

## **SUITABILITY OF ACTIVITY – BASED COSTING FOR LEAN BUSINESS CONCEPT**

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**Bojana Novičević Čečević, Ljilja Antić**

University of Niš, Faculty of Economics, Niš, Serbia

**Abstract.** *Lean business concept is characterized by securing the required customer value, quick product delivery, elimination of all forms of waste both from production and from all business processes in the company. In order to successfully respond to such requests, company managers need an appropriate information base. One of the possible information bases is activity-based costing. The paper deals with the issue of application and suitability of activity-based costing for lean business concept.*

**Key words.** *lean concept, activity-based costing, elimination of waste, performance measurement*

**JEL Classification:** M 41

### INTRODUCTION

Application of *lean* business concept began in the last decades of the 20<sup>th</sup> century. However, the earliest examples and postulates of *lean* business concept date back to 1855. Specifically, a weapons warehouse recorded a single piece flow. Since then, *lean* business concept has evolved and today represents the leading business paradigm of modern companies. *Lean* business concept includes a business philosophy and culture that eliminates all forms of waste from the company business flows in order to shorten the lead time. This can be achieved by performing value-added activities in the best possible way and constant business process improvement and employee development. The application of the basic principles of *lean* business concept brings numerous benefits both at operational and strategic levels. At the beginning of the application of *lean* business concept, only operational improvement is visible. This is because strategic improvement comes only

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**Corresponding author:** Bojana Novičević Čečević

University of Niš, Faculty of Economics, Trg kralja Aleksandra 11, 18000 Niš, Serbia

E-mail: [bojana.novicevic@eknfak.ni.ac.rs](mailto:bojana.novicevic@eknfak.ni.ac.rs)

after changing the way of thinking, business culture, and working methods, of both managers and executives. By guiding managers and executives towards reducing waste in business processes, operational improvement becomes strategic.

In an effort to adapt to *lean* business concept and successfully respond to demands of various stakeholders, company managers change their production systems, costing methods, and management methods. One of the concepts that can be successfully applied in the process of continuous improvement is activity-based costing.

Based on the information arising from activity-based costing, managers can monitor product and service costs, assess their profitability, and find out where they can reduce costs. Activity-based costing finds its conceptual basis in activities carried out in a company, and for the allocation of the increased mass of overhead costs, they use adequate bases, both those related to the physical volume of production, and those that do not relate to the physical volume of production, which leads to more precise costing. A particularly important aspect of this costing system is the ability to identify and eliminate non-value-added activities, which increase costs and time necessary for the product to be produced or service delivered.

In this regard, the paper is divided into three parts. The first part of the paper points to the essence of *lean* business concept and the model that should be established in the company in order to achieve a competitive advantage. The second part of the paper presents the basic characteristics of the original activity-based costing concept. Finally, similarities and differences between activity-based costing and *lean* business concept are highlighted.

## 1. THE ESSENCE OF BUSINESS CONCEPT

The term *lean* business concept is used in the business world to designate a philosophy that incorporates different models, methods, techniques, and tools applied in business processes in order to optimize time, employees, resources and productivity to ensure and improve quality of products and services delivered to customers (*Lean Manufacturing and the Toyota Production System*, 2010).

In the initial stages of development, *lean* business concept focused only on the operational level. At the operational level, it sought to reach customer value by applying appropriate *lean* techniques and practices. In this respect, the tendency was to improve efficiency and reduce costs in the production process (Salehi & Yaghtin, 2015), in order to create the value customers expected from a product. Thus value became the heart of *lean* business concept. Eliminating waste and unnecessary resource spending during the execution of business processes was seen as the basic goal of the *lean* concept. Waste and unnecessary spending in the *lean* business concept imply all non-value-added activities, resources, processes, and employees. With their elimination, waste and unnecessary spending of company resources disappear. Companies see waste as an enemy, which at the same time restricts operations and impedes the realization of the defined company strategy and goals. However, elimination of waste and unnecessary spending does not necessarily mean elimination of resources, processes, and dismissal of company employees, but the possibility of directing them to some other value-added activities within the company. In any case, elimination of waste and reduction of operating costs are important preconditions for creating *lean* flows and processes. Eliminating non-value-added activities leads to achieving the defined performance targets, ensures better understanding of processes, and facilitates the improvement of business processes and performance.

The focus of *lean* business concept during the 1990s shifted from operational to strategic level. At the strategic level, the aim was to understand the value provided to customers, in terms of product quality, costs, functionality, delivery speed, and the like.

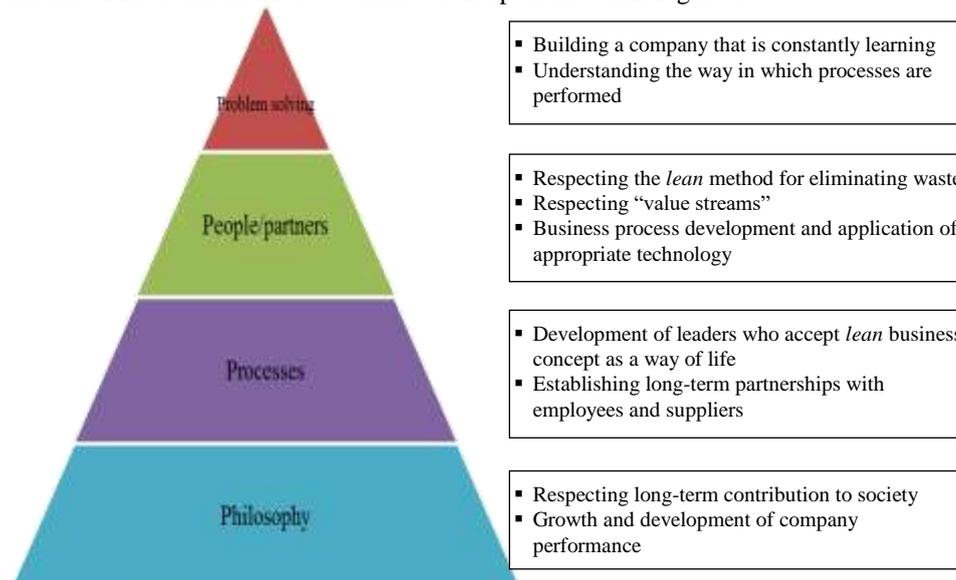
*National Institute of Standards and Technology Manufacturing Extension Partnership Lean Network* gave the definition of *lean* business concept, seeing it as “a systematic approach to identifying and eliminating waste through continuous improvement, flowing the product at the *pull* of the customer in pursuit of perfection (*Lean Principles*)”. This definition of *lean* business concept is integrated into company strategies and development policies, as customers determine the level of production and product quality. This business concept is the business philosophy rooted in the minds of employees.

Womack and Jones (Womack & Jones, 2003) gave another definition of *lean* business concept. They explain *lean* business concept as the most powerful weapon that creates value while eliminating waste in a company. *Lean* business concept requires value determination, definition of activities needed to create value, and their effective and continuous performance. *Lean* business concept allows one to do more with less and less. Less resources refers to less human effort, less equipment, less time, and less space.

*Lean* business concept is also defined as the creation of a business system that focuses on streamlining and improving processes in order to shorten the time needed for their performance and resource retention time within the process.

Consequently, *lean* business concept focuses on the following objectives: business process improvement in the company, performing only value-added activities, and eliminating all forms of waste and unnecessary spending (Chen & Taylor, 2009).

The above definitions of *lean* business concept put emphasis on business philosophy, process, people and partners, and problem solving, giving rise to the so-called “4P model”. The 4P model of *lean* business concept is shown in Figure 1.



**Fig. 1** 4P model of *lean* business concept

Source: Liker, J., Meier, D. (2006). *The Toyota Way Fieldbook, a Practical Guide for Implementing Toyota's 4 Ps*. New York: McGraw-Hill. p. 26.

The 4P model basis is a business philosophy. Modern companies focus on transforming values in the company in order to meet the needs of customers and owners, as well as other numerous stakeholders. Each of the listed groups of stakeholders is interested in a certain aspect of company operations. Customer satisfaction is only an initial stage, from which company results and contribution go further. In order to achieve this, *lean* business concept must be seen as a kind of company strategy, which basically relies on reduced operating losses, i.e. lowering costs, better use of resources, and delivering higher value to customers as well as other stakeholders.

The second P in this model refers to business processes carried out in the company. Toyota, which is considered the cradle of *lean* business concept, realized that well-designed processes lead to right results (Liker & Meier, 2006). Business process design involves a long-term activity that brings lower costs and product quality improvement. This, first of all, refers to the establishment of well-organized “value streams” in which *lean* methods and techniques are used to eliminate all forms of resource waste.

An important part of *lean* business concept is its human aspect, so it is understandable that the next element of the 4P model relates to people, i.e. employees. *Lean* concept respects all employees in the company, from operational workers in the production process to company managers. All employees are part of a team that continually strives to improve business activities. The company success is the success of all employees, not the individuals who lead the company. The behavior and operation of employees depend primarily on the incorporated business philosophy and culture, which employees rely on to achieve continuous improvement of activities they perform. In this sense, *lean* business concept allows for increasing employee satisfaction by providing very quick feedback with the aim of transforming resource waste and scrap into value-added activities.

The last element of the 4P model is problem solving. Continuous problem solving at the place where problems occur stimulates learning and growth in the company, and, thus, leads to better performance. Spotting the problem where it occurs is possible if one knows the business processes that are performed in the company well and if they are managed by a manager who “lives” *lean* business concept.

The application of the 4P model requires a long-term company orientation to better results, through employee training and education to carry out business processes through continuous problem solving, in a way that will increase the value for all stakeholders. If one of the above model elements is left out, implementation of other elements will not be complete, nor will the desired results be achieved.

Benefits from the application of *lean* business concept are noticeable at: operational, administrative, and strategic levels. The first visible business improvement occurs at the operational level. Research has shown that companies that applied *lean* business concept reduced lead time by 90%, increased productivity by 50%, reduced work-in-progress inventory by 80%, improved product quality by 70%, and reduced use of business potential by 75% (Womack & Jones, 1994).

Administrative improvement allows (*Lean Principles*):

- Reduction of errors in the product ordering process,
- Shortening customer waiting time, improving customer service function,
- Reducing documentation and paperwork of business processes by ensuring that more time is spent on securing value for customers,
- That the same number of workers handle a greater number of orders,

- Lowering costs with the increase in inventory turnover, and
- Implementation of business standards.

Strategic business improvement can be seen after a long period of time. This improvement relates to increased market share and rise in cash flow and corporate income. A large number of companies engage professional consultants for *lean* concept implementation and spend large sums of money. However, *lean* business concept must first be accepted by the top management to achieve the defined goals. This is because the process of implementing *lean* business concept must begin with the research and analysis of existing business practices, in order to determine the *lean* technique that is appropriate to specific business practices. If that is not the case, *lean* concept will be just a simple tool for business improvement.

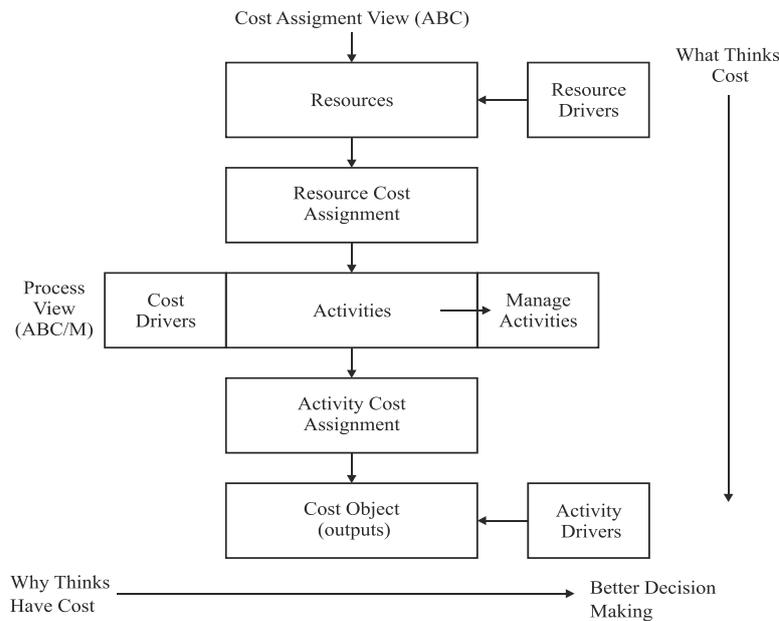
## 2. ACTIVITY-BASED COSTING AND MANAGEMENT

Activity-based costing (ABC) emerged as a result of the efforts of accounting theory and practice to respond to the information requirements of company management in changed business conditions. The initial goal of activity-based costing was to overcome the weaknesses of traditional costing systems, in terms of finding adequate keys to allocate overhead costs. This is because the new ways of doing business and the changed organizational structure in the company have led to a rise in overhead costs, but also to a reduction in direct labor costs, which were the most commonly used basis for allocating overhead costs. In a situation where the mass of overhead costs is allocated on the basis of direct labor costs, cost of goods determined by traditional approach becomes an unreliable information basis for making business decisions, planning, and control. The basic novelty of activity-based costing is that this concept recognizes that most of the company's resources are not used in direct production, but in production support activities and sale of products and services (Malinić & Jovanović, 2011). In fact, activity-based costing implies that costs are incurred when carrying out activities of production and sales of products. The basic task of this method is to allocate overhead costs to products by carefully researching the relationship between products, activities that incur production costs, and resources spent on production. Activity-based costing is based on the following assumptions (Antić & Georgijevski, 2010):

- To produce a product or service, it is necessary to carry out appropriate activities,
- To carry out an activity, it is necessary to spend some resources,
- Activities are the basis of cost allocation, and
- Cost drivers (resource cost drivers and activity drivers) do not have to be related to the physical volume of production.

In Figure 2, a two-dimensional activity-based costing model is shown.

The figure shows the vertical and horizontal dimension of activity-based costing and their interconnectedness with activity-based management (ABM).



**Fig. 2** A two-dimensional activity-based costing model

Source: Cokins, G. (2001) *Activity-Based Cost Management – An Executives Guide*, John Wiley & Sons, New York. p.15.

**Vertical dimension** refers to costing by cost objects. Direct resource costs can, like in traditional costing, be transferred directly to cost objects (Antić, 2003). However, indirect resource costs are transferred to cost objects by means of two-step allocation. Resource costs are allocated to activities based on the resource cost driver, i.e. on the basis of the amount of resources needed to perform certain activities. Then activity costs are allocated to cost objects with the help of activity drivers. Activity drivers measure the number of individual activities done in production. At both levels of cost allocation, keys are used that are independent of the physical volume of production (Antić & Sekulić, 2008). The process of activity-based costing is done in four iterations (Weygandt et al, 2008):

- Identification and classification of activities involved in the production process and allocation of production overhead costs to appropriate activities,
- Identifying cost drivers associated with activity costs,
- Calculating the production overhead cost rate for each cost driver; and
- Allocating production overhead costs from activity costs to products, using overhead cost rate for each driver.

The process of designing an activity-based costing system begins with identifying and classifying activities performed in a company from the perspective of available resources. In this regard, the conceptual basis of this costing system lies in activities carried out in the company. Activities can be defined as “every repeated action, movement or order of operations, carried out in order to execute the business function, and it can be described with a verb or noun, for example starting the machines or unloading of raw materials

(Rainborn et al, 1996). Identifying and classifying activities involves a detailed analysis of the work and processes that are performed in a company. Specifically, the goal is to determine the level of activity for the execution of defined tasks. The selection of activities will depend on the company size, its organizational structure, types of activities, and the like. An analysis of activities carried out in the company and the identification of resources for their performance create a good basis for allocating overhead costs to activities. This helps to determine the amount of resources spent on performing each activity. There are different ways to classify activities (Oliver, 2000):

- Repetitive activities (those undertaken permanently by the company) and non-repetitive (one-off or temporary activities),
- Primary activities (activities directly related to the mission of organizational parts that contribute to the performance of business functions) and secondary activities (activities that support the performance of primary activities and cause spending of time and resources),
- Value-added activities (activities that customers are willing to pay for because they increase the product value) and non-value-added activities (activities that do not increase the product value and consume time and resources, so customers are not ready to pay for them). These activities can be reduced or eliminated without affecting the quality and quantity of products.
- Controlled activities (company policies and procedures for doing business) and activities that are out of company control (state regulations and weather conditions)
- Optional activities (activities that depend on the business policy of the company as well as on managers' attitudes, but are not necessary for operations) and mandatory activities (activities that must be carried out in the company, because without them the company could not function).

Information about activities carried out in a company can be obtained in several ways. In this process, company employees play an important role as direct executors of jobs and tasks. Based on experience, employees can predict how much resources are spent on each activity. This will identify the causes of resource consumption that are the basis for allocating overhead costs to activities.

After allocating overhead costs to activities, cost drivers for each activity are determined, which should reflect the actual consumption of activities for each cost object. Activity drivers are usually the number of transactions or the elapsed time (Colin, 2003). The number of transactions can be, for example, the number of processed customers, the number of inspections carried out, and the like, while time, as cost driver, refers to the time period required to perform the activity.

When selecting activity drivers, it is necessary to take into account the following three factors: level of interconnectedness, costs of measurement, and effects on behavior of employees (Hilton, 2009). Since the goal of allocation is to determine how much each product consumes activity, the accuracy of cost allocation depends on the level of interconnection between activity consumption and consumption of activity driver. If, for example, the inspection activity takes the number of inspections and the time of inspection as drivers, the adequacy of drivers depends on the consumption ratio of drivers within the inspection activity. Thus, if every inspection activity requires the same time, the number of inspections can be used as a driver. However, if there are significant variations in the time of activity, it is easier to establish a link between the inspection activity and the duration of the inspection as the driver

of this activity. Stronger connection between activity consumption and its driver consumption gives a more precise allocation of costs from activities to products. The application of activity-based costing allows for the choice of a large number of cost drivers. However, although the choice of a large number of cost drivers leads to greater accuracy of cost allocation, the end result may be higher costs of adopting and maintaining the system. When choosing a cost driver, one should bear in mind the effect of the choice of activities on the behavior of employees. If the procurement activity takes the number of times suppliers were contacted as a cost driver, procurement manager may decide to contact a smaller number of suppliers, which may result in failure to identify the vendor with the lowest cost or the highest quality. It is very important to emphasize that the level of activity drivers should not be reduced in order to reduce costs if it endangers the product quality and its functionality.

In the third iteration, the rate of overhead costs is calculated for each activity driver. The overhead cost rate for each driver is obtained by dividing overhead costs with an appropriately determined driver for each activity.

In the last iteration of activity-based costing, allocation of overhead costs to products is made using the previously calculated overhead cost rate per activity driver. The costs for each product are obtained by multiplying the overhead cost rate with the expected consumption of driver for each activity.

The main argument for the application of activity-based costing is its precision in calculating product costs. By collecting the finest details on individual activities, this costing concept provides a good basis for making strategically important business decisions. Because of its information suitability, there was an attempt to further improve this concept. The horizontal dimension was added to the vertical dimension of activity-based costing.

**Horizontal dimension** of activity-based costing illustrates the process as a series of interrelated activities to achieve the goals set (Antić & Sekulić, 2008). This model made it possible to link the process of cost allocation to processes carried out in a company, by establishing a link between activity-based costing and activity-based management. Based on cost information and non-financial information on activities derived from the horizontal dimension of the ABC model, answers to the following questions can be given: which events trigger the performance of activities, which activities require the most resources, how successfully are activities performed, which factors have a negative impact on the performance of activities, and the like (Turney, 1997).

Bearing in mind the plenty financial and non-financial information underlying this concept, in the early 1990s it turned into activity-based management concept. Activity-based management is reflected in the provision of information on the basis of which managers can provide answers to the following questions (Kaplan & Cooper, 1998):

- How can the company achieve better position on the market, and
- How can internal capacities be improved and costs per unit reduced?

Activity-based management is commonly referred to as the process that involves identifying value-added and non-value-added activities for customers, company reengineering, value-added benchmarking, and development of a performance measurement system that will contribute to continuous development.

Identifying value-added and non-value-added activities is important from the aspect of their improvement and elimination. Non-value-added activities are those that cause costs, but do not increase value for customers. In this sense, there is the possibility to eliminate them without affecting the quality of products and services delivered. The next five steps

allow the elimination of non-value-added activities: identifying all activities, identifying non-value-added activities, detecting activity interaction, constructing performance measurement system, and reporting on costs of non-value-added activities (Hilton, 2009).

Value-added activities are those activities that customers are willing to pay for. These activities are necessary for the functioning of the company and there is no possibility of their elimination. Value-added activities can be improved in terms of increasing the efficiency of their performance. Thus, reengineering, as a process of redesigning the ways in which activities are carried out, is one of the ways to increase the efficiency of performing the appropriate activities. Benchmarking can also be used to improve value-added activities. In that sense, activities performed in the company are compared with activities of another company with the best practice.

Adopting a performance measurement system makes it easy for companies to continuously monitor activities and costs and find ways to reduce costs, eliminate waste, and improve quality.

### 3. ACTIVITY-BASED COSTING AND *LEAN* BUSINESS CONCEPT

Activity-based costing means long-term orientation and focus on calculating product costs. As such, it is a sophisticated method of cost allocation with the help of a cost driver. In this way, managers receive information on where costs occur, and, on the basis of this, link costs with their drivers. By establishing this relationship and improving the process of cost allocation, activity-based costing becomes an effective tool for reducing activity costs. Based on information this costing concept provides, it is possible to improve the process of making business decisions. In this regard, activity-based costing can help determine where the value is generated in the company, as well as make an analysis of this value. Application of activity-based costing allows identifying non-profitable products and non-value-added activities that need to be eliminated, which creates conditions that limited company resources are used only to produce profitable products. The application of this concept has greatly facilitated and improved company operations, significantly contributing to cost reduction and increasing the competitive advantage of the company. Activity-based costing has been a milestone in the development of costing system, and, as such, is suitable for use in a large number of companies. The concept of activity-based costing has changed and improved in order to eliminate the observed limitations in its application. As such, this costing concept can be applied in companies that apply *lean* business concept. Although there are many similarities of this costing concept and *lean* business concept, it is logical that certain matching will occur but also the difference between these concepts. Table 1 gives an overview of similarities and differences of activity-based costing and *lean* business concept.

The main purpose of doing business in companies that apply *lean* business concept is to reduce waste in order to increase business efficiency, with precise costing. Activity-based costing fits into this requirement of *lean* business concept in terms of precise costing and long-term orientation. However, activity-based costing does not provide precise information on the actual amount of costs needed to achieve the defined goals. Activity-based costing allows one to understand how costs occur in a company, as well as

which products are profitable, and which mix of products favorable for the company. Finding information about product profitability involves the collection of additional information about the business processes that are performed in the company. Gathering this data implies additional efforts and costs. Certainly, the collection of additional information for business decision-making, which results in the adoption of a decision by which the defined goals are achieved, should not constitute a redundant activity, but it is at high risk. Managers of companies that apply *lean* business concept require information support that will immediately produce the desired information, and not bring additional activities and waste.

**Table 1** Similarities and differences of activity-based costing and *lean* business concept

|                            | <i>lean</i> business concept                 | Activity-based costing   |
|----------------------------|--|--|
| Time of creation           | Toyota 1950-1960                             | 1910, but came to life in 1980                                   |
| Basic purpose              | Reduction of waste and increasing efficiency | As accurate calculation of product costs as possible             |
| Extended purpose           | Philosophy of continuous improvement         | Enable activity-based management                                 |
| Optimization               | Promotes optimization                        | Not explicitly emphasized  |
| Time dimension             | Long-term cost-improvement process           | Long-term focus on variable costs                                |
| Basic focus                | Company as a whole, cooperation and synergy  | Calculating costs to provide real cost information               |
| Orientation to improvement | Kaizen to achieve perfection                 | Does not result directly from ABC, but is possible in ABM        |
| Production control         | <i>Pull</i> system with <i>Kanban</i>        | Does not relate to control                                       |
| Overhead costs             | Linking all costs within production cells    | Overhead costs are linked with activities and then with products |
| Costs of production        | Accurate and precise calculation of costs    | Precise cost calculation   |
| Inventory level            | Zero inventory                               | Not applicable to inventory level                                |
| Waste                      | Focus on elimination                         | Not seen before the onset of ABM                                 |
| Quality                    | Ensure quality of products at the source     | Does not apply to quality  |
| Performance measurement    | Financial and non-financial measurement      | All costs are related to profitability measurement               |

Source: Martin, J. Comparing Traditional Costing, ABC, JIT, and TOC, available at: <http://maaw.info/TradABCJITTOC.htm>

The extended purpose of *lean* business concept in terms of fostering a culture of continuous improvement is not emphasized in activity-based costing, but using activity-based management can accomplish this purpose in a good way. This is because activity-based management encourages the analysis of activities and aims to eliminate non-value-added activities. Accordingly, the lack of implementation of activity-based management would refer to the absence of a tendency to optimize activity performance.

*Lean* business concept insists on optimizing the performance of business processes with long-term improvement, while activity-based costing does not emphasize explicit optimization, but is focused in the long term on improvement and monitoring variable costs. Business

improvement by applying *lean* business concept is achieved by Kaizen and by the application of numerous *lean* techniques. Improving business processes does not result directly from applying activity-based costing, but can be achieved by applying activity-based management.

An important aspect of *lean* business concept is the zero level of inventories and the production of quality products. Activity-based costing does not directly address the level of inventory, but through monitoring of the business process and the activities carried out, it aims at ensuring the required product quality. A special place in ensuring product quality and eliminating plenty of waste belongs to activity-based management.

Activity-based costing takes into account the flow of processes established in the company as one of the principles of *lean* business concept. However, this costing system links costs with activities and individual products, not with “value stream” and production cells.

Activity-based costing does not indicate a direct link between calculating precise operating costs and improving operational performance, which is one of the premises of *lean* business concept. Thus, the original activity-based costing model does not take into account the existence of unused capacities which *lean* business concept specifically deals with. An attempt was made to eliminate this deficiency by using time-driven activity-based costing, but the deficiency has not been completely eliminated. First of all, this refers to a long and complex process of collecting and processing data needed to calculate costs, as well as the inability to easily update and adapt to changed circumstances. Also, there is employees’ subjectivity when assessing the time needed to perform the activity (Antić & Novičević Čečević, 2016).

It should be noted that activity-based costing is complex for everyday use, which is in contrast to simplicity and comprehensibility on which *lean* business concept insists.

Based on the foregoing, one can conclude that activity-based costing, together with activity-based management and time-driven activity-based costing, partly fits in the company management requirements when applying *lean* business concept. Because of its great information power and suitability, this costing concept can be applied at the initial stages of company development. In practice, there are cases of activity-based costing application in the initial stages of development, and the companies that applied it facilitated their transformation into *lean* companies. In the later stages of transformation into a *lean* company, all of the stated disadvantages of this costing concept come to the fore, so it is necessary to replace this concept with a new one, which will best show the benefits of applying *lean* business concept.

## CONCLUSION

After Toyota had achieved enviable performance with *lean* business concept, a number of Western companies started implementing it. The goal of *lean* business concept is to reduce all forms of waste that can occur not only in the production but also in all business processes, in order to deliver the product of the required characteristics to the customer just in time. Any waste created additionally increases product cost, so the focus should be on its reduction or elimination.

In order to survive in the race to achieve a competitive advantage, many companies have begun with *lean* transformation of the entire business. Applying *lean* business concept is possible in both business and production processes as well as in accounting and finance. This is because the omission of the accounting process from the necessary changes would lead to inability to present the improvement achieved. In this sense, at the beginning of the application of *lean* business concept, the possible information basis is activity-based costing.

Activity-based costing allows measuring costs and performance of activities, resources, and cost objects. This costing system, linking resources with activities and activities with cost objects, recognizes the relationship between cost drivers and activities. As such, activity-based costing enables identification and elimination of non-value-added activities, which increase costs and time necessary for the product to be produced or service delivered. Since activity-based costing was a good potential information base for *lean* business concept, it was necessary to examine its suitability for implementation in such business conditions.

Activity-based costing appeared in 1910, but its application and full acceptance came much later, while *lean* business concept came to the fore only after the Second World War. Given that they appeared in different parts of the world and that the economies of these countries had different problems and characteristics, it is clear why certain differences between these concepts occur.

In this regard, activity-based costing can be applied in companies that apply *lean* business concept because:

- ABC enables managers to understand the activities performed in the company, establish their hierarchy, and find adequate drivers, which *lean* business concept requires too to provide a good basis for finding business constraints and potential opportunities for business improvement;
- Careful review of business processes and activities carried out allows finding the places where costs occur and their precise calculation;
- Although ABC, in contrast to *lean* business concept, emphasizes the process flow, not the value stream, the establishment of flows of both material and information in the company is an important aspect of business continuity;
- The desire to eliminate non-value-added activities is one of the requirements of activity-based costing, as well as of *lean* business concept. Non-value-added activities are considered waste that slows down the company flows, thereby increasing the value of performing certain activities.

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## PODOBNOST OBRAČUNA TROŠKOVA PO AKTIVNOSTIMA ZA LEAN KONCEPT POSLOVANJA

*Lean koncept poslovanja karakteriše se obezbeđivanjem zahtevane vrednosti od strane potrošača, brzom isporukom proizvoda, eliminisanjem svih oblika gubitaka kako iz proizvodnog tako i iz svih poslovnih procesa u preduzeću. Da bi uspešno odgovorili na ovakve zahteve menadžerima preduzeća potrebna je odgovarajuća informaciona osnova. Jedna od mogućih informacionih osnova jeste obračun troškova po aktivnostima. U radu se obrađuje problematika primene i podobnosti obračuna troškova po aktivnostima za lean koncept poslovanja.*

Ključne reči: *lean koncept, obračun troškova po aktivnostima, eliminisanje gubitaka, merenje performansi*