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INTERNATIONAL ECONOMICS

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INTERNATIONAL ECONOMICS

UNIT	CONTENTS
I	**Introduction** Nature and Scope of International Economics – The Globalization of the world Economy – International Trade and the Nations Standard of Living – International Trade Policy – Current International Economic Problems and Challenges.
II	**International Trade Theories** Absolute Advantages: Adam Smith – Comparative Advantages – David Ricardo – Opportunity Cost – Haberler – Reciprocal Demand – Mills Offer curves – Marshall – Factor Endowments – Heckscher Ohlin – Leontief Paradox – Economic Growth and International trade.
III	**Foreign Exchange Market** Foreign Exchange Market: Function and Structures – Exchange Rates: Fixed, Flexible, Floating, Pegged, Nominal and Real Exchange Rate – Theories of Exchange Rates: Mint Parity Theory, Purchasing Power Parity Theory and Balance of Payments Theory.
IV	**Balance of Payments** The balance of payments account – Equilibrium and Disequilibrium in BOP – Surplus and Deficit in BOP – Adjustment Mechanism: Direct and Indirect Mechanisms – Export promotion and Import Substitution.
V	**Terms of Trade and Trade Policy** Terms of Trade: Concept and Determinants – Terms of trade and Economic Development – Tariff and Non-tariff Barriers – Effects – Quotas – Import Quotas Vs Tariffs – Free Trade and Economic Development – Free Trade Vs Protection.

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Table of Content

UNIT – I

INTRODUCTION

1.1. Introduction

In today's context nations do not remain isolated. The economy consisting of the service sector and industry, along with income and employment, is linked to the partners in trade. This linkage is formed through the international movement of goods and services. Other kinds of linkages are established through investment, technology and business enterprise in general. This has favorable, as well as, unfavorable impacts on related economies. International trade is unique since transactions are carried in different currencies and steps are taken by one country to improve its balance of trade which has a rebound effect on others. All these factors make international economics as an applied economics requiring study of gains from trade, patterns of trade, protectionism, balance of payments, exchange rate determination, coordination in international policy & international capital market. International economics studies how independent economies of world interact with one another in the process of allocating the scarce resources to satisfy human wants. It deals with the economic and financial interdependence among nations. It analyses the flow of goods, services, payment, monies and people between a nation and the rest of world, the policies directed at regulating these flows and their effect on the nation's welfare. This economic and financial interdependence influences the political, social, cultural and military relations among nations. The field of international economics has emerged as a 'specialistic' field of economics over the past two centuries, with contributions from some of the world's most distinguished economists from Adam Smith to David Ricardo, John Stuart Mill, Alfred Marshall, John Maynard Keynes and Paul Samuelson who have developed in depth and width over time by a lot of theoretical, empirical and descriptive contributions. International economists view the world as a community of separate states, each with its own constellation of natural resources, capital, labor and knowledge, its own social and economic institutions and its own economic policies. Like many other disciplines, International Economics also has two distinct parts: Theoretical and Descriptive.

1. Theoretical International Economics: The theoretical part tries to go beyond the phenomena to seek general principles and logical framework which can serve as a guide to understanding of actual events. Like any other economic theory it uses for this purpose abstractions and models often expressed in mathematical form. It can be further divided into pure and monetary theory, each containing aspects of both positive and normative economics although these aspects are strictly intertwined.
2. The pure theory of international trade which has a micro economic sense overs mainly the effects of trade on production, consumption and distribution of income, effects of trade on relative factor prices and product prices, gains from trade and distribution of the gains etc. The international monetary theory which is of a macroeconomic nature deals with matters pertaining to balance of payments and international monetary system. It covers areas such as causes and methods correcting balance of payments disequilibria, exchange rate determination, international liquidity etc.
3. Descriptive International Economics: The descriptive part is concerned with the description of international economic transactions in the way they happen and of the institutional environmental in which they take place. This covers international flow of goods and services, flow of international financial and other resources, international organizations like IMF, World Bank, Regional Development Banks, and WTO and so on.

1.2. Nature and Scope of International Economics

The subject matter of international economics can be studied in two parts namely; International Trade and International Finance. However looking at the diverse aspects of the world economy we can explore four different windows on the modern world economy. These are International trade, International production, International finance and International development. International Trade Theory and Policies - They are the microeconomic aspects of international economics as they deal with individual nations treated as single units and with the relative price of individual commodities. International Production - Here production of a product in multiple countries is taken into account. At the broadest level, international production can take place through two modes: Contracts

(international licensing and franchising) and Foreign Direct Investment (FDI) undertaken by multinational enterprises.

These two modes are a major component of the world economy.

International Finance: They plays an increasingly important role in the world economy referring to the exchange of assets among countries. Since balance of payments deals with total receipts and payments as well as with adjustment and other economic policies that affect the level of national income and the general price of the nation as a whole, thus they represent macroeconomic aspects of international economics. They are also referred as open economy macroeconomics.

International Development: It is the fourth and the final window on the world economy. The processes of international trade, international production and international production reflect the many goals of their participants. However, it is hoped that these three processes will contribute to improved levels of welfare and standard of living throughout the countries of the world. It is thereby necessary to evaluate the processes of International trade, production and finance support or undermine international development.

1.3. The Globalization of the World Economy

"Globalization" will be understood here to mean major increases in worldwide trade and exchanges in an increasingly open, integrated, and borderless international economy. There has been remarkable growth in such trade and exchanges, not only in traditional international trade in goods and services, but also in exchanges of currencies; in capital movements; in technology transfer; in people moving through international travel and migration; and in international flows of information and ideas. One measure of the extent of globalization is the volume of international financial transactions, with some $1.5 trillion flowing through world currency markets each day, and with the volume of daily international stock market transactions exceeding this enormous amount. Globalization has involved greater openness in the international economy, an integration of markets on a worldwide basis, and a movement toward a borderless world, all of which have led to increases in global flows. There are several sources of globalization over the last several

decades. One such source has been technological advances that have significantly lowered the costs of transportation and communication and dramatically lowered the costs of data processing and information storage and retrieval. The latter stems from developments over the last few decades in electronics, especially the microchip revolution. Electronic mail, the Internet, and the World Wide Web are some of the manifestations of this new technology, where today's $2,000 laptop computer is many times more powerful than a $10 million mainframe computer of only twenty years ago. A second source of globalization has been trading liberalization and other forms of economic liberalization that have led to reduced trade protection and to a more liberal world trading system. This process started in the last century, but the two World Wars and the Great Depression interrupted it. It resumed after World War II through the most-favoured-nation approach to trade liberalization, as embodied in the 1946 General Agreement on Tariffs and Trade (GATT) and now in the World Trade Organization (WTO). As a result, there have been significant reductions in tariffs and other barriers to trade in goods and services. Other aspects of liberalization have led to increases in the movement of capital and other factors of production. Some have suggested that globalization is little more than a return to the world economy of the late nineteenth century and early twentieth century, when borders were relatively open, when there were substantial international capital flows and migrations of people, and when the major nations of Europe depended critically on international trade. This is particularly the view of some British scholars, looking back to the period of British imperial dominance of the world economy. While there are some similarities in terms of trade and capital movements, the period of a century ago did not have some of the major technological innovations that have led to a globalized world economy today that is qualitatively different from the international economy of the last century.

A third source of globalization has been changes in institutions, where organizations have a wider reach, due, in part, to technological changes and to the more wide-ranging horizons of their managers, who have been empowered by advances in communications. Thus, corporations that had

been mainly focused on a local market have extended their range in terms of markets and production facilities to have a national, multinational, international, or even global reach. These changes in industrial structure have led to increases in the power, profits, and productivity of those firms that can choose among many nations for their sources of materials, production facilities, and markets, quickly adjusting to changing market conditions. Virtually every major national or international enterprise has such a structure or relies on subsidiaries or strategic alliances to obtain a comparable degree of influence and flexibility. As one measure of their scale, almost a third of total international trade now occurs solely within these multinational enterprises. With the advent of such global firms, international conflict has, to some extent, moved from nations to these firms, with the battle no longer among nations over territory but rather among firms over their share of world markets. These global firms are seen by some as a threat to the scope and autonomy of the state, but, while these firms are powerful, the nation state still retains its traditional and dominant role in the world economic and political system. Non-government organizations, the NGO's, have also taken a much broader perspective that, as in the case of the global firms, is often multinational or global. Even international organizations, such as the United Nations, the International Monetary Fund and World Bank, and the World Trade Organization have new global roles. Overall, multinational enterprises and other such organizations, both private and public, have become the central agents of the new international globalized economy. A fourth reason for globalization has been the global agreement on ideology, with a convergence of beliefs in the value of a market economy and a free trade system. This process started with the political and economic changes that started in the 1978 reforms in China and then involved a “falling dominoes” series of revolutions in Eastern and Central Europe starting in 1989 that ended with the dissolution of the Soviet Union in December 1991. This process led to a convergence of ideology, with the former division between market economies in the West and socialist economies in the East having been replaced by a near-universal reliance on the market system. This convergence of beliefs in the value of a market economy has led to a world

that is no longer divided into market-oriented and socialist economies. A major aspect of this convergence of beliefs is the attempt of the former socialist states to make a transition to a market economy. These attempted transitions, especially those in the former Soviet Union and in Eastern and Central Europe have, however, been only partially successful.

The nations involved and their supporters in international organizations and advanced western market economies have tended to focus on a three-part agenda for transition, involving: 1) stabilization of the macro economy, 2) liberalization of prices, and 3) privatization of state-owned enterprise. Unfortunately, this "SLP" agenda fails to appreciate the importance of building market institutions, of establishing competition, and of providing for an appropriate role for the government in a modern mixed economy. A fifth reason for globalization has been cultural developments, with a move to a globalized and homogenized media, including the arts and popular culture, and with the widespread use of the English language for global communication. Partly as a result of these cultural developments, some, especially the French and other continental Europeans, see globalization as an attempt at U.S. cultural as well as economic and political hegemony. In effect, they see globalization as a new form of imperialism or as a new stage of capitalism in the age of electronics. Some have even interpreted globalization as a new form of colonialism, with the U.S. as the new metro pole power and with most of the rest of the world as its colonies. These "colonies" supply the U.S. not only with raw materials and markets, as in earlier forms of European colonialization, but also with technology; production facilities; labor, capital, and other inputs to the production process on a global basis. Whether one sees globalization as a negative or as a positive development, it must be understood that it has clearly changed the world system and that it poses both opportunities and challenges. It is also clear that the above technological, policy, institutional, ideological, and cultural developments that have led to globalization are still very active. Thus, barring a radical move in a different direction, these trends toward greater globalization will likely continue or even accelerate in the future. One important aspect of these trends will be the growth in international trade in

services that has already increased substantially but promises even greater growth in the future, especially in such areas as telecommunications and financial services. The result will be continued moves toward a more open and a more integrated world as it moves closer and closer to a planet without borders and to a more integrated, open, and interdependent world economy. The result will be even greater worldwide flows of goods, services, money, capital, technology, people, information, and ideas.

1.4. International Trade and the Nations Standard of Living

Countries participating in international trade gain national economic well-being. From the standpoint of exports, a country benefits from international trade because a new source of demand in foreign markets raises sales and the prices of the exported products. While domestic consumers lose economic well-being because they must now pay higher prices and buy a smaller quantity of the exported product, their losses are usually less than the gains of domestic producers. If the economic losses to domestic consumers and the gains to producers are valued the same, then the nation as a whole experience an increase in economic well-being.

From the standpoint of imports, countries benefit from having additional source of supply in their domestic markets. Increased availability of the product reduces the domestic price and improves well-being of consumers who can now buy a larger quantity. Meanwhile, domestic producers are hurt as the lower domestic price causes them to supply a smaller quantity. Because consumers gain more than domestic producers lose in economic well-being, the entire country benefits from international trade.

In summary, free trade improves a nation's economic well-being by raising its export prices rise relative its import prices. The increase in export prices relative to import prices represents an improvement in the nation's terms of trade. The improvement in the terms of trade causes domestic production to expand as productive resources are used more efficiently. Meanwhile, domestic consumption increases because of the lower import prices and the increase in production and real income. Table summarizes the effects of international trade on living standards.

Table.1.1. International Trade and the Nations Standard of Living

Item	Effects on Producers	Effects on Consumers	National Effects
Exports	Price ↑ Production ↑ Well-being ↑	Price ↑ Consumption ↓ Well-being ↓	Price ↓ Production ↑ > Consumption ↓ Well-being ↑
Imports	Price ↓ Production ↓ Well-being ↓	Price ↓ Consumption ↑ Well-being ↑	Price ↓ Production ↓ > Consumption ↑ Well-being ↑

1.5. International Trade Policy

The trade policy reforms initiated in 1991 have immensely changed the foreign trade scenario and have resulted in the shift from inward-oriented to an outward-oriented policy. The period after 1991 has been marked by a substantial liberalisation of the trade policy. While some liberalisation measures were necessary to make exports competitive in the international market, some were undertaken under the pressure of the international agencies, as a part of the stabilisation and structural adjustment programme. Moreover, with India joining the WTO in 1995 as a founder member, it was under an obligation to strike down all quantitative restrictions on imports and reduce import tariffs so as to 'open up' the economy to world trade and the forces of globalisation. The trade policy as it evolved over the years since 1991 focussed on freer exports and imports, liberal exchange rate management, rationalisation of tariff structure and many changes in the system of export incentives. It is framed around the twin objectives:

a) To double the percentage share in world merchandise trade in the next five years.

b) To act as an effective instrument for growth of an economy by giving a thrust to employment generation.

The goals are proposed to be attained by implementing the following strategies:

i. Removing controls and creating an atmosphere of trust and

transparency to encourage entrepreneurship.

ii. Simplifying procedures and bringing down the transaction costs.

iii. Facilitating development of India as a global hug for manufacturing, trading and services.

iv. Identifying and nurturing special focus areas which would generate additional employment opportunities.

v. Bringing about technological transformation and infrastructural development of all sectors of the economy through import of capital goods and equipment, thereby increasing value addition and productivity, while achieving internationally accepted standards of quality.

vi. Revitalizing the Board of trade by redefining its role, giving it due recognition and inducting experts on trade policy.

vii. Activating the embassies as key players in export strategy and linking our commercial wings abroad through an electronic platform for real time trade intelligence and enquiry dissemination.

Objectives

The short-term objectives of Trade Policy are:

(a) To control the declining trend of exports and put them on growth path.

(b) To achieve an annual export growth of 15per cent with an annual export target of US$ 200 billion by March 2011.

(c) By 2014, a high export growth path of around 25 per cent per annum to be targeted.

(d) To double India's exports of goods and services by 2014. The long-term policy objective is to double India's share in global trade by 2020. To meet these objectives, the policy measures to be adopted by the Government include:

(a) Improvement in export related infrastructure; reduction in transaction costs, and providing full refund of all indirect taxes and levies.

(b) Fiscal incentives, institutional changes, procedural rationalization enhanced market access across the world and diversification of export markets.

Foreign Trade Policy 2015 - 2020:

The new five-year foreign trade policy 2015 - 2020 announced in April 2015 provides a framework for increasing exports of goods and services as well as generation of employment & rising addition to the value in the country in-keeping with a vision of 'Make in India'. The Government's focus is to upkeep both the manufacturing and the services with a superior emphasis on improving the ease of doing business.

Features:

(1) Merchandise Exports from India Scheme (MEIS). This scheme has been introduced by merging five different schemes which existed in the earlier trade policy. These included FPS, MLFPS, FMS, AIIIS and VKGUY. There would be no conditions attached to the scrip's under the scheme.

(2) Services Exports from India Scheme (SEIS) This scheme replaces the Served from India Scheme (SFIS) and shall apply to service providers located in India instead of Indian service providers.

(3) All scrips issued under MEIS and SEIS and the goods imported under these scrips would be fully transferable and usable for payment of customs duty, excise duty and service tax.

(4) Manufacturers who are also status holders will be allowed to self- certify their manufactured goods as originating from India with a view to qualify for preferential treatment under different PTAs, FTAs, CECAs and CEPAs.

(5) Boost to Make in India: It is proposed to give higher level of rewards to products with higher domestic content and value addition as compared to products with high import content and with less value addition.

(6) Trade facilitation and Ease of Doing business: The DGFT already provides facility of online filing of documents/applications and paperless trade in 24*7 environment.

(7) New Initiatives for EOUs, EHTPs and STPs: These have been allowed to share infrastructural facilities among themselves. This will enable the units to utilize their infrastructural facilities in an optimum way and avoid duplication of efforts and costs.

The trade policy reforms initiated in 1991 have drastically changed the foreign trade scenario and have resulted in the shift from inward-oriented to an

outward-oriented policy. The period after 1991 has been marked by a substantial liberalisation of the trade policy. The Foreign Trade Policies announced by the government from time to time provide a framework for increasing exports of goods and services as well as generation of employment and increasing value addition in the country in-keeping with a vision of 'Make in India'. The focus of the Government is to support both the manufacturing and the services with a special emphasis on improving the ease of doing business. The volume of India's trade has increased manifold with imports growing faster than exports. Despite the declining share, manufacturing products still constitute more than 50 per cent of exports. Also there has been a significant diversification in India's trade in recent years.

1.6. Current International Economic Problems and Challenges

International economics examines how countries interact through trade, finance, investment, and policy coordination. In the contemporary world, this interaction is facing several complex problems and challenges that threaten global stability and equitable growth. These problems arise from changing economic conditions, geopolitical tensions, technological disruptions, and persistent inequalities. A detailed explanation of these issues is essential for understanding the present global economic scenario.

1. Global Economic Slowdown and Growth Uncertainty

The world economy is experiencing a broad-based slowdown due to multiple factors such as post-pandemic economic adjustments, fall in global demand, and structural weaknesses in major economies. Many countries face declining investment, reduced productivity, and rising unemployment. Slow growth in advanced economies has a direct spill over effect on developing nations through reduced exports and capital inflows. This slowdown threatens the sustainability of global value chains and weakens the overall process of globalization.

2. Inflationary Pressures and Monetary Tightening

Rising inflation has become a worldwide concern. The primary drivers include supply chain disruptions, rising energy prices, geopolitical conflicts, and climatic shocks affecting food supply. In response, central banks in

advanced economies have increased interest rates. Higher global interest rates make international borrowing more expensive and lead to capital outflows from developing countries, creating exchange rate volatility. This highlights the asymmetry in the international monetary system where decisions by major economies influence global financial stability.

3. Rising Protectionism and Weakening Multilateral Trade System

The post-globalization era is witnessing a shift towards protectionist trade policies. Major economies are adopting tariffs, export bans, local content rules, and sanctions for strategic reasons. The US–China trade rivalry has intensified this trend. As a result, the global trade environment has become more uncertain. The World Trade Organization (WTO) is losing authority due to the failure of the dispute settlement system and the dominance of bilateral trade agreements. This undermines the principle of free trade and reduces the efficiency gains offered by international specialization.

4. Geopolitical Conflicts and Fragmentation of Global Supply Chains

Geopolitical tensions such as the Russia–Ukraine war, Middle East conflicts, and the strategic rivalry between the US and China have disrupted global supply chains. These conflicts affect the supply of essential commodities such as oil, natural gas, grains, and critical minerals. Countries are adopting “friend-shoring” and “near-shoring” to reduce dependence on hostile nations. While this may increase security, it raises production costs and hampers the integrated nature of global trade. The world economy is moving from globalization toward regional economic blocs.

5. Global Debt Crisis and Financial Instability

Many countries, especially low- and middle-income nations, face a mounting debt burden. Public debt has increased dramatically due to pandemic-related spending and falling revenues. High debt levels reduce fiscal space for development and social welfare. Countries facing the risk of default require debt restructuring, often through the IMF. However, the associated austerity measures can cause social unrest, unemployment, and inequality. The absence of a fair global mechanism for sovereign debt resolution remains a key challenge for the international economy.

6. Technological Divide and Inequality in Digital Capabilities

Technological progress in areas such as artificial intelligence, automation, robotics, and digital services is reshaping global production and trade. But the benefits of the digital revolution are unevenly distributed. Developing countries lack adequate digital infrastructure, technological skills, and financial resources. As a result, they are marginalized in global value chains. Digital barriers, data localization rules, and cyber-security concerns further complicate cross-border digital trade. This technological divide deepens existing global inequalities.

7. Climate Change and Environmental Problems

Climate change represents a major long-term threat to international economic stability. Rising temperatures, extreme weather events, and environmental degradation affect agriculture, water supply, trade routes, and infrastructure. Developing countries face severe losses despite contributing least to global emissions. International efforts such as the Paris Agreement require significant financing for mitigation and adaptation, but the promised funds are not fully delivered. Carbon border adjustment mechanisms (CBAM) imposed by developed nations may hurt exporters from poorer countries, raising concerns about equity and fairness.

8. Energy Insecurity and Volatility in Commodity Markets

Energy markets have become highly unstable due to geopolitical conflicts, supply shortages, and rising demand. Oil and gas price volatility increases production costs, fuels inflation, and worsens balance-of-payments situations in energy-importing countries. Transitioning to renewable energy is essential but requires heavy investment, sophisticated technology, and global cooperation. Many countries lack the capacity to undertake this transition, deepening global disparities.

9. Migration Challenges and Labour Market Pressures

International migration has increased due to conflicts, climate change, and unemployment. While migration provides labour to advanced economies and remittances to developing economies, it also generates political resistance and stricter immigration policies. Reduced labour mobility affects global

efficiency and productivity. Brain drain remains a challenge for developing countries that lose their skilled workforce to richer nations.

10. Weakening of Global Institutions and Lack of Coordination

Institutions such as the WTO, IMF, World Bank, and UN are losing influence due to conflicting interests among nations, lack of reforms, and political polarization. Many global problems climate change, financial crises, pandemics require collective action. However, nationalism and geopolitical competition hinder multilateral cooperation. This governance deficit makes the global economy more vulnerable to shocks.

Conclusion

The contemporary international economy faces multiple and interconnected challenges. These include economic slowdown, inflation, debt crises, protectionism, geopolitical tensions, technological inequality, and climate change. The most critical issue is the lack of effective international coordination and a weakening multilateral system. Sustainable global development requires stronger cooperation, fairer economic rules, investment in green and digital technologies, and inclusive policies that protect vulnerable nations. Only through collective action can the world achieve stable and balanced international economic growth.

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UNIT – II

INTERNATIONAL TRADE THEORIES

2.1. Introduction

The classical theory of international trade was first formulated by Robert Torrens, David Ricardo and John Stuart Mill. Their ideas relate to the theory of comparative cost or advantage Adam Smith, the first classical economist, advocated the principle of absolute advantage as the basis of international trade, which was discarded by Ricardo. But the Ricardian theory of comparative advantages has been accepted and improved upon by modern economists like Taussig and Haberler.

2.2. Absolute Advantage Theory

Adam Smith, a classical economist, was a core believer of free trade on the grounds that it promoted international division of labor. This forms the basis for pure theory of international trade. The absolute advantage theory states that a nation will gain the most from producing products that take advantage of its most readily available resources. This implies that easier access to particular materials, skill sets, and other similar elements will make a country best suited for specific kind of production activity. It includes increased efficiency and cost savings. When a nation has an absolute advantage, it has something that is desirable to other nations, which inspires trade. According to the absolute advantage theory, out of two or more parties, the one that produces more products with the same resources has the advantage. For example, if two companies each have five employees and one can produce ten units per hour while the other can produce twelve units in the same period, then the second company has an absolute advantage. A country following the theory of absolute advantage would produce the products that work best with its resources.

2.2.1. Assumptions of the Theory

- The Trade takes place between two countries.
- Only two commodities are traded between the countries.
- It advocated for a Laissez Faire Policy where free trade exists between the countries and leads to efficient use of resources and would maximize world welfare.

- Labor is the only element of the cost of production.

When one nation is more efficient (or has absolute advantage over) another in the production of one commodity but is less efficient than (or has an absolute disadvantage with respect to) the other nation in producing another commodity, then both nations can gain by each of them specializing in the production of the commodity of its absolute advantage and exchanging part of its output with the other nation for the commodity of its absolute disadvantage. By this process, the resources of both nations are utilized most efficiently and output of both commodities will rise. The increase in the output of both commodities measures the gains from specialization in production available to be divided or shared between two nations through trade. To help us understand we analyze international rice market that arises between Vietnam and Japan, Vietnam is efficient in producing rice but inefficient in growing wheat. On the other hand, Japan is efficient in producing wheat but inefficient in producing rice. We make a simplifying assumption about the demand side of rice market in both Vietnam and Japan. More specifically, we are assuming that demand conditions are exactly the same in both the countries. We make this simplifying assumption because as trade arises due to differences in supply conditions rather than demand conditions. At every price, Vietnam supplies more rice than Japan. Why might this be? One possibility is that Vietnam produces rice using technology superior to that of Japan so that labor productivity in rice production in Vietnam is higher than in Japan. Another possibility may be that the prices for inputs used in rice production are lower in Vietnam than in Japan. This, in turn reflects the fact that Vietnam is more abundantly endowed with rice production factors (available land and agricultural labor) than Japan. Thus, Vietnam has an absolute advantage over Japan in production of rice but an absolute disadvantage in production of wheat. The opposite is true for Japan. Thus, under it, Vietnam would specialize in the production of rice and exchange some of it for wheat produced in Japan. As a result, both more rice and more wheat would be grown and consumed and both Vietnam and Japan would gain.

2.2.2. Illustration of Absolute Advantage

Absolute Advantage can be examined with a simple numerical example. In the table provided below it shows that one hour of labor time produce six bushels of wheat in the United States whereas only one in India. On the other hand, one hour of labor time produces four yards of cloth in the United States but five in India. Table 1.1 Absolute Advantage

Table 2.1. Absolute Advantage

	US	INDIA
Wheat (bushels/hour)	6	1
Cloth (yards/Hour)	4	5

Thus, we see that United States is more efficient than or has absolute advantage over India in the production of wheat while India is more efficient than or has an absolute advantage over, United States in the production of cloth. With trade, United States would specialize in the production of wheat and exchange part of it for Indian cloth. The opposite is true for India. If United States exchanges six bushels of wheat (6W) for six yards of Indian cloth (6C), United States gains 2C or saves 30 minutes of labor time as United States can only exchange 6W for 4C domestically. Similarly, 6W that India receives from the United States is equivalent to or would require six hours of labor time to produce in India. These same 6 hours can produce 30C (6 hours' times 5 yards of cloth per hour) in India. By exchanging 6C which requires a little over one hour to produce in India for 6W with the United States gains 24C or saves almost five hours of work. Thus, it is clearly demonstrated that two countries can gain through international trade if they have absolute advantage in producing different goods. However, gains from international exchange of goods need not be limited to the situations of absolute advantage.

2.3. Comparative Advantages

David Ricardo believed that the international trade is governed by the comparative cost advantage rather than the absolute cost advantage. A country will specialise in that line of production in which it has a greater relative or comparative advantage in costs than other countries and will depend upon imports from abroad of all such commodities in which it has relative cost disadvantage.

Comparative advantage is the capacity of a firm or individual to produce goods and/or services at a lesser opportunity cost than other firms. Opportunity cost is the loss of other possibilities when 1 alternative is chosen. It is a state of a producer where it is well-matched for production of one product than another product. Good A can be formed more efficiently than good B, for example. This contrast is done in terms of opportunity costs of each good, not in terms of actual production costs. Opportunity cost is how much you are able to produce of the good B with the same amount of factors, & other resources that it takes to produce 1 of good A. This is the trade-off how much of good B must be sacrificed in order to get one more of good A. He observed two important principles of economics. The first one is that nations behave in the same way as individuals do: economically. Whatever is economical for people is also economical on a macroeconomic, or large, scale. The second thing he observed is what we call the law of comparative advantage. When a nation has a lesser opportunity cost in the production of good, we conclude that they have a comparative advantage in the production of that good. Everyone has an opportunity in producing goods at lesser opportunity cost as compared to others. This theory explains that a nation should specialize in the production of good in which they have a comparative advantage**.**

Examples

To comprehend how the concept of comparative advantage can be used to the real world, we consider an example of 2 countries producing only 2 goods - motor cars & commercial trucks.

Maximum outputs	Country A	Country B
CARS	30m	35m
TRUCKS	6m	21m

Table 2.2. Comparative Advantage

Using all the resources, country A can produce 30m cars or 6m trucks, and country B can produce 35m cars or 21m trucks. This can be summarized in a table. In this case, country B has absolute advantage in producing both goods, but it has a comparative advantage in trucks as it is in a relatively better position at producing them. Country B is 3.5 times better at trucks, and only 1.17 times better at cars.

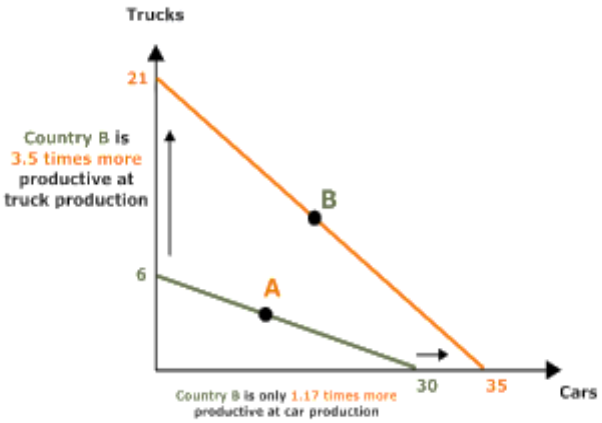

Fig.2.1.

However, the utmost benefit and the broadest gap lies with production of truck; hence Country B should specialize in truck's production, leaving Country A to manufacture cars. Economic theory proposes that, if countries apply the principle of comparative advantage, collective output will be increased in contrast with the output that would be produced if the both countries tried to become self-sufficient and allot resources towards production of both goods. Considering this example, if countries A and B allocate resources evenly to both goods combined output is: Cars = 15 + 15 = 30; Trucks = 12 + 3 = 15, therefore world output is 45 m units.

2.4. Opportunity Cost Ratios

Gottfried Haberler has attempted to restate the comparative costs in terms of opportunity cost. He demonstrates that the doctrine of comparative costs can hold valid even if the labour theory of value is discarded. The theory determines the cost of producing a commodity in terms of the alternative production that has to be foregone for producing the commodity in question.

It is being capable to produce goods by using fewer resources, at a lower opportunity cost that gives countries a comparative advantage. The slope of a PPF shows the opportunity cost of production. Raising the production of one

good means that less of another can be produced. The slope reflects the lost output of Y as a result of increasing the output of X.

2.4.1. Law of Increasing Opportunity Costs

The law of increasing opportunity costs states that as you raise the production of one good, the opportunity cost to produce other good will increase. The law is best explained along with a graphical representation of the production possibility frontier, also known as the PPF.

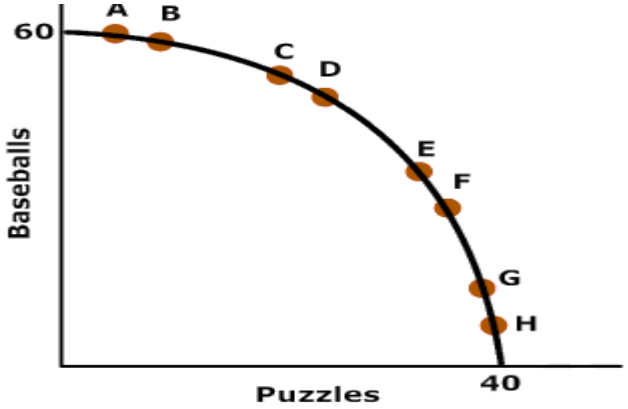

Fig.2.2.

The PPF is a graph showing all combinations of 2 goods that can be produced with the available resources. In this lesson, let's assume we can produce either baseballs or puzzles. The following PPF shows the combination of baseballs and puzzles we can make given our resources.

If we make only baseballs, we can produce 60. If we make puzzles only, we can produce 40. Let's assume we start with making all baseballs. When making all baseballs, there are some resources that would be more efficient if allocated to producing the other good. Let us take an e.g., if 1 person was actually skilled at woodcarving but we were producing all baseballs, that person would perhaps be more efficient making puzzles. So, you start to move off the end point and make a combination of baseballs & puzzles. With every extra puzzle you make, there is an opportunity cost of giving up baseballs. Since the law of increasing opportunity cost states, the cost of producing the additional puzzle increases as you move along the PPF. The first resources transferred to making puzzles are those that were not suitable to make baseballs. However, as you continue to increase puzzle production, you start reallocating resources that were better at making baseballs than puzzles.

Thus, the cost of making an additional puzzle is at the loss of more baseballs than with the initial set of resources that were allocated.

Increasing marginal cost simply means that as the production of one good in the two-good model increases at the expense of production of the other good, increasing amounts of the other product must be given up in order to get each additional unit of the good who's output is increasing. The theory presumes that markets are perfectly competitive, there is perfect factor mobility without any diminishing returns and with no transport costs. The reality is probably very dissimilar, with output from factor inputs subject to diminishing returns, & with transport costs. This will make the PPF for every country non-linear and bowed outwards. If this is the case, full specialization might not create the level of benefits that would be found from linear PPFs. In other words, there is rising opportunity cost related with increasing specialization. For example, it may be that the maximum output of cars produced by country A is only 20 million (compared with 30), and the maximum output of trucks produced by country B might only be 16 million instead of 21 million. Hence, the collective production from trade might only be 46 million units (instead of the 51 million units initially predicted. Increasing marginal cost simply means that as the production of one good in the two-good model increases at the expense of production of the other good, increasing amounts of the other product must be given up in order to get each additional unit of the good who's output is increasing.

2.4.2. Criticism of Comparative Advantage Theory

The principle of comparative advantage can be criticized in a several ways:

1. It may overstate the benefits of specialization by not taking into consideration a no. of costs. These costs include transport costs and any external costs associated with trade, such as air and sea pollution.
2. Complete specialization might create structural unemployment as some workers cannot transfer from one sector to another.
3. Relative prices and exchange rates are not taken into consideration in the simple theory of comparative advantage. For e.g. if the value of X rises comparative to Y, the advantage of raising output of X increases.

4. Comparative advantage is not a static theory - it may change over time. For e.g., non-renewable resources can gradually run out, raising the production cost, and diminishing the gains from trade. Countries can develop new advantages, such as Vietnam and coffee production. Although having a long history of production of coffee it is only in the last 30 years that it has become a worldwide player, seeing its global market share rises from just 1% in 1985 to 20% in 2014, making it the world's second main producer.

5. Many nations strive for food security, i.e. that even if they should specialize in non-food goods, they still favor to have a minimum level of food production.

6. Comparative advantage theory is derived from an extremely simplistic two good/two country model. The real world is far more complex, with nations exporting & importing many different goods & services.

According to Paul Krugman, the recurrent application of economies of scale by global producers with help of new technology means that various countries, comprising China, can produce very reasonably, & export surpluses. This, along with an insatiable demand for choice and variety, means that countries typically produce a variety of products for the global market, rather than specialize in a narrow range of products, rendering the traditional theory of comparative advantage almost obsolete.

2.5. Reciprocal Demand

The Ricardian failure to determine the exact rate of international exchange between the two countries was on account of an excessive emphasis upon the supply aspect and a complete neglect of demand aspect. It was J.S. Mill, who attempted to remove this lacuna in the Ricardian Comparative Cost theory.

According to him, the actual ratio at which commodities are transacted between two countries depends crucially upon the strength and elasticity of each country's demand for the product of the other or the reciprocal demand. By reciprocal demand, Mill meant the quantities of exports that a country would offer at different terms of trade, in return of varying quantities of imports. In other words, reciprocal demand refers to the intensity of demand for the product of one country in the other country.

2.5.1. Assumptions of the Theory:

J.S. Mill's theory of reciprocal demand is based upon the following main assumptions:

1. The trade takes place between two countries, A and B.
2. The trade is in two commodities, X and Y.
3. In both the countries, the production is governed by constant return to scale.
4. The trade between two countries is governed by the principle of comparative costs.
5. The pattern of demand is similar in two countries.
6. There are perfectly competitive conditions in the market.
7. There is no restriction on trade and government follows a policy of laissez faire.
8. There is full employment of resources in both the countries.
9. There is an absence of transport costs.
10. The exports of each country are sufficient to pay for its imports.

According to this table, the pre-trade exchange ratio between X and Y commodities in the two countries are:

Country A: 1 unit of X = 0.63 units of Y

Country B: 1 unit of X = 0.80 units of Y

If trade commences between them, country A specialises in the production of X while B specialises in the production of Y. But the basic issue is concerned with the rate at which they will exchange their goods. The international rate of exchange will be settled within the two limits of domestic exchange ratio on the basis of reciprocal demand or the relative intensity of demand for the products of each other.

If the demand for X commodity is less elastic in country B but the demand for Y commodity in country A is more elastic, the country B will be willing to give more units of Y for importing a given number of units of X and the international rate of exchange will be closer to the domestic exchange ratio of country B. It means the exchange ratio or terms of trade are more favourable to country A and she will obtain a larger share out of the total gain from trade.

On the contrary, if the demand for Y commodity is inelastic in country A and the demand for X commodity is more elastic in country B, the latter will be willing to give up an additional unit of Y in exchange of more units of X commodity. In this case, the international exchange ratio will get settled closer to the domestic exchange ratio of country A. The terms of trade are now more favourable to country B and it will secure a larger proportion of gain from trade. The determination of actual rate of exchange on the strength of reciprocal demand is shown through Fig. 2.3.

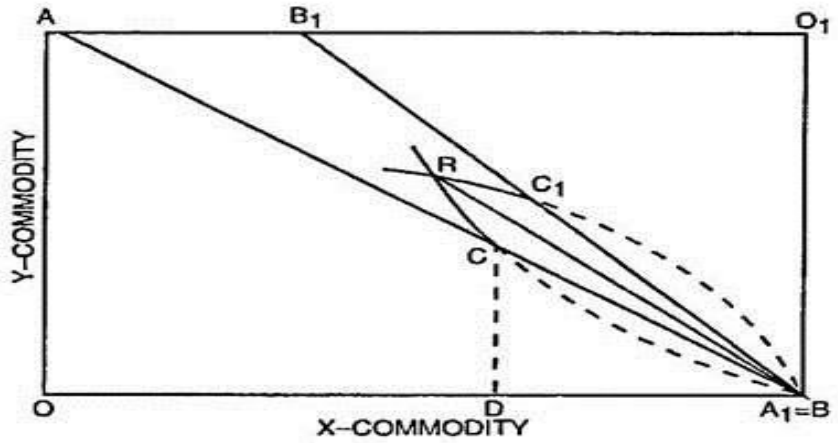

Fig.2.3.

AA_1 represents the production possibility curve of country A. It shows the different combinations of X and Y commodities that country A can produce under constant cost conditions and with the fullest utilization of available labour input. Similarly, BB_1 represents the production possibility curve of country B with origin as O_1. Suppose country A specialises in commodity X and country B specialises in Y.

If there is complete specialisation, the production point is A_1=B, where country A devotes all productive resources on producing X and country B on producing Y. AA_1 and BB_1 production possibility curves represent also the domestic ratio of exchange. Trade will take place within these two limits. So AA_1B_1 shows the potential trading area. The actual exchange ratio will lie somewhere in this area.

If country A requires OD quantity of X and CD quantity of Y, it can meet the demand through domestic production in the absence of foreign trade. Suppose it requires more quantity of Y than CD. The additional demand for Y can be met by importing it from country B. Now A will offer to give up more

quantity of X in order to get additional units of Y. A_1CR represents the offer curve of country A. CA_1 part of this curve is imaginary because all these combinations of X and Y commodities can be obtained through domestic production and without external trade. Similarly, BC_1R is the offer curve of country B and BC_1 part of this curve is imaginary. As we move along CR part of offer curve of country A, the terms of trade become favourable to A. In the same way, the movement along C_1R makes the terms of trade more favourable for B. The two offer curves intersect each other at R. At this equilibrium position, exports of each country are just sufficient to pay for imports. Any change in reciprocal demand will cause a variation in this actual exchange ratio. The more inelastic the offer curve of the country, the more favourable will be the terms of trade for her and vice-versa. The line joining R and A_1 (or B) denotes the actual exchange ratio of two commodities for the two countries.

2.5.2. Offer Curves

Mill's theory of reciprocal demand analysed in terms of the offer curves of two countries, can also provide a measure of distribution of gains from trade among the two countries. It can be explained through Fig. 2.4.

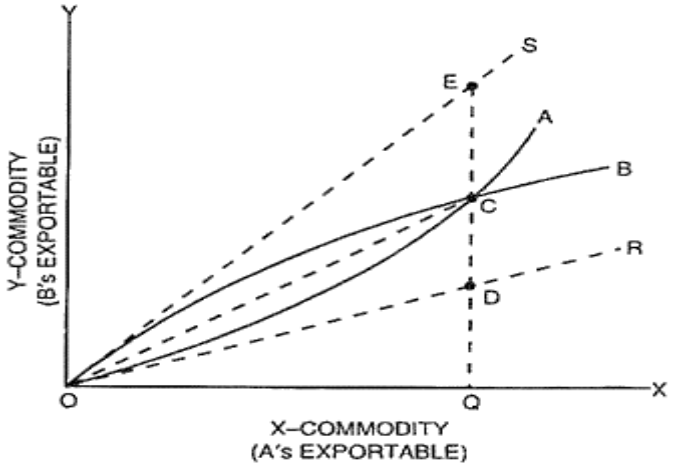

Fig. 2.4.

In Fig. 2.4, OA and OB are the offer curves of countries A and B respectively. The slope of the line OR measures the domestic exchange ratio in country A. The slope of line OS measures the domestic exchange ratio of country B. When trade takes place, the exchange equilibrium is determined at C where OA and OB cut each other. The international exchange ratio is measured by CQ/OQ

or the slope of line OC. In the absence of trade, given the domestic exchange ratio line OR, country A exchanges DQ of Y with OQ of X but after trade takes place, she can import CQ quantity of Y in exchange of the export of OQ quantity of X. Thus, gain from trade for country A is equivalent to CQ – DQ = CD units of Y. In the case of country B, the pre-trade position, given the domestic exchange ratio line OS was that she exchanged EQ quantity of Y with OQ quantity of X. But after trade commences, country B exports only CQ quantity of Y for the import of OQ quantity of X. Thus, the gain from trade for country B is EQ – CQ = EC. Closer the international exchange ratio line to the domestic exchange ratio line of one country, greater is the gain from trade for the other country and vice-versa.

2.5.3. Criticisms of the Theory of Reciprocal Demand

The theoretical structure of J.S. Mill's theory of reciprocal demand rests upon the foundation of Ricardian principle of comparative costs. Consequently, the theoretical assumptions in Mill's theory are almost the same as in the Ricardian theory. That makes Mill's theory of reciprocal demand susceptible to similar weaknesses as are found in the Ricardian analysis.

(i) Neglect of Supply:

According to Graham, the reciprocal demand theory concentrates too much on demand for determining the international values and the supply aspect has been grossly neglected. Such an approach can be accepted, if the theory of international trade is built in terms of fixed quantities of product. In practice, trade involves such commodities the supply of which undergoes significant variations. Therefore, the supply conditions are bound to have decisive effect on the international exchange ratio.

(ii) Unnecessary:

Graham dismissed the whole idea of reciprocal demand as unnecessary in the theory of international values. If the production takes place under constant cost conditions, as assumed both by Ricardo and Mill, the supply conditions alone are sufficient to settle the final equilibrium rate of exchange.

(iii) Neglect of Domestic Demand:

In this theory, the international exchange is supposed to be influenced by the demand in one country for the product of the other or the reciprocal demand.

The domestic demand in each country for her exportable product can also exert an important influence because each country is likely to export the product, which is left after satisfying the domestic demand. The determination of exchange ratio, by overlooking the domestic demand, was clearly faulty.

(iv) Not Relevant in Multi-Country, Multi- Commodity Trade:

The entire analysis in the Ricardian-Mill comparative costs theory is in terms of a two-country and two-commodity model. In the real-world multi-country, multi-commodity trade situation, there is strong possibility that the international terms of trade are determined by the cost ratios rather than the reciprocal demand.

2.6. Factor Endowments: Heckscher Ohlin Theory

Classical always laid emphasis on comparative advantage theory as they explain quite well how two nations can gain based on their comparative costs. The country with the lower comparative (or opportunity) cost has advantage in production of that commodity and hence completely specializes in the production of that commodity and export it to another nation. Similarly, it imports the commodity with the higher comparative cost produced by the other nation cheaply than others. According to Ricardian model, labor is the only factor of production and comparative advantage arises only because of international differences in labor productivity which then leads to changes in opportunity costs and hence prices. But it does not explain why such differences arise in the first place. Heckscher and Ohlin have attempted to explain the factors which cause differences in the comparative costs of different countries. The Heckscher-Ohlin (H-O) model was first conceived by two Swedish economists, Eli Heckscher (1919) and Bertil Ohlin (1933). According to Heckscher and Ohlin, trade is only partly explained by differences in labor productivity. It also reflects differences in countries' resources endowments i.e. how much capital and labor does a country have and how do these factors endowments shape the content of trade. So according to Heckscher-Ohlin, trade is not solely dependent on labor productivity but also due to differences in a country's resource and factor endowments. Before proceeding to the detailed analysis of Heckscher-Ohlin

(H-O) theorem, we need to first understand a number of assumptions on which it is based.

Assumptions

The following set of assumptions is important for the purpose of understanding the theory in its most basic and simple form:

1). Two countries, two commodities and two factors: In continuation with the Ricardian model assumption of two countries and two commodities, H-O model further assumes that there are two factors of production (labor and capital) instead of a single factor of production assumed earlier and that both factors are employed in the production of both commodities. In short, it is a 2X2X2 model.

2). Each commodity is produced under constant returns to scale: The two commodities are produced under constant returns to scale, that is, if both inputs are doubled, the output will also double.

3). Perfect competition in all markets: This assumption rules out monopolistic and oligopolistic market structures. It also rules out price and wage rigidities. Every firm is a price-taker. Each country is too small to exert market power and influence market price. Also, perfect competition means that in the long run, there are no economic profits, each factor is paid according to their marginal product and everyone in the economy has perfect knowledge.

4). Technology is given and identical: The two commodities are produced with the same technology in both nations. The available means of production are same no matter where we are. This is an unrealistic assumption but it is assumed to focus one's attention on differences in factor endowments alone in explaining trade.

5). Consumer tastes are identical across countries: Consumer demands are assumed to be approximately similar in both countries. And since consumer preferences are represented by Indifference Curves, this assumption implies that ICs for the two countries will be identical. This is again assumed to make factor endowment the key operating force at the margin.

6). Factors are mobile within each country but immobile between countries: Factors (labor and capital) can move across industries within each country but they cannot move across countries. This means that factors can move from high paying industry to low paying industry until earnings are equalized in all industries. But there is zero international factor mobility so that international differences in factor earnings would persist in the absence of trade.

7). No transportation costs: Transportation costs are assumed to be zero. It is true that transportation costs inhibit and reduce trade volume but it does not reverse the trade pattern between the countries. The purpose is not to ignore reality but to illuminate the pure effects of trade.

8). Free Trade: H-O Model is based on the assumption that final outputs are traded freely.

Ohlin's Simple Model:

Ohlin makes the following assumptions of a simplified static model to the analysis:

1. There are two countries A and B.
2. There are two factors, labour and capital.
3. There are two goods; X and Y of which X is labour-intensive and Y is capital-intensive.
4. Country A is labour-abundant country B is capital-rich.
5. There is perfect competition in both the commodity and factor markets.
6. All production functions are homogeneous of the first degree. Hence there are constant returns to the scale.
7. There are no transport costs or other impediments to trade.
8. Demand conditions are identical in both the countries.

These assumptions have been made to explain the meaning of comparative price advantage or relative price difference and to deduce the major propositions of the factor endowment theory.

Given these assumptions, Ohlin's thesis contends that, country exports goods which use relatively a greater proportion of its relatively abundant and thus cheap factors. It is implied that trade occurs because there are differences in relative commodity prices caused by differences in relative factor prices (thus

a comparative advantage) as a result of differences in the factor endowments among the countries. The "relative factor abundance" in the thesis has two conceptions (a) the price criterion of relative factor abundance; and (b) the physical criterion factor abundance.

The Price Criterion of Relative Factor Abundance:

According to the price criterion, a country having capital relatively cheap and labour relatively dear is regarded as relatively capital-abundant, irrespective of its ratio of total quantities of capital to labour in comparison with the other country. In symbolic terms, when:

$$(PK/PL)\ A < (PK/PL)\ B$$

Country A is relatively capital-abundant. (Here P stands for factor price and K for capital, L for labour, A and B for the two respective countries.) Ohlin's theorem may be verified diagrammatically in Fig.2.5.

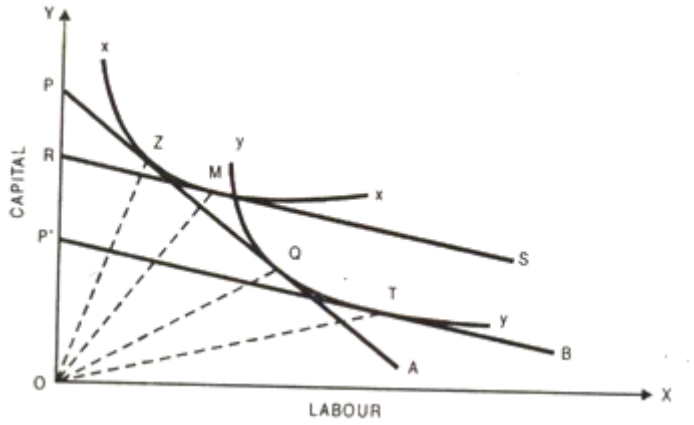

Fig.2.5. Price Criterion of Relative Factor Abundance

XX and YY isoquants (equal product curves) for two goods X and Y respectively. These two isoquants intersect only once so that the goods X and Y can be classified unambiguously according to factor intensity. It is easy to see that X is relatively capital- intensive, since the amount of capital is represented on the vertical axis. Similarly, good Y is labour-intensive, since the amount of labour is represented on the horizontal axis. If the isoquants intersect more than once, good X will not always be capital intensive relatively to Y.

Let us assume that there are two countries A and B A is the relatively capital-abundant and B is labour abundant. Now all possible factor combinations (of labour and capital) that can produce the given amounts of two goods X and Y

in each country can be read off from the two isoquants. Economically, the most efficient factor combination, however, depends upon the relative factor prices. To consider this, let us assume that the slope of the line P represents the relative factor prices in country A, i.e., (PK/PL) A.

The line PA is tangent to YY isoquant at point Q. Similarly, xx isoquant is also tangential to PA at point Z. Since we have assumed that (PK/PL) A < (PK/PL) B i.e., capital in A is relatively cheaper, the slope of the line representing relative factor prices (PK/PL) in B must be less than that of PA. Thus, line P′B is supposed to represent factor ratio in B. Line P′B is tangent to the isoquant YY at point T. Now, the line RS is drawn parallel to P′B such that it becomes tangent to the isoquant xx at point M. Line RS lies above the line P′B implying that OR intercept of RS on the capital axis is greater than OP′, the intercept of P′B′ on the same axis.

Under these assumptions, it appears that the equilibrium factor proportions are OZ for good X and OQ for Y in country A. That means, the cost of producing the given amount of X in country A is the cost of using the quantities of two factors labour and capital indicated by OZ at relative factor prices given by PA.

This is equal to the cost of using capital in the amount of OP (the point at which PA cuts the capital axis). Similarly, the cost of producing the given amount of Y in country A is equal to the cost of using capital in the same quantity (OP).

In country B, similarly, the equilibrium factor proportions are OM for X and OOT for good Y. The relative factor prices are shown by P′B (or RS). And therefore, the costs of producing the given amounts of X and Y (as assumed for country A) in this country are, in terms of capital, OR and OP respectively. Evidently, in country B the given amount of goods X is more expensive than the given amount of good Y. Comparing the relative costs of the equal amounts of the two goods X and Y in the countries A and B, we thus find good X is relatively cheaper in A and good Y is relatively cheaper in B. That means, the capital-abundant country has a comparative cost advantage in producing a capital-intensive good. So with the opening of trade with the other country, it

must export such goods only. Likewise, the labour abundant country must export labour-intensive goods.

This is how the Heckscher-Ohlin theorem confines to the position that: country exports goods produced relatively cheaper by using a relatively greater proportion of its relatively abundant factor. Though this conclusion has been inferred without consideration of demand conditions or factor endowments, it may be said that the data about relative factor prices do presuppose the given demand conditions and factor endowments in the two countries, obviously because the prices of factors are determined by the interaction of the supply of and demand for factors. However, the demand for factors, being a derived demand, depends, along with the technical conditions of production, on the demand for final commodities produced by them.

The Physical Criterion of Relative Factor Abundance:

Viewing the physical criteria, strictly implying relative factor endowments in physical quantities, a country is relatively capital-abundant only if it possesses a greater proportion of capital to labour as compared to the other country. To put it symbolically, then

$$(K/L)_A > (K/L)_B$$

Country A is relatively capital-abundant, whether or not the ratio of the prices of capital to labour is lower than in country B.

Using the price criterion of relative factor abundance, Ohlin's conclusion can be traced immediately from the assumptions made above, without consideration of demand conditions or factor proportions. But if the physical criterion is viewed, demand conditions are to be considered in order to establish the theorem. Ohlin, it seems, chooses the former criterion of determining the relative factor abundance and relative cheapness inter-changeably; but he also lays down that the difference in factor prices is due to the difference in the relative endowment of the factors between countries. He thus asserts that once the relative physical quantities of each productive factor endowed in both the countries are known, the relative factor-price structure for each country can be easily inferred.

Evidently, a country possessing relatively abundant capital will have a factor price structure such that capital will be cheaper as compared to labour

(relatively scarce factor). It follows, thus, that a relatively cheaper factor in a country implies that it is relatively abundant. Hence, considering physical quantities and scarcities rather than economic scarcities, Ohlin assumes that the supply aspect has a greater significance than demand in determining the relative factor prices in a country.

Ohlin, then, stresses the point that the factor-price structure will be different in two countries when the factor endowments are in differing proportions. Comparative advantages thus arise when the capital-abundant country (A) exports capital-intensive goods and imports labour- intensive goods and the labour abundant country (B) exports labour intensive goods and imports capital- intensive goods; because, $(PK/PL)_A < (PK/PL)_B < (PK/PL)_A$. If relative factor endowments are identical in two countries and commodity factor intensities are also the same, there will be no comparative price differences $(PK\backslash PL)_A = (PK/PL)_B$; there is no comparative cost difference); hence no theoretical basis for international trade.

2.7. Heckscher-Ohlin Model (Leontief Paradox)

Heckscher-Ohlin model is one of the most celebrated theorems in international economics, it has been subject to extensive empirical testing. The first and the most important piece of evidence has been provided by Wassily Leontief in 1951 using U.S. data for the year 1947.

Empirical Results of the Paradox

Leontief supposed correctly that in 1947 the United States was abundant in capital relative to its trading partners. Thus, from the Heckscher-Ohlin theorem, Leontief expected that the United States would export capital-intensive goods and import labor intensive goods. To test the hypothesis, he calculated the amount of labor and capital in a 'representative bundle' of $1 million worth of U.S. exports and import substitutes for the year 1947. Leontief used the numbers in this table to test the Heckscher-Ohlin theorem. Each column shows the amount of capital or labor needed to produce $1 million worth of exports from, or imports into, the United States in 1947.

Table. 2.3. LEONTIEF TEST

	Exports	Import substitutes
Capital ($ millions)	$2.55	$3.1
Labor (person-years)	182	170
Capital/Labor ($/person)	$14000	$18200

What Leontief actually found, however, was just the opposite- U.S. import substitutes were more K-intensive than U.S. exports i.e. the capital - labor ratio for U.S. imports was higher than the capital - labor ratio found for U.S. exports(as shown in the last row of the table 2.3. This finding contradicted the Heckscher-Ohlin theorem. In the same study, Leontief tried to defend the H-O theorem rather than rejecting it. He argued that U.S. labor is three times as productive as foreign labor and U.S. will become a labor abundant nation if we multiply labor force by three and H-O theorem will hold correctly. However, later he himself withdrew the explanation citing that U.S. capital is also three times as productive as foreign capital which then multiplied by three would result in the same ratio. Hence the contradiction remained and this came to be called Leontief's paradox. Another possible explanation was also provided by Leontief which states that U.S. citizens strongly preferred capital-intensive goods leading to a higher relative price for such goods. However, this reason cannot be accepted because H-O theorem assumes tastes to be equal in all nations.

Explanation of the Paradox

There are many possible explanations given for the Leontief Paradox which puts up the question that is the paradox real? The possible source of Leontief paradox bias could be due to:

1. U.S. and foreign technologies are not the same, in contrast to what the HO theorem and Leontief assumed.
2. Use of a two-factor model: By focusing only on labor and capital, Leontief ignored land abundance in the United States.

3. Leontief should have distinguished between skilled and unskilled labor (because it would not be surprising to find that U.S. exports are intensive in skilled labor).
4. 1947 being a non-representative year: The data for 1947 may be unusual because World War II had ended just two years earlier. The countries were engaged mainly in postwar reconstruction. When Leontief repeated his study taking 1951 year data, he found that the US exports were only 6% more labor intensive than 30% earlier. Though the paradox didn't eliminate but the intensity was significantly reduced.
5. The United States was not engaged in completely free trade, as the Heckscher Ohlin theorem assumes- Most heavily protected industries in U.S. were L - intensive, reduced imports and increased domestic production of L - intensive goods.
6. The most important source of bias was ignorance of human capital (education, job training, and skills) and only physical capital included as capital. Kenen in a 1956 study estimated the human capital embodied in U.S. exports and import substitutes and then recomputed K/L for U.S. exports and U.S. import substitutes of 1947 data and he succeeded in eliminating Leontief Paradox.

2.8. Economic Growth and International Trade

Economic growth manifests itself in the accumulation of factors and technical progress. Such changes create impact upon trade through the variations in the pattern of production, consumption and the international terms of trade. In this article we will discuss about the production and consumption effects of growth on trade.

Production Effects of Growth:

As the process of economic growth facilitates the increased supplies of factor inputs, there can be some change in the domestic output of exportable commodities. The increased production of exportable goods brings about an expansion in the volume of trade. The large production of importable goods, on the other hand, causes a contraction in the volume of trade. Although the effect of factor growth upon production was analysed by Rybczynski in a quite

simple manner, a more elaborate analysis on this issue was made by H.G. Johnson. He identified growth as neutral, export-biased, ultra- export biased, import-biased and ultra-import biased. Growth is said to be neutral, when the output of both exportable and importable goods increases in the same proportion, consequent upon accumulation of factors and growth. Growth is said to be export-biased or pro-trade, if the increase in the output of exportable goods is more than proportionate to an increase in the output of importable goods. The growth is supposed to be ultra-export-biased or ultra-trade-biased, if the increased production of exportable goods involves some reduction in the output of importable goods. In case, the growth reduces the production of exportable goods, it is said to be ultra-import- biased or ultra-anti-trade biased. When growth results in a more than proportionate increase in the output of importable goods than the exportable goods, it can be regarded as import-biased or anti- trade-biased.

Assumptions:

The varying implications of growth for the international trade can be analysed on the basis of the following assumptions:

a. The trade exists between two countries A and B.
b. The country A is the home country that experiences steady growth.
c. There are two productive factors labour and capital.
d. The quantities of the two factors of production increase over the growth process.
e. The trade is concerned with two commodities X and Y.
f. The X- commodity is the exportable and Y is the importable commodity of the home country.
g. The commodity X is labour-intensive, while Y is capital-intensive.
h. There is no change in the techniques of production.
i. There is incomplete specialisation.
j. The international terms of trade, measured by the ratio of price of exportable commodity to the price of importable commodity remain constant.

Given the above assumptions the production effects of growth are expressed through Fig.2.6.

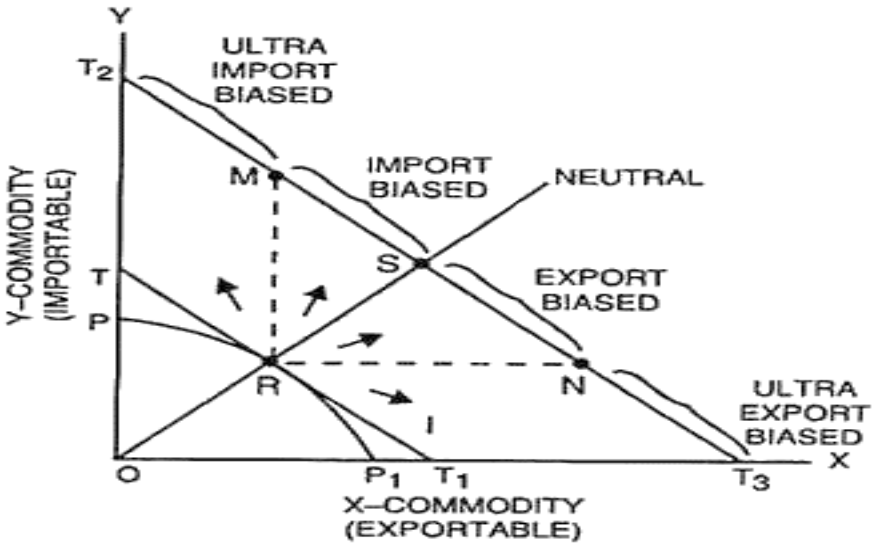

Fig.2.6.

In figure.2.6, the labour-intensive commodity X, which is the exportable commodity, is measured along the horizontal scale. The capital-intensive commodity Y, which is the importable commodity, is measured along the vertical scale. Originally PP_1 is the production possibility curve, given the factor supplies and technology. TT_1 is the term of trade line. The production takes place at R where TT_1 is tangent to the production possibility curve. As growth occurs, the factor supplies increase and the production possibility curve shifts to the right. The terms of trade line is T_2T_3 which runs parallel to the original terms of trade line TT_1. It signifies that international price ratio of X and Y remains unchanged despite growth. If production equilibrium occurs at S, the growth is neutral because there is equi-proportionate increase in output of two commodities and the two factors grow in the same proportion. If the production takes place in the range S and N, the growth is export biased. In this range, the proportionate change in the output of exportable commodity X is greater than the proportionate change in the output of importable commodity Y. It also signifies that the use of labour is proportionately more than that of capital.

If the production equilibrium is determined in the range N to T_3, the growth is ultra-export biased because the increased production of exportable commodity X involves a reduced production of the importable commodity Y. In case the production equilibrium is determined in the range S to M, the growth is import-biased. In this range, the output of importable commodity

increases more than proportionately compared with the increase in output of exportable commodity. In this type of growth, the use of capital is proportionately greater than the use of labour. If the production equilibrium gets determined in the range M to T_2, the growth is said to be ultra-import biased or ultra-antitrade biased.

In this situation, the increased production of the importable commodity Y involves a decline in the production of exportable commodity X. The process of production in this range involves an increased use of capital with possibly no increase in labour. The ultra-export biased and ultra-import biased patterns of growth are the extreme cases in terms of their effects on the self-sufficiency or trade-dependence of a growing country and may exist in very few cases.

Consumption Effects of Growth:

The process of growth in a given country denoted by the factor growth can bring about changes in its consumption pattern. If there is an increased consumption of the importable commodity, the volume of trade is likely to get enlarged. On the opposite, if the consumption of exportable commodity registers an increase, there is likely to be decline in the volume of trade. As in the case of production, Johnson has classified the consumption effects of factor growth as neutral, export-biased, ultra-export-biased, import-biased and ultra-import-biased.

The process of growth in a country, expressed through increased factor supplies, can bring about an increase in real income. This can result in changes in the consumption of exportable and importable commodities in varying quantities. The relative changes in the quantities consumed of these commodities determine the nature of growth process having varying implications for international trade.

The growth process is said to be neutral, if the increase in the demand for exportable commodity (X) takes place in the same proportion in which the demand for importable commodity (Y) increases. Growth is import-biased or anti-trade-biased, if the increase in demand for importable good is less than proportionate compared with the increase in demand for exportable good.

The process of growth can be regarded as ultra-import biased or ultra- anti-trade-biased, if the demand for importable commodity decreases in absolute terms. There is export-biased or pro-trade-biased growth, when the demand for importable commodity increases more than proportionately compared with the increased demand for the exportable commodity. When the demand for exportable commodity decreases in absolute terms, the growth process is said to be ultra-export biased or ultra-pro-trade biased.

H.G. Johnson pointed out that the output elasticity of demand for importable can measure the nature of growth in relation to trade. The growth process is import-biased, neutral or export- biased, if the output-elasticity of demand for importable commodity is less than, equal to or greater than unity respectively. If the output-elasticity of demand for importable commodity is negative, the growth process is ultra-import-biased. On the opposite, if the output elasticity of demand for exportable commodity is negative, the process of growth is ultra-export-biased.

The consumption effect of growth, given the constancy of tastes, terms of trade and distribution of income can be shown through Fig.2.7.

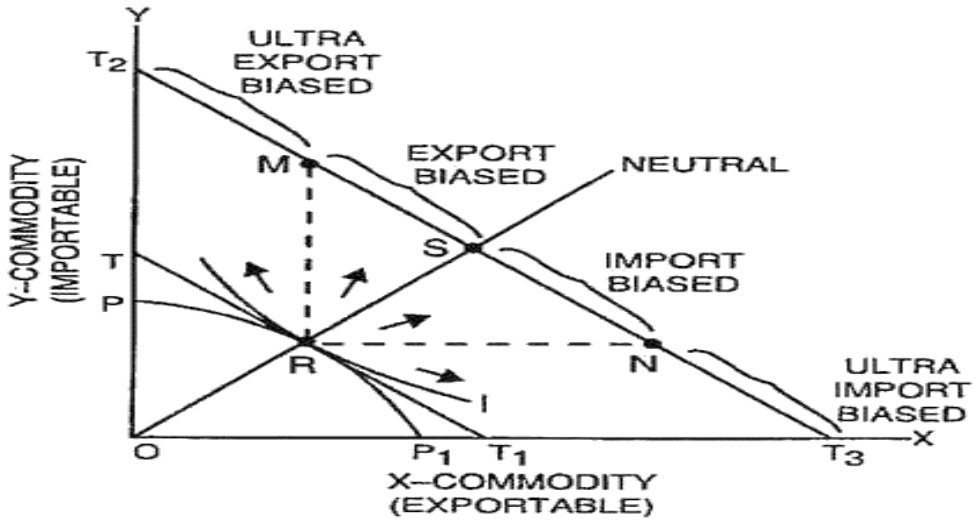

Fig.2.7.

In Fig.2.7, the original position of production and consumption equilibrium is determined at R. At this point, the terms of trade line TT_1 is tangent to the production possibility curve PP_1, on the one hand, and tangent to the community indifference curve I, on the other. If growth takes place, the production equilibrium shifts to S. It is assumed that terms of trade remain unchanged so that the terms of trade line T_2T_3 is parallel to TT_1.

The consumption equilibrium may get determined at any position on T_2T_3 where it becomes tangent to some higher commodity indifference curve. If the consumption takes place at S, and there are proportionate increases in the consumption of two commodities, growth is neutral. If consumption takes place in the range S to M, the growth is export-biased as the demand for importable commodity Y increases at a proportionately greater rate than the demand for exportable commodity.

If consumption takes place in the range M to T_2, the consumption effect of growth is ultra-export-biased. In case, if consumption occurs in the range S to N, there is an import-biased consumption effect. When the consumption takes place in the range N to T_3, the consumption effect of growth is ultra-import- biased.

The output or income elasticity of demand for imports can determine the implication of growth on trade, if the growth results from some factor other than population growth. In this connection, H.G. Johnon writes, "If growth is due to some other cause than population change, income per hand will rise, and the type of growth will depend on the average income elasticity of demand for imports. If imports are luxury goods, growth will be pro-trade-biased; if they are necessary goods, growth will be anti-trade-biased; if imports are inferior goods, growth will be ultra-anti-trade- biased and if exports are inferior goods, growth will be ultra-pro-trade-biased." So far in this analysis, it was supposed that the tastes pattern and distribution of income remain the same. With the expansion in income, subsequent to growth, there can be change in tastes pattern and income distribution. These factors can bring about significant change in the relative demand for the two commodities.

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UNIT – III

FOREIGN EXCHANGE MARKET

3.1. Introduction

A foreign exchange market is a market where foreign currencies are exchanged. In a foreign exchange market, investors buy foreign currencies with domestic currencies and sell foreign currencies for domestic currencies. Hence, it's a market where the claims to foreign moneys are bought and sold for domestic currency. Exporters sell foreign currencies for domestic currencies and importers buy foreign currencies with domestic currencies. According to Ellsworth, "A Foreign Exchange Market consists of all those individuals and institutions that buy and sell foreign exchange which can be stated as foreign money or any liquid claim on foreign money". Foreign Exchange transactions result in inflow & outflow of foreign exchange. Foreign Exchange markets comprise up of banks, commercial companies, central banks, investment management firms, hedge funds and retail forex brokers and investors. The forex market is considered the biggest financial market in the world. It is significant to see that the foreign exchange market is not a solitary exchange; rather it is composed of a global array of computers that connect investors from all parts of the world. The foreign exchange market, also known as the forex, FX, or currency market, involves the exchange of one currency for another. Earlier than 1996, the forex market was limited to the reach of big corporate banks and international institutions, however, now it can be accessed by all types of traders and speculators. The average daily turnover in the global forex market has now reached US$5.3 trillion, up from US$4 trillion in 2010, the latest Bank of International Settlements' Triennial Survey mentions. The market is progressing at a rapid pace as investors gain more information and develop more interest. In trading foreign exchange, investors bet that a particular currency's value will increase over another currency's value, they tend to gain if they bet accurately and collect the gains as an interest rate spread when they return to the original currency. The profit margins are less as compared to the margins in other fixed-income markets. Large trading volumes can, however, result in very high profits. Over half of all forex transactions are carried out in London and New York, with London

dominating the market at 37% of all transactions. New York's market share is 18%, with Tokyo taking third place at 6%. Singapore, Switzerland, and Hong Kong are the next-biggest foreign exchange markets of the world with around 5% market share each. In a foreign exchange market, currencies are bought and sold. It has to be separated from a financial market in which currencies are borrowed and lent. Since there is no physical market place for the participants to meet and execute the transactions, forex market is stated as an Over the Counter (OTC) market. It is more like an informal arrangement between the brokers and the banks working in a financing center purchasing and selling currencies, connected to each other by telecommunications like telex, telephone and a satellite communication network, SWIFT. The major forex market in India is Mumbai, Chennai, Calcutta and Delhi. These account for a larger portion of the total exchange transactions. The RBI has focused on decentralizing the operations of the exchanges and developing the exchange markets with a broader base. Due to the efforts of the RBI, Cochin, Ahmadabad, Bangalore and Goa have come out as new centers of forex market.

3.2. Definition of Exchange Rate

The price of one currency in terms of any other currency is known as the exchange rate. A flexible exchange rate system is a monetary system that allows the exchange rate to be determined by supply & demand. A fixed exchange rate is a type of exchange rate regime where a currency's value is fixed against either the value of another single currency, to a basket of other currencies, or to another measure of value, such as gold. A country can decide whether to adopt a flexible, fixed or some other approach which is in between the two extremes.

Appreciation: Increase in the value of a currency. (Flexible exchange rate)

Depreciation: Decrease in the value of a currency. (Flexible exchange rate)

Financial managers of Multinational Companies that carry out international business must regularly keep a watch on exchange rates since their cash flows significantly depend on them. They need to understand what factors affect exchange rates so that they can anticipate how exchange rates might alter in response to specific conditions. An exchange rate is the prevailing

market price at which a particular currency can be exchanged for another one. For instance, if the exchange rate of a U.S Dollar to Canadian Dollar is $1.60, it signifies that 1 American Dollar can be exchanged for 1.6 Canadian dollars. Exchange Rate is also known as a currency quotation, the foreign exchange rate or forex rate. Exchange Rate Equilibrium Albeit it is easy to gauge by how much the value of a currency changed, it is quite difficult to explain why the value changed or to forecast how it might change in the future. To achieve either of these objectives, the concept of an equilibrium exchange rate must be understood, along with the factors that affect the equilibrium rate. Before considering why an exchange rate changes, realize that an exchange rate at a given point of time represents the price of a currency, or the rate at which a particular currency can be exchanged for another. Like any other product sold in markets, the price of a currency is the product of demand for that currency and its supply. Thus, for each possible price of a British pound, there is a corresponding demand for pounds and a corresponding supply of pounds for sale. At a particular point of time, a currency should exhibit the price at which the demand for that currency is equal to supply and this represents the equilibrium exchange rate. Of course, conditions can change over time, causing the supply or demand for a given currency to adjust and thereby causing movement in the currency's price.

Demand for a Currency

The demand curve is sloping downwards since the corporations and individuals in the U.S will be encouraged to buy more British goods when the pound is worth less, since fewer dollars will be required to obtain the desired amount of pounds and vice versa.

Supply of a Currency

There is a positive relationship between the value of the British pound and the quantity of the British pounds for sale (supplied), which can be explained as follows. If the value of pound is high, British consumers and firms are more inclined to buy U.S goods. Thus, they supply a greater number of pounds to the market, to be exchanged for dollars. In contrast, when the value of pound is low, the supply of pounds is smaller, reflecting less British desire to obtain U.S goods.

Equilibrium

The demand and supply schedules for British pounds are combined in the exhibit. At an exchange rate of $1.50, the quantity demanded would exceed the supply of pound. Consequently, there will be a shortage of pounds at that exchange rate. At an exchange rate of $1.60, the demand of pounds will be lower than the supply of pounds for sale. Therefore, the banks providing exchange services will have a surplus of pounds at that exchange rate.

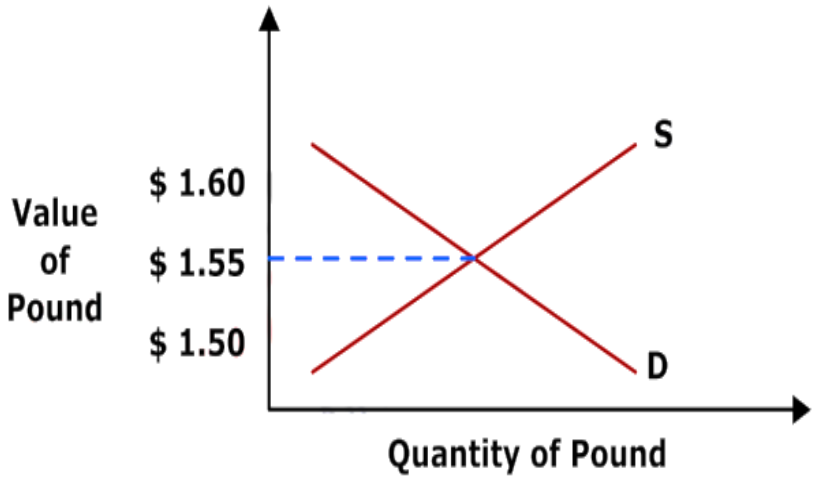

Fig.3.1. Equilibrium of Demand and Supply

According to the exhibit, the equilibrium exchange rate is $1.55 because this rate equates the quantity of pounds demanded with the supply of pounds for sale.

3.3. Exchange Rate Systems

Exchange rate systems can be classified on the basis of the degree of government control over the determination of exchange rates. Exchange rate systems basically fall into one of the following categories, each of which is discussed in turn:

1. Fixed (or) Pegged Exchange Rate System
2. Flexible (or) Freely Floating Exchange Rate System
3. Managed Float Exchange Rate System

1. Fixed Exchange Rate System (Or) Pegged Exchange Rate System

In a fixed exchange rate system, exchange rates are not allowed to fluctuate, even if these are allowed to change, these can change only within specified narrow boundaries. A fixed exchange rate system requires much intervention of the central bank in order to maintain a currency's value within

narrow boundaries. In general, the central bank has to offset any imbalance between supply and demand conditions for its currency to prohibit its value from changing. In some situations, the central bank may reset a fixed exchange rate. That is, it will devalue or reduce its currency's value against other currencies. A central bank's actions to devalue a currency in affixed exchange rate system are termed as Devaluation, while the term Depreciation represents the decrease in a currency's value that is permitted to change in response to market conditions. In a fixed exchange rate system, a central bank may also revalue (increase the value of) its currency against other currencies. Revaluation refers to an upward adjustment of the exchange rate by the central bank, while the term Appreciation represents the increase in the value of a currency that is allowed to change in response to the market conditions.

Some countries use a pegged exchange rate arrangement, under which their home currency's value is pegged to one foreign currency or to an index of currencies. Albeit the value of home currency is fixed and constant in relation to the foreign currency to which it is pegged, it moves in line with the currency against other currencies. Some governments peg their currency's value to that of a stable currency, such as the dollar, because that forces the value of their currency to be stable. First, this forces their currency's exchange rate with the dollar to be fixed. Second, their currency will move against non-dollar currencies by the same degree as the dollar. Since the dollar is relatively more stable than most currencies, it will make their currency more stable than most currencies.

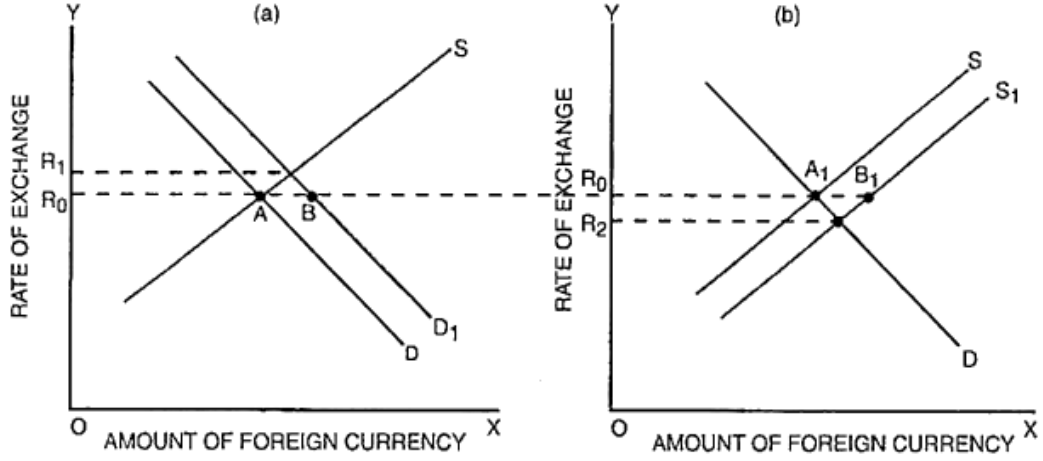

Fig. 3.2 (a) and (b)

The fixed or pegged rate of exchange can be shown through Figure 3.2 (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.3.2 (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. The resort to any one of the measures will help maintain the exchange rate at the official level rate of exchange R_0.

In Fig. 3.2 (b), the fixed official rate of exchange is again R_0. If there is an increase in the supply of foreign currency due to balance of payment OP 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.

2. Flexible (or) Freely Floating Exchange Rate System

In a freely floating exchange rate system, market forces determine the exchange rate without intervention by governments. Whereas a fixed exchange rate system permits no flexibility for exchange rate movements, a freely floating exchange rate system provides for total flexibility. Under this system, whenever the demand and supply schedules for that currency change, the exchange rate gets changed accordingly. Thus, there are appropriate variations in the exchange rates to maintain the BOP equilibrium.

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. 3.3 (a) and 3.3 (b). The amount of foreign currency is measured along the horizontal scale and rate of exchange is measured along the vertical scale. In Fig. 3.3 (a), given the demand and supply functions of foreign currency D and S, the initial equilibrium rate of exchange is R_0.

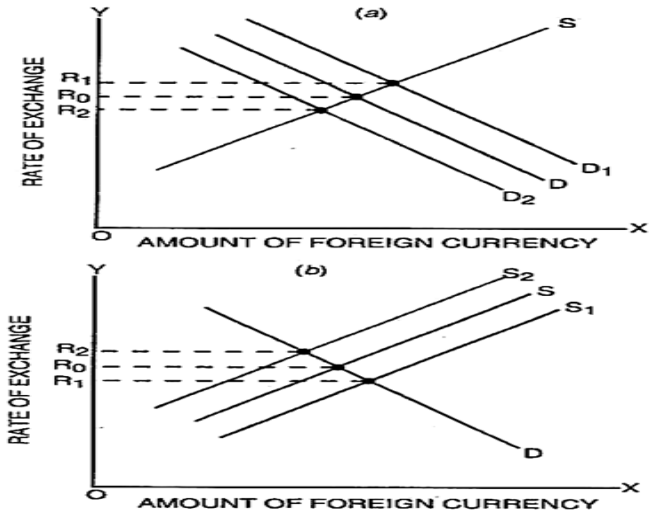

Fig. 3.3 (a) and (b)

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.

In Fig. 3.3 (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 up to 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.

3. Managed Float Exchange Rate System

The exchange rate system prevalent today for some currencies lies somewhere between fixed and freely floating. It reflects the freely floating system in that exchange rates are permitted to change on a continuous basis and no official boundaries exist. It is similar to the fixed rate system in that governments can and sometimes do interfere to not let their currencies significantly move in a particular direction. This type of system is known as a 'managed float' or 'dirty' float (as opposed to a 'clean' float where rates float freely without government intervention). At times, the governments of various countries including Brazil, Russia, South Korea and Venezuela have imposed bands around their currency to limit its degree of movement. Later, however, they removed the bands when they realized that it was difficult to maintain the currency's value within the bands. This policy is managed floating is also called the policy of leaning against the wind. The policy of managed floating has a number of variants.

a. Adjustable Peg System

It is a system in which exchange rates are pegged or fixed for a period of time. Deficit or surplus of balance of payments becomes substantial, the exchange rate is devalued or revalued. Adjusting the currency at a lower rate is called devaluation and at a higher rate revaluation.

b. Crawling Peg System

It is a system in which the monetary authority adjusts the exchange rate gradually. It adjusts the peg frequently at regular time intervals by small amounts instead of making large devaluations or revaluations when the equilibrium exchange rate changes. This is also known as Trotting Peg or Gliding Parity System.

c. Clean Float System

Under this system, the exchange rate is determined by the free market forces of demand and supply of foreign exchange. The exchange rate moves up and down freely without any intervention by the monetary authority.

d. Dirty Float System

Under this system, the exchange rate is determined by the free market forces of demand and supply of foreign exchange. But the monetary authority intervenes from time-to-time control excessive fluctuations in exchange rate.

e. Filthy Float System

When the monetary authority is compelled to intervene heavily under frequent and high fluctuations, it is called a filthy float.

3.4. Types of Nominal and Real Exchange Rate

Exchange rates are of different types. The usual distinction is between nominal exchange rate and real exchange rate.

The Nominal Exchange Rate:

The nominal exchange rate (NER) is the relative price of currencies of two countries. For example, if the exchange rate is £ 1 = $ 2, then a British can exchange one pound for two dollars in the world market. Similarly, an American can exchange two dollars to get one pound.

The Real Exchange Rate:

The real exchange rate (RER) refers to the relative price of goods of Britain and USA. It is the rate at which the Britishers can trade its own goods for those of the USA. The real rate is another name for the terms of trade, which is expressed as P_x/P_m, where P_x is the price of export and P_m is the price of import.

The real exchange rate is expressed as:

$$\text{RER} = \text{NER} \times \frac{\text{Price of domestic good}}{\text{Price of foreign good}}$$

This means that the rate at which the British can exchange foreign and domestic goods depends on two factors:

(i) The price of the good in local currency; and

(ii) The rate at which the two currencies are exchanged.

Symbolically, the RER may be expressed as: $e_r = e_n \times (P/ P^*)$

Where e_r is the RER, e_n is the NER and (P/ P*) is the ratio of price level in the home country (P) and the price level in the foreign country (P*).

3.5. Instruments of Foreign Exchange Market

A financial instrument is a financial medium such as bill of exchange, bond, currency, stock etc. which is used for the borrowing purposes. In relation to the foreign exchange market, the various financial instruments that are commonly used are as follows:

1. Spot Transaction: A spot transaction is an agreement to buy or sell a currency at the current exchange rate. To state otherwise, it is an exchange of one currency for another. The transaction is generally settled within two business days after the trade date and involves a cash exchange instead of the creation of a longer-term contract. The currencies are exchanged at the spot rate at the time of the contract. Currency traders use spot transactions to make profits in the same way as equity or commodity traders, buying low and selling high.

2. Forwards: Forwards transactions involve buying or selling of a foreign currency at a future date, not less than three days, at a price determined today. In short, a buyer and a seller agree to trade currency at a particular time and at a particular exchange rate, regardless of the prevailing exchange rate at the time of actual transaction. By locking in a specific exchange rate, the trader is protected against currency fluctuations for the term of the contract. Forward contracts are not standardized and are not traded on exchanges. This type of financial instrument enables the trader to take advantage of currently favorable exchange rates at a future date, as well as protect the trader against the risk of exchange rate volatility.

3. Futures: A futures contract is a forward contract with a pre-determined currency amount, maturity date and interest amount. A futures contact is an agreement to buy or sell a currency in a designated future month at a price determined by the buyer and seller. They are standardized and traded on futures exchanges such as the Chicago Mercantile Exchange (CME). A future transaction is usually carried out within three months. Currency futures are always quoted in terms of the currency value with respect to the US Dollar.

4. Swap: In a swap transaction, one currency is exchanged for another for a specified length of time. The transaction is reversed at a pre-determined future date, in which the original amounts are swapped. The two exchanges occur at different exchange rates. It is the difference in the two exchange rates that determines the swap price. Swaps have various maturity periods. A swap is another form of forward contract.

5. Options: A currency option is similar to a futures contract, as it involves a fixed currency transaction at some future point in time. A currency option gives the holder the right, but not the obligation, to either buy from the option writer or to sell to the option writer a stated quantity of one currency in exchange for another currency at a fixed rate of exchange. The fixed rate of exchange is called the strike price. The option styles can be American or European. In an American-style option the option can be exercised at any date before the agreed upon expiration. European options can only be exercised on the exercise date, not before. The option holder pays a premium to the option writer for the option. The premium is lost if the buyer does not exercise the option. Options protect the holder against the risk of unfavourable changes in the exchange rates.

3.6. Components of the Indian Foreign Exchange Market

Forex markets can be classified on the premise of type of transactions that are carried out i.e. whether the transactions are spot or forward. On this basis, there are two types of forex markets:

1) Spot Market

2) Forward Market

1) Spot Market: Spot market implies a market where the payments and receipts are made immediately. Generally, a time of two business days is permitted to settle the transaction. Spot market is of daily nature and deals only in spot transactions of foreign exchange (not in future transactions). The rate of exchange, which commands in the spot market, is referred to as spot exchange rate or current rate of exchange. The term 'spot transaction' is a bit misleading. In fact, spot transaction should mean a transaction, which is executed 'on the spot' (i.e., immediately). However, a two-day margin is

permitted as two days are required for transactions made through cheques to be cleared.

2) Forward Market: Forward market is a market were selling and buying of foreign currency is settled at a specified future date at a specified rate agreed upon today. The exchange rate quoted in forward transactions is known as the forward exchange rate. Generally, almost all international transactions are signed on one date and completed on a later date. Forward exchange rate becomes useful for both the parties involved in the transaction. The time period ranges from days to years. Currency swaps are a prominent type of forward transaction; these imply an exchange of currency by two parties for an agreed timeframe and an arrangement to swap currencies at an agreed later date. Another type is a foreign currency future, which is inclusive of interest. A standard contract is drawn up and a maturity date arranged. The time schedule is about three months. In a foreign exchange option (FX option), the most liquid and biggest options market in the world, the owner may choose to exchange money in a designated currency for another currency at an agreed future date. This type of transaction depends on the availability of option contracts on an organized exchange. Otherwise, such forex deals may be carried out using an over-the-counter (OTC) contract.

Forward Contract is executed for two reasons:

a) To minimize the risk of loss due to unfavorable changes in the exchange rate (through hedging);

b) To make profit (through speculation).

3.7. Significance of the Foreign Exchange Market

The forex market is the mechanism, through which purchasing power can be transferred from one country to another, credit for international transactions can be obtained and exposure to foreign exchange risk can be minimized.

1. Transfer of Purchasing Power (Clearing Function): The core element of the forex market is to provide for the conversion of one currency into another i.e. payment between importers and exporters. For e.g. Indian rupee is converted into U.S. dollar and vice-versa. To carry out this function, various credit

instruments are used such as telegraphic transfers, foreign bills and bank drafts.

2. Credit Function: The foreign exchange market supplies credit to both national and international, to encourage foreign trade. It is necessary as sometimes; the international payments get delayed for 60 days or 90 days. Obviously, when foreign bills of exchange are used in international payments, a credit for about 3 months, till their maturity, is required.

3. Hedging Function: Another function of forex market is to hedge against foreign exchange risks. Hedging signifies providing for the forex risk that arise out of the changes in exchange rates. Under this function the forex market protects the interest of the concerned persons from any unforeseen alterations in exchange rate. The exchange rates in a free market may move upward and downward; this can either be advantageous or dis-advantageous for the transacting parties. Hedging can be executed by means of a spot exchange market or a forward exchange market involving a forward contract.

3.8. Advantages of the Foreign Exchange Market

1. The foreign exchange market is extremely liquid; hence it is rapidly growing popularity. Currencies can be converted when purchased or sold without engendering significant price movement and the losses can be minimized.
2. Since no central bank is there, trading can take place anywhere in the world and works on a 24-hour basis apart from weekends.
3. A small amount of investment is required as compared to the amount required in other investments. Forex trading is tremendous in this respect.
4. In common with futures, forex is transacted using a “good faith deposit” rather than a loan. The interest rate spread is an attractive advent.

3.9. Limitations of the Foreign Exchange Market

1. The main risk involved in the transactions is that one counter party does not deliver the currency concerned with a very large transaction. In theory at least, this can bring failure to the entire foreign exchange market.

2. A large amount of capital is required to make gains since the profit margins on small-scale trades are very low.
3. The increased amount of leverage means that traders may have to bear losses to a significant extent of their investment if the market moves significantly in a particular direction against the investor's current open position.

3.10. Theories of Foreign Exchange Rate

There are three theories of the determination of foreign exchange rate. Some of the prominent explanations or theories include:

1. Mint Parity Theory
2. The Purchasing Power Parity Theory
3. The Balance of Payments Theory

1. The Mint Parity Theory:

The earliest theory of foreign exchange has been the mint parity theory. This theory was applicable for those countries which had the same metallic standard (gold or silver). Under the gold standard, countries had their standard currency unit either of gold or it was freely convertible into gold of a given purity. The value of currency unit under gold standard was defined in terms of weight of gold of a specified purity contained in it. The central bank of the country was always willing to buy and sell gold up to an unlimited extent at the given price. The price at which the standard currency unit of the country was convertible into gold was called as the mint price.

Suppose the official price of gold in Britain was £ 20 per ounce and in the United States it was $ 80 per ounce, these were the mint prices of gold in the two countries. The rate of exchange between these two currencies would be determined as £ 20 = $ 80 or £ 1 = $ 4.

This rate of exchange determined on weight-to-weight basis of the metallic contents of currencies of the two countries was called mint par of exchange or the mint parity. So, the mint par values of the two currencies determined the basic rate of exchange between them. Under the gold standard, the balance of payments adjustments was made through the free international flows of gold. The export and import of gold involved costs of packing, freight,

insurance, interest etc. Consequently, the actual rate of exchange between two currencies could vary above and below the mint parity by the extent of cost of gold export.

In order to illustrate it, the supposition is taken that the U.S. has a BOP deficit with Britain. It is adjusted through the export of gold to Britain. The mint parity between pound and dollar is £ 1 = $ 4. The cost of exporting gold including freight, insurance, packing, interest etc. of gold worth $ 4 is 0.04 dollar. So, the U.S. importers have to pay 4.04 dollars (4+.04) for each pound. No U.S. importer will pay more than 4.04 dollars for one British pound because he can buy 4-dollar worth of gold from the U.S. treasury and transport it to Britain and obtain 1 pound in exchange of that.

Therefore, the exchange rate between dollar and pound at the maximum can be £ 1 = $ 4.04. This exchange rate signifies U.S. gold export point or upper specie point. Similarly, the exchange rate of pound could not fall below $ 3.96 dollars, in case the United States had a BOP surplus resulting in flow of gold from Britain to that country. If the rate of exchange were lower than £ 1 = $ 3.96, the exporter would have preferred to import gold from Britain. This rate of exchange (£ 1 = $ 3.96) is the U.S. gold import point or lower specie point. The upper and lower specie points prescribe the limits within which the fluctuation can take place in the market rate of exchange.

The determination of the rate of exchange, according to Mint Parity Theory, can be explained through Fig. 3.4.

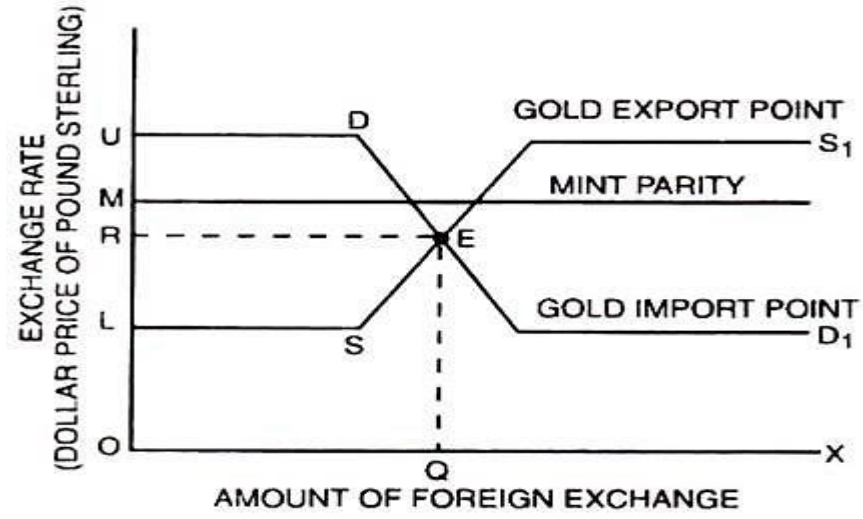

Fig.3.4. Mint Parity Theory

In Fig. 3.4, the amount of foreign exchange is measured along the horizontal scale and the exchange rate is measured along the vertical scale. DD_1 and SS_1 are the demand and supply curves of foreign exchange. The equilibrium market rate of exchange between dollar and pound sterling is determined by the intersection of DD_1 and SS_1 curves at E. The equilibrium rate of exchange is OR at which the quantity of foreign exchange demanded and supplied is OQ. The horizontal line drawn at M denotes mint-parity (£ 1 = $ 4). The mint parity and market rate of exchange do not necessarily coincide. The horizontal lines drawn at U and L denote the gold export point or upper specie point and gold import point or lower specie point respectively. The horizontal portion S_1 of the supply curve SS_1 corresponds with the upper specie point.

It indicates that no American would pay more than $ 4.04 for each pound. He can get any quantity of pounds at the price of $ 4.04 by exporting gold so that the supply function becomes horizontal or perfectly elastic at the upper specie point. D_1 part of the demand function DD_1 is again horizontal and it corresponds with the lower specie point L.

At the exchange rate £ 1 = $ 3.96, there can be an unlimited demand for pounds by the Americans so that the demand curve becomes perfectly elastic at the lower specie point. If the rate of exchange falls below the lower specie point, the U.S. will prefer to import gold from Britain. It, therefore, lies down that the rate of exchange can lie only within the limits of the upper and lower specie points or within the gold-export and gold-import points.

The mint parity theory of foreign exchange rate highlighted two important facts:

Firstly, the actual rate of exchange can differ from the equilibrium rate of exchange.

Secondly, under gold standard, there are specified limits beyond which the fluctuations in the rate of exchange cannot take place.

The mint parity theory was severely criticized on the various grounds. Firstly, the international gold standard has been completely abandoned since its breakdown under the weight of depression of 1930's. It is, therefore, unrealistic to analyse the rate of exchange presently in terms of mint parities. Secondly, the theory presupposed the free international gold movements. The

modern governments do not permit the free buying and selling of gold internationally. In these circumstances, the mint parity theory of exchange rate has little relevance. Thirdly, most of the countries at present are having inconvertible paper currencies. In such a system, the mint parity theory cannot at all determine the rate of exchange.

2. Purchasing Power Parity Theory

The purchasing power parity theory enunciates the determination of the rate of exchange between two inconvertible paper currencies. Although this theory can be traced back to Wheatley and Ricardo, yet the credit for developing it in a systematic way has gone to the Swedish economist Gustav Cassel. This theory states that the equilibrium rate of exchange is determined by the equality of the purchasing power of two inconvertible paper currencies. It implies that the rate of exchange between two inconvertible paper currencies is determined by the internal price levels in two countries.

There are two versions of the purchasing power parity theory:

(i) The Absolute Version and

(ii) The Relative Version.

(i) The Absolute Version:

According to this version of the purchasing power parity theory, the rate of exchange should normally reflect the relation between the internal purchasing power of the different national currency units. In other words, the rate of exchange equals the ratio of outlay required to buy a particular set of goods at home as compared with what it would buy in a foreign country.

The absolute version of the purchasing power parity theory is, no doubt, quite simple and elegant, yet it has certain shortcomings. Firstly, this version of determining exchange rate is of little use as it attempts to measure the value of money (or purchasing power) in absolute terms. In fact, the purchasing power is measured in relative terms. Secondly, there are differences in the kinds and qualities of products in the two countries.

These diversities create serious problem in the equalisation of product prices in different countries. Thirdly, apart from the differences in quality and kind of goods there are also differences in the pattern of demand, technology, transport costs, tariff structures, tax policies, extent of state intervention and

control and several other factors. These differences prohibit the measurement of exchange rate in two or more currencies in strict absolute terms.

(ii) The Relative Version:

The relative version of Cassel's purchasing power parity theory attempts to explain the changes in the equilibrium rate of exchange between two currencies. It relates the changes in the equilibrium rate of exchange to changes in the purchasing power parities of currencies. In other words, the relative changes in the price levels in two countries between some base period and current period have vital bearing upon the exchange rates of currencies in the two periods.

According to this version, the equilibrium rate of exchange in the current period (R_1) is determined by the equilibrium rate of exchange in the base period (R_1) and the ratio of price indices of current and base period in one country to the ratio of price indices of current and base periods in the other country.

$$R_1 = R_0 . \frac{P_{B1}/P_{B0}}{P_{A1}/P_{A0}}$$

In the above expression, R_1 is the rate of exchange in the current period and R_0 is the rate of exchange in the base period or the original rate of exchange. P_{B1} and P_{B0} are the price indices in country B in the current and base periods respectively. P_{A1} and P_{A0} are the price indices in the current and base periods respectively in the country A.

The purchasing power parity theory is explained through Fig.3.5.

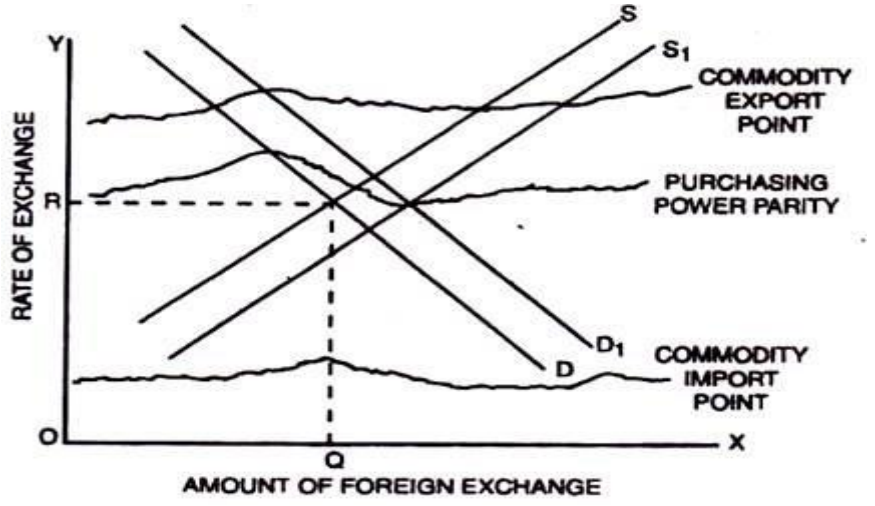

Fig.3.5

In Fig. 3.5, the purchasing power parity curve is of a fluctuating character. It signifies a moving parity. Along with it, the curves indicating commodity export and commodity import points also fluctuate. The market rate of exchange is determined by the intersection of demand curve DD and supply curve SS of foreign exchange.

The market rate of exchange is OR and the quantity of foreign exchange demanded and supplied is OQ. When the demand for and supply of foreign exchange change, the demand and supply curves can undergo shifts as shown by D_1 and S_1 curves.

Accordingly, there will be variations in the market rate of exchange around the normal rate of exchange determined by the purchasing power parity. The market rate of exchange, however, will invariably lie between the limits specified by the commodity export and commodity import points.

3. Balance of Payments Theory

The balance of payments theory of exchange rate maintains that rate of exchange of the currency of one country with the other is determined by the factors which are autonomous of internal price level and money supply. It emphasises that the rate of exchange is influenced, in a significant way, by the balance of payments position of a country.

A deficit in the balance of payments of a country signifies a situation in which the demand for foreign exchange (currency) exceeds the supply of it at a given rate of exchange. The demand for foreign exchange arises from the demand for foreign goods and services. The supply of foreign exchange, on the contrary, arises from the supply of goods and services by the home country to the foreign country.

In other words, the excess of demand for foreign exchange over the supply of foreign exchange is coincidental to the BOP deficit. The demand pressure results in an appreciation in the exchange value of foreign currency. As a consequence, the exchange rate of home currency to the foreign currency undergoes depreciation.

A balance of payments surplus signifies an excess of the supply of foreign currency over the demand for it. In such a situation, there is a depreciation of foreign currency but an appreciation of the currency of the home country.

The equilibrium rate of exchange is determined, when there is neither a BOP deficit nor a surplus. In other words, the equilibrium rate of exchange corresponds with the BOP equilibrium of a country. The determination of equilibrium rate of exchange can be shown through Fig. 3.6.

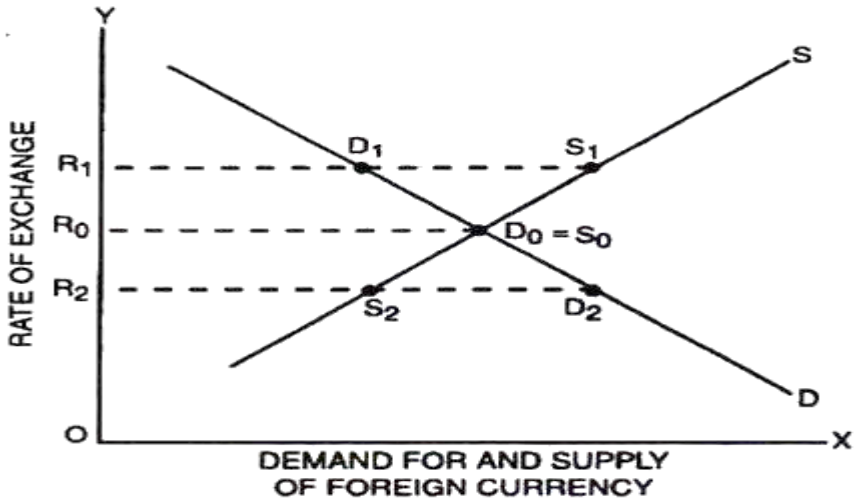

Fig. 3.6.

The demand for and supply of foreign exchange are measured along the horizontal scale and rate of exchange is measured along the vertical scale. D is the negatively sloping demand function of foreign currency. S is the positively sloping supply function of foreign currency. The equilibrium rate of exchange is OR_0 which is determined by the intersection between the demand and supply functions of foreign currency where $D_0R_0 = S_0R_0$.

The equality between the demand for and supply of foreign exchange signifies also the BOP equilibrium of the home country. If the rate of exchange is OR_1 which is higher than the equilibrium rate of exchange OR_0, the demand for foreign currency D_1R_1 falls short of the supply of foreign currency S_1R_1. In this situation, the home country has a BOP surplus. The excess supply of foreign exchange lowers the exchange value of foreign currency relative to home currency. The appreciation in the exchange rate of home currency reduces exports and raises imports. In this way, the BOP surplus gets reduced and the system tends towards the BOP equilibrium and also the equilibrium rate of exchange. If the rate of exchange is OR_2 which is lower than the equilibrium rate of exchange OR_0, the demand for foreign currency D_2R_2 exceeds the supply of foreign currency S_2R_2. The excess demand of foreign currency D_2S_2 signifies the BOP deficit. As a result of the excess

demand for foreign currency, the exchange value of foreign currency appreciates while the home currency depreciates.

The depreciation of the exchange value of home currency leads to a rise in exports and a decline in imports. Thus, the BOP deficit gets reduced and the exchange rate appreciates to approach finally the equilibrium rate of exchange OR_0 where the BOP is also in a state of equilibrium.

If there are changes in demand or supply or both, the rate of exchange will be accordingly influenced. Apart from the changes in demand and supply, the rate of exchange is affected by the foreign elasticity of demand for exports, the domestic elasticity of demand for imports, the domestic elasticity of supply of exports and the foreign elasticity of supply of imports. The stability of the equilibrium rate of exchange requires that the demand elasticities should be high whereas the supply elasticities should be low.

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UNIT – IV

BALANCE OF PAYMENTS

4.1. Introduction

The Balance of Payments accounts is an integral part of the national income accounts for an open economy. They record all transactions between residents of the country concerned and those of other countries, where residents are broadly interpreted as all individuals, businesses, and governments and their agencies; international organisations are also classified as foreign residents for this purpose. The balance of payments accounts however serve another purpose. The balance of a country's foreign transactions, and the accompanying issues of the exchange rate and reserves has long been a focus of interest for policy makers, the way in which policy makers view these foreign transactions, and the policies they have adopted, have of course varied over time. There is a distinct contrast, for example, between the mercantilist view that foreign trade should be managed so as to accumulate gold specie through running a surplus, and the view taken in the decades after the Second World War that governments should seek to maintain balance of payments equilibrium. There are equally important distinctions between the various exchange rate regimes that have been employed, from the various gold standards to the floating exchange rates of the 1930s and the recent period and the pegged exchange rate system devised at Bretton Woods and used until the early 1970s.

4.2. Balance of Payments

The term Balance of Payments is very often referred to in the news and is always a hot topic for political and economic discussions across the globe. The term Balance of Payments is used in various contexts and in order to avoid ambiguity, it is essential to understand its meaning. According to V. Sharan, "Balance of Payments is a macro level statement showing inflow and outflow of foreign exchange". This means that it is a statement that records the flow of foreign exchange arising as a result of international economic transactions. International economic transactions include export and import of goods and services, unilateral transfers, Foreign Direct Investment, Foreign Portfolio Investments, etc. in and out of a country. A more comprehensive

definition of Balance of Payments is provided by Cheol S. Eun and Bruce G. Resnik. According to them, Balance of Payments can be defined as, “the statistical record of a country's international transactions over a certain period of time presented in the form of double entry book keeping”. This definition shows that Balance of Payments statement has a time dimension that is, it is prepared over a certain time period which can be a quarter, a year, etc. Since BOP is a statement showing inflow and outflow of foreign currency in a country, all receipts from foreigners will be recorded as credit, bearing a positive sign. Receipts accrue to a country in case of exports (sale of goods and services abroad results in inflow of foreign exchange into the country), sale of financial and real assets. Likewise, all payments to foreigners will be recorded as debit, bearing a negative sign, indicating an outflow of foreign exchange. Payment of foreign exchange arises due to import of goods and services, purchase of financial and real assets. Thus,

Inflow of foreign exchange	=>	+ve entry (CREDIT)
Outflow of foreign exchange	=>	-ve entry (DEBIT)

4.3. Components of Balance of Payments

The BOP statement covers and records all types of international economic transactions that a country engages in over a certain time period. Based on the type of transactions, the BOP sub accounts are as follows:

i. The current account
ii. The capital account
iii. Statistical errors and discrepancies
iv. The official reserves account.

4.3.1. Current Account

The current account records all international economic transactions involving export and import of goods and services occurring within the current period. It has the following four sub categories:

1. Goods/ Merchandise Trade: The export and import of goods is included in this subcategory of the current account. This is the most basic and traditional form of international economic transaction. The export of goods causes an inflow of foreign exchange into the country while the import of

goods causes an outflow of foreign exchange from the country. Consequently, export of goods is recorded as a credit or +ve item in the BOP statement while the import of goods is recorded as a debit or a –ve item in the BOP statement. The difference between the export and import of goods is known as Balance of trade (BOT). If export of goods is more than the import of goods, the BOT is in surplus. On the other hand, if import of goods exceeds the export of goods, the BOT is in deficit.

Thus, Exports – Imports => BOT

Exports > Imports => BOT surplus/+ve BOT

Exports < Imports => BOT deficit/-ve BOT

2. Services/ Invisible Trade: This sub-category of the current account includes export and import of services. Services are intangible commodities. Since, they do not have a physical substance, service trade is also known as invisible trade. Common internationally traded services are transportation, tourism, financial charges for banking and insurance, royalties for intellectual property rights, constructions services, etc. The rendering or export of these services, entitles a country to receipt of foreign exchange and is therefore recorded as a credit or +ve item. On the other hand, the utilization or import of these services, creates a foreign exchange payment liability and is hence, recorded as a debit or a –ve item. This sub-category of the current account has recorded the fastest growth for many industrial countries in the last two decades.

3. Factor Income: This sub-category of the current account includes income by way of interest and dividend on investments made abroad in previous periods. Eg. If an Indian company sets up a subsidiary in Singapore, the proportion of net income of the subsidiary (as dividend) is paid to the parent company (in India), in the current period, it shall be treated as current investment income for India. Also, wages and salaries to non-resident workers shall be included in this sub-category.

4. Unilateral Transfers: As the name suggests, this sub-category of current account includes one-direction flows. Unlike exports and imports, unilateral transfers are unrequited or unreciprocated flow of funds. Hence, there is no offsetting flow against unilateral transfers. Flow of funds by way of gifts,

remittances, pension, foreign aid, official and private grants and other similar transfers against which no services are rendered or goods provided are included in this sub-category. Receipt of such transfers causes in inflow of foreign exchange and is recorded as a credit or +ve item and vice versa. The debit and the credit side of the various sub-categories of current account need to be balanced. If the credit side is bigger than the debit side, the difference is known as current account surplus and when the debit side is bigger than the credit side, the difference is known as current account deficit. A deficit in the current account is to be met by either of the following:

- Borrowings from foreigners, or
- Selling off past foreign investments

4.3.2. The Capital Account/ Financial Account: The capital account records all international economic transactions relating to investment in or withdrawal from financial assets and real estate. It reflects the flow of funds relating to international loans, investments and banking funds. Investment in or purchase of financial and real estate abroad is recorded as a debit item in the capital account since it involves an outflow of capital. Likewise, sale of financial assets and real estate to foreigners is recorded as a credit item in the capital account since it results in receipt of foreign exchange.

1. Foreign Direct Investment (FDI): When a foreign investor acquires 10% or more of the voting rights of a domestic business, with an intent to control it, such an investment is called foreign direct investment or FDI. Eg. When the Japanese automobile manufacturer, Honda, built an assembly plant in Ohio, it made a foreign direct investment in Ohio. In the same way, acquisition of Carnation, a U.S. firm by the Swiss multinational, Nestle Corporation, amounted to FDI. Giant multinationals locating their production facilities in India, China and other Asian countries to benefit from cheap labor also amounts to FDI. When a country receives FDI, capital flows into the country and it is hence recorded as a credit or a +ve item in the capital account of the BOP statement. On the other hand, when a country makes FDI abroad, capital flight takes place. Hence, it is recorded as a debit or a –ve item in the BOP.

2. Portfolio Investment: This sub-category of the capital account includes the sale and purchase of foreign financial assets such as bonds, stocks,

money market instruments, financial derivatives and the like which does not cause a transfer of control. Purchase of Indian financial assets by foreigners causes an inflow of foreign exchange and hence, it should be recorded as a credit or +ve item in the BOP statement. Likewise, Purchase of foreign financial assets by Indians causes a capital flight and hence, should be recorded as a debit or –ve item in the capital account. In the same way, withdrawal of investment in foreign financial assets by Indians causes an inflow of capital and withdrawal of investment in Indian financial assets by foreigners causes an outflow of capital.

3. Other Investments: This sub-category of capital account includes transactions in trade credit, currency, bank deposits, etc.

4.3.3. Errors and Omissions: This is an item in the BOP statement. It is also known as statistical discrepancy. It is considered while arriving at the overall balance. The statistical discrepancy in the BOP arises due to the following reasons:

1. Difficulty in data collection: Data for the BOP statement is collected from different sources and these sources differ in their approach of data compilation. Hence, statistics from different sources vary resulting in statistical discrepancy in the BOP statement.

2. Lead or lag transactions: Movement of foreign exchange may lead or lag the transactions that they are financing. Eg. If goods are shipped in March 2013 and payment for them is received in April 2013. The sent shipment will be recorded in the financial year ending 31st March 2013. However, payment for it shall be recorded in the following financial year ending 31st March 2014. This difference leads to statistical discrepancy in the BOP statement.

3. Estimates: The BOP statement uses estimates to arrive at certain figures relating to travel, tourism, etc., for which exact amounts are difficult to ascertain. Estimates are based on samples. If the sample chosen is defective, statistical discrepancy is bound to arise.

4. Unrecorded illegal transactions. Once statistical discrepancy is identified, the overall balance can be arrived at. The balancing between all credits and debits in the current account, capital account and the statistical discrepancies represent the overall balance. If the overall balance is in surplus

the surplus amount is used to repay borrowings from the IMF and the balance (if any) is carried to the official reserves account. If the overall balance is in deficit, the monetary authorities of the country arrange for capital flows via drawings from the IMF or official borrowings or by bringing down the foreign exchange reserves, to make good the deficit. Based on the above, capital account flows can be of two types: Accommodating capital flows and autonomous capital flows. Accommodating capital flows or above the line capital flows is the inflow of capital meant to cover the overall BOP deficit. The objective of such flows is to bring the BOP statement into equilibrium. It usually includes drawings from the IMF. Autonomous capital flows or below the line capital flows is the inflow of capital which occurs regardless of any deficit in the BOP. Eg. Foreigners repaying loan, FDI inflows in a country, etc.

4.3.4. Official Reserves Account: The official reserves account records monetary gold, SDR allocations to a country by the IMF and foreign currency assets held by the monetary authorities of a country. If the overall BOP is in surplus, the surplus gets added to the official reserves account. If the overall BOP is in deficit, the official reserves account gets reduced by the deficit amount, if accommodating capital flows are unavailable.

Balance of Payments Always in Equilibrium?

Balance of payments always balances means that the algebraic sum of the net credit and debit balances of current account, capital account and official settlements account must equal zero. Balance of payments is written as.

$B = R_f - P_f$

B =where, B represents balance of payments,

R_f receipts from foreigners,

P_f payments made to foreigners.

When $B = R_f - P_f = 0$, the balance of payments is in equilibrium.

When $R_f - R_f > 0$, it implies receipts from foreigners exceed payments made to foreigners and there is surplus in the balance of payments. On the other hand, when $R_f - P_f < 0$ or $R_f < P_f$ – there is deficit in the balance of payments as the payments made to foreigners exceed receipts from foreigners.

If net foreign lending and investment abroad are taken, a flexible exchange rate creates an excess of exports over imports. The domestic currency depreciates in terms of other currencies.

The export becomes cheaper relatively to imports. It can be shown in equation form:

$$X + B = M + I_f$$

Where X represents exports, M imports, 1, foreign investment, B foreign borrowing

or $X-M= I_f -B$

or $(X-M)-(I_f -B) = 0$

The equation shows the balance of payments in equilibrium. Any positive balance in its current account is exactly offset by negative balance on its capital account and vice versa. In the accounting sense, the balance of payments always balances. This can be shown with the help of the following equation:

$$C + S + T= C + I + G + (X-M)$$

$$Y=C + I + G + (X — M) \qquad [Y = C + S + T]$$

Where C represents consumption expenditure, S domestic saving, T tax receipts, I investment expenditures, G government expenditures, X exports of goods and services, and M imports of goods and services.

In the above equation

$C + S + T$ is GNI or national income (Y), and

$C + I + G =A$,

Where A is called 'absorption'.

In the accounting sense, total domestic expenditures ($C + I + G$) must equal current income ($C + S + T$) that is $A = Y$. Moreover, domestic saving (S_d) must equal domestic investment (I_d). Similarly, an export surplus on current account ($X > M$) must be offset by an excess of domestic savings over investment ($S_d > I_d$). Thus the balance of payments always balances in the accounting sense, according to the basic principle of accounting.

In the accounting system, the inflow and outflow of a transaction are recorded on the credit and debit sides respectively. Therefore, credit and debit sides always balance. If there is a deficit in the current account, it is

offset by a matching surplus in the capital account by borrowings from abroad or/and withdrawing out of its gold and foreign exchange reserves, and vice versa. Thus, the balance of payments always balances in this sense also.

4.4. Measuring Deficit or Surplus in Balance of Payments

If the balance of payments always balances, then why does a deficit or surplus arise in the balance of payment of a country? It is only when all items in the balance of payments are included that there is no possibility of a deficit or surplus. But if some items are excluded from a country's balance of payments and then a balance is struck, it may show a deficit or surplus. There are three ways of measuring deficit or surplus in the balance of payments:

First, there is the basic balance which includes the current account balance and the long-term capital account balance.

Second, there is the net liquidity balance which includes the basic balance and the short-term private non-liquid capital balance, allocation of SDRs, and errors and omissions.

Third, there is the official settlements balance which includes the total net liquid balance and short-term private liquid capital balance.

If the total debits are more than total credits in the current and capital accounts, including errors and omissions, the net debit balance measures the deficit in the balance of payments of a country. This deficit can be settled with an equal amount of net credit balance in the official settlements account. On the contrary, if total credits are more than total debits in the current and capital accounts, including errors and omissions, the net debit balance measures the surplus in the balance of payments of a country. This surplus can be settled with an equal amount of net debit balance in the official settlements account.

Each balance would give different figure of the deficit. The items that are included in a particular balance are placed 'above the line' and those excluded are put 'below the line'. Items that are put above the line are called autonomous items. Items that are placed below the line are called settlement or accommodating or compensatory or induced items. All

transactions in the current and capital accounts are autonomous items because they are undertaken for business or profit motives and are independent of balance of payments considerations. According to Sodersten and Reed, "Transactions are said to be autonomous if their value is determined independently of the balance of payments". Whether there is BOP deficit or surplus depends on the balance of autonomous items. If autonomous receipts are less than autonomous payments, BOP is in deficit and vice versa.

"Accommodating items on the other hand are determined by the net consequences of the autonomous items, according to Sodersten and Reed. They are in the official reserve account. They are compensating (induced or accommodating) short-term capital transactions which are meant to correct disequilibrium in the autonomous items of balance of payments.

But it is difficult to determine which item is compensatory and which is autonomous. For instance, in the table given above, the main difference in the three balances is their treatment of short-term capital movements which are responsible for deficit in the balance of payments.

The basic balance places short-term private non-liquid capital movements below the line while the net liquid balance puts them above the line. Similarly, the net liquid balance places short-term private liquid capital movements below the line and the official settlements balance puts them above the line. Thus, as pointed out by Sodersten and Reed, Essentially the distinction between autonomous and accommodating items lies in the motives underlying a transaction, which are almost impossible to determine".

4.5. System of Balance of Payment Accounting

International economic transactions are recorded in the BOP in the form of double entry bookkeeping. Every credit has a corresponding and matching debit entry and vice-versa. This means that disequilibrium in the BOP does occur, however, not from the accounting point of view since all credits are matched with corresponding debits (if the entries are correctly recorded.). Eg. Suppose that an export house in India exports garments worth Rs. 10 million to the US and the US pays for it from its rupee bank account kept with India.

Then, the receipt of Rs. 10 million by USA will be recorded as a credit or a positive item in the current account, and its corresponding debit or negative entry will be in the capital account showing a reduction in the Indian bank's liabilities (US rupee deposits in India). It should be noted that though BOP is based on the double entry book-keeping system of accounting, however, individual transactions i.e. the current and capital account entries are recorded independently of one another. Hence, due to mistakes, errors and statistical discrepancies, the debit of the BOP may not match with its credit and hence, the overall balance may not balance.

BOP is always in a balance. BOP disequilibrium always exists. This statement is a statistical explanation of equilibrium in BOP. However, there are two notions of equilibrium. The first notion is an accounting notion. Here, it is said that "BOP is always in a balance". It must first be understood that unlike an ordinary system of accounting, the BOP accounts are a peculiar account. It is a single account which consists of a current account as well as a capital account. The receipts and payments in the current account are revenue items of income & expenditure. Therefore, any surplus of expenditure (imports) over income (exports) would result in a revenue deficit. This deficit is known as the Current Account Deficit (CAD). In an accounting sense, the BOP Accounts is said to be always in a balance because as a single account, the deficit on the current account has to necessarily be matched with a surplus on the capital account. In this sense, BOP accounting is different from financial accounting. Hence, BOP being a single account is recorded in such a way that on the whole, it remains in a state of balance. This does not preclude the possibility of a deficit or surplus arising in any one of the two constituents of the BOP accounts. One part of the account compensates the deficit or surplus in the other part of the BOP account. In an economic sense, however, the BOP accounts, in most cases is found to be in a state of disequilibrium. Therefore, we can justify both the statements, namely that BOP is always in a balance and disequilibrium in BOP always exist.

4.6. Disequilibrium in Balance of Payments

Albeit the credit and debit sides are written balanced in the BOP, it may not always remain balanced. Very often, either the debit side exceeds the

credit side (referred to as deficit) or the credit side exceeds the debit side (referred to as surplus) which engenders an imbalance in the BOP account which is referred to as disequilibrium.

Surplus in balance of payments:

When the autonomous receipts (credits) are greater than autonomous payments (debits), the balance of payments will be in surplus or favorable. To state it otherwise, if total credits exceed total debits in the current and capital account (including errors & omissions), the balance of payments will say to be in surplus. This surplus is settled with an equal amount of net debit in the official reserves account.

Deficits in balance of payments:

When the autonomous receipts (credits) are smaller than autonomous payments (debits), the balance of payments will be in deficit or unfavorable or adverse. To state it differently, when total debits exceed total credits in the current and capital accounts (including errors & omissions), the BOP is said to be in deficit. This deficit is settled with an equal number of net credits in the official reserve account.

4.6.1. Types of Disequilibrium:

There are three main types of Disequilibrium cause by different conditions. These are:

1) Temporary Disequilibrium: Temporary disequilibrium in the form of deficits or surpluses tends to last for a short span of time. They are the result of temporary alterations in the economy like - crop failure, seasonal fluctuations, effect of weather on agricultural production, etc. Such disequilibrium may occur once a while and gets automatically corrected. It does not pose a serious problem for a country.

2) Cyclical Disequilibrium: This arises due to the trade cycles or business cycles which very often differ between trading partners. Under such circumstances there would be periods when exports boom and other periods when imports are higher.

3) Fundamental Disequilibrium: This refers to a state of deficit in BOP caused by the weakness of fundamentals in an economy. This includes low growth, high-cost prices structure & low efficiency. This is a long term

phenomenal which can be corrected only with structural changes in the economy.

4) Structural Disequilibrium: This is caused by change in tastes, culture & technology. For instance, developed economies may discover synthetic substitutes for primary exports from developing economies. This would lead to a permanent fall in the export potential of developing economies who are essentially primary exporters. Hence, there would be a long-term tendency towards deficits in BOP.

4.6.2. Causes of Disequilibrium in Balance of Payments

1. Population Growth: Most countries experience acceleration in the population and in some like India and China the population is not only large but increases at a faster rate. Imports become imperative to satisfy the needs of increasing population base.

2. Development Programs: Developing countries which have embarked upon planned development programs require importing capital goods, some raw materials which are not available at home and highly efficient and skilled manpower. To pursue long-term development, imports of these items for quite a long time become necessary which engenders a BOP deficit.

3. Demonstration Effect: It has been seen that people in developing countries try to adapt to the consumption pattern of the people in developed nations, due to which their imports tend to increase. If the exports do not rise at the same time, the balance of payments might become unbalanced.

4. Natural Factors: Sometimes, natural factors such as floods, famines etc. can adversely affect the agricultural and industrial production in a particular year. Due to low level of production, the country will be able to export less and will need to import more, thus causing disequilibrium in the BOP.

5. Cyclical Fluctuations: Trade cycles such as boom, recession etc. can affect the balance of payments by influencing the level of a country's exports. For instance, in case of a boom in the markets, the exports of a country will get an enhancement due to the increased demand from the other countries; this will cause disequilibrium in the BOP.

6. Inflation: Due to rapid economic development, income and price levels experience an increment. Due to this, imports get increased while exports get reduced, thus, causing a deficit in the BOP.

7. Poor Marketing Strategies: The developed nations follow advanced marketing strategies due to which their exports increase. Whereas, developing nations experience a deficit due to their poor marketing strategies.

8. Flight of Capital: Speculators tend to withdraw their funds from the developing nations whenever there is any adverse news related to their economy. Due to this, developing nations lose foreign exchange and gold reserves which the investors invest in more stable economies i.e. in developed nations. This capital movement causes disequilibrium in the developing countries BOP.

9. Globalization: Due to globalization there has been more liberal and open atmosphere for international movement of goods, services and capital. Competition has been increased as a result of globalization of international economic relations. The emerging new global economic order has brought in certain problems for some countries which have resulted in the balance of payment disequilibrium.

4.6.3. Implications of Disequilibrium in BOP

Disequilibrium (surplus or deficit) in BOP is considered undesirable for a country. However, the implication of disequilibrium depends on location or source and duration. In this context the following generalizations are possible

a. With respect to location, it could be said that a surplus in the combined current and capital accounts should be considered desirable for a country. Whereas, a deficit in the combined current and capital account should be considered as undesirable for the country.

b. With respect to duration, it could be said that if the disequilibrium (surplus / deficit) is temporary or short term, then it is not much a serious concern for the country. But, if the disequilibrium (surplus / deficit) is persistent or long term, it becomes an issue of grave concern for the country and needs corrective policy action.

c. A fundamental disequilibrium (in the form of deficit) is undesirable because under a fixed exchange rates regime it forces the country to go for

Devaluation, while under flexible exchange rates it causes depreciation in the External value of the currency.

d. It would increase the external debt of the country and may lead to external debt trap.

e. It leads to depletion in forex reserves and again makes the position of country extremely vulnerable.

f. It makes the country totally dependent on the loans supplied by international organizations and foreign governments and raises serious doubt about the maintenance of its external sovereignty.

g. It is observed that disequilibrium in the form of surpluses is very rare while disequilibrium in the form of deficits is a common phenomenon. Hence, in practice, the term disequilibrium is normally associated with deficits in BOP.

4.7. Adjustment Mechanism of Balance of Payments:

Different approaches to adjusting BOP Disequilibrium:

There are four main approaches to adjusting the BOP disequilibrium. These are as follows:

1. Classical View
2. Elasticity Approach
3. Absorption Approach
4. Monetary Approach

1. The Classical View:

The classical economists were of the view that BOP disequilibrium was self-adjusting. For example, as money supply in the economy increases, prices rise, exports turn uncompetitive and imports become cheaper. This causes exports to drop and imports to rise. With the two events happening, a BOP deficit arises. In order to finance the imports, precious metals leave the country. This reduces the money supply in the economy which lowers the price level. Lower prices make exports rise and imports fall, thus correcting the BOP disequilibrium.

2. The Elasticity Approach:

The traditional approach in respect of effects of devaluation is condensed in the form of Marshall-Lerner condition. It means exports earning

will increase and imports expenditure will decline if price elasticity is more than proportionate (i.e., if it exceeds unity or greater than unity). This situation is known as Marshall and Lerner Condition, since it was discovered in 1923 by A. Marshall and later in 1944 by Abba P. Lerner. The essence of this condition is that an improvement in competitiveness (relative prices) will improve trade balance and balance of payments only if the sum of price elasticity of demand for imports by residents and the price elasticity of demand for exports by non-residents is more than proportionate (exceeds or is greater than unity). The important point to note is that the emphasis of Marshall-Lerner Condition is on the sum of the elasticity and not on elasticity separately. For this reason, the theory is called Elasticities Theory. This may also be called the theory of price-effects on balance of payments. In case of deficit current account balance, they recommended for devaluation of currency. If currency is devalued, export become cheaper and import become costlier, thus export increases and import decreases, which automatically lead balance of payment back in equilibrium. But there is a condition that price elasticity must be greater than unity,

$$\text{i.e. } \in > 1$$

$$Em + Ex > 1$$

Where Em is the price elasticity of demand for import, and Ex is the price elasticity of demand for export. The purpose of the Elasticities Theory is to bring out the effects of price changes on balance of payments. The theory provides the basis for a policy measure like devaluation of a currency, as it indicates the conditions required for the success of devaluation as a measure to correct adverse balance of payments position.

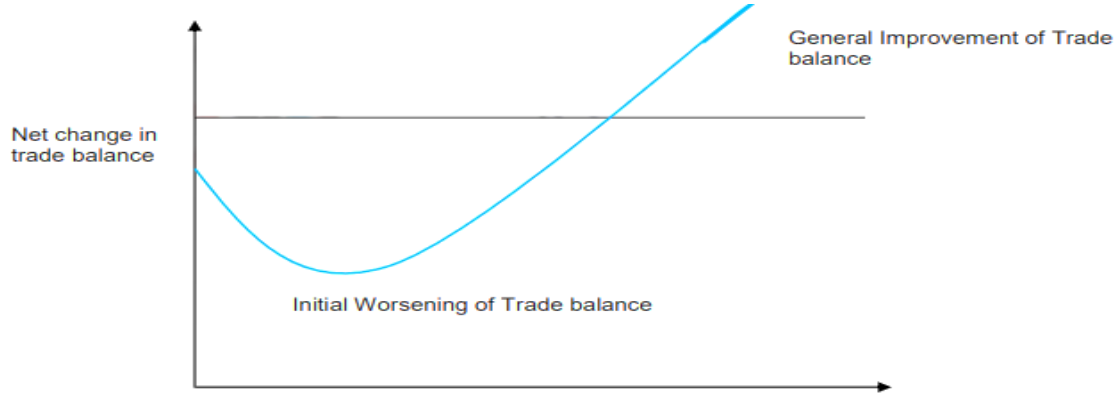

Fig.4.1. J-Curve Effect

J-CURVE EFFECT: - if the elasticity of demand is greater than unity, the import bill will contract and export earnings will increase as a sequel to devaluation. Trade deficit will be removed. However, the problem is that the trade partner may also devalue its own currency as a retaliatory measure. Moreover, there may be a long lapse of time before the quantities adjust sufficiently to change in price. Till then, trade balance will be even worse than that before devaluation. This is nothing but the J-curve effect of devaluation. In figure, trade balance moves deeper into the deficit zone immediately after devaluation. But then it gradually improves and crosses into surplus zone. The curve resembles the alphabet, J and so, it is known as the J-curve effect. On the basis of experiences of India, trade deficit was very high in 1965 and then India devalued rupees by 36% in June 1965. Export should have gone up but export increased only in 1972. Between, 1966-1971, devaluation does not help export to rise. So, this theory was examined by many experts and they realized that there is a lag between devaluation and rising exports. Apart from this the theory also suffers with some other limitations:-

1. It assumes that country's balance of payments position is in balance initially and that change in prices would affect the balance of payments. This is not correct, as no country's balance of payments is in balance, i.e., neither surplus nor deficit.
2. Generally. Exports and imports consist of thousands of different items, and it is difficult to estimate elasticity for all these individually or in aggregate.
3. Marshall-Lerner condition assumes that the supply side is highly flexible; that is, there are no difficulties in the availability of goods for export and production will quickly respond to changes in foreign demand. This is not correct. The most important of these other influences is the change in income.
4. Lastly, the Elasticity's Theory overemphasis the role of trade in improving a country's balance of payments. Changes take place in other parts of balance of payments, as well that is, in the current account as a whole as well as in the capital accounts.

3. Absorption Approach:

This approach is developed in 1952 by S.S.Alexander of the International Monetary Fund, is based on Keynes theory of balance of

payments which explains balance of payments on current account as a macroeconomic phenomenon. It focuses attention on the relationship between international trade and the domestic economy or the domestic economic activity represented by national income or Gross National Product (GNP). Thus, unlike the Elasticities Approach, which attempts to explain what happens to the balance of payments when relative price change, the Absorption Approach explain the changes in national income and their impact on balance of payments. National income or National output, is the sum total of economy activity of a country during a year, i.e., a sum total of goods and services produced in a year. This may be measured as income earned by its population or as output produced by the economy, or as expenditures or total spending in the economy. For the purpose of absorption what is relevant is the latter two, i.e., output and spending or expenditure. Total availability or aggregate supply of goods and services in the economy is represented by output. What is produced is also used for consumption and investment in the economy. This is total spending. The relationship between income or output and expenditure or spending may be expressed thus Y = C+I; Y stands for income or output and C and I stand for consumption and investment spending, respectively. In a closed economy, i.e., an economy which has no transaction with the rest of the world, all national income or output will flow between producers and consumers within the economy. As a result, there will be no tendency for national income or output to change unless consumers, on their own, change their production levels. Thus, Keynes theory of income predicts that when there is change in level of either consumption (or saving) or investment, national income or output will increase or decline. In an open economy, however, foreign trade influences national income or national output through changes in exports and imports. An increase in export earnings is in addition to (or injection into) national income stream and spending on imports is a subtraction (or leakage) from the income stream. The increase in exports increases national income and increase in imports causes decline of it. This relationship between national income or output and foreign trade may be expressed thus Y = C+I+X-M; Y stands national income or output, C+I represent consumption and investment spending and X-M

represent trade balance, X standing for exports and M standing for imports. The question is, by how much will the national income increase, due to an increase in exports. This is measured by the ratio of increase in national income to increase in export earnings. This ratio is called foreign trade multiplier. Similarly, national income will decline due to spending on imports is measured by the ratio of increase in imports to increase in income. This is called marginal propensity to imports. The net effect of the operation of these two tendencies determines the impact of foreign trade on national income. The conclusions that follow are: if in year expenditure or spending in the economy, it means that the economy is absorbing or using up more resources than are available in the economy. The difference is available in the form of imported resources and this is reflected in the balance of payments deficit. If, on the other side, output exceeds expenditure in the economy, it means that the economy has more resources to spare in the form of exports; and this is reflected in the balance of payments surplus. The basic relationship for the absorption approach is BOP = Y-E, where BOP is balance of payments, Y is income or output and E is expenditure. According to absorption, balance of payments deficit (or surplus) on current account reflects the difference between national output and national expenditure.

4. Monetary Approach: The Monetary Approach to balance of payments or external transactions emphasizes the role played by money supply in a country's balance of payments. This is because money supply is the basis for total or aggregate demand in the economy. Every transaction in the economy is financed by the use of money. According to this approach, balance of payments surplus or deficit is a monetary phenomenon because it results from excess demand for money or excess supply of money in the economy. If there is excess money supply, it may be spent within the country and abroad and the country will run into balance of payments deficit, leading to an outflow of the national currency. If there is an inflow of currency into the country, it means that the country is receiving more money than it is paying abroad; that is, there is a balance of payments surplus. In short, inflows and outflows of currency in an economy are associated with balance of payments surplus and deficit. Since money supply changes take place not only due to

transaction in goods and services but also because of capital transactions between countries, the monetary approach explains the balance of payments situation as a whole including capital account. The imported features of this theory are that it establishes a relationship between money supply and balance of payments. The policy implications of this theory are twofold. First, is that for a proper understanding of the balance of payments situation of a country, it is necessary to analyse the demand and supply of money in an economy? The second implication is that any balance of payments policy must aim to bringing into balance the demand for money and the supply of money by focusing attention on the control of domestic money supply. Mundell (1968) also incorporates interest rate and capital account in the ambit of discussion. In his view it is not only government spending but also interest rate that influences income as well as balance of payments. While larger government spending increases income, an increase in income leads to rise in import. With a positive marginal propensity to import, any rise in income as a sequel to increase in government spending will lead to greater imports and worsen the current account. However, changes in interest rate influence both the capital account and current account. A higher interest rate will lead to improvement in current account through lowering of income. At the same time, a higher interest rate will improve the capital account by attracting foreign investment flow. New Cambridge School Approach takes into account savings (S), investment (I), taxes (T), and government spending (G), and their impact on the trade account. In form of equation, it can be written as:

$$S + T + M = G + X + I$$

Or

$$(S-I) + (T-G) + (M-X) = 0$$

Or

$$(X-M) = (S-I) + (T-G)$$

The theory assumes that (S-I) and (T-G) are determined independently of each other and of the trade gap. (S-I) is normally fixed as the private sector has a fixed net level of saving. So, the balance of payments deficit or surplus is dependent upon (T-G) and constant (S-I). In other words, with constant (S-I),

it is only the manipulation of (T-G) that is necessary and a sufficient tool for balance of payments adjustment.

4.8. Monetary Approach Theory

The monetary approach was developed in the 1950s and 1960s by the International Monetary Fund's research department under Jacques J. Polak, and by Harry G. Johnson, Robert A. Mundell, and their students at the University of Chicago. The basic premise of the monetary approach is that the balance of payments is essentially a monetary phenomenon. The very concept of a balance of payments implies the existence of money; as one writer puts it, "Indeed, it would be impossible to have a balance-of-payments surplus or deficit in a barter economy." This being the case, any attempt to explain the concept of balance of payments must naturally focus on the demand for and supply of the money commodity. The monetary approach consists in the severe delineation of the consequences of this ordinary yet influential insight for the analysis of BOP disequilibrium, adjustment, and policy. Disequilibrium in BOP refers to a situation where the Credit (Receipts) and Debit (Payments) side are not equal i.e. either the credit side beats the debit side or the debit side beats the credit side. Thus, disequilibrium in BOP signifies an imbalance in its debit and credit sides. The monetary approach to the BOP explains the elimination of payments disequilibrium in terms of factors bringing the supply and demand for money into equality. It considers the supply of money to be endogenous by assuming a feedback from the balance of payments through changes in international reserves to changes in the monetary liabilities of the central bank and government. One of the important questions of monetary policy is the extent to which the monetary authority of an open economy can affect the price level or the other arguments of the demand for money, such as the level of real output and the interest rate. If it were the case that these were not to be changed, then any increase in monetary liabilities of the authority would be met by an equal and offsetting outflow of international reserves (or an equi-proportionate rise in the price of domestic goods and foreign exchange), and one would have to argue that monetary policy had no influence on the real responses of the system. We argue below that monetary policy will have real effects since it results into

changes in relative prices like fall or rise in the prices of nontrade or domestic goods relative to world prices in a either fixed or flexible exchange rates regime. Thus the effectiveness of monetary policy in an open economy may depend on the existence of a group of commodities whose relative prices can be influenced by domestic conditions of demand and supply.

Assumptions of Monetary Approach to BOP

As in the case of the demand-supply model, the Monetary Approach to BOP (MBOP) has its own assumptions:

1. Law of One Price: MBOP assumes that the identical goods being sold in different countries bear the same price, after accounting for transport costs.
2. Perfect Substitution in both Product as well as Capital Markets: The MBOP assumes there is perfect substitution in both the product and the capital markets. Due to this, the low of one price and a single interest rate prevail across various countries.
3. Exogenous Level of Output: The level of output of a country is assumed exogenous.
4. Full Employment: All the countries of the world are assumed to be operating at full employment level. It is also assumed that wage prices are flexible, due to which the output gets fixed at full employment level.
5. No Sterilization: The approach assumes that the sterilization of currency flows is not possible under a fixed exchange rate regime since the law of one price prevails globally.
6. Demand for Money: It has been assumed that the money demand is a stock concept and is a stable function of income, prices and interest rate.
7. Supply of Money: The supply of money is a function of monetary base which includes domestic credit and the country's foreign exchange reserves.
8. International investor behaviour: The most important characteristic of the monetary balance approach is its exclusive focus on the behavior of international investors. The monetary balance of payments considers an international investor who is to decide between securities

denominated in two different currencies. Therefore, it is not surprising that the monetary balance of payments is also called the Asset Approach to Exchange Rate Determination.

9. Changes in real returns: The term monetary in the MBOP emphasizes the relevance of the changes in monetary policy and the resulting changes in real returns on securities denominated in different currencies. After investors observe these changes in real returns, they express their preference for a security, which leads to buying or selling of certain currencies and, therefore, changes in the exchange rate.

Explanation

The Model Given these assumptions, the monetary approach can be expressed in the form of the following relationship between the demand for and supply of money: The demand for money (MD) is a stable function of income (Y), prices (P) and rate of interest (i)

$MD=f(Y, P, i)$ … (1)

The money supply (MS) is a multiple of monetary base (m) which consists of domestic money (credit) (D) and country's foreign exchange reserves (R). Ignoring m for simplicity which is a constant,

$MS = D + R$ ……. (2)

Since in equilibrium the demand for money equals the money supply,

$MD = MS$ …… (3)

or $MD = D + R$ [$MS = D + R$] … (4)

A balance of payments deficit or surplus is represented by changes in the country's foreign exchange reserves.

Thus $\Delta R = \Delta MD - \Delta D$ … (5)

Or $\Delta R = B$ … (6)

Here, B represents balance of payments which is equal to the difference between change in the demand for money (ΔMD) and change in domestic credit (ΔD).

A balance of payments deficit means a negative B which reduces R and the money supply. On the other hand, a surplus means a positive B which increases R and the money supply. When B = O, it means bop equilibrium or no disequilibrium of balance of payment. The automatic adjustment

mechanism in the monetary approaches is explained under both the fixed and flexible exchange rate systems. Under the fixed exchange rate system, assume that MD = MS so that BOP (or B) is zero. Now suppose the monetary authority increases domestic money supply, with no change in the demand for money. As a result, MS > MD and there is a BOP deficit. People who have larger cash balances increase their purchases to buy more foreign goods and securities. This tends to raise their prices and increase imports of goods and foreign assets. This leads to increase in expenditure on both current and capital accounts in BOP, thereby creating a BOP deficit. To maintain a fixed exchange rate, the monetary authority will have to sell foreign exchange reserves and buy domestic currency. Thus the outflow of foreign exchange reserves means a fall in R and in domestic money supply. This process will continue until MS = MD and there will again be BOP equilibrium.

On the other hand, if MS < MD at the given exchange rate, there will be a BOP surplus. Consequently, people acquire the domestic currency by selling goods and securities to foreigners. They will also seek to acquire additional money balances by restricting their expenditure relatively to their income.

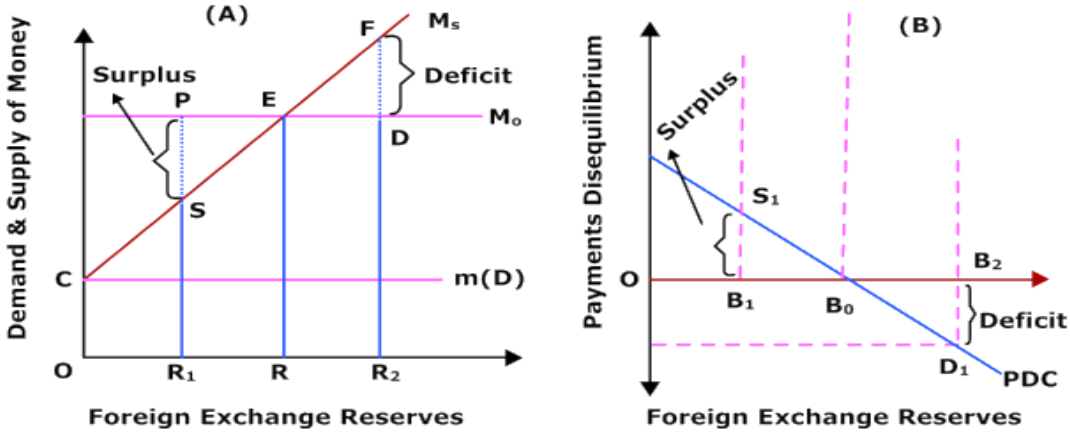

Fig.4.2.

The monetary authority on its part, will buy excess foreign currency in exchange for domestic currency. There will be inflow of foreign exchange reserves and increase in domestic money supply. This process will continue until MS = MD and BOP equilibrium will again be restored. Thus a BOP deficit or surplus is a temporary phenomenon and is self-correcting (or automatic) in the long-run.

This is explained in Fig. 4.2. In Panel (A) of the figure, MD is the stable money demand curve and MS is the money supply curve. The horizontal line m (D) represents the monetary base which is a multiple of domestic credit, D which is also constant. This is the domestic component of money supply that is why the MS curve starts from point C. MS and MD curves intersect at point E where the country's balance of payments is in equilibrium and its foreign exchange reserves are OR. In Panel (B) of the figure, PDC is the payments disequilibrium curve which is drawn as the vertical difference between MS and MD curves of Panel (A). As such, point B_0 in Panel (B) corresponds to point E in Panel (A) where there is no disequilibrium of balance of payments. If MS < MD there is BOP surplus of SP in Panel (A). It leads to the inflow of foreign exchange reserves which rise from OR_1 to OR and increase the money supply so as to bring BOP equilibrium at point E.

On the other hand, if MS > MD, there is deficit in BOP equal to DF. There is outflow of foreign exchange reserves which decline from OR_2 to OR and reduce the money supply so as to re-establish BOP equilibrium at point E. The same process is illustrated in Panel (B) of the figure where BOP disequilibrium is self-correcting or automatic when B_1S_1 surplus and B_2D_1 deficit are equal.

Under a system of flexible (or floating) exchange rates, when B = O, there is no change in foreign exchange reserves (R). But when there is a BOP deficit or surplus, changes in the demand for money and exchange rate play a major role in the adjustment process without any inflow or outflow of foreign exchange reserves.

Suppose the monetary authority increases the money supply (MS > MD) and there is a BOP deficit. People having additional cash balances buy more goods thereby raising prices of domestic and imported goods. There is depreciation of the domestic currency and a rise in the exchange rate. The rise in prices, in turn, increases the demand for money thereby bringing the equality of MD and MS without any outflow of foreign exchange reserves. The opposite will happen when MD > MS, there is fall in prices and appreciation of the domestic currency which automatically eliminates the excess demand for money.

The exchange rate falls until MD = MS and BOP is in equilibrium without any inflow of foreign exchange reserves.

Criticism of the Monetary Approach to BOP

The monetary approach to the balance of payments has been criticized on the following grounds:

i. Demand for Money not Stable: Critics do not agree with the assumption of stable demand for money. The demand for money is stable in a long term but not in the short term when it shows less stability.

ii. Full Employment not Possible: Similarly, the assumption of full employment is not acceptable because there exists involuntary unemployment in countries.

iii. One Price Law Invalid: The view of the approach that law of one price holds for identical goods sold is invalid. This is because when factors of production are drawn into sectors producing non-trading goods, the excess demand for non-traded goods will spill over into reduced supplies of traded goods. This will lead to increase in imports, and disturb the law of one price for all traded goods.

iv. Market Imperfections: There are also market imperfections which prevent the law of one price from working properly in many markets for traded goods. There may be price differentials due to the lack of information about overseas prices and trade regulations faced by traders.

v. Sterilization not Possible: The assumption that the sterilization of currency flows is not possible under fixed exchange rates, has not been accepted by critics. They argue that "the sterilization of currency flows is completely possible if the private sector is willing to adjust the composition of its wealth portfolio with regard to the relative importance of bonds and money balances, or if the public sector is prepared to run a higher budget deficit whenever it has a balance of payments deficit with which to contend."

vi. Link between BOP and Money Supply not Valid: The monetary approach is based upon direct link between BOP of a country and its total money supply. This has been questioned by economists. The link between the two depends upon the ability of the monetary authority to neutralize the inflows and outflows of foreign exchange reserves in case of BOP deficit and surplus. This requires some degree of sterilization of external flows. But this is not possible due to globalization of financial markets.

vii. Neglects Short Run: The monetary approach is related to the self-correcting long-run equilibrium in BOP. This is unrealistic since it fails to describe the short run through which the economy passes to reach the new equilibrium. As pointed out by Prof. Krause, the monetary approach's "concentration on the long-run assumes away all of the problems that make the balance of payments a problem."

viii. Neglects Other Factors: This approach neglects all real and structural factors which lead to disequilibrium in BOP and concentrates only on domestic credit.

ix. Neglects Economic Policy: This approach puts emphasis on the role of domestic credit in bringing BOP equilibrium and neglects economic policy measures. According to Prof. Currie, the BOP equilibrium can also be "achieved by expenditure-switching policies working through real flows and government budget."

4.9. Export Promotion and Import Substitution

Most economists and policymakers view LDCs as consisting of large "traditional" and "modern" sectors. Hence development has come to be seen as a process of contracting the traditional sector and its growth-retarding institutions in favour of a growing modern industrial sector. Less developed countries (LDCs) have adopted two alternative strategies for achieving industrialisation viz., inward-looking strategy and outward-looking strategy.

An inward-looking strategy is an attempt to withdraw, at least in the short run, from full participation in the world economy. This strategy emphasises import substitution, i.e., the production of goods at home that would otherwise be imported.

This can economise on scarce foreign exchange and ultimately generate new manufactured exports without difficulties associated with the exports of primary products if economies of scale are important in import substituting industries and if the infant industry argument applies. The strategy uses tariffs, import-quotas and subsidies to promote and protect import-substitute industries.

In contrast, an outward-looking strategy emphasises participation in international trade by encouraging the allocation of resources in export-

oriented industries without price distortions. It does not use policy measures to shift production arbitrarily between serving the home market and foreign markets. In other words, it is an application of production according to comparative advantage; the current expression is that, the LDCs should 'get prices right'. This strategy focuses on export-promotion, whereby policy measure such as export subsidies, encouragement of skill formation in the labour force and the use of more advanced technology, and tax concessions generate more exports, particularly labour intensive manufactured exports in accordance with the principle of comparative advantage.

Now these two strategies may be compared and evaluated:

Import Substitution Strategy:

For various reasons, many LDCs have ignored primary-exports-led growth strategies in favour of Import Substitution (IS) development strategies. These policies seek to promote rapid industrialisation and, therefore, development by erecting high barriers to foreign goods in order to encourage domestic production. A package of policies, called import substitution (IS), consists of a broad range of control, restriction and prohibitions such as import quotas and high tariffs on imports.

The trade restrictions are intended to "protect" domestic industries so that they can gain comparative advantage and substitute domestic goods for formerly imported goods. Import Substitution policies are largely based on the belief that economic growth can be accelerated by actively directing economic activity away from traditional agriculture and resource-based sectors of the economy towards manufacturing. The broad range of tariffs, quotas and outright prohibitions on imports that are part of IS policies are clearly not a form of infant industry protection. The infant-industry argument states that sectors and industries that can reasonably be expected to gain comparative advantage, after some learning period, should be protected.

But the broad protection under Import Substitution policies usually protect all industries indiscriminately, whether they generate technological externalities or have any chance of achieving competitive efficiency. Import Substitution policies were advocated due to a very sharp decline in the prices of commodities and raw materials exported by many LDCs. Prebisch and

Singer convincingly argued that low-income elasticity of demand for primary products implied that, in the long run, the terms of trade of primary product exporters would deteriorate. In short, the IS approach to development applies the strategic argument for protection to one or more targeted industries in the LDCs. That is, the government determines those sectors best suited for local industrialisation, erects barriers to trade on the products produced in these sectors in order to encourage local investment and then lowers the barriers over time as the industrialisation process gains momentum. If the government has targeted the correct sectors, the industries will continue to thrive even as protection comes down. In practice, however, the trade barriers are rarely removed. In the end, countries that follow import substitution strategies tend to be characterised by high barriers to trade that grow over time.

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UNIT – V

TERMS OF TRADE AND TRADE POLICY

5.1. Terms of Trade

Terms of trade refer to the rate at which the goods of one country exchange for the goods of another country. It is a measure of the purchasing power of exports of a country in terms of its imports, and is expressed as the relation between export prices and import prices of its goods. When the export prices of a country rise relatively to its import's prices, it terms of trade are said to have improved. The country gains from trade because it can have a larger quantity of imports in exchange for a given quantity of exports. On the other hand, when its import prices rise relatively to its export prices, in terms of trade are said to have worsened. The country's gains from trade are reduced because it can have a smaller quantity of imports in exchange for a given quantity of exports than before.

5.2. Concepts of Terms of Trade:

Jacob Viner and G.M.Meier have discussed many types of terms of trade which we take up one by one.

1. Commodity or Net Barter Terms of Trade
2. Gross Barter Terms of Trade
3. Income Terms of Trade
4. Single Factoral Terms of Trade
5. Double Factoral Terms of Trade
6. Real Cost Terms of Trade
7. Utility Terms of Trade

1. Commodity or Net Barter Terms of Trade

The most widely used concept of the terms of trade is what has been caned the net barker terms of trade which refers to the relation between prices of exports and prices of imports. In symbolic terms:

$$Tn = P_x/P_m$$

Where T_n stands for net barter terms of trade. P_x stands for price of exports (x), P_m stands for price of imports (m). When we want to know the changes in net barter tends of trade over a period of time, we prepare the price index

numbers of exports and imports by choosing a certain appropriate base year and obtain the following ratio:

$$Px_1/ Pm_1: Px_0/ Pm_0$$

Where Px_o and Pm_0 stand for price index numbers of exports and imports in the base year respectively, and Px_1 and Pm_1 denote price index numbers of exports and imports respectively in the current year. Since the prices of both exports and imports in the base year are taken as 100, the terms of trade in the base year would be equal to one $Px_0/ Pm_0 = 100/100 = 1$ The concept of the commodity or net barter terms of trade has been used by economists to measure the gain from international trade. The terms of trade as determined by the offer curves in the Mill Marshall analysis, are related to the commodity terms of trade. But the concept of net barter terms of trade suffers from some important limitations in that it shows nothing about the changes in the volume of trade. If the prices of exports rise relatively to those of its imports but due to this rise in prices, the volume of exports falls substantially, then the gain from rise in export prices may be offset or even more than offset by the decline in exports.

2. Gross Barter Terms of Trade

This concept of the gross terms of trade was introduced by F.W. Taussig and in his view this is an improvement over the concept of net barter terms of trade as it directly takes into account the volume of trade. Accordingly, the gross barter terms of trade refer to the relation of the volume of imports to the volume of exports.

$$\text{Thus, } Tg = Qm/Qx$$

Where Tg = gross barter terms of trade, Qm = quantity of imports Qx = quantity of exports

To compare the change in the trade situation over a period of time, the following ratio is employed: $Qm_1/Qx_1: Qm_0/Qx_0$ Where the subscript o denotes the base year and the subscript 1 denotes the current year. It is obvious that the gross barter terms of trade for a country will rise (i.e., will improve) if more imports can be obtained for a given volume of exports. It is important to note that when the balance of trade is in equilibrium (that is, when value of exports is equal to the value of imports), the gross barter terms

of trade amount to the same thing as net barter terms of trade. This can be shown as under:

Value of imports = price of imports x quantity of imports = Pm. Qm
Value of exports = Price of exports x quantity of exports = Px. Qx
Therefore, when balance of trade is in equilibrium.

$$Px.\ Qx = Pm.\ Qm$$

$$Px\ .Qm = Pm\ Qx$$

However, when balance of trade is not it equilibrium, the gross barter terms of trade would differ from net barter terms of trade.

3. Income Terms of Trade

In order to improve upon the net barter terms of trade G.S. Dorrance developed the concept of income terms of trade which is obtained by weighting net barter terms of trade by the volume of exports. Income terms of trade therefore refer to the index of the value of exports divided by the price of imports. Symbolically, income terms of trade can be written as

$$Ty = P_x.Q_x/P_m$$

Where T_y = Income terms of trade P_x = Price of exports Q_x = Volume of exports P_m= Price of imports Income terms of trade yields a better index of the capacity to import of a country and is, indeed, sometimes called 'capacity to import'. This is because in the long run balance of payments must be in equilibrium the value of exports would be equal to the value of imports.

Thus, in the long run:

$$P_m,\ Q_m = P_x,\ Q_x$$

$$Q_m = P_x.Q_x/P_m$$

It follows from above that the volume of imports (Q_m) which a country can buy (that is, capacity to import) depends upon the income terms of trade i.e., $P_x.Q_x/P_m$. Since income terms of trade is a better indicator of the capacity to import and since the developing countries are unable to change P_x and P_m. Kindle Berger thinks it to be superior to the net barter terms of trade for these countries, However, it may be mentioned once again that it is the concept of net barter terms of trade that is usually employed.

4. Single Factoral Terms of Trade

The concept of terms of trade does not take account of productivity changes in export industries. Prof. Viner had developed the concept of single factoral terms of trade which allows changes in the domestic export sector. It is calculated by multiplying the commodity terms of trade index by an index of productivity changes in domestic export industries. It can be expressed as:

$$Ts = Tc.Fx = P_x.F_x/P_m \qquad (Tc = P_x/P_m)$$

Where Ts is the single factoral terms of trade, Tc is the commodity terms of trade and F_x is the productivity index of export industries. It shows that a country factoral terms of trade improve as productivity improves in its export industries. If the productivity of a country export industries increases, its factoral terms of trade may improve even though its commodity terms of trade may deteriorate. Limitations: This index is not free from certain limitations. It is difficult to obtain the necessary data to compute a productivity index. Further single factoral terms of trade do not take into account the potential domestic cost of production of imports industries in the other country.

5. Double Factoral Terms of Trade:

The double factoral terms of trade take into account productivity changes both in the domestic export sector and the foreign export sector producing the country imports. The index measuring the double factoral terms of trade can be expressed as

$$Td = Tc.\ Fx\ Fm = Px\ Fm\ .\ Fx\ Fm\ (Tc = Px\ Pm)$$

Where T_d is the double factoral terms of trade, P_x/P_m is the commodity terms of trade, F_x is the export productivity index, and Fm is the import productivity index. It helps in measuring the change in the rate of exchange of a country as a result of the change in the productive efficiency of domestic factors manufacturing exports and that of foreign factors manufacturing imports for that country.

Limitations: Single factoral terms of trade is a much more relevant concept than the double factoral. We are interested in what our factor can earn in goods, not what factor services can command in the services of foreign factors. Related to productivity abroad moreover, is a question of the quality of the goods imported.

6. Real Cost Terms of Trade

Viner has also developed terms of trade index to measure the real gain from international trade. He calls it the real cost terms of trade index. This index is calculated by multiplying the single factoral terms of trade with the reciprocal of an index of the amount of disutility per unit of productive resources used in producing export commodities. It can be expressed as:

$$Tr = T_s . R_x = P_x / p_m . F_x . R_x \qquad (T_s = P_x/P_m . F_x)$$

Where T_r is the real cost terms of trade. Ts is the single factoral terms of trade and R_x is the index of the amount of disutility per unit of productive resources used in producing export commodities.

Limitations: A favourable real cost terms of trade index shows that the amount of imports received is greater in terms of the real cost involved in producing export commodities. But this index fails to measure the real cost involved in the form of goods produced for export which could be used for domestic consumption to pay for imports. To overcome this problem. Viner develops the index of utility terms of trade.

7. Utility Terms of Trade:

The utility terms of trade index measures change in the disutility of producing a unit of exports and changes in the relative satisfactions yielded by imports and the domestic products foregone to produce exports. The utility terms of trade index are calculated by multiplying the real cost terms of trade index with an index of the relative average utility of imports and domestic commodities foregone. Thus, the utility terms of trade index can be expressed as:

$$T_u = Tr.u = P_x/P_m . F_x . R_x.u$$

Since the real terms of trade index and utility terms of trade index involve the measurement of disutility. Limitations: The single and double factoral terms of trade concepts, the concepts of real and utility terms of trade are of little practical use. That is why the concepts of the commodity terms of trade and income terms of trade have been used in measuring the gains from international trade in developed as well as developing countries.

5.3. Determination of Terms of Trade

When there are two countries and two goods, the terms of trade of a country refer to the ratio between export prices and import prices of its goods. i.e., P_X/P_M. The exports of one country being the imports of the other country and vice versa, the terms of trade of one country are the inverse of the terms of trade of the other country. Suppose there are two countries Germany and England. Germany produces linen and England produces cloth which they trade with each other. The terms of trade of Germany are P_L/P_C and of England P_C/P_L. The terms of trade between them are determined when their price ratios are in equilibrium, $P_L/Pc=Pc/P_L=1$.

The determination of equilibrium terms of trade is explained in Fig. 79.1 where OE is England's offer curve and OG is the offer curve of Germany. The point A where the two offer curves intersect each other is the equilibrium point and the terms of trade are determined by the slope of the ray OT. The line OT is the relative price ratio of the two goods which is equal to 1, that is

$$P_X/P_M = P_C/P_L = OC/OL = 1 \text{ for England and}$$

$$P_X/P_M = P_L/Pc = OL/OC = 1 \text{ for Germany.}$$

At this price ratio OT, England exports OC units of cloth to Germany which exactly equal OL units of linen imports from Germany. On the other hand, Germany exports OL units of linen to England which exactly equal OC units of cloth from England. Since the exports and imports of cloth and linen supplied and demanded by England and Germany respectively equal at the line OT, the terms of trade are in equilibrium.

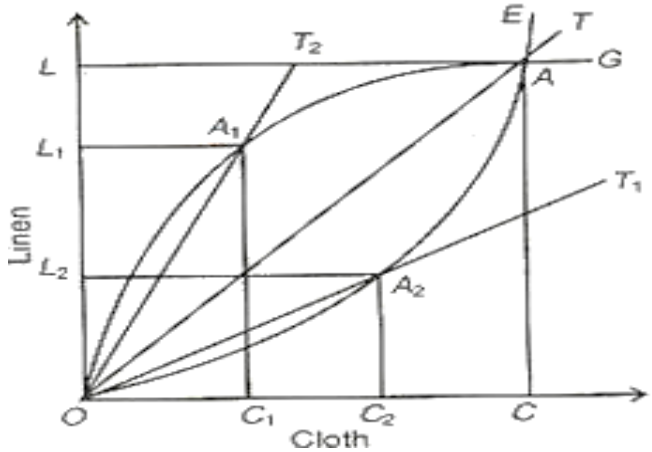

Fig.5.1.

To prove that OT is the equilibrium price ratio at which the two countries trade cloth and linen, take the price ratios OT_1 which cuts the offer curve OE of England at point A_2. Similarly, take the price ratio OT_2 which cuts the offer curve OG of Germany at point A_1. At point A_2, the price ratio is OC_2/OL_2 (= OL_1/OC_1). At this price ratio, England would export OC_2 of cloth in exchange for OL_2 imports of linen from Germany. On the other hand, at point A_1, the price ratio is OL_1/OC_1 at which Germany would export OL_1 of linen in exchange for OC_1 cloth imports from England. But OL_1 units of linen exports by Germany are much greater than OL units which England is willing to import from it. The supply of linen being more than its demand, it will lower its price (P_L/P_C) which will increase its demand by England. To meet this increased demand, Germany would continue to increase its supply of linen along its offer curve OG from point A_1 upwards till it reaches point A.

Similarly, at point A_2, England would export OC_2 units of cloth to Germany which are much greater than OC_1 units which Germany is willing to import. Thus, the supply of cloth being more than its demand, the price of cloth (Pc/P_L) will fall which will increase its demand by Germany. To meet this increased demand, England would continue to increase its supply of cloth along its offer curve OE from point A_2 upwards till it reaches point A. Thus, equilibrium terms of trade would be reestablished at the OT price ratio where the desired quantities of exports and imports of linen and cloth are equal.

5.4. Terms of Trade and Economic Development: Secular Deterioration Hypothesis

The hypothesis developed by Raul Prebisch and Hans Singer is considered as a major part of the dependency theories developed which supports the argument that resources flow from underdeveloped to developed countries at the expense of the former. The idea of import substitution industrialisation (ISI) is also based on the grounds of this theory.

The Hypothesis

The Prebisch-Singer hypothesis was initially developed by Hans Singer in 1948-49 and was later developed by Raul Prebisch. It argues that the prices of primary commodities will decline over time relative to manufactured goods

which leads to a decline in terms of trade for developing countries as developing countries are usually the exporter of primary products and developed nations the producer and exporter of manufactured goods. However, through this relationship, Prebisch and Singer focused on the rising per capita income gap between the developing and developed world arising due to the international trade. According to them, due to this static specialization in the production of primary commodities, developing world has been excluded from enjoying the fruits of technological progress mainly found in the industrial nations.

They argued this on the basis of three facts:

1. Developing countries specialize in the production and export of primary commodities and industrialized countries specializes in production of manufactures.
2. Technical progress is mainly concentrated in industry.
3. Terms of trade of primary goods relative to manufactured goods has declined since 19th century.

Due to these facts, developing countries has failed to benefit from the technical progress and have suffered from the declining terms of trade.

The Classical School of Thought

The classical economists however had an exactly opposite approach to what was conceived by Prebisch and Singer. They thought that primary products will overtime experience a rise in terms of trade relative to manufactures. They based their argument on the basis that diminishing returns operate in primary products production and manufactures experience increasing returns.

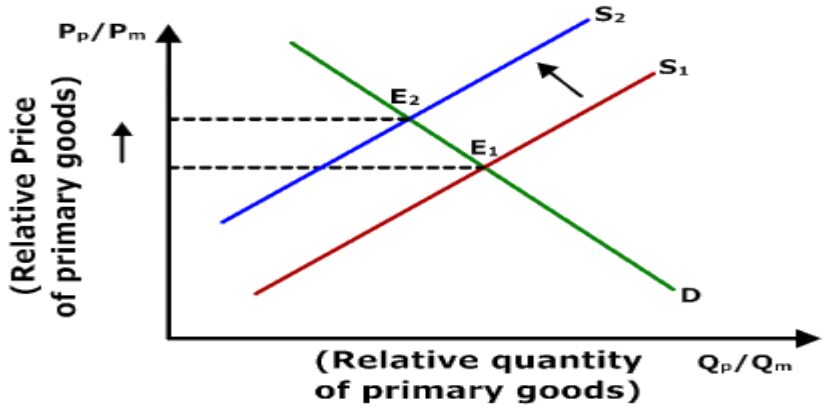

Fig.5.2.

Also, the technical progress in manufactures will exceed that of primary products and hence supply of manufactures will grow faster than the supply of primary commodities. Also, primary products producing nations need not industrialize as trade will increase the prices of the exports of primary products relative to the prices of imports of manufactured goods. This can be better explained with the help of a diagram.

The vertical axis shows the relative price of primary products in terms of manufactures, and the horizontal axis shows the relative quantity the quantity of primary products divided by the quantity of manufactured goods. The supply and demand curves intersection show the world equilibrium at point E. As technical progress in manufactured goods exceed that of primary goods, the relative supply of manufacture increases while the relative supply of primary products declines. As the relative supply curve (S_1) shifts to the left, the relative price of primary products rises and the relative quantity declines. The new equilibrium is at E_2 now and the terms of trade for primary product export rises. This leads to the welfare gains from primary product exporting nations. However, according to Prebisch and Singer, this doesn't work. The terms of trade for primary products relative to manufactures actually declines. The reason for the same is explained in the next section.

Explanation by Prebisch: (Supply-side argument)

According to Prebisch, labor unions work well in industrialized nations and are weak in developing nations. Hence, workers are able to extract higher wages in industrial nations as compared to primary products producing nations. Thus, cost of primary product rises by less than the cost of manufactured goods. This decline in costs increases the relative supply of primary products shifting the relative supply curve to the right and the relative price decreases leading to a decline in terms of trade.

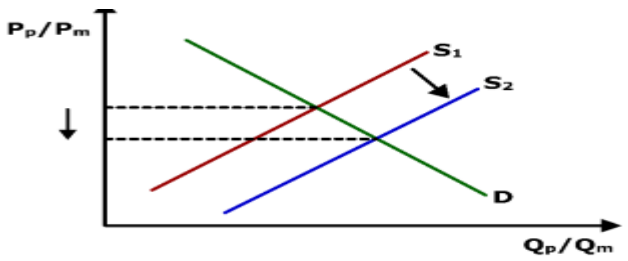

Fig.5.3. Supply Side Argument

Explanation by Singer (Demand-side argument)

Singer's argument is based on income and price elasticity. It is usually observed that primary products have low-income elasticity. So as and when income rises, the demand for primary commodities decline rapidly than demand for manufactured goods leading to a decline in relative price of primary goods. This would lead to a leftward shift in relative demand curve leading to a worsening of terms of trade for developing nations.

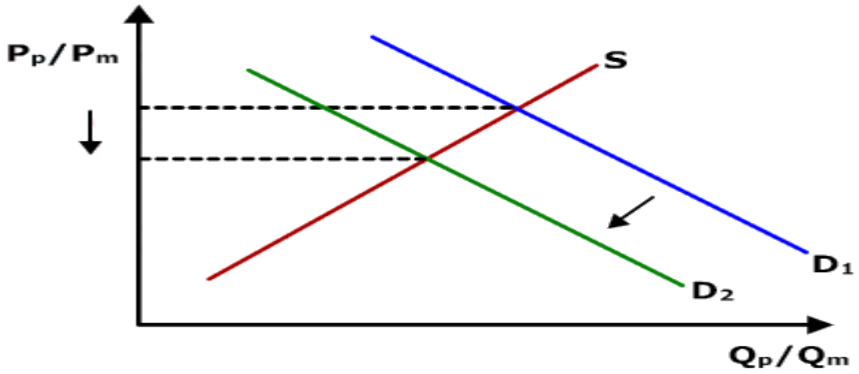

Fig.5.4. Demand Side Argument

Empirical Evidence

The Prebisch-Singer hypothesis has generated much debate. It has been criticized by academicians such as Jacob Viner (1953), R. E. Baldwin (1955), G. M. Meier (1958), G. Haberler (1961), R. E. Lipsey (1963), Harry Johnson (1967), Paul Bairoch (1975), Ronald Findlay (1981), and hence discarded the hypothesis. It is criticized on the grounds that if it will be reasonable to treat the relative prices of goods equivalent to terms of trade. Developing countries do not export only primary goods and developed countries do not only specialize in manufactured goods. So, commodity prices cannot be treated as synonymous to terms of trade. The fact that industrialized countries do not export only manufactures was addressed early on by Meier and Baldwin (1957), who pointed out the many primary commodities, like wheat, beef, wool, cotton and sugar, are heavily exported by industrialized countries. Indeed, Diakosavvas and Scandizo note that the developing country share of agricultural primary commodities was only 30% in 1983, down from 40% in 1955. Yet Spraos (1980) argues that this fact is immaterial, because the same trends that are observed in the broad index of primary commodity prices are found in a narrower index that includes only

developing-country products. Since the 1980s, a series of studies undertaken by John Spraos (1980), David Sapsford (1985), Prabirjit Sarkar (1986a, b, 1994, 2005), Sarkar and Singer (1991), E. R. Grilli, and M.C. Yang (1988), and many others questioned the validity of the criticism and provided strong statistical support for the Prebisch - Singer hypothesis, thereby bringing it back into the limelight.

5.5. Tariff and Non-Tariff Barriers

5.5.1. Tariff

A tariff is a duty or tax imposed by the government of a country upon the traded commodity as it crosses the national boundaries. Tariff can be levied both upon exports and imports. The tariff or duties imposed upon the goods originating in the home country and scheduled for abroad are called as the export duties. Countries, interested in maximising their exports generally avoid the use of export duties. Tariffs have, therefore, become synonymous with import duties or custom duties.

The import duties or import tariffs are levied upon the goods originating from abroad and scheduled for the home country. Sometimes a country may also resort to what is called as a transit duty. It is imposed upon the goods originating in the foreign country and scheduled for a third country crossing the borders of the home country. The imposition of import tariff results in the relative changes in prices of products and factors.

5.5.2. Types of Tariffs:

Tariffs are of several types and these can be classified into different groups or sub-groups as below:

Tariffs are used for two different purposes: 1. Revenue Tariff and 2. Protective Tariff.

1. Revenue Tariff: Revenue tariffs are meant to provide the state with revenue. Revenue duties are levied on luxury consumer goods. The lower the import duties, the larger is the revenue from them. This is because the rise in the price of the imported goods does not increase the imposition of low import duties and consumers do not normally shift their demand to other domestically produced goods.

2. Protective Tariff: Protective tariffs are meant to maintain and encourage those branches of home industry protected by the duties. Now a days governments levy import duties with the principal objective of discoutaging imports in order to encourage domestic production of protected industry. The revenue function of an import duty is a secondary one.

The following types of tariff duties are levied:

(a) Specific tariff: Specific duties are levied per physical unit of the imported commodity, as Rs X per TV, as cloth per metre, as oil per litre, as fertilizers per tonne, etc.

(b) Ad Valorem tariff: the most common type of duty is the ad valorem duty. It is levied as a percentage of the total value of the imported common duty. The import duty is a fixed percentage of the c.i.f. (cost, insurance and freight) value of the commodity. It may be 25 percent, 50 percent and so on.

(c) Compound tariff: often, governments levy compound duties which are a combination of the ad valorem and specific duties. In this case, units of an imported commodity are levied a percentage ad valorem duty plus a specific duty on each unit of the commodity.

5.5.3. Classification on the Basis of Retaliation:

On this basis, the tariffs can be of the types of

(a) Retaliatory tariffs and

(b) Countervailing tariffs.

(a) Retaliatory Tariffs:

If a foreign country has imposed tariffs upon the exports from the home country and the latter imposes tariffs against the products of the former, the tariffs resorted to by the home country will be regarded as the retaliatory tariffs. The home country, while adopting this measure does not either has the object of raising revenues or protecting home industries but of acting in retaliation.

(b) Countervailing Tariffs:

If the foreign country has been exporting large quantities of its products in the market of the home country on the strength of export subsidies, the home country can neutralise the 'unfair advantage' enjoyed by foreign products through imposing duties upon them as they enter the territory of the home

country. The latter has full justification for resorting to these countervailing duties in order that the unfair advantage given by exports subsidies to the foreign products is offset and the competition takes place on equal footing between the foreign and home-produced goods.

5.6. Effects of Tariffs

Tariffs have a variety of effects which depend upon their power to reduce imports. The effects of a tariff may be analysed from the stand point of the economy as a whole which is known as the general equilibrium analysis. Or they may be discussed from the point of view of particular good or market which is known as the partial equilibrium analysis.

5.6.1. Effects of a Tariff under Partial Equilibrium

When a small country imposes tariff on import of the product that competes with the product of the small domestic industry, the tariff can neither affect the international prices (as the country is small) nor can it affect the rest of the economy (as the industry is small). In such conditions, the partial equilibrium analysis that concerns the market for a particular product becomes the most appropriate.

Assumptions:

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

a. The demand and supply curves of the given commodity are concerned with home country that imposes import tariff.
b. The given demand and supply curves remain constant.
c. There is no change in consumers' tastes, prices of other commodities and money income of the consumers.
d. There is an absence of technological improvements, externalities and other factors that result in changes in cost conditions.
e. No tariff is imposed by the home country on the import of materials that are required for producing the given commodity.
f. Imported product and home-produced product are perfect substitutes.
g. There is no change in the foreign price of the commodity.
h. There is an absence of transport costs.
i. The foreign supply curve of commodity is perfectly elastic.

j. Domestic production of commodity takes place at increasing costs.

Kindelberger has mentioned eight effects of tariff in a partial equilibrium approach. These include: 1. Protective or 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. All these effects are the result of the price effect which we first explain.

Price Effect: the price effect of a tariff is explained in terms of figure. Where D and S are the domestic demand and supply curves of a commodity. OP represents the constant world price at which the foreign producers are prepared to sell their commodity in domestic market.

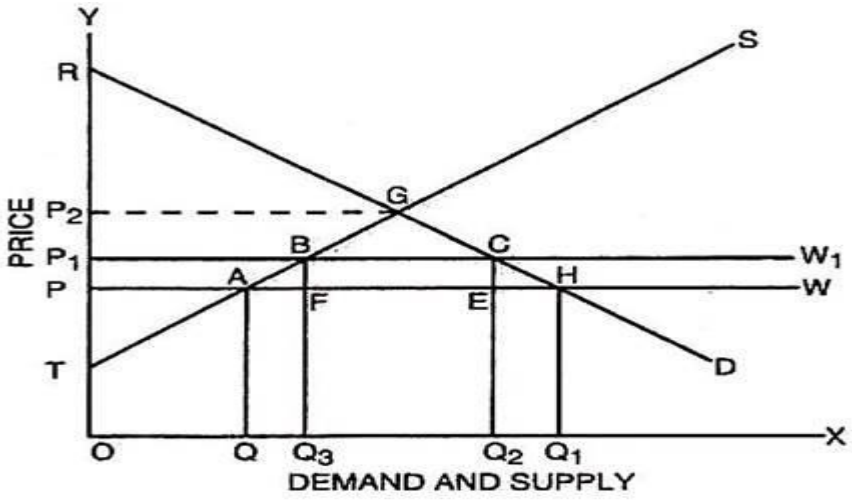

Fig.5.5.

Thus, the horizontal line PH is the supply curve of imports which is perfectly elastic at OP price. Thus, under free trade the equilibrium market position is given by point H where the domestic demand curve D intersects the world supply curve PW at the price OP. The total demand for the commodity is OQ_1. The domestic supply is OQ. The difference between domestic demand and domestic supply is met by importing QQ_3 at OP price.

Suppose a tariff of PP_1 is imposed on the import of the commodity. Given a constant foreign price, the domestic price of the commodity rises by the full amount of the tariff of OP_1. Thus, the rise in the price of the commodity by PP_1 is the price effect of the tariff. As a result, the new equilibrium market position is given by point C. In response to the higher price, the domestic demand falls from OQ_1 to OQ_2 and the domestic supply increases from OQ to OQ_3. So that the total demand for the commodity is OQ_2 which is partly met

by domestic supply OQ_3 and partly by importing Q_3Q_2. Thus, imports have fallen from QQ_1 to Q_3Q_2 as a result of the price effect.

The protective, consumption, revenue and redistribution effects of a tariff can also be illustrated by figure.

1. Protective or Production Effect:

The imposition of tariff may be intended to protect the home industry from the foreign competition. As tariffs restrict the flow of foreign products, the home producers find an opportunity to increase the domestic production of import substitutes. That is why Ellsworth termed the protective or production effect of tariff as the import-substitution effect.

In order to analyse the production and other effects diagrammatically, it is assumed that the world supply of the given commodity is perfectly elastic so that it is available at the constant price and the world supply curve is perfectly elastic. The domestic production of the commodity is possible, it is assumed, at an increasing cost. Therefore, the domestic supply curve is positively sloping. The domestic demand curve of the commodity, as usual, slopes negatively.

In Fig.5.5, 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.

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.

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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.5.5 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.5.4, 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 $PP_1 \times Q_3Q_2 = BF \times EF =$ 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 Figure.

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 = $PHCP_1 - (PABP_1 + BCEF)$

$= \Delta BAF + ACEH$

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:

The traditional theorists believed that tariff led to an improvement in the terms of trade of the tariff-imposing countries. The modern theorists, however, do not hold such a simplistic view. In their opinion, the terms of trade, consequent upon the imposition of tariff, depend upon the elasticity of demand and supply of products of the two trading countries. If the foreign supply of a good is perfectly elastic or if the foreign suppliers are ready to supply the product at a constant price, the imposition of tariff is not likely to improve the terms of trade for the tariff-imposing country. In case the foreign supply of a good is not perfectly elastic, the imposition of tariff can have varying effects upon the terms of trade of the tariff-imposing country depending upon the elasticity of demand and supply in the two trading countries. It has been explained through Figure.

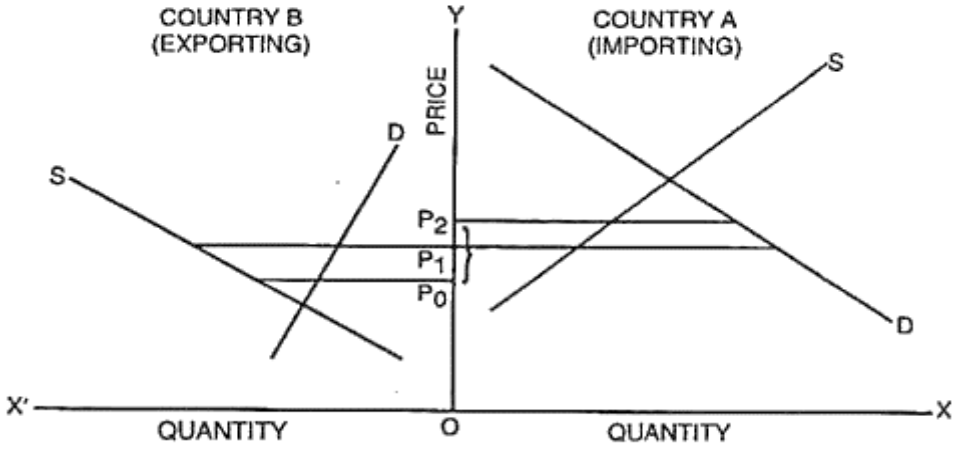

Fig.5.6.

In Fig. 5.6, 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:

The imposition of tariff, can facilitate the growth of an infant industry which otherwise is not in a position to face the foreign competition. As tariff makes the foreign product relatively more costly, the domestic infant industry finds opportunity to grow behind the protective shield.

Thus tariff increases the competitive power of the industries of tariff-imposing country. After the infant industry becomes mature enough to face the foreign competition, tariff may be removed. The increase in the competitive power of the domestic industries through tariff is called as the competitive effect. The fears are, however, expressed that protection breeds inefficiency and promotes the growth of monopolies.

7. Income Effect:

The imposition of tariff reduces the demand for foreign products. The amount of money not spent on imported goods may either be spent on the home-produced goods or saved. If there is the existence of surplus productive capacity in the home country, switch of expenditure from foreign to home-produced goods will lead to a rise in production, employment and income. Alternatively, if the money not spent on foreign products is saved, that result in greater accumulation of capital. The financing of investment through additional saving can again enlarge the productive capacity and income in the tariff-imposing country.

8. Balance of Payments Effect:

When tariff is imposed by a country upon foreign products, the home-produced goods become relatively cheaper than the imported goods. The price effect caused by tariff, on the one hand, reduces imports from other countries and on the other hand, causes increased production and purchase of home-

produced goods. That leads to a reduction in the balance of payments deficit of the home 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.

5.6.2. Effects of a Tariff under Partial 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.

General Equilibrium Analysis of Tariff in a Small Country:

When the tariff-imposing country is small, the domestic price of the importable commodity will rise by the full amount of tariff for the individual consumers and producers in that small tariff-imposing country. The international price of the commodity will, however, remain unaffected. The divergence between the price of the importable commodity for individual producers and consumers and the importing country as a whole is of crucial importance in analysing the effect of tariff upon welfare.

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. 5.7.

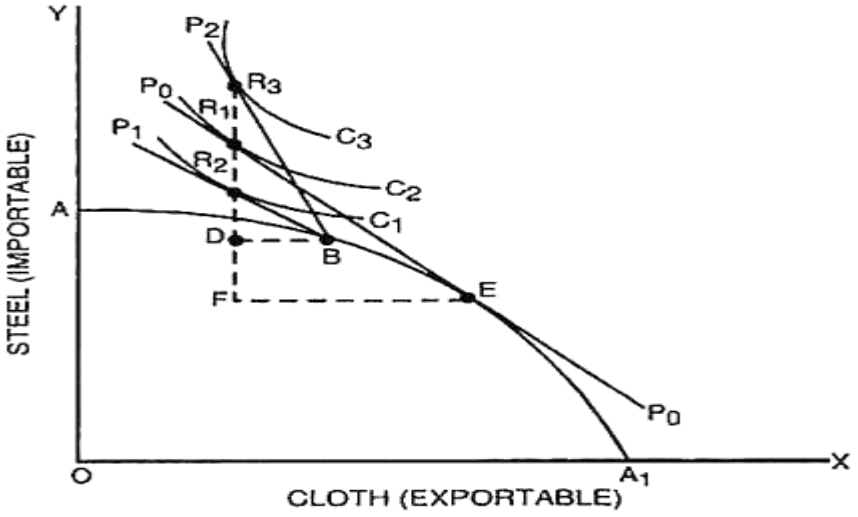

Fig.5.7.

In Fig. 5.7., 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.

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.

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 Figure. 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.

5.7. Non-Tariff Barriers:

Non-Tariff Barriers (NTBs) are obstacles to imports other than tariff. They are administrative measures that are imposed by a domestic government to discriminate against foreign goods and in favour of home goods.

5.7.1. Types of NTBs:

The trade barriers other than import quotas include voluntary export restraints, technical, administrative and other regulations, trade restrictions due to international cartels, dumping and export subsidies. During the recent decades, many countries have started relying increasingly upon these forms of protectionism.

1. Voluntary Export Restraints (VER):

These restraints refer to a situation in which the importing country, faced with excessive competition from industries of the exporting country, threatens to put stiffer all round trade restrictions. That may induce the exporting country to-reduce the flow of exports voluntarily to the importing country.

The United States and other industrial countries have successfully negotiated with Japan since 1950's to make the latter curtail its exports of textiles to them. During 1980's again U.S.A. employed this method to make Japan and some other countries to reduce voluntarily their exports of automobiles, steel, shoes and certain agricultural commodities. The voluntary export agreement sometimes covers more than one country. The most famous example of such an agreement is the Multi-Fiber Agreement (MFA) that restricted textile exports from 22 countries.

The effects of VER upon the importing country may be explained through Fig. 5.8.

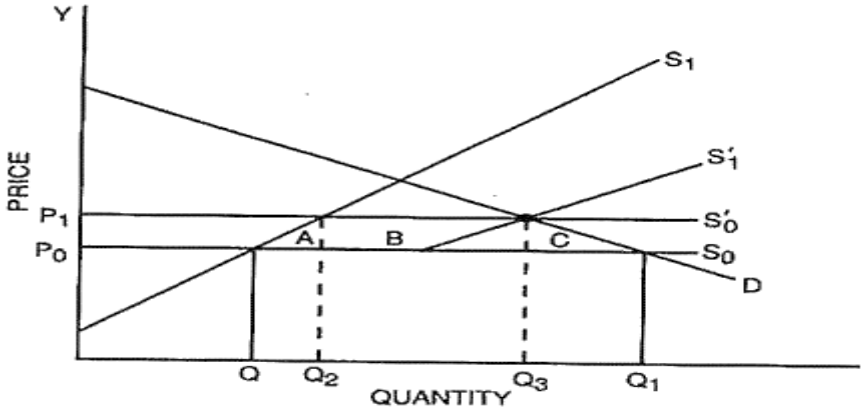

Fig.5.8.

In Fig. 5.8., D is the domestic demand curve and S_1 is the domestic supply curve of good. Originally the world supply curve of the good at price OP_0 is S_0. The quantity imported is QQ_1. If the exporting and importing countries enter the voluntary export agreement about the import of Q_2Q_3 quantity by the

home country at the price OP_1, the world supply curve shifts to S_0'. The domestic supply curve shifts to S_1'.

The net loss to the importing home country is measured by the area (A + B + C). In case of tariffs, the area B represents the revenue gain to the government of the importing country. In case of equivalent VER, the equivalent amount is taken away by the foreign exporters in the form of rents. It is in fact this consideration of rent that makes the foreign suppliers to enter into the voluntary export arrangement.

The foreign suppliers enter into such an agreement because they can later supply high cost or luxury item to the importing country and increase their rent earnings. In addition, such an agreement allows them to have an opportunity of protected market for their products. There is also the fear that not making of such as an agreement will result in tariffs or other restrictions upon their exports.

The voluntary export restraints, if successful, will have exactly similar effects as are associated with import quotas. The only difference in that these are administered by the exporting country.

The voluntary export restraints are likely to be less effective for various reasons. Firstly, the exporting countries are very reluctant in agreeing to these restraints. Generally, such agreements involve protracted negotiations.

Secondly, the agreement may be binding upon a specific country. As exports are reduced by the given exporting country, the other countries may enter the market and enlarge their exports. It means there is no reduction in imports but only a replacement of imports from one country by those from the other.

Thirdly, the country, forced to restrict the export of the commodity of a particular price and quality specification, may fill up its quota of market through products of upgraded quality specification and a higher level of price.

Fourthly, the exporting country, may continue to export through the third country trade.

Fifthly, this measure can be successfully employed by an economically powerful country like the U.S.A.

2. Technical, Administrative and Other Regulations:

Another non-tariff barrier to international trade is in the form of numerous technical, administrative and other regulations. Among these regulations are included the safety regulations for automobiles and several other categories of machines, health regulations related to production and packaging of edible products, patent and copyright provisions and labeling requirements showing origin and constant.

Some of these regulations are, undoubtedly, legitimate, while some are meant essentially for protecting domestic production against imports from abroad. For instance, French ban on advertisement of Scotch whisky, British restriction on the showing of foreign films on British T.V. are veiled devices for restricting imports.

Still another form of trade restriction is one, which has emanated from laws. For example, 'Buy American' Act passed in the U.S.A. in 1933 provided for procurements by the government agencies.

These procurement plans assure price advantage to the domestic suppliers. Many countries, including both the advanced and less developed countries, have their procurement programmes out of the domestic production. The Tokyo Round of GATT negotiations led to an agreement that countries would avoid such practices and allow the foreign suppliers also a fair chance. One more form of restrictions on trade is the tax rebates given to the exporters from such indirect taxes as sales tax, excise duty and value added taxes.

This practice is extensively followed by both less developed and the advanced countries to place their respective exporters in a relatively better position. The trade is also restricted by such measures as international commodity agreements, multiple exchange rates, government procurements, customs valuation and classification, stiff import licensing procedures, local content regulations etc.

All these measures are clearly intended to benefit the home country at the expense of the rest-of-the-world. No doubt, there is need for removing these trade barriers but much progress in this direction is not likely to take place in the near future. The advanced countries like the U.S.A. want to maintain the trade restrictions against the other countries.

As regards other countries, they are being pressurised to liberalise trade. Such an attitude is a major hindrance in the dismantling of the regime of technical, administrative and other regulations.

3. Trade Restrictions due to International Cartels:

An international cartel is an organization of suppliers of a commodity located in different countries that agrees to restrict output and export of the given commodity with the object of increasing or maximising profits. According to Kindelberger, "Cartels are business agreements to regulate price, division of markets or other aspects of enterprises."

In the opinion of Haberler, the international cartel is an act of "uniting the producers in a given branch of industry, of as many countries as possible, into an organisation to exercise a single planned control over production and price and possibility to divide markets between the different producing countries."

The most prominent example of international cartel is OPEC (Organization of Petroleum Exporting Countries) which by restricting output and exports, could push up the price of crude oil by four times between 1973 and 1974. Another instance of international cartel is International Air Transport Association (IATA) which is a cartel of major international airlines. It meets annually to prescribe international air fares and policies.

The international cartels are likely to be successful, if they fulfill certain requirements. Firstly, there are only a few suppliers of the given commodity. Secondly, the suppliers are amenable to discipline and uniform business conduct.

Thirdly, the product is produced on a large scale and not by the small or medium-sized firms.

Fourthly, the commodity is such for which no close substitutes are available.

4. Export Subsidies:

An important non- tariff device to influence the international trade and especially to expand home country's exports is the export subsidies. The export subsidies are direct cash payments or the grant of tax relief and subsidised loans to nation's exporters or potential exporters and/or low interest loans to the foreign buyers for stimulating exports. Although the

international agreements do not approve of resort to export subsidies, yet both developed and poor countries have extensively employed this device either in an explicit or disguised form.

During the recent years, the issue of farm subsidies became a matter of confrontation between the United States, on the one hand, and the countries of European Union (EU) and Japan on the other, it has resulted in the collapse of W.T.O. negotiations held at Cancun in September 2003. The export subsidies on farm products are still a very contentions issue at Doha Round of W.T.O. negotiations.

In 1984-86, the average rates of subsidies on farm products in Japan, the EC and the U.S.A. were 64 percent, 49 percent and 35 percent respectively. In Japan, the highest rate of subsidy among the farm products was 96 percent in the case of wheat and the lowest rate was 16 percent in the case of poultry. In the EC, the highest and lowest rates of subsidy were 75 percent and 18 percent in case of sugar and eggs respectively.

In the United States, the highest and lowest rates of subsidy in that period were 76 percent and 7 percent in case of sugar and eggs respectively. The United States insisted that the EC and Japan should scale down subsidies on the farm products so that the United States products could have greater access to the foreign markets.

The effect of export subsidy or the cost of protection due to subsidies can be examined through Fig. 5.9. In this Fig., D_X and S_X are the demand and supply curve of the exportable commodity X of the home country A. The free trade world price of the commodity is OP.

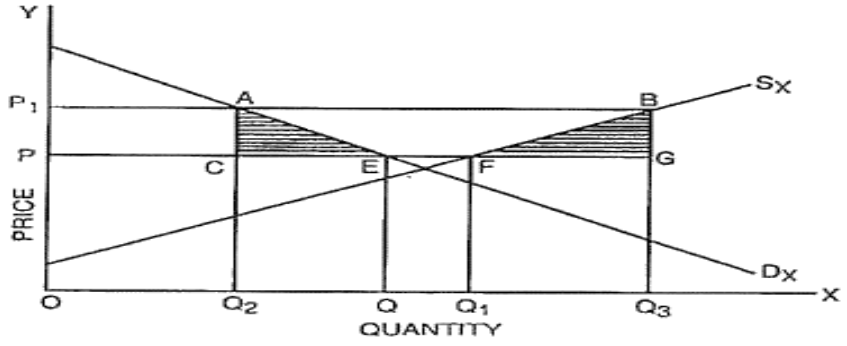

Fig.5.9.

At this price, the domestic supply is OQ_1 and demand is OQ so that exportable surplus is QQ_1. If PP_1 per unit subsidy is extended, the price for domestic

consumers and producers is OP_1. At this price, the quantities demanded and supplied are respectively OQ_2 and OQ_3. The exportable surplus expands from QQ_1 to Q_2O_3. The increase in domestic price results in a loss in consumer's surplus by $PEAP_1$. The gain in producer's surplus, on the other hand, is $PFBP_1$. The cost of subsidy is $PP_1 \times Q_2Q_3 = AC \times AB = ACGB$

Net Loss or the Cost of Protection

= Loss in Consumer's Surplus + Cost of Subsidy – Producer's Surplus

= $PEAP_1 + ACGB – PFBP_1$

= $\Delta ACE + \Delta BGF$

Thus the redistributive effects related to export subsidies can cause a net loss in welfare in the exporting country apart from the fact that the products of other countries will be at some disadvantage in foreign markets. As other countries also resort to counterveiling duties or export subsidies, there can be a serious restrictive effect upon the international trade.

5. Dumping:

The widespread impression about the term 'dumping' is the selling of the product in the foreign market below cost. But that is a wrong conception of dumping. Ellsworth and Leith defined dumping as "sales in a foreign market at a price below that received in the home market, after allowing for transportation charges, duties and all other costs of transfer."

In the words of Haberler, "dumping is the sale of a good abroad at the price which is lower than the selling price of the same good at the same time and in the same circumstances (that is, under the same conditions of payments and so-on) at home, taking account of differences in transport costs."

Thus the essential feature of dumping is price discrimination between the two markets. It is not necessary that the price discrimination or dumping occurs between the home market and foreign market. It may also take place between two regions in the home market or between two foreign markets.

Dumping has been classified into- (i) persistent, (ii) predatory and (iii) sporadic. The persistent dumping occurs when the domestic monopolist has a continuous policy to sell his product at a higher price in the domestic market than in the foreign market with the object of securing maximum profits. This kind of dumping can exist when the domestic demand for the product is

inelastic but the foreign demand for the product is highly elastic. The predatory dumping is one in which a commodity is sold at below cost or at a lower price in the foreign market temporarily with the object of driving the rivals out of that market.

After the object is achieved, the prices are raised to take the benefit of newly acquired monopoly position in the foreign market. The sporadic dumping is the occasional sale of the commodity either at below cost or at a lower price in the foreign market than in the home market for the purpose of getting rid of unforeseen and temporary glut of inventory stocks that cannot be disposed of in the home market. This kind of dumping can take place, if the demand for the product in the foreign market is more elastic than its demand in the home market.

The dumping can be successful or effective, if the following conditions exist:

(i) The producer should be a monopolist in the home market. If there are perfectly competitive conditions in the home market, the price will be equal to the average cost or marginal cost. In such a situation, the home producer cannot charge a lower price in the foreign market unless the government pays out subsidy to the home producers for making larger exports.

(ii) There should not be any possibility of the cheaper goods supplied in the foreign market flowing back to the home country. In order to prevent the flow back of the commodity, it is important that the difference between the foreign low price and domestic high price is less than the transport cost involved in the re-export of the commodity back to the country of origin.

Dumping is supposed to be beneficial from the point of view of the exporting country. It is believed that dumping makes the country get rid of unintended glut which, if disposed of in the home market, could have caused fall in prices and consequent slump in the system. If producer incurs any loss due to price difference, it can be easily compensated by the charging of high prices in the home market. In the case of persistent dumping, the domestic price may be higher than before dumping only when the production is governed by the increasing costs. Such a possibility is unlikely to exist, if the production is governed by the law of constant cost or the law of decreasing costs. In the

latter case (decreasing costs), it is possible that the producer changes a lower price in the long run even from the domestic buyers. In such a situation, there will be an increase in the level of welfare in the home country. The persistent dumping is not likely to have adverse effect even upon the importing country because the goods are available at low prices continuously. But the effects of dumping on production in the importing country have to be assessed carefully. If dumping occurs in respect of consumer goods or producer goods, it may cause injury to industrial expansion. In case the exporting country has been dumping cheap raw material, the importing country may be able to establish some processing industries. The persistent dumping is not likely to cause much harm to the economy of the importing country. It is often the sporadic dumping that causes injury to the latter. That is precisely the reason the importing countries feel the necessity of adopting counterveiling measures.

5.8. Quotas

One of the most restrictive forms of protectionism is the quota. Quotas involve restriction of imports of a good to a definite quantitative level. In practice, this means that a country imposing a quota imports only a certain number of units of the good on an annual basis.

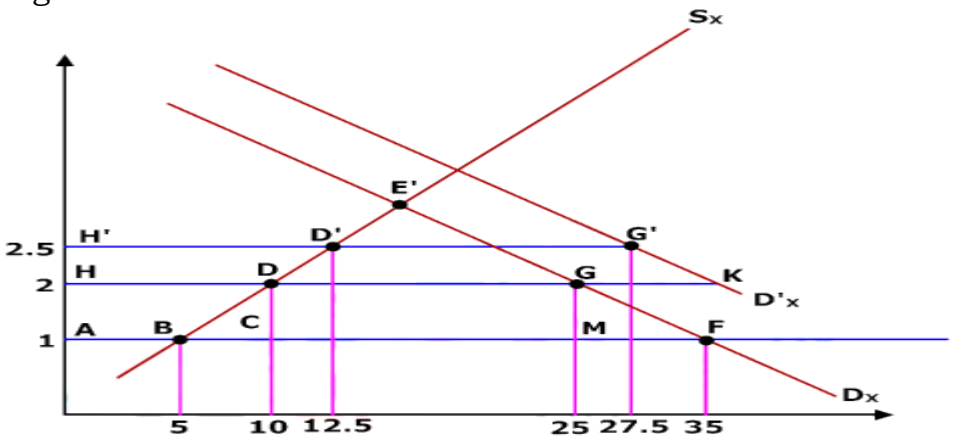

Fig.5.10.

The partial equilibrium effects of import quota can be explained through in fig.5.10, Dx is the demand curve and Sx is the supply curve of commodity X for nation 1. With free trade at the world price of Px = 1, the nation consumes 35 (X) AF, of which 5X (AB) is produced domestically and the remainder of 30X (BF) is imported. An import quota of 15X(DG) will raise the domestic price

of X to Px = 2 which is the same as if 100 percent ad valorem import tariff on commodity X is charged. At Px = 2, the quantity demanded of 25 X (HG) equals 10X (HD) produced domestically plus the 15X (DG) allowed by import quota. Thus consumption is reduced by FM and domestic production is increased by 5X (BC) with an import quota of 15X (DG). With an upward shift of Dx to D′x, the given import quota of 15X (D′G′) would result in domestic price of X rising to Px = 2.50, and domestic production rising to H′D′ (12.5X) and domestic consumption to H′G′. On the other hand if demand is increased from Dx to D′x and with given 100% import tariff, price of X would not have been changed and domestic production would also be the same i.e., 10X (HD) but domestic consumption would have increased to HK and imports to DK.

5.9. Import Quotas

The import quota means physical limitation of the quantities of different products to be imported from foreign countries within a specified period of time, usually one year. The import quota may be fixed either in terms of quantity or the value of the product. For instance, the government may specify that 60,000 colour T.V. sets may be imported from Japan. Alternatively, it may specify that T.V. sets of the value of Rs. 50 crores can be imported from that country during a given year.

5.9.1. Objectives of Import Quotas:

The system of prescribing import quota is resorted to by the government of a country for realising some of the following objectives:

(i) To afford protection to domestic industries through restricting foreign competition by limiting the imports from abroad.

(ii) To make adjustment in the adverse balance of payments. The restriction of imports through quotas can reduce the balance of payments deficit faced by the country.

(iii) To conserve the scarce foreign exchange resources of the country and to direct their use for high-priority import items.

(iv) To ensure the stabilisation of the internal price level by properly regulating the imports of goods from abroad.

(v) To discourage conspicuous consumption by the wealthy sections through placing quota restrictions on the import of luxury goods.

(vi) To improve the international bargaining position of the country through allocating larger import quotas for the products of such countries as allow a liberal inflow of the products of the home country.

(vii) To retaliate against the restrictive trade policies adopted by some of the foreign countries.

(viii) To check the speculative imports in anticipation of changes in exchange rates, tariff rates and internal money and credit policies, the government may take resort to import quota.

Types of Import Quotas:

5.9.2. Types of import quotas

(i) Tariff or Custom Quota:

In the case of tariff or custom quota, a certain specified quantity of a commodity is allowed to be imported by the government of the importing country either duty free or at a low rate of import duty. The imports in excess of this specified quantity are subject to a relatively higher rate of tariff. A tariff quota is either an autonomous quota or agreed quota. The autonomous tariff quota is fixed by decree or law. On the opposite, the agreed tariff quota is one, which is the result of some agreement between the quota-imposing country and one or more foreign countries.

This variant of import quota has some merits. Firstly, this system has the advantage of flexibility and it synthesises the tariff and import quota. Secondly, as the imports above-a specific limit are subject to a higher rate of tariff, this system, on the one hand, restricts imports and conserves scarce foreign exchange resources and, on the other hand, yields revenues to the government. Thirdly, this system does not completely prohibit imports. Some quantity of the importable goods is allowed to enter the home market either without duty or at very low rate of duty. Fourthly, the prices of domestic products under this system remain related to the prices of the foreign products. The home prices of a given product are not supposed to exceed the foreign prices by more than the amount of custom duty leviable upon it.

(ii) Unilateral Quota:

Under the system of unilateral quota, a country places an absolute limit upon the quantity of a commodity to be imported during a specified period. This limit is fixed without any prior negotiation or agreement with the foreign countries. The unilateral quota can be broadly of two types: (a) global quota and (b) allocated quota. In the case of global quota, the entire quantity to be imported may be obtained from any one or more countries during the specified period. Under the allocated quota system, the total quantity of import quota is allocated or distributed among the different exporting countries on the basis of certain criteria.

The global quota system allows the importing country to import even entire quota from anyone country. This greatly improves the bargaining position of the importing country. The exporting countries compete among themselves to capture the market of the importing country. They offer their products at lower prices and assure more favourable terms of trade compared with the rival countries. However, the global quota system suffers from certain defects. Firstly, the global quota system generally favours the nearby exporting countries than the distant countries.

Secondly, as the quota is announced by the government, the importers rush to make imports. This results in the flooding of home market and unnecessary stock-piling of goods. Such a situation may cause rapid fall in prices.

Thirdly, in the subsequent stages when the quota does not permit further imports, shortages and consequent rise in-prices occur.

Fourthly, in the global quota system, the small and less organised countries are at a disadvantage compared with the large and advanced industrialised countries.

Fifthly, the global quota system does not provide sufficient protection to the home industries from foreign competition.

In view of the above defects of global unilateral quota, the countries have developed preference for the allocated quota. But even the allocated quota system is not free from drawbacks. The main drawbacks in the allocated

unilateral quota are- Firstly, this system results in avoidable rigidity in the sources of supply of imports.

Secondly, this system may not prove to be cost and quality efficient. Some quota may be allocated, for political reasons, to such countries where the cost is relatively higher and the quality of the product is somewhat inferior.

Thirdly, as the exporting countries are assured of their share in the import quota, there is possibility of foreign firms indulging in monopoly practices.

Fourthly, the system is often criticised as discriminatory and creates a sense of grievance among some of the trading partners.

(iii) Bilateral Quota:

In case of the bilateral quota system, the import quota is fixed after negotiations between the importing and exporting countries. Haberler has called the bilateral quotas as agreed quotas.

The system has the following merits:

(a) As the quotas are fixed after negotiations among the countries, there is discrimination against one or the other country.

(b) There is no possibility of excessive fluctuations in imports and prices.

(c) The exporting countries are not likely to resort to monopolistic practices.

(d) It is not arbitrary. Therefore, it may not provoke opposition and retaliation by the foreign countries.

This system, at the same time, has the following drawbacks:

(a) This system promotes the formation of international cartels.

(b) It opens the floodgate of corruption on an extensive scale.

(c) The exporting countries, after securing the desired quota, may raise the prices of their products to the detriment of importing countries.

(d) This system greatly intensifies competition.

(e) It is an open invitation to monopolies in the exporting countries.

(iv) Mixing Quota:

Under this system, which is also known as indirect quota, the domestic producers in the quota-fixing country are required to make use of domestic raw materials along with the imported raw material in a specified proportion.

This system of import quota has the following merits:

(a) It affords protection to the producers of raw materials.

(b) It saves the valuable and scarce foreign exchange resources of the country.

(c) It induces the domestic processing of semi-finished goods and manufacturing of finished goods.

The system of mixing quota is, however, is subjected to some objections on the following grounds:

(a) If the domestic materials, which are required to be used in a fixed proportion along with imported materials, are of poor quality, there is a danger of deterioration in the quality of production in the quota-enforcing country.

(b) It causes deviation from the principle of comparative cost advantage and thus results in inefficiency and higher cost structure.

(v) Licensing of Imports:

The government of a country may prescribe any one of the systems of import quota. The most crucial aspect of any system of fixation of quota is its administration. For this purpose, the government may follow the mechanism of issuing licences to different categories of importers on the basis of specific terms, conditions and norms.

The system of issuing licences for the regulation of imports has the following main merits:

(a) The licensing authority can have an effective control over the volume of imports.

(b) The system tends to discourage the speculation in foreign exchange.

(c) It does not permit wide fluctuations in prices.

(d) It assures continuous supply of scarce products from abroad and prevents domestic shortages in a more efficient manner.

(e) This system has a great deal of flexibility and is easily adaptable to changing situations.

(f) It ensures the economical use of foreign exchange resources of the country.

The system of licensing of imports, at the same time, suffers from certain defects indicated below:

(a) This system generally favours the established, and prevents the entry of new importers. Thus the system of licensing of imports tends to encourage the growth of monopolies in the import trade.

(b) This system promotes bureaucratic corruption, favouritism and nepotism.

(c) Another defect of the system is that it tends to create 'premium market' for licences. Some of the unscrupulous importers transfer their licenses to the others and pocket substantial amounts of premia. This practice increases greatly the prices of imported goods and can intensify the inflationary condition within the quota enforcing country.

(d) The licensing tends to make the system more rigid.

(e) It causes concentration of economic power in the hands of small and privileged groups of established importers.

5.10. Import Quotas Vs Tariffs

Import quotas and tariffs have the same objectives that is to reduce the level of imports so as to protect the domestic industries, correct balance of payment deficit, and expand domestic employment and economic activities. Still they are distinguished on the basis of following points.

- The revenue effect: The tariff brings revenue to the government whereas quotas do not. When quota instead of tariff is used to restrict imports, the sum of money that would have appeared as government revenue with a tariff is collected by the one who receives import license. License holders are able to buy imports and resell them at a higher price in the domestic market.
- Corruption and bribery: Distribution of import licenses may give rise to corruption and bribery on the part of government officials. Import tariffs do not create such evils of government corruption, political favoritism etc.
- Monopoly profit: Quotas creates a monopoly profit for those who have import licenses. This means that consumer surplus is converted into monopoly profits. Thus, quotas are likely to lead to a greater loss of

consumer welfare. Whereas if a tariff is imposed domestic price will be equal to import price plus tariff.

- ❖ Nature of protectionism: In its protective effect, trade shelters the domestic market from competition by foreign firms, while import quota offers protection to old inefficient firms as import licenses are generally offered to them.
- ❖ Price Differential: Tariffs and Quota also differ in price differentials between domestic price and the world price, in the case of a tariff, the domestic price differs from the world price by the amount of a tariff duty. But under quota domestic price would exceed the tariffs, because when the quantity imported is fixed, instability in demand and supply conditions in the domestic and world markets have to be adjusted not through changing import quantities but through altered prices.
- ❖ Stability: An import quota is unstable because it can be changed at the discretion of the bureaucracy, while a tariff is stable because any change in tariff policy requires legislative approval.
- ❖ Preventing Recession: Quotas may also be used as a device to prevent the international transmission of severe recession. Recession generally causes a fall in prices and this may encourage exports. A country may make use of quotas to safeguard their interest against such recession.

5.11. Free Trade Vs Protection

Trade between the countries can either be the free trade or the protected trade. Free trade refers to a trade of goods and services between countries which is not impeded by government restrictions or interventions. Many economists have a belief that free trade leads to gains which are beyond the elimination of consumption and the production distortions. Protectionism refers to an economic policy which restricts trade between the economies. Restrictions in trade could be by way of tariffs, non-tariff barriers such as quotas, export subsidies, voluntary export restraints, technical barriers etc.

5.11.1. Free trade

A trade policy of placing no restrictions on the movement of goods between countries is known as the policy of “Free trade”. So the trade is free from all the tariff and non-tariff barriers. Such a policy permits the flow of

international commerce in its natural environment and is free from all artificial impediments. Free trade enables nations to focus on their core competitive advantages, thereby maximising economics output and fostering income growth for their citizens. The idea that free trade is welfare enhancing is one of the most fundamental doctrines in modern economics dating back to Adam Smith (1776) and David Ricardo (1816). According to Adam Smith, the term free trade is used to denote that system of commercial policy which draws no distinction between domestic and foreign commodities. Speaking in an alternative way, free trade denotes freedom in totality of international exchange. With such policy, no barriers to goods trade exists between countries.

5.11.2. Advantages of Free Trade

The important arguments in favour of free trade are as follows

1. The theory of Comparative Advantage: According to Ricardo, by specialising and trading goods in which countries have a lower opportunity cost or greater comparative advantage, there can be an increase in economic welfare for all the countries. Free trade requires countries to do specialisation in those goods having comparative advantage. Such production specialisation brings advantage for all and results in the maximisation of national production.

2. Better utilisation of factors of production: Free trade leads to the most economic utilisation of the productive resources. Under free trade each country specialises in the production of those goods for which it is best suitable and import those goods from the other countries in which the nation has comparative disadvantage.

3. Reduction in Tariff Barriers leads to creation of trade: creation of trade happens when consumption shifts from high cost production houses to low cost production houses. Reducing the tariff barriers with an objective to bring about free trade in an economy may help countries for trade creation.

4. Lower prices of imported goods: Free trade fetches imports at cheap rate. It is a lucrative argument from the consumers' perception. With free trade arena, consumers benefit via lower prices, producers benefit as factors of

production are employed in more fruitful and specialised production which gives better earnings.

5. Increased Competition: With the expansion of trade, domestic firms encounter competition from abroad. As a result of this there would be more motivation to cut costs and increase efficiency. It may prevent domestic monopolies from charging too high prices. So the inefficient producers forcefully improve their efficiency or quit.

6. Economic Growth: The countries indulged in free trade have increasing living standards, rising real incomes and increased rates of economic growth. It is achieved by more competitive industries, efficiency, increased productivity and the production levels.

5.11.3. Disadvantages of Free Trade

Though free trade is beneficial, there are number of disadvantages given by the economist who oppose free trade and trade liberalisation. Free trade policy has been abandoned by all countries for the following reasons.

1. Under the system of free trade, the underdeveloped countries suffer very much in competition with the advanced countries. Free trade policy in India adopted by the British government has proved that one time flourishing industries (handicrafts) of India were completely wiped out due to foreign competition.

2. Countries cannot allow free import of injurious and harmful products hence trade restrictions become very much necessary.

3. Developing or new industries may find it difficult to become established in a competitive environment with no short term protection policies by government.

4. Free trade can lead to pollution and environmental problems as companies fail to include these costs in the price of goods in trying to compete with countries operating under weaker environmental legislation in some countries.

5.12. Protected Trade

Protection refers to the policy of encouraging domestic industries by providing subsidies to home producers or more usually by imposing custom duties on foreign products. We can protect the trade with the help of tariffs

and Non tariffs. The several instruments of non-tariffs are Import Quota, Voluntary export restraints, Technical Barriers to trade etc.

Protectionist policies

A variety of policies have been used to protect the trade which are as follows

i. Tariffs: Tariff is simply a tax duty levied on a product when it crosses national boundaries. For example oil exports have been taxed by the Organisation of Petroleum Exporting Countries (OPEC) in order to raise the revenue or promote scarcity in global markets and hence increase the world price of oil.

ii. Import quotas: An import quota is a physical restriction on the quantity of some goods that may be imported during a specific time period. The restriction is usually enforced by issuing import licenses to some group of individuals or the firms. Import quotas aim at regulating and restricting imports in order to protect domestic industries from foreign competition and to correct disequilibrium in the balance of payments.

iii. Direct subsidies: Government subsidies in the form of cheap loans are sometimes given to local firms that cannot compete well against imports. These subsidies are provided to protect the local jobs and to help local firms adjust to the world markets.

iv. Technical barriers to trade: Technical barriers refer to a country's national standards for health, safety, and product labelling. Even when these regulations are designed solely for the protection of domestic population, they can distort international trade. For example most firms produce products primarily for domestic consumption and the exportation of the product provides a secondary source of demand. However when a firm decides to export its product, it will have to change the product label. In most cases, the new label will have to confirm to the importing country's product labelling and standards and to be printed in the country's official language.

v. Voluntary export restraints: The other important non-tariff trade barriers or NTB's is voluntary export restraints (VERs). These refer to the case where an importing country induces another nation to reduce

its exports of a commodity "voluntarily", under the threat of all round restrictions, when these exports threaten an entire domestic industry.

5.12.1. Arguments for protected trade

1. Protecting the domestic labour against cheap foreign labour

Trade restrictions are needed to protect domestic labour against cheap foreign labour. This argument is misleading as even if domestic wages are higher than the wages abroad, domestic labour costs can still be lower, if the productivity of labour is high domestically than abroad. Moreover the mutually beneficial trade could still base on comparative advantage ie the cheap labour nation specialising in the production of and exporting labour intensive commodities and the expensive labour nation specialising in the production of and exporting capital intensive commodities.

2. Reduces domestic Unemployment and cure deficit in balance of payment

Protection would reduce the domestic unemployment and a balance of payment deficit by the substitution of imports with domestic production. But these arguments are at the expense of the other nations as it causes greater unemployment and worsened balance of payment abroad. So the other nations retaliate and at the end all of them lose. So the domestic unemployment and deficit in the balance of payment should be corrected with appropriate monetary, fiscal and the trade policies rather than with trade restrictions.

3. Economic arguments

Infant Industry Argument

One of the most notable arguments for protection is known as the infant industry argument. An infant industry could be defined as the entity which has come new in the market, not grown up enough to stand competition from well-developed foreign industries. The argument affirms that protection is necessary for small and newly established firms particularly in less developed economies. Newly established firms have small chance of competing on a one to one basis with well-established firms in developed economies. Developed country firms have been doing business since longer time and with time have become efficient in its productive method with better knowledge and

information about the process of production, about market characteristics, about their own labour market, etc. As a result they are able to offer their product at a lower price in international markets and still remain profitable. A firm producing a similar product in less a developed country, on the other hand, would not have the same production technology available to it. Its management and workers would have absence of knowledge and experience of its rivals of developed country and hence will be going to have product production in a less efficient manner. If, say they are forcefully made to have competition with the firms directly in the developed economies, the LDC firms will not be able to have profitable production and thus will not be able to stay in the business for a longer time. Protection of these LDC firms, via taking the route of import tariff, will hike the product price domestically and lessen imports from other countries. If prices are increased, that are sufficient, the domestic firms will be apt to cover up their high costs of production and remain in business. Over time these LDC firms will be able to accrue fruits from production and experience of management that would lower its costs of production. Essentially the firms would follow the same path that the developed country firms had followed to realize their own production efficiency improvements. Protection, then, allows an infant industry time to "grow-up". Furthermore since the LDC firms would improve their productive efficiency over time, the protective tariffs could be gradually reduced until eventually, when the tariffs are eliminated, they would compete on an equal footing with the developed country firms.

4. Strategic arguments:

It means use of a tariff to protect military capability. The point is, to consume the goods produced by our country for the production of national industry and so, if the war happens we don't need to indulge in buying products from a foreign country and our industries would have the necessary capacity for producing all the necessary goods. We want tariffs to reduce the “dependence” on international resources. Conservation of exhaustible natural resources argument: Production for export market may involve early of irreplaceable natural resources like gas, oil and coal. Export duty is an

undesirable measure to balance the needs of present and the future generation.

5.12.2. Disadvantages of protectionism

1. Protectionism may raise prices to consumers and producers of the imported products.
2. Protected trade would lead to less choice for consumers due to high prices.
3. Protectionism distorts comparative advantage, leading to the inefficient use of world's resources. Specialisation is reduced and this would reduce the potential level of world's output.
4. Competition would diminish if foreign firms are kept out of country and so domestic firms may become inefficient without the incentive to minimise the cost. So the motive to innovation will also be reduced.
5. Protectionism may hinder the economic growth.

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