International Economics

DEECO606

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International Economics

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Content

Unit 01:Introduction

CONTENTS

Objectives

- understand the importance of International Economics.
- know about International Trade and Nation's Standard of Living.
- Understand the current international economics problems.

Introduction

International economics is a field of study that assesses the implications of international trade, international investment, and international borrowing and lending. There are two broad subfields within the discipline: international trade and international finance. International trade is a field in economics that applies microeconomic models to help understand the international economy. Its content includes basic supply-and demand analysis of international markets; firm and consumer behavior; perfectly competitive, oligopolistic, and monopolistic market structures; and the effects of market distortions.The barter of goods or services among different peoples is an age-old practice, probably as old as human history. International trade, however, refers specifically to an exchange between members of other nations, and accounts and explanations of such trade begin (despite fragmentary earlier discussion) only with the rise of the modern nation-state at the close of the European Middle Ages. As political thinkers and philosophers began to examine the nature and function of the nation, trade with other countries became a particular topic of their inquiry. It is, accordingly, no surprise to find one of the earliest attempts to describe the function of international trade within that highly nationalistic body of thought now known as mercantilism.

1.1 International Economics

International economics uses the same fundamental methods of analysis as other branches of economics, because the motives and behavior of individuals are the same in international trade as

they are in domestic transactions. Gourmet food shops in Florida sell coffee beans from both Mexico and Hawaii; the sequence of events that brought those beans to the shop is not very different, and the imported beans traveled a much shorter distance! Yet international economics involves new and different concerns, because international trade and investment occur between independent nations. The United States and Mexico are sovereign states; Florida and Hawaii are not. Mexico's coffee shipments to Florida could be disrupted if the U.S. government imposed a quota that limits imports; Mexican coffee could suddenly become cheaper to U.S. buyers if the peso were to fall in value against the dollar. Neither of those events can happen in commerce within the United States because the Constitution forbids restraints on interstate trade and all U.S. states use the same currency.

The economics of the international economy can be divided into two broad subfields: the study of international trade and the study of international money. International trade analysis focuses primarily on the real transactions in the international economy, that is, on those transactions that involve a physical movement of goods or a tangible commitment of economic resources. International monetary analysis focuses on the monetary side of the international economy, that is, on financial transactions such as foreign purchases of U.S. dollars. An example of an international trade issue is the conflict between the United States and Europe over Europe's subsidized exports of agricultural products; an example of an international monetary issue is the dispute over whether the foreign exchange value of the dollar should be allowed to float freely or be stabilized by government action.

In the real world there is no simple dividing line between trade and monetary issues. Most international trade involves monetary transactions, while, as the examples in this chapter already suggest, many monetary events have important consequences for trade. Nonetheless, the distinction between international trade and international money is useful.

1.2 International Trade

International trade is the exchange of capital goods, goods, and services across internationalborders or territories. In most countries, such trade represents a significant share of gross domesticproduct (GDP). While international trade has existed throughout history its economic, social, andpolitical importance has been on the rise in recent centuries.Carrying out trade at an internationallevel is a more complex process than domestic trade. Trade takes place between two or more nations.

Factors like the economy, government policies, markets, laws, judicial system, currency, etc.influence the trade. The political relations between two countries also influences the trade betweenthem. Sometimes, the obstacles in the way of trading affect the mutual relationship adversly. Toavoid this, international economic and trade organisations came up. To smoothen and justify theprocess of trade between countries of different economic standing, some international economicorganisations were formed. These organisations work towards the facilitation and growth ofinternational trade

Importance of International Trade

a. Make maximum use of raw materials

Some countries have natural raw materials, such as oil (Qatar), metals (Iceland), fish (Iceland), Congo (diamonds) and butter (New Zealand). Without trade, these countries would not benefit from the natural contributions of raw materials.

Eli Hawker and BertilOll developed the theoretical model. Countries known as the Hecksher-Ohlin Model (H-O Model) say they will pay special attention to producing and exporting goods that use several local component settlements. Countries with limited resources will import.

b. Comparative benefit

The principle of comparative achievement states that countries with special benefit costs must have particular expertise. Although a country can produce two goods at a low price, it should not make manufacturing). Therefore, exports of these services and goods will be efficient for India. Economies like the UK may benefit relatively from education and video game development. Trade allows countries to specialize. More details on how comparative gain can enhance financial well-being. The theory of relative gain has limitations, but it explains at least some aspects of international trade.

c. Great choice for users

The new commercial theory does not emphasize comparative advantage and relative input costs. In real business, the new business theory states that a driving force behind trade is giving consumers a choice of different products. We import BMW cars from Germany, not because they are affordable, but because of the quality and brand image. The business enables a wide selection of music and film to appeal to different tastes when it comes to music and film. When the Beatles toured the US in the 1960s, it was exporting British music – relative labor costs were not significant.

Probably the best example is things like clothing. Some textiles (eg, value-added garments from Primark) are very important and are likely to be imported from low-cost countries such as Bangladesh, however, we also import fashion labels from Gucci (Italy), where customers are charged lower prices. Are benefited. The argument is that international trade often fits the pattern of monopoly competition.

d. Specialization and Economy – More Efficiency

Another aspect of the new business theory is that no matter which countries are experts, the main thing is to advance expertise, which enables companies to benefit from an economy of scale that is influenced by other factors. Improves the Many times, countries may specialize in specific industries for no particular reason – this can be a historical risk. But that expertise provides better efficiency. Multinationals divide the manufacturing process into a global production system for high value-added products. For example, Apple designs its computers in the US but reduces production in Asian factories. Trade enables a product with multiple country sources. The manufacturing process is often global in car production, with engines, tires, design, and marketing coming from various countries.

e. Business in service sector

Import of physical goods, trade in bananas and export cars. However, the growth of the services sector economy means that more business is invisible –insurance, IT services and banking. In creating this website, I sometimes source our IT services for developers from other countries. This can be for small jobs up to $ 50. In addition, I can export a review guide for countries around the world on 49 7.49. A global economy with modern communications enables many micro-trades, which would not be possible in the pre-Internet era.

f. Global Development and Economic Development

International trade is an essential factor in promoting economic growth. This increase has led to a reduction in poverty – particularly in Southeast Asia, the highest growth rate since the 1980s.

1.3 Difference Between Inter-Regional and International Trade

Nevertheless, there are several reasons to believe the classical view that international trade is fundamentally different from inter-regional trade.

1. Factor Immobility. The classical economists advocated a separate theory of international trade on the ground that factors of production are freely mobile within each region as between places and occupations and immobile between countries entering into international trade. Thus, labour and capital are regarded as immobile between countries while they are perfectly mobile within a country. There is complete adjustment to wage differences and factor-price disparities within a country with quick and easy movement of labour and other factors from low return to high sectors. But no such movements are possible internationally. Price changes lead to movement of goods betwen countries rather than factors. The reasons for international immobility of labour are— difference in languages, customs, occupational skills, unwillingness to leave familiar surroundings, and family ties, the high travelling expenses to the foreign country, and restrictions imposed by the foreign coutnry on labour immigration. The international mobility of capital is restricted not by transport costs but by the difficulties of legal redress, political uncertainty, ignorance of the prospects of investment in a foreign country, imperfections of the banking system, instablity of foreign currencies, mistrust of the foreigners, etc. Thus, widespread legal and other restrictions exist in the movement of labour and capital between countries. But such problems do not arise in the case of inter-regional trade.

2. Differences in Natural Resources. Different countries are endowed with different types of natural resources. Hence, they tend to specialize in production of those commodities in which they

are richly endowed and trade them with others where such resources are scarce. In Australia, land is in abundance but labour and capital are relatively scarce. On the contrary, capital is relatively abundant and cheap in England while land is scarce and dear there. Thus, commodities requiring more capital, such as manufactures, can be produced in England; while such commodities as wool, mutton, wheat, etc. requiring more land can be produced in Australia. Thus both countries can trade each other's commodities on the basis of comparative cost differences in the production of different commodities.

3. Geographical and Climatic Differences. Every country cannot produce all the commodities due to geographical and climatic conditions, except at possibly prohibitive costs. For instance, Brazil has favorable climate geographical conditions for the production of coffee; Bangladesh for jute; Cuba for beet sugar; etc. So countries having climatic and geographical advantages specialize in the production of particular commodities and trade them with others.

4. Different Markets. International markets are separated by difference in languages, usages, habits, tastes, fashions etc. Even the systems of weights and measures and pattern and styles in machinery and equipment differ from country to country. For instance, British railway engines and freight cars are basically different from those in France or in the United States. Thus, goods which may be traded within regions may not be sold in other countries. That is why, in great many cases, products to be sold in foreign countries are especially designed to confirm to the national characteristics of that country. Similarly, in India right-hand drive cars are used whereas in Europe and America left-hand driven cars are used.

5. Mobility of Goods. There is also the difference in the mobility of goods between inter-regional and international markets. The mobility of goods within a country is restricted by only geographical distances and transportation costs. But there are many tariff and non-tariff barriers on the movement of goods between countries. Besides export and import duties, there are quotas, VES, exchange controls, export subsidies, dumping, etc. which restrict the mobility of goods at international plane.

6. Different Currencies. The principal difference between interregional and interantional trade lies in use of different currencies in foreign trade, but the same currency in domestic trade. Rupee is accepted throughout India from the North to the South and from the East to the West, but if we cross over to Nepal or Pakistan, we must convert our rupee into their rupee to buy goods and services there. It is not the differences in currencies alone that are important in international trade, but changes in their relative values. Every time a change occurs in the value of one currency in terms of another, a number of economic problems arise. "Calculation and execution of monetary exchange transactions incidental to international trading constitute costs and risks of a kind that are not ordinarily involved in domestic trade." Further, currencies of some countries like the American dollar, the British pound the Euro and Japanese yen, are more widely used in international transactions, while others are almost inconvertible. Such tendencies tend to create more economic problems at the international plane. Moreover, different countries follow different monetary and foreign exchange policies which affect the supply of exports or the demand for imports. "It is this difference in policies rather than the existence of different national currencies which distinguishes foreign trade from domestic trade," according to Kindle Berger.

7. Problem of Balance of Payments. Another important point which distinguishes international trade from inter-regional trade is the problem of balance of payments. The problem of balance of payments is perpetual in international trade while regions within a Download more at Learnclax.com country have no such problem. This is because there is greater mobility of capital within regions than between countries. Further, the policies which a country chooses to correct its disequilibrium in the balance of payments may give rise to a number of other problems. If it adopts deflation or devaluation or restrictions on imports or the movement of currency, they create further problems. But such problems do not arise in the case of inter-regional trade.

8. Different Transport Costs. Trade between countries involves high transport costs as against inter-regionally within a country because of geographical distances between different countries.

9. Different Economic Environment. Countries differ in their economic environment which affects their trade relations. The legal framework, institutional set-up, monetary, fiscal and commercial policies, factor endowments, production techniques, nature of products, etc. differ between countries. But there is no much difference in the economic environment within a country.

10. Different Political Groups. A significant distinction between inter-regional and international trade is that all regions within a country belong to one political unit while different countries have

different political units. Inter-regional trade is among people belonging to the same country even though they may differ on the basis of castes, creeds, religions, tastes or customs. They have a sense of belonging to one nation and their loyalty to the region is secondary. The government is also interested more in the welfare of its nationals belonging to different regions. But in international trade there is no cohension among nations and every country trades with other countries in its own interests and often to the detriment of others. As remarked by Friedrich List, "Domestic trade is among us, international trade is between us and them."

11. Different National Policies. Another difference between interregional and international trade arises from the fact that policies relating to commerce, trade, taxation, etc. are the same within a country. But in international trade there are artificial barriers in the form of quotas, import duties, tariffs, exchange controls, etc. on the movement of goods and services from one country to another. Sometimes, restrictions are more subtle. They take the form of elaborate custom procedures, packing requirements, etc. Such restrictions are not found in inter-regional trade to impede the flow of goods between regions. Under these circumstances, the internal economic policies relating to taxation, commerce, money, incomes, etc. would be different from what they would be under a policy of free trade.

1.4 International Trade and the Nation's Standard of Living

If there is a point on which most economists agree, it is that trade among nations makes the world better off. Yet international trade can be one of the most contentious of political issues, both domestically and between governments. When a firm or an individual buys a good or a service produced more cheaply abroad, living standards in both countries increase. There are other reasons consumers and firms buy abroad that also make them better off—the product may better fit their needs than similar domestic offerings or it may not be available domestically. In any case, the foreign producer also benefits by making more sales than it could selling solely in its own market and by earning foreign exchange (currency) that can be used by itself or others in the country to purchase foreign-made products. Still, even if societies as a whole gain when countries trade, not every individual or company is better off. When a firm buys a foreign product because it is cheaper, it benefits—but the (more costly) domestic producer loses a sale. Usually, however, the buyer gains more than the domestic seller loses. Except in cases in which the costs of production do not include such social costs as pollution, the world is better off when countries import products that are produced more efficiently in other countries.

Those who perceive themselves to be affected adversely by foreign competition have long opposed international trade. Soon after economists such as Adam Smith and David Ricardo established the economic basis for free trade, British historian Thomas B. Macaulay was observing the practical problems governments face in deciding whether to embrace the concept: "Free trade, one of the greatest blessings which a government can confer on a people, is in almost every country unpopular."

1.5 Subject Matter of International Economics

International economics deals with the economic and financial interdependence among nations. It analyzes the flow of goods, services, payments, and monies between a nation and the rest of the world, the policies directed at regulating these flows, and their effect on the nation's welfare. This economic and financial interdependence is affected by, and in turn influences, the political, social, cultural, and military relations among nations.

Specifically, international economics deals with international trade theory, international trade policy, the balance of payments and foreign exchange markets, and open-economy macroeconomics. International trade theory analyzes the basis and the gains from trade. International trade policy examines the reasons for and the effects of trade restrictions. The balance of payments measures a nation's total receipts from and the total payments to the rest of the world, while foreign exchange markets are the institutional framework for the exchange of one national currency for others. Finally, open-economy macroeconomics deals with the mechanisms of adjustment in balance-of-payments disequilibria (deficits and surpluses). More importantly, it analyzes the relationship between the internal and the external sectors of the economy of a nation, and how they are interrelated or interdependent with the rest of the world economy under different international monetary systems.

International trade theory and policies are the microeconomic aspects of international economics because they deal with individual nations treated as single units and with the (relative) price of individual commodities. On the other hand, since the 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 level of the nation as a whole, they represent the macroeconomic aspects of international economics. These are often referred to as open-economy macroeconomics or international finance.

International economic relations differ from interregional economic relations (i.e., the economic relations among different parts of the same nation), thus requiring somewhat different tools of analysis and justifying international economics as a distinct branch of economics. That is, nations usually impose some restrictions on the flow of goods, services, and factors across their borders, but not internally. In addition, international flows are to some extent hampered by differences in language, customs, and laws. Furthermore, international flows of goods, services, and resources give rise to payments and receipts in foreign currencies, which change in value over time.

International economics has enjoyed a long, continuous, and rich development 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. We will be examining the contribution made by each of these and other great economists in the following chapters. Other special branches of economics are of more recent vintage, and none can claim such a distinguished list of contributors and background.

1.6 Purpose of International Economic Theories and Policies

The purpose of economic theory in general is to predict and explain. That is, economic theory abstracts from the details surrounding an economic event in order to isolate the few variables and relationships deemed most important in predicting and explaining the event. Along these lines, international economic theory usually assumes a two-nation, two-commodity, and two-factor world. It further assumes no trade restrictions to begin with, perfect mobility of factors within the nations but no international mobility, perfect competition in all commodity and factor markets, and no transportation costs.

These assumptions may seem unduly restrictive. However, most of the conclusions reached on the basis of these simplifying assumptions hold even when they are relaxed to deal with a world of more than two nations, two commodities, and two factors, and with a world where there is some international mobility of factors, imperfect competition, transportation costs, and trade restrictions.

Starting with the simplifying assumptions just mentioned, international economic theory examines the basis for and the gains from trade, the reasons for and the effects of trade restrictions, policies directed at regulating the flows of international payments and receipts, and the effects of these policies on a nation's welfare and on the welfare of other nations. International economic theory also examines the effectiveness of macroeconomic policies under different types of international monetary arrangements or monetary systems.

Although most of international economics represents the application of general microeconomic and macroeconomic principles to the international context, many theoretical advances were made in the field of international economics itself, and only subsequently did they find their way into the body of general economic theory. One example is the so-called theory of the second best. Production and general equilibrium theory, growth theory, welfare economics, as well as many other economic theories, have also benefited from work in the international sphere. These contributions attest to the vitality and importance of international economics as a special branch of economics.

1.7 Current International Economic Problems

The beginning of 2007 offers a conflicting picture of the global economy for those trying to discern trends, challenges and opportunities. Concerns about energy security and climate sustainability are converging-finally bringing consensus in sight on the need for action in the United States, but prospects for breaking the global stalemate are still years away. While some developing countries are succeeding in bringing hundreds of millions out of poverty, too many are still mired in a doom spiral of conflict, poverty, and disease- despite the entry of new philanthropists, advocates and global corporations into the field of development. China's projected 9.6 percent growth rate is

sending ripples to the farthest reaches of the planet-creating opportunities but also significant risks. The United States remains in the "goldilocks" zone, but this is premised on continued borrowing from abroad at historically unprecedented rates while many Americans fret about widening inequality and narrowing opportunity. While the United States concentrates on civil war in the Middle East, most leaders in the region are preoccupied with putting an outsized cohort of young people to work and on the road to becoming productive citizens.

What are the most important challenges we face and what are the potential solutions? In Washington, D.C., where short-term political wrangling too often crowds out the harder and more important long-term challenges, this inaugural publication of Brookings Global Economy and Development seeks to put the spotlight squarely back on the most consequential issues demanding action. It seeks to size these issues, offering policymakers and leaders a concise and clear view of the critical challenges as viewed by leading experts in the field. From economic exclusion of youth in the Middle East to a pragmatic approach to energy and environmental security, this "top 10" is intended to mark core issues and shed light on opportunities and challenges with a broader and longer-term perspective.

1. *Energy and Environmental Security*

Energy and environmental security has emerged as the primary issue on the global agenda for 2007. Consensus has recently been forged on the potential for long-term economic, national security and societal damage from insecure energy supplies and environmental catastrophe, as well as the intense need for technological advances that can provide low-polluting and secure energy sources. Yet despite growing global momentum, there is still little agreement on the best set of actions required to reduce global dependency on fossil fuels and greenhouse gas emissions. Confounding the international policy challenge is the disproportionate impact of high oil prices and global warming across nations, insulating some countries from immediate concern while forcing others to press for more rapid change.

2.Conflict and Poverty

In a world where boundaries and borders have blurred, and where seemingly distant threats can metastasize into immediate problems, the fight against global poverty has become a fight for global security. American policymakers, who traditionally have viewed security threats as involving bullets and bombs, are increasingly focused on the link between poverty and conflict: the Pentagon's 2006 Quadrennial Defense Review focuses on fighting the "long war," declaring that the U.S. military has a humanitarian role in "alleviating suffering, ? [helping] prevent disorder from spiraling into wider conflict or crisis."

3. Competing in a New Era of Globalization

Is the new episode of globalization just another wave or a seismic shift? While individual elements feel familiar, the combined contours are unprecedented in scale, speed, and scope.

4. Global Imbalances

Today's interconnected world is in uncharted territory: the world's sole hegemonic power, the United States, nurses an addiction to foreign capital, while up-and-coming powers such as China and oil exporters sustain surpluses of increasing magnitudes. Some worry that the world is at a tipping point, where only a dramatic shift in economic policy can alter the looming trajectory. Others see underlying structural factors perpetuating gross imbalances for a sustained period.

5.Rise of New Powers

The rise of "emerging powers"-a group that usually includes the so-called BRICs (Brazil, Russia, India, and China), but which sometimes is applied more broadly to include South Africa, Mexico and others-is reshaping the global economy and, more gradually, international politics. Growing much faster than the rest of the world, these economies are changing the structure of international production and trade, the nature and direction of capital flows, and the patterns of natural resource consumption. At the same time, the growth of these countries is beginning to shift the global distribution of power forcing the great powers to come to terms with the reality that they will need to share management of international rules and systems in the coming decades.

6. Economic Exclusion in the Middle East

The Middle East has before it what could be one of the greatest demographic gifts in modern history-a potential economic windfall arising from a young and economically active workforce.

Today, young people aged 15- to 24- years old account for 22 percent of the region's total population, the highest regional average worldwide. With the right mix of policies, this demographic opportunity could be tapped to spur economic growth and promote stability.

7. Global Corporations, Global Impact

The private sector is becoming a significant player-indeed some might say the dominant player-in shaping the global economic and development agenda. Multinational corporations with operations that span the globe, and in some cases capacities and networks that match those of governments, have a particularly important role to play in helping to spread the opportunities and mitigating some of the risks of globalization.

8. Global Health Crises

From responding to the threat of pandemic flu to efforts to control the spread of HIV/AIDS, the world has begun to realize that global health issues are relevant for any citizen, regardless of nationality, residence or status. Despite improvements in the world's collective ability to battle disease with advances in medicine and technology, global health needs remain unmet, making the entire world vulnerable to health crises. In particular, the poor continue to suffer disproportionately from inadequate health services, exacerbating their struggle out of poverty.

9. Global Governance Stalemate

Today's global challenges-nuclear proliferation, the deadlock of global trade negotiations, the threat of pandemic flu, and the fight against global poverty-cannot be solved by yesterday's international institutions. To resolve the world's most pressing problems, which touch all corners of the globe, we must adapt our global governance approaches to be more representative and thus more effective by encouraging and enabling the key affected countries to take an active role in generating solutions.

10. Global Poverty: New Actors, New Approaches

The challenge of global poverty is more urgent than ever: over half the world's population-nearly 3 billion people-lives on less than $2 per day; nearly 30,000 children die each day-about 11 million per year -because they're too poor to survive. With such a toll, addressing poverty in new and more effective ways must be a priority for the global policy agenda. Fortunately, a variety of new actors are bringing new perspectives, new approaches and new energy to the challenge.

Summary

The world today is in the midst of a revolution based on the globalization of tastes, production, labor markets, and financial markets. Globalization is important because it increases efficiency; it is inevitable because international competition requires it. Globalization is being blamed for increased world income inequalities, child labor, environmental pollution, and other problems, and it has given rise to a strong anti-globalization movement. Interdependence in the world economy is reflected in the flow of goods, services, labor, and capital across national boundaries. The gravity model postulates that (other things equal), the bilateral trade between two countries is proportional or at least positively related to the product of the countries' GDPs. The greater the distance between the two countries, the smaller the GDPs. Starting with many simplifying assumptions, international economic theories examine the basis for and the gains from trade, the reasons for and the effects of trade restrictions, the policies directed at regulating the flow of international payments and receipts, and the effects of these policies on a nation's welfare. Thus, international economics deals with the pure theory of trade, the theory of commercial policy, the balance of payments and foreign exchange markets, and adjustment in the balance of payments or open-economy macroeconomics. The first two topics are the micro-economic aspects of international economics; the latter two are the macroeconomic aspects, also known as international finance.

Keywords

1. International Trade: the trade that takes place between buyer and seller of two different nations is called international trade.
2. Inter-Regional Trade: In addition to trade with other countries, trade also takes place among. the different regions and different states within the frontiers of a country.

3. Globalization: Globalization is a term used to describe how trade and technology have made the world into a more connected and interdependent place.
4. Balance of Payment: The balance of payments summarises the economic transactions of an economy with the rest of the world.
5. Foreign Exchange: The foreign exchange market is the market in which foreign currency—such as the yen or euro or pound—is traded for domestic currency—for example, the U.S. dollar.

SelfAssessment

1. International trade contributes and increases the world _____

A. Population
B. Inflation
C. Economy
D. Trade Barriers

2. Free international trade maximizes world output through_____.

A. Countries reducing various taxes imposed.
B. Countries specializing in production of goods they are best suited for.
C. Perfect competition between countries and other special regions
D. The diluting the international business laws & conditions between countries.

3.Domestic company limits it's operations to _____ political boundaries.

A. International
B. National
C. Transnational
D. Global

4.Trade between two or more than two countries is known as _____.

A. Internal Business
B. External Trade
C. International Trade
D. Unilateral Trade

5. LDCs pay more for their imports from DCs than what they receive for their exports

A. True
B. False

6. Geographical and climatic conditions are same for internal and international trade.

A. True
B. False

1. An international trade increases consumption level of participating countries.

A. True

B. False

2. An international trade increases welfare of only exporting countries

A. True

B. False

3. Regional trade agreement is treaty signed by countries to____

A. Encourage free movement of goods and services across borders

B. Encourage free movement of goods and services within borders

C. Discourage free movement of goods and services across borders

D. None of the above

4. Trade is not possible if countries operate under____

A. Absolute cost difference

B. equal cost difference

C. Comparative cost difference

D. None of the above

11. Internal and international trade differs in terms of _____

A. Geographical and climatic conditions

B. Mobility of factors of production

C. Factor endowment

D. All of these

12. International trade _____

A. Stimulates innovations,

B. Reduces cost of production

C. Diversifies consumption

D. All the above

13. Participation in international trade is important as _____

A. It acts as Engine of growth

B. Vent for surplus

C. Widens the market

D. All of these

14. In case of composition of International trade_____ play major role.

A. Manufactures

B. Agricultural products

C. Fuel and Mining

D. None of these.

15. Internal and international trade differs in terms of _____

A. Geographical and climatic conditions
B. Mobility of factors of production
C. Factor endowment
D. All of these

Answers for Self Assessment

l.	C	2.	B	3.	B	4.	C	5.	A
6.	B	7.	A	8.	B	9.	A	10.	B
11.	D	12.	D	13.	D	14.	A	15.	D

Review Questions

1. How is international trade related to the standard of living of the United States? of other large industrial nations? of small industrial nations? of developing nations? For which of these groups of nations is international trade most crucial?
2. What does international trade theory study? international trade policy? Why are they known as the microeconomic aspects of international economics?
3. What is the purpose of economic theory in general? of international economic theories and policies in particular?
4. Why does the study of international economics usually begin with the presentation of international trade theory? Why must we discuss theories before examining policies? Which aspects of international economics are more abstract? Which are more applied in nature?
5. If nations gain from international trade, why do you think most of them impose some restrictions on the free flow of international trade?
6. (a) How do international economic relations differ from interregional economic relations?

(b) In what way are they similar?

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Unit 02: International Trade Theory

CONTENTS

Objectives

- Understand the law of comparative advantage.
- Understand the relationship between opportunity costand relative commodity prices.
- Explain the basis for trade and show the gains fromtrade under constant costs conditions.

Introduction

In this chapter, we examine the development of trade theory from the seventeenth century through the first part of the twentieth century. This historical approach is useful not because we are interested in the history of economic thought as such, but because it is a convenient way of introducing the concepts and theories of international trade from the simple to the more complex and realistic. The basic questions that we seek to answer in this chapter are:

1. What is the basis for trade and what are the gains from trade? Presumably (and as in the case of an individual), a nation will voluntarily engage in trade only if it benefits from trade. But how are gains from trade generated? How large are the gains and how are they divided among the trading nations?

2. What is the pattern of trade? That is, what commodities are traded and which commodities are exported and imported by each nation?.

We begin with a brief discussion of the economic doctrines known as mercantilism that prevailed during the seventeenth and eighteenth centuries. We then go on to discuss the theory of absolute advantage, developed by Adam Smith. It remained, however, for David Ricardo, writing some 40 years after Smith, to truly explain the pattern of and the gains from trade with his law of comparative advantage. The law of comparative advantage is one of the most important laws of economics, with applicability to nations as well as to individuals and useful for exposing many serious fallacies in apparently logical reasoning One difficulty remained. Ricardo had based his explanation of the law of comparative advantage on the labor theory of value, which was subsequently rejected. In the first part of the twentieth century, Gottfried Haberler came to Ricardo's "rescue" by explaining the law of comparative advantage in terms of the opportunity cost theory, as reflected in production possibility frontiers, or transformation curves.

Mercantilist's View

From the sixteenth to the eighteenth centuries, world trade was based on the economic theory and practice of mercantilism, particularly in Western Europe, namely France, England, and Germany. It included elements such as belief in protectionism, nationalism, and the welfare of the nation. Furthermore, it included the planning and regulation of economic activities in order to achieve national goals, as well as the reduction of imports and promotion of exports. The trade revolution gave rise to a new economic concept known as 'Mercantilism.' According to this theory, agriculture practices have a very limited impact on a country's economic development because agriculture becomes unproductive after a certain period of time. However, economic development through the use of industries has no bounds. The mercantilists, primarily European countries, believed that a nation's power lies in its wealth, which grew by increasing gold and silver reserves. This was thought to be possible by establishing a favorable trade balance. This belief gained traction on the grounds that gold could be used to fund military expeditions and wars, and that exports would create jobs in the economy.

Adam Smith and Ricardo criticized mercantilism theory by emphasizing the importance of individuals and pointing out that their welfare was the welfare of the nation. They believed in liberalism and defined national wealth as "the sum of enjoyments" of individuals in society. Their trade doctrines were founded on the laissez faire principle and specialization in the production of goods for which resources were most suitable and easily available. The critics of mercantilism accepted any activity that would increase people's consumption. Mercantilists failed to recognize that export promotion and import substitution are not possible in all countries, and that mere possession of gold cannot improve people's well-being. Keeping resources in the form of gold reduces production of goods and services, lowering the welfare of citizens. The concentration of production of goods for domestic consumption through less efficient use of resources will result in less production and lower gains from international trade.

Case Study

Munn's Mercantilistic Views on Trade

Thomas Munn (1571–1641) was perhaps the most influential of the mercantilist writers, and his England's Treasure by Foreign Trade was the outstanding exposition of mercantilist thought on trade. Indeed, Adam Smith's attacks on mercantilist views on trade (see the next section) were directed primarily at Munn. Following is an excerpt from Munn's writing

Although a Kingdom may be enriched by gifts received, or by purchase taken from some other Nations, yet these are things uncertain and of small consideration when they happen. The ordinary means therefore to increase our wealth and treasure is by Foreign Trade, wherein we must ever observe this rule; to sell more to strangers yearly than we consume of theirs in value. For ... that part of our stock [exports] which is not returned to us in wares [imports] must necessarily be brought home in treasure [bullion]. . . . We may ... diminish our importations, if we would soberly refrain from excessive consumption of foreign wares in our diet and rayment [dress]. . . . In our exportations we must not only regard our superfluities, but also we must consider our neighbors necessities, that so ... we may ... gain so much of the manufacture as we can, and also endeavours to sell them dear, so far forth as the high price cause not a less vent in the quantity [of our exports]. But the superfluity of our commodities which strangers use, and may also have the same from other Nations, or may abate their vent by the use of some such like wares from other places, and with little inconvenience; we must in this case strive to sell as cheap as possible we can, rather than to lose the utterance [the sale] of such wares

2.1 Theory of Absolute Cost Advantage

Adam Smith, the father of economics, thought that the basis of international trade was absolute cost advantage. According to his theory, trade between two countries would be mutually beneficial if one country could produce one commodity at absolute advantage (over the other commodity) and the other countries could, in turn, produce another commodity at an absolute advantage over the first.

In other words , the principle of absolute advantage refers to the ability of a party (an individual, or firm, or country) to produce a greater quantity of a good, product, or service than competitors, using the same amount of resources. Adam Smith first described the principle of absolute advantage in the context of international trade, using labor as the only input. Since absolute advantage is determined by a simple comparison of labor productiveness, it is possible for a party to have no absolute advantage in anything; in that case, according to the theory of absolute advantage, no trade will occur with the other party. It can be contrasted with the concept of comparative advantage which refers to the ability to produce specific goods at a lower opportunity cost.

Origin of the theory

The main concept of absolute advantage is generally attributed to Adam Smith for his 1776 publication An Inquiry into the Nature and Causes of the Wealth of Nations in which he countered mercantilist ideas. Smith argued that it was impossible for all nations to become rich simultaneously by following mercantilism because the export of one nation is another nation's import and instead stated that all nations would gain simultaneously if they practiced free trade and specialized in accordance with their absolute advantage. Smith also stated that the wealth of nations depends upon the goods and services available to their citizens, rather than their gold reserves. While there are possible gains from trade with absolute advantage, the gains may not be mutually beneficial. Comparative advantage focuses on the range of possible mutually beneficial exchanges.

Assumptions of the Absolute Advantage Theory:

Trade between the two countries.

- He took into consideration a two-country and two-commodity framework for his analysis.
- There is no transportation cost.
- Smith assumed that the costs of the commodities were computed by the relative amounts of labor required in their respective production processes.
- He assumed that labor was mobile within a country but immobile between countries.
- He implicitly assumed that any trade between the two countries considered would takeplace if each of the two countries has an absolutely lower cost in the production of one of the commodities.

Table -1.Hours of work necessary to produce one unit

Country	Cloth	Wine
England	80	100
Portugal	120	90

Table-2. Hours of work commit after specialization

Country	Cloth	Wine
England	80 +100	0
Portugal	0	90+120

According to Table 1, England commits 80 hours of labour to produce one unit of cloth, which is fewer than Portugal's hours of work necessary to produce one unit of cloth. England is able to produce one unit of cloth with fewer hours of labour; therefore England has an absolute advantage in the production of cloth. On the other hand, Portugal commits 90 hours to produce one unit of wine, which are fewer than England's hours of work necessary to produce one unit of wine. Therefore, Portugal has an absolute advantage in the production of wine.

If the two countries specialize in producing the good for which they have the absolute advantage, and if they exchange part of the good with each other, both of the two countries can end up with

more of each good than they would have in the absence of trade. In the absence of trade, each country produces one unit of cloth and one unit of wine. Here, if England commits all of its labour (80+100) for the production of cloth for which England has the absolute advantage, England produces (80+100)÷80=2.25 units of cloth. On the other hand, if Portugal commits all of its labour (90+120) for the production of wine, Portugal produces (90+120)÷90=2.33 Units of wine. By exchanging the 2.25 units of cloth and the 2.33 Units of wine, both of the two countries can end up with more of each good than they would have in the absence of trade.

Achieving an Absolute Advantage

An absolute advantage is achieved through low-cost production. In other words, an absolute advantage refers to an individual, company, or country that can produce at a lower marginal cost. An absolute advantage is established when (compared to competitors):

- Fewer materials are used to produce a product
- Cheaper materials (thus a lower cost) are used to produce a product
- Fewer hours are needed to produce a product
- Cheaper workers are (in terms of hourly wage) used to produce a product

Criticisms:

Adam Smith, theory has certain weaknesses.

Firstly, this theory assumes that each exporting country has an absolute cast advantage in the production of a specific commodity. This assumption may not hold true, when a country has no specific line of production in which it has an absolute superiority. In this context Ellsworth says "Smith's argument is not very convincing as it assumed without argument that international trade required a producer of exports to have an absolute advantage, that is, an exporting country must be able to produce with a given amount of capital and labour a larger output than any rival. But what if a country has no line of production in which it was clearly superior." Most of the backward countries with inefficient labour and machinery may not be enjoying absolute advantage in any line of activity. So the principle of absolute cost advantage cannot provide complete and satisfactory explanation of the basis on which trade proceeds among the different countries.

Secondly, Adam Smith simply indicated the fundamental basis on which international trade rests. The absolute cost advantage had failed to explore in any comprehensive manner the factors influencing trade between two or more countries.

Thirdly, the 'Vent for Surplus' doctrine of Adam Smith is not completely satisfactory. This doctrine can have serious adverse repercussions on the growth process of the backward countries. These countries do not sell their surplus produce in foreign markets but are constrained to export despite domestic shortages for the reasons of neutralising their balance of payments deficit.

2.2 Trade Based on Comparative Advantage: David Ricardo

In 1817, Ricardo published his Principles of Political Economy and Taxation, in which he presented the law of comparative advantage. This is one of the most important and still unchallenged laws of economics, with many practical applications. In this section, we will first define the law of comparative advantage; then we will restate it with a simple numerical example; finally, we will prove it by demonstrating that both nations can indeed gain by each specializing in the production and exportation of the commodity of its comparative advantage.

The Law of Comparative Advantage

According to David Ricardo, it is not only the absolute but the comparativedifferences in costs that determine trade relations between two countries. Production costsdiffer in countries because of geographical division of labor and specialization inproduction. Due to differences in climate, natural resources, geographical situation andefficiency of labour, a country can produce one commodity at a lower cost than the otherbecause of these comparative advantages. In this way, each country specializes in theproduction of that commodity in which its comparative cost of production is the least.Therefore, when a country enters into trade with some other country, it will export thosecommodities in which its comparative production costs are less, and will import thosecommodities in which its comparative production costs are high. According to Ricardo, thisis the basis of international trade. It follows that each country will specialize in the productionof those commodities in which it has the greatest comparative advantage or the leastcomparative disadvantage. Thus, a country will export those commodities in which itscomparative advantage is the greatest and import those commodities in which its comparativedisadvantage is the least.

Assumptions

The Ricardian theory of comparative advantage is based on the following assumptions:

1. There are only two countries, say England and Portugal.

2. They produce the same two commodities say, wine and cloth.

3. There are similar tastes in both countries.

4. Labour is the only factor of production.

5. The supply of labour is unchanged.

6. All units of labour are homogeneous.

7. Prices of two commodities are determined by labour cost, i.e, the number of labour units employed to produce each.

8. Commodities are produced under the law of constant costs or returns.

9. Technological knowledge is unchanged.

10. Trade between the two countries takes place on the basis of the barter system.

11. Factors of production are perfectly mobile within each country, but are perfectly immobile between countries.

12. There is free trade between the two countries, there being no trade barriers or restrictions in the movement of commodities.

13. No transport costs are involved in carrying trade between the two countries.

14. All factors of production are fully employed in both the countries.

15. The international market is perfect so that the exchange ratio for the two commodities is the same.

Explanation of the Theory

Given these assumptions, Ricardo shows that trade is possible between two countries even when one country has an absolute advantage in the production of both commodities, but the country has a comparative advantage in the production of one commodity than in the other. This is illustrated in terms of Ricardo's well-known example of trade between England and Portugal as shown in table 3

Table 3: Labour Required For Producing One Unit

Country	Cloth	Wine
England	120	100
Portugal	80	90

The table 3shows the production of a unit of wine in England requires 120 men for a year, while a unit of cloth requires 100 men for the same period. On the other hand, the production of the same quantities of wine and cloth in Portugal requires 80 and 90 men respectively. Thus, England uses more labour than Portugal in producing both wine and cloth. In other words, the Portuguese labour is more efficient than the English labour in producing both the products. So, Portugal possesses an absolute advantage in both wine and cloth. But Portugal would benefit more by producing wine and exporting it to England because it possesses greater comparative advantage in it. This is because the cost of production of wine (80/120 men) is less than the cost of production of cloth (90/100 men). On the other hand, it is in England's interest to specialize in the production of cloth in which it has the least comparative disadvantage. This is because the cost of production of cloth in England in less (100/90 men) as compared with wine (120/80 men). Thus, trade is beneficial for both the countries. The comparative advantage position of both is illustrated in fig. 1 in terms of production possibility curves.

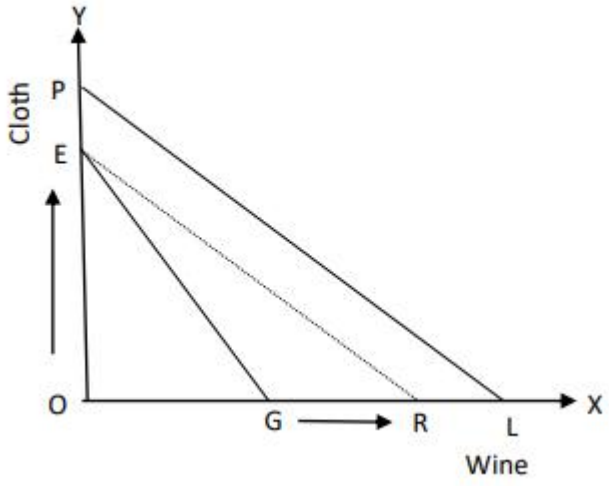

Fig. 1

PL is the production possibility curve of Portugal, and EG that of England. Portugal enjoys an absolute advantage in the production of both wine and cloth over England. It produces OL of wine and OP of cloth, as against OG of wine and OE of cloth produced by England. But the slope of ER (parallel to PL) reveals that Portugal has a greater comparative advantage in the production of wine because if it gives up the resources required to produce OE of cloth, it can produce OR of wine which is greater than OG of wine of England. On other hand England had the least comparative disadvantage in the production of OE of cloth. Thus, Portugal will export OR of wine to England in exchange for OE of cloth from her.

Gains from Trade and their Distribution

Ricardo does not discuss the actual ratio at which wine and cloth would exchange and how much the two countries gain from trade. Before trade, the domestic trade ratios in the two countries for wine and cloth are shown in Table 4. The cost of production of one unit of wine in England is 120 men and that of producing one unit of cloth is 100 men. It shows that the cost of producing wine is more as against cloth because one unit of wine can exchange for 1.2 units of cloth. On the other hand, the cost of producing one unit of wine in Portugal is 80 men and that of producing one unit of cloth is 90 men. It is clear that the cost of producing cloth is more than that of wine because one unit of wine can exchange for 0.89 unit of cloth. Suppose trade begins between the two countries. England will gain if it imports one unit of wine from Portugal in exchange for less than 1.2 units of cloth. Portugal will also gain if it imports more than 0.89 units of cloth from England in exchange for 1 unit of wine.

Table 4: Domestic Exchange Ratios

England	Portugal

Wine 120: 100 Cloth (6/5) 1: 1.2 Cloth 100: 120 Wine(5/6) 1: 0.83	Wine 80 : 90 Cloth (8/9) 1: 0. 89 Cloth 90: 80 Wine (9/8) 1: 1.125

The table shows that the domestic exchange ratio in England is one unit of cloth= 0.83 units of wine, and in Portugal one unit of wine= 0.89 unit of cloth. If we assume the exchange ratio between the two countries to be 1 unit of cloth = 1 unit of wine, England would gain 0.17 (1-0.83) unit of wine by exporting one unit of cloth to Portugal. Similarly, the gain to Portugal by exporting one unit of wine to England will be 0.11(1- 0.89) unit of cloth. Thus, trade is beneficial for both countries.

The gains from trade and their distribution are shown in Figure 2 where the line C1 W2 depicts the domestic exchange ratio 1 unit of cloth= 0.83 unit of wine of England, and the line W1 C2 that of Portugal at the domestic exchange ratio 1 unit of wine= 0.89 unit of cloth. The line C1 W1 shows the exchange rate of trade of 1 unit of cloth=1 unit of wine between the two countries. At this exchange rate England gains W2W1 (0.17 unit) of wine, while Portugal gains C2 C1 (0.11 unit) of cloth.

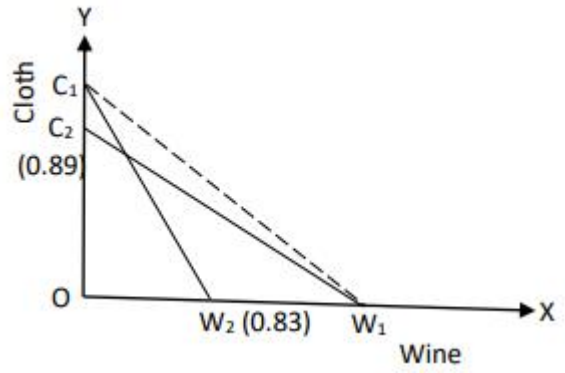

Fig. 2

Thus, both England and Portugal specialise in the production of one commodity on the basis of comparative costs. Each reallocates its factors accordingly and exports that commodity in which it has comparative advantage and imports that commodity in which it has a comparative disadvantage. Both gain through trade and can increase the consumption of the two commodities.

Criticisms

The principle of comparative advantage has been the basis of international trade for over a century till the First World War. Since then the critics have been able only to modify and amplify the theory. In particular, it has been several times criticised by Bertin Ohlin and Frank D. Graham.

We discuss here some of the important criticisms given below:

1. Unrealistic Assumption of Labour Cost: The most severe criticism of the comparative advantage doctrine is that it is based on the labour theory of value. In calculating production costs, it takes only labour costs and neglects non-labour costs involved in the production of commodities. This is highly unrealistic because it is money costs and not labour costs that are the basis of national and international transactions of goods. Further, the labour cost theory is based on the assumption of homogeneous labour. This is again unrealistic because labour is heterogeneous of different kinds and grades, some specific or specialized, and other non-specific or general.

2. No Similar Tastes: The assumption of similar tastes is unrealistic because tastes differ with different income brackets in a country. Moreover, they also change with the growth on an economy and with the development of its trade relations with other countries.

3. Assumption of Fixed Proportions: The theory of comparative costs is based on the assumption that labour is used in the same fixed proportions in the production of all commodities. This is essentially a static analysis and hence unrealistic. As a matter of fact, labour is used in varying proportions in the production of commodities. For instance, less labour is used per unit of capital in the production of textiles. Moreover, some substitution of labour for capital is always possible in production.

4. Unrealistic Assumption of Constant Costs: The theory is based on another weak assumption that an increase of output due to international specialisations if followed by constant costs. If the large-

scale of production reduces costs, the comparative advantage will be increased. On the other hand, if increased output is the result of increased cost of production, the comparative advantage will be reduced, and in some cases it may even disappear.

5. Ignores Transport Costs: Ricardo ignores transport costs in determining comparative advantage in trade. This is highly unrealistic because transport costs play an important role in determining the pattern of world trade. Like economies of scale, it is an independent factor of production. For instance, high transport costs may nullify the comparative advantage and the gain from international trade.

6. Mobility of Factor: The doctrine assumes that factors of production are perfectly mobile internally and wholly immobile internationally. This is not realistic because even within a country factor do not move freely from one industry to another or from one region to another. The greater the degree of specialisation in an industry, the less is the factor mobility from one industry to another. Thus, factor mobility influences costs and hence the pattern of international trade.

7. Two-Country two- Commodity Model: The Ricardian model is related to trade between two countries on the basis of two commodities. This is again unrealistic because in actuality, international trade is among many countries trading in many commodities.

8. Unrealistic Assumption of Free Trade: Another serious weakness of the doctrine is that it assumes perfect and free world trade. But in reality, world trade is not free. Every country applies restrictions on the free movement of goods to and from other countries. Thus, tariffs and other trade restrictions affect world imports and exports. Moreover, products are not homogeneous but differentiated. By neglecting these aspects, the Ricardian theory becomes unrealistic.

9. Unrealistic Assumptions of Full Employment: Like all classical theories, the theory of comparative advantage is based on the assumption of full employment. This assumption also makes the theory static. Keynes falsified the assumption of full employment and proved the existence of under-employment in an economy. Thus, the assumption of full employment makes the theory unrealistic.

10. Self-Interest Hinders its Operation: The doctrine does not operate if a country having a comparative disadvantage does not wish to import a commodity from the other country due to strategic, military or development considerations. Thus, often self-interest stands in the operation of the theory of comparative costs.

2.3 Haberler's Theory of Opportunity Cost

Ricardo's theory of comparative cost advantage was criticized because it was based on the labour theory of value. According to the labour theory of value, the value of a good is equal to the amount of labour time involved in its production. Ricardo discovered that labour was the only factor of production, that it was homogeneous, and that it was used in fixed proportions in the production of all commodities. Although all of these assumptions were found to be unrealistic because there are other factors of production besides labour, labour cannot be used in uniform proportions, and labour can be substituted with capital in countries where capital is cheaply available. Because of these flaws, Haberler developed his theory of Opportunity Cost. According to the theory, if a country produces either A or B commodity, the opportunity cost of commodity A is the amount of commodity B sacrificed in order to obtain an additional unit of commodity A. Nonetheless, the exchange ratio of the two goods is expressed in terms of opportunity cost. Along with the production possibility curve, the concept has been used in international trade theory. Haberler's theory is based on the following assumptions:

There are only two trading countries, each of which has two factors of production, namely labour and capital;

- Each country produces two goods;
- There is perfect competition in the factor and goods markets;
- There is full employment in both countries, factors are immobile between the
- two countries but completely mobile within the country;
- Trade between the countries was assumed to be free; and
- The supply of goods was assumed to be unlimited.

According to the theory, a production possibility curve (PPC) depicts various alternative combinations of the two commodities that a country can produce more efficiently by utilizing both factors of production and the technology at hand. The slope of PPC calculates the amount of one good that a country must give up in order to obtain an additional unit of another good. The slope of PPC, on the other hand, explains the marginal rate of transformation (MRT). Haberler's theory was thought to be superior to the comparative costs theory of international trade. Its superiority stems from an examination of pre-trade and post-trade conditions under constant, increasing, and decreasing opportunity costs, whereas comparative cost theory was founded on constant production costs within a country and comparative advantage and disadvantage

between the two countries. Despite its contributions to international trade, Jacob Viner has criticized the theory of opportunity cost on the following grounds:

- The opportunity costs approach was found to be inferior as a tool of welfare evaluation to the classical real cost approach, as the theory fails to measure real costs in the form of sacrifices made in providing productive services.
- Viner also criticized the PPC for failing to take into account changes in factor supply, and the assumptions of two countries, two commodities, two factors, and perfect competition were also found to be unrealistic.

2.4 Heckscher-Ohlin Theory

The writings of Smith, Ricardo and other classical economists, as it is clear from the foregone discussion, had established that the basis of international trade is the law of comparative advantage, But what causes the comparative advantage between the two nations? To this question, their answer was that the comparative advantage was based on the difference in the productivity of labour among nations; They however did not provide explanation for difference in labour productivity except for possible difference in climate. The Standard Theory of International Trade or the Heckscher Ohlin (H-0) theory went much beyond to examine the basis for comparative advantage. According to the Heckscher-Ohlin theory, which is-also known as factor endowment theory, a nation Will export the commodity intensive in its relatively abundant and cheap factor of production and import the commodity intensive in its relatively scarce and expensive factor. Out of all the possible forces that could cause a difference in pre-trade relative commodity prices between nations, Heckscher and Ohlin isolated the difference in factor endowments (in the face of equal technology and tastes) as the basic determinant or cause of comparative advantage. The general equilibrium nature of the H-0 theory arises from the fact that all commodity and factor markets are component of an overall unified system so that a change in any part affected every other part. Another point established by H-O theory is that international trade can also be a substitute for the international mobility of factors in equalizing relative and absolute returns to homogeneous factors across nations.

Heckscher-Ohlin trade theory was another name for the Heckscher-Ohlin trade model. Heckscher published a paper in 1919 in which this theory was presented, but Ohlin published a book in 1933 in which this model was presented. Furthermore, Ohlin was awarded a Noble Prize for his theory in 1977. This model is also known as the H.O Model. The model is 2x2x2 because it consists of two goods, two production factors, and two countries. Capital and labour are the two factors. Ricardo failed to explain how comparative advantage is determined. According to this theory, a country will export commodities with abundant factors and import commodities with scarce factors. However, in Adam Smith and Ricardo's trade models, labour was the only factor input, and the differences in the trade is determined by labour productivity. They pointed out that different countries have different factor endowments, and that the differences in factor endowments facilitate trade between trading partners. The theory is based on the assumption that there are trade barriers and that goods and factor markets are perfectly competitive. Furthermore, the theory is predicated on comparative advantage in terms of relative factor prices. As a result, if a country has a large amount of capital, it will produce capital-intensive products and export them in exchange for labor-intensive products. While another country, which is rich in labour, will produce and export labor intensive goods. Despite this, it will import capital-intensive goods. The term "abundance" has two meanings in this theory: it refers to the price of the factor and it refers to the physical quantity of the factor. If there are two countries, A and B, then the prosperity of the country in terms of factor prices means that the price of the factors of production is relatively lower.

Unlike the classical trade model, H.O. trade theory cannot guarantee the desired income distribution among the country's various classes. Because of the greater demand for producing respective goods for the global market, returns to capital are higher in country A and returns to labour are higher in country B. The traditional trade models were predicated on certain assumptions, such as no transportation costs and the free flow of information to all producers and consumers. They do not account for the effects of trade on global prices. These trade theories are static and ignore the effects of technological progress on global economic growth. These are real concerns that must be addressed in a customized description of classical and neoclassical theories. If a country has a monopoly on a particular good, it can have an impact on global prices. It can either supplement its gains through "optimal tariffs," which seek to maximize the welfare of the country. Trade has the potential to complicate the growth process. It can have an impact on employment and even the overall well-being of the country. This is possible in the case of exponential growth (when benefits from the higher output are neutralized by the adverse terms of trade). The country ends up with lower real income after growth because the benefits of higher output are washed out by deteriorating trade terms. However, it should be noted that the adapted version of the basic theory does not change the assumption that a country produces and exports the product in which it has a comparative advantage, and uses the abundant factor in the production. The country benefits from trade, but the distribution of gains can be distorted. Change in trade is not free, but the short-term cost of adjustment should be balanced against the long-term benefits of trade.

The theory was criticized on the following grounds: the assumption of 2x2x2 model was found to be unrealistic; unlike classical theory, this theory was also static in nature; the theory was based on the assumption of homogenous factors which was calculated with the help of factor endowment; the techniques of production cannot also be homogenous even for the same good in the two countries as assumed in H.O. model; the theory is based on another assumption of similar taste. The theory was based on the assumption of constant returns to scale, which is also not true because a country with a rich factor endowment frequently obtains the benefits of economies of scale through a smaller amount of production and exports, implying that there should be increasing returns to scale; the theory does not take into account transport costs in trade between trading countries; the impractical supposition of full employment and perfect competition; the Leontief paradox has been proven

2.5 Stopler - SamulsonTheorem

Wolfgang Stolper and Paul Samuelson proved that trade does split a country into clear gainers and clear losers under certain assumptions: such as, a country produces two goods (for example, wheat and cloth) with two factors of production (for example, land and labour); neither good is an input into the production of the other; competition prevails; factor supplies are given; both factors are fully employed; one good (wheat) is land-intensive and the other (cloth) is labour–intensive with or without trade; both factors are mobile between sectors (but not between countries); and opening trade raises the relative price of wheat.

The Stolper-Samuelson theorem: under the assumptions just stated, moving from no trade to free trade unambiguously raises the returns to the factor used intensively in the rising-price industry (land) and lowers the returns to the factor used intensively in the falling price industry (labour), regardless of which goods the sellers of the two factors prefer to consume.

When tariff is imposed, the domestic producers increase the production of imported goods due to rise in their prices and decrease that of exported goods. This change in the production pattern will affect the relative prices of the factors of production. The redistributive effect is explained here with the help of Stolper-Samuelson Theorem.

The Stolper-Samuelson Theorem states that when the relative price of a commodity rises, say due to tariff, it raises the return on the factor which is being extensively used in the production of that commodity. Therefore, the real return on the country's scarce factor production will rise with the imposition of tariff.

In our example, country 'B' being a capital abundant nation imposes an import tariff on commodity 'X' which is a labour-intensive commodity and Y is a capital-intensive commodity. Thus, PX/Py rises for both domestic consumers and producers. So, the real wage of labour (i.e., the scarce resource of country 'B') will rise. This is explained now.

After imposition of import tariff on commodity 'X', the country starts producing more of commodity 'X', and less of commodity 'Y'. Thus, the country moves from point 'D' to point 'F' in Fig. 2.1. This movement to point 'F' is the result of increase in capital–labour ratio in the production of both the commodities which further results in increase in the price of the country's scarce factor, labour.

To illustrate it, consider the following Fig.2.1, which makes use of the Edgeworth box diagram for country 'B'. The curve OXOY is the usual contract curve and isoquants are assumed to be linearly homogenous in this country.

In this figure, point 'C' depicts the autarky situation and point 'D' is the free trade production point on the contract curve. Point 'F' is the new production point when country 'B' imposes 100 percent ad valorem tariff on importable commodity 'X'. Observe from the figure that point 'F' is further away from the origin 'Ox and closer to the origin 'OY' than point 'D' implying post-trade capital-labour ratio. The slope of the line from the origin 'Ox to point 'F' measures the capital–labour ratio in the production of commodity 'X'. Again, the slope of the line from the origin 'Oy to point 'D' measures the capital–labour ratio in the production of commodity 'Y'.

This shows that with the rise in the price (PX/PY) as a result of import tariff on commodity 'X', country 'B' reduces more of commodity 'X' and less of commodity 'Y' .

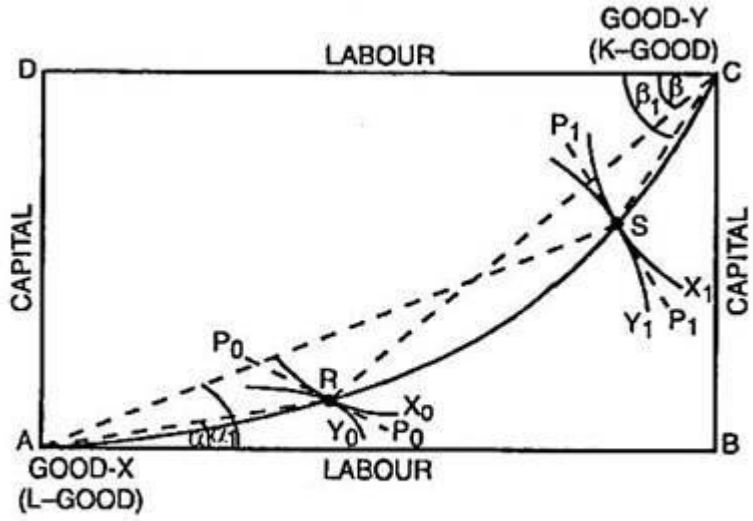

Fig. 8.10

The slope of the line from the origin 'Ox to point 'D' measures the capital–labour ratio in the production of commodity 'X' implying pre trade capital-labour ratio. Further, the slope of the line from the origin OY to point 'D' measures the capital–labour ratio in the production of commodity 'Y' under free trade. After imposition of import tariff, the country 'B' produces at point 'F'.

The capital–labour ratio in the production of commodity 'X' and commodity 'Y' are measured by the slope of the dotted lines from the origins Ox and OY respectively to point 'F'. As it can be seen in the diagram, dotted lines from the origin are steeper than the solid lines OXD and OYD. This indicates use of higher capital-labour ratio in the production of both the commodities after imposition of import tariff than under the free trade.

When the tariff is imposed by country 'B' on commodity 'X', i.e., the labourintensive commodity, each unit of labour is combined with more units of capital in the production of both the commodities. As a result, the productivity of labour increases. Consequently, not only the money wage but also the real wage rises in country 'B'. With labour fully employed before and after imposition of the tariff, the total earnings of labour and its share in national income will be greater. Thus, incomes get redistributed in favour of labour. It may thus, be concluded that tariff favours a factor which is used intensively after tariff implosion. In this Fig., since national income is reduced by the tariff, i.e., from point 'E' to point 'H' and the share of total income going to 'L' is higher, the rate of interest and total earnings of 'K' fall in country 'B'. Therefore, while a small nation as a whole is harmed by the tariff, its scarce factor benefits at the expense of its abundant factor.

2.6 Leontief Paradox – Failure of Heckscher – Ohlin Theory

The first empirical test of the Heckscher – Ohlin (H-O) model was conducted by the Wassily Leontief in 1951 using U.S. data for the year 1947. For this test Leontief used input-output table (The input-output table is a table showing the origin and destination of each product in the economy. In fact Leontief himself had contributed importantly to the development of this new technique of analysis and received Nobel prize for his contributions) of the U.S. economy to calculate the amount of capital and labour in the U.S. economy10. Leontief expected to find that U.S. exported capital intensive commodities and imported labour intensive commodities since U.S. was the most capital abundant nation in the world. According to Heckscher – Ohlin theory, a capital abundant nation exports capital intensive commodity and imports labour intensive commodities and vice versa. Since the United States was the capital abundant nation and import substitutes were 30 per cent more capital intensive than the United States exports, this result was the opposite of what the Heckscher – Ohlin theory predicted, and it became known as the Leontief paradox.

In the same study, Leontief rationalise his results rather than rejecting H-O theory. Leontief argued that since in 1947 labour was about three times as productive as foreign labour, the United States was really a labour abundant nation if we multiplied the U.S. labour force by three as against the availability of capital in the U.S. economy. The explanation of the Leontief regarding labour intensiveness was not acceptable because though labour in the U.S. was three times as productive as foreign labour so was the U.S. capital. Similarly, Leontief argued that the U.S. tastes were biased towards capital intensive commodity as a result demand for capital 18 increased the relative prices of capital intensive commodities in the United States. Therefore, Unites States would export labour intensive commodities. This explanation was also not acceptable because tastes are known to be similar across nations.

Another possible reason for Leontief's paradox is factor-intensity reversal. Factor intensity reversal refers to the situation where the same (given) commodity is labour intensive in labour abundant nation and capital intensive in capital abundant nation. For example, factor intensity reversal is present if commodity X is labour intensive in India (low wage nation) and at the same time the same commodity X is capital intensive in the United States (high wage nation). In this case labour abundant nation India would export commodity X and capital abundant nation the United States would export the same commodity X. Since the two nations viz; India and the United States cannot possibly export the same homogeneous commodity to each other, the Heckscher-Ohlin theory fails because it (H-O theory) says that labour abundant nation should export labour intensive commodity and capital abundant nation should export capital intensive commodity. Student must note here that to determine factor intensity the concept of elasticity of substitution is used. For example, factor intensity reversal may occur when the possibility of factor substitution is much greater in the production of one commodity (say wheat) than in the production of other commodity (say cloth). This means that if the elasticity of substitution of labour for capital in the production of wheat in India (labour abundant nation) is much greater than in the production of commodity cloth in India. This shows that wheat is labour intensive commodity in India. Similarly if the elasticity of substitution of labour for capital is much lower in the production of wheat in the United States than in the production of cloth in the United States, this shows that the same commodity wheat which is labour intensive in India is capital intensive in the United States because elasticity of substitution of capital for labour is much greater in the production of wheat in the United States.

Summary

Trade theories explain the pattern of trde between two countries, the pattern of specialisation znd the mutual benefit of the trade. There are various trade theories to explain above phenomenon. Ricardian theory states that a country has comparative advantage in the good in which its relative labour productivity is higher than its trading partner and tends to export this good. The country terfds to import the good in which its trading partner has con~parative advantage. Heckscher-Ohlin-Sarnuelson theorem emphasises that a country which is relatively abundant in labour will have comparative advantage in the labour intensive good and thk relatively capital abundant country will have comparative advantage in the capital intensive good. This theory advocates that it is the factor abundance rather than the technology which determines the pattern of trade. The modem theories of trade assumes monopolistic or oligopolistic market structure and economy of scale in production.

Keywords

- Absolute Advantage: Greater advantage or efficiency in theproduction of goods enjoyed by one countryover another country. This is the basis oftrade according to AdamSmith.
- Comparative Advantage: It states that trade would still be gainful even if one country is less efficient than the other, but specializes in the production of commodities or goods where its disadvantages are relatively lower (comparative advantage) and exports the same.
- Production Possibility Curve (PPC) : It shows the various possibilities of production of two goods in a country, given the factor endowments and technology.
- H.O. Trade Theory : Postulation that countries specialize in the production and export of those goods which require their abundant or cheap factors. A capital rich country exports capital intensive goods and imports labour intensive goods.
- Mercantilism: Mercantilism is an economic practice by which governments used their economies to augment state power at the expense of other countries. Governments sought to ensure that exports exceeded imports and to accumulate wealth in the form of bullion (mostly gold and silver).

Review Questions

1. What was the basis for and the pattern of trade according to Adam Smith? How were gains from trade generated? What policies did Smith advocate in international trade? What did he think was the proper function of government in the economic life of the nation?
2. In what way was Ricardo's law of comparative advantage superior to Smith's theory of absolute advantage? How do gains from trade arise with comparative advantage? How can a nation that is less efficient than another nation in the production of all commodities export anything to the second nation?
3. What is the relationship between opportunity costs and the production possibility frontier of a nation? How does the production possibility frontier look under constant opportunity costs? What is the relationship between the opportunity cost of a commodity and the relative price of that commodity? How can they be visualized graphically?
4. Why is a nation's production possibility frontier the same as its consumption frontier in the absence of trade? How does the nation decide how much of each commodity to consume in the absence of trade?
5. "In the neoclassical model free &ade not only equalises the relative commodity price in the two countries but also equalises the relative wage rate". Discuss.
6. Discuss the effects of change in commodity prices on real factor rewards in international trade.
7. What is the Leontief Paradox? How and to what extent it can be reconciled with Ohlin's theory of international trade?
8. Explain the impact of changes in factor endowments on output, volume of trade, national income, employment, gains from trade and terms of trade.

SelfAssessment

1. According to Ricardo, international trade is useful under _____

A. Absolute cost,
B. comparative cost,
C. equal difference in cost,
D. Zero cost.

2. Ricardian theory assumes perfect mobility of labour_____
A. Within the country,
B. between the countries,
C. both within and between the countries,
D. none of these.

3. Heckscher-Ohlin theory is about _____
A. inter-regional trade,
B. international trade,
C. domestic trade,
D. a and b both

4. According to Heckscher-Ohlin theory, product price depends on _____
A. Factor intensity,
B. factor abundance,
C. factor cost,
D. all of these.

5. A reciprocal demand is _____

A. Mutual demand of two countries to each other's good
B. Mutual supply
C. Price of export and import
D. Derived demand

1. Labour is the only factor of production according to the _____ theory of international trade.
A. Classical theory
B. Modern theory
C. None of these
D. All of these

2. Heckscher – Ohlin theory of International trade assumes _____ (Countries* Commodities* factors of production)
A. 2*2*2
B. 2*2*1
C. 2*3*2
D. 3*2*2

3. In case of Heckscher – Ohlin theory of international trade, Factor abundance in physical terms refers to _____

A. TK1/TL1 >TK2/TL2

B. PK1/PL1< PK2/PL2

C. None of these

D. All of these

9. _____is the oldest International Trade theory.

A. Country Similarity Theory

B. Theory of Absolute Cost advantage

C. Product Life Cycle Theory

D. Mercantilism Theory

10. Theory of comparative advantage was presented by:

A. Adam Smith

B. Ricardo

C. Hicks

D. Arshad

11. Modern theory of international trade is based n the views of:

A. Robbins and Ricardo

B. Adam Smith and Marshall

C. Heckcsher and Ohlin

D. Saleem and Kareem

12.Hecksher-ohlin theorem states that a capital rich country

A. Exports Capital intensive goods

B. imports capital intensive goods

C. exports labour intensive goods

D. imports labour intensive goods

13. According to Ricardo, international trade is useful under _____

A. Absolute cost

B. comparative cost,

C. equal difference in cost,

D. Zero cost.

14. Ricardian theory assumes perfect mobility of labour_____

A. Within the country,

B. between the countries,

C. both within and between the countries,

D. none of these.

15. According to Heckscher-Ohlin theory, product price depends on _____

A. Factor intensity,
B. factor abundance,
C. factor cost,
D. all of these.

Answers for Self Assessment

l.	B	2.	A	3.	D	4.	D	5.	A
6.	A	7.	B	8.	A	9.	D	10.	B
11.	C	12.	A	13.	B	14.	A	15.	D

Further Readings

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Web Links

http://www.citizen.org/trade

Unit 03:Kravis and Linder Theory of Trade

CONTENTS

Objectives

- Understand the law of comparative advantage
- Understand the relationship between opportunity costand relative commodity prices
- Explain the basis for trade and show the gains fromtrade under constant costs conditions

Introduction

It is observed that the Ricardian theory and H-O theory provided good explanations of trade theory till the first half of the 20th century. However, in due course many researchers observed that comparative advantage seemed to be less relevant in the modern world. Economists now believe that the traditional trade theories (i.e. Ricardian theory and H-O theory) fail to provide a complete explanation of the structure of the world trade. The world trade data now contains several empirical regularities or stylized facts that appear to be inconsistent with the traditional theories. Thus, the assumptions of H- O theory like – perfect competition, constant returns to scale, and same technology are invalid in today's context of world trade. Hence, economists have modified H-O theory by relaxing most of its assumptions and have developed new trade theories or complementary trade theories. These new theories are based on economies of scale, imperfect competition, and differences in technology among nations.

The new theories can be broadly categorized into three types –

(1) Neo – technological trade theories

(2) Intra-industry trade models

(3) Strategic trade policy models.

Neo – Technological Trade Theories

The neo-technological trade theories emphasize the importance of technological innovation and the technological gap across firms and countries as a major source of international trade. The main theories are as follows:

Kravis' Theory of Availability

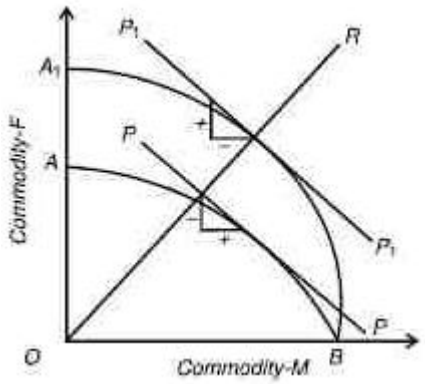
In 1956, I.B. Kravis, an American economist, questioned the assumption of the classical theory that technology was the same in all trading countries. While testing the H.O. theory he wanted to find out whether labour-intensive exports were produced by cheap labour. But he found that in almost every country the exporting industries paid the highest wage rates. According to him, a country produced and exported those goods which it had 'available', that is, goods developed by its entrepreneurs and innovators. Thus, Kravis propounded the theory that the commodity composition of trade is determined primarily by 'availability'. Availability means an elastic supply. Trade takes place in only those goods which are 'not available at home.' By this phrase he means (a) a country will import those goods which are not available in the absolute sense, for example, diamonds; (b) export those goods which are available in quantities greater than domestic demand.

Kravis has explained four factors which influence availability. They are: natural resources, technical change, product differentiation, and government policy. Firstly, it is the availability of scarce natural resources that determines the trade pattern of a country. The second factor is the availability of technical knowledge possessed by a country for producing a particular commodity which it exports. The third factor is product differentiation which confers temporary monopoly of production on the innovating country so that it is able to export its commodity until the importing country imitates. Government policy influences trade in a negative way. Tariff policies, transport costs, cartelization etc., tend to eliminate from trade those goods which are available to a country through domestic production at slightly higher cost. Thus, unavailability of a commodity is the result of lack of natural resources, technical knowledge, product differentiation or protectionist policies.

The availability theory can be explained with the help of an example. Suppose there are four countries: America (A), Britain (B), Canada (C) and Denmark (D). There are two goods, food (F) and manufactures (M). Both goods require labour and capital. But the production of F also requires land, and the production of M technical knowhow. It is further assumed that countries A, B and C posses land while B, C and D possess technical knowhow. Hence country A can only produce good F and country D only good M, but the other two countries B and C can produce both goods.

Suppose that the marginal rate of transformation between goods F and M is constant in both countries B and C, and that it is 5 F for 1 M in country B and 3 F for 1 M in country C. An equilibrium price ratio between F and M will be determined by the world demand conditions and production possibilities. Based on availability, country A will always exports good F, and D country good M. But the equilibrium price ratio governs the trade patterns of countries B and C. If the price ratio is less than 3 F for 1 M both would export F. If it is greater than 5 for 1 M, they would export M. If the price ratio is set at 4 F for 1 M, then country B would export F and C country good M.

To sum up, country A would export good F to country D, and country D would export good M to country A on the basis of availability theory since each country cannot produce the imported good domestically. However, trade between B and C can be explained in terms of the comparative cost theory since both countries can produce both goods.



However, we can argue that the availability approach is superior to the factor proportions theory. Suppose that good M has always a higher capital-labour ratio than good F and that country A has a higher capital-labour ratio than country B. But the same technical knowledge is available in both countries. Production of F requires land which is available only in country A, while production of

M requires iron-ore which is available only in country B. That A will export good F and country B good M. This means that the capital-abundant country A will export the labor-intensive good F, and vice versa. If the factor proportions reasoning is applied in the above manner, the answer would be wrong. But if the availability approach is adopted, then the availability of land in A and of iron ore in B would give the right answer. If it is argued that country A has abundance of land and B of iron-ore, therefore A exports the land-intensive good F and country B exports the iron-intensive commodity M, then the factor properties theory also gives the correct answer. Findlay opines that since the list of specific types of natural resources is a very long one, generating the factor proportions approach in this manner becomes a very clumsy tool.

The availability approach is also used to explain special consumer preferences as for Scotch whisky and Swiss watches. In this case, foreign consumers have and 'irrational' attachment to the source of such goods on the basis of past excellent quality, advertising or some other reason. They are, therefore, prepared to pay more for such a commodity from the particular country than for an objectively identical product from another country. Hence a country that produces a commodity of this type will enjoy more favorable terms of trade than its competitor country.

Criticisms.

The availability theory has not been accepted as an alternative to the comparative cost and factor proportions theories. It has been criticized as lacking in empirical evidence and as an inadequate explanation of trade.

1. ***Applicable in Special Cases.*** The availability approach as an explanation of the trade pattern is applicable in special cases. According to Findlay, availability as the main determinant of trade pattern is true only in very special cases where there are as many commodities as there are countries such that each of the commodities requires an input that is not required by any of the others, and that each country has only one of these types of inputs. For explaining trade in commodities which require readily available inputs, traditional theory is definitely superior.

2. ***Fails to State Testable Hypotheses***. Jagdish Bhagwati points out that the availability approach fails to state precisely testable hypotheses. However, he drives five hypotheses from this theory: (1) A country's imports will be characterised by domestic inelasticity of supply. (2) A country's imports will be characterised by the excess of foreign over domestic elasticity of supply. (3) A country's export industries will show rates of technical progress higher than the national average. (4) A country's export industries will show higher rates of technical progress than the same industries in the trading partners. (5) A country's export will be intensive in the use, or consist of raw materials which are relatively abundant in the country. But such Kravis-type hypotheses have neither been clearly formulated and analysed so far nor tested systematically with empirical evidence.

3. ***No Adequate Explanation of Trade Patterns.*** The availability approach is not an adequate explanation of the trade pattern of a country . It is possible that a country may be exporting a commodity though in a smaller quantity even if foreign consumers do not have attachment to it. Or, it is possible that the country may switch over to the production of some other commodity where its resources can be used more profitably even if foreign consumers do not have preference for it. "What Kravis has in mind seems to be trade in certain articles to which a snob value is attached and which should not otherwise enter world trade as cost differences are too small to warrant international trade."

3.1 Linder 's Theory of Volume of Trade and Demand Pattern

The Swedish economist, S.B. Linder, has propounded a theory that explains the volume of trade in manufactures as proportion of national income between different pairs of trading countries. Linder argues that as a country's per capita income grows, its representative-demand pattern causes an expansion in the domestic production of certain manufactures. This expansion causes such reductions in the costs of these manufactures that they become the country's new comparative advantage exports. In this way, a country comes to export its representative demand product.

Assumptions

Linder's theory is based on the following assumptions :

1. A country's potential trade is limited to those goods which have a domestic demand.

2. The potential trade between two countries is limited to those goods for which demand exists in both countries.

3. The goods for which domestic demand exists, is determined by per capita income.

4. The potential trade between two countries depends on broadly similar income levels.

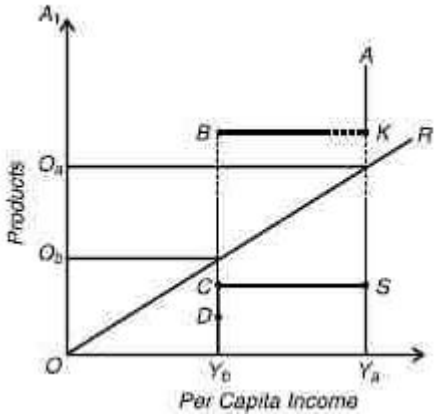
To begin with, Linder makes a distinction between trade in primary products and in manufactures. While trade in primary products can be explained in terms of relative natural resources endowments, that in manufactures cannot be so explained. For the latter, there are many complex factors such as technological superiority, managerial skills and economies of scale which cannot be put into a precise and predictable pattern. He, therefore, does not explain the precise composition of trade in manufactures. Instead, he propounds a theory concerning the volume of trade in manufactures as proportion of national income between different pairs of trading partners.

The analytical framework of Linder's theory can be explained as follows. The pre-condition for trade in manufactures as an export is the presence of home demand. This is due to several reasons: (a) foreign trade is only an extension of domestic trade; (b) there are innovating centres on existing industries; and (c) it is domestic demand which gives manufactures export possibility. But the main reason is that the foreign market is risky and the home market is not so. Therefore, producers do not wish to depend on foreign market alone. It follows that the internal demand pattern determines the range of potential export commodities.

A country will export only those products for which it has a large and active domestic demand. It is only when the production for the domestic market is large that firms are able to achieve economies of scale and reduce costs, and enter the foreign market.

According to Linder, a country will export its products more to those countries whose income levels and demand patterns are similar to those of the exporting country. This is what he calls "preference similarity". This preference similarity leads to overlapping of demands. Linder argues that other things being equal in a given country, consumers in higher income groups demand high quality goods and those in low-income groups demand low quality goods. The same rule applies at the international level where on an average low-income country will tend to demand low quality products and high-income countries high quality products. This does not mean that high income countries do not demand low quality products, and low-income countries high quality products. In fact, income distribution is not equal in any society. High- and low-income groups are found in every country. That is why there is preference similarity in different countries and demand patterns overlap. These lead to the existence of trade relations among countries, and every country produces and exports a variety of manufactured products after meeting its domestic demand.

Linder's theory of preference similarity or overlapping demand is explained in terms of Fig. 2



We take two countries A and B. Per capita income is taken on the horizontal axis and quality products on the vertical axis. Ray OR depicts relationship between them. Country A with higher per capita income OY. demands higher quality products Qa; while country B with lower per capita income OYb demands lower quality products Qb. If there is equal distribution of income among all persons in each country, there will be no trade between the two countries because each country will produce only one standard quality product demanded by the residents.

In reality, income distribution is uneven. So in each country products of both qualities are demanded. Suppose in country A income distribution leads to demand for both products in the

range AS. while in country B the range is BD. The range of overlap demand in the two countries is BC = KS. Since there is overlapping of demands, trade is possible between the two countries. The higher per-capita income country A will export the higher quality product Qa to the lower per capita income country B to meet the demands for consumers in higher income group. On the other hand, the lower per capita income country will export the lower quality products Qb to the higher per capita income country A to meet the demands for consumers in lower income group. The greater the overlap in the product composition of potential exports range of a trading country, the larger will be the volume of trade. The larger the potential volume of trade, the higher will be the income level in the trading country. And, the larger the potential volume of trade, the larger will be the actual volume of trade.

3.2 Technological Gap Theory

The Ricardian and Heckscher-Ohlin theories are based on the assumption that technology is the same in all trading countries. As such, they do not analyse the effect of technological change on trade. M.V. Posner1 in an article in 1961 analysed the effect of technology on trade. Posner regards technological changes as a continuous process which influences the pattern of international trade. A technological innovation in the form of production of a new good in one country leads to the imitation gap and the demand gap in the other country. The extent to which trade will take place between the two countries depends on the net effect of the demand lag and the imitation gap.

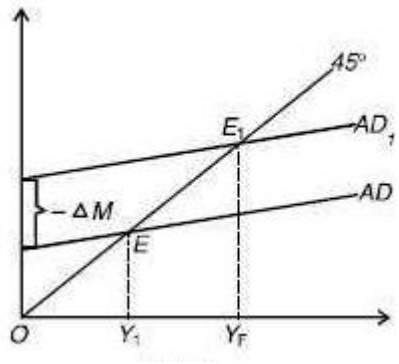
Assumptions

Posner's theory is based on the following assumptions: 1. There are two countries. 2. There are similar factor endowments in both. 3. Demand conditions are similar in both. 4. Pre-trade factor price ratios are similar in both. 5. Technologies differ in both countries.

Explanation

The imitation gap theory explains the sequence of innovation and imitation as it affects the pattern of trade. When a firm innovates in the form of a new product which becomes profitable in the domestic market, it enjoys a temporary monopoly. As it exports the product to foreign market and has an absolute advantage in this product. After some time, the profits of the innovating firm encourage imitation in the other country. But it will continue to export the product and have a comparative advantage in its production till the importing country learns the new process, change plant, equipment, etc. in order to produce it. This is the imitation gap. Imports of the new product in the other country continue during the period of the imitation gap.

According to Posner, the imitation gap has three components. The first is the 'foreign reactions lag' which is the time taken by the innovating firm to start the production of the new product. The second is the 'domestic reaction lag' which is the time taken by other domestic producers to follow suit and establish a hold on the domestic market. The third is the 'learning period' which is the time taken by domestic producers to master the technique of producing the new product and selling it in the domestic market. These three components together form the imitation lag. There is also the 'demand lag' which is the time taken by consumers in the importing country to acquire the taste for the new product. Imports of the new product will not continue by the full duration of the imitation lag due to the demand lag.To obtain the period during which its imports will continue, the demand lag must be substracted from the imitation lag. If producers in the importing country start producing the new product (imitate) quickly and consumers in that country are slow to adopt (demand) the new product, the imitation lag will be shortened and the period of importation of the new product will be reduced. On the contrary, if consumers adopt (demand) the new product quickly and producers are not able to produce it, the imitation lag will be lengthened, and the country will continue to import the new product for a long time. It is only when the imitation lag equals the demand lag that imports of the new product will fully stop. Thus the pattern of trade between the two countries will depend upon the relative strength of these two lags.



Posner's theory is explained in Fig. 3 where time is plotted on the horizontal axis and the trade balance of the innovating country A against the imitating country B is taken on the vertical axis. Upto point t1 , there is no trade between the two countries, in say good X. At t1 , A innovates the new product. The demand lag in B will determine the amount of exports of A and thus the slope of t1B. The imitation lag will determine how long country B will import the commodity from A and the extent of A's exports. If there is no imitation of the commodity in B, country A will continue to export it till exports reach the maximum level B at time t3 . The period from t1 to t3 is the demand lag. If producers in B start producing the new product by time t3 , the exports of A will decline and may even stop at time t4 , as shown by the downward arrow from B to t4 . In this situation, the imitation lag t3 t4 is shorter than the demand lag. If the imitation lag is longer and producers in B are unable to adopt the innovation of the new commodity till time t5 , country A will continue to export it to its maximum level B1 . As B starts producing this commodity, the imitation lag becomes shorter and exports from A continue to decline until they fully stop at time t6 when the commodity is fully imitated in country B. If producers in B introduce a new innovation in the commodity so that it is better than A's commodity, B will penetrate A's market. In this case, A will start importing it from B, as shown by the downward arrow from t6 to A.

Further, Posner combines the two concepts of innovation and imitation lag into a single concept of 'dynamism'. He defines the dynamism of a country in international trade as a function of the rate at which it innovate (i.e., the number of new products it introduces per unit of time), and the speed with which it imitates foreign innovations. If two trading countries have an equal degree of dynamism, they will have trade without any balance of payments difficulties, and trade leads to all round development as innovations from each country are quickly imitated in the other. If one trading country has a higher degree of dynamism than the other, the second country will find its balance of trade in deficit because it will be importing more of the new product. It will try to correct the balance of trade by exporting its traditional products at less favourable prices to the first country. The impetus to trade in traditional products is caused by the dynamic factors of innovation and imitation with the importation of the new product from the first country.

Criticisms

The imitation gap theory of Posner is more realistic than the traditional theories because it analyses the effect of technical changes on the pattern of international trade. But it has certain weaknesses. It fails to answer the following questions: (a) What generates innovation in country A, and subsequent innovations? and, (b) What is the competitive pattern of innovations in the two countries?

3.3 Intra – Industry Trade Models

Intra – industry trade refers to trade between identical countries which are exporting & importing similar but differentiated products. The intra- industry trade models developed after 1970s take into account firm level internal economies of scale and product differentiation in explaining trade between identical economies. In the late 1970s, several researchers like - Krugman, Dixit & Norman, Lancaster etc. independently formalized the idea that economies of scale and imperfect competition can give rise to trade even in the absence of comparative advantage. It was the Grubel & Lloyd's (1975)7 study which formed the basis for the development of intra-industry trade models. They found that international trade was maximum between identical (capital abundant) developed countries, and these countries, exported and imported similar but differentiated products. It was Krugman (1979) who formalized it into a systematic general equilibrium model by taking Dixit

&Stiglitz's (1977) 8 general equilibrium theory of monopolistic competition for the first time. The main intra –industry models are as follows:

(1) Krugman's Model (1979)–

Paul Krugman's model marks a distinctive and realistic departure from the traditional models because it recognizes the role of economies of scale and monopolistic competition in international trade. Krugman in his model points out that trade is possible between the two countries having identical tastes, technology, factor endowments & income levels, because of product differentiation and internal economies of scale in production. Thus, the sources of trade between identical economies lies in product differentiation and internal economies of scale in production of manufactured goods under a monopolistic competitive framework. The implications of his model are as follows; (a) Trade increases the choice of goods available to consumers and thereby improves consumer welfare. (b) Trade can cause an increase in demand, production and real income, facilitated by economies of scale.

(2) Brander – Krugman Model (1983) –

The Brander- Krugman model of intra-industry trade is based on oligopolistic competition. This model considers the application of the concept of dumping in international trade. The Brander-Krugman model considers a situation in which two firms of two countries resort to dumping in each other's domestic market. Hence, their model is also known as reciprocal dumping model. Dumping in the context of international trade means a practice in which a firm sells its products in foreign market at a price much lower than its domestic price. The situation in which dumping leads to a two way trade in the same product is known as reciprocal dumping. The possibility of dumping in international trade was first noted by Brander (1981)11 and then extended by Brander & Krugman (1983). The Brander- Krugman model suggests that with the opening up of trade the monopoly situation turns into a duopolistic market structure, which is a form of oligopolistic competition. Thus, their reciprocal dumping model explains the intra-industry trade in homogenous products under oligopolistic competition. However, the model fails to explain the net effect of such peculiar trade on a nation's economic welfare.

(3) Strategic trade policy models.

The strategic trade policy models provide certain theoretical justification for policy intervention such as home market protection and export subsidies towards increasing exports and national welfare. In the broader sense, the strategic trade policy models are an extension of intra-industry trade models. These models are developed in a partial equilibrium framework by assuming oligopolistic competition. The basis of these models lies in the trade war between industrialized countries such as United States, Japan, and the European Community. Two strategic trade theory models are as follows: (a) Krugman's Model (1984)12– Krugman's strategic trade policy model shows that import protection of domestic producers could lead to export promotion. In this model three forms of economies of scale are taken into account - (a) Static internal (to a firm) economies, (b) Economies in Research & Development and investment, (c) Dynamic economies of learning by doing. (b) Brander & Spencer's Model (1985)13– Brander & Spencer's model shows that export subsidies could help domestic producers to capture third country markets at the cost of foreign rivals. This is a two stage model in which governments (simultaneously) choose subsidy levels in the first stage and firms (simultaneously) choose output levels in the second stage. There is no domestic consumption in either country. i.e. firms produce only for the third country market. The model assumes foreign firm does not receive export subsidy. An export subsidy to a domestic firm is considered as a reduction in its cost of production. Hence, it becomes profitable for the domestic firm to expand its sale in the third country market, and capture a large market share at the cost of the foreign rival. Briefly, it can be said that the new theories are quite capable of explaining the pattern of world trade today.

3.4 Rybnszynski Theorem

In both Heckscher-Ohlin theory and the factor- price equalisation theory, the assumption was taken that the factor endowments were fixed. T.M. Rybczynski, published a paper in 1955 to investigate the effect of an increase in the quantity of a factor of production upon production, consumption and the terms of trade.

This theorem states that the increase in the supply of one of the factor of production, other factors remaining the same, causes the output of the good using the accumulating factor intensively to

increase and the output of the other good to decrease in absolute amount, provided that commodity and factor prices remain unchanged. Suppose in a labour- surplus country, the supply of labour gets increased. It will lead to an increased output of the labour- intensive commodity, say cloth, and reduced output of the capital- intensive commodity, say steel.

Assumptions of the Rybczynski Theorem:

(i) The trade takes place between two countries. The case of only one of the two countries will be discussed here.

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

(ii) This country produces two commodities — cloth and steel.

(iv) The production of these commodities requires two factors — labour and capital.

(v) Capital and labour are perfectly mobile, perfectly divisible and substitutable in some degree.

(vi) Cloth is labour-intensive good and steel is a capital-intensive good.

(vii) There are the conditions of perfect competition in the product and factor markets.

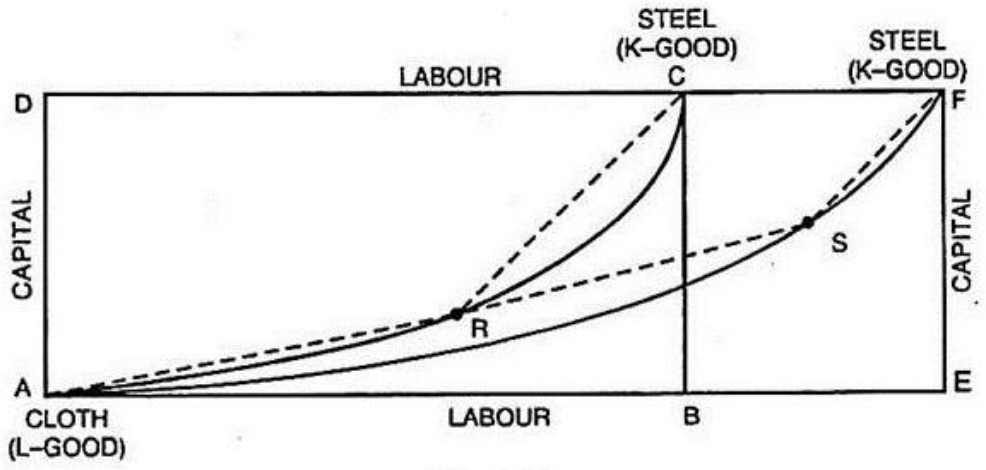
(viii) The production functions related to both the commodities are homogenous of the first degree. That implies constant returns to scale in production.

(ix) The factor and commodity prices are constant.

(x) The supply of the factor labour expands while that of capital remains the same.

It is now clear that Rybczynki makes departure from H-O theorem and factor-price equalisation theorem in respect of his abandoning the assumption of fixed factor supplies. He discusses the effect of an increased supply of the factor in which the country is abundant upon production, factor and commodity prices and the terms of trade. His theorem is explained through Fig. 4.

Fig. 4



ABCD is the Edgeworth box concerning the given country. It shows that this country is labour-abundant and capital-scarce. A is the origin of the commodity cloth which is labour- intensive (L-good). C is the origin for the good steel which is capital- intensive (K-good). AC is the non-linear contract curve sagging downwards. The production takes place at R. The K-L ratio in cloth is measured by the slope of the line AR and K-L ratio in steel is measured by the slope of the line RC.

It is now supposed that the supply of labour is increased by BE, capital stock remaining the same, so that the new box diagram is AEFD. Now A and F are the points of origin for the goods cloth and steel respectively. AF is the non-linear contract curve. A is the origin for the L-good cloth and F is the origin for K-good steel. Production, in this case, takes place at S. The K-L ratio in cloth is measured by the slope of the line AS and the K-L ratio in steel is measured by the slope of the line SF.

The factor-intensity in the two commodities remains unchanged at the points R and S. Since R and S lie on the same straight line AS, the K-L ratio in cloth remains unchanged. On the other hand, the line RC is parallel to SF. Since the slope of RC and SF are equal, there is no change also in the K-L ratio in the capital-intensive commodity steel.

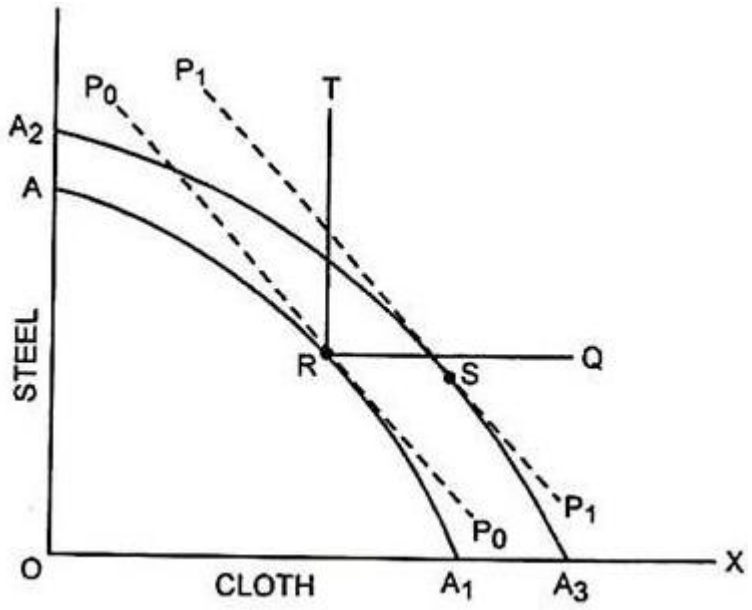
When the factor- intensity in both the commodities remains the same, there will be no change in the prices of the two factors. It shows that the Rybczynaski theorem refutes the possibility of factor price equalisation. As the increase in the supply of labour in the labour-abundant country and increase in capital stock in the capital-abundant country leaves the prices of two factors unchanged, there can be no equalisation in the factor prices.

When there is no change in the prices of the factors of production, the prices of two commodities will also remain the same as before.The most significant effect of an increase in the supply of factor will be upon the volume of production. The distance of the point of production equilibrium from origin measures the quantity produced of a commodity. In case of cloth, the original production is measured by the distance AR. Subsequently, it is measured by the distance AS. Since AS is greater than AR, it signifies an increase in the production of cloth after there is an increase in the supply of labour.

In case of steel, the production at R was originally indicated by the distance RC and subsequently it is measured by the distance SF. Since SF is shorter than RC, it follows that the production of K-good steel decreases after there is an expansion in the supply of labour in this country. Thus, the conclusion can be drawn that the increased supply of one factor, keeping the other unchanged, will raise in absolute amount the production of good intensive in the increasing factor, while the production of the other good will get reduced in absolute amount. The above analysis suggests that the commodity prices of the two commodities remain constant. This can happen only if the prices of two factors remain constant. It implies that the capital- labour ratio in the two industries remains constant. But how can all this be possible when the quantity of one of the two factors goes on increasing.In this connection, it may be stated that increase in the supply of labour will result in the entire additional labour going into the labour-intensive industry. There will also be diversion of labour from the capital- intensive industry (steel). Along with the diversion of labour, some amount of capital will also be diverted from the steel industry to the labour-intensive cloth industry.

Consequently, the production of cloth expands and that of steel contracts but the K-L ratios in two industries, factor prices and commodity prices still remain unchanged. If the labour force continues to expand indefinitely, the country will soon become completely specialised in the production of cloth.The constancy of the commodity prices implies that the terms of trade will remain unaffected. However, the equilibrium with constant prices, when supply of one factor has been increasing, is not compatible with general equilibrium. It may be possible if one of the two commodities, particularly the commodity intensive in the other factor (capital) is inferior. But neither of the two commodities— cloth and steel, can be considered inferior.

The general equilibrium in such a situation can be possible only if the price of the commodity intensive in the expanding factor decreases. It means the terms of trade are likely to become worse for the country in which one factor has been expanding. This is explained through Fig. 5



In Fig. 5, the labour-intensive commodity cloth is measured along the horizontal scale and the capital-intensive commodity steel is measured along the vertical scale. The production possibility curve AA-1 is derived from the box ABCD shown in Fig. 4. The international terms of trade are denoted by the slope of P0P0. The production equilibrium is determined at R.

The expanded supply of labour along with diversion of labour and capital from steel industry to cloth industry gives the new production possibility curve A2A3 derived from Box AEFD in Fig. 8.12. If the prices of two commodities remain the same, the terms of trade line P1P1 is parallel to P0P0. The production equilibrium takes place now at S where P1P1 is tangent to A2A3. The point S shows a larger production of labour-intensive commodity cloth and reduced output of the capital-intensive commodity steel. This can happen only if steel is an inferior commodity. The expansion in labour force and shift in the production possibility curve to the right imply an increase in national income.

In such a situation, barring the inferior goods, the demand for both the goods must increase. Therefore, the new position of equilibrium must lie on that part of the production possibility curve A2A3 that lies between the lines RQ and RT. The slope of this segment on the curve A2A3 is less steep than the slope of AA1 at R. It implies that the price of cloth will be relatively lower and that of steel is relatively higher. A lower price of exportable commodity cloth and a higher price of importable commodity steel mean that there is deterioration of terms of trade subsequent to an increase in the supply of labour.

About the pattern of consumption, Rybczynski explained that the pattern of consumption may remain unaltered, or change in favour of one good or the other despite the change in the relative prices of the two commodities. If the marginal propensity to consume of the product intensive in the accumulated factor is equal to or greater than the average propensity to consume, the production and the consumption pattern will change in the direction of the product intensive in that factor.When the marginal propensity to consume falls short of the average propensity to consume, the new production and consumption pattern may still change in favour of the commodity using much of the factor increased, or may remain unchanged or move in the direction of the other good. This depends upon the relative magnitudes of the average and marginal propensities to consume.From the above analysis, it is obvious that the Rybczynski theorem has several implications related to production, factor and commodity prices, and terms of trade and consumption pattern. However, its implication related to the factor price equalisation is most clear-cut. When the supply of the abundant factor increases rapidly, the factor price ratio may remain unchanged preventing the equalisation of factor prices among the trading countries.

3.5 Criticisms of the Rybczynski Theorem

E.J. Mishan has raised two major objections against the theorem given by Rybczynski. Firstly, if the increase in the supply of one factor (labour) is accompanied by the increased supply of the other

factor (capital), the results suggested by Rybczynski are not likely to follow. Secondly, there is technical difficulty in extending Rybczynski's two- factor model to a multi-factor system.

The process of economic growth may bring about an increase in level of output in the growing economy and the wealth effect may even be positive but the deterioration in the terms of its trade may be so large that it more than offsets the positive wealth effect. In such a situation, there can be a net decline in the welfare of the nation. In other words, it become worse off than before. The process of growth and trade, resulting in the country becoming poorer in respect of welfare, has been termed as 'immiserising growth' by Jagdish Bhagwati.

Assumptions

(i) There are two countries, the home country A and the foreign country B.

(ii) The home country experiences growth while the other country is not experiencing any growth is real output.

(iii) There are two commodities X and Y.

(iv) X commodity is the exportable commodity of country A whereas Y is its importable commodity.

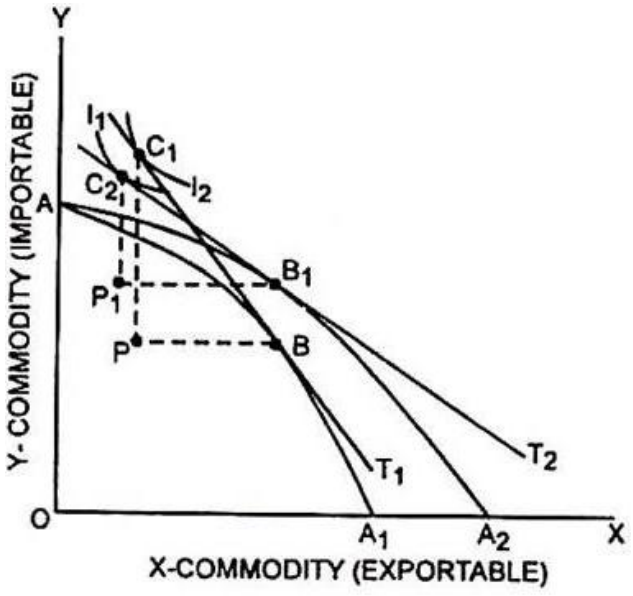
(v) There is full employment or resources.

(vi) The technical progress is neutral.

(vii) The growth results in an expansion in the supply of abundant factor, say labour.

(viii) Productive factors are mobile between the two countries.

The case of immiserising growth can be explained on the basis of the above assumptions with the help of Fig. 5



In Fig. 5, AA_1 is the original production possibility curve and T_1 is terms of trade line. The production equilibrium is determined at B. The consumption equilibrium takes place at C_1 where T_1 is tangent to the community indifference curve I_2. Country A exports BP quantity of X and imports C1P quantity of Y commodity. As growth takes place and the labour supply increases, the production possibility curve shifts to AA_2.

The price of labour- intensive commodity X falls relative to the commodity Y so that the slope of the terms of trade line T_2 decreases. Production takes place at B1 and consumption takes place at C2 where the terms of trade line T_2 becomes tangent to the indifference curve I1. Thus after growth takes place, B1P1 quantity of X is exported and C_2P_1 quantity of Y is imported.

There is an increase in production of importable commodity due to growth and its higher relative price. On the other hand, the consumption of importable commodity decreases due to relative rise

in the price. No doubt, there is an increase in production but terms of trade for the home country become worsened to such an extent that consumption point shifts from the higher indifference curve to the lower indifference curve. Consequently, the level of welfare shrinks after growth. It signifies the immiserising growth.

Salvatore has mentioned the different situations in which a given country A, may experience the immiserising growth.

Firstly, the immiserising growth may take place, when the exports of the given country A tend to expand substantially at constant terms of trade.

Secondly, immiserising growth can occur when country A is so large that the attempt to expand its exports results in the terms of trade worsening for it.

Thirdly, the terms of trade of country A can deteriorate, if income elasticity of country B's demand for the exports of country A is very low. Fourthly, in case of a small developing country, this phenomenon can occur on account of such distortions as monopoly trade and tariffs. Fifthly, the state of immiserising growth for country A can arise, if it is so greatly dependent on trade that a substantial worsening in its terms of trade results in a decrease in its national welfare.This, phenomenon is likely to prevail in the large developing countries having inelastic demand for their exports in foreign countries. In case they produce a bumper crop, the international prices tend to crash and their terms of trade become unfavourable. That involves them in the immiserising growth.

However, this phenomenon does not seem to be greatly prevalent in the real world. Even if it is recognized that there has been a secular deterioration of terms of trade for the developing countries, that has been made up by a substantial increase in production and resultant increase in real per capita income and welfare. The increase in real per capita income would have been much greater, if the growth of population had occurred at a relatively lesser rate.

Summary

Aside from trade based on technological gaps and product cycles which is dynamic in nature, the trade theory discussed thus far is completely static in nature. That is, given the nation's factor endowments, technology, and tastes, we proceeded to determine the nation's comparative advantage and the gains from trade. However, factor endowments change over time; technology usually improves; and tastes may also change. As a result, the nation's comparative advantage also changes over time.

Keywords

- Kravis' Theory of Availability: In the Kravis' (1956) model, technological innovation as. a basis of trade operates through his product availability hypothesis. The availability approach. seeks to explain the pattern of trade in terms of domestic availability and non-availability of goods.
- Linder 's Theory of Volume of Trade and Demand Pattern: The Linder hypothesis presents a demand-based theory of trade. This is in contrast to the usual supply-based theories of trade involving factor endowments. Linder hypothesized that nations with similar demands would develop similar industries.
- Technological Gap Theory: Technology Gap Theory is a model developed by M.V. Posner in 1961, which describes an advantage enjoyed by the country that introduces new goods in a market. The country will enjoy a comparative advantage as well as a temporary state of monopoly until other countries have achieved the ability to imitate the new good.
- Rybnszynski Theorem: This theorem states that when a region is open to trade with other regions, changes in regional relative factor supplies can be fully accommodated by changes in regional outputs without requiring changes in regional factor prices.
- Intra-Industry Trade: Intra-industry trade refers to the exchange of similar products belonging to the same industry.

- Immiserizing Growth : When opening up of the economy leads to reduction in welfare

SelfAssessment

1. The Rybczynski theorem argues that if one factor of production (e.g. capital) increases in a country, than the output of goods which are intensive in that factor will _____.

A. increase
B. decrease
C. remain the same
D. none of the above

2. The Rybczynski theorem implies that immigration will lower wages. *

A. true
B. false
C. uncertain
D. none of the above

3. A change in the price of a traded good results in a more than proportional change, in the same direction, in the price of the factor that is used in the production of that good ore intensively." This is the definition of the _____. *

A. Stolper-Samuelson theorem
B. Heckscher-Ohlin theorem
C. Rybczynski theorem
D. none of the above

4. According to the trade theory of Staffan Linder trade tends to be most pronounced in manufactured goods when trading countries have ?

A. similar endowments of natural resources
B. similar levels of technology
C. similar per-capita incomes
D. similar wage levels

5. Technological gap model or Imitation Gap Model was developed by:

A. M.V. Posner
B. Samuelson
C. Ricardo
D. Kravis

6. Economies of scale and net work effects resulting in exports of goods is related to

A. New Trade theory
B. Factor equalization theorem
C. Comparative cost advantage theory
D. The Heckscher-Ohlin theory

7. Intra - industry trade refers to the trade in _____ products.

A. Identical
B. Differentiated
C. Complementary
D. Non-related

8. New Trade Theory emphasizes on

A. Economies of scale
B. Imperfect competition
C. Differentiated Products
D. All of the above

9. Which of the following is not an example of intra-industry trade?

A. Europe exports Airbus airplanes and imports Boeing airplanes.
B. Americans export Jeeps and import Jaguars.
C. Japan exports cars and imports oil.
D. America exports films to the rest of the world and imports foreign films.

10.Which of the following statements about intra-industry trade is accurate?

1) Intra-industry trade occurs primarily between developed countries.
2) Intra-industry trade is less prevalent where trade barriers are low.
3) Intra-industry trade has become more prominent over the last 50 years.

A. (1) + (2)
B. (2) + (3)
C. (1) + (3)
D. (1) + (2) + (3)

11. Which of the following refers to the situation that arises when consumers view products produced in an industry as similar, but not perfect substitutes for each other?

A. product differentiation
B. net trade
C. intra-industry trade
D. constant returns to trade

12. According to the trade theory of Staffan Linder, trade tends to be most pronounced in manufactured goods when trading countries have

A. similar endowments of natural resources
B. similar levels of technology
C. similar per-capita incomes
D. similar wage levels

13. If tastes are identical between countries, then comparative advantage is determined by:

A. supply conditions only.
B. demand conditions only.
C. supply and demand conditions.
D. can't tell without more information.

14. Intra-industry trade can be explained by all of the following except

A. high transportation costs as a proportion of product value
B. different growing seasons of the year for agricultural products
C. product differentiation for goods such as automobiles
D. high per capita incomes in exporting countries

15. Who has given the theory of 'immiserising growth'

A. Jagdish Bhagwati
B. David Ricardo
C. Adam Smith
D. I.B. Kravis

Answers for Self Assessment

l.	A	2.	B	3.	A	4.	C	5.	A
6.	A	7.	B	8.	D	9.	C	10.	C
11.	A	12.	C	13.	A	14.	D	15.	A

Review Questions

1. Critically explain Kravis's availability theory.
2. What is novel in Linder's Volume of Trade Theory? Explain this theory.
3. How can intra-industry trade be measured? What are the shortcomings of such a measure?
4. How can our trade theory of previous chapters be extended to incorporate changes in the nation's factor endowments, technology, and tastes? Is the resulting trade theory a dynamic theory of international trade? Why?
5. What does the Rybczynski theorem postulate?

Further Readings

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Web Links

http://www.citizen.org/trade

Unit 04:Gains from Trade and Terms of Trade

CONTENTS

Objectives

- Understand the basis of terms of trade
- Use offer curve to understand the terms of trade

Introduction

Just as two traders in the same country enter into exchange for the consideration of making some gain, in the same way two countries get engaged into transactions for deriving some gain. The economists have viewed the gains from trade from different angles. The classical theorists believed that gains from trade resulted from increased production and specialisation.

Jacob Viner pointed out that the gains from trade were measured by the classical economists in terms of:

(i) Increase in national income,

(ii) Differences in comparative costs, and

(iii) Terms of trade.

The modern theorists considered the gains from trade as the gains resulting from exchange and specialisation.

4.1 Gains from Trade

The gains from trade refer to net benefits or increases in goods that a country obtains by trading with other countries. It also means the increase in the consumption of a country resulting from exchange of goods and specialization in production through international trade. The theory of gains from trade was at the core of the classical theory of international trade.

According to Adam Smith, the gains from trade resulted from the advantages of division of labor and specialization both at the national and international level. They were due to the existence of

absolute differences in costs, that is, each country would specialize in the production of that commodity which it could produce more cheaply than other countries and import those commodities which it could produce dearly. Thus international specialization would increase world output and benefit all the trading countries.

For Ricardo, extension of international trade very powerfully contributed 'to increase the mass of commodities, and therefore, the sum of enjoyments... obtaining the imported goods through trade instead of domestic production.' J.S. Mill analyzed the gains from international trade in terms of his theory of reciprocal demand which depends upon the terms of trade. In modern analysis, the gains from international trade refer to the gains from exchange and the gains from specialization based on the general equilibrium analysis.

4.2 Potential And Actual Gain from International Trade

Economists usually distinguish between potential and actual gain from international trade. The potential gain from international trade is the difference in domestic cost ratios of producing two commodities in two countries. If X and Y are two commodities and A and B two countries, then the potential gain can be expressed as

$$G_p = \left[\frac{Cx}{Cy}\right]_A - \left[\frac{Cx}{Cy}\right]_B$$

where G_P is the potential gain, C_X is the cost per unit of X, C_Y is the cost per unit of Y, and the subscripts A and B refer to the two countries.

n the other hand, the actual gain from international trade is the difference in price ratios of two commodities in the two trading countries. Assuming X and Y as two commodities and A and B as two countries, the actual gain can be shown thus

$$G_A = \left[\frac{Px}{Py}\right]_A - \left[\frac{Px}{Py}\right]_B$$

where G_A is the actual gain, P_X is the per unit price of X and P_Y is the per unit price of Y.

Under perfect competition and free trade between two countries, the cost ratio equals the price ratio of the two commodities in each country so that the potential gain equals the actual gain,

$G_P=G_A$

But if there are tariffs and other trade restrictions and commodity and factor markets are imperfect, the price and cost ratios will not be equal in each country. If the price ratio is more than the cost ratio, the actual gain will be less than the potential gain. Symbolically,

$$\left[\frac{Px}{Py}\right] > \left[\frac{Cx}{Cy}\right]$$

Therefore, $G_A < G_P$

Since there is always imperfect competition in world markets the actual gain is always less than the potential gain in international trade.

4.3 Measurement of Gains from Trade

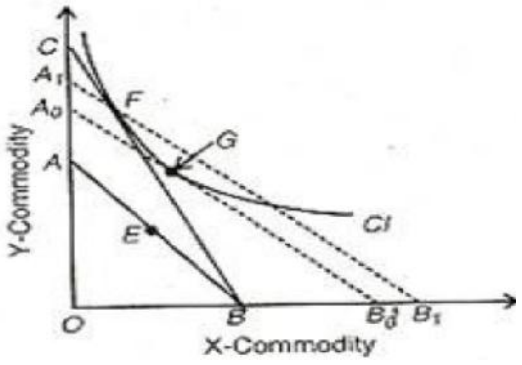
Economists have adopted various methods to measure the gains from international trade which are explained as under:

The Classical Method. Jacob Viner points out that the classical economists followed three different methods or criteria for measuring the gains from international trade: (1) differences in comparative costs; (2) increase in the level of national income; and (3) the terms of trade. But they often intermixed these methods without specifying them clearly. We discuss them as under.

Ricardo's Approach. To take Ricardo's approach first, a country will export those commodities in which its comparative production costs are less, and will import those commodities in which its comparative production costs are high. "The country thus economizes in the use of its resources,

obtaining for a given amount thereof a larger total income than if it attempted to produce everything itself."

Prof. Ronald Findlay in his Trade and Specialization (1970) has explained Ricardo's approach to the gains from international trade in terms of Fig. 1. In the pre-trade situation, AB is the production possibility curve of a country which produces two commodities X and Y, given the quantity of labor input. On AB, the country is in equilibrium at point E. After it enters into trade, its international price ratio is given by the slope of the line CB. Suppose that it is in equilibrium at point F on the line CB. If the quantities of X and Y represented by the combination at F are to be produced domestically, the quantity of labour input will have to increase sufficiently to shift the domestic production possibility curve up from AB to A_1B_1. The gains from trade will thus be measured by BB_1 /OB.



But Malthus criticized Ricardo for greatly over-estimating the gains from trade. In terms of Fig. 1, Malthus's view is that with the shifting of the domestic production possibility curve to A_1B_1, F would not be the equilibrium point. Relative prices along A_1B_1 would not be more favourable to the exported commodity X than along C_B, so that consumer will prefer a point to the right of F on A_1B_1 rather than F itself. Hence the gains from trading along CB cannot be measured by an increase of labour input in the ratio BB_1 /OB. This is because the change to the right of F on A_1B_1 is preferable to that on CB.

Prof. Ronald Findlay has modified the Ricardo measure of the gains from trade using the community indifference curve CI. If the labour input is increased sufficiently to push the production possibility curve to A_0B_0 instead of to A_1B_1, the point G on the CI curve will make each individual as better as he is at the free trade point F. The gains from trade would, therefore, be equal to BB_0/OB instead of the larger BB_1/OB. This measure satisfies Malthus's criticism of Ricardo.

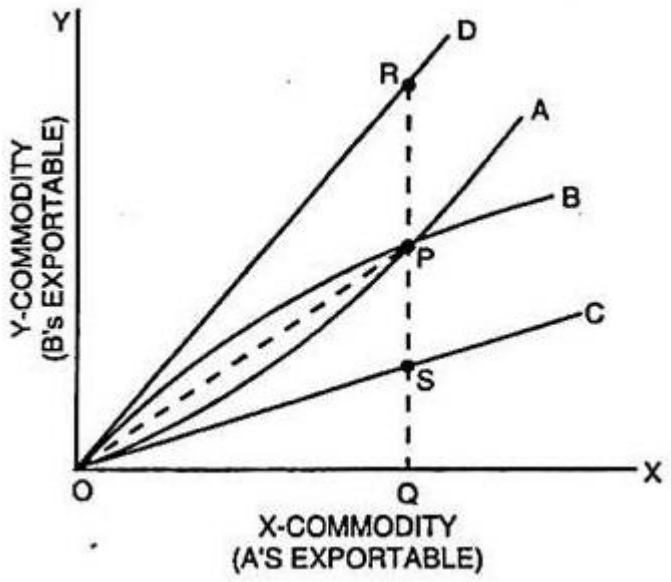
J.S. Mill's Approach: A serious deficiency in the Ricardian approach was that it could not explain the distribution of gains from trade among the trading countries. J.S. Mill attempted to analyse both the gains from trade and distribution thereof among the trading countries. He emphasised upon the concept of reciprocal demand that determines terms of trade, which is a ratio of quantity imported to the quantity exported by a given country. The terms of trade decide how the gain from trade is distributed between the trading partners.

Suppose in country A, 2 units of labour can produce 20 units of X and 20 units of Y so that the domestic exchange ratio in country A is : 1 unit of X = 1 unit of Y. In country B, 2 units of labour can produce 12 units of X and 18 units of Y so that the domestic exchange ratio in this country is : 1 unit of X = 1.5 unit of Y. The domestic exchange ratios set the limits within which the actual exchange ratio or terms of trade will get determined.

The reciprocal demand or the strength of the elasticity of demand of the two trading countries for the products of each other will decide the actual rate of exchange of two commodities. If A's demand for commodity Y is less elastic, the terms of trade will be closer to its domestic exchange ratio: 1 unit of X = 1 unit of Y. In this case the terms of trade will be favourable for country B and against country A.

The gain will be more for B than for A. On the contrary, if B's demand for X commodity is less elastic, the terms of trade will be closer to the domestic exchange ratio of country B: 1 unit of X = 1.5 unit of Y. The terms of trade, in this situation, will be favourable for A and against B. Country A will have a larger share out of the gains from trade than country B.

The distribution of gains from trade can be explained in terms of Marshall-Edgeworth offer curve through Fig. 2



In Fig. 2., OC and OD are the domestic exchange ratio lines of countries A and B respectively. OA is the offer curve of country A and OB is the offer curve of country B. The exchange takes place at P where the two offer curves cut each other. Country A imports PQ quantity of Y and exports OQ quantity of X.

The terms of trade for country A at P = (QM/QX) = (PQ/OQ) = Slope of Line OP. If the line OP gets closer to OD, the terms of trade become favourable to country A and unfavourable to country B. On the opposite, if the line OP gets closer to the line OC, the domestic exchange ratio line of country A, the terms of trade turn against country A and become favourable to country B.

Country A was willing to exchange before trade SQ units of Y for OQ units of X. After trade, it gets PQ units of Y for OQ units of X. Therefore, the gain from trade for country A, out of the total trade gain of RS, amounts to PQ – SQ = PS units of Y. In case of country B, RQ units of Y were being exchanged for OQ units of X before trade.

However, after trade it has to part with only PQ units of Y to import OQ units of X. Therefore, the gain from trade for this country amounts to RQ – PQ = RP units of Y. As the point of exchange P gets closer to the line OD, the share of country A in the gain from trade will rise and that of country B will fall and vice-versa.

Gains from Trade for Large and Small Country

Taking the size of the country, the gains from trade are relatively larger to a small country than to a large country. A small country does not possess many diversified resources and the size of its domestic market is also limited. So, the gains from its domestic specialization and exchange are limited. On the contrary, a large country possesses diversified resources and a large domestic market, so that it is able to reap the gain from specialization and exchange within the country. With the opening of international trade, a small country specializes in the production of those commodities in which it enjoys a comparative advantage and exchanges them in the world market. The more world market prices differ from domestic prices, the greater the benefits that the small

country may reap. Heller has sown that under the assumptions of constant opportunity cost and no change in the terms of trade of the large country, the large country shows no gains from international trade and the small country reaps all the gains. The case is illustrated in Fig. 3 (A) and (B). Fig. 3(A) shows the production possibility curve AL of the large country A wherein the no trade situation it produces and consumes at point C where the community indifference >curve CI is tangent to its production possibility curve AL. Similarly, the small country B produces and consumes at point C where the community indifference curve CI is tangent to its production possibility curve BS_1, as shown in Fig. 3 (B). Since A is a large country, let its domestic price ratio as represented by the curve AL be the international price ratio. The small country B is now faced with the possibility of exchanging its commodity produced at the international price ratio represented by the BS curve parallel to AL. It will gain by specializing in the production of only commodity Y and produce at point B. It also increases its consumption of X at point C_2 on the community indifference curve CI_2 in Fig. 3 (B). Since there is no change in the price ratio (terms of trade of the large country), it simply modifies its production pattern in order to meet the trade requirements of the small country. So it moves to point P. The small country will export TC_2 of commodity Y to the large country, shown as EC of imports in Fig. 3(A), and import TB of commodity X, shown as EP of exports of the large country.

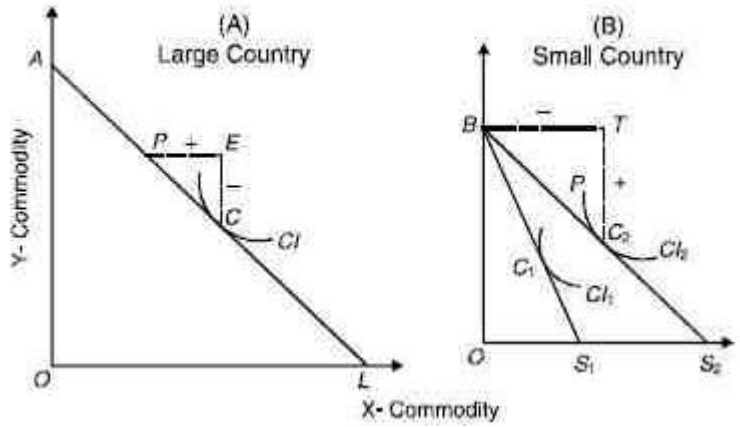


Fig. 3

So the small country has gained both from specialization and exchange by entering into trade with the large country, whereas the large country has not gained at all. "Under conditions of increasing opportunity cost and different demand patterns it is likely that the international terms of trade will find a new equilibrium somewhere between the domestic pre-trade price ratios prevailing in the two countries. In that case, both countries share in the benefits from trade, with the proportion of the benefits accruing to each country depending on how much the international terms of trade change from the pre-trade price ratios. Chances are that these prices changes are more pronounced in the small country and therefore most of the gains accrue to its residents."

4.4 Offer Curves

Offer curves (sometimes referred to as reciprocal demand curves) were devised and introduced into international economics by Alfred Marshall and Ysidro Edgeworth, two British economists, at the turn of the twentieth century. Since then, offer curves have been used extensively in international economics, especially for pedagogical purposes.

The offer curve of a nation shows how much of its import commodity the nation demands for it to be willing to supply various amounts of its export commodity. As the definition indicates, offer curves incorporate elements of both demand and supply. Alternatively, we can say that the offer curve of a nation shows the nation's willingness to import and export at various relative commodity prices.

The offer curve of a nation can be derived rather easily and somewhat informally from the nation's production frontier, its indifference map, and the various hypothetical relative commodity prices at which trade could take place. The formal derivation of offer curves presented in the appendix is based on the work of James Meade, another British economist and Nobel Prize winner.

Derivation and Shape of the Offer Curve of Nation 1

In the left panel of Figure 4.3, Nation 1 starts at the no-trade (or autarky) point A, as in Figure 3.3. If trade takes place at PB = P_X /P_Y = 1, Nation 1 moves to point B in production, trades 60X for 60Y with Nation 2, and reaches point E on its indifference curve III. (So far this is exactly the same as in Figure 4.) This gives point E in the right panel of Figure 4.

At PF = P_X /P_Y = 1/ 2 (see the left panel of Figure 4), Nation 1 would move instead from point A to point F in production, exchange 40X for 20Y with Nation 2, and reach point H on its indifference curve II. This gives point H in the right panel. Joining the origin with points H and E and other points similarly obtained, we generate Nation 1's offer curve in the right panel. The offer curve of Nation 1 shows how many imports of commodity Y Nation 1 requires to be willing to export various quantities of commodity X.

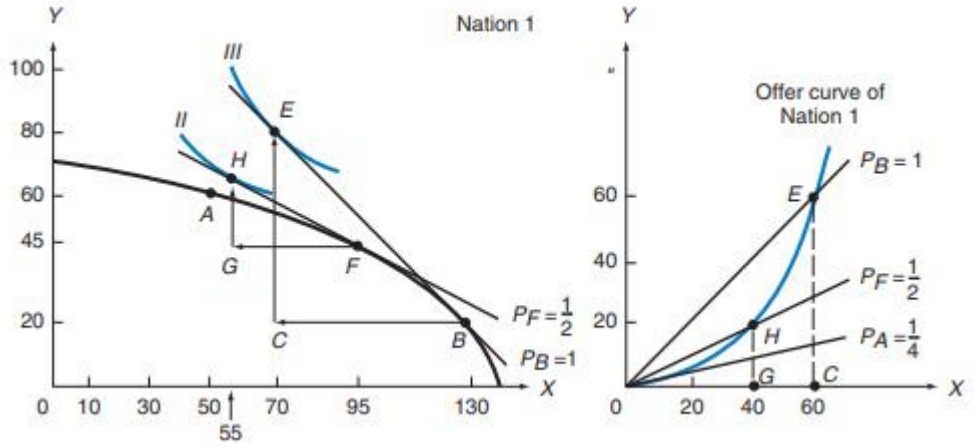


Fig. 4 Derivation of the Offer Curve of Nation 1.

To keep the left panel simple, we omitted the autarky price line P_A = 1/ 4 and indifference curve I tangent to the production frontier and P_A at point A. Note that P_A, P_F , and P_B in the right panel refer to the same P_X /P_Y as P_A, P_F , and P_B in the left panel because they refer to the same absolute slope.

The offer curve of Nation 1 in the right panel of Figure 4 lies above the autarky price line of P_A = 1/ 4 and bulges toward the X-axis, which measures the commodity of its comparative advantage and export. To induce Nation 1 to export more of commodity X, P_X /P_Y must rise. Thus, at P_F = 1/ 2, Nation 1 would export 40X, and at P_B = 1, it would export 60X. There are two reasons for this: (1) Nation 1 incurs increasing opportunity costs in producing more of commodity X (for export), and (2) the more of commodity Y and the less of commodity X that Nation 1 consumes with trade, the more valuable to the nation is a unit of X at the margin compared with a unit of Y

Derivation and Shape of the Offer Curve of Nation 2

In the left panel of Figure 5, Nation 2 starts at the autarky equilibrium point ' , as in Figure 4. If trade takes place at PB'= P_X /P_Y = 1, Nation 2 moves to point B' in production, exchanges 60Y for 60X with Nation 1, and reaches point E' on its indifference curve III' . (So far this is exactly the same as in Figure 4) Trade triangle B' C'E' in the left panel of Figure 5 corresponds to trade triangle O' C' E' in the right panel, and we get point E' on Nation 2's offer curve.

At P_F' = P_X /P_Y = 2 in the left panel, Nation 2 would move instead to point F' in production, exchange 40Y for 20X with Nation 1, and reach point H' on its indifference curve II' . Trade triangle F'G' H' in the left panel corresponds to trade triangle O' G' H ' in the right panel, and we get point H' on Nation 2's offer curve. Joining the origin with points H' and E' and other points similarly obtained, we generate Nation 2's offer curve in the right panel. The offer curve of Nation 2 shows how many imports of commodity X Nation 2 demands to be willing to export various quantities of commodity Y.

Once again, we omitted the autarky price line $P_A' = 4$ and indifference curve I′ tangent to the production frontier and P_A' at point A′ . Note that P_A', P_F' , and P_B' in the right panel refer to the same P_X/P_Y as P_A' , P_F' , and P_B' in the left panel because they refer to the same absolute slope.

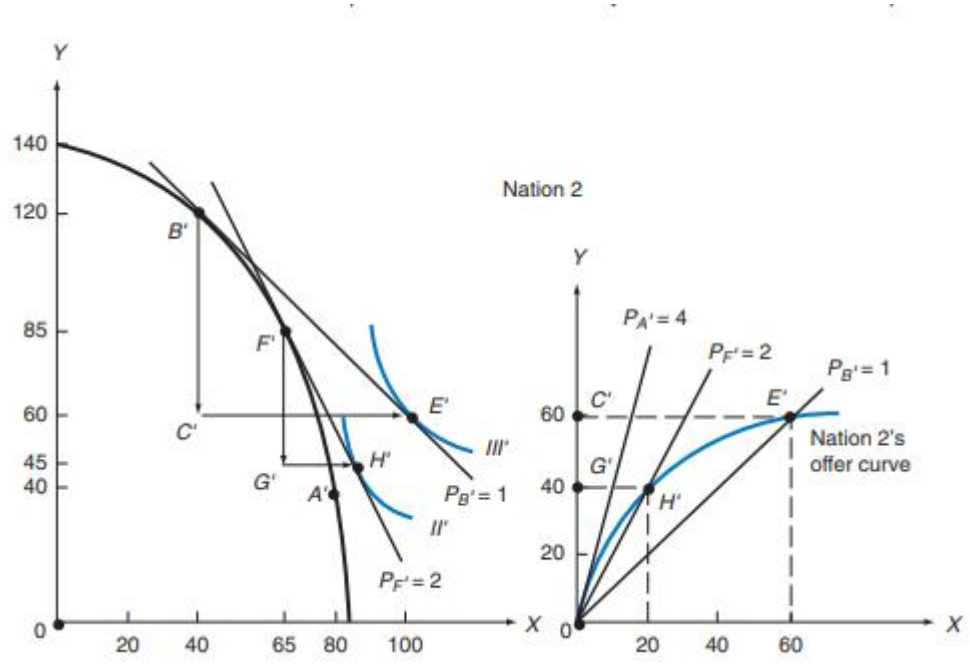


Fig. 5 Derivation of the Offer Curve of Nation 2

The offer curve of Nation 2 in the right panel of Figure 4.4 lies below its autarky price line of $P_A' = 4$ and bulges toward the Y-axis, which measures the commodity of its comparative advantage and export. To induce Nation 2 to export more of commodity, the relative price of Y must rise. This means that its reciprocal (i.e., P_X/P_Y) must fall. Thus, at $P_F' = 2$, Nation 2 would export 40Y, and at $P_B' = 1$, it would export 60Y. Nation 2 requires a higher relative price of Y to be induced to export more of Y because (1) Nation 2 incurs increasing opportunity costs in producing more of commodity Y (for export), and (2) the more of commodity X and the less of commodity Y that Nation 2 consumes with trade, the more valuable to the nation is a unit of Y at the margin compared with a unit of X.

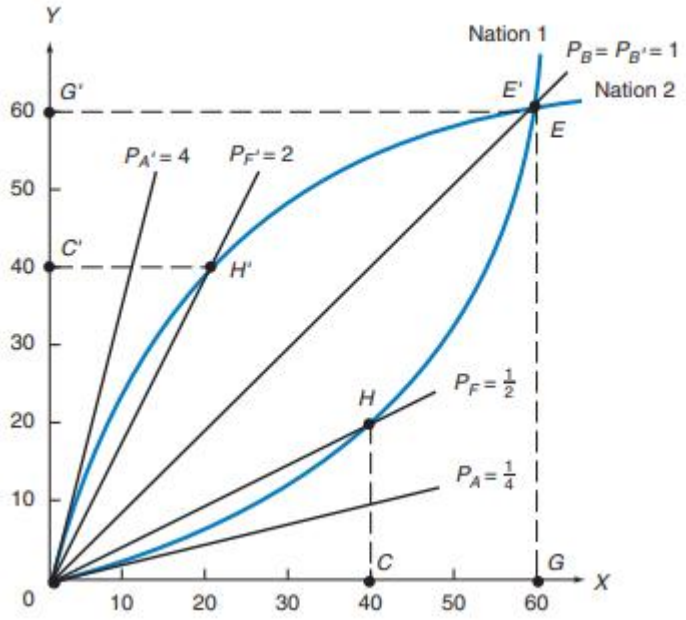
The Equilibrium-Relative Commodity Price with Trade—General Equilibrium Analysis

The intersection of the offer curves of the two nations defines the equilibrium-relative commodity price at which trade takes place between them. Only at this equilibrium price will trade be balanced between the two nations. At any other relative commodity price, the desired quantities of imports and exports of the two commodities would not be equal. This would put pressure on the relative commodity price to move toward its equilibrium level. This is shown in Fig 6.

The offer curves of Nation 1 and Nation 2 in Figure 6 are those derived in Figures 4 and 5. These two offer curves intersect at point E, defining equilibrium $P_X/P_Y = P_B = P_B' = 1$. At P_B , Nation 1 offers 60X for 60Y (point E on Nation 1's offer curve), and Nation 2 offers exactly 60Y for 60X (point E′ on Nation 2's offer curve). Thus, trade is in equilibrium at P_B .

At any other P_X/P_Y , trade would not be in equilibrium. For example, at $P_F = 1/2$, the 40X that Nation 1 would export (see point H in Figure 6) would fall short of the imports of commodity X demanded by Nation 2 at this relatively low price of X. (This is given by a point, not shown in Figure 6, where the extended price line P_F crosses the extended offer curve of Nation 2.)

The excess import demand for commodity X at $P_F = 1/2$ by Nation 2 tends to drive P_X/P_Y up. As this occurs, Nation 1 will supply more of commodity X for export (i.e., Nation 1 will move up its offer curve), while Nation 2 will reduce its import demand for commodity X (i.e., Nation 2 will move down its offer curve). This will continue until supply and demand become equal at P_B . The pressure for P_F to move toward PB could also be explained in terms of commodity Y and arises at any other P_X/P_Y , such as $P_F' = P_B$.



Note that the equilibrium-relative commodity price of $P_B = 1$ with trade (determined in Figure 6 by the intersection of the offer curves of Nation 1 and Nation 2) is identical to that found by trial and error in Figure. At $P_B = 1$, both nations happen to gain equally from trade.

4.5 Terms of Trade

The 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 imports prices, its 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 imports prices rise relatively to its export prices, its terms of trade are said to have worsened. The country's gains from trade is reduced because it can have a smaller quantity of imports in exchange for a given quantity of exports than before.

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

   The commodity or net barter terms of trade is the ratio between the price of a country's export goods and import goods. Symbolically, it can be expressed as

   Tc = Px/Pm

   where Tc stands for the commodity terms of trade, P for price, the subscript x for exports and m for imports.

   To measure changes in the commodity terms of trade over a period, the ratio of the change in export prices to the change in import prices is taken. Then the formula for the commodity terms of trade is

$$Tc = \frac{p_{x_1}}{p_{x_0}} \Big/ \frac{p_{m_1}}{p_{m_0}}$$

   where the subscripts 0 and 1 indicate the base and end periods. Taking 1971 as the base year and expressing India's both export prices and import prices as 100, if we find that by the end of 1981 its index of export prices had fallen to 90 and the index of import prices had risen to 110. The terms of trade had changed as follows

It implies that India's terms of trade declined by about 18 per cent in 1981 as compared with 1971, thereby showing worsening of its terms of trade.

If the index of export prices had risen to 180 and that of import prices to 150, then the terms of trade would be 120. This implies an improvement in the terms of trade by 20 per cent in 1981 over 1971.

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.

Its Limitations

Despite its use as a device for measuring the direction of movement of the gains from trade, this concept has important limitations.

1. Problems of Index Numbers. Usual problems associated with index number in terms of coverage, base year and method of calculation arise.

2. Change in Quality of Product. The commodity terms of trade are based on the index numbers of export and import prices. But they do not take into account changes taking place in the quality and composition of goods entering into trade between two countries. At best, a commodity terms of trade index shows changes in the relative prices of goods exported and imported in the base year. Thus the net barter terms of trade fail to account for large change in the quality of goods that are taking place in the world, as also new goods that are constantly entering in international trade.

3. Problem of Selection of Period. Problem arises in selecting the period over which the terms of trade are studied and compared. If the period is too short, no meaningful change may be found between the base date and the present. On the other hand, if the period is too long, the structure of the country's trade might have changed and the export and import commodity content may not be comparable between the two dates.

4. Causes of Changes in Prices. Another serious difficulty in the commodity terms of trade is that it simply shows changes in export and import prices and not how such prices change. As a matter of fact, there is much qualitative difference when a change in the commodity terms of trade index is caused by a change in export prices relative to import prices as a result of changes in demand for exports abroad, and ways or productivity at home. For instance, the commodity terms of trade index may change by a rise in export prices relative to import prices due to strong demand for exports abroad and wage inflation at home. The commodity terms of trade index does not take into account the effects of such factors.

5. Neglect of Import Capacity. The concept of the commodity terms of trade throws no light on the "capacity to import" of a country. Suppose there is a fall in the commodity terms of trade in India. It means that a given quantity of Indian exports will buy a smaller quantity of imports than before. Along with this trend, the volume of Indian exports also rises, may be as a consequence of the fall in the prices of exports. Operating simultaneously, these two trends may keep India's capacity to import unchanged or even improve it. Thus the commodity terms of trade fails to take into account a country's capacity to import.

6. Ignores Productive Capacity. The commodity terms of trade also ignores a change in the productive efficiency of a country. Suppose the productive efficiency of a country increases. It will lead to a fall in the cost of production and in the prices of its export goods. The fall in the prices of export goods will be reflected in the worsening of its commodity terms of trade. But, in reality, the country will not be worse off than before. Even though a given value of exports will exchange for less imports, the country will be better off. This is because a given volume of exports can now be produced with lesser resources, and the real cost of imports, in terms of resources used in exports, remains unchanged.

7. Not Helpful in Balance of Payment Disequilibrium. The concept of commodity terms of trade is valid if the balance of payments of a country includes only the export and imports of goods and services, and the balance of payments balances in the base and the given years. If the balance of payments also includes unilateral payments or unrequired exports and or/imports, such as gifts,

remittances from and to the other country, etc., leading to disequilibrium in the balance of payments, the commodity terms of trade is not helpful in measuring the gains from trade.

8. Ignores Gains from Trade. The concept of commodity terms of trade fails to explain the distribution of gains from trade between a developed and under-developed country. If the export price index of an underdeveloped country rises more than its import price index, it means an improvement in its terms of trade. But if there is an equivalent rise in profits of foreign investments, there may not be any gain from trade. To overcome this last difficulty, Taussig introduced the concept of the gross barter terms of trade.

2. Gross Barter Terms of Trade

The gross barter terms of trade is the ratio between the quantities of a country's imports and exports. Symbolically, Tg = Qm/Qx, where Tg stands for the gross terms of trade, Qm for quantities of Imports and Qx for quantities of exports. The higher the ratio between quantities of imports and exports, the better the gross terms of trade. A larger quantity of imports can be had for the same volume of exports.

To measure changes in the gross barter terms of trade over a period, the index number of the quantities of imports and exports in base period and the end period are related to each other. The formula for this is:

$$Tg = \frac{Q_{m_1}}{Qm_0} \Big/ \frac{Qx_1}{Qx_0}$$

Taking 1971 as the base year and expressing India's both quantities of imports and exports as 100, if we find that the index of quantity imports had risen to 160 and that of quantity exports to 120 in 1981, then the gross barter of trade had changed as follows:

$Tg = \frac{160}{100} / \frac{120}{100} = 133.33$

It implies that there was an improvement in the gross barter terms of trade of India by 33 per cent in 1981 as compared with 1971.

If the quantity of import index had risen by 130 and that of quantity exports by 180, then the gross barter terms of trade would be 72.22.

$Tg = \frac{130}{100} / \frac{180}{100} = 72.22$

This implies deterioration in the terms of trade by 18 per cent in 1981 over 1971.

When the net barter terms of trade (Tc) equal the gross barter terms of trade (Tg), the country has balance of trade equilibrium. It shows that total receipts from exports of goods equal total payments for import goods.

Numerically: $p_x.Qx = P_m \cdot Qm$

$$\frac{Px}{Pm} = \frac{Qm}{Qx}$$

Its Criticisms

1. Aggregating Goods, Services and Capital Transactions. The concept of gross barter terms of trade has been criticised for lumping together all types of goods and capital payments and receipts as one category in the index numbers of exports and imports. No units are applicable equally to rice and to steel, or to export (or import) of capital and the payment (or receipt) of a grant. It is therefore, not possible to distinguish between the various types of transactions which are lumped together in the index. Haberler, Viner and other economists have, therefore, dismissed this concept as unreal and impracticable as a statistical measure.

2. Ignores Factor Productivity. This concept ignores the effect of improvement in factor productivity on the terms of trade of a country. A country may have unfavourable gross barter terms of trade

due toincrease in factor productivity in the export sector. This increased factor productivity, in turn, reflects the gain for the exporting country.

3. Neglects Balance of Payments. The concept of gross barter terms of trade relates to the trade balance and ignores the influence of international capital receipts and payments of a trading country.

4. Ignores Improvements in Production. This concept measures the terms of trade in terms of physical quantities of exports and imports but ignores qualitative improvements in the production of exportable and importable goods.

5. Not True Index of Welfare. An improvement in gross barter terms of trade is regarded as an index of a higher level of welfare from trade. For the country exchanges more importable goods for its exportable goods. But this may not be true if tastes, preferences and habits of the people change so that the country needs less importables which yield greater satisfaction to the people. It will lead to unfavourable gross barter terms of trade but improve welfare.

3. Income Terms of Trade

Dorrance4 has improved upon the concept of the net barter terms of trade by formulating the concept of the income terms of trade. This index takes into account the volume of exports of a country and its export and import prices (the net barter terms of trade). It shows a country's changing import capacity in relation to changes in its exports. Thus, the income terms of trade is the net barter terms of trade of a country multiplied by its export volume index. It can be expressed as

$$Tc = \frac{p_x}{p_m}$$

where Ty is the income terms of trade, Tc the commodity terms of trade and Qx the export volume index. A.H. Imlah calculates this index by dividing the index of the value of exports by an index of the price of imports. He calls it the "Export Gain from Trade Index

Taking 1971 as the base year, if Px = 140, Pm = 70 and Qx = 80 in 1981, then

P_y= 80*120/160=60

It implies that the income terms of trade have deteriorated by 40 per cent in 1981 as compared with 1971. A rise in the index of income terms of trade implies that a country can import more goods in exchange for its exports. A country's income terms of trade may improve but its commodity terms of trade may deteriorate. Taking the import prices to be constant, if export prices fall, there will be an increase in the sales and value of exports. Thus while the income terms of trade might have improved, the commodity terms of trade might have deteriorated.

The income terms of trade is called the capacity to import. In the long-run, the total value of exports of a country must equal to its total value of imports, i.e., Px.Qx = Pm.Qm or Px.Qx/Pm = Qm. Thus Px.Qx/Pm determines Qm which is the total volume that a country can import. The capacity to import of a country may increase if other things remain the same (i) the price of exports (Px) rises, or (ii) the price of imports (Pm) falls, or (iii) the volume of its exports (Qx) rises. Thus the concept of the income terms of trade is of much practical value for developing countries having low capacity to import.

Its Criticisms

The concept of income terms of trade has been criticised on the following counts:

1. Fails to Measure Gain or Loss from Trade. The index of income terms of trade fails to measure precisely the gain or loss from international trade. When the capacity to import of a country increases, it simply means that it is also exporting more than before. In fact, exports include the real resources of a country which can be used domestically to improve the living standard of its people.

2. Not Related to Total Capacity to Import. The income terms of trade index is related to the export based capacity to import and not to the total capacity to import of a country which also includes its foreign exchange receipts. For example, if the income terms of trade index of a country has deteriorated but its foreign exchange receipts have risen, its capacity to import has actually increased, even though the index shows deterioration.

3. Inferior to Commodity Terms of Trade. Since the index of income terms of trade is based on commodity terms of trade and leads to contradictory results, the concept of the commodity terms of trade is usually used in preference to the income terms of trade concept for measuring the gain from international trade.

4. Single Factoral Terms of Trade

The concept of commodity 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 :

$T_S=T_C*F_X=P_X*F_X/P_M$

where Ts is the single factoral terms of trade, Tc is the commodity terms of trade, and Fx is the productivity index of export industries. It shows that a country's factoral terms of trade improve as productivity improves in its export industries. If the productivity of a country's exports industries increases, its factoral terms of trade may improve even though its commodity terms of trade may deteriorate. For example, the prices of its exports may fall relatively to its import prices as a result of increase in the productivity of the export industries of a country. The commodity terms of trade will deteriorate but its factoral terms of trade will show an improvement.

Its Limitations.

This index is not free from certain limitations. It is difficult to obtain the necessary data to compute a productivity index. Further, the single factoral terms of trade do not take into account the potential domestic cost of production of imports industries in the other country.

To overcome this weakness, Viner formulated the double factoral terms of trade.

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's imports. The index measuring the double factoral terms of trade can be expressed as

$T_d= T_c*F_X/F_M=P_X/F_M*F_X/F_M$

where Td is the double factoral terms of trade, Px/Pm is the commodity terms of trade, Fx 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. A rise in the index of double factoral terms of trade of a country means that the productive efficiency of the factors producing exports has increased relatively to the factors producing imports in the other country.

Its Criticisms

1. Not Possible to Construct a Double Factoral Terms of Trade Index. In practice, however, it is not possible to calculate an index of double factoral terms of trade of a country. Prof. Devons6 made some calculations of changes in the single factoral terms of trade of England between 1948-53. But it has not been possible to construct a double factoral terms of trade index of any country because it involves measuring and comparing productivity changes in the import industries of the other country with that of the domestic export industries.

2. Required Quantity of Productive Factors not Important. Moreover, the important thing is the quantity of commodities that can be imported with a given quantity of exports rather than the quantity of productive factors required in a foreign country to produce its imports.

3. No Difference Between the Double Factoral Terms of Trade and the Commodity Terms of Trade. Again, if there are constant returns to scale in manufacturing and no transport costs are involved, there is no difference between the double factoral terms of trade and the commodity terms of trade of a country.

4. Single Factoral Terms of Trade is more Relevant Concept. According to Kindleberger, "The 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 a terms of trade index to measure the real gain from international trade. He calls it the real cost terms to 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=Ts*Rx=Px/Pm*Fx*Rx

where Tr is the real cost terms of trade, Ts is the single factoral terms of trade and Rx is the index of the amount of disutility per unit of productive resources used in producing export commodities.

Its Criticisms

A favourable real cost terms of trade index (Tr) 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 "changes in the disutility of producing a unit of exports and changes in the relative satisfactions yielded by imports, and the domestic products foregone as the result of export production." In other words, it is an index of the relative utility of imports and domestic commodities forgone to produce exports. The utility terms of trade index is calculated by multiplying the real cost terms of trade index with an index of the relative average utility of imports and of domestic commodities foregone. If we denote the average utility by u and the domestic commodities whose consumption is foregone to use resources for export production by a, then $U = \frac{u_{m_1}}{u_{n_1}} \Big| \frac{u_{m_0}}{u_{n_0}}$ where u is the index of relative utility of imports and domestically foregone commodities. Thus, the utility terms of trade index can be expressed as:

$Tu=Tr.u=P_X/P_m*F_X.R_X.u$

Since the real terms of trade index and utility terms of trade index involve the measurement of disutility in terms of pain, irksomeness and sacrifice, they are elusive concepts. As a matter of fact, it is not possible to measure disutility (for utility) in concrete terms.

Its Criticisms

Hence like the single and double factoral terms of trade concepts, the concepts of real and utility terms of trade are of little practical use. They are only of academic interest. That is why the concepts of the commodity terms of trade and of income terms of trade have been used in measuring the gains from international trade in developed as well as developing countries.

Factors Affecting Terms of Trade

1. Reciprocal Demand and Supply. The TOT of a country depends upon reciprocal demand and supply, i.e. the strength and elasticity of each country's demand and supply of exports and imports. When the demand for exports of a country is less elastic as compared to its imports, its TOT will be favourable. For its exports will fetch a higher price than its imports. On the other hand, if the demand for its imports is less elastic than its exports, its TOT will be

unfavourable because it will have to pay a higher price for its imports. If the supply of its exports is more elastic than its imports, its TOT will be unfavourable because it can increase or decrease the supply of its exports in keeping with international market conditions. The opposite will be the case when the supply of exports is less elastic. So the TOT will be favourable.

2. Change in Demand. The TOT are also influenced by the size of demand for exports and imports of a country. Other factors remaining the same, if the demand for exports increases, it will raise the prices of exportables as against the prices of importables. The TOT will be favourable. On the other hand, if the demand for importables increases, their prices will rise as against the prices of importables, thereby worsening the TOT exportable.
3. Changes in Factor Endowments. The TOT of a country are influenced by changes in its factor endowments. With given tastes and technology, if the increase in factor supply is related to export industries, it will lead to the production of more of export goods and less of import goods. As a result, the TOT will worsen because exports of more goods will bid down their prices in world markets. Conversely, if the growth of factors produces more of importcompeting goods, the TOT will improve. For the demand for imports goods will fall which will bid down their relative prices in world markets.
4. Changes in Technology. Technological changes also affect the TOT of a country. If the technological changes lead to the production of more export goods, their supply will increase, prices will fall relative to its imports. It will export more than it imports. Therefore, its TOT will be unfavourable. On the contrary, if it leads to the production of more import-competing goods, its volume of world trade will be less and its TOT will improve.
5. Change in Tastes. Changes in tastes of the people of a country influence its TOT with another country. If the tastes for the products of another country increase, it leads to increase in the demand for the imported goods. Consequently, the TOT will become unfavourable, and vice versa.
6. Economic Growth. Another factor is economic growth which increases the country's productive capacity, welfare and income, given the tastes and technology. Economic growth affects TOT in two ways. The first is the demand effects which increases the demand for imports as a result of increase in per capita income with economic growth. The second is the supply effect which increases the supply of exportables and import-competing goods. It is the net effect of these two effects which ultimately determines the TOT of a country. If the demand effect is more powerful than the supply effect and the volume of trade increases through imports, its TOT will be unfavourable. On the other hand, if the supply effect is more powerful than the demand effect, and the country's trade volume increases through rise in exports and import-competing goods, its TOT will improve.
7. Tariffs. An import tariff improves the TOT of the tariff-imposing country. As a result of the imposition of tariff duties, imports will be reduced in relation to exports and its TOT will improve.
8. Quotas. Fixation of quotas also reduces imports and thus improves the TOT of the country fixing quotas.
9. Devaluation. By devaluation is meant a reduction of the value of domestic currency in terms of the foreign currencies. Devaluation makes imports costlier and exports cheaper in foreign markets. Thus it reduces imports and increases exports and makes the TOT favourable for the devaluing country. But the elasticities of demand and supply of exports and imports determine deterioration or improvement in its terms of trade. If both the foreign demand for

exports and home demand for imports are highly inelastic to price movements, devaluation leads to an improvement in the terms of trade, and vice versa.

10. Market Conditions. A country which has got monopoly or oligopoly in the goods which it exports in the world market, but its import market is competitive, its TOT will be favourable. For it will sell its goods at a high price in the world market. If a few countries are oligopolistic and form a cartel, such as oil producing countries, they can raise the price of oil by reducing its supply. So their TOT will improve.
11. Import Substitutes. If the country produces import-substitute goods in sufficient quantities, its import demand for such goods will be low. As a result, it will import less and its TOT will be favourable, and vice versa.
12. International Capital Flows. An inflow of capital from abroad in the form of capital and other goods reduces the demand for home products and exportables. As a result the prices of exportables fall relative to importables, thereby worsening the TOT of the country. On the other hand, when there is an outflow of capital to repay the debt in the form of larger exports, their prices fall which again make the TOT unfavourable for the country.
13. Balance of Payments. Deficit in BOP brings improvement in TOT because the exchange rate falls. On the other hand, a surplus in BOP worsens the TOT by raising the exchange rate of the currency. 14. Inflation and Deflation. Inflation worsens the TOT because with the rise in domestic prices On the other hand, deflation improves the TOT because the prices of domestic goods fall, the demand for exports increases and for imports falls.

Summary

In this chapter, we derived the demand for imports and the supply of exports of the traded commodity, as well as the offer curves for the two nations, and used them to determine the equilibrium volume of trade and the equilibrium-relative commodity price at which trade takes place between the two nations. process of trial and error.

- The excess supply of a commodity above the no-trade equilibrium price gives one nation's export supply of the commodity. On the other hand, the excess demand of a commodity below the no-trade equilibrium price gives the other nation's import demand for the commodity. The intersection of the demand curve for imports and the supply curve for exports of the commodity defines the partial equilibrium-relative price and quantity of the commodity at which trade takes place.
- The offer curve of a nation shows how much of itsimport commodity the nation demands to be willing tosupply various amounts of its export commodity. Theoffer curve of a nation can be derived from its production frontier, its indifference map, and the variousrelative commodity prices at which trade could takeplace. The offer curve of each nation bends towardthe axis measuring the commodity of its comparativeadvantage. The offer curves of two nations will liebetween their pretrade, or autarky, relative commodity prices. To induce a nation to export more of acommodity, the relative price of the commodity mustrise.
- The terms of trade of a nation are defined as the ratio of the price of its export commodity to the price of its import commodity. The terms of trade of the trade partner are then equal to the inverse, or reciprocal, of the terms of trade of the other nation. With more than two commodities traded, we use the index of export to import prices and multiply by 100 to express the terms of trade in percentages. Our trade model is a general equilibrium model except for the fact that it deals with only two nations, two commodities, and two factors.

Keywords

1. Net Barter TOT :The terms of trade index measures the relative prices of a country's exports and imports.
2. Offer curves: The offer curve shows all pairs of imports and exports implied by the production possibilities of an economy and the indifference curves.
3. Terms of Trade: Terms of trade are defined as the ratio between the index of export prices and the index of import prices.
4. Mill;s Doctrine: 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.
5. Gross Barter Terms of Trade: The gross barter terms of trade is the ratio between the quantities of a country's imports and exports

Review Questions

1. What do offer curves show? How are they derived? What is their shape? What explains their shape?
2. What do the terms of trade measure? What is the relationship between the terms of trade in a world of two trading nations? How are the terms of trade measured in a world of more than two traded commodities?
3. In what way is a nation's offer curve similar to:
   (a) a demand curve?
   (b) a supply curve?
   In what way is the offer curve different from the usual demand and supply curves?
4. To show how nations can share unequally in thebenefits from trade:
   (a) Sketch a figure showing the offer curve of anation having a much greater curvature than theoffer curve of its trade partner.
   (b) Which nation gains more from trade, the nation with the greater offer curve or the one withthe lesser curvature?
   (c) Can you explain why?

5. Distinguish between Gross Barter Terms of Trade and Barter Terms of Trade or Income Terms of Trade and Net Barter Terms of Trade.

6. What do you mean by Terms of Trade? Explain the determination of equilibrium terms of trade.

SelfAssessment

1. An offer curve _____

A. Differs from usual demand curve only
B. Differs from usual supply curve only
C. same as usual demand curve
D. Differs from both demand and supply curves

2. Graphical representation of reciprocal demand is referred to as_____

A. Offer curve,
B. Demand curve,
C. Supply curves,

D. Contract curve

3. The terms of trade measure ?

A. The income of one country compared to another

B. The GDP of one country compared to another

C. The quantity of exports of one country compared to another

D. Export prices compared to import prices

4. Terms of trade of developing countries are generally unfavourable because:

A. They export primary goods

B. They import value added goods

C. They export few goods

D. (a) and (b) of above

5. Terms of trade are expressed as a ratio of .

A. price index of exports and imports,

B. foreign exchange receipts and

C. payments, FDI and portfolio investments,

D. none of the above

6. Terms of trade are favourable if the current index in comparison to the base year index is .

A. less

B. more

C. equal

D. none of the above

7. Income terms of trade indicate increased capacity to .

A. import,

B. export

C. investment

D. none of the above

8. Generally, the developing countries terms of trade.

A. suffer from adverse,

B. enjoy favourable,

C. ignore,

D. none of the above

9. The gain from trade is maximum if the international terms of trade are .

A. nearer to the internal terms of trade of trading partner,

B. nearer to the domestic terms of trade of importing country,

C. equal to exporting country,

D. none of the above.

10. The concept of reciprocal demand was introduced by .

A. J. S. Mill,
B. J. M. Keynes,
C. G. S. Dorrance,
D. F.W. Taussig)

11. A country will have unfavourable terms of trade when .

A. exports have elastic supply,
B. imports have elastic demand,
C. imports have inelastic demand,
D. none of the above

12. Utility terms of trade was introduced by .

A. Adam Smith,
B. Jacob Viner,
C. J. S. Mill,
D. Frank Taussig

13. The concept of gross barter terms of trade was introduced by .

A. Frank Taussig,
B. Alfred Marshall,
C. Francis Edgeworth,
D. John S. Mill

14. The offer curve of a country is based on .

A. price of imports,
B. supply of exports
C. relative prices of two commodities,
D. price of exports

15. Reciprocal demand is expressed in terms of .

A. Offer curves,
B. supply curves,
C. demand curves,
D. cost curves

Answers for Self Assessment

1.	D	2.	A	3.	D	4.	D	5.	A
6.	B	7.	A	8.	A	9.	A	10.	A

11. C 12. A 13. A 14. C 15. A

Further Readings

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Unit 05: Trade Restrictions

CONTENTS

Objectives

- Understand Tariffs and its Types
- Analyse the partial and general equilibrium effects OF Tariff
- Analyze the trade ad commercial policies including protectionism

Introduction

Free trade maximizes world output and benefits all nations. However, practically all nations impose some restrictions on the free flow of international trade. Since these restrictions and regulations deal with the nation's trade or commerce, they are generally known as trade or commercial policies. While trade restrictions are invariably rationalized in terms of national welfare, in reality they are usually advocated by those special groups in the nation that stand to benefit from such restrictions.

The most important type of trade restriction has historically been the tariff. A tariff is a tax or duty levied on the traded commodity as it crosses a national boundary. In this chapter we deal with tariffs, and in the next chapter we discuss other trade restrictions. An import tariff is a duty on the imported commodity, while an export tariff is a duty on the exported commodity. Import tariffs are more important than export tariffs, and most of our discussion will deal with import tariffs. Export tariffs are prohibited by the U.S. Constitution but are often applied by developing countries on their traditional exports (such as Ghana on its cocoa and Brazil on its coffee) to get better prices and raise revenues. Developing nations rely heavily on export tariffs to raise revenues because of their ease of collection. Conversely, industrial countries invariably impose tariffs or other trade restrictions to protect some (usually labor-intensive) industry, while using mostly income taxes to raise revenues.

The tools of trade protection that countries typically use to restrict imports can be broadly classified into price related measures such as tariffs and non-price measures or non-tariff barriers (NTBs).

A tariff is a tax levied on imports. Tariffs may be applied to imports of both final and intermediate goods. This aspect is taken into account while assessing the extent of protection extended to

domestic industry by the tariff. We will learn about a concept called the 'effective rate of protection', which is used to measure the extent of actual protection granted to value added in a particular industry by the entire tariff structure (covering final and intermediate goods).

Non-tariff barriers (NTBs) are applied to quantities and other attributes of traded goods and services.

5.1 Meaning of Tariff

A tariff or import duty essentially alters the relative prices of traded goods vis a vis non-traded goods in the domestic market. Tariffs may be specific or ad valorem. Specific tariffs are levied as a fixed amount per unit of the good (e.g., Rs.400 per box of imported dates). While, ad valorem duties are levied as a fixed percentage of the total value of the goods (e.g., 30% duty on imported computer parts).

5.2 Types of Tariffs

Tariffs are classified in a number of ways

On the Basis of Purpose. Tariffs are used for two different purposes : for revenue and for protection.

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 much with the imposition of low import duties and the 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 discouraging 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 : ad valorem, specific, compound and sliding scale duties.

1. Ad Valorem Duty. 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 per cent, 50 per cent and so on.
2. Specific Duty. 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.
3. Compound Duty. Often, governments levy compound duties which are a combination of the ad valorem and the 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. For instance, a country may impose an import duty on a car at the fixed rate of Rs. 1 lakh + 10% on the price of car.
4. Sliding Scale Duty. Sometimes governments levy import duties which vary with the prices of commodities imported. Such duties are known as sliding scale duties which may be either ad valorem or specific. Normally, sliding scale duties are imposed on specific basis.

On the Basis of Country-wise Discrimination. The following types of tariffs are levied on the basis of country-wise discrimination.

1. Single Column Tariff. When a uniform rate of duty is imposed on all similar commodities irrespective of the country from which they are imported, it is called single-column tariff. It is non-discriminatory tariff which is very simple and easy to design and administer. But it is not elastic and adequate. Revenue may not be collected by this system.

2. Double Column Tariffs. Under this system, two different rates of duty exist for all or some of the commodities. The government of the country declares both the rates at the beginning or one at the beginning and another after settling the rates under trade agreements. They can be classified as follows :
    i. General and Conventional Tariffs. The general tariff is the list of tariffs which is announced by the government as its annual tariff policy at the beginning of the year. It is a particular tariff rate which is charged from all countries. On the other hand, conventional tariff rates are based on trade agreements/treaties with other countries. They may be different for different countries and vary from commodity to commodity. They are not flexible for they can only be changed by mutual consent. As they are inflexible, they hamper the expansion of trade.
    ii. Maximum and Minimum Tariffs. Governments usually fix two tariff rates for importing the same commodity from different countries. Countries with which it has a commercial agreement/ treaty, (under most favoured nation), minimum tariff rate is imposed. On the other hand maximum tariff rate is imposed on imports from the rest of the countries.
3. Multiple or Triple Column Tariffs. Under the multiple column tariff system, two or more tariff rates are levied on each category of commodity. But the usual practice is to have three different lists of tariffs, i.e. general, intermediate and preferential. The general rates are imposed in the same manner as the maximum rates mentioned above. Similarly, the intermediate rates are the minimum rates. The preferential rates were levied on goods imported from Britain before independence which had low rates or were duty free. Presently, imports among the SAARC countries carry preferential duties on imports from each other.

On the Basis of Retaliation. There are two ways to levy import duties on the basis of retaliation

1. Retaliatory Tariffs. A retaliatory tariff duty is levied by one country on the imports of another country in order to punish the latter for its trade policy which harms its exports or balance of payments position.

2. Countervailing Duty. It is an additional duty which is imposed on a commodity whose export price is reduced by the other country through an export subsidy. The additional duty is levied to raise its price in order to protect producers of the same commodity in the importing country from the cheap foreign commodity.

5.3 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 standpoint 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 a particular good or market which is known as the partial equilibrium analysis. A tariff "is likely to alter trade, prices, output, and consumption, and to reallocate resources, change factor proportions, redistribute income, change employment, and alter the balance of payments.

Effects of a Tariff Under Partial Equilibrium

The effects of a tariff under partial equilibrium analysis relate to a small industry in a small country. When a tariff is imposed on the imports of a single commodity by a small country, it does not affect the rest of the domestic economy and also the world price of this commodity.

Its Assumptions

The analysis of the effects of a tariff under the practical equilibrium analysis is based on the following assumptions :

1) There is only one small country.
2) It imposes tariff on one commodity.
3) The demand and supply curves of a commodity relate to the country which levies an import duty.
4) These curves are assumed as given and constant.
5) On the demand side, consumers' tastes, incomes and prices of other commodities areassumed to be fixed.
6) Onthesupplyside,changesincostconditionssuchas externalities, technological innovations, etc. do not take place.
7) The world supply of commodity is perfectly elastic with respect to price.
8) The home country does not impose tariff on the imports of materials required for producing the commodity.
9) There are no transport costs.
10) The foreign price of the commodity remains unchanged.
11) The imported and domestically produced commodity are perfect substitutes.

Prof. Kindleberger has listed eight effects of tariffs : (1) Protective Effect; (2) Consumption Effect; (3) Revenue Effect; (4) Redistributive Effect; (5) Terms of Trade Effect; (6) Competitive Effect; (7) Income Effect; and (8) Balance of Payments Effect. All these effects are the result of the Price Effect which we first explain.

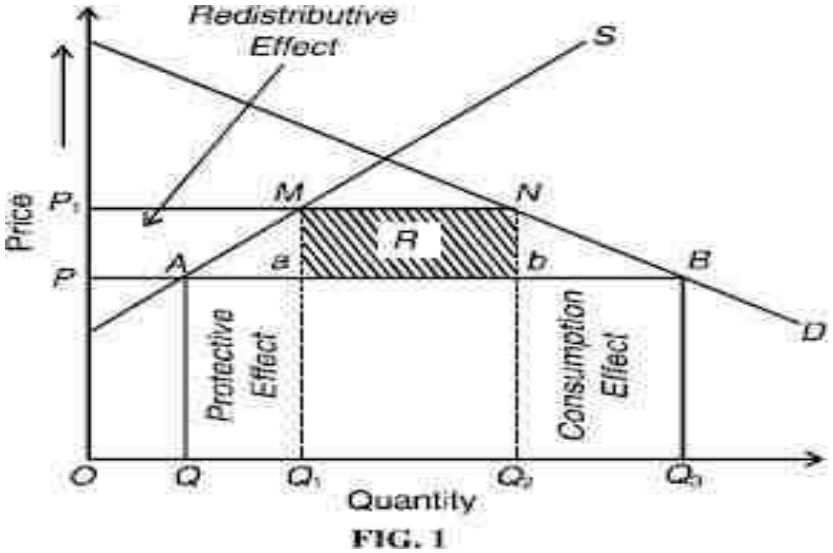

FIG. 1

Price Effect. Given these assumptions, the price effect of a tariff is explained in terms of Fig. 1 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 the domestic market. Thus the horizontal line fl PB is the supply curve of imports which is perfectly elastic at OP price. Thus under free trade (before the imposition of a tariff) the equilibrium market position is given by point B where the domestic demand curve D intersects the world supply curve PB at the price OP. The total demand for the commodity is OQ3. The domestic supply is OQ. The difference between domestic demand and domestic supply is met by importing QQ3 quantity at OP price.

Suppose a tariff of PP1 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 OP1. Thus the rise in the price of the commodity by PP1 is the price effect of the tariff. As a result, the new equilibrium market position is given by point N. In response to the higher price, the domestic demand falls from OQ3 to OQ2 and the domestic supply increases from OQ to OQ1. So that the total demand for the commodity is OQ2 which is partly met by domestic supply OQ1 and partly by importing Q1Q2. Thus imports have fallen from QQ3 to Q1Q2 as a result of the price effect. The protective, consumption, revenue and redistribution effects of a tariff can also be illustrated by Fig. 1.

Protective Effect. The protective effect shows how the domestic industry can be protected from foreign competition by imposing an import duty. In Fig. 1 under free trade, OQ3 quantity of the commodity is imported at OP price. With the imposition of the import duty of PP1, imports are reduced to Q1Q2, while the domestic production (supply) of the commodity increases from OQ to OQ. Thus the increase in the domestic production of the commodity by QQ1 as a result of the tariff is the protective or production effect. Prof. Ellsworth has carried this protective effect further and

Has analysed it as the import substitution effect. When the domestic producers face the higher price OP1, they are able to cover the rising marginal costs of additional output, and expand production to OQ1.This replacement of foreign production with domestic production by QQ1 is called the import substitution effect of a tariff.

Consumption Effect. The consumption effect of the tariff is to reduce the consumption of the commodity on which the tariff is imposed, as also to reduce consumers' net satisfaction. These are illustrated in Fig. 1. Before the imposition of a tariff, consumers were consuming OQ3 quantity of the commodity at OP price, with the levying of an import duty of PP1, the price of the commodity rises to OP1. Now imports are reduced by Q3Q2 and the total consumption of the commodity is also reduced from OQ3 to OQ2. Thus Q3Q2 (= OQ3 – OQ2) is the consumption effect of the tariff. This, in turn, leads to a net loss of consumers' satisfaction equal to the area PP1NB. Prof. Kindleberger calls the combined protective and consumption effect as trade effect. The imposition of PP1 tariff has the effect of reducing the total volume of trade of the country equivalent of OQ3 – Q1Q2.

Revenue Effect. the revenue effect is the change in government receipts as a result of the tariff. In the case illustrated in Fig. 1 initially the tariff is assumed zero at price OP. So when PP1 import duty is levied, the revenue to the government is equal to the amount of the import duty multipled by the quantity of imports. The revenue effect is, therefore, PP1 × Q1Q2, or the rectangular shaded area R.

Redistributive Effect. The redistribution effect results from producers receiving a higher price for their commodity after the imposition of the tariff. This is shown in Fig. 1 by the area PP1MA.

This amount is a surplus over production costs and is an economic rent which goes to producers. According to Kindleberger the redistribution effect "is an addition to producers' surplus derived by subtraction from consumers' surplus". In this sense, the net loss to consumers' satisfaction as measured by the consumption effect is PP1NB. Out of this, the amount shown by the area R is taken away by the government as revenue, and the loss of consumers' surplus is represented by the two trainglesa and b. This loss of consumers' surplus represented by the two triangles a and b is neither transferable to the producers nor to the government and is called by Kindleberger as the "deadweight loss of the tariff." This may also be called the cost of the tariff. Thus the quadrilateral PP1MA measures the redistributive effect of the tariff which goes to the domestic producers of the commodity.

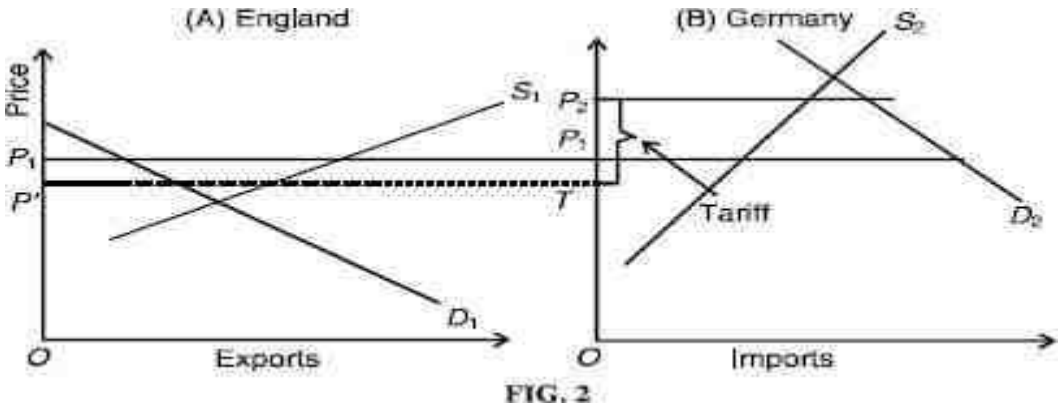

FIG. 2

Balance of Payments Effect: A tariff has a favourable balance of payments effect by reducing imports in the tariff imposing country and reducing exports in the other country. Thus a tariff reduces the country's international expenditure and brings stability in the balance of payments. The balance of payments effect is illustrated in Fig. 1. Under free trade conditions, QQ3 commodity is imported at OP price.

The total value of imports is represented by the rectangle AQQ3B. This represents a balance of payments deficit since the price paid by importers is the amount received by the other country. To remove this deficit, PP1 import duty is levied on the imported commodity. As a result, imports are reduced from QQ3 to Q1Q2. The government gets a revenue equal to the area R. There is also improvement in the balance of payments because the amount paid to the other country equals the area aQ1Q2b which is less than under free trade AQQ3B.imposing country and reducing exports in the other country. Thus a tariff reduces the country's international expenditure and brings stability in the balance of payments. The balance of payments effect is illustrated in Fig. 1. Under free trade conditions, QQ3 commodity is imported at OP price.

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Terms of Trade Effect: The terms of trade effect of a tariff is that it improves the terms of trade of country imposing it. This is illustrated in Fig. 2 when Panel (A) shows S1 and D1 as the supply and demand curves respectively of the exporting country England, and Panel (B) shows S2 and D2 the supply and demand curves respectively of the importing country Germany. Before the imposition of a tariff by Germany, trade between the two countries is taking place at the price OP1. Suppose Germany imposes tariff of P2T amount on the imported commodity from England. This raises its price in Germany and the demand for it falls. On the other hand, its supply price in England falls with the decline in its export demand. Thus, the price rises from OP1 to OP2 in Germany in Panel (B) and falls in England from OP1 to OP' in Panel (A), as a result of the tariff. Of the total tariff of P2T, a larger amount P2P1 is borne by the importer country Germany and P1P by the exporter country England. The terms of trade effect is that a tariff-imposing country improves its terms of trade by getting its imports cheaply in the sense that the exporter country is forced to pay a part of the tariff duty. "It is true that the consumer in the importing country has to pay a higher price. But this is offset, so far as imports are concerned, by the revenue effect. If the redistribution effect can be ignored, the revenue effect, which is the tariff times imports after the imposition of the tax, is levied partly on producers in the exporting country." If the supply is very inelastic in the exporting country and the demand fairly elastic in the importing country, the imposition of a tariff will not change the imports much, but they will be obtained much cheaply. If the supply curve in the exporting country is perfectly elastic the imposition of a tariff cannot improve the terms of trade at all.

Competitive Effect: The competitive effect of a tariff is to protect the domestic industry from foreign competition by imposing a tariff on the commodity imported. This effect is usually associated with the infant industry argument of protection. But the fear is expressed that an infant industry may not like to face competition even after attaining adulthood. It may develop into a monopoly and may continue to be inefficient. Prof. Kindleberger opines that "the competitive effect of a tariff is really an anti-competitive effect; competition is stimulated by tariff removal." He, therefore, favours the removal of tariff on "sluggish, fat and lazy" domestic industries in the interest of the economy.

Income Effect: The income effect refers to the effect of a tariff on the levels of income and employment of a country imposing the tariff. A tariff reduces the demand for imported goods by reducing imports, and increases the demand for home-produced goods on the assumption that there is no retaliation by the other country. It will increase the value of the export surplus (X – M), thereby increasing the inflow of income from the foreign sector. The whole of the income diverted from imports will not be saved but a part of it will be spent at home. Under conditions of less than full employment, this will raise money and real incomes and employment.

The income effect of a tariff is illustrated in Fig. 3. AD is the total expenditure schedule of the economy at unemployment level which crosses the 45° line at E so that OY1 is the equilibrium level

of income. AD also represents the aggregate demand and comprises C + l + G + (X – M). When a tariff is imposed, it reduces imports by DM and increases the demand for the domestically produced goods so that the aggregate demand curve shifts to AD1 = [C + 1 + G + (X –M). This gives a new equilibrium at point E1. If the increased level of income OYF is one of full employment, then the imposition of a tariff has brought the economy to the level of full employment and raised the level of income of OYF

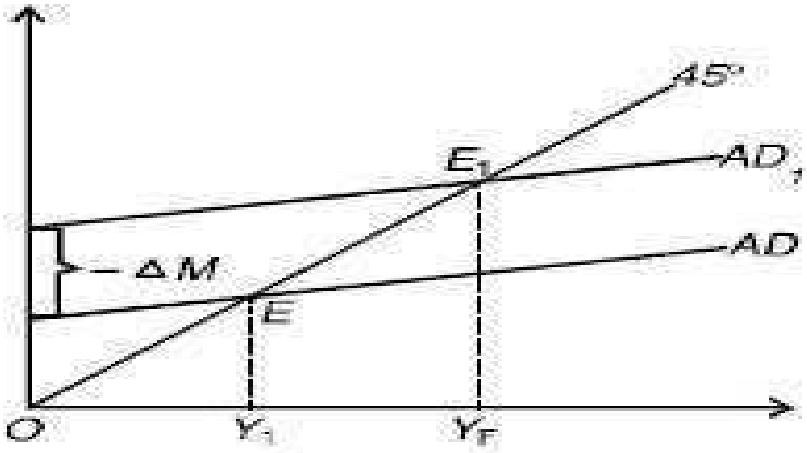


FIG. 3

The effect of tariff on income and employment of a tariff imposing country may not be expansionary for the following reasons. First, when the home country imposes a tariff, the exports of the foreign country are reduced which, in turn, reduce its output, employment and income. As a result, the foreign country will curtail its imports from the home country. This means reduction in the exports of the tariff imposing home country which reduces its income and employment. This is called a begger-thy-neighbour policy. Second, If the tariff imposing country is able to raise its income and employment at the expense of the other country. Third, the other country may adopt retaliatory measures like tariff and countervailing duties which may counteract the income and employment effects in the home country.

5.4 General Equilibrium Analysis of a Tariff

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.

Assumptions:

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

i. The trade takes place between two countries – A and B.
ii. The home country A is small.
iii. There are two commodities, cloth and steel, being exchanged between them.

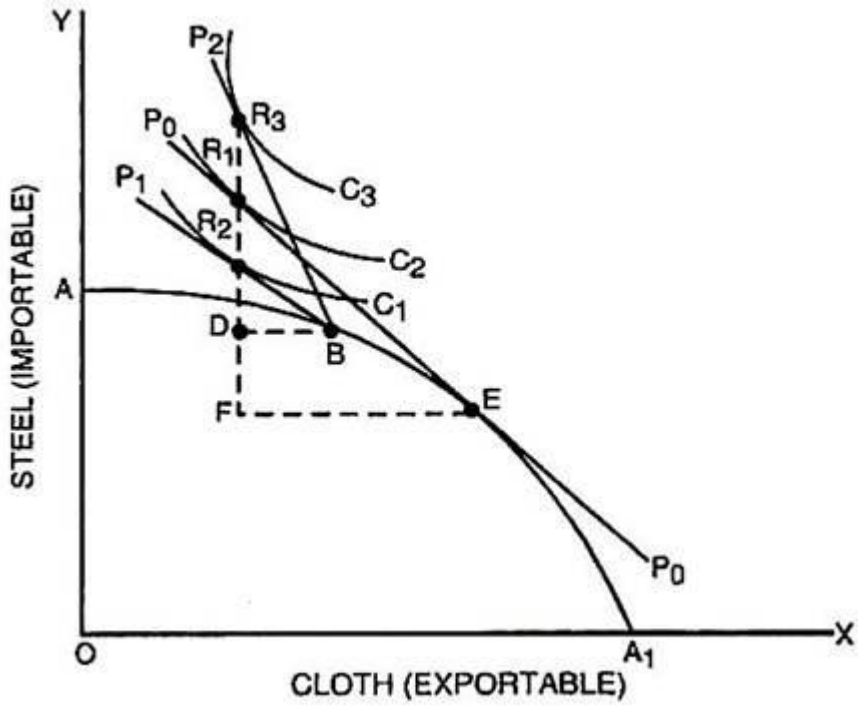
iv. Cloth is exportable and steel is importable commodity.

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

vi. World price of steel remains unaffected.

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

The production and consumption effects of tariff upon country A can be analysed through Fig.4



I

n Fig. 4., the production possibility curve related to two commodities cloth and steel is AA1. In the absence of international trade, the point of consumption and production equilibrium is B. In the conditions of free international trade, P0P0 is the international exchange ratio line and the production equilibrium point is E.

The consumption equilibrium point is R1 that lies on the community indifference curve C2. In this situation, country A exports FE quantity of cloth and imports R1F quantity of steel. If tariff is imposed but the world prices of commodities remain the same, the international exchange ratio line is P1B which is parallel to the original international exchange ratio line P0P0.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 R1 to R2 where the international exchange ratio line P1B becomes tangent to a lower community indifference curve C1.

It shows that tariff has caused a reduction in the welfare of tariff-imposing small country. The shift in consumption point from R1 to R2 signifies the consumption effect of tariff. After tariff, country exports BD quantity of cloth and imports R2D 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.

5.5 Optimum Tariff

Usually, the imposition of a tariff improves the terms of trade of the imposing country but reduces its volume of trade. The improvement in the terms of trade increases its welfare. This is the positive effect of a tariff. The decrease in the volume of trade reduces its welfare. This is the negative effect of a tariff. It is only when the positive effect of a tariff is larger than its negative effect that there is improvement in the welfare of a country. A prohibitive tariff with a very high rate reduced welfare by decreasing the volume of trade. On the other hand, a reduction in tariff by improving the terms of trade increases welfare. Thus as long as the terms of trade effect is stronger than the volume of trade effect, welfare can be improved by increasing the tariff rate. But a tariff cannot be continuously increased because sooner or later the net gain begins to decrease and net loss begins to increase. Therefore, a country "can always improve its welfare by applying the 'right' tariff. This tariff, the tariff that maximises a country's welfare is called the optimum tariff."

Determination of Optimum Tariff.

The optimum level of tariff is determined at a point where the trade indifference curve of a tariff imposing country is tangent to the offer curve of the other country.

Assumptions:

This analysis is based on the following assumptions :

1. There are two countries, England and Germany.
2. There are two commodities, cloth and linen.
3. England exports cloth and Germany exports linen.
4. England imposes tariff on the import of linen from Germany.
5. There is no retaliation by Germany on England's exports of cloth.

The following figure 5 explains the existence of some optimum tariff level. (R) is free trade equilibrium. At that point the volume of trade is og of A-good and oc of the B-good, and the terms of trade are given by the slope of line TP. The home country (II) now wishes to impose a tariff that will maximize its community welfare, i.e. place it on the highest possible trade indifference curve assuming no retaliation on the part of the foreign, country. Under free trade conditions at (R) country (H) attains the trade indifference level (h1) which crosses the foreign offer curve (OF) at (R) and at some other point (T).

Any tariff which distorts the home country's offer curve in such a way that it crosses the foreign country's offer curve between points (T) and (R) will lead to a higher trade indifference level. If the new tariff distorted point is at (T), of course, the trade indifference level will be unchanged. The highest possible trade indifference curve that the home country can reach is one that is tangent to the foreign offer curve. This is trade indifference curve (h2) tangent to foreign offer curve OF at point (s). Hence, if the home country can impose a tariff of such magnitude that the tariff distorted offer curve (OHt) touches the foreign offer curve (OF) at point (s); this is the optimum tariff (sd).

Given the foreign country's offer curve, the optimum tariff, in terms of A-good is quantity (Sa) or in terms of B-good, quantity (Sd). This is the optimum tariff. Given the foreign country's offer curve OF, there is no tariff the home country can impose that will yield a higher level of community welfare.

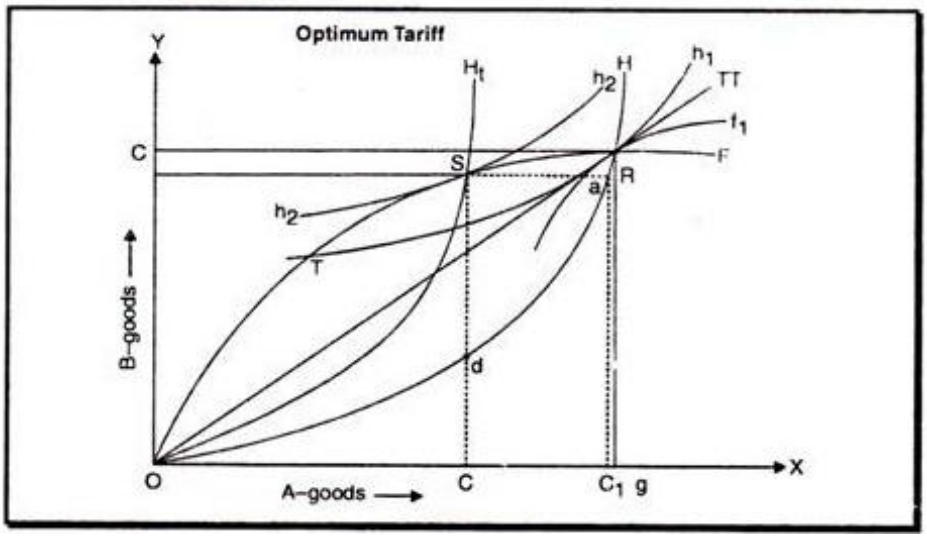


Fig. 5

The magnitude of optimum tariff depends upon the elasticity of foreign offer curve. If the foreign offer curve is perfectly elastic, no tariff will yield the home country improved terms of trade. Hence it cannot possibly advance to a higher trade indifference level. The less elastic the foreign offer curve, the higher will be the optimum tariff. Where the foreign offer curve has elasticity of one and thus is horizontal, the optimum tariff will be infinity.

Non-Tariff Trade Barriers and New Protectionism

Non-Tariff Barriers (NTBs), unlike tariffs, may impose direct restrictions on the inflow of imported goods. For instance, conventional NTBs like import quotas directly restrict the quantum of imports into the domestic country. While other NTBs discussed below restrict the flow of traded goods in a more indirect manner. From the following discussion you will see how countries are resorting to newer, more indirect forms of NTBs, most often in order to circumvent the directives of multilateral trade agreements like the WTO .

1. Quotas:

Import quotas impose direct restrictions on the quantum of imports into a country. In practice quotas are administered through a system of import licenses. Only license holders are given permission to import specified quantities of the imported good into the domestic market.

Other Nontariff Barriers and the New Protectionism

1. Voluntary Export Restraints

One of the most important of the nontariff trade barriers, or NTBs, 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 higher all-around trade restrictions, when these exports threaten an entire domestic industry. Voluntary export restraints have been negotiated since the 1950s by the United States, the European Union, and other industrial nations to curtail exports of textiles, steel, electronic products, automobiles, and other products from Japan, Korea, and other nations. These are the mature industries that faced sharp declines in employment in the industrial countries during the past three decades. Sometimes called "orderly marketing arrangements," these voluntary export restraints have allowed the United States and other industrial nations making use of them to save at least the appearance of continued support for the principle of free trade. The Uruguay Round required the phasing out of all VERs by the end of 1999 and the prohibition on the imposition of new VERs

When voluntary export restraints are successful, they have all the economic effects of (and therefore can be analyzed in exactly the same way as) equivalent import quotas, except that they are administered by the exporting country, and so the revenue effect or rents are captured by foreign exporters.

2. Technical, Administrative, and Other Regulations

International trade is also hampered by numerous technical, administrative, and other regulations. These include safety regulations for automobile and electrical equipment, health regulations for the hygienic production and packaging of imported food products, and labeling requirements showing origin and contents. Many of these regulations serve legitimate purposes, but some (such as the French ban on scotch advertisements and the British restriction on the showing of foreign films on British television) are only thinly veiled disguises for restricting imports.

Much attention has also been given in recent years to border taxes. These are rebates for internal indirect taxes given to exporters of a commodity and imposed (in addition to the tariff) on importers of a commodity. Examples of indirect taxes are excise and sales taxes in the United States and the value-added tax (VAT) in Europe. Since most government revenues are raised through direct taxes (such as income taxes) in the United States and through indirect taxes (such as the value-added tax) in Europe, United States exporters receive much lower rebates than European exporters (or no rebate at all) and are thus at a competitive disadvantage.

3. International Cartels

An international cartel is an organization of suppliers of a commodity located in different nations (or a group of governments) that agrees to restrict output and exports of the commodity with the aim of maximizing or increasing the total profits of the organization. Although domestic cartels are illegal in the United States and restricted in Europe, the power of international cartels cannot easily be countered because they do not fall under the jurisdiction of any one nation. The most notorious of present-day international cartels is OPEC (Organization of Petroleum Exporting Countries), which, by restricting production and exports, succeeded in quadrupling the price of crude oil between 1973 and 1974.

Another example is the International Air Transport Association, a cartel of major international airlines that met annually until 2007 to set international air fares and policies. An international cartel is more likely to be successful if there are only a few international suppliers of an essential commodity for which there are no close substitutes. OPEC fulfilled these requirements very well during the 1970s. When there are many international suppliers, however, it is more difficult to organize them into an effective cartel. Similarly, when good substitutes for the commodity are available, the attempt by an international cartel to restrict output and exports in order to increase prices and profits will only lead buyers to shift to substitute commodities. This explains the failure of, or inability to set up, international cartels in minerals other than petroleum and tin, and agricultural products other than sugar, coffee, cocoa, and rubber.

Since the power of a cartel lies in its ability to restrict output and exports, there is an incentive for any one supplier to remain outside the cartel or to "cheat" on it by unrestricted sales at slightly below the cartel price. This became painfully evident to OPEC during the 1980s when high petroleum prices greatly stimulated petroleum exploration and production by nonmembers (such as the United Kingdom, Norway, and Mexico). The resulting increase in supply, together with conservation measures that reduced the increase in the demand for petroleum products, led to sharply lower petroleum prices in the 1980s and most of the 1990s as compared to the 1970s. It also showed that, as predicted by economic theory, cartels are inherently unstable and often collapse or fail. If successful, however, a cartel could behave exactly as a monopolist (a centralized cartel) in maximizing its total profits.

4. Dumping

Trade barriers may also result from dumping. Dumping is the export of a commodity at below cost or at least the sale of a commodity at a lower price abroad than domestically. Dumping is classified as persistent, predatory, and sporadic. Persistent dumping, or international price discrimination, is the continuous tendency of a domestic monopolist to maximize total profits by selling the commodity at a higher price in the domestic market (which is insulated by transportation costs and trade barriers) than internationally (where it must meet the competition of foreign producers).

Predatory dumping is the temporary sale of a commodity at below cost or at a lower price abroad in order to drive foreign producers out of business, after which prices are raised to take advantage of the newly acquired monopoly power abroad. Sporadic dumping is the occasional sale of a commodity at below cost or at a lower price abroad than domestically in order to unload an unforeseen and temporary surplus of the commodity without having to reduce domestic prices.

Trade restrictions to counteract predatory dumping are justified and allowed to protect domestic industries from unfair competition from abroad. These restrictions usually take the form of antidumping duties to offset price differentials, or the threat to impose such duties. However, it is often difficult to determine the type of dumping, and domestic producers invariably demand protection against any form of dumping. By so doing, they discourage imports (the "harassment thesis") and increase their own production and profits (rents). In some cases of persistent and sporadic dumping, the benefit to consumers from low prices may actually exceed the possible production losses of domestic producers.

In 2011, the United States asked the WTO to strike down China's heavy antidumping duties on U.S. chicken products; the United States and the European Union set antidumping and anti-subsidy duties on Chinese coated paper (used in high-end catalogues and magazines); the United States asked the WTO to review Chinese measures restricting market access to U.S. suppliers of electronic payment services; and China itself imposed punitive duties of up to 22 percent on U.S. exports of SUVs to China.

5. Export Subsidies

Export subsidies are direct payments (or the granting of tax relief and subsidized loans) to the nation's exporters or potential exporters and/or low-interest loans to foreign buyers to stimulate the nation's exports. As such, export subsidies can be regarded as a form of dumping. Although export subsidies are illegal by international agreement, many nations provide them in disguised and not-so-disguised forms. For example, all major industrial nations give foreign buyers of the nation's exports low-interest loans to finance the purchase through agencies such as the U.S. Export–Import Bank. These low-interest credits finance about 2 percent of U.S. exports but a much larger percentage of Japan's, France's, and Germany's exports. Indeed, this is one of the most serious trade complaints that the United States has against other industrial countries today. The amount of the subsidy provided can be measured by the difference between the interest that would have been paid on a commercial loan and what in fact is paid at the subsidized rate.

5.6 Political Economy of Protectionism

1. Fallacious and Questionable Arguments for Protection

One fallacious argument is that trade restrictions are needed to protect domestic labor against cheap foreign labor. This argument is fallacious because even if domestic wages are higher than wages abroad, domestic labor costs can still be lower if the productivity of labor is sufficiently higher domestically than abroad. Even if this were not the case, mutually beneficial trade could still be based on comparative advantage, with the cheap-labor nation specializing in the production and exporting of labor-intensive commodities, and the expensive-labor nation specializing in the production and exporting of capital-intensive commodities (refer back to Section 2.4). Another fallacious argument for protection is the scientific tariff. This is the tariff rate that would make the price of imports equal to domestic prices and (so the argument goes) allow domestic producers to meet foreign competition. However, this would eliminate international price differences and trade in all commodities subject to such "scientific" tariffs. Two questionable arguments are that protection is needed (1) to reduce domestic unemployment and (2) to cure a deficit in the nation's balance of payments (i.e., the excess of the nation's expenditures abroad over its foreign earnings). Protection would reduce domestic unemployment and a balance-of-payments deficit by leading to the substitution of imports with domestic production. However, these are beggar-thy-neighbor arguments for protection because they come at the expense of other nations. Specifically, when protection is used to reduce domestic unemployment and the nation's balance-of-payments deficit, it causes greater unemployment and worsened balance of payments abroad. As a result, other nations are likely to retaliate, and all nations lose in the end.

2. The Infant-Industry and Other Qualified Arguments for Protection

One argument for protection that stands up to close economic scrutiny (but must nevertheless be qualified) is the infant-industry argument. It holds that a nation may have a potential comparative advantage in a commodity, but because of lack of know-how and the initial small level of output, the industry will not be set up or, if already started, cannot compete successfully with more established foreign firms. Temporary trade protection is then justified to establish and protect the domestic industry during its "infancy" until it can meet foreign competition, achieve economies of

scale, and reflect the nation's long-run comparative advantage. At that time, protection is to be removed. However, for this argument to be valid, the return in the grown-up industry must be sufficiently high also to offset the higher prices paid by domestic consumers of the commodity during the infancy period.

The infant-industry argument for protection is correct but requires several important qualifications which, together, take away most of its significance. First of all, it is clear that such an argument is more justified for developing nations (where capital markets may not function properly) than for industrial nations. Second, it may be difficult to identify which industry or potential industry qualifies for this treatment, and experience has shown that protection, once given, is difficult to remove. Third, and most important, what trade protection (say, in the form of an import tariff) can do, an equivalent production subsidy to the infant industry can do better. The reason is that a purely domestic distortion such as this should be overcome with a purely domestic policy (such as a direct production subsidy to the infant industry) rather than with a trade policy that also distorts relative prices and domestic consumption. A production subsidy is also a more direct form of aid and is easier to remove than an import tariff. One practical difficulty is that a subsidy requires revenues, rather than generating them as, for example, an import tariff does. But the principle remains.

The same general principle also holds for every other type of domestic distortion. For example, if an industry generates an external economy (i.e., a benefit to society at large, say, by training workers who then leave to work in other industries), there is likely to be underinvestment in the industry (because the industry does not receive the full benefit from its investments). One way to encourage the industry and confer greater external economies on society would be to restrict imports. This stimulates the industry, but it also increases the price of the product to domestic consumers. A better policy would be to provide a direct subsidy to the industry. This would stimulate the industry without the consumption distortion and loss to consumers that result from trade restrictions. Similarly, a direct tax would also be better than a tariff to discourage activities (such as automobile travel) that give rise to external diseconomies (pollution) because the tax does not distort relative prices and consumption.

Trade restrictions may be advocated to protect domestic industries important for national defense. But even in this case, direct production subsidies are generally better than tariff protection. Some tariffs can be regarded as "bargaining tariffs" that are to be used to induce other nations to agree to a mutual reduction in tariffs. Here, political scientists may be more qualified to judge how effective they are in achieving their intended purpose. The closest we come to a truly valid economic argument for protection is the optimum tariff discussed in Section 8.6. That is, if a nation is large enough to affect its terms of trade, the nation can exploit its market power and improve its terms of trade and welfare with an optimum tariff. However, other nations are likely to retaliate so that in the end of nations lose. Be that as it may, Broda, Limao, and Weinstein (2009) provide evidence that countries set higher tariffs on goods with lower export supply elasticites than on goods with higher supply elasticities.

Summary

The argument that tariffs are needed to protect domestic labor against cheap foreign labor and the "scientific tariff" is clearly fallacious. Two questionable beggar-thy-neighbor arguments are that protection is needed to reduce domestic unemployment and a deficit in the nation's balance of payments. A more valid argument for protection is the infant-industry argument. However, what trade protection can do, direct subsidies and taxes can do better in overcoming purely domestic distortions. The same is true for industries important for national defense. The closest we come to a valid economic argument for protection is the optimal tariff (which, however, invites retaliation). A quota is a direct quantitative restriction on imports or exports. An import quota has the same consumption and production effects as an (equivalent) import tariff. If the government auctions off import licenses to the highest bidder in a competitive market, the revenue effect also is the same. The adjustment to any shift in demand or supply occurs in the domestic price with an import quota and in the quantity of imports with a tariff. If import licenses are not auctioned off, they lead to monopoly profits and possible corruption. An import quota is in general more restrictive than an equivalent import tariff.

Keywords

- Dumping: It's when a country or company exports a product at a price that is lower in the foreign importing market than the price in the exporter's domestic market.
- Nontariff trade barriers (NTB's): Non-tariff barriers to trade are trade barriers that restrict imports or exports of goods or services through mechanisms other than the simple imposition of tariffs.
- Tariff: A tariff is a tax imposed by the government of a country or by a supranational union on imports or exports of goods.
- Specific Duty. 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
- Single Column Tariff: When a uniform rate of duty is imposed on all similar commodities irrespective of the country from which they are imported, it is called single-column tariff.

Review Questions:

1. What is an import quota? How is it mostly used today? What are the partial equilibrium effects of an import quota? How are they similar to and different from the effects of an equivalent import tariff.
2. What is meant by dumping? What are the different types of dumping? Why is dumping undertaken? What conditions are required to make dumping possible? Why does dumping usually lead to trade restrictions?
3. What do you mean by dumping? Explain the various types of dumping and the objectives of dumping.
4. What are tariffs? Explain the effects of a tariff on the terms of trade under general equilibrium analysis.
5. Explain the various types of tariffs. Show with the help of partial equilibrium diagram the price, protective, consumption, revenue and redistribution effects of a tariff.

SelfAssessment

1. The Protectionist Policy _____

A. Encourages international specialization,
B. Promotes global trade,
C. Prevents dumping
D. Reduces government's interference in trade

2. _____ is/ are controversies in trade policy

A. Labour standards,
B. IPR,
C. Environment,
D. All of these

3. Which one of the following is not a Non-Tariff Barrier (NTB)?

A. Voluntary export restriction,

B. Local content requirement
C. Administrative barrier
D. Tariff rate quotas

4. The reduction in domestic consumption due to imposition of quota results in

A. Increase in government revenue,
B. Increase in consumer's surplus
C. Loss of social welfare,
D. Increase in social welfare

5. Tariff is expressed as either a specific or an ad valorem rate, whichever is higher, is known as_____

A. General Tariff,
B. Mixed Tariff,
C. Compound Tariff,
D. Countervailing Tariff

6. Which one of the following is not an objective of commercial trade policy ?

A. To preserve foreign exchange reserves
B. To determine the rate of interest
C. To protect domestic industries from foreign competition
D. To maintain favourable balance of payment

7. Which one of the following NTBs prevents free movement of capital between countries? (a) Preferential government procurement

A. Exchange controls
B. Domestic subsidies
C. Local content requirement
D. None of these

8. Tariff rate quotas are

A. combination of tariffs and quotas
B. based on the value of the traded commodity only
C. based on the quantity or volume of the quantity only
D. low tariff rate on an initial quantity of import within the quota limit and very high tariff rate on imports above the initial amount

9. A system that makes it mandatory for domestic producers to use some proportion of domestic raw material is known as

A. Mixing quota
B. Global quota
C. Allocated quota
D. Import licensing

10. Which of the following is not a NTB?

A. Voluntary export restrictions
B. Local content requirement
C. Administrative barriers
D. Tariff rate quotas

11. Countervailing tariffs specifically aim to

A. give preference to imports from a customs union
B. retaliate to a tariff imposed by a trading partner
C. neutralize the effects of subsides given to the producers in the exporting countries
D. counter dumping by other countries

12. Bilateral agreements that restrict exports are called —

A. transit tariffs
B. voluntary export restraints
C. orderly marketing arrangements
D. export quotas

13. The Protectionist Policy results in efficient allocation of resources.

A. True
B. False

14. The import quotas are more effective than tariffs

A. True
B. False

15. The Protectionist Policy results in efficient allocation of resources.

A. True
B. False

Answers for Self Assessment

l.	C	2.	D	3.	D	4.	C	5.	B
6.	B	7.	B	8.	D	9.	A	10.	D
11.	C	12.	B	13.	B	14.	A	15.	B

Further Readings

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Web Links

http://www.citizen.org/trade

Unit 06: Rationale for Protection

CONTENTS

Objectives

- Understand the meaning and importance of effective rate of protection
- why countries adopt protectionist measures;
- Rationalise import substitution industrialisation strate gy;

Introduction

Economists have always acknowledged the benefits of international trade. Gains from trade arise due to specialization in production along lines of comparative advantage, leading to efficient allocation of scarce resources within nations. Gains also arise from exchange between countries, with each country exporting the goods, which it produces relatively most efficiently and importing goods at a cost lower than that of domestic production.

Therefore, trade can potentially be welfare improving for the world as a whole. Yet, in practice, trade barriers restricting the cross-border flow of goods and services, are erected by virtually every trading nation in the world.

What justifies the use of protectionist measures, given the many benefits of free trade? What are the various ways in which countries practice trade protection?

6.1 Infant Industry Argument

The famous Listian "infant industry" argument in favour of protection gives enough inducement to under-developed countries in accelerating their pace of industrialization. There are some industries which can be fruitfully developed in countries provided they are protected from foreign competition. in the present, their cost of production may be more due to tha lack of certain basic facilities, but in due course of time, after the initial difficulties are overcome, their products would cost less. The future fruits of industrialization would more than compensate for the sacrifice undergone in the form of higher prices in the present. Thus, the argument is that "infant" industries need protection from foreign competition till they attain adulthood. The period between infancy

and adulthood is generally characterized by a transition from the agricultural to the industrial stage. Myrdal has assigned "four" special reasons for industrial protection in under-developed countries —the difficulties of finding demand to match new supply, the existence of surplus labour, the large rewards of individual investments in creating external economies, and the lop-sided internal price structure disfavouring industry." These reasons are inter-related and provide an "infant economy" case for protection to an under-developed country.

Its Limitations.

But is has its limitations. First, according to Nurkse, infant industry protection alone is an ineffective instrument of promoting economic development because it overlooks the problem of capital supply. Second, infant industry protection should not be given before the industry has been actually set up. As Nurkse said, "infant creation must take precedence over infant protection." Third, tariff protection cannot create or increase the supply of capital required by the infant industry. it can, however, make a contribution on the demand side by increasing the inducement to invest in the protected industry. But this argument is confined only to creating demand for import substitutes. Fourth, it is also doubtful whether the stress on import substitutes will be enough to lead to a balanced growth of the economy. For, without an overall growth of the economy, investment in the import competing industries will be very small. Nurkse cautions that too much reliance on import restrictions should be avoided because the import substitutes produced at home are costly and tend to reduce real income.6 Fifth, given that the infant industry has been created, it must satisfy a number of conditions for the policy of protection to be successful. it is essential that the industry would not develop without the help of protection and that eventually it would be able to stand on its own legs when protection could be removed. Above all, it should acquire enough skill and experience to produce at low costs. it implies that though in the initial stages there may be losses, yet in the future the industry should be in a position to realize sufficient saving in costs. Sixth, it is also difficult to decide the amount and the period of protection to be given to the infant industry. Seventh, the right selection of infant industries is somewhat uncertain.

6.2 Concept of Effective Protection

The principal objective of a tariff is to discourage imports in order to encourage domestic production of the protected industry. Until recently, the protective effects of a tariff were measured in terms of the official nominal rate of tariff (ad valorem) on the imports of final products. It was believed that a higher nominal rate of tariff would bring a larger increase in the output of the protected industry. But the height of various duties imposed on imports by a country is not likely to give a true picture of the degree of protection afforded by the nominal tariff rate. For the nominal tariff rate does not take into consideration the height of the duty on imported intermediate products and raw materials which are used in the domestic import competing industries. The theory of effective rate of protection takes into account duties levied on such raw materials and intermediate products. According to Balassa, "Under the usual assumptions of international immobility of labour and capital, the effective rate of duty will indicate the degree of protection of value added in the manufacturing process". Thus the effective protection rate expresses the relationship between the tariff and the value added. It measures the actual rate of protection that the nominal tariff rate provides to the domestic import competing industry. Thus, the effective rate of protection is the tariff on value added. The effective rate of protection is defined as the percentage increase in the value added of an industry per unit of output as a result of the tariff relative to the free trade situation but with the same exchange rate.

The effective rate of protection is measured by Corden's modified formula.

$$e_t = \frac{t_n - at_t}{1 - a}$$

where et is the effective rate, tn the nominal tariff rate on the final product, a is the ratio of the value of the imported input to the value of the final product in the absence of tariff, and t i the tariff rate on imported inputs, (1–a) is the proportion of the final production accounted for by value added.

Assumptions

The theory of effective rate of protection is based on the following assumptions:

1. Primary factors are available in fixed quantities.

2. They are immobile between countries.

3. Full employment is maintained through appropriate fiscal and monetary policies.

4. The physical input-output coefficients are fixed.

5. All tariffs are applied in a non-discriminatory manner.

6. The elasticities of demand for all exports and the elasticities of supply for all imports are infinite.

7. All traded goods continue to be traded even after tariffs so that the domestic price of each importable good is given by the foreign price plus tariff.

8. All inputs are traded.

Explanation

Given these assumptions, the difference between nominal and effective rates of protection can be explained with an example. Suppose a domestically manufactured colour TV set costs Rs. 5000. Of this, the unit value added or the contribution of domestic primary factors is Rs. 2000 (40% of the final product) and of imported inputs is Rs. 3000 (60% of the final product). Under free trade, all inputs are imported as world prices and an imported TV also sells at Rs. 5000 in the domestic market.

Now the government decides to protect the domestic TV industry by importing a nominal (ad valorem) tariff of 10% on an imported TV. Its price in the domestic market, rises to Rs. 5500 (Rs. 5000 original price plus Rs. 500 on account of import duty). Thus the domestic TV industry enjoys a nominal protection of 10%.* Assuming that there is no duty on imported inputs of TV, the unit value added of the domestic TV industry increases by the full amount of Rs. 500. Thus the unit value added increases from Rs. 2000 to Rs. 2500 (Rs. 2000 + Rs. 500), an increase of 25%. In this case, the effective rate of protection is 25% which exceeds the nominal rate of 10%.

Introducing the same information in the formula

$$e_t = \frac{t_n - a t_i}{1 - a}$$

where 10% is the nominal tariff, 60% is the value of imported inputs in the final product and the tariff rate on imported inputs, ti = 0. It shows that ti = 0, et > tn.

Now suppose a 5% tariff is imposed on the imported TV inputs for the domestic industry, along with the nominal tariff of 10 per cent. This would cost the TV industry Rs. 150 per TV by raising the domestic prices of inputs from Rs. 3000 to Rs. 3150. This increases the unit value added of the industry by Rs. 350 (Rs. 500 from 10 per cent nominal tariff minus Rs. 150 from 5 per cent duty on imported inputs). The effective rate of protection is 17.5 per cent when the unit value added increases from Rs. 2000 to Rs. 2350.

It shows that if the nominal tariff on the final product is higher than on the imported inputs, the effective rate of protection is higher than both the nominal rates on the final goods and imported imputs : If tn>t1 , then et>tn>t1

If the nominal tariff on imported inputs equals the nominal tariff of 10 per cent on the final product, the effective rate of protection is also 10 per cent.

Thus if the nominal tariff rates on the final product and imported inputs are the same, the effective rate of protection equals the nominal rates:

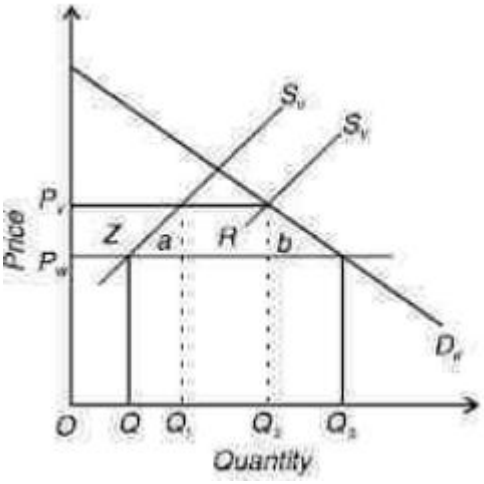
If tn = ti , then et = tn = ti.

Suppose the tariff on imported inputs is raised to 15 per cent. The unit value added increases by Rs. 50 (Rs. 500 from 10 per cent nominal tariff on the final product minus Rs. 450 from 15 per cent duty on imported inputs). The effective rate of protection is then 2.5 per cent with the increase in the unit value added from Rs. 2000 to Rs. 2050*.

It shows that if the nominal tariff on the imported inputs is greater that on the final product, the effective rate of protection is less than both the nominal rates: If tn< t., then et < t < t. Lastly, we take a case where the effective rate of protection may be negative. Suppose the nominal rate on the imported inputs is 20 per cent. This means that the unit value added declines by Rs. 100 (Rs. 500 Rs. 600). As a result, the effective rate of protection is minus 5 per cent.

This shows that if tn< at1, then et < 0

The effective rate of protection is illustrated diagrammatically in Fig. 1 where in order to simplify the diagram the demand curve is not shown because it is not affected by the imposition of a tariff. The horizontal axis measures the amount of labour and the quantity of TV. The vertical axis measures the wage of labour and the price of TV.



Assuming that there is only one primary factor, labour, its supply curve is shown as SL. S1 is the supply curve for the final product TV. OP is the constant world price under free trade at which the domestic production of TV and the amount of labour used equal OL. The unit value added is given by LB/LA. When a nominal tariff is imposed on the final product, TV, its domestic price rises from OP to OP2 and the domestic production of TV increases from OL to OQ2. With the imposition of an additional nominal tariff on the imported inputs of TV, the unit cost rises which is shown by the shifting of the supply curve S1 upwards to S2. Consequently, the production of TV falls from OQ2 to OQ1. The net increase in the production of TV is equal to LQ1. This is due to PP1—the difference between increase in the domestic price of TV equal to PP2 and the increase in the unit cost of production equal to P1P2, that is, PP1 = PP2P1P2. The effective rate of protection is obtained by dividing PP1 by the value added or the contribution of the primary factor, labour, in our example. Thus,

$$l_t = \frac{PP_1}{LB} = \frac{CD}{Q_1 D}$$

Its Limitations

The theory of effective rate of protection has a number of theoretical and practical limitations which are discussed below:

1. Restrictive Assumptions. The theory of effective rate is based on restrictive assumptions. If some of the assumptions like fixed input-output coefficients and availability of primary factors in fixed quantities are relaxed, the actual unit value added may fall below that given by the effective rate. Moreover, the assumption that the supply of imported inputs is infinite does not hold in large countries.

2. Partial Equilibrium Nature. The main theoretical limitation relates to its partial equilibrium nature. The theory assumes a fixed relationship between each input and the final product in calculating the effective rate. In fact, when relative factor price change, the values of inputs also change. It is, therefore, not possible to calculate the correct value of the effective rate.

3. Drawback in Index. The basic drawback in the effective rate of protection index is that it measures the effect of the effective protection upon particular industries without taking into account its indirect effects on other industries.

4. Difficulties of Measurement. Another difficulty arises in measuring the height of a tariff and comparing it with other country. If the method of weighted average is used no account can be taken of in the country's trade when the tariff is so high that imports of such goods totally stop. If the

method of unweighted average is used, duties on goods with little importance in the country's trade rank almost equal with the major imports.

5. Malallocation of Resources. Effective rates of protection on industries lead to resource allocation. However, they may bring about malallocation of resources. The prospect of receiving higher rewards may lead to the flow of primary factors into industries with the highest protective rates and away from industries with the least protective rates or negative protective rates, and from non-traded activities. Thus, resources are likely to be misallocated.

6. Ignores Non-traded Inputs. This concept assumes that all inputs are traded. This is unrealistic because some inputs are always non-traded. As a result, their prices enter into the value of total output and inputs. If the effect of effective protection on non-traded inputs is not taken into account, the rates of effective protection will be overestimated.

Its Importance

The importance of the concept of effective rate of protection lies in the following.

1. For Producers. The effective tariff is important for producers in their production decisions when a tariff is imposed on imported inputs and raw materials. That is why, producers care about the effective protection they receive for their industries rather than about the nominal protection.

2. Indicator of Factor Income. The theory of effective protection takes into account the value added created by primary factors of production. Effective rates are the indicators of income distribution in the short because value added is what these factors receive.

3. Degree of Protection. The effective rate of protection is based on the concept of value added. Value added being the difference between the value of outputs and inputs, the effective rate of protection is important in measuring the degree of protection not only on output but also on inputs.

4. Volume of Trade. When the nominal tariff rate is reduced on imported raw materials and inputs for use in domestic industries, it is intended to expand the volume of trade. But it leads to a rise in the effective tariff rate of the industry using them. This may adversely affect the volume of trade of the protected industry.

5. Tariff Structure. The concept of effective rate of protection helps in understanding the nature of tariff structure of a country. Usually, the nominal tariff rates are low for raw materials and high for finished goods. Keeping the interest of producers, the effective tariff on raw materials is kept low.

6. Infant Industries. To expand and protect infant industries, the concept of effective tariff suggests that the country should reduce tariff rates on imported raw materials and intermediate products instead of imposing high nominal tariff rates.

7. Resource Allocation. The importance of the effective rate of protection also lies in shedding light on "the direction of the resource allocation effects of a protection structure". The effect of any tariff structure is to move resources from industries with low effective rates of protection to industries with high rates because what resources earn in an industry is the value added. Therefore, to find out the effects of a country's tariff structure on its resource allocation among the various industries, economists calculate the effective protective rates for each industry.

8. For Government. Government officials who bargain with foreign countries on tariffs use effective protective rate calculations to discover the effects of proposed tariff rates on the various industries.

Conclusion

The theory of effective rate of protection has been empirically studied by Balassa, Johnson and a few other economists, Balassa's study shows that the effective rates in some of the industrial countries are substantially larger than nominal rates. Thus, industrial countries depend more on tariffs for protection than on other protective devices. Johnson's* study reveals that the gap between effective and nominal tariff rates is particularly large in the case of products having special interest for developing countries. Raw materials from developing countries are allowed duty free or at very low rates, semi-manufactured goods at higher rates, and fully manufactured goods at extremely high tariff rates. The latter products enjoy high effective rates of protection in industrial countries. This tendency naturally discourages the expansion of processing and manufacturing industries in developing countries.

The theory of effective rate of protection shows that the reduction on nominal tariff rate of an equal percentage brings about different degrees of changes in the effective rates of protection. It is, therefore, not advisable for developing countries to argue and demand across-the-board tariff reductions on all products from industrial countries. If the former insists on reductions in tariff on their primary products, the effective rate of protection will increase against their manufactures. In such a situation, they will be at a disadvantage vis-a-vis developed countries because exports of manufactures are more important to them for long-run development.

6.3 Political economy of Non-Trade Barriers (NTB)

Non Tariff Barriers (NTBs), unlike tariffs, may impose direct restrictions on the inflow of imported goods. For instance, conventional NTBs like import quotas directly restrict the quantum of imports into the domestic country. While other NTBs discussed below restrict the flow of traded goods in a more indirect manner.

From the following discussion you will see how countries are resorting to newer, more indirect forms of NTBs, most often in order to circumvent the directives of multilateral trade agreements like the WTO.

1. Quotas

Import quotas impose direct restrictions on the quantum of imports into a country. In practice quotas are administered through a system of import licenses. Only license holders are given permission to import specified quantities of the imported good into the domestic market. You will see that with a quota the domestic price of.an imported good will always be higher than its world market price. License holders buy the imported goods at world market prices and then sell at higher prices in the domestic market. In what follows we will examine the impact of an import quota under different market structures in the domestic economy. We first discuss the case of perfectly competitive markets and then that of monopoly.

(i) Import Quotas with Perfect Competition

Figure 2 demonstrates the effect of an import quota when markets are perfectly competitive. D and S represent the demand and supply curves for the good before quota imposition. Under free trade, the world price Pw prevails and total domestic production is Q1, demand is Q2, and Q, Q2 amount is imported. Now suppose an import quota is imposed, which restricts imports to Q, Q3 (where, Q1 Q3 < Q1 42). Immediately with quota imposition, at the world price Pw, domestic demand falls short of total domestic production plus imports. This excess domestic demand drives up prices in the domestic market, till the market clears

The quota effectively shifts the domestic supply curve to S', by the amount of the quota. The economy moves to the new equilibrium E', where price has risen from Pw to P', domestic production has increased from Q, to Q,, while domestic demand has fallen from Q2 to Q5. At E', imports, restricted by the quota, are equal to the amount Q4 Q5 (note that Q,QI = Q,Q, = import quota).

A tariff rate equal to P'- Pw, is the tariff equivalent of the quota. It would have restricted imports to the same level as the quota and had the same effect on domestic prices. However, it may not always be feasible to implement the tariff equivalent of a quota, as the rate may be too high to be acceptable.

You should see that as in case of a tariff, a quota involves a loss in consumer surplus equal to the area (a + b + c + d). This is offset by a rise in producer surplus equal to the area a. But an important difference between tariffs and quotas arises from the fact that with a quota the government does not earn revenues as in case of a tariff. The area c therefore does not accrue to the government, rather it represents the quota rent, which may be captured by the import-license holders, who buy at the world price Pw and sell at a higher price P', making a profit of (P' - Pw) per unit of imports. If c accrues to the license holders and is counted as part of social gain, then the social loss from the quota is equal to the area (b+ d), same as in case of a tariff.

Often foreign exporters have the right to sell directly in the domestic market. In that case the quota rent c would accrue to foreigners and it would be a social loss from the domestic country's point of view.

Another disturbing possibility, and one that is often observed in practice, is that the quota rent may not accrue to license holders. Rather it may be dissipated in rent-seeking activities, like paying bribes to acquire import licenses and so on. In that case, the area c would be a social loss and the total cost imposed by the quota would equal the area (b+c+d), which is more than in case of an equivalent tariff. In fact quota rents have been estimated to be as high as 24% of GNP in developing countries like Kenya. Governments in developing countries have the option to auction import licenses. A competitive bidding process would drive the price of licenses up to (P' - Pw) per unit of imports and the government would earn revenue equal to the area c. If this process worked smoothly, the effects of a tariff and quota would be equivalent. However, developing country experiences demonstrate that in reality the auction process may also run into difficulties. The auctions may not be competitive and collusion among bidders might subvert the entire process.

(ii) Import Quotas with Monopoly

When there is a domestic monopoly, an import quota leads to greater loss in social welfare, as compared to perfect competition. In fact we will see that in the presence of monopoly, an import tariff should be preferred to a quota from the efficiency and social welfare point of view.

When there is a tariff t, imports are freely available at a price (Pw + t). So, the monopolist cannot charge a higher price than this level, for if he did domestic consumers would go for imports and his sales would be reduced to zero. Thus, a tariff effectively imposes a price ceiling. However, with a quota, the monopolist can charge a price higher than the import price. In this case he will not lose his entire market share, since imports cannot exceed the limit set by the quota. Thus, a quota preserves the monopolist's price setting power to a large extent.

Under free trade D. monopolist and the domestic price of the good is the world imports to the amount Q1, Q2. With the quota the demand curve facing the monopolist shifts inwards by the amount of the quota, at all prices above Pw, because imports have reduced the monopolist's market by Q1, Q2. Fig- 3 Post quota imposition, the relevant marginal revenue curve facing the monopolist is NIR, corresponding to the new demand curve.

In this situation the monopolist will maximise profits by producing an output of Qm, at which marginal revenue equals marginal cost. This output will be sold at the price Pm, read off the demand curve. Now (Pm - Pw) is the tariff equivalent of the quota or the quota rent earned by the import license holders.

Note that with perfect competition in the domestic market, the MC curve would have been the supply curve, and the market price would have been P' and output, Q'. Clearly with a monopoly the outcome is more inefficient, compared to perfect competition. The monopoly output is lower (Q m < Q') and price is higher (Pm >P'), leading to greater welfare losses.

From this analysis it should be clear to you why tariffs are preferred to quotas, especially when the domestic producer wields monopoly power. In fact GATT negotiations have tried to phase out quantitative restrictions and replace quotas with tariffs.

2. Other Non-Tariff Barriers

The following are some of the other important NTBs commonly used by countries following protectionist policies:

1. Exchange controls: Exchange controls are restrictions imposed by countries' Central Banks that directly limit domestic residents' ability to acquire foreign currency in exchange for domestic currency. For instance, one method of imposing exchange controls, involved acquiring the Central Bank's permission to hold foreign currency bank accounts.
2. Import deposit schemes: These are rules imposed by countries' Central Policy Banks, which tend to restrict imports by making them more expensive. For instance, under the rules importers are required to deposit a certain amount (usually in proportion to the value of the imported good) with the Central Bank, which effectively raises the cost of importing.
3. Health and safety standards: Often importing countries insist that imported goods meet certain minimum health, safety and environmental standards. Meeting the

standards would obviously raise costs for the exporting country. Presumably the underlying motive for standard imposition is to safeguard the health and general welfare of domestic residents of the importing nation. However, in practice these standards are often used by developed nations to restrict imports originating from low-wagedeveloping countries. For instance, faced with cheap manufactures imports from low-wage countries like Malaysia, Indonesia and Thailand, developed countries are now insisting that these counties comply with certain minimum labour and environmental standards, which would raise their costs of production.

4. Customs valuation procedure: Under this procedure the importing country would artificially enhance the value of the imported goods under some pretext, which would raise the duty on it, under a system of ad valorem tariffs. For instance, the example of the US valuing certain chemical imports at the 'American selling price' (rather than at the 'invoice' price or the 'world market' price) in the post-war period. However, this practice was discontinued since the Tokyo Round of negotiations.
5. Local content requirements: This is a practice followed especially in developing countries, which requires that some stipulated portion of a final good be produced domestically. Or it may be stated that a certain specified fraction of the final goods price must represent domestic value added. The underlying logic is to promote local production of certain intermediate goods. From the importing firms viewpoint, there is no restriction on imports. For they can import more, as long as they also buy more from local firms. From the domestic intermediate industries' point of view a local content requirement provides trade protection in the same way as an import quota.

6.4 Regionalism vs. Multilateralism

The growing popularity of regional trading arrangements (RTAs) has ignited concerns that these agreements may undermine the global trading system by discriminating against imports and investments from non-members. Critics of regional arrangements argue that this practice would violate a core principle of the World Trade Organization; that all imports from member states should face the same barriers to trade. Furthermore, eliminating tariffs on imported goods from some countries but not others can be counter -productive. If imports from high-cost producers inside the agreement replace goods from low-cost producers outside the agreement, the importing country will not only lose tariff revenue but will wind up with imports that cost nearly as much as before.

Supporters of RTAs maintain that these agreements have enabled countries to liberalize trade and investment barriers to a far greater degree than multilateral trade negotiations allow. Proponents also argue that regional agreements have gone beyond trade liberalization, taking important steps toward harmonizing regulations, adopting minimum standards For regulations, and Recognising other countries' standards and practices - trends that enhance market access. Some empirical evidence supports each view. Regional arrangements seem to have generated welfare gains for participants, with small, possibly negative spillovers onto the rest of the world.

Should future research suggest that RTAs are having adverse effects on the world trading system, the arrangements will have to be aligned with the non-discrimination principle of the global trading system. One response is to pursue further multilateral trade liberalization to limit the margin of preference regional agreements create. Policy-makers who believe that their country is suffering because of the rise of RTAs elsewhere thus have a further incentive to support multilateral trade liberalization.

A second response is to alter the WTO's agreement on regional trading arrangements to commit members to phase out any preferential market access within a certain time frame. Such a provision ensures that preferential market access is only a temporary feature of any regional initiative. To make this approach more attractive to members of a regional initiative, they could be offered credit for the reduction in trade barriers, which could be used in future multilateral trade negotiations.

A third response is to negotiate a "model accession clause" for the principal types of RTA's, Such clauses contain a set of conditions non-members must meet in order to become members. Meeting the conditions automatically triggers a negotiation for accession to the regional agreement. These clauses could also ensure that the trade barriers non-members face do not rise when an RTA is established or when new members are admitted.

6.5 Regional Integration among Developing countries-SAARC

Regional integration means the development of piecemeal non-political cooperative organisations which are established most effectively at the regional level and in the economic, technical, scientific, social and cultural spheres. These sectors are functional sectors in which states can develop mutually cooperative institutional relations without jeopardizing their national sovereignties. Mutual advantages the basis of such regional functional organisations serves as a useful way of securing the desired goals of development in these sectors. The realization towards such thinking has led to the emergence of a definite trend towards regional integration. In the modern period of history, with the conceptualization and practical establishment of sovereign states that comprise the family of nations, the trend towards integration, cooperation and regularization of international relations has taken on new forms and greater urgency.

Regional integration can also be described as inter-state integration. It is an instrumentality of the modern multi-state system. In its most elementary form, the term denotes both the act of cooperation among the states for enhancing common purpose, institutions and the methods they employ to achieve this objective. In other words, regional integration means the process towards an end product of integration of nation-states. It is the process by which a group of nation states come forward to establish institutionalised cooperation among themselves. The organized institutions or mechanisms that these nation-states establish for conducting their relations also form a part of regional integration. Such institutional mechanisms afford a vehicle for arriving at collaborative determination of policies and actions. Each integrated institution amalgamates the individual members into a whole, their inter-relations and influences their international behaviour. By acknowledging and respecting the appropriate place of each unit of the whole system, the integrated institution not only maintains stability but also secures cooperation for development.

The South Asian Association for Regional Cooperation (SAARC)

While ASEAN prospered in the South Eastern region of the Asian continent, another regional forum emerged in South Asia almost on the pattern of ASEAN and this regional association of South Asian countries is known as SAARC. The seven countries of South Asia namely India, Pakistan, Bangladesh, Sri Lanka, Nepal, Bhutan and Maldives joined hands to form a regional forum modelled on the lines of ASEAN to serve as an agency or institution for promoting economic and cultural cooperation among the members.

Its aims are :(i) the development of social, economic, cultural and technical cooperation among the member countries (ii) it declared that the guiding principles of will be to respect the principles of sovereign equality, independence, integrity and noninterference in each others affairs (iii) it was also stated that decisions at all levels shall be taken on the basis of consensus and that bilateral and contentious issues shall be excluded from the deliberations (iv) it was further accepted that the regional cooperation shall be complementary and supplementary to the bilateral and multilateral cooperation among the member states.

Regarding the organsational set up, the Charter stated that the heads of the states or governments shall meet annually and a Council of Ministers consisting of foreign ministers of the member states shall be constituted to formulate policies, to review the progress of the cooperation, to establish additional mechanisms and to decide on matters of general interest. This Council of Ministers shall be assisted by the Committee of the Foreign Secretaries of the member states. It also laid down the setting up of Technical Committee, comprising of the representatives of member states for implementing, coordinating and monitoring of Programmes and Action Committee for the implementation of projects involving more than two states. It was also affirmed that a Secretariat for the Association shall be established at an appropriate time which is presently functioning in Kathmandu in Nepal.

6.6 Import Substitution and Industrialization

In order to understand the rationale for Import Substitution Industrialization strategy, it is important to know why this kind of industrialization strategy is needed? What were the appropriate tools used for this strategy. But let us first learn why developing countries needed industrialization at first place.

Economists trying to devise a strategy for development at the end of the Second World War took account of the dependence of almost all developing countries on exports of primary products. Prebisch, among others, argued that expansion of primary production and exports would not lead to development. Due to low income and price elasticities of demand for such products, expansion of export volumes would not result in a corresponding increase in export earnings as prices will decline. Irnport payments, on the other hand, would increase with rising imports of capital goods as investments increased in the attempt to raise growth, because these countries did not have a significant production of capital goods. So, countries would face worsening terms of trade and balance of payments (BOP) crisis when they tried to accelerate their growth. The BOP deficits would force a cutback in investment plans id slow down growth. Since development could not be based on growth of primary output it was necessary to base development on industrialization.

A further argument as given by Rosenstein-Rodan in favour of industrialization in over-populated countries was that land pressure in these countries bad resulted in very low labour productivity and prospects for agricultural growth were very limited. industrialization was the only way to absorb the surplus labour force in agriculture and grow.

Why Import Substituting Industrialization?

Industrialization based on producing import substitutes rather than producing for exports was recommended. Such import substituting industrialization would tackle many of the constraints to faster growth. Nurkse had argued that one of the factors limiting investment in developing countries was lack of demand. But if imports were restricted, it would create demand for previously imported goods, so entrepreneurs could be depended upon to invest in import substituting industries. Also, economists were in general pessimistic about prospects of the world economy based on the experience of the inter-war years. They expected the world economy to grow very slowly; there was supposed to be a bias towards stagnation. Economists like Nurkse also expected the continuation of the pre-Second World War pattern of countries adopting extensive restricts on trade, particularly, on exports of labour-intensive goods from developing countries. Furthermore, developing countries were expected to need? t me to develop the skilled and productive labour force necessary to be competitive in the world market. For all these reasons, many economists recommend the adoption of an IS1 strategy for development.

Appropriate Tools for Implementing an IS1 Strategy

Important policy issues in implementing the IS1 strategy were what instruments to use and who was to be responsible for investment?

Countries tended to adopt quantitative restrictions (QRs) to curtail imports. This was because QRs were believed to provide more certain signals to prospective investors in the protected industries. The impact of tariff protection could be uncertain as prices might fluctuate. (You should revise the discussion of tariffs and quotas from Unit 4 to help you understand this point.)

Furthermore, most countries adopted an import substitution strategy in consumer goods industries, with the private sector playing the leading role in undertaking investments. It was believed that stoppage of consumer goods imports would lead the transnational corporations (TNCs) who were supplying the imported goods from abroad to undertake the production of similar goods in the developing country itself, thereby solving the problems of adequacy of investible funds, technology transfer and of shortages of entrepreneurship.

A few countries, mainly India, also undertook import substitution in capital goods industries under the aegis of the state. such state sponsored industrialization raised more complex issues of generating sufficient investible funds as well as getting the technology to establish the plants to produce the capital goods.

Summary

There is no denying the fact that the virtues of regional integration are manifold. Through participation in regional integration organisations, the nation-states can secure increased economic growth rates. The rapid economic growth registered by the Western European states offers a matchless example. Regional integration helps nation-states in invigorating in international relations besides being helpful in resolving conflicts among themselves. Socio-economic and cultural integration can always lead to a gradual political integration which, in turn, can in lead to the emergence of a World Federation. Besides, in this age of ever-increasing interdependence, regional integration can help the states to achieve their desired objectives and goals without losing their identities or compromising their prestige. Regional integration, quite successful as it is in different parts of the world, can certainly lead to peace, prosperity, development and stability in international relations thereby reducing chances of war among different states.

The integration of Western Europe bears out the fact that regional integration can lead to all round development and prosperity. It must be accepted as a healthy trend. It offers a meeting ground for the supporters of both nationalism and internationalism. It can secure the benefits of progress through mutual cooperation, collaboration and accommodation in international relations. However, several negative and hindering trends like Cold War, security alliances, militarism and several vital international problems like the issue of NIEO the increasing gap between the rich and the poor nations, the failure to achieve disarmament and arms control, continued love for narrowly conceived goals of nationalism etc., are bound to hinder the strengthening of the trend. towards regional integration. Nevertheless, the process of regional economic integration helps in enhancing and building healthy international relations without loss of sovereignty of states if that is not in narrower sense.

Keywords

- Quota: A quantitative restriction on the quantum of imports permissible, that is often administered via the distribution of import licenses.
- Import Substituting Industrialization (ISI): It is a strategy for economic development based oh replacing imports with domestic production.
- Effective Rate of Protection: the effective rate of protection (ERP) is a measure of the total effect of the entire tariff structure on the value added per unit of output in each industry, when both intermediate and final goods are imported.
- Regionalism: Regionalism is a political ideology that seeks to increase the political power, influence and self-determination of the people of one or more subnational regions.
- Multilateralism: While unilateralism is when one country acts alone and bilateralism is when two countries work in partnership, multilateralism is usually defined as collaboration between several countries in pursuit of a common goal, where other parties such as civil society or the private sector may also be involved.

Review Questions

1. What strategy was adopted by developing countries for industrialization? Discuss
2. Critically examine different models across the world in developing regional integration
3. What is the relation between the infant industry and the market failure arguments for protection?
4. Do you think developing countries should use protectionist measures to attract inflows of foreign direct investment?
5. What do you mean by effective rate of protection? Explain with examples how is it different from nominal rate of protection.

6. Distinguish between nominal and effective rate of protection. Explain the limitations of the effective rate of protection. What are its implications for developing countries?

Self Assessment

1. An import quota is a

A. legal limit on the quantity of a good that can be imported per year.
B. legal requirement that a specified percentage of a final good's value must be produced domestically.
C. legal requirements that exports to a specific country must exceed a specific value before the country's product may be imported.
D. None of the above

2. The primary difference between an import tariff and an import quota is that

A. tariffs cause prices to rise, but quotas do not.
B. quotas cause prices to rise, but tariffs do not.
C. tariff revenues go to government, but quotas benefit those with the right to sell foreign goods domestically.
D. None of the above

3. A tariff that is levied as a fixed charge per unit of imports is known as a

A. Specific tariff
B. Ad- valorem tariff
C. Import tariff
D. Export tariff.

4. A government's restriction on the quantity of imports of a country is known as

A. Export quota
B. Import quota
C. Import rent.
D. Embargo.

5. Specific tariffs are collected as

A. Fixed amount of money per unit traded
B. A percentage of the price of the product
C. A percentage on the quantity of imports
D. All of the above.

6. Most tariffs have

A. only revenue effects
B. only protective effects
C. both protective and revenue effects
D. neither protective or revenue effects

7. The effective rate of protection

A. distinguishes between tariffs that are effective and those that are ineffective
B. is the minimum level at which a tariff becomes effective in limiting imports
C. shows how effective a tariff is in raising revenue for the government
D. shows the increase in value added for domestic production that a particular tariff structure makes possible, in percentage terms

8. Quota is very-----

A. effective
B. ineffective
C. sometimes effective
D. none of the above.

9. An Infant Industry argument promotes the idea of protection from foreign competition.

A. True
B. False

10. The Protectionist Policy results in efficient allocation of resources.

A. False
B. True

11. SAARC was formed in

A. 1995,
B. 1985,
C. 1980,
D. 1990

12. Regional trade agreement is treaty signed by countries to____

A. Encourage free movement of goods and services across borders
B. Encourage free movement of goods and services within borders
C. Discourage free movement of goods and services across borders
D. None of the above

13. Which one of the following is not a Non-Tariff Barrier (NTB)?

A. Voluntary export restriction,
B. Local content requirement
C. Administrative barrier
D. Tariff rate quotas

14. The reduction in domestic consumption due to imposition of quota results in

A. Increase in government revenue,

B. Increase in consumer's surplus
C. Loss of social welfare,
D. Increase in social welfare

15. Tariff is expressed as either a specific or an ad valorem rate, whichever is higher, is known as_____

A. General Tariff,
B. Mixed Tariff,
C. Compound Tariff,
D. Countervailing Tariff

Answers for Self Assessment

l.	A	2.	C	3.	A	4.	B	5.	A
6.	C	7.	D	8.	A	9.	A	10.	A
11.	B	12.	A	13.	D	14.	C	15.	B

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Web Links

http://www.federalreserve.gov

http://www.gpoaccess.gov/eop/2011/pdf/ERP-2011.pdf

http://en.wikipedia.org/wiki/Gravity_model_of_trade

Unit 07: The Political Economy of Non-Tariff Barriers and their Implications

CONTENTS

Objectives

After reading this Unit students will be able to:

- To protect domestic industries or certain other sectors of the economy from foreign competition;
- Describe an optimum tariff and Effective tariff

Introduction

We have seen in Part One that free trade maximizes world output and benefits all nations. However, practically all nations impose some restrictions on the free flow of international trade. Since these restrictions and regulations deal with the nation's trade or commerce, they are generally known as trade or commercial policies. While trade restrictions are invariably rationalized in terms of national welfare, in reality they are usually advocated by those special groups in the nation that stand to benefit from such restrictions.

The most important type of trade restriction has historically been the tariff. A tariff is a tax or duty levied on the traded commodity as it crosses a national boundary. In this chapter we deal with tariffs, and in the next chapter we discuss other trade restrictions. An import tariff is a duty on the imported commodity, while an export tariff is a duty on the exported commodity. Import tariffs are more important than export tariffs, and most of our discussion will deal with import tariffs. Export tariffs are prohibited by the U.S. Constitution but are often applied by developing countries on their traditional exports (such as Ghana on its cocoa and Brazil on its coffee) to get better prices and raise revenues. Developing nations rely heavily on export tariffs to raise revenues because of their ease of collection. Conversely, industrial countries invariably impose tariffs or other trade restrictions to protect some (usually labor-intensive) industry, while using mostly income taxes to raise revenues.

Tariffs can be ad valorem, specific, or compound. The ad valorem tariff is expressed as a fixed percentage of the value of the traded commodity. The specific tariff is expressed as a fixed sum per physical unit of the traded commodity. Finally, a compound tariff is a combination of an ad valorem and a specific tariff. For example, a 10 percent ad valorem tariff on bicycles would result in the payment to customs officials of the sum of $10 on each $100 imported bicycle and the sum of

$20 on each $200 imported bicycle. On the other hand, a specific tariff of $10 on imported bicycles means that customs officials collect the fixed sum of $10 on each imported bicycle regardless of its price. Finally, a compound duty of 5 percent ad valorem and a specific duty of $10 on imported bicycles would result in the collection by customs officials of the sum of $15 on each $100 bicycle and $20 on each $200 imported bicycle. The United States uses the ad valorem and the specific tariff with about equal frequency, whereas European countries rely mainly on the ad valorem tariff. Most of our presentation in this chapter will be in terms of ad valorem import tariffs.

7.1 Tariff Barriers

Tariffs in international trade refer to the duties or taxes imposed on internationally traded products when they cross the national borders.

Tariff is a very important instrument of trade protection. However, mostly because of the efforts of the GATT/WTO aimed at trade liberalisation, in the industrial countries, there has been a substantial reduction in the tariffs on manufactured goods over the last five decades. Although the tariff rates are still fairly high in the developing countries, many of them have also been progressively reducing the tariff levels.

Tariffs are generally regarded as less restrictive than other methods of protection like quantitative restrictions. Therefore, organisations like the WTO generally prefer tariff to non-tariff barriers.

Classification of Tariffs

There are different ways of classifying tariffs.

On the basis of the origin and destination of the goods crossing the national boundary, tariffs may be classified into the following three categories:

Export Duties An export duty is a tax imposed on a commodity originating from the duty-levying country destined for some other country.

Import Duties An import duty is a tax imposed on a commodity originating abroad and destined for the duty-levying country.

Transit Duties A transit duty is a tax imposed on a commodity crossing the national frontier originating from and destined for other countries.

There is a three-fold classification on the basis for quantification of the tariff:

Specific Duties A specific duty is a flat sum per physical unit of the commodity imported or exported. Thus, a specific import duty is a fixed amount of duty levied upon each unit of the commodity imported.

Ad-Valorem Duties Ad-Valorem duties are levied as a fixed percentage of the value of the commodity imported/exported. Thus, while the specific duty is based on the quantum of the commodity imported/exported, the ad-valorem duty is based on the value of the commodity imported/exported.

Compound Duties When a commodity is subject to both specific and ad-valorem duties, the tariff is generally referred to as compound duty.

With respect to its application between different countries, the tariff system may be classified into the following three types:

Single-Column Tariff The single-column, also known as uni-linear tariff system, provides a uniform rate of duty for all like commodities without making any discrimination between countries.

Double-Column Tariff: Under the double-column tariff system there are two rates of duty on some or all commodities. Thus, the double-column tariff discriminates between countries.

The double-column tariff system may be broadly divided into

(a) general and conventional tariff and

(b) maximum and minimum tariff.

The general and conventional tariff system consists of two schedules of tariffsthe general and the conventional. The general schedule is fixed by the legislature at the start, while the conventional

schedule results from the conclusion of commercial treaties with other countries. The maximum and minimum system consists of two autonomously determined schedules of tariffthe maximum and the minimum. The minimum schedule applies to those countries who have obtained the concession as a result of the treaty or through MFN (most favoured nation) pledge and the maximum schedule applies to all other countries.

Triple-Column Tariff The triple-column tariff system consists of three autonomously determined tariff schedules-the general, the intermediate and the preferential. The general and intermediate rates are similar to the maximum and minimum rates mentioned above under the double-column tariff system. The preferential rate was generally applied in the case of trade between the mother country and its colonies.

With reference to the purpose they serve, tariffs may be classified into the following categories:

Revenue Tariff Sometimes the main intention of the government in imposing tariff may be to obtain revenue. When raising revenue is the primary motive, the rates of duty are generally low lest imports be highly discouraged, thus defeating the objective of mobilizing revenue for the government. Revenue tariffs tend to fall on articles of mass consumption.

Protective Tariff Protective tariff is intended primarily to accord protection to domestic industries from foreign competition. Naturally, the rates of duty tend to be very high in this case because, generally, only high rates of duty curtail imports to a significant extent.

Countervailing and Anti-Dumping Duties Countervailing duties may be imposed on certain imports when they have been subsidized by foreign governments. Anti-dumping duties are applied to imports which are being dumped on the domestic market at a price either below their cost of production or substantially lower than their domestic prices. Countervailing and anti-dumping duties are, generally, penalty duties as an addition to the regular rates.

7.2 Impact of Tariff

Tariff affects an economy in different ways. An import duty generally has the following effects:

Protective Effect An import duty is likely to increase the price of the imported goods. This increase in the price of imports is likely to reduce imports and increase the demand for domestic goods. Import duties may also enable the domestic industries to absorb higher production costs. Thus, as a result of the protection accorded by the tariff, the domestic industries are able to expand their output.

Consumption Effect The increase in prices resulting from the import duty usually reduces the consumption capacity of the people.

Redistribution Effect If the import duty causes an increase in the price of domestically produced goods, it amounts to redistribution of income between the consumers and producers in favour of the producers. Further, a part of the consumer income is transferred to the exchequer by means of the tariff.

Revenue Effect As mentioned above, a tariff means increased revenue for the government (unless, of course, the rate of tariff is so prohibitive that it completely stops the import of the commodity subject to the tariff).

Income and Employment Effect The tariff may cause a switch over from spending on foreign goods to spending on domestic goods. This higher spending within the country may cause an expansion of domestic income and employment.

Competitive Effect The competitive effect of the tariff is, in fact, an anti-competitive effect in the sense that protection of domestic industries from foreign competition may enable the domestic industries to obtain monopoly power with all its associated evils.

Terms of Trade Effect In a bid to maintain the previous level of imports to tariff imposing country, if the exporter reduces the prices, the tariff imposing country is able to get their imports at a cheaper price. This will, ceteris paribus, improve the terms of trade of the country imposing the tariff.

Balance of Payments Effect Tariffs, by reducing the volume of imports, may help the country to improve its Balance of Payments position.

Diagrammatic Illustration of Effects of Tariff

Figure 1 illustrates the consumption, protective revenue and redistributive effects of tariff. DD1 is the domestic demand curve and SS1 the domestic supply curve. In the absence of foreign trade the equilibrium price is P2, domestic demand and supply being Q4. For simplicity, it is assumed that the foreign supply is perfectly elastic at price P. Therefore, under free trade the supply position is represented by PF. Under free trade, at price P the total domestic demand is Q; Q2 of which is met by domestic supply and Q2 Q is imported. Now, assume that the government imposes a tariff of PP1 per unit of import so that the price rises from P to P1. Consequent upon the increase in price, the total domestic demand falls to Q1. The increase in price enables the domestic supply to increase from Q2 to Q3. The remaining part of the domestic demand (Q3 Q1) is met by import. Under free trade, the total consumerssurplus is DPF but with the tariff it is reduced to DP1 F1, thus the total loss of consumers surplus being P1 PFF1. This loss to consumers is absorbed in a number of ways.

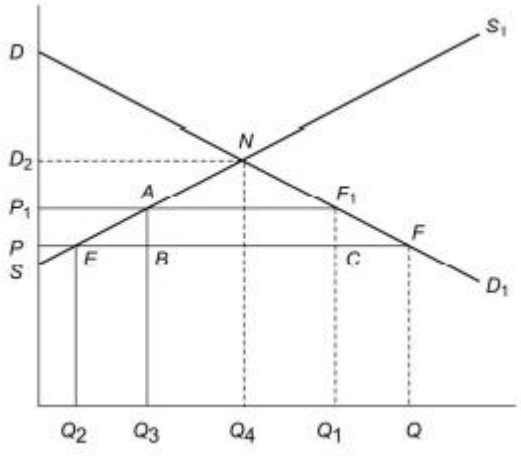


Fig. 1: Effects of Tariff

When the tariff per unit is PP1, the total imports is Q3 Q1. Therefore, government gets tariff revenue equivalent to ABCF1 (PP1 *Q3 Q1). This is the revenue effect of the tariff.

At the higher tariff imposed price the producers get an additional return of PP1 on every unit. As the supply curve also represents the cost curve, the total gain to the producers due to the imposition of the tariff is PP1 AE. This additional economic rent to the producers represents a transfer of income from the consumers to the producers. This is the redistributive effect of the tariff.

Protection enables the domestic producers to increase supply from Q2 to Q3. ABE represents the sum of the additional cost per unit of output. This is the protective effect of the tariff.

Due to the increase in price as a result of the protection, consumption has fallen from Q to Q1, causing a loss of consumersurplus by CFF1. This is the consumption effect of the tariff.

It must be noted that part of the loss of the consumer surplus represented by the revenue effect and the redistribution effect are gained by the government and the producers. Hence, they do not represent a loss to the economy; they represent transfer of income from one sector to other sectors within the economy. Hence, the total net loss imposed by the tariff upon the economy is a sum of the protective effect and the consumption effect (ABE + CFF1).

The effect of tariff on terms of trade can be illustrated with the help of offer curves. In Fig. 2, OH is the offer curve of the home country exporting X goods and importing Y goods, and OF is the offer curve of the foreign country exporting Y goods and importing X goods. The free trade equilibrium terms of trade is represented by the slope of OT.

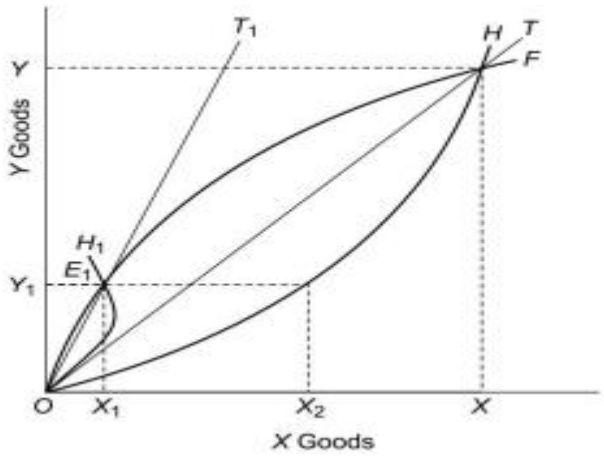


Fig.2: Effect of Tariff on Terms of Trade

Now, suppose that the home country imposes a tariff on its imports so that its offer curve shifts from OH to OH1. This means that now the home country is getting a larger quantity of imports for a given quantity of its exports, or conversely it offers a lesser quantity of exports for a given quantity of imports. New equilibrium is established by the intersection of OH1 and OF at E1, and OT1 emerges as the new equilibrium terms of trade. OT1 is more favourable than OT for the home country while it is more unfavourable for the foreign country. It must, however, be noted that such an improvement in the terms of trade of the home country is possible with the tariff only if the foreign country does not retaliate by imposing tariff on its imports from the home country.

7.3 Nominal and Effective Tariffs

Nominal tariff refers to the actual duty on an imported item. For example, if a commodity is subject to an import duty of 25 per cent ad-valorem, the nominal tariff is 25 per cent.

Corden defines1 the effective protective rate as the percentage increase in value added per unit in an economic activity, which is made possible by the tariff structure relative to the situation in absence of tariffs but the same exchange rates. It depends not only on the tariff on the commodity produced but also on the input coefficients and the tariffs on the inputs.

Effective protective rate of industry 'j' (Ej) may be defined as the difference between the industry's value added under protection (Vj 1) and under free market conditions (Vj), expressed as a percentage of free market value added.

$$E_j = \frac{v_j' - v_j}{v_j} \qquad 7.1$$

Obviously, the protective effect of a tariff on domestic manufacturing is larger when the import duty on the raw materials used in its manufacture is lower.

Illustration Suppose that product X uses imported materials worth Rs. 6,000 and its domestic value added is Rs. 4,000. Thus, the total cost of product X is Rs. 10,000. Suppose, further, that under free trade the imported price of X is only Rs. 9,000. The domestic industry, therefore, cannot survive without protection. The government imposes an import duty of 40 per cent (nominal tariff) on product X. This would increase the price of imported X to Rs. 12,600. The domestic industry could now increase the domestic value addition up to Rs. 6,600 (Rs. 12,600 - 6,000). The effective rate of protection is thus:

(6600-4000)/4000= 0.65(i.e. 65percent)

This means that the 40 per cent nominal import duty enables the domestic producer to increase his value addition up to 65 per cent.

Suppose now that the government imposes an import duty of 20 per cent on the imported materials. This increases the cost of the imported materials to Rs. 7,200 from Rs. 6,000. The maximum domestic value addition that can take place now is Rs. 5,400 (Rs. 12,600 7,200). Therefore, the effective rate of protection is:

(5400-4000)/4000=0.35(i.e 35perecnt)

It is clear that if the domestic producer of X reduces the proportion of the imported materials (assuming that the indigenous materials are available at prices lower than the imported prices), he can enjoy a higher rate of protection. In some cases, import duty on inputs encourages indigenisation/import substitution.

Generalization and Evaluation of the Theory of Effective Protection

From examining Equation (7.1) and the results obtained with it, we can reach the following important conclusions on the relationship between the rate of effective protection (g) and the nominal tariff rate (t) on the final commodity:

1. If $a_i = 0$, g = t.

2. For given values of ai and t_i, g is larger the greater is the value of t.

3. For given values of t and t_i, g is larger the greater is the value of a_i.

4. The value of g exceeds, is equal to, or is smaller than t, as t i is smaller than, equal to, or larger than t (see the first three examples above).

5. When ai t_i exceeds t, the rate of effective protection is negative (see the last example above).

Note that a tariff on imported inputs is a tax on domestic producers that increases their costs of production, reduces the rate of effective protection provided by a given nominal tariff on the final commodity, and therefore discourages domestic production. In some cases (see conclusion 5 above), even with a positive nominal tariff on the final commodity, less of the commodity is produced domestically than would be under free trade.

Clearly, the nominal tariff rate can be very deceptive and does not give even a rough idea of the degree of protection actually provided to domestic producers of the import-competing product. Furthermore, most industrial nations have a "cascading" tariff structure with very low or zero nominal tariffs on raw materials and higher and higher rates the greater is the degree of processing (see Case Study 8-5). This "tariff escalation" makes the rate of effective protection on a final commodity with imported inputs much greater than the nominal tariff rate would indicate. Case Study 8-6 shows that the highest rates in developed nations are often found on simple labor-intensive commodities, such as textiles, in which developing nations have a comparative advantage and, as such, are of crucial importance to their development.

The concept of effective protection must be used cautiously, however, because of its partial equilibrium nature. Specifically, the theory assumes that the international prices of the commodity and of imported inputs are not affected by tariffs and that inputs are used in fixed proportions in production. Both assumptions are of doubtful validity. For example, when the price of an imported input rises for domestic producers as a result of an import tariff, they are likely to substitute cheaper domestic or imported inputs in production. Despite these shortcomings, the rate of effective protection is definitely superior to the nominal tariff rate in estimating the degree of protection actually granted to domestic producers of the import-competing product and played a crucial role during the Uruguay Round trade negotiations.

Equation (7-1) can easily be extended to the case of more than one imported input subject to different nominal tariffs. This is done by using the sum of ai ti for each imported input in the numerator and the sum of ai for each imported input in the denominator of the formula. (It is this more general formula that is actually derived in the appendix; the case of a single imported input is a simpler special case.)

7.4 Optimum Tariff

As a country raises its tariff (import duty) unilaterally, the terms of trade may improve and the volume of trade may decline. The improvement in the terms of trade initially tends to more than offset the accompanying reduction in the volume of trade. Hence, a higher trade indifference curve is reached and community welfare is enhanced. Beyond some point, however, it is likely that the detrimental effect of successive reductions in trade volume will begin to outweigh the positive effect of further improvements in the terms of trade so that community welfare begins to fall. Somewhere in between there must be a tariff which optimizes a country's welfare level under these conditions.

Thus, the optimum tariff is the rate of tariff beyond which any further gain from an improvement in terms of trade would be more than offset by the accompanying decline in trade volume. By raising the rate of tariff beyond the optimum rate, it may be still possible to improve the country s terms of trade, but the gain from this improvement in the terms of trade is more than offset by decline in the volume of trade.

Figure 3 illustrates optimum tariff. OH is the offer curve of the home country and OF is the offer curve of the foreign country. Under free trade both the offer curves intersect at E and OT is the equilibrium terms of trade. IC is the trade indifference curve of the home country. Any tariff which distorts the home country s offer curve in such a way that it crosses the foreign country s offer curve between points E and S will lead to a higher trade indifference level. If the new tariff distorted trade point is at S, the trade indifference level will be unchanged because S is on the same old indifference curve IC.

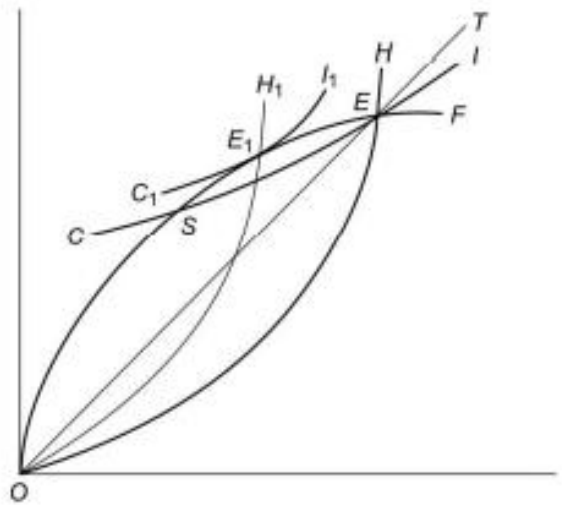


Fig. 3: Optimum Tariff

The highest possible trade indifference curve that the home country can reach is one that is tangent to the foreign offer curve. In Fig. 10.3 it is the trade indifference curve I1C1 which is tangent to OF at point E1. Hence, if the home country can impose a tariff of such magnitude that the tariff distorted offer curve (OH1) intersects the foreign offer curve at point E1, it will be the optimum tariff, because given the foreign country's offer curve OF there is no tariff the home country can impose that will yield a higher level of community welfare.

The magnitude of the optimum tariff depends upon the elasticity of the foreign offer curve. The less elastic the foreign offer curve is, the higher will be the optimum tariff. If the foreign offer curve is perfectly elastic, no tariff will yield improved terms of trade for the home country.

In the above analysis we have assumed that the foreign country does not retaliate against the imposition of tariff by the home country. However, the foreign country will be tempted to retaliate and the retaliation and counter retaliations might set off a tariff war affecting the interests of both the countries.

The Optimum Tariff Formula

Prof. Kindleberger has devised a formula to measure the rate of optimum tariff which is

$$T_t = \frac{1}{e-1}$$

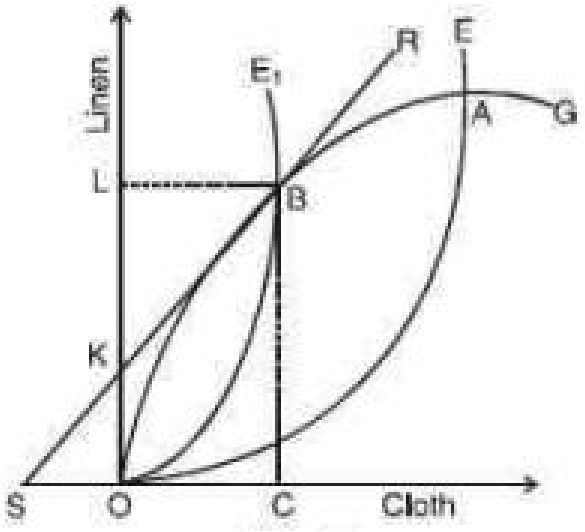


Fig. 4

Where Tf is the optimum tariff rate and e is the point elasticity of the offer curve of the other country. By applying this formula to the above case of a straight line offer curve having infinite elasticity, the optimum tariff is 1/(∞ 1) = 0. At point A in Fig. 12, the elasticity of the foreign offer curve is 1. The optimum tariff is 1/ (1 1) = ∞, infinity. When e is more than unity (one), the value of optimum tariff falls. When e is less than unit, the value of optimum tariff is negative thereby indicating that the optimum tariff does not exist on the inelastic portion of the foreign offer curve.

The rate of optimum tariff can be calculated in terms of the elasticity of the foreign offer curve.

In Fig. 4, B is the point where the optimum tariff is determined. The import duty to the public in the tariff imposing country England is OK/KL when CB (= OL) quantity of linen is imported from Germany. Now the optimum tariff at point B is OS/OC. But OS/OC = OS/LB since OC = LB which, in turn, equals OK/KL by similar triangles SOK and BLK. The optimum tariff,

T_t=OS/OC=OK/KL 1)

The ratio OK/KL can be written as 1/(KL/OK) 2)

But KL = OL OK substituting it in (2), we have

1/(OL-OK)/OK=1/(OL/OK-OK/OK)=1/OL/OK-1

But OL/OK is the elasticity of the offer curve at point B. So the optimum tariff OS/OC at point B can be expressed as

T_t= 1/OK/OL-1=1/e-1

On the basis of the above tariff formula, the optimum tariff rate can be calculated for the different values of elasticity as under:

Optimum Tariff Rate

Elasticity	Optimum Tariff Formula (1/e – 1)	Optimum Tariff Rate T_f
e = 1	1/1 – 1 = ∞	Infinity
e = 2	1/2 – 1 = 1/1 = 1	100%
e = 3	1/3 – 1 = 1/2 = 0.5	50%
e = 5	1/5 – 1 = 1/4 = 0.25	25%
e = ∞	1/5 – 1 = 1/4 = 0.25	zero

If the tariff-imposing home country is too small to influence the world price, elesticity is infinity. Thus Tf equals O which means that the optimum policy for a small country is free trade. But if the home country is large, the tariff formula requires a positive tariff.

Practical Relevance of Optimum Tariff.

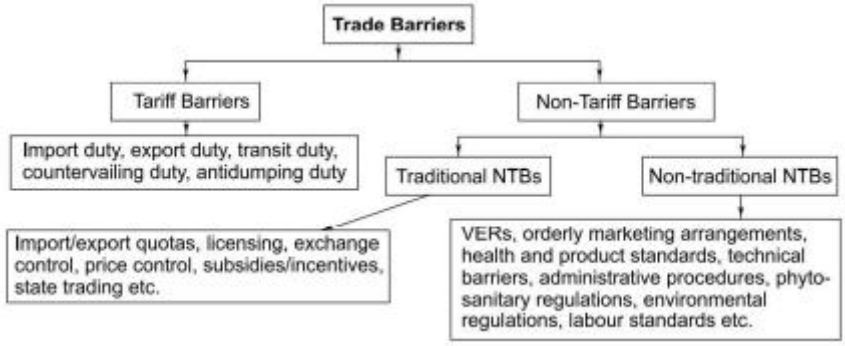
The optimum tariff implies the exploitation of monopoly and monopsony power by large country. Since the country possesses monopoly power, it can influence the world price. As a monopolist, the country can withhold its supply of the exportable good and thus force its price up. As a monopsonists in the market for imports, it can reduce the price by restricting demand by imposing a tariff. But this is essentially a nationalist argument whereby the home country's welfare increases at the expense of the other country.

So far as the relevance of the optimum tariff policy to developed countries is concerned, other motives for protection are more important than this policy. This is because the optimum tariff policy is not practically feasible. It requires that the home country must influence the world price of the good to a large extent so as to justify the imposition of optimum tariff. But there is always the fear of a counter foreign tariff and the resultant tariff war. In such a situation, optimum tariff is not the best policy because it will leave both countries worse off than under free trade. However, if the tariffimposing country is large and the other country is small, there is no fear of retaliation.

So far as LDCs are concerned, the optimum tariff policy is not of much help to them. This is because such economies have a low degree of adaptability to changes in world trade. Therefore, they are not likely to gain much from high tariffs and their optimum tariffs are quite low as compared to developed countries.

Summary

Trade barriers refer to the government policies and measures which obstruct the free flow of goods and services across national borders. They fall into two groups, namely, tariff barriers and non-tariff barriers (NBTs). Figure 5 gives a summary view of trade barriers.



Keywords

1. Nominal tariff refers to the actual duty on an imported item.
2. Optimum Tariff: The optimum tariff is the rate of tariff beyond which any further gain from an improvement in terms of trade would be more than offset by the accompanying decline in trade volume.
3. Rate of Effective Protection: the effective rate of protection (ERP) is a measure of the total effect of the entire tariff structure on the value added per unit of output in each industry, when both intermediate and final goods are imported.
4. Ad valorem tariff The most common is an ad valorem tariff, which means that the customs duty is calculated as a percentage of the value of the product.
5. Compound Tariffs. A compound tariff is a combination of an ad valorem and specific tariffs.

Self Assessment

1. The optimum tariff is

A. the best tariff a country can obtain via a WTO negotiated round of compromises.
B. the tariff, which maximizes the terms of trade gains.
C. the tariff, which maximizes the difference between terms of trade gains and terms of trade loses.
D. not practical for a large country due to the likelihood of retaliation

2. The optimum tariff is most likely to apply to

A. a small tariff imposed by a small country.
B. a small tariff imposed by a large country.
C. a large tariff imposed by a small country.
D. a large tariff imposed by a large country.

3. The effective rate of protection

A. distinguishes between tariffs that are effective and those that are ineffective
B. is the minimum level at which a tariff becomes effective in limiting imports
C. shows how effective a tariff is in raising revenue for the government
D. shows the increase in value added for domestic production that a particular tariff structure makes possible, in percentage terms

4. Which one of the following is not a Non-Tariff Barrier (NTB)?

A. Voluntary export restriction,
B. Local content requirement
C. Administrative barrier
D. Tariff rate quotas

5. The optimum tariff

A. must occur in the elastic range of the tariff-imposing home country's offer curve.
B. takes account of the probability that the partner country will retaliate with protective measures of its own.
C. maximizes total export sales of the imposing country.
D. must occur in the elastic range of the partner country's offer cure.

6. Which of the following refers to the fact that a large country can benefit by levying a tariff?

A. The "optimal tariff"
B. The "terms of trade effect of a tariff"
C. The "monopoly effect of a tariff"
D. All of the above

7. A specific tariff is

A. Any tax on a particular imported good (as opposed to one on all imports).
B. An import tax that must be paid in kind (giving the government the good itself).
C. A requirement to pay the government a specified fraction of the monetary value of an imported good.
D. A tax on imports defined as an amount of currency per unit of the good.

8. A tariff on imports benefits domestic producers of the imported good because

A. They get the tariff revenue.
B. It raises the price for which they can sell their product on the domestic market.
C. It prevents imports from rising above a specified quantity.
D. It reduces their producer surplus, making them more efficient.

9. When a large country levies a tariff on imports

A. The world price falls.
B. Demanders of the good on the domestic market are hurt
C. The domestic price rises by less than the tariff.
D. All of the above.

10.Specific tariffs are

A. import taxes stated in specific legal statutes.

B. import taxes calculated as a fixed charge for each unit of imported goods.

C. import taxes calculated as a fraction of the value of the imported goods.

D. the same as import quotas

11. Ad-valorem tariffs are

A. import taxes stated in ads in industry publications.

B. import taxes calculated as a fixed charge for each unit of imported goods.

C. import taxes calculated as a fraction of the value of the imported goods.

D. the same as import quotas

12. Which of the following is NOT an example of a "nontariff barrier" to the free flow of goods and services in

accordance with comparative advantage?

A. import quotas.
B. government procurement provisions that favor home products.
C. specific duty of $1.00 per unit on each imported item.
D. voluntary export quotas (VERs).

13. Voluntary exports restraints often convey

A. monopoly power to the importing country.

B. monopoly power to the exporting country.
C. revenues to the importing countries.
D. benefits to both countries equally.

14. An ad valorem tariff is better than a specific tariff because

A. it is hard for importers to avoid it.
B. the value of the tariff on all goods is the same
C. it accounts for changes in inflation.
D. it can always replace a quota

15. Other things equal, which one of the following will cause an increase in the ERP in the automobile industry?

A. a decrease in the nominal tariff rate on automobiles.
B. an increase in the nominal tariff rates on imported inputs used in making automobiles.
C. an increase in the world price of imported inputs used in making automobiles.
D. a decrease in the nominal tariff rates on imported inputs used in making automobiles

Answer for Self Assessment

l.	D	2.	B	3.	D	4.	D	5.	D
6.	D	7.	D	8.	B	9.	D	10.	B
11.	C	12.	C	13.	B	14.	C	15.	D

Review Questions

1. Explain the various types of tariffs. Show with the help of partial equilibrium diagram the price, protective, consumption, revenue and redistribution effects of a tariff.
2. What do you mean by optimum tariff? Under what conditions optimum tariff is likely to be high or zero?
3. What do you mean by effective rate of protection? Explain with examples how is it different from nominal rate of protection.
4. Distinguish between nominal and effective rate of protection. Explain the limitations of the effective rate of protection. What are its implications for developing countries?
5. Write short notes on the following:
   (a) Types of tariffs.
   (b) Nominal and effective tariff.
   (c) Optimum tariff.
6. What is meant by an ad valorem, a specific, and a compound tariff? Are import or export tariffs more common in industrial nations? in developing nations?
7. What is meant by the optimum tariff? What is its relationship to changes in the nation's terms of trade and volume of trade?
8. Why are other nations likely to retaliate when a nation imposes an optimum tariff (or, for that matter, any import tariff)? What is likely to be the final outcome resulting from the process of retaliation?

Further Readings

- Asian Development Bank, Foreign Trade Barriers and Export Growth, Readings Manila: ADB.
- Ellsworth, P.T. and Clark J. Leith, The International Economy, Macmillan Publishing Co. Inc., New York.
- Johnson, Harry G., Aspects of the Theory of Tariffs, George Allen and Unwin, London.
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Unit 08: Balance of Payment

CONTENTS

Objectives

After studying this unit, you will be able to,

- understand Balance of payments and its components
- understand the reasons for disequilibrium in Balance of payments
- understand measures to correct disequilibrium in balance of payment.

Introduction

The BOP is a statistical account of the transactions between residents of one country and residents of the rest of the world for a period of one year or fraction thereof. It is a systematized procedure for measuring, summarizing and stating the effects of all financial and economic transactions. The BOP statistics reflect all the economic transactions of a country vis-à-vis rest of the world for which payment may or may not be involved. These transactions may include exchange of goods and services or there may be loan transactions, gifts and grants, or short-term, long-term and portfolio investments. For all these transactions, except gifts and grants, payment is involved in foreign currency. A transaction is recorded as being either a credit or a debit depending on the direction of the payment. If the transaction results in a cash outflow, it is recorded as a debit. Likewise, if the transaction results in a cash inflow it is recorded as a credit.

8.1 Meaning of Multiplier

In the modern world, there is hardly any country which is self-sufficient in the sense that it produces all the goods and services it needs. Every country import from other countries the goods that cannot be produced at all in the country or can be produced only at an unduly high cost as compared to the foreign supplies. Similarly, a country exports to other countries the commodities which those countries prefer to buy from abroad rather than produce at home.

"The balance of payments is a systematic record of economic transactions of the residents of a country with the rest of the world during a given period of time." The record is so prepared as to provide meaning and measure to the various components of a country's external economic transactions. Thus, the aim is to present an account of all receipts and payments on account of goods exported, services rendered and capital received by residents of a country, and goods imported, services received and capital transferred by residents of the country. The main purpose of keeping these records is to know the international economic position of the country and to help the Government in reaching decisions on monetary and fiscal policies on the one hand, and trade and payments questions on the other.

8.2 Balance of Trade and Balance of Payments

Balance of trade and balance of payments are two related terms but they should be carefully distinguished from each other because they do not have exactly the same meaning. Balance of trade

refers to the difference in value of imports and exports of commodities only, i.e., visible items only. Movement of goods between countries is known as visible trade because the movement is open and can be verified by the customs officials. During a given period of time, the exports and imports may be exactly equal, in which case, the balance of payments of trade is said to be balanced. But this is not necessary, for those who export and import are not necessarily the same persons. If the value of exports exceeds the value of imports, the country is said to experience an export surplus or a favorable balance of trade. If the value of its imports exceeds the value of its exports, the country is said to have a deficit or an adverse balance of trade.

The terms "favorable" and "unfavorable" are derived from the mercantilist writers of the 18th century. In those days, settlements of the foreign transactions were made in gold. If India had exported 100 crores worth of goods but had imported `80 crores worth of goods, India would receive 20 crores worth of gold from the foreign countries. As gold was regarded as wealth and as the receipts of gold made a country wealthy, the mercantilist writers regarded exports surplus as being favorable to the country.

On the other hand, if India had exported 100 crores worth of goods, but imported ` 150 crores worth of goods, it had to pay 50 crores in gold to the foreigners. India would be losing gold and would be poorer to that extent. Therefore, an import surplus was regarded by the mercantilist writers as adverse balance. But in these days, the international transactions are not settled in terms of gold. Even then, the terms "favorable" and "unfavorable" balance of trades have continued to be used till today. Exports and imports of a country are rarely equal. Balance of trade, in other words, will not balance. During any period, a country may experience a favorable or an adverse balance of trade.

8.3 Distinction between Current Account and Capital Account

The distinction between the current account and capital account may be noted. The current account deals with payment for currently produced goods and services; it includes also interest earned or paid on claims and also gifts and donations. The capital account, on the other hand, deals with payments of debts and claims. The current account of the balance of payments affects the level of national income directly. For instance, when India sells its currently produced goods and services to foreign countries, the producers of those goods get income. In other words, current account receipts have the effect of increasing the flow of income in the country. On the other hand, when India imports goods and services from foreign countries and pays for them, money which would have been used to demand goods and services within the country flows out to foreign countries. The current account payments to foreigners involve reduction of the flow of income within the country and constitute a leakage. Thus, the current account or trade account of the balance of payments has a direct effect on the level of income in a country. The capital account, however, does

not have such a direct effect on the level of income; it influences the volume of assets which a country holds.

It may be further noted that when there is a deficit in the current account, it has to be financed either by using foreign exchange reserves with Reserve Bank of India, if any, or by capital inflows (in the form of foreign assistance, funds flowing through FDI and portfolio investment by FIIs, commercial borrowing from abroad, non-resident deposits.

8.4 Determinants of Balance of Payments

There are several variables which determine the balance of payments position of a country, viz., national income at home and abroad, exchange rate of national currency, the prices of goods and factors, international oil and commodity prices, the supply of money, the rate of interest, etc. all of which determine exports, imports, and demand and supply of foreign currency. At the back of these variables lie the supply factors, production function, the state of technology, tastes, distribution of income, economic conditions, the state of expectations, etc. If there is a change in any of these variables and there are no appropriate changes in other variables, disequilibrium will be the result.

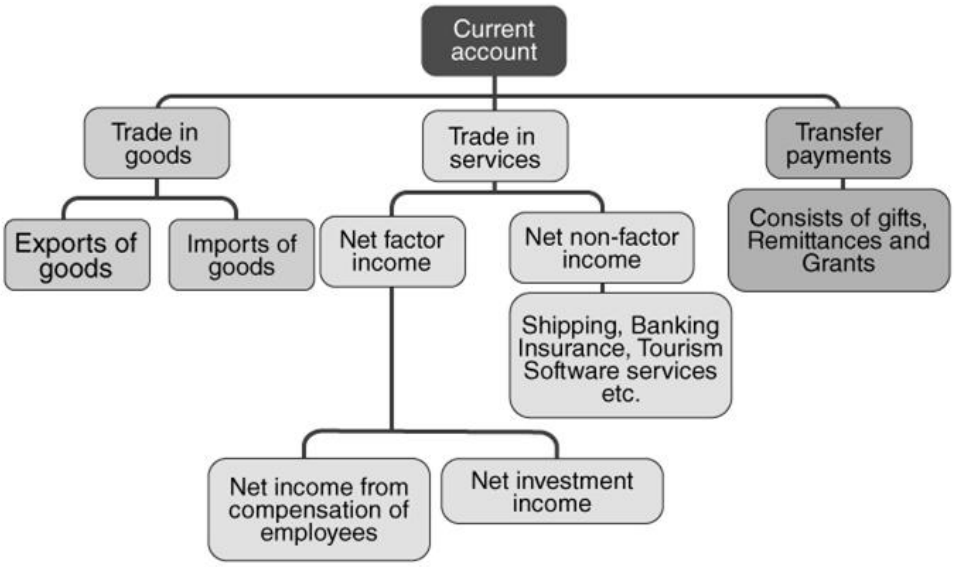
The main cause of disequilibrium in the balance of payments arises from imbalance between exports and imports of goods and services, that is, deficit or surplus in balance of trade. When for one reason or another exports of goods and services of a country are smaller than their imports, disequilibrium in the balance of payments is the likely result. Exports may be small due to the lack of exportable surplus which in turn results from low production or the exports may be small because of the high costs and prices of exportable goods and severe competition in the world markets. Important causes of small exports are the inflation or rising prices in the country or over-valued exchange rate. When the prices of goods are high in the country, its exports are discouraged and imports encouraged. If it is not matched by other items in the balance of payments, disequilibrium emerges.

8.5 Balance of Payments on Current Account

Current account refers to an account which records all the transactions relating to export and import of goods and services and unilateral transfers during a given period of time.Current account contains the receipts and payments relating to all the transactions of visible items, invisible items and unilateral transfers.

Components of Current Account:

The main components of Current Account are:



1. Export and Import of Goods (Merchandise Transactions or Visible Trade)*:* A major part of transactions in foreign trade is in the form of export and import of goods (visible items). Payment for import of goods is written on the negative side (debit items) and receipt from exports is shown on the positive side (credit items). Balance of these visible exports and imports is known as balance of trade (or trade balance).

2. Export and Import of Services (Invisible Trade): It includes a large variety of non- factor services (known as invisible items) sold and purchased by the residents of a country, to and from the rest of the world. Payments are either received or made to the other countries for use of these services.

a. Shipping.

b. Banking.

c. Insurance.

Payments for these services are recorded on the negative side and receipts on the positive side.

3.Unilateral or Unrequited Transfers to and from abroad (One sided Transactions):

Unilateral transfers include gifts, donations, personal remittances and other 'one-way' transactions. These refer to those receipts and payments, which take place without any service in return. Receipt of unilateral transfers from rest of the world is shown on the credit side and unilateral transfers to rest of the world on the debit side. Income receipts and payments to and from abroad: It includes investment income in the form of interest, rent and profits.

Current Account records all the actual transactions of goods and services which affect the income, output and employment of a country. So, it shows the net income generated in the foreign sector. Unilateral transfers include gifts, donations, personal remittances and other 'one-way' transactions. These refer to those receipts and payments, which take place without any service in return. Receipt of unilateral transfers from rest of the world is shown on the credit side and unilateral transfers to rest of the world on the debit side.

4. Income receipts and payments to and from abroad: It includes investment income in the form of interest, rent and profits.

Current Account records all the actual transactions of goods and services which affect the income, output and employment of a country. So, it shows the net income generated in the foreign sector. In the current account, receipts from export of goods, services and unilateral receipts are entered as credit or positive items and payments for import of goods, services and unilateral payments are entered as debit or negative items. The net value of credit and debit balances is the balance on current account.

1. Surplus in current account arises when credit items are more than debit items. It indicates net inflow of foreign exchange.

2. Deficit in current account arises when debit items are more than credit items. It indicates net outflow of foreign exchange.

S. No. Items	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
1. Exports	105.1	128.9	166.2	189.0	182.2	256.2	309.8	305.6
2. Imports	157.1	190.7	257.6	307.6	300.6	383.5	499.5	502.2
3. **Trade Balance**	–52.0	–61.8	–91.5	–118.6	–118.4	–127.3	–189.9	–195.7
	(–6.2)	(–6.5)	(–7.4)	(–9.8)	(–8.6)	(–7.8)	(–10.1)	(–10.0)
4. **Invisibles (Net)**	42.0	52.2	75.7	89.9	79.9	79.3	111.6	–
(*i*) Non-factor Services	23.2	29.5	38.9	49.6	35.7	44.1	64.1	–
(*ii*) Investment Income	–5.9	–7.2	–5.1	–4.0	–8.0	–17.9	–16.0	–
(*iii*) Private Transfers	24.5	29.8	41.7	44.6	52.3	53.1	63.5	–
5. **Goods and Services Balance**	–28.7	–32.3	–52.6	–69.0	–83.0	–83.2	–125.7	–130.7
6. **Current Account Balance (Net)**	**–10.0**	**– 9.6**	**–15.7**	**–28.7**	**–38.4**	**–48.1**	**–78.2**	**–87.8**
	(–1.2)	(–1.0)	(–1.3)	(–2.4)	(–2.8)	(–2.7)	(–4.2)	(–4.8)

It will be noted from Table 1 above that the most important item in the balance of payments on current account is balance of trade which refers to imports and exports of goods. In the Table 34.1 balance of trade does not balance and shows a deficit in all the seven years. In years 2011-12 and 2012-13 trade deficit substantially increased. Trade deficit was over 10 per cent of GDP in both these years. In fact, it is huge trade deficit in these two years that caused huge current account deficit of over 4% of GDP in these two years Economic slowdown in advanced countries and its spillover effects in Emerging Market Economies coupled with high crude oil and gold prices were responsible for sharp increase in trade deficit. Due to surplus in invisibles account, there was a surplus on current account during 2001-2002, 2002-03 and 2003-04. In India's balance of payments on current account from 2004-05 onwards there has been a deficit. Contrary to popular perception, deficit on current account is not always bad provided it is within reasonable limits and can be easily met by non-debt capital receipts. In fact, deficit on current account represents the extent of absorption of capital inflows in India during a year It may be noted that when there is deficit on the current account, it is financed either by using foreign exchange reserves held by Reserve Bank of India or by capital flows that come into the country in the form of foreign direct investment (FDI) and portfolio investment by FIIs, external commercial borrowing (ECB) from abraod and by NRI deposits in foreign exchange account in our banks. However, due to global financial crisis in 2008-09, there was first slowdown and then decrease in exports. As a result, there was a large deficit of 2.4 per cent of GDP on current account which could not be met by capital inflows as they were quite meagre ($ 8.6 billion) as a result of global financial crisis. Therefore, to finance the deficit on current account in 2008-09 we had to withdraw US $ 20 billion from our foreign exchange reserves. Again, in the last two years 2011-12 and 2012-13 the current account deficit (CAD) has been quite high. It may be noted that high current deficit tends to weaken the rupee by raising the demand for US dollars. In 2011-12, current account deficit tended to weaken the rupee by raising the demand for US dollars. In 2011-12, the current account deficit was 4.2 per cent of GDP. Since capital inflows in this year were not adequate to finance the current account deficit, RBI had to withdraw 12.8 million US dollars from its foreign exchange reserves to meet the demand for US dollars (see Table 34.2). In the year 2012-13 the current account deficit has been estimated to be even higher at 4.8 per cent of GDP, capital inflows through portfolio investment by FIIs have picked up in the latter half of 2012-13 but capital inflows through FDI have fallen. Therefore, to meet the current account deficit some US dollars will have to be withdrawn from foreign exchange reserves held by RBI. Thus, current account deficit poses serious challenge to macroeconomic management of the economy. The dependence on volatile capital inflows through FIIs to meet the current account deficit is unsustainable as these capital flows go back when global situation worsens and thereby causes sharp depreciation in exchange rate of rupee and crash in stock market prices.

Since in the recent years, 2011-12 and 2012-13, current account deficit of India widened, this increased the balance of payments vulnerability to sudden reversal of capital flows, especially when sizable flows are comprised of debt and volatile portfolio investment by FIIs. The priority has therefore been to reduce current account deficit (CAD) through improving trade balance. Efforts have been made to promote exports by diversifying the export commodity basket and export destinations. One way to limit imports is to bring prices up to the international level so that users bear the full cost.

Accordingly, petrol has been decontrolled and diesel prices have been revised upward in Jan. 2013 to curtail subsidy on it. To discourage the imports of gold which has played a significant role in causing trade deficit, customs duty on its import has been raised from 4% to 6%. Further, to improve the current account deficit emphasis has been on facilitating remittances and encouraging software exports that have been responsible for surplus on the invisible account. In recent years this surplus has lowered the impact of widening trade deficit on current account deficit (CAD) significantly. The two components together met nearly two-thirds of the trade deficit that was more than 10 per cent of GDP in 2011-12 and 2012-13. Remittances particularly are known to exhibit resistance when the country is hit by external shock as was evident during the global crisis of 2008.

8.6 Balance of Payments on Capital Account

Capital account of BOP records all those transactions, between the residents of a country and the rest of the world, which cause a change in the assets or liabilities of the residents of the country or its government. It is related to claims and liabilities of financial nature.

Capital Account is used to:

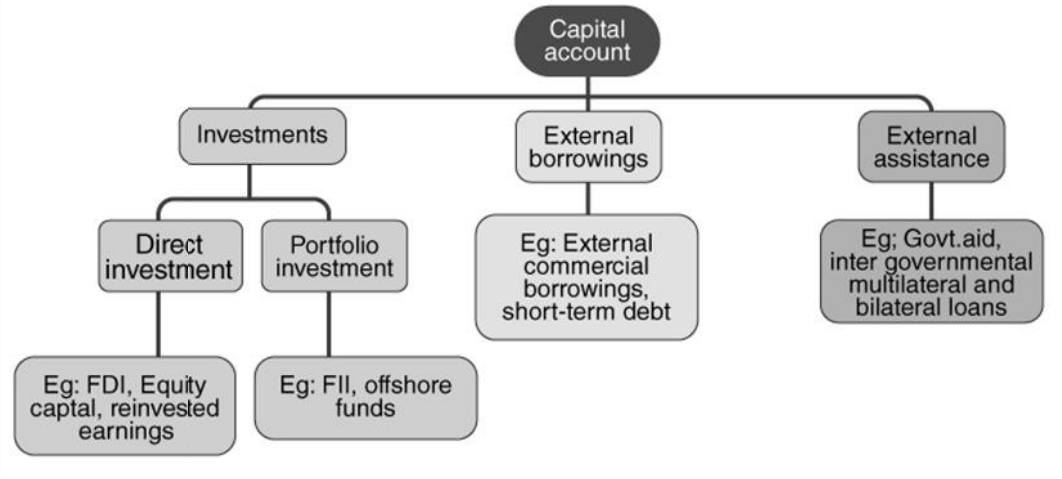
(i) Finance deficit in current account; or

(ii) Absorb surplus of current account.

Capital account is concerned with financial transfers. So, it does not have direct effect on income, output and employment of the country.

Components of Capital Account:

The main components of capital account are:



1. **Borrowings and landings to and from abroad:**

It includes:

A. All transactions relating to borrowings from abroad by private sector, government, etc. Receipts of such loans and repayment of loans by foreigners are recorded on the positive (credit) side.

B. All transactions of lending to abroad by private sector and government. Lending abroad and repayment of loans to abroad is recorded as negative or debit item.

2. Investments to and from abroad:

It includes:

A. Investments by rest of the world in shares of Indian companies, real estate in India, etc. Such investments from abroad are recorded on the positive (credit) side as they bring in foreign exchange

B. Investments by Indian residents in shares of foreign companies, real estate abroad, etc. Such investments to abroad be recorded on the negative (debit) side as they lead to outflow of foreign exchange.

3. Change in Foreign Exchange Reserves:

The foreign exchange reserves are the financial assets of the government held in the central bank. A change in reserves serves as the financing item in India's BOP. So, any withdrawal from the reserves is recorded on the positive (credit) side and any addition to these reserves is recorded on the negative (debit) side. It must be noted that 'change in reserves' is recorded in the BOP account and not reserves.

8.7 Balance on Capital Account

The transactions, which lead to inflow of foreign exchange (like receipt of loan from abroad, sale of assets or shares in foreign countries, etc.), are recorded on the credit or positive side of capital account. Similarly, transactions, which lead to outflow of foreign exchange (like repayment of loans, purchase of assets or shares in foreign countries, etc.), are recorded on the debit or negative side. The net value of credit and debit balances is the balance on capital account.

A. Surplus in capital account arises when credit items are more than debit items. It indicates net inflow of capital.

B. Deficit in capital account arises when debit items are more than credit items. It indicates net outflow of capital.

In addition to current account and capital account, there is one more element in BOP, known as 'Errors and Omissions'. It is the balancing item, which reflects the inability to record all international transactions accurately.

	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
External Assistance (Net)	1.7	1.8	2.1	2.6	2.9	4.94	2.3
Commercial Borrowing (Net)	2.5	16.1	22.6	7.0	2.8	12.16	10.3
Non-Resident Deposits (Net)	2.8	4.3	0.2	– 4.3	2.9	3.14	11.9
Foreign Investment (Net) of which	15.5	14.8	43.3	3.5	50.4	42.13	39.2
(*i*) FDI net	3.0	7.7	15.9	17.5	18.0	11.83	22.1
(*ii*) Portfolio Investment (Net)	12.5	7.1	27.4	–15.0	32.4	30.3	17.2
(*iii*) Other capital flows (Net)	2.4	9.2	39.7	–9.7	–13.1	–10.48	–7.0
Capital Account Total (Net)	**24.9**	**46.1**	**107.9**	**8.6**	**51.6**	**63.74**	67.8
Use of Exchange Reserves*	–15.0	–36.6	–92.2	+20.1*	–13.4*	(–13.1)*	(+12.8)*

Capital inflows in the capital account can be classified into debt creating and non-debt creating. Foreign investment (both direct and portfolio) represents non-debt creating capital inflows, whereas external assistance (i.e. concessional loans taken from abroad), external commercial borrowing (ECB) and non-resident deposits are debt-creating capital inflows. It will be seen from Table 34.2 that during 2007-08, there was net capital inflow of 43.3 billion US dollars on account of foreign investment (both direct and portfolio). Table 2 gives the position of India's balance of payments in capital account for seven years, 2005-06, 2006-07, 2007-08, 2008- 09 and 2009-10, 2010-11 and 2011-12. When all items of balance of payments on capital account are taken into account, we had a surplus of 107.9 billion US dollars in 2007-08. Taking into current account deficit of $ 15.7 billion in year 2007-08 there was accretion to our foreign exchange reserves by $ 92.2 billion in 2007-08. Global financial crisis affected our capital account balance as there was reversal of capital flows after Sept. 2008 with the result that we used $ 20.1 billion of our foreign exchange reserves in 2008-09 resulting in decrease of our foreign exchange reserves. That is, because we used our foreign

exchange reserves equal to $ 20.1 billion, there was decline in our foreign exchange reserves by $ 20 billion in 2008-09. The situation improved in 2009-10 as foreign direct investment (FDI) and portfolio investment by FIIs picked up. As a result, there was net capital account surplus of $ 51.6 billion in 2009-10 and after meeting the current account deficit of $ 38 billion there was addition to our foreign exchange reserves by $ 13.4 billion in 2009-10. In 2010-11 also there was surplus on capital account of $ 63.74 billion and after meeting current deficit we added $ 13.1 billion in our foreign exchange reserves in 2010.11. However, in 2011-2012 and 2012-13 the situation regarding capital flows changed significantly and capital flows were not sufficient to meet the large current account deficit (CAD). Consequently, in 2011-12 withdrawal from foreign exchange reserves of 12.8 billion US dollars was made. In 2012- 13 also due to large deficit on current account the withdrawal from our foreign exchange reserves was made. Capital flows are driven by pull factors such as economic fundamentals of recipient countries and push factors such as policy stance of source countries. The capital flows have implications for exchange rate management, overall macroeconomic and financial stability including liquidity conditions. Capital account management therefore needs to emphasize promoting foreign direct investment (FDI) and reducing dependence on volatile portfolio capital. This would ensure that to the extent current account deficit is bridged through capital surplus it would be better if it is done through stable and growth enhancing foreign direct investment flows. In the present international financial situation, reserves are the first line of defense against the volatile capital flows. However, the decline in reserves as a percentage of GDP is a source of concern.

8.8 The Official Reserve Account (ORA)

The ORA measures changes in the holdings of foreign currency, SDRs and gold by the central bank of a nation. It takes into account the surplus or deficit resulting from the current account and capital account transactions.

Caution

In the accounting format, balances on individual accounts can be worked out as

follows:

(a) Trade balance (merchandise A/c) = Merchandise exports - merchandise imports (X - M).

(b) Current account (includes earnings and expenditure for services and "invisible" trade items).

= Balance on goods, services and income + Unrequired transfers (determined autonomously

because of pricing, quality of similar factors).

(c) Basic balance = Current A/c + long-term capital flows including FDI (autonomous).

(d) Overall balance/Official settlement balance

= Basic balance + Short-term capital movements + Errors and omissions.

The transactions in the current account, capital account and statistical discrepancies are treated as autonomous in BOP accounting format whereas, entries in the official settlement account are treated as compensatory items.

8.9 The Total Balance of Payments Notes

The BOP is just the sum of these three accounts and is calculated as follows: BOP = Current Account Balance + Capital Account Balance + Change in Official

Reserves Account

BOP = BCRA + CPA + ORA

The BOP must always equal 0, i.e., balance since it is an accounting identity in a fixed exchange rate system. If for some reason, the CRA and CPA do not sum to 0, then the government must take

action by adjusting the ORA so that BOP equals 0. The government does this by buying or selling foreign currency and gold, depending on the situation, up to a total that equals the CRA and CPA.

Causes of Disequilibrium:

1. ***Temporary Changes (or Disequilibrium):*** There may be a temporary disequilibrium caused by random variations in trade, seasonal fluctuations, the effects of weather on agricultural production, etc. Deficits or surpluses arising from such temporary causes are expected to correct themselves within a short time.

2. ***Fundamental Disequilibrium:*** Fundamental disequilibrium refers to a persistent and long-run BOP disequilibrium of a country. It is a chronic BOP deficit, according to IMF. It is caused by such dynamic factors as:

(1) Changes in consumer tastes within the country or abroad which reduce the country's exports and increase its imports.

(2) Continuous fall in the country's foreign exchange reserves due to supply in-elasticities of exports and excessive demand for foreign goods and services.

(3) Excessive capital outflows due to massive imports of capital goods, raw materials, essential consumer goods, technology and external indebtedness.

(4) Low competitive strength in world markets which adversely affects exports.

(5) Inflationary pressures within the economy which make exports dearer.

3. ***Structural Changes (or Disequilibrium):*** Structural changes bring about disequilibrium in BOP over the long run.

They may result from the following factors:

(a) Technological changes in methods of production of products in domestic industries or in the industries of other countries. They lead to changes in costs, prices and quality of products.

(b) Import restrictions of all kinds bring about disequilibrium in BOP.

(c) Deficit in BOP also arises when a country suffers from deficiency of resources which it is required to import from other countries.

(d) Disequilibrium in BOP may also be caused by changes in the supply or direction of long-term capital flows. More and regular flow of long-term capital may lead to BOP surplus, while an irregular and short supply of capital brings BOP deficit.

4. Changes in Exchange Rates: Changes in foreign exchange rate in the form of overvaluation or undervaluation of foreign currency lead to BOP disequilibrium. When the value of currency is higher in relation to other currencies, it is said to be overvalued. Opposite is the case of an undervalued currency. Overvaluation of the domestic currency makes foreign goods cheaper and exports dearer in foreign countries. As a result, the country imports more and exports less of goods. There is also outflow of capital. This leads to unfavorable BOP. On the contrary, undervaluation of the currency makes BOP favorable for the country by encouraging exports and inflow of capital and reducing imports.

5. Cyclical Fluctuations (or Disequilibrium): Cyclical fluctuations in business activity also lead to BOP disequilibrium. When there is depression in a country, volumes of both exports and imports fall drastically in relation to other countries. But the fall in exports may be more than that of imports due to decline in domestic production. Therefore, there is an adverse BOP situation. On the other hand, when there is boom in a country in relation to other countries, both exports and imports may increase. But there can be either a surplus or deficit in BOP situation depending upon whether the country exports more than imports or imports more than exports. In both the cases, there will be disequilibrium in BOP.

6. Changes in National Income: Another cause is the change in the country's national income. If the national income of a country increases, it will lead to an increase in imports thereby creating a deficit in its balance of payments, other things remaining the same. If the country is already at full

employment level, an increase in income will lead to inflationary rise in prices which may increase its imports and thus bring disequilibrium in the balance of payments.

7. Price Changes: Inflation or deflation is another cause of disequilibrium in the balance of payments. If there is inflation in the country, prices of exports increase. As a result, exports fall. At the same time, the demand for imports increase. Thus, increase in export prices leading to decline in exports and rise in imports results in adverse balance of payments.

8. Stage of Economic Development: A country's balance of payments also depends on its stage of economic development. If a country is developing it will have a deficit in its balance of payments because it imports raw materials, machinery, capital equipment, and services associated with the development process and exports primary products. The country has to pay more for costly imports and gets less for its cheap exports. This leads to disequilibrium in its balance of payments.

9. Capital Movements: Borrowings and lending's or movements of capital by countries also result in disequilibrium in BOP. A country which gives loans and grants on a large scale to other countries has a deficit in its BOP on capital account. If it is also importing more, as is the case with the USA, it will have chronic deficit. On the other hand, a developing country borrowing large funds from other countries and international institutions may have a favorable BOP. But such a possibility is remote because these countries usually import huge quantity of food, raw materials, capital goods, etc. and export primary products. Such borrowings simply help in reducing BOP deficit.

10. Political Conditions: Political condition of a country is another cause of disequilibrium in BOP. Political instability in a country creates uncertainty among foreign investors which leads to the outflow of capital and retards its inflow. This causes disequilibrium in BOP of the country. Disequilibrium in BOP also occurs in the event of war or fear of war with some other country.

Implications of Disequilibrium:

A disequilibrium in the balance of payments whether a deficit or surplus has important implications for a country. A deficit in the combined current and capital accounts is regarded as undesirable for the country. This is because such a deficit has to be covered by borrowing from abroad or attracting foreign exchange or capital from abroad. This may require paying high interest rates. There is also the danger of withdrawing money by foreigners, as happened in the case of the Asian crisis in the late 1990s. An alternative may be to draw on the reserves of the country which may also lead to a financial crisis. Moreover, the reserves of a country being limited, they can be used to pay for BOP deficit up to a limit. But the above analysis of a combined current and capital account deficit is not correct in practice.

The reason being that a current account deficit is the same thing as a capital account surplus. However, it is beneficial for a country to have a current account deficit even if it equals capital account surplus in BOP. In the short-run, the country may benefit from a higher level of consumption through import of goods and consequently a higher standard of living. But the excess of imports over exports may be financed by foreign investments in the country. These may lead to increased production, employment and income in the country. In the long-run, foreign investors may purchase large assets in the country and thus adversely affect domestic industry as is the case with MNCs (multinational corporations).

The current account deficit in BOP of a country may have either good or bad effects depending on the nature of an economy. Take a country where domestic industries are rapidly growing and it has current account BOP deficit. These industries offer a high rate of return on their investment. This would, in return, attract foreign investments. As a result, the country would have a capital account surplus due to the inflow of capital and a current account deficit. This current account deficit is good for the economy. No doubt, the external debt of the country increases, but this debt is being utilized to finance the rapid growth of the economy. The real burden of this debt will be very low because it can be repaid out of higher income in the future.

On the contrary, a country having an inefficient and unproductive domestic industry will be adversely affected by its current account BOP deficit. The country borrows from abroad to finance the excess of spending over consumption. To attract foreign borrowings, the country will have to pay high interest rates. These will increase the money burden of the debt. The real burden of the debt will also increase because of the low productive capacity of domestic industries. If the current consumption is being financed by foreign borrowings, the wealth of the economy will decline. This,

in turn, will lead to either a reduction in domestic expenditure or a change in government policy so as to control the rising debt. On the other hand, if foreign borrowings are being used to finance real investment, the current account BOP deficit will be beneficial for the economy. A higher rate of return on real investment than the interest on foreign borrowings would increase the country's wealth over time through rise in its national income. Thus, a current account BOP deficit is not always undesirable for a country.

8.10 Correction of Disequilibrium (Adverse Balance of Payments)

The following are the principal methods for adjusting the adverse balance of payments:

1. Adjustment under Gold Standard: In the classical gold standard system, disequilibrium was corrected by price-specific flow mechanism. A deficit leads to outflow of gold and thereby to a reduction in money supply which reduces the price level and promotes exports and discourages imports. So, deficit is corrected.

2. Adjustment under Flexible Exchange Rate: Deficit is corrected automatically by a depreciation of its currency.

3. Income Adjustment Mechanism: If exports go up, national income goes up, purchasing power goes up and imports also go up.

4. ***Adjustment under Gold Exchange Standard (Fixed Exchange Rate):*** The gold exchange standard was set up after World War II and lasted until 1971. Under this, the exchange rate was fixed in terms of dollar or gold. The exchange rates were then allowed to vary 1 percent up or down. The deficit could be settled in gold or in dollar. Automatic adjustment is possible under this system.

Example: If exports increase, income increases. Therefore, prices in the surplus country go up. This discourages exports and encourages imports.

The surplus nation's exchange rate may appreciate and it can get an inflow of reserves leading to greater money supply and lowering of rate of interest. All these may lead to increased imports, capital outflow and reduced exports. If permitted to operate, the above automatic adjustment mechanisms are likely to bring about adjustment in BOP. But nations may not permit them to operate for fear of unemployment and inflation. Therefore, some policies are necessary to complete the adjustment.

5. Expenditure Changing Policy: Expenditure adjusting policies are monetary and fiscal tools. A restrictive monetary policy leads to a reduction in investment and income, thus reducing imports. Therefore, a restrictive monetary policy by reducing expenditure corrects an external deficit.

However, under the policy of Operation Twist, short-term rate of interest is raised to attract short-term capital from abroad which will cure the balance of payment deficit and at the same time does not disturb economic growth and capital formation (long-term rate is kept constant).

Fiscal policy may be very helpful for reducing expenditure. Taxes may be raised and public expenditure may be reduced. Both, restrictive monetary and fiscal policies, will be deflationary in character and will stimulate exports and discourage imports.

6. Exchange Control: Exchange control refers to government regulation of exchange rate as well as restriction on the conversion of local currency into foreign currency. Under this system, all exporters are asked to surrender their foreign exchanges to the central bank. Then foreign exchanges are rationed out to licensed importers. The aim of exchange control is to bring about an equality between the demand for and the supply of foreign exchange through state intervention and control.

8.11 Direct Controls

Direct controls take the form of exchange control, capital control and commodity control. Imports and exports can be directly controlled by various measures.

1. ***Devaluation:*** The home currency may be deliberately deflated. In that case, prices will come down and exports would be promoted and imports restricted.
2. ***Import Restriction and Export Promotion:*** Imports may be restricted by tariff, quotas, duties, licenses and so on. Exports may be promoted by giving bounties, incentives, tax concessions, advertisement and publicity, cost reduction, quality improvement and the like.

In short, correction of disequilibrium calls for a judicious combination of the following methods:

(i) Monetary and fiscal changes affecting income and prices in the country;

(ii) Exchange rate adjustment, i.e., depreciation or appreciation of the home currency;

(iii) Trade restrictions, i.e., tariffs, quotas, etc.;

(iv) Capital movement, i.e., borrowing or lending abroad; and

(v) Exchange control.

No reliance can be placed on any single tool. There is room for more than one approach and for more than one device. But the application of the tools depends on the nature of the disequilibrium. There are, we have said, three types of disequilibrium: (1) cyclical disequilibrium, (2) secular disequilibrium, (3) structural disequilibrium (at the goods and the factor level). It is more appropriate that fiscal measures should be used to correct cyclical disequilibrium in the balance of payments. To correct structural disequilibrium adjustment in exchange rate should be avoided. Capital movements are needed to offset deep-seated forces in secular disequilibrium.

The main methods of desirable adjustment are, therefore, monetary and fiscal policies which directly affect income, and exchange depreciation (that is, devaluation) which affects prices in the first instance. Devaluation or depreciation of exchange rate can also have income effect through price effects. Monetary and fiscal policies affect relative prices also.

Summary

- The BOP is a statistical account of the transactions between residents of one country and residents of the rest of the world for a period of one year or fraction thereof.
- BOP is divided into 3 accounts: capital account, current account and Official Reserves Account. The current account records the net flow of goods, services and unilateral transfers;
- The capital account records the net flow of FDI in plant, equipment and long-term, short-term portfolio (debt and equity) investment; and The ORA measures changes in the holdings of foreign currency, SDRs and gold by the central bank of a nation.
- The BOP must always equal 0, i.e., balance since it is an accounting identity in a fixed exchange rate system.
- When payments are larger than receipts in international transactions, it is called deficit balance of payments, but when receipts are larger than payments, it is called surplus balance of payments.
- Short-term disturbances like floods, crop failures, drought and so on may raise imports and reduce exports, and Increase in income may lead to more imports and less exports lead to an imbalance in BOP.

- The currency will, therefore, depreciate against other currencies and, in consequence, demand for exports will increase (because they have become cheaper abroad) while demand for imports will fall (because they have become more expensive in the domestic economy).
- The current account balance is the sum of the balance of merchandise trade, services and net transfers received from the rest of the world. The capital account balance is equal to capital flows from the rest of the world, minus capital flows to the rest of the world.

Keywords

- Balance of Payments: Record of all transactions made between one particular country and all other countries during a specified period of time.
- Deficit Balance of Payments: When payments are larger than receipts in international transactions.
- Devaluation: It means an official reduction in the external value of a currency vis-à-vis gold or other currencies.
- Exchange Control: It refers to government regulation of exchange rate as well as restriction on the conversion of local currency into foreign currency.
- Expenditure Switching Policies: It involves policies that cause domestic spending to switch away from imports to home produced goods

SelfAssessment

1. Which of these is not included in the current account of BOP?

A. Expenditure on tourism
B. Expenditure on defense
C. Investment income
D. Government lending's

2. Visible goods are recorded in this part of balance of payments account:

A. Current account
B. Capital account
C. Govt. account
D. Official account

3. BOP must always be equal to:

A. 0
B. 1
C. GDP
D. Government spending

4. .....balance includes the basic balance plus the short-term private non-liquid capital balance.

A. Current account
B. Basic

C. Net liquidity

D. Official settlement

5. ..... disequilibrium is caused by persistent deep-rooted dynamic that slowly takes place in the economy over a long period of time.

A. Cyclical

B. Secular

C. Structural

D. Fundamental

6. Balance in capital account refer to the

A. Nation's net exports of goods and services

B. Nation's net exports of financial claims

C. Nation's net exports of international official reserve assets

D. Nation's sum of net exports of goods, services and financial claims

7. Which of the following are the components of balance of payments?

1. Financial capital transfer

2. External loan and investment

3. Foreign institutional investment

4. Issuing of external bonds

5. Export and imports of goods and services

Select the correct answer using the codes given below:

A. 1, 2, and 3 only

B. 2, 3, and 4 only

C. 1, 4, and 5 only

D. 1, 2, 3, 4, and 5

8. Invisible items in balance of payments include:

A. Foreign remittances

B. Income from tourists

C. Internet charges

D. All the three

9. Which of the following must always balance:

A. Balance of visible trade

B. Balance of invisible trade

C. Balance on the current account

D. Balance of payments

10. Corrective measures to current account deficit may be:

A. Monetary
B. Non-monetary
C. Both A&B
D. None

11. What is a current account deficit?

A. Running a deficit means that there is a net outflow of demand versus the income that comes into a country.
B. This can be thought of as a country "not paying their way".
C. The current account isn't required to balance, because the capital account can run a surplus.
D. All of the above

12. If a country has a balance of payments deficit, this is probably owing to them importing more goods and services than it exports. It will therefore need to borrow from another country to pay for the imports.

A. True
B. False

13. Non-Monetary measures corrective measures to current account deficit include:

A. Tariffs: These are duties placed upon imports.
B. Quotas: A government may fix a permanent amount of a good that may be imported into a country.
C. Export promotion
D. import substitution

14. Monetary measures corrective measures to current account deficit include:

A. Exchange rate depreciation
B. Deflation
C. Exchange control
D. All of the above

15. Which of the following statements is true?

A. The BOP record is maintained in a single-entry book-keeping method.
B. The BOP record is maintained in a double-entry book-keeping method.
C. The BOP record is maintained in a multiple-entry book-keeping method.
D. The BOP record is not maintained systematically.

Answers for Self Assessment

l.	D	2.	A	3.	A	4.	C	5.	B
6.	B	7.	D	8.	D	9.	D	10.	C

11. D 12. A 13. D 14. D 15. B

Review Questions

1. Differentiate between balance of trade and current account balance.

2. What are official reserve transactions? Explain their importance in the balance of payments.

3.Explain the following: (a) The current account, (b) The capital account and, (c) The official reserve account.

4. Distinguish between balance of trade and balance of payments. What information would you get about the economic position of a country from its BOP?

5. Describe the term disequilibrium in balance of payments. State various conscious policy measures to correct this disequilibrium.

6. Support the statement: "It is best to offset a capital account surplus with a current account deficit".

7. 'Technological changes are a major cause of disequilibrium in the balance of payments.' Do you agree? Give suitable arguments to justify your answer.

8. Explain the various measures that can be adopted to correct disequilibrium.

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Unit09:Exchange Rate Determination

CONTENTS

Objectives

- explain meaning of foreign exchange rate
- Understand the purchasing-power parity theory andwhy it does not work in the short run.
- Understand how the monetary and the portfolio balance models of the exchange rate work

Introduction

These theories are based on the monetary approach and the asset market or portfolio balance approach to the balance of payments that have been developed since the late 1960s. These theories view the exchange rate, for the most part, as a purely financial phenomenon. They also seek to explain the great short-run volatility of exchange rates and their tendency to overshoot their long-run equilibrium level, which have often been observed during the past four decades.

These modern exchange rate theories may be distinguished from traditional exchange rate theories which are based on trade flows and help explain exchange rate movements only in the long run or over the years. Since the advent of floating rates in 1973, international financial flows have increased tremendously and are now far larger than trade flows. Therefore, it is only natural that interest shifted toward monetary theories of exchange rate determination. Traditional exchange rate theories are still important, however, especially in explaining exchange rates in the long run.

9.1 Meaning

The foreign exchange rate or exchange rate is the rate at which one currency is exchanged for another. It is the price of one currency in terms of another currency. It is customary to define the exchange rate as the price of one unit of the foreign currency in terms of the domestic currency. The exchange rate between the dollar and the pound refers to the number of dollars required to purchase a pound. Thus the exchange rate between the dollar and the pound from the US view point is expressed as $ 2.50 = £ 1. The Britishers would express it as the number of pounds required to get one dollar, and the above exchange rate would be shown as £ 0.40 = $ 1.

The exchange rate of $ 2.50 = £ 1 or £ 0.40 = $ 1 will be maintained in the world foreign exchange market by arbitrage. Arbitrage refers to the purchase of a foreign currency in a market where its price is low and to sell it in some other market where its price is high. The effect of arbitrage is to

remove differences in the foreign exchange rate of currencies so that there is a single exchange rate in the world foreign exchange market. If the exchange rate is $ 2.48 in the London exchange market and $ 2.50 in the New York exchange market, foreign exchange speculators, known as arbitrageurs, will buy pounds in London and sell them in New York, thereby making a profit of 2 cents on each pound. As a result, the price of pounds in terms of dollars rises in the London market and falls in the New York market.

Ultimately, it will equal in both the markets and arbitrage comes to an end. If the exchange rate between the dollar and the pound rises to $ 2.60 = £ 1 through time, the dollar is said to depreciate with respect to the pound, because now more dollars are needed to buy one pound. When the rate of exchange between the dollar and the pound falls to $ 2.40 = £ 1, the value of the dollar is said to appreciate because now less dollars are required to purchase one pound. If the value of the first currency depreciates that of the other appreciates, and vice versa. Thus a depreciation of the dollar against the pound is the same thing as the appreciation of the pound against the dollar, and vice versa.

9.2 Theories of Foreign Exchange Rate

There are three theories of the determination of foreign exchange rate. The first is the Mint Parity Theory, the second is the Purchasing Power Parity Theory, and the third is the Balance of Payments Theory. We discuss these theories one by one.

The Purchasing Power Parity Theory

The purchasing power parity (PPP) theory was developed by Gustav cassel in 1920 to deter mine the exchange rate between countries on inconvertible paper currencies. The theory states that equilibrium exchange rate between two inconvertible paper currencies is determined by the equality of the relative change in relative prices in the two countries. In other words, the rate of exchange between two countries is determined by their relative price levels. There are two versions of the PPP theory : the absolute and the relative. The absolute version states that the exchange rate between two currencies should be equal to the ratio of the price indexes in the two countries. The formula is $R_{AB} = P_A / P_B$ where R_{AB} is the exchange rate between two countries A and B and P refers to the price index. This version is not used because it ignores transportation costs and other factors which hinder trade, non-traded goods, capital flows and real purchasing power. Economists, therefore, use the relative version which we discuss. The theory can be explained with the help of an example

Suppose India and England are on inconvertible paper standard and by spending Rs. 60, the same bundle of goods can be purchased in India as can be bought by spending £ 1 in England. Thus according to the purchasing power parity theory, the rate of exchange will be Rs. 60 = £ 1. If the price levels in the two countries remain the same but the exchange rate moves to Rs. 50 = £ 1. This means that less rupees are required to buy the same bundle of goods in India as compared to £ 1 in England. It is a case of overvaluation of the exchange rate. This will encourage imports and discourage exports by India. As a result, the demand for pounds will increase and that of rupees will fall. This process will ultimately restore the normal exchange rate of Rs. 60 = £ 1. In the converse case, if the exchange rate moves to Rs. 70 = £ 1, the Indian currency becomes undervalued. As a result, exports are encouraged and imports are discouraged. The demand for rupees will rise and that for pounds will fall so that the normal exchange rate of Rs. 60 = £ 1 will be restored.

According to the theory, the exchange rate between two countries is determined at a point which expresses the equality between the respective purchasing powers of the two currencies. This is the purchasing power parity which is a moving par and not fixed par (as under the gold standard). Thus with every change in price level, the exchange rate also changes. To calculate the equilibrium exchange rate, the following formula is used:

R= (Domestic Price of a Foreign Currency*Domestic price Index)/Foreign price Index

Or $R = R_0 * \frac{P_{A_1}/P_{A_0}}{P_{B_1}/P_{B_0}}$

where 0 = base period, 1 = period 1, A and B countries, P = price index and R0 = exchange rate in base period.

According to cassel, the purchasing power parity is "determined by the quotients of the purchasing powers of the different currencies." This is what the formula does. Let us explain it in terms of our above example. Before the change in the price level, the exchange rate was Rs. 60 = £ 1. Suppose the domestic (Indian) price index rises to 300 and the foreign (England) price index rises to 200, thus the new equilibrium exchange rate will be

R= £1*300/200=£1.5

Rs. 60=£1.5

This will be the purchasing power parity between the two countries. In reality, the parity will be modified by the cost of transporting goods including duties, insurance, banking and other charges. These costs of transporting goods from one country to another are, in fact, the limits within the exchange rate can fluctuate depending upon the demand and supply of a country's currency. There is the upper limit, called the commodity export point; and the lower limit, known as the commodity import point. (These limits are not as definite as the gold points under the mint par theory).

There is an absolute and a relative version of the PPP theory.

Absolute Purchasing-Power Parity Theory

The absolute purchasing-power parity theory postulates that the equilibrium exchange rate between two currencies is equal to the ratio of the price levels in the two nations. Specifically:

R=P/P*

where R is the exchange rate or spot rate and P and P∗ are, respectively, the general price level in the home nation and in the foreign nation. For example, if the price of one bushel of wheat is $1 in the United States and ¤1 in the European Monetary Union, then the exchange rate between the dollar and the pound should be R = $1/¤1 = 1. That is, according to the law of one price, a given commodity should have the same price (so that the purchasing power of the two currencies is at parity) in both countries when expressed in terms of the same currency. If the price of one bushel of wheat in terms of dollars were $0.50 in the United States and $1.50 in the European Monetary Union, firms would purchase wheat in the United States and resell it in the European Monetary Union, at a profit. This commodity arbitrage would cause the price of wheat to fall in the European Monetary Union and rise in the United States until the prices were equal, say $1 per bushel, in both economies (in the absence of obstructions to the flow of trade or subsidies and abstracting from transportation costs). Commodity arbitrage thus operates just as does currency arbitrage in equalizing commodity prices throughout the market.

This version of the PPP theory can be very misleading. There are several reasons for this. First, it appears to give the exchange rate that equilibrates trade in goods and services while completely disregarding the capital account. Thus, a nation experiencing capital outflows would have a deficit in its balance of payments, while a nation receiving capital inflows would have a surplus if the exchange rate were the one that equilibrated international trade in goods and services. Second, this version of the PPP theory will not even give the exchange rate that equilibrates trade in goods and services because of the existence of many nontraded goods and services.

Nontraded goods include products, such as cement and bricks, for which the cost of transportation is too high for them to enter international trade, except perhaps in border areas. Most services, including those of mechanics, hair stylists, family doctors, and many others, also do not enter international trade. International trade tends to equalize the prices of traded goods and services among nations but not the prices of nontraded goods and services. Since the general price level in each nation includes both traded and nontraded commodities, and prices of the latter are not equalized by international trade, the absolute PPP theory will not lead to the exchange rate that equilibrates trade. Furthermore, the absolute PPP theory fails to take into account transportation costs or other obstructions to the free flow of international trade. As a result, the absolute PPP theory cannot be taken too seriously. Whenever the purchasing-power parity theory is used, it is usually in its relative formulation.

Relative Purchasing-Power Parity Theory

The more refined relative purchasing-power parity theory postulates that the change in the exchange rate over a period of time should be proportional to the relative change in the price levels in the two nations over the same time period. Specifically, if we let the subscript 0 refer to the base period and the subscript 1 to a subsequent period, the relative PPP theory postulates that

$R_1=(P_1/P_0)/(P^*_1/P^*_0)*R_0$

where R1 and R0 are, respectively, the exchange rates in period 1 and in the base period.

For example, if the general price level does not change in the foreign nation from the base period to period 1 (i.e., P∗ 1/P∗ 0 = 1), while the general price level in the home nation increases by 50 percent, the relative PPP theory postulates that the exchange rate (defined as the home-currency price of a unit of the foreign nation's currency) should be 50 percent higher (i.e., the home nation's currency should depreciate by 50 percent) in period 1 as compared with the base period.

Note that if the absolute PPP held, the relative PPP would also hold, but when the relative PPP holds, the absolute PPP need not hold. For example, while the very existence of capital flows, transportation costs, other obstructions to the free flow of international trade, and government intervention policies leads to the rejection of the absolute PPP, only a change in these would lead the relative PPP theory astray.

However, other difficulties remain with the relative PPP theory. One of these results from the fact (pointed out by Balassa and Samuelson in 1964) that the ratio of the price of nontraded to the price of traded goods and services is systematically higher in developed nations than in developing nations. The Balassa–Samuelson effect results from labor productivity in traded goods being higher in developed than in developing countries, but about the same in many nontraded goods and services sectors (for example, haircutting). To remain in nontraded goods and services sectors in developed nations, however, labor must receive wages comparable to the high wages in traded-goods sectors. This makes the price of nontraded goods and services systematically higher in developed than in developing nations. For example, the price of a haircut may be $10 in the United States but only $1 in Brazil.

Since the general price index includes the prices of both traded and nontraded goods and services, and prices of the latter are not equalized by international trade but are relatively higher in developed nations, the relative PPP theory will tend to predict overvalued exchange rates for developed nations and undervalued exchange rates for developing nations, with distortions being larger the greater the differences in the levels of development. This has been confirmed by Rogoff (1996) and Choudri and Khan (2005).

Significant structural changes also lead to problems with the relative PPP theory. For example, the PPP theory indicated that the British pound was undervalued (i.e., the exchange rate of the pound was too high) immediately after World War I, when it was obvious that the opposite was the case (and the exchange rate of the pound should have been even higher). The reason was that the United Kingdom had liquidated many of its foreign investments during the war, so that the equilibrium exchange rate predicted by the relative PPP theory (which did not take into consideration the drop in earnings from foreign investments) would have left a large deficit in the U.K. balance of payments after the war.

9.3 Monetary Approach to the Balance of Payments and Exchange Rates

In this section we examine the monetary approach to the balance of payments. This approach was started toward the end of the 1960s by Robert Mundell and Harry Johnson and became fully developed during the 1970s. The monetary approach represents an extension of domestic monetarism (stemming from the Chicago school) to the international economy in that it views the balance of payments as an essentially monetary phenomenon. That is, money plays the crucial role in the long run both as a disturbance and as an adjustment in the nation's balance of payments. We examine the monetary approach under fixed exchange rates, in we look at the monetary approach under flexible exchange rates, we show how exchange rates are determined according to the monetary approach, and then we discuss the effect of expectations on exchange rates.

Monetary Approach under Fixed Exchange Rates

The monetary approach begins by postulating that the demand for nominal money balances is positively related to the level of nominal national income and is stable in the long run. Thus, the equation for the demand for money can be written as:

Md = kPY ----------1)

where Md = quantity demanded of nominal money balances k = desired ratio of nominal money balances to nominal national income P = domestic price level Y = real output

In Equation (1), PY is the nominal national income or output (GDP). This is assumed to be at or to tend toward full employment in the long run. The symbol k is the desired ratio of nominal money balances to nominal national income; k is also equal to 1/V , where V is the velocity of circulation of money or the number of times a dollar turns over in the economy during a year. With V (and thus k) depending on institutional factors and assumed to be constant, Md is a stable and positive function of the domestic price level and real national income. For example, if GDP = PY = $1 billion and V = 5 (so that k = 1/V = 1/5), then Md = (1/5)PY = (1/5)($1 billion) = $200 million. Although not included in Equation (1), the demand for money is also related, but inversely, to the interest rate (i) or opportunity cost of holding inactive money balances rather than interest-bearing securities. Thus, Md is directly related to PY and inversely related to i. (This more complete money demand function is formally presented in the appendix to this chapter.) To simplify the analysis, however, we assume for now that Md is related only to PY , or the nation's nominal GDP, and will work with Equation (1).

On the other hand, the nation's supply of money is given by

$$Ms = m(D + F) \qquad (2)$$

where Ms = the nation's total money supply m = money multiplier D = domestic component of the nation's monetary base F = international or foreign component of the nation's monetary base

The domestic component of the nation's monetary base (D) is the domestic credit created by the nation's monetary authorities or the domestic assets backing the nation's money supply. The international or foreign component of the nation's money supply (F) refers to the international reserves of the nation, which can be increased or decreased through balance-of-payments surpluses or deficits, respectively. D + F is called the monetary base of the nation, or high-powered money. Under a fractional-reserve banking system (such as we have today), each new dollar of D or F deposited in any commercial bank results in an increase in the nation's money supply by a multiple of $1. This is the money multiplier, m, in Equation (2).

For example, a new deposit of $1 in a commercial bank allows the bank to lend (i.e., to create demand deposits for borrowers) $0.80, if the legal reserve requirement (LRR) is 20 percent. The $0.80 lent by the first bank is usually used by the borrower to make a payment and ends up as a deposit in another bank of the system, which proceeds to lend 80 percent of it ($0.64), while retaining 20 percent ($0.16) as reserve. The process continues until the original $1 deposit has become the reserve base of a total of $1.00 + $0.80 + $0.64 + ... = $5 in demand deposits (which are part of the nation's total money supply). The figure of $5 is obtained by dividing the original deposit of $1 by the legal reserve requirement of 20 percent, or 0.2. That is, $1/0.2 = 5 = m. However, due to excess reserves and leakages, the real-world multiplier is likely to be smaller. In what follows, we assume for simplicity that the money multiplier (m) is constant over time.

Starting from a condition of equilibrium where Md = Ms, an increase in the demand for money (resulting, say, from a once-and-for-all increase in the nation's GDP) can be satisfied either by an increase in the nation's domestic monetary base (D) or by an inflow of international reserves, or balance-of-payments surplus (F). If the nation's monetary authorities do not increase D, the excess demand for money will be satisfied by an increase in F. On the other hand, an increase in the domestic component of the nation's monetary base (D) and money supply (Ms), in the face of unchanged money demand (Md), flows out of the nation and leads to a fall in F (a deficit in the nation's balance of payments). Thus, a surplus in the nation's balance of payments results from an excess in the stock of money demanded that is not satisfied by an increase in the domestic component of the nation's monetary base, while a deficit in the nation's balance of payments results from an excess in the stock of the money supply of the nation that is not eliminated by the nation's monetary authorities but is corrected by an outflow of reserves.

For example, an increase in the nation's GNP from $1 billion to $1.1 billion increases Md from $200 million (1/5 of $1 billion) to $220 million (1/5 of $1.1 billion). If the nation's monetary authorities keep D constant, F will ultimately have to increase (a surplus in the nation's balance of payments) by $4 million, so that the nation's money supply also increases by $20 million (the $4 million increase in F times the money multiplier of m = 5). Such a balance-of-payments surplus could be generated from a surplus in the current account or the capital account of the nation. How this surplus arises is not important at this time, except to note that the excess demand for money will lead to a balance-of-payments surplus that increases Ms by the same amount. On the other hand, an

excess in the stock of money supplied will lead to an outflow of reserves (a balance-of-payments deficit) sufficient to eliminate the excess supply of money in the nation.

The nation, therefore, has no control over its money supply under a fixed exchange rate system in the long run. That is, the size of the nation's money supply will be the one that is consistent with equilibrium in its balance of payments in the long run. Only a reserve-currency country, such as the United States, retains control over its money supply in the long run under a fixed exchange rate system because foreigners willingly hold dollars.

To summarize, a surplus in the nation's balance of payments results from an excess in the stock of money demanded that is not satisfied by domestic monetary authorities. On the other hand, a deficit in the nation's balance of payments results from an excess in the stock of money supplied that is not eliminated or corrected by the nation's monetary authorities. The nation's balance-of-payments surplus or deficit is temporary and self-correcting in the long run; that is, after the excess demand for or supply of money is eliminated through an inflow or outflow of funds, the balance-of-payments surplus or deficit is corrected and the international flow of money dries up and comes to an end. Thus, except for a currency-reserve country, such as the United States, the nation has no control over its money supply in the long run under a fixed exchange rate system.

Monetary Approach under Flexible Exchange Rates

Under a flexible exchange rate system, balance-of-payments disequilibria are immediately corrected by automatic changes in exchange rates without any international flow of money or reserves. Thus, under a flexible exchange rate system, the nation retains dominant control over its money supply and monetary policy. Adjustment takes place as a result of the change in domestic prices that accompanies the change in the exchange rate. For example, a deficit in the balance of payments (resulting from an excess money supply) leads to an automatic depreciation of the nation's currency, which causes prices and therefore the demand for money to rise sufficiently to absorb the excess supply of money and automatically eliminate the balance-of-payments deficit.

On the other hand, a surplus in the balance of payments (resulting from an excess demand for money) automatically leads to an appreciation of the nation's currency, which tends to reduce domestic prices, thus eliminating the excess demand for money and the balance-of-payments surplus. Whereas under fixed exchange rates, a balance-of-payments disequilibrium is defined as and results from an international flow of money or reserves (so that the nation has no control over its money supply in the long run), under a flexible exchange rate system, a balance-of-payments disequilibrium is immediately corrected by an automatic change in exchange rates and without any international flow of money or reserves (so that the nation retains dominant control over its money supply and domestic monetary policy).

The actual exchange value of a nation's currency in terms of the currencies of other nations is determined by the rate of growth of the money supply and real income in the nation relative to the growth of the money supply and real income in the other nations. For example, assuming zero growth in real income and the demand for money, as well as in the supply of money, in the rest of the world, the growth in the nation's money supply in excess of the growth in its real income and demand for money leads to an increase in prices and in the exchange rate (a depreciation of the currency) of the nation. Conversely, an increase in the nation's money supply that falls short of the increase in its real income and demand for money tends to reduce prices and the exchange rate (an appreciation of the currency) of the nation. (The actual process by which exchange rates are determined under the monetary approach is examined in the next section.)

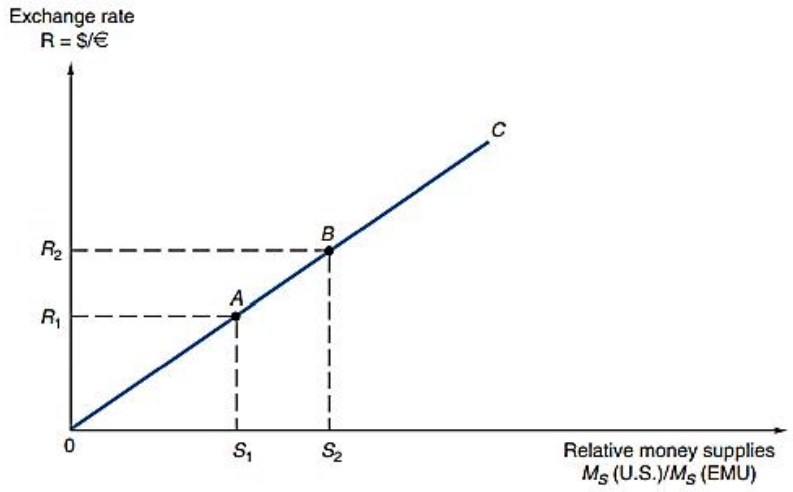

Fig. 1

Thus, according to the monetary approach, a currency depreciation results from excessive money growth in the nation over time, while a currency appreciation results from inadequate money growth in the nation. Put differently, a nation facing greater inflationary pressure than other nations (resulting from more rapid growth of its money supply in relation to the growth in its real income and demand for money) will find its exchange rate rising (its currency depreciating—see Figure 1). On the other hand, a nation facing lower inflationary pressure than the rest of the world will find its exchange rate falling (its currency appreciating). According to global monetarists, the depreciation of the U.S. dollar and the appreciation of the German mark during the 1970s were due to excessive money growth and inflationary pressure in the United States, and to the much smaller rate of money growth and inflationary pressure in Germany than in the rest of the world.

With flexible exchange rates, the rest of the world is to some extent shielded from the monetary excesses of some nations. The nations with excessive money growth and depreciating currencies will now transmit inflationary pressures to the rest of the world primarily through their increased imports rather than directly through the export of money or reserves. This will take some time to occur and will depend on how much slack exists in the world economy and on structural conditions abroad.

Under a managed floating exchange rate system of the type in operation today, the nation's monetary authorities intervene in foreign exchange markets and either lose or accumulate international reserves to prevent an "excessive" depreciation or appreciation of the nation's currency, respectively. Under such a system, part of a balance-of-payments deficit is automatically corrected by a depreciation of the nation's currency, and part is corrected by a loss of international reserves (refer to Figure 14.2). As a result, the nation's money supply is affected by the balance-of-payments deficit, and domestic monetary policy loses some of its effectiveness. Under a managed float, the nation's money supply is similarly affected by excessive or inadequate growth of the money supply in other nations, although to a smaller extent than under a fixed exchange rate system.

Monetary Approach to Exchange Rate Determination

We defined the exchange rate as the domestic currency price of a unit of the foreign currency. With the dollar ($) as the domestic currency and the euro (£) as the foreign currency, the exchange rate (R) was defined as the number of dollars per euro, or R = $/£. For example, if R = $1/£1, this means that one dollar is required to purchase one euro, or if R = $1.20/£1, it would take $1.20 to get one euro. If markets are competitive and if there are no tariffs, transportation costs, or other obstructions to international trade, then according to the law of one price postulated by the purchasing-power parity (PPP) theory, the price of a commodity must be the same in the United States as in the European Monetary Union (EMU). That is, PX ($) = RPX (£). For example, if the price of a unit of commodity X is PX = £1 in the EMU and R = $1.20/£1, then PX = $1.20 in the United States. The same is true for every other traded commodity and for all commodities together (price indices). That is,

$P = RP*$

And

$R=P/P^*$ 3

where R is the exchange rate of the dollar, P is the index of dollar prices in the United States, and P∗ is the index of euro prices in the EMU.

We can show how the exchange rate between the dollar and the euro is determined according to the monetary approach by starting with the nominal demand-for-money function of the United States (Md , from Equation (1)) and for the EMU (M^*_d)

Md = kPY and M ∗ d = k ∗P∗Y ∗

where k is the desired ratio of nominal money balances to nominal national income in the United States, P is the price level in the United States, and Y is real output in the United States, while the asterisked symbols have the same meaning for the EMU.

In equilibrium, the quantity of money demanded is equal to the quantity of money supplied. That is, Md = Ms and M∗ d = M∗ s. Substituting Ms for Md and M∗ s for M∗ d in Equation (1), and dividing the resulting EMU function by the U.S. function, we get

$M^*_s/M_s = k *P*Y */Kpy$ 4

By then dividing both sides of Equation () by P∗/P and M∗ s/Ms we get

P P∗ = Msk∗Y ∗ /M ∗ s k 5

But since R = P/P∗ (from Equation (3)), we have

$R= M_sk^*Y^*/Ms*Ky$ 6

Since k∗ and Y∗ in the EMU and k and Y in the United States are assumed to be constant, R is constant as long as Ms and M∗ s remain unchanged. For example, if k∗Y∗/kY = 0.3 and Ms/M∗ s = 4, then R = $1.20/¤1. In addition, changes in R are proportional to changes in Ms and inversely proportional to changes in M∗ s. For example, if Ms increases by 10 percent in relation to M∗ s, R will increase (i.e., the dollar will depreciate) by 10 percent, and so on.

Exchange Rate Dynamics

1. Exchange Rate Overshooting

We have seen previously that changes in interest rates, expectations, wealth, and so on disturb equilibrium and lead investors to reallocate financial assets to achieve a new equilibrium or balanced portfolio. The adjustment involves a change in the stock of the various financial assets in the portfolio. Having been accumulated over a long period of time, the total stock of financial assets in investors' portfolios in the economy is very large in relation to the yearly flows (additions to the stock) through usual savings and investments. Not only is the total stock of financial assets in investors' portfolios very large at any point in time, but any changes in interest rates, expectations, or other forces that affect the benefits and costs of holding the various financial assets are likely to lead to an immediate or very rapid change in their stock as investors attempt to quickly reestablish equilibrium in their portfolios.

For example, an unanticipated increase in the nation's money supply leads to an immediate decline in the nation's interest rate. If all markets were originally in equilibrium, the decline in the nation's interest rate would lead investors to shift from domestic bonds to money balances and foreign bonds, as explained earlier. This stock adjustment can be very large and usually occurs immediately or over a very short time. This is to be contrasted to a change in the flow of merchandise trade that results from, say, a depreciation of the nation's currency and that takes place only gradually and over a longer period of time. (Previous contracts have to be honored, and new orders may take many months to fill.) Thus, stock adjustments in financial assets are usually much larger and quicker to occur than adjustments in trade flows.

The differences in the size and quickness of stock adjustments in financial assets as opposed to adjustments in trade flows have very important implications for the process by which exchange rates are determined and change (their dynamics) over time. For example, an unexpected increase in the nations' money supply and decline in domestic interest rates are likely to lead to a large and quick increase in the demand for the foreign currency as investors increase their stock of the foreign bond. This, in turn, leads to an immediate and large depreciation of the domestic currency, which is

likely to swamp the smaller and more gradual changes in exchange rates resulting from changes in real markets, such as changes in trade flows. (Of course, the opposite would occur if the money supply increased and the interest rate declined abroad.) To be sure, in the long run, the effect on exchange rates of changes in real markets will prevail, but in the short or very short run (i.e., during the period of a day, week, or month), changes in exchange rates are likely to reflect mostly the effect of stock adjustments in financial assets and expectations. If the real sector responded immediately, as financial sectors do, there would be no exchange rate overshooting.

The preceding analysis can also help explain why, in the short run, exchange rates tend to overshoot or bypass their long-run equilibrium level as they move toward long-run equilibrium. Since adjustments in trade flows occur only gradually over time, most of the burden of adjustment in exchange rates must come from financial markets in the very short and short runs. Thus, the exchange rate must overshoot or bypass its long-run equilibrium level for equilibrium to be quickly reestablished in financial markets. Over time, as the cumulative contribution to adjustment coming from the real (e.g., trade) sector is felt, the exchange rate reverses its movement and the overshooting is eliminated. Exactly how this takes place is shown next.

2. Time Path to a New Equilibrium Exchange Rate

The model that examines the precise sequence of events that leads the exchange rate in the short run to overshoot its long-run equilibrium was introduced by Rudi Dornbusch in 1976 and can be visualized with Figure 15.6. Panel (a) shows that at time t 0 the Fed unexpectedly increases the U.S. money supply by 10 percent, from $100 billion to $110 billion, and keeps it at that higher level. Panel (b) shows that the 10 percent unanticipated increase in the U.S. money supply leads to an immediate decline in the U.S. interest rate—say, from 10 percent to 9 percent at time t0. Panel (c) shows that the 10 percent increase in the U.S. money supply will have no immediate effect on U.S. prices. We assume that U.S. prices are "sticky" and rise only gradually over time until they are 10 percent higher than originally in the long run (from the price index of 100 to 110).

Finally, panel (d) shows that as investors shift from domestic bonds and money balances to foreign bonds and increase their demand of the foreign currency (to purchase more foreign bonds), the exchange rate (R) increases (i.e., the dollar depreciates). The dollar immediately depreciates by more than the 10 percent that is expected in the long run (because of the 10 percent increase in the domestic money supply). Panel (d) shows that R immediately rises (the dollar depreciates) by 16 percent, from $1/¤1 to $1.16/¤1 at time t0. The question is why does the dollar immediately depreciate by more than 10 percent when, according to the PPP theory, we expect it to depreciate only by 10 percent (the same percentage by which the U.S. money supply has increased) in the long run?

To explain this we must go back to the uncovered interest parity (UIP) condition given by Equation (15-8). This postulates that the domestic interest rate (i) is equal to the foreign interest rate (i∗) plus the expected appreciation of the foreign currency (EA). Since we assume (as in the monetary approach) that domestic and foreign bonds are perfect substitutes, there is no risk premium. If we further assume for simplicity that EA equals zero, then the uncovered interest parity condition means that i = i∗ before the increase in the U.S. money supply. But the unanticipated increase in the U.S. money supply leads to a reduction in the U.S. interest rate. Thus, the U.S. interest rate (i) now exceeds the foreign interest rate (i∗), and this must be balanced by the expectation of a future depreciation of the foreign currency (¤) and appreciation of the dollar in order for the condition of uncovered interest parity to be once again satisfied.

The only way that we can expect the dollar to appreciate in the future and still end up with a net depreciation of 10 percent in the long run (to match the 10 percent increase in the U.S. money supply and prices) is for the dollar to immediately depreciate by more than 10 percent. Panel (d) shows that the dollar immediately depreciates (R rises) by 16 percent at time t0 and then gradually appreciates (R falls) by 6 percent (measured from the original base of $1.00) over time (thus removing the overshooting), so as to end up with a net depreciation of only 10 percent in the long run. In other words, after the initial excessive depreciation, the dollar appreciates in order to eliminate its undervaluation. Note also from panel (b) that over time, as U.S. prices rise by 10 percent, the U.S. nominal interest will also gradually rise until it reaches its original level of 10 percent in the long run.

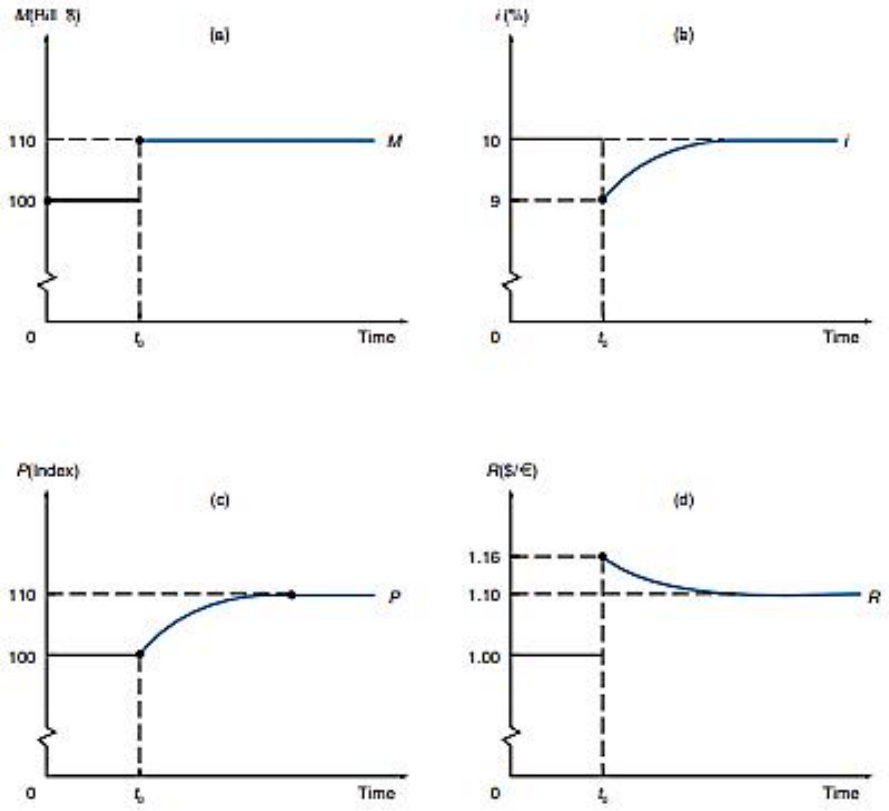

Fig.1 Exchange Rate Overshooting.

It may seem to be a contradiction that the dollar appreciates by 6 percent over time (after its sudden 16 percent depreciation at time t0) at the same time that prices are rising in the United States. But, as shown in panel (d), the dollar appreciation occurs only to remove the excessive depreciation at time t0. Another way to look at this, which also brings trade into the picture, is to realize that the immediate depreciation of the dollar will lead to a gradual increase in the nation's exports and reduction in the nation's imports, which will result (everything else being equal) in an appreciation of the dollar over time. Since we know from the PPP theory that the dollar must depreciate by 10 percent in the long run, the only way to also expect that the dollar will appreciate in the future is for the dollar to immediately depreciate by more than 10 percent as a result of the unexpected 10 percent increase in the U.S. money supply.

Of course, if other disturbances occur before the exchange rate reaches its long-run equilibrium level, the exchange rate will be continually fluctuating, always moving toward its long-run equilibrium level but never quite reaching it. This seems to conform well with the recent real-world experience with exchange rates. Specifically, since 1971, and especially since 1973, exchange rates have been characterized by a great deal of volatility, overshooting, and subsequent correction, but always fluctuating in value.

Summary

Modern exchange rate theories are based on the monetary and the asset market or portfolio balance approaches to the balance of payments and view the exchange rates, for the most part, as a purely financial phenomenon. Traditional exchange rate theories, on the other hand, are based on trade flows and contribute to the explanation of exchange rate movements in the long run. With financial flows now dwarfing trade flows, interest has shifted to modern exchange rate theories, but traditional theories remain important and complement modern theories in the long run. The absolute purchasing-power parity (PPP) theory postulates that the exchange rate between two currencies is equal to the ratio of the price level in the two countries so that a given commodity has the same price in both countries when expressed in terms of the same currency (the law of one price). The more refined relative PPP theory postulates that the change in the exchange rate should be proportional to the change in relative prices in the two nations. The theory has relevance only in

very long-run or in highly inflationary periods. The existence of nontraded goods and structural changes usually leads the theory astray. This has been particularly true since the late 1970s.

According to the monetary approach, the nominal demand for money is stable in the long run and positively related to the level of nominal national income but inversely related to the interest rate. The nation's money supply is equal to its monetary base times the money multiplier. The nation's monetary base is equal to the domestic credit created by its monetary authorities plus its international reserves. Unless satisfied domestically, an excess supply of money in the nation results in an outflow of reserves, or a balance-of-payments deficit under fixed exchange rates and a depreciation of the nation's currency (without any international flow of reserves) under flexible exchange rates. The opposite takes place with an excess demand for money in the nation. Thus, except for a currency-reserve country, such as the United States, the nation has no control over its money supply in the long run under fixed exchange rates but retains control under flexible exchange rates. An increase in the expected rate of inflation in a nation will immediately result in an equal percentage depreciation of the nation's currency. The monetary approach also assumes that the interest differential in favor of the home nation equals the expected percentage appreciation of the foreign country's currency (uncovered interest arbitrage).

Keywords

- Foreign Exchange Market: The market in which currencies are bought and sold.
- Absolute purchasing-powerparity theory: Absolute purchasing power parity (APPP) is the basic PPP theory, which states that once two currencies have been exchanged, a basket of goods should have the same value.
- Purchasing-power parity (PPP) theory: Purchasing power parity (PPP) is the idea that goods in one country will cost the same in another country, once their exchange rate is applied.
- Balance of Payment: The balance of payments (BOP) is a statement of all transactions made between entities in one country and the rest of the world over a defined period of time
- Monetary Approach : The monetary approach, given the above assumptions, holds that the excess of money supply over money demand reflects the balance of payments deficit.

SelfAssessment

1. Theory of purchasing power parity …….
A. neglects capital account transactions,
B. includes transportation cost,
C. includes prices of non- traded goods,
D. applies only in shortrun

2. Purchasing Power Parity Theory was propounded by . …….
A. (Gustav Cassel,
B. David Ricardo,
C. Adam Smith,
D. None of the above)

3. Equilibrium exchange rate is determined when ……..
A. the demand curve for foreign currency intersects with supply curve,
B. demand curve shifts upwards,
C. supply curves slopes downwards,
D. none of the above

4. Exchange rate between two currencies is based on …….
A. purchasing power of two currencies,
B. economic development of the two nations,
C. political stability in the two countries,
D. none of the above

5. PPP Theory considers that goods in different countries are ……
A. Identical,
B. differential,
C. superior,
D. none of the above

6. PPP Theory ignores capital flows on account of …….
A. capital account,
B. trade account,
C. current account,
D. none of the above

7. The Purchasing Power Parity (PPP) theory is a good predictor of
A. the long-run tendencies between changes in the price level and the exchange rate of two countries
B. interest rate differentials between two countries when there are strong barriers preventing trade between the two countries
C. either b or c
D. none of the above

8. According to the Purchasing Power Parity (PPP) theory,
A. Exchange rates between two national currencies will adjust daily to reflect price level differences in the two countries
B. In the long run, inflation rates in different countries will equalize around the world
C. In the long run, the exchange rates between two national currencies will reflect price level differences in the two countries
D. None of the above

9.If purchasing power parity were to hold even in the short run, then:
A. real exchange rates should tend to decrease over time;
B. quoted nominal exchange rates should be stable over time.
C. real exchange rates should tend to increase over time;
D. real exchange rates should be stable over time;

10. According to the Purchasing Power Parity theory, the value of a currency should remain constant in terms of what it can buy in different countries of
A. Bonds
B. Stocks

C. Goods
D. Labor

11. The exchange rate is the
A. total yearly amount of money changed from one country's currency to another country's currency
B. total monetary value of exports minus imports
C. amount of country's currency which can exchanged for one ounce of gold
D. price of one country's currency in terms of another country's currency

12. Exchange rates
A. are always fixed
B. fluctuate to equate the quantity of foreign exchange demanded with the quantity supplied
C. fluctuate to equate imports and exports
D. fluctuate to equate rates of interest in various countries

13. India's foreign exchange rate system is _____
A. Fixed target of band
B. Free float
C. Fixed system
D. Managed float

14. Who determines foreign exchange rates in India?
A. RBI
B. FEDAI
C. market forces of demand and supply
D. finance ministry of India

15. If purchasing power parity were to hold even in the short run, then:
A. real exchange rates should tend to decrease over time;
B. quoted nominal exchange rates should be stable over time.
C. real exchange rates should tend to increase over time;
D. real exchange rates should be stable over time;

Answer for Self Assessment

l.	A	2.	A	3.	A	4.	A	5.	A
6.	A	7.	A	8.	C	9.	D	10.	C
11.	D	12.	B	13.	D	14.	C	15.	D

Review Questions

1. Which are the modern and the traditional exchange rate theories? What distinguishes them? What is the relevance of each? What is the relationship between them?
2. What is the purchasing-power parity theory? What are its uses? What is the absolute purchasing-power parity theory? Why is this not acceptable?
3. What is the relative purchasing-power parity theory? Do empirical tests confirm or reject the relative purchasing-power parity theory?
4. How does the monetary approach explain the process by which a balance-of-payments disequilibrium is corrected under a flexible exchange rate system? How does this differ from the case of fixed exchange rates?
5. Explain the exchange rate trends of the Rupee since 1993?
6. What are foreign exchange markets? What is their most important function? How is this function performed?
7. What is meant by a spot transaction and the spot rate? a forward transaction and the forward rate? What is meant by a forward discount? forward premium? What is a currency swap? What is a foreign exchange futures? a foreign exchange option?
8. What is meant by foreign exchange risk? How can foreign exchange risks be covered in the spot, forward, futures, or options markets? Why does hedging not usually take place in the spot market?
9. What is meant by speculation? How can speculation take place in the spot, forward, futures, or options markets? Why does speculation not usually take place in the spot market? What is stabilizing speculation? destabilizing speculation?
10. Explain the working of spot and forward exchange markets.
11. Write notes on : hedging, speculation.

Further Readings

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Unit10:Foreign Exchange Markets

CONTENTS

Objectives

- explain meaning of foreign exchange market
- discuss various types of exchange transaction quotations md rates prevailing in foreign exchange markets
- describe the functions of the foreign exchange ma&% and the role of its participants

Introduction

International trade and investment create need for buying, selling borrowing and lending foreign currencies Let us take an example, an exporter in Japan sells goods to a customer in the U.K. The sale will be priced in Yen, Sterling or perhaps a third currency such as U.S. dollar.

a) If the sale is priced in Yen, the U.K. customer will purchase Yen with Sterling in order to make payment.

b) If the sale price is in Sterling, the Japanese supplier will normally wish to convert the receipts into domestic currency yen^ to meet operating expenses in Japan, and will sell Sterling in exchange for Yen.

c) If the sale price is in a third currency, such as US dollars, the customer will buy dollars in exchange for Sterling to. make the payment and supplier will then sell the dollars in exchange for Yen.

Sometimes, international trade transactions do not result in the sale or purchase of foreign currency because companies set-off foreign currency receipts against foreign exchange payments. However. buying and selling, borrowing and lending foreign currencies an common activities which support international trade and investment. These activities an undertaken in the financial markets called foreign exchange markets. As student of International Business Operations, it is thus important for you to know the terminology operations and mechanisms of foreign exchange markets. In this unit, you will learn about the meaning of foreign exchange market and its functions, types of transactions made and the rates used in this market. You will also learn about the operations and dynamics of Indian foreign exchange market

10.1 Meaning

Foreign exchange in short form is called Forex. The foreign exchange market or forex market is the market where one currency is exchanged or traded for another currency. Forex markets are also called foreign currency or just currency markets. There are domestic and international foreign currency markets. Domestic foreign currency markets serve the foreign currency buying, selling, borrowing and lending needs of residents whereas international markets serve non-residents also. Much of the foreign currency lending and borrowing take place in the Euromarkets.

Currencies are also traded in other forms as "derivative contracts" such as currency swaps, options and futures. These are more sophisticated instruments for trading in foreign currencies. You will study about them in the following units in this block.

10.2 Functions

As you know in the past most of the financial markets had a physical centre or say trading floor, where dealers met to transact their trade by "out- cry" method. But things have changed for many of the markets in many countries. Floor trading has been replaced by screen trading, meaning trades are made through the network of telephone and computers from dealers' dealing rooms. Foreign exchange markets have led this trend.

Despite its lack of a physical centre, the forex market is still a market, in the sense that it is a system for bringing buyers and sellers together and for supplying information's about prices and trading activity to participants. 'The dealers responsible for setting prices at which their banks will exchange currencies must have access to the latest prices in the market. This information is provided constantly by computer networks and brokers. Thus, forex market performs very useful functions. The global foreign exchange market has established three principle (major) dealing centers, each operating with a specific time zone: London, New York and Tokyo. London is the main forex market centre.

1. Players

There are various participants in the foreign exchange market. The major participants are commercial banks which act as a clearing house between users and earners of foreign exchange. The banks also deal with foreign exchange brokers. These brokers act as a middleman for a fee between banks. The investors, exporters, importers and tourists also participate in the market. They are users and suppliers of foreign currencies.

Nation's central bank acts as the lender or buyer of last resort when the nation's total foreign exchange earnings are not equal to expenditures. In that case the central bank either draws down its foreign exchange reserves or adds to them.

Most foreign exchange trading is conducted between banks. Non-financial companies wishing to make foreign currency transactions will either deal with a bank or within the same group in case companies have internal procedures for inter-company currency trading

Major international banks trade in many currencies from offices in several countries. Other banks specialize in certain currencies. A bank will want to be a major dealer in a particular currency in any country, if its trading profits are sufficient to support the cost of its dealing operation. The Bank employ a dealer(or dealers) with responsibility for fixing the exchange rates (price) at which the bank will buy or sell Foreign Exchange Markets the currency at any time. Trading profits represent the difference between selling (offer or ask) and buying (bid) prices. We will discuss more about bid-offer prices a little later. Exchange rate movements occur because dealers must continuously adjust their prices to match buying and selling pressures.

2. Currencies Commonly Traded

The US dollar is the most heavily traded currency in the international forex markets. It indicates : a) The role of the dollar as the favored currency of major energy and agricultural commodities b) The power of the US economy and its central role in the . world economy and c) The dollar's status on the traditional reserve' currency and a safe heaven for investors in the times of world crises.

In recent years, world wide trading in Yen and Deutsche Mark has increased in volume and these currencies have begun to challenge the supremacy of the dollar. Euro, the currency of European Union or Euroland, is aimed to challenge the supremacy of US dollar, though the experience till

now does not bear any such sign. Every currency is quoted against dollar and most currency transactions included the dollars as one of the two constituent currencies.

Most non-dollars transactions are called 'cross currency' deals and involve two transactions, a purchase and a sale transaction in exchange for dollars. An 1NWFrench Franc exchange, for example, would be a cross-currency deal, involving the bank in two transactions INR/Dollar and Dollar/French Franc.

	Cross-Currency Deal	
Purpose is	Sell Currency A and Buy Currency B	
Effected by	Sell Currency A Buy US Dollars	Sell US Dollars Buy Currency B

If a bank wants to purchase of a large quantity of French francs in exchange for Sterling, it would sell Sterling and purchase French francs for US dollars in two separate transactions.

3. Trading Hours

The trading hours of the three major foreign exchange markets virtually span 24 hours, expressed in local time, are

London	8.00	16.30
New York	8.30	16.30
Tokyo	8.00	17.30

Allowing for the five-hours time lag between London and New York and nine hours between Tokyo and London, the effective opening hours in UK time (GMT) are virtually round the clock. As one major forex market closes for the day, trading will switch to another centre. For banks and other organisations, with heavy involvement in the forex markets, buying and selling currencies can be done virtually round the clock.

Foreign Exchange Rates

The foreign exchange rate or exchange rate is the rate at which one currency is exchanged for another. It is the price of one currency in terms of another currency. It is customary to define the exchange rate as the price of one unit of the foreign currency in terms of the domestic currency. The exchange rate between the dollar and the pound refers to the number of dollars required to purchase a pound. Thus, the exchange rate between the dollar and the pound from the US view point is expressed as $ 2.50 = £ 1. The Britishers would express it as the number of pounds required to get one dollar, and the above exchange rate would be shown as £ 0.40 = $ 1.

The exchange rate of $ 2.50 = £ 1 or £ 0.40 = $ 1 will be maintained in the world foreign exchange market by arbitrage. Arbitrage refers to the purchase of a foreign currency in a market where its price is low and to sell it in some other market where its price is high. The effect of arbitrage is to remove differences in the foreign exchange rate of currencies so that there is a single exchange rate in the world foreign exchange market. If the exchange rate is $ 2.48 in the London exchange market and $ 2.50 in the New York exchange market, foreign exchange speculators, known as arbitrageurs, will buy pounds in London and sell them in New York, thereby making a profit of 2 cents on each pound. As a result, the price of pounds in terms of dollars rises in the London market and falls in the New York market.

Ultimately, it will equal in both the markets and arbitrage comes to an end. If the exchange rate between the dollar and the pound rises to $ 2.60 = £ 1 through time, the dollar is said to depreciate with respect to the pound, because now more dollars are needed to buy one pound. When the rate of exchange between the dollar and the pound falls to $ 2.40 = £ 1, the value of the dollar is said to appreciate because now less dollars are required to purchase one pound. If the value of the first currency depreciates that of the other appreciates, and vice versa. Thus, a depreciation of the dollar

against the pound is the same thing as the appreciation of the pound against the dollar, and vice versa.

Spot and Forward Rates, Currency Swaps, Futures, and Options

Interbank transactions are where two banks trade currencies between themselves. Banks buy and sell huge quantities of foreign currencies. They also accept currency deposits and lend in foreign currency.

Spot Transactions

A spot transaction is a contract to buy or sell a quantity of a foreign currency for immediate settlement. Immediate settlement as per convention of forex market means two working days from the date of contract. The settlement date is also known as 'value date'. The exchange rate for a spot transaction is known as the 'spot rate' and the market where spot 'transactions are conducted is called spot market.

Value Date and Dealing Date for Spot Transactions

As noted above, spot transactions traditionally require two banking day's for settlement. The date on which the spot transaction (agreement) is made is called 'dealing date' and the exchange of currencies will occur two working days after the dealing date. Settlement date is known as 'spot value date', this is the day when the exchanged currencies are delivered with good value into the (bank) accounts of the counter-parties to the transaction. This allows time for necessary paper work and cash transfers to be arranged. These arrangements consist of the verification of the transaction, through an exchange of confirmation, between the counter parties detailing the terms of the deal, the issue of settlement instructions by each counter party to its bank to pay the amount on the appointed date and satisfying exchange control requirements, if any.

When one counter party is a bank, payment may be made by its own branches or by another bank acting as an agent. The actual transfers of funds will be carried out on the value date.

Working days do not include Saturdays, Sundays or bank holidays in either of the countries of the two currencies involved.

To take an example, a spot deal transacted on a Tuesday will be settled on the Thursday of the same week and a deal agreed on a Friday will be settled on the following Tuesday. But there are some exceptions. For example :

A transaction for US dollar against Canadian dollars is often for delivery on the next working day. Forex market in the Middle East are closed on Fridays but open on Saturdays. A transaction involving the exchange of US dollars and Saudi riyals could therefore have a split settlement date, with US dollar delivered on the Friday and the riyals delivered on the Saturday.

There are over night (Om) contracts also available in forex markets.

Interbank Spot Rates

Interbank spot rates are the current selling and buying prices for spot transactions in a currency. These are the benchmark rates for trade transactions. They are used for foreign currency transactions above a certain size. They also provide the basis for an exchange rate for transactions of smaller size.

For example, if a company wishes to buy US$ 5 million spot, its bank will quote the current interbank spot rate for the transaction. However, if the company wished to buy a smaller quantity of dollars; say $ 50,000, the bank would quote a rate less favourable to the customer (although based on interbank rate) in order to obtain a reasonable profit from a relatively small transaction.

The minimum transaction size at which a bank will be willing to deal at the interbank spot rates varies with currencies and individual banks.

Spot rates are quoted as one unit of base currency against a number of units of variable Management currency. Quoted rates are therefore, the rates at which a bank will buy or sell the

base currency: e.g. Pound E 1 = $1.4705 or $1 = Y 1.66.5 10. The spot rates are published in daily newspapers. There are two spot rates for a currency, namely, Bid Rate and Offer (or Ask) Rate.

Forward Transactions

Currency can be traded spot or forward. In a spot transaction, the purchase or sale of currencies takes place for settlement two working days later. With a forward transaction, the purchase or sale is agreed now but will take place at sometime in the future, there by fixing the rate now for a future exchange of currencies. Forward transactions are -- forward exchange contracts (or forward contract). The rate at which forward transactions contracted in the present for future delivery of foreign currency is the forward rate. The market where purchase and sales of currencies are contracted in the present for receipt and delivery in future is called forward market.

Forward Quotation

As you know, the forward rate is the rate quoted by foreign-exchange traders for the purchase or sale of foreign exchange in the future. There is a difference between the spot rate and the forward rate known as the 'spread' or swap rate in the forward market. In order to understand how spot and forward rates are determined, let us now understand how to calculate the spread between the spot and forward rates. In the example given below, we compute the points, or the difference between the spot and forward rates, for a 3 months contract for the Canadian dollar and the Japanese ym quoted in US terms.

	Canadian Dollars	Japanese Yen
Spot	$0.8590	$0.00760
3 months forward	0.8510	0.00762
Points	-80	+2

The spread in Canadian dollars is 80 points; because the forward rate is less than 'the Foreign Exchange Markets spot rate, the Canadian dollar is at a discount in the 3 months forward market. The spread in Japanese yen is only 2 points, and since the forward rate is more than the spot rate, the yen is at a premium in the forward market. Thus, we can say that a foreign currency is at a forward discount if the forward rate is below the spot rate whereas it is at forward premium if the forward rate is above the spot rate.

The premium or discount can also be quoted in terms of annualized per cent. The following fonnula can be used to determine the annualized percentage.

Premium (discount)= $(F_1-S_1)/S_1*12/N*100$

Where F, is the forward rate on the day the contract is entered into, S, is the spot rate on that day, N is the number of months forward, and 100 is used to convert the decimal to per cent amounts (e.g., 0.05 x 100 = 5%).

Discount = (0.8510-.8590)/.8590*12/3*100=3.725%

which means that the Canadian dollar is selling at a discount of 3.725 per cent under the spot rate. Lets work out forward premium rate for yen, in our example:

Premium = (0.00760-0.00762)/0.00760*12/3*100=1.05%

10.3 Foreign Exchange Swaps

A foreign exchange swap refers to a spot sale of a currency combined with a forward repurchase of the same currency—as part of a single transaction. For example, suppose that Citibank receives a $1 million payment today that it will need in three months, but in the meantime it wants to invest this sum in euros. Citibank would incur lower brokerage fees by swapping the $1 million into euros with Frankfurt's Deutsche Bank as part of a single transaction or deal, instead of selling dollars for euros in the spot market today and at the same time repurchasing dollars for euros in the forward market for delivery in three months—in two separate transactions. The swap rate (usually expressed on a yearly basis) is the difference between the spot and forward rates in the currency swap.

Most interbank trading involving the purchase or sale of currencies for future delivery is done not by forward exchange contracts alone but combined with spot transactions in the form of foreign exchange swaps. In April 2010, there were $1,765 billion worth of foreign exchange swaps outstanding. These represented 44 percent of total interbank currency trading. Spot transactions were $1,490 billion or 37 percent of the total. Thus, the foreign exchange market is dominated by the foreign exchange swap and spot markets.

10.4 Foreign Exchange Futures and Options

An individual, firm, or bank can also purchase or sell foreign exchange futures and options. Trading in foreign exchange futures was initiated in 1972 by the International Monetary Market (IMM) of the Chicago Mercantile Exchange (CME). A foreign exchange futures is a forward contract for standardized currency amounts and selected calendar dates traded on an organized market (exchange). The currencies traded on the IMM are the Japanese yen, the Canadian dollar, the British pound, the Swiss franc, the Australian dollar, the Mexican peso, and the euro. International Monetary Market trading is done as contracts of standard size. For example, the IMM Japanese yen contract is for ¥12.5 million, the Canadian dollar contract is for C$100,000, the pound contract is for £62,500, and the euro contract is for ¤125,000. Only four dates per year are available: the third Wednesday in March, June, September, and December (see Case Study 14-4). The IMM imposes a daily limit on exchange rate fluctuations. Buyers and sellers pay a brokerage commission and are required to post a security deposit or margin (about 4 percent of the value of the contract). A market similar to the IMM is the NYSE Euronext Liffe and the Frankfurt-based Eurex.

The futures market differs from a forward market in that in the futures market only a few currencies are traded; trades occur in standardized contracts only, for a few specific delivery dates, and are subject to daily limits on exchange rate fluctuations; and trading takes place only in a few geographical locations, such as Chicago, New York, London, Frankfurt, and Singapore. Futures contracts are usually for smaller amounts than forward contracts and thus are more useful to small firms than to large ones but are somewhat more expensive. Futures contracts can also be sold at any time up until maturity on an organized futures market, while forward contracts cannot. While the market for currency futures is small compared with the forward market, it has grown very rapidly, especially in recent years. (The value of currency futures outstanding was about $475 billion in April 2010). The two markets are also connected by arbitrage when prices differ.

Since 1982, individuals, firms, and banks have also been able to buy foreign exchange options (in Japanese yen, Canadian dollars, British pounds, Swiss francs, and euros) on the Philadelphia Stock Exchange, the Chicago Mercantile Exchange (since 1984), or from a bank. A foreign exchange option is a contract giving the purchaser the right, but not the obligation, to buy (a call option) or to sell (a put option) a standard amount of a traded currency on a stated date (the European option) or at any time before a stated date (the American option) and at a stated price (the strike or exercise price). Foreign exchange options are in standard sizes equal to those of futures IMM contracts. The buyer of the option has the choice to purchase or forego the purchase if it turns out to be unprofitable. The seller of the option, however, must fulfill the contract if the buyer so desires. The buyer pays the seller a premium (the option price) ranging from 1 to 5 percent of the contract's value for this privilege when he or she enters the contract. About $207 billion of currency options were outstanding in April 2010.

In contrast, neither forward contracts nor futures are options. Although forward contracts can be reversed (e.g., a party can sell a currency forward to neutralize a previous purchase) and futures contracts can be sold back to the futures exchange, both must be exercised (i.e., both contracts must be honored by both parties on the delivery date). Thus, options are less flexible than forward contracts, but in some cases they may be more useful. For example, an American firm making a bid to take over an EMU firm may be required to promise to pay a specified amount in euros. Since the American firm does not know if its bid will be successful, it will purchase an option to buy the euros that it would need and will exercise the option if the bid is successful. Case Study 14-4 gives the average daily distribution of global foreign exchange market turnover by instrument, by currency, and by geographical location.

10.5 Foreign Exchange Risks, Hedging, and Speculation

Foreign Exchange Risks

Through time, a nation's demand and supply curves for foreign exchange shift, causing the spot (and the forward) rate to vary frequently. A nation's demand and supply curves for foreign exchange shift over time as a result of changes in tastes for domestic and foreign products in the nation and abroad, different growth and inflation rates in different nations, changes in relative rates of interest, changing expectations, and so on.

For example, if U.S. tastes for EMU products increase, the U.S. demand for euros increases (the demand curve shifts up), leading to a rise in the exchange rate (i.e., a depreciation of the dollar). On the other hand, a lower rate of inflation in the United States than in the European Monetary Union leads to U.S. products becoming cheaper for EMU residents. This tends to increase the U.S. supply of euros (the supply curve shifts to the right) and causes a decline in the exchange rate (i.e., an appreciation of the dollar). Or simply the expectation of a stronger dollar may lead to an appreciation of the dollar. In short, in a dynamic and changing world, exchange rates frequently vary, reflecting the constant change in the numerous economic forces simultaneously at work.

Hedging

Hedging refers to the avoidance of a foreign exchange risk, or the covering of an open position. For example, the importer of the previous example could borrow ¤100,000 at the present spot rate of SR = $1/¤1 and leave this sum on deposit in a bank (to earn interest) for three months, when payment is due. By so doing, the importer avoids the risk that the spot rate in three months will be higher than today's spot rate and that he or she would have to pay more than $100,000 for the imports. The cost of insuring against the foreign exchange risk in this way is the positive difference between the interest rate the importer has to pay on the loan of ¤100,000 and the lower interest rate he or she earns on the deposit of ¤100,000. Similarly, the exporter could borrow ¤100,000 today, exchange this sum for $100,000 at today's spot rate of SR = $1/¤1, and deposit the $100,000 in a bank to earn interest. After three months, the exporter would repay the loan of ¤100,000 with the payment of ¤100,000 he or she receives. The cost of avoiding the foreign exchange risk in this manner is, once again, equal to the positive difference between the borrowing and deposit rates of interest.

Covering the foreign exchange risk in the spot market as indicated above has a very serious disadvantage, however. The businessperson or investor must borrow or tie up his or her own funds for three months. To avoid this, hedging usually takes place in the forward market, where no borrowing or tying up of funds is required. Thus, the importer could buy euros forward for delivery (and payment) in three months at today's three-month forward rate. If the euro is at a three-month forward premium of 4 percent per year, the importer will have to pay $101,000 in three months for the ¤100,000 needed to pay for the imports. Therefore, the hedging cost will be $1,000 (1 percent of $100,000 for the three months). Similarly, the exporter could sell pounds forward for delivery (and payment) in three months at today's three-month forward rate, in anticipation of receiving the payment of ¤100,000 for the exports. Since no transfer of funds takes place until three months have passed, the exporter need not borrow or tie up his or her own funds now. If the euro is at a three-month forward discount of 4 percent per year, the exporter will get only $99,000 for the ¤100,000 he or she delivers in three months. On the other hand, if the euro is at a 4 percent forward premium, the exporter will receive $101,000 in three months with certainty by hedging.

A foreign exchange risk can also be hedged and an open position avoided in the futures or options markets. For example, suppose that an importer knows that he or she must pay ¤100,000 in three months and the three-month forward rate of the pound is FR = $1/¤1. The importer could either purchase the ¤100,000 forward (in which case he or she will have to pay $100,000 in three months and receive the ¤100,000) or purchase an option to purchase ¤100,000 in three months, say at $1/¤1, and pay now the premium of, say, 1 percent (or $1,000 on the $100,000 option). If in three months the spot rate of the pound is SR = $0.98/¤1, the importer would have to pay $100,000 with the forward contract, but could let the option expire unexercised and get the ¤100,000 at the cost of only $98,000 on the spot market. In that case, the $1,000 premium can be regarded as an insurance policy and the importer will save $2,000 over the forward contract.

In a world of foreign exchange uncertainty, the ability of traders and investors to hedge greatly facilitates the international flow of trade and investments. Without hedging there would be smaller international capital flows, less trade and specialization in production, and smaller benefits from trade. Note that a large firm, such as a multinational corporation, that has to make and receive a large number of payments in the same foreign currency at the same time in the future need only hedge its net open position. Similarly, a bank has an open position only in the amount of its net balance on contracted future payments and receipts in each foreign currency at each future date. The bank closes as much of its open positions as possible by dealing with other banks (through foreign exchange brokers), and it may cover the remainder in the spot, futures, or options markets.

Speculation

Speculation is the opposite of hedging. Whereas a hedger seeks to cover a foreign exchange risk, a speculator accepts and even seeks out a foreign exchange risk, or an open position, in the hope of making a profit. If the speculator correctly anticipates future changes in spot rates, he or she makes a profit; otherwise, he or she incurs a loss. As in the case of hedging, speculation can take place in the spot, forward, futures, or options markets—usually in the forward market. We begin by examining speculation in the spot market.

If a speculator believes that the spot rate of a particular foreign currency will rise, he or she can purchase the currency now and hold it on deposit in a bank for resale later. If the speculator is correct and the spot rate does indeed rise, he or she earns a profit on each unit of the foreign currency equal to the spread between the previous lower spot rate at which he or she purchased the foreign currency and the higher subsequent spot rate at which he or she resells it. If the speculator is wrong and the spot rate falls instead, he or she incurs a loss because the foreign currency must be resold at a price lower than the purchase price.

If, on the other hand, the speculator believes that the spot rate will fall, he or she borrows the foreign currency for three months, immediately exchanges it for the domestic currency at the prevailing spot rate, and deposits the domestic currency in a bank to earn interest. After three months, if the spot rate on the foreign currency is lower, as anticipated, the speculator earns a profit by purchasing the currency (to repay the foreign exchange loan) at the lower spot rate. (Of course, for the speculator to earn a profit, the new spot rate must be sufficiently lower than the previous spot rate to also overcome the possibly higher interest rate paid on a foreign currency deposit over the domestic currency deposit.) If the spot rate in three months is higher rather than lower, the speculator incurs a loss.

In both of the preceding examples, the speculator operated in the spot market and either had to tie up his or her own funds or had to borrow to speculate. It is to avoid this serious shortcoming that speculation, like hedging, usually takes place in the forward market. For example, if the speculator believes that the spot rate of a certain foreign currency will be higher in three months than its present three-month forward rate, the speculator purchases a specified amount of the foreign currency forward for delivery (and payment) in three months. After three months, if the speculator is correct, he or she receives delivery of the foreign currency at the lower agreed forward rate and immediately resells it at the higher spot rate, thus realizing a profit. Of course, if the speculator is wrong and the spot rate in three months is lower than the agreed forward rate, he or she incurs a loss. In any event, no currency changes hands until the three months are over (except for the normal 10 percent security margin that the speculator is required to pay at the time he or she signs the forward contract). As another example, suppose that the three-month forward rate on the euro is FR = $1.01/£1 and the speculator believes that the spot rate of the euro in three months will be SR = $0.99/£1. The speculator then sells euros forward for delivery in three months. After three months, if the speculator is correct and the spot rate is indeed as anticipated, he or she purchases euros in the spot market at SR = $0.99/£1 and immediately resells them to fulfill the forward contract at the agreed forward rate of $1.01/£1, thereby earning a profit of 2 cents per euro. If the spot rate in three months is instead SR = $1.00/£1, the speculator earns only 1 cent per euro. If the spot rate in three months is $1.01/£1, the speculator earns nothing. Finally, if the spot rate in three months is higher than the forward rate at which the speculator sold the forward euros, the speculator incurs a loss on each euro equal to the difference between the two rates.

As an alternative, the speculator (who believes that the euro will depreciate) could have purchased an option to sell a specific amount of euros in three months at the rate of, say, $1.01/£1. If the speculator is correct and the spot rate of the euro in three months is indeed $0.99/£1 as anticipated, he or she will exercise the option, buy euros in the spot market at $0.99/£1, and receive $1.01/£1 by exercising the option. By so doing, the speculator earns 2 cents per euro (from which he or she deducts the premium or the option price to determine the net gain). In this case, the result will be the same as with the forward contract, except that the option price may exceed the commission on the forward contract so that his or her net profit with the option may be a little less. On the other hand, if the speculator is wrong and the spot rate of the euro is much higher than expected after three months, he or she will let the option contract expire unexercised and incur only the cost of the premium or option price. With the forward contract, the speculator would have to honor his or her commitment and incur a much larger loss.

When a speculator buys a foreign currency on the spot, forward, or futures market, or buys an option to purchase a foreign currency in the expectation of reselling it at a higher future spot rate, he or she is said to take a long position in the currency. On the other hand, when the speculator

borrows or sells forward a foreign currency in the expectation of buying it at a future lower price to repay the foreign exchange loan or honor the forward sale contract or option, the speculator is said to take a short position (i.e., the speculator is now selling what he or she does not have).

Speculation can be stabilizing or destabilizing. Stabilizing speculation refers to the purchase of a foreign currency when the domestic price of the foreign currency (i.e., the exchange rate) falls or is low, in the expectation that it will soon rise, thus leading to a profit. Or it refers to the sale of the foreign currency when the exchange rate rises or is high, in the expectation that it will soon fall. Stabilizing speculation moderates' fluctuations in exchange rates over time and performs a useful function.

On the other hand, destabilizing speculation refers to the sale of a foreign currency when the exchange rate falls or is low, in the expectation that it will fall even lower in the future, or the purchase of a foreign currency when the exchange rate is rising or is high, in the expectation that it will rise even higher in the future. Destabilizing speculation thus magnifies exchange rate fluctuations over time and can prove very disruptive to the international flow of trade and investments. Whether speculation is primarily stabilizing or destabilizing is a very important question, to which we return in Chapter 16, when we analyze in depth the operation of a flexible exchange rate system, and in Chapter 20, when we compare the operation of a flexible exchange rate system with that of a fixed exchange rate system. In general, it is believed that under "normal" conditions speculation is stabilizing, and we assume so here.

Speculators are usually wealthy individuals or firms rather than banks. However, anyone who has to make a payment in a foreign currency in the future can speculate by speeding up payment if he or she expects the exchange rate to rise and delaying it if he or she expects the exchange rate to fall, while anyone who has to receive a future payment in a foreign currency can speculate by using the reverse tactics. For example, if an importer expects the exchange rate to rise soon, he or she can anticipate the placing of an order and pay for imports right away. On the other hand, an exporter who expects the exchange rate to rise will want to delay deliveries and extend longer credit terms to delay payment. These are known as leads and lags and are a form of speculation.

In recent years, a number of huge losses have been incurred by speculating on the movement of exchange rates. One of the most spectacular was the case of Showaka Shell Sekiyu, a Japanese oil refiner and distributor 50 percent owned by Royal Dutch Shell. From 1989 until 1992, the finance department of Showaka bet $6.44 billion worth in the futures market that the dollar would appreciate. When the dollar depreciated (and the yen appreciated—see Figure 14.3) instead, Showaka lost $1.37 billion. More recently, there was the five-year $750 million cumulative foreign exchange loss by John Rusnak of Allfirst Bank, the U.S. subsidiary of Allied Irish Banks, Ireland's largest bank, on trading the U.S. dollar against the Japanese yen discovered in February 2002. And in January 2004, four foreign currency dealers at the National Australia Bank incurred losses of $360 million in three months of unauthorized foreign exchange trades. Yes, speculation in foreign exchange is very risky and can lead to huge losses.

Summary

The market where one currency is traded for another is called forex market. Its primary function is to facilitate international trade and investment. The market consists of the interbank market in which major banks deal with each other and the retail market, in which banks deal with their commercial customers. Foreign exchange market has two segments; (a) spot market; and (b) forward market. In spot market, currencies are traded if for settlement two business days after. In the forward market contracts are made to buy or sell currencies for future delivery. The foreign exchange quotation cc\? be in direct, indirect or cross. They can also be expressed in European terms or American terms. The participants in the foreign exchange markets are commercial banks, brokers, customers, MNCs and central banks. Indian forex market is in a developing stage. All the currencies are not traded in the markets.

Keywords

- Foreign Exchange Market: The market in which currencies are brought and sold.
- Spot Transaction: A transaction in which the exchange of currencies occur two business days later.

- Forward Transaction: A transaction in which exchange of currencies take place in the future at a rate which is fixed on a day when the transaction is entered into.
- Exchange Rate : The price at which one currency is trade for another.
- Speculation: Speculation involves trading a financial instrument involving high risk, in expectation of significant returns.

SelfAssessment

1. Hedging refers to .
A. the covering of a foreign exchange risk,
B. foreign exchange speculation,
C. the acceptance of foreign exchange risk,
D. interest rate arbitrage

2. Which of the following is not a function of the foreign exchange market?
A. Import and export of goods and services,
B. transfer of purchasing power,
C. coverage of risk,
D. provision of credit instruments and credit

3. ……helps to equalize the exchange rate in all part of the foreign exchange market.

A. speculation,
B. interest arbitrage
C. hedging
D. None of the above

4. Forward market in foreign exchange refers to market.

A. Short and long run,
B. a short run,
C. a long run,
D. a spot

5. Speculation in foreign exchange market refers to ……..

A. accepting risk to make profits,
B. hedging,
C. interest arbitrage,
D. none of the above

6. The rate at which the foreign currency is exchanged at current rate is called rate……..

A. spot,
B. forward,
C. arbitrage,
D. none of the above

7. Arbitrage refers to purchase and sale of an asset……..

A. at low price in one market and its simultaneous sale at higher price in another market, b. at high price in one market and its sale at lower price in another market,
B. purchase and sale at the same price,
C. all of the above

8. Speculators deal in ……

A. spot and forward exchange rate,
B. only spot exchange rate,
C. only forward exchange rate,
D. none of the above

9. Hedgers enter foreign exchange market to …….

A. cover risk,
B. earn margin,
C. speculate,
D. none of the above

10. The foreign exchange rate of a nation is influenced by ……

A. all of the below,
B. speculators,
C. hedgers,
D. arbitrators

11. The foreign exchange rate of a nation is influenced by ……

A. all of the below,
B. BoP,
C. Interest rate
D. speculation

12. Foreign exchange market is a place where ……..

A. only exporters convert the foreign currencies c
B. only foreign tourists exchange currencies,
C. various foreign currencies are exchanged,
D. only importers convert the foreign currencies

13. The function of foreign exchange market that helps in clearing international transactions is known as …….

A. credit,
B. transfer,
C. hedging,
D. speculation

14. Provision of documentary bills of exchange in international payments is an example of function……..

A. transfer,
B. speculation,
C. hedging
D. creation of credit

15. The function of foreign exchange market, which is concerned with fixing of forward exchange rates is known as ……

A. transfer
B. Hedging,
C. speculation,
D. arbitrage

Answer for Self Assessment

l.	A	2.	A	3.	A	4.	A	5.	A
6.	A	7.	A	8.	A	9.	A	10.	A
11.	A	12.	C	13.	B	14.	D	15.	B

Review Questions

1. What are foreign exchange markets? What is their most important function? How is this function performed?
2. What is meant by a spot transaction and the spot rate? a forward transaction and the forward rate? What is meant by a forward discount? forward premium? What is a currency swap? What is a foreign exchange futures? a foreign exchange option?
3. What is meant by foreign exchange risk? How can foreign exchange risks be covered in the spot, forward, futures, or options markets? Why does hedging not usually take place in the spot market?
4. What is meant by speculation? How can speculation take place in the spot, forward, futures, or options markets? Why does speculation not usually take place in the spot market? What is stabilizing speculation? destabilizing speculation?
5. Explain the working of spot and forward exchange markets.
6. Write notes on : hedging, speculation.

Further Readings

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Unit 11: Price Adjustment Mechanism

CONTENTS

Objectives

- Understand the effect of a change in the exchange rate on the nation's current account
- Understand the meaning and importance of the ''stability of the foreign exchange market''
- Understand the meaning and importance of the exchange rate ''pass-through'

Introduction

In this chapter, we examine how a nation's current account is affected by price changes under flexible and fixed exchange rate systems. For simplicity, in this chapter we assume that there are no autonomous international private capital flows. That is, international private capital flows take place only as passive responses to cover (i.e., to pay for) temporary trade imbalances. We also assume that the nation wants to correct a deficit in its current account (and balance of payments) by exchange rate changes. (The correction of a current account and balance-of-payments surplus would generally require the opposite techniques.) Since this traditional exchange rate model is based on trade flows and the speed of adjustment depends on how responsive (elastic) imports and exports are to price (exchange rate) changes, it is called the trade or elasticity approach.

11.1 Adjustment With Flexible Exchange Rates

The method of correcting a deficit in a nation's current account or balance of payments by a depreciation or a devaluation of the nation's currency. A depreciation implies a flexible exchange rate system. A devaluation, on the other hand, refers to the deliberate (policy) increase in the exchange rate by the nation's monetary authorities from one fixed or pegged level to another. However, since both a depreciation and a devaluation operate on prices to bring about adjustment in the nation's current account and the balance of payments, they are both referred to as the price adjustment mechanism and are discussed together here. This is to be distinguished from the income adjustment mechanism, which relies on income changes in the nation and abroad and will be

examined in the next chapter. We begin by examining the process of adjustment itself, and then show how the demand and supply schedules of foreign exchange are derived.

11.2 Balance-of-Payments Adjustments with Exchange Rate Changes

The process of correcting a deficit in a nation's balance of payments by a depreciation or devaluation of its currency is shown in Figure 16.1. In the figure, it is assumed that the United States and the European Monetary Union are the only two economies in the world and that there are no international capital flows, so that the U.S. demand and supply curves for euros reflect only trade in goods and services. The figure shows that at the exchange rate of R = $1/£1, the quantity of euros demanded by the United States is £12 billion per year, while the quantity supplied is £8 billion. As a result, the United States has a deficit of ¤4 billion (AB) in its balance of payments.

If the U.S. demand and supply curves for euros were given by D£ and S£, a 20 percent devaluation or depreciation of the dollar, from R = $1/£1 to R = $1.20/£1, would completely eliminate the U.S. deficit. That is, at R = $1.20/£1, the quantity of euros demanded.

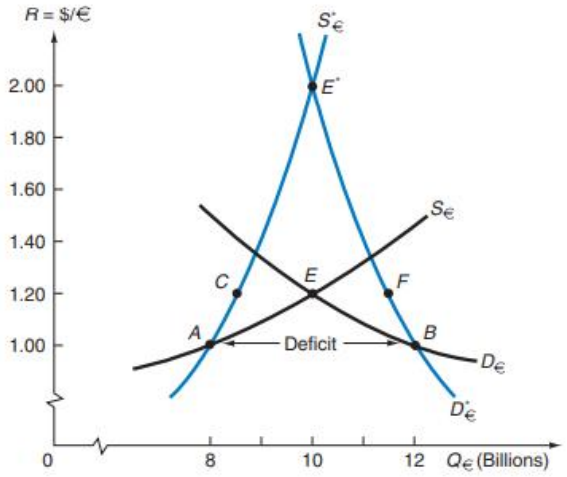

Fig. 1 Balance-of-Payments Adjustments with Exchange Rate Changes.

and the quantity supplied would be equal at £10 billion per year (point E in the figure), and the U.S. balance of payments would be in equilibrium. If, however, the U.S. demand and supply curves for euros were less elastic (steeper), as indicated by D*£ and S*£, the same 20 percent devaluation would only reduce the U.S. deficit to£3 billion (CF in the figure), and a 100 percent devaluation or depreciation of the dollar, from R = $1/£1 to R = $2/£1, would be required to completely eliminate the deficit (point E* in the figure). Such a huge devaluation or depreciation of the dollar might not be feasible (for reasons examined later).

Thus, it is very important to know how elastic the U.S. demand and supply curves for euros are. In some cases, the shape of the deficit nation's demand and supply curves for foreign exchange may be such that a devaluation or depreciation would actually increase, rather than reduce or eliminate, the deficit in its balance of payments. These crucial questions are examined next by showing how a nation's demand and supply schedules for foreign exchange are derived.

11.3 Derivation of the Demand Curve for Foreign Exchange

The U.S. demand curve for euros (D£) shown in Figure 1 is derived from the demand and supply curves of U.S. imports in terms of euros (shown in the left panel of Figure 2). On the other hand, the U.S. supply curve for euros (S£) shown in Figure 16.1 is derived from the demand and supply curves of U.S. exports in terms of euros (shown in the right panel of Figure 2). Let us start with the derivation of the U.S. demand curve for euros (D£).

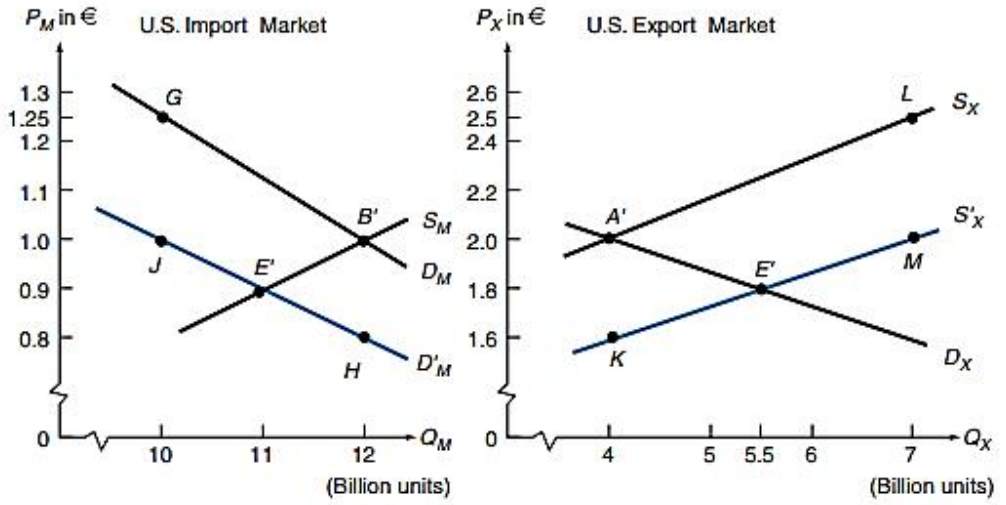

Fig. 2 Derivation of the U.S. Demand and Supply Curves for Foreign Exchange.

In the left panel of Figure 2, DM is the U.S. demand for imports from the European Monetary Union in terms of euros at R = $1/£1, while SM is the EMU supply of imports to the United States. With DM and SM, the euro price of U.S. imports is PM = £1, and the quantity of U.S. imports is QM = 12 billion units per year, so that the quantity of euros demanded by the United States is £12 billion (point B£ in the left panel of Figure 2). This corresponds to point B on the U.S. D¤ in Figure 1.

When the dollar depreciates by 20 percent to R = $1.20/£1, SM remains unchanged, but DM shifts down by 20 percent to D£ M (see the left panel of Figure 16.2). The reason is that for the United States to continue to demand 12 billion units of imports (as at point B£ on DM), the euro price of U.S. imports would have to fall from PM = £1 to PM = £0.8, or by the full 20 percent of the depreciation of the dollar, in order to leave the dollar price of imports unchanged (point H on D£ M). However, at euro prices below PM = £1, the European Monetary Union will supply smaller quantities of imports to the United States (i.e., the European Monetary Union will move down along SM), while the United States will demand smaller quantities of imports at euro prices above PM = £0.8 (i.e., the United States will move up along), until a compromise on price at the new equilibrium point E is reached (see the left panel of Figure 2). The student should reread this paragraph and the previous one, and carefully study the left panel of Figure 2 and its relationship to Figure 1 because this is a rather important topic and one of the most challenging in international finance.

Note that D£ M is not parallel to DM because the shift is of a constant percentage. Thus, a 20 percent downward shift from point B£ (£1.00) is only £0.20, while the same 20 percent downward shift from point G (£1.25) is £0.25. With D£ M and SM, PM = £0.9 and QM = 11 billion, so that the quantity of euros demanded by the United States falls to £9.9 billion (point E£ in the left panel of Figure 16.2). This corresponds to point E (with ¤9.9 billion rounded to £10 billion) on D£ in Figure 16.1. Thus, the quantity of euros demanded by the United States falls from ¤12 billion (given by point B£in the left panel of Figure 16.2) at R = $1/£1 to £10 billion (given by point E£) at R = $1.20/£1. This corresponds to a movement from point B to point E along D£ in Figure 16.1. Only in the unusual case when DM has zero elasticity (is vertical) will the U.S. quantity demanded of euros remain exactly the same after the devaluation or depreciation of the dollar as it was before, because in that case the downward shift in DM leaves DM unchanged (this is assigned as an end-of-chapter problem). Thus, aside from the unusual case where DM is vertical, a devaluation or depreciation of the dollar always leads to a reduction in the U.S. quantity demanded of euros, so that D£ (in Figure 1) is always negatively sloped. The reduction in the U.S. quantity demanded of euros when the dollar is devalued or is allowed to depreciate results because both the euro price of U.S. imports and the quantity of U.S. imports fall (see the left panel of Figure 2). Furthermore, given SM, the less elastic (steeper) is DM, the smaller is the reduction in the U.S. quantity demanded of euros and the less elastic (steeper) is the U.S. demand curve for euros. (This is assigned as another end-of-chapter problem.) In that case, a 20 percent devaluation of the dollar might be represented by a movement from point B to point F along D*£ rather than by a movement from point B to point E along D£ in Figure 1.

11.4 Derivation of the Supply Curve for Foreign Exchange

In the right panel of Figure 16.2, DX is the EMU demand for U.S. exports in terms of euros, and SX is the U.S. supply of exports to the European Monetary Union at R = $1/£1. With DX and SX , the euro price of U.S. exports is PX = £2, and the quantity of U.S. exports is QX = 4 billion units, so that the U.S. quantity of euros earned or supplied is £8 billion (point A in the right panel of Figure 2). This corresponds to point A on S£ in Figure 1.

When the dollar is devalued or is allowed to depreciate by 20 percent to R = $1.20/£1, DX remains unchanged, but SX shifts down by 20 percent to S £X (see the right panel of Figure 2). The reason is that the United States would now be willing to export 4 billion units (the same as at point A on SX) at the euro price of PX = £1.6, or 20 percent lower than before the depreciation of the dollar, because each euro is now worth 20 percent more in terms of dollars (point K on S£X in the figure). However, at euro prices below PX =£2, the European Monetary Union will demand greater quantities of U.S. exports (i.e., the European Monetary Union will move down along DX), while the United States will supply greater quantities of exports at euro prices above PX = £1.6 (i.e., the United States will move up along S £ X), until the new equilibrium point E£ is reached (see the right panel of Figure 2).

Note that S £X is not parallel to SX because the shift is of a constant percentage. With DX and S £ X , PX = £1.8 and QX = 5.5 billion units, so that the quantity of euros supplied to the United States increases to £9.9 billion (1.8 times 5.5). This is given by point E£ in the right panel of Figure 16.2 and corresponds to point E (with £9.9 billion rounded to £10 billion) on S¤ in Figure 16.1. Thus, the quantity of euros supplied to the United States rises from £8 billion (given by point A£ in the right panel of Figure 16.2) at R= $1/£1 to £10 billion (given by point E£at R = $1.20/£1. This corresponds to a movement from point A to point E along S£ in Figure 1.

f DX had been unitary elastic, the devaluation or depreciation of the dollar would have left the U.S. quantity supplied of euros completely unchanged, so that the U.S. supply curve of euros would have been vertical, or have zero elasticity. (The same would be true if SX were vertical, so that a depreciation or devaluation of the dollar would leave SX unchanged.) Finally, if DX had been price inelastic, a devaluation or depreciation of the dollar would have actually reduced the U.S. quantity supplied of euros, so that the U.S. supply curve of euros would have been negatively sloped. (These are assigned as end-of-chapter problems.) Thus, while the U.S. demand curve for euros is almost always negatively sloped, the U.S. supply curve of euros could be positively sloped, vertical, or even negatively sloped, depending on whether DX is elastic, unitary elastic, or inelastic, respectively.

Effect of Exchange Rate Changes on Domestic Prices and the Terms of Trade

Up to now, we have discussed the demand and supply curves of U.S. imports and exports in terms of the foreign currency (the euro) because we were interested in the effect of a devaluation or depreciation of the dollar on the U.S. balance of payments. However, a devaluation or depreciation of the dollar also has very important effects on U.S. prices in terms of dollars. That is, the depreciation or devaluation of the dollar stimulates the production of U.S. import substitutes and exports and will lead to a rise in prices in the United States. Thus, while a devaluation or depreciation of the dollar reduces the euro price of U.S. imports and exports (see Figure 2), it increases the dollar price of U.S. import substitutes and exports and is inflationary.

The greater the devaluation or depreciation of the dollar, the greater is its inflationary impact on the U.S. economy and the less feasible is the increase of the exchange rate as a method of correcting the deficit in the U.S. balance of payments. Note that the increase in the dollar price of import substitutes and exports in the United States is a necessary incentive to U.S. producers to shift resources from the production of nontraded or purely domestic goods to the production of import substitutes and exports. But this also reduces the price advantage conferred on the United States by the devaluation or depreciation of the dollar. This is even more so for developing countries.

Export and import prices must both be measured in terms of either the domestic or the foreign currency. Since the prices of both the nation's exports and imports rise in terms of the domestic currency as a result of its depreciation or devaluation, the terms of trade of the nation can rise, fall, or remain unchanged, depending on whether the price of exports rises by more than, less than, or the same percentages as the price of imports.

From Figure 2 we already know the exact change in the euro prices of U.S. exports and imports as a result of the 20 percent depreciation or devaluation of the dollar and we can use these prices to measure the change in the U.S. terms of trade. Before the depreciation or devaluation of the dollar, PX = ¤2 (see point A in the right panel of Figure 16.2) and PM = £1 (point B in the left panel), so that PX /PM = 2/1 = 2, or 200 percent. After the 20 percent depreciation or devaluation of the dollar, PX = £1.8 (point E in the right panel) and PM = £0.9 (point E in the left panel), so that PX /PM = 1.8/0.9 = 2, or 200 percent. Therefore, the U.S. terms of trade in this case remain unchanged. The conclusion would be the same if we used the dollar prices of U.S. exports and imports to measure the change in the U.S. terms of trade.

An interesting situation arises when an industrial nation begins to exploit a domestic natural resource that it previously imported. An example of this is provided by Great Britain when it started to extract substantial quantities of petroleum from the North Sea in 1976, thus eliminating the need to import it. The nation's exchange rate might then appreciate so much as to cause the nation to lose international competitiveness in its traditional industrial sector and even face deindustrialization. This is known as the Dutch disease. The name is derived from the Netherlands' loss of relative competitiveness in its traditional industrial sector as a result of the appreciation of the Dutch florin after the development of the Dutch natural gas industry, which eliminated the need for the Netherlands to import natural gas.

11.5 Stability of Foreign Exchange Markets

We examine the meanings of and the conditions for stability of the foreign exchange market. We have a stable foreign exchange market when a disturbance from the equilibrium exchange rate gives rise to automatic forces that push the exchange rate back toward the equilibrium level. We have an unstable foreign exchange market when a disturbance from equilibrium pushes the exchange rate further away from equilibrium.

Stable and Unstable Foreign Exchange Markets

A foreign exchange market is stable when the supply curve of foreign exchange is positively sloped or, if negatively sloped, is less elastic (steeper) than the demand curve of foreign exchange. A foreign exchange market is unstable if the supply curve is negatively sloped and more elastic (flatter) than the demand curve of foreign exchange. These conditions are illustrated in Figure 3.

The left panel of Figure 3 repeats D£ and S£ from Figure 1. With D£ and S£, the equilibrium exchange rate is R = $1.20/£1, at which the quantity of euros demanded and the quantity supplied are equal at £10 billion per year (point E in the left panel of Figure 3). If, for whatever reason, the exchange rate fell to R = $1/£1, there would be an excess demand for euros (a deficit in the U.S. balance of payments) of £4 billion (AB), which would automatically push the exchange rate back up toward the equilibrium rate of R = $1.20/£1. On the other hand, if the exchange rate rose to R = $1.40/£1, there would be an excess quantity supplied of euros (a surplus in the U.S. balance of payments) of £3 billion (NR), which would automatically drive the exchange rate back down toward the equilibrium rate of R = $1.20/£1. Thus, the foreign exchange market shown in the left panel of Figure 3 is stable.

The center panel of Figure 3 shows the same D£ as in the left panel, but S¤ is now negatively sloped but steeper (less elastic) than D£. Once again, the equilibrium exchange rate is R = $1.20/£1 (point E). At the lower than equilibrium exchange rate R = $1/£1, there is an excess demand for euros (a deficit in the U.S. balance of payments) equal to The center panel of Figure 16.3 shows the same D£ as in the left panel, but S£ is now negatively sloped but steeper (less elastic) than D£. Once again, the equilibrium exchange rate is R = $1.20/£1 (point E). At the lower than equilibrium exchange rate R = $1/£1, there is an excess demand for euros (a deficit in the U.S. balance of payments) equal to £1.5 billion (UB), which automatically pushes the exchange rate back up toward the equilibrium rate of R = $1.20/£1. At the higher than equilibrium exchange rate of R = $1.40/£1, there is an excess supply of euros (a surplus in the U.S. balance of payments) of £1 billion (NT), which automatically pushes the exchange rate back down toward the equilibrium rate of R = $1.20/£1. In this case also, the foreign exchange market is stable1.5 billion (UB), which automatically pushes the exchange rate back up toward the equilibrium rate of R = $1.20/£1. At the higher than equilibrium exchange rate of R = $1.40/£1, there is an excess supply of euros (a surplus in the U.S. balance of payments) of ¤1 billion (NT), which automatically pushes the exchange rate back down toward the equilibrium rate of R = $1.20/£1. In this case also, the foreign exchange market is stable.

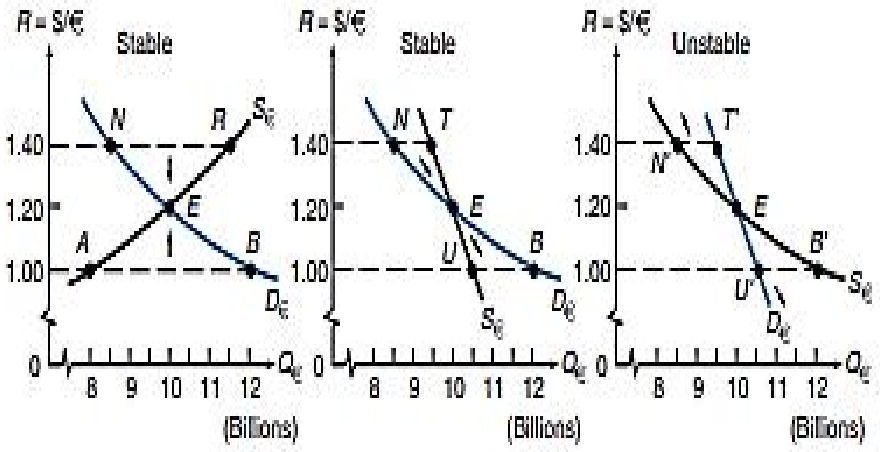

Fig. 3 Stable and Unstable Foreign Exchange Markets.

The right panel of Figure 3 looks the same as the center panel, but the labels of the demand and supply curves are reversed, so that now S£ is negatively sloped and flatter (more elastic) than D£. The equilibrium exchange rate is still R = $1.20/£1 (point E). Now, however, at any exchange rate lower than equilibrium, there is an excess quantity supplied of euros, which automatically drives the exchange rate even lower and farther away from the equilibrium rate. For example, at R = $1/£1, there is an excess quantity supplied of euros of £1.5 billion (U£B£), which pushes the exchange rate even lower and farther away from R = $1.20/£1. On the other hand, at R = $1.40/£1, there is an excess quantity demanded for euros of ¤1 billion (N'T' which automatically pushes the exchange rate even higher and farther away from the equilibrium rate. Thus, the foreign exchange market in the right panel is unstable.

When the foreign exchange market is unstable, a flexible exchange rate system increases rather than reduces a balance-of-payments disequilibrium. Then a revaluation or an appreciation rather than a devaluation of the deficit nation's currency is required to eliminate or reduce a deficit, while a devaluation would be necessary to correct a surplus. These policies are just the opposite of those required under a stable foreign exchange market. Determining whether the foreign exchange market is stable or unstable is, therefore, crucial. Only after the foreign exchange market has been determined to be stable will the elasticity of D£ and S£ (and thus the feasibility of correcting a balance-of-payments disequilibrium with a depreciation or devaluation of the deficit nation's currency) become important.

11.6 Elasticities in the Real World

In this section, we examine how the price elasticity of demand for imports and exports is measured and present some real-world estimates, discuss the J-curve effect, and examine the "pass-through" of exchange rate changes to domestic prices.

a. Elasticity Estimates

The Marshall–Lerner condition postulates a stable foreign exchange market if the sum of the price elasticities of the demand for imports and the demand for exports exceeds 1 in absolute value. However, the sum of these two elasticities will have to be substantially greater than 1 for the nation's demand and supply curves of foreign exchange to be sufficiently elastic to make a depreciation or devaluation feasible (i.e., not excessively inflationary) as a method of correcting a deficit in the nation's balance of payments. Thus, it is very important to determine the real-world value of the price elasticity of the demand for imports and exports.

Before World War II, it was widely believed not only that the foreign exchange market was stable but that the demand for and the supply of foreign exchange were very elastic. Marshall, among others, advanced this view in his Money, Credit and Commerce, published in 1923, but offered no empirical support for his belief.

During the 1940s, a number of econometric studies were undertaken to measure price elasticities in international trade. Two representative studies were undertaken by Chang, one in 1945 to measure the price elasticity of the demand for imports in 21 nations for which data existed from 1924 to 1938, and the other in 1948 to measure the price elasticity of the demand for exports of 22 nations over the same period. Chang found that the sum of the demand elasticities on the average barely exceeded 1, so that while the foreign exchange market was stable, the demand and supply curves of foreign exchange were probably fairly steep and inelastic (i.e., as D∗£ and S ∗£ rather than as D£ and S£ in Figure 1). Other studies reached similar conclusions, confirming that the sum of the elasticities of the demand for imports and the demand for exports was either below or very close to 1 in absolute value. Thus, the prewar elasticity optimism was replaced by postwar elasticity pessimism. However, writing in 1950, Orcutt provided some convincing reasons for the view that the regression technique used to estimate elasticities led to gross underestimation of the true elasticities in international trade. In short, it was likely that Marshall had been broadly correct, while the new econometric estimates, though seemingly more precise, were in fact likely to be far off the mark.

One reason advanced by Orcutt for the belief that the early econometric studies of the 1940s grossly underestimated the price elasticity of the demand for imports and exports results from the identification problem in estimation. This is explained with the aid of Figure 16.4. This figure is similar to the right panel of Figure 2 in that it shows the effect of a depreciation or devaluation of the dollar on the U.S. export market when the foreign demand curve and the U.S. supply curve of exports are expressed in terms of the foreign currency (euros). Suppose that points E and E∗ are, respectively, the equilibrium points actually observed before and after the United States devalues its currency or allows it to depreciate (with none of the curves in Figure 16.4 being observed). The downward shift from SX to S ∗X in Figure 16.4 is due to the depreciation or devaluation of the dollar (as in the right panel of Figure 2). The depreciation or devaluation of the dollar does not affect the foreign demand for U.S. exports.

If no other change (such as a change in tastes for U.S. exports) occurs, then the estimated foreign demand curve of U.S. exports is inelastic, as shown by DX in Figure 16.4. However, equilibrium points E and E∗ are also consistent with elastic demand curve D′ X , which shifts down to D′′ X as a result, for example, of reduced foreign tastes for U.S. exports. Regression analysis will always measure the low elasticity of demand DX even if the true demand is elastic and given by D′ X and D''X (i.e., regression techniques fail to identify demand curves D′ X and D′′ X). Since shifts in demand due to changes in tastes or other unaccounted forces frequently occur over time, estimated elasticities are likely to greatly underestimate true elasticities.

The estimated elasticities of the 1940s also measured short-run elasticities in that they were based on quantity responses to price changes over a period of one year or less. Junz and Rhomberg (1973) have identified five possible lags in the quantity response to price changes in international trade. These are the recognition lag before the price change becomes evident, the decision lag to take advantage of the change in prices, the delivery lag of new orders placed as a result of price changes, the replacement lag to use up available inventories before new orders are placed, and finally the production lag to change the output mix as a result of price changes. Junz and Rhomberg estimated that it takes about three years for 50 percent of the final long-run quantity response to take place and five years for 90 percent to occur. By measuring the quantity response only during the year of the price change, the early econometric studies of the 1940s greatly underestimated long-run elasticities.

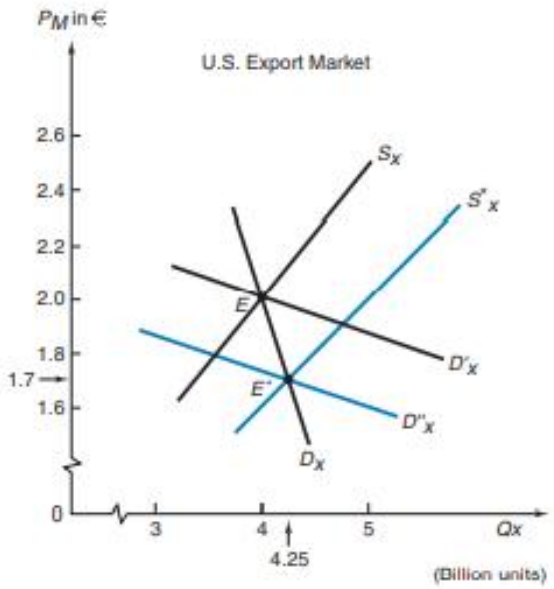

Fig. 4 The Identification Problem

b. The J-Curve Effect and Revised Elasticity Estimates

Not only are short-run elasticities in international trade likely to be much smaller than long-run elasticities, but a nation's trade balance may actually worsen soon after a devaluation or depreciation, before improving later on. This is due to the tendency of the domestic-currency price of imports to rise faster than export prices soon after the devaluation or depreciation, with quantities initially not changing very much. Over time, the quantity of exports rises and the quantity of imports falls, and export prices catch up with import prices, so that the initial deterioration in the nation's trade balance is halted and then reversed. Economists have called this tendency of a nation's trade balance to first deteriorate before improving as a result of a devaluation or depreciation in the nation's currency the J-curve effect. The reason is that when the nation's net trade balance is plotted on the vertical axis and time is plotted on the horizontal axis, the response of the trade balance to a devaluation or depreciation looks like the curve of a J (see Figure 5). The figure assumes that the original trade balance was zero.

Empirical studies by Harberger (1957), Houthakker and Magee (1969), Stern, Francis, and Schumacher (1976), Spitaeller (1980), Artus and Knight (1984) (summarized and reviewed by Goldstein and Khan, 1985), Marquez (1990), and Hooper, Johnson, and Marquez (1998) attempted to overcome some of the estimation problems raised by Orcutt. These studies generally confirmed the existence of a J-curve effect but also came up with long-run elasticities about twice as high as those found in the empirical studies of the 1940s. The upshot of all of this is that real-world elasticities are likely to be high enough to ensure stability of the foreign exchange market in the short run and also to result in fairly elastic demand and supply schedules for foreign exchange in the long run. In the very short run.

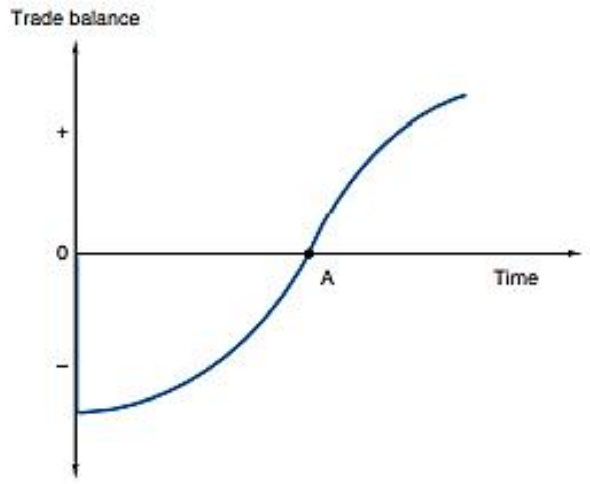

Fig. 5 : The J-Run

c. Currency Pass-Through

Not only are there usually lags in the response of a nation's trade and current account balances to a depreciation of its currency (and there may even be a perverse response for a while—the J-curve effect), but also the increase in the domestic price of the imported commodity may be smaller than the amount of the depreciation—even after lags. That is, the pass-through from depreciation to domestic prices may be less than complete. For example, a 10 percent depreciation in the nation's currency may result in a less than 10 percent increase in the domestic-currency price of the imported commodity in the nation. The reason is that foreign firms, having struggled to successfully establish and increase their market share in the nation, may be very reluctant to risk losing it by a large increase in the price of its exports and are usually willing to absorb at least some of the price increase that they could charge out of their profits. Specifically, a foreign firm may only increase the price of its export commodity by 4 percent and accept a 6 percent reduction in its profits when the other nation's currency depreciates (and its currency appreciates) by 10 percent for fear of losing market share. That is, the pass-through is less than 1. The pass-through is higher in the long run than the short run and higher for industrial goods than for other goods.

In the United States, the pass-through of a dollar depreciation has been estimated to be only about 42 percent in the long run. This means that the dollar price of U.S. imports tends to increase only by about 42 percent of a dollar depreciation after one year, with the remaining 58 percent being absorbed out of exporters' profits. There is also mounting empirical evidence that the "pass-though" from exchange rate changes to prices (i.e., firm's pricing power) declined during the low-inflationary environment of the past two decades and it is lower for trade in primary commodities than for trade in manufactured products and in trade with China.

Exporters may also be reluctant to increase prices by the full amount of the dollar depreciation if they are not convinced that the depreciation of the dollar will persist and not be reversed in the near future. Since it is very costly to plan and build or dismantle production facilities and enter or leave new markets, they do not want to risk losing their market by a large increase in the price of their exports. This has been referred to as the beachhead effect. This effect was clearly evident during the sharp depreciation of the dollar from 1985 to 1988 when Japanese automakers avoided increasing the dollar price of their automobile exports to the United States for as long as possible in order to hold on to their share of the U.S. market and then reluctantly increased prices only by a small amount. In the process, their profit margins fell sharply, and they even incurred losses—prompting accusations of dumping on the part of the American competitors. At the same time, U.S. automakers chose to increase prices in order to rebuild their profit margins instead of holding the line on prices and recapturing market share from the Japanese.

Summary

In this Chapter, we examined the traditional trade or elasticity approach to exchange rate determination. This assumes that there are no autonomous international private financial flows (i.e., international private capital flows take place only as passive responses to cover or pay for temporary trade imbalances) and shows how a current account (and balance-of-payments) deficit can be corrected automatically by a depreciation of the nation's currency under flexible exchange rates or by (the policy of) devaluing the nation's currency with fixed exchange rates. The opposite would be the case for a current account (and balance-of-payments) surplus. A nation can usually correct a deficit in its balance of payments by devaluing its currency or allowing it to depreciate. The more elastic are the demand and supply curves of foreign exchange, the smaller is the devaluation or depreciation required to correct a deficit of a given size. The nation's demand for foreign exchange is derived from the demand for and supply of its imports in terms of the foreign currency. The more elastic is the latter, the more elastic is the former.

Keywords

1. Flexible Exchange Rates: Exchange rate depends upon demand for and supply of currency.
2. Terms of Trade: Depends upon export and import of a nation.
3. J-Curve: the trade balance usually gets better before it gets worse after a currency appreciation
4. Exchange rate system: It will be determined either fixed, flexible or by managed exchange rate of different economies.
5. Equilibrium exchange rate is determined when the demand curve for foreign currency intersects with supply curve

SelfAssessment

1. Under flexible exchange rate system, exchange rate is determined by the:

A. Demand for exchange
B. Supply of foreign exchange
C. Supply and demand forces
D. Government

2. Under Exchange rate system, there is no interference of monetary authorities to decide exchange rate.

A. fixed
B. floating
C. mixed
D. pegged

3. Under Exchange rate system, value of currency is decided by the market forces of demand and supply.

A. fixed
B. floating
C. mixed
D. pegged

4. The J-curve effect refers to the observation that ?

A. GDP usually decreases before it increases after a currency depreciation
B. the trade balance usually gets worse before it improves after a currency depreciation
C. the trade balance usually gets better before it gets worse after a currency appreciation
D. GDP usually decreases before it increases after a currency appreciation

5. Under fixed exchange rate system , the currency rate in the market is maintained through

A. Rationing of foreign exchange
B. Official intervention
C. Centralizing all foreign exchange operations
D. None of the above

6. The statutory basis for administration of foreign exchange in India is?

A. Foreign Exchange Regulation Act, 1973
B. Foreign Exchange Management Act , 1999
C. Exchange control Manual
D. Conservation of Foreign Exchange & prevention of Smuggling Act.

7. Flexible exchange creates in importers and exporters.

A. uncertainty,
B. confidence,
C. safety,
D. none of the above

8……..is not a defect of flexible exchange rate.

A. Stability in international monetary system,
B. speculation,
C. structural unemployment,
D. discourages investments.

9. Under exchange rate system, the exchange rate is determined by market forces.

A. flexible,
B. fixed,
C. managed float,
D. all of the above

10. Under exchange rate system, the central bank of a nation intervenes in exchange rate determination.

A. managed float,
B. fixed,
C. flexible,
D. none of the above

11. The demand curve for foreign exchange slopes indicating that when the exchange rate of foreign currency falls, the demand for it increases.

A. downwards,
B. upwards,
C. sideways,
D. none of the above

12. The supply curve for foreign currency slopes indicating that when the exchange rate of foreign currency increases, the supply of it increases.

A. upwards,
B. downwards,
C. sideways,
D. all of the above

13. Equilibrium exchange rate is determined when ……..

A. the demand curve for foreign currency intersects with supply curve,
B. demand curve shifts upwards,
C. supply curves slopes downwards,
D. none of the above

14. Exchange rate between two currencies is based on ……..

A. purchasing power of two currencies,
B. economic development of the two nations,
C. political stability in the two countries,
D. none of the above

15. Fixed exchange rate system, the exchange rate was …….

A. stable,
B. unstable,
C. fluctuating,
D. all of the above

Answers for Self Assessment

l.	C	2.	B	3.	B	4.	B	5.	B
6.	B	7.	A	8.	A	9.	A	10.	A
11.	A	12.	A	13.	A	14.	A	15.	A

Review Questions

1. How is the nation's demand curve for foreign exchange derived? What determines its elasticity?
2. How is the nation's supply curve of foreign exchange derived? What determines its elasticity?
3. What shape of the demand and supply curves of foreign exchange will make the foreign exchange market stable? unstable?
4. From the negatively sloped demand curve and the positively sloped supply curve of a nation's tradeable commodity (i.e., a commodity that is produced at home but is also imported or exported), derive the nation's demand curve of imports of the tradeable commodity for below-equilibrium prices.
5. What is the J-curve effect?

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Unit 12: International Monetary System

CONTENTS

Objectives

After reading this Unit students will be able to:

- Know the Meaning of International Monetary System.
- Discuss the Bretton Woods System.
- Explain the Present International Monetary System.

Introduction

The period 1870 to 1914 are regarded as the classical gold standard period. London was the center of international trade and finance, and the major currencies, led by the British pound, were convertible into gold at specified parities. During this time, there were no major currency crises, and no major currencies had to be discounted or revalued. International trade and finance proceeded without incident; goods and factors moved freely across national borders. Although trade restrictions were not unheard of, they were not typically utilized for the sake of balance of payments adjustments. Deficits and surpluses were to be addressed by deflation and inflation within the economy.

During this time, international liquidity consisted of gold, and the British pound served as the reserve currency. The British pound was a significant contributor to international liquidity, and it was regularly utilized to meet balance of payments commitments. The time was marked by currency rates that were largely stable. On the eve of World War I, this was the condition of the global monetary system. World War I ended all of this.

The interwar years were marked by worldwide monetary and exchange rate disorder. The gold standard was abandoned, trade and tariff limitations gained significance, exchange rates ceased to be stable, and competitive exchange rate movements and beggar-my-neighbor policies became the norm. It was deemed necessary to put an end to all of this and establish a system of international monetary arrangements in which countries could pursue full employment and stable prices without causing issues for others.

The Bretton Woods System was supported by two pillars: the preservation of stable currency rates and an IMF-instituted global credit system. In order to ensure orderly exchange rate adjustments, the framers of the Bretton Woods Agreement required IMF clearance for exchange rate changes above 10 percent. The Fund would only authorize modifications more than 10 percent if it was

convinced that a "fundamental imbalance" existed in the balance of payments of the member country. The second pillar of the system was the international liquidity arrangement.

There was to be a pool of member countries' currencies, donated on the basis of the fixed quota system for member countries, allowing the Fund to function as a "lender of last resort."

The Bretton Woods System never operated as anticipated by its creators. Specifically, the Bretton Woods System was threatened by two changes: (a) the increased role of the U.S. dollar as a worldwide currency and a widely acknowledged asset, and (b) the exchange rate rigidity that grew over time. Please explain briefly these two problem areas.

At the end of World War II, the United States possessed more than three-quarters of the world's monetary gold and fifty percent of the world's gross national product. For these reasons, the US dollar became the international currency. The world's countries began to retain their official reserves in US dollars. Dollar holdings (as reserves) earned interest, whereas gold holdings (as reserves) did not. Therefore, the US dollar was superior to gold. After 1958, the US balance of payments deficits kept the global monetary system liquid. The increasing accumulation of US dollars by foreign nations, particularly Europe, constituted a danger to the dollar's status as the international reserve currency.

The second threat to the Bretton Woods System's stability was the reality-based rigidity of exchange rates. Despite initial exchange rate changes in the early 1950s, by the 1960s the global monetary system had established a system defined by continuous deficits and surpluses. The Bretton Woods System failed to achieve exchange rate stability in equilibrium.

The accumulation of US dollars by foreign central banks was directly attributable to the large and chronic US payments deficits. Even as early as 1964, the foreign countries' dollar holdings were equal to the United States' total gold reserves. This excessive buildup of US dollars in foreign countries resulted in foreign central banks' reluctance to maintain US dollars as currency reserves. After 1968, the dollars' worth began to decline, and the price of gold began to skyrocket. In March 1968, at the request of the United States, the United States and European nations agreed to establish the so-called Two-tier Gold Market. This measure isolated the private gold market from the official gold market on which central banks traded gold. On the private market, the price of gold may climb above $35 per ounce, but the central banks continued to trade gold at a fixed price of $35 per ounce. Since the passage of the Gold Reserve Act in 1934, the U.S. government has committed to buying or selling limitless quantities of gold at a set price of $35 per ounce. The European nations decided not to exert pressure on the United States to exchange its dollar reserves into gold. In 1968, the US currency became nearly unconvertible to gold.

12.1 Meaning of International Monetary System

The international monetary system is the mechanism prevalent on global foreign currency markets that finances international trade and capital flows and determines exchange rates. Following is a discussion of the worldwide financial system since the end of World War II.

12.2 The Bretton Woods System

During the years preceding World War I, nearly all major national currencies were pegged to the international gold standard with fixed exchange values. During World War I, this technique was discontinued. From the end of the war till 1925, there were shifting exchange rates. In 1925, efforts were made to return to the gold standard. However, it fell as a result of the Great Depression. Numerous nations resorted to protectionism and competitive devaluations, so reducing international trade by virtually half. However, depression eliminated entirely during World War II.

In July 1944, the allies gathered at Bretton Woods, in the United States, to escape the rigidity of the gold standard and the instability of the 1930s in international trade and finance, and to promote free trade. The current International Monetary Fund (IMF) devised an adjustable peg system as the new system.

Under the Bretton Woods system, exchange rates between nations were established or tied at $ 35 per ounce of gold or the US dollar. This referred to a fixed exchange rate system with fluctuations in the exchange rate within a band or range of 1% above to 1% below par. But these modifications were unavailable to the United States, which was required to maintain the dollar's gold value. If the exchange rate reached either band, the monetary authorities were required to buy or sell dollars

against their respective currencies. Where there was "fundamental disequilibrium" (i.e. persistent and huge deficits or surpluses) in BOP, large adjustments might be made with the permission of the IMF and other countries. With the exception of a transitional period, member states were prohibited from imposing limitations on payments and commerce. They were permitted to store a portion of their foreign reserves in gold and the remainder in dollars. These reserves were intended to allow member nations to incur short deficits or surpluses while maintaining stable exchange rates. In the event of a BOP deficit, dollar sales resulted in a reserve outflow, while dollar purchases resulted in a reserve inflow.

Under the Bretton Woods arrangement, reserve outflows were a source of concern. To fix the BOP deficit, the IMF insisted on expenditure reduction strategies and devaluation. In addition, temporary BOP deficits were covered by borrowing from the Fund for a period of three to five years. A country's ability to borrow from the Fund would depend on the size of its quota. The IMF loans were issued in convertible currencies.

The first 25% of its allotment was automatically allocated to the gold tranche, while the remaining 75% was allocated to credit tranches with high interest rates. The World Bank (or IBRD) was established in 1946 to provide long-term loans, followed by the International Finance Corporation (IFC) in 1956 and the International Development Association (IDA) in 1960. In January 1948, the General Agreement on Tariffs and Trade (GATT) went into effect to eliminate trade restrictions. In order to supplement its resources and meet the objectives of the International monetary system, the and began borrowing from the eleven industrialized countries under General Agreements to Borrow (GAB) in October 1962. In addition, it established Special Drawing Rights (SDRs) in January 1970 to bolster foreign reserves and meet its members' liquidity needs. From the 1950s to the mid-1960s, the Bretton Woods system ran smoothly. During this time period, global output increased, and with the GATT's decrease of tariffs, global commerce also increased.

The Breakdown of the Bretton Woods System

The following are the principal causes and sequences of the breakdown of the Bretton Woods system.

1. Built-in Instability: The Bretton Woods System had a built-in instability that led to its eventual collapse. It had an adjustable peg system that was within plus or minus 1% of $35 par value. In the event of fundamental disequilibrium, a nation may discount its currency with IMF agreement. However, nations were hesitant to weaken their currencies since they needed to sell more goods to pay for more expensive imports from other nations. This prompted nations to rely on deflation to remedy BOP imbalances via expenditure-cutting monetary-fiscal policies. The United Kingdom frequently returned to deflation, as in 1949, 1957, and 1967.
2. The Triffin Dilemma : Since the dollar operated as a means of exchange, a unit of account, and a store of value within the IMF system, every country desired to raise its dollar reserves, resulting in an excess of dollar holdings. As a result, the U.S. gold stock and balance of payments continued to decrease. In 1960, Robert Triffin cautioned that the demand for global liquidity was outpacing the supply since the incremental supply of gold was growing slowly. As a result of the dollar's convertibility into gold, the supply of US dollars would fall short of countries' liquidity requirements. This would compel the United States to forsake its pledge to convert currencies to gold. This is the Triffin Dilemma, which precipitated the breakdown of the Bretton Woods System in August 1971.
3. Lack of International Liquidity : There was a growing lack of international liquidity due to increasing demand for the dollar in world monetary markets. With the expansion of world trade, BOP deficits (and surpluses) of countries increased. This required the availability of gold and the dollar. However, gold production in Africa was barely increasing. This increased the dollar's demand and holdings. Additionally, countries desired to store more dollars because they earned interest. As the dollar supply was insufficient relative to the

liquidity requirements of countries, the United States produced extra dollars to pay for its deficits, which other nations took as reserves.

4. Mistakes in US Policies : In the 1960s, the BOP deficits of the United States grew substantially worse. The policies adopted by the U.S. administration in response to global crises eventually contributed to their escalation. In the 1960s, rising US government spending on the Vietnam War, the US space programme, and the "Great Society" (social welfare) programme resulted in a significant cash outflow from the country. However, the Federal Reserve did not devalue the currency. Instead, monetary and fiscal measures were implemented to reduce the BOP deficit.
5. Destabilizing Speculation : Since countries with "fundamental disequilibrium" in BOP were unwilling to lower their currencies and need time to obtain IMF permission, speculators were able to engage in dollar speculation. When devaluations were implemented, they occurred in greater quantities than had been anticipated. This was attributable to destabilizing speculation, which rendered monetary-fiscal measures ineffective for controlling capital flows. This was the direct cause for the 1967 devaluation of the British pound.
6. Crisis of Confidence and Collapse : The immediate cause of the breakdown of the Bretton Woods System was the emergence of a dollar confidence crisis. The British pound was devalued in November 1967. With the emergence of a separate price on the open market, the global gold market was no longer under control. The direct cause of the breakdown of the Bretton Woods System was the March 1971 rumour that the United States would devalue the dollar. This caused a massive capital flight from the United States. When certain small European central banks attempted to convert their dollar holdings into gold at the US on August 15, 1971, the US blocked the conversion of dollars into gold. It refused to intervene in foreign exchange markets to ensure stable exchange rates and imposed a 10 percent import surcharge. Thus, the breakdown of the Bretton Woods System was mostly due to liquidity, adjustment, and confidence issues. The increase in liquidity (foreign reserves) resulted from the United States' BOP deficits. As a result of the United States' inability to reduce its deficits and the accumulation of superfluous dollars in foreign nations, there was a crisis of trust in the dollar, and the Bretton Woods System collapsed.

Thus, the main points of the post-war system evolving from the Bretton Woods Conference were as follows:

1. A new institution, the International Monetary Fund (IMF), would be established in Washington DC. Its purpose would be to lend foreign exchange to any member whose supply of foreign exchange had become scarce. This lending would not be automatic but would be conditional on the member's pursuit of economic policies consistent with the other points of the agreement, a determination that would be made by IMF.
2. The US dollar (and, de facto, the British pound) would be designated as reserve currencies, and other nations would maintain their foreign exchange reserves principally in the form of dollars or pounds.
3. Each Fund member would establish a par value for its currency and maintain the exchange rate for its currency within one per cent of par value. In practice, since the principle reserve currency would be the US dollar, this meant that other countries would peg their currencies to the US dollar, and, once convertibility was restored, would buy and sell US dollars to keep market exchange rates within the 1 per cent band around par value.

The United States, meanwhile, separately agreed to buy gold from or sell gold to foreign official monetary authorities at $35 per ounce settlement of international financial transactions. The US dollar was thus pegged to gold and any other currency pegged to the dollar was indirectly pegged to gold at a price determined by its par value.

4. A Fund member could change its par value only with Fund approval and only if the country's balance of payments was in "fundamental disequilibrium." The meaning of fundamental disequilibrium was left unspecified but everyone understood that par value changes were not to be used as a matter of course to adjust economic imbalances.
5. After a post-war transition period, currencies were to become convertible. That meant, to anyone who was not a lawyer, that currencies could be freely bought and sold for other foreign currencies. Restrictions were to be removed and, hopefully, eliminated. So, in order to keep market exchange rates within 1 per cent of par value, central banks and exchange authorities would have to build up a stock of dollar reserves with which to intervene in the foreign exchange market
6. The Fund would get gold and currencies to lend through "subscription." That is, countries would have to make a payment (subscription) of gold and currency to the IMF in order to become a member. Subscription quotas were assigned according to a member's size and resources. Payment of the quota normally was 25 per cent in gold and 75 per cent in the member's own currency. Those with bigger quotas had to pay more but also got more voting rights regarding Fund decisions.

The Bretton Woods System worked without major changes from 1947 till 1971. During this period, the fixed exchange rates were maintained by official intervention in the foreign exchange markets. International trade expanded in real terms at a faster rate than world output and currencies of many nations, particularly those of developed countries, became convertible. The stability of exchange rates removed a great deal of uncertainty from international trade and business transactions thus helping the countries to grow. Also, the working of the system imposed a degree of discipline on the economic and financial policies of the participating nations. During the 1950s and 1960s, the IMF also expanded and improved its operation to preserve the Bretton Woods System. The system, however, suffered from a number of inherent structural problems. In the first place, there was much imbalance in the roles and responsibilities of the surplus and deficits nations. Countries with persistent deficits in their balance of payments had to undergo tight and stringent economic policy measures if they wanted to take help from the IMF and stop the drain on their reserves. However, countries with surplus positions in their balance of payments were not bound by such immediate compulsions. Although sustained increases in their international resources meant that they might have to put up with some inflationary consequences, these options were much more reasonable than those for the deficit nations. The basic problem here was the rigid approach adopted by the IMF to the balance of payments disequilibria situation. The controversy mainly centres around the 'conditionality issue,' which refers to a set of rules and policies that a member country is required to pursue as a prerequisite to using the IMF's resources. These policies mainly try and ensure that the use of resources by concerned members is appropriate and temporary. The IMF distinguishes between two levels of conditionality – low conditionality where a member needs funds only for a short period and high conditionality where the member country wants a large access to the Fund's resources. This involves the formulation of a formal financial programme containing specific measures designed to eliminate the country's balance of payments disequilibrium. Use of IMF resources, under these circumstances, requires IMF's willingness that the stabilization programme is adequate for the achievement of its objectives and an understanding by the member to implement it.

12.3 The Present International Monetary System

Beginning in March 1973, India, Canada, Japan, Switzerland, the United Kingdom, and a number of smaller nations utilized floating exchange rates. However, the "joint float" of the EEC countries remained after March 1973 and was now known as the "snake in the lake" due to the absence of a band within which EEC currencies might fluctuate relative to other currencies. In March 1979, the

European Monetary System (EMS) was established, resulting in the creation of the European Currency Unit (ECU), a "basket" currency comprised of the major European currencies. The EMS restricts the internal exchange rate fluctuations of its member nations to no more than 2.25 percent from the "central rates," with the exception of Italy, whose lira is permitted to fluctuate up to 6 percent.

In the meantime, the Jamaica Agreement of January 1976 (ratified in April 1978) formalized the regime of floating exchange rates under the auspices of the IMF. A number of factors forced the majority of member countries of the IMF to float their currencies. There were large short-term capital movements and central banks failed to stop speculation in currencies during the regime of adjustable pegs. The oil crisis in 1973 and the increase in oil prices in 1974 led to the great recession of 1974-75 in the industrial countries of the world. As a result, "the dollar saw a precipitous depreciation that, by late 1978, had reached such dangerous proportions that the United States government adopted a strategy of major intervention to keep the dollar's value from falling further" By 1978, the managed floating exchange rate arrangement had become permanent. By 1978's Second Amendment to the IMF Charter, members are no longer required to maintain and establish par values with gold or the dollar. The Fund has no control over the member countries' exchange rate adjustment programmes. However, it conducts international "monitoring" of its members' exchange rate policy. .

The Second Amendment has diminished gold's role in the global monetary system by (a) abolishing the official price of gold; (b) delinking it from the dollar in exchange arrangements; (c) eliminating the Fund's and its members' obligations to transfer or receive gold; and (d) selling a portion of the Fund's gold holdings.

The Second Amendment has also made SDRs as the chief reserve assets of the global monetary system whose value is expressed in currencies and not gold. It is now a unit of account, a currency peg and medium of transactions.

The current international monetary system of floating exchange rates is one of "controlled floating" rather than freely flexible exchange rates. It has seldom operated independently of government involvement. Periodic government interference has led to the system being referred to as a "managed" or "dirty" floating system. In 1977, when the intervention was extremely weighty, it was referred to as a "filthy" float. When governments do not intervene, the float is "clean." However, the likelihood of a clean float is quite low. Thus, a system of managed floating exchange rates is forming in which central banks attempt to limit variations of exchange rates around "normal" rates, despite the fact that the Fund's Second Amendment makes no reference of normal rates.

"The current international monetary system has also evolved in a number of significant ways, including the new allocation of SDRs, the increased nations' quota in the IMF, the renewal of the General Agreements to Borrow (GAB), the elimination of the official gold price, and the formation of the European Monetary System (EMS) and the Euro Currency."

The United States is the most influential nation on the global monetary system. It has let the dollar to float relative to other currencies, with sporadic interventions when the currency has reached extreme highs or lows. By the September 1985 Plaza Accord, the G-5 (United States, United Kingdom, Germany, Japan, and France) agreed to intervene to lower the dollar when it was extremely high (appreciating). Subsequently, the dollar declined significantly against the yen, by more than 50 percent. By early 1987, the dollar had become undervalued, and in accordance with the Louvre Accord, the G-7 (G-5 plus Canada and Italy) countries committed to cooperate in maintaining their currency rates close to their then-current levels. The Louvre Accord stabilized exchange rates for the remainder of the year. Since then, there appears to be a consensus that exchange rates should be mostly stabilized, but there is little overt collaboration between nations."

Its Problems

The present international monetary system is faced with excessive fluctuations and large disequilibria in exchange rates. Often countries, both developed and developing, have been faced with either excessive appreciation or depreciation of their currencies in relation to the dollar which continues to dominate the world monetary system. Even the newly created Euro of the EU which was supposed to be a strong currency has been depreciating considerably since its inception against the dollar. This has adversely affected the world trade.

Reform of the Present International Monetary System

Economists have suggested a number of measures in order to avoid the excessive fluctuations and large disequilibria in exchange rates for reforming the present world monetary system.

Coordination and Cooperation of Policies: A few economists, and McKinnon in particular, suggested international co-operation and co-ordination of policies among the leading developed countries for exchange rate stability. According to McKinnon, the US, Germany and Japan should have the optimal degree of exchange rate stability by fixing the exchange rates among their currencies at the equilibrium level based on the purchasing power parity. Thus, they would co-ordinate their monetary policies for exchange rate stability.

Establishing Target Zones: Williamson advocated for the establishment of goal zones within which volatility in the exchange rates of major currencies may be tolerated. According to him, the equilibrium exchange rate should be determined by the forces of demand and supply. The top target zone should be 10 percent above the equilibrium exchange rate, while the lower target zone should be 10 percent below the equilibrium exchange rate. Through state intervention, the currency rate should not be permitted to fluctuate outside of the two goal zones. In February 1987, the five largest developed nations agreed, under the Louvre Agreement, to establish target zones for the stability of their currencies' exchange rates. Despite official action by these nations, exchange rates continued to fluctuate within wider ranges than those agreed upon at the Louvre. Since then, Williamson's concept has been dismissed as impractical. .

Improving Global Liquidity: The reform package of the present world monetary system should improve global liquidity. As a first step, both BOP deficit and surplus countries should take steps to reduce a persistent imbalance through exchange rate changes via internal policy measures. Second, they should also cooperate in curbing large flows of "hot money" that destabilise their currencies. Third, they should be willing to settle their BOP imbalances through SDRs rather than through gold or dollar as reserve assets. Fourth, there should be increasing flow of resources to the developing countries.

Leaning Against the Wind: To reduce the fluctuations in exchange rates, the IMF Guidelines for the Management of Floating Exchange Rates, 1974 suggested the idea of leaning against the wind. It means that the central banks should intervene to reduce short-term fluctuations in exchange rates but leave the long-term fluctuations to be adjusted by the market forces. Richard Cooper proposes a worldwide central bank with a global currency that would function as a global lender of last resort. Jaffrey Sachs suggests the establishment of an international bankruptcy court with jurisdiction over nations. George Soros believes that the IMF should establish external financial ceilings for each country, above which private capital access need not be guaranteed. However, mandated insurance should be provided by an international credit insurance business. Paul Krugman advocates the reinstatement of capital controls as the "least terrible solution" to a global economic crisis.

Objective Indicators: To iron out exchange rate fluctuations, the IMF Interim Committee suggested the adoption of such objective indicators as inflation-unemployment, growth of money supply, growth of GNP, fiscal balance, balance of trade and international reserves. The variations in these indicators require the adoption of restrictive monetary-fiscal measures to bring stability in exchange rates.

Summary

As opposed to developmental capital, international liquidity is the total of official foreign reserves held by the world's governments and the IMF. International liquidity is a notion related to countries' balance of payments, but not their economic development. However, there will be an indirect relationship between international liquidity and economic development, as the latter is directly tied to the balance of payments position of the countries, particularly the so-called Third World's undeveloped nations.

It is vital to maintain a particular level of international liquidity for international trade and monetary transactions to flow smoothly. A lack of international liquidity impedes the progress of international trade, whereas an excess of international liquidity would result in monetary expansion and a global inflationary wave. Today's globe is defined by insufficiency rather than excess of international liquidity.

The international liquidity crisis can be resolved by increasing international reserves such as gold and reserve assets, especially SDRs, through international agreements. This has its own limitations, which are typically related to supply constraints. The only long-term solution to the international liquidity problem, especially for Third World countries with enormous balance of payments deficits, lies in the willingness of surplus countries in the developed world to implement policy

steps to lower their balance of payments surpluses. Additionally, this will make the world less protectionist.

The period, 1870-1914, was one of international gold standard, relatively free trade and factor movements, and of stable exchange rates. The inter- war period was characterized by international monetary and exchange rates, international cooperation and trade and tariff negotiations 1971 marked the end of the fixed exchange rate regime when the Bretton Woods System collapsed. Today we are living in a world of flexible exchange rates. As a measure of international reserves and exchange rates, the SDR is increasingly replacing gold, the US dollar, and other reserve assets. The Bretton Woods System no longer exists, and no replacement has been established.

SDRs are a new source of international liquidity, comparable to the discovery of new gold mines. The IMF remains the primary source of international money.

Changes in the International Monetary System have been driven largely by the rapid growth of private international capital flows, which first overwhelmed the Bretton Woods fixed exchange rate system, and, since the 1980s, have had especially strong effects on the emerging market countries.

Increasingly the discretion of national policymakers is constrained by international capital markets, which magnify the rewards for good policies and the penalties for bad policies. But markets may, on occasion, overreact by responding late and excessively to change in underlying conditions.

The International Monetary System has had to adapt to the increasing role of private capital flows. That process was evident in the shift towards flexible exchange rates among the major currencies three decades ago, and it continues today, as we absorb and react to the lessons of the emerging market crises of the last decade.

The gold standard worked well until World War I interrupted trade flows and disturbed the stability of exchange rate for currencies. The inter-war years from 1914-1944 were characterized by political instabilities and financial crisis.

The Bretton Woods System, which played a major emphasis on the stability of exchange rates, worked from 1945–1972. However, it came under mounting pressure as the post-war growth of international trade was complemented by an even more dramatic expansion of cross-border capital flows. These starkly revealed the difficulty of fixed exchange rate, an open capital account, and a monetary policy dedicated to domestic economic goals. With the leading countries unwilling to subordinate domestic policies to maintenance of the exchange rate, the fixed exchange rate regime among the major economies gave way.

Keywords

Monetary System : Medium of exchange: anything that is generally accepted as a standard of value and a measure of wealth in a particular country or region

Bretton Wood System : The Bretton Woods system of monetary management established the

rules for commercial and financial relations among the world's major industrial states in the mid-20th century. The Bretton Woods system was the first example of a fully negotiated monetary order intended to govern monetary relations among independent nation-states.

Self Assessment

1. The international monetary system can be defined as the institutional framework within which

A. International payments are made
B. Movement of capital is accommodated.
C. Exchange rates among currencies are determined.
D. All of above

2. Gresham's Law in economics relates to

A. Supply and Demand
B. Circulation of currency
C. Consumption and supply
D. Distribution of goods and services

3. The international monetary system went through several distinct stages of evolution. These stages are summarized, in alphabetic order, as follows:

i. Bimetallism
ii. Bretton woods system
iii. Classical gold standard
iv. Flexible exchange rate regime
v. Interwar period

A. (iii), (i), (iv), (ii), (v)
B. (i), (iii), (v), (ii), (iv)
C. (v), (i), (iii), (ii), (iv)
D. (v), (iii), (iv), (ii), (i)

4. What are the requirements of good international monetary system (IMS)

A. A good system must be able to adjust imbalances in balance of payments quickly and at a relatively lower cost
B. the system must be able to keep exchange rates relatively fixed and people must have confidence in the stability of the system
C. The system must be able to provide enough reserve assets for a nation to correct its balance of payments deficits without making the nation run into deflation or inflation
D. All of the above

5. During the period of the classical gold standard (1875-1914) there were

A. Highly volatile exchange rates.
B. Volatile exchange rates.
C. Moderately volatile exchange rates.
D. Stable exchange rates.

6. Which of the following is not the goal of the Bretton Woods conference?

A. Intended to govern currency regulations and establish legal obligations
B. Promote investment of capital
C. Set a standard for exchange rates
D. Establish international monetary cooperation

7. What was the desire behind the Bretton Woods Agreement?

A. A desire to put an end to the Second World War
B. A desire to eradicate the causes that led to the Second World War
C. A desire for creating a system of fluctuating currencies
D. A desire for the abolition of different currencies

8. What was the agreement for Bretton Woods System?

A. Fixed Exchange Rate
B. US Dollar as reserve currency
C. US dollar was pegged to gold at $35 an ounce
D. All of the above

9. Which were the two institutions that were instituted during the Bretton Woods System era?

A. World Trade Organization and World Bank
B. International Monetary Fund and World Bank
C. World Trade Organization and United Nations
D. International Monetary Fund and World Trade Organization

10. When Bretton Woods System was created?

A. 1955
B. 1944
C. 1956
D. 1942

11. Choose the false statement among the following statements:

A. The Bretton Woods Conference was held in 1944 in Canada
B. Silver supplemented gold introducing 'bimetallism'

C. Gold standard was the epitome of the fixed exchange rate system
D. The Gold Standard: 1870 to the outbreak of the First World War in 1914

12. The Smithsonian Agreement of 1971 is related to?
A. Moving from fixed to floating exchange rate
B. Widening the permissible band of the exchange rates to 2.5 per cent above or below the new 'central rates'
C. Tackle shortage of liquidity during the Great Depression
D. Bop crisis faced by countries after fall of the Bretton Woods System

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15. In the formation of the European Monetary System, an attempt was made to allow for the problems of particular countries by allowing:
A. Members freely to choose to join in the broad band of the system
B. Marginal intervention in support of currencies
C. Some member currencies to float
D. Some members to join in the broad band

Answer for Self Assessment

1.	D	2.	D	3.	B	4.	D	5.	D
6.	B	7.	B	8.	D	9.	B	10.	B
11.	A	12.	B	13.	A	14.	B	15.	D

Review Questions

1. What do you mean by the monetary system? Discuss the international monetary system.
2. Write a short note on Bretton Wood System.
3. What are the causes of the breakdown of the Bretton Wood System? Discuss.
4. What are the components of the international monetary system?
5. Why do nations need international monetary systems?

Further Readings

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Unit 13: Emerging International Monetary Systems with Special Reference to Post

CONTENTS

Objectives

- Know how the present international monetary system works
- Identify the major international economic problems facing the world today

Introduction

An international monetary system (sometimes referred to as an international monetary order or regime) refers to the rules, customs, instruments, facilities, and organizations for effecting international payments. International monetary systems can be classified according to the way in which exchange rates are determined or according to the form that international reserve assets take. Under the exchange rate classification, we can have a fixed exchange rate system with a narrow band of fluctuation about a par value, a fixed exchange rate system with a wide band of fluctuation, an adjustable peg system, a crawling peg system, a managed floating exchange rate system, or a freely floating exchange rate system. Under the international reserve classification, we can have a gold standard (with gold as the only international reserve asset), a pure fiduciary standard (such as a pure dollar or exchange standard without any connection with gold), or a gold-exchange standard (a combination of the previous two).

The various classifications can be combined in various ways. For example, the gold standard is a fixed exchange rate system. However, we can also have a fixed exchange rate system without any connection with gold, but with international reserves comprised of some national currency, such as the U.S. dollar, that is no longer backed by gold. Similarly, we can have an adjustable peg system or a managed float with gold and foreign exchange or with only foreign exchange as international

reserves. Under a freely floating exchange rate system, there is theoretically no need for reserves since exchange rate changes automatically and immediately correct any balance-of-payments disequilibrium as it develops. Throughout the period of our analysis, most of the international monetary systems possible were in operation at one time or another or for some nations, as described in this chapter.

A good international monetary system is one that maximizes the flow of international trade and investments and leads to an "equitable" distribution of the gains from trade among the nations of the world. An international monetary system can be evaluated in terms of adjustment, liquidity, and confidence. Adjustment refers to the process by which balance-of-payments disequilibria are corrected. A good international monetary system is one that minimizes the cost of and the time required for adjustment. Liquidity refers to the amount of international reserve assets available to settle temporary balance-of-payments disequilibria. A good international monetary system is one that provides adequate international reserves so that nations can correct balance-of-payments deficits without deflating their own economies or being inflationary for the world as a whole. Confidence refers to the knowledge that the adjustment mechanism is working adequately and that international reserves will retain their absolute and relative values

We examine the gold standard as it operated from about 1880 to 1914 and the experience between World War I and World War II. The gold standard was a fixed exchange rate system with gold as the only international reserve asset. The interwar period was characterized first by a system of flexible exchange rates and subsequently by the attempt to reestablish the gold standard—an attempt doomed to failure. Sections 21.3, 21.4, and 21.5 examine the establishment, operation, and collapse of the Bretton Woods system, the fixed or adjustable peg gold-exchange standard that operated from the end of World War II until August 1971. From then through March 1973, an adjustable peg dollar standard prevailed. Section 21.6 examines the operation of and the problems facing the present managed floating exchange rate system. Finally, the appendix presents the composition and value of international reserves from 1950 to 2011.

13.1 Reforms of the International Monetary systems

At the beginning of March 1973 India, Canada, Japan, Switzerland, the UK and several smaller countries had floating exchange rates. However, the "joint float" of the EEC countries continued even after March 1973 and was now called the "snake in the lake", as there was no band within which the EEC currencies could fluctuate relative to other currencies. In March, 1979 the European Monetary System (EMS) was formed which created the European Currency Unit (ECU) which is a "basket" currency of a unit of account consisting of the major European currencies. The EMS limits the internal exchange rate movement of the member countries to not more than 2.25 per cent from the "central rates" with the exception of Italy whose lira can fluctuate up to 6 per cent.

In the meantime, the Jamaica Agreement of January 1976 (ratified in April 1978) formalised the regime of floating exchange rates under the auspices of the IMF. A number of factors forced the majority of member countries of the IMF to float their currencies. There were large short-term capital movements and central banks failed to stop speculation in currencies during the regime of adjustable pegs. The oil crisis in 1973 and the increase in oil prices in 1974 led to the great recession of 1974-75 in the industrial countries of the world. As a result "the dollar went into a rapid decline, which, by late 1978, had such alarming proportions that the United States government finally decided on a policy of massive intervention in order to prevent a further fall in the value of the dollar". At last, the system of managed floating exchange rates had come to stay by 1978. By the Second Amendment of the IMF Charter in 1978, the member countries are not expected to maintain and establish par values with gold or dollar. The Fund has no control over the exchange rate adjustment policies of the member countries. But it exercises international "surveillance" of exchange rate policies of its members.

The Second Amendment has reduced the position of gold in the global monetary system in the following ways by: (a) abolishing the official price of gold; (b) delinking it with the dollar in exchange arrangements; (c) eliminating the obligations of the Fund and its members to transfer or receive gold; and (d) selling a part of Fund's gold holdings.

The Second Amendment has also made SDRs as the chief reserve assets of the global monetary system whose value is expressed in currencies and not gold. It is now a unit of account, a currency peg and medium of transactions.

The present international monetary system of floating exchange rates is not one of free flexible exchange rates but of "managed floating". It has rarely operated without government intervention.

Periodic intervention by governments has led the system to be called a "managed" or "dirty" floating system. In 1977, when the intervention was very heavy, it was characterized as a "filthy" float. When Governments do not intervene, it is a "clean" float. But the possibilities of a clean float are very remote. Thus a system of managed floating exchange rates is evolving where the central banks are trying to control fluctuations of exchange rates around some "normal" rates even though the Second Amendment of the Fund makes no mention of normal rates.

"The present international monetary system has also evolved in a number of important ways, including new allocation of SDRs, increased nations' quota in the IMF, renewal of the General Agreements to Borrow (GAB), the abolishment of the official gold price, and the formation of the European Monetary System (EMS) and the Euro Currency.

The US is the major country which has been influencing the global monetary system. It has permitted the dollar to float in relation to other currencies with occasional interventions when the dollar has reached extreme highs or lows. When the dollar was extremely high (appreciating), the G-5 (US, UK, Germany, Japan and France) agreed to intervene to bring the dollar down by the Plaza Accord in September 1985. Subsequently, the dollar depreciated substantially i.e. by more than 50% relative to the yen. By early 1987, the dollar had become undervalued and by the Louvre Accord, the G-7 countries (G-5 plus Canada and Italy) agreed to cooperate in keeping their exchange rates around their current levels at that time. "The Louvre Accord was successful in stabilizing exchange rates for the rest of the year. Since then there seems to have been a consensus that exchange rates should be broadly stabilized, but there is little overt cooperation among countries."

Its Problems

The present international monetary system is faced with excessive fluctuations and large disequilibria in exchange rates. Often countries, both developed and developing, have been faced with either excessive appreciation or depreciation of their currencies in relation to the dollar which continues to dominate the world monetary system. Even the newly created Euro of the EU which was supposed to be a strong currency has been depreciating considerably since its inception against the dollar. This has adversely affected the world trade.

Suggestions to Reform The Present Monetary System

Economists have suggested a number of measures in order to avoid the excessive fluctuations and large disequilibria in exchange rates for reforming the present world monetary system

- Coordination and Cooperation of Policies. A few economists, and McKinnon in particular, suggested international co-operation and co-ordination of policies among the leading developed countries for exchange rate stability. According to McKinnon, the US, Germany and Japan should have the optimal degree of exchange rate stability by fixing the exchange rates among their currencies at the equilibrium level based on the purchasing power parity. Thus they would co-ordinate their monetary policies for exchange rate stability.
- Establishing Target Zones. Williamson called for the establishment of target zones within which fluctuations in exchange rates of major currencies may be permitted. According to him, the forces of demand and supply should determine the equilibrium exchange rate. There should be an upper target zone of 10% above the equilibrium rate and a lower target zone of 10% below the equilibrium exchange rate. The exchange rate should not be allowed to move outside the two target zones by official intervention. In February 1987, the leading five developed countries agreed under the Louvre Agreement to have some sort of target zones for the stability of exchange rates among their currencies. Despite official intervention by these countries, the exchange rates continued to fluctuate within wide margins than agreed upon at Louvre. Thus Williamson's proposal has since been discarded being impracticable.

- Improving Global Liquidity. The reform package of the present world monetary system should improve global liquidity. As a first step, both BOP deficit and surplus countries should take steps to reduce a persistent imbalance through exchange rate changes via internal policy measures. Second, they should also cooperate in curbing large flows of "hot money" that destabilise their currencies. Third, they should be willing to settle their BOP imbalances through SDRs rather than through gold or dollar as reserve assets. Fourth, there should be increasing flow of resources to the developing countries.
- Leaning Against the Wind. To reduce the fluctuations in exchange rates, the IMF Guidelines for the Management of Floating Exchange Rates, 1974 suggested the idea of leaning against the wind. It means that the central banks should intervene to reduce short-term fluctuations in exchange rates but leave the long-term fluctuations to be adjusted by the market forces.
- Richard Cooper suggests a global central bank with a global currency which should be a global lender of last resort.
- Jaffrey Sachs proposes the creation of an international bankruptcy court which should deal with countries.
- George Soros opines that the IMF should set ceilings for external finance for each country beyond which access to private capital need not be insured. But there should be mandatory insurance by an international credit insurance corporation.
- Paul Krugman suggests reintroduction of capital controls as a "least bad response" to an international crisis.
- Objective Indicators. To iron out exchange rate fluctuations, the IMF Interim Committee suggested the adoption of such objective indicators as inflation-unemployment, growth of money supply, growth of GNP, fiscal balance, balance of trade and international reserves. The variations in these indicators require the adoption of restrictive monetary-fiscal measures to bring stability in exchange rates.

13.2 Portfolio and Foreign Direct Investments

Foreign direct investment (FDI) refers to investment in a foreign country where the investor retains control over the investment. It typically takes the form of starting a subsidiary, acquiring a stake in an existing firm or starting a joint venture in the foreign country. Direct investment and management of the firms concerned normally go together. If the investor has only a sort of property interest in investing the capital in buying equities, bonds, or other securities abroad, it is referred to as portfolio investment. That is, in the case of portfolio investments, the investor uses his capital in order to get a return on it, but has no much control over the use of the capital. Foreign portfolio investment (FPI), thus, is investment by individuals, firms, or public bodies (like governments or government organisations) in financial instruments (such as stocks and government bonds).

FDI may take the form of:

1. Green-field investment, i.e. establishing an entirely new enterprise in the foreign market.
2. M&A, i.e. merging or acquiring an existing firm in the foreign country. In recent years, cross-border M&A has been the major driver of FDI.

UNCTAD s World Investment Report defines foreign direct investment (FDI) as an investment involving a long-term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate), FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities.

The ownership level required in order for a direct investment to exist is 10 per cent of the voting shares.

There are two related but different measures of FDI: FDI flows and FDI stock. FDI flows refer to the new FDI during a specified period while the FDI stock measures the total amount of FDI exists at a point in time. These stocks are the sums of past flows of FDI.

Flows of FDI comprise capital provided (either directly or through other related enterprises) by a foreign direct investor to an FDI enterprise, or capital received from an FDI enterprise by a foreign direct investor. FDI has three components: equity capital, reinvested earnings and intra-company loans.

According to the World Bank, foreign direct investment is net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, re-investment of earnings, other long-term capital, and short-term capital, as shown in the balance of payments.

FDIs are governed by long term considerations because these investments cannot be easily liquidated. Hence factors like long term political stability, government policy, industrial and economic prospects etc. influence the FDI decision, However, portfolio investments, which can be liquidated fairly easily, are influenced by short term gains. Portfolio investments are generally much more sensitive than FDIs. Direct investors have direct responsibility with the promotion and management of the enterprise. Portfolio investors do not have such direct involvement with the promotion and management.

There are mainly two routes of portfolio investments in India, viz., by Foreign Institutional Investors (FIIs) like mutual funds and through Global Depository Receipts (GDRs), American Depository Receipts (ADRs) and Foreign Currency Convertible Bonds (FCCBs).

GDRs/ADRs and FCCBs are instruments issued by Indian companies in the foreign markets for mobilising foreign capital by facilitating portfolio investment by foreigners in Indian securities. Since 1992, Indian companies, satisfying certain conditions, are allowed to access foreign capital markets by Euro issues.

13.3 International Debt Crisis

The problem of external debt of LDCs is a serious one because they depend heavily on inflows of capital from abroad to finance their development needs. LDCs being poor countries, their rates of domestic savings and investment are low. They woefully lack in economic and social overhead capital and basic and key industries. To accelerate the rate of economic development, they borrow to import capital goods, components, raw materials, technical know-how, etc. Besides, they also borrow to finance consumer goods to meet the requirements of the growing population. Their exports being limited to a few primary products, they borrow to supplement and increase their domestic resources. These lead to huge current account balance of payments (BOP) deficits. A current account BOP deficit means that the country is borrowing from abroad. To finance its BOP deficit, the LDC borrows by selling bonds abroad, from commercial banks abroad, from international financial institutions like the IMF, World Bank, IFC, etc., and from private foreign firms. In all such cases, the country accumulates external debt which it has to repay abroad in the future in the form of interest and principal.

Causes of the Debt Crisis

The following have been the causes of the international debt crisis:

1. Oil-Price Shocks. The principal cause of the international debt crisis of the 1970s and 1980s was the increase in oil prices in 1973 and 1979. The first oil shock to the international economy was an increase in oil prices by more than four-fold and the second doubled them. This caused a large increase in the import bills of non-oil producing LDCs. Simultaneously, their export earnings fell due the recession in the developed countries. Consequently, the current account BOP deficit of oil importing LDCs increased much. Their ratio of debt to GNP rose from 15.4% in 1974 to 37.6% in 1986.

2. Bad Macro-economic Management. To cope with the problem of BOP deficit, the LDCs began macro-economic management of their economies. They continued to expand their expenditures to meet demand for their economic development. This led them to adopt expansionary fiscal and monetary measures and to large borrowings from abroad. This resulted in inflation and external

debt. As the Bretton Woods System of fixed exchange rates had collapsed in 1973, the LDCs adopted new exchange rate strategies like the crawling peg and managed floating in order to avoid real appreciation of their currencies in the face of rising inflation. They aimed at a declining rate of depreciation against the dollar. For this, they adopted trade reform measures to boost exports, and encouraged the inflow of private capital through international banks. These further increased their external debt.

3. Policies of Developed Countries and their Banks. The policies adopted by the developed countries and their banks were instrumental in creating the debt crisis. The rise in oil prices had increased the revenues of oil exporting countries. But they were unable to absorb them within their economies. They deposited large volumes of "petro-dollars" in the commercial banks of the developed countries. Thus these banks had accumulated huge funds which could not be used by the developed countries, as the latter were faced with recession. But the LDCs needed funds for their economic development programmes which these banks "recycled" in the form of loans to LDCs.

4. Rising Interest Rates. The increase in interest rates also added to the debt crisis. During the first oil-price hike, the real interest rates were low and even negative in the developed countries due to inflation. This reduced the real burden of the debt of LDCs. But the second oil shock increased both money and real interest rates between 1979-82. The rise in oil prices led to inflation in the developed countries which adopted restrictive monetary policies to control inflation. This resulted in a sharp increase in money and real interest rates. Consequently, the costs of servicing the past debts and of new debts increased for LDCs. The costs of debt service was made worse by the growing proportion of debt at variable interest rates in the form of loans from commercial banks belonging to developed countries. For instance, the ratio of debt service to exports of all developing countries increased from 13.2% in 1980 to 25.9% in 1986.

5. Trade Policies. Trade related policies of both LDCs and developed countries also led to the growth of external debt of LDCs. The LDCs followed the inward-oriented import-substitution industrialisation till the 1970s. This policy brought initial gains but ultimately led to inefficiencies in the production of manufactured goods. Agricultural and primary production activities were neglected. The two oil-price hikes which led to recessions in the developed countries and the increase in non-tariff restrictions by the latter led to reduction in exports and export prices of LDCs. During 1981-86, they suffered an annual average loss of $ 8 billion due to reduction in their export earnings. With the fall in the prices of their primary commodities, the terms of trade of LDCs also deteriorated. The cumulative loss suffered due to this by them was $ 95 billion during this period.

6. Immediate Cause. After 1979, many LDCs had accumulated huge external debts which they found it difficult to repay in the form of interest and principal. This led to the international debt crisis of the 1980s. The crisis emerged in August 1982 when the Mexican Central Bank announced that it had run out of foreign exchange reserves and that it could not pay its foreign debt of $ 80 billion. Fearing that Argentina, Brazil and Chile might not follow Mexico, the lender-banks of developed countries started refusing new loans and demanded repayments of earlier loans from these and other Latin American countries. This trend spread to African and some East Asian LDCs. By the end of 1986 more than 40 countries were engulfed by the debt crisis.

UNCTAD/IMF: NEED, ADEQUACY AND DETERMINANTS OF INTERNATIONAL RESERVES

13.4 International Monetary Fund (IMF)

Background

The establishment of the International Monetary Fund, abbreviated IMF, is a watershed in the history of global economic cooperation. The creation of the International Monetary Fund was the result of a 1944 meeting held in Bretton Woods (United States). The conference gave rise to the IMF and IBRD organizations. The IMF was established in December 1945, and in March 1947 it proclaimed its preparedness to begin foreign exchange transactions. Presently, 187 countries are members of the IMF. The IMF is a pool of central bank reserves and national currencies that its members have access to under specific conditions. It might be viewed as an expansion of the central bank reserves of member nations.

The principal purposes setting up of IMF are:

1. Creation of global money related co-activity: The above all else objective of the asset is to advance worldwide financial collaboration through an extremely durable foundation.
2. Promotion of adjusted development of International Trade: The second significant target of the asset is to work with the extension and adjusted development of global exchange and to contribute along these lines to the advancement and upkeep of elevated degrees of work of the part nations.
3. Stability in conversion standard: One of the principal goals of IMF is to advance trade steadiness, to keep up with methodical trade plans among individuals and to stay away from serious trade deterioration.
4. Multilateral Payments Arrangement: This goal is to aid the foundation of a multilateral arrangement of installment in regard of current record exchanges among individuals and in the end of unfamiliar trade limitations, which hamper the development of world exchange.
5. To right maladjustments yet to be determined of installments: The significant goal is to give certainty to individuals by making the asset's assets accessible to them under satisfactory protections. In this way, it gives them a valuable chance to address maladjustments in their equilibrium of installments without turning to measures disastrous of public and global success. The IMF doesn't meddle in the interior economy of the part nations to reestablish harmony in their equilibrium of installments.
6. To abbreviate the span and reduce the level of disequilibrium: The goal is to abbreviate the term and decrease the level of disequilibrium in the worldwide equilibrium of installments of individuals.
7. Abolition of trade limitations: The asset will attempt to eliminate a wide range of limitations and controls on unfamiliar trade forced by the part nations.
8. Help in global installments: The asset will loan or offer to its part countries monetary standards of different nations. This works with unfamiliar trade exchanges among the individuals.
9. Aid to part nations during crisis: The asset targets giving momentary money related help to part countries during crisis.

13.5 Membership of IMF

There are two types of members of the fund:

- Original Members: All those countries whose representatives took part in Bretton Woods Conference and who agreed to be the member of the Fund prior to 31st December, 1945, are called the original members of the Fund.
- Ordinary Members: All those who became its member subsequently are called ordinary members.

Any country may withdraw its membership by submitting a written withdrawal notification. Fund may terminate a country's membership if it violates its regulations. From forty in 1947 to 187 in 2010, the number of member states has increased from forty.

Organization and Management

In order to manage the fund, the following administrative boards have been set up:

- Board of Governors: It consists of one Governor and an Alternate Governor for each member country. It meets once a year. The board of governors frames the policies of the Fund.

- Board of Directors: It conducts day-to-day affairs of the Fund. It consists of 21 directors, 7 of whom are permanent and others being temporary directors. Permanent directors belong to those countries that have the largest quotas in the Fund. Currently, these countries are United States, Japan, Germany, France, China, Italy and Saudi Arabia. Fourteen other directors are elected by other member countries. India is one of the elected directors. The managing director may appoint three deputy managing directors instead of one, w.e.f. June, 1994.

13.6 Capital Resources of the Fund and Organizational Strategy of the Fund

Capital Resources of the fund

The capital resource of the fund are bought in by the different part nations via their separate shares. Every part's still up in the air before its enrolment as a part. The standard of every part is fixed concerning SDRs. Every nation needs to give 25% of its share sum with regards to save resources, as SDRs or some other usable cash and 75 percent concerning its own money. A country's relations with the not entirely set in stone by how much its standard.

Example:

(a) Voting powers of a part country relies on how much its standard. Every nation has 250 least votes. In addition, on every lakh of SDRs, one vote is expanded.

(b) The most extreme restriction of the monetary help from the Fund to the part country to address its equilibrium of installments relies upon how much its quantity.

(c) Share of a country in the portion of SDRs relies upon how much its share.

Changes in how much standard of Fund are made after like clockwork. The asset has made changes in the quantities of part nations at various times. In 2010, the portion raised by the Fund was around 238.4 billion SDRs.7.6.2. Operational Strategy of the Fund

Borrowing Strategy of the Fund

The Fund is a significant financial institution in addition to conducting regulatory and advisory roles. The majority of the Fund's financial resources come from quota subscriptions from member countries. In addition, it can borrow from the governments, central banks, and private institutions of industrialised nations, the Bank for International Settlements, and even OPEC nations such as Saudi Arabia.

General Arrangements to Borrow (GAB)

The Fund can borrow from its 20 industrialized members under GAB and NAB (New Arrangements to Borrow) The GAB and NAB are credit arrangements between the IMF and a group of members and institutions to provide supplementary resources of up to SDR 34 billion (about US$50 billion) to the IMF to forestall or cope with an impairment of the international monetary system or to deal with an exceptional situation that poses a threat to the stability of that system

Lending Strategy of the Fund

Members may utilise the reserve tranche, the four credit tranches, and the three permanent facilities for particular reasons, per tranche policy. The members have access to the facility for compensatory financing of export fluctuations (established in 1963 and liberalised in 1975 and 1979), the Buffer stock financing facility (established in 1969), the Extended Fund 'facility (established in 1974), and the Structural Adjustment Facility (SAF) established in March of 1986. Fund lending is made to members momentarily out of balance in their current account balance of payments. If a member country's currency falls below its quota, the shortfall is known as a reserve tranche. It can automatically withdraw up to 25 percent of its reserve tranche upon notifying the Fund of its

balance-of-payments needs. The Fund charges no interest on such withdrawals. The borrowing country is required to repay the loan within three to five years.

Credit Strategy of the Fund

Credit Tranches

In addition, a member country may withdraw up to 100 percent of its outstanding limit from credit tranches in instalments. The borrowing member must demonstrate to the Fund that a feasible financial stability programme is being implemented. It indicates that credit tranche withdrawals are subject to conditions. To address the severe balance of payment issues, the Fund has gradually boosted the borrowing limit for members. A member can now borrow up to 300 percent of their new quotas on the Fund's overall net usage of resources. Withdrawals made under the CCFF, BSAF, SAF, STF, and ESAF are exempt from this 300 percent cap.

Other Credit Facilities

The Fund has established several new loan facilities since 1960. These credit facilities exclude borrowings made through credit tranches, and these loans are available for an extended term. These are the credit facilities:

1. **Buffer Stock Financing Facility (BSFF):**It was established in 1969. It was developed so that member nations may finance the commodities buffer stock. A member may use up to 30% of its quota under this heading. The member is required to collaborate with the Fund in establishing domestic commodity pricing. Repurchases occur between three and a half and five years.
2. **Extended Fund Facility (EFF):** The building was constructed in 1974. The EFF credit is offered to cover imbalances in the balance of payments. The quantities supplied by EFF are greater than the member's credit limit under conventional credit facilities. This facility is available for a maximum of ten years. The maximum loan amount permitted under EFF is 300 percent of the member's quota. The punishment is based on performance standards and instalment payments.
3. **Supplementary Financing Facility (SFF):** In 1977, the Supplemental Finance Facility (SFF) was established to offer additional financing for extended or standby arrangements. The primary objective of the SFF was to provide member nations with funding to cover substantial balance of payments deficits relative to their economies and quotas. This facility was expanded to include developing member nations with modest incomes. In 1980, the Fund established a Subsidy Account to minimise the cost of SFF borrowing for low-income developing nations. Subsidy Account refers to the account through which the Fund pays out subsidies to borrower nations.
4. **Structural Adjustment Facility (SAF):** It was founded in March of 1986. The primary objective of SAF was to give concessions to implement macroeconomic and structural reform plans over the medium term. Additionally, the loans are granted to them to address their balance of payments issues. The loans are made accessible to the weaker nations on extremely favourable terms. The interest rate levied on these loans ranges from 0.5 to 1%, and the repayment duration varies from 5 12 to 10 years with a 5-year grace period. Annual payments are contingent on the acceptance of annual agreements, with members getting 15 percent of their quota under the first annual arrangement, 20 percent under the second annual arrangement, and 15 percent under the third annual arrangement. The SAF was established with a budget of 2,7 billion SDR. The majority of the funds come from loan repayments to the Trust Fund.

5. **Enhanced Structural Adjustment Facility (ESAF):** The ESAF was established in December 1987 with a budget of 6 billion SDR. It was established to satisfy the medium-term funding requirements of low-income nations. The ESAF has the same aims, eligibility requirements, and fundamental programmes as the SAF. The only difference between the two is the level of aid provided. The members can receive up to one hundred percent of their Quota throughout the course of a three-year programme, with a provision for up to two hundred fifty percent in extraordinary situations. The ESAF disburses funds biannually instead of annually.
6. **Compensatory and Contingency Financing Facility (CCFF):** The CCFF was established in August of 1988. Its primary objective was to offer timely compensation for temporary shortages or increases in cereal import costs caused by external factors. This facility was offered to a member in order to continue the momentum of adjustment programmes financed by the Fund. In 1990, the Fund temporarily incorporated a significant element to assist members in recovering from the Gulf War Crisis. This was within 95 percent of the CCFF quota. Additionally, it was determined to increase the scope of CCFF. Now, for the calculation of export shortfalls, workers' remittances, and trip receipts, shortfalls in other services such as revenues from pipelines, canals, shipping, transportation, construction, and insurance, etc. are also factored into compensating finance. .
7. **Transformation Facility (STF):** In April, 1993, STF was established with $6 billion to help Russia and other Central Asian Republics to face balance of payments crisis.
8. **Emergency Structural Adjustment Loans (ESAL):** The ESAL facility was established by the Fund at the beginning of 1999 to assist Asian and Latin American countries in financial difficulty. The Fund's short-term loan rates were 3 to 5 percentage points higher than its typical lending rates. The ESAL facility was established by the Fund at the beginning of 1999 to assist Asian and Latin American countries in financial difficulty. The Fund's short-term loan rates were 3 to 5 percentage points higher than its typical lending rates.
9. **Contingency Credit Line (CCL):** CCL was established in April 1999 to shield fundamentally sound countries from the contagion of other countries' financial crises. Those countries were deemed qualified which could finance BOP comfortably over the medium term, had a robust financial sector, and strong debtor-creditor relations. No nation has borrowed through this facility.

13.7 Conditionality Clause Of Imf And World Bank

When the IMF provides financial support to member countries, it must be sure the members are pursuing policies that will improve or eliminate their external payments problems. The explicit commitment that members make to implement corrective measures in return for the IMF's support is known as conditionality. Fund conditionality requirements, linking the financial assistance to the adoption of economic adjustments policies by members, seek to ensure that the member's policies are adequate to achieve a viable balance of payments position over a reasonable period. This commitment also ensures that members are able to repay the IMF in a timely manner, which in turn allows the IMF's limited pool of financial resources to be made available to other members with balance of payments problems. IMF financing, and the important role it plays in helping a country secure other financing, enables the country to adjust in an orderly way without resorting to measures that would harm its own or other countries prosperity.

Conditions for IMF financial support may range from general commitments to cooperate with the IMF in setting policies, to the formulation of specific, quantified plans for financial policies. IMF financing from its general resources in the upper credit tranches (that is, where larger amounts are provided in return for implementation of remedial measures) is disbursed in stages.

The IMF requires a letter of intent or a memorandum of economic and financial policies, in which a government outlines its policy intentions during the period of the adjustment program; the policy changes it will make before the arrangement can be approved; performance criteria, which are objective indicators for certain policies that must be satisfied on a quarterly, semiannual, or in some instances monthly basis in order for drawings to be made; and periodic reviews that allow the Executive Board to assess whether the member's policies are consistent with the programs objectives.

Conditionality is flexible. The Executive Board's guidelines on conditionality encourage members to adopt corrective measures at an early stage; stress that the IMF should take into consideration members domestic social and political objectives, as well as their economic priorities and circumstances; permit flexibility in determining the number and content of performance criteria; and emphasize that IMF arrangements are decisions of the IMF that set out, in consultation with members, the conditions for its financial assistance.

The IMF recognizes that no one reform model suits all members and that individual countries both governments and civil society must have ownership of their programs. Thus, each member country, in close collaboration with the IMF staff, designs its IMF-supported programme. The process involves a comprehensive review of the member's economy, including the causes and nature of the balance of payments problems and an analysis of the policies needed to achieve a sustainable balance between the demand for, and the availability of, resources.

IMF-supported programs emphasize certain key aggregate economic variables domestic credit, the public sector deficit, international reserves, and external debt and crucial elements of the pricing system including the exchange rate, interest rates, and, in some cases, wages and commodity prices that significantly affect the country's public finances and foreign trade and the economy's supply response.

Although macroeconomic policies designed to influence aggregate demand (the total amount of national planned expenditure in an economy) continue to play a key role in many IMF-supported adjustment programs, it is widely recognized that measures to strengthen an economy's supply side (production of goods and services) are frequently essential to restore and maintain external viability and sound growth. Among the IMF-supported policy adjustments that member countries make to enhance the growth potential and flexibility of their economies are measures to remove distortions in the external trade system and in domestic relative prices, improve the efficiency and soundness of the financial system, and foster greater efficiency in fiscal operations.

Structural reforms in these areas have been particularly important in programs under the Extended Fund Facility and the Poverty Reduction and Growth Facility (PRGF), and the latter focuses particularly on poverty reduction as well. Given the emphasis on structural reforms in IMF-supported programs, close collaboration with the World Bank has been important.

Asian Development Bank

Some regional development banks have been established to assist the development of the developing countries of the respective regions the African Development Bank, the Asian Development Bank, the Caribbean Development Bank and the Inter-American Development Bank. The Asian Development Bank (ADB) was set up in December 1966 under the auspices of the United Nations Economic Commission for Asia and Far East (ECAFE) to foster economic development of Asian countries, with its headquarters at Manila. It also has about two dozen other offices around the world) ADB is a multilateral development finance institution dedicated to reducing poverty in Asia and the Pacific. In 2002, 61 nations, mostly from the region were members of ADB. The funds of the ADB are contributed by developed countries such as Japan, USA, Canada, West Germany, Australia, etc.

Objectives

ADB's overarching goal is to reduce poverty in Asia and the Pacific. It helps improve the quality of people's lives by providing loans and technical assistance for a broad range of development activities. ADB is a non-profit, multilateral development finance institution that engages in mostly public sector lending for development purposes in its developing member countries. The main objectives of the ADB are:

1. To promote investment in the ESCAP region of public and private capital for development.

2. To utilise the available resources for financing development, giving priority to those regional, sub-regional as well as national projects and programmes which contribute more effectively to the harmonious economic growth of the region as a whole.

The success factors are:

1. long-term relationships for policy dialogue,
2. policy regulatory system and rules for private sector investment in sanitation,
3. national campaigns for investment in sanitation,
4. combining water supply and sanitation institutions and cost-recovery mechanisms,
5. encouraging partnerships with other utilities in member countries, and
6. encouraging demonstration effects of pilot fecal sludge management at municipality level for a wider effect.

The failure factors are:

1. no targets for the poor in inclusive planning,
2. lack of a thorough capacity assessment of local implementing agencies,
3. not supporting small-scale independent sanitation providers for fecal sludge management,
4. not monitoring of environment and health impact indicators,
5. not incorporating gender analysis and actions, and
6. slow uptake and disbursement of initiatives under the Sanitation Financing Partnership Trust Fund (SFPTF).

13.8 India and the WTO

India is a founder-member of the WTO. India has contributed significantly to the evolution of the concept of the WTO. In turn, India is already reaping in a big way various benefits that can be directly or indirectly associated with the WTO.

1. India is experiencing an unprecedented boom in exports, as are the world exports. India is soon to reach the export target of $100 billion, up from only $33.22 billion in 1998-99. This can be attributed, in a large measure to the WTO-induced lowering of the trade barriers.
2. India has immensely benefited from the multilateral dispute settlement system that has been set up under the WTO. Action has been initiated against such powerful economies as the USA on disputes involving India.
3. Adoption of international standards in Intellectual Property Rights protection would enhance flow of foreign investment and technology.
4. Indian laboratories engaged in research in plant varieties and seeds for tropical regions would benefit.
5. Trade in textiles and agricultural products, in particular, would get a boost.

In short, the WTO has opened up new vistas in international economic relations for all the countries of the world. In the opened up world, the stakes of all the countries have multiplied, and so has the degree of rivalry and competitiveness. India, like any other country, would be on guard to save its interests and promote them in a world which is swamped with multifold opportunities.

13.9 India and the Bank

India is the founder-banker of the Bank. For India, the Bank means many things. The Bank has not been merely a lending institution to India but has also served as a worthy counsel whom India has approached for advice in difficulties.

India has been the single largest borrower of the Bank. The Bank has extended generous assistance to India in executing a number of development projects in different sectors like manufacturing, industry, transportation – railways, ports, roads and aircrafts – electrical power, agriculture, etc. The Bank has also been instrumental in the establishment of the India Development Forum, a consortium of donor nations to India. The massive financial assistance pledged by the consortium members has been the largest aid commitment and is a landmark in the history of development aid from developed countries to developing countries.

But in line with the general changes in the environment, India's growing preference for equity capital rather loans has resulted in a marked fall in the inflow of assistance from the Bank to India, as would be seen from

Table 1

Table 1: World Bank Assistance to India

Year	Grants	Loans	Total
1980-81	–	175.5	175.5
1990-91	–	1217.5	1217.5
1997-98	8.0	581.9	589.9
1998-99	3.0	575.1	578.1
1999-00	5.1	646.6	651.7
2000-01	5.4	706.8	712.2
2001-02	1.5	772.8	774.3
2002-03	10.4	657.3	667.7
2003-04	13.2	902.3	915.4

India's total outstanding debt from the Bank stands at about $5 billion presently.

Bank aid to India, however, has been subject to a number of criticisms:

• The Bank has granted loans for specific purposes and projects rather than for general development purposes.

• The Bank exercises excessive control over the expenditure on the proposed projects.

• The rate of interest charged by the Bank is very high.

• An increasingly large share of the Bank's assistance is linked to the "conditionality", i.e., to effect the changes in the economic policies as desired by the Bank.

Summary

A set of different international economic organisations has been set up to ensure orderly international economic cooperation and smooth economic relations between the nations of the world. While the IMF and the World Bank were set up when the world was caught in the turmoil of the World War, the WTO has been set up when the wave of globalization and liberalization was sweeping across the globe. Both the situations called for a need to set up mutually-agreed organisations, which would only prove a win-win situation for all the contracting parties. While there may be some short-term pains for a few, due to need for structural adjustment during the phase of transition, long term prospects for economic development only serve to attract more adherents to this doctrine. Even China, which has been in the forefront to maintain its relative isolation in the world of nations, finally chose to get a membership of the WTO, and subject itself to the various agreements, rules and regulations framed by it. Open trade in goods and services, if carried out in true spirit, can only promote welfare, globally and for each constituent individual nation.

Keywords

Conditionalities: Various obligations placed on a borrower-nation by the IMF.

Review Questions

1. Discuss the functions and role of IMF. Give a brief account of IMF's financing policies and facilities
2. IMF and World Bank serve the interests of industrialised nations rather than those of the developing countries. Comment
3. What is meant by an international monetary system? How can international monetary systems be classified?
4. (a) Explain how a nation could attempt to discourage large destabilizing international capital inflows under the Bretton Woods system by intervening in the forward market.

(b)Can the same be done under the present international monetary system?

5. What have been the causes of external debt of developing countries ? Discuss the measures that have been adopted to solve this problem.
6. State the objectives and functions of the International Monetary Fund. How have these undergone a change since its incentive?

SelfAssessment

1. Where is the headquarters of the 'United Nations Conference on Trade and Development' located?

A. Geneva
B. Washington
C. Paris
D. Brussels

2. The headquarter of International Monetary Fund is located at …….

A. Geneva
B. London
C. USA
D. Washington D.C.

3. The International Monetary Fund (IMF) was established by an international treaty in

A. 1942
B. 1943
C. 1944
D. 1945

4. In December 1945, the IMF came into existence with the following number of countries signed its Articles of Agreement.

A. 29
B. 30
C. 31
D. 32

5. The purpose of IMF is to

A. To promote international monetary cooperation
B. To facilitate the expansion and balanced growth of international trade
C. To promote exchange stability
D. All of the above

6. The IMF focuses mainly on a country's ___ policies.

A. Macroeconomic
B. Microeconomic
C. Both (A) And (B)
D. None of the above

7. Member's quota delineates basic aspects of its financial and organizational relationship with the IMF, including:

A. Voting power
B. Access to financing
C. SDR allocations
D. All of the above

8. What is the main role of the World Bank?

A. To be a forum for trade and liberalization.
B. To assist countries in development.
C. To facilitate private investment around the world.
D. All of the options given are correct

.

9. Which of the following statement is correct?

A. World bank has established 73 years ago
B. Headquarter of World Bank is in Washington D.C.
C. Adam smith is the founding father of the World Bank
D. Only a. and b.

10. Which of the following is not the function of World bank?

A. To provide the long-term loans to the members countries
B. To provide the loans to the private investor belonging to the member countries
C. To ensure the exchange rate stability
D. To provide the loan for the productive activities

11. Headquarter of Asian Development Bank (ADB) is in

A. Bangkok
B. Singapore
C. Beijing
D. Manila

12. Asian Development Bank (ADB) has the following objective(s)

A. Environmental Protection
B. Economic Growth
C. Human Development
D. All of the above

13. WTO stands for_____

A. World Tariff Organization
B. World Tax Organization
C. World Trade Organization
D. World Trademark Organization

14. _____ became the 164th member of World Trade Organization (WTO).

A. Kenya
B. Liberia
C. Pakistan
D. Afghanistan

15. The World Trade Organization (WTO) was established to implement the final act of _____round agreement of GATT.

A. Torquay
B. Uruguay
C. Geneva
D. Tokyo

Answers for Self Assessment

l.	A	2.	D	3.	D	4.	A	5.	B
6.	A	7.	D	8.	B	9.	D	10.	C
11.	D	12.	D	13.	C	14.	D	15.	B

Further Readings

1. International Business Environments and Operations, John D Daniels, University of Miami, Lee H Radebaugh, Brigham Young university and Daniel P Sullivan , University of Selaware, Pearson, 2007
2. International Business – Competing in the Global Marketplace, Charles W L Hill, University of Washington and Arun Kumar Jain , Heilbronn Business School (Germany), on leave from IIM Lucknow, The Tata McGraw Hill publishing Company Ltd.

Web Links

Data and analyses of the operation of the present international monetary and trading systems are regularly conducted by the International Monetary Fund (IMF), the Organization for Economic Cooperation and Development (OECD), the Bank for International Settlements (BIS), the World Trade Organization (WTO), and the World Bank (WB). Many of these are posted on their web sites at:

http://www.imf.org

http://www.oecd.org

http://www.bis.org

http://www.wto.org

http://www.worldbank.org

Unit14:FormsofEconomicCooperation

CONTENTS

Objectives

After reading this Unit, students will be able to

- Understand the emergence of trading Blocs
- Examine the rationale of a Customs Union (CU),
- Evaluate the benefits are expected from economic integration,
- Analyze the Static and Dynamic effects of Custom Unions.

Introduction

Although some form of economic cooperation has been a part of international political relations during most of this century, American interest in international economic cooperation has increased substantially. This heightened desire to coordinate economic policies with the other major economic powers is a response to the special problems of the 1980s: the sharp fluctuations in exchange rates, the massive shifts in the trade balance, and the explosive growth of debt, among many of the developing countries.

14.1 International Economic Cooperation

The objective development of diverse economic, scientific, and technological ties among individual countries and groups of countries and between the socialist and capitalist socio-economic and

political systems is based on independence, equality, and mutual advantage. Essentially the process represents the intensification of the international division of labor.

The scientific and technological revolution, which has accelerated the international division of labor, and the USSR's growing economic strength and the entire world socialist system have increased the importance of international economic cooperation. Only after the appearance of socialism did genuine economic cooperation become possible, based on sovereignty and equality between states and peoples. The forms of economic cooperation within the socialist community and those within the capitalist economic system, while superficially similar, reflect the fundamental differences between the two opposing economic and sociopolitical systems.

Did you Know?

Theworldsocialist economic systemaffects the nature of economic cooperationnotonly between capitalist and socialist countries but alsobetweenthedevelopedcapitalistcountriesandthedevelopingcountries.

As a result of the continuing scientific and technological revolution, no single country, not even the most developed, can efficiently produce the entire range of modern products. Therefore, individual countries or groups of countries attempt to limit the range of goods they produce and produce them in huge quantities to meet not only their own needs but also the needs of other countries in exchange for the commodities that the other countries produce export. In this way, trade expands and a single world economy develops, each country providing the goods primarily it produces better and more cheaply than others.

International economic cooperation among the capitalist countries developed from simple forms of trade and exchange. At the imperialist stage, a complex and diverse system of international industrial ties arose between monopolies and monopolistic associations (such as international cartels, syndicates, and concerns), and intergovernmental economic unions were formed. The capitalist division of labor arose and developed, closely linked with the world capitalist market. Within the capitalist system, international economic cooperation is accompanied by fierce competition among monopolies and countries, by the intensification of irreconcilable contradictions, by the growing effect of the law of uneven economic and political development of capitalist countries in the age of imperialism, and by the narrowing of imperialism's sphere of influence and the growth of the world socialist system.

International economic cooperation includes foreign trade, credit relations, cooperation between countries in extracting natural resources, compensation arrangements, and extensive scientific and technical cooperation—for example, trade in licenses to produce certain goods and to use certain technological methods, joint scientific studies, and collaboration on major technical projects, in the construction of plants and other enterprises, in geological exploration, and in training national personnel.

14.2 The Effects of Customs Union

There are two kinds of effects of customs unions, static and dynamic. The static effects relate to the establishment of the customs union on welfare. The analysis in this instance focuses on comparing the welfare of a country or groups of countries before and after the establishment of the customs union; thus, the analysis is one of comparative statics.

The dynamic effects focus on the impact of the customs union on the output growth rate of a country or countries in the medium term. Many analysts have noted (Winters 1996) that supporters of customs unions and other regional preferential arrangements frequently fin d that the static welfare effects are typically small and possibly harmful. They then focus on the potential dynamic benefits, which are difficult to define and even more challenging to measure.

In the case of the CIS countries, there is already an FTA among all members as well as a Customs Union (CU) among some of them however modified by specific exceptions for variation from a common external tariff. Hence the analysis of both dynamic and static effects has to compare the advantages and disadvantages of joining this specific customs union not just any one, and assumes that in principle the alternative to joining, is continuation of the FTA among the CIS; but the implications of a different choice, under which countries that do not join the CU are excluded from the FTA area, also briefly examined.

Static Welfare Effects

The principal impact of joining the customs union would be to replace the external tariff of each of the countries with the standard external tariff of the customs union. In general, under these

circumstances the benefits of joining the CU would depend to a considerable extent on the height and structure of each of the countries external tariff compared to that of the Customs Union external tariff. While in practice a Customs Union external tariff may not be in place at present, for purposes of analysis, the Russian tariff is a good proxy of the Customs Union external tariff that had been negotiated and will be used for the discussion in this Unit. If a country such as Armenia or the Kyrgyz Republic with lower external tariffs were to substitute the Russian tariff for its own tariff structure, it would increase its unweighted average tariff to 13-14 percent (see table 2). More importantly, assuming that following accession of new members, the common external tariff is not changed, the Russian tariff exhibits considerably more dispersion compared with the tariff for some of the countries (typically between 0 and 30 percent),3 meaning that for selected highly protected products in Russia, the tariff would increase significantly. For other countries, adopting the common external tariff would mean actually reducing their average tariff.

Starting with Jacob Viner (1950), international trade economists typically analyze preferential trade arrangements, whether members of a FTA or a CU, in terms of trade creation and trade diversion. Trade creation in a product occurs, when additional imports come from partner countries which displace sales of inefficient domestic producers and these imports are at least as cheap as imports from non-partner countries. Trade creation results in improved welfare for the importing country for much the same reasons as increased trade improves a country's welfare. On the other hand, trade diversion occurs when suppliers in the rest of the world (who continue to face tariffs) are more efficient than partner suppliers, but additional partner country imports displace the more efficient suppliers. Trade diversion is typically (but not necessarily) welfare reducing since the home country must pay more to import the product from the less efficient partner country suppliers.

Although the general theory of regional trading arrangements is quite ambiguous in its conclusions, we believe some definitive conclusions are possible with respect to the specific customs union under consideration, at least for some of the CIS countries. Since the partner countries in the potential customs union already have tariff free access to the other CIS markets under the Free Trade Agreement, prices in these countries' markets cannot fall as a result of the customs union, i.e., there will be little welfare gain from trade creation. Whatever trade creation would occur, would come from third country suppliers in those products where the current external tariff in the country is higher than that of the Customs Union external tariff. Since welfare costs from a tariff increase with the square of the tariff rate, net welfare effects are little impacted by reductions in tariffs by a few percentage points say, from ten to seven percent. Instead, the changes that involve significant tariff increases are crucial to the welfare effects.

14.3 Countries with Lower Tariffs Than in the Customs Union

Prospective partner country suppliers will have the potential, under the higher tariffs of the customs union, to raise prices to consumers in other CIS countries by the amount of the tariff preference over rest of world imports. In the model we present in the appendix, we assume that they will do so. A principal reason we believe they will do so is our judgment that advocates of the customs union propose it to expand protection for inefficient domestic industries throughout the CIS. The customs union is an import substitution strategy for inefficient industries, where the tariff structure is high in those industries that exist in the customs union, especially in Russia. In the appendix, we elaborate some additional reasons why we believe they will do so. Thus, a key assumption of our model is that prospective members of the customs union face upward sloping supply curves from partner country suppliers who will raise prices by the extent of the tariff.

Moreover, since these countries have tariff free access to markets of the customs union members and Russia in particular, the exporters from a CIS country joining the CU will not obtain improved access to the Russian market, which is by far the dominant market in the customs union. Thus, for countries like the Kyrgyz Republic and Armenia with already liberal external tariffs or others like Georgia and Moldova which are also pursuing generally liberal trade policies and assuming the common external tariff is not changed following their accession, the usual tradeoffs that must be

considered in the evaluation of a preferential trade arrangement (trade diversion versus improved access and trade creation) do not apply. Thus, the CU would virtually result in pure trade diversion.

High tariff protection for such small economies is generally very inefficient and costly. Protection prevents the transmission of world prices to the economy and thereby prevents market signals from inducing resource reallocation to areas of comparative advantage in the economy. Experience has shown that countries with high protection generally grow more slowly than those with low protection over time. Moreover, we show in the appendix that increasing an external tariff within the framework of a customs union with Russia and the other partners for a small CIS country, is much more costly than simply raising tariffs, without preferential treatment to the customs union members. In fact, in this example the customs union will be several times more inefficient and costly to the small country than simply raising tariffs to the rest of the world in a non-preferential manner.

Joining the customs union with a common external tariff such as that previously negotiated is so costly for several reasons: First, partner country suppliers can raise prices under the tariff protection they receive from preferential protection. Then for the quantities previously purchased from partner country suppliers, consumers in member countries with a once lower external tariff will likely pay higher prices (excluding the tariffs) to partner country producers than they were paying before participation in the customs union, i.e., there is an adverse terms-of-trade effect on the initial quantities purchased from partner country suppliers. Second, since rest of world imports are subject to a higher tariff, there will be a diversion of sales away from rest of the world suppliers toward partner country suppliers.

This trade diversion entails two costs: (a) since the importing country does not collect any tariff revenue on imports from partner countries, there is a loss of the tariff revenue on these diverting trade imports; and (b) excluding the tariff, consumers will have to pay higher prices to partner country suppliers than they were paying to rest of world suppliers prior to participation in the customs union.

In their comprehensive theoretical treatment, Bhagwati and Panagariya (1996) describe a model in which partner country suppliers have perfectly elastic supply curves. This situation might be expected to apply if a country is forming a preferential trade area with a huge market, such as the European Union or NAFTA because competition among many suppliers in the large market results in flat supply curves to the prospective new member country. In this case, there is a much larger likelihood of the preferential trade area being welfare increasing since the new member will not suffer a terms-of-trade loss on its purchases from the suppliers from the large market.

Countries with Higher Average Tariffs Than in the Customs Union

For countries with a higher average external tariff than that of the CU, the results are more ambiguous. On the one hand, in converting to the common external tariff, since the average tariff is lower than in the home country, there will be a number of products where the external tariff will be reduced.

Then there will be a welfare gain on those products where the external tariff is lowered Because there will be some trade creation from additional imports from rest of the world Suppliers (partner country suppliers already have tariff free access due to the FTA so no Additional trade creation is possible from CIS partners). On the other hand, the negotiated

Tariff of the CU is not uniform; rather, it favors the production of those products already produced in the CU Even in countries with higher average tariffs than in the CU, their tariffs typically favor their home production. Substitution of the CU tariff will shift the tariff structure so that it favors the producers of the CU, i.e., tariffs will be high on the products produced in the CU and low on the products produced in the home country, and it is likely that even in countries with higher average tariffs, they will have to raise their external tariffs on many products produced in their partner countries. This will allow partner country producers to charge higher prices under the protection of higher tariffs on third-country producers, a significant welfare loss that is likely to dominate. A choice available to a country in these circumstances is to lower its tariff on third countries, without joining the CU This option offers the gains from the trade creation on the products where the external tariff is being lowered, without the losses of the trade diversion from having to pay higher prices to inefficient partner country suppliers.

Russia, Kazakstan and Belarus. Finally, briefly consider the welfare impact on Russia, Kazakstan and Belarus, the members of the Customs Union which had adopted the standard external tariff.

Since the tariff structure favors production in these countries, then as more countries join the Customs Union, in the short run producers in these countries will gain additional profits and exports from the additional protection they receive against rest of world imports in the new partner country markets. Since the costs of protecting home producers will be borne in part by consumers in partner countries, the strategy has an initial appeal in the countries whose producers receive the high protection. But, because the benefits of a liberal trade regime to consumers are dispersed widely (presenting a free- rider problem where it is not typically worth it to individual consumers to lobby their governments for liberal trade actions) while the benefits of trade protection are concentrated in the industry receiving protection (which provides an incentive for the industry to lobby its government for protection), the kinds of preferential trade areas that will typically arise are those which are trade diverting (see Grossman and Helpman (1995)). Thus, in order for the existing members of the Customs Union to convince additional members to join, or at least to remain members over time, it is likely that the tariff structure will have to change in a way that offers protection to producers of other CIS countries, i.e., the existing members will have to offer protection in their markets to high priced products produced in non-member CIS states.

Caution: A country will not participate in a Customs Union if the Customs Union offers neither enhanced protection for its producers nor widespread benefits for its consumers.

Suppose the external tariff is adjusted to accommodate the inefficient producers of new members, although some of the producers of the existing member countries may still gain from a wider Customs Union. In that case, the benefits to the countries as a whole are going to be reduced and countries could become net losers. That is, the short-run gains to existing producers mask potential longer term costs of not opening up trade to the rest of the world. It is likely that the entire CIS is not collectively large enough to approximate world market efficiency in most products. Thus, a strategy of widening the protection of domestic producers through a Customs Union of a set of the CIS countries, is really an import substitution policy through protection on a slightly larger scale, a strategy that has retarded growth in many countries .

14.4 Revenue Effects

Due to the potential impact on the fiscal deficit, macro stabilization and inflation, governments must also be cognizant of the impact of preferential trade arrangements on their revenues. In this section, we examine various aspects of this question for the CIS countries.

Tariffs

Joining the customs union is likely to have negative revenue implications on Individual new members. As there will continue to be no tariffs on trade within the customs union, to the extent that rest of world imports are displaced, tariff revenue will be lost to the customs union. In addition, despite the fact that the customs union agreements stipulate that the tariff revenue will go to the country to whom the imports are destined, one can not overlook the potential administrative problems associated with obtaining tariff revenues from the customs offices of other member countries, especially given the weakness in tax reserve collections in all these countries. And there are other reasons to believe that revenues of imports from the rest of the world will be diminished. There are central administrative institutions of a customs union that will have to receive funding. Funding for the administration of the customs union or any centralized programs is typically done out of tariff revenue collected by the customs union.

Excise Taxes: Accession to the customs union will increase pressure on members to harmonize excise tax rates. These rates are presently rather diverse both within the CU countries and potential members. The tax revenue implications of unified rates would have to be assessed in each case individually.

Value Added Taxes. The dominant practice among the CIS countries is to apply the value added tax (VAT) on a mixed basis. That is, for trade outside of the CIS, imports are taxed but exports are not, the

"destination" system. For trade within the CIS, exports are taxed but imports are not, the "origin system." Participation in the customs union will require a value added tax that is harmonized with the system applicable in the customs union, i.e., the current mixed system. Berglas (1981) has

shown that under certain assumptions (including flexible exchange rates) the origin or destination systems are equivalent and do not tax the trade regime if designed properly. Since the VAT rates of most CIS are approximately equalized, the allocation of real resources and trade flows among the other CIS countries is not seriously affected, but it is important to harmonize these taxes within a mixed system to avoid arbitrage and distortions.

What is more likely to be a problem with a mixed VAT system is the allocation of tax revenues. Even if the VAT rates are harmonized, countries with a trade deficit within the customs union and a trade surplus outside the customs union will experience an adverse transfer of VAT tax revenues toward the partners in the customs union with the opposite trade pattern. To illustrate, suppose the trade of Azerbaijan is balanced overall, but it imports exclusively from, say Russia, and exports exclusively outside the customs union, and that Russia has the opposite trade balance.

Since the destination system applies on trade outside of the CIS, and the origin principle applies on trade within the CIS, Azerbaijan would collect no VAT tax revenues (neither on its imports nor its exports), and Russia would collect all the VAT revenue on trade (Russia collects VAT on both its exports to Azerbaijan and its imports from the rest of the world). Thus, even though the mixed VAT system would not change relative prices and is therefore non-distortionary because there is no impact on the allocation of resources, in this example it would represent a transfer of VAT revenues from Azerbaijan to Russia.

14.5 Dynamic Effects

In general, there are two basic ways in which the rate of output growth can increase: First through a faster growth of factor inputs and second through increases in the growth of total factor productivity. Assuming no changes in population growth and in labor force participation rates, the growth of factor inputs essentially boils down to the rate of investment in human and physical capital. Total factor productivity on the other hand is thought to be dependent in the medium and long term on improvements in technology and knowhow.

More generally, access to a diverse mix of products including modern technology appears to be very important for the growth process. New and diverse technologies are constantly appearing and these new technologies allow an increase in the productivity of both capital and labor.

The question that needs to be addressed then is how a customs union among the CIS countries will affect output growth through its impact on access to technology that enhances productivity and through its effects on the rate of investment in human and physical capital.

There is some evidence that developing countries total factor productivity is positively related to the access of technology and knowledge embodied in imports from developed countries. In the case of CIS and other transition economies, access to diverse and modern intermediate products from world markets appears especially crucial as these economies attempt to transform themselves from an industrial structure that was inherited from the era of the former Soviet Union, i.e., that was outdated and frequently not based on comparative advantage. It is very important that these countries move away from reliance on technologies that are available only in the countries that were part of the former Soviet Union, since the most dynamic and modern technologies are found elsewhere. Yet, tariff protection for products that are produced in the customs union will discourage the introduction of new products and technologies from outside the customs union and free trade area, technologies that would boost the growth and development of the CIS members. Thus, on the question of enhancing growth through improvements in total factor productivity the effect of the customs union (and for that matter of the exisitng free trade area) on all its members is likely to be very negative.

There are several ways through which a customs union could affect the rate of investment in member countries: (a) through a change in tariffs and hence in the cost of imported capital equipment that changes the rate of return on investment and the rate of capital accumulation; (b) through affectingthe financial system and the overall stability and effectiveness of economic policies that improve the climate of investment; (c) by providing an incentive to foreign direct investment to locate and produce in the countries of the Union as opposed to exporting goods and services.

Unfortunately, it is difficult to make a credible case that these effects would be positive in the case of a customs union in the CIS. First, it is likely that the cost of imported capital would actually increase especially for some of the smaller members, as they could obtain capital goods more

cheaply from third countries. Second, while there are plans for greater integration of the financial systems and economic policies of members, which may positively impact the climate of investment in the future, there is very little chance that any of this will happen in the immediate future. In fact, premature integration without adequate multilateral institutions may resurrect some of the problems of the recent past which contributed to instability. For example, the common ruble area of 1992-1993, without monetary coordination of the multiple central banks was a root cause of inflation and trade problems. The key challenge in all countries is improving the national environment for private sector development by establishing policies and institutions (for example, better enforcement of contractual obligations) that improve the investment climate--policies that may best be pursued unilaterally in the near term. Third, it is possible that as result of the establishment of the customs union, there may be a positive effect on foreign investment that comes in to "jump" the common external tariff. How big this effect will be is hard to predict simply because there are so many other factors that constrain the inflow of foreign direct investment which countries need to address first and which are likely to have a far greater impact on foreign direct investment than the stimulus provided by the establishment of a customs union. More importantly, foreign direct investment which is in response to tariff jumping can cause the welfare and growth rate of the capital importing country to decline. The reason is tht foreign investment responds to the private return to capital, and the foreigners will repatriate profits based on their private returns; but when the sector is highly protected, the social return to investment in the sector is much lower than the private return.

In sum, while the dynamic effects of establishing or joining a customs union and of the exisiting Free Trade Area in the CIS are difficult to demonstrate, they are likely to be negative, especially because of the adverse effect of the preferential arrangements on technology and productivity improvements.

The Threat of the Loss of the Free Trade Agreement: In the event that a CIS country fails to join the customs union, there is some possibility that the members of the customs union would apply the common external tariff to the exports of that CIS country; that is, they may revoke their Free Trade Agreements. Although we must be cautious since the effects will vary from country to country and we do not have precise estimates, the net welfare impact of participation in the Free Trade Agreement is likely to be negative for most CIS countries; consequently, the threat of exposure to the common external tariff of the customs union is not an event that should be feared for most CIS countries.

The reasons are as follows: If Russia, Kazakstan and Belarus, withdraw from the Free Trade Agreements and apply the negotiated common external tariff of the customs union to exports from the other CIS countries, there would be economic impacts on both the imports and the exports of these CIS countries. Regarding imports, as explained in detail in the appendix, applying tariffs on imports from former partner countries in the CIS results in displacement of partner country imports by rest of world supply. This results in a gain in tariff revenue on these sales. Moreover, since partner country suppliers are likely, in many products, to lower their prices to the extent of reduction of the tariff on rest of world products (since marginally inefficient partner country suppliers will be forced out of the market as competition from rest of world producers becomes more intense), CIS consumers will be able to pay less to partner suppliers by the amount of the tariff, and this is a gain to their economic welfare. Moreover, permitting efficient imports from the rest of the world instead of preserving inefficient imports from partners in the former Soviet Union is very productive in breaking away from the outdated and inefficient technology of the Soviet past.

Weighed against this potential benefit from applying tariffs on imports in the CIS is the loss in welfare from lost preferential access to the markets of countries in the Customs Union. Exporters from the CIS countries outside the Customs Union would no longer be able to obtain higher prices than producers from the rest of the world on exports to the countries in the Customs Union, since like

exporters from the rest of the world, their exports would also be subject to the tariff. But since the negotiated tariff of the Customs Union is based on the Russian external tariff, it tends to be high in those items important to Russian producers. That is, products important to the exports of the CIS tend to be inputs into production in Russia and therefore have relatively low tariffs in the Customs Union.

Although we must again be cautious since this effect will vary from country to country and we do not have precise estimates, this implies that most CIS countries outside Russia, Belarus and Kazakstan likely derive little terms of trade gain on their exports to the Customs Union, from the

fact that they are in the Free Trade Agreement. That is, most CIS countries perhaps with the exception of Ukraine, would likely be able to sell the vast majority on their products in the same markets with small losses losses that are considerably smaller than the losses suffered by their consumers from having to pay higher prices to the exporters from the Customs Union.

Moreover, the dynamic effects of the free trade area could also be negative for all its members. It would be desirable for CIS exporters to find alternate marketing channels outside of the CIS Customs Union countries. This would reduce dependence on a limited number of countries for markets and transportation facilities. Absent Free Trade Agreements, it will become even more imperative for exporters from the CIS to find alternate markets and marketing channels. Moreover, while finding new markets outside of the Customs Union countries may require a difficult adjustment period, the experience of the Baltic countries between 1992 and 1994 demonstrates that rapid adjustment is possible.

Converting the Free Trade Area to a Customs Union

Now consider the impact of imposing the common external tariff at the rate t', starting with the Free Trade Agreement. The supply curve, including the tariff of the rest of the world and the new equilibrium price increases to P.R. (1+t'), where the quantity demanded for imports declines to M1. Partner country suppliers also receive this higher price and then the quantity they supply increases to Q1. The quantity supplied from the rest of the world declines to M1 - Q1.

The welfare costs to country A are strongly negative, and may be decomposed into three parts. First, there are consumer deadweight losses because country A consumers are induced to reduce their consumption of total imports from Mo to M1 in favor of alternate goods available that were previously less preferred (this could include domestic substitutes in this product category or goods in other product categories). These were equal to the triangle ADL in the initial equilibrium, but they increase to BCL. The difference is the shaded area ABCD, representing the increase in consumers' deadweight loss due to the common external tariff. Second, there is an increase in the triangle of producers' deadweight losses, from NGH to NFE.

The difference is the shaded area FEHG, representing the increase in producers' deadweight loss due to the imposition of the common external tariff. Partner country producers are able to obtain higher prices in country A, which attracts less efficient higher cost supply. Absent a tariff, supplies from the rest of the world would have been available at the price P.R. Third, part of the higher prices received by partner country suppliers results in an increase in their profits or producers' surplus. The increase in partner country profits or producers surplus is HIJE; this is a transfer from country A consumers to producers in partner countries. Overall the loss of moving to the customs union, given that a Free Trade Agreement is already in place, is the sum of the three shaded areas in Figure 1: ABCD + FEHG + HIJE.

Given a Free Trade Agreement, the losses to the economy of increasing tariffs through the common external tariff of the customs union are considerably greater than non-preferential tariff increases from an average rate of t to t'. That is, if tariffs were applied in a non-preferential manner and were increased from t to t', the costs to the economy of the increase in the tariff would be the shaded area ABCD. The customs union imposes the additional costs equal to the areas FEHG and HIJE, representing inefficiency losses and transfers to partner country suppliers, respectively.

Combined Loss of the Customs Union and the Free Trade Agreement

The combined loss of the Free Trade Agreement and the customs union is larger than the loss of the customs union or the Free Trade Agreement alone and equals the triangle BCL plus the rectangle

MFEJ. A non-preferential tariff of rate t' would produce a welfare loss equal to the triangle BCL. The difference is equal to the area MFEJ which derives from the fact that consumers in country A pay higher prices to partner country producers than they would have to pay to rest of the world producers. The area MFEJ would be captured for country A as tariff revenue and not lost to the economy if the tariff were not preferential. Instead with a the combination Free Trade Agreement and customs union the area MFEJ is added to the losses of country A, thereby greatly magnifying the losses. The area MFEJ represents a combination of transfers to partner country suppliers (the area MNEJ) plus inefficiency (deadweight) losses of using marginally inefficient partner country suppliers (the triangle NFE). It is necessary to reduce this estimate of the losses by the increase in

the terms of trade earned by exporters from country A on their sales within the PTA. Since the tariff primarily benefits existing Customs Union members, these gains may be expected to be small.

14.6 Rationale and economic progress of SAARC & ASEAN Regions

SAARC

South Asian Association for Regional Cooperation (SAARC) was founded in Dhaka on 8 December 1985. Its secretariat is based in Kathmandu, Nepal. SAARC has eight members e.g. Afghanistan (inducted in 2006), Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. The idea of the SAARC itself was put on the table by Bangladesh President Ziaur Rehman in the late 1970s with a view to containing the "hegemony" of India in South Asia - a view fueled by the structural asymmetry between India and its smaller South Asian neighbors.

SAARC comprises 3% of the world's area, 21% of the world's population and 3.8% (US$2.9 trillion) of the global economy. It is the world's most densely populated region and one of the most fertile areas. The members of this grouping have a lot in common as a result of their shared history and shared geography. There is a cultural and civilizational heritage which provides the platform to pursue their common interests. Also, the SAARC countries have common tradition, dress, food and culture and political aspects thereby synergizing their actions. All the SAARC countries have also common problems and issues like poverty, illiteracy, malnutrition, natural disasters, internal conflicts, industrial and technological backwardness, low GDP and poor socio-economic condition and uplift their living standards thereby creating common areas of development and progress having common solutions. India dominates the grouping because of its size, population, economy, technological superiority, scientific progress etc.

The objectives of the Association as outlined in the SAARC Charter are: to promote the welfare of the peoples of South Asia and to improve their quality of life; to accelerate economic growth, social progress and cultural development in the region and to provide all individuals the opportunity to live in dignity and to realize their full potentials; to promote and strengthen collective self-reliance among the countries of South Asia; to contribute to mutual trust, understanding and appreciation of one another's problems; to promote active collaboration and mutual assistance in the economic, social, cultural, technical and scientific fields; to strengthen cooperation with other developing countries; to strengthen cooperation among themselves in international forums on matters of common interests; and to cooperate with international and regional organizations with similar aims and purposes.

Achievements

Several factors such as political, economic, security and potentiality of mutual economic benefit through regionalism seem to have influenced President Ziaur Rahman's thinking about establishing a regional organization in South Asia. 15 SAARC's existence, however, has enabled South Asian political leaders to meet regularly and carry on informal discussions to address their mutual problems. This is no mean achievement given South Asia's past history and low level of interaction among South Asian countries since their independence. Informal talks among the leaders at regularly held SAARC meetings have led to inter-elite reconciliation on many sensitive issues, producing some noteworthy results in South Asia. The informal talks between the Indian and Pakistani Prime Ministers at the second SAARC Summit meeting at Bangalore in November 1986 led to the diffusion of tension between the two countries on the issue of India's military exercise, Operation Brasstacks, on the Indo-Pakistan border, and the India-Sri Lanka talks at the 1987 SAARC foreign ministers' meeting led to their accord on the Tamil problem. As a result of an informal meeting and discussion between Prime Minister of India and Pakistan, Narasimha Rao and Nawaz Sharif, at Davos (Switzerland), in 1992, the Pakistani government took action to prevent the move of the Jammu and Kashmir Liberation Front (JKLF) to cross the ceasefire line in Kashmir later that year. The Davos meeting was possible because of an earlier informal agreement between the two leaders at the sixth SAARC Summit meeting at Colombo in December 1991. Given this utility of SAARC, can the organization grow or expand its role in the coming decades?

The Heads of State or Government during the Ninth SAARC Summit agreed for the first time that a process of informal political consultations would prove useful in promoting peace, stability, amity and accelerated socio-economic cooperation in the region. The leaders reiterated this intent during their Tenth and Eleventh Summits in Colombo and Kathmandu respectively also. The Agreement on SAARC Preferential Trading Arrangement (SAPTA) was signed in 1993 and four rounds of trade negotiations have been concluded. With the objective of moving towards a South Asian

Economic Union (SAEU), the Agreement on South Asian Free Trade Area (SAFTA) was signed during the Twelfth Summit in Islamabad in January 2004. SAFTA may enter into force by the end of the year 2006. The Association has carried out Regional Studies on trade, manufactures and services, environment and poverty alleviation, SAFTA and Customs matters.

Since its inception in 1984 there have also been serious differences among member countries over the aims and functioning of SAARC.Such differences have been pronounced in verbal bickering in several SAARC meetings. This is in the face of the fact that closer social, economic and cultural ties (the espoused ideals of SAARC) are considered the one and only hope for building regional cooperation efforts in South Asia in the coming years. Indeed, increasing rationalization of world trade and the fluidity of the emerging global system has increased trade within each trade bloc and those countries that do not belong to any trade blocs are likely to be the losers.This also provides a strong rationale for sustaining the SAARC vis-à-vis future trade prospects of South Asia.

The assumption that peace can be achieved through SAARC without addressing the political problems of the region has neither been able to cultivate peace nor to invigorate the SAARC process successfully. Though since its very inception it has been regularly able to hold Summit meetings yet there have been interruptions in between owing mainly to intrastate conflicts between the member countries.

ASEAN

ASEAN and India agreed at the Laos summit to cooperate in human resource development, through capacity building, strengthening of institutions, training and entrepreneurship development focusing on small and medium enterprises. Apart from fostering cooperation to preserve their common cultural heritage, they agreed to promote people to people exchanges involving parliamentarians, the youth, artists, sport persons and representatives from business, industry, the media, and academic and think-tank institutions. The document on Partnership for Peace, Progress and Shared Prosperity signed on November 11, 2004 at the Third ASEAN—INDIA Summit also provides for strengthening cooperation at the United Nations and other multilateral fora, in particular WTO. It expresses support for early reforms of the United Nations and the Breton Woods institutions to make them more democratic and responsive to the priorities of the developing countries. The ASEAN—India Partnership document manifests a new urge on the part of ASEAN and India to jointly address the common challenges confronting the world, especially those relating to security such as the menace of international terrorism, other transnational crimes like trafficking in drugs, human trafficking, cyber crimes, international economic crimes and environmental crimes, sea piracy and money laundering, through effective institutional linkages and programmes of cooperation. As partners ASEAN and INDIA have also agreed to collaborate on the global plane in areas of general and complete disarmament and the non-proliferation of weapons of mass destruction under strict and effective international control. India sees its growing interaction with ASEAN as 'critical to fulfilling the promise of the 21st century being an Asian century' to use the words of Prime Minister Manmohan Singh. While launching the INDIA—ASEAN car rally at Guwahati on the eve of the third ASEAN—INDIA Summit, the Prime Minister called it 'a journey in to the future demonstrating the possibilities in trade, tourism and people to people contact by bringing all these countries together'. He was equally conscious however of the enormous benefits likely to accrue to India's north eastern region through an intensification of ties with ASEAN and its member countries and of which the sub- regional cooperation under BIMSTC is a part.

Milestones Covered

To give practical shape to the objectives of this newly envisaged partnership, the Laos document is accompanied by an Action Plan for the implementation of specific activities and projects that will be periodically reviewed in the light of the dynamic developments in the region and the world. With the signing of this document India joins the array of ASEAN partners such as China, Japan and South Korea. Our relationship with ASEAN has come a long way from the year 1991 when the first steps were taken to move towards a constructive relationship with ASEAN. I had the good fortune of being Secretary (East) in the Ministry of External Affairs at that time and visited several ASEAN countries with that intent. As a result India became a sectoral dialogue partner of ASEAN in 1992. India's trade with ASEAN countries has multiplied a few times since then and now stands at US $13 billion. It is targeted to reach US $30 billion by 2007. This is a far cry from the mid-1960's when India declined the offer to be a full member of ASEAN. The Partnership Agreement reached at Laos with ASEAN makes it possible for India to interact with the South East Asia community of 500 million people with a combined GDP of US $750 billion as a collectivity. ASEAN's integrative

mechanisms and the success it has achieved as a regional body should also inspire greater confidence in SAARC (the South Asian Association for Regional Cooperation), as an instrument of change in the South Asian region.

14.7 Problems and Prospects of Forming a Custom Union in The Asian Regionalism (Eu, Nafta)

The success of the EU encouraged many attempts at economic integration among groups of developing nations as a means of stimulating the rate of economic development. Most of these attempts, however, met with only limited success or failed.

1. The Central American Common Market (CACM), established by Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua in 1960, which was dissolved in 1969 and revived in 1990.

2. The Latin American Free Trade Association (LAFTA), established in 1960 by Mexico and most of South America, and its subgroup (the Andean Community, formed by Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela in 1969), which hoped to accelerate the process of integration and establish a common market; in 1980, the LAFTA was superseded by the Latin American Integration Association (LAIA).

3. The Southern Common Market (Mercosur), formed by Argentina, Brazil, Paraguay, and Uruguay in 1991. It was joined by Bolivia and Chile as associate members in 1996, Peru in 2003, and Colombia, Ecuador, and Venezuela in 2004. Venezuela is in the process of becoming a full member in 2012.

4. The Free Trade Area of the Americas (FTAA) established in 1998 with the goal of free trade among the 34 democratic countries of North and South America.

5. The Caribbean Free Trade Association (CARIFTA), set up in 1968 and transformed into a common market (CARICOM) in 1973 with the membership of Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, St. Kitts-Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

6. The East African Community (EAC), established in 1967 by Kenya, Tanzania, and Uganda.

7. The West African Economic and Monetary Union (WAEMU), which includes Benin, Burkina Faso, Cote d'Ivoire, Guinea Bissau, Mali, Niger, Senegal, and Togo.

8. The 14-member Southern Africa Development Community (SADC), extending from Angola, Botswana, the Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe.

9. The Association of South East Asian Nations (ASEAN), which includes Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, the Philippines, Singapore, Myanmar, Thailand, and Vietnam, though primarily a political association, in 1977 decided that it would also move toward a common market.

These customs unions are (or were) to a large extent explicitly trade diverting to encourage industrial development. Perhaps the greatest stumbling block to successful economic integration among groups of developing nations is the uneven distribution of benefits among members. Since benefits are likely to accrue mainly to the most advanced nations in the group, lagging nations are likely to withdraw, causing the attempt at economic integration to fail. One way to avoid this difficulty is to provide investment assistance through industrial planning (i.e., assign some industries to each member nation). Although this tactic was tried in the Central American Common Market, the effort failed nevertheless and the union dissolved in 1969 (although, as noted earlier, it was revived in 1990). Another difficulty is that many developing nations are not willing to relinquish part of their newly acquired sovereignty to a supranational community body, as is required for successful economic integration. Other difficulties arise from lack of good transportation and communication among member nations, the great distance that often separates members, and the basically complementary nature of their economies and competition for the same world markets for their agricultural exports. For these reasons, economic integration among developing countries cannot be said to have been very successful in most cases.

14.8 Principles of the Multilateral Trading System Under the WTO

For an international business manager, it is difficult to go through the whole of the WTO agreements which are lengthy and complex being legal texts covering a wide range of activities. The agreements deal with a wide range of subjects related to international trade, such as agriculture, textiles and clothing, banking, telecommunications, government purchases, industrial standards and product safety, food sanitation regulations, and intellectual property. However, a manager dealing in international markets needs to have an understanding of the basic principles of WTO which form the foundation of the multilateral trading system. These principles are discussed below.

Trade without discrimination

Under the WTO principles, a country cannot discriminate between its trading partners and products and services of its own and foreign origin.

Most-favoured nation treatment : Countries are not allowed to discriminate amongst their trading partners under WTO rules. If a country gives a special favour to someone (such as a lower customs rate for one of their items), it must do the same for all other WTO members. Most-favoured-nation (MFN) treatment is the principle. This paragraph is so significant that it is the first item of the General Agreement on Tariffs and Trade (GATT), the international agreement that oversees goods trade. The idea of MFN is also a priority in the General Agreement on Trade in Services (GATS, Article 2) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS, Article 4), albeit the principles are treated differently in each agreement. These three accords, taken together, encompass the WTO's three primary areas of trade.

Some exceptions to the MFN principle are allowed as under :

- Countries can set up a free trade agreement that applies only to goods traded within the group

—discriminating against goods from outside.

- Countries can provide developing countries special access to their markets.
- A country can raise barriers against products that are considered to be traded unfairly from specific countries.
- In services, countries are allowed, in limited circumstances, to discriminate.

But the agreements only permit these exceptions under strict conditions. In general, MFN means that every time a country lowers a trade barrier or opens up a market, it has to do so for the same goods or services from all its trading partners—whether rich or poor, weak or strong.

National treatment: The World Trade Organization (WTO) stipulates that imported and domestically produced commodities should be treated equally—at least after the foreign goods have reached the market. Foreign and domestic services, as well as foreign and domestic trademarks, copyrights, and patents, should all be treated the same. All three major WTO agreements, namely, Article 3 of GATT, Article 17 of GATS, and Article 3 of TRIPS, contain the notion of "national treatment" (providing outsiders the same treatment as one's own citizens). The principle, however, is handled differently in each of these accords. Once a product, service, or piece of intellectual property has hit the market, it receives national treatment. As a result, levying a customs duty on an import does not constitute a violation of national treatment, even if no corresponding tax is imposed on locally manufactured goods.

Gradual move towards freer markets through negotiations

One of the most obvious ways to encourage international trade is to lower trade barriers. Customs duties (or tariffs) and policies that restrict quantities selectively, such as import bans or quotas, are examples of such barriers. There have been eight rounds of trade negotiations since the GATT was established in 1947-48. Initially, they aimed to reduce tariffs (customs duties) on imported goods. By the mid-1990s, industrial countries' tariff rates on industrial goods had consistently declined to less than 4% as a result of the discussions. However, by the 1980s, the talks had broadened to include non-tariff barriers to commodities as well as new areas like services and intellectual property. The WTO agreements allow nations to gradually implement changes through a process known as "progressive liberalisation." Developing countries are typically granted more time to meet their responsibilities. .

Increased predictability of international business environment

Promises not to raise trade barriers are sometimes just as significant as promises to lower them since they provide firms a clearer picture of their future market potential. With stability and predictability, investment is encouraged, jobs are created, and consumers can fully enjoy the benefits of competition—choice and lower prices. Governments use the multilateral trading system to try to make the business environment more stable and predictable.

One of the Uruguay Round's accomplishments was to expand the volume of commerce that was subject to binding commitments. When countries agree to open their markets for products or services in the WTO, their pledges are 'bound.' These binders act as a ceiling on customs duty rates for commodities. A country's bindings can be changed, but only after negotiations with its trading partners, which may include compensating them for lost commerce. In agriculture, all products now have tariffs that are bound. As a result, traders and investors should expect a far higher level of market security.

In addition, the WTO's trading system aims to promote predictability and stability in other ways. One option is to discourage the use of quotas and other measures to put limitations on import volumes, as implementing quotas can result in more red tape and false allegations. Another is to make trade rules as plain and open (transparent) as feasible between countries. Many WTO accords compel nations to either publicly reveal their policies and practises inside their own country or to notify the WTO. The regular surveillance of national trade policies through the Trade Policy Review Mechanism provides a further means of encouraging transparency both domestically and at the multilateral level.

Promoting Fair Competition

The WTO is sometimes described as a 'free trade' institution, but that is not entirely accurate. The system does allow tariffs and, in limited circumstances, other forms of protection. More accurately, it is a system of rules dedicated to open, fair, and undistorted competition.

The anti-discrimination rules—MFN and national treatment—are intended to ensure that trade conditions are fair. The WTO has also established regulations on dumping and subsidies that harm fair trade. The concerns are complicated, and the laws attempt to define what is fair and unfair trade, as well as how governments can respond, such as by levying additional import tariffs to compensate for the harm caused by unfair trade. Many other WTO accords, such as those in agriculture, intellectual property, and services, attempt to promote fair competition. The government procurement agreement (known as a 'plurilateral' agreement because only a few WTO members have signed it) extends competition laws to thousands of government bodies in numerous nations.

14.9 Theory of Short-Term Capital Movements and East-Asian Crisis and Lessons For Developing Countries

The global financial system evolved over the years in a manner in which private capital flows took precedence over institutionalised flows from the Bretton Woods system. One of the main recipients of such attraction from the global capital market was the Asian region.

One of the reasons of such an attention was the economic dynamism displayed by the Asian countries whose achievement was broadly acclaimed by economic institutions including the IMF and World Bank, and was known as part of the Asian economic miracle. This economic dynamism was reflected in countries such as Thailand, Malaysia, Indonesia, the Philippines, Singapore, and South Korea that experienced high GDP growth rates of 8-12% in the late 1980s and early 1990s. However, a debate on the success of the Asian countries got initiated with Paul Krugman's article attacking the idea of an Asian economic miracle in 1994 by arguing that it lacked long term sustainability. He argued that East Asia's economic growth had historically been the result of capital investment, leading to growth in productivity. However, total factor productivity had increased only marginally or not at all. Krugman argued that only growth in total factor productivity, and not capital investment, could lead to long-term prosperity.

By 1997, Asia attracted almost half of total capital inflow to developing countries. The economies of Southeast Asia in particular maintained high interest rates attractive to foreign investors looking for a high rate of return. As a result the region's economies received a large inflow of hot money (short-term capital) and experienced a dramatic run-up in asset prices.

The Southeast Asian countries had large private current account deficits and the maintenance of pegged exchange rates encouraged external borrowing and led to excessive exposure to foreign exchange risk in both the financial and corporate sectors. In the mid-1990s, two factors began to

change their economic environment. As the U.S. economy recovered from a recession in the early 1990s, the U.S. Federal Reserve Bank began to raise U.S. interest rates to combat inflation. This made the U.S. a more attractive investment destination relative to Southeast Asia, which had attracted hot money flows, through high short-term interest rates. This step also raised the value of the U.S. dollar, to which many Southeast Asian nations' currencies were pegged, thus making Southeast Asian exports less competitive. At the same time, Southeast Asia's export growth slowed dramatically in the spring of 1996, due to a glut in the international market (more countries exporting similar products), deteriorating their current account position. Triggered by events in Latin America, particularly after the Mexican peso crisis of 1994, Western investors lost confidence in securities in East Asia and began to pull money out, creating a snowball effect. The Asian crisis started in mid- 1997 and affected currencies, stock markets, and other asset prices of several Southeast Asian economies. Further, the financial crisis led to an economy-wide crisis and in some countries even led to social and political problems.

14.10 Causes of Crisis

The causes of the crisis are often disputed. Overemphasis on excessive financial and capital market liberalization as opposed to generating real sector activities have been considered as the root cause of the crisis. This led to speculative capital of short-term nature to flow into these countries and when its outflow began it left the countries in a state of financial crisis. Due to capital market integration while on one hand such rapid outflows were facilitated, on the other hand, it also created the 'contagion effect' - crisis spreading from one country to another.

Some economists have maintained that the main cause of the crises was excessive real estate speculation and the mismatch between foreign currency denominated borrowings and local currency denominated returns. While some consider 'moral hazard' in the banking and financial system, others give more emphasis to excessive speculation by short-term investors.

Arguments of others have downplayed the role of the real economy in the crisis compared to the financial markets due to the speed of the crisis. The rapidity with which the crisis happened has prompted Sachs and others to compare it to a classic bank run prompted by a sudden risk shock. Sachs points to strict monetary and contractionary fiscal policies implemented by the governments at the advice of the IMF in the wake of the crisis, while Frederic Mishkin points to the role of asymmetric information in the financial markets that led to a "herd mentality" among investors that magnified a relatively small risk in the real economy. The crisis has thus attracted interest from behavioural economists interested in market psychology.

However, some believed that the Asian crisis was created not by market psychology but by macroeconomic policies of the crisis-hit countries that distorted information, which in turn created the volatility that attracted speculators. According to this argument, what some have called "herd mentality" was merely the result of speculators behaving rationally, noting the fraudulent currency policies of the countries (fixed exchange rates defended by the-governments), which speculators assumed could not be sustained

Summary

- For small CIS countries, with relatively open trade regimes, joining the Customs Union that several CIS members have established could be economically quite costly. These costs could be mitigated, but probably not fully offset, if as a consequence of the entry of new members, both the average level and the dispersion of the previously negotiated external tariff of the customs union were reduced. Maintaining an open trade regime without preferences is the best policy for these countries that maximizes welfare and growth prospects. It will also facilitate entry into the WTO, a key objective for these countries' trade policies.
- Even for the existing customs union members and others with more restrictive trade regimes than existing members, preferential arrangements that provide strong incentives to orient trade towards partners in the former Soviet Union contain significant long-term

risks. The main risks are that the preferences (through customs union or free trade arrangements) lock in traditional technologies and production structures, reduce innovation and competition, and hence result in inefficient industries that absorb scarce resources that could be better used elsewhere.

- The discussion has focused on preferences and a specific customs union arrangement among CIS countries. But it has relevance for preferential arrangements, including customs unions, that might be considered in the context of other country groupings in the CIS as well as in transition economies in Eastern Europe, e.g. former Yugoslavia. In this case as well, the main problems would arise from lack of competition and the absence of dynamic technology. The discussion is not intended to apply to countries in transition joining the E.U., where different circumstances prevail which improve the prospects for economic benefits.
- A tariff will induce inefficiency losses, but preferential trading areas with partners with upsloping supply curves greatly magnify the losses. This explains why preferential trade arrangements with small partner countries or with countries that may be expected to increase supply at higher protected prices can be expected to be very inefficient, more inefficient than non-preferential tariff protection at the same rate.
- The key difference between preferential arrangements among CIS members an d other preferential arrangements (NAFTA, the E.U.) is that in the latter the markets are large enough to promote competition and encourage the flow of new technology which increase the probability that distortions introduced through preferences are more than offset by new trade creation and the dynamic effects of investment embodying new technology.
- We had advocated preferential arrangements for CIS members as useful transitional devices to mitigate the severe disruption of trade among the new independent states in the aftermath of the breakup of the Soviet Union (Michalopoulos and Tarr, 1992; 1994). Although based on duration of unemployment measures, two years appears to be a sufficient period of adjustment in market economies,11 there is no standard period for adjustment or transition; and the breakup of the Soviet Union clearly created unprecedented disruption which may have warranted a greater adjustment period. The new independent states have had five years to adjust to international competition. Given the inherited burden of inefficiencies that plagues a sizable portion of CIS industry, there are serious costs of continuing preferential arrangements indefinitely, and integrating more closely through a customs union at this time appears ill advised.

Lessons from the Crisis

Some of the major lessons from the crisis are:

i) Sound Macroeconomic and Exchange Rate Management
ii) Development of Financial Market Structure and Regulation
iii) Strengthening of Financial Supervision and Oversight Mechanism
iv) Development of Non-Bank Financial Sector
v) Developing Frameworks for Bank and Corporate Crisis Resolution
vi) Crisis Prevention and Management

(a) Tax to Check Volatile Capital Flows

One of the major lessons for developing countries in the context of the crisis is to exercise caution in opening capital accounts and short-term capital inflows. One of the remedial

measures for checking volatile capital flows is suggested to be in the form of a tax on international capital transactions, widely known as the 'Tobin Tax'. Interest in the potential for taxing international capital flow stems from concern that exchange rates under floating regimes are too volatile, and that exchange rate target zones are too vulnerable to real shocks or inconsistent macroeconomic policies. A contributing factor in both cases is the rapid development of capital mobility in the last decade, deriving from capital markets liberalization and technological innovation. The crisis-situations in several parts of the world including the Asian region have given further impetus to this idea.

(b) Regional Financial Cooperation

The ASEAN countries believed that the well-coordinated manipulation of currencies by speculators was a deliberate attempt to destabilize the ASEAN economies. At the 30th ASEAN Ministerial Meeting held in Malaysia they issued a joint declaration on 25 July 1997 expressing serious concern and called for further intensification of ASEAN's cooperation to safeguard and promote ASEAN's interest in this regard.

As a response to the crisis, Asian countries began to consider establishing regional financial facilities. This was a reflection of their views that the provisions of international financial assistance through existing multilateral arrangements had been neither timely nor sufficient to deal with the crisis. Finally, the finance ministers of ASEAN+3 (China, Japan and South Korea) countries reached an agreement on the Chiang Mai Initiative (CMI), which was the first significant regional financing arrangement to enable countries to cope with disruptive capital flows and maintain exchange rate stability in Thailand in May 2000.

(c) Reforming International Financial Architecture

The crisis has also prompted for a comprehensive review of the present architecture of the international monetary system. With a view to developing, a framework to prevent, manage and resolve future crisis, within the context of a global environment of liberalized capital flows it is necessary to institute an international financial architecture responsive to developing countries' needs. In this regard, some reforms of the IMF may be necessary to reduce contagion effects of similar crises in the future. There is a need to develop a mechanism to provide for an orderly resolution of any financial crisis in the future, as what is lacking is an effective rule-based and adequately funded international older of last resort. The IMF needs to seriously consider assuming this role, and make changes in the terms and conditions of its financial support facilities, to better assist countries affected by the crisis and effectively stabilize the economy and financial markets.

(d) Devising Adequate Social Safety Nets One of the most important lessons of the Asian crisis is that adequate social safety nets need to be set in place. In the era of global interdependence including in the area of capital markets, risk of crisis would always remain with economic openness. While it is imperative to calibrate capital market integration and regulate short term volatile capital flows, it is equally important to build institutional mechanisms to deal with occasions of crisis. To this end, one of the very significant responses at the national level would be to develop adequate social safety nets for the people. This would help minimizing the adverse impact of crisis on those who are already poor those whose social conditions deteriorate due to crisis as experienced in all the countries of the Asian region.

Keywords

1. Trade Creation: When trade between custom union partners increases, this implies a shift in the Union to more efficient, competitive producers
2. Trade Diversion: When imports from the less expensive world market are replaced by imports from a higher cost / less efficient partner country within the customs union
3. Trade expansion: When lower market prices in one partner country stimulates total domestic demand which is satisfied by increased foreign trade with another partner country
4. Economic Integrations: It refers to trade unification between the different states by the partial and full abolishing of customs tariffs on the trade


Note: *The government obtains tariff revenue on the imports from the rest of the world, equal to the rectangle GHAD, but imports from partner countries enter without paying tariffs.

SelfAssessment

1. Which one of the following sets of countries contains only members of the European Union (EU)?

A. France, Spain, Switzerland, UK
B. Germany, Italy, Portugal, Sweden
C. Denmark, Greece, the Netherlands, Poland
D. Belgium, Greece, Italy, Portugal

2. If good X of country C faces a 10% tariff in country A and a 20% tariff in country B, but if A and B have free trade between each other, then A and B are part of which one (and only one) of the following types of groupings?

A. Free trade area
B. Customs union
C. Common market
D. Economic union

3. If country A forms a customs union with country B, then

A. country B continues to get tariff revenue from country A's exports sent to B.
B. all new trade between A and B because of the union is known as "trade creation".
C. the welfare of A and B must necessarily be enhanced, especially if A and B begin to buy many items from each other that they used to buy from the :"outside world".
D. A and B may especially benefit from the union if substantial economies of scale exist in some of the A and B industries.

4. If two countries remove all tariffs on each other's products and establish a common set of tariffs against the rest of the world, but take no further steps toward economic integration, these two countries have formed .

A. a free trade area
B. a customs union
C. a common market
D. an economic union

5. Which of the following is considered to be a positive dynamic effect of integration?

A. economic-of-scale effects
B. reduced customs costs
C. trade division
D. the increased monopoly power of firms

6. A ____ is a regional trading bloc in Which member countries eliminate internal trade barriers but maintain existing barriers against countries that are not member?

A. free trade area

B. customs union
C. common market
D. monetary union

7. Which of the following is not the positive effect of the trade bloc?
A. Co-operative Spirit
B. Expansion of the market
C. Uniform Policies
D. Import Restrictions

8. When was ASEAN established?
A. 1996
B. 1967
C. 1963
D. None of the above

9. Which of the country is not the part of NAFTA?
A. Great Britain
B. Canada
C. México
D. The United States

10. Which of the following is / are the objectives of the trade Bloc?
A. Maintaining better relations
B. Imposing barriers on non-member countries
C. Promoting free transfer of labor, capital and other factors
D. All of the above

11. Trade diversion takes place when?
A. a country moves from autarky to free trade
B. a movement to a customs union reduces the costs of trade through standardization economic integration results in a
C. economic integration results in a movement in product origin to a lower cost member country
D. economic integration results in a shift in product origin from a lower-cost, nonmember country to a member country having higher costs

12. Trade creation will more likely outweigh trade diversion for Country X that forms a customs union if the level of tariffs in Country X prior to the customs union is _____ and the total number of countries forming the customs union is _____?
A. relatively high; relatively large
B. relatively high; relatively small
C. relatively low ; relatively large
D. relatively low ; relatively small

13. What of the following is/are the relevance of the Commercial Policy?
A. Contributes to functioning of CU and Single Market
B. EU laws and community right to conclude trade agreement
C. Strengthens the bargaining power of EU versus individual states
D. All of the above

14. Antidumping duties are used to?
A. offset the margin of dumping
B. punish domestic consumers for buying high-priced imported goods
C. discourage foreign governments from subsidizing their exporters
D. reduce the tariff revenue of the domestic government

15. If a tariff and import quota lead to equivalent increases in the domestic price of steel, then?
A. the quota results in efficiency reductions but the tariff does not
B. The tariff results in efficiency reductions but the quota does not
C. They have different impacts on how much is produced and consumed
D. They have different impacts on how income is distributed

Answer for Self Assessment

1.	D	2.	A	3.	D	4.	B	5.	A
6.	A	7.	D	8.	B	9.	C	10.	D
11.	D	12.	A	13.	D	14.	A	15.	D

Review Questions

1. What is meant by trade regimes?
2. Write a short note on the effects of Custom Union. Discuss.
3. Discuss the dynamic and static effects of custom union.
4. What are the reasons for economic reforms
5. What challenges are faced by economic reforms?

Further Readings

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