Ans. Q1. Refer to Section 12.4

Ans. Q2. Refer to Section 12.4.1

Ans. Q3. Refer to Section 12.4.2

Self-Check Exercise 12.3

Ans. Q1. Refer to Section 12.5

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12.10 TERMINAL QUESTIONS

Q1. Critically examine the Stopler-Samuelson Theorem of international trade. Also write its implications.

Q2. What is optimum tariff? Explain the relationship between optimum tariff and elasticity of offer curve.

Unit-13

NON-TARIFF POLICY INSTRUMENTS

STRUCTURE

13.1 INTRODUCTION

When a country wants to limit free trade in order to grant protection to its domestic industries, the policy instruments available for such state intervention are broadly divided into two categories, viz. the tariff and the non-tariff policy measures. The theory of the former was briefly analyzed by us in the preceding units. In the present unit, we shall be dealing with the non-tariff policy instruments. These are also sometimes referred to as the quantitative trade restrictions. The important quantitative trade restrictions are import quotas, state trading, multiple exchange rates and the international commodity agreements. All we will discuss in this unit.

13.2 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- Discuss the import quotas
- Explain Multiple Exchange rates
- Explicate International Commodity Agreement
- Describe the concept State Trading

13.3 NON-TARIFF POLICY INSTRUMENTS

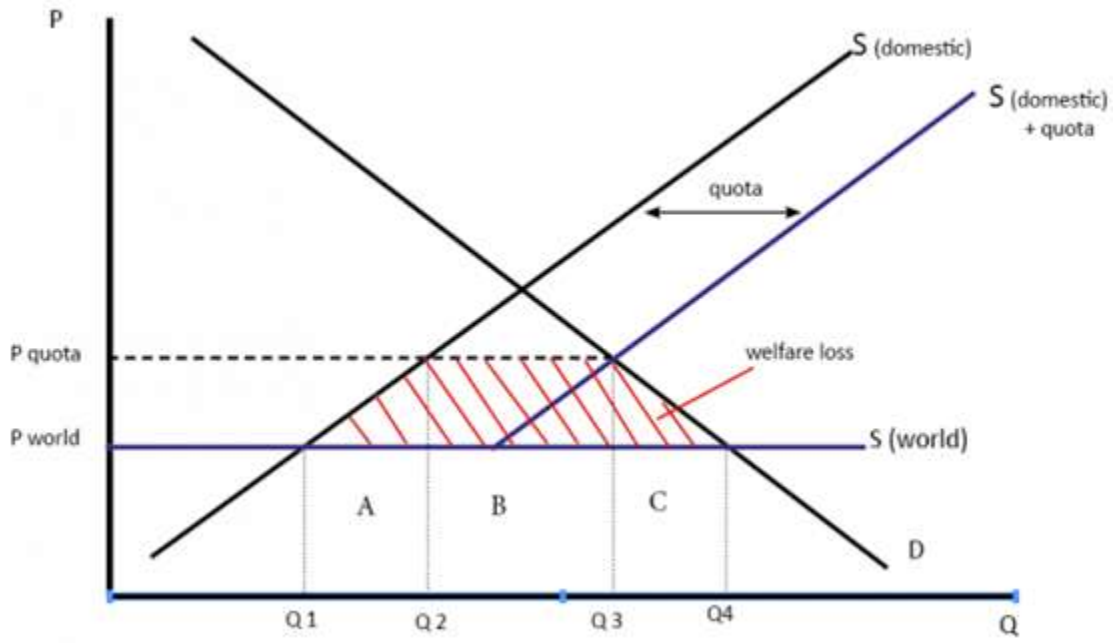
13.3.1 Import Quotas

An import quota is a limit on the amount of imports that can be brought into a particular country. For example, the India may limit the number of Japanese car imports to 2 million per year. Quotas will reduce imports and help domestic suppliers. However, they will lead to higher prices for consumers, a decline in economic welfare and could lead to retaliation with other countries placing tariffs on our exports. Quotas will lead to lower sales for foreign companies, but it could push up prices and make sales more profitable.

Types of Quotas

- Absolute quota – a simple physical limit on the number.
- Tariff rate quota – These allow a certain number of imports to gain a discount on the usual tariff rate.
- Voluntary export restraints (VER) This is when a government limits the amounts of exports from one country to another for a particular type of good.

The effect of quotas



In this diagram, the quota is the difference between S(domestic) and S(domestic) + quota

Without quotas

- The market price is P world
- Quantity of imports is Q4-Q1
- World exporters make revenue of areas A+B+C

Imposing quotas of (Q3-Q2)

- This leads to a fall in imports to just Q3-Q2
- Domestic suppliers gain more revenue. The price rises to P quota and domestic suppliers, supply more Q1 to Q2. It can create domestic jobs.
- Consumers pay a higher price and also total quantity falls from Q4 to Q3.
- Governments are not affected directly, as there is no income.
- There is a net welfare loss to society because the increase in producer surplus is outweighed by the decline in consumer surplus.
- World exporters will make less revenue – unless demand is very inelastic, meaning increase in price is greater than fall in quantity.
- Welfare loss of quotas: The shaded area is welfare loss of quotas.

Quotas vs Tariffs

- Quotas tend to cause a bigger fall in economic welfare because the government don't gain any tax revenue, that you get with tariffs.
- Quotas allow the country to be certain on the number of imports coming in. Tariffs is more unknown because it depends on the elasticity of demand and how consumers and suppliers react to the tariff.
- Quotas may be harder to enforce if it is difficult to count the amount of the good coming into the country.
- Quotas could be more unfair. Some export firms may do well if they get the quota allowance, but others may lose out. It becomes a political issue on how to distribute the quotas. Firms may also dislike the uncertainty of not knowing how many quotes to gain

13.3.2 General Agreement on Tariffs and Trade (GATT)

Which aims at the abolition of all discriminatory tariffs, quantitative trade restrictions and the promotion of free trade owes its origin to the evils of tariffs and quotes. We shall discuss the provisions of the GATT in the next unit.

13.3.3 State Trading

State trading has been another form of state intervention in foreign trade in the past in countries of nearly all political hues. Under this policy instrument, either a ministry of govt. or a separate govt. body is given exclusive rights of importing and or exporting to a certain region of the world or of trading in specified Commodities. Thus, state trading was extensively practiced in the U.S.A. and several industrialized countries of, the world (most notably in Germany under the Nazis) in the interwar period. In the post-Second World War period, with the establishment of communist regime in several East European countries, state trading received a tremendous boost. Within the COMECON, which was the institutional arrangement within the communist World akin to the present day EEC, inter-country trade was carried out through the state trading agencies. Beside, Such agencies; also carried out import export trade with the developed western countries as well as the developing countries Stale trading agencies have also been operating in several less Developed countries too. We in India have our State Trading Corporation (the STC).

In the erstwhile East European socialist countries, state trading has been practised as a matter of ideology, because in these countries private enterprise had been replaced by public enterprise in 'all important economic activities. In the developed western countries, state intervention of this form has been adopted in the past in order to conserve foreign exchange (because the state agencies could enter Barter arrangement with foreign buyers and suppliers), or to protect the interests of some specific Domestic producers, such as the farmers, etc. In developing countries, state trading has been used as a policy measure to boost export trade and to effect economics of scales in import trade..

However, state trading as a policy instrument has fallen from grace with the fall of the, communist citadel in the early 1990s. The erstwhile U.S.S.R and its allies were the great bastions of state trading. Not only in these countries, where private enterprise has taken over from the public sector trading agencies to be on their way out. In 1992 impending privatization if, therefore, the trends in the early 1990s are any indication, state trading will be used less and less an instrument of commercial policy. In any case, the state trading agencies have by and large proved to be economically Inefficient. In the current wave of privatization, such agencies are bound to be swept out of existence.

13.3.4 Multiple Exchange Rates

Exchange controls are extensively used the world over as a form of state intervention. In cases, where commercial policy aims at reducing the balance of payments deficit or where' import substitution industrialization in being pursued; exchange control is a popular measure. Exchange control in general refers to the abolition of a free market in foreign change (i.e. purchase and sale of foreign currencies) and the control of the market by the central, banking authority of the country. Multiple exchange rates are a component of the general exchange control measures. Multiple exchange rates are usually used within view to keep a deficit in- the balance of payments under control. 'For that it may become necessary to promote exports and to restrict imports.

But an across the board restriction of imports may not be possible because the demand of the country for some of the imported goods may in fact be price inelastic (such goods being, for example, necessaries of life like food grains). Therefore, the govt., may adopt a system of multiple exchange rates undo" which foreign currencies may be purchased and sold by a designated govt., agency at varying rates For example, the govt. may fix on exchange rate of Rs. 20 per dollars for exporters (i.e. the govt., paying 20 to an exporter who earn a dollar from exports), a rate of Rs. 18 per dollar for importers of essential items like food-grains, raw materials and machinery, and exchange rate of Rs. 25 per dollar for importers of low priority goods like cars, cigarette consumers electronic goods etc.

It is sometimes pointed out that when the balance of payments disequilibrium gets out of hand, the goods resorts to devaluation of the currency. However it is agreed that devaluation proves to be an ineffective policy measure if the country's elasticity of demand for imports in most cases is low and elasticity of supply of exports as well is quite low. (The theory of devaluation shall the discussed in unit-18 later). In such a situation a regime of multiple exchange rates may prove to be a more effective policy

instrument Exports and imports need to be classified as those wives low demand elasticity. Instead of changing the exchange rate for all imports (i.e. devaluating the currency) it would be advisable to have a system of multiple exchange rate. In other words the exchange rate should be raised for those imports and exports for which demand is inelastic and reducing for those for which demand is relatively elastic. This is expected to have the desired effect on the balance of payments of the country.

Administering a system of multiple exchange rates is rather difficult. When one exchange rate is changed from its equilibrium level, it would mean a subsidy to some and a tax for others. While all would like to enjoy a subsidy, none would like to be penalized. Therefore, the chances are that a black market in foreign exchange will emerge. Those buying foreign" exchange at a subsidized rate would be tempted to sell it at a higher price, in the- black market. Thus, policing the multiple exchange rate system becomes difficult which is one of the shortcomings of this policy instrument. Secondly, a system, of multiple exchange rate brings about a distortion, in the free trade north. The greater this distortion the greater will be the loss in terms of welfare of the world community.

The commercial policy instruments which we have discussed so far in this and the preceding unit are in fact domestic policy measure. These are adopted by each country separately, depending upon its own circumstances and its policy goals, there are also measures jointly among these, and one measure is International commodity Agreements which, we discussed briefly below.

13.3.5 International Commodity Agreement

There are several products, primarily produced, in. the tropical zone, which are exported by the less developed countries and imported by the developed ones. The former have nursed the grouse that the prices of their primary exports are subject to violent fluctuations in the international market which generates a good deal of overall macro-economic instability in their domestic economies.

However, as in the case of other (ratio problems of the LDC's there is a controversy over whether such a problem exists at all, arid also whether the magnitude of the problem is such as to merit a spécial consideration Unfortunately even the empirical evidence is conflicting on whether there are wide fluctuations in primary product prices; Benjamin Higgias, for instance, estimate for the a year's period 1948-56 that average price fluctuation for; Thai rice, Ceylonese tea and Indonesian and Malaysiantin was 10-15 per cent. The range of these fluctuations was 15- 22 per cent for Burmese, rice, Philippines' copra and Bangladesh's jute. Rubber prices had fluctuated on an average by nearly 30 per cent.

On the other hand, a later study (published in 1966) by Alis air MacBean shows that the price fluctuations are not an important factor in causing fluctuations of the export earnings of the LDCs. Michaely, in his study finds through various tests that the variations in the prices of primary products are not very much more than in those manufactured goods. However, he concludes that "the fact that a country is an exporter of primary goods does not tend to increase the amplitude of fluctuations of the country's export prices.

It is only because exporters of primary goods are usually countries with highly concentrated exports they appear to be more vulnerable to violent price fluctuation. All this does not amount to saying that there is no problem of this nature for the LDCs. It only a show that the less developed a country is the more concentrated its exports will be and the greater is the vulnerability of such a country to price fluctuations. We may also add that if the ratio of exports of the country concerned to its domestic product is high there is greater likelihood of such a country's employment and income levels to fluctuate in the eventuality of fluctuations in her export price.

Therefore, price fluctuations in the case of primary products assume great importance since they cause an instability in the levels of income and employment of the LDCs However, price fluctuation", alone do not account for such an instability. There are, in fact, three factors which jointly or severally might, explain the phenomenon of instability, in income and employment-in the LDCs. These are fluctuations in (i) supply of primary production, demand for them, and (iii) price fluctuations.

One of the stabilization policies in this regard has been the negotiation of International Commodity Agreements, Fluctuations in production, demand and price's of primary products hurts the interest of both the importers and exporters of such products. Therefore, the importers and exporters of specific commodities sometimes arrive at an agreement under which production supply demand and prices are sought to be stabilized so the agreement, if it works, would be to the mutual benefit of buyers and sellers.

There have been several instances, of International Commodity Agreements in the past. These include: international Tin Agreement, Cocoa Agreement, Wheat Agreement, Sugar Agreement, and so on. Each of these has met with a different degree of success. Some have merely remained paper agreements, while others have met with some success. For the success of these agreements it is necessary to either limit production, or to build up a buffer stock of the Commodity in question. The buffers stock is necessary for meeting the fluctuations in demand and prices drawing down the stocks when demand and prices size, and replenishing the stocks when there is either excess supply or full in demand and a consequent crash in prices. Since the success of the International Commodity Agreements depends on the co-operation of a large number of buyers and sellers, the chances of their failure are indeed more than that of success.

Self-check Exercise 13.1

Q1. Import Quotas are much like Tariffs. Discuss?

Q2. Write a short note on State Trading?

13.5 SUMMARY

In the present unit we have dealt with the non-tariff policy instruments. Import Quotas and their effects are studied in detail. Instruments like State trading. Multiple Exchange rates and International Commodity Agreement are also specified. Besides the different forms 'of state intervention in trade discussed in this and preceding units, there is one which stands in a category apart. This is called regional economic integration. We shall deal with it in the next unit.

13.6 Glossary

- **International Commodity Agreement:** An agreement among producing and consuming countries to improve the functioning of the global market for a commodity. May be administrative, providing information, or economic, influencing world price, usually using a buffer stock to stabilize it. ICAs are overseen by UNCTAD.
- **Multiple Exchange Rates:** The existence of more than one exchange rate for a given pair of currencies. Rare today, this used to be common in countries with extensive capital controls, which also set different exchange rates for different purposes.
- **State Trading:** Under this policy instrument, either a ministry of govt. or a separate govt. body is given exclusive rights of importing and or exporting to a certain region of the world or of trading in specified Commodities.
- **General Agreement on Tariffs and Trade (GATT):** A multilateral treaty entered into in 1948 by the intended members of the International Trade Organization, the purpose of which was to implement many of the rules and negotiated tariff reductions that would be overseen by the ITO. With the failure of the ITO to be approved, the GATT became the principal institution regulating trade policy until it was incorporated into the WTO in 1995
- **Import Quotas:** An import quota specifies the maximum amount of an import per year, typically administered with import licenses that may be sold or directly allocated, to individuals or firms, domestic or foreign.

13.7 ANSWERS TO SELF-CHECK EXERCISES

Exercise 13.1

Ans. Q1. Refer to Section 13.3.1

Ans. Q2. Refer to Section 13.3.3

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13.9 TERMINAL QUESTIONS

Q1. Examine the different effects of import Quotas?

Q2. Write short note on:

1. International Trade Agreement
2. Multiple Exchange Rates

Unit-14

REGIONAL ECONOMIC INTEGRATION

STRUCTURE

14.1 INTRODUCTION

In the present unit, you will study the concept and the welfare-implications of regional economic integration a phenomenon that has acquired prominence-in the post-Second World War period. Regional economic integration refers to the absence of different forms of discrimination among a few national economics. It takes the form of customs unions, free trade areas common market, economic union or sectoral or partial integration. We shall first deal with the theory of customs union and its welfare implications and thereafter discuss the possible gains that the less developed countries might derive from regional economic-integration groups, viz. the EEC and SAARC

14.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Define regional economic integration
- Explain the theory of custom unions
- Explain the European Economic Community (EEC) and SAARC

14.3 THEORY OF CUSTOMS UNIONS

A customs union is an association of usually contiguously situated independent states formed with a view to abolish all trade restrictions among themselves, to enforce common tariff on imports from the rest of the world and ultimately to evolve common economic policies. The formation of a customs union leads not only to the abolition of trade barriers between the constituent countries, but also to uniform trade barriers against other countries.

In the contemporary world, we have a number of such regional trade groups such as European Common Market, European Free Trade Area, Latin American Free Trade Area, Central American Common Market, East African Common Market, etc. The attempt is at free trade among the members of the union, or association and greater restriction on trade with the rest of the world. In the analysis of the theory of customs union the members of the union are usually referred to as 'partner countries' and the countries outside the union as the 'foreign countries, and we too shall follow this terminology here.

The objective of study of the theory of customs Union is to assess the gains or losses from such trade, arrangements. The gains from regional economic integration are the result of increased specialization due to the extension of the market beyond the nation boundaries of the producing country, and the scale economics that would be realized now by catering to the demand of all partner countries. To analyze the gains or losses from the formation of customs union, Jacob had identified two types of effect of such regional trade arrangements viz. ‘the trade creation effect' and ‘the trade diversion effect.’ These can be briefly discussed as below:

14.3.1 Trade Creations Effect

As a customs union is formed the national boundaries of each member country are thrown open for free trade with the rest of the partner countries. This has a trade creation effect. Those goods which were produced at a higher cost at-home would now

be imported from cheaper partner countries. There are, thus two inter-related effects: (i) the production effect the reduction or complete abolition of domestic production of goods which can be imported at a lower prices from partner countries and (ii) the consumption effect increased consumption of the same good since its prices in the domestic-market goes down. These two effects constitute the creation effect.

Corresponding to each of the above mentioned effect of trade creation there are two gains to the country joining a customs union (i) Saving of the cost on home-produced costlier articles, and (ii) increased consumer satisfaction due to an increase in consumer surplus.

These gains from trade creation can be illustrated, with the help of the following diagram. In Fig. 14.1, D''D' and SS' are the demand and the supply curves of a country for a particular product. Suppose, the country concerned partly. produced the goods at home and partly imports from the other country. At OP international price the latter country's supply curve is PH: If the former country, imposes a tariff on the import of the commodity, the, price goes up to say, OP_1 At the new, price, the consumption of this commodity falls to OC, domestic production 'increases' to OB and imports shrink to BC.

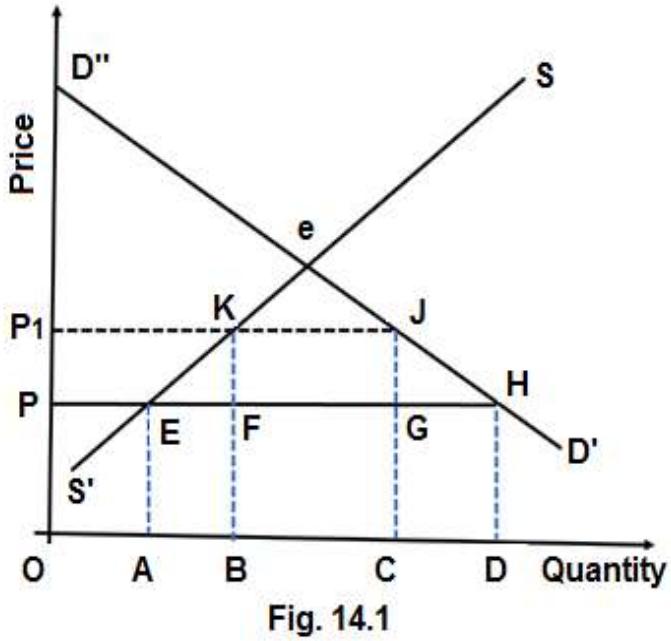

Fig. 14.1

Suppose now that a customs union is formed and the above importing and exporting countries join the union. The tariff PP_1 would now be abolished: Domestic production of the good falls to OA but consumption increases to OD. The saving of cost on domestic production would EFK, while the increase in consumer's surplus is JGH the total gain, therefore, from trade creation would be the sum of these, two viz. ΔEFK and ΔJGH. This shows that the trade creation effect of à customs union increases welfare. This is because the domestic consumer instead of having to buy from a dearer source, now buy from a cheaper partner country.

14.3.2 Trade Diversion Effect

The formation of a customs union also entails trade diversion. As noted above, the idea lying behind the theory of customs union is to discriminate against the 'foreign countries' in the matter of tariff. While such tariffs are in inter partner country trade, these trade restrictions remain intact so far as trade with the foreign countries is concerned. The consequence is to divert trade from tariff-laden sources to: the partner countries. This discrimination proves costly because instead of buying it cheaper from foreign countries the commodity would now have to be purchased from partner

countries since in the latter case the import axe tariff free. The self-imposed tariffs would render the imports from cost while cheaper source dearer now to each member of the customs union.

The trade diversion causes a loss which is measured by the difference in import price per unit from a foreign country and that from a partner country multiplied by the amount of the commodity imported. Such a loss from trade diversion can be illustrated with the help of the following diagram.

In fig.14.2, DD' is the demand curve for the imported commodity. PQ is the foreign country supply curve and RQ_1 would be partner country supply curve (both assumed to be constant at the OP and OR prices respectively). As the country imposes a uniform tariff on imports from both the countries, their respective supply curve shift upwards and are now P_1Q_2 and R_1Q3. At the tariff-laden price the country imports from the cheaper source i.e. the foreign country. The quantity imported is OA_1 whose total cost of import of OA_1TP and PTQ_2P_1 being the customs revenue.

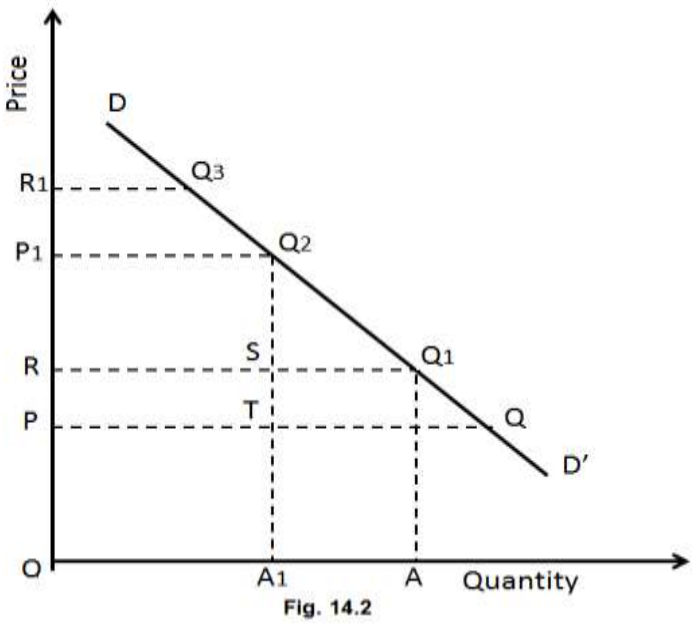

Fig. 14.2

Now the country joins a customs union along with, the 'partner country' and consequently abolishes tariffs on imports from the latter. This leads to diversion of imports from the 'foreign country to the 'partner country'. The imports rise from OA_1 to OA. For her previous imports, of OA_1 the country has now to pay OA_1SR an increase of PTSR in cost as compared to the pre-union position. This represents the loss from trade diversion but in 'order to arrive at the net gain or loss. The above loss must be weighed against the gain in consumption represented by Q_2SQ_1

It is assumed above that the supplies from the foreign and the partner countries are perfectly elastic. If, however, these are not so the above consequences of trade diversion have to be modified. If supply in the 'foreign country is inelastic, trade diversion to partner country will cause price to fall in the foreign country. If after the formation of the customs union the country has still some, trade in, the commodity with the foreign country the terms of trade in the former will improve and the ill-effects of trade diversion will, to that extent, be reduced. On the other hand, imperfectly elastic supply from the partner country will cause, price to rise as trade is diverted to it and consequently loss in consumer satisfaction will be much greater.

14.3.3 Secondary Effect of Customs Union

(1) We were concerned above only with the effect of customs union upon the Imports of a country. There would also be gains or losses from the elimination of duties on the home country's exports to other partner countries. As the market for the former's exports expands she comes to enjoy scale economies especially when the domestic market was inadequate (by dint of either poverty or small size) for the enjoyment of such economics.

(2) If the supplies of exports of the country are inelastic, increased demand would result in a rise in the prices of exports and the terms of trade of the country would improve.

(3) In the pre-union period a, country may have created sheltered markets for her domestic producers by raising tariff walls. This might, sometimes turn even a comparative industry into one collusion of one from or other tends to take place. The formation of custom unions might turn into a healthy development in that the monopoly producer in the national market shall have to face the competition with other producers of the same or nearly the same commodity within the union or common market. Introduction of competition or increase in it would spur each rival to greater efficiency which in itself would, be a great gain-to the members of the customs union.

(4) The increased scope for specialization prospects of increased scale economics and assured higher markets would provide a great leverage to the investment of capital and enterprise. Investment is a function of an assured, large, stable market. Thus, within the customs union, capital formation might get accelerated, thereby accelerating the average rate of growth of the member's countries. This trend would be reinforced with increased factor mobility within the region.

(5) A Customs Union is likely to affect the level of employment in partner countries. Some of the-resources might be lying idle in partner countries due to, lack of complementary: factors of production, the import of which is restricted by trade controls. After the formation of customs union, removal of trade restrictions will increase the possibilities of such resources being imported. Moreover, coordination of monetary and fiscal policies of different partner countries will facilitate the achievement of full employment goal.

The magnitude of gains or losses from the formation of a customs union is however contingent on a number of factors and circumstances which we shall be considering in the following paragraphs. Empirical studies though very few have been made to gauge these possible gains or losses. Two notable studies are by Verdoom and Harry G Johnson. The first relates to gain from intra-European trade including trade among the members of-the European Common Market. Verdoom concludes that the gains from such trade to the European countries are equal to about one twentieth of one per cent of their annual incomes. Similarly, Johnson has estimated the possible gain to Britain from joining the European Free Trade Area which according to his estimates was to be as an absolute maximum one per cent of the national product of the UK. while commenting upon the former empirical study concludes that the gains insignificant."

14.3.4 Factors Determining Gain or Loss

Without considering the nature of trade, the direction of trade, the magnitude of tariffs etc, in the-'pro-union period, it would be unwise to say anything definite about the gain or loss from the formation of customs unions. The following generalizations have, therefore, been made about the factors that would intimately affect the possible gain or loss from a customs union to a country that prefers to join it. In the first instance, the greater would be the gain to a country joining a customs union the higher the initial levels of her tariffs on trade, with partner countries, more elastic the demand for and supply of goods now imported from the partner countries.

Secondly, we have noted above the trade diversion causes a loss to each member country. However, such a loss would be less (i) the smaller the cost difference between" (be foreign and partner' country goods) (ii) The more elastic the supply of the partner country's goods and (iii) the less elastic the supply of foreign country goods

Thirdly, we have also noted earlier that the trade diversion effect has to be weighed against the possible terms of trade effects to trade diversion. Thus, the terms of trade of a country will improve more with a foreign country, the more inelastic is the supply of imports from the latter country. and the more inelastic is the demand of the former country for the latter's goods.

Besides these conditions; the gain or loss from the formation of a customs union also depends upon what type of countries from such a union. Should the countries joining it be competitive in- the production of goods or complementary? The question was initially answered by Jacob Viner and has been lent greater clarity by later analysis. Thus GH, Johnson says a customs union in is likely to be beneficial if the countries are alike at the start but can become different. The more alike they are the more scope there is for them to become complementary to each other by specializing: the scope for such complementary specialization is small 'when the countries already produce completely different goods. Countries entering a union, in Denis Robertson's phase should be, actually highly competitive but potentially highly complementary. Although the partner countries, should be similar to each other, they should be different from the rest of the world. In this case the loss from trade diversion would be less.

K. Lipsey makes two further points about the type of countries likely to gain/ loss the most from, the formation of customs union. One of these is that the higher the proportion of a country's total expenditure on international trade, the greater the likelihood of her bearing a loss in joining the customs union. It means that a country' which makes the major part of her aggregate expenditure-on domestic trade is one likely to given more, from her of a customs union. Secondly given the volume "of internal trade of a country, the higher the proportion of her foreign trade with the partner countries relative to the rest of the world in the pre-union period, the greater the gain-to-her. That is because under-such conditions' while benefits of trade creation would be greater, the ill-effects of trade diversion would be minimized.

Self-Check Exercise 14.1

Q1. Distinguish between Trade Creation and Trade Diversion.

Q3. What are the secondary effect of Customs Union?

14.4 Regional Economic Integration among the Less Developed Countries

The less developed countries (LDCs) have also tried out the experiment of regional economic integration of the type discussed above in certain continents. We have the examples of Latin American Free Trade Area, Central American Common Market, East African Common Market, West African Custom's Union, Central African Customs and Economic Union and the West Indies

Federation, Pakistan, Iran and Turkey had also tried an experiment under, the name Regional co-operation for Development. Among these the Central American Common Market is perhaps most successful attempt.

14.4.1 Benefits for LDCs

We have noted above some of the benefits that would be enjoyed by a country joining a customs union. A case be built for regional economic integration among the LDCs on the basis of the possible gains to such countries from regional trade arrangements. The following three benefits of regional economic integration may b particularly noted for the LDCs:-

(1) **Specialization in Exports—**It was pointed out above that the advantages of trade creations are the result of realization of economics of large scale and increased specialization. This is of particular relevance to the LDCs. 'Ragnar Nurkse and Rosenstein Rodan have pointed out that sometimes the development of large scale manufacturing units' is inhibited by inadequate demand in the LDCs. Thus, market pooling may be an important- advantage from customs unions or free trade areas to the member LDCs. Import substitution industries may particularly benefit from the enlargement of markets, especially if the market constraints of a protected market had been preventing them from enjoying economies of large scale.

(2) **Gain from trade—**As the trade among member countries increases, the trade creations effect, with which you are already familiar, would be of special significance. Each LDC instead of producing the whole range of import substitution goods may produce only those goods in which it has an actual or potential comparative advantage. Pattern of trade and production would become more rational.

There would be, however, some adverse effects of trade diversion from the cheaper sources (the developed countries) to dearer partner countries. Which of the two, the trade creation or the trade diversion effects would be more significant depends upon several factors. The gains from trade creations would be greater, the higher the pro-union mutual tariff rates, the more similar the pattern of their production, and the lower the union tariffs on imports from foreign countries as compared to the pre-union tariffs of individual LDCs. It was also contented by R.S. Bhambri in an article, (Feonomia International, May, 1972) that trade diversion through import substitution over a wide area will-save the foreign exchange of the region on traditional imports and enable the LDCs to divert the saved foreign exchange the import of capital equipment and scarce raw material, thus helping the process of capital formation and economic development.

Another gain from regional integration may be that the development of related complementary industries within the union will enable the member countries to enjoy the external economics associated therewith. Terms of trade of the LDCs joining a customs union may also improve. This would happen if the prices of demand for imports) while those of their exports rise in the post-union period. This is likely to be the case when the LDCs joining the customs unions are monopolistic buyers of imports, but they themselves are, monopolistic sellers of the exports to these countries.

(3) **In the LDCs, as import substitution industries develop**: Behind the tariffs walls, monopoly or oligopoly situation might rise, which might breed inefficiency and lethargy among the firms. With the formation of customs unions these firms would be exposed to competition from rivals in the union. This might improve their technical efficiency. Marginal firms might be forced to bring down their costs or go out of business. Thus, increased competition within the unions would promote technological progress and innovation.

14.4.2 Problems and Difficulties

Building up a case for regional economic integration among the LDCs is one thing and giving the idea a practical shape is quite another. There are numerous difficulties with which the formation of regional grouping among the LDCs is beset. We may briefly refer to some of them below:-

(1) Different levels, of Economic Development: It is obvious that promotion of regional co-operation the LDCs at roughly the same levels, of economic development is easy. However, the difficulty arises among those that have experienced disparate 'rates of growth. The lagging economies among them might genuinely feel that their superior partners would promote their future development because of unequal competitive strength of the two. This is sure to cause internal strains within the union. Tins difficulty has also been faced by the European Common Market and the Latin American Free Trade Area. One way out of the difficulty may be a. symmetrical treatment to the laggards-some type of aid, assistance or favour to them.

(2) Political and Administrative Difficulties: There might be difficulties of a political and administrative nature. For example, the political instability that afflicts many LDC's is a serious handicap. Unstable governments are typically inward looking in their policies. Besides, even the stable odes may be pre-occupied with national reconstruction programmes and may have very little time or inclination to enter such regional blocks. The administrative machinery may be inadequate to meet even the national requirements. It may, therefore, be beyond their means and. competence to form, and administer a regional assoplated above citation of the type contemn.

(3) Economic Problems: We have noted earlier that a customs union among the LDCs may be beneficial because it would widen the market for the products of the partner countries. However, 'this is a solution on the demand side. We might 'over look some-of the difficulty faced by the LDCs in promoting manufacturing activity that lie on the supply side. Take for instance, the non-availability of capital

equipment, skill and knowledge of of production. Thus, a union would be justified only where the Industries have already been set up and their growth is being held up by the constraint of markets.

(4) Adverse Effect on the Trade with Developed Countries: A customs union would be justified where within a region intra-regional trade is significant. Most of the LDCs, however, trade mainly with the developed countries Therefore, when a union is formed there would be considerable amount of trade diversion from these cheaper sources to the dearer ones. There would consequently be a significant fall in the short-run welfare. The consumers may have to suffer a good deal Thus by': way of a short run benefits, customs union may have very little to offer. In the long-run-the enjoyment of scale economics and the-'acquisition of comparative advantage in newlines of production might certainly increase welfare. But it would be too much to expect LDCs to enter negotiations for the formation of customs Unions in the hope of enjoying long term advantages, when immediate benefits are almost absent,

It may therefore, be fair to conclude that although the LDCs may have considerable benefits of a long-term 'nature to be enjoyed from the regional economic cooperation, the absence of the prospects, of immediate gain aim other difficulties enumerated above might, determine of them to join such regional groups. Besides the more developed ones among them might be. required to make some concessions for smaller and less developed partners which the former might be reluctant to do.

In view of these difficulties and problems GM Meier suggests partial or sectoral integration among the LDCs. Such integration could be in respect of specific industries or activities especially where external economies and complementarily of development are important. The chief areas of such regional co-operation could be (1) regional investment policy, (ii) partial liberalization of trade,' (iii) regional development banks and corporations.

The success of partial integration would ultimately pave the way for a more cohesive arrangement and the formation of more ambitious customs unions. Such brick-by-brick approach to the formation of customs unions has also been suggested for the developing Asian countries by PE Stanhan. He argues that Asian countries are facing a number of difficulties in' pushing up tin-scales of their primary exports in the developed countries. These include the unfavourable trade policies of the EEC and price competition, with superior rivals: It is, therefore/suggested that these' countries could join hands in the matter "of import substitution which could be justified more on a regional rather than national-basis, inter-regional coordination in planning etc.

Before ending this unit, we shall briefly discuss the nature and working of two experiments at regional economic integration, one the most elaborate and successful so far and the other which is still in an embryonic form but in which our, own country is involved. The former is the European Economic Community and the latter the SAARC. We shall discuss the, two separately below.

Self-Check Exercise 14.2

Q1. Write the benefits of regional economic integration for Less Developed Countries

Q2. What are the difficulties faced in formation of regional economic integration?

14.5 THE EUROPEAN ECONOMIC COMMUNITY (EEC)

The European Economic Community (EEC) was an international organization created by the Treaty of Rome of 1957. Its aim was to bring about economic integration, including a common market, among its six founding members: Belgium, France, Italy, Luxembourg, the Netherlands and West Germany. The EEC was also known the Common Market in the English-speaking world and sometimes referred to as the European Community even before it was officially renamed as such in 1993. as such in 1993.

It gained a common set of institutions along with the European Coal and Steel Community (ECSC) and the European Atomic Energy Community (EURATOM) as one of the European Communities under the 1965 Merger Treaty (Treaty of Brussels). Upon the entry into force of the Maastricht Treaty in 1993, the EEC was renamed the European Community (EC) to reflect that it covered a wider range of policy. This was also when the three European Communities, including the EC, were collectively made to constitute the first of the three pillars of the European Union (EU), which the treaty also founded. The EC existed in this form until it was abolished by the 2009Treaty of Lisbon, which merged the EU's former pillars and provided that the EU would "replace and succeed the European Community."

Background

The Treaty of Paris, signed in 1951, established the European Coal and Steel Community (ECSC), an international organization based on supranationalism and international law. Its primary goal was to strengthen Europe's economy and prevent future conflicts by integrating member states.

To advance the vision of a federal Europe, two additional communities were proposed: the European Defence Community and the European Political Community. While the Common Assembly, the parliamentary body of the ECSC, was drafting the treaty for the latter, the French Parliament rejected the proposed defence community. In response, ECSC President Jean Monnet, a key architect of European integration, resigned from the High Authority in protest. He then shifted his focus towards economic rather than political integration.

Following the Messina Conference in 1955, Paul-Henri Spaak was tasked with drafting a report on the feasibility of a customs union. The resulting Spaak Report, along with the Ohlin Report, laid the foundation for intergovernmental negotiations held at Val Duchesse in 1956. These discussions ultimately led to the Treaty of Rome.

In 1956, Spaak chaired the Intergovernmental Conference on the Common Market and Euratom at Val Duchesse, which paved the way for the Treaty of Rome. On 25 March 1957, this treaty was signed, formally establishing the European Economic Community (EEC).

Formation and Early Development

The establishment of the European Economic Community (EEC) and the European Atomic Energy Community (EURATOM, also referred to as EAEC) marked a significant shift in European integration. These new entities were less supranational than their predecessors, as several countries expressed concerns about sovereignty infringement. However, debates over the role and influence of the Hallstein Commission persisted. The Hallstein Commission held its first formal session on January 16, 1958, at the Château de Val-Duchesse.

The EEC, which later evolved into the modern European Union, was created to establish a customs union, whereas Euratom aimed to foster collaboration in the nuclear energy sector. Over time, the EEC emerged as the more influential of the two, expanding its scope significantly. One of its major early achievements was the introduction of common pricing for agricultural goods in 1962. By 1968, tariffs on certain products traded between member states had been eliminated.

A major political dispute arose over the financing of the Common Agricultural Policy (CAP), which had been implemented in 1962. As the transitional phase that required unanimous decision-making ended, majority voting in the Council was introduced. French President Charles de Gaulle, a staunch opponent of supranational governance, feared that other member states would challenge the CAP. In response, France adopted an "empty chair policy," withdrawing its representatives from European institutions until the French veto power was reinstated. The crisis was eventually resolved through the Luxembourg Compromise on January 29, 1966, which informally allowed member states to veto decisions affecting their national interests.

The institutional structure of European integration underwent a significant transformation on July 1, 1967, when the Merger Treaty came into effect. This treaty unified the institutions of the European Coal and Steel Community (ECSC), the EEC, and Euratom, while maintaining their distinct legal identities. These entities, collectively referred to as the European Communities, shared a Parliamentary Assembly and judicial bodies, fostering deeper integration. Subsequent treaties extended the Community’s authority beyond economic matters, advancing the vision of European political unification. As this integration progressed, Soviet leader Mikhail Gorbachev described the evolving European project as a "Common European Home," emphasizing its role in promoting peace and unity across the continent.

Expansion and Elections

The first efforts toward the enlargement of the European Communities emerged in the 1960s. In 1961, Denmark, Ireland, Norway, and the United Kingdom applied for membership. However, French President Charles de Gaulle opposed British entry, fearing it would serve as a conduit for U.S. influence, leading to the suspension of all four applications. These nations reapplied on May 11, 1967, and with Georges Pompidou succeeding de Gaulle in 1969, the veto was lifted. Negotiations commenced in 1970 under British Prime Minister Edward Heath, who had to navigate disagreements concerning the Common Agricultural Policy and the UK's ties to the Commonwealth. By 1972, accession treaties were signed, and all except Norway (which rejected membership in a referendum) officially joined on January 1, 1973.

The Treaties of Rome mandated direct elections for the European Parliament, but implementation required consensus on a voting system, which the Council failed to finalize for some time. President de Gaulle played a significant role in obstructing Parliament's development, though it was eventually granted budgetary powers after his resignation. Persistent pressure from Parliament led to a breakthrough on September 20, 1976, when the Council agreed on partial electoral mechanisms, though details of the voting systems remained inconsistent across member states. Under the leadership of President Roy Jenkins, the first direct elections were held in June 1979, marking a turning point for the Parliament. With enhanced legitimacy and authority, the newly elected body functioned full-time and took on a more active role. Shortly afterward, it became the first institution to propose adopting the European flag as the official symbol of the Community, a motion approved by the European Council in 1984.

The European Council, which had evolved since the 1960s as an informal summit of heads of state, was a response to de Gaulle's opposition to supranational dominance by institutions like the European Commission. Its existence was first acknowledged in treaties through the Single European Act.

Following the restoration of democracy in Greece, the country applied for membership on June 12, 1975, and officially joined on January 1, 1981. Spain and Portugal followed a similar path, applying in 1977 and becoming members on January 1, 1986. Turkey's formal application in 1987 initiated the longest accession process in the Community's history. Recognizing the need for institutional reform to accommodate expansion and foster greater cooperation, the Single European Act was signed in Luxembourg and The Hague on February 17 and 28, 1986. This treaty introduced significant institutional reforms, extended Community competencies, reinforced foreign policy collaboration, and laid the groundwork for the single market. It came into effect on July 1, 1987. This was followed by negotiations leading to the Maastricht Treaty, finalized on December 10, 1991, signed the following year, and implemented on November 1, 1993, marking the establishment of the European Union.

The Evolution of the European Community

The formation of the European Union led to the integration of the European Communities into one of its three pillars. The European Economic Community (EEC) expanded its scope and was rebranded as the European Community (EC), maintaining its supranational governance structure. While the European Parliament, Commission, and Court of Justice became institutions of the EU, they initially had limited authority over the newly created intergovernmental pillars. The institutional titles reflected this distinction, with the "Council of the European Union" and the "Commission of the European Communities" preserving their original nomenclature. However, the Maastricht Treaty significantly increased the European Parliament's influence, introducing the co-decision procedure, which granted it equal legislative authority with the Council in Community matters. The use of Qualified Majority Voting (QMV) in the Council further strengthened the federal aspects of decision-making within the Community pillar.

The Treaty of Amsterdam shifted responsibilities for migration-related issues—including visas, asylum, and illegal immigration—from the Justice and Home Affairs

(JHA) pillar to the European Community. Consequently, the JHA was renamed Police and Judicial Cooperation in Criminal Matters (PJCC). Both the Amsterdam and Nice Treaties expanded the co-decision procedure, ensuring the Parliament had equal legislative power to the Council in almost all policy areas.

The Treaty of Paris, which had established the European Coal and Steel Community (ECSC) in 1952, expired in 2002 after reaching its 50-year term. Instead of renewing it, relevant provisions were incorporated into the Treaty of Rome, allowing the ECSC's functions to continue under the European Community framework.

A major structural shift occurred with the Treaty of Lisbon, which took effect in 2009. This treaty dismantled the EU's three-pillar system and transferred the legal personality of the European Community to the newly unified European Union, merging the remaining pillars while keeping Euratom distinct. This reform had initially been proposed under the European Constitution, but that treaty failed ratification in 2005.

Aims and Achievements

The primary goal of the European Economic Community (EEC), as outlined in its preamble, was to "maintain peace and freedom while fostering greater unity among the peoples of Europe." To achieve balanced economic development, the EEC aimed to:

(i) Establish a customs union featuring a unified external tariff.

(ii) Implement common policies in key sectors such as agriculture, transport, and trade.

(iii) Expand the EEC to include additional European nations.

Regarding the customs union, the treaty initially proposed a 10% reduction in customs duties along with a phased elimination of up to 20% of global import quotas. However, progress on this front exceeded expectations, advancing significantly faster than the planned twelve-year timeline. Despite this, France experienced delays due to its ongoing conflict in Algeria.

Founding Members and Expansion

The six founding nations of the EEC, often referred to as the "inner six," were France, West Germany, Italy, and the three Benelux countries—Belgium, the Netherlands, and Luxembourg. These nations were distinct from the "outer seven," which comprised members of the European Free Trade Association (EFTA).

The EEC expanded for the first time in 1973, welcoming Denmark, Ireland, and the United Kingdom. Further enlargements followed in the 1980s with Greece, Spain, and Portugal joining the bloc. The reunification of Germany in 1990 led to the incorporation of East Germany into the EEC. After the European Union (EU) was formally established in 1993, it continued to grow, ultimately including sixteen more countries by 2013.

Representation in Institutions

All member states hold representation within various EU institutions. The Council of the European Union consists of national ministers, each acting on behalf of their respective governments. In the European Commission, each country appoints one

Commissioner, who is expected to serve the interests of the Community rather than their home nation. Before 2004, larger countries such as France, Germany, Italy, and the United Kingdom were entitled to two Commissioners each.

The European Parliament assigns seats to member states based on population size. Since 1979, these representatives have been elected directly and are organized by political affiliation rather than nationality. Other institutions, including the European Court of Justice, also ensure national representation in their composition.

Self-Check Exercise 14.3

Q1. Write a note on European Economic Community.

14.6 The South Asian Association for Regional Cooperation (SAARC)

The South Asian Association for Regional Cooperation (SAARC) was founded in December 1985 with the objective of fostering regional collaboration. Its founding members include seven South Asian nations: Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka, and the Maldives. These countries pledged to enhance cooperation in socio-economic and cultural spheres for their mutual benefit. A key focus of SAARC has been the development of human resources, recognizing it as a crucial component of overall economic progress. Compared to other regional economic alliances like the European Economic Community (EEC), SAARC adopted a cautious approach regarding the potential outcomes of its initiatives.

Afghanistan became the eighth member of SAARC during the 14th Summit held in New Delhi in April 2007. Additionally, several countries and organizations, including the United States, the European Union, China, Japan, South Korea, Iran, Australia, and Myanmar, have been granted observer status. The 16th SAARC Summit, held in Thimphu, Bhutan, in April 2010, marked a significant milestone with the signing of an agreement on trade in services. This agreement aimed to strengthen regional collaboration in sectors such as communication, information technology, air transport, healthcare, and hospitality.

The 17th SAARC Summit took place in Addu, Maldives, in November 2011. The discussions focused on the need to expedite the implementation of the South Asian Free Trade Area (SAFTA) agreement, particularly in reducing sensitive lists and addressing non-tariff barriers. Member states also deliberated on increasing the movement of financial capital, promoting intra-regional long-term investment, finalizing the Regional Railway Agreement, and advancing cooperation in the energy sector.

The 18th SAARC Summit was held in Kathmandu, Nepal, in November 2014. While member countries reiterated their commitment to regional cooperation, concrete commitments remained limited. However, a noteworthy achievement was progress in sub-regional connectivity. In June 2015, India, Bangladesh, Bhutan, and Nepal signed an agreement to develop a sub-regional road network, aiming to enhance transport connectivity across these nations.

14.6.1 Objectives and Principles of SAARC

Objectives

SAARC's primary goal is to accelerate economic and social development in the region by efficiently utilizing collective resources, both human and material. Article I of the SAARC Charter outlines its objectives:

(i) To promote the well-being of South Asian populations and enhance their quality of life.

(ii) To facilitate economic growth, social progress, and cultural development while ensuring that individuals have opportunities to live with dignity and realize their potential.

(iii) To strengthen self-reliance among South Asian countries through collective efforts.

(iv) To foster mutual trust, understanding, and cooperation in addressing shared challenges.

(v) To encourage collaboration and mutual assistance in economic, social, cultural, technical, and scientific domains.

(vi) To enhance cooperation with other developing nations.

(vii) To work together in international forums on matters of common interest.

(viii) To establish partnerships with global and regional organizations that share similar objectives.

Principles

Article II of the SAARC Charter lays down the guiding principles of the association:

(i) Cooperation within SAARC shall be based on the principles of sovereign equality, territorial integrity, political independence, non-interference in each other's internal affairs, and mutual benefit.

(ii) SAARC initiatives are not meant to replace bilateral or multilateral cooperation but to complement them.

(iii) Any cooperation among member states must align with their existing bilateral and multilateral commitments.

14.6.2 Organisation of SAARC

The South Asian Association for Regional Cooperation (SAARC) is organized into several key bodies, including the Summit, the SAARC Secretariat, the Council of Ministers, the Standing Committee, the Programming Committee, and various Technical Committees. The Summit serves as the highest decision-making authority, comprising the heads of all member states. It is held annually in one of the member countries on a rotational basis. However, if any head of state is unable to attend, the meeting cannot proceed.

The SAARC Secretariat is responsible for coordinating and overseeing the implementation of SAARC activities, facilitating meetings, and acting as the communication link between SAARC and other international organizations. Established on January 16, 1987, in Kathmandu, Nepal, the Secretariat is led by the Secretary-General, who is appointed by the Council of Ministers based on a rotational system among member states in alphabetical order. The Secretary-General serves a fixed term of three years.

Supporting the Secretary-General, the Secretariat also includes eight Directors, each representing a member state, along with general administrative staff. Directors are appointed for a three-year term, which may be extended under special circumstances with the approval of the Secretary-General and the concerned member states. While Nepal initially covered the establishment costs of the Secretariat, ongoing expenses are shared among SAARC members. India contributes 32% of the total budget, Pakistan 25%, while Bangladesh, Nepal, and Sri Lanka each contribute 11%. Bhutan and the Maldives contribute 5% each.

The Council of Ministers consists of the Foreign Ministers of all member countries. It is responsible for policy formulation, reviewing progress, identifying new areas of cooperation, establishing necessary mechanisms, and addressing matters of regional importance. The Council meets twice a year but can convene additional sessions if all member states agree.

Other important bodies within SAARC include the Standing Committee, the Programme Committee, and Technical Committees. The Standing Committee, comprising Foreign Secretaries of member states, is responsible for coordinating and monitoring SAARC initiatives, determining financial requirements, setting sectoral priorities, and fostering regional and international collaboration. It usually meets twice a year and submits reports to the Council of Ministers. Additionally, it has the authority to establish Action Committees to implement projects involving multiple member states, though not necessarily all of them.

To support the Standing Committee, the Programme Committee is formed with senior officials. This ad hoc body meets before Standing Committee sessions and handles tasks such as reviewing the Secretariat's budget, finalizing annual activity schedules, analyzing reports from Technical Committees and SAARC Regional Centres, and addressing other issues assigned by the Standing Committee.

Currently, SAARC has 12 Technical Committees focusing on various fields, including agriculture, rural development, environment, health, population activities, transport, communications, science and technology, and tourism. Each committee consists of representatives from all member states, who develop and oversee programs and projects within their respective sectors. Their activities are monitored and reported to the Standing Committee through the Programming Committee. The chairmanship of each Technical Committee rotates among member states in alphabetical order every two years.

14.6.3 Appraisal of the SAARC

The South Asian Association for Regional Cooperation (SAARC) is a trade organization established by some of the world's economically weaker nations, primarily aimed at promoting economic and social development in South Asia. Among its member countries, Bangladesh, Bhutan, the Maldives, and Nepal are classified as least developed countries. Additionally, Bhutan, Nepal, and Afghanistan are landlocked nations that rely on access to global markets through India's and Bangladesh's ports. However, Pakistan has been reluctant to provide transportation facilities to Afghanistan.

India's trade with SAARC nations increased from $6.9 billion in 2005-06 to $19.98 billion in 2013-14. Despite this growth, intra-regional trade within SAARC remains limited, accounting for only 5% of the total trade among its member countries. This highlights significant potential for expanding trade within the region. Studies suggest that regional trade could increase to $120-180 billion if member nations successfully implement a comprehensive Free Trade Agreement (FTA) covering goods and services while also improving infrastructure and connectivity.

According to a report by the Centre for Global Trade Development (CGTD), the South Asian Preferential Trading Arrangement could provide access to a consumer base of over 425 million middle-class individuals, fostering economic growth across the region. Given that imports account for 8% of India's GDP, 34% in Sri Lanka, and 17% in Pakistan, Bangladesh, and Nepal, intra-regional trade expansion could drive substantial economic benefits. It is projected that the region could achieve an average annual growth rate of 7%, unlocking new opportunities for development.

14.6.4 Achievements of SAARC

Despite facing significant political challenges since its inception, SAARC has managed to achieve notable progress in several areas:

(i) **Trade Liberalization**: Member nations have taken steps to ease trade restrictions by reducing quantitative import restrictions and offering trade concessions. For instance, India lifted restrictions on approximately 2,300 import items from SAARC countries in August 1998. By August 2003, India had granted trade concessions to Pakistan on around 370 products, while Pakistan extended similar benefits on about 340 items. Additionally, India has signed free trade agreements with Bhutan, Nepal, and Sri Lanka.

(ii) **Establishment of Technical Committees**: To enhance cooperation in key sectors such as agriculture, rural development, environment, health, science and technology, transport, tourism, education, and culture, SAARC has set up specialized technical committees focused on economic collaboration.

(iii) **Poverty Alleviation Initiatives**: SAARC has prioritized social mobilization, decentralized agricultural development, small-scale labor-intensive industries, and human resource development to tackle poverty. The organization emphasizes employment rights and expanding access to primary education for underprivileged populations. A three-tier mechanism has been established to facilitate information exchange on poverty reduction efforts, with support from international bodies like the World Bank (IBRD), UNDP, and ESCAP.

(iv) **SAARC Financial Assistance**: To support member states financially, SAARC has created two funds—the South Asian Development Fund (SADF) and the SAARC Japan Special Fund (SJSF). SADF operates through three distinct channels: project identification, institutional and human resource development, and social and infrastructure development.

(v) **Food Security Measures**: The SAARC Food Security Board was formed to periodically assess the region's food situation. A reserve of 2.42 lakh tonnes of food grains has been established to address emergencies. At the 14th SAARC Summit in April 2007 (New Delhi), the organization announced plans to create a regional food bank to mitigate shortages caused by natural calamities like floods and droughts.

(vi) **SAARC Chamber of Commerce and Industry (SCCI)**: Headquartered in Karachi, SCCI fosters economic cooperation by promoting trade and interaction among the chambers of commerce in member states. It organizes trade fairs and facilitates negotiations with other trade bodies to enhance intra-regional trade. SCCI has played a pivotal role in the establishment of SAPTA and strengthening economic collaboration within the region.

(vii) **SAARC Agricultural Information Centre (SAIC)**: Established in 1998, SAIC functions as a central hub for agricultural information, covering areas like forestry, fisheries, livestock, rice, and potatoes. It facilitates research and development exchanges among member countries and disseminates agricultural studies and experimental findings.

(viii) **Collaboration with International Organizations**: To support social and economic growth, SAARC has entered into agreements with global institutions such as UNCTAD, UNDP, UNDCP, ESCAP, ITU, and the Asia-Pacific Telecommunity (APT). These partnerships help drive regional development initiatives.

(ix) **Formation of the South Asian Growth Quadrangle (SAGQ)**: In early 2000, India, Bhutan, Nepal, and Bangladesh established the SAGQ to foster development in Nepal, Bhutan, Bangladesh, and eastern India, particularly in the Ganga, Meghna, and Brahmaputra river basins. This initiative promotes multimodal transport, improved telecommunications, sustainable tourism, environmental protection, and increased trade and investment.

(x) **Bilateral Free Trade Agreements**: To advance toward a South Asian Free Trade Area (SAFTA), several regional nations have signed bilateral free trade agreements. A significant milestone was the India-Sri Lanka Free Trade Agreement signed on December 28, 1998. Under this pact, India agreed to import 1,000 items duty-free from Sri Lanka, while Sri Lanka permitted the duty-free import of 900 products from India. Similar agreements have been forged between India and Bhutan, as well as India and Nepal.

14.6.5 Problems Faced by SAARC:

Although SAARC has attempted to move forward over the years, yet it has been faced with very serious problems and so far it has not been able to play its assigned role. These problems are as under:

(i) **Political, Ethnic, and Religious Conflicts** – One of the primary obstacles to cooperation among SAARC nations is the prolonged political, ethnic, and religious disputes between member states. A major point of contention has been Pakistan's long-standing demand that India cede Jammu & Kashmir, which has strained regional cooperation in trade and development.

(ii) **Lack of Economic Complementarity** – The economies of SAARC countries are largely similar, with member nations producing comparable goods. Successful regional integration usually requires economic diversity rather than similarity. This lack of complementarity has limited trade and cooperation.

(iii) **Preference for Trade with Hard Currency Markets** – Many SAARC nations prioritize exporting to hard currency regions, neglecting intra-regional trade. This preference has slowed economic integration within SAARC.

(iv) **Balance of Payments Deficit** – Persistent balance of payments deficits and foreign exchange shortages are common issues across SAARC nations, including India. This has led countries to impose import restrictions and tariffs instead of facilitating freer trade.

(v) **Inter-Member Economic Competition** – Several SAARC nations compete in global markets, leading to trade rivalries. For instance, India and Sri Lanka compete in tea exports, India and Pakistan in textiles and clothing, and India and Bangladesh in jute and textiles. Such competition discourages regional cooperation.

(vi) **Infrastructural Deficiencies –** The region lacks well-developed infrastructure, including transport networks, communication systems, institutional frameworks, and efficient payment and clearing mechanisms. These inadequacies hinder intra-regional trade expansion.

(vii) **Perceived Dominance of India** – Due to its geographical size and superior financial, technical, and manpower resources, smaller member states like Pakistan and Bangladesh often view India as a dominant force that could overshadow their economies. This perception has created hesitation in fully embracing economic collaboration.

(viii) **Limited Intra-Regional Investment** – SAARC nations largely depend on Western countries and international financial institutions for investment rather than seeking capital from within the region. Intra-regional investment remains as low as 1% of total investment, in contrast to 43% in ASEAN and 64% in the EU. Increasing regional investment would significantly enhance cooperation.

(ix) **Bilateral Trade Agreements** – Some SAARC members have entered into bilateral trade agreements that provide better concessions than those under the

SAARC Preferential Trading Arrangement (SAPTA). This reduces the incentive for countries to rely on SAARC-based trade negotiations.

(x) Product-Specific Trade Concessions – Trade negotiations within SAARC have been hindered by a narrow, product-specific approach to trade concessions. In many cases, products included in trade agreements are not even exchanged among member nations. Transitioning to a broader, sector-based strategy could accelerate progress toward the South Asian Free Trade Area (SAFTA).

(xi) Transport and Connectivity Issues – Although a technical committee on transport exists, inadequate transport infrastructure remains a major challenge. Additionally, high transit duties further complicate regional trade and hinder the realization of SAFTA.

(xii) Trade Barriers and Tariffs – Despite ongoing negotiations, high tariffs and trade restrictions persist. Pakistan and Bangladesh, for example, impose Value-Added Tax (VAT) on all imports. Other non-tariff barriers, such as quantitative restrictions and restrictive licensing, continue to exist. Pakistan has yet to grant Most Favored Nation (MFN) status to India, despite WTO obligations to do so by 2005. Unless SAARC nations commit to removing these trade barriers, the vision of SAFTA will remain unfulfilled.

14.6.6 South Asian Free Trade Area (SAFTA):

A significant milestone was achieved by the SAARC nations during their 12th Summit, held in Islamabad, Pakistan, from January 4 to 6, 2004. At this summit, member states signed an agreement to establish the South Asian Free Trade Area (SAFTA), which was set to take effect on January 1, 2006. Following the ratification of the agreement, SAFTA officially became operational on July 1, 2006. The agreement aimed to eliminate trade barriers among member countries by 2016. For the phased reduction of tariffs, the customs duty rates in effect as of January 1, 2000, were taken as the reference point. India initiated duty reductions, with an average decrease of 5 percentage points per year for most products falling under the highest tariff category.

As part of the agreement, member countries were required to issue notifications regarding their 'negative lists' or 'sensitive lists,' which included products exempted from tariff concessions. According to the lists announced, Nepal identified 1,310 items, Bangladesh 1,254, Pakistan 1,183, Sri Lanka 1,065, India 884, Maldives 671, and Bhutan 157 items as sensitive. India's sensitive list encompassed agricultural goods, textiles, chemicals, leather products, and items reserved for small-scale industries. However, least developed countries (LDCs) like Bangladesh were granted permission to export certain listed products to India under preferential terms.

Under SAFTA, member countries also agreed to grant each other 'Most Favoured Nation' (MFN) status. However, Pakistan resisted this provision and withheld MFN status from India, linking it to the resolution of the Kashmir issue in its favor. Despite this stance, India granted MFN status to Pakistan unilaterally. Although Pakistan initially hesitated, it committed to complying with this requirement by the end of 2012. Meanwhile, India established a negative trade list, permitting Pakistan to import over 5,600 items. In March 2012, Pakistan also released its negative list, allowing all

imports from India except for 1,209 restricted items. This development provided a glimmer of hope for improved trade relations between the two nations.

SAFTA also introduced measures to compensate LDCs for any loss in national import duty revenues resulting from tariff reductions. This provision primarily benefited Bangladesh, Nepal, Bhutan, and Maldives. The compensation structure was set at a cap of 1% for the first two years, increasing to 5% in the third year and reducing to 3% in the fourth year, based on customs revenue from non-sensitive items under bilateral trade in 2000. While this compensation scheme was designed to last for four years for LDCs, Maldives was granted an additional two years of support. If implemented effectively, SAFTA has the potential to unlock significant trade opportunities among the participating nations.

Despite these efforts, SAARC's overall progress has been underwhelming. The region continues to grapple with security threats, yet member nations have failed to establish a robust intelligence-sharing mechanism or coordinate counter-terrorism initiatives. Although a Convention on Legal Assistance was signed in August 2008, no member state has ratified it. Furthermore, the implementation of both the South Asian Preferential Trade Agreement (SAPTA) and SAFTA has been inconsistent and lackluster, hindering the full realization of their intended benefits.

Self-Check Exercise 14.4

Q1. Write a note on SAARC.

Q2. What are the achievements of SAARC?

Q3. Write a note on SAFTA

14.7 SUMMARY

In this unit, you have studied the concept and the welfare implications of regional economic integration. Regional economic integration refers to the absence of different forms of discrimination among a few national economics. It takes the form of customs unions, free trade areas common market, and economic union or sectoral or partial integration. We have gone through the theory of customs union and its welfare implications and also have discussed the possible gains that the less developed countries might derive from regional economic-integration groups, viz. the EEC and SAARC.

14.8 GLOSSARY

- **SAARC (South Asian Association for Regional Cooperation):** SAARC is a regional geopolitical and economic alliance comprising eight South Asian nations. Its headquarters is located in Kathmandu, Nepal. The concept of regional cooperation in South Asia was first introduced in 1980, leading to the first summit in Dhaka on December 8, 1985, where Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka formally established the organization. Over time, SAARC expanded, with Afghanistan becoming its first new member in 2007. The association focuses on fostering economic welfare, promoting self-reliance among South Asian nations, and enhancing socio-cultural development across the region.

- **European Union (EU):** The EU is a coalition of European nations that have integrated various economic policies, including the establishment of a customs union and harmonization of trade regulations. It evolved from earlier organizations such as the European Economic Community (EEC) and the European Community (EC). As of August 2012, the European Union comprised 27 member states.
- **Customs Union:** A customs union is a trade bloc where member countries agree to eliminate tariffs and trade restrictions among themselves while imposing a unified external tariff on goods imported from non-member nations. This arrangement is essentially a free trade agreement combined with a common external tariff policy.
- **Regional Integration:** This refers to the process through which neighboring countries strengthen their economic ties, typically by forming preferential trade agreements to facilitate trade and investment flows.
- **Trade Creation:** This occurs when a preferential trade agreement (PTA) leads to increased trade among member nations, replacing domestic production in the importing country. Trade creation generally benefits the importing country by reducing the cost of goods.
- **Trade Diversion:** This phenomenon happens when a preferential trade agreement shifts imports from a more cost-effective non-member country to a higher-cost member country, potentially leading to a loss of economic welfare for the importing nation due to higher prices.

14.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 14.1

Ans. Q1. Refer to Sections 14.3.1 and 14.3.2

Ans. Q2. Refer to Section 14.3.3

Self-Check Exercise 14.2

Ans. Q1. Refer to Section 14.4.1

Ans. Q1. Refer to Section 14.4.2

Self-Check Exercise 14.3

Ans. Q1. Refer to Section 14.5

Self-Check Exercise 14.4

Ans. Q1. Refer to Section 14.6

Ans. Q1. Refer to Section 14.6.4

Ans. Q1. Refer to Section 14.6.6

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14.11 TERMINAL QUESTIONS

Q1. Explain the theory of custom unions in detail?

Q2. What are the problems and difficulties faced in the case of Regional Economic Integration among LDCs?

Unit-15

TRADE POLICY AND LESS DEVELOPED COUNTRIES

STRUCTURE

15.1 INTRODUCTION

In the unit, we shall discuss the trade policy of underdeveloped countries. These countries may be called underdeveloped", "economically backward", developing or "less developed countries" Their main features is that they are poor countries, being at the bottom of a ranking of countries of the world in respect of per capita real income. They could be considered poor in terms of such non-monetary indication as quality of diet, housing, transportation, health and education. They also lack adequate savings, capital and technical know-how

We shall be presently concerned with foreign trade policy of these countries. We shall primarily be focusing on the question of tariff protection in these countries. We had earlier unit discussed with the theory of tariffs. Here we shall discuss the arguments for and against protection in LDCS. Besides, we shall also notice the frame work of the GATT vis-a-vis the LDCs.

15.2 LEARNING OBJECTIVES

After going through this unit you will be able to:

- Explain the concept of Protection given to industries in LDC's
- Give Arguments For and against Protection
- Explicate The GATT and the LDCs

15.3 THEORY OF COMPARATIVE ADVANTAGE AND LDCS

Even the earliest proponents of the theory of comparative advantage had felt that the lagging behind in the race of economic development could benefit by participating in free trade with other countries; Once a LDC starts specializing according to comparative advantage, it is enable to enjoy economics of large scale and faces an 'enlarged market. This raises her levels of employment and the raising profits of the export industries, when reinvested, accelerate the pace of capital formation. Besides, foreign trade is, so to say, a window on outside world through which new be acquired. Thus, in the words of Dennis Robertson, trade acts as an engine of growth."

The theory seems to have worked perfectly in the pre-First' World War period when the immense increase in world trade stimulated the economic development of many, now developed countries. However, in later years international trade appears to have lost its magic touch as an "engine of growth In fact, there is an Influential school of thought led by Myrdal and Prebish etc. who feel that free trade has retarded rather than Prebisch the economic development of the less developed countries. Whether one agrees with this view or not, it is however, quite clear that international trade has not performed the expected role in the context of economic development, of the LDCs. The reason perhaps is that the Theory of Comparative Advantage is not fully applicable to these countries.

The first reason is that the theory is static in nature (assuming tastes, technology, and factor supplies constant), while economic development is a dynamic process turning the constants of the Theory into independent variable.

Secondly, some other assumptions of the theory are not fulfilled by the LDCs. These relate to perfect competition, full employment of resources, and nonexistence of external economics and diseconomies. Free trade practiced, under conditions not suited to them might harm than help the LDCs.

Thirdly, the trade partners of the LDCs in developed countries do not themselves practice free trade where it does not suit them. A case in point is the tariff and nontariff restrictions imposed by them on exports of manufactured, goods out of LDCs in which the latter have an actual or potential comparative advantage.

It is thus that neither the LDCs nor-the developed countries practice trade in a manner suited to the requirements of the Theory, of Comparative Advantage. Therefore, the theory is not entirely relevant to the LDCs.

Self-Check Exercise 15.1

Q1. Write a note on theory of comparative advantage and the LDCs.

15.4 GAINS FROM TRADE BETWEEN THE DEVELOPED AND LESS DEVELOPED COUNTRIES

At this stage we may refer to the controversy regarding gains from international trade. One important point in this connection is that at a low level of economic development, the proportion of primary products is high in total output; but with a rise in the level of development, the proportion of manufactured goods in total output increases. The LDCs produce primary products, and naturally they mainly export them. For instance, till the 1960s, India mainly depended upon sugar, tea and textiles for earning foreign exchange. These commodities are still occupying an important place on our exports. Mauritius specializes in sugar exports. Egypt in cotton, Brazil in coffee, etc. The major export, items in countries whose exports highly concentrated is always primary products.

Some; economists have argued that there is conclusive quantitative, evidence to show that the LDCs have sustained losses in international trade over an extended period and that the gains from such trade, have mainly flowed to the developed countries. They point to a long run tendency for, the terms of trade to turn against the former. In other Words, it is alleged that there has been a secular deterioration in the terms of trade of the LDCs. A keen controversy over this point has been going among the economists for quite some time now.

The first shot was fired in a UN, study entitled "Relative Prices of Exports and Imports of Under- Developed Countries", published in 1949. It showed that the ratio of index of prices of primary goods to that of manufactured goods (Px/Pm exhibited a secular tendency to decline from 147 for the period 1876-1880 to 100 in 1978.

It was a challenging result in that if the evidence was correct the LDCs were paying an ever-increasing amount by way of exports for a given quantity of imports. Three economists, H.W. Singer, R. Prebisch and Gunnar Myrdal, basing their conclusions on such data, have vigorously repudiated claims of other economists. That international trade has benefited the LDCs as much as the developed ones. Their arguments are usually referred to as the Prebisch-Singer-Myrdal Thesis. According to the Thesis, the deterioration in the terms of trade of LDCs can be explained thus.

(1) A period of general rise in prices is characterized by a slower rise in the prices of primary products because in the international market the primary products face a nearly inelastic demand. On the other hand, the demand for manufactured goods is fairly elastic.

(2) The development of the exports sector can be traced back to the colonial period in many LDCs. The sector was created with the help of foreign capital and enterprise. Thus instead of initiating a process of development, it only resulted in lopsided development and creation of dual economic.

(3) Perhaps the most forceful arguments about the beneficial effects of international trade upon the LDCs has been in terms of price fluctuation and destabilising efforts of foreign trade. It is pointed out that during the upswing and the

downswing of business cycle the prices of primary products fluctuate- much more than those of manufactures in the international market. This has a stabilizing effect on the levels of income and employment in the LDCs. In other words large variations in the-prices of primary goods lead to considerable fluctuations, in exports earnings, the level of investment, output and employment. Uncertain prices are one of the reasons for misallocation of resources in primary production: Moreover fluctuations in the prices of primary products discourage specialization and necessitate exchange restrictions.

This, and other points discussed above have been hotly debated among the economists. There may be a grain of truth in each one of the alleged baneful effects of international trade, but it is also true that some of them have been exaggerated and played up for extra-economic reasons.

Self-Check Exercise 15.2

Q1. Give the arguments explained by Singer-Prebisch regarding terms of trade for LDCs.

15.5 PROTECTION TO INDUSTRIES IN LDCS

Although the classical economists were in favour of free trade in as much as it would secure the advantages of international division of labour for all, yet in due course. Economist like F. List in Germany and economists in other countries started advocating a policy of protection to safeguard the interest of under-developed countries.

15.5.1 Arguments in favour of Protection

The following are the main arguments in favour of protection:

(1) The Infant Industry Argument— It is found that most LDCs have a latent comparative advantage in some lines of production, but the foreign competition does not allow them to grow and develop. A temporary protection would enable them to achieve maturity; in production, to enjoy economics of scale and to reduce costs, thereby being ultimately able to compete in the international market. The infant industry argument rests upon the concepts on external and internal economies of scale. It is argued that an infant industry, by reasons of its infancy, has certain unrealized economies. Take internal economies of scale first. An infant industry starts at an uneconomical scale and is unable to compete with cheaper Imports. In a protected' market the domestic producer could attain the optimum size realize internal economics of scale and thus face foreign competition confidently later.

External economies are perhaps more important in a LDC. As a protected market allows an infant industry to grow it has external economy effects. To quote of Gunner Myrdal, almost every new industrial enterprise yields benefits for the economy as a whole, which are not reflected in the profit calculation in the form of trained worker etc. These effects are for reasons relatively much mere important in an under-developed country than in a- developed one.

(2) Increase in foreign Investment— Protection may attract foreign investment. But foreign producers may establish their branches or subsidiaries and thus

appropriate the benefit themselves. This can be remedied through various devices. A majority of voting rights should be reserved for nationals and management be in the hands of nationals. Profits can be controlled.

(3) To rectify distortions in and factor, markets— It is assumed in free trade that commodity and factor markets arc perfect and there are no distortions in them. This is not so in under-developed countries/where there are external economies and diseconomies. The production of steel may stimulate the growth of many engineering industries. External diseconomies refer to soil erosion due to new irrigation practices or difficulties of housing in towns gets vitiated Owing to these distortions the country may stand to lose from international trade. In the factor market, there may be distortions, because factor prices may differ in different sectors of the economy. Monopoly of trade union activity may bring this about Here protection may have more favourable effects than free trade. It may, however, produce adverse effect on consumption. Hence fiscal policy would have to be geared, to meet the situations. For instance, a tax may have-to be imposed where the factor price is lower, but where it is higher. subsidy may have to be given to keep down the" cost of production. Some economists, however, point out that a tariff is not an appropriate policy, because to remove the distortion in the national factor market, we are proposing the limitation of international trade.

(4) Home Market Argument— Protection creates or develops home market, particularly for a big country. This is stable as compared to a fluctuating foreign market. The free traders argue that there is no net addition of the market. It is a substitution of home for foreign demand. However, over a long period, the home market can be expected to grow independently due to protection.

(5) Protection gives employment to home country's labour in new industries— The free traders argue that employment in import industries is reduced and there may not be net addition lo employment But here again one can take a long term and a dynamic view.

15.5.2 Arguments against Protection

While the foregoing are some of the weighty arguments theoretical, in favour of protection in LDCs, the actual track record of these countries in this regard has not been very commendable, In the light of the actual experience; as well as a prior, the following arguments can be advanced against a policy of protection in LDCs:

(i) The policy of protection has been mainly adopted in LDCs in the context of developing import-substitution industries. However, the results have not been happy in many cases. Such protected industries failed to enjoy economies of scale because of the limited home market. Such industries also failed to improve their efficiency and productivity because of lack of international or external competition. Due to their high, costs of production and low quality of the products, such protected industries ended up as sick enterprises.

(ii) Protection in LDCS has merely helped several of these countries to inward-looking economies, with a tendency to develop import- substitution industries rather than 'developing export industries. Evidence has shown that outward looking (those

relying mainly on a robust exports sector) economies have experienced a faster overall growth rate than the inward-looking, protection-ridden economies. The World Development Report 1987, rank such countries in terms of their growth rates of per capital output for two periods, 1963-73 and 1973- 83, and finds that the strongly outward-oriented economies experienced the highest growth rates in both the periods, while the strongly inward oriented (i.e. relying heavily on protection of their industries) experienced the 10 west growth rates This is perhaps due to the reason that protection has tended to generate inefficiency, low productivity and consequently high cost of production. Thus protection has proved to be a poor instrument of economic development.

(iii) Experience has also shown that several variables involved in the poor macro-economic performance of the LDCs can be directly related to their policy of protection. A reference to a high cost economy has already been made above. If exports from such an economy have to be made competitive in the international market, huge subsidies have to be paid to the exports sector. These subsidies add to the budget deficits of the government. A budgetary crisis is bound to arise sooner or later. A withdrawal of these subsidies adds to the balance of payments crisis.

(iv) While presenting a case for protection in LDCs earlier, we had argued that the policy can be justified in the context of infant industries but that such industries had to ultimately face foreign-competition. In reality it has been noted in LDCs that once industries starts enjoying protection, they start developing vested interest in the perpetuation of that policy. A hue and cry is raised in the name of national interest when the government attempts to withdraw protection. In the context of globalization of national economies Domestic industries cannot be allowed to be perpetually operating in a sheltered market This not only generates inefficiency and low productivity but also gives rise to monopolies and oligopolistic markets which exploit both the consumers and the workers.

Self-Check Exercise 15.2

Q1. Give the argument in favour of protection of the industries in LDC's?

Q2. Give the argument against the protection of the industries in LDC's?

15.6 GATT AND LDCS

General Agreement on Tariffs and Trade (The GATT) is an organization which came into being at the end of the Second World . War. The inter-war period was marked by trade restrictions imposed by different countries of the world. The GATT was established so as to restore a free trade. The countries which are members of this organization are called the 'contracting parties'. The chief aim of the GATT is to ensure free trade among members countries through multilateral negotiations and agreements. The basic principles of the GATT are Non-discrimination (Le. efforts are made to prevent the use of discriminatory practices through the use of import quotas, etc.); The MFN clause (i.e. the contracting parties are made to agree not to give better treatment in trade to any single nation than what it offers to the most favoured nation); and

multilateralism (i.e. in matter of trade, the contracting parties are made to sit together and sort out the their problems together rather than bilaterally).

In order to liberalize international trade the GATT has organized trade negotiations among member countries several times, each of them being referred to as a 'round". There have been for instance, the Tokyo Round and the Kennedy Round of trade negotiations under the aegis of the GATT. The eight round i.e. the Uruguay Round started in 1986 and was being sought to be concluded in 1993. The fact that each of these trade takes several years to be concluded show that there a good deal of hard bargaining especially among the leading countries of the World. However, within the GATT framework, the LDCs have never felt much satisfied with the result of the trade negotiations. In fact the GATT is sometimes referred to as 'a Whiteman's. club'- an organization which is alleged to look after the interest primarily of the developed countries. Initially, trade negotiations mainly focused attention on trade in manufactured goods or those raw materials which were chiefly used by the industries of developed countries.

It was only the Kennedy Round (concluded in the 1960s) that the trade problems of the LDCs received some attention. Due to the inadequate attention received by the LDCs under GATT, these countries succeeded in having the U.N.O set up the UNCTAD (discussed in the following unit) for this purpose.

Under the current Uruguay Round Several innovations in international trade relations are going to be tried out during the 1990s. Most of these are supposed to prove to be beneficial mainly up the developed countries, especially, the U.SA and the E.E.C. The two of such innovations, the so-called TRIPS and TRIMs are especially supposed to be pernicious in their impact on the LDCs like India: The TRIPS Trade Related Intellectual Property Rights- would create a globally uniform system of patent. A product patent right taken in one country will prohibit other from manufacturing it and would thus give the patent holder a monopoly over the- product would happen not only in the case of industrial but also in agricultural products. The patent holder will have to be paid a royalty before any firm or any farmer can produce a product.

The TRIMS-The trade Related Investment Measures-"would allow the developed countries to invest in any LDC without the latter haying any to enact laws regarding investment by foreign in the country. Be- sides, there are also other proposals being mooted like prohibiting any contracting party to grant subsidies on its exports, etc."

It is felt that an open global system which is being created under the GATT currently to be one-sided in its impact, with major part of the gain flowing to the developed countries. The gain will be in the form of increased trade, investment opportunities and patent royalties. On the other hand, the LDCs fear that they will lose initiative in adopting policies of trade, development, investment and self-reliance suited to their peculiar requirements. However, due to their heavy dependence on the developed countries in matter of aid, trade, technology and even arms supplies, the LDCs are in very weak bargaining position within the GATT. On account of above discussion, GATT disappeared on 1 January, 1995 and passed into history when it merged in the World Trade Organization (WTO).

Self-Check Exercise 15.4

Q1. Write a short note on GATT and LDC's?

15.7 SUMMARY

In the unit, we have discussed the trade policy of underdeveloped countries. Their main features are that they are poor countries, being at the bottom of a ranking of countries of the world in respect of per capita real income. They could be considered poor in terms of such non-monetary indication as quality of diet, housing, transportation, health and education. They also lack adequate savings, capital and technical know-how. We had presently dealt with foreign trade policy of these countries. We shall primarily be focusing on the question of tariff protection in these countries. Here we had discussed the arguments for and against protection in LDCS. Besides, we had also noticed the frame work of the GATT vis-a-vis the LDCs.

15.8 GLOSSARY

- **WTO:** A global international organization that specifies and enforces rules for the conduct of international trade policies and serves as a forum for negotiations to reduce barriers to trade. Formed in 1995 as the successor to the GATT, it had 155 member countries as of August 2012.
- **GATT:** A multilateral treaty entered into in 1948 by the intended members of the International Trade Organization, the purpose of which was to implement many of the rules and negotiated tariff reductions that would be overseen by the ITO. With the failure of the ITO to be approved, the GATT became the principal institution regulating trade policy until it was incorporated into the WTO in 1995.
- **TRIMS:** Any policy applied to foreign direct investment that has an impact on international trade, such as an export requirement. The Uruguay Round included negotiations on TRIMS
- **TRIPS:** The agreement negotiated in the Uruguay Round that incorporated issues of intellectual property into the WTO. It provides a set of minimum standards for intellectual property protection to which all but the poorest member countries of the WTO must conform.
- **Infant industry protection:** refers to a government policy where a new, developing domestic industry is shielded from foreign competition through trade barriers like tariffs or quotas, allowing it to mature and become competitive on a global scale before facing open market pressures; essentially, protecting young industries until they can stand on their own in the international market
- **Prebisch-Singer-Myrdal Thesis:** The idea that the prices of primary products relative to manufactures would decline over the long term, and therefore that developing countries that were led by comparative advantage to specialize in them would find their prospects for development diminished. Due to Prebisch (1950) and Singer (1950).
- **Comparative Advantage:** The ability to produce a good at lower cost, relative to other goods, compared to another country. In a Ricardian model, comparison is of

unit labour requirements, more generally it is of relative autarky prices With perfect competition and undistorted markets, countries tend to export goods in which they have comparative advantage. See also absolute advantage. Due to Ricardo (1815).

15.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 15.1

Ans. Q1. Refer to Section 15.3

Self-Check Exercise 15.2

Ans. Q1. Refer to Section 15.4

Self-Check Exercise 15.3

Ans. Q1. Refer to Section 15.5.1

Ans. Q1. Refer to Section 15.5.2

Self-Check Exercise 15.4

Ans. Q1. Refer to Section 15.6

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15.11 TERMINAL QUESTIONS

Q1. Do you favour free trade or Protection? Give arguments in support of your answer?

Q2. Explain the reasons for the deterioration in terms of trade of LDCs?

WTO AND DEVELOPING COUNTRIES

STRUCTURE

16.1 INTRODUCTION

Every day, we use goods and services imported from various countries—such as wearing Italian jeans, using mobile phones designed in the United States but manufactured in China, or traveling in a bus engineered in Germany. This raises important questions: How do these products reach our cities? How easily can goods be transported from one country to another? And who oversees these transactions and international relations? The answer lies in international trade agreements, which facilitate these exchanges. Like any economic activity, international trade operates under a complex framework of rules and regulations, primarily managed by global organizations.

With the rise of globalization and liberalization, trade between nations has become significantly easier. Countries have strengthened economic ties through agreements and by reducing trade barriers. These developments are largely the result of negotiations and initiatives led by the World Trade Organization (WTO). As the world's largest economic organization, the WTO has 164 member countries, accounting for 98 per cent of global trade, and plays a crucial role in shaping international commerce.

16.2 LEARNING OBJECTIVES

After reading this unit, you will be able to:

- Understand the meaning of WTO, its administrative structure, objectives and functions
- Discuss the role of WTO in developing countries, and
- Explain the challenges faced by WTO in the development of developing countries

16.3 WTO: AN INTRODUCTION

The World Trade Organization (WTO) was established in 1995 as the successor to the General Agreement on Tariffs and Trade (GATT). Originally founded in 1948 with 23 member nations, GATT functioned as a global trade body, facilitating multilateral trade agreements and ensuring equitable opportunities for international trade. The WTO aims to establish a structured and rule-based trading system, preventing countries from imposing unjustified trade restrictions.

Additionally, the WTO seeks to enhance the exchange of goods and services, ensure optimal utilization of global resources, and contribute to environmental conservation. Its agreements cover trade in both goods and services, fostering international trade—both bilateral and multilateral—by reducing tariff and non-tariff barriers and promoting broader market access for member nations.

As a significant WTO member, India actively contributes to shaping fair global trade policies and advocating for the interests of developing economies. India has honored its commitments toward trade liberalization by removing import-related quantitative restrictions and reducing tariff rates, aligning with WTO guidelines.

16.3.1 GATT and Formation of WTO

The origins of GATT can be traced back to the 1944 Bretton Woods Conference, held in the aftermath of World War II. Officially known as the United Nations Monetary and Financial Conference, this gathering of representatives from 44 countries took place in Bretton Woods, New Hampshire. The primary goal was to establish a new framework for the international monetary system and create an economic order that would assist nations in recovering from wartime losses. This conference led to the formation of two key institutions: the International Monetary Fund (IMF) and the International Bank for Reconstruction and Development (IBRD).

A third institution, the International Trade Organization (ITO), was also proposed during the conference. The draft charter for the ITO was finalized at the 1948 United Nations Conference on Trade and Employment, commonly referred to as the Havana Charter. This charter outlined various regulations governing trade, business, services,

commodity agreements, investment, and employment policies. However, due to the U.S. Senate's failure to ratify the charter, the ITO was never formally established.

In the meantime, in 1947, a group of 25 countries reached an agreement that led to the formation of the General Agreement on Tariffs and Trade (GATT), which officially came into effect on January 1, 1948. The primary objective of GATT was to lower tariffs on goods and eliminate import quotas. Although GATT was initially intended as a temporary arrangement, it remained in place for nearly five decades as a key multilateral trade agreement until the creation of the WTO. Over the years, GATT facilitated eight rounds of multilateral trade negotiations aimed at reducing tariffs and revising trade policies. The final round, known as the Uruguay Round (1986–1994), concluded with the Marrakesh Agreement, leading to the establishment of the WTO in 1995.

The WTO has incorporated key principles of GATT, solidifying its role as the most comprehensive multilateral institution governing international trade. GATT's provisions were integrated into WTO agreements under GATT 1994, which continues to regulate trade in goods.

16.3.2 Administrative Structure of WTO

WTO is headed by a director-general (currently Mr. Renato Ruggiero, former Italian trade minister) who has four deputies from different member states. The WTO's ruling body is the General Council, comprising each member country's permanent envoys. It sits in Geneva on an average once a month. Its supreme authority is the ministerial conference, to be held every two years. The General Council appoints the director- general to a four-year term after consultations among member countries.

WTO started with 125 countries. But seven more states including China, Russia were admitted later on as members. Members range from the top four world trade powers—the United States, the European Union, Japan and Canada—to the increasingly influential emerging developing economies of Asia to some of the world's poorest countries, like Bangladesh, Guinea. The two important bodies in WTO have been set up to perform its various functions:

1. **Dispute Settlement Body (DSB):** The DSB, on which all member countries can sit, usually meets twice a month to hear complaints of violations of WTO rules and agreements. It sets up expert panels to study disputes and decide if the rules are being broken. The DSB's final decisions, unlike those of a similar but less powerful body in the old GATT, cannot be challenged.
2. **Trade Policy Review Body (TPRB):** The TPRB is a forum for the entire membership to review the trade policies of all WTO member countries. Major trading policies are reviewed every two years, others every four years.

   Other major bodies are the Council for Trade in Goods, the Council for Trade in Services and the Council for Trade-Related Aspects of Intellectual Property Rights (TRIPS).

16.3.3 Key Objectives of WTO

The World Trade Organization (WTO) was established with the primary aim of regulating international trade and fostering economic cooperation. Its key objectives include:

(i) **Enhancing Global Welfare**: The WTO seeks to improve people's quality of life by boosting living standards, generating employment, increasing incomes, and promoting the global exchange of goods and services. It also supports developing and underdeveloped nations in strengthening their trade capacities to achieve economic stability and growth.

(ii) **Facilitating Trade Negotiations**: The organization works to eliminate trade barriers and other obstacles that hinder a progressive global trading system. Through negotiations, countries are encouraged to open their markets to international trade while maintaining certain protective measures to safeguard consumer interests, environmental concerns, and other critical aspects.

(iii) **Monitoring Trade Agreements**: WTO agreements establish the framework for international trade and bind member countries to specific trade regulations. These agreements aim to protect and assist producers, exporters, importers, and other stakeholders involved in global trade, ensuring a fair and balanced trading environment.

(iv) **Promoting Free Trade**: A core goal of the WTO is to facilitate the seamless movement of goods and services while preventing unfair competition, monopolization of specific industries, and discriminatory trade policies. It plays a crucial role in integrating developing economies into the global trade system, helping them achieve economic progress and full employment. Additionally, the WTO ensures transparency and predictability in trade regulations and policies.

(v) **Resolving Trade Disputes**: Given the complexities of international trade, conflicts often arise due to the differing interests of nations. The WTO serves as an impartial mediator, resolving disputes through its structured Dispute Settlement Mechanism. This process ensures that conflicts are addressed in accordance with WTO agreements and international trade laws.

16.3.4 Functions of WTO

WTO has the following five functions to perform:

(1) The WTO provides the framework for implementation, administration and operation of multilateral trade agreements reached at Uruguay Round.

(2) The WTO provides the forum for further negotiations among its member states concerning their multilateral trade relations with regard to the matters included in the agreements reached at Uruguay Round.

(3) The WTO undertakes the task of settlement of disputes among the member states, which arise from their different understandings of the rules and procedure agreed upon.

(4) The WTO administers the ‘Trade Review Mechanism.’

(5) In order to evolve a coherent global economic policy to promote free and fair trade among the different countries, WTO cooperates in an appropriate manner with the IMF; World Bank and its affiliated agencies.

16.3.5 Principles and Objectives of WTO:

The World Trade Organization (WTO) operates on several fundamental principles that define its role as a multilateral trading system. These principles highlight the key features of the WTO:

a) Non-Discrimination

This is the core principle upon which the WTO is based. It encompasses two key aspects:

- **Most-Favoured Nation (MFN) Treatment:** All WTO member countries are treated equally in trade relations. No member state can discriminate between its trading partners, ensuring that every member enjoys the same advantages as the most-favoured nation. However, exceptions are made in certain cases, such as regional trade agreements.
- **National Treatment:** Foreign goods, services, trademarks, patents, and copyrights must receive the same treatment as those of domestic entities, ensuring fair competition.

b) Free Trade Promotion

Like its predecessor, GATT, the WTO aims to encourage free trade among nations. This is achieved through continuous negotiations that focus on reducing tariffs and eliminating quantitative restrictions on imports, facilitating smoother trade relations among member states.

c) Stability in the Trading System

WTO agreements ensure that member countries do not arbitrarily impose tariff or non-tariff barriers. This commitment creates a stable and predictable trading environment, reducing uncertainties in international trade.

d) Encouraging Fair Competition

The WTO fosters a transparent and fair trading system. Principles such as MFN treatment and equal rights for foreign and domestic goods, patents, and copyrights help maintain a level playing field. Moreover, WTO regulations discourage unfair trade practices like export subsidies and dumping (selling products abroad below domestic prices to gain market access).

e) Special Consideration for Developing Countries

The WTO recognizes the challenges faced by developing nations and grants them additional time to implement agreements, along with special privileges. Unlike its predecessor, GATT, the WTO also addresses disputes beyond goods trade, extending its scope to services and intellectual property rights.

f) Market Access Commitment

WTO agreements promote multilateral trade by requiring member states to commit to market access based on reciprocity. This includes:

- Reducing tariffs on industrial goods and agricultural products by approximately 37%.
- The United States agreeing to cut farm subsidies to enhance market access for developing countries.
- Developing nations reducing agricultural subsidies to a maximum of 10% of their agricultural output.
- Ensuring foreign service providers receive the same treatment as domestic service providers.

g) Decision-Making at the Ministerial Level

A distinctive feature of the WTO is its emphasis on decision-making at the ministerial level. Important trade-related policies and agreements are now discussed and finalized during Ministerial Conferences, which have been integrated into the WTO's legal framework.

h) Broad Scope of Trade Issues

Unlike previous trade organizations, the WTO does not limit its scope to trade in goods. It also addresses trade in services and intellectual property rights, making it a comprehensive global trade regulator.

i) Establishing a Multilateral Trading System:

One of the primary objectives of the WTO is to create an equitable and inclusive multilateral trading system. It ensures that developed, developing, and least-developed countries have equal access to international markets. By eliminating discriminatory trade barriers and unjust government subsidies, the WTO promotes fair trade opportunities for all member nations.

Self-check Exercise 16.1

Q1. Write a note on WTO.

Q2. What are the key objectives of WTO?

Q3. What are the functions of WTO?

16.4 ROLE OF WTO IN DEVELOPING COUNTRIES

The World Trade Organization (WTO) plays a crucial role in promoting the economic growth of developing nations, which constitute approximately three-fourths of its total membership. Through various initiatives, assistance programs, and collaborations, the WTO helps these countries enhance their trade capabilities, enabling them to participate more effectively in the global marketplace. It provides training programs and workshops in partnership with other international organizations to strengthen their trade capacities. This support covers multiple areas, including WTO participation, trade negotiations, and compliance with commitments. Special attention is given to least developed countries (LDCs), offering them tailored assistance in trade

policies, tariff structures, and export interests to improve their engagement with the WTO.

(i) **Committee on Trade and Development (CTD):** The CTD is the primary body within the WTO responsible for overseeing and coordinating development-related initiatives. It addresses a range of trade-related concerns for developing nations, such as implementing WTO agreements, providing technical assistance, and increasing participation in global trade. The committee also evaluates and supervises WTO-led technical assistance programs. As mandated by the Doha Declaration, it regularly reviews and strengthens special provisions for developing countries to make them more effective and relevant.

(ii) **Aid for Trade Initiative:** Launched in December 2005 at the Sixth WTO Ministerial Conference in Hong Kong, China, the Aid for Trade initiative operates on a biennial work program. This initiative is designed to help developing countries enhance their trade infrastructure and economic potential. It provides financial support and resources to improve their capacity for engaging in international trade. The 2020-2022 work program, themed "Empowering Connected, Sustainable Trade," focuses on digital connectivity and sustainability in trade. To date, over $400 billion has been allocated to Aid for Trade projects.

(iii) ***Enhanced Integrated Framework (EIF):*** The EIF serves as a key channel for LDCs to access Aid for Trade support. It helps bridge the gap between trade-related assistance demands and available resources while integrating these programs into national development strategies. The EIF enables LDCs to prioritize their trade-related needs and access funding through a structured framework. The EIF Trust Fund provides essential financial assistance, allowing LDCs to leverage the benefits of Aid for Trade and improve their economic prospects.

(iv) **Standards and Trade Development Facility (STDF):** The STDF was established through a collaboration between the WTO, FAO, OIE, WHO, and the World Bank at the Doha Ministerial Conference in 2001. It plays a significant role in helping developing countries comply with international standards related to food safety, as well as animal and plant health, thereby facilitating their access to global markets. The STDF complements the Aid for Trade initiative by supporting various projects and monitoring aid distribution. With a Trust Fund exceeding $50 million, the STDF has financed numerous development projects across Africa, Asia-Pacific, and Latin America.

(v) **Technical Assistance and Capacity Building:** To ensure that all member nations can fully benefit from the multilateral trading system, the WTO conducts numerous technical assistance and capacity-building programs throughout the year. These programs, organized by the WTO Secretariat through the Institute for Training and Technical Cooperation (ITTC), are tailored to meet the specific needs of each country. The Committee on Trade and Development supervises these initiatives, ensuring they align with national and regional trade objectives.

Through these mechanisms, the WTO plays a vital role in strengthening the trade capabilities of developing countries, facilitating their integration into the global economy, and promoting sustainable economic development.

16.4.1 Agriculture Negotiations:

Agriculture is a matter of International Trade. It has been introduced in the Uruguay round of talks. Agriculture is the most protected both in North and South. Agricultural negotiations are most politicized in both the North and South. These negotiations are the major issues in the Doha round of talks. It is a major area of concern for developing countries as it is the main commodity they export. It is the major export of the forex and generates resources for poverty alleviation. In WTO, agricultural negotiations are going on under three pillars

- Market Access
- Export Subsidies
- Domestic Support

a) Market Access:

Market access means reducing barriers. There can be two types of barriers, tariff and non-tariff. Developed countries have already lowered their tariff. Developing countries continue to maintain tariffs. Even when developed countries have reduced tariffs. It has not been possible for developing countries to increase their export. The reason is that developed countries impose non-tariff barriers. The imposition of anti-dumping duty is also without transparency. Even developing countries use such protectionist measures. For example, India even uses quantitative restrictions.

In the context of market access, there is a lack of consensus over two measures, special safeguard measures and special products. **Special safeguard measures**: Developing countries can trigger tariff walls in case of an import surge. **Special product:** Developing countries can keep some products out of the liberalization. The products should have a linkage with rural development, employment, and livelihood concern. However, the problem lies in the number of items. The developing countries want to keep as many items as possible.

b) Export subsidy:

The matter was resolved in the Nairobi package. In the Nairobi package, the decision to eliminate the subsidies given on the export of Agricultural goods was taken.

c) Domestic support:

Domestic support is the most controversial issue. The developed countries continue to maintain huge subsidies. Whereas there have been many restrictions on the subsidies given by developing countries. One of the worst impacts of the WTO policy has been that it adversely impacted not only agriculture which is the backbone of the economy but even food security. It is the impact of WTO policies on agriculture that agriculture is stagnating and showing negative trends. Since WTO policies have come into existence the number of farmer's suicide has increased. The problem of Hunger and malnutrition

has become acute. Due to this in India, there has been a surge in left-wing extremism. Domestic subsidies are classified into 3 boxes

- **Green box:** They are not considered as trade distorting and hence there are no limitations. They are primarily meant for research and development.
- **Amber box:** The subsidies that result in increased production are in the Amber box. They are considered trade-distorting and hence there are limitations on these subsidies. They were primarily used by developing countries.
- **Blue box:** This is a part of the Amber box but is not considered trade distorting because they do not increase the production but rather decrease the production. For example, given for livestock, animal husbandry, etc.

The leaders of the developing countries feel that the developed countries have fooled them. They played with the boxes and shifted their subsidies from the Amber box to the green box. And developing countries lacked enough expertise to understand the technicalities of such agreements.

16.4.2 Impact of WTO on Food Security

The developed countries have surplus production and they want to export food items to the developing countries. Developed countries have also opted for an overall cap whereas developing countries have gone for a product-wise option. Developed countries can give accumulator subsidies, and they can concentrate the entire amount of two to three crops. Developed countries manipulated the price of agricultural produce. Developing countries exposed their farmers to price fluctuations in the Global markets. To get better prices, the farmers opted for cash crops. There have been limitations on the government in the context of the amounts of subsidies they can give. The prices of food items have been manipulated to affect production as well as reach. Because of WTO norms, the government cannot release food even when they are getting rotten.

Developed countries suggest importing cheaper food grains to address food security. They criticize the huge corruption in the PDS system of the developing country. They accuse developing countries are procuring the food items to later dump these items in the international market.

Self-check Exercise 16.2

Q1. Write a note on the role of WTO in Developing Countries

Q2. Assess the impact of WTO on food security in Developing Countries

16.5 ACTUAL PERFORMANCE

In theory, WTO appears to be favourable to developing countries. However, in practice, it has impacted adversely the developing countries. These so-called equal voting rights have not benefited developing countries because the developed countries use various bargaining tools like green room diplomacy. WTO dispute settlement body is too costly and hence developing countries cannot afford the use of the body. Some developing countries are too poor to even pay the rent for the office in Geneva. The mechanism could be employed only by well-off countries.

WTO policies in agriculture have impacted food security in developing countries. Still, it is important to note that the success of WTO is in the interest of the developing countries subject to the condition they can retain solidarity. Multilateralism is always better because in a Bilateral Framework, developing countries, especially small countries do not have bargaining power. It is also very important for India. Only through WTO India can get a favourable trade environment.

16.5.1 Challenge for WTO and Developing Countries

- Developed countries maintain huge subsidies whereas developing countries can afford only nominal subsidies.
- In developing countries, the per capita land holding is very small whereas in developed countries it is very large.
- In developing countries, most of the farmers are subsistence whereas in developed they are commercial.
- Developing countries have unfavourable climatic zones whereas developed countries are in favourable climatic zones.
- In developing countries around 70 per cent of the population depends on agriculture for employment. Whereas in developed countries just three to four per cent are dependent on agriculture.
- In developing countries, the average share of GDP is 30 per cent whereas in developed the share is just 3 per cent.
- In developed countries, agriculture is just a matter of Commerce whereas in developing countries it is the way of life.

Self-check Exercise 16.3

Q1. What are the Challenge for WTO in the development of developing countries?

16.6 SUMMARY

The relationship between the WTO and developing countries is dynamic and evolving. While the organization has mechanisms in place to address the unique challenges faced by developing nations, there is recognition that more needs to be done. Balancing the interests of diverse economies within a global trading framework requires ongoing efforts, reforms, and a commitment to inclusivity. As the global economic landscape continues to shift, the role of the WTO in promoting fair and equitable trade for all remains a crucial aspect of international economic governance.

16.7 GLOSSARY

- **WTO:** A global international organization that specifies and enforces rules for the conduct of international trade policies and serves as a forum for negotiations to reduce barriers to trade.
- **GATT:** A multilateral treaty entered into in 1948 by the intended members of the International Trade Organization, the purpose of which was to implement many of the rules and negotiated tariff reductions that would be overseen by the ITO. With

the failure of the ITO to be approved, the GATT became the principal institution regulating trade policy until it was incorporated into the WTO in 1995.

- **Green Box** as outlined in Annex 2 of the Agriculture Agreement, refers to subsidies that have little to no impact on trade distortion (as per paragraph 1). These subsidies must be financed by the government rather than through increased consumer prices and should not provide price support. Typically, Green Box measures include programs that are not product-specific, such as direct income support for farmers, which is decoupled from both current production levels and market prices.
- **Amber box:** The subsidies that result in increased production are in the Amber box. They are considered trade-distorting and hence there are limitations on these subsidies. They were primarily used by developing countries.
- **Blue box:** This is a part of the Amber box but is not considered trade distorting because they do not increase the production but rather decrease the production. For example, given for livestock, animal husbandry, etc.

16.8 ANSWERS TO SELF-CHECK EXERCISES

Self-check Exercise 16.1

Ans. Q1. Refer to Section 16.3

Ans. Q2. Refer to Section 16.3.3

Ans. Q3. Refer to Section 16.3.4

Self-check Exercise 16.2

Ans. Q1. Refer to Section 16.4

Ans. Q2. Refer to Section 16.4.2

Self-check Exercise 16.3

Ans. Q1. Refer to Section 16.5

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16.10 TERMINAL QUESTIONS

Q1. Discuss, in details, the objectives and functions of WTO.

Q2. Critically discuss the role of WTO in the development of developing countries.

Unit-17

BALANCE OF PAYMENT: AN INTRODUCTION

STRUCTURE

17.1 INTRODUCTION

Dear Students,

In the present unit, we shall discuss the structure of a country's trade and the allied questions. More specifically we shall be analyzing the balance of payments and the adjustment mechanism under laissez fairer. In the theory of free trade discussed earlier, it was generally assumed that only two countries were trading with each other that only two commodities figured in trade, and that once an international price came to be settled, a given quantum of goods continued to be traded Besides, nothing was said about trade in invisible Items, movement of capital and gold etc. This was an oversimplified model not taking into account the intricacies of actual trade relations, the magnitude of transactions, their sources and composition etc.

Now is the time to make the picture more realistic. A country purchases from different sources goods, services, capital and gold etc. for which it has to make payments. Similarly, it sells to different Countries all such items for which it receives payments from abroad. All such receipts and payments during say year are recorded so as to present an integrated picture of the economic transaction of a country with the rest

of the world. A statement such receipts a payment referred to as the balance of payments. Kindleberger defines it as follows, "The balance of payments of a country is, a systematic record of all economic transactions between residents of a reporting country and residents of foreign countries during a given period of time". The phase "Systematic record is important, for imports and exports are duty classified into different categories so as to facilitate comparison and analysis rather then give the look of an ordinary business invoice.

17.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Explain Current account and capital account
- Elucidate the Equilibrium and Disequilibrium in the balance of payments
- Explicate Balance of Payment and Adjustment Mechanism

17.3 CURRENT ACCOUNT AND CAPITAL ACCOUNT

The balance of payments account consists of current and capital accounts. All the items entering into the balance of payments are classified into these two categories on the basis of, the nature of each item. All those items that are of a flow nature and effect the national output of the country of only the year to which the balance of payments, account pertains are entered in the current account. On the other hand, all those that express changes in stock and, therefore, do not affect only the current national output, are entered in the capital account.

17.3.1 Current Account

Usually the following items are entered into the current account of balance of payments:

1. Merchandise, import and exports.
2. Transportation (including freight and insurance).
3. Travel (goods, services and transportation services purchased by the residents, of a country abroad).
4. Income of investment' abroad (interest, profits, dividends etc.).
5. Other services (insurance, royalties, commissions, fees etc.).
6. Unilateral transfers:
    (i) Private (personal and institutional remittances).
    (ii) Official (pension, reparation, grants etc.).

17.3.2 Capital Account

The capital account of the balance of a payment includes following items:

1. Direct investment (in enterprises set up a broad).
2. Portfolio investment (assets and liabilities transacted abroad with maturity of more than 12 months).

3. Short term investment (assets and liabilities transacted abroad with a maturity of 12 months or less).
4. Government capital (official transaction in assets and liabilities abroad, excluding reserve assets).
5. Official reserve transactions (changes, in the country's monetary gold stick, holding of foreign currencies and net position in the I.M.F.).

Two terms, balance of trade and balance of payments, are mentioned in official publications and these are sometimes erroneously used as synonyms. In fact, balance of trade is the balance of only merchandise trade i.e. items (1) above in the current account. On the other hand, balance of payments is a much wider term encompassing all the items in the current and capital account enlisted above.

The definition of balance of payment given by the l.M.F. is as below: The balance of payment is a system of account covering of given period that is intended to record systematically (a) How of real resources, including the service of original factors of production. between the domestic economy of a country and rest of the world, (b) change in the country's-foreign assets and liabilities that arise from economic transaction and (c) un-required transfers, which are the counterpart of real resource or financial claim provided to or received from, the rest of the worlds without requital. While the balance of payment mainly covers transaction between residents, and foreigners there are several exceptions, all intended to make the statement more suitable to analyzing the economic relations between the domestic economy and the rest of the economy."

The balance of payment data are divided into some convenient group and sub-group accounts, depending upon the variety and extent of the international accounts of a country, its philosophy regarding publication of its statistics, the balance of payment, i.e., whether externally it is in a comfortable or difficult position. Balance of trade will be favourable when merchandise exports are greater than merchandise imports. Unfavourable balance of trade would, therefore, mean a situation in which merchandise imports are greater than merchandise exports.

The chief item in the current account of balance of payment are merchandise imports and exports and the transaction in services like transportation, banking, insurance, travel, tourism etc. Thus, it can be said, that each item in the current account is an income related flow. On the other hand, each transaction on the capital account is an asset related flow. There assets either create the claim of the country on foreigner's and thus generate capital outflows, or these create foreigner's claim on the country, whose account are being considered and these lead to capital inflow. These capital inflow and outflows are recorded in the capital account of the balance of payments.

Each balance of payments accounts has two compartments each of which is variously described as credit (+) and debits (-) inflow and outflows, receipt and payment of incomings and outgoes etc. Every export item either of good services or capital creates a debit, outflow or payment. While drawing up the balance of payments compartments on the credits (receipt) and the debts (payment) sides and on the basis of that comparison we can speak of a surplus or deficit in the balance of payments we

shall take up the question of these surplus of-deficit i.e., a disequilibrium in the balance of payment subsequently.

In the meanwhile, we can look at the receipt and payments (or credits and debits) in the current account of the balance of payments and see how it is related to the national income of the country.

Self-Check Exercise 17.1

Q1. Write a note on Current Account

Q2. What is Capital Account

17.4 CURRENT ACCOUNT AND NATIONAL INCOME

Two things need to be remembered regarding' the current account of the balance of payments. In the first place, this component of the balance of payment is normally the main or leading part of the overall account in the sense that all items of imports and exports of goods and services are recorded here. Besides, the incomes earned from abroad on investments made there and conversely all income earned from abroad on investment made in this country are recorded in this component of the balance of payments. Secondly, as noted above all these items recorded here generate income related flows (i.e. either an inflow, of income or its outflow). Thus, this component of the balance, of payment is important from the point of view of the national income of the country.

If we look at the current account, of the balance of payments of a country earns from abroad through export goods and services and through investments made in foreign countries. All this will comprise her receipts of credits on the current account. Similarly, it records the import of goods and services and pay to foreigner’s incomes earned by them on investments made here. In a given year, the receipts (credit) may be more than (debit) or vice-versa. If the receipts income of the country will rise, and conversely, if receipts payment, the national income will decline.

From this, case we draw the policy conclusion that a country should endeavour to see that its receipts on the current account of the balance of payment are always more than the payments? A little reflection will show that such a policy will not necessarily be beneficial to a country. There are in fact several reasons to show, that a current account surplus in the balance of payments is not necessarily beneficial to à country. In the first place, it may be noted that if one country has a current account surplus in its balance of payments some other country (or countries) will correspondingly have a 'deficit in, its balance of. payments. For the former Country, therefore, such a policy will be a beggar-my-neighbour approach to increasing its national income. The country which suffers on this account will ultimately retaliate in one form or 'other. Secondly, a current account surplus may indeed have been the result of decline in the national income its imports may have fallen thus causing a situation of receipts, and payments. Thus, at current account surplus need not necessarily mean a rise in 'national income.

Finally, a current account surplus signifies that the country is not spending the whole of its income. Rather it is using a part of the income on building up claim on the rest of the world (or accumulating foreign exchange). In order to notice how it happens,

let us integrate the balance on current account into the national income accounting of the country.

In the closed economy, the national income identity (as you know from your Knowledge of macroeconomics) is as below.

$$Y= C+I+G$$

Where Y = national income. C=consumption, I =investment, and G = government expenditure. Now open up this economy, for foreign trade. The exports (X) would now constitute an additional item of demand for national output and would now be added to the right side of the above equation On the other hand, imports (M) would be an additional source of domestic supplies of goods, and would be added to left hand side of the above equation (because Y constitutes the total domestic output in a closed economy).

Thus,

$$Y+M = C+I+G+X$$

Re-arranging this equation, we have

$$X-M = Y - (C+I+G).$$

Now let us put C+I +G = A where A is domestic spending or absorption, in the immediately foregoing equation.

Thus $X- M = Y- A$

It would be noted that in this final equation, left hand side donates the current account balance (if we for the time being ignore the capital account) and the right hand side represents the gap between domestic expenditure or absorption. This equation, therefore, show that if X>M, Y will also have be greater than A. In other words, if there is a surplus on current account of the balance of payments, the whole of domestic income will not be spent; rather the excess will be used to build up claim on foreigners (or in accumulating foreign exchange reserves). A rich country can afford to do that but a less developed country, which already has a low level of income can ill- afford to do so.

Just as naming a current account surplus is not necessarily a very desirable policy, similarly a deficit in the current account is not always undesirable. A country con continue to import more goods and service in of her exports of goods and services and to finance the deficit through short term borrowing or drawing down its foreign exchange reserves. However, neither a current account surplus, nor a current account deficit a fairing long period is a desirable for a viable, policy

In the foregoing discussion, we have been ignoring the capital account of the balance of payments, Just as in the current account we record mainly the import and export of goods and services, in the capital account, we record the import and export of financial assets And just as there can be a surplus or a deficit on the capital account, there can also be a surplus or deficit on the capital account, and the desirability or otherwise of these will be similar to that discussed in the context of the current account above But in order to have an integrated picture of the current and capital account of the

balance of the payment and especially how a current account surplus or deficit affect the capital account, let us define an 'equilibrium in the balance of payments.

Self-Check Exercise 17.2

Q1. Write Short notes on Current Account and National Income

17.5 EQUILIBRIUM AND DISEQUILIBRIUM IN BALANCE OF PAYMENTS

It would be a rare coincidence that all the items on the current account under receipts and payments, exports and imports would balance. It is reasonable to export that the sum of merchandise. exports, export of service and the unilateral receipt would be less or greater than the sum of merchandise, imports, imports of service and the unilateral payments. Thus, there would be surplus or deficit on current account. Whenever there is a deficit it means that the country spending more abroad then what she is earning from the residents of foreign countries. This deficit has to be made good by transactions on the capital account For example, if we look at the trade statistics of India for the year 1975-76 we notice a surplus of Rs. 294 2 crores on the current account which is matched by a deficit of Rs. 829.7 crores on the capital account Since the two do not balance, a balancing item ‘Errors and Omissions’ of (+) Rs. 535.5 crores were entered in the accounts. This last entry is meant to cover all those items that statisticians might have somehow missed and failed to enter in the accounts. It is thus clear that the balance of payments must balance. In what sense then do we talk of disequilibrium (deficit or surplus) in the balance of payments?

In order to understand this, one must know how the balances of payment account are maintained. The principal of double entry book keeping is followed in compiling: trade statistics Each item of import or exports is entered twice in the accounts, on the debit side and-the credit side. The exports are entered as a credit entry because they give rise to receipt from abroad' The receipts for such export are entered both on debit and credit side, the total of debit and credits (or receipt and payments) must be the same, it is in this book keeping or accounting sense that the balance of payment are always in balance.

It is however, important to know something about the nature of real transaction and therefore to go a little beyond the balance of payments accounting. It was mentioned above that the current account of the balance of payment is rarely in balance In order to offset the deficit or the surplus on the current account an equal amount of surplus or deficit respectively has to be created on the capital account to balance the over-all accounts.

Suppose that there is a deficit on the current account. This deficit may be made good in the capital account by depicting the past stock of foreign currency. This would be equal to an export of capital and would be entered in the capital account. Alternatively, the deficit might be made good by contracting a loan abroad by selling assets (securities etc.) to foreign residents. This would be an export item which would create a surplus on the capital account. All this would amount to be creation of a surplus on the capital account consciously so as balance the overall accounts.

There is also another possibility, during a year, when there is a deficit on the current account, the inflow of foreign capital into the country (as a result of improved

investment climate or a sudden rise in the grants made by, foreign governments) might be much greater than the out flow of capital. This might automatically leave a surplus on the capital account, referred to in the last two paragraphs when in order to balance the account, capital transfers have to be effected consciously. so that a matching surplus or deficit could be created on the capital account', such capital transfer are called accommodating or compensatory transfer. If, on the other band, such capital transfers take place independent of the balance of payments situation and are induced by the consideration of profitability of capital investment, these are known as autonomous capital flows.

Thus, the deficit or surplus in the balance of payments can be defined in term of the autonomous and accommodating capital flows. If the autonomous receipts of a country are smaller than her autonomous payment, this will have to be matched by accommodating capital outflow. In the case of a surplus, there will be an accommodating capital inflow equal to amount of the surplus.

Self-Check Exercise 17.3

Q1. What is equilibrium and disequilibrium in Balance of Payments

17.6 BALANCE OF PAYMENT AND ADJUSTMENT MECHANISM

It has been maintained earlier that the current account is the main component of the balance of payments for most countries and neither a protracted surplus nor a deficit in it is a desirable policy for the country Over a long period, the two sides of the accounts (the credit and debits) should balance. In other words, the deficit of some years should be counterbalanced by the surplus of other years so that the average credits over a long period are in balance.

If a country has a free foreign exchange market and the price structure of the economy is also relatively flexible, there, are tendencies in the economic system to bring automatically equilibrium in the balance of payments. Let us briefly discuss this adjustment mechanism.

Suppose there are only two countries, India and USA trading with each other. Further suppose India satisfies the above mentioned assumption of a free foreign exchange market and a flexible price structure If there is a free foreign exchange marked it implies that India has downward sloping demand curve for foreign exchange and a positively sloped supply curve, as shown in Fig. 17.1

In the diagram. it is shown that the demand for the foreign exchange would be low, the higher the, rate of exchange and vice- versa. Thus, the demand Curve D'D slope downwards from left to right. On the other band, the supply of foreign exchange or is determined at the point of intersection between demand and supply curve. At this point, the demand for and supply of foreign exchange are equal i.e. the foreign exchange market is cleared and there is equilibrium in balance of payments.

The Indian demand for foreign exchange (the U.S, dollars) might increase at all the rate of exchange, due to say, an increase in per capita output, change in taste or acceleration of planned investment. This will be represented by an upward Shift of the demand curve to D'D. The-new exchange rate will be Or, this will mean exchange depreciation for India, since now more rupees will exchange per dollar. As India's demand for dollar increases, more of these will be supplied but at higher rate.

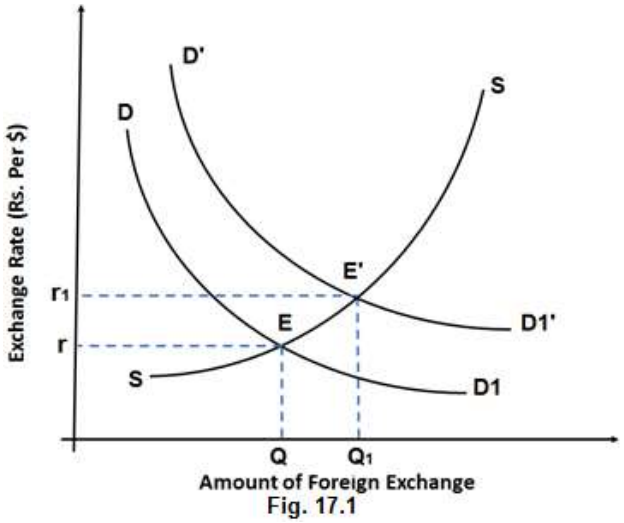

Fig. 17.1

It has a bearing upon the adjustment in the balance of payments Starting from an equilibrium in the balance of payments, suppose next that there develops a situation where the countries import more than exports (the import may rise, exports may fall or capital inflow gets reduced) Here the country's demand for foreign exchange is greater than its supply. This leads to exchange depreciation, in the event of a surplus in the balance of payments the supply of foreign exchange "would be greater than demand for it. This will cause the foreign value of the rupees to appropriate. In either case there will be such a movement in the exchange rate that this will automatically bring about equilibrium in the balance of payments. For example, as soon as there appear a deficit in the balance of payments, the exchange rate start rising The Indian imports find that he has to pay more rupees per dollar which means that the imports become more expensive. This discourages imports. On the other hand, at the higher exchange 'the foreign importer would find that Indian exports are cheaper, which encourages him to import more from India. Thus, the demand for foreign exchange tends to fall while its supply rises. Ultimately equilibrium is restored between the demand for and supply of foreign exchange. The balances of payment are brought into equilibrium.

The foregoing were the price effects of the adjustment mechanism in the balance of payments. The Keynesians have argued that these price effects of the adjustment mechanism are relatively unimportant. They explain the mechanism in terms of the income effects. As a country comes to have a deficit in the balance of payments, income changes are set into motion so that the deficit will be ultimately wiped off the deficit may have been caused by either a fall in exports and a rise in imports. In the former case, a fall in export will have a negative multiplier effect on income, reducing the latter by much more than the fall in exports. Fall in income in discourage import since imports are assumed to be a function of income) and thus help in rectifying the deficit in the, balance of payments. If on the other hand, there is a surplus in the balance of payments the rise in exports will have a positive multiplier effect on income Rice in income will stimulate imports and thus reduce or Wipe off the surplus in the balance of payments.

It has however, been seen that the automatic adjustment mechanism does not operate, perfectly. Therefore, disequilibrium in the balance of payments needs policy measures, some of which shall be discussed in the following units.

Self-Check Exercise 17.4

Q1. Write a short note on Balance of Payment and Adjustment Mechanism?

17.7 SUMMARY

In this unit, we dealt with the structure of a country's trade and the allied questions. More specifically we shall be analyzing the balance of payments and the adjustment mechanism under laissez fairer.

17.8 GLOSSARY

- **Balance of Payment:** The balance of payment is a system of account covering of given period that is intended to record systematically (a) How of real resources, including the service of original factors of production, between the domestic economy of a country and rest of the world. (b) change in the country's-foreign assets and liabilities that arise from economic transaction and (c) un-required transfers, which are the counterpart of real resource or financial claim provided to or received from, the rest of the worlds without requital While the balance of payment mainly covers transaction between residents, and foreigners there are several exceptions, all intended to make the statement more suitable to analyzing the economic relations between the domestic economy and the rest of the economy."
- **Current Account:** All those items that are of a flow nature and effect the national output of the country of only the year to which the balance of payments, account pertains are entered in the current account.
- **Capital Account:** all those that express changes in stock and. therefore, do not affect only the current national output, are entered in the capital account.

17.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 17.1

Ans. Q1. Refer to Section 17.3.1

Ans. Q2. Refer to Section 17.3.2

Self-Check Exercise 17.2

Ans. Q1. Refer to Section 17.4

Self-Check Exercise 17.3

Ans. Q1. Refer to Section 17.5

Self-Check Exercise 17.4

Ans. Q1. Refer to Section 17.6

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17.11 TERMINAL QUESTIONS

Q1. Differentiate between Capital Account and Current Account?

Q2. Write a note on Balance of Payment and Adjustment Mechanism?

Unit-18

BALANCE OF PAYMENT: ADJUSMENT MECHANISM

STRUCTURE

18.1 INTRODUCTION

In the preceding unit, we defined the deficit or surplus (disequilibrium in the balance of also noted now an automatic adjustment mechanism to bring about an equilibrium between receipt and payment is supposed to work under certain assumed conditions. However, it was also noted that the mechanism usually does not work perfectly so that balance of payments disequilibrium (a surplus or deficit) may persist indefinitely which then becomes the balance of payments problem for which specific policy measures may be needed. In the present unit, we shall focus on these policy measures.

18.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Explain Monetary Policy
- Explicate Fiscal Policy
- Elucidate Elasticity's Approach
- Explain Absorption Approach

18.3 DISEQUILIBRIUM IN BALANCE OF PAYMENTS

You would recall that in the preceding unit, we distinguished between accommodating and autonomous items-in the balance of payments accounts. And disequilibrium in the balance of payments was defined in terms of this distinction. To recapitulate, it was noted that most items in the balance of payments account are of an autonomous nature. These items are based on business and profitability considerations are of the nature of gifts donations or grants). Imports and exports of goods and services, income flows on account of investments made abroad, capital transfers with a view to make investments abroad or earn a higher rate of interest, are all autonomous (commercial) transition. But the receipts and payments arising" out of these autonomous transactions normally do not balance. So, in order to balance the accounts, certain accommodating items have to be created. For example, if all imports made on commercial considerations are in excess of all exports, the excess imports have to be paid for. The payment may be made out of the gold reserves, or the foreign exchange reserves or the importers may have contracted a short term loan from the exporters or other agencies abroad. It would the noted that all these items appear in the accounts because these (the accounts) have to be balanced So these are accommodating items. It-would be clear that the size of these accommodating items measures the disequilibrium in the balance of payments (whether a surplus or deficit).

It must be stressed that a disequilibrium in the balance of payments is not always a problem. For one thing, the automatic adjustment mechanism discussed in the preceding unit may be working quite satisfactorily if not perfectly. For another, there might be periods of alternating deficits and surpluses, so that over a long period the average receipts and payments may nearly balance. For either or both these reasons the disequilibrium in the balance of payment may not be much of a problem calling for a policy response from the government.

The disequilibrium (a surplus or deficit) in the balance of payments becomes a problem when it persists for a long enough period to cause a serious depletion of gold reserves, foreign exchange reserves or an alarming rise in the foreign indebtedness of the country. In all these cases, the balance of payments problem has to be solved through appropriate policies. We shall discuss same of these policies below.

Self-Check Exercise 18.1

Q1. What is meant by disequilibrium in Balance of Payments?

18.4 ADJUSTMENT MECHANISM

18.4.1 Fiscal Policy

In order to correct disequilibrium in the balance of payments the government of the country may try fiscal and monetary policies before resorting to any drastic measure; such as the devaluation of the Currency Fiscal policy refers to the budgetary policy. In developed countries fiscal policy is usually adopted for the achievement of full employment without inflation. But such a policy can also be used for rectifying a disequilibrium in the, balance of payments. Taxation measures and public expenditure can be so devised as to influence the level of income. Since imports are usually

assumed to be a function of level of income budgetary measures can influence the balance of payments of the country.

A surplus in a country's balance of payments is seen to occur (as noted in the preceding unit) due to the excess of national income (Y) over the national absorption (A). On the other hand, a deficit means a situation of A>Y Fiscal policy, through changes in Y or A or both, tends to correct a disequilibrium in the balance of payments. As noted in the preceding unit A=C+I+G. Fiscal policy i.e. taxation and public expenditure can be used to affect the level of C, I as well as G. For equilibrium in the balance of payments Y should be equal to A; If there is surplus n the balance of payments (i.e. Y > A, to restore equilibrium either Y should be reduced or A increased or both. On the other hand, if there: is a deficit i.e. Y < A), restoration of equilibrium requires other increase in Y or reduction in A or both. This can be done through the budgetary policy. When income (Y) is to be an increased tax may be reduced so as to stimulate work and production so that overall income rises. In the opposite situation, taxes may be raised. Through public expenditure, G can be directly influenced so that the overall A changes.

But there are two stages in the use of fiscal policy for bringing about equilibrium in the balance of payments. In the first place, the balance of payments objective can be at variance with other macro- economic objectives such as achievement of full employment or control of inflation. If for example, income expenditure is being raised to bring about equilibrium in the balance of payment, but there is inflation in the economy, increase in income/ expenditure will only add to inflationary pressures an appropriate fiscal policy so that balance of payments are brought into, equilibrium, but if there is already a recession in the economy, the reduction in income expenditures will only further exacerbate the recessionary situation. Secondly, a fiscal policy adopted with a view to bring about equilibrium in the balance of payments may indeed harm the interests of the trading partner of the country. For instance, if income is being reduced in the former country so that imports' could be curtailed this may well bring about equilibrium in its balance of payments, but it will leave the other country with smaller exports and therefore lower national income. If the latter country takes retaliatory steps; these may neutralize the fiscal measures adopted by the former.

18.4.2 Monetary Policy

Monetary policy refers to the manipulation of supply of credit so that interest rates could be influenced, or the interest rates may be directly changed, by the monetary authority Change in credit supply and interest rates may be used for bringing about equilibrium in the balance of payments. Change in credit supply and interest rate is influences investment expenditures. Income; being a function of these investment expenditures, will-also consequently change. Under monetary policy, the interest rate may be lowered to encourage expansion of investment expenditures and income so that imports could be simulated. This will be obviously done in a situation of surplus in the balance of payments. On the other hand, in the event of a deficit, imports will have to be discouraged so that balance could be restored between exports and imports. In order-to do that, a contractionary monetary policy will be adopted In other words, the credit supply will be restricted and or interest rates will be raised. This will have the desired effect on imports which will now decline due to a fall in income.

Monetary policy is expected to influence' not only the current account of balance of payments i.e. the imports of goods and services, as we have been arguing above. It is also expected to affect the capital account as well. For example, if there is a deficit in the balance of payments and the country adopts a contractionary monetary policy through a rise in interest rates, this may well encourage foreign investors to shift their capital from low interest rate countries to this particular country. This will be tantamount to a rise in the exports of the country (The foreign investors will buy more of the capital assets of the country). Thus, as exports rise, a deficit, in the balance of payments will be ultimately eliminated.

Monetary policy also suffers from similar problems as fiscal policy does. Besides effectiveness, of monetary policy depends on three elasticities, viz. (i) the elasticity of interest rate with regard to change in credit supply, (ii) elasticity of investment schedules and (iii) elasticity of imports with regard to changes in income. Obviously. if these elasticity' are low, monetary policy will be poor instrument of bringing about equilibrium in the balance of payments.

A common problem with the fiscal and monetary policies is that these may either help in achieving either and internal balance (or internal equilibrium), or an external balance (Or external equilibrium); but not both simultaneously. An internal balance refers to a situation of full employment without inflation. External balance, on the other hand, refers to equilibrium in balance of payments. We have already noted above that in order to bring about equilibrium in balance of payments the level of income or expenditure may have to be increased or reduced. But the resultant level of income may be far from that corresponding to' full employment. Therefore, reconciling the monetary and fiscal policies simultaneously refer an internal and external equilibrium the economy is difficult if not an impossible task.

Since a deficit in the balance of payments (i.e. imports exceeding the export) is seen as the balance of payments problem especially if it persists over a long period, usually the fiscal and monetary policies aim at reducing absorption or expenditures so that through a consequent decline in income, imports could be reduced to a manageable level, these policies are sometimes referred to as the expenditure-reducing Policies. By contrast, there are also the expenditure-switching policies; which may also be used for bringing about an equilibrium in the balance of payments. Devaluation is one such a policy which we shall discuss in some detail below.

18.4.3 Devaluation

In a situation where (i) the automatic mechanism of adjustment in balance of payments (as discussed earlier) does not work, as well as fiscal and monetary policies prove to be unequal to the; task of restoring equilibrium in balance of payments, and (ii) a freely fluctuating exchange rate system does not prevail and the governments are free to intervene in the foreign exchange market, devaluation is a method or last resort available to the monetary- authorities to bring about equilibrium in the balance of payments. Devaluation refers to the raising of the price of foreign currency in terms of domestic currency. Suppose the current rate of exchange between Indian rupee and U.S. dollar is Rs. 50 per dollar. If the Indian imports at this rate of exchange have been consistently higher than exports for a number of years (i.e., there has been a prolonged

deficit in the balance of trade of the country) one way of correcting the disequilibrium is to devalue Indian currency. This is done by raising the rupee price of the dollar and now having and exchange rate of say Rs. 60 per dollar.

As noted earlier, devaluation is on expenditure-switching policy It helps in switching expenditure from imports to exports because of a change in relative prices of the two. Within India, imports would become dearer after devaluation, so less would be imported. On the other hand, foreigners would-find the prices of Indian exports to have fallen after devaluation. They would now trend to buy more of Indian goods, i.e. exports will rise. As imports decline' and exports rise, the initial situation of imports & exports would now get corrected and hopefully the two may be equalized.

All this is of course a theoretical possibility. But in practice this may or may not happen. A government should not take a leap in the dark. Before taking a measure like devaluation it would ensure that revaluation is going to have the desired effect on the balance of payments of the country. The theory of devaluation has certain guiding principle available for governments to power and weigh before the currency of the country is devalued. The theory is briefly discussed below.

Effects of Devaluation

In order to evaluate the effects of devaluation, there are two approaches available one a traditional and the other a modern approach. The traditional approach is referred to as the elasticity's approach or the Marshall-Lerner-condition. The modern economists have come up with what is referred to as the Absorption approach. We-shall discuss the two below in some detail.

18.4.4 Elasticity's Approach

The elasticity approach to the balance of payments (BOP) is linked to the Marshall-Lerner condition, which was independently developed by these two economists. It examines the circumstances in which changes in the exchange rate help restore BOP equilibrium by depreciating a nation's currency. This approach primarily focuses on the impact of devaluation on prices. The analysis is based on the following assumptions:

(i) Supplies of exports are perfectly elastic.
(ii) Product prices are fixed in domestic currency.
(iii) Income levels are fixed in the devaluing country.
(iv) The supply of imparts are large.
(v) The price elasticities of demand for exports and imports are arc elasticities.
(vi) Price elasticities refer to absolute values.
(vii) The country’s current account balance equals its trade balance.

Given these assumptions, when a nation devalues its currency under these assumptions, the cost of imported goods rises domestically, while the prices of its exports become more competitive in foreign markets. As a result, devaluation can help address a balance of payments (BOP) deficit by boosting exports and curbing imports. However, the effectiveness of this strategy depends on the price elasticity of demand for both imports and exports. According to the Marshall-Lerner condition, if the absolute

sum of these price elasticities exceeds one, devaluation will lead to an improvement in the country's balance of payments.

$e_x + e_m > 1$

The demand elasticity of exports (e_x) and the demand elasticity of imports (e_m) play a crucial role in determining the impact of devaluation on a country's balance of payments (BOP). If the sum of these elasticities, measured in absolute terms, is less than one ($e_x + e_m < 1$), devaluation will have an adverse effect, worsening the BOP deficit. Conversely, if their sum equals one ($e_x + e_m = 1$), devaluation will have no impact on the BOP, leaving it unchanged.

The Marshall-Lerner condition explains how devaluation can help address a BOP deficit. When a country devalues its currency, the prices of its exports decrease in terms of foreign currency, making them more competitive internationally. As a result, export volumes tend to rise, though the extent of this increase depends on the elasticity of demand for exports, the nature of exported goods, and prevailing market conditions. If the country is a dominant supplier and exports raw materials or perishable goods, demand elasticity for exports tends to be low. However, if it exports machinery, tools, or industrial products in a competitive global market, demand elasticity is higher, making devaluation more effective in correcting a deficit.

Devaluation also raises the domestic price of imports, leading to a decline in import volumes. The degree of this reduction depends on the demand elasticity of imports, which in turn is influenced by the types of goods imported. If a country primarily imports essential consumer goods, raw materials, or industrial inputs, the demand elasticity for imports is low, limiting the effectiveness of devaluation in improving the BOP. However, if the elasticity of import demand is high, devaluation can successfully reduce import volumes and help correct the deficit. Therefore, for devaluation to improve the balance of payments, the combined elasticity of export and import demand must exceed one.

The J-Curve Effect:

Empirical evidence shows that the Marshall- Lerner condition is satisfied in the majority of advanced countries. But there is a general consensus among economists that both demand-supply elasticities will be greater in the long run than in the short run. The effects of devaluation on domestic prices and demand for exports and imports will take time for consumers and producers to adjust themselves to the new situation.

The short-run price elasticities of demand for exports and imports are lower and they do not satisfy the Marshall-Lerner condition. Therefore, to begin with, devaluation makes the BOP worse in the short- run and then improves it in the long-run. This traces a J-shaped curve through time. This is known as the J-curve effect of devaluation. This is illustrated in where time is taken on the horizontal axis and deficit- O surplus on the vertical axis. Suppose devaluation takes place at time T.

In the beginning, the curve has a big loop which shows increase in BOP deficit beyond D. It is only after time T_1 that it starts sloping upwards and the deficit begins to reduce. At time T_2 there is equilibrium in BOP and then the surplus arises from T_2 to J. If the Marshall-Lerner condition is not satisfied, in the long run the J-curve will flatten out to F from T_2. However, in case the country is on a flexible exchange rate, BOP will get worse when there is devaluation of its currency. Due to devaluation, there is excess supply of currency in the foreign exchange market which may go on depreciating the currency. Thus the foreign exchange market becomes unstable and the exchange rate may overshoot its long-run value.

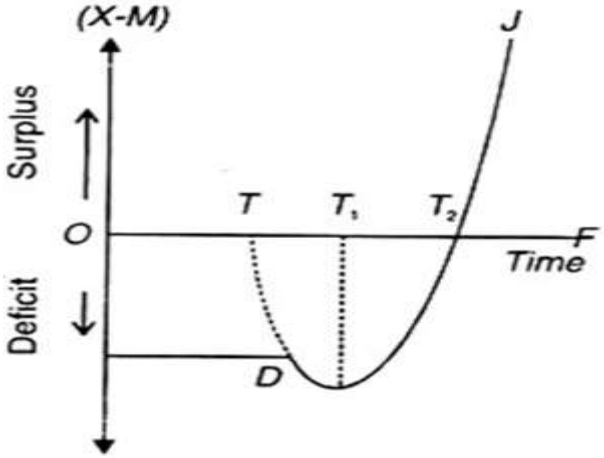

Fig. 18.1

18.4.5 Absorption Approach

The alternative approach was' provided by Sideny Alexander in an article in 1952 This approach views a deficit in the balance of payments as a symptom of absorption (expenditure) being more than national income. This can be seen in terms of the national income identities as below:

$$Y= C+1+G+X-M \quad \text{.....(i)}$$

Or $$Y- (C+I+G) = X-M \quad \text{..... (ii)}$$

Now we know that C+I+G refer to domestic expenditure on consumption, investment and govt. account If C+I+G A i.e. absorption or domestic expenditure, then equation (ii) would be

$$Y-A=X-M \quad \text{.....(iii)}$$

Here the right hand side of the equation is obviously the balance of trade in the event of a deficit in the balance, of trade X < M, which in terms of equation (iii) above be due to Y < A. In other words, the-absorption approach hypothesizes that if absorption exceeds income, there will be a deficit in the balance of trade.

In order to correct the deficit in the balance of payments, if devaluation, is restored to, its effect will depend on whether it helps in reducing absorption or not, besides it must be determined how devaluation will affect income. Let us look at it a little more closely We assume that devaluation will change all the four variables of equation (ii), so that

dY – dA = dX – dM……..(iv)

where d stands for a change in equation (iv) change in absorption (dA) is of crucial importance from the point of view. Change in absorption can be further analyzed as

dA= e (dy) – D (v) where is margin propensity to absorb and D stands for the changes in absorption due to non-income factors (such as the price). Substituting (V) in (iv), we get dye(dy) + D + dx - dM……... (vi)

Factoring out dY, we final get

(I-e) dy-D = dX - dM.....(vii)

Focusing first of all on the right hand side of equation (vii) we notice that devaluation is expected to change both exports and imports, inducing Increase in the former and a decline in the letter: But as exports rise these will have a multiplier effect on income (on the left hand side of equation vii) The change in income will,-induce change in absorption depending, on the marginal propensity to absorb, i.e. MPC and marginal propensity to invest now. If e is greater than unity, devaluation will increase absorption more than income thereby leading to a further worsening of the deficit in balance of payments therefore, this approach shows that devaluation will have the desired effect on a deficit in balance of payment only if marginal propensity to absorb is low and in any case less than unity.

If the economy is already at full employment and no idle resources are available, then there will be no above-mentioned income effect and via that effects on absorption In that event, we may have non-income effects is subsumed under D in equation (vii) One possible non-income effect is the real balance effect. We noted earlier that devaluation raised the price of imports for the country If this leads to overall rise in the price level, people find that the real value purchasing power of their cash balance has declined, they will therefore try to increase their cash balance, (i.e. they will save more) so as to maintain their real balances In Other words, they will try to have sufficient cash balance so that in real terms they can buy the same quantity of goods and services as they had planned to buy before price rise. This is called the real balance effect. Since it will be a negative real balance effect in equation (vii) D carries a negative sign), saving' will rise due to devaluation, while absorption will decline and this will have the desired effect on balance of payments.

The real lesson that can be drawn from the absorption approach is that in order to avoid a deficit in, balance of payments, which affects many countries in the real world, the nation must produce more than it absorbs.

Self-Check Exercise 18.2

Q1. Discuss monetary approach to balance of payment adjustments.

Q2. Discuss the absorption approach to devaluation

Q3. What are the Marshall-Learner conditions to Balance of Payment adjustments?

18.5 SUMMARY

In the present unit we discussed about the policy measures to correct the disequilibrium in the balance of payments. We have gone through the monetary policy and fiscal policy measures. We discussed devaluation as a method or last resort available to the monetary-authorities to bring about equilibrium in the balance of payments. Devaluation refers to the raising of the price of foreign currency in terms of domestic currency. Lastly we studied methods to evaluate the effects of devaluation. There are two methods or an approach first is the traditional approach is referred to as the elasticity's approach or the Marshall- Lerner-condition. And second is that with which the modern economists have come up what is referred to as the Absorption approach.

18.6 GLOSSARY

- **Monetary Policy:** Monetary policy refers to the manipulation of supply of credit so that interest rates could be influenced, or the interest rates may be directly changed, by the monetary authority. Change in credit supply and interest rates may be used for bringing about equilibrium in the balance of payments.
- **Fiscal Policy:** *influences the economy through government spending and taxation*, typically to promote strong and sustainable growth and reduce poverty.
- **Devaluation:** Devaluation refers to the raising of the price of foreign currency in terms of domestic currency.
- **Absorption Approach to the Balance of Payments**: states that a country's balance of trade will only improve if the country's output of goods and services increases by more than its absorption, where the term 'absorption' means expenditure by domestic residents on goods and services.

18.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 18.1

Ans. Q1. Refer to Section 18.3

Self-Check Exercise 18.2

Ans. Q1. Refer to Section 18.4.2

Ans. Q2. Refer to Section 18.4.5

Ans. Q3. Refer to Section 18.4.4

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18.9 TERMINAL QUESTIONS

Q1. What do you understand by devaluation? Discuss the two approaches to evaluate the effects of devaluation?

Q2. Write a note on Fiscal and Monetary approaches to Balance of Payment adjustment?

Unit-19

EXCHANGE RATE DETERMINATION AND SYSTEM

STRUCTURE

19.1 INTRODUCTION

In the preceding unit, we have discussed about the policy measures to correct the disequilibrium in the balance of payments. We have gone through the monetary policy and fiscal policy measures. We also discussed devaluation as a method or last resort available to the monetary-authorities to bring about equilibrium in the balance of payments. In the present unit we shall study foreign exchange rate, its determination and different system of foreign exchange rate.

19.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Define Exchange rate
- Explain the determination of exchange rate
- Differentiate between fixed and flexible exchange rate
- List the merits and demerits of the flexible exchange rate
- Discuss the merits and demerits of the fixed exchange rate

19.3 FOREIGN EXCHANGE RATE

Foreign exchange is defined as that medium of exchange with the help of which a country settles its foreign account or meets its foreign obligations such as payment of foreign loans or price of imported goods. Any commodity or currency may be used as such which is acceptable in this form to all countries participating in international trade. Gold has always been used as a medium of exchange in international payments. But, due to the scarcity of gold it cannot always be used as foreign exchange. In the contemporary, world currencies of a few countries which have been the world economy leaders such as U.K. and U.S.A. have served as foreign exchange. Just as any scare and valuable commodity has a market, foreign exchange too has a market where it is purchased and sold. Before we further discuss the nature of this market it may be noted here that sometimes such a market is freely allowed to function but under certain circumstances the govt., or the monetary authority of the country may intervene in the market in a significant way so that instead of letting the forces of demand and supply interact with each other, the govt. may determine its working. The former is called the freely fluctuating exchange rate system, while the latter is called the fixed exchange rate system. Since, we are discussing a market where it is obvious that there must be a price prevailing in such a market. The price that prevails in the foreign exchange market is called exchange rate. As exchange rate is that price at which foreign exchange can be bought and sold in the foreign exchange market It should be obvious that in a freely fluctuating foreign exchange market the price (i.e. the exchange rate) is determined by the forces of the demand and supply, while under a fixed exchange rate system, the exchange rate is fixed by the government.

Self-Check Exercise 19.1

Q1. What is meant by foreign exchange rate?

19.4 EXCHANGE RATE DETERMINATION

From our foregoing discussion it would be clear that when one is dealing with the question of how the exchange rate is determined in the foreign exchange market, we have the freely fluctuating or the flexible exchange rate system in mind, because it is only in-such a market that the question-of determination of a price can arise in a fixed exchange rate system (unless it is the gold standard which had been operation in some part of the world in the first quarter of this century but which is not expected to stage a comeback in the times to come) the economic forces of do not determine the prevailing exchange rate.

The questions, therefore is how is the exchange rate determined in a flexible exchange rate system? Like any other price, the exchange rate would be determined in the foreign exchange market by forces of demand and supply. In a foreign exchange market one currency is exchanged for another currency. A foreign exchange market is not a particular place rather, it consists of buyers and sellers of foreign currencies. In order to understand, how the exchange rate is determined in the foreign exchange market let us try to look at the demand for and supply of foreign exchange.

19.4.1 Demand for Foreign Exchange

In the following discussion, it will be assumed that this market is truly free and that the government does not interfere in its working. A country's demand for foreign exchange will broadly consist of (i) its demand for foreign goods and services, (ii) its requirement of foreign currencies for making investments abroad, (iii) for making any grants of donations to foreign nationals, and (iv) for repayment of past loans.

The demand for foreign currencies for all the above-mentioned purpose will depend upon the price, i.e. the exchange rule. The higher the price, the lower will be the demand and vice versa. Out of all the purposes for, which there is a demand for foreign exchange, the imports are the most important component. Therefore, the elasticity of demand for foreign exchange will depend on the country's demand elasticity for imports. The letter will depend on (i) how easily, can domestic production replace imports, and (ii) whether the imports fall broadly under the category of necessaries of luxuries. The easier it is to replace imports with domestic production and the more this import are luxury nature, the more elastic will be the demand for import and correspondingly the more elastic will also be the demand for foreign exchange.

Time is another factor in this respect. The shorter the period under consideration the less elastic will be demand for foreign exchange, since in a short period it is relatively difficult to react to price changes and to reallocate resources. On the other hand, the longer the period under consideration; the more likely it is for the demand for foreign exchange to be more elastic. That is so because if prices of imports rise these can be replaced with domestic production over a long period.

14.3.2 Supply of Foreign Exchange

Where does the foreign exchange market get its supplies of foreign exchange from? Obviously, the most important sources are export of goods and services. Through sale of these goods and services abroad the exporter of the country acquire foreign exchange which they sell in the market (get if exchange for the domestic currency). Beside foreign exchange which again gets sold in the foreign exchange market foreign government agencies and individual may make unilateral transfers in the form of grants, donations and gifts. There transfers are made in the form of foreign currencies which again find their way into the foreign exchange market. All these taken together constitute the supply of foreign exchange market in most of the cases mentioned above, supply of foreign exchange will be positive function of the price of foreign exchange or the exchange or the exchange rate. As in the case of demand for foreign exchange, the elasticity of supply of foreign exchange will depend on the supply elasticity of exports.

Having discussed 'the forces operating on the demand and supply of the foreign exchange market, it is now easy to notice how the equilibrium exchange rate will be determined. This is shown with the help of the fig. 19.1.

In the fig., D'D' and 'S are the demand and supply curve of foreign exchange. The exchange rate measured along the vertical axis is shown in term of rupees per dollar. The demand and supply curves interest each other at point E and the resultant equilibrium exchange rate is Or. It shows that at the equilibrium exchange rate. Or rupees per dollar, the demand for and the supply of foreign exchange in market would be OQ.

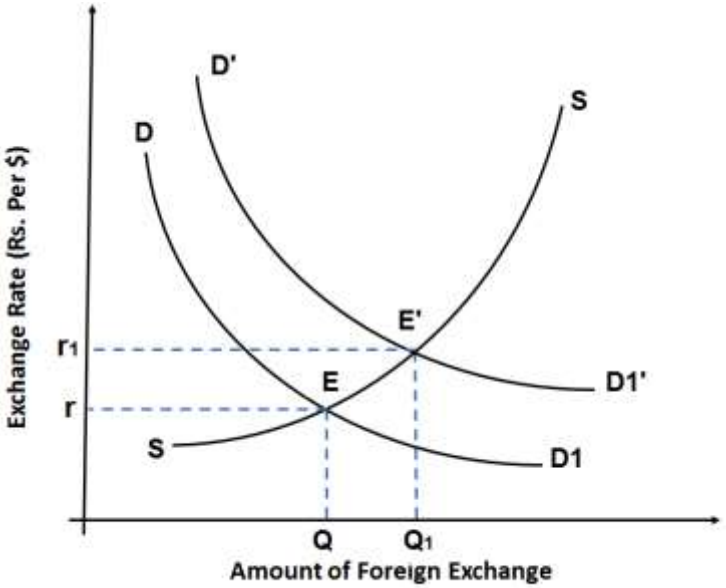

Fig. 19.1

Suppose Indian demand for dollars arise which will be reflected in a shift of the demand curve to D_1D_1. The new equilibrium exchange rate will be Or_1 which the demand for supply of foreign exchange will be OQ_1. The implications of a flexible exchange rate system are clear from the diagram. Under the system changes in the price of foreign exchange i.e. the exchange rate and to bring about an equilibrium between demand and supply of foreign exchange, so that there exists an automatic adjustment mechanism in the balance of payment of the country, or what may be called a mechanism of restoring external equilibrium in the economy.

In the above diagram, it is noted that due to certain reasons India's demand for foreign exchange rises, causing' a shift in the demand curve for foreign exchange upward and to the right this also causes the exchange rate to rise. Such a rise in the equilibrium exchange rate is referred to as exchange depreciation for Indian currency. By exchange depreciation, here we mean to say that more Indian rupees will have to be paid in return of the same amount of dollars. On the other hand, if the demand curve had shifted to the left (or the Supply curve had shifted to the right), the exchange rate would have declined. This is referred to an exchange appreciation a situation where less unit of domestic currency has to be paid per unit of the foreign currency.

It would be seen that in the event of a deficit in the balance of payment; the demand for foreign exchange would be more than it supply, causing a situation of exchange depreciation. The rise in the exchange rate (i.e. more rupees exchanging per dollar) will inhibit demand for imports and promote supply of exports; thus, causing similar changes in the two sides of the foreign exchange market. The rise in the exchange rate will establish equilibrium in the balance of payment. Opposite changes will occur in the event of a surplus in the balance of payments. Thus, exchange appreciation and exchange depreciation (i.e. rise or fall in the exchange rate) is

supposed to bring about equilibrium in the-balance of payments automatically. This seems to be then an ideal foreign exchange system where economic forces automatically eliminate a surplus of a deficit in the balance of payments.

Ironically, during most of the recent history, the countries of the world have opted for a fixed exchange rate system instead of the above mentioned seemingly ideal flexible exchange rate system. From the beginning of the last quarter of 19th Century up to the First World War, most countries had adopted Golden Standard system which was a form of fixed exchange system. The system was received by some countries after the First World War, but it collapsed during the Great Depression. After the Second World War, fixed exchange rate system re-appeared in the form of the I.M.F par value system, though it also collapsed in 1973. Since then the world has been experimenting with floating exchange rate system, a system under which within defined limits, the exchange rate is allowed to be determined by the forces of demand and supply.

Self-Check Exercise 19.2

Q1. How can exchange rate be determined?

19.5 FIXED VERSUS FLEXIBLE EXCHANGE RATE SYSTEMS

The flexible exchange rate system has been discussed in some detail earlier in this unit. It seems to have great merit in bringing about automatic adjustment in balance of payments. Yet in practice, it is the fixed exchange rate system which has ruled the roots over the greater part of the recent history. These two systems have their own merit and demerits, which we shall briefly discuss below:

19.5.1 Fixed or Pegged Exchange Rate System

In the case of fixed or pegged exchange system, all the international transactions take place at the rate of exchange fixed by the monetary authority. The exchange rate is either fixed by the government through legislation or it comes into existence through the intervention in the foreign exchange market by the authorities. If the rate of exchange diverges from the fixed equilibrium level due to market forces or the activities of speculators, the monetary authority or government interferes in the foreign exchange market and maintains the rate of exchange at the equilibrium level.

The market intervention in such a situation is called as pegging, i.e., the sale or purchase of foreign exchange in the foreign exchange market. It is just like the buffer stocks operation in foreign exchange. The authorities buy the foreign exchange when there is excess supply of it and sell it out when there is excessive demand for it in the exchange market. The pegging operations facilitate the maintenance or 'pegging' of the rate of exchange at the desired equilibrium level.

The fixed or pegged rate of exchange can be shown through Fig. 19.2 (a) and (b). In Figs. 19.2 (a) and (b), the amount of foreign currency is measured along the horizontal scale and the rate of exchange is measured along the vertical scale. In Fig. 19.2 (a), the equilibrium fixed official rate of exchange is R_0 determined by the intersection between the demand and supply function D and S respectively. If the demand for foreign currency increases such that the demand function shifts from D to D_1, given the exchange rate, there is excess demand gap which is likely to

appreciate the exchange value of foreign currency in terms of domestic currency to R_1 or cause corresponding depreciation in the exchange value of domestic currency. In order to peg or maintain the exchange rate at R_0, the excess demand gap AB is neutralized through the sale of foreign currency in the foreign exchange market.

It is possible for the government or monetary authority of the home country to fill up the foreign exchange gap AB in any of three possible ways:

(i) Reduction in the foreign exchange reserves built through BOP surplus in past years (which implies sale of foreign exchange),

(ii) Borrowing of short-term funds externally as accommodating transactions, and

(iii) Export of monetary gold.

The resort to any one of the measures will help maintain the exchange rate at the official level rate of exchange R_0.

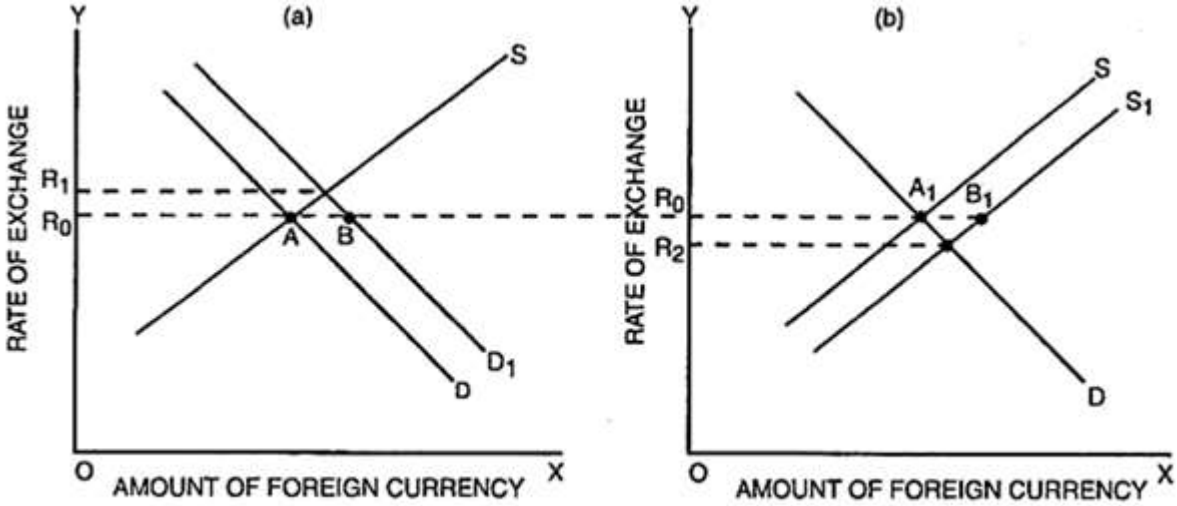

Fig. 19.2

In Fig. 19.2 (b), the fixed official rate of exchange is again R_0. If there is an increase in the supply of foreign currency due to BOP surplus, the supply curve shifts to the right from S to S_1. This creates an excess supply gap A_1B_1. Consequently, the exchange value of foreign currency in terms of domestic currency depreciates to R_2 or there is a corresponding appreciation in the exchange value of domestic currency. In order to peg or maintain the exchange rate at the official level R_0, the government or monetary authority will be obliged to buy the foreign currency in the exchange market. Thus, in a system of fixed exchange rates, the pegging operations (sale or purchase of foreign currency) can help maintain the equilibrium rate of exchange at the official level.

19.5.1.1 Advantages of Fixed Exchange Rate System

(i) Elimination of Uncertainty and Risk: A stable exchange rate is essential for the smooth and consistent expansion of international trade. Fluctuating exchange rates create unpredictability, making it difficult for both exporters and importers to

plan effectively. Variations in exchange rates can lead to income instability for exporters and cost uncertainties for importers. By adopting a fixed exchange rate system, this unpredictability is minimized, ensuring stability in trade and investment while significantly reducing associated risks.

(ii) **Discouragement of Speculation:** Since exchange rates remain constant over extended periods, there is less incentive for speculation in the foreign exchange market. Stability fosters confidence among traders, reducing capital flight—a phenomenon commonly observed in fluctuating exchange rate systems. When exchange rates are fixed, businesses and investors can engage in international transactions without the fear of sudden financial losses.

(iii) **Prevention of Currency Depreciation:** Developing nations often struggle with persistent balance of payments (BOP) challenges. If exchange rates fluctuate frequently, the domestic currency may continuously depreciate against foreign currencies, exacerbating the crisis. A fixed exchange rate system helps prevent such depreciation, ensuring greater economic stability.

(iv) **Encouragement of Prudent Macroeconomic Policies:** A stable exchange rate system discourages governments from implementing reckless macroeconomic policies, such as frequent currency devaluations. It also allows countries to adopt deflationary measures to address BOP deficits without the need for drastic domestic policy changes.

(v) **Attraction of Foreign Investment:** Foreign investors are more likely to invest in a country with a stable exchange rate since frequent fluctuations create uncertainty about the value of their investments. A predictable exchange rate fosters confidence, encouraging capital inflows that, in turn, contribute to economic growth through a multiplier effect.

(vi) **Inflation Control:** A fixed exchange rate system helps curb inflationary pressures. When exchange rates depreciate, the cost of imported goods rises, fueling inflation. By maintaining a stable exchange rate, import prices remain predictable, preventing inflationary spirals caused by expensive imports.

19.5.1.2 Disadvantages of Fixed Exchange Rate System

(i) **Encouragement of Speculation:** Although fixed exchange rates reduce some forms of speculation, they can also create opportunities for speculative activity. If a country faces a significant BOP deficit, speculators may anticipate an eventual devaluation and begin selling domestic currency in foreign exchange markets. If this continues, the central bank may be forced to lower the exchange rate. This cycle benefits speculators but can destabilize the currency, as seen in the collapse of the Bretton Woods system in 1971.

(ii) **Dependence on Foreign Exchange Reserves:** For a fixed exchange rate system to function effectively, a country must maintain adequate foreign exchange reserves. However, many developing nations struggle with limited reserves, making it difficult to sustain a stable exchange rate. If reserves are insufficient, speculators may predict devaluation, leading to further economic instability.

(iii) **Compromise on Economic Growth and Employment:** Countries experiencing prolonged BOP deficits often deplete their foreign exchange reserves, necessitating devaluation and internal austerity measures. These measures, while aimed at restoring economic balance, can slow economic growth and increase unemployment. The rigid nature of a fixed exchange rate system may, therefore, hinder a nation's ability to achieve full employment and sustained economic expansion.

(iv) **Neglect of Global Competitive Dynamics:** Fixed exchange rates do not account for shifts in global competitiveness. In a dynamic international market, exchange rate flexibility can help a country's exports remain competitive. Without adjustments in exchange rates, countries must rely on domestic economic policies to enhance their export potential. This limits their ability to respond effectively to changing trade conditions.

19.5.2 Flexible or Fluctuating Exchange Rate System:

In a system of flexible or fluctuating exchange rates, the value of a currency is determined by the natural forces of supply and demand in the foreign exchange market. When the demand for a particular foreign currency surpasses its available supply, the value of that foreign currency rises, leading to an appreciation. Conversely, the domestic currency experiences a depreciation due to its relatively lower demand. On the other hand, if the supply of foreign currency exceeds the demand for it, the foreign currency depreciates, while the domestic currency appreciates in value. These continuous adjustments in exchange rates help in maintaining equilibrium in the balance of payments (BOP), ensuring that international trade and financial flows remain stable. The impact of changes in demand for and supply of foreign currency upon the rate of exchange and consequent effect on the BOP adjustments can be shown through Figs. 19.3 (a) and 19.3 (b).

In Figs. 19.3 (a) and (b), the amount of foreign currency is measured along the horizontal scale and rate of exchange is measured along the vertical scale. In Fig. 19.3 (a), given the demand and supply functions of foreign currency D and S, the initial equilibrium rate of exchange is R_0. If demand increases and demand function shifts to the right to D_1, there is excess demand for foreign currency at R_0 rate of exchange. The excess demand pressure causes an appreciation of foreign currency to R_1 (depreciation of home currency).

This movement of exchange rate restores the balance of payments in an automatic manner. On the opposite, if a decrease in the demand for foreign currency causes a shift in the demand function to D_2, there is deficiency of demand for foreign currency at R_0 rate. As a result, the foreign currency depreciates to R_2 (appreciation of home currency). This movement of rate of exchange neutralizes any possibility of BOP surplus and keeps the system in a state of balance.

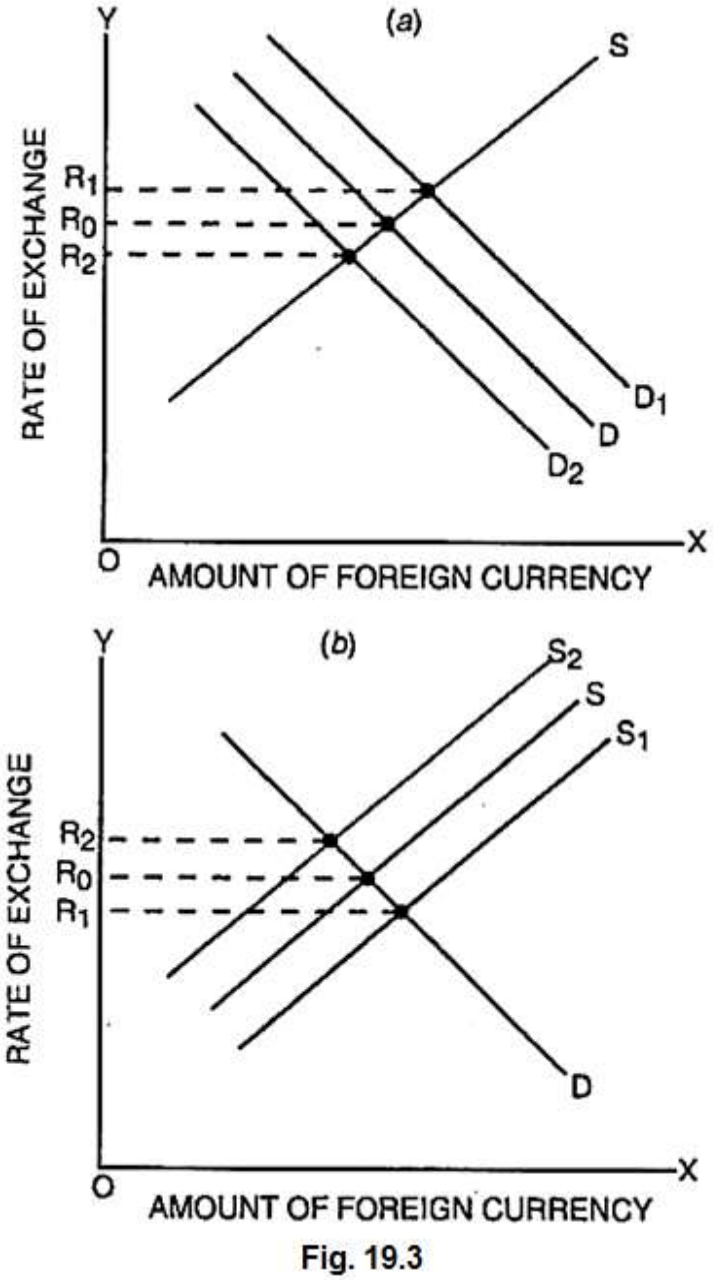

Fig. 19.3

In Fig. 19.3 (b), the original equilibrium rate of exchange is R_0. If there is an increase in supply of foreign currency, the supply function shifts to the right to S_1 causing depreciation in foreign currency R_1 (appreciation of home currency). On the opposite, a decrease in supply causes a shift in the supply function to the left to S_2. There is shortage of the foreign currency at the original rate. It leads to an appreciation of foreign exchange upto R_2 (depreciation of home currency).

Whether there is a BOP deficit or surplus, it can be easily and rapidly offset by the free movement of the exchange rates. The monetary or fiscal authorities are

not required to intervene to correct the BOP disequilibrium. The market forces of demand and supply operate in an automatic way and no need is felt for making accommodating capital transactions for achieving or maintaining the BOP equilibrium. The flexible exchange rates are also called as floating exchange rates.

19.5.2.1 Advantages of Flexible Exchange Rate System

(i) Automatic Adjustment in BOP: The chief merit of the freely fluctuating exchange rate is that the BOP disequilibrium gets corrected automatically with the change in exchange rate. If a BOP deficit arises, there would be an excess supply of home currency leading to a fall in exchange rate simply by the market forces of demand and supply. This causes export goods cheaper and import goods dearer. As a result, export tends to rise while imports tend to decline—thereby removing deficit in the BOP account. Similarly, supply in the BOP account means excess demand for home currency and, thus, rise in the exchange rate. This, in turn, encourages imports and discourages exports. As a result, the BOP accounts will reach equilibrium by the same logic. Thus, this exchange rate makes an automatic adjustment in the BOP crisis of an economy and that too without governmental intervention.

(ii) No Collusion Between Internal-External Objectives: Surplus and deficit in the BOP accounts get corrected if foreign exchange rate falls and rises, respectively. In a regime of fixed exchange rate, the removal of BOP deficit requires the adoption of internal policies like fall income and price level. In other words, pegged exchange rate requires a change in domestic macroeconomic policies like deflationary policies of price and output reduction. But, under flexible exchange rate system, a government can adopt independent monetary policy. In other words, under this system of exchange rate, internal balance could be maintained by the government. It is further argued that, as it is a self-adjusting mechanism to restore BOP equilibrium, a government can put more effort in tackling internal problems of inflation, un-employment, etc.

(iii) Absorption of Sudden Shocks: In a flexible exchange rate, the domestic economy remains insulated from external shocks and pressures. Under this system, the threat of 'importing inflation' from outside the country is minimum. In other words, price feedback effect is imperceptible.

(iv) Minimum Buffer of Foreign Exchange Reserves: Since exchange rate is not pegged under the floating arrangement of exchange rate, the central bank of a country need not hold adequate foreign exchange reserves as a buffer against unforeseen developments in international trade.

19.5.2.2 Disadvantages of Flexible Exchange Rate System

(i) **Uncertainty and Confusion:** Flexible exchange rate and trade presents an atmosphere of uncertainty and confusion in trade and investment. Susceptibility to uncertainty is greater as soon as exchange rate fluctuates freely. Suppose an Indian has dispatched an export 'invoice' to the foreign buyers. But the Indian exporters do not know at what price foreign currency will

be converted into Indian currency. This kind of uncertainty hampers trade. However, such uncertainty can be largely minimised through forward exchange contracts. The uncertainty involved in this kind of exchange rate may cause trading community to lose some confidence in the system.

(ii) **Hampering Investment:** Unregulated free- floating exchange rate often discourages foreign investment as exchange rate becomes erratic and, hence, destabilising. Because of the uncertainty associated with this exchange rate involving profit and loss implications of foreign investment deals, a country might experience decumulation of capital. Hence—it is destabilising in effect.

(iii) Risk, Instability, and Speculation: Flexible exchange rate encourages wide speculation since foreign exchange prices are not known in advance as in fixed exchange rate. It is because of speculation there occurs disruptive hot money flows. To put it elaborately, it can be argued that when the exchange rate tends to decline, speculators anticipate that such would continue to decline further and the possibility of the flight of money to another country will brighten. This will then cause a further fall in the exchange rate. Thus, greater the speculation against a currency, the deeper the economic crises. However, economists are not unanimous about this kind of speculation associated with the flexible exchange rate system.

(iv) Inflationary in Character: By nature, flexible exchange rate is inflationary. As soon as the exchange rate falls, automatically, consequent upon the BOP deficit, import goods become expensive. High cost of imported goods then fuels inflationary tendencies. As depreciation of a currency makes import costlier, the domestic economy faces both demand-pull and cost-push inflationary pressures.

It is because of these drawbacks of the freely fluctuating exchange rate that countries attach importance to 'managed exchange rate' with their central banks buying and selling currencies in the foreign exchange market so as to moderate the degree of fluctuations as far as practicable.

Self-Check Exercise 19.3

Q1. What is fixed exchange rate system?

Q2. What is flexible exchange rate system?

19.6 SUMMARY

In this unit we explained you the meaning of exchange rate. We also explained the determination of the exchange rate with the help of demand and supply of exchange rate. Lastly we explained about the fixed exchange and the flexible exchange rate systems along with their merits and demerits

19.7 GLOSSARY

- **Foreign exchange:** Foreign exchange is defined as that medium of exchange with the help of which a country settles its foreign account or meets its foreign obligations such as payment of foreign loans or price of imported goods

- **Exchange Rate:** The price that prevails in the foreign exchange market is called exchange rate. As exchange rate is that price at which foreign exchange can be bought and sold in the foreign exchange market. It should be obvious that in a freely fluctuating foreign exchange market the price (i.e. the exchange rate) is determined by the forces of the demand and supply, while under a fixed exchange rate system, the exchange rate is fixed by the government.
- **Fixed Exchange Rate:** is a regime where the official exchange rate is fixed to another country's currency or the price of gold.
- **Flexible Exchange Rate**: also known as a floating exchange rate, is a system where the market determines the exchange rate of different currencies based on supply and demand. In this system, the value of a currency is not fixed or pegged to a specific rate, but instead fluctuates freely based on economic factors like interest rates, inflation, and market speculation.

19.8 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 19.1

Ans. Q1. Refer to Section 19.3

Self-Check Exercise 19.2

Ans. Q1. Refer to Section 19.4

Self-Check Exercise 19.3

Ans. Q1. Refer to Section 19.5.1

Ans. Q1. Refer to Section 19.5.2

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19.10 TERMINAL QUESTIONS

Q1. What is exchange rate. How is exchange rate determined?

Q2. What is meant by fixed exchange rate system? Also explain its merits and demerits.

Q3. What is meant by flexible exchange rate system? Also explain its merits and demerits.

Unit-20

FOREIGN TRADE AND NATIONAL INCOME

STRUCTURE

20.1 INTRODUCTION

In the present unit, we shall analyze the link between the foreign .trade and the overall national income of-the country. In this context, we shall also discuss the investment multiplier in a closed economy with which you are already familiar. A further concern in this context would be to notice how foreign repercussions, like for instance a business cycle emanating abroad, would affect the level of economic activity in an open economy.

When we try to integrate the imports and exports of the country into its national income accounting frame work, it is customary to assume that while, like saving, imports are an increasing function of national income exports like investment are exogenously determined (i.e. determined by foreign demand) so that these are assumed to be constant at all levels of income.

20.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Explain Foreign trade multiplier
- Explicate National Income and Balance of Payment
- Elucidate Foreign Repercussions and National Income

20.3 FOREIGN TRADE MULTIPLIER

Let us look at simple national income accounting in an open economy. In the context of such an economy we have to take an explicit notice of imports and exports or receipts and payments. As you already know, the broad items of expenditure in a closed economy are consumption expenditure and investment expenditure. In an open economy exports are an additional item of expenditure (i.e. expenditure made by foreigners on goods exported by a country). All this expenditure taken together generates aggregate, or national income of the country. However, expenditure made by the nationals of a county on imports generates income abroad and is therefore, subtracted from national expenditure and national income. All this taken into account by the national income identity as given below:

$Y = C + I + X - M$ ..... (i)

where X = exports and M = imports.

Equation (1) may be re-written as

$Y-C = I + X - M$ .....(ii)

It is clear that Y-C=S. Substituting in (ii) we have

$S = I + X - M$..... (iii)

Or $S + M = I - X$ (iv)

Equation (iv) provides the equilibrium condition for an open economy. This equilibrium condition is shown in the diagram below (Fig. 20.1):

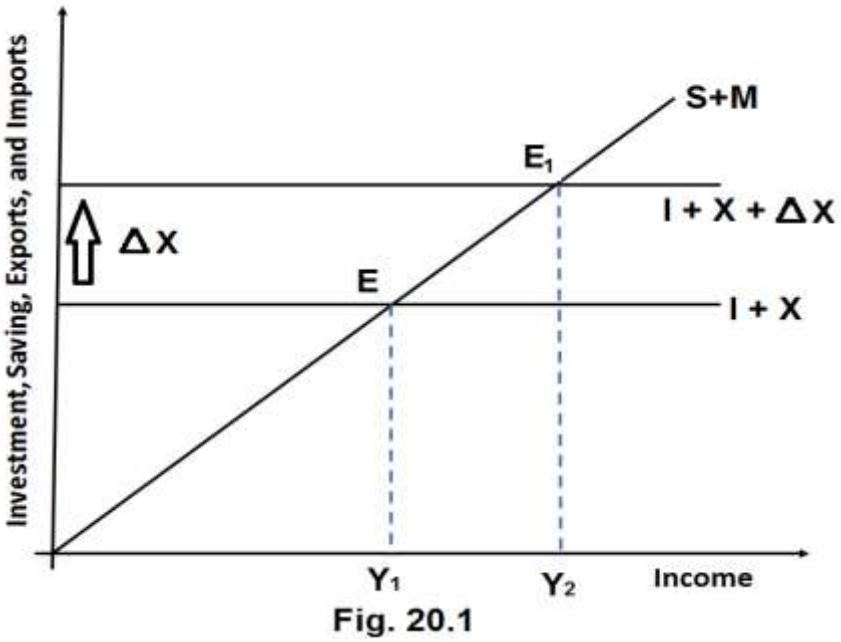

Fig. 20.1

In Fig. 20.1, we measure income along horizontal axis; and saving, investment, imports and exports along the vertical axis. The, I+X schedule is parallel to the

horizontal axis because both investment and export, are assumed to be autonomous and therefore independent of income.

On the other hand, both S and M are increasing functions of income equilibrium level of income, OY is determined where I + X are equal to S+M.

Now, any change on left-hand side of equation (iv) must be balanced by an equal change on the right hand side of the equation. Thus

dM + ds = dI + dx..... (V)

As noted earlier, imports assumed to be a function of income. The change in imports due to a given change in income will depend on marginal propensity to import (i.e. change in imports divided by change in income, dM/dY). In other words

dM = m(dY).

Where m = marginal propensity to import, similarly, we know that

dS = s(dY)

where s = marginal propensity to save. Substituting these in equation (v) we get;

m(dY) + s(dY) = dI + dX.....(vi)

or m+s (dY) = (dI + dX) .....(vii)

Now divide both sides of (vii) by m+s to get

dy = $\frac{1}{m+s}$ (dI + dx) ..... (viii)

In equation (viii), let us assume autonomous investment (dl) to be zero. Then the equation show that a given autonomous change (dx) will lead to a multiple changes in income, depending on the value of 1/m+s. In other words a, given change in exports will result in a multiple change in income depending on the reciprocal of the marginal propensity to save and to import. The lower these propensities the higher will be the increase in income due to a given change in exports, and vice versa. Thus $\frac{1}{m+s}$ is the foreign trade multiplier.

In determining the value of the foreign trade multiplier, since the values of marginal propensity to import and to save are important, therefore, it is essential to understand what role ‘m’ and ‘s’ play in this process if income generation in an open economy. You would recall that when you had studied the process of income, generation under the Keynesian investment multiplier, marginal propensity to save had played a role in that process, the value of investment multiplier who seem to be determined by the marginal propensity to consume $\left(\frac{dc}{dy}\right)$ the higher that propensity, the greater is the investment multiplier. It would, also be recalled that the MPC is the observe of MPS, the higher the former the lower the latter. In investment, saving is seemed to be leakage out of, the income stream. So a high value of MPS yields a low value of investment multiplier because of the higher degree of leakage involved in this situation.

In an open economy, this form of leakage from income stream does operate. But there is also an additional leakage in the form of expenditure on imports. It was contented earlier that such expenditure generates income abroad, in those countries which supply (export) such imports. The greater the income spent on imports the greater will be the leakage out of domestic income stream. The foreign trade multiplier takes into account both the leakages from the income stream, the saving as well as expenditure made on imports. Naturally, therefore, the higher the values of m and s, the more will be the leakage from the income, stream, the lower, will be the value of the 'foreign trade multiplier and thus the less, will be the growth of income' due to a given increase in exports.

The operation of the foreign trade multiplier can be demonstrated diagrammatically In Fig. 20.1. increase in exports (AX) is shown by the shift in I+X to 1+X+AX. Now the 1+X+AX line intersect the S+M, line at a new point and thus yields equilibrium income level OY_2 The higher income is the result of the operation Al foreign trade multiplier.

In this context, it is also important to remember that the values of m and s will be reflected in the slope of the S+M line, the higher the values of m and s, the greater the slope of the S+M line. A greater slope of the S+M line will yield a smaller increase in income (from OY_2 to O Y_2) and conversely, a lower slope of S+M line (when marginal propensity to save and to import will be low will naturally show a much greater increase in income).

Self-Check Exercise 20.1

Q1. What is Foreign Trade Multiplier

20.4 National Income and Balance of Payment

The type of equilibrium we have been talking about earlier refers to what is called internal equilibrium. The question is: how internal equilibrium and a shift from one in the level of national income will have impact on the balance of payments. Let us take some simple illustration how this happens.

Suppose we start from a situation of full employment and equilibrium in the balance of payments of the aggregate demand, say. due to a fall in propensity to save or to an increase in public investment. Normally this should lead to inflation because while aggregate supply cannot be increased (the economy is already at full employment) aggregate demand has increased. Interestingly in an open economy this need not necessarily cause the prices to rise. Instead it may merely induce a' deficit in 'the balance of payments. There is also a possibility that partly prices may rise and partly a deficit in balance of payments may arise. The latter may in fact be further re-inferred by the former, since inflation in the country may lower foreign demand for the country's exports.

Let us consider an alternative scenario Suppose initially there is full employment and equilibrium in the balance of payments. Now suppose there is an autonomous decline in exports (due to a fall in foreign demand of the exportable of the country). The fall in exports will have a negative multiplier effect on income. And a decline in income will induce a fall in imports also. But the fall, in imports is likely to be less than a fall in

exports (because of the marginal propensity to import being considerably less than unity) so that a deficit in balance of payment will arise. Thus we have here a situation of both deflation in the economy and a deficit in the balance of payments.

However if the causes of deflation lie within the country rather than abroad as assumed above, such as an increase in propensity to save, the deflationary situation will lead to a surplus in the-balance of payments. That outcome will be the result of the fact that as Aggregate demand and expenditures decline and consequently national income falls, it will induce a decline in imports which are assumed to be a fraction of income. But exports will remain unaffected since these are determined by foreign demand. Indeed, the deflationary situation within may render exports cheaper and thus raise foreign demand for exports. If this happens, the surplus in the balance of payments will rise further.

The foregoing tends to show that there is an ultimate link between changes in the national income of a country and its balance of payments. Thus, interval equilibrium or balance and external equilibrium are intimately interlinked. The preceding discussion shows that, broadly after the attainment of full employment) will cause a deficit in the balance of payments, while deflation and unemployment (i.e. a fall in national income below the full employment level) will result in a surplus in the balance of payments. This is of course an over simplification' of the real-world situation because the nature of the link between change in national income and the balance of payments of the country will ultimately depend on the main cause of the change in the former that is whether the change has been caused by internal or external factors, and by autonomous or endogenous factors and forces. There can be different types of outcomes of a so far as the balance of payments are concerned.

Self-Check Exercise 20.2

Q1. Write short notes on National Income and Balance of Payment

20.5 FOREIGN REPERCUSSIONS AND NATIONAL INCOME

While the foregoing discussion traced the effects of a change in the level of national income on the balance of payments of the country, we can also shift the perspective a little and notice the effects of what happens abroad on the national income of the country. Such effects can; get propagated through other routes as well but we shall finally notice the fact of such foreign repercussion being ideated into the economic system of a country primarily through its imports and exports or in other words, through foreign trade.

To start with, it should be noted that when we are talking of the effects of foreign repercussions on the national income of a country through foreign trade, we are in fact trying to link the national incomes together of the trading partners. The foreign influences that we have in mind here can be better comprehended in terms of the level of economic activity and, therefore, of national incomes abroad. When there are changes in the level of economic activity abroad, such as during the course of a business cycle, it will certainly affect the national income of a country engaged in foreign trade. And the more dependent a country is on foreign trade, that is the higher the marginal propensity to import of the country, the more sensitive it will be to the effects of

the foreign repercussions, In a well-knit global economic system, characterized by relative free trade the national incomes of different trading countries will be subject to these foreign influences much more than when these countries practice autarky or protectionism.

In order to take a formal view of the linkage between the level of economic activities and the national incomes of different countries and therefore, to notice the working out of foreign repercussions, we present below a simple diagrammatic exercise. In Fig. 20.2(a), to (c) we measure national income along the horizontal axis, and saving, investment, imports and exports along the vertical axis. This set of diagrams shows how the national incomes of different countries are inter-linked, so feat if the national income of one country changes, it will have repercussions on the national income of the other country (or other countries) which is (or which are) a trading partner (or partners) of the former. We start with stage 1 and country. A where due to certain internal the national income of this country also changes, and this is shown in Fig 20.2(a) initially, country A's investment schedule was I and when, exports were added to it, the same was shown by I + X schedule. The intersection of its I+X and M+S schedules yielded the equilibrium level of income OY_1. (This has already been analyzed earlier in Fig. 20.1 of this unit). Now suppose that there is an autonomous increase investment. (Say, the government starts an investment programme). The investment schedule consequently shifts upwards to + AI and similarly, the investment plus exports schedule takes the position of 1+X+AI, as shown in figure 20.2(a). This yields a new equilibrium level of income OY_1.

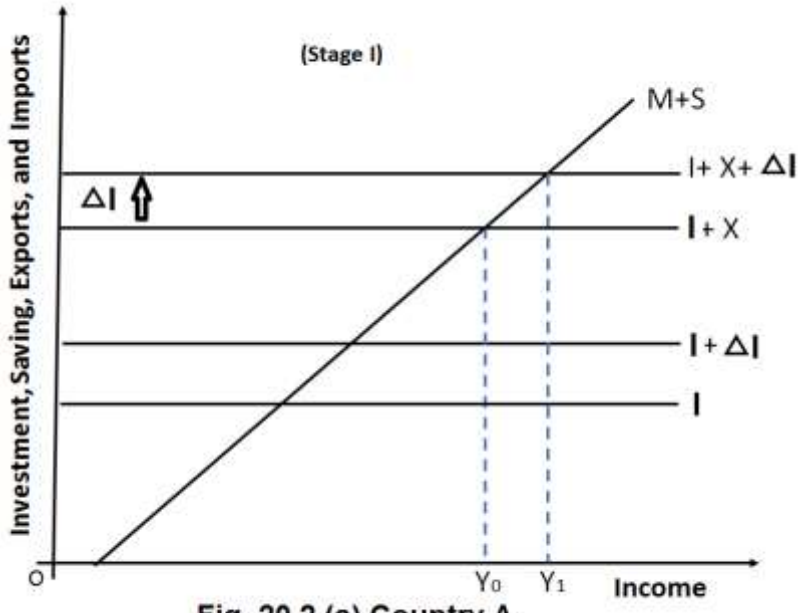

Fig. 20.2 (a) Country A

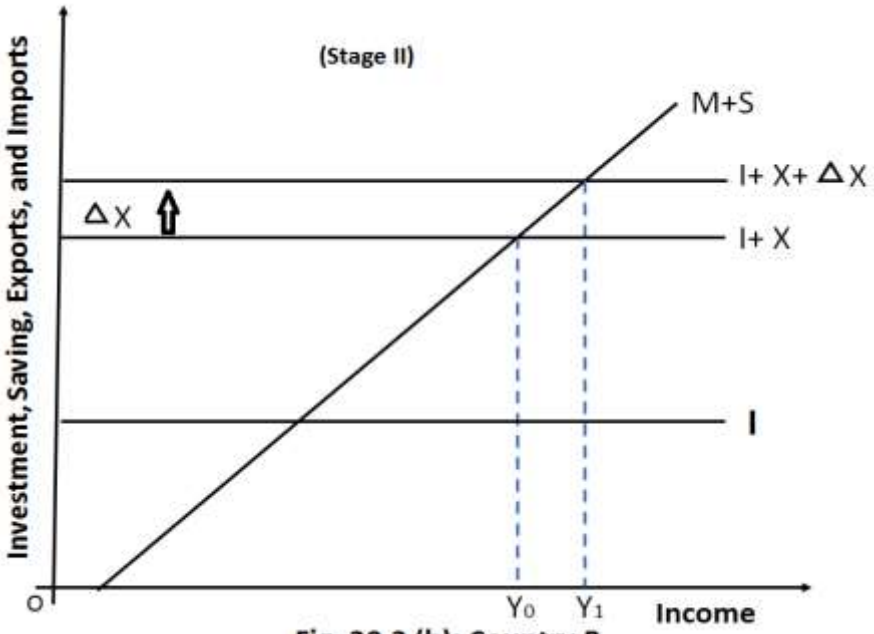

Fig. 20.2 (b): Country B

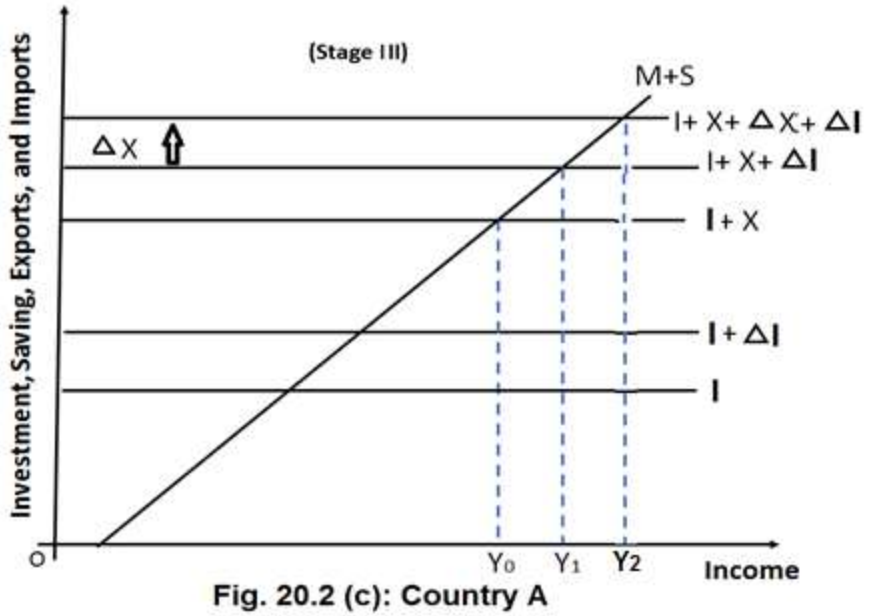

Fig. 20.2 (c): Country A

Now the foreign repercussions start unfolding themselves. As the national income of country A rises its demand for imports from country B Will also rise (assuming that there are only two Countries trading with each other). The impact of this rise in imports of country A from country B, as stage II of (his process is shown in Fig. 20.2 (b). In the latter country, the intersection of the I+X and M+S schedule, before the above-mentioned changes take place, result in equilibrium level of income OY_0 When imports of county A rise, and correspondingly exports of country B increase, the I+X schedule of the later country shifts upwards to take the position of 1+X+ΔX, as shown in Fig. 20.2 (b). "The intersection of this schedule with M+S schedule of this country yields a higher equilibrium level of income, OY_1. But the process of these foreign repercussions need

not end here in stage II. There will be farther rebounding of these repercussions as show in Fig. 20.2 (c) which records the subsequent sequence of these inter-linkage in the next stages. But now the focus shifts back to country A from where this sequence of repercussions had started.

As the national income of country B rises in stage II its demand for imports will raise. This is seen as stage III when the focus shifts back to country A. A rise in country B's imports causes a corresponding rise in the exports of country A. This is shown in Fig. 20.2(c). The intersection of the I+X+ΔI and M+S schedules had yielded an equilibrium level of income $OY_{1,}$ in stage I. Now when due to the foreign repercussion, country A's exports rise (which is shown by ΔX) and this, when added to the original 1+X+ΔI schedule, produces the new schedule 1+X+ΔX+ΔI. As this new schedule, intersects the unchanged M+S schedule, the equilibrium level of income rises from OY_1 to $OY_{2.}$

The above set of diagrams provides a simplified version of the foreign repercussions. It helps to show how the economies of different countries are inter linked and any change in the level of economic activity in one country gets transmitted to the trading partner suit would also be clear that in the propagation of these foreign repercussions the foreign trade multiplier plays an important role. The reasons that the foreign trade multiplier tends to magnify any increase in foreign, demand in the form of multiple change in national income. But there is a stabilizing force in the form of marginal propensity to import being considerably less than unity

Self-Check Exercise 20.3

Q1. Write short notes on Foreign Repercussions and National Income

20.6 SUMMARY

In the present unit, we analyzed the link between the foreign trade and the overall national income of-the country. In this context, we discussed the investment multiplier in a closed economy with which you were already familiar. A further concern in this context was to notice how foreign repercussions, like for instance a business cycle emanating abroad, affect the level of economic activity in an open economy. After having analyzed the balance of payments accounting and policies in the last few units, we shall take up the question of foreign indebtedness of the LDCs in the following unit.

20.7 GLOSSARY

- **Foreign Trade Multiplier:** The foreign trade multiplier also known as export multiplier operates like the investment multiplier of Keynes. It may be defined as the amount by which national income of a nation will be raised by a unit increase in domestic investment on exports. It is dependent upon their marginal propensity to save (MPS) and marginal propensity to import (MPM). The smaller these two propensities are, the larger will be the value of multiplier and vice versa.
- **Balance of payments:** statement that summarizes an economy's transactions with the rest of the world for a specified time period. The balance of payments, also known as balance of international payments, encompasses all transactions between a country's residents and its non-residents involving goods, services

and income; financial claims on and liabilities to the rest of the world; and transfers such as gifts.

- **Foreign Repercussions:** The feedback effect on a domestic economy when its macroeconomic changes cause large enough changes abroad for those in turn to cause further changes at home Most commonly, a rise in income stimulates imports, causing an expansion abroad that in turn raises demand for the home country's exports.

20.8 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 20.1

Ans. Q1. Refer to Section 20.3

Self-Check Exercise 20.2

Ans. Q1. Refer to Section 20.4

Self-Check Exercise 20.3

Ans. Q1. Refer to Section 20.5

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20.10 TERMINAL QUESTIONS

Q1. Write notes on:

i. National Income and Balance of Payment

ii. Foreign Repercussions and National Income

iii. Foreign Trade Multiplier

Unit-21

FOREIGN CAPITAL REQUIREMENTS AND DEBT PROBLEM OF LDCS

STRUCTURE

21.1 INTRODUCTION

In this unit, we take up the capital requirements of less developed countries, the sources of finance to these countries, their current debt position, and note the trends and the problems associated with that. We shall also discuss the institutional arrangements at the international level to see to what extent the capital requirements of LDCs can be met through these institutions and which new problems have emerged in this respect.

21.2 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Explain the factors determining capital requirements of LDCs
- Give detail of financial flows to LDCs
- State the debt position of LDCs

21.3 FACTORS DETERMINING CAPITAL REQUIREMENTS OF LDCS

The levels of income in most LDCs are so low that domestic saving is not adequate the growth of national output is used up by consumption requirements. The capital requirements of these countries are increasing for the following reasons;

(1) With the initiation of development process, the capital requirements of these countries grow.

(2) As development outlays rise, their foreign exchange requirements to grow, which cannot be met out of their foreign exchange earnings. Their demands for capital equipment and raw material rise as the development process proceeds.

(3) Developing countries need additional capital not only to get over their short-term balance of payments difficulties, but also to make major longer term adjustments to higher energy and basic commodity costs. These adjustments require large increases in investment expenditures. Development of power and irrigation require larger foreign exchange resources.

(4) The capital requirements of developing countries during the last four decades as a result of higher petroleum prices. According to the IBRD, this factor had necessitated a considerable investment of capital, including foreign exchange. The World Bank has analyzed repercussion of higher petroleum prices in five sectors power industry, transportation, agriculture and tourism and has come to the conclusion that on the whole developing countries cannot greatly change their present pattern of production or consumption of energy before the early 1980s and they will be necessitated considerable investment of capital, including foreign exchange.

In the wake of the oil crisis of early 1970s the World Bank Chief Robert McNamara had estimated that during the world's poorest and middle-income countries would require foreign capital to the tune of $61 billion, if they were to achieve a growth rate of per capita output of 3.2 per cent and 3.8 per cent respectively. The financial requirements of the LDCs can be broadly divided into two categories; the short-term financial requirements mainly dictated of payments position, and long-term capital requirements primarily determined by the gap between domestic saving and fixed capital investment.

Self-Check Exercise 21.1

Q1. What are the factors determining capital requirements of LDCs?

21.4 IMPORTANCE OF FOREIGN CAPITAL

The developing nations often encounter three critical deficiencies that hinder their economic growth: a shortage of domestic savings, a deficit in foreign exchange reserves, and a gap in technological advancements. Foreign capital can play a significant role in bridging these gaps by supplementing insufficient savings, improving access to foreign currency, and facilitating the transfer of advanced technology. To better understand this, we will now examine the mathematical framework underlying the savings gap.

21.4.1 Savings Gap

The difference between the desired level of investment and available domestic savings can be bridged by foreign capital. This relationship can be demonstrated through a simple algebraic approach. According to the fundamental principles of national income accounting:

$$Y = C + I + (X – M) \quad \ldots\ldots (1)$$

Where Y = Gross national product (total spending), C = Consumption, I = Investment, X = Exports of goods and services plus income received from abroad, and M = Imports of goods and services plus income paid abroad.

The total spending is equal to consumption plus investment plus the excess of foreign receipts over foreign spending. The total spending, Y, is either consumed, C, or saved, S; which gives

$$Y = C + S \quad \ldots\ldots (2)$$

Since total spending equals total income, combining (1) and (2), gives

$$C + I + (X – M) = C + S \quad \ldots\ldots (3)$$

The above equation can be manipulated as follows: subtract C from both sides, and shift (X – M) to the other side, reversing the sign. This gives

$$I = S + (M – X)$$

This is a simple relationship. Investment is constrained by the domestic savings plus any net receipts from abroad (M – X). Since export receipts are constrained (export pessimism) the only way for $M – X > 0$ is through capital inflows from abroad. The above then is the manner in which foreign capital inflows can increase investment in a developing country beyond that made possible by its domestic savings. Foreign capital will increase the total financial resource available for investment.

But there is yet another route to increase the rate of investment beyond domestic savings. This is through remittances from the country’s workers working abroad. India, for instance, has benefited greatly from the remittances of Indian workers in the Gulf countries and West Asia in general.

21.4.2 Foreign Exchange Gap

The foreign exchange gap arises when a country's export earnings are insufficient to finance essential imports of machinery, equipment, and other investment-related goods. This issue is closely linked to "export pessimism," which suggests that in certain economies, the demand for exports is highly inelastic. As a result, an increase in supply does not necessarily lead to higher export revenues. This situation is commonly observed in the early stages of development in underdeveloped economies.

However, historical evidence suggests that even the Least Developed Countries (LDCs) can gain a foothold in global markets by engaging in labor-intensive industries, such as garment manufacturing. Over time, strategic economic policies can help

overcome this constraint and integrate these economies into international trade more effectively.

21.4.3 Technology Gap

Beyond financial and foreign exchange constraints, a more significant challenge for developing economies is the technology gap. Advanced industrialized nations have developed sophisticated manufacturing and agricultural technologies that significantly enhance productivity. To bridge this gap, developing countries must acquire and implement these technologies.

This can be done in several ways:

(i) Direct Purchase – Countries can buy technology from foreign firms. However, this is not always feasible, as companies may be unwilling to sell their proprietary technologies outright.

(ii) Foreign Direct Investment (FDI) – Multinational corporations (MNCs) may prefer to invest in a developing economy rather than selling their technology. By doing so, they ensure continuous profits rather than a one-time transaction. In such cases, MNCs bring in capital, establish local operations, and share technology as part of their investment.

Encouraging FDI can be a viable strategy for developing economies to access and adapt modern technology, ultimately enhancing productivity and fostering economic growth.

Self-Check Exercise 21.2

Q1. What is the role of foreign capital in Less Development Countries?

Q2. What is meant by Saving Gap?

21.5 FOREIGN CAPITAL AND FINANCIAL FLOWS INTO LDCS

The foreign capital and financial requirements to the LDCs are fulfilled through following three sources:

(a) Foreign Private Capital: This has traditionally been the most important source of foreign capital and has played a great role in the economic development of even the presently developed industrial economics However there was a decline in such capital flows between DCs and the LDCs in the 1956s and the 1960s when of the latter group of countries, due to their apprehension of the re-emergence of colonialism through the route of foreign private capital, imposed restrictions on the entry of such capital into their economic system. But, as would be noted from-Figures as' the table below, foreign private capital has again emerged as the single most important source of foreign, financial flows into LDCs.

The flows of foreign private capital into LDCs take three forms: Direct investments where the foreign firms (usually multinational corporations) set up enterprises, either singly or in collaboration with local enterprises, within LDCs. In this case, investment, control and management normally go together. (ii) Portfolio Investment where a foreign investor, usually through purchase of shares of local firms provided capital with a view to earn a return on it. Unlike under direct foreign investment

here the foreign investor does not exercise any control over the borrowing enterprise, (iii) Short term financial lending's which takes the form of short-term loans contracted between an in importer-the latter providing a short-term credit to the former.

It would be noted in the Table below that in 1980 as much as 60 per cent of total foreign capital and financial flows into LDCs was in the form of foreign private capital in 1989, although its relative importance had declined quite a bit, yet was still the chief source of financial flows into these countries. In the 1990s there is going to be a surge in the quantum of such capital flows into LDCs because of the strong winds of privatization and globalization blowing throughout the world. But in this respect, the countries of East Europe, which have recently opted for private enterprise and open economic systems might flow to the former in comparison to the latter. Besides despite the desperate needs of LDCs for foreign capital, doubts.

Net Foreign Capital and Financial Flows into LDCs (% to total)

S. No.	Source	1960-65	1980	1989
1	Foreign Private Capital	35.0	60.0	42.2
2	Official Assistance			
	(a) Bilateral grants	43.0	15.1	22.4
	(b) Bilateral loans	17.0	14.8	9.6
3	Multilateral	5.0	9.5	18.8

Still exist in these countries regarding the role and usefulness of foreign private capital flows in the form of Multinational Corporation whose operations in different parts-of the world have come in for critical comment.

(b) **Official Assistance** - As would be noted in the table above official assistance come in the form of bilateral loans as well as bilateral assistance, i.e. loans and outright grants contracted between the governments of a' given LDCs and a DC. The figures in the table show that bilateral assistance was the single most important source of foreign capital, and financial flows into LDCs in the early 1960s. An organization of the developed countries known as the Organization for Economic Co-operation and Development (O.E.C.D) had set up a Development Assistance Committee (D.A.C.) which regulated official, development assistance. (O.P.A.) has continued shrinking. In the early 1960s the assistance component of such capital flows had played a very significant role in over all foreign capital flows into LDCs, as can be seen from the foregoing Table, But its relative role has continued declining and in 1980 the proportion of total foreign capital flows had fallen to less than one third of total flows. And the loans and grant components were equally balanced. It would also be noted in the table that the proportion of government, to governments loans in total flows has continued declining during the last three decades and in 1989, such aid had fallen to a mere trickle.

Under the O.D.A. programme of the O.E.C.D. countries (i.e. the major DCs) loans and grants have been provided on very favourable terms the rates of interest on loans being fairly low and the loans being provided on a long term basis. But the

drawbacks of such assistance have been extensively documented and quite adversely commented upon. The tying of such aid has been one drawback. Official development assistance has usually carried political strings with it. The aid donor countries have usually tried to interfere with the internal policies of the borrowing countries. And the former have expected the latter to tow their line if thinking still such assistance was perhaps a lesser evil as compared to the foreign private capital.

(c) Multilateral Assistance - The main sources of such assistance are the World Bank and the I.M.F Besides, there are sonic other minor sources of multilateral assistance like, the Asian Development Bank. It would be seen from the table given earlier that the relative importance of such assistance has been rising over the years- from 5 per cent in the early 1960s to nearly 20 per cent in 1989.

The chief merit of such assistance is that it is provided on relatively soft terms so far as the rate of interest and the period of repayment are concerned. Still, such assistance is not without its demerits. The multilateral institutions are dominated by the DCs, especially the U.S.A. Assistance is usually, provided on political and ideological considerations. Countries economic systems based on private enterprise and those being closer to the capitalist bloc have been the favourites of these multilateral financial institutions.

In recent years, multilateral assistance has been more and more tagged to what, has come to be known as structural adjustment programme of the World Bank and the I.M.F. (which shall be discussed more fully in the following unit). Much assistance is called structural adjustment loans These loans carry stiff terms and conditions usually referred to as the conditionalties. Through such loans the multilateral financial institutions. have started openly and brazenly meddling with the internal policies of the borrowing LDCs.

Net private capital flows to developing countries have continued to recover strongly from their slump in 2008 and early 2009. They increased from about $110 billion in 2008 to about $386 billion in 2009 and are estimated to have grown strongly in 2010. This trend has been driven by the combination of stronger economic growth in a number of developing countries and problematic economic fundamentals in many advanced economies.

Extensive monetary easing has kept interest rates low, while fragility in the financial systems of the major developed economies and the weak recovery continue to constrain credit growth in the major high-income countries. This has created substantial excess liquidity in advanced financial markets. In search of higher returns, .investors have shifted to emerging markets. Improving terms of trade have attracted Foreign Direct Investment (FDI) in commodity-exporting economies, contributing to greater private capital flows. After declining markedly during the crisis, portfolio equity flows to developing countries recovered strongly in 2009 and 2010. This recovery was particularly strong for those countries in Asia and Latin America that are viewed as having better growth prospects. Stock markets in Colombia, Indonesia and the Philippines hit record levels in October 2010; markets in Brazil and India also boomed. The revival in flows from 2009 onwards also reflected a return of investors who had feared that the global crisis would have more severe effects on the corporate sector in

emerging economies. Portfolio debt flows have also been staging a strong recovery from the financial crisis. This has been helped by the fact that both non-bank credit institutions and emerging market issuers of debt have been less damaged by the crisis. In addition, low interest rates in some of the major advanced economies appear to have been encouraging a wave of foreign currency bond issuance in their capital markets by emerging market borrowers. Bond inflows to Latin America and Asia have been particularly strong, as has issuance by the non-financial corporate sector. Non-portfolio debt flows (bank credit) have also rebounded. However, mounting non- performing loans have restrained lending in the transition economies of Europe and Central Asia.

FDI remains the single largest component of private capital flows to developing economies. FDI was affected by the crisis through reduced access to finance for investing firms and low investor confidence as a result of gloomy economic prospects and market conditions. Despite a revival in corporate earnings, the weak global investment environment has limited the recovery in FDI flows.

Net financial flows[a] to developing countries and economies transition, 1997-2011

	Average annual flow						
	1997-2000	**2001-2006**	**2007**	**2008**	**2009**	**2010[b]**	**2011[c]**
Developing countries							
Net private capital flows	92.3	103.5	383.7	110.0	385.7	659.2	602.8
Net direct investment	146.4	161.9	311.8	341.6	193.3	247.5	270.9
Net portfolio	31.1	59.4	7.7	-135.5	77.7	93.4	79.9
investment[d]							
Other net investment[e]	-85.3	1.0	64.1	-96.0	114.7	318.2	252.1
Net official flows	-0.4	-69.1	-140.7	-113.5	-26.8	-249.4	-217.7
Total net flows	91.9	34.4	243.0	-3.5	358.9	409.7	385.1
Change reserves[f]	-76.7	-373.1	-1059.4	-787.8	-687.5	-654.2	-561.6

Sources: IMF, World Economic Outlook Database, October 2010; Institute of International Finance, "Capital flows to emerging market economies", IIF Research Note, 4 October 2010; UNCTAD; and UN/DESA.

a Net financial flows are defined here as "net", that is to say, net financial inflows less net financial outflows.

b Partly estimated.

c Forecasts.

d Including portfolio debt and equity investment.

e Including short- and long-term bank lending, and possibly including some official flows owing to data limitations.

f Negative values denote increases in reserves.

The global financial crisis and economic recession of 2008 and 2009 negatively impacted many developing countries and has placed severe strain on many low-income countries, making ODA delivery even more critical. The fragile recovery in developed countries and the possible double-dip recession create considerable uncertainty about the future. volume of ODA flows.

It would be seen from the foregoing discussion that there has been a major change in the structure of the foreign capital and financial flows into the LDCs in the last four decades. Earlier, official development assistance, which despite its obvious drawbacks Was she most welcome form of foreign assistance, had dominated the aid scene. But progressively such bilateral assistance has continued drying up. The LDCs are now increasingly depending upon foreign private capital. Despite a rise in the proportion of multilateral assistance the relative role of such aid is still somewhat significant.

Self-Check Exercise 21.3

Q1. Give detail of financial flows to LDCs?

21.6 DEBT POSITION OF LDCS

In most LDCs, the process of economic development got underway in the 1950s. At that time, their capital requirements, including those of foreign-capital, were modest. In the 1950s and the 1960s, these countries continued getting large sums of foreign capital in the form of bilateral grants (not loans) from foreign governments, this did not therefore, create much of a debt problem for these countries. Even in 1970s, the debt position of LDCs seemed to be fairly comfortable. In that year, the ratio of their-debt to GNP was merely. 13.3%. Besides, the debt service ratio (i.e., the ratio of interest payments on loans and debt amortization to export earnings), which is considered a good index of the debt position, was only 13.5% in that year. The aggregate debt of the LDCs in 1970 was. 08.4 billion dollars, with official and private foreign debt nearly equally balanced.

The debt position of the LDCs has worsened since the early 1970s, especially after the first oil crisis of 1973-74. The O.P.E.C. nearly quadrupled the price of petroleum in 1973-74. In the wake of the first oil crisis there was a recession in the world economy which adversely affected the export of these countries even while their import bills had skyrocketed due to the rise in oil prices, Obviously, all this had hit the non- oil exporting LDCs the hardest. Then followed a second oil crisis in 1979- 80 when the OP.E.C. again doubled the oil prices. Thus the 1970s were a period when the debt problem arose and snowballed into a debt crisis in many LDCs during the late 1970s and the 1980s. The debt position of the LDCs in the late 1980s was pretty bad and has continued to be so in the early 1980s. The gravity of this problem can be seen from the fact that the total debt of LDCs rose from $ 68.4 billion to $595.8 billion in 1983. The external debt as a percentage of the GDP rose from 10.2 per cent in the 1970-75

periods to 28.5% in the 1982-89 periods in the case of the low income LDCs (1.e. excluding the middle-income LDCs). If out of the list of the low- income LDCs, the two giants' viz. India and China are excluded, the percentages in these two periods were as high as 20.5 and 60.3 respectively. And, strongly enough, the position of the middle-income countries in this respect was still worse, because the percentages for these countries were higher at 18.6 and 54.9 for the two periods respectively. Interest payments as a percentage of total export earnings rose from 2.9 to 9.8 between 1970-75 and 1983-89 period for low income LDCs and from 5.1 to 15.4 for the middle- income LDCs. These indices of external indebtedness of the LDCs clearly bring out their dismal debt position in the 1983-89 periods for low-income LDCs and from 5.1 to 15.4 for the middle- income LDCs. These indices of external indebtedness of the LDCs clearly bring out their dismal debt position in the late 1980s as compared to the early 1970s. There are no signs of the position improving in this respect in the early 1990s.

The question that arises in this regard is what has led to the worsening of the debt position of the LDCs during the last two decades? The answer to this question can be provided under the following two broad heads.

21.6.1 Adverse External Environment:

The external environment broadly consists of the external shocks to which the LDCs have been subjected during the last two decades. These external shocks may be analyzed as under:

(i) In the wake of the two oil shocks, the terms of trade of the non-oil exporting LDCs deteriorated sharply. In other words, while these countries were called upon to pay steeply rising prices for petroleum and other industrial goods the prices received by them for their primary and other exports did not register much increase. Thus, while their export earning did not rise much, their import bills shot up to unprecedented heights, which caused a sharp deterioration in their balance of payments. These LDCs were naturally obliged to borrow abroad heavily in order to pay further their excess imports.

(ii) Nearly all the oil importing countries, both DCs and LDCs, were adversely affected by the oil shocks of the 1970s. The world economy reported to these shocks in the form of a recession (fall in general economic activity and decline in demand) which paused further distress in for their exports. The deficits in the balance of payments increased further, causing the external debt to rise.

(iii) As noted earlier, the period under reference here also saw a decline in the relative share of concessional aid (S.D.A.) to the LDCs. The increasing demand for got further compounded through a sharp increase in interest rates after 1979, which has hurt the borrowers in the subsequent period badly. This increase in interest rates has added to the debt burden of these countries.

21.6.2 Inter Expenditure Policies:

Foreign borrowings per sec are not bad or these do not necessarily create a debt crisis as emerged in several LDCs after the early 1950s, provided that the external debt is efficiently used in well-thought out and competently managed schemes and enterprises. It has been noted that this provision was not satisfied of the countries

plagued by the recent debt crisis. It has been observed that the debt crisis infect illustrates the costs of misused capital flows. In the late 1970s and the early 1980s some LDCs used external finance to maintain usually high levels of public and private consumption even while the growth of export earnings has declined and the terms of trade had worsened The World Development Report 1991quotes studies to show some countries used an exceedingly high share of foreign. capital flows for consumption rather than investment. For instance, the additional consumption spending from an additional dollar of foreign loans in 1960s and 1970s was 88 per cent for Bolivia and 99 per cent for Colombia.

Besides, the domestic policies of LDCs which contributed to debt crisis in several of these countries Included large fiscal deficits, overvaluation of their currencies, and Inward looking trade policies. India is one of those LDCs in the early 1990s was on the average of a debt crisis. In "the preceding last ten years the country had contracted huge amount of foreign loans which were used for unproductive purposes. Large fiscal deficits and overvaluation of currency had also additionally contributed to a situation of near debt crisis. Similar has been the experience in several other LDCs which have been affected with a foreign debt crisis.

What have been the policy initiatives to rectify the debt position of the LDCs? These policy initiatives may be briefly discussed here. In the 1980s the debt position of the severely indebted low income countries became very acute At the end of 1989; the debt of such countries was estimated to be equivalent to their combined GNP. In order to help such countries out of such a tight spot, official creditors agreed to forgive and reschedule some of the debt. This has been done mainly through what is called the Paris Club (a group of the developed countries). In June 1989, Toronto summit of the club was held, in which nearly 11 per cent of the bilateral official loans given to the low income LDCs were partly reduced rescheduled Under the so-called Toronto terms bilateral official creditors, who had extended non-concessional loan, were either-to cancel one third of the total loan or to adopt a longer repayment schedule and curtail interest rates.

So far as commercial debt (ie. loans borrowed) from foreign banks is concerned, under Brady Initiative commercial bank consortia have been formed. Under these consortia or other multilateral forums, agreements have been signed with debtors countries (such as Costa Rica, Philippines and Mexico) to reduce commercial debt and debts service Official support has also been provided under Brady Initiative, but only in the case of those debtor countries which undertake to encourage flow of foreign private capital into their economics debt deductions normally take the shape of debt buybacks e. exchange of old debt for new.

In the case of commercial loans, some new approaches of debt relief have also been tried out since. One approach is called the debt equity swaps, Le conversion of commercial bank credit for equity of private companies. Recently, in some countries a secondary market for trading LDSS' debt instruments at a discount has emerged. The debtor countries, which are unable to repay their foreign commercial bank loans use this market to exchange, their debt instruments for foreign private capital. This is called "debt-equity swap. (For details, you may look up World Development Report, 1987,

p.22) this, is indeed a method of encouraging private investment in debtor LDCs. Chile and Mexico have entered into such debt- equity swap arrangements

Besides, in 1980, the World Bank had introduced adjustment loans to enable LDCs to absorb foreign stocks. Under the scheme, balance of payments support is provided to those LDCs which suffer from severe balance of payments problems on account of foreign stocks such as the oil crisis or fall in commodity (export) prices. But under the scheme, the concerned LDCs have to carry out a macro-economic stabilization and long term structural reform programme to which are added strict conditionality conditions by the World Bank This is discussed in greater details in the following unit. This unit is devoted to a discussion in reform of the international monetary system.

Self-Check Exercise 21.4

Q1. Write a note on debt position of LDCs.

Q2. Write a note on Adverse External Environment

21.7 SUMMARY

In this unit, we have studied about the factors determining requirements of LDCs. The main factor is the need of capital for the sake of development. In this unit, we also dealt with inflow of foreign capital in the LDCs. The flow is in the form of either as the official development assistance or as the foreign direct investment. We covered both the form.

21.8 GLOSSARY

- **Official Development Assistance:** Flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25 per cent (using a fixed 10 percent rate of discount). By convention, ODA flows comprise contributions of donor government agencies, at all levels, to developing countries ("bilateral ODA") and to multilateral institutions. ODA receipts comprise disbursements by bilateral donors and multilateral institutions.
- **Foreign Direct Investment:** Acquisition or construction of physical capital by a firm from one (source) country in another (host) country. The term sometimes refers to the flow per unit time, sometimes to the accumulated stock.
- **Portfolio Investment:** The acquisition of portfolio capital. Usually refers to such transactions across national borders and/or across currencies.
- **Debt-Equity Swap:** transaction in which the obligations (debts) of a company or individual are exchanged for something of value (equity) In the case of a publicly-traded company, this would generally entail an exchange of bonds for stock. The value of the stocks and bonds being exchanged are typically determined by the market at the time of the swap.

21.9 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 21.1

Ans. Q1. Refer to Section 21.3

Self-Check Exercise 21.2

Ans. Q1. Refer to Section 21.4

Ans. Q2. Refer to Section 21.4.1

Self-Check Exercise 21.3

Ans. Q1. Refer to Section 21.5

Self-Check Exercise 21.4

Ans. Q1. Refer to Section 21.6

Ans. Q2. Refer to Section 21.6.1

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21.11 TERMINAL QUESTIONS

Q1. Write notes on:

a) The factors determining capital requirements of LDCs

b) Inter Expenditure Policies

c) Foreign Capital and Financial Flows to LDCs

INTERNATIONAL MONETARY SYSTEM AND ITS REFORMS

STRUCTURE

22.1 INTRODUCTION

The international monetary system is a framework that establishes rules and standards to facilitate trade between nations. It plays a crucial role in redistributing capital and investments across borders. This system comprises a global network of governments and financial institutions responsible for determining exchange rates for international trade. Essentially, it provides guidelines for currency exchange between countries. Given the increasing complexity of global trade and financial markets, the international monetary system ensures a standardized valuation of currencies. The regulations governing exchange rates are mutually agreed upon by national governments, making their policies influential in shaping the system's decisions. For instance, modifications in a country's trade policies can directly impact the exchange of goods and services on an international scale.

22.2 LEARNING OBJECTIVES

After reading this unit, you will be able to:

- Understand the meaning of international monetary system;
- Discuss the various stages of international monetary system;
- Describe the reform of International Monetary System

22.3 INTERNATIONAL MONETARY SYSTEM

An international monetary system comprises a framework of globally recognized rules, agreements, and institutions designed to support international trade, cross-border investments, and the movement of capital among countries with distinct currencies. It solves the problem relating to liquidity, adjustment and stability. In the words of Eichengreen (2008), "The international monetary system is …the glue that binds national economies together. Its role is to lend order and stability to foreign exchange markets, to encourage the elimination of balance-of-payments problems, and to provide access to international credits in the event of disruptive shocks."

22.3.1 Aims of International Monetary System

The primary aims of the International Monetary System is to-

- The efficient and unrestricted flow of international investments.
- Stability in foreign exchange markets.
- Facilitating balance of payments adjustments to prevent disruptions.
- Supplying countries with adequate liquidity to handle the temporary balance of payments deficits without causing deflation or inflation.
- Minimizing additional uncertainty in the monetary system.
- Allowing member nations to pursue independent fiscal policies.

Self-Check Exercise 22.1

Q1. What is meant by International Monetary System?

Q2. What are the aims of International Monetary System

22.4 STAGES IN INTERNATIONAL MONETARY SYSTEM

22.4.1 Bimetallism (before 1870)

22.4.2 Gold Standard (1875-1914)

22.4.3 Inter-war Period (1915-1944)

22.4.4 Bretton Woods System (1945-1972)

22.4.5 Present International Monetary System (1972-present)

22.4.1 Bimetallism (before 1870)

Before 1870, the international monetary system was based on bimetallism, a system in which both gold and silver coins were recognized as valid forms of payment in international trade. The value of different currencies was determined by the amount of gold or silver they contained. While some nations adhered to a gold standard, where the value of their currency was linked solely to gold, others operated on a silver standard, tying their currency to silver.

An important economic principle related to bimetallism is Gresham's Law, which states that "bad money drives out good money." This means that when two types of money with different intrinsic values are assigned the same face value by law, people tend to use the currency made of the less valuable metal for transactions. Meanwhile, the currency composed of the more valuable metal is either hoarded or taken out of circulation through export, leading to its scarcity in everyday trade.

22.4.2 Gold Standard (1875-1914)

The gold standard is a monetary system where a country's currency or paper money has a value directly linked to gold. With the gold standard, countries agreed to convert paper money into a fixed amount of gold. A country that uses the gold standard sets a fixed price for gold and buys and sells gold at that price. That fixed price is used to determine the value of the currency.

For example:

1 ounse of gold = 20 pounds (fixed by UK), and

1 ounse of gold = 10 dollars (fixed by US)

Hence, the dollar-pound exchange rate will be 20 pounds= 10 dollars, or 1 pound = 0.5 dollars

Gold standard created a fixed exchange rate system

Benefits:

- One of the advantages of gold standard was that BOP imbalances were corrected automatically.
- Another advantage was that it created a stable exchange rate system that was conducive to the international trade.

Disadvantages of gold standard

- Growth of output is not equal to growth of gold supplies
- Volatility in the supply of gold
- Limiting the creation of gold
- Countries cannot use monetary policy to fight domestic trade.

Fall of the Gold Standard

With World War I, political alliances changed, international indebtedness increased, and government finances deteriorated. This created a lack of confidence in

the gold standard that only aggravated economic difficulties. It became increasingly apparent that the world needed something more flexible on which to base its global economy.

22.4.3 Inter-War Period (1915-1944)

The interwar period, spanning from 1915 to 1944, was marked by significant economic and financial upheavals, often described as an era of de-globalization. The onset of World War I in 1914 led to the collapse of the gold standard, which had previously facilitated stable international trade and capital flows. In response to mounting war-related expenditures, nations resorted to printing money, causing inflationary pressures. To enhance their export competitiveness, many countries deliberately devalued their currencies, resulting in an era characterized by fluctuating exchange rates.

During this time, the United States emerged as the preeminent global financial power, surpassing Britain. In 1919, the U.S. reinstated the gold standard in an effort to restore monetary stability. Meanwhile, numerous countries adopted a policy of gold sterilization, wherein they offset gold inflows and outflows by adjusting domestic money supply and credit to maintain economic equilibrium.

The economic turmoil deepened with the onset of the Great Depression in the 1930s, which severely curtailed international trade, currency exchanges, and cross-border financial transactions. In an attempt to shield their economies, many nations imposed trade restrictions and adopted protectionist policies, such as tariffs and import quotas. However, these "beggar-thy-neighbor" strategies triggered retaliatory measures from other countries, exacerbating global economic fragmentation and hastening the breakdown of the international economic system.

22.4.4 Bretton Woods System (1945-1972)

The Bretton Woods System was established in the aftermath of World War II and remained in operation from 1945 to 1972. In July 1944, delegates from 44 countries convened in Bretton Woods, New Hampshire, USA, to formulate a new framework for the global monetary system. This initiative sought to replace the pre-war gold standard with a system in which the U.S. dollar became the primary international reserve currency, reinforcing the United States' economic dominance on a global scale. The agreement led to the creation of key financial institutions, including the International Monetary Fund (IMF) and the World Bank, along with the General Agreement on Tariffs and Trade (GATT), which later evolved into the World Trade Organization (WTO), to oversee and regulate the new economic order.

A fundamental feature of the Bretton Woods System was the commitment of participating nations to maintain fixed exchange rates between their national currencies and the U.S. dollar. Under this arrangement, central banks were responsible for intervening in foreign exchange markets to stabilize their currencies. If a country’s currency depreciated significantly against the dollar, its central bank would purchase its own currency in the foreign exchange market, thereby reducing its supply and increasing its value. Conversely, if a currency appreciated excessively, the central bank would issue more of it, increasing supply and subsequently lowering its value. This

mechanism functioned as a monetary policy tool to manage inflation and maintain economic stability.

Furthermore, within this system, each country established a fixed exchange rate (par value) against the U.S. dollar, which in turn was pegged to gold at a rate of $35 per ounce. The United States, as the issuer of the reserve currency, was expected to maintain a balance of payments deficit to ensure a sufficient supply of dollars in the global economy. This framework facilitated international trade and investment by providing exchange rate stability and reducing currency fluctuations. However, the system eventually collapsed due to persistent imbalances, leading to the transition to a more flexible exchange rate regime in the 1970s.

Collapse of the Bretton Woods System

- Lead to problem of lack of international liquidity
- Countries began holding less in dollars and more keen on holding gold
- Any pressure to devalue the dollar would cause problems throughout the world
- Trade balance of USA became highly negative
- Large amount of US dollar was held outside the USA that it was more than the total gold hold of the USA
- On 15th August 1971, the president Nixon suspended the system and decided for floating exchange tare system.

22.4.5 Present International Monetary System (1972-present)

The modern international monetary system has undergone significant changes since the early 1970s. In 1973, the currencies of Japan and several European nations transitioned to a free-floating exchange rate system. This shift was officially recognized in 1976 when members of the International Monetary Fund (IMF) ratified the Jamaica Agreement. Under this agreement, national central banks were granted the authority to intervene in foreign exchange markets to prevent excessive volatility. Additionally, gold was formally removed as the primary international reserve asset.

A pivotal moment in the system’s evolution occurred in 1985 with the Plaza Accord. This agreement aimed to facilitate the depreciation of the U.S. dollar against other major global currencies to address the United States' trade deficit.

The contemporary international monetary framework consists of various exchange rate systems. In a free-floating or independently floating system, market forces primarily determine exchange rates, with central banks intervening only to curb extreme fluctuations. Countries such as the United States, the United Kingdom, Japan, and Australia operate under this model.

In contrast, a managed-floating system allows central banks to actively influence exchange rate movements without adhering to a predefined exchange rate path. This approach is utilized by countries like China, India, Russia, and Singapore.

Another widely adopted system is the fixed-peg arrangement, in which a nation ties its currency’s value to a specific currency or a basket of currencies. Many Gulf

Cooperation Council (GCC) countries, including the United Arab Emirates and Saudi Arabia, have pegged their currencies to the U.S. dollar to maintain economic stability.

These diverse exchange rate mechanisms illustrate the flexibility within the international monetary system, allowing nations to adopt policies that best align with their economic objectives and external trade dynamics.

Self-Check Exercise 22.2

Q1. What is Gold Standard.

Q2. Why was Bretton wood system collapsed ?

22.5 REFORM OF INTERNATIONAL MONETARY SYSTEM

In order to retrieve the situation a little, the Smithsonian Agreement was signed in December 1971. Under the Agreement major countries agreed on realignment of their exchange rates. The U.S.A. devalued the dollar by about 8 per cent in terms of gold and the S.D.R.s It was agreed upon to make a thorough review of the monetary system, including the role of gold. US dollar S.D.R.s (Special Drawing Rights) and an acceptable and suitable degree of flexibility in exchange rates. For this purpose, a Committee of Twenty had already been set up in the annual meeting of the I.M.F. in 1972.

Out the Smithsonian Agreement did not solve the problem. The year 1973 proved momentous from the point of view of the international monetary system. During the year, while all the major European currencies were floated (ie. a flexible exchange rate system was adopted), the U.S.A. devalued the dollar a second time in terms of gold by 10 per cent. During the year the organization of Petroleum Exporting Countries OPEC) administered the first oil shock by sharply increasing the price of petroleum. This was a portentous development, as we shall notice subsequently, and it further strained and destabilized an already confusing world monetary scene.

The Committee of Twenty wrestled with the question of reforming the international monetary system, but after two years of deliberations it was and its place was taken by an Interim Committee, consisting of twenty Finance Ministers of member countries In 1978, the interim Committee come up with a package of proposals for reform of the international monetary system which, was approved in-the annual meeting of the Fund. This meant the amendment of the Articles of the I.M.F. The amendment legalized the floating exchange rate system and the official price of gold was abolished. In the years to come, the S.D.R.s, which had been created within the I.M.F. earlier, were to be the new unit of value in terms of which the foreign values of different currencies were to be expressed. The official role of both gold and the US dollar was to be abolished. Further, it was decided that the Fund would sell one-sixth of its gold holdings at market prices so as to set up a special trust fund, to be utilized for helping the poorer countries.

Under the change brought about in the Articles of the I.M.F., the Fund did not become redundant so as far as the exchange rate system was concerned Rather, the revised Articles merely allowed the government of member countries wide latitude in choosing the exchange rate, but the Fund was asked to exercise 'firm surveillance over exchange rate policies of these countries. The foregoing change in the Fund Article do not in arks a final solution of the problem of international monetary system: The floating

exchange rate system was legalized only provisionally and in the late 1970s there was still a wish among, the majority of member of the Fund to return to a system of stable but adjustable exchange rate something resembling the old international monetary system through somewhat more flexible. But the floating exchange rate system in the absence of a latter and broadly agreeable system has become to stay since then.

The first oil crisis of the early 1970s, had already given a new dimension to the international monetary system. This was added a second shock in the late 1970s. Previously, the USA and UK were the major countries plagued by prolonged deficits in their balance of payments, while Germany and Japan had experienced surpluses in their balance of payments for many years. After the oil shock the OPCE countries also emerged as a bloc of countries, with the balance of payment surpluses which meant massive deficits for some other countries (i.e. the oil importers). While on the one hand, these oil shock, of the OPEC created new problems of inflation and unemployment in different countries of the world, on the other hand, these left the non-oil exporting LDCs with the heavy deficit in their balance of payments and consequent indebtedness. The total debt of countries was estimated at $ 708 billion in 1982

The 1980s also witnessed the emergence of the problems viz that of debt crisis. In the early 1990s, Poland followed by Mexico, Brazil, Argentina and several other countries were engulfed in a debt crisis. The foreign debts of these countries were about to default in the repayment of their debts. These countries asked for rescheduling of their loans. In the 1980s the IMF has heavily involved in finding solution to the debt crisis. The funding of these in fact created enormous pressures on the resources of Fund, which it has been able to meet through periodic increases in its quotas. Thus, in the 1980s the focus of international monetary crisis has shifted from the developed to the developing countries. For instance, the dollar which had for a long time suffered from depreciation in its foreign value was appreciating in the 1980-85 period, thanks to its monetary policy of high interest rates (which partly created the debt crisis referred to above. But that did help matter because an appreciating dollar meant current account deficit in its balance of payments.

The floating exchange rate system has not solved the problem of developed countries. Its failure was demonstrated by the Louvre Arrangement of February 1987, arrived at among that is called the G- 5countrids (France, Germany, Japan, Britain and U.S.A.) The Agreement was in fact a resolve made among these countries to make efforts to foster stability of exchange rate system, as we have noted in an earlier unit; is theoretically an ideal system to bring about an automatic adjustment in the balance of payments. The floating exchange rate system has failed primarily for two reasons. In the first place, the governments have never been indifferent to swings in exchange rates. They have been ever ready to intervene in the foreign exchange markets. That is why the current system is sometime referred to as dirty or managed float. Secondly, ideally speaking. the exchange rates should reflect the purity between the purchasing, powers of the respective currencies. The failure of the floating' exchange rate system has indeed been the failure to follow the purchasing power parities.

In the wake of these newly emerging problems, (i.e. the oil crisis the mounting balance of payments deficit especially in non-oil exporting LDCs and the debt crisis) the international monetary system, mainly embodied in the I.M.F. system has been

reformed in primarily three direction in the late 1970s and the 1980s, as discussed below:

(a) **New Financing Facilities:** In the wake of the first oil crisis, when many non-oil exporting countries, faced severe balance of payment deficits, the I.M.F. created a temporary loan facility called the oil facilities for two years. To finance this facility the funds were borrowed from the oil exporting countries. In 1974, an Extended Fund Facility (EEF) was also created, under which a member country facing chorine, balance of payments problem can get a medium term loan (for. 23 years). Besides, the Fund has also been providing compensatory financing facilities to these countries which suffer due or fluctuation in their export prices.

(b) **Financing under Stabilization Programmes and Structural Adjustment Lending:** As the debt crisis in more LDCs started assuming staggering proportional in the 1980s, the international financial institutions found their hands full with finding solution to these problems. These institutions, particular the I.M.F. now assumed a new role of not merely providing a balance of payments support to its member countries, but of combining this traditional role with bringing about, a structural change, based on their philosophy, in the debt crisis-ridden economies. These multilateral institutional has always been the votaries of laissez faire, free trade, free flow of foreign private capital and, naturally a minimal role for the public sector enterprises in particular and for the govt. as a whole in general.

Since the early 1980s, the I.M.F. and subsequently the World Bank have been providing loan to debt ..... subject to .... policy reforms. These I.M.F. loan are provided under what is called the stabilization programme for three years each. The World Bank provides such loan under its structural adjustment programme, the loans bring for a period of three to five years. Three is a defect connection between the I.M.F. loan and the World Bank's structural adjustment loans (SALS), in that for the later a nod from I.M.F. in the form of a prior loan from it necessity. Besides, the private commercial banks from the DCs also provide loan to those LDCs without much fuss which are subject to the I.M.F. stabilization programme. The conditions, (called the conditionality's which attach to the I.M.F. and the World Bank loans are almost identical), these conditions are broadly the following:

(i) The demand conditionally which include cutting the govt, spending devaluation of currency, trade liberalization and jacking up the interest rates.

(ii) The supply conditionality which focuses on increased investment expenditure, financial liberalization, provision of incentives to private sector and pricing of 'goods and services through the market mechanism;

(iii) Growth conditionally which centers attention on giving a freer hand to private enterprisers so far as production and investment are concerned, privatization of public enterprises and promotion of free foreign private capital

(iv) Cross conditionally is said to exit where one financial institution makes the borrowing of loans from another agency a pre-condition for its own lending, just as their exists in an informal way-between the Fund and the Bank.

The serious balance, of payment deficits which are considered to be a symptom of a debt crises in LDCs are in the eyes if the I.M.F, caused by high budget deficit excessive food subsidies, low interest rates, wage inflation, exchange controls, overvaluation of currencies and lack of a market friendly atmosphere so far as domestic industry is concerned. So, under the stabilization programme all these alleged ills have to the rectified by the borrowing LDCs. The conditions attaching to the loans from the I.M.F. and the World Bank have come in for a great deal of criticism in the LDCs, including India. Till 1909, the I.M.F. articles were free from any such cumbersome conditionalties for the LDCs. In fact the Bretton woods Conference, where the Fund and the Bank took birth, J.M. Keynes had argued in favour of free and unconditional access for the deficit countries to the resources of the I.M.F.

During the last one decade and a half, several, debt ridden LDCs have been granted loans from the multilateral financial institution subject to their agreeing to go through a drastic structural change in the policies and economics systems. This has not only been criticized on ground of the LDCs sovereignty being compromised but also on the basis of empirical evidence which show that while the structural adjustment programme has succeeded in some countries, in others it has been a dismal failure.

(c) The Special Drawing Rights (S.D.R.s): Another measure to reform the international monetary system has been in the direction of creation and allocation of S.D.R.s by the IMF under the old Bretton woods system, gold reserves were assumed to play the role of liquidity (i.e. as the medium of international payment). But because the production of gold was rising merely at about 1 per cent per annum, which was far too inadequate to meet the requirement of growing international trade. In order to meet these requirement countries started building up reserve of U.S. dollar which could not be done without that country having persistence deficits in its own balance of payments. This indeed created n queer situation and ultimately de-stablished the old Bretton wood system. In order to come out of this situation, different reform measures were suggested, out of which one was that the I.M.F. should act as on international central bank and issue an international currency.

Following deliberation among member countries, not an international currency but inter-nation reserve assets called the Special Drawing Rights (S.D.R.s); were proposed to be created by fund. The agreement was reached in 1967, was put into effect in 1969 and the first allocation of S.D.R.s was made in 1970-72 period. A second allocation was made subsequently in 1979-81 period.

Initially, S.D.R.s were linked to gold and were, therefore, called 'paper gold'. But subsequently these have been defined in terms of a 'basket' of 16 currencies, out of which five are major ones. These five major currencies are the U.S. dollar, the German mark, the French franc, the Yen and Pond sterling. The S.D.R. is merely an accounting unit. When these are created by the I.M.F., these are allocated to each member country in proportion to its- 'quota' in the Fund. These are then used by them, to buy other

countries' currency or to directly settle their accounts with other countries in terms of S.D.R.s.

The creation of S.D.R.s was an important step in the direction of reforming the international monetary system. Unlike gold, which is a scare resource and whose availability depends on the production and supply of this metal S.D.R.s are merely an international asset existing in the Account books of the I.M.F. yet in the performance of international transactions it is as effective as gold. Still the reform of international monetary system through the creation and allocation by S.D.R.s has been full of controversy. Due to the contentious nature of this form of reform, S.D.R.s could he created to be linked to development assistant. But this has not been acceptable to the richer member of Fund. Instead of providing, additional resources to the LDCs through this route, the IMF has approached the problem of capital requirement and especially debt crisis in these countries, by pushing through its stabilization programme, which has evoked a great deal of criticism.

Self-Check Exercise 22.3

Q1. Write a short note on reform of international monetary system?

Q2. What are S.D.R.s?

22.6 SUMMARY

It has been clear from the foregoing that the question of international monetary reform is far from having been resolved. Most of the actual measures or reforms are still provisional whether it is the floating exchange rate system, the S.D.R. creation, or the controversial stabilization programme. The new international monetary system is yet to take a final and complex acceptable form. This is unlikely to happen till the membership of the Fund remains divided between the stronger few and the weaker majority (the LDCs). In the following unit, the final topic of this course shall be devoted to the question of new international economic order.

22.7 GLOSSARY

- **IMF:** An organization formed originally to help countries to stabilize exchange rates, but today pursuing a broader agenda of financial stability and assistance.
- **OPEC:** A group of countries that includes many, but not all, of the largest exporters of oil. Its major purpose is to regulate the supply of petroleum and thereby to stabilize (often rise) its price.
- **UNCTAD:** An Intergovernmental body established in 1964 within the United Nations, responsible for trade and development. Historically it has often been the international voice of developing countries.
- **Special Drawing Right:** Originally intended within the IMF as a sort of international money for use among central banks pegging their exchange rates, the S.D.R is a transferable right to acquire another country's currency. Defined in terms of a basket of currencies, today it mainly plays the role of a unit of international account.
- **Bretton Wood:** A town in New Hampshire at which a July 1944 conference of

44 countries launched the IMF and the World Bank. These, along with the GATT/WTO became known as the Bretton Woods Institutions, and together they comprise the Bretton Woods System.

- **Exchange Rate:** The price at which one country's currency trades for another, typically on the exchange market.

22.8 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 22.1

Ans. Q1. Refer to Section 22.3

Ans. Q2. Refer to Section 22.3.1

Self-Check Exercise 22.2

Ans. Q1. Refer to Section 22.4.2

Ans. Q2. Refer to Section 22.4.4

Self-Check Exercise 22.3

Ans. Q1. Refer to Section 22.5

Ans. Q2. Refer to Section 22.5

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22.10 TERMINAL QUESTIONS

Q1. Discuss the developments in international monetary system since 1970?

Q2. Write a note on reform of international monetary system?

Unit-23

INTERNATIONAL LIQUIDITY AND NEW ECONOMIC ORDER

STRUCTURE

23.1 INTRODUCTION

In this final unit, we shall focus on two important topics, viz. International liquidity; and the New International Economic Order. The former relates to the requirements of countries engaged in foreign trade and other inter-country financial transactions; both DCs and LDCs, while the latter primarily relates to the bringing into existence a just economic global framework within which the LDCs can develop proper according to their potential. We shall take up the discussion of each of these below one by one.

23.1 LEARNING OBJECTIVES

After going through this unit, you will be able to:

- Discuss International Liquidity
- Explain the New International Economic Order

23.3 INTERNATIONAL LIQUIDITY

If no international currency exists, it causes a problem in making (and receiving) payment across countries when goods and services are purchased and sold in the international market. However, in order to solve this problem, certain reserve assets are used for this purpose and their total quantity available, is referred to as international liquidity. It may be defined as any internationally accepted means of payment which is used for setting debt for liabilities between nationals of different countries. In the absence of any international currency, payments across countries' can-be made these days in the form of gold, other major reserve currencies (such as the U.S. dollar), and to a limited extent, S.D.R.s. International liquidity refers to the total stocks of these means of payment available for this purpose at any point of time, the demand for international liquidity mainly arises, due to the imbalance, in the receipts and payment (i.e., balance of, payments) of different countries. The greater these imbalances, the greater would be the need for international liquidity. Besides, if there, are international financial institutions such as the, I.M.F. or foreign commercial banks, the need to build lip stocks

or international reserves of international liquidity) by individual countries diminishes correspondingly. If on the other hand, such lending facilities do not exist, or are costly or are accompanied by unacceptable conditions, countries have to build up their reserve of gold, internationally acceptable currencies the so called hard currencies) and SDRS so that these could be utilized for meeting deficits in the balance of payment or making other payments abroad; such payment of interest on loans or repaying of past loans.

In 1970, the total value of international reserve was $ 95135 million which had increased to $ 106766 million in 1989 (i.e. an increase of nearly 11 times in less than two decades). These international reserves are however very unevenly distributed among the different categories of countries. In 1989, nearly 7% reserves were with O.E.C.D. high in some countries, 8% with upper middle income countries and the rest 19% with low and lower middle income countries. It must be remembered that the last mentioned category' accounts of countries are I the economic, giants of our globe and as such their requirement by nearly all of them their need for international reserves should have declined. Still, it is strange that nearly four-fifth of the total international reserves with just a handful of payments preserves and which are many times more in number than the DCS have to make, do with only a fraction of what the latter process.

There are several questions which are important in the context of international liquidity; these may be briefly discussed below.

(a) Problem of Adequacy: The amount of international liquidity existing at any time and its distribution, among different countries should be in consonance with the trade requirement of the international community, If the quantum of international reserve is inadequate, this will naturally put a brake on the growth of international trade. However, the question of building up reserve is not just that of accumulation. It is an economics question because as these reserve are accumulated the opportunity cost of doing so' also rises. The resaves have alternative uses. These can be used for importing consumer or investment goods Alternatively, these can be invested, and a return earned there on If the reserves are just accumulated and kept in the coffers of the central bank, the return which could have been earned, 'of the additional satisfaction derived from goods imported would have to be foregone; Besides, as more reserve are built up; the risk of loss through depreciation of the value of any one of them (such as gold or foreign currency) also increase. Therefore, it is difficult to arrive at just the right or optimum quantity of international reserves which on the one hand serves the country adequacy when there is a deficit in the balance of payments and at the same time, minimize the opportunity cost of accumulate as well as the risk of depreciation of its value. While considering the question of adequacy if international reserve another aspect of the issue which also needs to be considered is the policy choice between building up more reserve, or alternatively to bring about exchange up more reserve, or alternatively to bring about exchange rate changes (devaluation) in the event of a continued deficit in the balance of payments. To the extent that devaluation is considered as a feasible alternative the demand for international reserves of a country will decline.

The question of adequacy of international reserves cannot be divorced from that of its distribution among different groups, of countries. As noted-above nearly

three fourth of the-total international reserves in 1989 were with the E.C.D. countries (the 24 rich countries of the western- world. While the nearly 100 low and lower-middle income countries had less than one fifth of these reserves. It is clear that a mere equitable distribution based on requirement would greatly solve the problem of adequacy.

(b) Problem of Composition of Reserves: The international reserves primarily consist of gold the S.D.R.s, other reserve positions with the I.M.F. and foreign exchange (mainly U.S. dollars). Although the composition of these reserves varies from period to period, yet roughly 2% of these consist of gold, 15% of S.D, Rs. and other reserve position with IMF. (i.e. the entitlements of borrowing from the Fund in the event of a deficit in the balance of payments), and rest 65% of foreign exchange, each of them suffer from limitation peculiar to it. So far as gold is concerned its availability for reserve purposes depends on its production. The erstwhile U.S.S.R. and South Africa together produced nearly 85% the world's total gold. The supplies are not adequate for building up desired reserve position with the I.M.F. are limited by the overall resources of the Fund as well as the quotas of each country. After the collapse of the Bretton woods system the initial feeling in the international community was in favour of creation of an international reserve asset was created because there arose the contentious issue or their allocation among member countries. Therefore, in the over-all international reserves, the proportion of S.D.R. is relatively small.

In the case of the foreign exchange as a component of international reserves there are problems galore. In the post-Second World War period, the dollar emerged as a reserve currency, because the U.S.A. had been running a deficit in her balance of payments. Year after year, other countries went on accumulating dollar reserves. The added attraction of U.S. dollar was that it was freely convertible into gold at a fixed price. But, there was always the fear of devaluation of the U.S. dollar because of persistent deficit in U.S. balance of payments. Devaluation means loss of purchasing power of the reserve in the international market. This also disabled the old Bretton woods or the I.M.F. system. Thus, the composition of international reserves gives rise to another associated problem which we discuss next.

(c) Problem of Confidence: The problem of confident can arise in the context of any component of international reserves, whether it is gold or any individual country currency, if confidence to the stability of value of the reserve asset is shaken due to the emerging circumstance countries would try to shift to other assets if available, This will disrupt the fresh flow of trade and capital. "The problem of confidence especially emerged in the context of the U.S. dollar in the 1960-68 period which lead to the issue and allocation of S.D.R.s; through in limited quantities, later the problem of confidence in international reserves is perhaps never going to be solved unless an internationally acceptable and equitably distributed reserve asset is created by an agency like the I.M.F.

Self-Check Exercise 23.1

Q1. What is meant by International Liquidity?

Q2. What are the main problems in the context of International Liquidity?

23.4 NEW INTERNATIONAL ECONOMIC ORDER (NIEO)

In the wake of the problem arising in the world economy in the inter war aid the Post Second World War periods a new international economic system needed to be created. This resulted-in-holding of the Bretton woods Conference in 1944. This frame works of the international economic system was to comprise of three organization are recommended by this conference, viz. the International Monetary Fund, which was to look after the short term problems arising in the context of international investments; and the International Trade Organization to help in the creation of a liberal-world trading system. The last-mentioned organization never came into existence and its place was taken by its pale shadow; the GATT, the I.M.F. and the I.B.R.D. (the World Bank) did come into existence, and are presently fairly live and kicking.

With the passage of time, it became increasingly clear that the International economic system (order) so created, had tended to increasingly work in the interest of the DCs and that the decision making process in the progenies of the, Bretton woods conference was dominated by the rich countries on the strength of their superior economic power. Besides, several issues, which were primarily relevant to the development requirement of the LDCs were either not being attended to within their purview. Frequently, the international institutions have looked at the problems of the LDCs from the perspectives of the DCs. This has caused frustration and sometimes even anger in the people, the statesmen and the intelligent in of the LDCs. They have fell discriminated against and quite frequently left out within the existing international economic order.

During the 1960s and the 1970s numerous articles, books, reports and even theoretical constructs based on empirical reality articulated the foregoing bias (real or imagined) in the prevailing international economics system against the LDCs. A sentiment in favour of changing that system to the advantage of these countries soon emerged culminating in the Sixth Special session of the United National General Assembly in May, 1974. A resolution was passed in the Session calling for the establishment of a new international' economic order (NIEO) based on equity, sovereign equality, interdependence, common interest and co-operation among all countries irrespective of their economics of political systems. The NIEO was to correct inequalities land to redress existing injustices, to make-it possible to dominate the widening rating economic and social development.

The NIEO was defined in term of the following measures; (1) increase in aid and other forms of resource transfer to the LDCs (1) Improved market access to their exports of manufactured goods in DC markets, (ii) proper mechanism for marketing and prices' of their primary exports, (iv) access to the LDCs to the technology and capital of DCs and (v) appropriate reform in the international monetary system.

Since 1974 several efforts have been made in different international forums conference and reports to further articulate the need for and nature of the NIEO. These include the UNIDO Lima Conference (1975) the UNCTAD IV (1976) and all the subsequent UNCTADs, the ILO. World Employment Conference (1976) the Brandt Report of the Independence commission on International Development issues (1980).

The Can Cum Summit (1981), and several Conference of the South leader for promoting south co-operation, last of which was held in Caracas calico the second summit of Group of 15 LDCs in November1991.

According to Jagdish Bhagwati, there have been different perceptions of the LDCs at different times. What they really aim at and why the relations between the DCs and the LDCs, are linked through trade and investment and migration. These relations, according to Bhagwati, have passed different phases of perception on the part of the LDC. The initial ideology was that these relations would have a being Influence on LDCs as the links between the two groups of countries are strengthened. This was on theory of free trade Which assumed that free trade (and by indication other forms of inter-country commercial exchange) would act as an engine of growth for LDCs.

In reality that did not happen and, therefore a doctrine of the LDCs emerged from the writing of economists like Myrdal and Singer. This view focuses on the problems which seem to have been created for the LDCs by the prevailing-international' economic order based on free trade. In order to change this order, the LDCs have, also been encouraged by the experiment of the OPEC which was able to dictate terms in the matter of sale of oil. Besides, the LDCs have also been actuated by the political desire of participating more effectively and frequently in the decision making process at the international level. This needs a change in the prevailing international economic order.

There has hardly been any progress towards the realization of a NIEO; though Jagdish Bhagwati is of the view that there is already in existence a transitional 'NIEO as is evident, according to him, from the membership of the committee, of 23 of the I.M.F. being accorded to LDCs also. However; this is a small concession given to the LDCs because the consideration of issue of concern to the LDCs such as the LDC aid link, have been indefinitely postponed.

Four major factors can be held responsible for the, non-realization of the objective of establishing a NIEO. These are as below:

(a) **Increasing Intransigence of the DCs:** in the 1950s and the 1960s the world was driven by cold war between the rival power blocs. Most of the LDCs then formed their own group of non-aligned nation. This proved to be annoying to the Western countries; especially the U.S.A., which dominate the prevailing international. economic order. With the passage of time this annoyance has got converted into a strong resistance to the demands of the LDCs for the reformation of the international trade and monetary frame work. Obviously, the NIEO cannot be established unless an atmospheric of give and take prevails and the DCs agree to co-operate in this matter with the LDs.

(b) **Inter-group Division Among the LDCs:** In the 1950's and the 1960s the LDCs under the non-aligned' movement, had displayed a great deal of cohesion as a group. But with the passage of time spirit of non- alignment has tended to gradually evaporate. Besides, during the last decades, due to disparate rate of growth experienced by various LDCs some of them are on the; threshold of attaining the status of DCs, while the rest, have failed to cast off shackle of under development. This has naturally caused a division in their ranks. Another strong factor which has clearly divided the LDCs into two distinct and somewhat

adversary groups is the emergence of the O.P.E.C. as a potent cartel which inflicted repeated oil stocks on the world community. These oil stocks on one hand put huge amounts of hard currency into the coffers of the oil exporting LDCs, these on the other hand resulted in untold hardships to the oil importing LDCs. In View of the foregoing factors, the LDCs are no longer the cohesive group that it once used to be. As a hopelessly divided group it no longer counts for much vis-s-vis the better knit group of the DCs. That has removed the realization the dream of a NIEO that much farther.

(c) Fall of the Socialist Citadel:- As long as the U.S.S.R. and other East European socialist countries were going strong the LDCs had an alternative to the Western capitalist countries as a source of aid, trade and even technology. The LDCs had also learnt to play one group against the other in these matters. This rival made the western DCs to be more respective to the demands of the LDCs. With the weakening if the socialist bloc and its eventual disintegration has improved the bargaining strength of the DCs in any international' parleys further.

(d) The Debt Crisis: As seen in an earlier unit, the LDCs have been gradually overtaken by the debt crises. The LDCs went on borrowing recklessly and used borrowed funds most unproductively during the last 4-5 decades. With the unfolding of the debt crisis (i.e. the failure of the borrowers to meet their past debt liabilities easily and successfully), the LDCs have been driven for relief and further assistance to mainly those very financial institutions which they wanted to be disbanded or reformed. Since these international agencies are helping the LDCs out of their difficulties, the latter do not have the courage left to demand a change in the international economic order, of which the former are the major components.

Jagdish Bhagwati has further pointed that the LDCs too have failed to formulate-the desirable targets and the precise form of the NIEO properly. According to him, the demand for NIEO should mainly two reforms, viz., the allocation of increased share resources to him, allocation of increased share resources to the LDCS and (ii) stress on bargains which are mutually profitable to the DCs and the LDCs. The latter would ensure taking the dream of a NIEO nearer reality.

Self-Check Exercise 23.2

Q1. What are the major factors responsible for establishing a NIEO?

23.5 SUMMARY

The present era is characterized by liberalization and globalization, WTO is giving a new mode to form a newer global economic order. New challenges and new problems have been emerging. With market- orientation, growing speculation is talking its tall, with unchecked speculations currency trading, a kind of capitalism has also, cropped up. It is posing a new danger to developing countries. A heavier speculation can ruin the economy in a global set up despite its good economic fundamentals as has been the case with Malaysia recently. The International economic system has to play a positive role in safeguarding the basic interest of the developing countries at all levels.

23.6 GLOSSARY

- **IMF:** An organization formed originally to help countries to stabilize exchange rates, but today pursuing a broader agenda of financial stability and assistance.
- **International liquidity:** Refers to the adequacy of a country's, or the world's, international reserves. Under the Bretton Woods System, liquidity was a problem, since it depended on US dollars and thus a US deficit. The S.D.R. was an attempt to fix this.
- **OPEC:** A group of countries that includes many, but not all, of the largest exporters of oil. Its major purpose is to regulate the supply of petroleum and thereby to stabilize (often rise) its price. The international oil cartel.
- **UNCTAD:** An intergovernmental body established in 1964 within the United Nations, responsible for trade and development. Historically it has often been the international voice of developing countries.
- **Special Drawing Right:** Originally intended within the IMF as a sort of international money for use among central banks pegging their exchange rates, the SDR is a transferable right to acquire another country's currency Defined in terms of a basket of currencies, today it mainly plays the role of a unit of international account

23.7 ANSWERS TO SELF-CHECK EXERCISES

Self-Check Exercise 23.1

Ans. Q1. Refer to Section 23.3

Ans. Q2. Refer to Section 23.3

Self-Check Exercise 23.2

Ans. Q1. Refer to Section 23.4

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23.9 TERMINAL QUESTIONS

Q1. Write a critical note on the problem of International Liquidity?