FACTOR ANALYSIS OF TOTAL EXPENDITURE LEVEL LIVESTOCK (MEAT PRODUCT) ACHIEVED DURING THE PLAN-MADE

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Abstract: The paper examines the evolution of total expenditure by category of livestock (cattle, pigs and sheep) and the influence of factors (number average, the average unit cost) during the plan-made.

Key words: economic model, iterating method, absolute deviation.

INTRODUCTION

Economic model based on factor analysis which carry total expenditure is as follows:

\[ Ch_T = \sum_{i=1}^{n} \bar{E}_f \cdot \bar{q}_i \cdot cu_i \]

Where:
\( \bar{E}_f \) - The average number of animals for fattening;
\( \bar{q}_i \) - average production class of animals, and"
\( cu_i \) - unit cost per unit;
\( Ch_T \) - Total costs at farm level.

Methodology: iterating method.

Economic data that are informative support. Total expenditure analysis are listed in Table 1

<table>
<thead>
<tr>
<th>Agricultural product</th>
<th>Average effect - Head</th>
<th>Average production - Kg / cap</th>
<th>Unit cost - Lei / kg</th>
<th>Total expenditure - lei</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat cattle</td>
<td>200 300 400 350</td>
<td>5 6</td>
<td>400000 630000</td>
<td></td>
</tr>
<tr>
<td>Meat pigs</td>
<td>5000 4000 90 110</td>
<td>5.5 6.5</td>
<td>2475000 2860</td>
<td></td>
</tr>
<tr>
<td>Meat sheep</td>
<td>1.50 0 1000 35</td>
<td>4 5</td>
<td>210000 200000</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>X X X X X X</td>
<td>X X</td>
<td>3085000 3690000</td>
<td></td>
</tr>
</tbody>
</table>

Analysis of expenditure to them several stages:

a) determine the absolute deviation of total expenditure
\[ \Delta Ch_T = Ch_{T1} - Ch_{T0} = 369000 lei - 3085000 lei = 605 000 lei \]

b) determine the influence of factors: the actual average production and average unit expenditure
\[ \Delta Ch_r(\bar{E}_f) = \sum \bar{E}_{f_1} \cdot \bar{q}_{i_0} \cdot cu_{i_0} - \sum \bar{E}_{f_2} \cdot \bar{q}_{i_0} \cdot cu_{i_0} = \]
\[ = 300 \text{cap} \cdot 400 \text{kg} \cdot 5 \text{lei} / \text{cap} + 4.000 \text{cap} \cdot 90 \text{kg} \cdot 5.5 \text{lei} / \text{kg} + \]
\[ + 1000 \text{cap} \cdot 35 \text{kg} \cdot 4 \text{lei} / \text{kg} \cdot 308500 \text{lei} = \]
\[ = 600000 \text{lei} + 1980000 \text{lei} + 140000 \text{lei} - 3085000 \text{lei} = \]
\[ = 272000 \text{lei} \cdot 3085000 \text{lei} = 365000 \text{lei} \]

\[ \Delta Ch_r(\bar{q}) = \sum \bar{E}_{f_1} \cdot \bar{q}_{i_1} \cdot cu_{i_1} - \sum \bar{E}_{f_2} \cdot \bar{q}_{i_1} \cdot cu_{i_1} = \]
\[ = 300 \text{cap} \cdot 350 \text{kg} \cdot 5 \text{lei} / \text{cap} + 4.000 \text{cap} \cdot 110 \text{kg} \cdot 5.5 \text{lei} / \text{kg} + \]
\[ + 1000 \text{cap} \cdot 40 \text{kg} \cdot 4 \text{lei} / \text{kg} - 2720000 \text{lei} = \]
\[ = 525000 \text{lei} + 2420000 \text{lei} + 160000 \text{lei} - 2720000 \text{lei} \]
\[ = 3105000 \text{lei} - 2720000 \text{lei} = 385000 \text{lei} \]

\[ \Delta Ch_r(cu) = \sum \bar{E}_{f_1} \cdot \bar{q}_{i_1} \cdot cu_{i_1} - \sum \bar{E}_{f_2} \cdot \bar{q}_{i_1} \cdot cu_{i_1} = \]
\[ = 3690000 \text{lei} - 3105000 \text{lei} = 585000 \text{lei} \]

c) The determination of the equality relationship between the amount equalments influence factors and deviation of total expenditure.

\[ \Delta Ch_r(\bar{E}_f) + \Delta Ch_r(\bar{q}) + \Delta Ch_r(cu) = \Delta Ch_r \]
\[ = 605000 \text{lei} + 385000 \text{lei} + 585000 \text{lei} = 605000 \text{lei} \]
\[ 605000 \text{lei} = 605000 \text{lei} \]

**CONCLUSIONS**

Livestock operation is shaped cattle and sheep fattening and rails in plan-period real grounds made a total expenditure exceeded 605000 lei to plan.

This tolerance level complex, worth 605 000 was generated by:
- The influence of livestock which amounted to - 365 000 lei (the economy was driven by expenses: increased by 100 cattle to the plan; decrease of 1000 pig heads towards planned and decrease the number of 500 sheep to plan complex level, joined the herd of 5300 head to 6700 head planned. Actual difference in pigs and sheep was due to lack of financial resources necessary purchase.
- The influence of the average production recorded a value of 385 000, this extra expense is determined by capitalizing pigs and sheep over time (110 kg/cap to 90 kg/cap plan to pigs to 40 kg/capita to plan 35 kg/cap in sheep).
- Unit cost reflects the influence exceeded 585,000, due to increased cost items every animal species (cattle 6 lei / kg to 5 lei / kg level, pigs 6.5 lei / kg to 5.5 lei / kg ovine plan and 5 lei / kg to 4 lei / kg level).

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