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Efficiency and Competitiveness

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ABSTRACT: The constant stream of innovations, changes, competitive situations with time, technologies, market participants, for a higher share, for survival puts great pressure on companies. For companies to be able to operate sustainably, flexibly, and successfully, it is clear that they must be competitive or at least have a competitive advantage. The accelerated developments, the continuous changes, and the pressure of cost and time require a reassessment of competitiveness perspectives. The greatest chance and opportunity for manufacturing and service companies lie in their ability to enhance their efficiency.

KEYWORDS: efficiency, competitiveness

I. INTRODUCTION

The enhancement of efficiency in businesses is increasingly necessitated by the scarcity of resources and their more limited availability (for example: raw materials, energy, labor), as well as their accessibility (for example: workforce, technology, knowledge). Furthermore, the long-term survival and flexible operation of market participants is hindered by the growing demands and expectations of customers, as well as overproduction and waste. As a result of this combination, exploring cost-saving opportunities is becoming an increasingly difficult and unfeasible task for companies.

In the market, efficiency dictates the best outcome for the company to achieve given spatial, temporal, and other constraints. That is, success in business can be ensured through the cost-effective use of resources and the enhancement of knowledge and its application. To achieve this, it is necessary to increase the performance derived from economical (cost-saving) utilization of resources and to add value originating from knowledge.

II. RESEARCH

By efficiency, we mean the economical and cost-advantageous use of knowledge and available resources. According to Ceglarek et al. [2004] [1], success lies in meeting market expectations with higher quality products or services while also incurring lower costs in this time-based competition.

The cost advantage and service differentiation already indicate a company's diversification, as it encompasses complex areas (e.g., marketing, logistics, innovation, strategy, etc.). This theory was also shared by Buckley et al. [1988] [2], because according to them, competitive companies are those that can sell products of greater quality cheaper than their competitors can.

Quantitatively expressed, the measure of efficiency is shown by the ratio of expenditure to effectiveness, that is, the generated value added. Efficiency is generally expressed in monetary terms, values, or defined by production performance. However, efficiency is relative and comparative, making it very difficult to accurately determine and measure. For the most part, we compare something such as performance, time, or other values, but the challenge is that not every element's expenditure and outcome can be precisely determined. (For example, expressing the efficiency of knowledge gained as a result of the outcome in numerical values.)

Horváth [1999]'s [3] efficiency theory posits that the business activity of a product or provided service reaches an output value (yield) and takes into account the relationship of the resources used to achieve this performance.

Samuelson-Nordhaus [2000] [4] considers the economical use of resources, the elimination of errors and deficits, and the values created by the level of technology as decisive: "The exclusion of losses, or alternatively, the use of economic resources in a way that leads to the maximum welfare of economic actors given the amount of resources and level of technology."

Pupos et al. [2020] [5] examined the correlations between productivity, efficiency, and competitiveness, and sought to answer the question of whether productivity values or efficiency indicators are more determinative for the basis of competitiveness? As a conclusion, they arrived to the following statement: "Productivity and efficiency influence the output that can be produced through the available input factors, and thereby also affect the income-generating capability and profitability." (Pupos et al. [2020], p. 466) [5]. Thus, the importance of productivity factors (labor productivity) and the elements affecting them are the primary and key issues that need to be tackled in order to enhance efficiency, and consequently to increase competitiveness and profit generation.

While Nábrádi et al. [2007] [6] simply express efficiency in terms of a company's effectiveness, Szűts [1983]'s [7] theory, which was proposed much earlier, drew attention to the fact that profitability and effectiveness are not capable of accurately conveying a company's efficiency.

This further strengthens the fact that it is difficult to accurately measure and quantify the efficiency of areas and activities. A good example is the presence of companies in the market that operate efficiently, whose effectiveness, however, does not support or validate their efficiency in terms of revenue and profit. Therefore, this type of narrow-minded categorization, which focuses solely on economic effectiveness or the ratio of revenue to expenditure, is not advisable. Such approaches do not provide businesses with a complete, detailed, or accurate picture, as some financial analyses do not examine the facts deeply or precisely enough, thus they may not be suitable for drawing conclusions. Any conclusions drawn this way can be misleading, as many companies make the mistake of only controlling and basing their directives on numerical data and its outcomes, instead of measuring, examining, or optimizing the processes and paying attention to their internal operations alongside the numerical results.

"In analyzing efficiency, the primary question we seek to answer is: How much can the available resources used by the business in a given period – primarily its various tools, groups of tools, and human resources – enable to achieve? Under the concept of performance, we understand the yield of the activity, which shows significant variations depending on the nature of the activity." (Bíró et al. [2016], p. 120) [8].

This implies that the internal corporate efficiency and the "value" yield of activities hold outstanding significance in the operation of a company and its performance level. These together affect and influence the position achieved in the market, which determines the financial outcome and corporate ranking of the company. The series of coordinated activities, the effective distribution and utilization of resources, that is, the company's overall performance (efficiency, flexibility factors), support customer value creation and can also provide companies with a competitive advantage.

Thus, customer demands have shifted towards services and products that add or increase value. The importance of value creation has increasingly been recognized, and several researchers have stated that consumer satisfaction is linked to the quality of the provided service, which ultimately affects success, influencing the company's competitive opportunities (Chang et al. [2009] [9], de Ruyter et al. [1997] [10], Oliver [1993], [11]). In the changing system of the market with growing expectations for value creation, the solution for creating a competitive advantage is mostly found in enhancing efficiency, as previously highlighted. Demeter-Szász [2012] [12], Davies et al. [2006] [13], Matthyssens-Vandenbempt [2008] [14] also declare that customer value creation and associated services are indispensable for retaining customers: it is necessary to provide "packages of physical products and associated services, that is, integrated solutions" (Demeter-Szász [2012], pp. 6 – 8 [12]).

According to Kopányi [2004] [15], the aim of companies in enhancing efficiency is to maximize the measurable differences (to produce the given output with minimal expenditure or to achieve the greatest output with the expenditure used).

The importance of the relationship between efficiency and competition is most closely correlated with the factor of time and adaptability. As a refutation of the competitive significance of efficiency, Szalavetz ([2002], p. 37 [16]) already somewhat criticizes the resulting corporate competitive advantage, stating: "Competitive advantage derives much more from the exploration of new opportunities, rather than from enhancing efficiency." He refers to the identification and exploitation of new opportunities, placing emphasis on the importance of knowledge and the advantages that arise from it, as opposed to enhancing efficiency. The competitive role and importance of knowledge was also supported by Bokor ([2000], p. 66 [17]) through the utilization of knowledge and the opportunities it presents.

Kanter-Brinkerhoff [1981] (p. 21) [18] also expressed skepticism about organizational efficiency: “Some recognized experts are impatient with the concept of organizational efficiency and encourage researchers to shift their focus towards other, significantly more fruitful areas.”

The exploration of theories illustrates that efficiency is primarily based on resources and knowledge, so accordingly, the corporate value of efficiency is determined by cost reduction and the potential in resources. These could include, for example:

- completing or performing more work or production within the same amount of time while maintaining the same level of quality. That is, feasible additional work, additional production, which can be associated with the efficiency of time as a resource, and can be increased in response to market demand for the quick availability of the product/service to

customers. This influences sales opportunities, quality, customer satisfaction, and long-term retention, which in turn affects profit generation.
- Less resource utilization is required for the implementation of planned projects. This could involve using fewer raw materials, machining processes, energy, or time, which reduces costs and frees up resources.
- With lesser resource utilization or the completion of additional work within the same timeframe, capacities can be freed up, which can be leveraged for further advantages. For example: there is an opportunity to increase sales volume, create added value for customers, or expand the market, customer base, and purchase frequency. However, this surplus capacity can also be used in innovative manners, such as process improvement, loss minimization, product or internal workflow analysis, and development.

The research process revealed that various and multifaceted approaches to competitiveness are more characteristic, which highlight its significance as well as its relationships and influences.

There is no specific, unified, and universally accepted definition. Due to constant change, it would be necessary to occasionally rethink or reevaluate the meaning of competitiveness. Just as in the market, technologies, and development, changes are often unpredictable. As a result, it is assumed that the concept of competitiveness is also unable to keep up with changes or achieve the ideal "state and definition". According to Bató [2005] (p. 6) [19], competitiveness is a relative indicator, and he believes that "it usually suffices to surpass others." This "relative indicator" is appropriate because it is difficult to expect precision from a competitiveness ranking.

Némethné ([2010], p. 181 [20]) shares a similar perspective, stating that the competitiveness of products and services determines corporate competitiveness. However, she also emphasizes the importance of taking into account and dynamically examining competitiveness alongside changes.

Gelei-Schubert ([2006], p. 6 [21]) describes competitiveness with the breadth of intangible and inimitable knowledge, stating that "the more true it is for knowledge that it is not tied to a single participant and resource, but is rather created through the interaction of multiple participants and resources, the more difficult it becomes to grasp that knowledge, and the more it applies to the tacit descriptor."

Through the accumulation of acquired experiences, a corporate value chain model has been established, with artificial intelligence and innovation taking the forefront due to their ability to best fulfill the aforementioned criteria. The foundational pillar for achieving competitiveness and gaining a competitive advantage lies in the form of artificial intelligence and innovative thinking, which will increasingly determine the well-being, position, and profit of companies. At the end of the model stands the created value and the customer, who benefits from the advantages of a good starting point at the end of the process, resulting in the company gaining advantages.

If a company utilizes innovation and artificial intelligence, it has a fundamentally advantageous position. If it can maintain and perhaps even enhance this, it may gain a competitive advantage. If it can also add inimitable knowledge to this, then it will stand out among other companies.

According to Magretta (2002), business models describe how businesses operate, answering the fundamental question of who the customer is and what value the customer accepts. The business model also addresses the key question of how profit can be generated and how value can be produced and delivered to customers at appropriate costs using a certain logic. Magretta (2002) believes that "to this day business models still revolve around the elements of Porter's value chain model."

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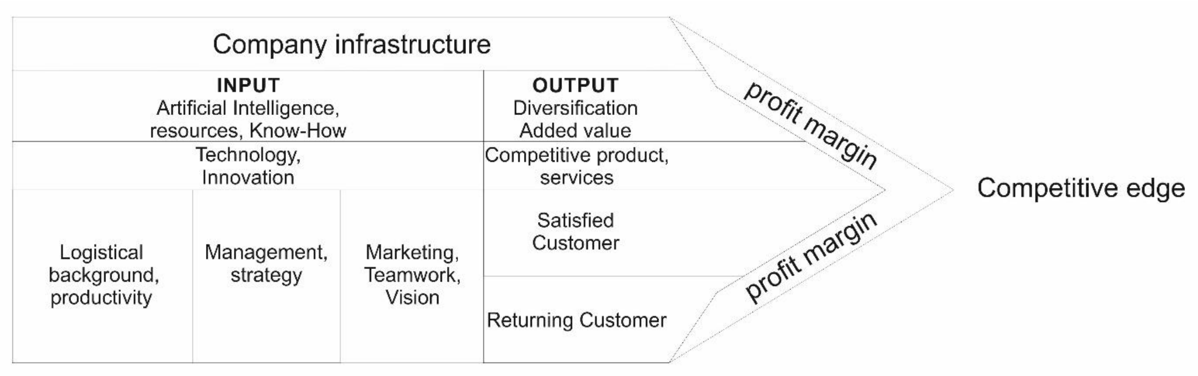

CORPORATE VALUE CREATION MODEL - VALUE CHAIN STRUCTURE
Own drawing

III. CONCLUSION

Competitiveness forms a multifaceted "set of values," in which every change in external or internal factors affects and influences the participants in the system. Competitiveness is determined by the company's ability to change and operate along with the performance it offers. It is certain that improving competitiveness is a continuous, perpetual task required by businesses, which may test them due to the need for constant adaptation and flexibility, and without efficiency, it is unfeasible.

During their corporate operations, companies must consider the direction of improvement and allocate the necessary time to it, keeping it in focus in their daily endeavors. Competitive advantage fundamentally arises from two important directions: cost advantage and the distinctiveness of products, services, technologies, strategies, and knowledge, which are unique, inimitable, and diversified. The most important aspect is marketability, attractiveness, and innovative capability. Moreover, instead of focusing on sustainable competitive advantage, there should be a concentration on the changing and transient competitive advantage, which cannot be achieved without innovation and artificial intelligence.

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