APPLICATION OF MODEL THAT RATES ECONOMIC EFFECTIVENESS OF PRODUCTION

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Abstract
This paper is about the model that rates economic effectiveness of production. This paper is applied on selected company, which has problems with economic criteria that are important for economic effectiveness of production. These factors are especially costs, trading income and profitability. The last section of this paper presents proposed model that rates economic effectiveness of production, which could be used (maybe with modification) in production companies.

Key words
Costs, trading income, profitability, model that rates economic effectiveness of production.

INTRODUCTION
Economic effectiveness is of the main target for the companies in their life, when they make their economic and financial activities. [1, 2] It joins itself all angles of the reproductive process, from basic industry to final production, from source to circulation and application. It expresses the measure of achievement the estimated targets, and because of that fact it is measured like the difference from predetermined values. The production is one of the basic business activities. It is sociable process that includes processes associated with the change of material and raw on products. [9] Effective production dealt with the production of such products, which requires the consumer. Production is realized with production processes, which happened at manufacturing units and have various characters, which affects their management. [11]

Economic effective production creates such products, that are asked from the customer and time total costs on product are lower than price, which gave customer for this product. [5] Natural incentive and long-time manufacturer target is to realize the production process with positive closure economic effect – with the profit, which enables further development of the production. [10]

RATING THE EFFECTIVENESS OF PRODUCTION ON THE GROUND OF BASIC ECONOMIC CRITERIA FOR THE VALUATION OF EFFECTIVENESS

In the selected company were analyzed available data and were compared periods for last finally 3 years (2006, 2007 and 2008). It was recorded the trend for given period and were compared data, which were directly related with economic effectiveness of production. When we speak about the economic effectiveness of production we have to rating also the productivity of production. These characteristics chart are interdependent directly proportional, when the productivity of the processes growth, consequently growth also the total effectiveness in this company. On the other hand, when one of these indicators has negative trend, automatically has negative trend the second indicator too. Concerning the character of this text, we will not speak further about the productivity.

Theoretical knowledge and practical skills in this area were very helpful to choose the parameters, which are suitable for rating the effectiveness of production. For the most important parameters, we choose:
1. Costs, earnings and added value,
2. Economic result,
3. Profitability and profitability indexes.

When we rate the economic effectiveness we have to rate also the other areas, but concerning on the nature and range of this text, about these areas we don’t speak in the further text, but they have also very big impact on the final effectiveness of production. These other areas are especially:
4. Machine utilization and system for scheduling and production management,
5. Rating the lengths of fixed stock,

When we rated the economic effectiveness of production in the selected company, as the biggest problem looks the fact that by the injection moulding process was excessively big share of sprue system to final products. This actuality suggests that for company is the most important thing the production, and the aspect of the economic effectiveness isn’t so important. However, when we analyzed the selected company, we find out, that company hasn’t problems with effectiveness only from technological view, but that the effectiveness problem is necessary to solve also.
from the economic view, because several relevant parameters show negative trend or these parameters were in alarming areas.

**Cost analysis**

From the analysis, this was made in the selected company result, which costs on material create in the selected company significant cost item. Because of that fact also the level of management with incoming material at expressive measure affects economic effectiveness of production. Substantial problem in this area is the level consumption of material in the selected company. Values of the real consumption in many cases differ from the consumption of material standardization.

Main reasons of this effect are:

- Incorrect specified material standard – in some cases is actual consumption low, and reversal, in some cases is actual consumption higher like consumption of material standardization,
- Isn’t made objectivization of material standard,
- Big material waste in the production (especially by the injection moulding process),
- Big defective work of the production.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Sk</th>
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<tbody>
<tr>
<td>2006</td>
<td>13 011 000</td>
</tr>
<tr>
<td>2007</td>
<td>81 348 000</td>
</tr>
<tr>
<td>2008</td>
<td>85 385 000</td>
</tr>
</tbody>
</table>

From the table 1 is clear that cost trend in the selected company is positive. Because of that fact management target in the next time will be try this trend to retain, or reduce costs on the minimal level. The company in the last three years began consistently work on the cost management system and this fact can be in the next the key element and can get the basic criteria from the view of further raising of economic effectiveness of the production.

When we consider about possible improvements, it is important to consider about the key indicator by the rating of the economic effectiveness of production, which are costs. From the longer-range effectiveness view, the key indicator can be regarded the change of the costs spend system spend, during which time is required to build up the costs management system, where would be evidently visual the purpose of spending the cost item. Projected procedure is showed on the picture 1.

**ANALYSIS OF THE ECONOMIC RESULT**

Economic result is the difference between total earning or receipts and total costs or business expenses. When the earnings or receipts are higher than costs or expenses, business generate profit, otherwise generate loss. After cost analysis of the selected company is effective to analyze economic result too, because it gives aggregate table about economic situation and is also the indicator, which rate the economic effectiveness. For the selected company, it is important the fact, that for the higher economic effectiveness is more important long-term look than short-term. The profit and also the profitability decide about strategy and tactics, but at the short term (operative) decision can they stand back. Tab. 2 expresses the trend of the company economic result in years 2006 – 2008.
For the selected company we can suggest the action that result from the analysis of the economic result, that is the second key indicator of the economic effectiveness. The suggestion has to stabilize the economic result and have to go on the positive trend in this parameter. The company have to work more effectively and the key suggestion is to rise in sales of the finished product that have the company in warehouse.

**Profitability analysis**

Profitability indexes express the rate of return on investment. Into their value synthesizes the trend of liquidity, activity and liability. In the selected company were followed four leading profitability indicators, which are ROE, ROA, earnings profitability and costs profitability and these indices were calculated in the years 2006, 2007 a 2008. Picture 2 and table 3 shows the trend of profitability indicators in these three years.

### Tab. 3 Leading profitability indicators in the years 2006 – 2008

<table>
<thead>
<tr>
<th>Years</th>
<th>ROA</th>
<th>ROE</th>
<th>Earnings profitability</th>
<th>Costs profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1,88%</td>
<td>2,65%</td>
<td>2,36%</td>
<td>2,46%</td>
</tr>
<tr>
<td>2007</td>
<td>2,58%</td>
<td>3,76%</td>
<td>0,42%</td>
<td>0,42%</td>
</tr>
<tr>
<td>2008</td>
<td>1,94%</td>
<td>2,99%</td>
<td>0,31%</td>
<td>0,30%</td>
</tr>
</tbody>
</table>

ROA have to clear ratio of valuation of measure reviews risk less assets adjusted from investment risk. Selected company had in the following period only symbolical measure reviews. Profitability indexes should have been positive and possible most highly. From the analysis results that selected company has these indicators positive, but these are only on the minimal level, which can have big impact on the company in the near future. Management of the company don’t subserv the basic target that is the increase of contributed capital. It can be the result of the relations in the company, where management of the home company don’t want to change the management style of the company, despite the negative facts.

### Model of the rating the economic effectiveness of production

Following the actual results of the selected company it is desirable to make a few actions for increasing the total economic effectiveness of production. These actions is possible to summarize in consistent model, that could be considered for the directory by the rating the economic effectiveness of production for injection moulding process. For the rating the economic effectiveness of production was applied the program MS Excel (specially the sector for rating the economic criteria). In this program was rated technical effectiveness too, but concerning the nature of this text it would be not detail specified. Proposed model for rating the economic effectiveness of production following to economic criteria expresses picture 3.

![Profitability Indexes Trend](image-url)
Picture 3 Model for rating the economic effectiveness of production on the base of economic criteria
Proposed model of rating the economic effectiveness of production consists from a few following steps and consistent procedure that respect all steps of given model would supply to substantial increase of effectiveness of production in the selected company, as well as in the other companies, which have problems with economic effectiveness of their production.

CONCLUSION

When companies want to understand the problem of economic effectiveness in the present conditions, they have to choose such methodical procedure that is in these conditions adequate. [4, 7] Economic analysis has to detect the economic relations between individual economic indexes. Rating the economic effectiveness is based on the comparison of two or more variant of production from given type of product, alternatively using given technology. The core of rating the economic effectiveness in every business is following the costs on all levels of activities, though in present time this core expands about monitoring the economic result and profitability. [6, 8]

Proposed model of rating economic effectiveness could contribute for expansion of approaches to rating the economic effectiveness and has to serve as one of the instrument for rating the economic effectiveness of production in the praxis.

REFERENCES


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