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The System of Indicators of Economic Efficiency of Social Production Used In Socialist Planning (Abstract)

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1.0. Evaluation of economic efficiency of planned decisions adopted is the fundamental problem of planning at the present stage of development. It provides opportunities of determining correlation between expenditures and results achieved and choosing the most rational ways of national economy development.

1.1. Many years of planning experience enabled the USSR planning bodies to elaborate a comprehesive system of economic efficiency indicators which reflects all the spheres of production activity.

The main principles laid down in the system of indicators of evaluating economic efficiency of enterprises and organization stem from the requirements and provisions of the theory of extended socialist reproduction and planning.

2.0. Economic development of a society is always under the simultaneous impact of two factors, extensive and intensive ones. At the present stage of the country's development intensive factors have acquired decisive importance. Rational combination of these factors is achieved through the system of efficiency indicators.

3.0. As soon as time saving is the most important factor in economy development productivity of labour is considered to be the main indicator of efficiency.

3.1. The summary indicator of social labour efficiency within the scale of national economy is determined on the basis of national income which is the final result of development of all the national economy sectors.

At the level of national economy sectors this indicator is estimated through the net product calculated as a difference between commodity output and material outlays, depreciation deductions including.

With respect to ministries and enterprises labour productivity indicator is fixed as calculated on the basis of gross output.

3.2. The principal scheme of efficiency indicators, their content and interrelation can be seen from the following table:

System of economic efficiency indicators	Calculation formula	
1.0. Summary indicators		
1.1. Per capita (N) national income (D) growth rates for enterprises and sectors	$\frac{D_1 \cdot No}{N_1 \cdot Do}$	1 - plan period index o - base period index
Production growth rates Total:		
a) net output (P)	$\frac{P1}{Po}$	
b) gross output (P^B) of which for sectors-production growth on account of existing enterprises	$\frac{P_1^B}{P_o^B}$	
1.2. Per capita (N) growth rate of consumption fund	$\frac{D_1^p \cdot No}{N_1 \cdot D_1^p}$	where $D_1^p = A_1 + B_1$ A_1-consumption fund B_1-non-productive accumulation
1.3. Produced national income (D) per 1 rouble of outlays (S) (for sectors and enterprises--net output per 1 rouble of outlays)	$\frac{D}{S}$	
1.4. Relative saving of: a) fixed production assets b) rated circulating assets c) material outlays (net of depreciation) d) wage fund	General formula $E_1 = Ro \cdot K_1 - R_1$	E_1-relative saving of resources in plan period in value terms Ro and R_1- average annual value of resources K_1 -index of national income growth (for enterprises and sectors - of gross output) as compared to base period
1.5. Profitability ratio of accumulation (H) (profit and turnover tax) to average annual value of fixed production assets (V^p) and circulating assets (V^s)	$\frac{H}{V^p + V^s}$	

1	2
1.6. Production and distribution costs (Z) per one rouble of social product(P^T) For enterprises-outlays per one rouble of commodity output at full cost price	$\frac{Z}{P^T}$
2.0. Live labour utilization efficiency	
2.1. Labour productivity growth rates for national economy and republics are calculated through national income (D) For enterprises and sectors -through net and gross output	$\frac{D_1 \cdot No^m}{N_1^m \cdot Do}$ where N^m - number of people employed in material production
2.2. Share of national income increment due to rise in labour productivity; for enterprises and sectors; - share of net output increment due to rise in labour productivity	$\left(I - \frac{K^N}{K^p} \right) \cdot 100$ where K^N - rate of increase in the number of employed; K^p - rate of growth of national income or net output.
2.3. Saving of live labour (annual number of persons employed) as compared to the base year	according to formula in 1.4.
3.0 Fixed assets and capital investments efficiency	
3.1. Output-to-assets ratio - Production of national income (D) per one rouble of average annual value of fixed production assets (VP) For enterprises and sectors- production of net and gross output per one rouble of average annual value of fixed production assets.	$\frac{D}{V^p}$
3.2. Circulating assets turnover. Production of national income (D) per one rouble of average annual value of rated circulating assets(V^H) For enterprises and sectors - net and gross output per one rouble of average annual value of rated circulating assets.	$\frac{D}{V^H}$
3.3. Ratio of material income increment (Δ D) to capital investments that effected increment (W)	$\frac{\Delta D}{W}$

1	2
For enterprises and sectors ratio of net and gross output to capital investments	
3.4. Specific capital investments (W) a) per unit of production capacity commissioned (x) (by main types of product) b) per one rouble of output increment (ΔP^B)	$\frac{W}{X}$ $\frac{W}{\Delta P^B}$
3.5. Payback time of capital investments - ratio of capital investments (W) to the accumulation increment (ΔH), due to that investments; For enterprises and sectors- ratio of capital investments to profit increment	$\frac{W}{\Delta H^P}$
4.0. Material resources utilization efficiency.	
4.1. Material outlays (M) (without depreciation) per one rouble of social product (P^T)	$\frac{M}{P^T}$
For enterprises and sectors - per one rouble of gross output	
5.0. Indicators of production pattern and quality of products *	
5.1. Share of products depending on quality categories (pK) in the total volume of output (P^B): -first category - second -"- - third -"-	$\frac{P^K}{P^B}$
Share of products manufactured for the first time in the USSR (P^I)	$\frac{P^I}{P^B}$

* These indicators are considered within the science and technology development section of the plan

3.3. Besides the above-mentioned indicators by sectors - technico-economic indicators are used. They are specific for each sector, but in most cases are calculated according to the following pattern: amount of material resources of different types and live labour inputs per unit of output of a certain commodity or type of work; in other cases indicators show the degree of production capacity utilization, equipment productivity, etc.

4.0. The indicators given in the above table are fixed on the basis of data of relevant sections of the plan. The aggregate evaluation of efficiency is effected by means of the indicator of national income(or net output) per one rouble of production costs taken into account in calculating cost price of commodities.

A very important indicator for evaluating effectiveness of plan decisions and especially for choosing economic development alternatives is indicator of relative saving of all types of resources in value terms (1.4). Indicators of overall profitability (1.5) and costs of production and distribution per one rouble of social product are financial indicators of economic efficiency.

4.1. Indicator of live labour productivity growth is determined on the basis of calculations of labour inputs saving (according to the number of employed). In this case a unified classification of factors is used, that is:

raising technical level of production (especially the impact of mechanization of production),improvement in the organization of production, labour and management,change in the volume and structure of production as well as shifts in the location of production. Special account is taken of specific factors in individual sectors.

To substitute plans for raising labour productivity assets-to-labour indicator is used which is calculated as the ratio of average annual value of fix production assets (V^p) to one person employed (N^m)- $\frac{VP}{N^m}$.

4.2. Calculations of economic efficiency of capital investments are made with a view to choosing most effective channel for investments as soon as they have their bearing on overall social production efficiency.

The most important general indicator of capital investments efficiency is the production of national income per one rouble of capital invested as it characterizes total amount of resources both for consumption and accumulation. To evaluate capital investment efficiency by individual sectors payback time indicator with respect to profit is used. For industry as a whole payback time coefficient. is determined to be 8 years.

In carrying out pre-plan estimates which require comparing economic and technical variants of decisions, calculations of comparative effeciency are used.

Indicator of comparative economic efficiency is the minimum of imputed outlays. Imputed outlays for each variant are the sum of current outlays (cost price) and capital investments multiplied by efficiency standard, which is reverse to the payback indicator.

$$Ci + En^{\circ} Ki = \min$$

where Ki - capital investments by each variant

Ci - current outlays (cost price) for particular variant

En - standard coefficient of capital investment efficiency equal to 0,12 for industry as a whole.

In choosing project variants with account of construction locations, transportation costs for delivery of goods to consumption areas are included into imputed outlays.

To evaluate utilization of most important resources the following physical indicators of material consumptions are used: for example, metal consumption per one Kilowatt of turbine capacity, per one car, tractor, etc.

These physical indicators find its general expression in the indicator of material consumption which at the national economy level reflects the amount of material outlays per one rouble of gross social product and with respect to sectors correspondigly per one rouble of gross output. In order to show changes in the level of material outlays correctly they must be calculated in constant prices.

4.3. At present in evaluating efficiency in the USSR much attention is being paid to structure and quality of products.

A system of certificates for high quality of products has been introduced: some high grade products are awarded "High Quality Mark"; economic incentives have been introduced to stimulate output of such produce.

5.0. To choose development variants for both existing and new enterprises the above-mentioned system of indicators is used, documents of ministries, agencies and local authorities are also usually made use of. It is obligatory for the planned efficiency indicators to be compared with the same indicators for the previous years as well as with achievements of the best USSR enterprises and international standards.

In case planned indicators are inferior to reported ones for the previous year special analysis of reasons explaning such state of affairs is to be made and measures are worked out to eliminate such a situation.

6.0 In planning social production efficiency method of rates and standards is widely employed. This method enables us to fix such a progressive level of outlays ofindividual types of resources for a plan period that takes into consideration latest achievements of science and technology as well as advanced organization of production and labour.

6.1. In working out all the sections of a national economy plan rates and standards are used as criterias in evaluating results achieved and in fixing level of outlays for a plan period.

We understand a rate as maximum acceptable absolute value of consumption of material, labour and financial resources per unit of output in the production conditions of the plan year.

6.2. Standards are usually determined either on the basis of calculations by factors or with account of changes in the production structure.

For standards used in long term plans by-factor-of-production calculations which are coordinated with efficiency indicators are usually employed.

6.3. On the basis of savings calculations made by factors of production the USSR Gosplan fixes assignments on reducing material resources consumption rates for five-year and annual plans. In accordance with these assignments Ministries and agencies fix specific rates and standards with respect to individual types of products.

7.0. The most important factor in progressive rate setting and efficiency increase is scientific and technical progress.

Planning the development of science and technology is a specific section of the national economy plan. This section covers such items as drawing up scientific-research work plan, development of new types of commodities, plan for introduction of advanced technology, production processes mechanization and automation, introduction of computer equipment, purchase and sales of licences.

7.1. Plan for science and technology development is drawn up by ministries and agencies together with scientific and research organizations under the guidance of the State Committees for Science and technology, State Committee for construction and the USSR Gosplan.

7.2. The efficiency of measures envisaged in that section of the plan is calculated in the following way:

- with respect to saving of live labour- according to the number of persons employed;
- economizing in production costs and saving of capital investments is calculated in money terms.

Saving of material resources due to introduction of advanced technology, mechanization and automation is being taken into consideration when plan assignment for reducing raw materials consumption rates are being worked out.

Saving due to introduction of achievements of science and technology is being taken into account in relevant sections of national plan.