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M.L. Gorbunova

**WORLD ECONOMY AND INTERNATIONAL ECONOMIC
RELATIONS**

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М.Л. Горбунова

МИРОВАЯ ЭКОНОМИКА И МЕЖДУНАРОДНЫЕ ЭКОНОМИЧЕСКИЕ ОТНОШЕНИЯ

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В настоящем пособии изложены учебно-методические материалы по курсу «Мировая экономика и международные экономические отношения» для иностранных студентов, обучающихся в ННГУ по направлению подготовки 38.03.01 «Экономика» (бакалавриат).

Учебно-методическое пособие может быть использовано студентами финансово-экономических специальностей, изучающим английский язык для профессиональных целей.

Ответственный за выпуск:
председатель методической комиссии ИЭП ННГУ,
к.э.н., доцент Летягина Е.Н.

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Unit 1. Introduction to the World Economy and International Economic Relations

The globalization challenge. Current international economic problems. Classifications of countries based on their level of development. International economics state and non-state actors

International economics is a branch of economic thought that dates back to XIV century when the mercantilism, the first economic doctrine focusing on international economic relations, appeared. Since that time, the study of world economic processes became one of the most developed part of economic theory. Strictly speaking, this discipline focuses on a global system of national economies connected by different forms of international economic relations.

As a part of economic theory, international economics uses the same analytical methods, because the motives and behavior of agents are the same in international economic relations as they are in domestic transactions.

The major trend of the world economy is the globalization. It is creating many opportunities and risks to the nations and their economic agents across the globe. In economic terms, the globalization means a high interdependence among countries, an impossibility of an autonomous autarchic development, and international competitors for almost all business agents.

The contemporary subject matter of international economics includes

- Operation of global economy as a market one. There is a plenty of national economic realities and each single country may have single features typical for traditional or planned economic system. However, the methodology of international economics considers the global economic system and cross-border economic relations as market ones. Therefore, international trade, factor movements, cross-border monetary and financial cooperation are based upon such categories as competition, autonomous decision-making of economic agents, supply and demand, free price mechanism. In the real world, however, there is no such thing as a truly market economy, the international economic theory tends to simplify real-world processes;
- Cross-border commercial flows of goods, services and production factors. Not all goods and services are traded internationally. According to this aspect, goods and services are divided into tradable and non-tradable. The tradable goods move freely in international trade. They can be easily obtained from the international markets or sold abroad in a case of excess. The price on the internal market and competition depends on the global dynamics. Non-tradable goods are not moveable across the borders. The most part of services and some goods are non-tradable either because of their nature or due to high transportation costs per product unit, high tariffs or other restrictions. Examples of internationally non-tradable goods may be found in the sectors of housing, electricity generation, transport, educational services, personal services, etc.;
- International monetary and financial system. On the one hand, international money serves so-called real operations, i.e. exchange of goods, services and factors, under this logic, the exports, imports, inflows and outflows of foreign loans and investments determine currency supply and demand and dynamics of respective exchange rates. On

the other hand, exchange rates dynamics that may be generated by market expectations, rumors, governmental announcements and other noneconomic factors affects trade and investment. In 2008, with the global financial crisis the debate on a new global functional currency, US dollar substitute or complement, was opened. Should it be new supra-national currency or single one? This dispute has relevant practical implications for economic agents all over the world, because true global currency should realize typical money functions as medium of exchange, unit of cost and store of value across the globe;

- Theory and practice of global economic governance. Because of complex and contradictory nature, international economic policy coordination works for solving global problems that a single country is not able to figure out. All international organizations, for example UN, the WTO, the IMF encourage economic relations between countries and global prosperity. However, these respectable organizations have attached a lot of criticism because of predominant influence of developed countries on a decision-making process.

The global community needs to resolve some actual international economic problems, although they may differ among organizations and scholars. A non-exhausted list of them includes:

1. Global financial and economic instability. The world economy faces the periodical economic recessions in advanced countries and the reduction in economic growth in emerging markets. The United States have structural imbalances, Japan and Western Europe suffer from slow growth, the transition economies of Central and Eastern Europe face an insufficient restructuring [Salvatore, 2013].
2. Resource scarcity, climate change, environmental degradation. All these phenomena inhibit opportunity for the global sustainable development.
3. Deep poverty in many countries and global health crises. Millions of people all over the world starve each day. Theirs health needs remain unmet. This situation is unacceptable from an ethical point of view and leads to further global problems involving almost all advanced and less advanced countries.
4. Excessive fluctuations in exchange rates, interests, stock prices and structural imbalances regarding real and financial markets. These trends interfere the specialization, international trade, and investment.
5. Widening trade protectionism and trade wars in conditions of political controversy and economic stagnation. This problem is now intensified by the competitive challenges that national economies face from the outside world.

Because of size and complexity of a global economy, there are two ways to structure it. The *first way* is to rank countries. There are many country classifications based upon a single criterion or a combination of them:

- a. Geographical position. Neighboring countries may have comparable resources pools, face same economic problems, and realize common, sometimes copied from each other, development patterns. Examples are Southeast Asian countries, Central and Eastern European countries, Latin American countries;
- b. GDP or GNI per capita. The World Bank proposed the classification. In a large extent, the average income of a country's citizens coincides with a country development. The same World Bank later transformed the ranking into the Human development report based upon homonym index. Countries by income are divide into low income, lower middle income, upper middle income, high income ones;
- c. Country economic size or potential. The criteria of the ranking are territory, population, GDP, access to natural resource, etc. A country with a larger economic potential is more self-sufficient, independent on the international stage than a smaller one. This may serve as a foundation for economic growth and prosperity and affect decisions for foreign direct investment, for example;
- d. Member of relevant formal or informal international bodies as the OECD, OPEC, G7, G20, BRICS and so on. The OECD membership means high level of country's development as well as its strong commitment to the free market system;
- e. Human development index level. The same World Bank later transformed the ranking into the Human development report based upon homonym index. Countries by income are divide into very high, high, medium and low human development. The Human Development Index understands human well-being (ultimate policy goal) as individual capabilities to access to health, education, and goods.

The most relevant classifications are analytical groupings provided by the World Bank (the WB) and the International Monetary Fund (the IMF) on the basis economic and financial data submitted by member states. They are dichotomous and include industrial, developed countries or *the Global North*, on the one hand, and developing, less-developed, primary producing in less developed areas countries or *the Global South*, on the other hand. The intermediate categories are capital-surplus oil-exporting countries (1978, the WB), primary producing countries in developed areas (early 1970s the IMF), other high-income countries (1974, the IMF), other Europe, Australia, New Zealand, South Africa (late 1970, the IMF), countries in transition (1993-2004, the IMF) (Nielsen, 2011). These approaches recognize the existence of three 'worlds' in contrast to concepts whereby the global economy is a system of center and periphery. The intermediate group usually is characterized by a high level of one of three pylons of the Human development index. It can be a per capita income as in oil and gas exporting countries, education level typical for countries in transition, former socialist Central and Eastern European countries, etc. Whereas the Global North countries are postindustrial market economies, the nations of the Global South typically have a dualistic economy built upon market fundamentals accompanied by traditional beliefs and values affecting decision-making.

The international economic relations (activities) connect single parts of the world economy. A brief description of different forms of international economic activity follows.

1. International trade. It represents exchange of goods and services across the borders and consists of the import and export. The international trade is leading and the oldest kind of international economic activity.
2. Production factors migration (movement). It includes capital flow, workforce mobility and technology transfer. They may support as well substitute, or ‘cannibalize’, international trade. The deficit of official statistics on topic inhibits their comprehensive measurement and research.
3. International monetary relations. The periodical monetary and financial conferences decide upon government of monetary relations among independent nation-states and introduce so-called Paris, Bretton-Woods and Jamaica Accords defining reserve or truly international in a sense of opportunity to fulfill all money functions worldwide currency and establishing exchange rate regime. All these agreements order international financial and commercial relations among economic agents worldwide.
4. Relations of economic integration. Few countries all over the Globe do not participate at the arrangements promoting reduction or elimination of economic barriers dividing countries. A unification of trade rules, financial and monetary policies permits to create a common economic space, reduces costs and extends markets for both consumers and producers in the countries taking part in the agreement.

The second approach to the world economic system sees it as a combination of the various actors characteristic for any economic system: households, firms, State, financial institutions. The specific world economy establishments are international organizations, regional trading blocs, free economic zones and NGOs. According to philosophical dichotomy the ‘subject–object’, not all economic agents mentioned above are independent subjects of the world economy. For example, there is a commonplace idea that only countries with export to GDP ratio less than 30% are truly self-sufficient in relation to the rest of the world. The subjectivity of the most significant international organizations and quite developed trading blocs (economic and currency unions, firstly) ascends from part of proper sovereignty transmitted by entering member States. The private agents such as multinational corporations (MNCs) or big NGOs, the Roman Catholic Church, the Green Peace, for instance, can influence have sometimes a decisive impact on the governments economically and politically inferior to them.

Unit 2. International trade theory

International trade: indicators, and problems. Mercantilists’ views on trade. Trade based on absolute advantage (Adam Smith). Trade based on comparative advantage (David Ricardo). Gains from trade with comparative advantage. Factor endowments and the Heckscher-Ohlin theory. Factor price and income distribution in the Heckscher-Ohlin theory. Economies of scale and international trade. Technological gap and product cycle models of the international trade. National competitive advantage theory.

Growth and development with international trade. The contribution of trade to development: UNCTAD and Generalized system of preferences. Immiserizing growth. Import-substitution vs export-oriented industrialization.

Let us focus on international trade. The international trade is the most traditional form of international business and a leading one among all other international activities. Thus, it serves as a rough estimation for cross-border investment and financial flows, technology transfer and its results, unilateral money transfer caused by migrants. There is a wide range of indicators providing information on the importance and development of country foreign trade activities in an international context. The indicators, which are collected and calculated on the annual basis, are

1. **Exports of goods and services** represent the monetary value (usually measured in current U.S. dollars) of all transactions involving a change of ownership from residents to nonresidents of general merchandise and services.
2. **Imports of goods and services** represent the monetary value (usually measured in current U.S. dollars) of all transactions involving a change of ownership from nonresidents to residents of general merchandise and services.
3. **Foreign trade balance or net exports** is the difference between exports and imports. It can be positive (surplus) or negative (deficit). A trade surplus leads to a net inflow of currency from foreign markets and creates a basis for further foreign investment. It is a measure of a country's production competitiveness. The situation is the opposite for a trade deficit. The advanced countries excluding Germany and Japan have a foreign trade deficit.
4. **Export propensity** is the ratio of exports to the gross domestic product (GDP) calculated on the same time basis.
5. **Import ratio** is the ratio of imports to the GDP.
6. **Import penetration rate or Import dependency** is the ratio of imports to the GDP adjusted for the foreign trade balance (difference between exports and imports). In other terms, it specifies the extent of dependency on importation in relation to domestic consumption.
7. **Openness index or Foreign trade-to-GDP ratio or Globalization index** is the ratio of country's sum of exports and imports to the country's GDP.

8. *Terms of trade* is indicate how the country's purchasing power of an export unit measured in terms of import units has changed on the base year. It is the relation between the export and import prices. The gains from the exports of same quantity of goods increase when the export prices rise or the import prices go down. The country's terms of trade are improved, and vice versa. It is calculated using index numbers and not absolute values. Some important modifications of this indicator are *income terms of trade* which is obtained by multiplying per volume of exports of a country and *single factoral terms of trade* calculated by multiplying terms of trade by an index of productivity changes in domestic export sectors (Jhingan, 2014). All these indicators focus on dynamics of country's gains from international commerce.

There are some open research questions in the field of international trade regarding

1. Impact of intra-firm trade on international commerce (for example a tax optimization may determine and diverge prices and directions of flows of goods and services observed by the official statistics); the lateral scientific inquiries regard influence of trade networks, significance of offshore production decisions and results of multiproduct firms international strategy;
2. Existence of positive influence of international trade on country's GDP growth and employment, what are the gains form trade and how they are distributed between countries and economic agents;
3. Uncertainties on trade policy effects. There is a tendency to support and promote free trade policy, because of its positive influence on output, utilization of resources, factor incomes, consumption and other relative indicators. However, the opposite opinion suggests nonexistence of non-interventional or laissez-faire trade policy that justifies a protection of certain domestic industries from foreign competition. This debate is relevant for all developing countries adopting a liberalization policy under international bodies and developed countries requirements.

International trade is one of the most conceptualized and studied economic phenomenon. The first economic doctrine on international trade or more precisely on international trade policy was mercantilism that spanned from the 16th to the late 18th century. The goal of these policies was to build a wealthy state by obtaining a positive balance of trade that would bring gold into the country. The idea was that national strength could be maximized by limiting imports and maximizing exports through appropriate import and export tariffs. Among the measures suggested there were embargoes upon raw materials export, the same restrictions on imports of any good producing by a country, promotion of unavailable raw materials import and so on. So, the mercantilists believed that a nation could gain in international trade only at the expense of other nations. Under that logic, the international trade is a zero-sum game and needs to be regulated.

As D. Hume and A. Smith showed later, this type of trade policy cannot last forever. First, because the world development would stop if every country wanted to sell abroad and no one wanted to buy abroad. Second, after a period of such policy being applied, an accumulation of gold

as an increase of money supply leads to inflation and to loss of price competitiveness against imported goods, if a country achieves an upper limit of production possibilities. Hence, the mercantilist policy is senseless and useless.

The continued pressure of growing capitalist business, initially in England and then in the rest of Europe, resulted in the implementation of laissez faire principles and trade based on *absolute advantage* proposed in Adam Smith’s book “Wealth of Nations” (1776). A country has an absolute advantage in producing a good if it is able to provide its lower absolute cost, i.e. use fewer resources (labor primarily) in its production than its partnering country. This consideration coincides with the labor theory of value introduced by Adam Smith and supported later by David Ricardo.

Example 1. Absolute advantage (cost) principle illustration

Table 2.1
Labor cost per unit of good, working hours

	Russia	Belorussia
Potato	4	3
Grain	5	6

Table 2.2
Output per hour (productivity), units

	Russia	Belorussia
Potato	0,25	0,33
Grain	0,2	0,17

The table 2.1 indicates that Russia has a lower absolute labor cost in grain cultivation, while the table 2.2 demonstrates its absolute advantage (higher productivity) for the good. Belorussia has a lower cost and higher productivity in potatoes production. The trade between countries will save about one working hour per unit for both goods. A. Smith considered the labor as unique production factor and labor cost in working hours can be easy transformed in monetary terms multiplying by hourly payment.

Because of model’s assumption of two countries and two commodities there may be a situation when one of two countries has absolute advantage (lower absolute cost) in both goods. In that case, the international exchange will not have a place. The table 2.3 reports the situation when Belorussia has an absolute advantage in both grain and potato production and hence no interest to trade with Russia.

Table 2.3
Labor cost per unit of good, working hours

	Russia	Belorussia
Potato	4	3
Grain	5	4

Table 2.4
Relative prices

	Russia	Belorussia
Potato, units of grain for unit of potato	0,8	0,75
Grain, units of potato for unit of grain	1,25	1,33

D. Ricardo overcame this limitation proposing to use comparative and not absolute cost for goods. The comparative or relative cost of good X is the amount of good B that might otherwise have been produced with the same quantity of labor (together with other production factors). Transforming the information of the table 2.3 into relative prices, we obtained the table 2.4.

Belorussia has a lower relative price for potatoes (0,75 unit of grain against 0,8 unit in Russia), while Russia has a relative advantage in grain cultivation.

A country has a comparative (relative) advantage in producing a good of its relative price (later nominated opportunity cost) is less than that of another trading country. Participating in the trade with Belorussia Russia gains additional 8 units of potato exchanging 100 units of grain for 133 units of potato at the foreign market and not for 125 units as at home. The same logic is valid for Belorussia that can obtain additional 5 units of grain exchanging 100 units of potato abroad and not at home.

Gottfried Haberler in 1936 explained the theory of comparative advantage by the opportunity cost theory and production possibility frontier. The concept of opportunity cost substituted the Ricardo's idea about comparative (relative) price. In the absence of trade, a nation's production possibility curve is also its consumption frontier. With trade, each nation can specialize in producing commodity of its comparative advantage (lower opportunity cost) and exchange part of its production with the other nation for the commodity of that country's advantage, i.e. of proper disadvantage.

Let's suppose that Russia possesses 2400 working hours as labor endowment, and Belorussia has 1200 working hours. For simplicity, the opportunity cost in both countries is constant (see Fig. 2.1). The Production Possibility Frontier of Russia passes from a combination of 480 units of grain (obtained by dividing 2400 hours of labor endowment of Russia by 5 working hours of grain's labor cost) corresponding and 0 units of potato to a combination of 0 units of grain and 600 units of potato (obtained in the same way). The Production Possibility Curve of Belorussia has extreme points corresponding to 300 units of grain and 0 units of potato, from one side, and 0 units of grain and 400 units of potato.

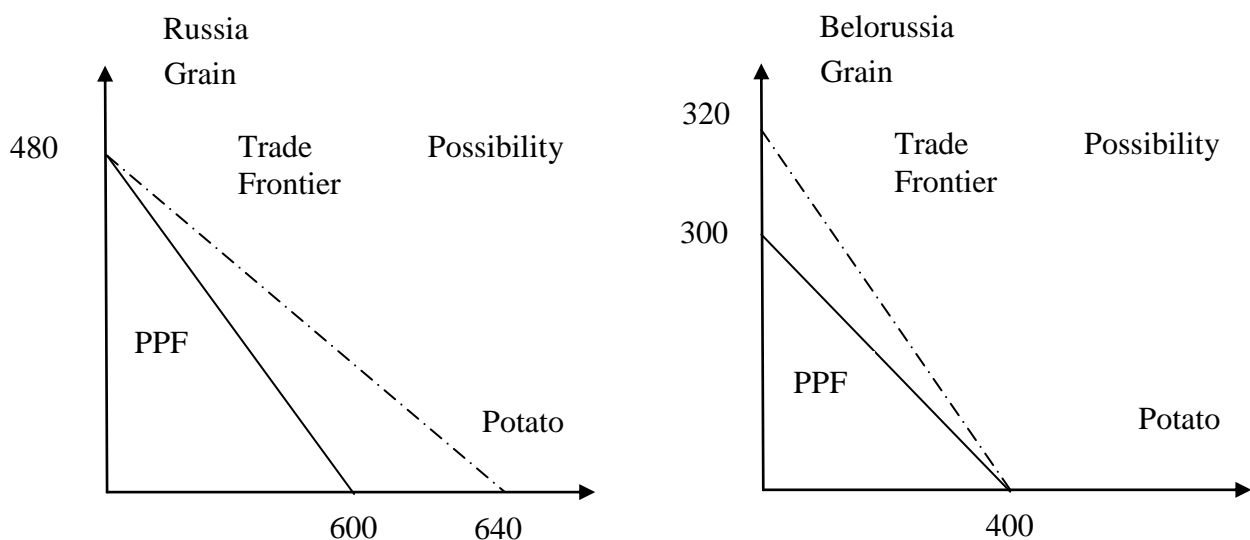


Fig.2.1. The Production and Trade (Consumption) Possibilities Frontiers of Russia and Belorussia

The historic significance of the Smith and Ricardo theories is the justification and promotion of free international trade and policy based on the good specialization and respective export of more efficient countries.

The next important development of international trade theory is the Heckscher-Ohlin theory (or model). This theory consisting of four fundamental propositions (theorems) focuses on the explanation of commodity trade patterns by the composition of countries' factor endowments and goods' factor intensity as well as the consequences of free trade for the functional distribution of income within trading countries.

The first contribution is the Heckscher-Ohlin theorem. It builds on two separate research works, Eli Heckscher's *The effect of foreign trade on the distribution of income* (1919) and Bertil Ohlin's *Interregional and International Trade* (1933). The Heckscher-Ohlin Theorem developed by Ohlin states that countries export those goods that require for their production relatively intensive use of those productive factors possessed locally in relative abundance, and import the commodity intensive in its relatively scarce and expensive factor. Therefore, they determined the basis of both absolute and comparative advantages and therefore reasons for international trade.

The second idea, factor price equalization or Heckscher-Ohlin-Samuelson theorem arises from homonymous P. Samuelson's article *International Trade and the Equalisation of Factor Prices* (1948). According to this theorem that the relative and absolute prices or returns for two identical factors will be equalized across countries because of international trade.

The third proposition is the Stolper-Samuelson theorem published in a joint article *Protection and Real Wages* (1941). According to it, an increase in the relative price of a commodity will rise the return to that factor which is used most intensively in the production of the good, and conversely, to a fall in the return to the other factor. If some factors are specific, i.e. can only be used in some industries, that trade will have a controversial effect: it will benefit the immobile production factors that are specific to export commodities and influence negatively factors specific to the nation's import-competing goods.

To complete the list of Heckscher-Ohlin theory's propositions, the Rybczynski Theorem (1955) emphasizes the relationship between factor availability and commodity outputs. The Rybczynski theorem states: when only one of two production factors is increased there is a relative increase in the production of the good using intensively that factor. This leads to a corresponding decline in that good's relative price as well as a decline in the production of the good that uses the other factor more intensively. The reason of the process is that expanding production of the intensive good also requires some of the other factor. This amount of the other factor must be drawn from the other industry, so its output declines. The Rybczynski theorem explains a famous phenomenon of the 'Dutch disease', i.e. deindustrialization following discovery, extraction and further export of a natural resource.

The first empirical test of the Heckscher-Ohlin model was conducted by Wassily Leontief in 1954 and led to a paradox. He found that U.S. import substitutes (which he used for modelling factors structure of normally imported commodities) were about 30 percent more capital-intensive

than U.S. exports. This result contradicts the Heckscher-Ohlin model's prediction based on the U.S. absolute leadership in capital endowment in the early postwar period.

Another major reason that international trade may take place is the existence of economies of scale in production. Economies of scale means that production at a larger scale can be realized at a lower cost. Although both trading partners have same level of productivity and mostly identical factor endowments, international trade exists. Each country produces the entire quantity of a certain commodity, one of the wide range, obtains lower costs comparing with the situation of production of less quantity for each variety. This phenomenon explains the existence of intra-industry international trade and trade between similarly gifted countries.

The Ricardo's and Heckscher-Ohlin theories are based on the unrealistic assumption that technology is the same in all trading countries. M.V. Posner in article *Technical Change and International Trade* (1961) recognized the effect of temporary technological monopoly of an innovating firm on its export leadership. There are two types of delay in competition: imitation lag and demand lag. The revealed imitation gap has three components [Jhingan, 2014]: domestic reaction lag, foreign reactions lag, and learning period. The first two lags regard a delay in competitors' reactions to pursue the innovating leader. The learning time is time taken by producers to master the production techniques for the new product. The demand lag refers to foreign consumers' reaction. The gaps in competitors' efficiency maintain export positions of the first inventor.

R. Vernon developed M Pozner's ideas and proposed to reflect on the product cycle's influence on the international trade and investment in homonymous paper *International Investment and International Trade in the Product Cycle* (1966). He noticed that many new products were developed in capital-rich and R&D-intensive countries. He derived three-phase model including production, trade and investment.

At the first, *new product*, stage the production requires cheap financial resources, highly skilled labor, and exclusive technological capabilities, therefore the production is located in developed countries, the promotion and sales regard domestic clients, the international trade and investment do not exist. At the next, *maturing product* stage, the mass production and distribution require a decrease in prices and costs, the innovative firm starts overseas sales. At the *standardized product* stage, the technological gap is overcome and the competitive advantage of the initial producer disappears, and the manufacturing operations become less sophisticated and shifts abroad, so the international trade takes the opposite direction.

Michael Porter proposed the national competitive advantage (NCA) concept in his book *The Competitive Advantage of Nations* (1990). Evaluating the key success factors of leading manufacturers in different industries, M. Porter discovered their preferential localization within a single country in a contradiction with marketing demand-driven orientation. Porter proposed a diamond-shaped diagram to outline four key factors of country's competitiveness (see Fig. 2.2). The four determining elements of the model are

1. Factor Conditions. The nation's position in factors of production, such as skilled labor or infrastructure, necessary to compete in a given industry.

2. Demand conditions. The nature of home-market demand for the industry product or service.
3. Related and Supporting Industries. The presence or absence in the nation of supplier industries and other related industries that are internationally competitive.
4. Firm Strategy, Structure and Rivalry. The condition in the nation governing how companies are created, organized, and managed, as well as the nature of domestic rivalry.

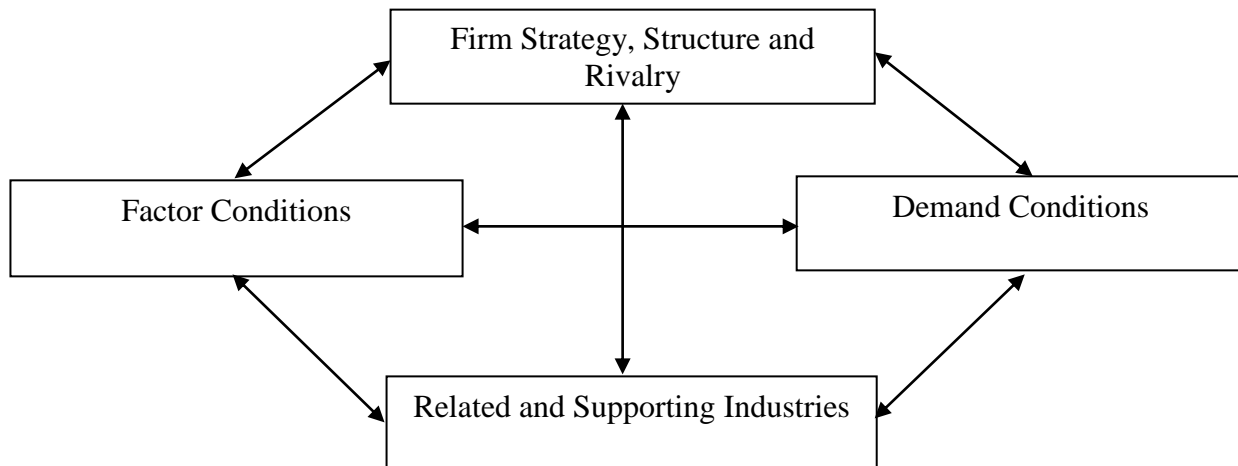


Fig. 2.2 Porter's Diamond of National Advantage

The resource endowments, technology and consumer tastes change over the time. It affects the comparative advantages of trading countries, the volume of trade and the welfare of each nation. First, the growth in capital and labor is considered. There are three situations in regard.

1. Labor and capital grow at the same rate (balanced growth). The nation's production possibility curve enlarges in all directions at the identical rate of factor endowment increase, the output per worker or productivity remains constant.
2. If labor grows faster than capital, the production possibility curve will shift more in the axes of labor, so the nation will be able to produce a greater quantity of labor-intensive commodity but the labor productivity will decrease.
3. If the capital grows faster than labor the opposite situation happens.

The extreme case of the growth in factor endowments is considered in the Rybczynski theorem when only one factor grows.

The technical progress decreases the amount of factors required to produce any given quantity of a commodity or a service and therefore push the production possibility curve outward increasing a nation's welfare. The influence of technological development on production and consumption and consequently on trade, however, can be protrade, anti-trade and neutral. Production is protrade if the growth in exportable goods is greater than the growth in importable goods. Consumption is protrade in the opposite case when the incentive of import occurs.

The Generalized System of Preferences, a fruit of the discussion within the United Nations Commission on Trade and Development in the 1960s partially is based on the protrade production and consumption concept. It is a system of preferential tariffs for developing countries when they exports to developed countries. Nevertheless, the relationship between trade and welfare is ambiguous. The growth in export without rising price leads to a deterioration of terms of trade. The

positive effect of growth on nation's welfare caused by export may be eliminated by the terms-of trade deterioration. This situation is known as 'immiserating growth'.

Unit 3. International trade policy

International trade policy: forms and tariff and nontariff tools. Nature and purpose of tariffs. Types of tariffs. Effects of a tariff in a small nation. Effects of a tariff in a large nation. Tariff escalation and effective rate of protection. Nontariff trade barriers: nature and basic types. Quotas, voluntary export restraint, and licensing. Hidden nontariff measures: technical and ecological standards, trade-related investment measures, government procurement and others. Financial nontariff measures: export subsidies, credits and insurance. Political economy of protectionism. The place and role of the WTO (WTO law).

International trade or commercial policy is a system of tariff and non-tariff restrictions altering volume, structure, and direction of international flows of goods and services. The intent of intervention in the foreign trade includes protection of the domestic market from foreign competition, support of national business abroad and the generation of tariff revenues.

Tariff or duty is a trade restriction in an indirect tax form whose value depends on three elements: (1) type of a good, (2) country of origin, (3) customs value. Tariff barriers are historic trade policy tool. Nowadays their role is diminished by the multiple tariff concession and reduction in the framework of the WTO and its predecessor, General Agreement on Tariffs and Trade (the GATT) rounds. Besides that, the WTO rules make almost impossible to levy tariffs on imported goods freely. Because of this, countries have shifted to non-tariff barriers. Therefore, tariffs are relatively low in developed countries; on the other hand, developing economies have high average tariffs in order to defend infant or labor-intensive industries appealing to the interests of future development, employment support and necessity to finance budget expenditures.

Non-tariff tool is any barrier to international trade flows of a kind differ commodity-based indirect tax. There are more than 100 types of them. The simplest classification of non-tariff barriers includes quantitative, hidden, and financial groups of non-tariff barriers.

According to intensity of tariff and non-tariff tools application, trade policy has three basic forms. The first one is *protectionism* that implies tariff restrictions comprising a relevant part of country's commerce and exceeding 30% and a wide range of non-tariff restrictions covering a significant part of trade. *Free trade policy* refers to minimal impact on export and import flows, it means that the trade-weighted tariff is below 5%, non-tariff measures are seldom used. Free trade policy is an ideal state of commercial policy, that is why it is promoted by advanced economies, but even they are far from its real implementation because their high salaries and therefor low price competitiveness in production of commodities except innovative ones.

The most part of countries accomplish a *restrained trade policy* based on targeting sectors, commodities to protect, and selecting countries to deal with. Typically, the regulation occurs in so-called 'sensitive industries' including agriculture, textiles, clothing, footwear, steel, and civil aircraft. Despite the prohibition of single country's discrimination by the WTO, regional trade blocs

represent a clear case of major trade preferences toward a group countries and automatic discrimination of all remained ones.

There are several classifications of tariffs that a country or group of countries can employ.

1. According to the object or direction of international trade, there are import, export and transit duties. Import duties are most frequently used. Export duties are proscribed in some countries, usually the developing countries tax raw material export as natural resource rent appropriation in the public interest. Some countries introduce export tariffs when the world price for a certain commodity is too high and the export decimates its domestic consumption. Transit duties are rare and used as trade war tool

2. According to the way of taxation, the duties are divided into *ad valorem*, specific, and compound ones. The *ad valorem tariff* is expressed as a percentage of the value of the commodity customs value of the traded commodity. The import duty on silk yarn in the Russian Federation equals to 5% of customs value. The specific tariff is a fixed sum per unit. Import duty on almond in shell in the United States amounts to 7.7¢/kg. *Compound* tariff combines both a specific and an *ad valorem* components. The Russian import tariff on drawing tables now equals to 20%, but not less than 0.5 € per kg. At the end of transition period after the Russian Federation's WTO accession will be 10 plus 0.06 € per kg.

3. According to the tariff column or country's of origin, the duties are divided into autonomous, conventional or most-favored nation (MFN) level and preferential. The *autonomous*, highest, level of tariff is for commodities originating from countries without a trade agreement with the country in consideration. The conventional tariff coincides with the WTO level of duty. The preferential duty is designed for trading bloc's partners or for the countries benefiting from the Generalized System of Preferences of the United Nations. The less developed countries enjoys zero-tariffs for the selected or complete nomenclature of commodities, the developing countries have normally 50 per cent discount for the MFN level. A country can skip every single item from the preferences of generalized system and diminish the discount rate. For example, historically Russia has a donor status in this system, but in front of economic difficulties, it excluded nonagricultural products from the preferences and diminished a discount until 25%.

4. Special duty types. They are varied. *Season tariffs* run few month a year or have a variable rate. *Countervailing duty* serves to offset the production or export subsidy in importing countries. *Anti-dumping* duty is a penalty imposed on abnormally low-priced imports, to increase their price in the importing country in order to protect domestic industry from harmful competition. *Safeguard duties* are temporary taxes applied when increased imports occurs.

The influence of tariff *in a small country* is considered by the partial equilibrium analysis. The first situation refers to *an import tariff introduction* (see Fig.3.1). D is the demand and S is the supply of a commodity in a domestic market. This country is small, price-taker. Therefore, the supply of import S_M is a horizontal line. With the free trade at the price P_M , the consumers of this country want to buy Q_{D1} units of the good and the producers are able to sell Q_{S1} of the good. Hence, the import Q_{M1} is equal to the difference ($Q_{D1} - Q_{S1}$). If now a tariff of t currency units per unit of

the good or $t\%$ per P_M is imposed on imports of the good, the price line shifts up to the position P_{M+t} , the new price for the domestic market.

With this increase in price, producers increase the supply until Q_{S2} units, and consumers buy less, Q_{D2} . The imports declines to Q_{M2} equal to the difference $(Q_{D2} - Q_{S2})$. The government will obtain revenues from the duty calculated as $T = (P_{M+t} - P_M) \times (Q_{D2} - Q_{S2})$.

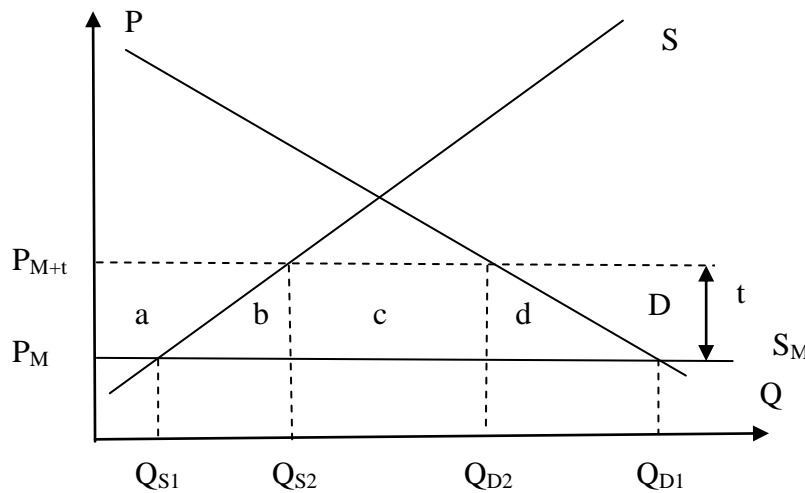


Fig. 3.1. The effects of an import tariff in a small nation

Summarizing the effects of the import tariff:

Consumption: 1) decrease in domestic consumption $(Q_{D1} - Q_{D2})$; 2) negative change in consumer surplus $(a+b+c+d)$;

Production: 1) increase in domestic production $(Q_{S1} - Q_{S2})$; 2) positive change in producer surplus (a) ;

International trade effect: decrease in units imported $(Q_{M2} - Q_{M1})$;

Government revenue: tax income (c) ;

Net welfare or deadweight loss: $(b+d)$.

In essence, consumers in a case of an import tariff ‘pay’ $(a+b+c+d)$ to producers (a) and to government (c) . The amount $(b+d)$ is not transferred to anybody.

The influence of an *export tariff in a small country* can be considered in the same manner (see Fig.3.2). Since the country is small, the demand for exports D_X is a horizontal line. With the free trade at the price P_X , the consumers of this country are able to buy only Q_{D1} units of the good and the producers want to sell Q_{S1} of the good. Hence, the export Q_{X1} is equal to the difference $(Q_{S1} - Q_{D1})$. If now a tariff of t currency units per unit of the good or $t\%$ per P_X is imposed on exports of the good, the price line shifts up to the position P_{X+t} , the new, lower, price for the domestic market. The price goes down because of impossibility to influence the export price by local producers forced to pay the tax from the price and therefore to collect less effective gross returns.

With the reduction of effective price, producers decrease the supply until Q_{S2} units, and consumers buy more, Q_{D2} . The exports declines to Q_{X2} equal to the difference $(Q_{D2} - Q_{S2})$. The government will obtain revenues from the duty calculated as $T = (P_X - P_{X+t}) \times (Q_{S2} - Q_{D2})$.

Summing up the effects of the export tariff in a small nation:

Consumption: 1) increase in domestic consumption ($Q_{D2} - Q_{D1}$); 2) positive change in consumer surplus (a);

Production: 1) decrease in domestic production ($Q_{S1} - Q_{S2}$); 2) negative change in producer surplus (a+b+c+d);

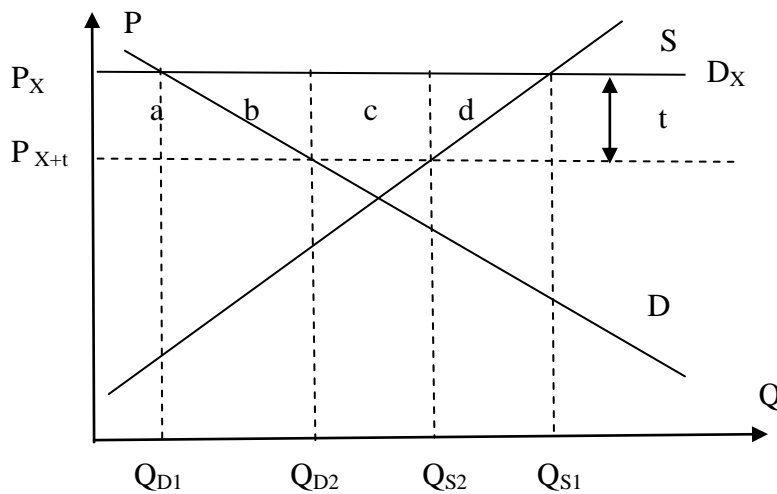


Fig. 3.2. The effects of an export tariff in a small nation

International trade effect: decrease in units exported ($Q_{X1} - Q_{X2}$);

Government revenue: tax income(c);

Net welfare or deadweight loss: (b+d).

Fundamentally, producers in a case of an import tariff ‘pay’ (a+b+c+d) to consumers (a) and to government (c). The net loss (b+d) is not assigned to anybody.

Not all countries are ‘small nation’ like. For example, eventual U.S., EU or China restrictions on imports could deteriorate the situation in exporting country, because the reduced U.S. demand would cause import prices to drop. As a result, the price increase to domestic consumers would be less than the size of tariff expressed in monetary units because the tariff would be added to the import price, which has fallen (see Fig.3.3). With the free trade at the price P_M , the consumers of this country want to buy Q_{D1} units of the good and the producers are able to sell Q_{S1} of the good. Hence, the import Q_{M1} is equal to the difference ($Q_{D1} - Q_{S1}$). If now a tariff t is imposed on imports of the good, the price for consumers shifts up to the position P_{M+t} , the new price for the domestic market. Meanwhile, the price for importers or foreign producers goes down until P_{EF} level effectively determined their total revenues.

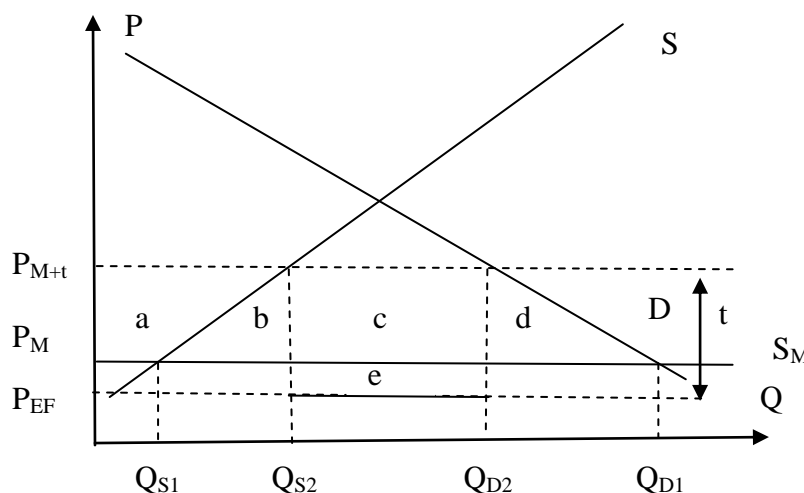


Fig. 3.3. The effects of an import tariff in a large nation

With this increase in price, producers increase the supply until Q_{S2} units, and consumers buy less, Q_{D2} . The imports declines to Q_{M2} equal to the difference ($Q_{D2} - Q_{S2}$). The government will obtain revenues from the duty calculated as $T = (P_{M+t} - P_{EF}) \times (Q_{D2} - Q_{S2})$.

Summarizing the effects of the import tariff:

Consumption: 1) decrease in domestic consumption ($Q_{D1} - Q_{D2}$); 2) negative change in consumer surplus (a+b+c+d);

Production: 1) increase in domestic production ($Q_{S1} - Q_{S2}$); 2) positive change in producer surplus (a);

International trade effect: decrease in units imported ($Q_{M2} - Q_{M1}$);

Government revenue: tax income (c+e);

Net welfare or deadweight loss (gain): the common effect depends on difference [e-(b+d)].

If area (e) exceeds area (b+d) then there is a gain to the nation introducing the tariff. The opposite situation leads to the net loss of the importing country. Therefore, a large country can benefit from import duty imposing. From the whole world prospective, a tariff always deteriorates efficient allocation of scarce resources.

The nominal tariff rate misestimates the degree of protection from foreign competition, because the tariff protection expressed in currency units falls on domestic value added which is less than the price of a commodity. Value added is the difference between selling price and cost of intermediate goods. The *effective rate of protection* (ERP) is calculated by the formula:

$$ERP = (VA_1 - VA_0) / VA_0$$

where: VA_1 – value added after taxation; VA_0 – value added before taxation.

The rate of effective protection in an industry may also be negative. It happens if the condition of tariff escalations is not satisfied. The WTO'S glossary defines *tariff escalation* as situation when import duties on raw materials are lesser than duties on semi-processed products, which are still less than duties on finished products. The policy of tariff escalation allows to protect the processing industries without contradiction to the WTO's rules.

Although nontariff barrier varies significantly (see Tab. 3.1), their impact on trade flows is compatible with the results of tariffs imposing. They increase the cost of international operations and reduce export or imports. The influence of *import quota* – representing a limit on the quantity of imports allowed – is similar to an import tariff effect for a small nation (see Fig.3.4) as well as for a large nation.

Table 3.1

Nontariff barriers classification

Group of restrictions	Definition	Examples
Quantitative	Limitation on	<i>Import and export quotas</i>

	quantity or value of imports or exports allowed into a country	<i>Embargo</i> (the total prohibition of imports or exports) <i>'Voluntary' exports restraints</i> <i>Import or export licenses</i>
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End of table 3.1

Group of restrictions	Definition	Examples
Hidden	Domestic economic policy tools affecting international trade flows	<i>Health/technical/product/labor/environmental standards</i> <i>Tools of sanitary, phytosanitary and veterinary control</i> <i>Local content requirements (Trade-related investment measures – TRIMS)</i> <i>Government procurement</i> <i>Customs and administrative entry procedure, etc.</i>
Financial	Measures relating to or involving money	<i>Export subsidies, credits and risks compensation fees</i> <i>Border and other internal taxes or charges</i> <i>Undervalued currency policy</i> <i>Domestic subsidies</i> <i>Import deposits</i>

With the free trade at the price P_M , the consumers buy Q_{D1} units of the good and the producers sell Q_{S1} of the good. Hence, the import Q_{M1} is equal to the difference $(Q_{D1} - Q_{S1})$.

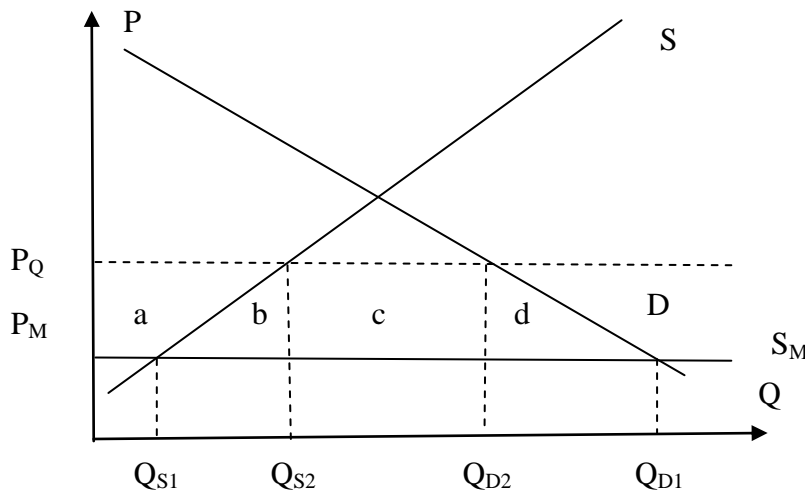


Fig. 3.4. The effects of an import quota in a small nation

If a quota of q units is imposed on imports of the good, the price line shifts up to the position P_Q , the new price for the domestic market. With this increase in price, producers increase the supply until Q_{S2} units, and consumers buy less, Q_{D2} . The imports declines to Q_{M2} equal to the difference $(Q_{D2} - Q_{S2})$. The government revenues from the quota (c) are in question now. If the government applies open auctions to sell rights to import quoting commodity, the import stakeholders will pay a right price that is equal to the difference $(P_Q - P_M)$. If the state use for import permissions approach 'take as you go', the above-mentioned difference will be the additional revenue of the successful

importers'. This alternative represents the worst way to distribute the quotas from the nation's welfare.

The effects are:

Consumption: 1) decrease in domestic consumption ($Q_{D1} - Q_{D2}$); 2) negative change in consumer surplus (a+b+c+d);

Production: 1) increase in domestic production ($Q_{S1} - Q_{S2}$); 2) positive change in producer surplus (a);

International trade effect: decrease in units imported ($Q_{M2} - Q_{M1}$);

Government revenue: depends on efficiency of licensing;

Net welfare or deadweight loss: from (b+d) to (b+c+d).

Despite negative effects of interventionist trade policy leading to net welfare loss, the justifications or *political economy arguments in favor of protectionism* are numerous. The typical arguments of policy makers in favor of protection trade policy are

- 1) support of employment;
- 2) increase of budget revenues;
- 3) security considerations;
- 4) absence of countries which do not protect proper markets absolutely.

Economists consider them as an aid to some special interest group that worsens welfare of nations and the world as a whole. The generally recognized plausible argument is the *infant industry* defense since the protection of such sectors can help to slide faster on the experience curve reaching economy of scale and may be sustainable comparative advantage. Another reasonable argument in favor of protectionism is the implementation of industrial and strategic trade policy. In a case of industries with significant internal and/or external economies of scale, a government contributes to comparative advantage development in an industry, while trading partners will support and specializes in other industries.

The existing *arguments in favor of free trade policy* are

- 1) optimal allocation of resources all over the world leading to an increase in global output;
- 2) possibility responsive restrictions leading to eventual trade disputes and wars;
- 3) reduction of poverty by decreasing the cost of living;
- 4) moral arguments, for example, that free trade prevents conflicts or that reciprocity in free trade policy is in interests of all producers and exporters.

Unit 4. Economic integration and international trading arrangements

Essence, reasons and drivers of economic integration. Forms of economic integration. Trade creation and trade diversion in customs unions. Static and dynamic benefits from economic integration. Economic integration in various geographic regions.

There are different approaches to economic integration's definition. First, it is an international economic activity developing by the majority of countries. Many countries belong to more than one trading bloc. Second, economic integration is a process of liberalization where barriers to trade,

investment and migration are reduced or eliminated, at the highest level of economic integration, nations agree to coordinate fiscal and monetary policy by adopting fixed exchange rates or a single currency as in the European Union, tax equalization, and budget principles unification. All these processes serve to facilitate business conditions across the nations increasing reference markets. From strictly scientific point of view, economic integration at early stages is the commercial policy of discriminative decrease until complete removal of trade barriers only for the participating nations.

The examples of regional economic integration spread worldwide are the European Union (EU), North American Free Trade Agreement (NAFTA), Southern Common Market (Mercosur), West African Economic and Monetary Union (UEMOA), Eurasian Customs Union.

The core *reason* of economic integration is the need of enterprises for more secure business expansion to a greater market. Hence, the interest groups promote an alleviation of trade barriers at the intergovernmental level.

Drivers of economic integration are numerous

1. *Geographic proximity of countries* distinguish trading blocs from other institutions of international public law.
2. *Same level of economic development of member states* is historic attribute of economic integration. Recently, there is an appearance of trade blocs both the high-income industrialized and developing countries participate to. For example, NAFTA or EU28 represent such 'North-South' regional agreements.
3. *Presence of common problems* pushes countries to adopt international coordination policy.
4. '*Domino effect*' process when each successive integration increases the pressure of non-member state to join the trading bloc.

There are several *stages* or *forms* in the process of economic integration varying from a very loose association of countries in a preferential trade to the complete economic integration, where the participating countries have a joint fiscal and monetary system. In increasing order of consolidation, the most common forms are preferential trade agreements, free trade areas, customs unions, common markets, and economic unions.

A *preferential trade agreement* provides lower duties on trade in a limited range of goods among participating countries than on trade with the rest of the world. This form or phase of integration is not welcome by the WTO, because does not suppose directly the full trade liberalization and represents a trade discrimination of nonmember states.

Free trade areas are based on the complete removal of all tariff and nontariff barriers on trade among countries. Each single member state, however, preserves its own trade policy toward third countries. Besides that, the liberalization within free trade zones does not comprise a whole range of goods and services. The EU's example demonstrates that the agricultural sector was outside of integration regulation until the common market phase. The NAFTA agreement is also underdeveloped excluding some service sectors from the provision of national treatment.

A *customs union* goes beyond a free trade area unifying customs territory and barriers to international trade for the third parties. Creation of customs union represents a challenge in a course of integration, and the number of them is significantly less the quantity of free trade areas. That is why, the unification of commercial policy toward outsiders requires indigenous efforts due to divergence of economic structure and respective interest of insiders. At this level, the trade liberalization is formally accomplished with the exclusion for the agriculture as in the EU, unique bloc concluded this phase of integration.

A *common market* deals with the production factors liberalization and allows the free movement of capital, labor, and technology among member states. Only the EU arrived until this phase of economic integration, Mercosur is a project yet which only pretends to realize this type of integration bloc.

An *economic and currency union* is designed to harmonize or even unify the monetary and fiscal policies of members. The creation of distinctive economic area equalizes the conditions of living and doing business in all participating countries. This is the most progressive form of integration. The evident example of economic union is the European one. D. Salvatore describes the U.S. as an example of complete economic and monetary union [Salvatore, 2013].

There are two static effects of forming a customs union called trade creation and trade diversion. The *trade creation* effect is considered by the partial equilibrium analysis. The situation refers to an *import tariff* abolition (see Fig.4.1). *D* is the demand and *S* is the supply of a commodity in a domestic market. This country is small, price-taker. With the regulated trade at the price P_{M+t} , the consumers of this country want to buy Q_{D1} units of the good and the producers are able to sell Q_{S1} of the good. Hence, the import Q_{M1} is equal to the difference $(Q_{D1} - Q_{S1})$. If within the customs union a tariff t on imports is eliminated, the price line shifts down to the position P_M , the new price for the domestic market will coincide with the world one.

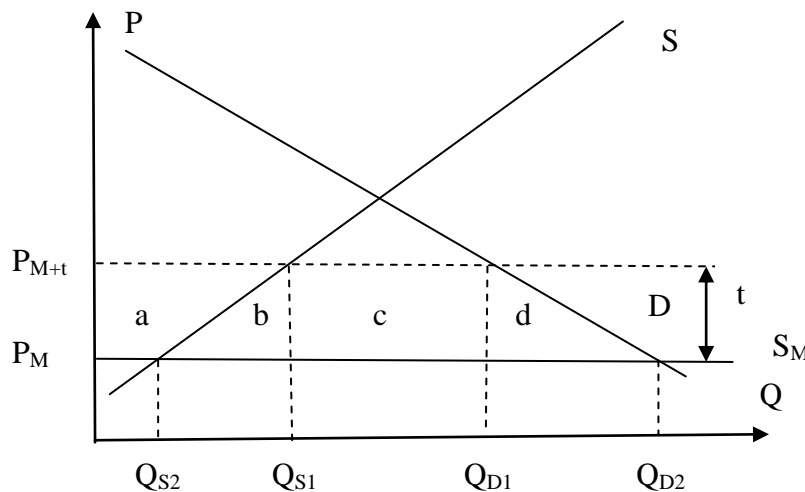


Fig. 4.1. A trade-creating customs union

With this decrease in price, producers diminish the supply until Q_{S2} units, and consumers buy more, Q_{D2} . The imports increase to Q_{M2} equal to the difference $(Q_{D2} - Q_{S2})$. The government losses revenues from the duty calculated as $T = (P_{M+t} - P_M) \times (Q_{D1} - Q_{S1})$.

Summarizing the effects of the customs union:

Consumption: 1) increase in domestic consumption ($Q_{D2} - Q_{D1}$); 2) positive change in consumer surplus (a+b+c+d);

Production: 1) decrease in domestic production ($Q_{S2} - Q_{S1}$); 2) negative change in producer surplus (a);

International trade effect: increase in units imported ($Q_{M2} - Q_{M1}$);

Government revenue: tax loss (c);

Net welfare gain: (b+d).

In essence, tariff revenues disappears, an amount of money is transferred from domestic producers to domestic consumers.

The *trade diversion* effect takes place if the most efficient producer of the imposed good is outside the customs union. Therefore, there are two foreign suppliers, the outsider with the import price P_M , and insider with the higher price $P_{M'}$. With the regulated trade at the price P_{M+t} , equal to sum (P_{M+t}) the consumers of this country want to buy Q_{D1} units of the good and the producers are able to sell Q_{S1} of the good. Hence, the import Q_{M1} is equal to the difference ($Q_{D1} - Q_{S1}$). If a creation of customs union occurs and the import tariff t is removed (see Fig.4.2), the price line shifts down to the position $P_{M'}$, the new price for the domestic market will be equal to the price of less-efficient member state. Therefore, a part of domestic production in a nation that is a member of the customs union is replaced by lower-cost less-effective imports from member nation.

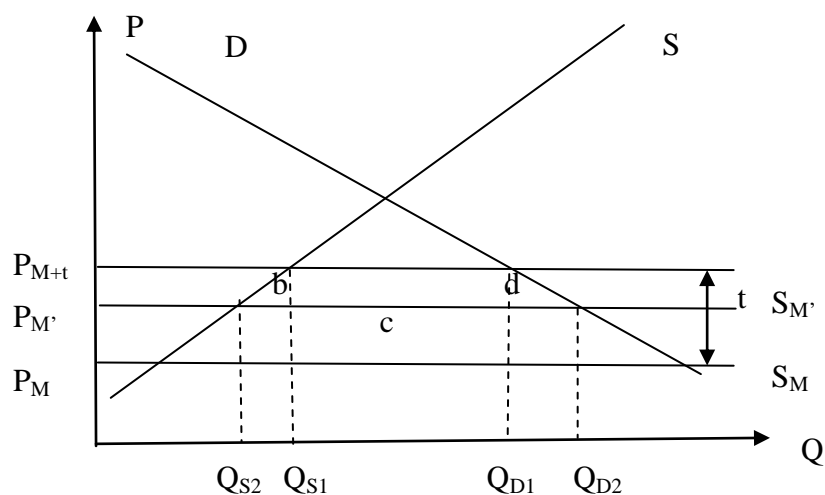


Fig. 4.2. A trade-diverting customs union

With this decrease in price, producers diminish the supply until Q_{S2} units, and consumers buy more, Q_{D2} . The imports increase to Q_{M2} equal to the difference ($Q_{D2} - Q_{S2}$). The government losses revenues from the duty calculated as $T = (P_{M+t} - P_M) \times (Q_{D1} - Q_{S1})$. The losses would be partially compensated by increasing consumer surplus due to price shifting from P_{M+t} to $P_{M'}$. The rectangle (c) is welfare loss from diversion.

The effects of the customs union with the most efficient producer outside:

Consumption: 1) increase in domestic consumption ($Q_{D2} - Q_{D1}$); 2) positive change in consumer surplus lesser than in a case of customs union with the efficient producer;

Production: 1) decrease in domestic production ($Q_{S2} - Q_{S1}$); 2) negative change in producer surplus;

International trade effect: increase in units imported ($Q_{M2} - Q_{M1}$);

Government revenue: tax loss;

Net welfare gain (loss): $(b+d) - (c)$.

Essentially, tariff revenues disappears; an amount of money is transferred from domestic producers to domestic consumers. The impact on net welfare depends on difference $[(b+d) - (c)]$. If it is negative, the trade-diverting effect is stronger than the trade-creating effect, and the customs union in question has a lesser, but still negative impact not only on global welfare, but also on the welfare of a country importer in question.

Another static effect of economic integration is an extension of the *theory of the second best*, which declares that if all the conditions required to maximize welfare or reach Pareto optimum cannot be satisfied, trying to satisfy as many as possible does not necessarily or usually lead to the second-best position [Salvatore, 2013; Viner, 1950]. It means that a removal of trade barriers only among members of a certain trading bloc does not generate automatically the second best situation. It matches with the trade-diversion effect discussed earlier when formed customs union could increase as well as reduce the welfare of participating countries.

Besides the static welfare effects, the countries forming a trading bloc can get *important dynamic benefits* from economic integration which are increased competition, economies of scale, stimulus to investment, and better utilization of economic resources. The first two predispositions reduce prices on the enlarged domestic market of customs union, so the consumer surplus (welfare) enlarges. The amplification of common, ‘single nation’ like, domestic market attracts a greater investment in production facilities as well as in portfolio of various securities. A better utilization of resources that occurs within the common market triggers further integration steps connected to the labor and capital movement liberalization.

Table 4.1

Economic integration in various geographic regions

Integration bloc	Participants	Region	Level of economic integration	Characteristics
North American Free Trade Agreement (NAFTA)	Canada, Mexico, and the United States	North America	Free trade zone (planned) Preferential trade zone (achieved)	The largest in the world in terms of combined nominal as well as PPP GDP in the 2013
West African Economic and Monetary Union (UEMOA – Union économique et monétaire ouest-africaine)	Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal, Togo	West Africa	Economic union (planned) Customs Union (achieved)	The furthest along the path toward integration of all the regional groupings in Africa. Presence of combined indirect taxation regulations, regional

				structural and sectoral policies
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End of table 4.1

Integration bloc	Participants	Region	Level of economic integration	Characteristics
Eurasian Customs Union	Belarus, Kazakhstan, Russian Federation	Eurasia	Customs Union (achieved) Eurasian Economic Union (planned) Single market (planned)	Created from a disintegrated country and based upon another trading bloc the Commonwealth of Independent States (i.e. the former URSS)
Southern Common Market (Mercosur - Mercado Común del Sur)	Argentina, Brazil, Paraguay, Uruguay, Venezuela (full members); Chile, Bolivia, Colombia, Ecuador, Peru (associate partners); New Zealand, Mexico (observer countries)	South America (Southern Hemisphere)	Common market (planned) Customs union (achieved) Free movement of manpower (achieved)	Three-level membership
European Union (EU28)	Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, United Kingdom	Western and Central Europe	Economic union	The most developed integration bloc with a combined population of over 500 million inhabitants

Unit 5. International production factors movements and multinational corporations

Production factor mobility. Notion and types of foreign capital movements. Motives for international portfolio and direct investments. Reasons for the existence of multinational corporations: OLI-paradigm. Problems created by multinational corporations in the home and host countries. International labor migration: notion, indicators, and types. Welfare effects and political economy of labor migration. Technology transfer: basic forms.

The movement of capital, labor, and technology between countries is mainly caused by different factor endowments and intensities, and consequently, by respective prices. The production

factor migration substitutes and accompanies flows of commodities and services. The standard model of factor movement considers two countries, donor and recipient, and three effects:

- 1) impact on GDP;
- 2) change in moving factor revenues;
- 3) change in other factor revenues.

The factor-exporting country or 'donor' manifests a decline in both the GDP and the remaining factor revenues, and a growth in the migrating factor revenue. The factor-importing country or receiver experiences the opposite dynamics; therefore, there is an increase in both the GDP and the revenues of non-migrating factors, and a decline in the revenues of imported factor. At the global level an increase in the world GDP occurs, it means that a factor migration lead to an optimal resource utilization.

Capital is absolutely mobile factor, because in a world there are few barriers to the movement of capital. The *international capital migration* consists of inflows and outflows of funds conditioned by the temporal utilization of capital abroad in a form of loans, stocks acquiring, intergovernmental credits or profit repatriation. The capital flows metaphorically represent a circulatory system of the global economy since they determines production (employment), consumption and general living conditions in any geographical community of reference. Following general laws of factor migration, capital moves from nations where capital is abundant and cheap to countries where capital is limited and expensive. Nevertheless, there is also an opposite flow from high return on capital countries to low return ones justified by risk diversification needs. However, if we consider risk-adjusted return the capital movements the capital flows follow the logic of pursuing a higher return on real investment. This phenomenon is typical only for monetary flows unlike labor migration and technology transfer.

The international movement of capital has several structural taxonomies

- 1) *functional division* based on sphere of activity and type of return includes foreign loans and international investment. *Foreign loans* regard fixed or floating income capital credit, with a low uncertainty and risk expectations. The income on foreign loans is the interest. Loans are typically released by banking sector as well as official public institutions as governments and international bodies. *International investments* do not guarantee directly return on capital. The investment income is profit or security risky return. Historically, investment is connected to the real sector, building new facilities or new assets abroad. The purchase of shares and bonds abroad involves also financial institutions;
- 2) classification based on *terms of investment* supposes existence of short-term (up to a year), mid-term (1-3 years) and long-term (over 3 years) capital flows;
- 3) classification on *source of capital* presumes division of capital flows into official and non-official ones.

The international investment flows as a part of capital flows include portfolio investment and direct investment. *Portfolio investment* is the international exchange of financial assets regarding purchases of stocks, bonds, bank accounts, etc. in another country, and then international portfolio of assets is formed.

Direct investment implies not only acquisition of foreign assets, but control of activity as well. What constitutes a controlling cannot be precisely determined. Clearly, anything above 50% ownership is a controlling interest, but according international standards an ownership recognized as direct investment with 10% control. The motives of portfolio and direct investment partially coincides (see Tab. 5.1)

Table 5.1.

Motives for international portfolio and direct investments

<i>Common motives</i>	
<ul style="list-style-type: none"> • Higher real income considerations; • Balance of payment effect; • Tax optimization both in source and host countries 	
<i>Distinct motives</i>	
International portfolio investment	Foreign direct investment (FDI)
<ul style="list-style-type: none"> • Risk diversification; • Advantage of different interest rates 	<ul style="list-style-type: none"> • Horizontal integration; • Vertical integration (downstream and upstream activities); • Business diversification

Foreign direct investment is realized mostly by multinational corporations (MNCs) or transnational corporations (TNCs). Strictly speaking, a TNC belongs to the capital of a single nation, while the owners of MNC represent few countries. In a general case, these two terms are used in parallel. The common trait of both types of companies is the possession of production facilities in more than nation, for this purpose the international commercial presence is not enough.

MNCs create and develop the competitive advantages that can be conceptualized as in OLI-model, also known as the eclectic paradigm, proposed by John H. Dunning [Dunning, 1980].

The OLI paradigm collects and arranges all revealed by 1980 motives of foreign direct investment into three pillars

1. *Ownership advantages* (trademark, production technique, entrepreneurial skills, returns to scale). Ownership specific advantages refer to the proper unique assets allowing to obtain an additional revenue alone or in combination.
2. *Location advantages* (logistically favorable geographical position, right to enter a foreign market, access to raw materials and low-cost labor, moderate regulation in tax, labor, custom, environmental law). Location advantages leads to an economy of production resources and a respective cost reduction.
3. *Internalization advantages* (advantages of well-controlled hierarchical structure of business). Firms earn from internal and not external organization of transactions. It is a business trend characteristic for 1970s, in the contemporary conditions of digital revolution, the strategies to outsource (and offshore) win.

The rapid growth and significant role of MNCs since WWII has raised important issues concerning their effect on the source and host countries as well as the world economy (see Tab. 5.2).

Table 5.2.

Pros and cos of MNC's operating

Areas Effects	Home country	Host country	World economy
Pros	Increase of jobs in administrative and financial service Better utilization of a country's unique (intangible, intellectual) resources	Increase of jobs, GDP, and tax revenues Access to new technology	Increase in the world output and welfare Achievement of economies of scale and diminishing of production costs and selling prices Establishment of minimum standards
Cos	Transfer pricing, tax optimization, and budget shortfall Loss of jobs in production Eventual erosion of technological knowledge of the home nation Difficult monitoring of financial flows	Rising dependency on foreign firms Eventual erosion of technological knowledge of the host nation Abusive exploitation of local resources	Profit at the expense of the consumer, destruction of product diversity across the globe; Difficult for small local business that usually generates more jobs Violation of Western-type labor standards, humiliation of human dignity

International labor migration is the movement of people from one country to another for the purpose of employment. Labor is relatively mobile production factor, it means that is generally less mobile internationally than capital. It occurs, first, because labor migration depends on economic as well as on social and political reasons. Second, there are non-economic cost of labor migration connecting, for example, to ethnic contradictions, discriminations in the workplace, cultural alienation, isolation from family members and relatives, etc. The utilization of work force abroad is not immediate, except for nonqualified jobs not requiring a knowledge of local language or international jobs as a programmer, scientist, etc.

The OECD, other international organizations, and national authorities propose a set of indicators illustrating international migration, in particular labor force movement:

1. Inflows/outflows of foreign population (workers) by country.
2. Net migration (labor migration) balance by country.
3. Inflows of asylum seekers by country.
4. Stocks of foreign and foreign-born population (labor force) by country.
5. Stocks of foreign-born in selected OECD countries

The official statistics usually operates with general migration information that may not adequately reflect labor migration situation because of labor migration is narrower than general one, the data are not always publicly available, and besides that, almost all countries are affected by illegal migration flows not reflected in official statistics. All these circumstances impede migration studies.

Migration processes are not homogeneous and there are few types of international labor migration: *illegal migration*, *brain drain* (a flight away of valuable human capital from developing

countries and not only), *international retirement migration, remigration* toward home countries stimulated by developed countries' government.

Labor migration has the same effects of other factor movements described at the beginning of the unit

- wages diminishing and other factor income growth in the countries experiencing the influx of workers (major distributional issue);
- increase in the world income and output as well as in the host country's output;
- decrease in the country of emigration output;
- futile budget spending of labor-supplying countries in training and educating skilled workers, etc.

The theory of international economics considers *international technology transfer* as a particular form of international resource movement of significant relevance. First, the technology transfer shapes the world development picture. Second, nothing else determines better a division in global North and South in comparison to technological knowledge flows. International technology transfer depends on the country's capacity and policies, the size of the technological gap, the amount and quality of the technical information available.

The technology transfer includes commercial and noncommercial knowledge and competencies relocation.

Commercial technology transfer regards the applied sciences and can take a number of different forms

- patent sales;
- various licence agreements;
- Purchase contracts for machinery and know-how;
- technology transfer as an integral part of the machinery imported by the recipient;
- management contracts with suppliers;
- turnkey contracts, where suppliers guarantee the transfer of technology when they construct a factory, etc.

Non-commercial technology transfer is strictly connected to the fundamental knowledge exchange and may not have evident valuable results but without it the development of applied science slips. The transfer of non-commercial assets involves the training, the participation at scientific conferences and workshops, the accesses to publications, etc.

Unit 6. The balance of payments. Foreign exchange markets and exchange rates

The balance of payments: definition and use. The balance of payments accounting principles. Current, capital and official reserves accounts. Functions of foreign exchange market. Exchange rate types. The exchange rates and the balance of payments. Hedging and speculation on the foreign exchange markets. Fundamental and speculative factors of exchange rate dynamics. Purchasing-power parity approach. Elasticity approach. The monetary approach. The asset approach. Adjustment policies with flexible and fixed exchange rates.

The *balance of payments* is a synthesis of a nation's international transactions over some period of time, usually a year. International transactions represent concrete operations of a certain type of international economic relations. There are export and import operations, factor revenues as wages, license payments, movements, capital and credit flows, unilateral transfers, official aids.

The distinction between a domestic transaction and an international transaction, however, is not easy. For example, if a British rock band gave a concert on the Red Square and received a reward for the performance, is it an export for the Great Britain? Is the sale of Japanese car that was assembled in a factory near to Sankt-Petersburg from the special designed modules to a Russian client an export?

For balance of payments purposes, an entity is classified as domestic or foreign according to its normal residence or location. The British rock band was fund outside of the Great Britain, provided the entertainment service, collected the money, so this transaction will be an export for the United Kingdom and an import for the Russian Federation, although such sales may be difficult to capture completely in the balance of payment statistics.

In the cases when country exports or imports goods to and from other countries, invest and disinvest abroad its banks collect or deliver foreign currency, and these payment inflows and outflows together changes in the official reserves literally form a country's balance of payment.

Every international transaction has a matching inflow and outflow, physical operation side and payment side. An export leads to moving a good in a foreign country in exchange of a cash flow. A foreign rock band concert represents an import of a service (inflow of a 'good' in the broad sense) in return of the payment (outflow of monetary equivalent).

This matching of inflows and outflows for every international transaction represents a clear case of double-entry bookkeeping method. Every entry recording an inflow (outflow) in good or monetary terms in the balance of payments has a corresponding entry in opposite terms that records an outflow (inflow).

Transactions that give rise to a receipt of payments from foreign residents are recorded as credits and carry a '+' sign. Transactions that give rise to payments to foreign residents are recorded as debits and carry a '-' sign.

An export transaction leads to an inflow of funds so it will be recorded as a credit. Respectively an import transaction will be recorded as a debit. When financial assets are bought or sold, there is a corresponding flow of financial capital, which is documented as a *capital outflow* or a *capital inflow*. A capital outflow occurs whenever a foreigner sells a national asset and a national citizen buys a foreign asset.

The balance of payments structure consists of current, capital and official reserves accounts. The *current account* consists of the balance of trade (net exports), net factor income (earnings on foreign investments minus payments made to foreign investors) and net cash transfers.

Table 6.1

Balance of payment structure

<i>Receipts (Credits)</i>	<i>Payments (Debits)</i>
1.Export of goods.	Imports of goods.

<u>Trade Account Balance</u>	
2. Export of services. 3. Interest, profit and dividends received. 4. Unilateral receipts.	Import of services. Interest, profit and dividends paid. Unilateral payments.
<u>Current Account Balance (1 to 4)</u>	
5. Foreign investments. 6. Short term borrowings. 7. Medium and long term borrowing.	Investments abroad. Short term lending. Medium and long term lending.
<u>Capital Account Balance (5 to 7)</u>	
8. Errors and omissions. 9. Change in reserves. (+)	Errors and omissions. Change in reserve (-)
Total Receipts	= Total Payments

A current account surplus increases a country's net foreign assets and/or official reserves by the corresponding amount, and a current account deficit has an opposite influence. The *capital account* or the *financial account* reflects net change in ownership of national and foreign assets. A surplus in the capital account reflects a money inflow into the country. Such inflow may represent borrowings or sales of assets. A deficit in the capital account means a money outflow of the country, and it suggests the nation is increasing its ownership of foreign assets or lending funds abroad. *Official settlements account* is used in the balance of payments to keep track of a central bank's reserve asset transactions. It refers to operations involving gold, foreign exchange reserves, bank deposits and special drawing rights (SDRs), currency issued by the International Monetary Fund.

The parties involved in an international transactions must deal in foreign currency. If an Indian exporter sells goods to a Russian importer, with high probability the contract is stated in foreign currency for both counterparts. The importer will buy foreign currency at the Russian foreign exchange market to pay the bill from the exporter. Then, the exporter will receive foreign currency and will eventually exchange it for the local currency. An export operation generally leads to a sale of foreign currency and a purchase of local one. Exporters, foreign investors and creditors in a local market generate a supply of foreign currency. Importers, national investors abroad and lenders create a demand for foreign currency. This sort of exchange takes place on the *foreign exchange market* that consists of all the banks and foreign exchange dealers trading currencies.

The *exchange rate* can be expressed as the price in local currency of a foreign currency's unit (direct foreign currency quotation). Indirect quotation represents the price of a national currency's unit in foreign currency.

Thus the exchange rate, R (also nominated as e), for the U.S. dollar will be defined as

$$R = \text{RUR/USD.}$$

If $R=35.25$, then it costs 35.25 RUR to buy one U.S. dollar.

The number of dollars sold on the foreign exchange market is determined by the willingness of owners of dollars (exporters, foreign investors, etc.) to supply (sell) them for rubles at a particular exchange rate. As the exchange rate increases (more rubles per dollar) the quantity of dollars supplied will increase according to the supply law (S_{USD}). The demand curve for dollars is downward sloping because as the ruble cost of dollars decreases, more importers decide to buy goods abroad and ask for dollars at the foreign exchange market. The same logic is valid for national investors willing to buy assets abroad and asking for dollars also.

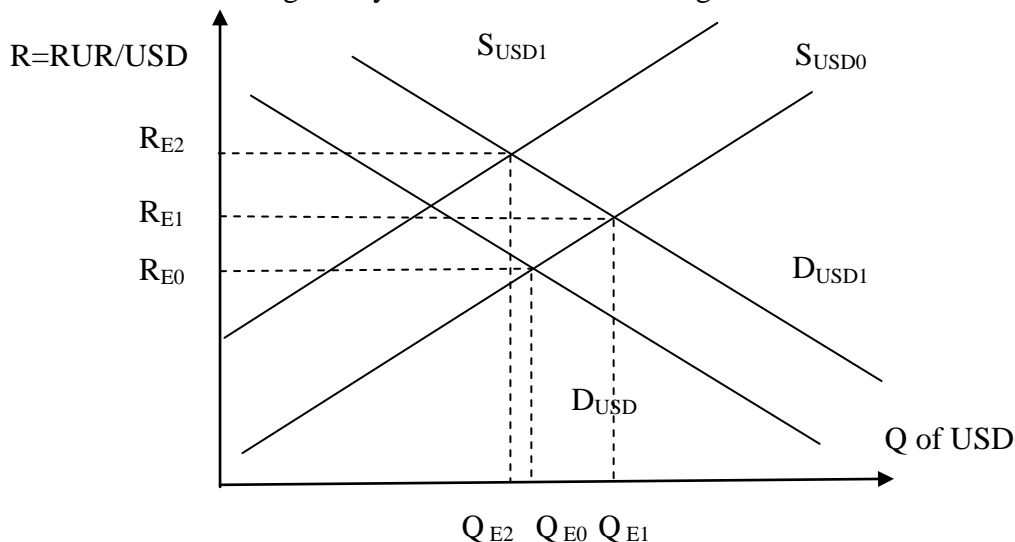


Fig. 6.1. The foreign exchange market

There are several classifications of exchange rates.

1. According to the mechanism establishing exchange rate, there are divided into *flexible* also known as *floating*, and *fixed* exchange rate. In a floating exchange-rate regime the price of foreign currency is determined exclusively by market forces. The Fig.6.1. shows a comparative statics picture connecting market forces and an exchange rate's dynamics. For example, when the demand for dollars grows until D_{USD1} , for example, due to an increase in demand for touristic services during the high season, the exchange rate (the price for dollar) increases until R_{E1} . Next, for example, because of worsening of export conjecture, the supply of dollars decreases until S_{USD1} , and the exchange rates grow further till R_{E2} . Therefore, the dollar appreciated and the ruble depreciated in both cases. The opposite changes in supply and demand lead to the appreciation of ruble and depreciation of dollar. In a *fixed exchange rate* regime the price of foreign currency is conditioned totally or partially (also known as 'dirty floating' regime) by the monetary authorities. This currency exchange regime is generally recognized as inefficient, but some political economy's reasons may cause an introduction of this system for suppressing the inflation expectations or other negative phenomenon of monetary nature.
2. According to the way of estimation, there are nominal exchange rate, cross-rate, purchasing power parity exchange rate, effective exchange rate. The *nominal exchange rate* is the rate as it is. It is originated in the foreign exchange market and applied for the real current account or capital account operations. The *cross-rate* is calculated on the basis of two different exchange

rates (for example, U.S. dollar to ruble and U.S. dollar to Canadian dollar) when there is no direct foreign exchange market (in that case of Canadian dollar to ruble). The *purchasing power parity* (PPP) exchange rate refers to a relation of the costs of the same market basket of goods expressed in both the currencies. Using that PPP rate, with a given amount of one currency used directly to purchase a market basket of goods on the local market being converted at the PPP rate to the second currency it is possible to purchase the same market basket on the second domestic market. The PPP exchange rate is theoretical indicator used for international comparisons between countries that help to minimize the effect of exchange rates' volatility and long-term foreign exchange market disequilibria on the international comparisons. The *effective exchange* rate is a weighted average of the value with respect to all other currencies. It needs to evaluate 'general value' of a currency.

3. In relation to the effective or PPP exchange rates, there is a distinction in *undervalued* and *overvalued* exchange rates. The developing countries usually have the undervalued exchange rate. First, because there is a lack of trust of domestic and foreign economic agents in such currencies. Second, the policy of undervalued currency rises price competitiveness of domestic commodities on the local as well foreign market. Respectively, the developed countries possess the overvalued exchange rate because excessive demand for these currencies generated by local and, more important, foreign economic agents.

4. According to the delivery period (this division also known as depending on market structure's one), the exchange rates are divided into spot and forward rates. The *spot* rate refers to the price of foreign currency for immediate (after 1-2 banking days from the deal) delivery of bought currency. The *forward* rate represents a current price for the future delivery.

5. According to the counterpart of exchange, the exchange rates consist of *ask* rate, *bid* rate and *average rate*.

The exchange rates' dynamics affects the balance of payments accounts, and vice versa. If the exchange rate depreciation occurs, exports will grow, imports will fall, and thus the trade balance and probably current account will increase. The net positive capital inflow into a country *ceteris paribus* will cause a domestic currency appreciation.

The foreign exchange markets are subject to volatile market conditions. It means that an exchange rate dynamics displays its ups and downs. Under these conditions, first, the traders and investors try to hedge their foreign exchange positions. A *foreign exchange position* is a difference between requirements and liabilities expressed in each currency used by the economic agent on a specific date. The *long position* in a foreign currency means that the requirements exceed the liabilities. The long position is risky if the foreign currency of reference suffers from depreciation. The *short position* in a foreign currency means that the liabilities exceed the requirements. The short position is risky if the foreign currency of reference suffers from appreciation.

Hedging removes exchange risk through the use of forward markets various tools. An importer (or national invest abroad) should be afraid when the foreign currency is expected to appreciate. Buying the foreign currency outright, the economic agent concludes the deal that covers him from the excessive currency appreciation.

Another side of the volatility is the possibility to earn on the exchange rate *speculation*. The speculative attack on the foreign exchange market is made up of market misbalancing provoked by some economic agents. If these agents expect a foreign currency's appreciation they buy a currency now and wait it to appreciate to sell it later. This behavior leads to the real currency appreciation. The art of a good speculator is to sell the currency before others start to do it and the exchange rate will decrease. Besides that, speculators serve a very useful function in foreign exchange markets smoothing acute the peaks and valleys of exchange rate movements.

The drivers of exchange rate dynamics are divided into fundamental and speculative factors. The *fundamental factors* of exchange rate represent real changes in connected economic indicators. The economic growth, low inflation high real return on investment on the domestic market, positive trade balance or balance of payment taken as a whole, all these phenomena lead to the local currency appreciation. The *speculative factors* has the same foreign exchange market nature. Among them, there are the effect of day of the week or of the season, unfounded forecasts and rumors, etc. The fundamental factors influence long term rate dynamics while the speculative ones affects mostly short run exchange rate movements.

Although these two groups of exchange market drivers describe in a sufficient manner the process of exchange rates determination, there are different approaches to exchange rate dynamics explanation.

The first approach is elasticity one. The *elasticity approach* is based in the flow of goods between nations. Hence, the demand and supply of foreign money in the respective market depends on the demand for imports and the supply of exports. If the demand for imports increases, then will be an excess demand for foreign currency at the initial exchange rate, and then the foreign currency will appreciate. The rise in foreign currency price will cause a decrease in the quantity demanded and an increase in quantity supplied until there is equilibrium at a higher currency cost. How much foreign currency appreciates depends on the elasticity of the demand and the supply of foreign currency. This elasticity depends on elasticity of exports and imports to changes in the exchange rate.

Purchasing-power parity approach is also connected to the flows of commodities and services. There are two versions of the PPP theory. *Absolute PPP* deals with the law of one price. Thus, the exchange rate will equal to ratio of local market basket values expressed in both currencies. The concept of relative PPP accepts that the exchange rate value may differ from the direct ratio between prices of respective market baskets, i.e. absolute value of PPP. From the empirical point of view, PPP is a reasonable indicator for exchange rates for very long periods, because the relative isolation of local commodities markets.

The *monetary approach* considers equilibrium on the foreign exchange market as a result of equilibrium on the money market. If a country has an international deficit in the balance of payment account, thus there should be an excess supply of money domestically to pay the imports superior of the exports. For the surplus, the opposite situation takes place.

The *asset* approach also known as *portfolio balance* approach to foreign currency pricing considers money as one type of financial assets. Hence, currency competes with shares, bonds,

derivatives for the inclusion to an investment portfolio. Each investor distribute wealth somehow between domestic currency, domestic bonds, foreign bonds, etc. Domestic and foreign currencies serve to conduct ongoing transactions. At the same time, the foreign or domestic liquidity does not bring direct interests, but the foreign liquidity may generate an income from its appreciation. The split between financial assets depends upon diversification, relative interest rates, expected appreciation (or depreciation) of the foreign money, and risk. All these considerations have an impact on exchange rate dynamics.

The foreign exchange market is strictly connected to the state of the balance of payments. Deficit or surplus in the balance of payments causes the volatility on the foreign exchange market. In the *floating rates regime*, the foreign exchange rate dynamics, in turn, affects the inflation expectations of economic agents and consecutive price dynamics. The appreciation of foreign currency leads to an increase in import prices and a following decrease of demand for foreign goods and services. On the foreign exchange market, the demand for the foreign currency will decrease because of diminishing in price of imports accessible for domestic consumers measured in the foreign currency and quantity of foreign currency.

Because depreciation increases the price of exports and imports expressed in the domestic currency, first, a depreciation of the local currency increases the demand for the exports of that country, while the supply of imports in the local currency would decrease, causing the price of imports to increase. A higher price for imports would cause a substitution into import competing goods, which causes a general rise in prices in the domestic economy. Thus, the depreciation of the domestic currency is inflationary. Further, the depreciation of domestic currency leads to a decrease in the demand of foreign currency while the supply of foreign currency from the exports increases. Consequently, *ceteris paribus*, the foreign exchange market will come back to the initial state.

This consideration is valid for the downward sloping demand curve and upward sloping supply curve, i.e. for situation when the laws of supply and demand hold.

Nevertheless, some empirical evidences show that the demand curve for the foreign currency may be very flat while the supply curve is downward sloping. It generates an *unstable foreign exchange market* when a change in exchange rates does no produce a movement toward equilibrium, but a movement away from it.

As a result of this discussion, the Marshall-Lerner condition of foreign exchange market stability appeared. The foreign exchange market will be stable if the sum of the price elasticities of demand for domestic exports and imports is owe 1.0.

The adjustment process in the *fixed rates regime* differs. The exchange rate is held stable, therefore the trade or investment balance in a case of deficit or surplus need to be adjusted. The central bank matching upward or downward pressure on the foreign currency intervenes selling or buying currency. In a case of a deficit, the central bank sells the reserves and therefore erodes a monetary supply of the home market. It causes a deflation and a fall in output. In long-run the imports loss their price competitiveness and trade balance will adjust. In a surplus case, the domestic prices grow and the opposite logic hold.

Unit 7. The international monetary system: past, present and future

Meaning of international monetary system. Flexible vs fixed exchange rate debate. The Gold standard and interwar experience. The Bretton Woods system: operation and evolution. Operation of the present monetary system. European monetary system. Problems with the present monetary system and proposals for reforms. Creation of the euro, and the Maastricht treaty's requirements. Current international economic problems and international macroeconomic policy coordination.

There are two approach to understand what the international monetary system is.

According to the *structural* approach, an *international monetary system* (also called international monetary order or regime) refers to the rules, customs, tools, facilities, and organizations for effecting international payments [Salvatore, 2013]. The request for international monetary rules was originated in the 19th century when the symbolic money (banknotes) replaced traditional commodity form of them. As the commodity form money with an internal real value disappeared, the matter of trust in the foreign symbolic money and the question about respective exchange rates determination arose. In such circumstances, the national authorities developed agreements on the international monetary order.

Since that time, the structure of the international monetary system includes following elements

1. *International liquidity or currency* represents the ultimate universal mean exchangeable for goods and services
2. *Exchange rate regime*. There are two opportunities to establish exchange rates, flexible exchange rate regime and fixed exchange rate regime. The *fixed exchange rates* make international economic activity results forecastable, but if the international economic activity are non-monopolized by the authority, the opportunity of holding exchange rates stable in the world of increasing internalization is absent. Therefore, all the attempts to install fixed rate regime failed.
3. *Foreign exchange market organization*. The contemporary foreign exchange market consists of two levels. The first level embodies all domestic foreign exchange markets on which domestic currency is exchanged into key word currencies and currency of neighboring countries. The second level represents the global market for trading key currencies called FOREX. This free international market of currencies appeared together with the abolition of the fixed exchange rate regime.
4. *International bodies or other institutions supporting the order*. The typical economic institution regulating a particular problem passes three stage of progress: custom, agreement, and body. The international monetary organizations appeared in the 20th century alongside the complication of monetary relations.

From the evolutionary point of view, an *international monetary system* is a historical stage of international money relations organization based on the international agreements.

In the history of the world economy, there were three 'monetary systems' (Table 7.1).

Table 7.1

Three phases of international monetary system

Phase Elements	The Gold Standard (the Paris System)	The Bretton Woods System	The Jamaica's System
Period	1880-1914	1945-1973	1976 -... (?)
International liquidity (reserve asset)	Gold	Gold + key currency (dollar)	SDR, leading convertible currencies, exclusion of gold
Exchange rate regime	Fixed exchange rate	Fixed exchange rate	Floating exchange rate
Foreign exchange markets	Of one level: Internal	Of one level: Internal	Of two levels <ul style="list-style-type: none"> • Internal • FOREX
International organizations supporting the order	None	<ul style="list-style-type: none"> • International Monetary Fund • International Bank for Reconstruction and Development 	<ul style="list-style-type: none"> • Monetary Fund • International Bank for Reconstruction and Development

The Gold standard, the first international monetary system, was a fixed exchange rate regime based upon immovable domestic prices of gold of participating countries. Therefore, the gold was a reserve asset; each nation's currency was fixed to gold. It facilitated an automatic adjustment in the exchange rates, when each exchange rate was fluctuating inside the 'gold points' interval determined by cost of gold transportation between countries. The essential problem of the gold standard was incompatibility between demand for gold as a reserve asset determined by the growth of the world economy and supply of gold conditioned by its stock and mining. World War I disrupted the gold standard because the participating countries experiencing budget problems did not observe the currency fixation to gold anymore. During interwar interval, there was an attempt to recuperate the gold standard in the form of Genoa monetary system that later was repressed by the Depression.

The Bretton Woods, next, system was designed prior to the end of the World War II (WWII) to give a basis to the postwar monetary order monitored by the International Monetary Fund, established just for that purpose. The International Bank for Reconstruction and Development was established to finance the postwar renewal of countries destroyed by the war. The U.S. dollar was chosen as a reserve currency, because by the end of the WWII the U.S. reserves in gold accounted for 70% of the world stock, and hence only this currency can be fixed to gold. The United States fixed their currency to gold at \$35 per ounce, the other member countries fixed their' currency to the dollar, with $\pm 1\%$ deviations allowed. That is why, the Bretton Woods system is known as 'gold-exchange standard'. The central banks of member countries used reserves of dollars to hold the exchange rate by the interventions. In a case of persistent distortions, a currency's devaluation or revaluation was allowed with the approval of the IMF. Besides the approval function, the IMF funded its lending to member countries through initial contributions made by them and above initial contributions at higher interest rates. The IMF also promoted monetary stability and removal of restrictions on currency exchange.

The system functioned until the early 1970s, when its contradictory characteristics were revealed. Again, the growing demand for dollars used as a reserve currency was limited by the U.S. stock of gold. Under such circumstances, the U.S. supplied more dollars than fixed price of gold

allowed, creating the distortions on the gold market. Later, the United States suspended convertibility of the dollar into gold and devalued the proper currency in 1971. In 1973 the Bretton-Woods System ended definitely.

The next, Jamaica's monetary system was established by apposite agreements in 1976. Special Drawing Rights (SDR) was established as a new reserve asset. Special drawing rights are essentially accounting entries, in a certain sense, global symbolic money, called to substitute gold in the function of reserve assets. The exchange rate mechanism is flexible. The IMF besides its lending facilities promotes the capital movement liberalization. The local foreign exchange markets found the supranational, global level of foreign exchange market. In this period, the EU has adopted one monetary system transformed in the Eurozone later on. The euro area is an economic and monetary union of 18 European Union member states that have adopted the euro (€) as their common currency. To join the Eurozone, a country should meet the euro convergence criteria also known as the Maastricht criteria. These criteria regards country's level of inflation, budget deficit and debt, exchange rates and long-term interest rates.

The current international monetary system faces serious problems in front of financial instability and global recession, they regard all structural elements of global monetary order

1. Absence of a true reserve asset. The SDR, i.e. pure international symbolic money, did not convince the global economic community. There are also doubts on utilization of national currencies as reserve assets as the U.S. dollar example shows.
2. Excessive volatility of exchange rates creates many problems to the globalizing economic agents across the Globe. There is an extreme opinion that the Jamaica's monetary system is a recognition of impossibility to establish a fixed currency regime, but the global economy needs it and this system will be created sooner or later.
3. Weakness of the IMF, European monetary union and other financial institutions to maintain the stability of global financial system. The situation may be resolved by an active involvement of emerging markets resources into the mutual benefit funds. But the world political economy system is slow to reform itself.

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Мария Лавровна Горбунова

**МИРОВАЯ ЭКОНОМИКА И
МЕЖДУНАРОДНЫЕ ЭКОНОМИЧЕСКИЕ
ОТНОШЕНИЯ**

Учебно-методическое пособие,

Федеральное государственное автономное
образовательное учреждение высшего образования
«Национальный исследовательский Нижегородский государственный
университет им. Н.И. Лобачевского».
603950, Нижний Новгород, пр. Гагарина, 23.