**INTERNATIONAL TRADE: THEORY AND POLICY**

|  |  |  |
| --- | --- | --- |
| **Module no** | **Contents** | **Page no** |
| **1** | **Introduction:**  - What is International Economics About - The Basis of International Trade - Internal and International Trade - The Importance of International Economics | 1-26 |
| **2** | **International Trade Theories:**  - Mercantilists Views on Trade  - The Standard Theory of International Trade  - Demand and Supply, Offer Curves & the Terms of  trade  - Factor Endowments and the Heckscher- Ohlin Theory  - Economic Growth and International Trade | 27-116 |
| **3** | **International Trade Policies:**  - Partial Equilibrium Analysis of a Tariff  - General Equilibrium Effects of a Tariff in a Small  Country  - General Equilibrium Analysis of Tariff in a Large  Country  - The Theory of Tariff Structure  - The Optimum Tariff  - Non-Tariff Trade Barriers and the New Protectionism  - Import Quota  - Voluntary Export Restraints (VERs)  - Technical, Administrative, and Other Regulations  - International Cartels  - Dumping  - Outstanding Trade Problems | 117-135 |
| **4** | **Economic Integration:**  - Trade Creation and Trade Diversion  - Customs Union  - The History of Economic Integration  - The European Economic Community  - The European Free Trade Association  - NAFTA - North American Free Trade Agreement  - SAARC | 136-165 |
| **5** | **World Trade Organization:**  - General Agreement on Tariffs and Trade (GATT)  - Trade Related Intellectual Property rights  - The Agreement on Trade-Related Investment Measures (TRIMs)  - GATS (General Agreement on Trade in Services)  - Trade and Environment  - Trade Liberalisation  - Recent Developments in TRIMs | 166-185 |
| **6** | **International Trade and Economic Development:**  - Importance of trade for development  - Terms of Trade and Economic Development  - Import Substitution and Export Promotion  - Problems of the Developing Countries Related to Trade | 186-196 |

**MODULE-1: INTRODUCTION**

**What is International Trade? Definition and Meaning:**

International Trade refers to the exchange of products and services from one country to another. International trade allows countries to expand their markets and access goods and services that otherwise may not have been available domestically. As a result of international trade, the market is more competitive. This ultimately results in more competitive pricing and brings a cheaper product home to the consumer, in other words it is simply called as exports and imports. International trade consists of goods and services moving in two directions: **Exports** – flowing out of a country and sold overseas and **Imports** – flowing into a country from abroad. Imports and exports are accounted for in the current account section in a country's balance of payments.

* **Visible trade** refers to the buying and selling of goods – solid, exchange of physically tangible goods between countries, involving the export- import and re-export of goods at various stages of production.
* **Invisible trade**, on the other hand, refers to services. An invisible trade is an international transaction that does not include an exchange of tangible goods. Customer service outsourcing, overseas banking transactions, and the medical tourism industry all are the best examples of invisible trade. In fact, any transaction that is associated with a value but not with physical goods could be called an invisible trade.

Global trade allows wealthy countries to use their resources—for example, labor, technology, or capital—more efficiently. Different countries are endowed with different assets and natural resources: land, labor, capital, and technology, etc. This allows some countries to produce the same good more efficiently—in other words, more quickly and with less of a cost. Therefore, they may sell it more cheaply than other countries. If a country cannot efficiently produce an item, it can obtain it by trading with another country that can. This is known as specialization in international trade. For example, suppose Country A and Country B both produce cotton sweaters and wine. Country A produces ten sweaters and six bottles of wine a year, while Country B produces six sweaters and ten bottles of wine a year. Both can produce a total of 16 units. Country A, however, takes three hours to produce the ten sweaters and two hours to produce the six bottles of wine (a total of five hours). Country B, on the other hand, takes one hour to produce ten sweaters and three hours to produce six bottles of wine (a total of four hours).

These two countries realize that they could produce more by focusing on those products with which they have a ***comparative advantage***. Country A begins to produce only wine, and Country B begins to produce only cotton sweaters. Each country can now create a specialized output of 20 units per year and trade equal proportions of both products. As such, each country now has access to 20 units of both products.

According to the international trade theory, even if a country has an absolute advantage over another, it can still benefit from specialization. International trade has been acting as a key for the rise of the global economy. In the global economy, supply and demand—and therefore prices—both impact and are impacted by global events. Most economists globally agree that international trade helps boost nations’ wealth. When a person or company purchases a cheaper product or service from another country, living standards in both nations rise may rise.

There are several reasons why we buy things from foreign suppliers. Perhaps, the imported options are cheaper. Their quality may also be better, as well as their availability. According to stats.oecd.org - The exporter also benefits from sales that would not be possible if he is alone and there is no reciprocity. “The two main data items used in the concept of international trade are imports and exports. Imports of goods measures the value of goods that enter the domestic territory of a country irrespective of their final destination. Exports of goods similarly measures the value of goods which leave the domestic territory of a country.”

The exporter also benefits from sales that would not be possible if it solely sold to its own market. The exporter may also earn foreign currency. It can subsequently use that foreign currency to import things.

The term ‘***commerce’*** / International commerce is often (not always) used when referring to the buying and selling of goods and services internationally. International commerce allows countries to take advantage of competitive advantages in certain areas, while diminishing disadvantages in other areas. To help facilitate international buying and selling among countries, a variety of national and local government agencies have been set up, including the International Chamber of Commerce (ICC) and the World Trade Organization (WTO), even though there is a distinction between commerce and trade.

1

**International Commerce vs. International Trade**

International commerce is technically different from international trade, only in that commerce generally refers to buying and selling goods and services, as opposed to exchanging them. With businesses increasingly globalizing, international trade and commerce has grown more and more popular, and has allowed companies in less densely populated regions to compete against those based in more densely populated regions.

**International trade – winners and losers**

Economists have long argued, and with better justification, that international trade brings overall benefits to economies. However, increasing trade is likely to create *losers as well as gainers*. Indeed, within a broader context of rising inequality in many countries, recent years have seen growing public concern surrounding the negative consequences of trade and globalization for certain sectors of society. Those concerns, in turn, are seen as being partly responsible for the rise in populism in some developed countries.

Given such developments, and as the UK prepares to leave the EU and have an independent trade policy, it is important to understand how future trade agreements, or policy changes, may affect economic outcomes such as prices, productivity and output, and through these, individuals and regions. Let’s suppose there are two countries – Country A and Country B. What happens if it costs more for Country A producers to make something than for Country B producers? Specifically, what happens if the two countries trade?

Producers in Country A will subsequently lose out because consumers will buy the Country B option.- They choose that option because it is cheaper. However, the consumer gains more than the domestic producer loses, economists say. With international trade, there is greater competition and more competitive pricing in the market. This means that consumers have more choice and more affordable options. The economy of the world which is driven by supply and demand – also benefits.

Imagine one world in which every single country traded internationally. Now imagine another world where international trade did not exist. In which world would consumers be better off? Also, in which world would the countries be richer. In the world with international trade, both the consumers and the countries would be better off.

**Basis of International Trade**

**WHY IS TRADE A ‘GOOD THING’… BUT NOT NECESSARILY FOR ALL?**

**1.** **Specialization:** The classic explanation is based on the principle that countries should specialize in what they are relatively better at, driven by countries being in some way different from each other. Countries with lots of skilled labour can produce skilled-labour-intensive goods and services relatively cheaply (aircraft, banking), those with lots of fertile land can produce agricultural products at lower cost, and those with better technology for producing industrial pumps, say, will have cheaper pumps.

As trade increases, countries specialize more in those things that they are relatively good at and this increases the overall value of output and income. But as we have noted, some sectors will expand while others contract, cutting jobs or even driving some firms out of business. These changes may also affect wages within a country – if high-skill-intensive sectors expand, there will be increased demand for highly skilled workers, pushing up their wages. Conversely, if low-skill-intensive sectors contract, laying off their workers, this puts downward pressure on low-skill wages. In the short run there may also be increased unemployment depending on the net effects in any locality.

**2.** **Within industry reallocations:** In the preceding explanation, trade and the distributional impacts of trade, are driven by differences between countries (such as labour, land, capital or technology). However, trade also occurs even if countries are similar. Indeed, much of world trade is between similar developed countries (i.e. North-North) rather than between developed and developing countries (i.e. North-South).

As consumers, we like to have choice and variety. In addition, if there are economies of scale in production, then it makes sense for some firms to concentrate on some varieties (e.g. Ford cars), and for others to concentrate on a different range (e.g. Volkswagen), and these firms may well be located in different countries. Since some consumers want Fords, and others Volkswagens, trade will occur.

Opening up to more of this sort of trade also leads to winners and losers at the firm level, with less efficient firms contracting (or going out of business) and the more efficient expanding (or entering the industry). Therefore, even if there are no specialization changes as described in (1) above, such that the share of an industry in imports or exports remains fairly constant over time, international trade can still lead to substantial changes within the industry. Substituting more efficient for less efficient firms increases average productivity and so is good for the economy as a whole. Consumers and firms buying intermediates benefit by getting products at lower prices, and their choice may increase as trade adds foreign varieties to the available range.

**3.** **Productivity and growth**: The previous two causal chains implicitly assumed given levels of technology and given sets of inputs such as land, capital, or labour. They were then concerned with the best way of organizing who produces what, and sells to whom. But over time there may also be trade-induced improvements in productivity, for example, from economies of scale or scope, from increases in investment and research and development stimulated by larger markets, from reductions in inefficiencies due to increased competition, or from positive spillovers between firms.

Productivity change has complex effects on who gains and losses. There may be consumer gains through more product varieties, lower prices, or higher quality of goods and services, and gains from higher wages induced by higher productivity. But technological change may affect sectors’ competitiveness, and impinge differently on the owners of different inputs. For example, technological change could be biased against low-skilled labour, and hence reduce low-skilled wages across all sectors of the economy. Equally, it could increase the demand for some workers, e.g. computer programmers.

If technological change increases workers’ productivity this should be reflected in higher wages. However, such a change typically means getting more output for less input, which may, in turn, imply a need for fewer workers for the same level of output. So, while those working in such sectors might get higher wages, fewer workers might be demanded, which implies ambiguous effects for labour as a whole.

**4.** **Agglomeration:** As opposed to being evenly spread across a country, economic activity concentrates geographically. Think of Silicon Valley in California, the concentration of car production in the Midlands or the North East of the UK, or the agglomeration of financial services in London. Such agglomeration raises aggregate efficiency, but can also lead to an uneven regional distribution of economic activity and incomes – a core-periphery pattern. The greater the mobility of labour and capital, the more likely this may be.

Agglomeration occurs because there may be gains from:

1. being close to good infrastructure, such as ports or intra-city transport systems that improve firms’ access to national and international goods and factor markets;
2. being close to other firms in their industry – as this may generate knowledge spillovers or easier access to inputs;
3. being close to consumers to minimize the costs of accessing the market and also to improve knowledge about demand in the market; or
4. being close to conurbations as it gives access to a larger and possibly better pool of workers.

The breadth of the menu of possible gains from agglomeration generates complex trade-offs – for example, between being close to other firms or close to consumers – and changes in international trade policy can affect these in quite surprising ways. Improved port facilities may increase local production because products are more easily (cheaply) sold abroad, or reduce it because imports that are substitutes for local production become more easily available. Thus, while agglomeration and benefits thereof are real enough, the complex trade-offs make it difficult to predict the effects of any particular policy change.

There are **two related issues which are worth underlining.**

**First**, the issue of export-led growth. A notable feature is that many of the preceding sources of gains from trade – specialization, scale economies, increased competition, increased variety, spillovers and agglomeration – operate through facilitating imports. Exports are, of course, the means to affording increased imports, but the gains arise from increased imports. This does not mean there are no gains from exporting. **Second,** each of the above causal chains can occur over different time horizons and these **time horizons** will differ across sectors, industries, regions and people. In the short run, changes in trade policy can have an immediate impact. For example, the tariffs introduced by the US and China in the on-going trade war have already impacted on prices, output and workers in both America and China.

Indeed, some countries, both developed and developing, have pursued export-led strategies (e.g. Germany and Korea). Having access to larger consumer markets encourages economies of scale and increases the returns to investment and innovation. Exporting may lead to productivity growth via technology diffusion and knowledge transfer from customers and competitors abroad. And being able to sell to several different markets can reduce risk, and provide a way of extending the life-cycle of a product. A pair of last-year’s sunglasses may no longer be fashionable in one market, but sell extremely well in another market.

**Why does international trade exist?**

Nations trade internationally when there are no resources or capacity to satisfy domestic needs and wants domestically. By developing and exploiting their domestic resources, countries can produce a surplus. They may use this surplus to buy goods they need from abroad, i.e., through international trade. International trade has been existing for more than 9,000 years. Long distance trade – before the existence of nation states and national borders – goes back much further. In fact, it goes back to when pack (group of) animals and ships first came onto the scene. Our modern industrialized world would not exist if countries did not import and export. To put it in simple terms international trade is at the heart of today’s global economy.

Global interdependence is a fact of life for every country today. Goods and services are likely to be imported from abroad for several reasons, which are as follows:

**Price:** A foreign company can produce something more cheaply.

**Quality:** may be superior abroad. For example, Scotch whisky from Scotland, in most people’s opinion, is superior to any local alternative. That is why Scotland-exports about 37 bottles of Scotch every second.

**Availability:** It might not be possible to produce the item locally. Therefore, the only way consumers can buy it is by importing it. A raw material, such as oil, iron, bauxite, gold, etc. might not exist at home. Japan, for example, has no domestic reserves of oil. However, it is the fourth largest consumer of oil in the world. Japan imports virtually all its oil.

**Demand:** Might be greater than local supply. To satisfy the difference, it is necessary to import.

The production of goods and services in countries that need to trade is based on two fundamental principles, first analyzed by Adam Smith in the late 18th Century (in *The Wealth of Nations, 1776*), these being the *division of labour* and *specialization*.

* **Division of labour**

In its strictest sense, a division of labour means breaking down production into small, interconnected tasks, and then allocating these tasks to different workers based on their suitability to undertake the task efficiently. When applied internationally, a division of labour means that countries produce just a small range of goods or services, and may contribute only a small part to finished products sold in global markets. For example, a bar of chocolate is likely to contain many ingredients from numerous countries, with each country contributing, perhaps, just one ingredient to the final product.

* **Specialization**

Specialization is the second fundamental principle associated with trade, and results from the division of labour. Given that each worker, or each producer, is given a specialist role, they are likely to become efficient contributors to the overall process of production, and to the finished product. Hence, specialization can generate further benefits in terms of efficiency and productivity.

Specialization can be applied to individuals, firms, machinery and technology, and to whole countries. International specialization is increased when countries use their scarce resources to produce just a small range of products in high volume. Mass production allows a surplus of goods to be produced, which can then be exported. This means that goods and resources must be imported from other countries that have also specialized, and produced surpluses of their own.

When countries specialize they are likely to become more **efficient** over time. This is partly because a country’s producers will become larger and exploit **economies of scale**. Faced by large global markets, firms may be encouraged to adopt mass production, and apply new technology.  This can provide a country with a price and non-price advantage over less specialized countries, making it increasingly **competitive** and improving its chances of exporting in the future.

**Advantages of International Trade:**

The internet and technology have made it much easier for businesses of all sizes to profit from the many advantages of international trade. Going international could provide business access to a world of opportunities.

1. **Comparative Advantage:** Trade encourages a nation to specialize in producing or supplying only those goods and services which it can deliver more effectively and at the best price, after taking into account opportunity cost.
2. **Increased Revenues:** One of the top advantages of international trade is that you may be able to increase your number of potential clients. Each country you add to your list can open up a new pathway to business growth and increased revenues.

The *2016 FedEx Trade Index*, a national survey of 1,004 small business leaders conducted by Morning Consult, shows that business leaders engaged in global trade say they're growing faster and hiring more employees than small businesses who stay stateside. "65 percent of small businesses that trade say their revenue is increasing versus 46 percent of small businesses that do not trade," the report said.

1. **Economies of Scale:** If you sell your goods globally, you will have to produce more than if you sold just domestically. Producing in higher volumes provides greater economies of scale. In other words, the cost of producing each item is lower.
2. **Longer Product Lifespan:** Sales can dip for certain products domestically as people stop buying them or move to upgraded versions over time. Focusing only on the domestic market may expose to increased risk from downturns in the economy, political factors, environmental events and other risk factors.

Selling a product to an overseas market can extend the life of an existing product as emerging markets seek to buy international products.

1. **Competition:** International trade boosts competition. This, in turn, is good for prices and quality. If suppliers have to compete more, they will work harder to sell at the lowest price and best quality possible. Consumers benefit by having more choice, more money left over, and top-quality goods. Domestic product and services may have to compete in a crowded market domestically, but it may have less competition in other countries compared to domestic markets. Hence trade also breaks down domestic monopolies, which face competition from more efficient foreign firms.
2. **Increases Purchasing Power**: Trade increases competition and lowers world prices, which provides benefits to consumers by raising the purchasing power of their own income, and leads a rise in consumer surplus.
3. **Transfer of Technology**(**TOT**)**:** It isalso called **technology transfer,** is the process of transferring (disseminating) technology from the nation or organization that owns or holds it to another nation or organization. These transfers may occur between universities, businesses, governments, across geopolitical borders, both formally and informally, and both openly and secretly. Often it occurs by concerted effort to share skills, knowledge, technologies, manufacturing methods, samples, and facilities among the participants. to ensure that scientific and technological developments are accessible to a wider range of users who can then further develop and exploit the technology into new products, processes, applications, materials, or services. It is closely related to (and may arguably be considered a subset of) **knowledge transfer**. Transfer of technology goes from the originator to a secondary user. In fact, that secondary user is often a developing nation.
4. **Employment:** Trade is also likely to increase employment, given that employment is closely related to production. Trade means that more will be employed in the export sector and, through the multiplier process, more jobs will be created across the whole economy. Great trading nations such as Japan, Germany, the UK, the USA, and South Korea have one thing in common. They have much lower levels of unemployment than protectionist countries. "Small businesses that trade are 20 percent more likely to say they are hiring more employees." (Respondents included business owners and executive at companies with between two and 500 employees) according to the *2016 FedEx Trade Index.*
5. **Easier Cash-flow Management:** Getting paid upfront may be one of the hidden advantages of international trade. When trading internationally, it may be a general practice to ask for payment upfront, whereas at home people may have to be more creative in managing cash flow while waiting to be paid. Expanding business overseas could help  manage cash flow better.
6. **Better Risk Management:** One of the significant advantages of international trade is market diversification. Focusing only on the domestic market may be exposed to increased risk from downturns in the economy, political factors, environmental events and other risk factors. Becoming less dependent on a single market may help in mitigate potential risks in the core market.
7. **Benefiting from Currency Exchange:** Those who add international trade to their portfolio may also benefit from currency fluctuations. For example, when the U.S. dollar is down, U.S. may be able to export more as foreign customers benefit from the favorable currency exchange rate.
8. **Access to Export Financing:** Another one of the advantages of international trade is able to leverage export financing. For example, The Export-Import Bank of the United States (EXIM) and the U.S. Small Business Administration may be places to explore for export financing options.
9. **Disposal of Surplus Goods:** One of the advantages of international trade is that it acts as an outlet to dispose of surplus goods that are unable to sell in the home market.
10. **Enhanced Reputation:** Doing business in other countries can boost company's reputation. Successes in one country can influence success in other adjacent countries, which can raise the company's profile in the market niche. It can also help increase company's credibility, both abroad and at home.
11. **Opportunity to Specialize:** International markets can open up avenues for a new line of service or products. It can also gives an opportunity to specialize in a different area to serve that market. Being exposed to the realities of the world outside home base may even spark innovations, upgrades and efficiencies for products and services.
12. **Optimal use of Natural Resources:** International trade helps each country to make optimum use of its natural resources. Each country can concentrate on production of those goods for which its resources are best suited. Wastage of resources is avoided.
13. **Availability of all Types of Goods:** It enables a country to obtain goods which it cannot produce or which it is not producing due to higher costs, by importing from other countries at lower costs.
14. **Specialization:** Foreign trade leads to specialization and encourages production of different goods in different countries. Goods can be produced at a comparatively low cost due to advantages of division of labour.
15. **Advantages of Large-scale Production:** Due to international trade, goods are produced not only for home consumption but for export to other countries also. Nations of the world can dispose of goods which they have in surplus in the international markets. This leads to production at large scale and the advantages of large scale production can be obtained by all the countries of the world.
16. **Stability in Prices:** International trade irons out wild fluctuations in prices. It equalizes the prices of goods throughout the world (ignoring cost of transportation, etc.)
17. **Exchange of Technical Know-how and Establishment of New Industries:** Underdeveloped countries can establish and develop new industries with the machinery, equipment and technical know-how imported from developed countries. This helps in the development of these countries and the economy of the world at large.
18. **Increase in Efficiency:** Due to international competition, the producers in a country attempt to produce better quality goods and at the minimum possible cost. This increases the efficiency and benefits to the consumers all over the world.
19. **Development of the Means of Transport and Communication:** International trade requires the best means of transport and communication. For the advantages of international trade, development in the means of transport and communication is also made possible.
20. **International Co-operation and Understanding:** The people of different countries come in contact with each other. Commercial intercourse amongst nations of the world encourages exchange of ideas and culture. It creates co-operation, understanding, cordial relations amongst various nations.
21. **Ability to Face Natural Calamities:** Natural calamities such as drought, floods, famine, earthquake etc., affect the production of a country adversely. Deficiency in the supply of goods at the time of such natural calamities can be met by imports from other countries.

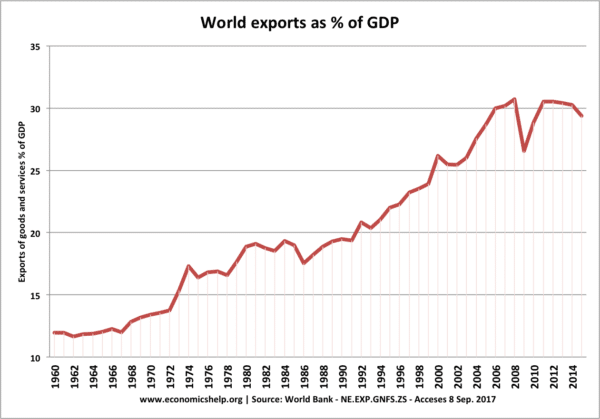
**Disadvantages of International Trade:**

1. **Over-Specialization**: Employees might lose their jobs in large numbers if global demand for a product declines. Jobs lost through such changes cause severe **structural unemployment**.
2. **Threat to New Companies:** Certain industries do not get a chance to grow because they face competition from more established foreign firms, such as new infant industries which may find it difficult to establish themselves.
3. **National Security:** If a country is totally dependent on imports for strategic industries, it is at risk of being held to ransom by the exporter(s). Strategic industries include food, energy and military equipment**.**
4. **Impediment in the Development of Domestic Industries:** International trade has an adverse effect on the development of domestic industries. Due to foreign competition, cheaper availability, and unrestricted imports, the domestic industries in the country may collapse.
5. **Difficulties in Times of Need:** Dependence on foreign goods creates difficulties in time of war when the country is cut off by enemy action. The rivalry between gulf nations results in fluctuation of crude oil prices, which impact the economy depending upon the crude oil. It depletes foreign reserves of the country.
6. **Use of Monopoly to Control Price:** The exploitation of the importing country by the exporting country can take place.   For example, crude oil cannot be produced by every country and that is the reason why crude importing countries are at a disadvantage all the time due to the near monopoly of oil exporting nations.
7. **Economic Dependence:** The underdeveloped countries have to depend upon the developed ones for their economic development. Which may lead to economic exploitation of the country. Countries which sell primary commodities and buy manufactured goods in return are the losers and get exploited. The standard of living of the people in such countries remains low. Such conditions may lead to discontent and unrest among undeveloped countries.
8. **Widening Trade Gap:** The gains from trade are not equally distributed. Developing Countries which sell primary commodities and buy manufactured goods in return from the developed countries are the losers. Thus trade balance remains in favour of developed countries. Thus the trade gap, i.e. the difference between imports and exports is large in the case of developing countries. In such a case, the standard of living of the people cannot improve. It may lead to discontent and unrest.
9. **Over Utilization of Natural Resources:** Excessive exports may exhaust the natural resources (like coal and oil which are irreplaceable) of a country in a shorter span of time than it would have been otherwise. These goods are exported for the sake of profit.  This will cause the economic downfall of the country in the long run. Thus there is a danger to Gulf countries which are solely dependent on the export of crude oil.
10. **Political Risk:**Different countries provide their own political risks at varying levels, while domestic political changes over time and presents an ongoing challenge. A government can change laws in a discriminatory fashion or create regulations that directly impact a specific organization. E.g. the President of the United States, Donald Trump abruptly changed the trade policies of the US which impacted international trade of many countries, particularly China, India, and the European Union. It may be good to market products to a varying geographic region, rather than a single country, to help balance the political risk.
11. **High Credit Risk:** There is high credit risk in international trade. Credit risks can be managed by obtaining insurance or a letter of credit. Customer finances and credit can impact the number of potential sales that can be received within a market.
12. **Additional Cost of Shipping, Customs and Duties:** One of the disadvantages of international trade is that most of these destination countries’ customs agencies charge extra fees on items shipped to them. Each government determines these assessments of duties and taxes differently, it is typically calculated on the value of the products sent (item, insurance plus shipping). The item description may also affect these fees based on what it is made of or used for. Thus the landed cost of the product depends on shipping charges, customs and duties paid.
13. **Servicing Customers**: It may be comparatively easy to sell in the international market but after sales service is not easy. Language and cultural differences also lead to service problems. In such cases, the company needs to be ready to communicate with these customers in different zones, different time zones, and preferably in their language. Hence the company should be ready to set up 24 x 7 Customer Service Centres.
14. **Import of Harmful Goods:** Another disadvantage of international trade is that sometimes developed countries export harmful products to other countries (generally developing) leading to damage to the environment of importing country and hence international trade poses an environmental hazard for nations doing international trade.
15. **Shortage of Goods in Domestic Market:** Sometimes the essential commodities required in a country and in short supply are also exported to earn foreign exchange. This results in a shortage of these goods at home and causes inflation.  If nations export products in spite of good domestic demand then the scarcity of the product in the domestic market leads to a rise in prices of such products. Such a situation may create frustration in the minds of the general public and anger towards the ruling government and It can lead to domestic turbulence.
16. **Danger to International and Internal Peace:** International trade gives an opportunity to foreign agents, traders, and workers to settle down in the country which ultimately endangers its internal peace. E.g. Many Chinese workers, engineers came to Pakistan for the project, China Pakistan Economic Corridor and settled in Pakistan. There is a cultural difference between the two countries. It is found that Pakistani citizens are exploited by the Chinese. Which may disturb internal peace in Pakistan and as a whole international peace will get destroyed.
17. **Political Dependence:** International trade often encourages slavery. It impairs economic independence which endangers political dependence.
18. **Intellectual Property Theft:** The wider a product is distributed, the more likely that it may be illegally copied by a competitor. This can be in the form of proprietary information or market branding or by reverse engineering. Due to the different legal system in different countries, it becomes very difficult for a company to prosecute. There are international treaties on intellectual property rights. Some countries also have their own separate copyright and trademark protections that can be filed to protect companies selling products in their countries.

These disadvantages of international trade are also the factors affecting it.

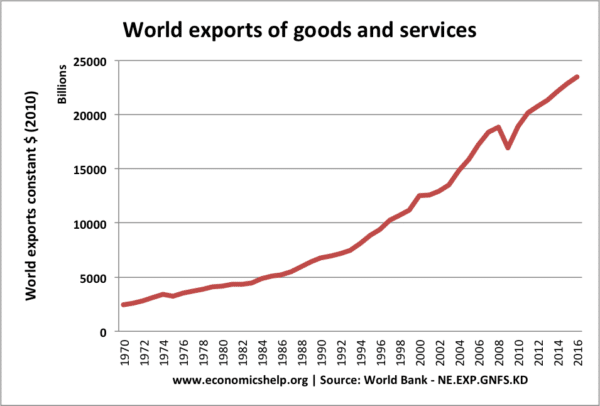
**Importance of International Trade:**

International trade between different countries is an important factor in raising living standards, providing employment and enabling consumers to enjoy a greater variety of goods. International trade has occurred since the earliest civilizations began trading, but in recent years international trade has become increasingly important with a larger share of GDP devoted to exports and imports.

****

**Figure 1: World exports as percentage of GDP**

World Bank stats show how world exports as a % of GDP have increased from 12% in 1960 to around 30% in 2015. With an increased importance of trade, there have also been growing concerns about the potential negative effects of trade – in particular, the unbalanced benefits with some losing out, despite overall net gains.

****

**Figure 2: World exports of goods and services**

World exports of goods and services have increased to $2.34 trillion ($23,400 billion) in 2016.

**Importance of Trade can be Summarized as Follows;**

1. **Make use of abundant raw materials**

Some countries are naturally abundant in raw materials – oil (Qatar), metals, fish (Iceland), Congo (diamonds) Butter (New Zealand). Without trade, these countries would not benefit from the natural endowments of raw materials. A theoretical model for this was developed by Eli Heckscher and Bertil Ohlin. Known as the Heckscher–Ohlin model (H–O model) it states countries will specialize in producing and exports goods which use abundant local factor endowments. Countries will import those goods, where resources are scarce.

1. **Comparative advantage**

The theory of comparative advantage states that countries should specialize in those goods where they have a relatively lower opportunity cost. Even if one country can produce two goods at a lower absolute cost – doesn’t mean they should produce everything. India, with lower labour costs, may have a comparative advantage in labour-intensive production (e.g. call centres, clothing manufacture).

Therefore, it would be efficient for India to export these services and goods. While an economy like the UK may have a comparative advantage in education and video game production. Trade allows countries to specialize. More details on how comparative advantage can increase economic welfare. The theory of comparative advantage has limitations, but it explains at least some aspects of international trade.

1. **Greater choice for consumers**

New trade theory places less emphasis on comparative advantage and relative input costs. New trade theory states that in the real world, a driving factor behind the trade is giving consumers greater choice of differentiated products. We import BMW cars from Germany, not because they are the cheapest but because of the quality and brand image. Regarding music and film, trade enables the widest choice of music and film to appeal to different tastes. Perhaps the best example is with goods like clothing. Some clothing (e.g. value clothes from Primark – price is very important and they are likely to be imported from low-labour cost countries like Bangladesh. However, we also import fashion labels Gucci (Italy) Chanel (France). Here consumers are benefitting from choice, rather than the lowest price. Economists argue that international trade often fits the model of monopolistic competition. In this model, the important aspect is brand differentiation. For many goods, we want to buy goods with strong brands and reputations. e.g. popularity of Coca-Cola, Nike, Addidas, McDonalds e.t.c.

1. **Specialization and economies of scale – greater efficiency**

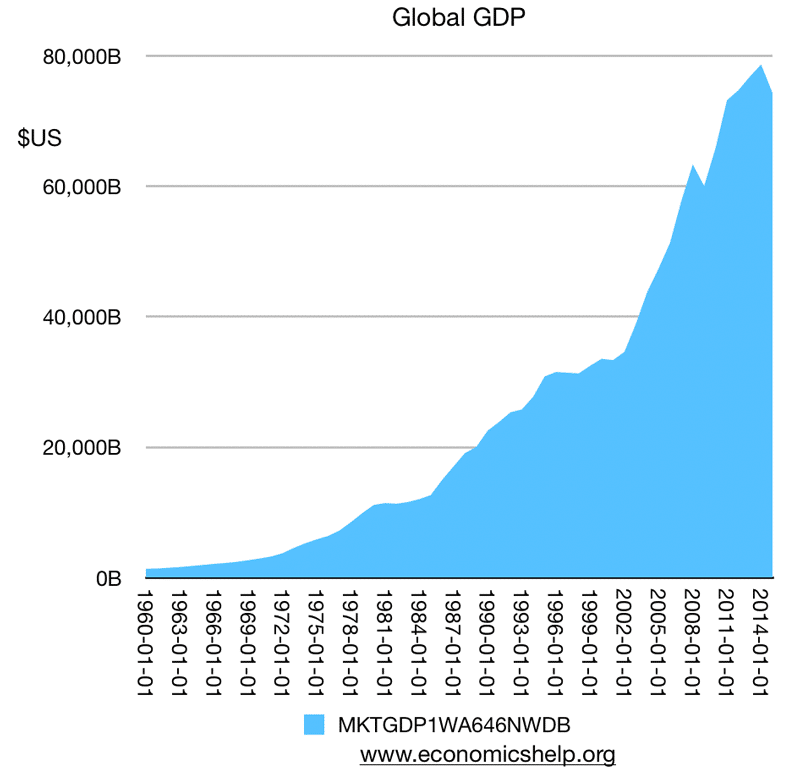
Another aspect of new trade theory is that it doesn’t really matter what countries specialize in, the important thing is to pursue specialization and this enables companies to benefit from economies of scale which outweigh most other factors. Sometimes, countries may specialize in particular industries for no over-riding reason – it may just be a historical accident. But, that specialization enables improved efficiency. For high value-added products, multinationals often split the production process into a global production system. For example, Apple designs their computers in the US but contract the production to Asian factories. Trade enables a product to have multiple country sources. With car production, the productive process is often even more global with engines, tyres, design and marketing all potentially coming from different countries.

1. **Service sector trade**

Trade tends to conjure images of physical goods import bananas, export cars. But, increasingly the service sector economy means more trade is of invisibles – services, such as insurance, IT services and banking. A global economy with modern communications enables many micro trades, which wouldn’t have been as possible in a pre-internet age.

1. **Global growth and economic development**

International trade has been an important factor in promoting economic growth. This growth has led to a reduction in absolute poverty levels – especially in south east Asia which has seen high rates of growth since the 1980s.



**Figure 3: Global GDP**

Source: St Louis Fed – GDP For World

1. Products of the most developed industries, which can't be released at the internal market, is transported abroad. Since the capacity of domestic market is limited by solvent demand of population, production is overgrowing the limits of domestic market and business people of every country are struggling for foreign markets. Tendency to get higher income in connection with the usage of low-paid manpower and raw materials from developing countries.
2. International trade is important, because there is no country in the world, which can exist without foreign trade. The opportunity to export those goods, production of which takes more national resources, which country has in relatively large numbers; The opportunity to import those goods, which can't be produced in their country because of the lack of needed resources;
3. There are two points of view on benefits from international trade for home international firms. The first point of view concerns the export opportunities, the second one - the import ones. From the point of view of export activity, enterprises obtain benefits at the expense of using excess capacity, which is hold by companies, but are not desirable by domestic demand getting greater profits. Because of the difference between the foreign trade competitiveness environment and the national one, the producer can sell goods there with higher income;
4. Reduction of production costs, connected with distribution of risk. Knowledge and best practices, received by firms in the functioning process on foreign markets.
5. Possibilities of distribution of operative risks, as by expanding the suppliers range, the company will be less depended on a singular supplier. In their turn, consumers obtain benefits from cheaper prices, increasing of quantity and diversification of goods, which leads to higher standard of well-being.

**ModulE-2: INTERNATIONAL TRADE THEORIES**

**1. Mercantilists Views on Trade:**

Mercantilism (William Petty, Thomas Mun and Antoine de Montchrétien model) Mercantilism is a philosophy from about 300 years ago. The base of this theory was the “commercial revolution”, the transition from local economies to national economies, from feudalism to capitalism, from a rudimentary trade to a larger international trade. Mercantilism was the economic system of the major trading nations during the 16th, 17th, and 18th centuries, based on the premise that national wealth and power were best served by increasing exports and collecting precious metals in return.

It superseded the medieval feudal organization in Western Europe, especially in Holland, France, United Kingdom, Belgium, Portugal and Spain. The monarch controlled everything. Their policy was to export in the countries that they controlled and not to import (to have a positive Balance of Trade). Geographical discoveries not only stimulated the international trade, but also produced an affluent flow of gold and silver, which could be used to encourage the economy based on money and prices. The state exercised much control over economic life, chiefly through corporations and trading companies. Production was carefully regulated with the objective of securing goods of high quality and low cost, thus enabling the nation to hold its place in foreign markets.

The theory states that the world only contained a fixed amount of wealth and that to increase a country wealth; one country had to take some wealth from another, either through having a higher import/export ratio. So, this tendency, to export more and import less and to receive in exchange of gold (the deficit is paid in gold) is called *Mercantilism*.

In other words, Mercantilism is an economic theory where the government seeks to regulate the economy and trade in order to promote domestic industry – often at the expense of other countries. Mercantilism is associated with policies which restrict imports, increase stocks of gold and protect domestic industries. Mercantilism stands in contrast to the theory of free trade – which argues countries economic well-being can be best improved through the reduction of tariffs and fair free trade.

**Mercantilism involves**

* Restrictions on imports – tariff barriers, quotas or non-tariff barriers.
* Accumulation of foreign currency reserves, plus gold and silver reserves. (also known as bullionism) In the sixteenth/seventeenth century, it was believed that the accumulation of gold reserves (at the expense of other countries) was the best way to increase the prosperity of a country.
* Granting of state monopolies to particular firms especially those associated with trade and shipping.
* Subsidies of export industries to give a competitive advantage in global markets.
* Government investment in research and development to maximize the efficiency and capacity of the domestic industry.
* Allowing copyright/intellectual theft from foreign companies.
* Limiting wages and consumption of the working classes to enable greater profits to stay with the merchant class.
* Control of colonies, e.g. making colonies buy from Empire country and taking control of colonies wealth.

**Examples of Mercantilism**

* England Navigation Act of 1651 prohibited foreign vessels engaging in coastal trade.
* All colonial exports to Europe had to pass through England first and then be re-exported to Europe.
* Under the British Empire, India was restricted in buying from domestic industries and were forced to import salt from the UK. Protests against this salt tax led to the ‘Salt tax revolt’ led by Gandhi.
* In seventeenth-century France, the state promoted a controlled economy with strict regulations about the economy and labour markets.
* Rise of protectionist policies following the great depression; countries sought to reduce imports and also reduce the value of the currency by leaving the gold standard.
* Some have accused China of mercantilism due to industrial policies which have led to an oversupply of industrial production – combined with a policy of undervaluing the currency.
* However, the extent of mercantilist policies are disputed

**Modern Mercantilism**

In the modern world, mercantilism is sometimes associated with policies, such as:

* Undervaluation of currency. e.g. government buying foreign currency assets to keep the exchange rate undervalued and make exports more competitive. A criticism often leveled at China.
* Government subsidy of an industry for unfair advantage. Again China has been accused of offering state-supported subsidies for industry, leading to oversupply of industries such as steel – meaning other countries struggle to compete.
* A surge of protectionist sentiment, e.g. US tariffs on Chinese imports, and US policies to ‘Buy American.’
* Copyright theft

**Criticisms of Mercantilism**

* The theory was criticized by the newly appeared class.
* More money was associated with less products and inflation.
* The standard of living is weaker.
* Mercantilists ideas did not decline until the coming of the Industrial Revolution and of laissez-faire policies.
* Adam Smith’s “The Wealth of Nations” (1776) – argued for benefits of free trade and criticized the inefficiency of monopoly.
* Theory of comparative advantage (David Ricardo) gave a blow to the mercantilism theory.
* Mercantilism is a philosophy of a zero-sum game – where people benefit at the expense of others. It is not a philosophy for increasing global growth and reducing global problems. Trying to impoverish other countries will harm our own growth and prosperity. By contrast, if we avoid zero-sum game of mercantilism increasing the wealth of other countries can lead to selfish benefits, e.g. growth of Japan and Germany led to increased export markets for UK and US.
* Mercantilism which stresses government regulation and monopoly often lead to inefficiency and corruption.
* Mercantilism justified Empire building and the poverty of colonies to enrich the Empire country.
* Mercantilism leads to tit for tat policies – high tariffs on imports leads to retaliation.
* The growth of globalization and free trade during the post-war period showed possibilities from opening markets and respecting other countries as equal players.
* Economies of scale from specialization possible under free trade.

**2**. **The Absolute Advantage Theory (Adam Smith):**

In the second half of the XVIII century, mercantilists policies became an obstacle for the economic progress. Adam Smith (father of liberalism and economical science) brought the argument in his book “The Wealth of Nations”, published in 1776, that the mercantilists policies favorised producers and disadvantaged the interests of consumers. Adam Smith’s theory starts with the idea that export is profitable if you can import goods that could satisfy better the necessities of consumers instead of producing them in the internal market. The essence of Adam Smith theory is that the rule that leads the exchanges from any market, internal or external, is to determine the value of goods by measuring the labour incorporated in them. One country has an absolute cost advantage in the production of one commodity and disadvantage in the production of the other. Each country will export that commodity in the production of which it has absolute cost advantage. Import that commodity in which it suffers from an absolute cost disadvantage.

**Absolute Advantage Theory : Assumptions**

1. Trade is between two countries

2. Only two commodities are traded

3. Free Trade exists between the countries

4. The only element of cost of production is labour

**Absolute Advantage Theory**

* Adam Smith argued that a country has an absolute advantage in the production of a product when it is more efficient than any other country producing it.
* Countries should specialize in the production of goods for which they have an absolute advantage and then trade these goods for the goods produced by other countries
* In economics, principle of absolute advantage refers to the ability of a party (an individual, or firm, or country) to produce more of a good or service than competitors, using the same amount of resources.

**Absolute Advantage Theory : Simple Terms**

* + 1. Theory is based upon principle of division of labour.
    2. Free Trade among countries can increase a country’s wealth
    3. Free Trade enables a country to provide a variety of goods and services to its people by specializing in the production of some goods and services and importing others.
    4. Every country should specialize in producing those products at cost less than that of other countries and exchange these products with other products produced cheaply by others.
    5. When one country produces a product at a lower cost and another country produces another product at lower cost, both can exchange required quantity and can enjoy benefits of absolute cost advantage.

To explain the same a numerical example is given below with a simple statistical table.

Let us assume that there are two countries America and England producing two commodities Wheat and Cloth. The Table-1 clearly reveals that one man-hour produces 6 bags of wheat in USA and 1 bag of wheat in the UK. On the other hand, the same amount of labour produces 4 yards of cloth in USA and 5 yards of cloth in UK.

**Table 1: Specialization in Production & the Advantage from Trade Through Absolute Advantage.**

|  |  |  |
| --- | --- | --- |
| **Products Produced** | **Units of Products/Units of Time** | |
| **USA (Wheat)**  **Country-A** | **UK (Cloth)**  **Country-B** |
| Wheat (Bushels/man-hour) | 06 | 01 |
| Cloth (yards/man-hour) | 04 | 05 |

Therefore, it can be concluded that USA has absolute advantage in the production of wheat and disadvantage in the production of cloth and vice-versa in case of England.

* If the united states exchanges six bags of wheat (6 Wheat) for six yards of British cloth (6C), the US gains 2C or saves 1/2 man-hour or 30 minutes of labour time.
* Similarly, the 6W that the UK receives from the USA is equivalent or would require six man-hours of labour time to produce in the UK.
* These same six man-hours can produce 30 C in the UK (6 hours time and 5 yards of cloth per man-hour). By being able to exchange 6 C for 6 Wheat with US, the UK gains 24C or saves almost five man-hours.
* Country A (USA) is more productive than country B (UK) in the production of wheat and it has an absolute advantage in this product and country B (UK) is more productive than A in producing product Y (cloth). It is reasonable and in the benefit of 2 countries to concentrate all resources of labour to the product for which they have absolute advantage. *After specialization, exchanging products, both countries gain from trade.*

**ABSOLUTE ADVANTAGE THEORY: LIMITATIONS**

* 1. There is no absolute advantage for many countries
  2. Country size varies
  3. Country by country differences in specialization
  4. Deals with labour only and neglects other factors of production
  5. Neglected Transport cost
  6. Theory is based on an assumption that Exchange rates are stable and fixed.
  7. It also assumes that labor can switch between products easily and they will work with same efficiency which in reality cannot happen.

**3.** **The Comparative Advantage (David Ricardo Model):**

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 political applications.

According to the Law of CA **(**Comparative Advantage), even if one nation is less efficient than the other nation in the production of both the commodities, there is still a basis for mutually beneficial trade.

The first nation should specialize in the production of and export the commodity in which its absolute disadvantage is smaller and import the commodity in which its absolute disadvantage is greater (this is the commodity of its comparative disadvantage).

**Assumptions of the Theory:**

1. There are only two countries, assume USA and UK. Both of them produce the same two commodities, Wheat and Cotton.
2. Labour is the only factor of production.
3. The supply of labour is unchanged.
4. All labour units are homogeneous.
5. Tastes are similar in both countries.
6. The labour cost determines the price of the two commodities.
7. The production of commodities is done under the law of constant costs or returns.
8. The two countries trade on the barter system.
9. Technological knowledge is unchanged.
10. Factors of production are perfectly mobile within each country. However, they are immobile between the two countries.
11. Free trade is undertaken between the two countries.
12. Trade barriers and restrictions in the movement of commodities are absent.
13. Transport costs are not incurred in carrying trade between the two countries.
14. Factors of production are fully employed in both the countries.
15. The exchange ratio for the two commodities is the same.

The statement of the law can be clarified by looking at the Table given below.

**Table 2 : Comparative Advantage from trade with 2 products:**

|  |  |  |
| --- | --- | --- |
| **Product Produced in Quantity** | **USA** | **United Kingdom** |
| Wheat (Quantity in Bushels/man-hour) | 06 | 01 |
| Cloth (Quantity in yards/man-hour) | 04 | 02 |

* The UK now produces only two yards of cloth per man-hour instead of five. Thus the UK now has an absolute disadvantage in the production of both the commodities.
* US is more productive in the production of Wheat than in Cloth.
* The UK is more productive in the production of Cloth than wheat.
* Each country should specialize in the production for which it has less opportunity cost.
* What is Opportunity Cost?

Opportunity cost is the forgone benefit that would have been derived by an option not chosen. To properly evaluate opportunity costs, the costs and benefits of every option available must be considered and weighed against the others. Considering the value of opportunity costs can guide individuals and organizations to more profitable decision-making. Opportunity costs represent the potential benefits an individual, investor, or business misses out on when choosing one alternative over another. The idea of opportunity costs is a major concept in economics. Because by definition they are unseen, opportunity costs can be easily overlooked if one is not careful. Understanding the potential missed opportunities foregone by choosing one investment over another allows for better decision-making.

* However, since UK’s labour is half as productive in cloth but six times less productive in wheat with respect to the US, the UK has a comparative advantage in cloth.
* US, on the other hand, has an absolute advantage in both wheat and cloth with respect to the UK., but since its absolute advantage is greater in wheat (6:1) than in cloth (4:2), the US has a comparative advantage in wheat.
* To summarize, the US’s absolute advantage is greater in wheat and so the US has a comparative advantage in wheat. The UK’s absolute disadvantage is smaller in cloth, so its comparative advantage lies in cloth. According to the law of comparative advantage, both nations can gain if the US specializes in the production of wheat and exports some of it in exchange for British cloth (At the same time, the UK is specializing in the production of cloth and exporting cloth to US).

**Gains From Trade According to the Law of Comparative Advantage:**

* According to theLaw of Comparative Advantage, both the nations can gain if the USA specializes in the production of wheat and exports some of it in exchange for British cloth.
* At the same time the UK is specializing in the production of cloth and exporting cloth for wheat.
* Suppose the USA could exchange 6 W for 6 C with the UK, the USA would gain 2C since USA could only exchange 6 W for 4C domestically.
* On the other hand UK also would gain; note that the 6W that the UK receives from the USA would require six man hours to produce in the UK.
* The UK could instead use these 6 man hours to produce 12C and give up only 6C for 6W from USA.
* Therefore, these countries by involving trade both the countries gain. This theory helped most of the underdeveloped and developing countries to get into trade.

**Criticisms of Comparative Advantage**

The following are the criticisms of the Ricardian doctrine of comparative advantage:

1. The theory only considers labour costs and neglects all non-labour costs involved in the production of the commodities.
2. The theory considers all labour to be homogenous. However, in reality, labour is heterogeneous due to different grades and kinds.
3. The theory assumes similar tastes for all. However, the tastes differ with the growth of economies and income brackets.
4. The theory assumes that a fixed proportion of labour is used in the production of all commodities. However, in reality, utilization of the proportion of labour depends on the type of commodity being produced.
5. The theory has an unrealistic assumption of constant costs. However, large-scale productions lead to cost reduction and thereby increase the comparative advantage.
6. Transport costs play an essential role in determining the pattern of trade. But the Ricardo theory neglects this independent factor of production.
7. The assumption of the factors of production being mobile internally is unrealistic. The factors do not move freely from one region to another or one industry to another. The greater the degree of specializations in an industry, the more immobile the factor will be.
8. The assumption of the theory of having only two countries and two commodities is unrealistic as international trade takes place among countries trading numerous commodities.
9. Every country implements restrictions on the movement of goods to and from the countries. Thus, tariffs and trade restrictions play a role in world imports and exports. However, the theory assumes free and perfect world trade.
10. The theory assumes full employment. However, every economy has an existence of underemployment.
11. A country may or may not want to trade a commodity due to military, strategic or development considerations. Therefore, self-interest stands in the operation of the comparative advantage theory.
12. The Ricardian theory considers only the supply side of world trade and neglects the demand side.
13. The theory only explains how two countries gain from international trade. But the theory fails to explain how the gains from the trade are distributed between the two countries.

**4. Law of Reciprocal Demand (LRD):**

The Principle of Reciprocal Demand was developed by J.S. Mill in 1848. The RD analysis purely based on the offer curve technique and offer curve technique was developed by Edge worth and Marshall. Offer curve explains how the terms of trade are determined by the interactions of demand and supply. Their

merit lies in the fact that resolves the problem of determining the exact terms of trade that emerge in trade equilibrium. Assume that two countries (A and B) are producing two commodities (textiles and rubber). According to the LRD the exchange is determined by A's demand for B's product and B's demand for A's product.

In other words the intensity of domestic demand for foreign goods and of the foreign demand for domestic goods. The equilibrium terms of trade are determined at a point where the two offer curves intersect.

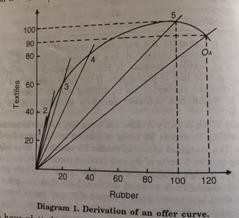
Mill’s theory is based on the following **assumptions**, i) Full employment conditions, ii) Perfect competition, iii) Free foreign trade, iv) Free mobility of factors, v) Applicability of the theory of comparative cost, vi) Two country, two commodity model

Now we will explain the same through the following table.

**Table 3: Reciprocal Demand from trade with 2 products:**

|  |  |  |
| --- | --- | --- |
| **Textiles**  **(Country A)** | **Rubber (Country B)** | **TOT**  **Ratio** |
| 25 | 05 | 5:1 |
| 40 | 10 | 4:1 |
| 60 | 20 | 3:1 |
| 80 | 40 | 2:1 |
| 100 | 100 | 1:1 |

* exchange for 5 units of rubber, here the price of one unit of rubber in this case would be 5 units of textiles.
* It means that country 'A' is willing to trade with Country 'B' at 5:1 terms of trade. It is willing to pay a relatively higher price for one unit of the imported output.
* Still later - Country 'A' is willing to pay smaller and small price for every unit of imported rubber.
* Country A goes on consuming more and more units of rubber, its marginal utility of that product goes on declining and it is willing to pay a lower price per unit of rubber as it goes on importing more and more rubber.

All this follows from the Law of Diminishing Marginal Utility.

This can be explained with **the following diagram.**

**Figure 4: Derivation of an offer curve**

Above figure explains,

* OA curve is positive curve and it is non-linear.
* Up to point '5' its slope continues to be **+**.
* At point 5, country 'A' is willing to offer 100 units of textiles in exchange for 100 units of rubber imports.
* Beyond point 5, however, the Offer Curve has a (-) slope. This indicates that at point 5, where country 'A' exports 100 units, its desire to export more textiles is exhausted. It doesn't mean that country `A's desire to consume more of imported goods is exhausted.

**Criticisms of the Mill’s Theory of Reciprocal Demand:**

Mill’s theory of reciprocal demand has been criticized on the following grounds:

* 1. The theory is based on unrealistic assumptions, such as perfect competition and full employment.
  2. Actual trade is not restricted to two country, two commodity model.
  3. Mill concentrates on the elasticity of demand, thus neglecting the impact of elasticity of supply. According to the modern economists, terms of trade are generally influenced by (a) elasticity of demand for exports, (b) elasticity of demand for imports, (c) elasticity of supply exports, and (d) elasticity of supply of imports.
  4. Graham has criticized the reciprocal demand aspect of Mill’s theory. It has exaggerated the role of reciprocal demand and neglected the comparative cost conditions in determining the terms of trade.
  5. Jacob Viner has criticized the theory as imperfect and inadequate.
  6. Shadwell has criticized the theory by saying that in this theory the exchange ratio is fixed at a point where the value of imports and exports are in equilibrium as a mere truism. It does not throw any light on the determinants of terms of trade.

However, does not agree with this criticism because Mill’s theory not only states the equilibrium, but also discusses the forces that operate to bring it about.

**5.** **The Theory of Opportunity Cost- Haberler:** The opportunity cost is what has been given up in order to have some quantity of another thing. If an additional unit of one commodity has to be produced, the productive resources are to be diverted from the production of some other commodity to the given commodity. The resultant decrease in the quantity of the second commodity represents the opportunity cost of the additional quantity of the given commodity.

For instance, if India has to reduce the production of cotton by 2 lakh bales in order to raise the production of wheat by 1 lakh tons, then the opportunity cost of one unit of wheat is two units of cotton(1W = 2C).

Haberler made use of opportunity cost curve to express the opportunity cost of one commodity in terms of the other. The opportunity cost curve has been called as the ‘Transformation Curve’ or ‘Production Possibility Curve’ by Paul Samuelson and ‘ production frontier’ or ‘production indifference curve’ by A.P. Lerner.

**Assumptions of Haberler’s Opportunity Cost Theory:**

1. The economic system is in a state of full employment equilibrium.
2. There is perfect competition in commodity and factor markets.
3. Price of each commodity equals the marginal cost of producing it.
4. Price of each factor equals its marginal productivity.
5. The supply of factors is fixed.
6. The state of technology is given.
7. There are two trading countries A and B.
8. Each country produces two commodities, say X and Y.
9. Each country has two productive factors- capital and labour.
10. There is perfect factor mobility within each country.
11. The factors of production are perfectly immobile between the two countries.
12. Neither of the two countries imposes any restrictions upon international trade.

On the basis of the above assumptions, it is possible to determine the opportunity cost curve or the *production possibility curve* of any country.

Before explaining the PP curve we have given simple statistical table explaining the alternative combinations of the two commodities that a nation can produce by fully utilizing all of its resources with the best technology available to it.

**Table 4: Production Possibility Schedule for Wheat and Cloth in the US and the UK**

|  |  |  |  |
| --- | --- | --- | --- |
| **USA Producing Wheat and Cloth** | | **UK Producing Wheat and**  **Cloth** | |
| **Wheat** | **Cloth** | **Wheat** | **Cloth** |
| 180 | 0 | 60 | 0 |
| 150 | 20 | 50 | 20 |
| 120 | 40 | 40 | 40 |
| 90 | 60 | 30 | 60 |
| 60 | 80 | 20 | 80 |
| 30 | 100 | 10 | 100 |
| 00 | 120 | 00 | 120 |

* USA can produce 180 W and 0 Cloth, 150 Wheat and 20Cloth etc...... down to 0 Wheat and 120 Cloth.
* For each 30 W that the USA gives up, just for 20C (30W=20C). Thus the Opportunity Cost of cloth in USA is 3W= 2C.
* UK can produce 60W and 0C, 40W and 40C down to 0W and 120C.
* UK can increase its output by 20C for each 10W it gives up. Thus the Opportunity cost of wheat in the UK is 1W = 2C

**The Standard Theory of International Trade**

**Production Possibilities Curve (PPC):**

Specialization is not only a characteristic of individuals but also of macroeconomic aggregates like regions or nations. Just as individuals are limited by the scarcity of time and other personal resources, societies are also constrained in their capacity to produce goods and services from their available resources of land, labor, and real capital.

The quantity and quality of available human and nonhuman resources usually determines the competitive relationship between countries (i.e., who has comparative advantage in what products). These resource factors include:

* labor (with consideration of the education and skills of the workforce and the extent of specialization),
* natural resources such as fertile fields, minerals, navigable waterways, forests, etc., and
* technology and real capital.

The Central problems of any economy are

i) What to Produce, ii) How to Produce iii) For whom to produce and iv) How much to invest. To understand these problems better and distinguish each other one can use the modern economic tool known as PPC. PPC represents graphically alternative production possibilities facing an economy.

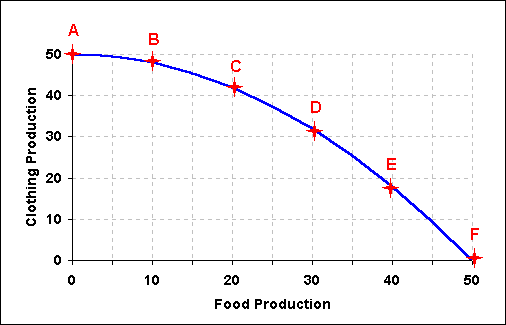
We can apply the microeconomic concepts of opportunity cost and specialization to entire countries with our first macroeconomic model the *Production Possibilities Curve* (PPC). To illustrate the concept of the production possibilities curve, assume that we live on an island that has only two industries -- food and clothing. Table 5 below shows different combinations of the maximum possible quantities that can be produced with the resources that are available on island:

**Table 5: Production Possibilities for Island Economy**

|  |  |  |
| --- | --- | --- |
| **Option** | **Food** | **Clothing** |
| A | 0 | 50 |
| B | 10 | 48 |
| C | 20 | 42 |
| D | 30 | 33 |
| E | 40 | 19 |
| F | 50 | 0 |

The table identifies six production possibilities, options A through F. Each option represents the amount of food and clothing that our island economy can produce given ***full*** and ***efficient*** utilization of our available resources. In option `A’ all available resources are dedicated to the production of clothing. If we decide to produce some food we must give up some production of clothing. Options B through F represent progressively increasing output of food and decreasing output of clothing. Actually there are many more possible production combinations than indicated in the table. We can illustrate these many combinations with a graph of the production possibilities curve.

**Diagrammatic Representation of Production Possibility curve**

****

**Figure 5: The Food-Clothing Production Possibilities Curve**

***Production Possibilities Curve*** (curve 'AF' )- a graph that indicates all the possible combinations of two goods or services (or aggregates of goods and services) that can be produced within an economy given the full and efficient use of all available resources.

The production possibilities curve is often referred to as a "***Frontier***". The PPC represents all possible combinations of two goods or services that can be produced given available resources and technology. Consequently it is impossible to produce *outside* the production possibilities curve (above and/or to the right of the PPC) because of scarcity of resources. However, you can operate *inside* the production possibilities curve (below and/or to the left of the PPC). But this represents the undesirable situation of an underutilization of resources. For example, if there is a higher than normal level of unemployment, then our economy is not producing at its full capacity.

Given the assumptions of the Opportunity Cost Theory, a PPC shows the various alternative combinations of the two commodities that a country can produce most efficiently by fully utilizing its factors of production with the available technology. The slope of the PPC measures the amount of one commodity that a country must give up in order to get an additional unit of the second commodity. In other words, the slope of the PPC is its 'Marginal Rate of Transformation' (MRT).

**The Production Frontier With Increasing Costs**: **Diagrammatic Explanation**

The shape of the PPC under different cost conditions that determines the bases and the gains from Inter-National Trade(INT). Under the theory of opportunity cost, if the amount of Y required to be given up to get additional quantities of X remains constant, the PPC would be a straight line and it would indicate Constant Opportunity cost .

If more quantity of Y is required to be given up in order to have an additional quantity of X, the PPC would be concave to the origin and it would indicate increasing opportunity costs. Lastly if in order to get an additional quantity of X, less quantity of Y is required to be given up, the PPC would be convex to the origin and it would indicate diminishing opportunity costs.

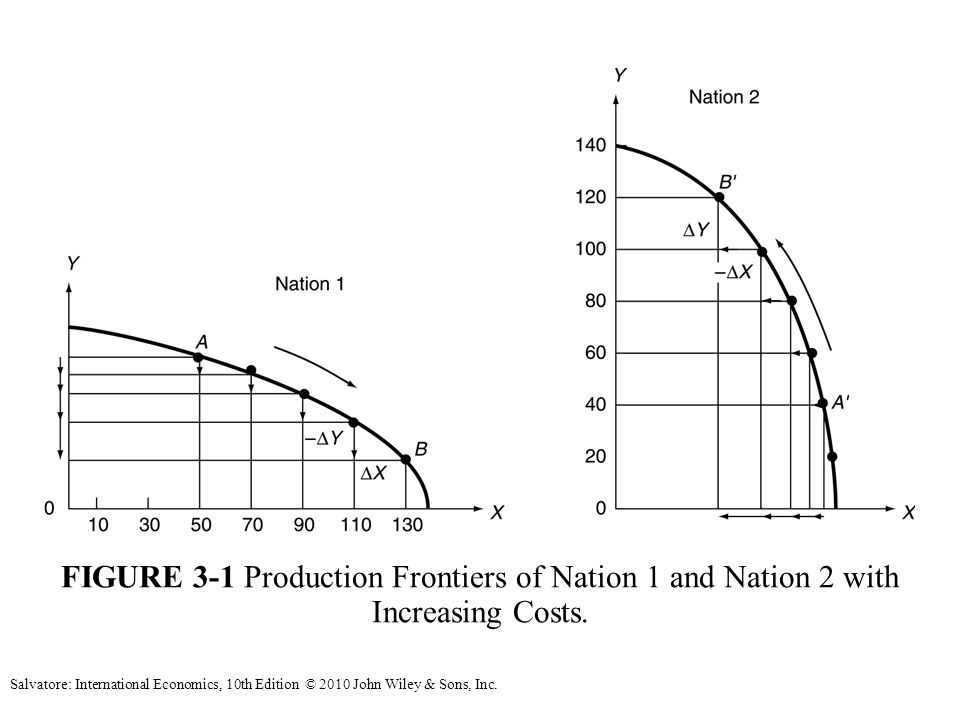
**Trade Under Increasing Opportunity Costs (IOC):**

Trade under Increasing Opportunity Costs is based on two assumptions such as -

* Factors of production cannot be substituted for each other in the production of the two commodities
* Factors are more suited for the production of one commodity than for the other.

The PPC under Increasing Opportunity Costs is concave to the origin because when a country specializes in the production of one commodity, in which it possesses comparative advantage, its opportunity cost increases.

This can be **diagrammatically explained below.**



**Figure 6: Production Frontiers of Nation 1 and Nation 2 with Increasing Costs**

Suppose the Nation-1 wants to produce more of commodity X, starting from Point A on its production frontier. Since at point A the nation is already utilizing all of its resources with the best technology available, the nation can only produce more of X by reducing the output of commodity Y. For each additional batch of 20X that Nation-1 produces, it must give up more and more of commodity Y. Nation-1 also faces IOCs in the production of Y. this could be demonstrated graphically by showing that Nation-1 has to give up increasing amount of X for each additional of 20Y that it produces.

However, instead of showing this for Nation-1, we demonstrate Increasing Opportunity Costs in the production of Y with production frontier of Nation-2. Moving upward from point A1 along the production frontier of Nation-2, we observe leftward arrows of increasing length, reflecting the increasing amounts of X that Nation-2 must give up to produce each additional batch of 20 Y.

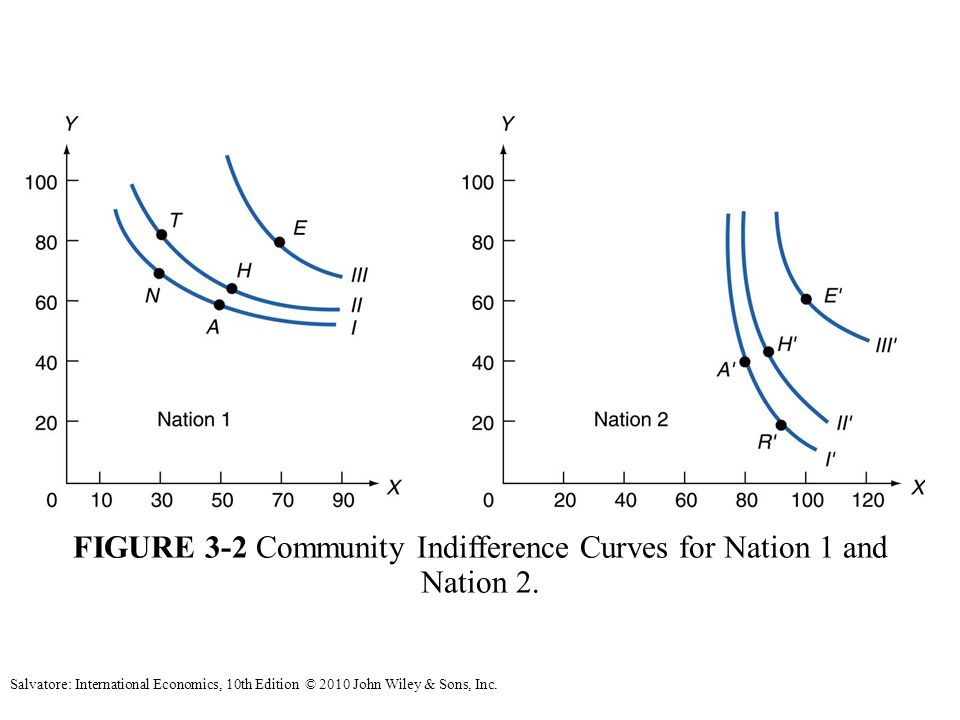
Thus, concave production frontiers for Nation-1 and Nation-2 reflect Increasing Opportunity Costs in each nation in the production of both commodities.

**Community Indifference Curves (CICs):**

A Community Indifference Curve shows the various combinations of two commodities that yield equal satisfaction to the community or nation. Higher curve refers to greater satisfaction, lower curves to less satisfaction.

Community Indifference Curvesare negatively sloped and convex from the origin because as a nation consumes more of X, it must consume less of Y if the nation is to have the same level of satisfaction.

**Illustration of Community Indifference Curves:**

**Figure 7:** **Community Indifference Curves of Nation 1 and Nation 2**

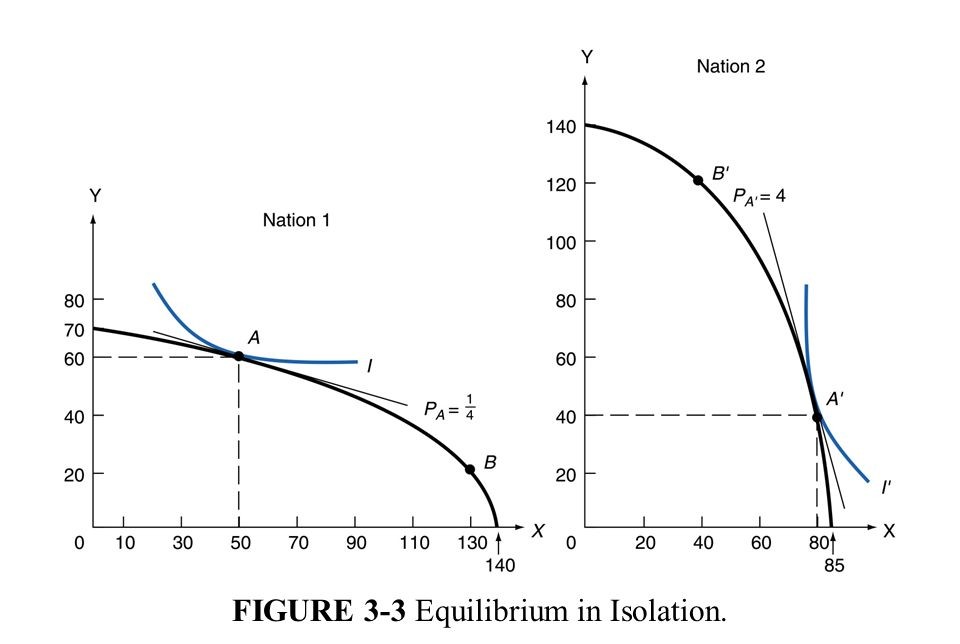
The diagram explains three hypothetical ICs for Nation-1 and Nation-2. They differ on the assumption that tastes or demand preferences are different in the two nations. In the diagram Points N and A give equal satisfaction to Nation-1, since both are there on the IC-1. Points T and H refer to a higher level of satisfaction, since they are on a higher IC-II. Point E refers to still greater satisfaction, since it is on IC-III. Alternatively for Nation-2, A1= R1< H1< E1

**Equilibrium in Isolation:**

Equilibrium in Isolation explains the interaction of demand and the supply, which determine the equilibrium point or point of maximum social welfare in a nation in isolation - (i.e., in the absence of trade - Autarky point)

* In the absence of trade, a nation is in equilibrium when it reaches the highest IC possible given its production frontier. This occurs at the point where a community Interaction of forces of demand (community indifference curves) and supply (production possibilities frontier) determine equilibrium for a nation in the absence of trade (autarky).
* Nations seek the highest possible indifference curve, given its production constraint. Indifference Curve is tangent to the nation's production frontier.
* Note that since community indifference curves are convex from the origin and drawn as nonintersecting, there is only one such point of tangency, or equilibrium. However, there are any number of ICs but points on lower ICs are possible but would not maximize the nation's welfare. On the other hand, the nation cannot reach higher ICs with the resources and technology presently available.
* The common slope of the two curves at the tangency point gives the internal equilibrium-relative commodity price in the nation and reflects the nation’s comparative advantage.

**Diagrammatic explanation for Equilibrium in isolation:**



**Figure 8: Equilibrium in Isolation**

Nation 1 is in equilibrium, or maximizes its welfare, in isolation by producing and consuming at point A, where its production frontier reaches (is tangent to) indifference curve I (the highest possible). Similarly, Nation 2 is in equilibrium at point A1, where its production frontier is tangent to indifference curve I1. The equilibrium-relative price of X in Nation 1 is given by the slope of the tangent common to its production frontier and indifference curve I at point A. This is PA = 1/ 4. For Nation 2, PA = 4. Since the relative price of X is lower in Nation 1 than in Nation 2, Nation 1 has a comparative advantage in commodity X and Nation 2 in commodity Y.

The **equilibrium-relative commodity price** in isolation = slope of tangency between PPF and indifference curve at autarky point of production and consumption. Relative prices are different in Nation 1 and Nation 2 because of different shape and location of PPF’s and indifference curves

Note that since community indifference curves are convex from the origin and drawn as nonintersecting, there is only one such point of tangency, or equilibrium. Furthermore, we can be certain that one such equilibrium point exists because there are an infinite number of indifference curves (i.e., the indifference map is dense). Points on lower indifference curves are possible but would not maximize the nation’s welfare. On the other hand, the nation cannot reach higher indifference curves with the resources and technology presently available.

**The Basis for the Gains from Trade with Increasing Costs:**

A difference in relative commodity prices between two nations is a reflection of their comparative advantage and forms the basis for mutually beneficial trade. The nation with the lower relative price for a commodity has a comparative advantage in that commodity and a comparative disadvantage in the other commodity, with respect to the second nation.

Each nation should then specialize in the production of the commodity of its comparative advantage (i.e., produce more of the commodity than it wants to consume domestically) and exchange part of its output with the other nation for the commodity of its comparative disadvantage.

However, as each nation specializes in producing the commodity of its comparative advantage, it incurs increasing opportunity costs. Specialization will continue until relative commodity prices in the two nations become equal at the level at which trade is in equilibrium. By then trading with each other, both nations end up consuming more - than in the absence of trade.

**Illustrations of the Basis for and the Gains from Trade with Increasing Costs**

We have seen (Figure 8) that in the absence of trade the equilibrium-relative price of X is PA = 1/ 4 in Nation 1 and PA = 4 in Nation 2. Thus, Nation 1 has a comparative advantage in commodity X and Nation 2 in commodity Y. Suppose that trade between the two nations becomes possible (e.g., through the elimination of government obstacles to trade or a drastic reduction in transportation costs). Nation 1 should now specialize in the production and export of commodity X in exchange for commodity Y from Nation 2. How this takes place is illustrated by Figure 9.

**
03_04/w12.jpg                                                  0004452B
CS1-Vol.04                     B95464D4:Figure 9: The Gains from Trade with Increasing Costs.**

With trade, Nation 1 moves from point A to point B in production. By then exchanging 60X for 60Y with Nation 2 (see trade triangle BCA), Nation 1 ends up consuming at point E (on indifference curve III). Thus, Nation 1 gains 20X and 20Y from trade (compare autarky point A with point E). Similarly, Nation 2 moves from A1 to B1 in production. By then exchanging 60Y for 60X with Nation 1 (see trade triangle B1C1E1), Nation 2 ends up consuming at point E1 and also gains 20X and 20Y. PB = PB = 1 is the equilibrium-relative price—the price at which trade is balanced.

* **Equilibrium-relative commodity price with trade** = common relative price at which trade is balanced.
* **Balanced trade:** quantity of X (Y) Nation 1(2) wants to export = quantity of X(Y) Nation 2(1) wants to import.
* Any other relative price could not persist because trade would be unbalanced.
* Under constant cost conditions, specialization is *complete*.
* Under increasing cost conditions, specialization is *incomplete*:
* As production moves along PPF toward comparative advantage good, relative costs change, thus changing basis and gains from trade.

**Trade Based on Differences in Tastes:**

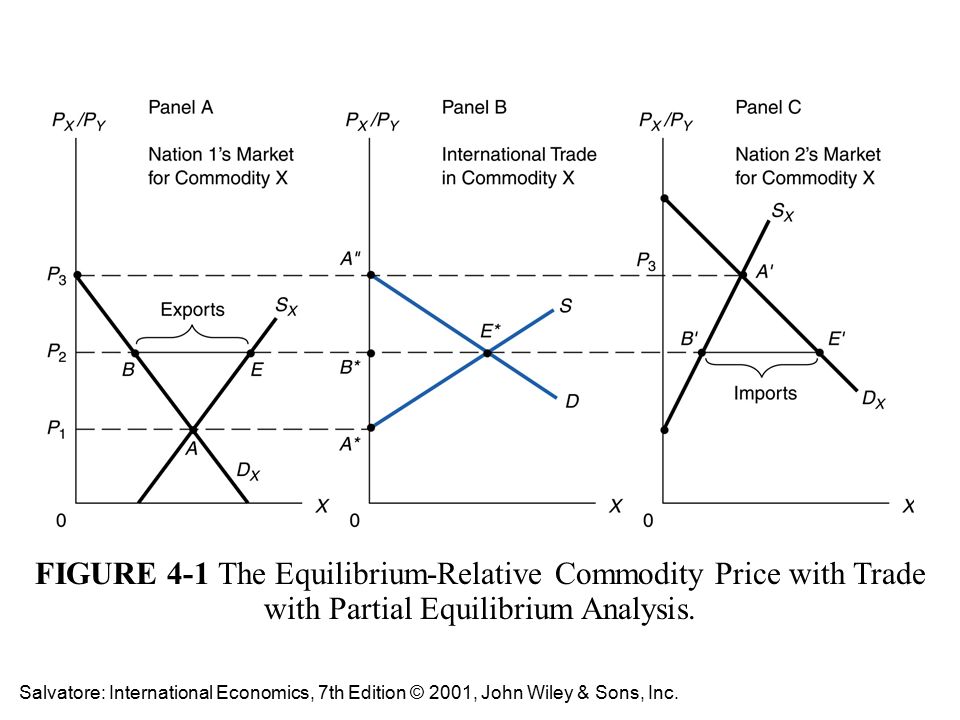
The difference in pretrade-relative commodity prices between Nation-1 and Nation-2 was based on the difference in the production frontiers and ICs in the two nations. This determined the comparative advantage of each and set the stage for specialization in production and mutually beneficial trade. With increasing costs, even if two nations have identical production possibility frontiers (which is unlikely), there will still be a basis for mutually beneficial trade if tastes or demand preferences, in the two nations differ. The nation with the relatively smaller demand or preference for a commodity will have a lower autarky relative price for and a comparative disadvantage in that commodity. The process of specialization in production and trade would then follow. In other words, even if two nations have identical PPFs, basis for mutually beneficial trade will still exist if tastes, or demand preferences, differ. Nation with relatively smaller demand for X will have a lower autarky relative price for, and comparative advantage, in X.

**Demand and Supply, Offer Curves and the Terms of trade**

**The Equilibrium-Relative Commodity Price With Trade**

Partial Equilibrium Analysis (PEA): Partial equilibrium analysis is basically refers to the equilibrium price fixed for the commodity X for the export of the same by the Nation-1 and Import by the Nation-2 of the same commodity X. In other words the equilibrium price agreeable for both the Nations. Since the price analysis is done for a single commodity by both the nations it is called PEA. The diagram given below shows the equilibrium-relative commodity price with trade is determined by PEA. Curves Dx and Sx in panels A and C refer to the demand and supply curves for commodity X of Nation-1 and Nation-2, respectively. the vertical axes in all three panels of the diagram measure the relative price of commodity X (i.e., Px/Py, or the amount of commodity Y that a nation must give up to produce one additional unit of X). The horizontal axes measures the quantities of commodity X.

**Illustrations of the Equilibrium-Relative Commodity Price with Trade with Partial Equilibrium Analysis.**

Figure 10 shows how the equilibrium-relative commodity price with trade is determined by partial equilibrium analysis. Curves DX and SX in panels A and C of Figure 10 refer to the demand and supply curves for commodity X of Nation 1 and Nation 2, respectively. The vertical axes in all three panels of Figure 10 measure the relative price of commodity X (i.e., PX /PY , or the amount of commodity Y that a nation must give up to produce one additional unit of X). The horizontal axes measure the quantities of commodity X. 

**Figure 10: The Equilibrium-Relative Commodity Price with Trade with Partial Equilibrium Analysis.**

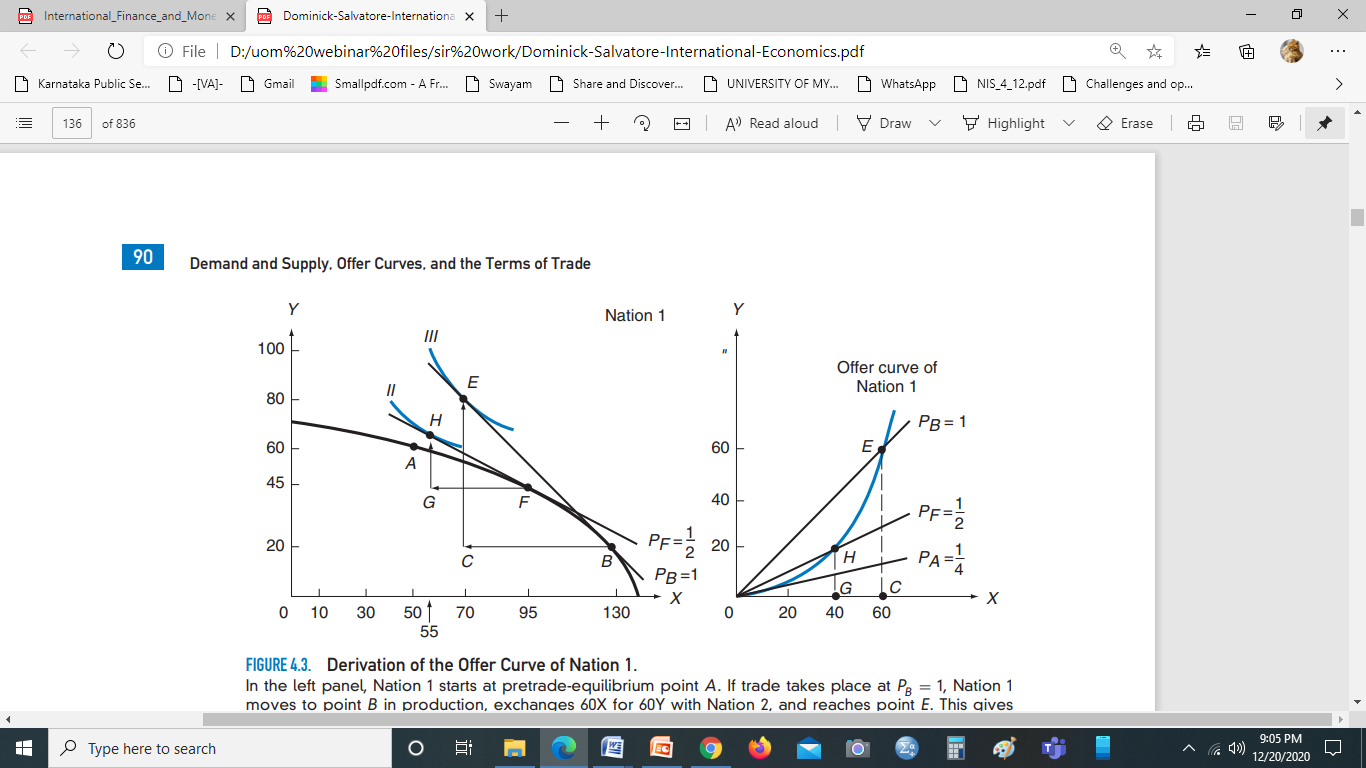
At PX/PY larger than P1, Nation 1’s excess supply of commodity X in panel A gives rise to Nation 1’s supply curve of exports of commodity X (S) in panel B. On the other hand, at PX/PY lower than P3, Nation 2’s excess demand for commodity X in panel C gives rise to Nation 2’s demand for imports of commodity X (D) in panel B. Panel B shows that only at P2 does the quantity of imports of commodity X demanded by Nation 2 equal the quantity of exports supplied by Nation 1. Thus, P2 is the equilibrium PX/PY with trade. At PX/PY > P2, there will be an excess supply of exports of commodity X, and this will drive PX/PY down to P2. At PX/PY < P2, there will be an excess demand for imports of X, and this will drive PX/PY up to P2.

**Offer Curves:**

In economics and particularly in international trade, an offer curve shows the quantity of one type of product that an agent will export ("offer") for each quantity of another type of product that it imports. The offer curve was first derived by English economists Edge worth and Marshall to help explain international trade. The offer curve is derived from the country's PPF. We describe a Country named A which enjoys both goods Y and X. It is slightly better at producing good X, but wants to consume both goods. 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.

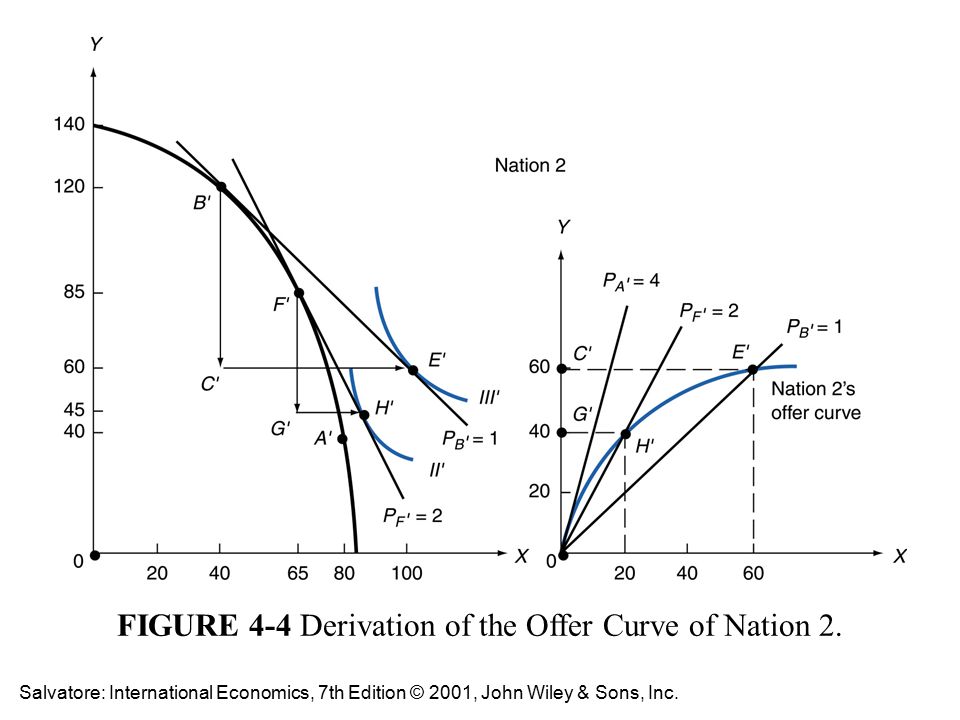
**Derivation and Shape of the Offer Curve of Nation 1 :**



**Figure 11: Derivation of the Offer Curve of Nation 1.**

In the left panel, Nation 1 starts at pretrade-equilibrium point A. If trade takes place at PB = 1, Nation 1 moves to point B in production, exchanges 60X for 60Y with Nation 2, and reaches point E. This gives point E in the right panel. At PF = 1/2 in the left panel, Nation 1 would move instead from point A to point F in production, exchange 40X for 20Y with Nation 2, and reach point H. This gives point H in the right panel. Joining the origin with points H and E in the right panel, we generate Nation 1’s offer curve. This shows how many imports of commodity Y Nation 1 requires to be willing to export various quantities of commodity X.

**Derivation and Shape of the Offer Curve of Nation 2:**



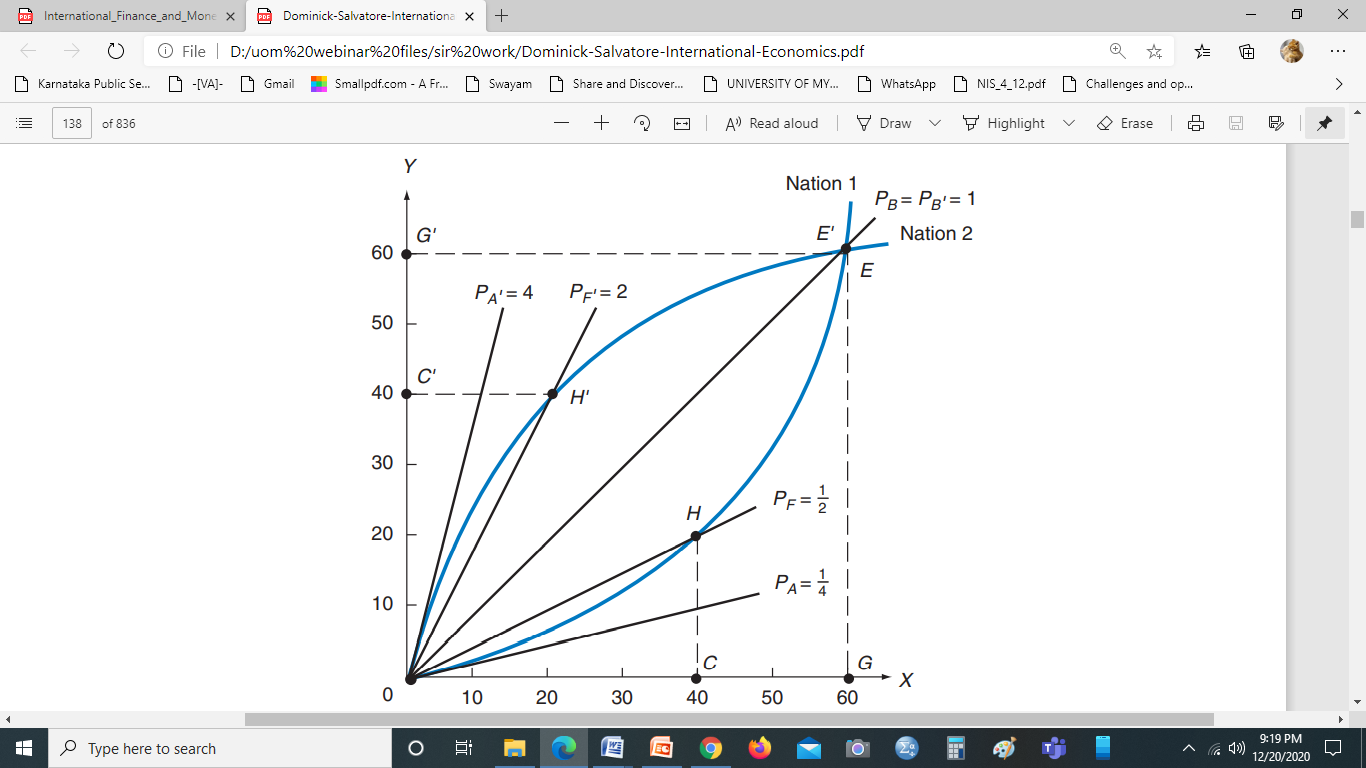
**Figure 12: Derivation and Shape of the Offer Curve of Nation 2**

In the left panel, Nation 2 starts at pretrade equilibrium point A1. If trade takes place at PB1 = 1, Nation 2 moves to point B1 in production, exchanges 60Y for 60X with Nation 1, and reaches point E1 . This gives point E in the right panel. At PF = 2 in the left panel, Nation 2 would move instead from A1 to F1 in production, exchange 40Y for 20X with Nation 1, and reach H1. This gives point H1 in the right panel. Joining the origin with points H1 and E1 in the right panel, we generate Nation 2’s offer curve. This shows how many imports of commodity X Nation 2 demands to be willing to supply various amounts of commodity Y for export.

**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 Figure 13.

**Diagrammatic Explanation:**



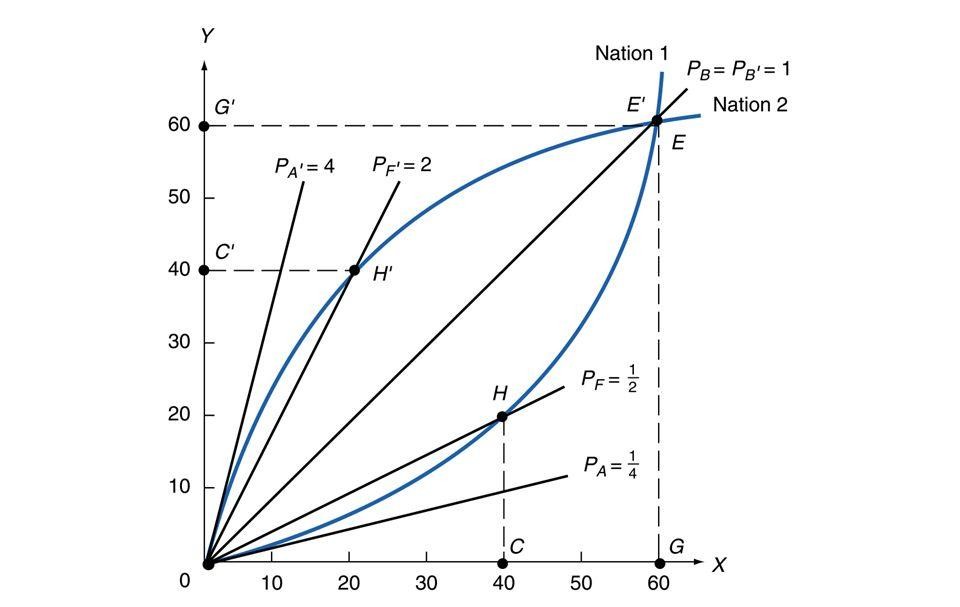
**Figure 13:** **Equilibrium-Relative Commodity Price with Trade.**

The offer curves of Nation 1 and Nation 2 are those of Figures 11 and 12. The offer curves intersect at point E, defining the equilibrium-relative commodity price PB = 1. At PB, trade is in equilibrium because Nation 1 offers to exchange 60X for 60Y and Nation 2 offers exactly 60Y for 60X. At any PX/PY < 1, the quantity of exports of commodity X supplied by Nation 1 would fall short of the quantity of imports of commodity X demanded by Nation 2. This would drive the relative commodity price up to the equilibrium level. The opposite would be true at PX/PY > 1.

**Relationship Between General and Partial Equilibrium Analysis:**

We can also illustrate equilibrium for our two nations with demand and supply curves and thus show the relationship between the general equilibrium analysis and the partial equilibrium analysis.

**Diagrammatic Explanation:**



**Figure 14:** **Equilibrium-Relative Commodity Price with Partial Equilibrium Analysis.**

In the diagram S refers to Nation 1’s supply curve of exports of commodity X, while D refers to Nation 2’s demand curve for Nation 1’s exports of commodity X. S and D are derived from the left panel of Figures 11 and 12, and show the same basic information as Figure 13. D and S intersect at point E, determining the equilibrium PX/PY = 1 and the equilibrium quantity of exports of 60X. At PX /PY = 11/ 2, there is an excess supply of exports of R1R = 30X, and PX/PY falls toward equilibrium PX/PY = 1. At PX /PY = 1/ 2, there is an excess demand of exports of HH1 = 80X, and PX/PY rises toward PX/PY = 1.

**The Marginal Rate of Substitution (MRS):**

Though the theory of `Marginal Rate of Substitution’ is not there in the syllabus, we have given some information relating to the same, mainly because, the theory of Marginal Rate of Substitution helps to explain and to understand the Heckcher Ohlin Theory and the theory of `Vent for Surplus Approach. Therefore, an effort is made here to give some basic issues/information relating to the theory of the Marginal Rate of Substitution.

In economics, the marginal rate of substitution (MRS) is the amount of a good that a consumer is willing to consume in relation to another good, as long as the new good is equally satisfying. It's used in `Indifference Theory’ to analyze consumer behavior. The marginal rate of substitution is calculated between two goods placed on an indifference curve, displaying a frontier of utility for each combination of "good X" and "good Y."

The MRS of X for Y in consumption refers to the amount of Y that a nation could give up for one extra unit of X and still remain on the same IC. This is given by the (absolute) slope of the community IC - at the point of consumption and declines as the nation moves down on the curve. The decline in MRS or absolute slope of an IC is a reflection of the fact that the more of X and the less of Y a nation consumes, the more valuable to the nation is a unit of Y at the margin compared with a unit of X. Therefore, the nation can give up less and less of Y for each additional unit of X it wants.

Declining MRS means that community ICs are convex from the origin. Thus, while increasing opportunity cost in production is reflected in concave production frontiers, a declining MRS in consumption is reflected in convex Community ICs. Some Difficulties with Community ICs. Two ICs should not intersect each other. In case they intersect, the consumer attains equal satisfaction on two ICs. A particular set of or map of Community ICs refers to a particular income distribution - with in the nation. Otherwise due to INT there may be change in the distribution of real income in the nation and may cause ICs to intersect. There may not be fresh IC due to constant income.

**Understanding the Marginal Rate of Substitution**

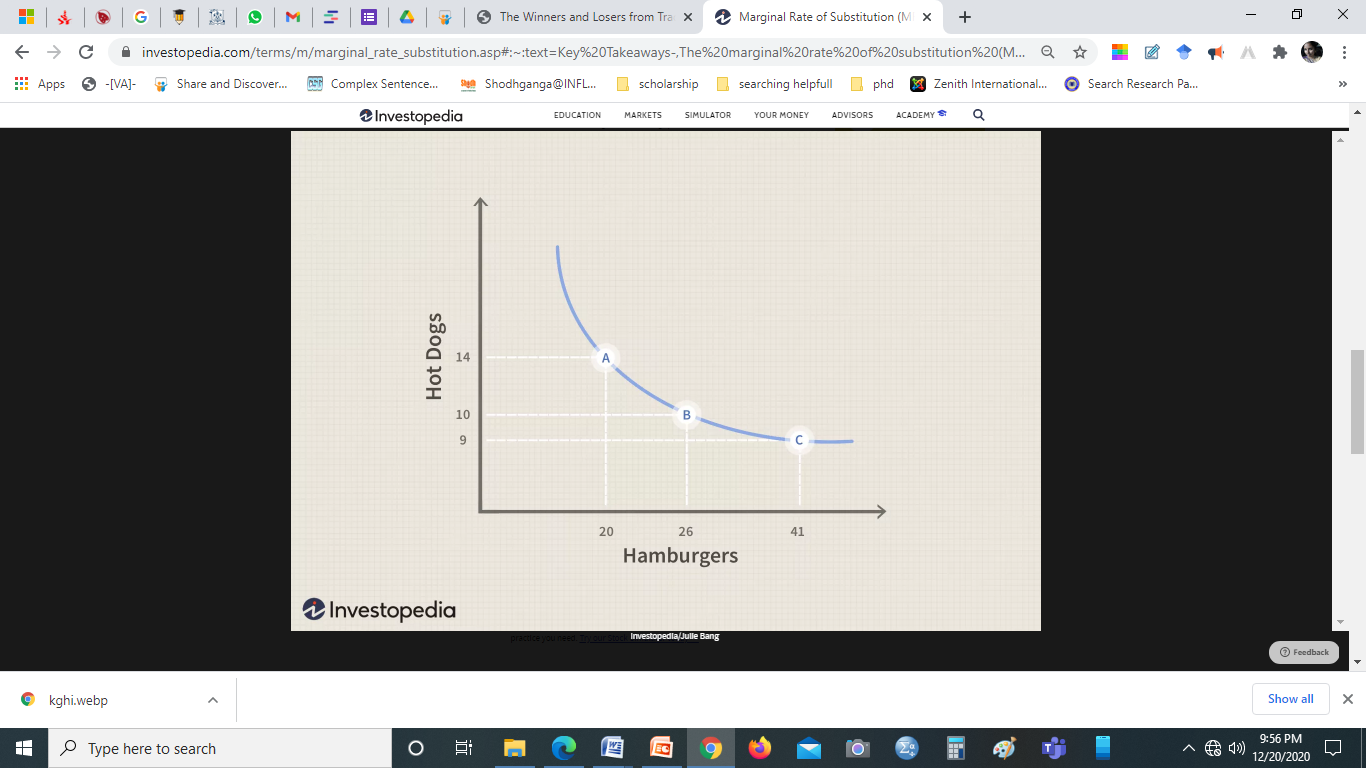
MRS economics is used to analyze consumer behaviors for a variety of purposes. The marginal rate of substitution is an economic term that refers to the amount of one good that is substitutable for another. MRS economics involves a sloping curve, called the indifference curve, where each point along it represents quantities of good X and good Y that you would be happy substituting for one another. The slope of the indifference curve is critical to marginal rate of substitution analysis. At any given point along an indifference curve, the MRS is the slope of the indifference curve **at that point**. Note that most indifference curves are actually curves, so the slopes are changing as you move along them. Most indifference curves are also usually convex because as you consume more of one good you will consume less of the other. Indifference curves can be straight lines if a slope is constant, resulting in an indifference curve represented by a downward-sloping straight line.

If the marginal rate of substitution is increasing, the indifference curve will be concave to the origin. This is typically not common since it means a consumer would consume more of X for the increased consumption of Y and vice versa. Usually, marginal substitution is diminishing, meaning a consumer chooses the substitute in place of another good rather than simultaneously consuming more. The law of diminishing marginal rate of substitution states that MRS*decreases*as one moves down a standard convex-shaped curve, which is the indifference curve.

**Example of How to Use the Marginal Rate of Substitution**

For example, a consumer must choose between hamburgers and hot dogs. In order to determine the marginal rate of substitution, the consumer is asked what combination of hamburgers and hot dogs provide the same level of satisfaction.

**Diagrammatic Explanation:**



**Figure 15:** **Marginal Rate of Substitution**

When these combinations are graphed, the slope of the resulting line is negative. This means that the consumer faces a diminishing marginal rate of substitution: the more hamburgers they have relative to hot dogs, the fewer hot dogs they are willing to consume. If the marginal rate of substitution of hamburgers for hot dogs is -2, then the individual would be willing to give up 2 hot dogs for every additional hamburger consumption.

**Limitations of Marginal Rate of Substitution**

The marginal rate of substitution does not examine a combination of goods that a consumer would prefer more or less than another combination. This generally limits the analysis of MRS to two variables. Also, MRS does not necessarily examine marginal utility since it treats the utility of both comparable goods equally though in actuality they may have varying utility.

**Factor Endowments and the Heckscher- Ohlin Theory**

**Hecksher-Ohlin Theory and its Application in the Contemporary Scenario**

**Introduction:**

Heckscher was a Swedish economist. He is probably best known for his book "Mercantilist." Although his major interest was in studying economic history, he also developed the essentials of the factor endowment theory of international trade in a short article in Swedish in 1919. It was translated into English thirty years later. Heckscher's student, Bertil Ohlin developed and elaborated the factor endowment theory. He was not only a professor of economics at Stockholm, but also a major political figure in Sweden. He served in **Riksdag** (Swedish Parliament), as the head of liberal party for almost a 1/4 of a century and also he was Minister of Trade during World War II.

In 1979 Ohlin was awarded a Nobel prize jointly with **James Meade** for his work in international trade theory. It is based on the assumption that countries have identical production technologies.

Before the discovery of Hecksher-Ohlin theorem the economists, thinkers and administrators were under the impression that the Absolute and Comparative advantage in price of various commodities in different countries of the world have been the reasons for the international trade to take place. The later discovery has been that the reasons or causes for the international trade is the difference in relative commodity prices and comparative advantage between the two nations.

The second and the most important factor has been the discovery of the effect that international trade has on the earnings of factors of production in the two trading nations. That is, it was intended to examine the effect of international trade on the earnings of labour as well as on international differences in earnings.

Ohlin’s theory begins where the Ricardian theory of international trade ends. The Ricardian theory states that the basis of international trade is the comparative costs difference. Ohlin’s theory explains the real cause of this difference. Ohlin did not invalidate the classical theory but accepted the comparative advantage as the cause of international trade and then tried to examine and analyze it further in a moral and logical manner. Thus, Ohlin’s theory supplements but does not supplant the Ricardian theory.

Ohlin states that trade results on account of the different relative price of different goods in different countries. The relative price commodity difference is the result of relative costs and factor price differences in different countries. Differences in factor prices are due to differences in factor endowments in different countries. It, thus, boils down to the fact that trade occurs because different countries have different factor endowments. Ohlin’s theory is, therefore, also described as the factor endowment theory or the factor proportions analysis.

Ohlin’s theory is usually expounded in terms of a two-factor model with labour and capital as the two factors of endowments. The gist of the theory is: what determine trade are differences in factor endowments. Some countries have plenty of capital; others have an abundance of labour. The Heckscher-Ohlin theorem is: countries which are rich in labour will export labour intensive goods and countries which have plenty of capital will export capital-intensive products.

The Ricardian model is more relevant to the world economy before WW-II. There were significant differences in production technologies between industrial countries and developing countries.

**HO Model = 2 × 2 × 2 model (2 countries, 2 commodities, 2 factors)**

For example, there are two countries (America and Britain); each country is endowed with 2 homogeneous factors (labor and capital) and produces 2 commodities. This is the smallest case of "*even*" model, i.e., the number of commodities is equal to that of factors. Extending the model to a more general case is not easy. In fact, the results obtained from a more general model do not have the clear, common sense interpretations which the simple HO model enjoys. The Heckscher-Ohlin model explains mathematically how a country should operate and trade when resources are imbalanced throughout the world. It pinpoints a preferred balance between two countries, each with its resources.

The model isn't limited to tradable commodities. It also incorporates other production factors such as labor. The costs of labor vary from one nation to another, so countries with cheap labor forces should focus primarily on producing labor-intensive goods, according to the model.

**What is the Heckscher-Ohlin Model?**

The Heckscher-Ohlin model is an economic theory that proposes that countries export what they can most efficiently and plentifully produce. Also referred to as the H-O model or 2x2x2 model, it's used to evaluate trade and, more specifically, the equilibrium of trade between two countries that have varying specialties and natural resources.

The model emphasizes that the export of goods requiring factors of production that a country has in abundance. It also emphasizes the import of goods that a nation cannot produce as efficiently. It takes the position that countries should ideally export materials and resources of which they have an excess, while proportionately importing those resources they need.

Although the Heckscher-Ohlin model appears reasonable, most economists have had difficulty finding evidence to support it. A variety of other models have been used to explain why industrialized and developed countries traditionally lean towards trading with one another and rely less heavily on trade with developing markets.

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

1. There are two countries A and B.
2. There are two factors, labour and capital.
3. There are two goods; X and Y of which X is labour-intensive and Y is capital-intensive.
4. Country A is labour-abundant country B is capital-rich, hence, commodity X is labour intensive and commodity Y is capital intensive. It means that commodity X requires relatively more labour to produce than the commodity Y in both the nations. But it does not mean that the K/L ratio for X is the same in Nation-1 and Nation-2.
5. Both nations use the same technology in production.
6. Constant returns to scale in the production of both commodities in both the nations.
7. Incomplete specialization in production in both nations, means that even with free trade both nations continue to produce both commodities. This implies that neither of the two nations is 'very small'.
8. Equal tastes in both nations, means that demand preferences as reflected in the shape and location of indifference curves, are identical in both nations. Thus, when relative commodity prices are equal in the two nations (as, for ex. With free trade) both nations will consume X and Y in the same proportions.
9. Perfect competition in both commodities and factor markets. It means that producers, consumers and traders of commodity X and Commodity Y in both nations are too small to affect the price of these commodities. The same is true for each user and supplier of labour time and capital. It also implies that the consumers, producers and owners of the factors of production will have full knowledge about the commodity prices and factor earnings.
10. Perfect internal factor mobility but no international factor mobility, means that labour and capital are free to move from one firm to another and region to another region until factor prices are equalized in all the regions.
11. There are no transport costs or other impediments to trade, tariffs, or other obstructions to the free flow of goods. Means that specialization in production proceeds until relative commodity prices are the same in both the nations with trade.
12. All production functions are homogeneous of the first degree. Hence there are constant returns to scale.
13. Demand conditions are identical in both the countries.
14. All resources are fully employed in both the nations
15. Trade between the two nations is balanced, means that the total value of each nation’s exports equals the total value of the nation’s imports

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

Given these assumptions, Ohlin’s thesis contends that, country exports goods which use relatively a greater proportion of its relatively abundant and thus cheap factors. It is implied that trade occurs because there are differences in relative commodity prices caused by differences in relative factor prices (thus a comparative advantage) as a result of differences in the factor endowments among the countries.

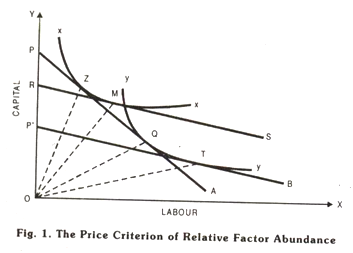
The “relative factor abundance” in the thesis has two conceptions (a) the price criterion of relative factor abundance; and (b) the physical criterion factor abundance.

**The Price Criterion of Relative Factor Abundance:**

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

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

Country A is relatively capital-abundant. (Here P stands for factor price and К for capital, L for labour, A and В for the two respective countries.) Ohlin’s theorem may be verified diagrammatically in **Figure 16**.

****

**Figure 16: The Price Criterion of Relative Factor Abundance**

**Figure 16** depicts xx and yy isoquants (equal product curves) for two goods X and Y respectively. These two isoquants intersect only once so that the goods X and Y can be classified unambiguously according to factor intensity.

It is easy to see that x is relatively capital- intensive, since the amount of capital is represented on the vertical axis. Similarly, good Y is labour-intensive, since the amount of labour is represented on the horizontal axis. If the isoquants intersect more than once, good X will not always be capital intensive relatively to Y.

Let us assume that there are two countries A and В. A is the relatively capital-abundant and В is labour abundant. Now all possible factor combinations (of labour and capital) that can produce the given amounts of two goods X and Y in each country can be read off from the two isoquants.

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

The line PA is tangent to yy isoquant at point Q. Similarly, xx isoquant is also tangential to PA at point Z. Since we have assumed that (PK/PL) A < (PK/PL) B i.e., capital in A is relatively cheaper, the slope of the line representing relative factor prices (PK/PL) in B  must be less than that of PA.

Thus, line P’B is supposed to represent factor   ratio in B. Line PB is tangent to the isoquant yy at point T. Now, the line RS is drawn parallel to PB such that it becomes tangent to the isoquant xx at point M. Line RS lies above the line P’B implying that OR intercept of RS on the capital axis is greater than OP, the intercept of PB on the same axis.

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

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

In country B, similarly, the equilibrium factor proportions are OM for X and OOT for good Y. The relative factor prices are shown by P’B (or RS). And therefore, the costs of producing the given amounts of X and Y (as assumed for country A) in this country are, in terms of capital, OR and OP respectively. Evidently, in country В the given amount of good X is more expensive than the given amount of good Y.

Comparing the relative costs of the equal amounts of the two goods X and Y in the countries A and B, we thus find good X is relatively cheaper in A and good Y is relatively cheaper in B. That means, the capital-abundant country has a comparative cost advantage in producing a capital-intensive good. So with the opening of trade with the other country, it must export such goods only. Likewise, the labour abundant country must export labour-intensive goods.

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

**The Physical Criterion of Relative Factor Abundance:**

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

(K/L)A > (K/L)B

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

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

Evidently, a country possessing relatively abundant capital will have a factor price structure such that capital will be cheaper as compared to labour (relatively scarce factor). It follows, thus, that a relatively cheaper factor in a country implies that it is relatively abundant.

Hence, considering physical quantities and scarcities rather than economic scarcities, Ohlin assumes that the supply aspect has a greater significance than demand in determining the relative factor prices in a country.

Ohlin, then, stresses the point that the factor-price structure will be different in two countries when the factor endowments are in differing proportions. Comparative advantages thus arise when the capital-abundant country (A) exports capital-intensive goods and imports labour- intensive goods and the labour abundant country (B) exports labour intensive goods and imports capital- intensive goods; because, (PK/PL)A < (PK/PL)B < (PK/PL)A.

If relative factor endowments are identical in two countries and commodity factor intensities are also the same, there will be no comparative price differences (PK\PL)A= (PK/PL)B; there is no comparative cost difference); hence no theoretical basis for international trade.

**The Gist of the Theory:**

**In a nutshell, we can interpret Ohlin’s theory as under:**

1. Two countries A and В will involve themselves in trade, if relative price of goods X and Y are different. To quote Ohlin, “the immediate cause of inter-regional trade is always that goods can be bought cheaper from outside in terms of money than they can be produced at home.”

2. Under comparative market conditions, prices are equal to average costs. Thus, relative price differences are an account of cost differences.

3. Cost differences are taking place because of the factor price differences in the two countries.

4. Factor prices are determined by factors’ supply and demand. Assuming a given demand, it follows that a capital-rich country has a cheaper or a lower capital price and a labour-abundant country has a relatively lower labour price.

In our model, thus, factor-price ratio Price of Labour/Price of Capital in country A is lower than the ratio Price of Labour/Price of Capital in B.

5. Ohlin states that each region has advantages in the production of goods into which enter considerable amounts of factors abundant and cheap in that region.

Since X is a labour-intensive product in country A, it will be cheaper than in B, because labour is relatively cheaper in A. Similarly Y, the capital- intensive product in country B, is relatively cheaper as В is a capital-rich country and the price of capital is relatively lower.

6. It follows that country A will tend to specialize in the production of X and export its surplus. Likewise, В will specialize in Y and export it.

In short, a capital-rich and capital-cheap country exports capital intensive products while a labour-abundant and labour-cheap country exports labour-intensive products.

It also follows that trade takes place because of factor-endowment difference and their international immobility. Sodersten writes, “In a world where factors of production cannot move among countries but where goods can move freely, trade in goods can be viewed as a substitution for factor mobility.”

**The Concepts - Factor Intensity and Factor Abundance:**

**Factor Intensity:** In a world of two commodities (X and Y) and two factors (Labour and Capital), we say that commodity Y is Capital Intensive if the capital-labour ratio (K/L) used in the production of Y is greater than K/L used in the production of X and vice-versa.

For example: If two units of capital (2K) and two units of labour (2L) are required to produce one unit of commodity Y, the Capital-Labour ratio is one. That is, K/L=2/2=1 in the production of Y. If at the same time 1K and 4L are required to produce one unit of X, K/L = ¼ for commodity X. Since K/L = 1 for Y and K/L = ¼ =0.25 for X, we say that Y is K intensive and X is L intensive.

**Factor Abundance:** There are two ways to define factor abundance. One way is in terms of physical units (i.e., in terms of the overall amount of capital and labour available to each nation). Another way to define factor abundance is in terms of relative factor prices (i.e., in terms of the rental price of capital and the price of labour time in each nation).

According to the definition in terms of physical units, Nation-2 is capital abundant if the ratio of the total amount of capital to the total amount of labour (TK/TL) available in Nation-2 is greater than that in Nation-1 (i.e., if TK/TL for Nation-2 exceeds TK/TL for Nation-1).

**Factor Price Equalization Theorem:**

Factor Price Equalization Theorem is really a corollary, since it follows directly from the H.O. Theorem and holds only if the H-O theorem holds. It was Paul Samuelson (1970 Nobel Prize winner in economics) who rigorously proved this theory. Therefore, this theory is also called as H-O-S Theorem for short).

H-O-S theorem says that INT brings about equalization in the relative and absolute returns to homogeneous factors across nations. As such, INT is a substitute for the international mobility of factors. In short INT will cause the wages of homogeneous labour to be the same in all trading nations. Similarly, INT will cause the return to homogeneous capital to be the same in all trading nations. i.e., INT will make 'w' the same in Nation-1 and Nation-2; Similarly, it will cause 'r' to be the same in both nations. Both relative and absolute factor prices will be equalized. i.e., Wages of homogeneous labour and the rate of interest for the capital will be the same in all the trading nations due to (Demand for capital and labour increases in the respective countries with more specialization in the respective factor/commodity).

In the absence of trade the relative price of commodity X is lower in Nation-1 than in Nation-2 because the relative price of labour or the wage rate, is lower in Nation-1. As Nation-1 specializes in the production of commodity X and reduces its production of commodity Y, the relative demand for labour rises causing wages (w) to rise, while the relative demand for capital falls, causing the interest rate (r) to fall. The exact opposite occurs in Nation-2. That is Nation-2 specializes in the production of Y and reduces its production of X with trade, its demand for L falls, causing 'w' to fall, while its demand for K rises, causing 'r' to rise.

**Factor Price Equalization Theory (With Obstacles)**

The factor price equalization theory is an important corollary of the H-O theory of trade. If there is a free international movement of factors, the prices of the factors of production undisputedly get equalized. However, the classical theorists as well as Heckscher and Ohlin had assumed an international immobility of factors. This led to the crucial question of how the international trade would affect the prices of the factors of production.

Heckscher, on the one hand, suggested that international trade in commodities would act as a substitute for the international mobility of factors leading to a complete equalisation of the costs or factor prices. Ohlin, on the other hand, recognised that the international trade might result in only an incomplete or partial equalisation of prices of factors. The writers like Samuleson (1948) and Lerner (1953) discussed the possibility of a complete equalisation of factor prices.

The factor price equalization theory picks up the argument that the labour-abundant country specializes in the export of the labour-intensive commodity because labour is a relatively cheaper factor compared with capital. On the other hand, the capital-abundant country specializes in the export of capital-intensive commodity on account of capital being a relatively cheaper factor there. The pressure of international demand renders the abundant factor scarce and its price starts rising.

At the same time, the import of the commodities that require more input of scarce factor relieves the domestic pressure of demand for that factor, resulting in a fall in its price. The process of change in prices of factors will ultimately bring about an equality in the prices of factors. It is in this sense that free international trade in commodities acts as a substitute for the international mobility of factors.

**1. Samuelson’s Analysis of Factor-Price Equalization Theorem:**

**Samuelson’s analysis of the factor price equalization is based upon the following assumptions:**

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

(ii) These countries produce two commodities, say X and Y.

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

(iv) There is free competition both in the product and labour markets.

(v) There is an absence of tariff and transport costs.

(vi) The production function related to each commodity is identical and homogeneous of degree first. It implies the production is governed by constant returns of scale.

(vii) The factor-intensities are different for the two commodities. For instance, the commodity X is labour-intensive, while commodity Y is capital- intensive. It means there is an absence of reversal of factor intensity.

(viii) Capital and labour are qualitatively identical in the two countries.

(ix) The availability of factors is quantitatively different in the two countries. The country A is supposed to be labour-abundant whereas country B is capital-abundant.

(x) There is absence of complete specialisation. It means both the countries continue to produce both the commodities even after trade takes place between them.

(xi) The factor supplies are fixed in the two countries.

(xii) In each country, there is full employment of both the factors.

(xiii) There is no mobility of factors between the countries.

(xiv) The marginal-physical product of each factor is diminishing.

(xv) The tastes are identical in the two countries.

Before trade, there is low capital-labour ratio in country A and a high capital-labour ratio in country B. As trade commences, the labour-abundant country A exports the labour-intensive commodity X and country B exports the capital-intensive commodity Y. The export of labour-intensive commodity X by A creates relative scarcity of labour and consequent rise in wage rate. It also leads to a rise in capital- labour ratio.

On the opposite, the export of capital- intensive commodity by country B will result in its scarcity there. It will cause a rise in the price of capital (rate of interest) and a consequent fall in the capital-labour ratio. These relative changes in K-L ratio will continue until the K-L ratios in both the countries become exactly equal. Along with it, the prices of the two factors also undergo changes (rise in wage rate in country A and rise in interest rate of country B) in such a manner that there is ultimate equalisation of prices of two factors in both the countries.

**Relative Resource Endowments of Various Countries and Regions.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table 6: Factor Endowments of Various Countries and Regions, as a % of world Total** | | | | |
| Countries/Regions | Capital | Skilled labour | Unskilled labour | All Resources |
| United States | 20.80 | 19.40 | 2.60 | 5.60 |
| European Union | 20.07 | 13.30 | 5.30 | 6.90 |
| Japan | 10.50 | 8.20 | 1.60 | 2.90 |
| Canada | 2.00 | 1.70 | 0.40 | 0.60 |
| Rest of OECD | 5.00 | 2.60 | 2.00 | 2.20 |
| Mexico | 2.30 | 1.20 | 1.40 | 1.40 |
| Rest of LA | 6.40 | 3.70 | 5.30 | 5.10 |
| China | 8.30 | 21.70 | 30.40 | 28.40 |
| India | 3.00 | 7.10 | 15.30 | 13.70 |
| HK, South Korea,K, Taiwan & Singapore | 2.80 | 3.70 | 0.90 | 1.40 |
| Rest of Asia | 3.40 | 5.30 | 9.50 | 8.70 |
| Eastern Europe (Including Russia) | 6.20 | 3.80 | 8.40 | 7.60 |
| Organization of Petroleum Exporting Coun. | 6.20 | 4.40 | 7.10 | 6.70 |
| Rest of the World | 2.50 | 4.00 | 10.00 | 8.90 |
| Total of the World contries | 100.00 | 100.00 | 100.00 | 100.00 |
| Source: Elaboration on W.R. Cline, Trade and Income Distribution (Washington, D.C. : Institute for International  Economics, 1997), pp. 183-185. | | | | |

**Convergence of Real Wages Among Major Industrial Nations:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Table-7: Real Hourly Wage in Manufacturing in the Leading Industrial Countries as a Percentage of the US Wage | | | | | | |
| Country | 1959 | 1970 | 1983 | 1990 | 2000 | 2018 |
| Japan | 11 | 24 | 51 | 86 | 96 | 103.88 |
| Italy | 23 | 42 | 62 | 79 | 85 | 113.20 |
| France | 27 | 41 | 62 | 102 | 91 | 117.90 |
| United Kingdom | 29 | 35 | 53 | 85 | 84 | 85.86 |
| Germany | 29 | 56 | 84 | 142 | 140 | 115.90 |
| Canada | 42 | 57 | 75 | 84 | 90 | 93.00 |
| Average | 27 | 43 | 65 | 97 | 98 | 104.96 |
| United States | 100 | 100 | 100 | 100 | 100 | 100.00 |
| Source: Calculated from indices from: International Monetary Fund, International Financial Statistics: Organization for Economic Co-operation and Development, Economic Outlook; United Nations, Monthly Bulletin of Statistics; and U.S. Bureau of Labour Statistics, Bulletin. Note: 2018 data is Index of the hourly wages in manufacturing. | | | | | | |

**How Factor Price Equalization Takes Place?**

INT not only tends to reduce the international difference in the returns to homogeneous factors, but would in fact bring about complete equalization in relative factor prices when all of the assumptions made hold. This is so because as long as relative factor prices differ, relative commodity prices differ and trade continues to expand. But the expansion of trade reduces the difference in factor prices between nations. Thus, INT keeps expanding until relative commodity prices are completely equalized, which means that relative factor prices have also become equal in the two nations.

One has to understand that trade acts as a substitute for the IN mobility of factors of production in its effect on factor prices. With perfect mobility, labour would migrate from the low-wage nation to high-wage nation until wages in the two nations became equal. Similarly, capital would move from the low-interest to the high interest nation until the rate of interest was equalized in the two nations. While trade operates on the demand for factors, factor mobility operates on the supply of factors. In either case the result is complete equalization in the absolute returns of homogeneous factors. With some (rather than perfect) international mobility of factors, a smaller volume of trade would be required to bring about equality in factor returns between the two nations.

**The Leontief Paradox to Heckscher-Ohlin Theory**

**Introduction to the Leontief Paradox:**

The Heckscher-Ohlin theorem gave a generalisation that the capital-abundant counties tend to export capital-intensive goods while labour- abundant countries tend to export the labour- intensive goods. W.W. Leontief put this generalisation to empirical test in 1953 and found the results that were contrary – to the generalisation provided by the H-O theory.

Leontief made use of 1947 input-output tables related to the U.S. economy. 200 groups of industries were consolidated into 50 sectors, of which 38 traded their products directly on the international market. He took only two factors of production— labour and capital. His main empirical results are stated in Table. 9.

**Table 8: Domestic Capital and Labour Requirements per million dollars of U.S Exports and of Competitive Imports Replacement in 1947**

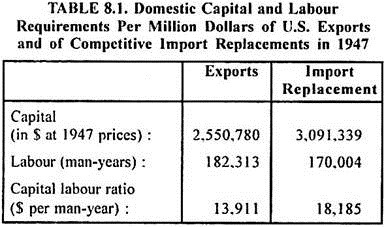


Table 8, shows that import replacement industries in the U.S. had been employing 30 percent more of capital than the export industries. The capital-labour ratio was higher in the import- replacement industries than the export industries. It suggested that the exports of United States, generally recognised as the capital-abundant country, were labour-intensive.

Leontief therefore, concluded, “American participation in the international division of labour is based on its specialisation in labour intensive rather than capital-intensive lines of production. In other words, this country resorts to foreign trade in order to economize its capital and dispose of its surplus labour rather than vice-versa.”

In brief, capital-abundant countries export labour- intensive goods and labour-abundant countries export capital-intensive goods. This reflects what is called as ‘Leontief Paradox’ as this conclusion goes against H-O theory. Although the United States is a capital-abundant country, yet its specialisation is found in the labour-intensive commodities.

The conclusion derived by Leontief not only surprised himself but startled the academicians throughout the world. The economists undertook intense research for re-examining both the H-O theory and Leontief paradox. The attempts were also made on empirical grounds to reconcile the Leontief analysis with the H-O theory. Several economists investigated the causes of bias in Leontief’s work and exposed the methodological and statistical weaknesses and inaccuracies in his analysis.

**Loentief Paradox and Evidence Related to Other Countries:**

The Loentief paradox brought into focus the crucial issue of the validity or otherwise of H-O theory. Many economists conducted Loentief type studies related to other countries. The evidence is, however, not conclusive one way or the other. While some of the empirical studies put a question mark on the validity of H-O theory, the others have gone in favour of it.

A study attempted by Tatemato and Ichimura concerning Japan has confirmed the Leontief paradox. Japan even though a labour-abundant country, imported labour-intensive goods like raw materials and exported capital-intensive goods such as automobiles, computers, T.V. sets, watches etc.

According to these writers, this pattern of trade is not consistent with the H-O theory. They attributed such a trade pattern to the fact that almost 75 percent of Japan’s exports were directed to the Third World countries which were more capital- scarce that Japan. From their viewpoint, Japanese exports to them were capital-intensive. In contrast to the United States, Japan was labour-abundant and capital-scarce. Consequently her exports to the advanced countries like the United States had a lower capital-labour ratio. In this way, their findings confirmed the validity of H-O theory.

The H-O theory found support from a study made by W. Stopler and K. Roskamp concerning the erstwhile East Germany in 1956. Almost 75 percent of her trade was with the countries of the communist block. East Germany was relatively more capital-abundant than the latter. At the same time, her exports to these countries were relatively capital- intensive and imports labour-intensive.

D.F. Wahl conducted a study related to the trade pattern of Canada in 1961. This study showed that Canadian exports to the U.S.A, the major trading partner of Canada, were relatively more capital- intensive than her imports. It lent support to the Leontief paradox and contradicted the H-O theory.

Another study that provided support to the Leontief paradox was made by R. Bhardwaj in 1961 concerning India’s trade pattern. He showed that Indian exports, in general, were more labour- intensive, while imports were capital-intensive. However, in her trade with the United States, the exports were capital-intensive and imports were labour-intensive.

Thus, even this study ran counter to the H-O theory. There can be certain reasons for greater capital-intensity of exports by India and some other LDC’s to the United States. Firstly, these countries depend greatly on the technology imported from the advanced countries, as they do not themselves have an indigenous technology suited to their own factor endowments. The imported technology is highly capital-intensive.

As a result, the exported goods have a relatively high capital- labour ratio. Secondly, India relied heavily on the imports of food grains and many other consumer products from the United States until 1970’s. That accounted for high labour-intensity of her imports from the United States. Thirdly, there is a substantial direct foreign investment by MNC’s owned by the United States and the European countries in India and other LDC’s.

They generally operate in the export sector and produce goods through highly capital-intensive techniques. That can be one of the reasons for high capital-intensity of their exports, even though they are capital-scarce. Fourthly, there is factor price distortion in the LDC’s, i.e., the factor prices existing in these countries do not necessarily reflect their factor proportions.

There is the possibility that labour is over-priced and capital is underpriced in the LDC’s on account of such factors as strong trade union pressures, minimum wage laws, capital consumption allowances and other subsidies on capital and duty free imports of technology and capital goods from abroad. As the over-pricing of labour and underpricing of capital cause factor-price distortion, there is likelihood that the labour-surplus and capital-scarce countries like India export capital-intensive goods and import labour-intensive goods.

The Leontief paradox was supported by the study made by M. Diab in 1956 concerning the United States trade with Canada, Britain, Netherlands, France and Norway. This study, relying on Colin Clark’s data, demonstrated that the United States was having a low capital-labour ratio in her exports than the above-mentioned countries.

L. Tarshis approached the whole problem indirectly by comparing the internal commodity prices in different countries. The study revealed that the price ratio of capital-intensive relative to labour- intensive goods was lower in the United States and higher in other countries. Since the United States is a relatively capital-abundant country, the result is fully consistent with Heckscher-Ohlin theory.

In the empirical studies made by E.E. Leamer in 1980 and 1984, it is suggested that the comparison of K-L ratio in the multi-factor world should be in production versus consumption rather than in exports versus imports.

Applying this approach to 1947 Leontief’s data, Learner concluded that K-L ratio was indeed greater in the United States production than the United States consumption. That strengthened the H-O theory and refuted Leontief paradox. The study made by Stern and Maskus in 1981 for the year 1972 confirmed the H- O theory even when natural resource industries were excluded.

In a 1987 study, however. Bowen, Learner and Sveikauskas, employed more complete 1967 cross- sectional data on trade, factor input requirements and factor endowments of 27 countries, 12 factors (resources) and several commodities. They concluded that H-O trade theory was valid in about fifty percent cases.

It is now sufficiently clear that the empirical studies concerning the Leontief paradox or H-O theory, have provided conflicting conclusions. Until convincing or more conclusive evidence becomes available in support of Leontief paradox, the H-O theory must be deemed as valid.

**Reconciliation between Leontief Paradox and Heckscher-Ohlin Theory:**

Although the conclusion given by Leontief was in contradiction to the generalisation given by H-O theory, yet Leontief never attempted to supplant the factor proportions theory. He rather tried to explain the reasons due to which he arrived at a result different from that provided by the H-O theory. Many other economists too attempted to reconcile the Leontief paradox with the H-O theory of international trade.

**The more prominent explanations in this context are as follows:**

(i) Labour Productivity:

Leontief himself tried to bring about reconciliation between his paradox and H-O theory through the argument that the United States, though a labour-scarce country in strictly quantitative or conventional terms, is actually a labour-abundant country. The productivity of labour in the United States is about three times that of labour in the foreign countries. The higher productivity of the American labour was attributed by him to better organization and entrepreneurship in the United States than in other countries.

In view of this, it is not surprising that the labour- abundant United States exports those products, which have relatively greater labour-intensity. There is no doubt that the productivity of labour is higher in the United States than in other countries. But the multiple of three, as assumed by Leontief was clearly arbitrary. In a study conducted by Kreinin in 1965, it was revealed that the productivity of American labour was more than that of the foreign labour only by 20 to 25 percent and not by 300 percent.

Given such a situation, the United States cannot be regarded as a labour-abundant country. Salvatore pointed out that the higher labour productivity in the United States than in other countries implies a higher productivity of capital also in that country relative to the other countries. So both U.S. labour and capital should be multiplied by the same multiple 3. But that will leave the relative capital-abundance of the United States as unaffected. Leontief himself later on withdrew this explanation.

(ii) Human Capital:

Leontief had found greater capital-intensity in the U.S. import- substitution industries than in export industries because he did not include the investment in human capital. He had emphasized only upon the physical capital such as machinery, equipment, buildings etc. The investment in human capital means spending on education, skill creation and health.

Such an investment brings about substantial increase in the productivity of labour. There is little doubt that the United States is most well-endowed with human capital. If the human capital component is added to the physical capital, the U.S. exports become far more capital-intensive relative to her import- substitutes. It is confirmed by the empirical studies conducted by Kravis (1956), Kenen (1965) and Keesing (1966).

(iii) Natural Resources:

In Leontief’s analysis, the part played by natural resources in determining the composition of trade of a country had been over-looked. A prominent study made by J. Vanek showed that the United States was relatively scarce of several natural resources. There is complementarity between capital and natural resources in the field of production. The efficient utilization of capital requires large amounts of natural resources also. The United States imports, in fact, are the natural resource intensive products such as minerals and forest products.

These products have high capital- labour ratio in the United States process of production. By importing such products, the United States actually conserves her scarce natural resources. At the same time, she exports the farm products that have low capital-labour ratio. The exact assessment of the validity of H-O theory or Leontief paradox can be possible only after the quantification of the contribution of natural resources in a precise manner, gets materialized.

(iv) Factor-Intensity Reversal:

The H-O theorem does not recognize the reversal of factor intensity. It assumes that a commodity cloth is labour-intensive both in the U.S.A. and India and another commodity steel is capital-intensive in both these countries. The factor-intensity reversal can occur if the United States produces and exports textiles through capital-intensive techniques but India produces and exports the same commodity though labour-intensive techniques.

In such a situation, the H-O theory cannot be sustained and Leontief paradox may become applicable in one of the two countries. But the factor-intensity reversal must be widespread or substantial to repudiate the H-O theory. A widely discussed study by Minhas recognised the validity of factor-intensity reversal but the studies made by Leontief himself in 1964 and Moroney found it to be quantitatively insignificant. It is found insufficient to reject strong factor intensity hypothesis of the H-O theory or justify Leontief’s paradox.

(v) Consumption Pattern:

Another explanation to reconcile the H-O theory and Leontief paradox is in terms of the consumption pattern in the U.S. economy. It is sometimes argued that the American consumption pattern was so strongly biased in favour of capital-intensive goods that the prices of such commodities were relatively higher in the United States and, therefore, she would export relatively labour-intensive goods.

This argument tends to support Leontief paradox. A 1957 study concluded by Houthakker about the consumption patterns in many counties showed that the income elasticity of demand for food, clothing, housing and several other goods was strikingly similar across nation. Consequently, the explanation of Leontief paradox in terms of taste differences cannot be accepted.

(vi) International Demand Pressures:

The high labour-intensity in the United States exports and capital-intensity in case of import-replacement products can be attributed to the demand pressures in the United States and her trading partners. Romney Robinson explained Leontief paradox without repudiating the Heckscher-Ohlin theory on the basis of relative patterns of demand existing in the United States and other countries.

According to him, the pattern of demand in the United States is such that it is compelled to import all such commodities that have a relatively higher capital-intensity. Similarly, the pressure of demand in foreign countries is such that the United States is required to export the labour-intensive commodities.

(vii) Research and Development:

Leontief arrived at a conclusion which is in contradiction to the H-O theory also because he over-looked the effect of research and development expenditure on the trade pattern. The value of output derived from a given stock of materials and human resources increases on account of research and development activity. Even casual observation demonstrates that the U.S. exports are research and development sensitive.

The study attempted by W. Gruber, D. Mehta and R. Vernon found that the U.S. export performance is closely related to the investment in research and development. It is true that this test is indirect, because technology differences have not so far been recognised as the basis for trade, but still the relative comparative advantages of different countries may be influenced by the research and development expenditure.

(viii) Tariff Structure:

Leontief paradox can be reconciled with H-O theory, if it is recognised that the tariff structure existing between the trading countries can influence the pattern of trade. A tariff is a tax on imports and it tends to restrict imports. A 1954 study made by Kravis showed that the labour-intensive industries were most heavily protected in the United States. That perhaps reduced the labour-intensity of U.S. import substitutes. Similarly the LDC’s may be compelled to permit duty-free import of agricultural products or other labour-intensive products from the United States in order to tide over their domestic shortages.

**Criticisms of Leontief Paradox:**

Leontief paradox has been subjected to criticism both on the methodological and empirical grounds.

**The main objections against it are as follows:**

(i) Inherent Bias:

The writers like B.C. Swirling and Salvatore found an inherent bias in Leontief s work related to year 1947. This year was very close to the period of Second World War (1939-45). The world economy, completely disorganised during the war-period, had not yet been able to make proper adjustments in production and international trade.

(ii) Inclusion of Industries with Low Capital-Intensity:

Swirling pointed out that the Leontief paradox involved a bias because of inclusion of certain industries in case of which capital-labour ratio was low. In view of this objection, Leontief reworked upon his data after enlarging the group of industries into 192 sectors. However, even this study confirmed that the American import- substitution industries had higher capital-intensity than the export industries, although the capital- intensity of the former over the latter had been reduced only to 6 percent.

(iii) Incompatibility of Input-Output Model:

The paradox was attacked by Valvaris-Vail on the ground that it was based on the input-output table showing the fixed input-output co-efficients. Such models are not compatible with the domestic conditions of international trade in which the technological developments do bring about changes in the input-output co-efficients and trade can have significant influence on the composition of production and structure of industries.

(iv) Problem of Aggregation:

According to Balogh, the Leontief paradox involved a bias that resulted from the aggregation in the input-output matrix for indirect computation of capital-labour ratio. A spurious labour-intensity of the U.S. export industry appeared because of the aggregation of capital-intensive exportable goods with similar domestically used labour-intensive goods.

(v) Irrelevant Factor-Intensity Comparison:

According to P.T. Ellsworth, the comparison instituted by Leontief between capital-abundant and labour-abundant countries in irrelevant. In fact, the comparison should have been made between the capital-intensity of U.S. exports with the capital- intensity in the countries from which the American imports are obtained.

The higher capital-intensity in import-replacement industries of the U.S.A. than her exports industries is also not surprising as the production of import substitutes in the U.S.A. is bound to require more capital per unit of labour due to more round-about methods of production there. Leontief should have seen whether or not goods imported into America were capital or labour intensive in the country of origin.

(vi) Neglect of the Role of Natural Resources:

Buchanan has criticized Leontief for having neglected the role of natural resources in the determination of trade pattern. This has also been stressed by E. Hoffmeyer and J. Vanek. Capital and natural resources are complementary in many fields of production. Although capital is relatively abundant in the United States, yet it may be less effective because that country is relatively under-supplied with natural resources and it may not be able to make full use of its capital. Larger agricultural exports from Canada, Australia and most of the less developed countries are land-intensive essentially because of an abundance of land.

(vii) Neglect of Differences in Durability of Capital:

According to Buchanan, Leontief made use of investment requirement co-efficient as the capital co-efficients. He failed to take into account the differences in capital durabilities in different industries.

(viii) Neglect of Human Capital:

Leontief’s conclusion suffered from bias that resulted from the inclusion of physical capital alone in his measure of capital. The human capital was overlooked completely. If human capital is included, the paradox gets eliminated. This was confirmed by several studies made by Kravis, Kenen and Keessing. Baldwin updated in 1971 Leontief’s study by using the 1958 U.S. input-output tables and U.S. trade data for 1962.

He confirmed Leontief paradox and found that the U.S. import-replacement industries were 27 percent more capital-intensive than the United States export industries. Baldwin pointed out that the exclusion of even natural-resource industries was not enough to repudiate the paradox. However, the inclusion of human capital could eliminate the paradox. But in fairness to Leontief, it must be said that the analysis of human capital became fully developed and fashionable only after the works of Schultz (1961) and Becker (1964) got published. .

(ix) Effect of Demand Conditions:

Romney Robinson attacked the Leontief paradox on the ground that the demand conditions within a country may be such that a country produces a commodity through the use of her abundant factor. The given demand or consumption pattern may prevent the export of such a commodity. On the opposite, the country may feel the necessity of importing it.

The capital-abundant country United States, on the basis of the above logic, may import capital-intensive goods from abroad, if its income level rises and if the income elasticity of demand for such goods in that country is high. Similarly, a labour-abundant country may export capital-intensive goods, if the income elasticity of demand for such goods is high in that country.

The Leontief paradox can be valid in the case of United States, if it is assumed that the consumption pattern in that country is very strongly biased in favour of capital-intensive goods. The assumption is, however, not acceptable. A study made by A.J. Brown revealed that the consumption or demand pattern in the United States did not appear to be biased in favour of capital- intensive goods. Thus Leontief paradox cannot be justified even on the basis of differences in demand or consumption pattern.

(x) Unbalanced Trade:

Learner expressed the view that Leontief paradox would fail when the country had trade imbalance. He pointed out that the United States had a trade surplus in 1947 and there was little evidence that exports were labour- intensive.

(xi) Analysis Concerned with Single Country:

Leontief arrived at the conclusion of higher capital- intensity of the U.S. imports than exports perhaps because his analysis was concerned with only one country—the U.S.A. Had he considered U.S.A along with Japan, he would have found that U.S. exports were capital-intensive compared with the Japanese exports.

(xii) Productivity of Labour:

Leontief attempted to defend his conclusion by putting forward the argument that the productivity of an average American worker was equivalent to three foreign workers. Therefore, the United States was a labour surplus country, which was likely to export labour- intensive goods. But Leontief failed to provide any convincing reason for making this rather arbitrary hypothesis.

In addition, the increase in labour efficiency or productivity to the stated extent implies that productivity of capital should also be three times more than that in the foreign country. The multiplication of capital stock with a multiple of three would leave the factor endowments unchanged and Leontief’s logic would fall through.

(xiii) Neglect of Tariffs:

A serious weakness in Leontief’s analysis was that he failed to take into account the effect of tariffs policy on the pattern of trade. W.P. Travis emphasized that the tariff policies adopted by different trading countries often distorted the pattern and composition of traded commodities. Leontief’s results too were seriously affected by tariff policies in the United States and her trading partners but Leontief overlooked this influence.

In view of objections against Leontief’s study and mixed empirical tests, a categorical answer about the validity of H-O theory or Leontief paradox cannot be easily given. “Clearly much more research,” says Sidney J. Wells, “remains to be done in this very intricate field; so far we really know very little about the precise relationship between any country’s pattern of trade and its factor endowments.”

**Heckscher-Ohlin Theory and the Leontief Paradox (Empirical Verification):**

The first empirical test of the Hecksher-Ohlin model was conducted by Wassily Leontief in 1951 using U.S. data for the year 1947. Since the US was the most K-abundant nation in the world, Leontief expected to find that it exported most K-intensive commodities and imported L-intensive commodities.

To test the above Leontief utilized the input-output table of the U.S. economy to calculate the amount of labour and capital in a “representative bundle” of $ 1 million worth of U.S. exports and import substitutes for the year 1947.

To be noted is that Leontief estimated K/L for U.S. import substitutes rather than for imports. He had used the import substitutes because foreign production data on actual US imports were not available. However, Leontief correctly reasoned that even through U.S. import substitutes would be more K intensive than actual imports (Because K was relatively cheaper in the US than abroad). Therefore, they should still be less K intensive than U.S. exports if the H-O model held true.

**The Result of the Leontief’s Empirical Test:**

The results of the Leontief’s test were startling. U.S. Import substitutes were about 30 per cent more K intensive than U.S. exports. That is, the US seemed to export L- intensive commodities and import K-intensive commodities. This was the opposite of what the H-O model predicted, and it became known as Leontief Paradox.

Leontief instead of rejecting the H-O theory he has said that the US labour was three times stronger (productive ) than foreign countries labour force. It is not acceptable because Leontief’s decision to one labour multiplied three and the same has to be done even in case of the capital.

Second Leontief has justified that the US citizens tastes were more towards capital intensive commodities and therefore, they were exporting more of labour intensive commodities and importing import substitutes. This is again not acceptable as it was rejected by a study conducted by Houthakker in 1957 saying that the income elasticity of demand for food, clothing, housing, and other classes of goods was remarkably similar across nations.

**Reasons for the Paradox:**

One possible explanation of the paradox is that the year 1947, which Leontief used for the test, was too close to World War II to be representative. Leontief himself answered this criticism by repeating his study in 1956 using the 1947 input-output table of the U.S. economy but 1951 trade data.

The analysis had shown that U.S exports were only 6 per cent more L intensive than U.S. import substitutes. Therefore, Leontief had reduced the paradox but had not eliminated it.

Thirdly, just with two factor model it is very difficult to judge whether the commodity is K or L intensive for ex. Soil, Climate, Mineral Deposits, forests, etc. The production processes using natural resources – such as coal mining, steel production, farming also require large amounts of physical capital. The U.S. dependence on imports of many natural resources, therefore, might help explain the large capital intensity of U.S. import competing industries.

Kravis found that the most heavily protected industries in the US were the L intensive industries. This biased the pattern of trade and reduced the labour intensity of U.S. import substitutes, thus contributing to the existence of the Loeontief Paradox.

Most important source for the bias is Leontief included in his measure of capital only physical capital and completely ignored human capital. Human capital refers to the education, job training and health embodied in workers, which increase their productivity. The implication is that since U.S. labour embodies more human capital than foreign labour, adding the human capital component to physical capital would make U.S. exports more K intensive relative to U.S. import substitutes (this was greatly realized after the work produced by Schultz in 1961 and Becker in 1964).

The R & D was also completely neglected by the Leontief, while revealing the Paradox, i.e., the “Knowledge capital resulting from R & D leads to an increase in the value of output derived from a given stock of material and human resources. Thus, human and knowledge capital are important considerations in determining the pattern of U.S. trade. In a 1966 study, Keesing found that U.S. exports were more skill intensive than the exports of nine other industrial nations for the year 1957. This reflected the fact that the US had the most highly trained labour force, embodying more human capital than other nations. Therefore, he also gave less or no importance for the Leontief’s paradox.

**Developments Over a Period of Time Relating to H-O Theory and Leontief Paradox:**

Kravis, Keesing, Kenen and Baldwin had taken up empirical works relating to human capital approach and published the same in 1956 and found that wages in U.S. exports industries in both 1947 and 1951 were about 15 per cent higher than wages in U.S. import-competing industries. Kravis correctly argued that the higher wages in U.S. exports industries were a reflection of the greater productivity and human capital embodied in U.S. exports than in U.S. import substitutes. Therefore, Kravis and his group observed that Leontief Paradox need not be taken seriously. In a 1965 study by Kenen, estimated the human capital embodied in US exports and import-competing goods, add these estimates to the physical capital requirements and then recomputed K/L for U.S. exports and U.S. import substitutes. Using 1947 data without excluding products with an important natural resource content, Kenen succeeded in eliminating the Leontief Paradox.

In a 1971 study, Baldwin updated Leontief’s study by using the 1958 U.S. input-output table and U.S. trade data for 1962. Baldwin found that excluding natural resource industries was not sufficient to eliminate the paradox unless human capital was included. The Paradox remained, however, for developing nations and for Canada. In 1977 Branson and Monoyios also raised some questions on the appropriateness of combining human and physical capital into a single measure for the purpose of testing the H-O trade model. The strongest and most convincing evidence validating the H-O theory, however, comes from more recent research. Using data on a large sample of developed and developing countries over the years 1970-1992 period. Harrigan and Zakrajsek (2000) show that factor endowments do explain comparative advantage.

Schott (2001) provides strong support for the H-O theory by utilizing more disaggregated data (for example strong electrical machinery also includes portable radios assembled by using hand). Davis and Weinstein (2001) by utilizing the trade data of ten countries between the period 1970-1995, and given weightage for `different technologies, factor prices across countries, the existence of non-traded goods and transportation cost showed that countries export commodities intensive in their relatively abundant and cheap factors of production and they do so in the predicted magnitudes, which eliminates the Paradox. Thus one can say that we can retain the H-O theory as the centerpiece of modern theory for explaining not only trade between developed and developing countries but also among the developed countries.

Table-9: Capital and Labour Requirements Per Million Dollars of US Export and Import Substitutes:

|  |  |  |  |
| --- | --- | --- | --- |
| Particulars | Exports | Import Sub | Imp/Exp |
| Leontief (1947 input requirements, 1947 Trade) |  |  |  |
| Capital (in $) | 2550780 | 3091339 |  |
| Labour (worker-Years) | 182 | 170 |  |
| Capital/worker-year (in $) | 147010 | 18180 | 1.30 |
| Leontief (1947 input requirements, 1951Trade) |  |  |  |
| Capital (in $) | 2256800 | 2303400 |  |
| Labour (worker-Years) | 174 | 168 |  |
| Capital/ Worker year | 12977 | 13726 | 1.06 |
| Capital/worker-years, excluding natural resources (in $) |  |  | 0.88 |
| Baldwin (1958 input requirements, 1962 Trade) |  |  |  |
| Capital (in $) | 1876000 | 2132000 |  |
| Labour (worker-Years) | 131 | 119 |  |
| Capital/worker-year (in $) | 14200 | 18000 | 1.27 |
| Capital/worker-years, excluding natural resources |  |  | 1.04 |
| Capital/worker-years, excluding natural resources and including human capital |  |  | 0.92 |

**H-O Theory and Leontief Paradox in the 21st Century.**

* The theory of factor endowments is failed
* The theory of relative commodity price and exports is failed
* The theory of comparative cost is failed
* The Theory of comparative advantage is failed to some extent
* The factor prize equalization is not a reality – as it is one sided
* At the end I would like to conclude that the trade, development and such other factors are according to the whims and fancies of the developed countries, but not according to the theory.
* America and China
* America and India

American policy towards India and American policy towards China are the best examples to say that the theories are failed – if not failed they are not succeeded in the modern regime.

**The Stopler – Samuelson Theorem**

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

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

**Assumptions of the Stopler-Samuelson Theorem:**

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

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

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

(iii) Both labour and capital are fully employed.

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

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

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

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

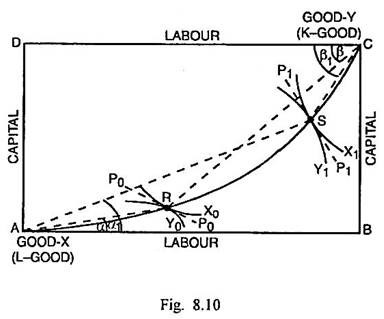
(viii) The international terms of trade are fixed.

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

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

(xi) There is an absence of transport costs.

Given the above assumptions, the Stopler- Samuelson Theorem can be explained through Edgeworth Box shown in Fig. 17



**Figure 17**

In Fig. 17, the Edgeworth box shows that the given country is labour-abundant and capital-scarce. A is the origin for labour-intensive goods—cloth and C is the point of origin for the capital-intensive good—steel. AC is the non-linear contract curve sagging below. In the absence of trade, production takes place at R, which is the point of tangency of isoquant X0 of cloth, isoquant Y0 of steel and the factor price line P0P0.

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

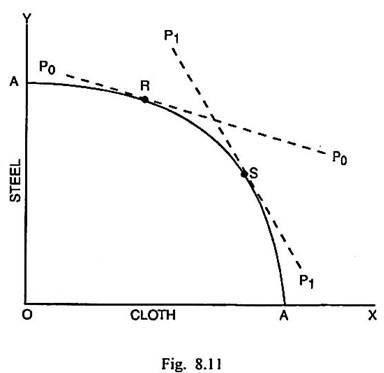
K-L Ratio in steel at R = Slope of line RC = Tan β

When trade commences, this labour-surplus country expands the production of cloth (L- good) and reduces the production of steel (K-good). The production now takes place at S, which is the point of tangency of higher isoquant X1 of cloth, lower isoquant Y1 of steel and the factor price line P1P1.

K-L Ratio in cloth at S = Slope of line AS = Tan α1­

K-L Ratio in cloth at S = Slope of line SC = Tanβ1

Since Tan α1 > Tan α and Tan β1 > Tan β, the K-L ratio rises in both the commodities in this country. The factor price line P1P1 is more steep than the original factor price line P0P0. It signifies that the price of labour rises relative to the price of capital. As the production of exportable commodity cloth expands, the resources are diverted from the steel industry to the cloth industry. The increased production of cloth and resource diversion to this industry will cause a rise in the price of cloth relative to that of steel. It may be shown through Fig. 18.



**Figure 18**

Fig. 18 measures L-good cloth along the horizontal scale and K-good steel along the vertical scale. AA is the production possibility curve. Its slopes indicates that this country is labour-abundant and capital-scarce. In the absence of trade (i.e., autarchy), the production takes place at R. This point corresponds with point R in Fig.17.

As the production of cloth is expanded after the commencement of trade, production takes place at S. This point corresponds with point S in Fig. 18. The slope of the production possibility curve at S is greater than its slope at R. This is represented by more steepness of price line P1P1 than P0P0.

From this it follows that:

[https://cdn.economicsdiscussion.net/wp-content/uploads/2018/03/clip_image005_thumb-13.jpg](https://cdn.economicsdiscussion.net/wp-content/uploads/2018/03/clip_image005-13.jpg)

It signifies that price of cloth increases while that of steel falls.

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

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

**Implications of the Stopler-Samuelson Theorem:**

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

(i) Increase in Welfare:

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

(ii) Improvement in Income Distribution:

Since trade raises the share of abundant factor in the GNP, the distribution of income becomes more equitable.

(iii) Strategy of Export Promotion:

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

(iv) Adverse Effect of Tariff and Other Protective Policies:

The theorem suggests that slapping of tariffs and other restrictive or protective measures will reduce imports. That will limit also the opportunities to expand exports. It will keep the real income of the abundant factor relatively lower than that of scarce factor. As a consequence, the growth process will get slowed down apart from making the income distribution inequitable.

The Stopler-Samuelson Theorem came to be criticized, modified and elaborated by writers like Kelvin Lancaster, Lloyd Metzler and Jagdish Bhagwati. Metzler dropped the assumption of fixed terms of trade and argued that the imposition of tariff, given an inelastic offer curve of foreign country, will cause improvement in the terms of trade of tariff-imposing country through an increase in internal price of country’s export and a fall in the internal price of country’s import.

In such a situation, the production of import-substitutes will decline and the income will get distributed in favour of the factor used relatively intensively in the production of exportable commodity. Kelvin Lancaster did not accept the view that protection would result in an inequitable distribution of income. Jagdish Bhagwati did not accept the universal validity of this theorem.

He discussed the possible alternative effects of protection upon the income of more intensively employed factor. In his words, “…protection (prohibitive or otherwise) will raise, reduce or leave unchanged the real wage of the factor intensity employed in the production of good according as protection raises, lowers or leaves unchanged the relative price of that good.”

**The Vent for Surplus Approach:**

Professor Williams has sponsored the doctrine of `vent-for-surplus’ from the crude idea found in the classical theory of international trade presented by Adam Smith in the Wealth of Nations. Smith stated that “foreign trade carries out that surplus part of the produce of their (trading countries) land and labour for which there is no demand among them, and brings back in return for it something else for which there is a demand”.

It gives a value to their superfluities (excess), by exchanging them for something else, which may satisfy a part of their want and increase their enjoyment. By means of it, the narrowness of the home market does not hinder the division of labour in any particular branch of art or manufacture from being carried to the highest perfection .” This means international trade overcomes the narrowness of the home market and by increasing the size of the market provides an outlet (vent) for the surplus generated in the domestic market.

On this thread of argument, the “Vent-for-surplus” theory of international trade is developed by modern economists like Williams, Myint, etc., to explain the nineteenth-century process of expansion of foreign trade to the underdeveloped countries of the South-East Asia, Latin America and Africa.

The vent-for-surplus approach especially seeks to provide an explanation of how colonial underdeveloped countries had entered into foreign trade. The theory asserts that, an underdeveloped country usually tends to have some commodity (mostly primary products) in surplus when its domestic demand is completely satisfied. This surplus is its exportable or, it may have some unused/idle resource – raw materials which can be exported once the trade opening takes place. A marked difference between the classical theory and Vent-for-Surplus Theory is that, the former assumes that the trading country operates on its production-possibility frontier both before as well as after trade (owing to the assumption to full employment condition). The later theory, on the other hand, more realistically presumes that the country is operating below its production-possibility (PP) curve.

The Vent-for-surplus approach has, however, a limited scope of applicability. Its only merit is that it provides an explanation for the contraction of trade which took place in the colonial economies of India, Africa, etc., in the past. This phenomenon is not easily explicable in the classical or Ohlin’s general equilibrium approach. Professor Myint offers following three valid reasons as to why the “vent-for-surplus” theory offers a more effective approach than the traditional approach for explaining the foreign trade expansion process in the underdeveloped countries.

1. Comparative costs theory cannot logically explain the characteristically high rate of expansion of exports observed in many underdeveloped countries in the nineteenth century.

2. Comparative costs theory is extended by Ohlin in terms of qualitative differences in the resources of the trading countries. While, there has been a sharp differences in the resources of the tropical underdeveloped countries and the advanced countries of the temperate regions, so there has been absolute cost differences between these countries.

Again, the comparative cost theory or Ohlin’s theorem of factor endowments cannot explain the phenomenon such as that, though, Burma and South India have similar factor endowments, and both the regions are rice-producing. Yet why is it so that, Burma is the exporter of rice, while South India is not? Here, we have to resort to the “vent-for-surplus” approach for the answer.

It shows that the population density and the demand factor are the main determinant of the surplus and the resulting export capacity. Burma has surplus of rice, while South India has no surplus due to high density of population and intensive domestic demand for rice. Therefore, Burma is the exporter of rice, while South India is not.

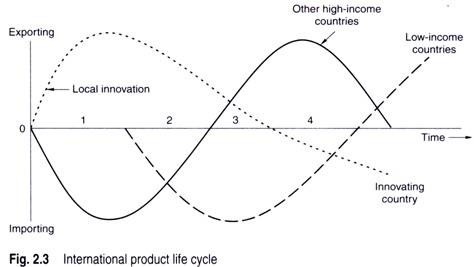
3. Ohlin’s theory assumes that the country entering into trade should possess a highly developed and flexible economic system which permits factor mobility and specialization process very quickly. But, underdeveloped countries are lacking in such quick adjustments in their economic frame-work. Hence, the vent-for-surplus approach in their case seems to be more suitable to explain their trade phenomenon.

**International Product Life-Cycle Theory of International Trade:**

International markets tend to follow a cyclical pattern due to a variety of factors over a period of time, which explains the shifting of markets as well as the location of production. The level of innovation and technology, resources, size of market, and competitive structure influence trade patterns.

In addition, the gap in technology and preference and the ability of the customers in international markets also determine the stage of international product life cycle (IPLC). In case the innovating country has a large market size, as in case of the US, India, China, etc., it can support mass production for domestic sales. This mass market also facilitates the producers based in these countries to achieve cost-efficiency, which enables them to become internationally competitive.

However, in case the market size of a country is too small to achieve economies of scale from the domestic market, the companies from these countries can alternatively achieve economies of scale by setting up their marketing and production facilities in other cost-effective countries. Thus, it is the economies of scope that assists in achieving the economies of scale by expanding into international markets. The theory explains the variations and reasons for change in production and consumption patterns among various markets over a time period, as depicted in Fig. 19.



**Figure 19: International Product Life Cycle**

The IPLC has four distinct identifiable stages that influence demand structure, production, marketing strategy, and international competition as follows.

(i) Introduction:

Generally, it is in high-income or developed countries that the majority of new product inventions take place, as product inventions require substantial resources to be expended on R&D activities and need speedy recovery of the initial cost incurred by way of market-skimming pricing strategies.

Since, in the initial stages, the price of a new product is relatively higher, buying the product is only within the means and capabilities of customers in high-income countries. Therefore, a firm finds a market for new products in other developed or high income countries in the initial stages.

(ii) Growth:

The demand in the international markets exhibits an increasing trend and the innovating firm gets better opportunities for exports. Moreover, as the market begins to develop in other developed countries, the innovating firm faces increased international competition in the target market.

In order to defend its position in international markets, the firm establishes its production locations in other developed or high income countries.

(iii) Maturity:

As the technical know-how of the innovative process becomes widely known, the firm begins to establish its operations in middle- and low-income countries in order to take advantage of resources available at competitive prices.

(iv) Decline:

The major thrust of marketing strategy at this stage shifts to price and cost competitiveness, as the technical know-how and skills become widely available. Therefore, the emphasis of the firm is on most cost-effective locations rather than on producing themselves.

Besides other middle-income or developing countries, the production also intensifies in low-income or least-developed countries (LDCs). As a result, it has been observed that the innovating country begins to import such goods from other developing countries rather than manufacturing itself.

The UK, which was once the largest manufacturer and exporter of bicycles, now imports this product in large volumes. The bicycle is at the declining stage of its life cycle in industrialized countries whereas it is still at a growth or maturity stage in a number of developing countries.

The chemical and hazardous industries are also shifting from high-income countries to low-income countries as a part of their increasing concern about environmental issues, exhibiting a cyclical pattern in international markets.

Although the product life cycle explains the emerging pattern of international markets, it has got its own limitations in the present marketing era with the fast proliferation of market information, wherein products are launched more or less simultaneously in various markets.

**Economic Growth and International Trade**

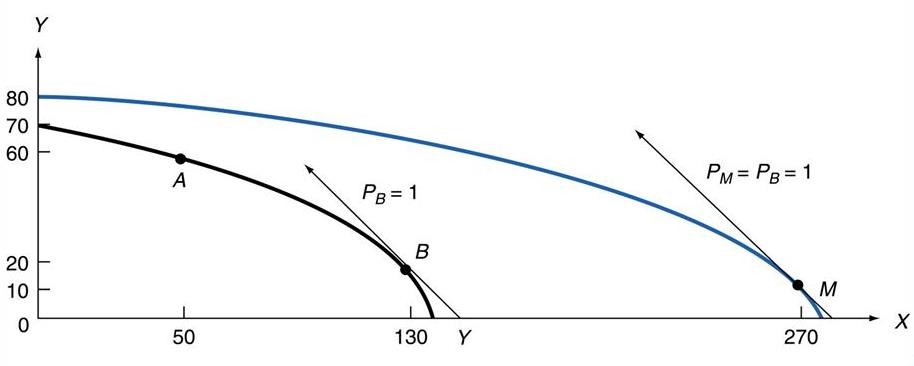
**The Rybczynski Theorem:**

The Rybczynski Theorem (RT) postulates that at constant commodity prices, an increase in the endowment of one factor will increase by a greater proportion the output of the commodity intensive in that factor and will reduce the output of the other commodity. For example, if only L grown in Nation-1, then the output of commodity X (the L-intensive commodity) expands more than proportionately, while the output of commodity Y (the K-intensive commodity) declines at constant Px and Py.

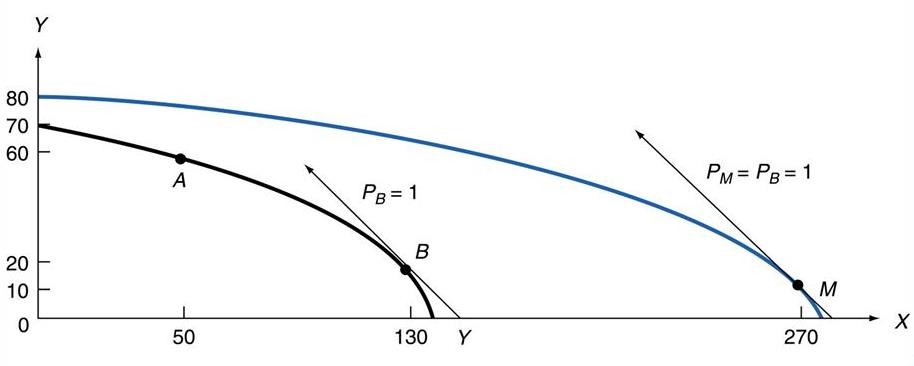
In other words if the endowment of some resource increases, the industry that uses that resource most intensively will increase its output while the other industry will decrease its output. The relative factor intensity is measured by the ratio of factor use in each industry. The theorem suggests that unbalanced growth in factor supplies tends, at constant commodity prices, to lead to strong asymmetric (irregular) changes in output level of two types of industries-capital-intensive and labour-intensive.

**Diagrammatic Explanation:**

.



.



**Figure 20:** **The Growth of Labor Only and the Rybczynski Theorem.**

With trade but before growth, Nation 1 produces at point B (130X and 20Y) at PX/PY = PB = 1, as in previous chapters. After only L doubles and with PX/PY remaining at PB = 1, Nation 1 produces at point M (270X and 10Y) on its new and expanded production frontier. Thus, the output of X (the L-intensive commodity) expanded, and the output of Y (the K-intensive commodity) declined, as postulated by the Rybczynski theorem.

In fact, the increase in the output of commodity X expands by a greater proportion than the expansion in the amount of labor because some labor and capital are also transferred from the production of commodity Y to the production of commodity X. This is called the *magnification effect*.

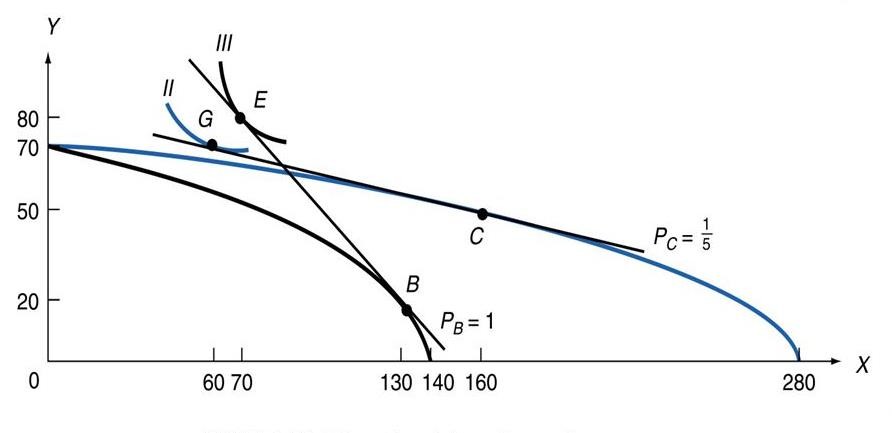
**Immiserizing Growth Theory (Jagdish Bhagwathi):**

Immiserizing growth is a theoretical situation first proposed by Jagdish Bhagwati, in 1958, where economic growth could result in a country being worse off than before the growth. If growth is heavily export biased it might lead to a fall in the terms of trade of the exporting country. In rare circumstances this fall in the terms of trade may be so large as to outweigh the gains from growth. If so, this situation would cause a country to be worse off after growth than before. This result is only valid if the growing country is able to influence world prices. Harry G. Johnson had, independently, worked out conditions for this result in 1955.

In other words - Immiserizing growth is a long-term phenomenon that occurs when the gain in a country's social welfare arising from economic growth is more than offset by the loss in such welfare associated with an adverse shift in the terms of trade. In one case explored many years ago by Jagdish Bhagwati, immiserizing growth occurs in a developing nation that has started economic growth but faces unfavorable international demand conditions as it increases its traditional exports.

In another case explored recently by Paul A. Samuelson, immiserizing growth occurs for the growing industrialized country when its trade partner follows a policy of import substituting growth and, as a result, shifts the terms of trade against the exporting country. Still others have specified a variety of different cases of immiserizing growth. The author provides a simple graphical method to analyze these situations and then presents data showing that immiserizing growth is a relatively rare phenomenon.

**Diagrammatic Explanation of the Immiserizing Growth:**

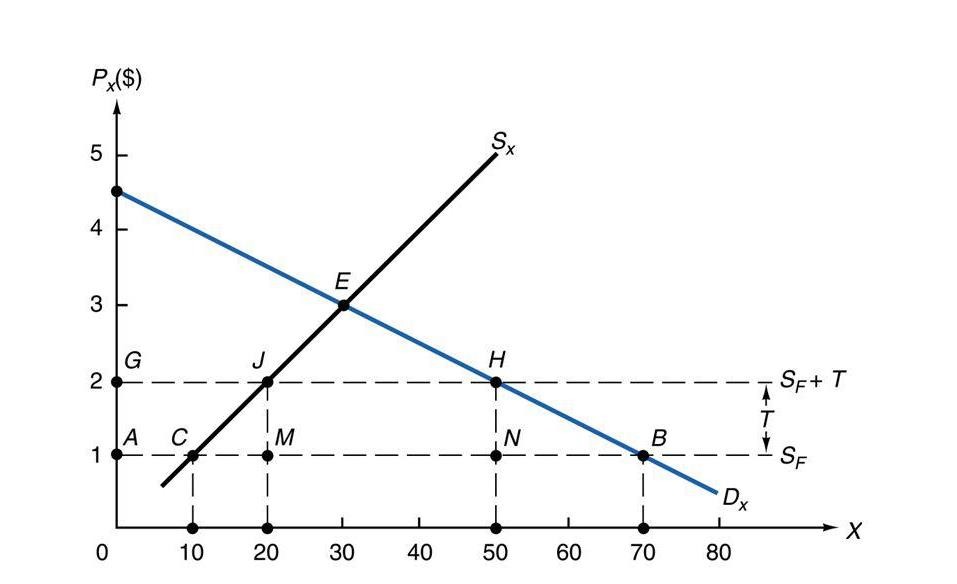
**Figure 21:** **Immiserizing Growth.**

In the diagram, reproduces from neutral technical progress, the production frontier of Nation 1 before and after neutral technical progress increased the productivity of L and K in the production of commodity X only. With this type of technical progress, the wealth effect, by itself, would increase the welfare of Nation 1. However, Nation 1’s terms of trade deteriorate drastically from PB = 1 to PC = 1/ 5, so that Nation 1 produces at point C, exports 100X for only 20Y, and consumes at point G on indifference curve II (which is lower than indifference curve III, which Nation 1 reached with free trade before growth).

**MODULE-3: INTERNATIONAL TRADE POLICIES**

**Partial Equilibrium Analysis of a Tariff:**

When a small country imposes tariff on import of the product that competes with the product of the small domestic industry, the tariff can neither affect the international prices (as the country is small) nor can it affect the rest of the economy (as the industry is small). In such conditions, the partial equilibrium analysis that concerns the market for a particular product becomes the most appropriate. In order to analyze the production and other effects diagrammatically, it is assumed that the world supply of the given commodity is perfectly elastic so that it is available at the constant price and the world supply curve is perfectly elastic. The domestic demand curve of the commodity, as usual, slopes negatively.

**Diagrammatic Explanation of Partial Equilibrium Analysis of a Tariff:**

**Figure 22: Partial Equilibrium Analysis of a Tariff**

DX and SX represent Nation 2’s demand and supply curves of commodity X. At the free trade price of PX = $1, Nation 2 consumes 70X (AB), of which 10X (AC) is produced domestically and 60X (CB) is imported. With a 100 percent import tariff on commodity X, PX rises to $2 for individuals in Nation 2. At PX = $2, Nation 2 consumes 50X (GH), of which 20X (GJ) is produced domestically and 30X (JH) is imported. Thus, the consumption effect of the tariff is (–) 20X (BN); the production effect is 10X (CM); the trade effect equals (–) 30X (BN + CM); and the revenue effect is $30 (MJHN).

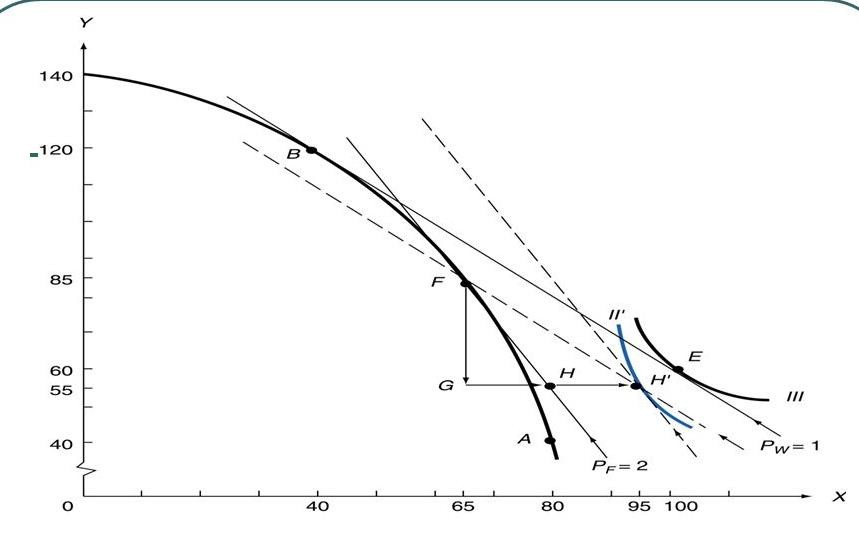
**General Equilibrium Effects of a Tariff in a Small Country:**

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 in 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.

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 (deviation) between the price of the importable commodity for individual producers and consumers and the importing country as a whole is of crucial importance in analyzing the effect of tariff upon welfare.

**Diagrammatic Explanation of General Equilibrium Effects of a Tariff in a Small Country:**

****

**Figure 23: General Equilibrium Effects of a Tariff in a Small Country**

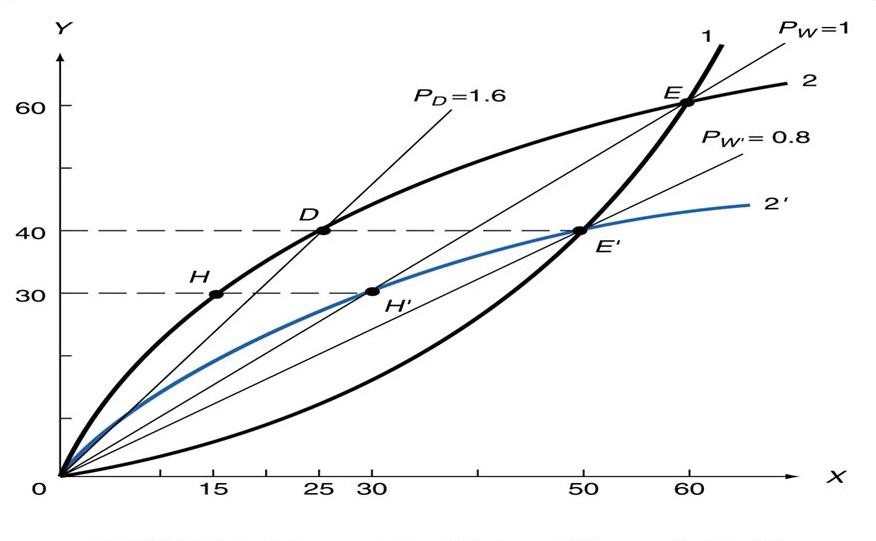
In the diagram, at Px/Py=1 on the world market, the small nation produces at point B and consumes at point E. With a 100 percent advalorem tariff on imports of commodity X, Px/PY=2 for individuals in the nation, production takes place at point F, and the nation exports 30 Y (FG) FOR 30X, of which 15X (HH1) is collected by the government as tariff. Since we assume that the government redistributes the tariff revenue in full to its citizens, consumption with the tariff takes place on indifference curve II1 at point H1, where the two dashed lines cross. Thus, free trade consumption and welfare (Point E) are superior to consumption and welfare with the tariff (Point H1).

**General Equilibrium Analysis of Tariff in a Large Country:**

If the tariff-imposing country is large, the reduced demand for imports subsequent upon the imposition of tariff may reduce the world demand for the product to such a great extent that the price of importable good falls. In such a situation, the fall in import price relative to export price causes a change in the international price ratio and brings about an improvement in the terms of trade of the tariff-imposing large country. Hence the imposition of tariff by a large country, despite the reduction in the volume of international trade, leaves it a net beneficiary from the policy of tariffs.

In other words, to analyze the general equilibrium effects of a tariff in a large nation, it is more convenient to utilize offer curves. When a nation imposes a tariff, its offer curve shifts or rotates toward the axis measuring its importable commodity by the amount of the import tariff. The reason is that for any amount of the export commodity, importers now want sufficiently more of the import commodity to also cover (i.e., pay for) the tariff. The fact that the nation is large is reflected in the trade partner’s (or rest of the world’s) offer curve having some curvature rather than being a straight line.

Under these circumstances, imposition of a tariff by a large nation reduces the volume of trade but improves the nation’s terms of trade. The reduction in the volume of trade, by itself, tends to reduce the nation’s welfare, while the improvement in its terms of trade tends to increase the nation’s welfare. Whether the nation’s welfare actually rises or falls depends on the net effect of these two opposing forces. This is to be contrasted to the case of a small country imposing a tariff, where the volume of trade declines but the terms of trade remain unchanged so that the small nation’s welfare always declines.

**Diagrammatic Explanation of General Equilibrium Analysis of Tariff in a Large Country:**

**Figure 24: General Equilibrium Analysis of Tariff in a Large Country**

Free trade offer curves 1 and 2 define equilibrium point E and PX/PY = 1 in both nations. A 100 percent ad valorem import tariff on commodity X by Nation 2 rotates its offer curve to 21 , defining the new equilibrium point E1. At point E1 the volume of trade is less than under free trade and PX/PY = 0.8.

This means that Nation 2’s terms of trade improved to PY/PX = 1.25. The change in Nation 2’s welfare depends on the net effect from the higher terms of trade but lower volume of trade. However, since the government collects half of the imports of commodity X as tariff, PX/PY for individuals in Nation 2 rises from PX/PY = 1 under free trade to PX/PY = PD = 1.6 with the tariff.

**The Theory of Tariff Structure:**

This is the main message of the new theory of tariff structures. The effective protective rate is 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 the absence of tariffs but with the same exchange rate.

**What is the Optimum Tariff?**

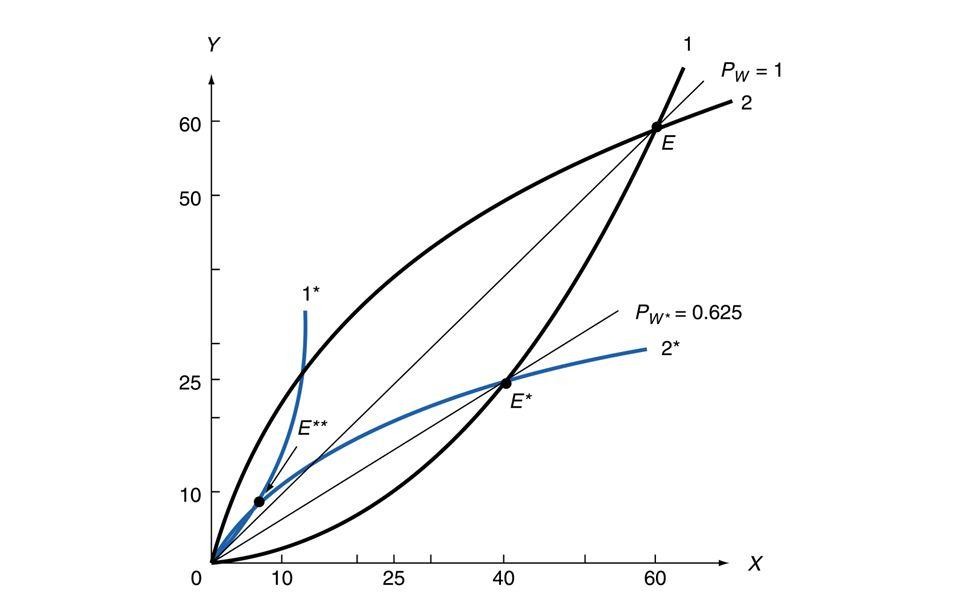
Tariffs result in gain for the tariff-imposing home country in the form of improvement in the terms of trade. At the same time, tariffs involve cost in the form of reduction in the volume of exports and imports. So long as the gain from tariffs is more than the cost of it, the welfare of the tariffs-imposing country increases and it is worthwhile for it to raise tariff.

A tariff which maximizes a country's welfare, trading off improvement in the terms of trade against restriction of trade quantities. For a small economy which cannot affect world prices in the markets in which it trades, the optimum tariff is zero.

In case, the cost of tariffs for the society is more than the gain from tariffs, there may be reduction in the level of economic welfare and worsening of the terms of trade. In such a situation, it is appropriate for the tariff-imposing country to reduce tariff.

The point of optimum tariff is reached when tariff does not further increase the net benefit to the given country and a level of economic welfare has become maximum. In the words of Sodersten, “…. the tariff that maximizes a country’s welfare is called the optimum tariff.”

**Diagrammatic Explanation** **of the Optimum Tariff and Retaliation:**

****

**Figure 25: Optimum Tariff and Retaliation**

Offer curves 1 and 2 define free trade equilibrium point E and PX/PY = 1, as in Figure 8.6. If the optimum tariff for Nation 2 rotates its offer curve to 2\* , Nation 2’s terms of trade improve to PX /PY = 1/P W = 1/0.625 = 1.6. At equilibrium point E\* , Nation 2 is at its highest possible welfare and is better off than at the free trade equilibrium point E. However, since Nation 1’s welfare is reduced, it is likely to retaliate with an optimum tariff of its own, shown by offer curve 1\* and equilibrium at point E\*\*. Nation 2 may then itself retaliate so that in the end both nations are likely to lose all or most of the benefits from trade.

Finally, note that the optimum tariff for a small country is zero, since a tariff will not affect its terms of trade and will only cause the volume of trade to decline. Thus, no tariff can increase the small nation’s welfare over its free trade position even if the trade partner does not retaliate. Finally, recent empirical research by Broda, Limao, and Weinstein (2008) indicates that nations do indeed impose higher tariffs on goods with lower export elasticity (i.e., in which the nations have more market power).

**Non-Tariff Trade Barriers and the New Protectionism:**

Although tariffs have historically been the most important form of trade restriction, there are many other types of trade barriers, such as import quotas, embargoes, sanctions, levies, voluntary export restraints, and antidumping actions. As tariffs were negotiated down during the postwar period, the importance of nontariff trade barriers was greatly increased.

**What is a Non-tariff Barrier?**

A nontariff barrier is a way to restrict trade using trade barriers in a form other than a tariff. As part of their political or economic strategy, some countries frequently use nontariff barriers to restrict the amount of trade they conduct with other countries.

* A nontariff barrier is a trade restriction–such as a quota, embargo or sanction–that countries use to further their political and economic goals.
* Countries usually opt for nontariff barriers (rather than traditional tariffs) in international trade.

**How Non-tariff Barriers Work?**

Countries commonly use nontariff barriers in international trade. Decisions about when to impose nontariff barriers are influenced by the political alliances of a country and the overall availability of goods and services.

In general, any barrier to international trade–including tariffs and non-tariff barriers–influences the global economy because it limits the functions of the free market. The lost revenue that some companies may experience from these barriers to trade may be considered an economic loss, especially for proponents of laissez-faire capitalism. Advocates of laissez-faire capitalism believe that governments should abstain from interfering in the workings of the free market.

Countries can use nontariff barriers in place of, or in conjunction with, conventional tariff barriers, which are taxes that an exporting country pays to an importing country for goods or services. Tariffs are the most common type of trade barrier, and they increase the cost of products and services in an importing country.

Often countries pursue alternatives to standard tariffs because they release countries from paying added tax on imported goods. Alternatives to standard tariffs can have a meaningful impact on the level of trade (while creating a different monetary impact than standard tariffs).

**Types of Non-tariff Barriers**

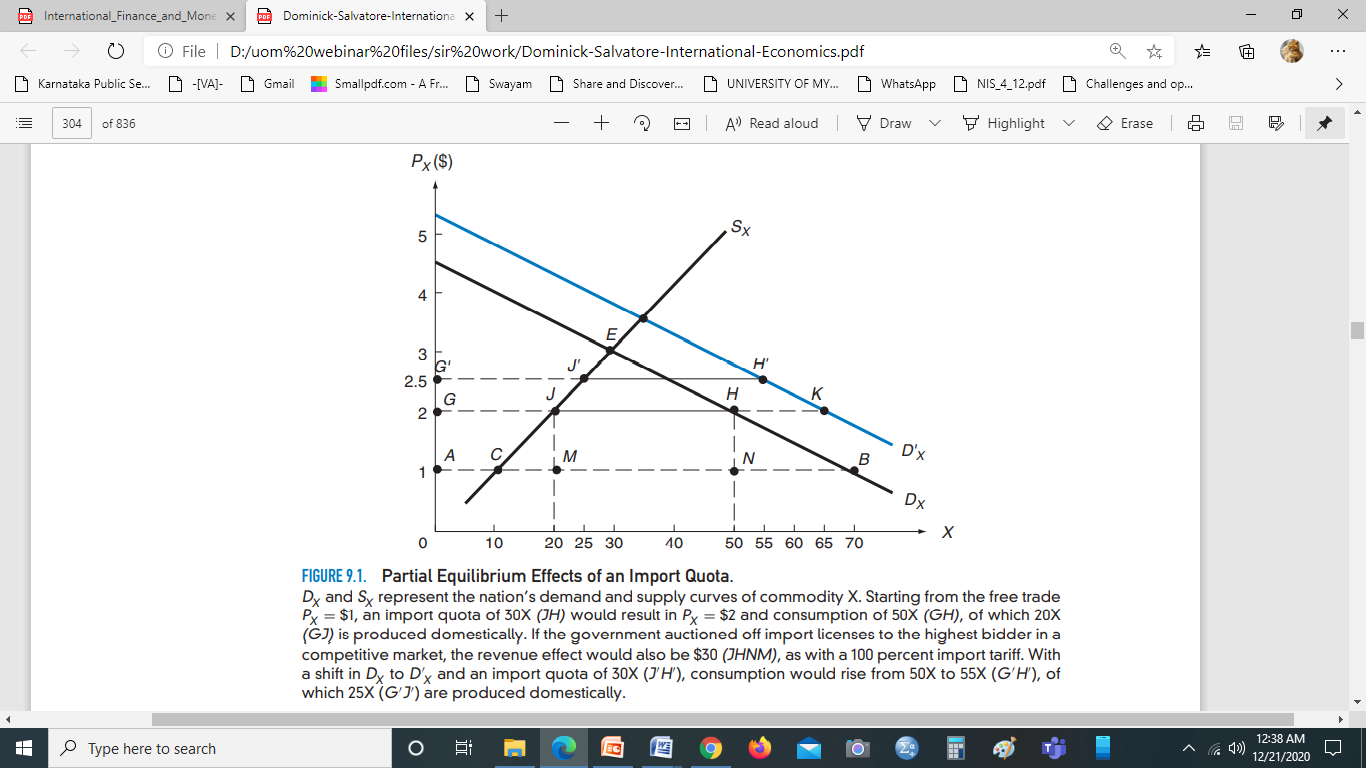
1. **Licenses:** Countries may use licenses to limit imported goods to specific businesses. If a business is granted a trade license, it is permitted to import goods that would otherwise be restricted for trade in the country.
2. **Import Quotas:** A Quota is the most important nontariff trade barrier. It is a direct quantitative restriction on the amount of a commodity allowed to be imported or exported.

Countries often issue quotas for importing and exporting both goods and services. With quotas, countries agree on specified limits for products and services allowed for importation to a country. In most cases, there are no restrictions on importing these goods and services until a country reaches its quota, which it can set for a specific timeframe. Additionally, quotas are often used in international trade licensing agreements. In simple terms, the import quota means physical limitation of the quantities of different products to be imported from foreign countries within a specified period of time, usually one year. The import quota may be fixed either in terms of quantity or the value of the product.

**Effects of an Import Quota:**

Import quotas have been used by industrial countries to protect their agriculture and by developing countries to stimulate import substitution of manufactured products and for balance-of-payments reasons.

**Diagrammatic Explanation** **of Partial Equilibrium Effects of an Import Quota:**

****

**Figure 26:** **Partial Equilibrium Effects of an Import Quota.**

DX and SX represent the nation’s demand and supply curves of commodity X. Starting from the free trade PX = $1, an import quota of 30X (JH) would result in PX = $2 and consumption of 50X (GH), of which 20X (GJ) is produced domestically. If the government auctioned off import licenses to the highest bidder in a competitive market, the revenue effect would also be $30 (JHNM), as with a 100 percent import tariff. With a shift in DX to D X1 and an import quota of 30X (J1 H1), consumption would rise from 50X to 55X (G1H1), of which 25X (G1J1) are produced domestically.

**Comparison of an Import Quota to an Import Tariff:**

1. With a given import quota, an increase in demand will result in a higher domestic price and greater domestic production than with an equivalent import tariff. However, with a given import tariff, an increase in demand will leave the domestic price and domestic production unchanged but will result in higher consumption and imports than with an equivalent import quota.
2. The quota involves the distribution of import licenses. The government does not auction off these licenses in a competitive market, firms that receive them will reap monopoly profits. These profits will make potential importers devote efforts to lobbying and even bribing to obtain the licenses (rent seeking activities). Thus import quotas not only replace market mechanism but also result in waste from the point of view of the economy as a whole and contain the seeds of corruption.
3. An import quota limits imports to the specified level with certainty, while a tariff’s effect is uncertain. The reason is that the elasticity of supply and demand often unknown, making it difficult to estimate the import tariff required to restrict imports to a desired level. Furthermore, foreign exporters may absorb all or part of the tariff by increasing their efficiency or accepting lower profits. Exporters cannot do this with an import quota since quantity of imports is clearly specified. For this reason domestic producers prefer quotas to tariffs. However, since quotas more restrictive than tariffs, society should resist these efforts.
4. **Voluntary Export Restraints (VERs):**

A voluntary export restraint (VER) or voluntary export restriction is a government-imposed limit on the quantity of some category of goods that can be exported to a specified country during a specified period of time. They are sometimes referred to as 'Export Visas'. They 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-round trade restrictions, when these exports threaten an entire domestic industry.

* The VERs were used by developed countries against other countries (e.g. Japan, Korea) to curtail exports of textiles, steel, automobiles.
* These industries faced sharp declines in employment in the industrial countries.
* The VERs have allowed developed nations 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.
* VERs have same effect of quotas, except they are administered by the exporting country and rents are captured by foreign exporters. Examples:
* US restraints on Japanese cars exports in 1981.
* US restraints on steel exports in 1982 that limited imports to 20% of the US steel market.
* VERs are less effective than quotas and exporters tend to fill their quota with higher-quality and higher priced units of the product over time.
* As a rule, only major suppliers were involved, leaving the door open for other nations to replace part of the exports of the major suppliers and also from transshipments through third countries.

1. **Technical, Administrative, and Other Regulations:** Here, technical barriers to trade refer to measures such as labeling requirements, standards on technical specifications and quality standards, and other measures protecting the environment.

These include:

1. **Safety regulations:** for automobiles and electronics
2. **Health regulations:** for hygienic production and packaging of imported food products
3. **Labeling requirements:** showing origin and contents

While many regulations serve legitimate purposes, some thinly veiled disguises for restricting imports. Other restrictions have resulted from laws requiring governments to buy from domestic suppliers.

1. **International Cartels:** A cartel is an organization created from a formal agreement between a group of producers of a good or service to regulate supply to regulate or manipulate prices. A cartel is a collection of otherwise independent businesses or countries that act together as if they were a single producer and thus can fix prices for the goods they produce and the services they render without competition.

In other words, an international cartel is an organization of suppliers of a commodity located in different nations that agrees to restrict output and exports of the commodity with the aim of maximizing profits.

**Examples:**

1. **OPEC:** The World's Biggest Cartel -The Organization of Petroleum Exporting Countries (OPEC) is the world's largest cartel. It is a grouping of 14 oil-producing countries whose mission is to coordinate and unify the petroleum policies of its member countries, which restricts production and exports of oil. and ensure the stabilization of oil markets.
2. **International Air Transport Association:** a cartel of major airlines that set international fares and policies

* Cartels are more successful with fewer members producing an essential commodity with no close substitutes.
* Cartels are less successful if there is a large number of international suppliers and if there are good substitutes for the commodity.
* 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.
* Cartel behaves as a monopolist in maximizing profits
* Since the power of a cartel lies in its ability to restrict output, 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.
* Example: high oil prices in the 1980s stimulated supply by nonmembers and reduced prices sharply.

1. **Dumping:** It 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 either:

1. **Persistent Dumping (or international price discrimination):** It 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 insulted by transportation costs and trade barriers) than internationally (where it must meet the competition of foreign producers).
2. **Predatory Dumping:** It 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.
3. **Sporadic Dumping:** It is the *occasional* sale of a commodity at below cost or at below price abroad than domestically in order to unload an unforeseen and temporary surplus of the commodity without having to reduce domestic prices.

* Trade restriction to counteract predatory dumping are justified 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.
* Domestic producers demand protection against any type of dumping, so they discourage imports and increase their own production and profits (rents).
* Examples: Japan was accused of dumping steel and TV sets in the US, while European nations were accused from dumping cars, steel and agricultural products.
* When dumping is proved, the violating nation or firm usually choose to raise prices rather than face dumping duties.

1. **Export Subsidies:** They 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.

Export subsidies can be regarded as a form of dumping. Although export subsidies are illegal by international agreement, many nations provide them in disguised (hidden) and not-so-disguised forms. **Examples:**

1. All major industrial nations give foreign buyers of the nation’s export low-interest loans to finance the purchase through agencies such as the **US Export-Import Bank.**
2. The US “extraterritorial income” or **Foreign Sales Corporations** provisions of the US tax code have been used by US corporations to set up overseas subsidiaries to enjoy partial exemption from US tax laws on income earned from exporters.
3. Countervailing duties are often imposed on imports to offset export subsidies by foreign governments.

**Diagrammatic Explanation - Partial Equilibrium Effect of an Export Subsidy:**

**
09_02/w72.jpg                                                  000445E4
CS1-Vol.04                     B95464D4:**

**Figure 27: Partial Equilibrium Effect of an Export Subsidy**

At the free trade price of PX = $3.50, small Nation 2 produces 35X (A1C1), consumes 20X (A1B1), and exports 15X (B1C1). With a subsidy of $0.50 on each unit of commodity X exported, PX rises to $4.00 for domestic producers and consumers. At PX = $4, Nation 2 produces 40X (G1J1), consumes 10X (G1H1), and exports 30X (H1J1). Domestic consumers lose $7.50 (area a1+ b1), domestic producers gain $18.75 (area a1+ b1+ c1), and the government subsidy is $15 (b1+ c1+ d1). The protection cost or deadweight loss of Nation 2 is $3.75 (the sum of triangles B1H1N1= b1= $2.50 and C1J1M1= d1= $1.25).

1. **Embargoes:** Embargoes are when a country–or several countries–officially ban the trade of specified goods and services with another country. Governments may take this measure to support their specific political or economic goals.
2. **Sanctions:** Countries impose sanctions on other countries to limit their trade activity. Sanctions can include increased administrative actions–or additional customs and trade procedures–that slow or limit a country’s ability to trade.

**Recent Examples of Non-tariff Barriers:**

In December 2017, the United Nations adopted a round of nontariff barriers against North Korea and the Kim Jong Un regime. The nontariff barriers included sanctions that cut exports of gasoline, diesel, and other refined oil products to the nation. They also prohibited the export of industrial equipment, machinery, transport vehicles, and industrial metals to North Korea. The intention of these nontariff barriers was to put economic pressure on the nation to stop its nuclear arms and military exercises

**New Protectionism:**

In addition to tariffs and quotas, there are several other barriers that national governments may use to limit imports or stimulate exports. Despite the relative success of the WTO in encouraging multi-lateral negotiations to reduce tariff barriers, and to arbitrate over disputes, barriers still exist, but are becoming harder to detect, and somewhat hidden from view.  Examples include the following:

1. **Government favouring domestic firms:** Countries can protect their domestic industries by employing public procurement policies, where national governments favour local firms. For example, national or local governments may purchase supplies of military or medical equipment from local firms. While many WTO members have signed up to the GPA (Government Procurement Agreement), the majority have not signed up to initiatives to make national public procurement more open to overseas competition.
2. **Domestic subsidies:** Governments may also give subsidies to domestic firms, which can then be used to help reduce price and deter imports. This financial support can also be in the form of an *export subsidy*, providing an incentive for firms to export.

Such subsidies may be in the form of start-up or ‘launch’ aid, which may be given to larger projects, such as the EU with its Airbus development, and the US with its support for Boeing.

1. **Health and safety grounds:** National governments can also use health and safety regulations to discriminate against imported products, such as banning the import of a product on health or safety grounds, while local producers do not have to pass such stringent tests.
2. **Quality standards:** In a similar way, governments can set tough quality standards that may be difficult for overseas producers to meet.
3. **Bureaucracy:** Excessive bureaucracy associated with the process of importing and exporting may also restrict trade. For example, goods may be deliberately held-up at ports and airports, and there may be unnecessarily complex and lengthy paperwork associated with international transactions.
4. **Exchange rates:** Monetary protection involves countries deliberately devaluing their exchange rate to stimulate exports and deter imports.

**Outstanding Trade Problems:**

There are three major trade problems remain.

Firstly, many sectors were not included in the agreement. For example, many services such as banking, insurance and movies and TV programmes were excluded from the agreement; agricultural subsidies remain high; patent protection for pharmaceuticals is disappointing; and trade in computer chips is still subject to tariffs (even if cut by half).

Secondly, many of the trade problems of developing countries have either not been addressed or liberalization is long delayed. This is the case for trade in agricultural products and textiles - products which are of great importance to most developing countries.

Finally, the Uruguay Round has not dealt with labour and environmental standards. So these may create major trade problems in the future. Trade- related competition policies (such as subsidies and regulation) as well as trade-related investment measures (TRIMs) have also not been properly dealt with in the Uruguay Round.

**MODULE-4: ECONOMIC INTEGRATION**

**Trade Creation and Trade Diversion:**

**Trade creation** is an economic term related to international economics in which trade flows are redirected due to the formation of a free trade area or a customs union. The issue was firstly brought into discussion by Jacob Viner (1950), together with the trade diversion effect.

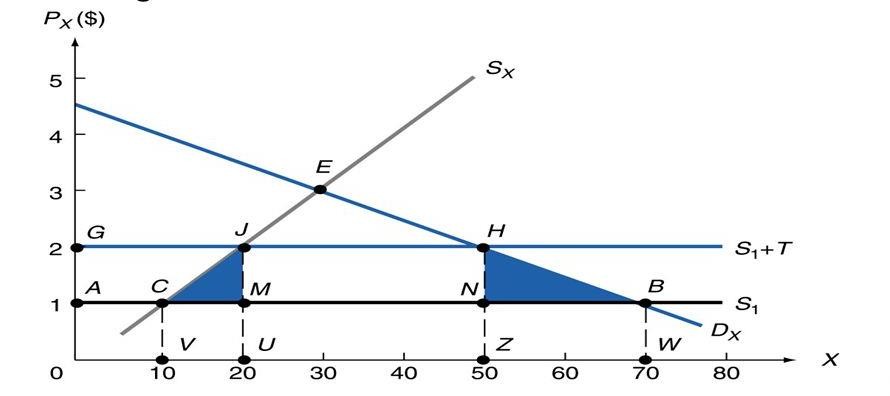
In the former case after the formation of economic union, the cost of the goods considered is decreased, leading to an increase of efficiency of economic integration. Hence, trade creation's essence is in elimination of customs tariffs on inner border of unifying states (usually already trading with each other), causing further decrease of price of the goods, while there may be a case of new trade flow creation of the goods between the states decided to economically integrate.

The opposite takes place in case of **trade diversion**, when the trade flow is diverted from actually cost efficient partner state to less efficient one – but which became a member of economic union and made its goods cheaper within a union, but higher compared to the rest of the world.

**Trade diversion** occurs when lower-cost imports from outside the customs union are replaced by higher cost imports from a union member. This results because of the preferential trade treatment given to member nations. Trade diversion, by itself, reduces welfare because it shifts production from more efficient producers outside the customs union to less efficient producers inside the union. Thus, trade diversion worsens the international allocation of resources and shifts production away from comparative advantage.

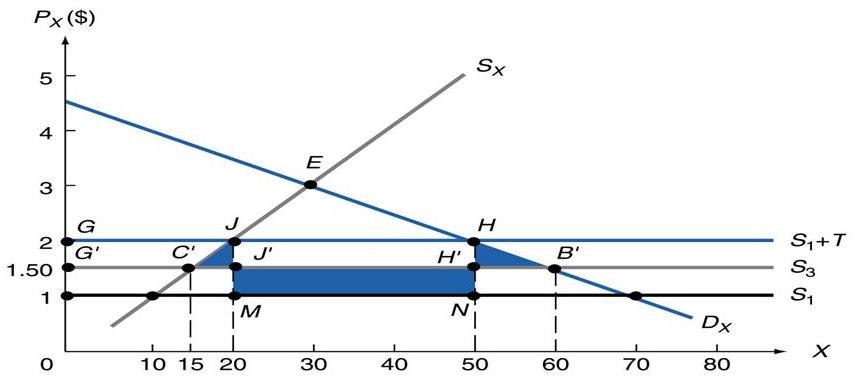
In practice, both trade creation and diversion effects take place due to formation of economic union. Efficiency of economic integration of specific union right now is assessed as a final outcome between trade creation and diversion effects: it is cost-effective in case of prevailing of the trade creation effects, and vice versa.

A trade-diverting customs union results in both trade creation and trade diversion, and therefore can increase or reduce the welfare of union members, depending on the relative strength of these two opposing forces. The welfare of nonmembers can be expected to decline because their economic resources can only be utilized less efficiently than before trade was diverted away from them. Thus, while a trade-creating customs union leads only to trade creation and unequivocally increases the welfare of members and nonmembers, a trade-diverting customs union leads to both trade creation and trade diversion, and can increase or reduce the welfare of members (and will reduce the welfare of the rest of the world).

**Diagrammatic Explanation of the Trade Creating Customs Union:**

**Figure 28: Trade Creating Customs Union**

DX and SX represent Nation 2’s domestic demand and supply curves of commodity X. At the tariff-inclusive PX = $2 before the formation of the customs union, Nation 2 consumes 50X (GH), with 20X (GJ) produced in Nation 2 and 30X (JH) imported from Nation 1. Nation 2 also collects a tariff revenue of $30 (MJHN). Nation 2 does not import commodity X from Nation 3 because of the tariff-inclusive PX > $2. After Nation 2 forms a customs union with Nation 1 only, Nation 2 consumes 70X (AB), with 10X (AC) produced domestically and 60X (CB) imported from Nation 1 at PX = $1. The tariff revenue disappears, and area AGJC represents a transfer from domestic producers to domestic consumers. This leaves net static gains to Nation 2 as a whole equal to $15, given by the sum of the areas of shaded triangles CJM and BHN.

**Diagrammatic Explanation of a Trade-Diverting Customs Union:**

**Figure 29: A Trade-Diverting Customs Union**

DX and SX represent Nation 2’s domestic demand and supply curves of commodity X, while S1 and S3 are the free trade perfectly elastic supply curves of commodity X of Nation 1 and Nation 3, respectively. With a nondiscriminatory 100 percent tariff, Nation 2 imports 30X (JH) at PX = $2 from Nation 1. After forming a customs union with Nation 3 only, Nation 2 imports 45X (C1B1 ) at PX = $1.50 from Nation 3. The welfare gain in Nation 2 from pure trade creation is $3.75 (given by the sum of the areas of the two shaded triangles). The welfare loss from trade diversion proper is $15 (the area of the shaded rectangle). Thus, this trade-diverting customs union leads to a net welfare loss of $11.25 for Nation 2.

**Regional Integration:**

Regional integration helps countries overcome divisions that impede the flow of goods, services, capital, people and ideas. These divisions are a constraint to economic growth, especially in developing countries. The World Bank Group helps its client countries to promote regional integration through common physical and institutional infrastructure.

Divisions between countries created by geography, poor infrastructure and inefficient policies are an impediment to economic growth. Regional integration allows countries to overcome these costly divisions integrating goods, services and factors’ markets, thus facilitating the flow of trade, capital, energy, people and ideas.

Regional integration can be promoted through common physical and institutional infrastructure. Specifically, regional integration requires cooperation between countries in:

* Trade, investment and domestic regulation;
* Transport, ICT and energy infrastructure;
* Macroeconomic and financial policy;
* The provision of other common public goods (e.g. shared natural resources, security, education).

Cooperation in these areas has taken different institutional forms, with different levels of policy commitments and shared sovereignty, and has had different priorities in different world regions.

Regional integration can lead to substantial economic gains. Regional integration allows countries to:

* Improve market efficiency;
* Share the costs of public goods or large infrastructure projects;
* Decide policy cooperatively and have an anchor to reform;
* Have a building block for global integration;
* Reap other non-economic benefits, such as peace and security.

**Static Benefits of Regional Integration:**

* Reduction in the administrative cost (customs officers, border patrols and so on)
* Secondly a trade-diverting customs union, by reducing its demand for imports from and its supply of exports to the rest of the world, is likely to lead to an improvement in collective TOT of the customs union.
* Thirdly, since part of the increase in real income resulting from formation of the customs union spills over in to a greater demand for imports from the rest of the world.
* Lastly any Customs Union (CU), by acting as a single unit in IT negotiations, is likely to have much more bargaining power than all of its members separately. there is no doubt that the **European Union** (**EU)** is the best example towards this.

**Dynamic Benefits of Customs Union:**

* Increased competition among both member and non-member nations.
* Economies of scale are likely to result from the enlarged market
* Stimulus to investment to take advantage of the enlarged market
* Finally, in a CU that is also a common market, the free commodity wide movement of labour and capital is likely to result in better utilization of the economic resources of the entire community.

However, there are risks to regional integration that need to be identified and managed.

* Countries may have different preferences on priorities for regional integration, depending on their connectivity gaps, economic geography, or preferences for sovereignty in specific areas.
* Regional integration’s impact on trade and investment flows, allocation of economic activity, growth, income distribution are often difficult to assess.
* Lack of adequate complementary policies and institutions may lead to inefficient outcomes. For instance, policy barriers at the border may offset the gains transport infrastructure cooperation.
* Regional integration creates winners and losers, notably within countries. Policies and institutions are needed to ensure that regionalism is inclusive and social, environmental, governance risks are managed.

**The History of Economic Integration:**

The framework of the theory of economic integration was laid out by Jacob Viner (1950) who defined the trade creation and trade diversion effects, the terms introduced for the change of interregional flow of goods caused by changes in customs tariffs due to the creation of an economic union. He considered trade flows between two states prior and after their unification, and compared them with the rest of the world. His findings became and still are the foundation of the theory of economic integration.

The basics of the theory were summarized by the Hungarian economist Béla Balassa in the 1960s. As economic integration increases, the barriers of trade between markets diminish. Balassa believed that supranational common markets, with their free movement of economic factors across national borders, naturally generate demand for further integration, not only economically but also politically—and, thus, that economic communities naturally evolve into political unions over time. Among the requirements for successful development of economic integration are "permanency" in its evolution (a gradual expansion and over time a higher degree of economic/political unification); "a formula for sharing joint revenues" (customs duties, licensing etc.) between member states "a process for adopting decisions" both economically and politically; and "a will to make concessions" between developed and developing states of the union.

**Europe’s Economic Integration Narrative:**

From the Treaties of Rome (January 1958) to the Maastricht Treaty (November 1993), Europe moved gradually but unambiguously towards closer economic integration – i.e. an ‘internal market’. Inherent to the pursuit of the internal market was a need for intra-area exchange rate stability. When the externally arranged Bretton Woods exchange rate system broke down, it was replaced by European arrangements (the ‘snake’, and then the EMS). Given the difficulties, the idea of a single currency, first explored by the Werner Report of 1970, was abandoned.

Yet, in the late 1980s and early 1990s, when regional integration made important strides, this idea re-emerged. The single monetary policy was considered as a logical complement to the need for stable exchange rates and the new regime of free capital movement that were implied by the internal market. The favourable political momentum came with Germany’s *Wiedervereinigung*.

In the eyes of many, from an economic perspective the launch of the euro and the Eurozone was just – very reductively – a sort of ‘cherry on the internal market pie’. Also for that reason, diverse recommendations on more compelling economic and fiscal union, contained in the Delors Report of 1989, were watered down in the less ambitious compromise signed in Maastricht in 1992. In the same vein, the 1997 version of the Stability and Growth Pact proved too weak and was even watered down in 2003-05. On the whole, a collective failure occurred in the years that preceded the burst of the Eurozone crisis in 2010. It had not been sufficiently understood that the euro implied a*major discontinuity* in the process of European economic integration; the final goals of European integration had, implicitly but compellingly, changed, and had become much more ambitious than completing the internal market with a single currency and monetary policy.

While this fundamental misunderstanding may be interpreted as one of the many factors at the roots of the Eurozone crisis, the crisis in turn acted as a de facto catalyst for the dramatic acceleration we have witnessed in the pace of reform of European governance. A milestone was reached with the Four Presidents’ Report of December 2012 (Rompuy et al. 2012), which for the first time acknowledged that, alongside monetary union, Eurozone governance was requiring the pursuit of four major, complementary goals: a more effective economic union, fiscal union, financial union, as well as a commensurate political union. Different views, however, persist about the ingredients of these unions and their depth.

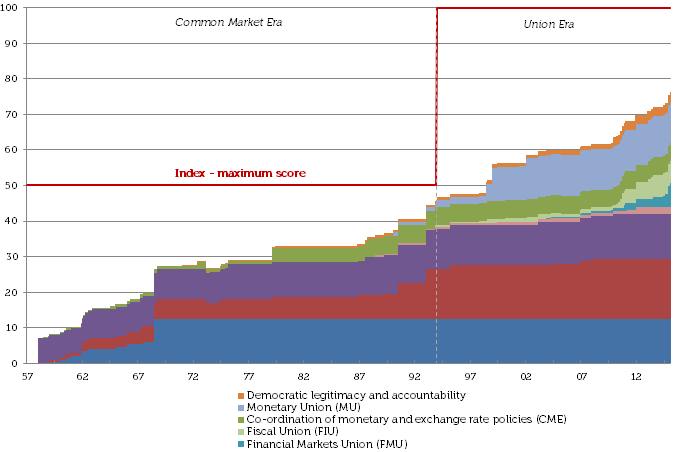
**Measuring European Integration:**

The narrative sketched is captured in Figure 26, which presents a quantitative index of the path of EMU-relevant institutional integration in Europe since the late 1950s (Dorrucci et al. 2015, including for the methodology).Novel monthly dataset is articulated along two overarching periods of institutional integration:

* The ‘Common Market Era’, from 1958 until 1993; and
* The ‘Union Era’ thereafter.

A maximum score of 50 is assigned to each of these periods, with the index starting at 0 on 1 January 1958 (when the Treaty of Rome entered into force) and then making progress up to the current cumulated value of slightly above 76 as of 1 January 2015. The gap between 100 – i.e., the maximum total score that would be assigned in the index if all objectives of the Common Market and Union Eras were fully accomplished – and the current total score gives an indication of the distance still to be covered until a ‘new perceived steady state’ is achieved in the process of integration.

Figure 26, European Index of Regional Institutional Integration (THE INDEX) Concerning the Common Market era, the index draws on the traditional classification of regional economic integration by recognizing five ‘stages’ of integration (Balassa 1961), as shown in Figure 30.



**Figure 30: European Index of Regional Institutional Integration**

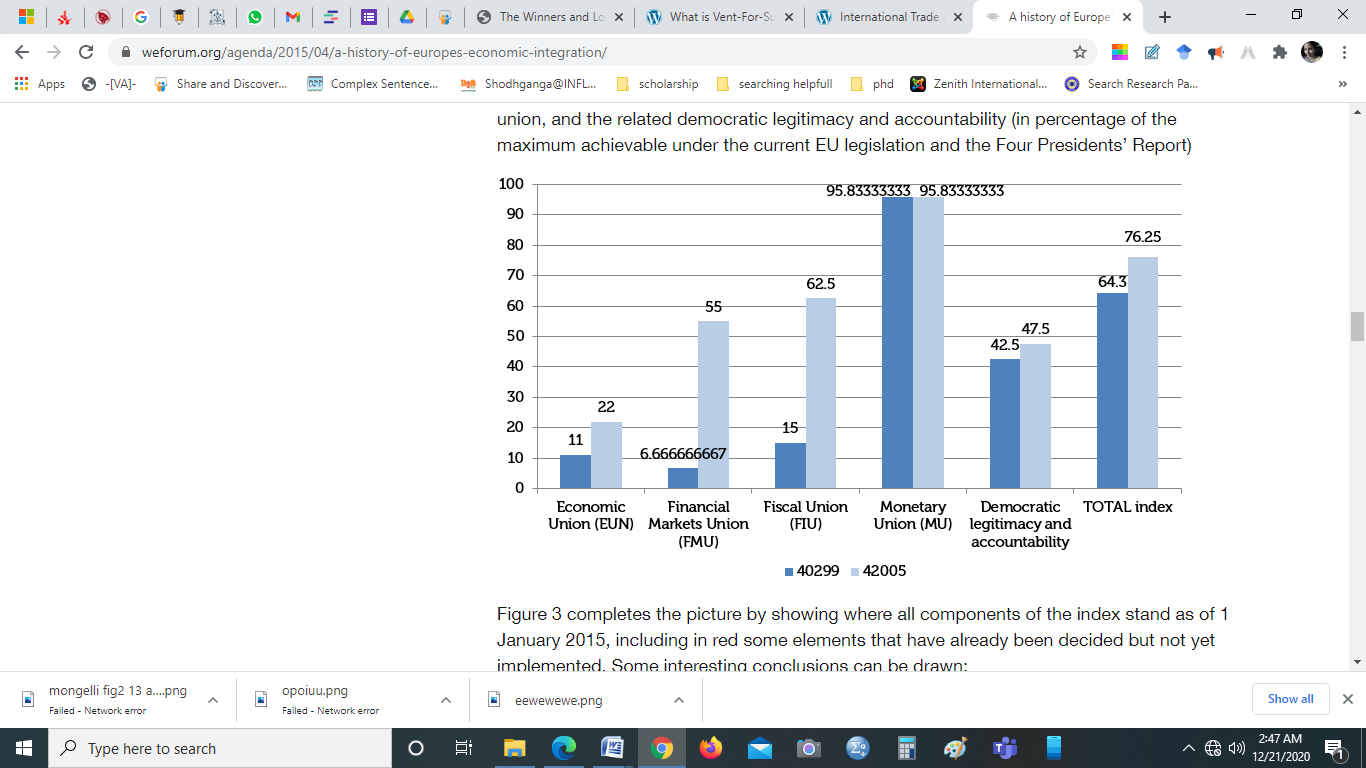
* A free trade area and customs union (stages 1 and 2);
* The gradual build-up of the European internal market (stage 3);
* Some degree of coordination of, for instance, exchange rate policies (stage 4); and
* A number of institutions, laws, and decision-making processes which can be defined – though to different degrees – as supranational in nature (stage 5).

Given the final goal of a fully-fledged common market, this process was not too far from being completed in the early 1990s, though additional work needed (and still needs) to be done to complete the internal market.

Figure 30 also illustrates the major discontinuity in the integration process that was implied by the start of stage two of EMU in 1994. It was only at the end of 2012, with the Four Presidents’ Report, that the need to complement the monetary union with the other four unions was clearly articulated. At the same time, when the Maastricht Treaty was signed, very few would have anticipated the crisis-driven institutional quantum leap occurred in the period 2010-14, which accounts for 12 points in our index or 16% of the overall progress made since 1958.

Figure 30 zooms on two specific dates in the Union Era, namely May 2010 (start of the Greek programme) and January 2015. It illustrates the institutional progress made during the Euro zone crisis under each component of the Union Era, expressed as a percentage of the final objectives set both in the existing EU legislative framework and the Four Presidents’ Report. Clearly, the strongest improvements have been witnessed under the headings of the fiscal and banking unions, whereas more needs to be done as regards the economic union.

**Figure 31,** **Union Era:** Progress made under the economic, fiscal, monetary, and financial union, and the related democratic legitimacy and accountability (in percentage of the maximum achievable under the current EU legislation and the Four Presidents’ Report)



**Figure 31: Union Era**

Figure 32 completes the picture by showing where all components of the index stand as of 1 January 2015, including in red some elements that have already been decided but not yet implemented. Some interesting conclusions can be drawn:

* First, there is still progress to be made with the internal market as regards both the single market for services and labour mobility.

From an OCA theory perspective, the importance of this cannot be underestimated also from the perspective of the single currency.

* Second, under the Union Era, while the monetary union as such is virtually accomplished, a lot of progress has still to be made in the other dimensions.

Nonetheless, the recent banking union has marked a gigantic step, and the degree of accomplishment of the financial market union (‘FMU’ bar) is expected to jump from the current 55% to 72% once all measures already scheduled will be implemented (e.g. bail-in procedures under the BRRD, setting up of the Single Resolution Fund, etc.).

* Third, apart from an initial agreement on enhanced cooperation in financial sector taxation (FTT), there are no additional steps agreed going forward as regards the fiscal union.

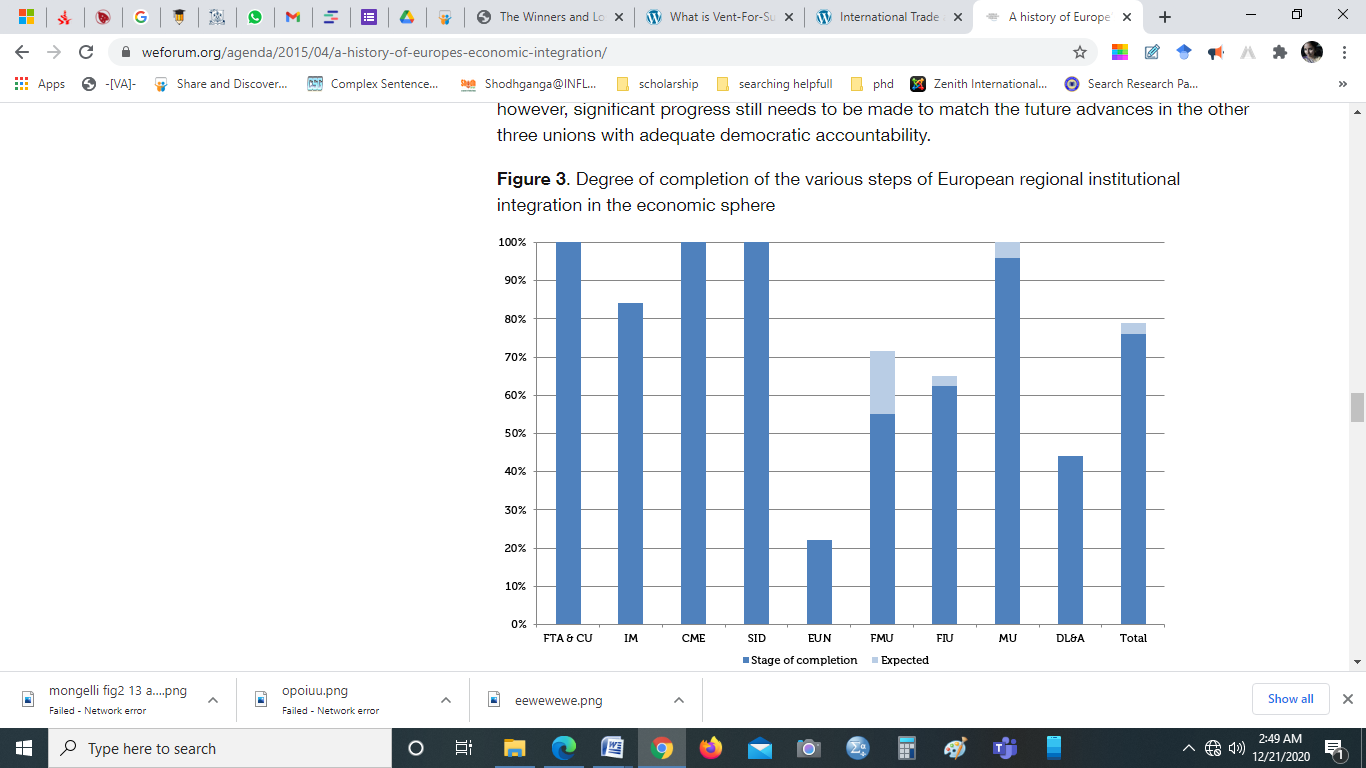
The Four Presidents’ Report, however, mentions – or implies in our reading – further potential objectives, such as the development of a Eurozone fiscal capacity; the institution of a EU finance ministry that would take over, for example, fiscal surveillance so as to internalize the negative externalities of this process; and, if a number of preconditions are fulfilled, even the common issuance of debt (bar ‘FIU’). It has to be seen whether such goals will be taken forward and how.

* Fourth, the economic union clearly lags behind, especially in the area of structural policies (e.g. via national reform contracts, greater traction of country-specific recommendations, and an EU finance ministry that monitors competitiveness more effectively, see Wolff and Sapir 2015).

Moreover, a more cogent economic surveillance than is currently the case is badly needed, while the debate is open on a Eurozone-wide macroeconomic stabilization mechanism. None of such steps is likely to be implemented for the time being (bar ‘EUN’).

Fifth, political union is currently only seen as the complement needed to be able to achieve the accountability and legitimacy of the economic governance developed in the other unions, rather than as a process on its own.

This explains the relatively low score we assign in our index to the item ‘democratic legitimacy and accountability’ (bar ‘DL&A’). Even along the existing narrow definition, however, significant progress still needs to be made to match the future advances in the other three unions with adequate democratic accountability.



**Figure 32: Degree of completion of the various steps of European regional institutional integration in the economic sphere**

The process of economic integration in Europe has been always incremental in nature, and often ‘forged in crises’ (Monnet 1978). In this column we have shown that this can be seen as the ‘natural condition’ of European integration as long as the final goals of integration are well identified and understood from the outset of the process. It took 35 years to establish the internal market, and yet in this period there was no doubt about the path of economic integration to be followed. Conversely, the issue with the Union Era lies in the uncertainty and ambiguity of some of its final goals. This is in turn a by-product of the very high degree of national sovereignty pooling implied at this stage, which calls for properly addressing the ultimate question of democracy in Europe. In this context, the traditional incremental approach becomes much more precarious and the outcome of crises much less predictable. Not to deny that tremendous progress has been made since 2010. 2015 have mark another milestone towards better European governance under the four unions.

**The European Economic Community:**

The European Economic Community (EEC) was a regional organization which aimed to bring about economic integration among its member states. It was created by the Treaty of Rome of 1957. Upon the formation of the European Union (EU) in 1993, the EEC was incorporated and renamed as the European Community (EC). In 2009 the EC's institutions were absorbed into the EU's wider framework and the community ceased to exist.

The Community's initial aim was to bring about economic integration, including a common market and customs union, among its six founding members: Belgium, France, Italy, Luxembourg, the Netherlands and West Germany. It gained a common set of institutions along with the European Coal and Steel Community (ECSC) and the European Atomic Energy Community (EURATOM) as one of the European Communities under the 1965 Merger Treaty (Treaty of Brussels). In 1993, a complete single market was achieved, known as the internal market, which allowed for the free movement of goods, capital, services, and people within the EEC.

In 1994, the internal market was formalized by the EEA agreement. This agreement also extended the internal market to include most of the member states of the European Free Trade Association, forming the European Economic Area covering 15 countries. Upon the entry into force of the Maastricht Treaty in 1993, the EEC was renamed as the European Community to reflect that it covered a wider range than economic policy. This was also when the three European Communities, including the EC, were collectively made to constitute the first of the three pillars of the European Union, which the treaty also founded. The EC existed in this form until it was abolished by the 2009 Treaty of Lisbon, which incorporated the EC's institutions into the EU's wider framework and provided that the EU would "replace and succeed the European Community". The EEC was also known as the Common Market in the English-speaking countries and sometimes referred to as the European Community even before it was officially renamed as such in 1993.

**The European Free Trade Association:**

The European Free Trade Association (EFTA) is an intergovernmental organization working to promote free trade and economic integration for its member states. It was founded in 1960 by Austria, Denmark, Norway, Portugal, Sweden, Switzerland and the United Kingdom, and later joined by Finland, Iceland and Liechtenstein. However, currently there is only four EFTA countries – Iceland, Liechtenstein, Norway and Switzerland – as the other members left at different times in order to join the European Union.

**The main tasks of the Association are threefold**

* Maintaining and developing the***EFTA Convention***, which regulates economic relations between the four EFTA States;
* Managing the ***Agreement on the European Economic Area*** (EEA Agreement), which brings together the Member States of the European Union and three of the EFTA States – Iceland, Liechtenstein and Norway – in a single market, also referred to as the “Internal Market”.
* Developing EFTA’s worldwide network of***free trade agreements***.

**Mission of EFTA**

The European Free Trade Association (EFTA) is an intergovernmental organization set up for the promotion of free trade and economic integration to the benefit of its four Member States – Iceland, Liechtenstein, Norway and Switzerland – and the benefit of their trading partners around the globe.

The EFTA is responsible for managing the European Economic Area Agreement, which allows three of its four members access to the EU's internal market (Switzerland trades with the EU based on a series of bilateral treaties). Relations with the EU is, and continues to be, at the core of EFTA's activities with the first free trade agreements signed in the early 1970's. EFTA also actively pursues trade deals with countries in Asia and the Americas.

**Member States of EFTA:**

The four EFTA States are all open, competitive economies committed to the progressive liberalization of trade in the multinational arena as well as in free trade agreements.

**History of EFTA**

EFTA was founded by the Stockholm Convention in 1960. Relations with the EEC, later the European Community (EC) and the European Union (EU), have been at the core of EFTA activities from the beginning. Since the beginning of the 1990s, EFTA has actively pursued trade relations with third countries in and beyond Europe.

**Key Figures of EFTA**

The four EFTA States are open, developed economies with trade figures that are substantially higher than might be expected from a total of less than 14 million people. EFTA is the ninth largest trader in the world in merchandise trade and the fifth largest in trade in services. EFTA is the third most important trading partner in goods for the EU and the second most important when it comes to services.

**Annual Budget of EFTA**

EFTA’s budget is prepared in two currencies: Swiss francs (CHF) and euros (EUR). The total budget for 2016 was equivalent to CHF 21 677 000 and the EFTA Secretariat has fewer than 90 employees. Three of the four EFTA States contribute to cohesion in the European Union through a separate arrangement, the EEA and Norway Grants. The EFTA’s budget is prepared according to the framework budgeting principle used by the Member States’ public administrations. This approach aims to increase awareness of budgetary spending at all levels.

**NAFTA** - **North American Free Trade Agreement**

NAFTA stands for the North American Free Trade Agreement, which was negotiated by former U.S. President George H.W. Bush, and went into effect under President Clinton in 1994. The North American Free Trade Agreement (NAFTA) is a treaty entered into by the United States, Canada, and Mexico; it went into effect on January 1, 1994. (Free trade had existed between the U.S. and Canada since 1989; NAFTA broadened that arrangement.) On that day, the three countries became the largest free market in the world-;the combined economies of the three nations at that time measured $6 trillion and directly affected more than 365 million people. NAFTA was created to eliminate tariff barriers to agricultural, manufacturing, and services; to remove investment restrictions; and to protect intellectual property rights. This was to be done while also addressing environmental and labor concerns (although many observers charge that the three governments have been lax in ensuring environmental and labor safeguards since the agreement went into effect). Small businesses were among those that were expected to benefit the most from the lowering of trade barriers since it would make doing business in Mexico and Canada less expensive and would reduce the red tape needed to import or export goods.

**Highlights of NAFTA included:**

* Tariff elimination for qualifying products. Before NAFTA, tariffs of 30 percent or higher on export goods to Mexico were common, as were long delays caused by paperwork. Additionally, Mexican tariffs on U.S.-made products were, on average, 250 percent higher than U.S. duties on Mexican products. NAFTA addressed this imbalance by phasing out tariffs over 15 years. Approximately 50 percent of the tariffs were abolished immediately when the agreement took effect, and the remaining tariffs were targeted for gradual elimination. Among the areas specifically covered by NAFTA are construction, engineering, accounting, advertising, consulting/management, architecture, health-care management, commercial education, and tourism.
* Elimination of nontariff barriers by 2008. This includes opening the border and interior of Mexico to U.S. truckers and streamlining border processing and licensing requirements. Nontariff barriers were the biggest obstacle to conducting business in Mexico that small exporters faced.
* Establishment of standards. The three NAFTA countries agreed to toughen health, safety, and industrial standards to the highest existing standards among the three countries (which were always U.S. or Canadian). Also, national standards could no longer be used as a barrier to free trade. The speed of export-product inspections and certifications was also improved.
* Supplemental agreements. To ease concerns that Mexico's low wage scale would cause U.S. companies to shift production to that country, and to ensure that Mexico's increasing industrialization would not lead to rampant pollution, special side agreements were included in NAFTA. Under those agreements, the three countries agreed to establish commissions to handle labor and environmental issues. The commissions have the power to impose steep fines against any of the three governments that failed to impose its laws consistently. Environmental and labor groups from both the United States and Canada, however, have repeatedly charged that the regulations and guidelines detailed in these supplemental agreements have not been enforced.
* Tariff reduction for motor vehicles and auto parts and automobile rules of origin.
* Expanded telecommunications trade.
* Reduced textile and apparel barriers.
* More free trade in agriculture. Mexican import licenses were immediately abolished, with most additional tariffs phased out over a 10-year period.
* Expanded trade in financial services.
* Opening of insurance markets.
* Increased investment opportunities.
* Liberalized regulation of land transportation.
* Increased protection of intellectual property rights. NAFTA stipulated that, for the first time, Mexico had to provide a very high level of protection for intellectual property rights. This is especially helpful in fields such as computer software and chemical production. Mexican firms will no longer be able to steal intellectual property from companies and create a "Mexican" version of a product.
* Expanded the rights of American firms to make bids on Mexican and Canadian government procurement contracts.

One of the key provisions of NAFTA provided "national goods" status to products imported from other NAFTA countries. No state, provincial, or local governments could impose taxes or tariffs on those goods. In addition, customs duties were either eliminated at the time of the agreement or scheduled to be phased out in 5 or 10 equal stages. The one exception to the phase out was specified sensitive items, for which the phase-out period would be 15 years.

Supporters championed NAFTA because it opened up Mexican markets to U.S. companies like never before. The Mexican market is growing rapidly, which promises more export opportunities, which in turn means more jobs. Supporters, though, had a difficult time convincing the American public that NAFTA would do more good than harm. Their main effort centered on convincing people that all consumers benefit from the widest possible choice of products at the lowest possible price-;which means that consumers would be the biggest beneficiaries of lowered trade barriers. The U.S. Chamber of Commerce, which represents the interests of small businesses, was one of the most active supporters of NAFTA, organizing the owners and employees of small and mid-size businesses to support the agreement. This support was key in countering the efforts of organized labor to stop the agreement.

**NAFTA and Small Business:**

Analysts agree that NAFTA has opened up new opportunities for small and mid-size businesses. Mexican consumers spend more each year on U.S. products than their counterparts in Japan and Europe, so the stakes for business owners are high. (Most of the studies of NAFTA concentrate on the effects of U.S. business with Mexico. Trade with Canada has also been enhanced, but the passage of the trade agreement did not have as great an impact on the already liberal trade practices that America and its northern neighbor abided by.)

Some small businesses were affected directly by NAFTA. In the past, larger firms always had an advantage over small ones because the large companies could afford to build and maintain offices and/or manufacturing plants in Mexico, thereby avoiding many of the old trade restrictions on exports. In addition, pre-NAFTA laws stipulated that U.S. service providers that wanted to do business in Mexico had to establish a physical presence there, which was simply too expensive for small firms to do. Small firms were stuck-;they could not afford to build, nor could they afford the export tariffs. NAFTA leveled the playing field by letting small firms export to Mexico at the same cost as the large firms and by eliminating the requirement that a business establish a physical presence in Mexico in order to do business there. The lifting of these restrictions meant that vast new markets were suddenly open to small businesses that had previously done business only in the United States. This was regarded as especially important for small businesses that produced goods or services that had matured in U.S. markets.

Still, small firms interested in conducting business in Mexico have to recognize that Mexican business regulations, hiring practices, employee benefit requirements, taxation schedules, and accounting principles all include features that are unique to that country. Small businesses, then, should familiarize themselves with Mexico's foundation of business rules and traditions-;not to mention the demographics culture of the marketplace before committing resources to this region.

**Opposition to NAFTA:**

Much organized opposition to NAFTA centered on the fear that the abolishment of trade barriers would spur U.S. firms to pack up and move to Mexico to take advantage of cheap labor. This concern grew during the early years of the 2000s as the economy went through a recession and the recover that followed turned out to be a "jobless recovery." Opposition to NAFTA was also strong among environmental groups, who contended that the treaty's anti-pollution elements were woefully inadequate. This criticism has not abated since NAFTA's implementation. Indeed, both Mexico and Canada have been repeatedly cited for environmental malfeasance.

Controversy over the treaty's environmental enforcement provisions remained strong in the late 1990s. In fact, North American business interests have sought to weaken a key NAFTA side accord on environmental protections and enforcement. This accord-;one of the few provisions welcomed by environmental groups-;allows groups and ordinary citizens to accuse member nations of failing to enforce their own environmental laws. A tri-national Commission for Environmental Cooperation is charged with investigating these allegations and issuing public reports. "That process is slow, but the embarrassment factor has proven surprisingly high," noted *Business Week*. As of 2005, the U.S. government has expressed opposition to revisions in the NAFTA agreement. But the Canadian government and many businesses in all three countries continue to work to change this accord.

NAFTA in 2018 and Trump's Impact

* + President Trump has been a key advocate of renegotiating or abolishing the treaty, claiming that the agreement is unfair to the United States.
  + Currently, the president does not intend to withdraw fully from NAFTA, according to Larry Kudlow, Director of the United States National Economic Council in 2018.
  + "His preference now - and he asked me to convey this - is to actually negotiate with Mexico and Canada separately," Kudlow told The Washington Post this year. "He prefers bilateral negotiations."
  + But despite the assurance that Trump doesn't intend to utterly abolish the treaty, experts are still skeptical of the consequences.
  + "I don't think there's many ways that the rules of origin can be changed to expand U.S. production and jobs because tighter rules would lead to higher production costs and have adverse effects on U.S. competitiveness," Jeffrey Schott, senior fellow at the Peterson Institute, told Politico.
  + Additionally, The New York Times reported that even if the United States withdrew from the treaty, Mexico and Canada might not - putting the United States at a disadvantage in North America.

**The Effects of NAFTA:**

Since NAFTA's passage, American business interests have often expressed great satisfaction with the agreement. Trade has grown sharply between the three nations who are parties to NAFTA but that increase of trade activity has resulted in rising trade deficits for the U.S. with both Canada and Mexico-;the U.S. imports more from Mexico and Canada than it exports to these trading partners. Critics of the agreement argue that NAFTA has been at least partially responsible for these trade deficits as well as the striking loss of manufacturing jobs experienced in the U.S. over the last decade. But, manufacturing jobs began to decline before the NAFTA agreement. The debate about NAFTA continues.

Isolating the effects of NAFTA within the larger economy is impossible. It is difficult, for example, to say with certainty what percentage of the current U.S. trade deficit-;which stood at a record $65,677 million at the end of 2005-;is directly attributable to NAFTA. It is also difficult to say what percentage of the 3.3 million manufacturing jobs lost in the U.S. between 1998 and 2004 are the result of NAFTA and what percent would have occurred without this trade agreement. It is not even possible to say with certainly that the increased trade activity among the NAFTA nations is entirely the result of the trade agreement. Those who favor the agreement usually claim credit for NAFTA for the increased trade activity and reject the idea that the agreement resulted in job losses or the rising trade deficit with Canada and Mexico, ($8,039 million and $4,263 million respectively in December 2005). Those who are critical of the agreement usually link it to these deficits and to job losses as well.

What is clear is that NAFTA remains a lightning rod for political opinions about globalization and free trade generally. Opposition to NAFTA has grown and has made it far more difficult, politically, to pass other similar free trade agreements. This was demonstrated clearly in the summer of 2005 when the Central American Free Trade Agreement (CAFTA) was stalled in Congress for lack of support. Two journalists, Dawn Gilbertson and Jonathan J. Higuera, writing in the *Arizona Republic* at the ten year anniversary of NAFTA, summed things up this way: "The Reality of NAFTA at 10 is this: a still-developing story of winners and losers, split largely by where you work and what you make." The same may be said about the effects of NAFTA on small businesses. For some it has been an opportunity to grow and for others a challenge to be met.

**Economic Integration Among the Less Developed Countries**

The success achieved by the EU inspired many groups of the LDC’s to have economic integration among themselves. The closer integration among the LDC’s is justified, not so much in terms of trade creation and dynamic gains, as in terms of accelerated growth and speedy industrialization.

1. **Central American Common Market (CACM):** It was established by Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua in 1960. But it could make little headway and was dissolved in 1969.
2. **Latin American Free Trade Association (LAFTA):** This association became operative in June 1961. It was comprised of 10 Latin American countries. Some of them were Mexico, Bolivia, Chile, Colombia, Equador and Peru. These countries wanted to have a common market for achieving a rapid increase in trade and development. The LAFTA was, however, superseded by the Latin American Integration Association (LAIA) in 1980.
3. **Caribbean Free Trade Association (CARIFTA):** It was created by the Caribbean countries in 1968. In 1973, it was transformed into the Caribbean Common Market (CARICOM).
4. **East African Economic Community (EAEC):** It was established by the East African countries including Kenya, Tanzania and Uganda. This organization collapsed in 1977.
5. **Association of South East Asian Nations (ASEAN):** Of all the attempts towards integration among the less developed countries, the most successful attempt is the creation of ASEAN in 1967. It includes Indonesia, Malaysia, the Philippines, Singapore, Thailand and Brunei. Vietnam and Myanmar joined the Association in 1995 and 1997 respectively.

Under the framework of a generally export- oriented strategy of development, these countries could liberalize inter-member trade and promote import-substitution. The economic growth rate of the ASEAN is quite high. It accounts for the dominant share of world’s natural rubber, tin and palm oil.

This region is also a prominent producer of timber, sugar, bauxite, coal, coffee and petroleum. The ASEAN is likely to develop in future as a free trade area. India has also joined the countries of this region as a trade partner and has been participating in the ASEAN deliberations.

1. **South Asian Association of Regional Cooperation (SAARAC):** This association came into being in December, 1985. It was formed by India, Bangladesh, Pakistan, Nepal, Sri Lanka, Bhutan and Maldives. Afghanistan joined as the eighth member in 2007. This association despite its existence for 25 years has failed to make the desired headway because of its excessive pre-occupation with political issues.

#### **Problems in the Integration among the Less Developed Countries:**

Of the different integration schemes among the less developed countries, ASEAN alone has achieved some measure of success. In all other attempts towards integration, they had to encounter a number of difficulties over and above the problems.

**The main stumbling blocks in their successful integration are as below:**

1. **Problem in Distribution of Gains:** The most important problem in the successful integration among the LDC’s is connected with the distribution of gains. The gains accrue from new, protected and import-substitution industries. A member can secure gain when the new industries are set up in the home country but suffer loss when the industries are set up in the partner countries. Since most of them are industrially-deficient, each one desires that new industry is started in its territory. Such conflicting demands create serious problem.

Moreover, the gains are not evenly distributed among the developing countries. The benefits or gains are likely to accrue disproportionately to the most advanced nations in the group. This makes lagging nations to withdraw, causing the attempt at economic integration to fail. Such a problem can be overcome, if there is a planned and equitable allocation of investment projects among the member countries.

1. **Competitive Nature of Economies:** The success of integration requires that the member countries should have complementary economies. That was the basic cause of the success of EU. In case of developing countries, on the other hand, the economies are generally of a competitive nature and they have to compete for the same foreign markets for their agricultural exports
2. **Unwillingness to Surrender Sovereignty:**

Many less developed countries are not willing to surrender a part of their sovereign authority to make economic and political decisions to some central super-national authority. Unless they are willing to do so, co-ordinate uniform economic policies cannot be framed and adopted.

1. **Inefficient Means of Transport and Communications:** The existence of larger geographical distances and absence of efficient means of transport and communications may result in higher cost of import even from the member countries. It is possible that the tariff structure is not sufficiently high to neutralize the advantage which a non-member country acquires because of lower transport cost.
2. **Little Influence over Terms of Trade:** The LDC’s produce predominantly primary products, the prices of which have shown a secular declining trend. The advanced countries can import the same products from the diverse sources. The developing countries, the economies of which depend excessively upon the exports of primary goods, tend to compete out the rival suppliers through price reduction.

In such conditions, they have little influence over the terms of trade which have remained secularly unfavourable for them. The experience of OPEC during the last few years showed that the petroleum price violently fluctuated because of non-adherence of members to regulations. This shows inherent weakness of LDC’s in organizing an effective customs union.

1. **Tendency to Set Up Competitive Industries:** The LDC’s have a strong urge to develop a sound industrial base. They want to achieve industrial self-sufficiency. The existence of potentially competitive industrial units creates hindrance in forming a successful customs union.
2. **Excessive Dependence on Advanced Countries:** The LDC’s depend excessively upon the advanced countries for capital, advanced technical know-how and a large variety of manufactured products. They are under huge external debt burden. They persistently have an unfavourable balance of payments with the advanced countries. Given the excessive dependence of poor countries, there is little likelihood that they can afford to raise tariffs against the products of advanced countries.
3. **Differences in Political System:** Still another hurdle in the organization of customs union among the developing countries is a great diversity in their political systems and institutions. The integration of non-homogeneous political structures in the member countries is an extremely difficult proposition.

In view of formidable barriers in the organization of a permanent arrangement of the type of customs union, common market or economic union in the LDC’s, it seems worthwhile that the developing countries should have a less ambitious approach. They should limit the regional co-operation to mutual reduction of tariffs to expand trade among themselves at the first instance and make collective efforts to secure greater access for their exportable products to the markets of developed countries on more favourable terms.

In this connection P.R.D. Wilson commented, “Perhaps LDC’s should limit regional integration to more ad hoc co-operation over tariff reduction in particular products and joint bargaining with DC’s over the importation of foreign capital and technology.”

**MODULE-5: WORLD TRADE ORGANIZATION**

**General Agreement on Tariffs and Trade (GATT):**

GATT was a legal agreement between many countries, whose overall purpose was to promote international trade by reducing or eliminating trade barriers such as tariffs or quotas. According to its preamble, its purpose was the "substantial reduction of tariffs and other trade barriers and the elimination of preferences, on a reciprocal and mutually advantageous basis."

It was first discussed during the United Nations Conference on Trade and Employment and was the outcome of the failure of negotiating governments to create the International Trade Organization (ITO). GATT was signed by 23 nations in Geneva on 30 October 1947, and took effect on 1 January 1948. It remained in effect until the signature by 123 nations in Marrakesh on 14 April 1994, of the Uruguay Round Agreements, which established the World Trade Organization (WTO) on 1 January 1995. The WTO is a successor to GATT, and the original GATT text (GATT 1947) is still in effect under the WTO framework, subject to the modifications of GATT 1994.

GATT, and its successor WTO, have successfully reduced tariffs. The average tariff levels for the major GATT participants were about 22% in 1947, but were 5% after the Uruguay Round in 1999. Experts attribute part of these tariff changes to GATT and the WTO.

**General Agreement on Tariffs and Trade and WTO:**

In 1993, the GATT was updated (GATT 1994) to include new obligations upon its signatories. One of the most significant changes was the creation of the World Trade Organization (WTO). The 75 existing GATT members and the European Communities became the founding members of the WTO on 1 January 1995. The other 52 GATT members rejoined the WTO in the following two years (the last being Congo in 1997). Since the founding of the WTO, 21 new non-GATT members have joined and 29 are currently negotiating membership. There are a total of 164 member countries in the WTO, with Liberia and Afghanistan being the newest members as of 2016.

Of the original GATT members, Syria and the SFR Yugoslavia have not rejoined the WTO. Since FR Yugoslavia, (renamed as Serbia and Montenegro and with membership negotiations later split in two), is not recognized as a direct SFRY successor state; therefore, its application is considered a new (non GATT) one. The General Council of WTO, on 4 May 2010, agreed to establish a working party to examine the request of Syria for WTO membership. The contracting parties who founded the WTO ended official agreement of the "GATT 1947" terms on 31 December 1995. Montenegro became a member in 2012, while Serbia is in the decision stage of the negotiations and is expected to become a member of the WTO in the future.

Whilst GATT was a set of rules agreed upon by nations, the WTO is an institutional body. As such, GATT was merely a forum for nations to discuss, while the WTO is a proper international organization (which implies physical headquarters, staff, delegation ) The WTO expanded its scope from traded goods to include trade within the service sector and intellectual property rights. Although it was designed to serve multilateral agreements, during several rounds of GATT negotiations (particularly the Tokyo Round) plurilateral agreements created selective trading and caused fragmentation among members. WTO arrangements are generally a multilateral agreement settlement mechanism of GATT.

The average tariff levels for the major GATT participants were about 22 percent in 1947. As a result of the first negotiating rounds, tariffs were reduced in the GATT core of the United States, United Kingdom, Canada, and Australia, relative to other contracting parties and non-GATT participants. By the Kennedy round (1962–67), the average tariff levels of GATT participants were about 15%. After the Uruguay Round, tariffs were under 5%.

In addition to facilitating applied tariff reductions, the early GATT's contribution to trade liberalization "include binding the negotiated tariff reductions for an extended period (made more permanent in 1955), establishing the generality of nondiscrimination through most favored nation (MFN) treatment and national treatment, ensuring increased transparency of trade policy measures, and providing a forum for future negotiations and for the peaceful resolution of bilateral disputes. All of these elements contributed to the rationalization of trade policy and the reduction of trade barriers and policy uncertainty."

According to Dartmouth economic historian Douglas Irwin," The prosperity of the world economy over the past half century owes a great deal to the growth of world trade which, in turn, is partly the result of farsighted officials who created the GATT. They established a set of procedures giving stability to the trade-policy environment and thereby facilitating the rapid growth of world trade". With the long run in view, the original GATT conferees helped put the world economy on a sound foundation and thereby improved the livelihood of hundreds of millions of people around the world.

**Objectives And Operation of WTO:**

The WTO has six key objectives:

(1) to set and enforce rules for international trade,

(2) to provide a forum for negotiating and monitoring further trade liberalization, (3) to resolve trade disputes,

(4) to increase the transparency of decision-making processes,

(5) to cooperate with other major international economic institutions involved in global economic management, and

(6) to help developing countries benefit fully from the global trading system.

Although shared by the GATT, in practice these goals have been pursued more comprehensively by the WTO. For example, whereas the GATT focused almost exclusively on goods—though much of agriculture and textiles were excluded—the WTO encompasses all goods, services, and intellectual property, as well as some investment policies. In addition, the permanent WTO Secretariat, which replaced the interim GATT Secretariat, has strengthened and formalized mechanisms for reviewing trade policies and settling disputes. Because many more products are covered under the WTO than under the GATT and because the number of member countries and the extent of their participation has grown steadily—the combined share of international trade of WTO members now exceeds 90 percent of the global total—open access to markets has increased substantially.

**Functions of WTO:**

**1. Global trade rules**

Global rules of trade provide assurance and stability. Consumers and producers know they can enjoy secure supplies and greater choice of the finished products, components, raw materials and services they use. Producers and exporters know foreign markets will remain open to them.

This leads to a more prosperous, peaceful and accountable economic world. Decisions in the WTO are typically taken by consensus among all members and they are ratified by members’ parliaments. Trade frictions are channelled into the WTO’s dispute settlement process, where the focus is on interpreting agreements and commitments and how to ensure that members’ trade policies conform with them. That way, the risk of disputes spilling over into political or military conflict is reduced.

By lowering trade barriers through negotiations among member governments, the WTO’s system also breaks down other barriers between peoples and trading economies.

At the heart of the system – known as the multilateral trading system – are the WTO’s agreements, negotiated and signed by a large majority of the world’s trading economies, and ratified in their parliaments.

These agreements are the legal foundations for global trade. Essentially, they are contracts, guaranteeing WTO members important trade rights. They also bind governments to keep their trade policies transparent and predictable which is to everybody’s benefit.

The agreements provide a stable and transparent framework to help producers of goods and services, exporters and importers conduct their business.

The goal is to improve the welfare of the peoples of the WTO’s members.

**2. Trade Negotiations:**

The World Trade Organization came into being in 1995. One of the youngest of the international organizations, the WTO is the successor to the General Agreement on Tariffs and Trade (GATT) established in the wake of the Second World War.

So while the WTO is relatively young, the multilateral trading system that was originally set up under the GATT is over 70 years old.

The past 70 years have seen an exceptional growth in world trade. Merchandise exports have grown on average by 6% annually. This growth in trade has been a powerful engine for overall economic expansion and on average trade has grown by 1.5 times more than the global economy each year. Total exports in 2016 were 250 times the level of 1948. The GATT and the WTO have helped to create a strong and prosperous trading system contributing to unprecedented growth.

The system was developed through a series of trade negotiations, or rounds, held under the GATT. The first rounds dealt mainly with tariff reductions but later negotiations included other areas such as anti-dumping and non-tariff measures. The 1986-94 round – the Uruguay Round – led to the WTO’s creation.

The negotiations did not end there. In 1997, an agreement was reached on telecommunications services, with 69 governments agreeing to wide-ranging liberalization measures that went beyond those agreed in the Uruguay Round.

In the same year, 40 governments successfully concluded negotiations for tariff-free trade in information technology products, and 70 members concluded a financial services deal covering more than 95% of trade in banking, insurance, securities and financial information.

In 2000, new talks started on agriculture and services. These were incorporated into a broader work programme, the Doha Development Agenda, launched at the fourth WTO Ministerial Conference in Doha, Qatar, in November 2001.

The new work programme included negotiations and other work on non- agricultural tariffs, trade and the environment, WTO rules on anti-dumping and subsidies, trade facilitation, transparency in government procurement, intellectual property and a range of issues raised by developing economies as difficulties they face in implementing WTO agreements.

Negotiations on these and other topics have resulted in major updates to the WTO rulebook in recent years. A revised Government Procurement Agreement – adopted at the WTO’s 8th Ministerial Conference in 2011 – expanded the coverage of the original agreement by an estimated US$ 100 billion a year.

At the 9th Ministerial Conference in Bali in 2013, WTO members struck the Agreement on Trade Facilitation, which aims to reduce border delays by slashing red tape.

When fully implemented, this Agreement – the first multilateral accord reached at the WTO – will cut trade costs by more than 14% and will lift global exports by as much as US$ 1 trillion per year.

The expansion of the Information Technology Agreement – concluded at the 10th Ministerial Conference in Nairobi in 2015 – eliminated tariffs on an additional 200 IT products valued at over US$ 1.3 trillion per year. Another outcome of the Conference was a decision to abolish agricultural export subsidies, fulfilling one of the key targets of the UN Sustainable Development Goal on “Zero hunger”.

Most recently, an amendment to the WTO’s Intellectual Property Agreement entered into force in 2017, easing poor economies’ access to affordable medicines. The same year saw the Trade Facilitation Agreement enter into force.

**3. WTO Agreements:**

How can you ensure that trade is as fair as possible, and as open as is practical? By negotiating rules and abiding by them.

The WTO’s rules – the agreements – are the result of negotiations between the members. The current set is largely the outcome of the 1986- 94 Uruguay Round negotiations, which included a major revision of the original General Agreement on Tariffs and Trade (GATT).

The Uruguay Round created new rules for dealing with trade in services and intellectual property and new procedures for dispute settlement. The complete set runs to some 30,000 pages consisting of about 30 agreements and separate commitments (called schedules) made by individual members in specific areas, such as lower tariffs and services market-opening.

Through these agreements, WTO members operate a non- discriminatory trading system that spells out their rights and their obligations. Each member receives guarantees that its exports will be treated fairly and consistently in other members’ markets. Each promises to do the same for imports into its own market. The system also gives developing economies some flexibility in implementing their commitments.

**4. Goods**

It all began with trade in goods. From 1947 to 1994, the GATT was the forum for negotiating lower tariffs and other trade barriers; the text of the GATT spelt out important rules, particularly non- discrimination. Since 1995, the Marrakesh Agreement Establishing the WTO and its annexes (including the updated GATT) has become the WTO’s umbrella agreement. It has annexes dealing with specific sectors relating to goods, such as agriculture, and with specific issues such as product standards, subsidies and actions taken against dumping.

A recent significant addition was the Trade Facilitation Agreement, which entered into force in 2017.

**5. Services**

Banks, insurance firms, telecommunications companies, tour operators, hotel chains and transport companies looking to do business abroad enjoy the same principles of more open trade that originally only applied to trade in goods. These principles appear in the General Agreement on Trade in Services (GATS). WTO members have also made individual commitments under the GATS stating which of their service sectors they are willing to open to foreign competition, and how open those markets are.

**6. Intellectual property**

The WTO’s Intellectual Property Agreement contains rules for trade in ideas and creativity. The rules state how copyrights, patents, trademarks, geographical names used to identify products, industrial designs and undisclosed information such as trade secrets – “intellectual property” – should be protected when trade is involved.

**7. Dispute settlement**

The WTO’s procedure for resolving trade conflicts under the Dispute Settlement Understanding is vital for enforcing the rules and therefore for ensuring that trade flows smoothly. Governments bring disputes to the WTO if they think their rights under the WTO agreements are being infringed. Judgements by specially appointed independent experts are based on interpretations of the agreements and individual members' commitments. The system encourages members to settle their differences through consultation with each other. If this proves to be unsuccessful, they can follow a stage- by-stage procedure that includes the possibility of a ruling by a panel of experts and the chance to appeal the ruling on legal grounds. Confidence in the system is borne out by the number of cases brought to the WTO – more than 500 cases since the WTO was established compared with the 300 disputes dealt with during the entire life of the GATT (1947-94).

**8. Trade monitoring**

The WTO's Trade Policy Review Mechanism is designed to improve transparency, to create a greater understanding of the trade policies adopted by WTO members and to assess their impact. Many members see the reviews as constructive feedback on their policies. All WTO members must undergo periodic scrutiny, each review containing reports by the member concerned and the WTO Secretariat. In addition, the WTO undertakes regular monitoring of global trade measures. Initially launched in the wake of the financial crisis of 2008, this global trade monitoring exercise has become a regular function of the WTO, with the aim of highlighting WTO members' implementation of both trade- facilitating and trade-restricting measures.

**9. Building Trade Capacity in Developing Economies:**

Over three-quarters of WTO members are developing or least-developed economies. All WTO agreements contain special provisions for them, including longer time periods to implement commitments, measures to increase their trading opportunities and support to help them build the infrastructure needed to participate in world trade.

A WTO Committee on Trade and Development looks at developing economies’ special needs. Its responsibility includes implementation of the WTO agreements, technical cooperation and the increased participation of developing economies in the global trading system.

The Aid for Trade initiative, launched by WTO members in 2005, is designed to help developing economies build trade capacity, enhance their infrastructure and improve their ability to benefit from trade- opening opportunities. So far, over US$ 340 billion has been disbursed to support Aid for Trade projects. A Global Review of the initiative is held every two years at the WTO’s headquarters.

The Enhanced Integrated Framework (EIF) is the only multilateral partnership dedicated exclusively to assisting least developed countries (LDCs) in their use of trade as an engine for growth, sustainable development and poverty reduction. The EIF partnership of 51 countries, 24 donors and eight partner agencies, including the WTO, works closely with governments, development organizations, civil society and academia. The EIF has invested in over 170 projects, with US$ 220 million committed to supporting the poorest countries in the world.

Another partnership supported by the WTO is the Standards and Trade Development Facility (STDF), set up to help developing economies meet international standards for food safety, plant and animal health and access global markets. The WTO houses the Secretariat and manages the STDF trust fund, which has provided financing of over US$ 40 million to support projects in low-income economies.

**10. Technical Assistance and Training**

The WTO organizes hundreds of technical cooperation missions to developing economies annually. It also holds many trade policy courses each year in Geneva for government officials. Regional seminars are held regularly in all regions of the world, with a special emphasis on African countries. E-learning courses are also available. In 2017, some 18,500 participants benefited from WTO training aimed at improving understanding of WTO agreements and global trade rules.

**Trade Related Intellectual Property Tights:**

TRIPS provide minimum standards in the form of common set of rules for the protection of intellectual property globally under WTO system. The TRIPs agreement gives set of provisions deals with domestic procedures and remedies for the enforcement of intellectual property rights.

Member countries have to prepare necessary national laws to implement the TRIPs provisions. TRIPs cover eight areas for IPRs legislation including patent, copyright and geographical indications.

**The TRIPs Regime**

A breakthrough of the GATT signed in 1994 was that it brought TRIPs as a common standard for the protection of intellectual property globally. Implication of TRIPs is that member countries should design domestic intellectual property legislations on the basis of the TRIPs provisions.

**TRIPs as WTO’s IPR Regime**

TRIPs is considered as a major achievement of the Uruguay Round as an international trade agreement. At the trade negotiations, the developed countries were succeeded in linking intellectual property rights with trade. Until then, the World Intellectual Property Organization (WIPO) was the exclusive international institution dealing with intellectual property. With TRIPs, the WTO also emerged as the institution for the protection and promotion of intellectual property globally.

**The Agreement on Trade-Related Investment Measures (TRIMs):**

These are the rules that apply to the domestic regulations a country applies to foreign investors, often as part of an industrial policy. The agreement, concluded in 1994, was negotiated under the WTO's predecessor, the General Agreement on Tariffs and Trade (GATT), and came into force in 1995. The agreement was agreed upon by all members of the World Trade Organization. Trade-Related Investment Measures is one of the four principal legal agreements of the WTO trade treaty.

TRIMs are rules that restrict preference of domestic firms and thereby enable international firms to operate more easily within foreign markets. Policies such as local content requirements and trade balancing rules that have traditionally been used to both promote the interests of domestic industries and combat restrictive business practices are now banned.

**How it came in action:** In the late 1980s, there was a significant increase in foreign direct investment throughout the world. However, some of the countries receiving foreign investment imposed numerous restrictions on that investment designed to protect and foster domestic industries, and to prevent the outflow of foreign exchange reserves.

Examples of these restrictions include local content requirements (which require that locally produced goods be purchased or used), manufacturing requirements (which require the domestic manufacturing of certain components), trade balancing requirements, domestic sales requirements, technology transfer requirements, export performance requirements (which require the export of a specified percentage of production volume), local equity restrictions, foreign exchange restrictions, remittance restrictions, licensing requirements, and employment restrictions.

These measures can also be used in connection with fiscal incentives as opposed to requirement. Some of these investment measures distort trade in violation of GATT Articles III and XI, and are therefore prohibited.

Until the completion of the Uruguay Round negotiations, which produced a well-rounded Agreement on Trade-Related Investment Measures (hereinafter the "TRIMs Agreement"), the few international agreements providing disciplines for measures restricting foreign investment provided only limited guidance in terms of content and country coverage. The (Organization for Economic Co-operation and Development) OECD Code on Liberalization of Capital Movements, for example, requires members to liberalize restrictions on direct investment in a range of areas. The OECD Code's efficacy, however, is limited by the numerous reservations made by each of the members.

In addition, there are other international treaties, bilateral and multilateral, under which signatories extend most-favored-nation treatment to direct investment. Only a few such treaties, however, provide national treatment for direct investment. The Asia-Pacific Economic Cooperation Investment Principles adopted in November 1994 are general rules for investment but they are non-binding.

**GATS (General Agreement on Trade in Services)**

The creation of the GATS was one of the landmark achievements of the Uruguay Round, whose results entered into force in January 1995. The GATS was inspired by essentially the same objectives as its counterpart in merchandise trade, the General Agreement on Tariffs and Trade (GATT): creating a credible and reliable system of international trade rules; ensuring fair and equitable treatment of all participants (principle of non-discrimination); stimulating economic activity through guaranteed policy bindings; and promoting trade and development through progressive liberalization.

While services currently account for over 60 percent of global production and employment, they represent no more than 20 per cent of total trade (BOP basis). This — seemingly modest — share should not be underestimated, however, many services, which have long been considered genuine domestic activities, have increasingly become internationally mobile.

This trend is likely to continue, owing to the introduction of new transmission technologies (e.g. electronic banking, tele-health or tele-education services), the opening up in many countries of long-entrenched monopolies (e.g. voice telephony and postal services), and regulatory reforms in hitherto tightly regulated sectors such as transport.

Combined with changing consumer preferences, such technical and regulatory innovations have enhanced the “tradability” of services and, thus, created a need for multilateral disciplines.

**Trade and Environment:**

Sustainable development and protection and preservation of the environment are fundamental goals of the WTO. They are enshrined in the Marrakesh Agreement, which established the WTO, and complement the WTO’s objective to reduce trade barriers and eliminate discriminatory treatment in international trade relations. While there is no specific agreement dealing with the environment, under WTO rules members can adopt trade-related measures aimed at protecting the environment provided a number of conditions to avoid the misuse of such measures for protectionist ends are fulfilled.

The WTO contributes to the protection and preservation of the environment through its objective of ensuring sustainable development and avoiding protectionism, through its rules and enforcement mechanism, and through work in different WTO bodies.

Trade liberalization and stable and predictable trade conditions support the environment. An important element of the WTO’s contribution to sustainable development and protection of the environment comes in the form of furthering trade opening in goods and services to promote economic development, and by providing stable and predictable conditions that enhance the possibility of innovation. This promotes the efficient allocation of resources, economic growth and increased income levels that in turn provide additional possibilities for protecting the environment. The importance of trade’s contribution to efforts on sustainable development and the environment has been recognized in such forums as the 1992 Rio Summit, 2002 Johannesburg Summit and 2005 UN World Summit. Under WTO rules, members can adopt trade-related measures aimed at protecting the environment. A number of WTO cases have covered environmental measures

WTO institutions advance dialogue and understanding of trade and environment linkages. The negotiations on trade and the environment are part of the Doha Development Agenda launched at the Fourth WTO Ministerial Conference in Doha, Qatar, in November 2001. The overarching objective is to enhance the mutual support of trade and environmental policies.

**International efforts on the environment** **policies**

There are about 200 international agreements (outside the WTO) dealing with various environmental issues currently in force. They are called multilateral environmental agreements (MEAs).

About 20 of these include provisions that can affect trade: for example they ban trade in certain products, or allow countries to restrict trade in certain circumstances. Among them are the Montreal Protocol for the protection of the ozone layer, the Basel Convention on the trade or transportation of hazardous waste across international borders, and the Convention on International Trade in Endangered Species (CITES).

Briefly, the WTO’s committee says the basic WTO principles of non-discrimination and transparency do not conflict with trade measures needed to protect the environment, including actions taken under the environmental agreements. It also notes that clauses in the agreements on goods, services and intellectual property allow governments to give priority to their domestic environmental policies.

The WTO’s committee says the most effective way to deal with international environmental problems is through the environmental agreements. It says this approach complements the WTO’s work in seeking internationally agreed solutions for trade problems. In other words, using the provisions of an international environmental agreement is better than one country trying on its own to change other countries’ environmental policies.

The committee notes that actions taken to protect the environment and having an impact on trade can play an important role in some environmental agreements, particularly when trade is a direct cause of the environmental problems. But it also points out that trade restrictions are not the only actions that can be taken, and they are not necessarily the most effective. Alternatives include: helping countries acquire environmentally-friendly technology, giving them financial assistance, providing training, etc.

The problem should not be exaggerated. So far, no action affecting trade and taken under an international environmental agreement has been challenged in the GATT-WTO system. There is also a widely held view that actions taken under an environmental agreement are unlikely to become a problem in the WTO if the countries concerned have signed the environmental agreement, although the question is not settled completely. The Trade and Environment Committee is more concerned about what happens when one country invokes an environmental agreement to take action against another country that has not signed the environmental agreement.

**Recent Developments in TRIPs:**

WTO members agreed by consensus to appoint Roberto Azevêdo for a second four-year term as Director-General, beginning on 1 September 2017. He was the only candidate nominated for the post when the process closed on 31 December 2016. Xavier Carim (South Africa), Chair of the General Council – the WTO’s highest level decision-making body in Geneva – oversaw preparations for the 11th Ministerial Conference (MC11), held in Buenos Aires in December.

The Conference ended with ministers adopting decisions on fisheries subsidies, e-commerce, small economies and intellectual property and establishing a working party on the accession of South Sudan. Substantive progress was not possible in other areas under discussion but the Ministerial Conference-11 Chair noted that WTO members agreed to advance negotiations on all remaining issues.

During the year, the General Council regularly reviewed progress in implementing decisions taken at the two previous ministerial conferences, in 2013 and in 2015. In particular, the Chair regularly reported on the implementation of the Nairobi Decision on Export Competition, which commits WTO members to eliminate agricultural export subsidies.

The protocol amending the TRIPS Agreement entered into force on 23 January 2017 upon its acceptance by two-thirds of the WTO membership. The protocol eases poorer WTO members’ access to medicines by allowing generic versions of patented medicines to be produced under compulsory licenses for export to countries that cannot manufacture the medicines for themselves.

The Trade Facilitation Agreement (TFA) entered into force on 22 February 2017 after acceptances of the required two thirds of WTO members were received. By speeding up the movement of goods across borders, the Agreement is expected to reduce trade costs globally by an average of over 14 per cent. The TFA Committee started work under its first chair.

**Recent Developments in TRIMs**:

The TRIMs Committee heard concerns about three new investment measures at its two meetings in 2017, all concerning alleged local content requirements, which stipulate that at least part of a good or service should be locally produced. The first measure, discussed at the request of Canada and the United States, concerns guidelines on domestic content in information communications technologies adopted by Nigeria.

The second, discussed at the request of the United States, refers to requirements adopted by Indonesia for dairy importation and distribution. The third, discussed at the request of the European Union and the United States, relates to Turkey’s policy in the pharmaceutical sector. The Committee continued to discuss measures that were raised in previous years. These included measures adopted by Argentina in its auto parts industry and by China covering the use of technology by companies in the insurance industry. A number of Indonesian measures have been questioned, including the Industry Law and Trade Law, as well as requirements in the telecommunications sector, the energy sector and the retail sector. Members again raised concerns about the implementation of Russia’s import substitution policy.

The Committee took note of one new notification submitted by Malawi under Article 6.2 of the TRIMs Agreement, which requires WTO members to notify the Committee of all publications in which TRIMs may be found, including those applied by regional and local governments and authorities within their territory.

**MODULE-6: INTERNAIONAL TRADE AND ECONOMIC**

**DEVELOPMENT**

Importance of Trade in Development:

For many developing countries, progression from low income to middle and upper middle-income country status rests heavily on successful trade in regional and global markets

Conventional theory suggests that there is a standard process through which this takes place.

* **Exporting primary goods** (commodities) in which a country has a natural comparative advantage
* **Import substitution** – where a country develops a domestic manufacturing capability and capacity e.g. tomato growing businesses can build tomato processing factories
* **Export-focused manufacturing production** taking advantage of lower unit cost labour and increasing economies of scale in production

Many sub Saharan African countries and nations such as India and Sri Lanka have a trade ratio lower than the world average. However for others, trade is a significant percentage of national income and competitiveness in international markets has a huge bearing on their overall macroeconomic performance and development prospects.

**Successful trade provides for developing/emerging nations:**

* A source of foreign currency to help a nation’s balance of payments (trade surplus countries build up US$ reserves)
* An important way of financing imports of essential imports of capital equipment / technologies and energy supplies
* An injection of demand into the circular flow of income and spending + creating positive export multiplier effects
* Increased employment in export industries and related industries which can lead to rising per capita incomes and also stronger Human Development Index scores
* Falling prices for consumers helps to increase real incomes e.g. by opening up markets to new competition

**Terms of Trade and Economic Development:**

Terms of trade represent the ratio between a country's export prices and its import prices. The ratio is calculated by dividing the price of the exports by the price of the imports and multiplying the result by 100. When a country’s TOT is less than 100%, more capital is leaving the country than is entering the country. When the TOT is greater than 100%, the country is accumulating more capital from exports than it is spending on imports.

**Factors Affecting Terms of Trade**:

A variety of factors affect the TOT, and some are unique to specific sectors and industries. Scarcity, or the amount of goods available for trade, is one factor influencing the TOT. For example, during the commodity price boom of the early 2000s, developing countries experienced increases in their terms of trade. When selling a certain quantity of commodities, such as oil and copper, they could buy more consumer goods from other countries.

The size and quality of goods also affect TOT. Larger and higher-quality goods will likely cost more. If goods are sold for a higher price, a seller will have additional capital to purchase more goods.

**Fluctuating Terms of Trade**:

When a country’s TOT improves, for every unit of export that a country sells, it can purchase more imported goods. Therefore, an increase in the TOT may be beneficial because the country needs fewer exports to buy a given number of imports. When a country’s TOT deteriorates, the country must export a greater number of units to purchase the same number of imports. The Prebisch-Singer hypothesis states that some emerging markets, or developing countries, have experienced declining TOT because of a generalized decline in the price of commodities relative to the price of manufactured goods. In the past two decades, however, a rise in globalization has reduced the price of manufactured goods. Thus, industrialized countries' advantage over developing countries is becoming less significant.

**Import Substitution and Export Promotion:**

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

The trade restrictions are intended to “protect” domestic industries so that they can gain comparative advantage and substitute domestic goods for formerly imported goods. IS policies are largely based on the belief that economic growth can be accelerated by actively directing economic activity away from traditional agriculture and resource based sectors of the economy towards manufacturing.

The broad range of tariffs, quotas and outright prohibitions on imports that are part of IS policies are clearly not a form of infant industry protection. The infant-industry argument states that sectors and industries that can reasonably be expected to gain comparative advantage, after some learning period, should be protected.

But the broad protection under IS policies usually protect all industries indiscriminately, whether they generate technological externalities or have any chance of achieving competitive efficiency.

**b) Export Promotion Policy:** Export promotion policies reflect the interest of national governments to stimulate exports. Subsidies, tax exceptions, and special credit lines are the main instruments used to promote exports. The regulatory aspects of export promotion changed significantly in the late twentieth century. In the past export promotion activities were not substantially regulated, but increasingly since the creation of the World Trade Organization (WTO) in 1995 some export promotion activities have been identified as trade–distorting practices.

The WTO has devised rules that allow countries that have been affected by the export promotion practices of their trading partners to use the WTO’s dispute–settlement procedure and in some cases retaliate.

Export promotion is sometimes seen as a complementary development strategy to import protection. While import protection usually allows infant industry to develop, export promotion allows access to external markets. Foreign demand is often required by the limited size of domestic markets and the need to achieve economies of scale, essential in many productive activities. In a 1984 article Paul Krugman argued that, under increasing returns to scale, import protection may act as a form of export promotion, because in this case protection would allow considerable gains in terms of productivity that would enhance the possibilities of exporting. However, in policy circles export promotion or export oriented industrialization (EOI) is seen more often as an alternative development strategy to import substitution industrialization (ISI).

There are two main interpretations about the advantages of export promotion. One has a laissez–faire bias, while the other emphasizes the role of state intervention in promoting exports. Conventional wisdom suggests that an emphasis on exports forces integration into world markets and a more efficient allocation of resources, because external markets impose discipline by eliminating uncompetitive firms. In other words, exports affect positively the supply side of the economy. This view, exposed by Ian Little, Tibor Scitovsky, and Maurice Scott in 1970 and by Bela Balassa in 1971, was influential within the World Bank and the International Monetary Fund (IMF), and it shaped the Structural Adjustment Programs (SAPs) of the 1980s and influenced the liberalization strategy of the Washington Consensus. The studies by Anne O. Krueger and Jagdish Bhagwati, both in 1978, and by Demetris Papageorgiou, Michael Michaely, and Armeane M. Choksi in 1991 suggested that ISI policies generally did not produce sustainable increases in income per capita and that export promotion policies were more appropriate for achieving that goal. Export promotion, in this view, is associated with liberalization and market reforms.

**Major Ten Problems of the Developing Countries Related to Trade:**

* 1. **Primary Exporting:** Most of the developing countries, in its initial stage of development are exporting mostly primary products and thus cannot fetch a good price of its product in the foreign market. In the absence of diversification of its export, the developing countries have failed to raise its export earnings.
  2. **Un-Favourable Terms of Trade:** Another problem of trade faced by these developing countries is that the terms of trade are always going against it. In the absence of proper infrastructure and the quality enhancement initiative, the terms of trade of these countries gradually worsened and ultimately went against the interest of the country in general.
  3. **Mounting Developmental and Maintenance Imports:** The developing countries are facing the problem of mounting growth of its developmental imports which include various types of machineries and equipment’s for the development of various types of industries as well as a huge growth of maintenance imports for collecting intermediate goods and raw materials required for these industries. Such mounting volume of imports has been creating a serious problem towards round management of international trade.
  4. **Higher Import Intensity:** Another peculiar problem faced by the developing countries is the higher import intensity in the industries development resulting from import intensive industrialization process followed in these countries for meeting the requirements of elitist consumption (viz., colour TVs, VCR, Refrigerators, Motor cycle, cars etc.). Such increasing trend towards elitist consumption has been resulting a huge burden of burgeoning imports in these developing countries, resulting serious balance of payment of crisis.
  5. **BOP Crisis:** The developing countries are facing the problem of burgeoning imports and sluggish growth in its exports resulting in growing deficit in its balance of payments position. In some countries, this deficit has gone to such an extent at a particular point of time that ultimately it led to a serious crisis in its international trade.
     1. **Lack of Co-ordination:** The developing countries are not maintaining a good co-ordination among themselves through promotion of integration economies grouping, formation of union etc. Thus in the absence of such co-ordination, the developing countries could not realize those benefits of foreign trade which they could have realised as a result of such economic grouping.
     2. **Depleting Foreign Exchange Reserve and Import Cover:** The developing countries are sometimes facing the problems of depleting foreign exchange reserves as a result of growing volume of imports and continuous balance of payment crisis. Such depleting foreign exchange reserve results in shorter import cover for the country.
     3. **Steep Depreciation:** Steep depreciation of the currency with dollar and other currencies in respect of developing countries has been resulting in a considerable increase in the value of its imports which ultimately leads to huge deficit in its balance of trade.
     4. **Higher Prices of POL imports:** The worsening of the current account deficit in balance of payments of the developing countries has been partly on account of higher price of POL imports charged by the oil producing countries especially since the Gulf War.
     5. **International Liquidity Problem:** Most of the developing countries has been facing all the more serious international liquidity problem. Accordingly, these countries are experiencing chronic deficiency of capital and technology resulting heavy dependence on the developed countries for their scarce resources.

**References,**

1. Salvatore Dominick (2014). "International Economics", 11th edition, Macmillan publishing company, New York.
2. Mannur, H.G. (1999). "International Economics", 2nd Edition, Vikas Publishing House, New Delhi.
3. Kumar Raj (2008). "International Economics", Excel Books Publishing company, New Delhi.
4. Södersten Bo (1970). "International Economics", Harper & Row Publishing company, University of California.