Logistics Controlling as Support in Managing Service Companies

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Abstract

Importance of services in contemporary business environment has been recognized in a number of world economies. Service sector importance in economy of Serbia is growing from sixties of the last century. In that sense, Serbia is sharing destiny of similar mid European countries. Service sector development requires new concepts, approaches and methods in development and management of logistics sectors in these companies, so they can survive and create competitive advantage. It requires development of logistics controlling in service sector companies as scientific discipline. Every day changes and turbulences in supply and demand of goods requires a provocative way of quality management in logistics.

Good practice in area of logistics providers business shows that it is not enough to be flexible and adaptive to market requirements, but it is necessary to anticipate future trends and timely prepare company for expected future customer needs. On the other hand, quality in logistics is based on systematic approach and continuous managing of all processes, activities, subsystems and resources, which requires efficient process of managing different internal and external changeable inputs and performances. In other words, quality system management in logistics requires timely, accurate and reliable information on logistics processes and systems.

Based on this, companies should consider if their current operational models are still effective and efficient. Purpose and primary goal which corresponding logistics controlling model should deliver is to enable management team to steer company in sense of achieving planned business results. In this managing process possibility of making subjective decisions by management team should be ruled out. Accordingly, proper organizational logistics controlling model should represent one new way of management support in making business decisions.

Key words: *logistics, logistics controlling, business performance, logistics processes and systems*

1. INTRODUCTION

Serbian companies, as well as the entire Serbian economy, are at a significant turning point as the Republic of Serbia keeps coming closer the European Union, being at the same time under the pressure of business globalization and internationalization. Companies are faced with increasing competition, especially from companies in foreign private ownership. This is can be particularly seen in the beer, juice and water industry, which are the subject of this paper. The today's business environment is marked by increasing flow of information necessary for the efficient operation of companies. With the advancement of electronic media, there is an increasing amount of information from the markets around the world. Do they help companies in making business decisions or are obstacles to business operations? In this way of doing the business, managerial skills are of great importance, as well as the ability to develop and commercialize new products that will be competitive in the international

market. This is particularly true for small economies such as the Republic of Serbia. Logistics controlling is one of the managerial tools that can be of great help for managing the enterprise successfully and making the operation efficient at all levels.

Daily changes and turbulences in markets where raw materials are procured and products placed require managing quality in logistics in a proactive way. Practice in logistics business has shown that being flexible and adaptable to market demands is not enough, but it is necessary to anticipate future needs and prepare in a timely manner to meet the expected customer demands. This problem is quite present in this industry as these are consumer products whose demand may be significantly different at different times. In addition, these products also require special storage and transport conditions. But how to meet the demands of the market at any moment without overstretching the stock of finished products? This is one of the questions that should be answered by the company's logistics controlling. On the other hand, it is necessary to

consider all quality performances in logistics and manage them in the best way. In other words, the quality management system in logistics requires timely, accurate and reliable information on logistics processes and systems. Data and parameters that are collected and processed on the basis of traditional information systems, legally adopted procedures and regulations, various forms of accounting and reporting, analytical and synthetic account charts are insufficient for effective decision making.

It should be emphasized that major changes in beer, juice and water production occurred in the Serbian market after the transition and privatization. Foreign companies arrived, and purchased some of the domestic companies, such as the breweries from Apatin, Čelarevo, Novi Sad and Zaječar, the Knjaz Miloš, Rosa and other water plants, while at the same time domestic private companies occur, especially those in the business of bottling of spring water. A number of companies from this business segment are closed; some are either in the process of restructuring or in bankruptcy. There were also unfavourable privatizations from which foreign investors withdrew. The main feature of this market is consolidation of capital and the takeover of small businesses by large companies, such as Coca Cola, which took over Next and Rosa. To which extent can controlling help companies from this industry in their business? Most foreign-owned enterprises already have controlling introduced in their business, while some domestic have either implemented or are in the phase of introducing controlling. How can logistics controlling help in doing this? By providing them with a comprehensive methodologically designed and elaborated system for identifying, collecting, processing, distributing and presenting relevant information and data, instead of the traditional procedures, mainly focused on partial subsystems and processes, and poorly usable parameters and data[1. This is what the management of these companies expects from logistics controlling.

2. BASIC FUNCTIONS OF LOGISTICS CONTROLLING

Logistics is a very complex concept, which is not easy to define for many reasons, logistics controlling is even more difficult. The first concepts of logistics controlling appeared in the 1980's and 1990's, with different authors differently defining its objectives, importance, and functions. In the initial stages, there were interpretations that suggested that logistics controlling is the same as controlling the logistics processes, while later, with the advancement of the concept of logistics controlling, many authors emphasized that controlling is much more than standard controlling and that it represents an integrated support to logistics management [3].

The following can be said to be the main functions of logistics controlling [4]:
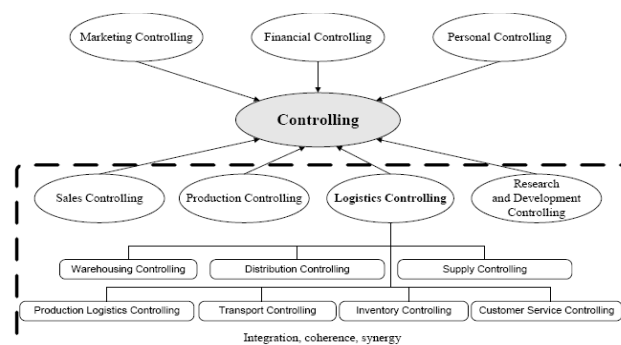
- Planning
- Managing
- Controlling
- Informing

Figure 1. The place of logistics controlling in a enterprise's structures

Analyzing the system of process enterprises, i.e. companies that produce beer, juices and water, and the basic functions of logistics controlling, it can be attributed the role of regulator. In these enterprises, the input process values influence the output process values, which can then be selected and predefined by the functions of logistics controlling.

The **planning function** helps logistics controlling to base its operation on predictions and anticipations of future events and events. These enterprises should respond to changes occurring on the market, but it is much better when they create these changes themselves or are able to predict them in time, avoiding the adverse effects on the business. Logistics controlling should provide a proactive way of decision-making that would be based on the prediction and development of different business scenarios or models. Logistics controlling has the function of managing performances and business results actively. In today's business conditions, traditional methods of measuring only financial performances are proved to be ineffective. Being able to manage something requires measuring it, focus thereby performances on achieving the objectives. Instead of wasting time on data collection, more time should be spent on analyzing the samples and consequences of each performance of logistics controlling. Based on performance measurements, processes and activities should be improved. An increasing number of enterprises in this branch of industry are opting for the introduction of the Balanced Scorecard as a modern performance-measuring controlling instrument. Customer demands in the modern market and logistics services market require changes to be introduced in the quality of services provided. Improving the level of quality of services refers to increasing the speed of transfer of goods, reducing the duration of all activities related to the delivery of goods, increasing the accuracy of deliveries, increasing the safety of goods, etc., minimizing logistical costs, that is, minimizing logistics resources [6]. All this led to major changes in the concept of realization of logistics activities. The main areas of these changes are:

➢ locating, conceptualizing, organizing, categorizing logistics centres and their functions;
➢ technology of implementing logistics processes;
➢ information technologies that ensure the functioning of logistics systems;

> ➤ methods and procedures for strategic, tactical and operational planning and management of logistics processes; and
> ➤ methods and procedures for monitoring, measuring and analyzing the performances of the logistics system.

Logistic performances are the result of business strategy, organization of work, and application of information technology and techniques in the enterprise. Logistics performances can be divided in two groups of indicators:

> ➤ hard (financial and physical) indicators;
> ➤ soft indicators of the quality of logistics services (regular deliveries, customer satisfaction, a small number of justified claims)

The group of "hard" indicators includes: costs, profit, and economic and financial indicators. Properties of these indicators are relatively easy to quantify.

The "soft" indicators are: level of customer satisfaction, service, complaints, late deliveries, and others. "Soft" indicators usually represent the user's subjective perception of the service provided.
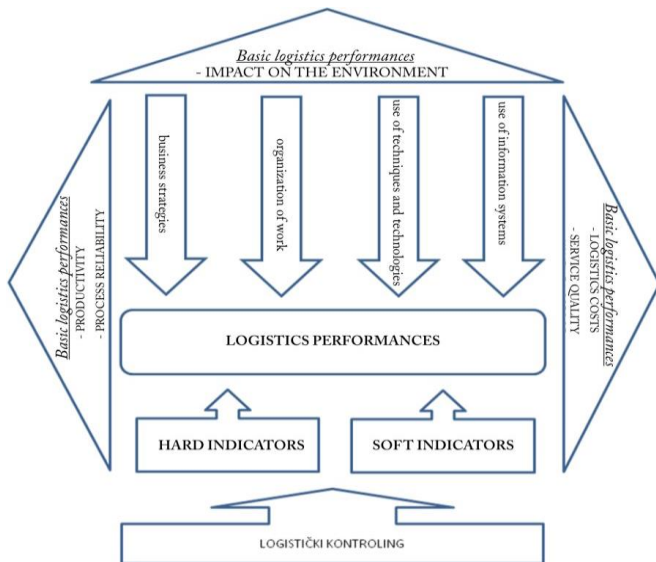

Figure 2. Logistics performances

In order to monitor whether the set objectives of measured logistics performance are realized, it is necessary to measure, monitor and process the realized values, i.e. determine deviations between the desired and actual values. In addition to the analysis of the obtained data, it is also necessary to establish and determine causal relationships, or map the logistics controlling process strategically. On the basis of all this, corrective measures and improvement proposals are made, enabling the management to make right decisions. This is where the **controlling function** of logistics controlling helps.

All of this would not yield results if it was not done in a transparent manner and if the received information were not distributed to different levels of decision making, from top management to direct executors of logistics processes. This reflects the informing function of logistics controlling[5].

3. LOGISTICS BUSINESS PERFORMANCES

Logistics performances are the result of the business strategy, organization of work, and the applied level of information technology and techniques in the company [7]. Logistics costs, the level of quality of logistics services, logistics productivity or resource efficiency, reliability of logistics processes and environmental impacts can be distinguished as the main logistics performances. Based on this, logistics performances can be divided in internal and external performances. This is a conditional division because all performances are links of a single logistic chain.
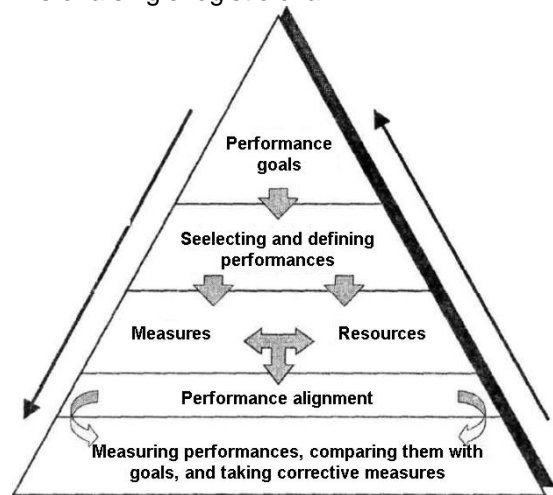

Figure 3. System of performances supporting company objectives and strategies

The above performances can be seen from the aspect of a single subsystem or from the aspect of the system as a whole. The same performance in one case can be an internal, while in the other an external dimension.

When choosing and defining logistics performances, the following issues should be taken in consideration:

> ➤ Can performances of the company be defined without comparing them with competitors?
> ➤ How to re-design the performance system in conditions of introducing technical and organizational innovations in the business system?
> ➤ How to define the quality of service provided to the customer, while getting a realistic image of the extent of his (un)satisfaction?
> ➤ In order to meet these conflicting criteria, it is necessary to monitor the functioning of the business system, control the consumption of resources and, in line with business policy, find the "real" relationship between what has been invested and realized.
> ➤ Does logistics costs best describe the financial aspect of the work in a warehouse?
> ➤ Is the set of techno-exploitation performances the only measure of success of the vehicle fleet?
> ➤ Can human resource performances be viewed independently of the company's output?

Analyzing logistics performances, their structuring, measuring and assessing their effectiveness by

changing their values can be an extremely complex task, depending on the structural and hierarchical level of the company. Human competences in performing logistics tasks, as well as in designing the performances, are of the utmost importance.

3.1 Logistics costs

Logistic costs include the costs of all activities that are taking place in order to form, design, direct, manage and regulate the flow of goods, energy and information, and represent an economic measure of functioning of logistics systems. Logistics costs, on average, account for 8% of the total revenue generated by the company, and some studies show that the structure of total logistics consists of 45% transportation, 25% storage, 20% stocks and 10% administrative costs, which does not have to be the rule for every company. Calculating and adequately monitoring logistics costs require breaking them down and determining the phases and elements of processes that generate these costs. It is necessary to determine the carriers of each individual cost.

3.2 Level of quality of logistics services

The best way to measure the level of logistics service quality is checking the level of customer satisfaction with the service provided. Customer satisfaction is usually unexpressed quantitatively and represents the subjective opinion that makes it difficult to measure it. Customer satisfaction levels should be expressed quantitatively and should be comparable to other performances. Another problem is that each user of services has his own system of assessment of services. Thus, what is a poor service for one user is good or great for the other. It is necessary to create such questionnaire for measuring customer satisfaction that will neutralize these problems.

The next disadvantage or problem in measuring customer satisfaction is that the user evaluates the operation of the entire company and is not interested in its system and structural elements. All this indicates that the level of service quality makes a complex performance of the logistics system. The following is suggested as the most common indicators of the level of service quality: the time needed for delivery, reliability, accuracy of delivery, and the number of justified complaints. Many companies believe that raising the service quality directly leads to the increase of logistics costs, which is a wrong opinion. How many companies from the processing industry are testing customer satisfaction? Competition and the increasing number of products from this industry have made many companies to focus on their customers. Who are the customers of breweries, juice and water producers? Are they end-users, distributors, retailers or catering facilities? The producers of beer, juices and water rarely meet the end users of their products, but this does not mean that they need to devote less attention to them than to other participants in the chain. One way or another, everyone is interested in checking the satisfaction. If a customer comes to the shop in order to buy a particular product but the shop does not have it, the customer will very likely buy the product of some of the competitors. In a situation where there are "plenty" of new products on the market, brand loyalty is becoming increasingly challenging. Customers are constantly tempted to try something new, which is a great incentive for companies to work on their products.

3.3 Productivity of logistics systems

Productivity of logistics systems includes different methods and uses of indicators inherent to this system. Logistics productivity indicators can be divided in three groups:
1. Technical characteristics determining logistics costs;
2. Technical characteristics describing resource utilization; and
3. Characteristics determining the level of quality through the level of customer satisfaction.

Logistics productivity indicators are calculated at lower levels of logistics system management and provide a prerequisite for the adequate linking of subsystems. They are the basis for determining logistics costs and quality levels, based on which decisions are made at higher hierarchical levels of management. The structure of logistics productivity indicators can be broken down in logistic subsystems, for example, rolling stock productivity, the degree of utilization of loading machinery, etc.

4. THE ROLE OF CONTROLLING AND LOGISTICS CONTROLLING AS A SUPPORT TO DECISION-MAKING IN THE PROCESS INDUSTRY

The previous section of this paper identified the basic functions of logistics controlling, asserting that their presence is necessary in the system of logistics. However, this is not easy to do and there are two fundamental questions:
1. How to organize the system of logistics, which resources to apply, how to plan the logistic process and how to manage it?
2. How to determine the extent to which changes in process planning and management will affect logistics performances? It is necessary to raise the quality of logistics services to the highest possible level without increasing the consumption of resources, i.e. the operational costs need to be reduced.

Is logistics controlling helpful to companies in the process industry? This paper analyzes companies from the food industry, i.e. beer, juice and water production.

Our research involved employees in the field of logistics from 14 companies: 15 employees from water production and bottling companies, 59 employees from juice producing companies and 73 employees from beer producing companies. The research was aimed at determining the degree to which controlling is present in these companies and their logistics systems, the role of controlling in planning and reporting, and the degree to which controlling contributes to measuring the performances and improving the business process.

Regarding the presence of controlling in companies under consideration, 140 employees (89.17 %) stated that controlling is present in their companies, while 16 employees (10.19%) declared that controlling does not exist.
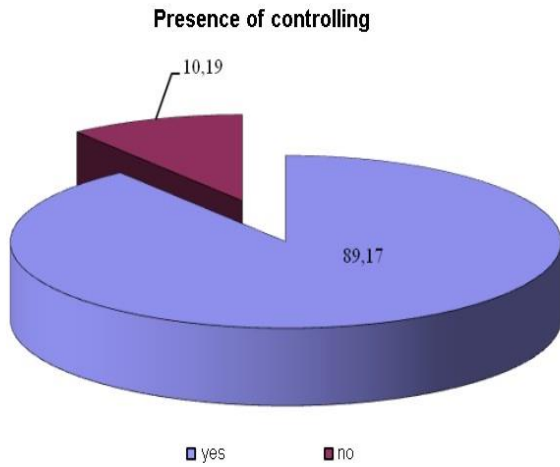

Figure 4. Presence of controlling

In the majority of companies (52.87%), controlling is present for more than 6 years, which is understandable, since the owners of capital in most of the companies covered by this study are foreign companies. However, controlling in 54.78% of companies is centralized, i.e. it is at the company level, which makes the work difficult because controlling refers merely to a reporting process rather than creating future decisions for business improvement.

Making right decisions and always being ready for market demands requires planning and forecasting future events. Most employees from these companies agree that planning is necessary for the successful operation of the company. One of the questions was which information is the most important: is it only the financial data from the company itself, financial data coming from the environment (competition), non-financial data from the company, non-financial data from the environment or all these combined? The largest share of employees believes that the financial data and data from the company are insufficient for successful operation or planning, and that all financial and non-financial data both from the enterprise and from the environment must be included. Companies that are in majority foreign ownership believe that it is necessary for the planning to look at all the data, while with state-owned enterprises it is represented that the financial data are the basis for successful planning. State-owned enterprises in this area are mostly in the process of bankruptcy or privatization, and obviously they have not yet considered all performances essential to monitoring business performance. Whether they have lost the battle in the market for this reason is difficult to say, but certainly that this is one of the reasons. Especially since these companies still believe that the Planning and Analysis Department should be the place where the planning unfolds, and that controlling should not participate, while the opinion in private companies is completely different.
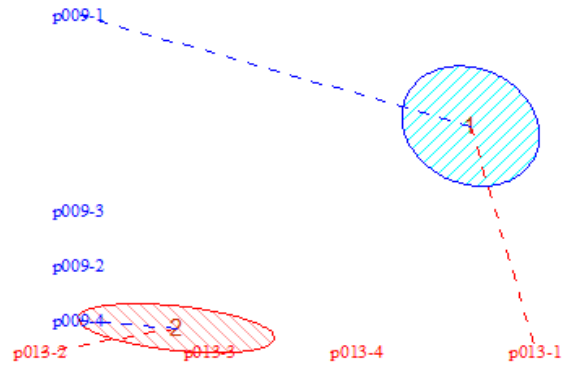

Figure 5. Ellipses of ownership forms of the company as a function of estimates of the most useful planning data

Should strategic planning be carried out every year, every 2-3 years or every five years? Enterprises in private or foreign ownership believe that strategic plans have to be made every year and refer to a five-year period.

Domestic state-owned enterprises believe that strategic planning should be done on a 3-5 year basis. How many changes happen on the market in one year, not to mention a period of three years? All companies participating in this study agreed that there is a need for improving both strategic and operational planning. Companies in foreign ownership (as much as 85.79% of them) believe that it is necessary to improve measurements of business performance. This is agreed by 44.2% of domestic companies.

Privately owned enterprises (85.9%) believe that controlling can lead to business success and to success of logistics systems, while as many as 34% of state-owned companies believe that controlling cannot affect the success of the company. When it comes to business risk assessment, most companies think that controlling should take part in the assessment of business risks, assisting thereby the company management in making the right decisions. Private companies believe that reports should be created for each company separately instead of using standard forms of reporting with the introduction of controlling. Each market in which the company operates carries certain specifics that are not included in standard reports generated by the company at the central level. The same company performs differently in different markets. Supplier reliability is not the same in the Republic of Serbia or the Netherlands, Belgium and Denmark, from which some of the largest companies operating in the investigated segment of business in our market are coming.

Controlling helps management in decision-making, preventing it at the same time from making subjective decisions, which may be unsuitable for the business at a given moment.

Most companies covered in this survey recognized the importance of controlling and logistics controlling. Based on the research, we see that different data groups and variable dimensions that describe the

logistics process, activities, and subsystems are the key instruments of logistics controlling.
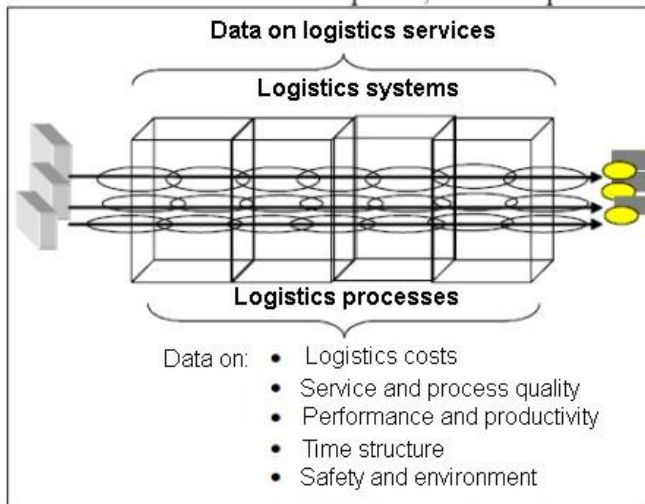

Figure 6. Data on logistics services, processes and systems as instruments of logistic controlling [4]

Logistics controlling should collect and analyze the processed data that will enable the assessment of performances in relation to the projected values and the defined plans and goals.

Based on the company's goals, it is necessary to define the strategy, the implementation of which will result in the required results. Progress in achieving the goals should be measured based on the clearly quantified data.

This is the way of identifying discrepancies and defining the potential areas for improving the quality of logistics processes. Describing the complex and changing structure of logistics systems and processes, often requires a large number of logistics performance indicators, the identification, processing and application of which is a serious problem in actual systems. Initially, a large number of indicators will appear, from which the indicators key to logistics operation (logistics performances) should be selected and the effective criteria and method of tracking them defined.

Measuring and tracking logistics performances is a cornerstone of quality management in logistics, because if something cannot be measured, it cannot be managed. Creating performance measures is directly related to the company's vision and goals. One of the best instruments of strategic controlling for measuring business performance is the Balanced Scorecard, which can also be applied in tracking logistics performances [2]. The BSC provides a clear picture of business indicators, benchmarks, defined goals, and the period in which they are tracked. Creating a strategic map also enables to identify the interdependencies of indicators within each perspective and also between the perspectives.

The research showed that some companies of this branch of industry lack any controlling, let alone logistics controlling and performance measurement. Resistance to logistics controlling exists primarily due to the lack of vision and strategic thinking in the company, fear of changes, lack of understanding and support from the management, resistance to the introduction of new technologies, primarily the introduction of information systems which would facilitate the flow of information, etc. This is more pronounced in state-owned enterprises which still do not use instruments of strategic controlling that can help them in some way, but rather expect the change to happen by itself or be introduced by someone else.

5. CONCLUSION

Unstable business conditions and changes that happen on a daily basis require companies to introduce new instruments of strategic controlling in order to improve their performances. In today's business, planning and forecasting are essential components of an organization. This requires companies to actively manage their performances and thus control their business, take corrective measures and improve their business. Measurement results can be used to analyze the differences between the defined and achieved results, analyze the cause-and-effect processes, identify wrong decisions, manage the risks and continuously increase the quality. Enterprises in the process industry should harmonize the stocks of raw materials and the finished products in accordance with the market demands and needs. Product availability is extremely important but it is necessary to define the "right measure", because excessive stocks lead to increased capital engagement, higher operating costs, and potentially higher costs due to product expiration. Responding to demands, while at the same time keeping optimal product quantities in the stock, with a reduction in operating costs is essential. In doing this, logistics controlling can be very helpful. There are many performance measurement instruments that can be implemented in these companies. Today, logistics requires educated staff, well-balanced indicators that will be monitored, and goals aligned with the goals of the company.

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