

METHODOLOGY OF RESEARCH EFFICIENCY IN THE DISTRIBUTION AREA

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Abstract

In the following paper the Balanced Scorecard as a concept with which one can transform efficiency not only into the dimension across the enterprise but also into the area of a single fine-scale process were applied. A separate process is the process of distribution, which, as is clear from the observations of significantly affects the strength of the ties and the relationship between the manufacturer and the client (direct or indirect). The objectives of this paper are to develop a comprehensive methodology for examining the effectiveness of selected processes as well as the practical application of the methodology developed. The procedure was carried out in terms of application performance evaluation processes carried out in the area of distribution, deemed more important aspect of any company. Methodology The research procedure consisted in substantial part on the use of the Balanced Scorecard methodology proposed by Kaplan and Norton. It is a comprehensive method, because it contains in itself four important points from the point of view of a company's development prospects. The novelty in the use of the BSC methodology adopted in the methodology framework was its application only within the selected area - the area of distribution and customer service. Each perspective was selected and characterized by metrics, then the degree of achievement of the objectives were measured. After identifying discrepancies, proposed improvement actions were suggested.

Keywords: efficiency, the distribution process, the efficiency of the distribution, the distribution process performance measures, Strategic Scorecard.

Introducing

The entrepreneurial activity transforms into processes often defined as: integrated, purposeful system, or a chain of activities altogether constituting an integrative and structuring result, being an objective of the integrated management. [1] These processes may be seen as a repetitive and predetermined cycle of activities, customer oriented, defined by materials and information flows, exceeding enterprise specific activity fields, including primary and secondary activities creating the value.[2]

The distribution process includes the activities related to manufacturer – final product user connection organisation, as well as these products actual flow.[3] This makes this distribution process a crucial stage of the basic large process implemented within an enterprise, as on this very stage an enterprise is already paid for the products or goods, which creates the revenue used for further net profit calculation. This allows us to make a thesis, that distribution processes influence an enterprise market success, which is definitely defined by profit.[4]

1. Distribution process efficiency

The distribution efficiency may be determined as a ratio defined by the results gained by a distribution channel and its functioning costs. A. Czubała highlights that a complete distribution assessment includes efficiency as a relation between results and costs, and usefulness, which is meeting buyers' requirements by a distribution channel.

The situations presented are just few examples how various opinions there are on the distribution efficiency. It comes mainly out of absence of an universal efficiency assessment model, including aspects of each proposals presented in the literature.

Table 1.

Duality of efficiency based on logistics criterion

Logistics efficiency in market dimension	Logistic efficiency in economic dimension
Comparison and planning of the results	Reasonable actions
Orientation to generation of value for customer	Cost orientation
Criterion of purposefulness and usefulness of results	Proper means selection criterion
Supreme efficiency – compatibility of results with customer's requirements	Supreme efficiency – optimized use of available resources
Market research as a motive for efficient actions	The study on the enterprise as motive for efficient actions
Formula: "to create a proper logistic system"	Formula : "to create a logistic system in proper manner".

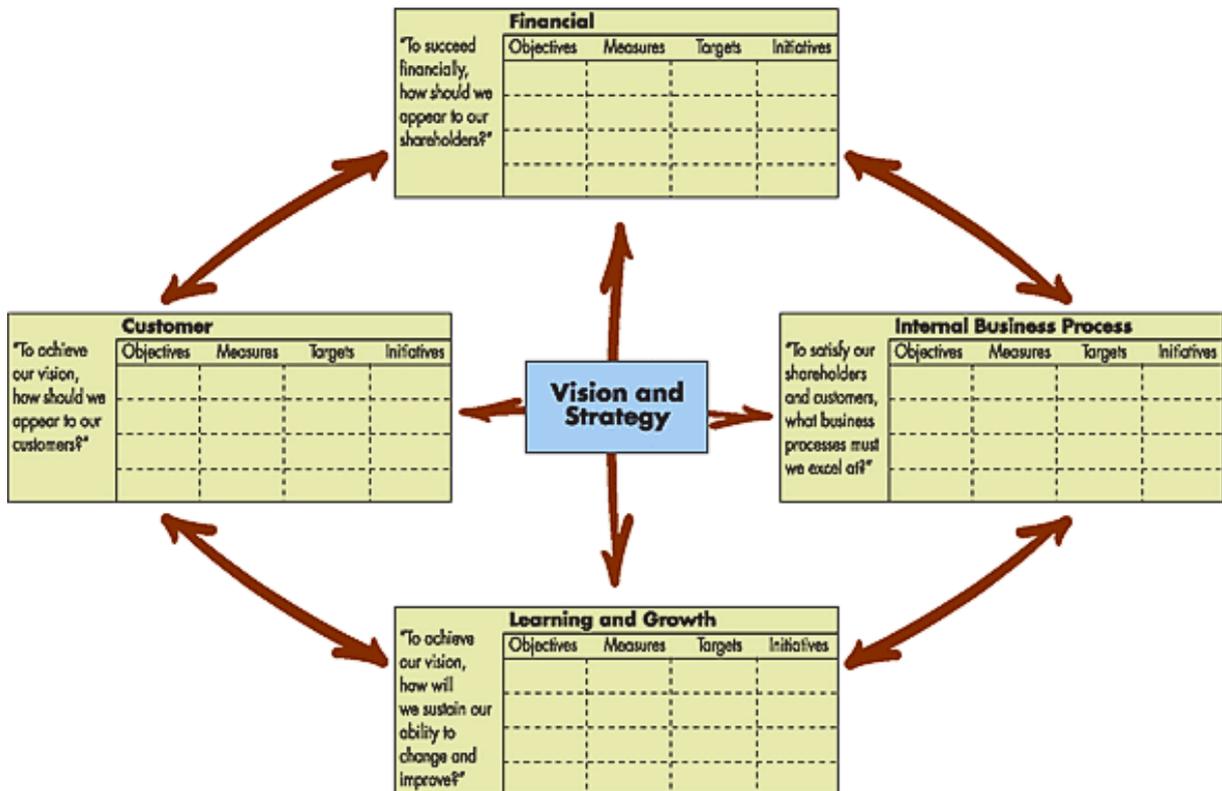
Source: P. Blaik: *Efektywność procesów logistycznych w aspekcie strategicznym*. Biblioteka Logistyka. Poznań 1998, s. 31.

2. Balaced Scorecard in distribution – concept assumptions

One of the most comprehensive efficiency assessment concepts is Balanced Scorecard proposed by R. S. Kaplan and D.P. Norton. It is based on translating vision, mission and strategy of company development to proper aims and indicators of efficiency. This concept includes tools which, on one hand, are used for strategic planning, helping to define the enterprise's aims in four identified perspectives, and on the other hand, they constitute tools for implementation control of predefined aims.[5]

Efficiency seen through Balanced Scorecard is seen in four crucial perspectives: financial, customer's, development and internal processes related.[6]

Translating Vision and Strategy: Four Perspectives



Source: Own elaboration

Financial perspective – indicates real impact of planned strategy implementation on economic results. Customer's perspective - customers defining and characteristics, including their distribution related needs. Necessary step is to precise the indicators which help to assess the efficiency in this field. The most oftenly used indicators appear to be e.g.: market share or customer's. The processes implemented in several enterprise areas, according to the process approach should be described, standradised and constantly controlled and analysed. Internal processes related perspective – indicators used to assess the distribution efficiency.

Development related perspective – defining the company areas, which needs to be improved to secure the enterprise development and success. The vital ones are: constant raising personnel qualification, improving technology and systems as well as adapting procedures to changing environment.

3. Methodology of research

Extremely important is verification of the business processes both, in present and future. Below presents aims of the study:

1. the first aim is to work out the framework process of efficiency assessment,
2. the second aim of this study is analyzing details of the efficiency assessment stages based on BS concept, aimed at empirical applicability,

3. the third and last aim is practical application of conceptual assumptions.
- 4.

The first aim was based on creating a framework efficiency assessment process:

- Stage 1. Research subject characteristics. Identification of the analysis base field.
- Stage 2. Aim of research and research methodology selection.
- Stage 3. Assessment criteria defining.
- Stage 4. Obtaining data necessary for the research.
- Stage 5. Performing the research.
- Stage 6. The analysis of obtained values and conclusions.
- Stage 7. The proposals of efficiency improving actions.

The abovementioned framework efficiency assessment methods will be used for more detailed research of a genuine enterprise distribution and customer service dpt.

Stage I – Research subject characteristics – The research subject concerning the distribution assessment is represented by an enterprise from SME sector working in construction ceramics. This enterprise performs its sales both in direct and indirect distribution channels.

Stage II – Research aim and methodology selection – The research is aimed at presentation of the current distribution and customer's service condition, defining these activities efficiency in this field and proposing tools to improve their efficiency. The research included one of the most popular concepts used in planning, implementation and monitoring of organisation strategy – Balanced Scorecard. For the purposes of this analysis, the concept of it has been modified. It has not been used for the mission and strategy of the whole organisation to one area – distribution and customer's service.

The Balanced Scorecard proposes the strategy in distribution, as measurable objectives, necessary for its achievement. The data collected in the enterprise helped to set the basic aims in distribution and customer's service, select the indicators for individual activities results measurements, then each of indicators was assigned to one of four perspectives. The results were compared with planned assumed values. Comparing plans with actual results helped to point the efficient and inefficient activities. Then, on the basis of the results gained the conclusions were made and the activities proposed in order to neutralise the discrepancies discovered

Creating these indicators of distribution should be connected with considering the idea of good distribution and its efficiency determining factors. One should however be aware of the fact, that distribution is not just providing ready made products to the customers, but also warehousing, customer service or transport. The questions and guidelines helped to precise the factors describing the distribution and its indicators.

Stage III – Assessment criteria definition

Setting aims and indicators of these aims assessment, it was required to define the enterprise mission and vision in the analysed area.

Stage IV – Collecting data

Data necessary to build BS were collected on September 4th 2015, on Distribution and Customer Service Dpt meeting with senior management present (total 28 persons, 4 senior management members). During the meeting the statistics based on integral IT systems were analysed, as well as the reports and financial data, which were put in the special survey which had a function of profiled research tool. The employees defined their thirteen the most vital aims for the enterprise in terms of distribution and customer service, concerning, i.a.: personnel, orders, deliveries or customers. Filled surveys were used for creation of BS and analysis of the enterprise's distribution efficiency, basing on predefined aims

Stage V. Performing the research

The perspective of internal processes has been considered by the respondents as the most vital one, or even determining the remaining ones (19 of 28 opinions).

Further part of this study will be based exclusively on internal processes, according to its title.

Internal processes is a third perspective in the Balanced Scorecard. Its aims concern mainly the very distribution process and its shaping factors. There are four aims set in this perspective.

Increasing number of deliveries per day is important not only because of the orders volume, but also because of the costs. In distribution organisation it is vital to set the deliveries routs, in order to make maximum deliveries within a single course. Deliveries per day mainly depend on operational transport means availability.

Within the analysed period (September 10th 2015 - October 10th 2015) the enterprise planned to achieve average result 24 deliveries per day, but data show that 19 of them were completed, and 5 are still not done.

24-19 deliveries completed per 1 day= 5 deliveries less

In terms of internal processes perspective **shortening order time** is extremely important. Shortening order time proves: 1. the efficiency growth, 2. customer satisfaction growth. Time is one the most important efficiency criteria. In the analysed period (September 10th 2015 – October 10th 2015) average order completion period of the enterprise was 7 days.

The aim was to shorten this period to maximum 4 days, so the above period should be reduced with 3 days, which seems to be hard as now it means 50%.

7 - 4 days per order = reducing completion time with 3 days

Promptness is another vital factor in distribution efficiency. The customers pay much attention to prompt deliveries. The enterprise's aim was to keep it on the level of 95%. The results were slightly above the planned area and in the research period (September 10th 2015 - October 10th 2015) they reached 95,7%.

(number of prompt deliveries)/(total number of deliveries) * 100% 364/380 * 100% = 95,7%

Minimising complaints level is also crucial for our enterprise. Not only the qualitative complaints are concerned, but also and above all, the ones related to improper distribution. Damaging during transport decreases customers' satisfaction. The enterprise's aim was to decrease the complaints down to 5% of all deliveries. The result was much higher and reached 14,5%.

$$(\text{number of complaints})/(\text{total number of orders}) * 100\% \\ 55/380 * 100\% = 14,5\%$$

Table 1
Internal processes perspective

INTERNAL PROCESSES PERSPECTIVE			
General aims	Indicators	Current result	Planned result
Increasing deliveries per day	Number of deliveries per day	24	19
Shortening delivery time	Time between order and delivery	7	4
Increasing promptness	Number of prompt deliveries / total deliveries	95,7%	95%
Decrease of complaints	Number of complaints / number of total orders	14,5%	5%

Source: Own elaboration.

According to the table, only one of the predefined aims was achieved within first month. We can make a conclusion, that efficiency indicators in the internal processes perspective prove to be of insufficient efficiency. The least efficient areas are: time between order and delivery.

Stage VI. The analysis of obtained values and conclusions.

In result of comparison of values describing several partial aims, a rate defining the relation between plan and result has been determined. According to the assumption, efficient activity means results obtained within analysed period (September 10th 2015 - October 10th 2015) exceeding 80% of planned level (in the event of maximising activities) up to 120% (for minimising ones).

Stage VII – Proposed changes

The aims set turned out to be unsatisfactory, which makes them a guideline for future improvements. The proposed indicators optimisation solutions related to specific aims are the last stage of research methodology aimed at raising efficiency in distribution and customer service, which makes it a strategic part of Balanced Scorecard, used for efficiency assessment.

Table 2
Proposed improvement

No.	Activity	Proposed improvement
1.	Increasing daily deliveries till 13.	Increasing deliveries per day is vital in efficient distribution. This prevents excessive warehousing time. The solution is increasing number of distributions, in manner enabling carrying out few deliveries simultaneously. It will also have good influence on transport means.
2.	Shortening delivery time to 4 days.	Long order implementation time is usually related with warehouse shortages. That's why it is important to plan production, tracing the product demand and minimizing production of the least popular ones. Decrease of delivery time is also related to the availability of additional transport means.
3.	Decreasing complaints to 5%.	Decrease of complaints is a result of quality improving activities, i.a. Distribution process. As the additional research prove the complaints were usually related with products damages due to excessive warehousing. Improvements in this matter meant intensification of raw materials quality control, additional control during a specific product loading and delivery. Additional securing packages and safe transport, compliant with valid regulations.

Source: Own elaboration.

The proposals presented herein show the extent of mutual relations between specific aims and improvements. Improvement of one direct or indirect aspect influences the other one. Implementation of proposed changes in future will raise the efficiency of the whole distribution process. The table above may indicate that distribution improvement should be performed in three categories: time, quality and costs.

Conclusion

Processes efficiency research concept is a vital issue in total assessment of an enterprise functioning. Knowledge about the activity results brings vital information to the management. It proves the correctness of processes, as well as necessity of their improvement. High efficiency level constitutes a basis for the enterprise competitiveness increase. The research methodology may be applied directly in the enterprise. The individual areas distribution in the general enterprise efficiency determines a comprehensive organisation assessment. As noticed herein, the efficiency as such is extremely vital both, for theory of management and in economic practice. The literature contains popular concepts of processes efficiency, including distribution and customer service as a main topic, which includes following concepts: TQM, Just In Time, or Lean Management. They are joint together by involving all the employees in the process implementation, customer

oriented attitude, including external customers as a reference point for distribution activities and constant processes improvement, which is vital for the enterprise administration concepts processes.[7] The practical aim of this study has been achieved and the concept of Strategic Results Cart as a comprehensive efficiency management method seems to be justified.

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