# Topic 3. Competitiveness of goods on internal and external markets

Competitiveness of good is determined by ratio of useful effect (P) and costs for purchase and use of good (C)

$$CM = P/C$$

Good shall be treated as compatible when CM is maximum in comparison to CM of other goods

(CM is an comparative indicator and should always be compared with CM of goods of company-competitor)

# Information about product includes following parameters:

1. Quality of product
2. Quality of services which are supplied with product
3. Economic characteristics of good
4. **Economic environment** (integrated index that indicates globalization processes)

# Main stages of evaluation of product competitiveness

1. Market analysis and determination of comparative good (sample)

   - same group of products

   - same consumption effects (utility)

   - high level of consumption

   - same level of demand satisfaction

2. Determination of panel of parameters for goods comparison

   • Want-satisfying quality (for consumption)

   - **Hard** (technical effectiveness, constructional quality, conformation to standarts, laws, instructions)

   - **Soft** (design, color, package)

- Economic quality (determined by the price of consumption)

$$C = C_1 + C_2 + \ldots C_n = \sum_{I=1}^{M} C_i,$$

where C1 – price of good, C2 – costs for transportation, C3 – costs for construction, C4 – costs for employee trainings, C5 – costs for repair works, C6 – costs for technical services, C7 – tax costs, C8 – insurance costs, ect.

The most competitive is the good with minimal price of consumption for the whole period of exploitation.

# Estimation techniques

-According to ranking of good

-According to sales of good

-Differential method

-Complex method

-Combined method

# Estimation of good competitiveness according to its ranking

$$P_{t=1}^{n} = \prod Q_i$$

Pt – ranking of good t, Qi – relative index of product quality, n – quantity of parameters of quality.

Advantages of this method: easiness of evaluation, availability of information about changes in quality of goods.

Pitfalls of this method: only quality parameters are included. As it doesn't apply to economic parameters, such method may only be used for a short term analyses.

# Estimation of good competitiveness according to its sales

$$K_{ij} = \sum_{i=1}^{n} a_i b_i \rightarrow 1$$

Kij – competitiveness of good i on market j;

ai – relative share of good i in sales amount;

bi – parameter of significance of market where the good is sold. bi=1 for external developed markets, bi=0,7 for external other than developed markets; bi=0,5 for internal market.

Advantages of method: can be used to analyze dynamic of sales of the market

Pitfalls of method: doesn't include quality parameters therefore can't reflect total competitiveness of good on the market.

# Differential method of estimation of competitiveness of goods

$$q_i = (P_i / P_{io}) * 100\%$$

qi – singular parameter index of competitiveness upon parameter i;

Pi – value of parameter i for good under analyses;

Pio – value of parameter i with which needs of consumer are totally satisfied.

Method allows to figure out the fact of competitiveness comparing to the other good but doesn't show differences in value of different parameters.

# Complex method of estimation of competitiveness of goods

$$R_{ij} = \sqrt{A_1^2 + A_2^2 + \cdots + A_{ij}^2}$$

Rij – level of competitiveness of analyzed good and other competitors goods on the market

A1, A2, …. Aij - singular parameters of goods competitiveness (analyzed company and competitors)

Combined method: includes elements of differential and complex methods. In particular part of parameters are estimated using differential method and some – using complex method.

**Another approach:** Estimation of integrated index of international competitiveness of good

*Integrated index of international competitiveness of good* (K)

$$K = \frac{I_p}{I_e}$$

Ip – composite parameter index of competitiveness of good

Ie – composite index of economic parameters

# Estimation of composite parameter index of competitiveness of good (Ip)

$$I_p = \sum_{i=1}^{N} q_i a_i$$

qi – singular parameter index upon parameter i (next formula)

ai – value of parameter i

n – quantity of parameters

$$q = \frac{P_{pr}}{P_{pc}}$$

P pr – value of parameter of good

P pc – value of parameter for good of competitor

# Estimation of composite index of economic parameters (Ie)

$$I_e = \sum_{j=1}^{M} c_j a_j$$

cj – singular index of economic parameter j (next formula)

aj – value of economic parameter j
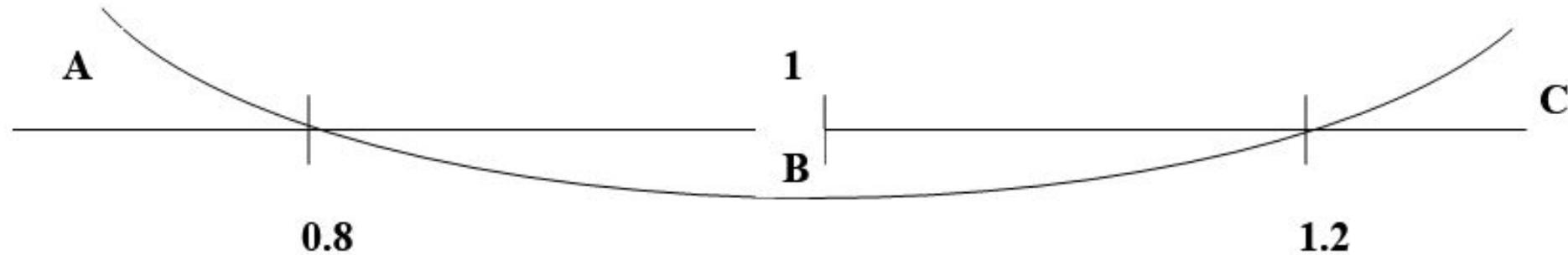
n – quantity of economic parameters for good

$$C = \frac{P_{er}}{P_{ec}}$$

P er – value of economic parameter of good

P ec – value of economic parameter for good of competitor

# Integrated index of international competitiveness of good (K)

K increases when Ip increases and Ie decreases and K decreases when Ip decreses and Ie increases.



A – good isn't competitive

B – good is competitive but competitiveness is elastic (quick changes are possible)

C – high level of competitiveness of good

Described methods can be applied to estimate competitiveness of good but they are not perfect as they state that improvement on separate characteristics (quality) of good may lead to increase of competitiveness of good.

It's not always so because the main factor of competitiveness detection is satisfaction of consumers needs (i.e. sometimes people prefer bitter apples to sweet).

Therefore methods of estimation of competitiveness of goods <span style="color:red">should be modified</span> and should include parameters of:

-quality

-importance of good features for consumers

-globalization and integrational factors

-image of company and brand

-peculiarities of regional markets

-influence of additional services

-customers behavior

(The most valuable resource is customers attention)

# Competitiveness of intermediate goods

Trade in intermediate goods and services are direct consequence of <span style="color:red">international fragmentation of production, rise of supply chains and related sourcing strategies of companies</span>.

Companies are **outsourcing and offshoring** in order to decrease costs, acquire higher quality inputs and generally improve their competitiveness.

Effectiveness and competitiveness of intermediate goods determine competitiveness of value chains (national, regional, international) and countries.

Trade of intermediate goods is app. 60% of all world trade of goods

Trade of intermediate services even more = more than 70% of world trade in services

## Porter's value chain

Harvard Business School's Michael E. Porter was the first to introduce the concept of a value chain. Porter, who also developed the Five Forces Model that many businesses and companies use to figure out how well they can compete in the current marketplace, first discussed the value chain concept in his book "Competitive Advantage: Creating and Sustaining Superior Performance" (Free Press, 1985).

"Competitive advantage cannot be understood by looking at a firm as a whole," Porter wrote. "It stems from the many discrete activities a firm performs in designing, producing, marketing, delivering and supporting its product. Each of these activities can contribute to a firm's relative cost position and create a basis for differentiation"

Porter suggests that activities within an organization add value to the service and products that the company produces, and that all of these activities should be run at optimum level if the organization is to gain any real competitive advantage.

In his book, Porter said a business's activities could be split into two categories: **primary activities and support activities**.

**Primary activities include the following:**

Inbound logistics: This refers to everything involved in receiving, storing and distributing the raw materials used in the production process.

Operations: This is the stage where raw products are turned into the final product.

Outbound logistics: This is the distribution of the final product to consumers.

Marketing and sales: This stage involves activities like advertising, promotions, sales-force organization, selecting distribution channels, pricing, and managing customer relationships of the final product to ensure it is targeted to the correct consumer groups.

Service: This refers to the activities that are needed to maintain the product's performance after it has been produced. This stage includes things like installation, training, maintenance, repair, warranty and after-sales services.

**The support activities help the primary functions and comprise the following:**

**Procurement:** This is how the raw materials for the product are obtained.

**Technology development:** Technology can be used across the board in the development of a product, including in the research and development stage, in how new products are developed and designed, and process automation.

**Human resource management:** These are the activities involved in hiring and retaining the proper employees to help design, build and market the product.

**Firm infrastructure:** This refers to an organization's structure and its management, planning, accounting, finance and quality-control mechanisms.