EFFICIENT MANAGEMENT OF TRANSPORT COMPANY COSTS IN THE POST COVID PERIOD USING MANAGEMENT ACCOUNTING TOOLS

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Cite as: *Ponisciakova, O. (2022). Efficient management of transport company costs in the post covid period using management accounting tools, Ekonomicko-manazerske spektrum, 16(1), 104-113.*

Available at: *dx.doi.org/10.26552/ems.2022.1.104-113*

Received: 8 March 2022; Received in revised form: 29 May 2022; Accepted: 9 June 2022; Available online: 30 June 2022

Abstract:
Research background: Business management is currently facing a number of problems that arise in a very turbulent business environment, regardless of the subject of the business. The situation is also characteristic of transport companies, which are not only in need but also interested in various tools to support the management process. As part of value creation management, cost calculation is one such tool. It is the oldest and, at the same time, the most used. It is constantly evolving in an effort to reflect on the current conditions forming in the business environment.
Purpose of the article: to focus on one of the ways to streamline cost management. It is an application of managerial accounting tools that enriches traditional calculation procedures with new progressive forms. A specific measure in this context is the use of the ABC calculation and, in particular, the advantage it provides to support management compared to the traditional calculation.
Methods: To evaluate the calculation methods in question, it was necessary to proceed from the analysis of the acquired knowledge concerning the development, origin, and basic characteristics of both calculation methods, and then the method of comparison was used in the final comparison and definition of advantages or disadvantages.
Findings & Value-added: The required output can be realized based on the application of methods of analysis, synthesis, and abstraction using a logical-deductive approach together with the application of specific mathematical procedures. The findings and benefit of the comparison lie in the higher efficiency and accuracy of the calculation procedure used by managerial accounting. At the same time, this fact contributes to a more efficient management of value-creating quantities.

Keywords: management; managerial accounting; ABC calculation; traditional calculation; comparison.

JEL Classification: M41

1. Introduction

At present, it is very difficult for company managers to ensure the long-term growth of the company or, more generally, the very existence of the company in the market. For this reason, they strive to improve management and refine their economic information system. This consists of various purpose elements, which, depending on their focus and content, support the performance of management so that the set goals are met at different time horizons. Significant elements include the cost subsystem, accounting information subsystem, calculation subsystem, controlling, etc. All components of the economic system are interconnected and cooperate. As Sukhina et al. (2022) point out, that enterprise cost management is a component of the enterprise management system as a whole. Transport activity has significant implications for the other sectors' activities, including agriculture and agribusiness. Transportation costs represent a significant determinant of total operating costs, and therefore the selling price, which affects the competitiveness of products and the achieved business results. (Savic et al., 2020) Constrained by low profit margins and having to be active in a highly competitive market, companies active in this sector seek multi-dimensional innovative solutions that lower their operational costs. (Carlan et al., 2019)

In this context, management accounting fulfils an important mission and complements existing financial accounting with important information to support decision-making within the accounting information subsystem. Bulog et al. (2019) also add to this assertion, stating that Managers need relevant information to lean on in order to achieve success and growth of the company. Accounting information should form an important share in managerial decision making even in micro companies where managers have different educational backgrounds. Marius et al. (2012), state that we consider managerial accounting to be an essential source of information for business management. Mihăilă (2014), who adds that managerial accounting, is an area of accounting that supports corporate governance in planning, decision-making, control, and analysis, extends the definition. Effective use of managerial accounting by operational management ensures profitable growth of the company, including freight.

Financial accounting provides the management of a transport organization with comprehensive information about its activities. This information is indeed quite detailed, but not sufficient. Therefore, the term managerial accounting has evolved in organizations as a term for comprehensive information needed for successful managerial work. Managerial accounting is one of the modern management tools of an organization, as its content is in principle not subject to remote control. Not only the department in which it operates but also by the management, tools and methods used to determine the success of an organization determines the success of an organization. Managerial accounting belongs to the modern tools of organization management since its content is, in principle, not subject to off-site control. Kontsevoy et al. (2020) also agree with this view, arguing that the management accounting information system should be oriented towards solving complex issues and making managerial decisions quickly. Marenych et al. (2021) add that management accounting is based on generally accepted principles of accounting, (financial) accounting and specific principles of managerial accounting; principles of accounting (financial) accounting, general and specific principles of managerial accounting; only on general (or own) principles.

2. Literature review

The success of the organization is not decided only by the department in which they operate but also by the use of managerial tools and methods. (Jacková, 2016). Generally, in the literature, it is also referred to as an independent form of business accounting, which provides

 ISSN 1337-0839 (print) / 2585-7258 (online)

information support to the management system of the business entity. Management accounting is an integrated system of collecting, processing, and informing internal users about the company's income and expenses in order to ensure effective cost management and obtain a positive financial result (Zadoroznuy, 2020). In French literature and in French-speaking countries, managerial accounting is referred to as cost management accounting— Compatabililite - Compatabillite de Gestion, and in German literature we encounter the concept of decision-making cost and revenue accounting - Entscheidungsorientierte Kosten und Leistungrechnung. In English literature we encounter a term similar to management - managerial accounting (Král, 2001). In the conditions of the Slovak Republic, managerial accounting reached a boom before the Second World War. Its subsequent development in our conditions stagnated due to the introduction of a centrally planned economy after the Second World War. The boom in managerial accounting occurred in our conditions only after the "gentle revolution" in 1989 (Král et al., 2010). An important aspect of managerial accounting is the fact that it can be considered as a system that displays information about business activities within a company. Its task is to find, record, and analyse information about business activities through reports, statements, and reports for executives to support their decision-making and management. They are then able, based on management accounting information, to draw up proposals, recommendations, and measures, which will lead to an improvement in the overall performance of the undertaking. An important role in this context is played by the fact that increase profitability require information on the real level of costs, rationality of use various resources (Bozgulova et al., 2019). In their view, they agree with Sternad (2020), who states that Cost management is important for every transport company. Increasing competition in road freight transport forces companies to cost-effectiveness, so they need to know their costs of carrying out the transport service. Nowak et al. (2020), that costs represent an important economic category that is closely related to the price, can state it. Each company must perfectly manage costing, especially absorption costing, which consists of budgeting overhead costs on the production (performance, products and services). In addition to traditional calculations, one of the important tools of managerial accounting is activity-based calculation (ABC method). As Stopka et al. (2021) claims, ABC is an efficient technique for enhancing the quality of provided services and process complexity of certain railway companies, executing its activities at a regional or international scale. It is one of the new costing approaches that eliminate the inaccuracies and deficiencies of the traditional costing system. Compared to other costing techniques, considerable change lies especially in the way of assigning indirect cost units to activities based on actual causations, and subsequently, assigning activities to the very cost items by the intensity of their consumption. Furthermore, this approach allows decision-makers to identify specific cost item in terms of determining ways of how they can be managed. Activity-based Costing (ABC) is an advanced method of calculation and management. It can provide managers with relevant and accurate cost information so they can make the right production decisions and optimize resource allocation. The article presents the theory and steps of ABC calculation, analyses the unfavourable factors of ABC applied to a Chinese manufacturing company, and presents some measures to improve the application of the method. (Zhao et al., 2016) This method has emerged from the shortcomings of traditional calculation methods, which became more visible during the eighties of the 20th century. To this day, many authors, who have different views on the essence, address the issue of ABC calculation. Lepadata (2007), who points out, also confirms that management is an activity based on activity-based division, as defined by the ABC method. For some authors, activity management is considered the development and refinement of the ABC method. For others, ABC is a business management subproduct. The third category of authors, who consider ABC as a

costing tool and the ABM method as a performance management psychology, has a different concept.

The ABC method can be considered one of the most modern methods of cost calculation. It is the result of research carried out by top American economists in the 1980s. The need for a new approach to cost identification is linked to the development of automation, the expansion of the product range, and the related increase in the share of indirect costs. The traditional way of allocating costs proved to be insufficient and often led to incorrect conclusions and decisions. Later, this method was introduced into the practice of the world's most successful companies (e.g., Chrysler, AMD, ABB, Boing, Hilton Hotel Network, etc.), as well as smaller, dynamically developing companies. In Slovakia, the introduction of the method, e.g., at a telecommunications operator, in banking and food (e.g., Heineken). The main idea of the ABC method is that it considers activities, not individual performances, to be the cause of costs. The solution of the problem of calculations by the ABC method therefore requires knowledge and understanding of the factual course of specific activities, procedures, and processes within the company. (Šukalová et al., 2013) Emerging globalization has led to the formation of intense global competition. Therefore, active participants in the global market had to start thinking about creating more accurate, and especially more objective, calculation procedures and updating performance standards and competitive strategies. Globalization has brought many changes in terms of production conditions and corporate governance itself. The most important determinants of these changes include:

- increasing globalization and increasing competitive pressure,
- substitution of work by automation of production and activities,
- constant innovation of performance and technology,
- great attention paid to the quality and individuality of services, shortening the life cycle of services,
- increasing the share of service activities,
- change in cost structure - increase in indirect costs,
- customer orientation preference.

Cooper and R. Kaplan (from Harvard Business School) became pioneers in the field of calculation according to activities. They developed and published a new way of calculating costs in 1988. Its benefit is the ability to eliminate, and in many cases, eliminate the shortcomings of the calculation procedures used so far. They called the method Activity Based Costing (ABC). It deals mainly with the assignment of overhead costs to performance and cost calculations. Its basic principle consists of assigning the consumed resources to activities, grouping activities into activities, and then assigning activities to cost objects. The interplay of the facts has given rise to changes in the method of calculation, which has resulted in the need to look for links between the incurrence of costs and the existence of the business. The closest link is to performance, the implementation of which causes certain activities and, at the same time, costs. This relationship is ultimately the main idea of ABC. The cause of costs is activities, not individual performances. The practical use of the ABC method therefore requires a detailed knowledge of the facts and course of specific activities, procedures, and processes within the company.

3. Methodology

In order to evaluate the calculation methods in question, it was necessary to rely on information from the relevant literature and other available sources. The acquired knowledge

 ISSN 1337-0839 (print) / 2585-7258 (online)

concerning the development, formation, and basic characteristics of both calculation methods was then used in the final comparison, defining the benefits or shortcomings that resulted from it. The required output could be realized based on the application of methods of analysis, synthesis, and abstraction using a logical-deductive approach together with the application of specific mathematical procedures.

4. Results

When considering the implementation of activity-based calculation, the company's management often faces a major decision. The introduction of a progressive method of calculation, together with the positives, is associated with various negatives, which can often discourage managers from practical use. A comparison of traditional business calculations with the ABC method can provide arguments that will guarantee the usefulness of ABC.

With the traditional method of calculation, the company ensures the implementation of its services in internally differentiated organizational units. They can be supply, sales, and production, auxiliary, and other economic canters. It is necessary to transform the company's costs from the corporate level, i.e., from financial accounting, through in-house organizational units, i.e., calculation units. In internal accounting and calculations, a breakdown of direct and indirect costs is used. The problem is a clear assignment of costs to individual outputs. To overcome this problem, overheads include, in addition to all indirect costs, a part of the direct costs. In addition to the acceptance of generic costs, it is necessary to distinguish between:

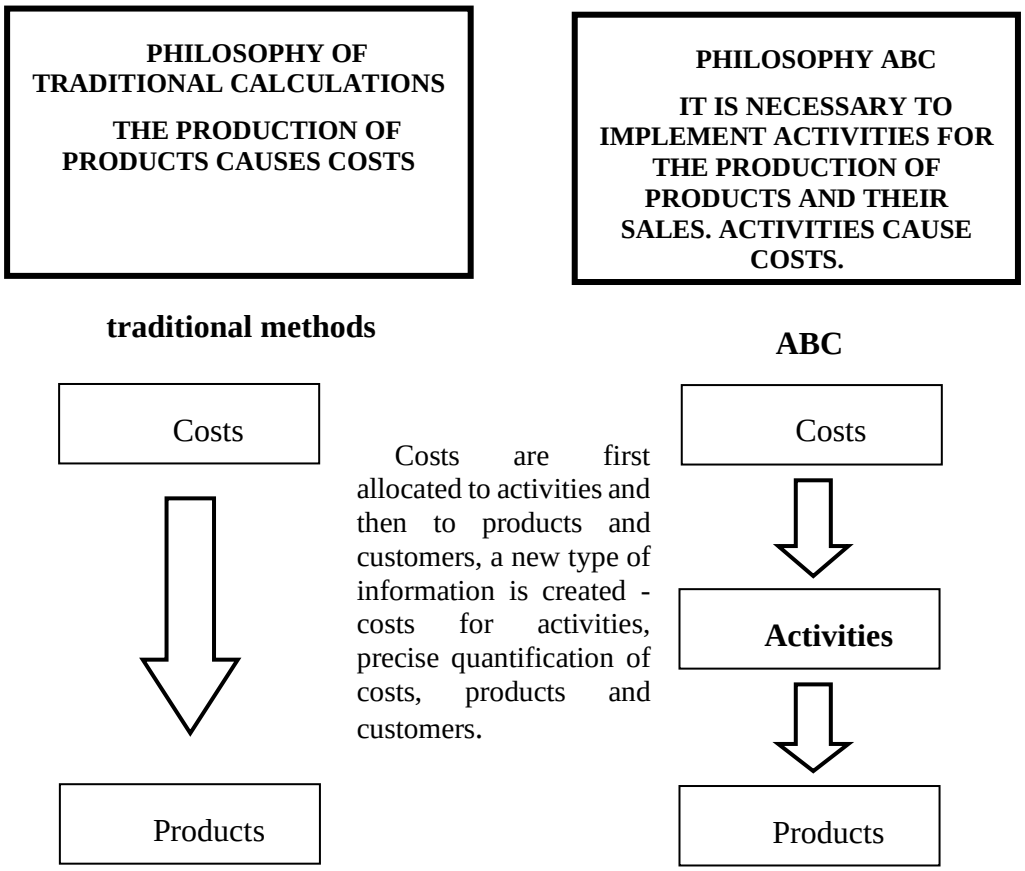
- overheads arising from the actual,
- when considering the implementation of activity-based calculation, the company's management often faces a major decision. The introduction of a progressive method of calculation, together with the positives, is associated with various negatives, which can often discourage managers from practical use. A comparison of traditional business calculations with the ABC method can provide arguments that will guarantee the usefulness of ABC. l volume and structure of the services (overheads), which depend not only on capacity and technical characteristics but also on the performance and discipline of the centre's staff,
- insurance, depreciation, rent, and so on), which are determined by the task of a specific center and cannot be influenced by the staff of that center.

TCA assigns costs to individual products as separate units. Costs that we can demonstrably assign to a given product or service are also allocated, and costs that cannot be allocated equally are calculated for all calculation units. A typical example is the number of hours a machine produces one product, or the number of working days. The advantage of TCA in the first place is:

- simplicity,
- cheaper acquisition of the necessary data and information,
- lower set-up costs.

On the other hand, this method also has its disadvantages, which include the fact that it does not take into account the activities of the company. The accuracy of cost calculations is limited.

Figure 1: Figure description



Source: own processing

5. Discussion

The management method, based on the analysis of the relationship between costs and activities and the ABC calculation derived from it, provides interesting stimuli, which in some cases extend its application to tactical and strategic considerations and decisions. The method brings new information in particular:

- for the management of activities, activities and processes,
- for performance line management,
- for departmental management.

The long-term, traditionally focused orientation of managers to management along the line of performance and along the line of responsibility was reflected in the lower attention paid to the management of auxiliary and service activities (repairs, delivered services, supply activities, etc.). Internal departments at various levels of the corporate hierarchy provide these activities, which are frequently uncoordinated and, to some extent, duplicated. A new, informative view of the costs of individual activities implemented through individual orders and departments allows us to reveal not only the above-mentioned disharmonies and duplications. It gives the opportunity to assess the cost-effectiveness of these activities and compare them with their benefits. It thus creates a natural pressure to eliminate activities that do not have an effect (storage of materials, semi-finished products, and products) or even if their added value is

negative (handling complaints about received materials or own products). In the long run, the method allows:

- then, to assess the cost-effectiveness and benefits of the more broadly understood activities formed by the systematic combination of sub-activities,
- we will analyse the course of these activities in terms of their coordination.

Its aim is to provide the basis for the restructuring of the necessary activities in the whole understanding of the business process so that it runs as efficiently as possible.

In contrast to the traditional way of assigning indirect costs to final services (based on the assumption that the larger the volume of services performed, the greater the overhead costs), the ABC calculation draws attention to the cost intensity of non-standard, small-volume services and their cost intensity. This information is useful for specific price negotiations and can focus the attention of managers in the long run on the elimination of non-standard performances and activities. The ABC method thus indirectly affects the efficiency of design and technological work, the management of the supply, production, and sales processes, and the coordination of ancillary and service activities. Another significant advantage is the method of separate management of fixed and variable costs, which is based on a critical examination of the conclusions that come primarily for short- and medium-term management. It emphasizes that market share and business effects can be increased mainly by maximizing capacity utilization, which can also be achieved by reducing the sales price of the additional volume and assortment to the level of variable product costs. The alternative view of product costs offered by the ABC method emphasizes the cost intensity of the additionally produced assortment. This is because the pursuit of maximum capacity utilization leads to a higher share of non-standard activities in the final phase when classifying products with a smaller volume. Together with the reduction in the prices of these products, this can result in a reduction in profit and return on capital. Knowledge of the sub-activities that give rise to costs is of considerable importance in improving the budgets of those overhead costs that are not related to changes in the volume of services performed. It makes it possible to process variant budgets for a different range of performed sub-activities, to measure the performance of the departments that provide the activities, and to influence the economy by spending these costs in the departments that are responsible for their amount.

A new look at the causes of these costs has led to the development of two methods of budgeting them, known as "Activity Based Budgeting" and "Zero Based Budgeting." It is paradoxical that the source of difficulties in its practical application is also a wide range of diverse support and service activities, as well as services provided to a wide range of customers as prerequisites for the effective use of the method. These are activities as well as, e.g., providing information on how many units of sub-activity relate to a certain part of the realized range of final outputs. In the case of using the method as a basis for decision-making, e.g. on changes in the volume and structure of realized outputs, it is required to distinguish processes caused by the number of outputs from processes whose volume is not affected by the number of outputs. The effectiveness of the use of this data is significantly affected by how accurately it is possible to quantify the proportion of costs dependent and independent of the volume of the evaluated activity. In a more detailed analysis of sub-activities, there are some difficulties in allocating costs related to several joint activities. The conceptual approach of the method not only broadens the traditional view of business processes but also orients them in the current direction in terms of their current characteristics. Difficulties in implementing the method are rather related to the practical problems of quantifying the information needed. In connection with the development of automation of information systems and their integration with automated control of technological processes, the severity of these problems is decreasing, and

on the contrary, the number of large companies that are gradually applying the method is growing.

Use of the ABC method in relation to partial activities in practice

These advantages of the method have the greatest effect in industries like these, which are characterized by a wide range of services, the implementation of which requires a number of costly support and provisioning activities. The greatest experience with its application is in the manufacturing industry, with heterogeneous production and assembly technology. However, the method is also applied in non-manufacturing industries, e.g. in commercial companies, banking, insurance, and transport. It brings fundamental differences compared to other methods in activities in which the development of activities causes costs to arise in indirect relation to the volume of final services. This relationship between costs, activity, and volume of final outputs is typical, especially for the following types of activities:

- logistics operations ensure mainly the supply and sales phase of reproduction (material orders, entry control, transfers to production, in-plant transport, packaging, shipping, transport to customers, including information support for these activities),
- operations ensure the balance between resources and their use (operational planning and dispatch management of supply, production, and sales),
- operations, ensuring the implementation of changes (machine set-up, design, and technological preparation),
- operations ensuring quality control of performed services (quality control, handling of complaints at the entrance and exit, expenses for repairs of failures).

In terms of the decision-making tasks for which the ABC method provides information, it is generally accepted that in the calculation area it provides an improved basis for solving tasks related to the design and defense of prices and for tasks based on the knowledge of full product costs. This is dominated by long-term tasks on capacity and how to fulfil it ("produce or buy" tasks). Systematic monitoring of the cost intensity of individual activities and aggregate activities, especially if it is possible to separate the costs affected by the volume of activity (activities) from the costs that cannot be influenced by volume, can also be used in analyses of so-called value creation (Value Chain Analysis, Value Based Management).

6. Conclusions

The calculation, based on the allocation of costs to sub-activities, provides some new information, especially for the management of activities, activities and processes, but also for traditional areas of management along the lines of services and departments. The new information view on the costs of activities allows you to assess their cost intensity and compare it with their benefits. It thus creates a natural pressure to eliminate activities that either do not have the desired effect or whose added value is negative. From a top point of view, the method allows you to assess:

- cost-effectiveness and benefits of more broadly understood activities, formed by a systemic combination of partial activities,
- analysing the course of these activities, especially in terms of coordination.

As an information base, the calculation processed by the ABC method draws attention to the cost intensity of non-standard, low-volume services and the reasons for their cost intensity. This information can direct managers' attention in the long term to the elimination of non-standard performances. However, it is necessary to highlight managers' relatively conservative approach

 ISSN 1337-0839 (print) / 2585-7258 (online)

to changes in regular values. Certain limits are represented by low awareness of new management options and a reluctance to innovate within established methods and tools.

Author contributions: The author listed has made a substantial, direct and intellectual contribution to the work, and approved it for publication.

Funding: This research received no external funding.

Data Availability Statement: No new data were created or analysed in this study. Data sharing is not applicable to this article.

Acknowledgments: This publication was created thanks to support under the Operational Program Integrated Infrastructure for the project: Identification and possibilities of implementation of new technological measures in transport to achieve safe mobility during a pandemic caused by COVID-19 (ITMS code: 313011AUX5), co-financed by the European Regional Development Fund.

Conflicts of Interest: The authors declare no conflict of interest.

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