Product quality is a combination of technical, operational, economic and other properties that determine its suitability for consumption. Product quality is measured in accordance with *State Standards* (*SS*) and *technical specifications* (*TS*) on products.

The cost efficiency of production is caused by such indicators as *capital expenditure*, *product cost* and *labor productivity*. They are closely connected among themselves and depend on structure of economy of chemical production, in particular, from specific weight in it *the fixed* and *circulating assets* and *the wages fund*.

Financial resources intended for simple and expanded reproduction of fixed assets are characterized by *capital expenditures*.

Capital expenditures are the sum of all costs incurred in the construction of a workshop or an enterprise as a whole.

They include the cost of purchasing equipment, machinery and equipment (*the active part*) and construction and installation work (*the passive part*). The efficiency of return on capital expenditures depends on the share of their active part and is estimated by the criterion *"specific capital expenditures"*, that is, the cost per unit of output:

$$P = Ce / M$$

where: *Ce* are capital expenditures in tenge, *M* is an annual capacity of the installation (workshop, enterprise) t/year, therefore, specific capital expenditures are expressed in tenge/t/year.

With the growth of the annual capacity of technological units and installations, the specific capital costs are reduced in accordance with the formula:

$$P = a \cdot M^{-0.4},$$

where: a is a coefficient depending on the type of production.

For example, if the annual capacity of an installation of the same production doubles ($M_2 = 2M_1$), then the ratio of specific capital costs will be equal to:

$$P_1/P_2 = (a \cdot M_1^{-0.4} / a \cdot M_2^{-0.4}) = 0.5^{-0.4} = 0.76.$$

This means that specific capital costs will decrease by 24%.

The economic indicator of *profitability of production* is *the cost of production*.

The cost of production (S) is the sum of all the costs of the enterprise in monetary terms related to the manufacture and sale of a unit of mass (volume) of its products. The expenses of the enterprise which are directly connected with production represent factory prime cost and include costs of means of production, compensation and services of other enterprises, on management and service of production. High costs of raw materials about 70 - 80% of the total costs are characteristic of chemical industry.

Similar to capital costs, the cost of production decreases with an increase in the unit capacity of the aggregates in accordance with the dependency:

$$\boldsymbol{S = a \cdot M^{b}}$$

where: *S* is the cost of production, tenge/t, *M* is the capacity of the unit (workshop, enterprise), t/year; *a*, *b* are coefficients, with b = -0.2 (to -0.3).

$$S_1/S_2 = M_1^{-0.2}/M_2^{-0.2} = 0.5^{-0.2} = 0.87$$