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ACTIVITY BASED COSTING METHOD IN THE LOGISTICS SYSTEM OF ENTERPRISE

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Abstract: Article focuses on the integration possibility of the following areas: logistics enterprise system, management control system and the method of ABC - activity-based costing. ABC method as a fundamentally different view of the behaviour of costs in the company can find the cause of the enterprise costs and affect the costs of business and better use of resources. Aim of this paper is to analyse the current real possibility of extending the theoretical and methodological bases Applications ABC method as a new modern management tools costing the company in the context of the requirements of logistics management.

1 INTRODUCTION

Analytical and predictive knowledge about the trends and visions for 21st century is characterized by major shifts and changes in the concept of enterprise. Generally refers to the company transition from the industrial era into the era of informatics. These changes significantly affected the field of logistics.

Logistics as realisation of material and related information and financial flows in a new era represents a part of strategy of the conditional time of deployment of resources - goods, people, information and capacity to act in terms of substitution material processes in information processes.

Logistics in the company will represent an area where it is possible to achieve significant cost savings, an activity which has enormous potential impact on customer satisfaction and marketing weapon that can be effectively used for competitive advantage.

In this context, we can conclude that with the improvement of economy growing share of logistics costs and declining share of the cost of processing. Growth trends relative logistics costs may not yield an absolute increase in spending on business logistics. This would have an impact on prices, as well as other negative impacts. Improvement of logistics processes is way how to cope with these trends.

One means of achieving efficiency represents the management of costs and benefits geared to their relationship to operations, activities and processes. The concept, which in this context offers is a method of Activity-Based Costing viewed as management techniques for costing and process and value of modern business management.

Method ABC as a fundamentally different view of the behaviour of the costs in the company may look for reasons of cost, to influence them and thus affect the cost and thus make better use of scarce resources. ABC method ultimately contributes significantly to improving performance by reducing material movements and eliminates activities that do not add value.

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2 LOGISTICS ENTERPRISE SYSTEM

Logistics can be simply defined as the science of flow in logistics networks, which are made in satisfaction of the requirements for products that may take the form of products, services or their combination.

Modern Logistics deals with the flows throughout the course of developing requirements through design and process development, purchase of inputs, production planning, production, distribution, service and disposal. Flows have a physical, information and monetary dimension.

Logistics applies primarily procedural (horizontal) view of business activity as opposed to the traditional (vertical) perspective focusing on the services and functions. Logistics is a typical system approach, which examines the phenomena in context.

Logistics system can be defined as intentionally created the physical and managerial structure, which allows you to activate, secure, evaluate and improve the operation flow performed by logistical networks. Logistics system can be broken down into subsystems - technical and management subsystem.

The technical subsystem consists of service and served elements. We mean the production facilities, warehouse equipment, vehicles, technical infrastructure and the like. Technical subsystem has its own material, capacity, and specialization, technological and spatial structure.

Control subsystem consists of management services and personnel, management tools, information and registration system, communication channels, methodology, methods and techniques. The role of the management subsystem is to create, maintain and develop itself, logistics systems, deciding on the choice of logistics networks, guiding and evaluating the operation of logistics networks, namely the organization and management workflow. It is a logistics management, logistics of actual decision making.

For logistic approach is typical of the overall search optimization in terms of time and in terms of economic. Logistics costs represent all costs are affected by way of organizing and managing the flow of all logistics network. In logistics costs we include, except we called economic costs so the cost of lost opportunities. This means that to find the optimal resource allocation alternatives being considered, not just the actual cost of the alternatives, but also lost the effect that the adoption of the alternatives was rejected. [1]

2.1 Requirements for logistics management level data on business logistics costs

Understanding of economic and logistic costs

In terms of requirements for logistics management logistics costs is identifying the various cost streams were as clear as possible, accurate and targeted as the origin, destination and payment.

With regard to logistics costs will go on:

a) The exact extent of the content and method of tracking breakdowns:

- Logistics business performance in emerging
- Logistics services provided by businesses

b) The precise location of (and consumption), logistics cost

From a logistical point of view is valid:

- Location of logistics performance can only be in the logistics chain,
- Where the resulting logistical performance (activity associated with the provision of logistics services), logistics costs resulting from

Economic point of view follows:

- That all costs, including logistics were planned and budgeted, measured, denominated (recorded), and charged at the same time analysed
- That these requirements are matched in terms of economic management method adopted by the company.

To be properly organized internally corporate entities (relevant articles, centres) so that they can take responsibility for the creation and costs reasonably incurred.

c) Selecting and applying appropriate accounting system in-house,

d) The possibility of expressing their price (delivered price and other services)

e) Payment these costs.

These principles have a common goal - optimization (spending) creating of their costs to achieve total optimization.

2.2 Limitations of the current financial statements

From the corporate point of view may be the inability to measure and manage logistics costs lead to loss of business opportunities and cost error. If managers do not know the real costs of products and services their company produces, they do not know how to most effectively reduce costs and cannot allocate resources to most profitable business segments.

The decisive reasons are usually the following factors:

- Accounting systems are designed primarily to create aggregate reports on performance of the enterprise, beneficiaries who are shareholders, owners, creditors and public authorities (tax authorities, etc.)
- Costs are calculated in the books to provide a historical record of running a business. All costs associated with a particular business are business segments. Because thus redistributing the costs common to more segments of this process is subjective and random.
- Accounting systems typically combine marketing and logistics costs in the aggregate (synthetic) accounts and rarely attempt to divide the cost by function and responsibility of the individual products or customers.
- Profit denounce the impact of various segments of business profits, but include fixed costs, common costs to products, services and corporate overheads. In some cases, may even fear that the knowledge variable costs would lead to unrealistically low prices. However, these are usually determined by the market rather than cost.
- The most cost systems with fixed labour costs as variable costs, which conceals the true nature and behaviour of fixed costs.

Many of the problems faced by manufacturing companies, is attributed to the use of methods of "full cost allocation", under which all indirect costs (e.g. overhead and administrative costs) assigned to individual groups of products (clients) on the basis of more or less randomly established rule . The result is that management is focused in the wrong direction - at the expense of workers in production or sales volume. [2]

Generally speaking, the problem arises whenever a non-homogeneous part of the cost schedule based on the same basis. Our intention is not to know:

- Why is the cost of a given height?
- What determines the amount thereof?

Tracking system costs must ultimately allow:

- create an overview of the flow of costs in the business
- respond to changing cost structures,
- provide accurate calculations,
- provide funds for planning and budgeting.

3 MANAGEMENT CONTROL SYSTEMS

Information is a prerequisite for any activity management. Without information management company becomes helpless and unable to do anything. Significant role in this regard and shall enter into management accounting, which aims to show management what information is needed on how and where this information can be obtained and how they can be useful of business administration for proper planning, decision making and control. Information provided to management accounting is often crucial for the analysis of alternative ways of solving problems.

Management practices and methods in the world is still developing and changing. Especially in recent years, these methods significantly changed qualitatively. Organizations are turning from vertical to horizontal managed. A horizontal view is focused mainly on examining the processes undertaken at various levels of the enterprise. This change in management companies fit the new management techniques, tools and procedures for measuring performance, control costs and improve customer service. Among the techniques and means include in particular:

- ABC (Activity Based Costing)
- ABM (Activity Based Management)
- Benchmarking
- Process improvement;
- Process reengineering,
- TQM (Total Quality Management)
- BSC (Balanced Scorecard)
- Six Sigma.

3.1 Method ABC

ABC method can be regarded as one of the most modern methods of costing. It is the result of research that was carried out America's top economists in the 80s of last century. Later, this method implements the world's most successful companies, as well as dynamically developing small businesses. The main idea lies in the method of ABC that the cause of cost considered of the activity and not individual performance. Tackling ABC costing method therefore requires knowledge and understanding on the substance during specific activities, procedures and processes within the company.

ABC method tells how to be allocated to cost units. ABC method focuses on individual activities (operations), which require the creation of each product. Products consume activities in different quantities (followed by cost drivers), and activities consume resources also available in different quantities (followed by resource drivers). This process is shown in Fig. 1

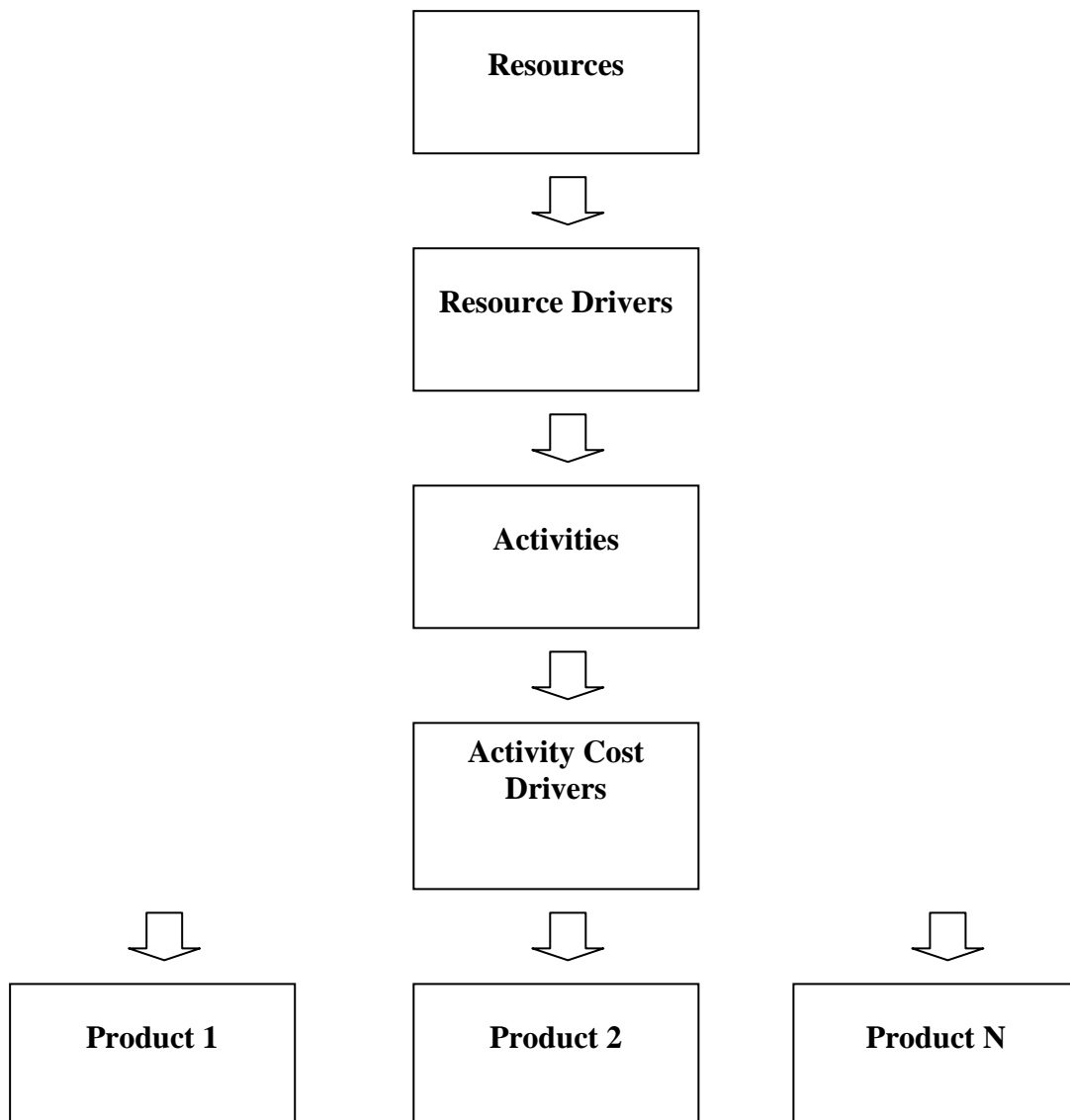


Figure 1 Method Activity Based Costing (ABC)

This procedure can be expressed and vice versa and perhaps more accurately:

- The organization has the resources it needs to carry out their activities.
- Consumption of resources incurs costs to activities, how much is spent on various activities necessary resources indicate the causes of resource consumption.
- For specific customer service are consumed different activities to varying degrees, how much for him to consume the necessary actions indicate the cause of consumption activities.
- Consumption of these activities rise costs a particular customer.

For completeness, it should be noted even following option. Implementation of the method ABC, when the information flow goes from product to resources can greatly refine the budget, financial plan. This use is called Activity Based Budgeting (ABB), which is an advanced technique using the ABC model. [3]

3.2 Methods of ABC and management accounting

Describing of business process should be differentiated according to who is the user of accounting information and what decision he makes.

Unlike financial accounting, where the pressure of users for a uniform interpretation and comparability of information submitted leads to a unified conceptual apparatus, the accounting information to managers characterized by the fact that their content is in principle not subject to out-plant control.

A more detailed structure of management accounting is largely based on what type of information provides decision-makers. Most important is dividing of information in terms of their relation to the stages of decision process.

An important method for tracking costs by activity and compiling reports on the flow of costs in the enterprise becomes a method of Activity Based Costing, and management techniques in the calculation and cost management.

Causes of the development of new methods of cost management

Major impetus to the creation and development methods are significant changes taking place in business processes not only in manufacturing but also in service sectors, transport, banking and other business.

Among the major causes of the development of new methods of cost control include:

- Interested customers and business partners focused on buying or handling requirements "under one roof" generally lead to a significant increase in performance made structures, often inversely proportional to the amount of performance. A substantial part of range is often carried lesser, but important quantity that allows the company to keep customers interested in the complex delivery.
- Efforts to minimize customer average rate of production inventory is reflected in shorter intervals of supply. This has the effect of reducing the volume of homogeneous performances conducted in a single dose or a series.
- Constantly clearly reduces the lifetime of the products. On the other hand increasing the extent of modifications offered performances.
- a growing demand by customers for quality of performance and awareness of business entities in respect of money involved complaints and their negative impact on the future effects.
- Development of industries producing consumer goods significantly affects the interest of customers not only improved on the single "uniform" products, but the goods are as different product from the product. This requires an individualized performance within a single product-type.
- Significantly changing the method of implementation performance in the manufacturing and non-productive sphere. In virtually all areas of decreased proportion of "unit" of human labour, and vice versa, the share of automated processes taking place, money involved which is strongly influenced by the company the ability to rationally coordinate these processes.

All these changes are also reflected in the cost structure:

- In the traditionally conceived production costs have decreased substantially the proportion of unit costs relative to overhead costs. A considerable part of the overhead costs are fixed costs then. An important factor for business success becomes optimal capacity utilization, which is associated with these costs.
- an even more important change is the increase in overhead costs needed to secure assistance, the service, but also information, planning, control and strategically oriented activities. Their relation to the type of final results is imputed using traditional practices not only difficult to quantify, but also difficult to identify the functional relationship and dependency of such costs from changes in the volume and structure of the final performances. Often the variable costs in relation to specific activities (process), the relationship of these activities (processes) to the second and final performance of the unit is so diverse that the traditional definition of the "fixed - variable" nature of the relationship and does not appear to lead to erroneous decisions. Essentially, these costs can be expressed using the following notation:



These overhead costs (R), which is traditionally considered as a fixed (F), changes in business processes, however, lead to the fact that these costs are more variable (V) and depending on the cost of relational variables CD (Cost Driver), which is indifferent or inverse relationship to the active use of capacity or volume of the final performances Q. [4]

3.3 Using the ABC method in relation to sub-activities in practice

These preferably methods bring the greatest effect in those sectors, which are characterized by a wide range provided by the performance, implementation of which requires a lot of relatively cost-intensive activities and providing assistance. The largest experience with its application is in manufacturing industry with heterogeneous production and assembly technology. The method, however, also applies to the non-manufacturing sectors such as in commercial companies, banking, insurance and transport.

The essential differences compared to other methods of bringing the activities in which the development of cost-producing activities, in an indirect relation to the volume of final realized performance. Typically, the relationship between costs, activity and volume of the final performances especially in these types of activities:

- providing logistical operations mainly supply and selling reproductions of the lever (material orders, the implementation of access control, shifts in manufacturing, national enterprise transport, packing, shipping, customer service - including information support these activities,
- operations to ensure a balance between resources and their use (operational planning and dispatching control of supply, production and marketing)
- operations capable of making changes (setting up machinery, construction and technology training)
- ensuring quality control operations carried out by the performance (quality control, handling of complaints at the entrance and exit, reject repair expenses).

In terms of decision-making tasks, for which ABC method provides information that is generally accepted that in the calculation provides an improved basis for solving problems connected with the defines and the role of prices and based on full knowledge of product costs. This is dominated by long-term challenges of the future capacity and how its implementation (the role of "make or buy"). In a similar way, t. j. for solving "buy or produce in-house" can also use the information on the full cost and variable intensity activities, operations and processes.

Systematic monitoring cost performance of individual activities and synthesis activities and in particular in case when it is possible to separate the costs affected by quantity and costs not affected by quantity. It can also be used in the analysis - Value creation (Value Chain Analysis, Value Based Management).

ABC collectively as a method allowing obtaining more accurate and concise information about costs and profitability of each:

- processes
- products
- customers
- distribution channels,
- markets.

This qualitatively higher form of information is a prerequisite for better power management decisions. Based on them, so managers can:

- clarify their goals,
- improve the strategy
- increase efficiency and profitability of organizations.

The present method in addition provides all contexts:

- With process management,

- the strategy,
- the concept - outsourcing
- Benchmarking
- Balanced Scorecard and others.

The specific implementation procedure ABC method in logistics business, according to the above methodology available, may consist of the following [5]:

- 1st Preparatory Phase.
- 2nd Specification activities.
- 3rd Aggregation of activities into actions.
- 4th Identification of sources.
- 5th The first stage of allocation - costing the activities.
- 6th Structuring of the stream of costs.
- 7th Identification Activity Centres.
- 8th Product specifications.
- 9th The second stage of allocation - costing products.
- 10th Providing the input data for the model.
- 11th Evaluation of the results.

The implementation of the ABC method can be based on knowledge available to the following conclusions:

- scheduling of indirect costs in the traditional system, a calculation results in inaccuracies because the timetable inhomogeneous cost base following the same schedule and number of these bases is limited
- ABC method allows you to determine precisely the cause of costs and their assignment to specific actions to transform their direct and uniform costs
- resources in the ABC method can be most easily identified from the records of business expenses ledger after their objectivity,
- containing the costs of resources that are consumed in carrying out activities
- Drivers need to express the cause of the job and also serve as a base Schedules, the driver is a measure of the frequency of consumption reflects the extent to which the activity is carried out, usually expresses the frequency of the driver
- actions reflect a coherent set of activities, their extent depends on the size of the organization and diversity of activities, monitoring of financial and non-financial indicators
- the express driver activity is most easily applied frequency of activity
- sequence the implementation of ABC model is different in different enterprises. [6]

3.4 Relations between ABC and ABM

Given that there are some uncertainties regarding the semantics and acronyms related to information-based activities, they will be explained below.

Figure 2 shows three levels of information on monitoring activities, which are distinguished by its abbreviation in that they represent a different target orientation.

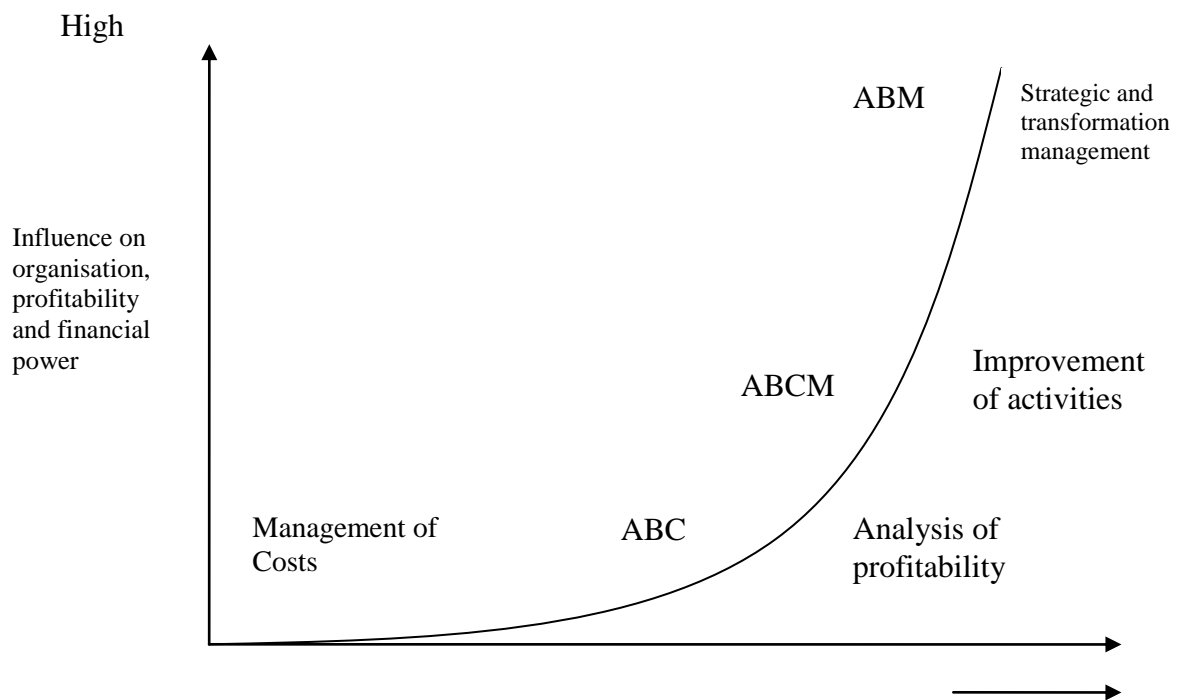


Figure 2 Abbreviations for the information-based activities

In the bottom of the picture may be ABC (Activity-Based Costing) is considered "mathematics" used to allocate administrative costs to the cost items, which may be products, services, customers, distribution channels and so on. The main objective is to analyse the profitability of ABC.

ABCM (Activity-Based Cost Management) uses information from the ABC level, not only for rationalization measures, which sell products or services, but more important is to identify opportunities to change the activities and processes to improve productivity.

ABM (Activity-Based Management) integrates ABC and ABCM through indicators such as: total cycle time, quality, flexibility and customer service. ABM is more than just information about the cost. [7]

A concise explanation of the juxtaposition of terms provides Figure 3.

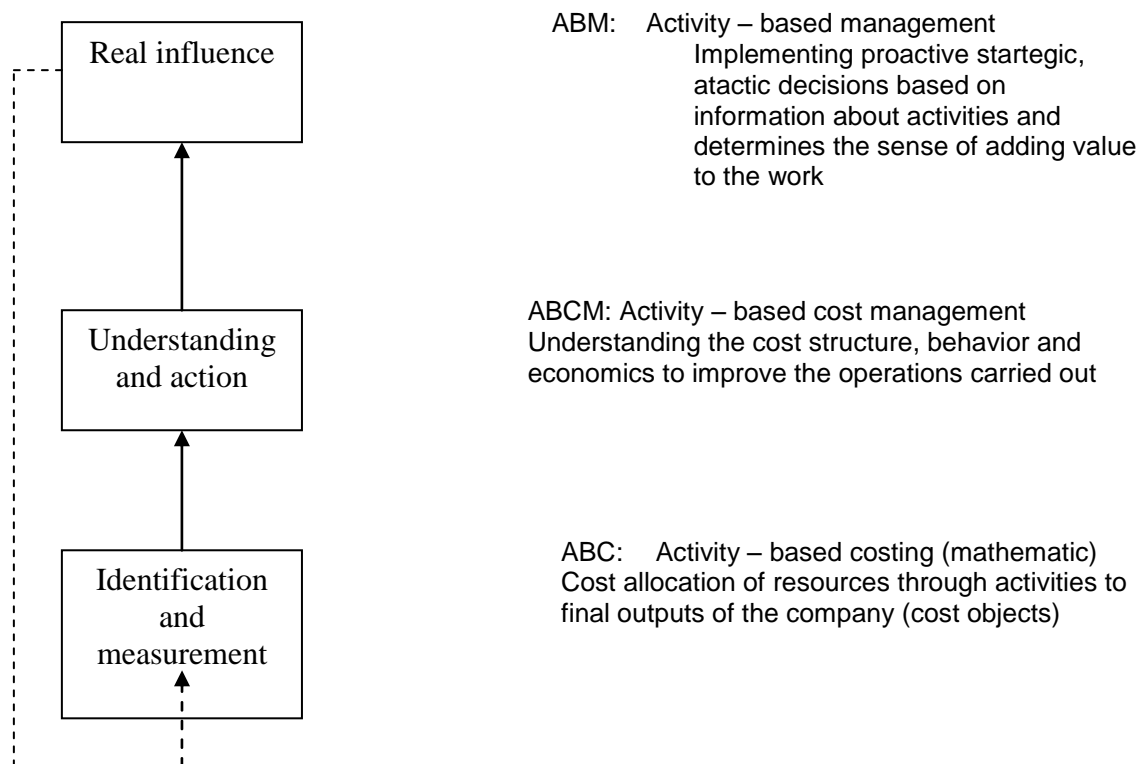


Figure 3 ABM versus ABCM versus ABC

Referred to in those ABM can be defined as the discipline which aims to govern the activities of business processes as a means of continually increasing the value provided to customers, and profits, the disclosure of this value arises.

ABM uses ABC information on costs and results of performance measurements to influence management behaviour.

ABC is a calculation method focused on monitoring costs, which can be used also in the "traditional" management. ABM as an extension constitutes a way of thinking.

To properly define and clarify the terms listed here a brief recap of methods based activities.

- Activity-Based Costing
Costing-based activities.
- Activity-Based Management
Managing the asset base.
- Activity-Based Planning
Planning-based activities (need products, services, activities, resources).
- Activity-Based Budgeting
Budgeting based activities (costing as planned).

4 CONCLUSIONS

Costing under sub-activities include not only the modern methods of allocating costs, but also a new outlook on business. From this perspective, he sees business as interrelated actions that are necessary for the existence of the company and ensure its function - to serve customers.

ABC Method is an approach to management accounting, which provides distinct advantages businesses. Opens new possibilities for management, increases efficiency, and provides a framework for gaining a competitive advantage in the marketplace and increase profitability. Provides

administrative management information for long-term strategic decisions on products manufactured and used resources.

ABC method allows understanding the impact of various proposals into their price and providing the opportunity at the time of product development targeted to affect its price. It reveals the causes of cost management, opening up a wider scope for cost management. The method focuses on the understanding of the enterprise, through monitoring of activities and their relationship to the development costs. Unlike traditional valuation systems, which allow you to track costs to what had broken, ABC method allows management to manage and control costs before they occur.

Hierarchy load obtained by ABC approach mainly provides clarification of the terms of the need for resources and their relationship to the cost of individual products, enabling management to effectively manage these resources.

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