



---

## APPROACH TO RESEARCHING BUSINESS ORGANIZATIONS' COMPETITIVENESS

V. Milusheva\*

Department of Industrial Business, UNWE - Sofia, Bulgaria

### ABSTRACT

The relevance of the issue presented in the paper stems from the trends in current economic development. They pose multiple challenges to researchers when it comes to methods for assessing and analyzing competitiveness of business organizations. The aim of this paper is to present an approach to researching business organization's competitiveness based on highly versatile and adaptive competitiveness evaluation technology. Part of the methods on which the said approach is based are analysis, summary, logical approach, and includes quantitative assessment of indicators used to make comparisons with competitors. The results of the implementation of this approach by researchers are associated with a more precise diagnosis of the causes leading to one level of business organizations' competitiveness or another. A conclusion can be drawn that the accuracy and effectiveness of any research depends on the preparation of a proper set of methods. When researching business organizations' competitiveness, it is crucial to take account of the extreme dynamics of the developing business environment.

**Key words:** competitiveness, assessment methods, research method, business organization

### INTRODUCTION

The 20<sup>th</sup> century technological transformation changed the way economy functions. Digitalized production and increased production automation are leading to multiple changes in production processes, results and business models (1). Digitalization and AI-based technologies are the today's challenges stemming from Industry 4.0.

At this stage of social development, the increased role of information, development of innovations, processes of digitalization, application of robots and automation are among the primary factors facilitating competitiveness. This means that the strategies for enhancing competitiveness of business organizations should be adapted to the realities as technological changes lead to accelerated production and business cycles in the economy (2). Knowing the challenges and resultant

possibilities is also important for the process of company competitiveness evaluation. Researchers face a very complex choice in terms of approaches toward and toolset of methods for assessing company competitiveness, the latter being the base on which a strategy for enhancing competitiveness should be developed. Author's understanding is based on the view that business organizations' development and success are contingent upon the environment in which they exist and the successful use of company's potential in the long run. Another important aspect is the continuous search for and implementation of new, versatile and hard to copy decisions and ways to act. This means that the assessment of business organization's competitiveness must take account of the new challenges and must be based on an approach that has a high degree of adaptability.

### METHODS

In a market economy environment, and, moreover, in the rapidly changing business environment, assessment of a business organization's competitive position should be

---

\*Correspondence to: Vyara Milusheva,  
Department of Industrial Business, UNWE - Sofia,  
Bulgaria, 1700 Sofia, Student District, No.19  
December 8th st.,  
[UNWE,vyara\\_milusheva@unwe.bg](mailto:UNWE,vyara_milusheva@unwe.bg)

an operational component of every business entity. Researching competitors and competitive conditions in a sector is important for every business organization as well as to determine its strengths and weaknesses compared to its competitors. It serves as a basis for developing competitiveness strategy which will help support maintain competitive advantages.

There are various methods for assessing company's competitiveness, yet so far no universal and commonly accepted approach to assessing business organization's competitiveness has been developed. A review of the academic literature on the subject (3) reveals a diverse list of criteria under which the various methods can fall. A large portion of the existing methods can be categorized under several criteria which makes their classification difficult. The classifications are developed according to various features, such as: conceptual framework, form of assessment result presentation, form of mathematical relation among indicators, number of indicators and system of indicators, etc.

It must be noted that currently none of the methods discussed by the author is widely employed in the field or can be recognized as a universal analytical tool. This is the very area of authors' exploration – to propose a universal, wide-scope practical application for assessing business organizations' competitiveness which allows for comprehensive as well as objective assessment. Assessment is the process of registration, collection, analysis and summarization of information on business results. The essence incorporated in the term requires that assessment of business organization's competitiveness be conducted on per stage basis in an integrated form in order for it to be considered a process.

The identified challenges arising from the new realities, specifics of competitiveness, the multitude of methods for its research, the organizational complexity of companies system wise, and the diverse company features in terms of business operations provide a solid base to conclude that there is no need to look for universal set of methods.

Rather, a universal technology for assessing competitiveness must be sought that is versatile and adaptive with respect to the requirements in

the field. A technology for studying business organization's competitiveness which allows for:

- adding or excluding indicators depending on the company's size and business operations;
- adapting indicators depending on research objectives,
- assessing company's competitiveness as a whole;
- possibility to measure only a specific competitive advantage or a number of advantages.

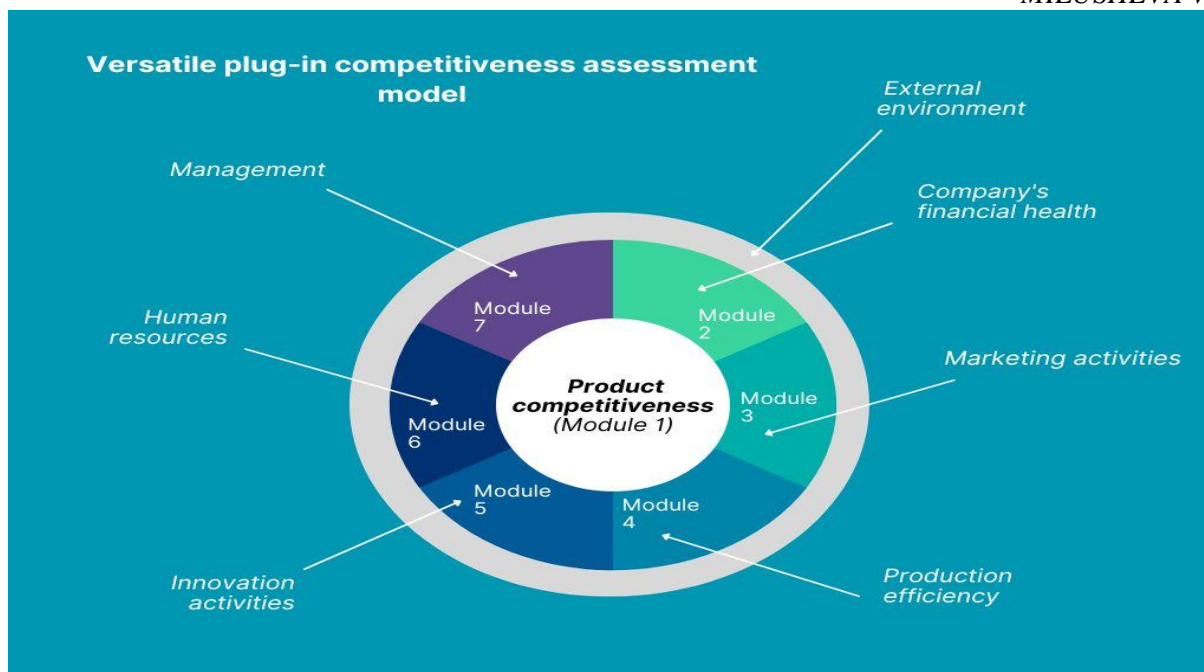
The assessment must allow for determining the competitive position of the business organization in the industry in order to make comparisons with other companies. The resultant assessment of the level of competitiveness must be based on a *system of quantified indicators*. At the same time, the system of (metrics) indicators must be included in a single overall indicator (index). In most general terms, the assessment must allow for determining the competitive status and competitive potential.

Considering all of the above, the following conclusion can be drawn with respect to the technology for assessing the competitiveness of a business organization: the most important features are its versatility and adaptability with respect to the systems of indicators which can be included in it. A technology which possesses these two major characteristics is universal in terms of the assessment algorithm. This is the technology employed in the Versatile Plug-in Competitiveness Assessment Model (3) presented below. The assessment in the proposed model is based on indicators stemming from the individual company functions which comprise the internal company environment. This model focuses on factors which the management can control. In the model, company functions are separated in modules and the indicators in the functions (in general) are submodules.

Researches can choose:

- all modules (based on the predefined ones in the model);
- specific modules depending on the objectives of the research;
- submodules in the main modules.

Despite the possibility for researchers to choose modules and submodules in the assessment model, it would be beneficial to define the main, key indicators from each function to assess business organization's competitiveness.



**Figure 1.** Versatile plug-in competitiveness assessment model Author's model

Assessment of business organization's competitiveness is based on evaluating the factors of the external environment and versatile adaptable model. The model for assessing company's external environment is made of two components: assessment of product (service) competitiveness and a comprehensive assessment of the major business activities (functions) of the business organization which define the level of its competitiveness. In the field, the two constituting components are interrelated. An important feature of the model is the mandatory assessment of product (service) competitiveness. When assessing competitiveness of microbusinesses, this might be the only module to assess.

When assessing the internal business environment, researches can add various submodules to the modules. From a practical point of view, the richer the model, the more reliable the assessment of competitiveness. However, this would require the processing of large amount of data. This will create difficulties related to the gathering of information and increased consumption of time, resources and means needed to conduct the research. Hence, two types of submodules should be distinguished:

The first – those which are readily accessible to companies – is the information from accounting and statistical reports. Companies don't need to allocate specific funds to access such information. This group can also include

submodules the information on which is acquired from company's own analyses.

The second – submodules for the content of which the companies must allocate funds in order to access data bases with competitors and/or contract this activity to external consultants (it is possible to contract the entire assessment process to external experts, specialist in the field).

Competitor research must focus on the same areas like those selected for assessment in the model. This provides for comparability of results. For example, a useful tool for comparing company's capacities and those of its competitors is the construction of a competitiveness polygon which provides a graphical representation of the assessments of company's position and that of its competitors in the most important operational areas resented as vectors-axes.

Another important feature of the proposed business organization's competitiveness assessment model is that adding modules and submodules has an effect on their individual importance weights. Adding more modules reduces the importance of the modules in the overall assessment. This principle also applies to the submodules in each module. The number of assessed submodules and their features must be optimized in order to provide for managerial decision making.

The complexity and multifaceted nature of the problem in question as well as the lack of generally accepted approaches toward assessing company's competitiveness allow for researches, approaches of different authors to be included in the proposed model.

A useful toolset for such type of research can be mathematical modeling which allows for the identification of functional specifics of the studied objects and prediction of their future behavior upon parameter change.

Before calculating an overall score of business organization's competitiveness, it is necessary to define the scores for the respective submodules using the following formulas(5-6, 3):

In case of assessing and comparing the competitiveness of a large number of companies, in order to determine their relative position (ranking):

$$S_{ik} = 6 * \frac{(CT_{ik} - CT_{i \min})}{(CT_{i \max} - CT_{i \min})} + 1, \text{ where:}$$

$S_{ik}$  – score for the  $i$  indicator for the  $k$  company;  
 $CT_{ik}$  – value of the  $i$  indicator for the  $k$  company;

$CT_{i \max}$  and  $CT_{i \min}$  – the respective maximum and minimum level (value) of the  $i$  indicator for the entire population of analyzed companies.

In case of assessing and comparing the competitiveness of only two companies (e.g. comparison with the main competitor), the company with the higher value of the submodule receives a score of 7, and the a rating of the other company is determined in accordance with the following formula:

$$S_{ik} = 6 * \frac{CT_{ik}}{CT_{i \max}} + 1$$

Significance factors for the individual submodules are also determined. They show their various relative significance for the value of the respective module. These can be determined in three ways:

- by experts in a research team;
- by surveying manager's opinion;
- as a result of empirical studies.

Irrespective of the way employed to determine them, when quantifying them, it should be taken into account that the sum of the significance factors of all submodules for a specific factor must be 1.

The same procedure is applied with respect to the modules when calculating the overall score.

The final overall score must also incorporate assessment of company's external environment (3).

Company's internal environment is an extremely important aspect of competitiveness management. Environment is the totality of all components in an organization which function together and through them the organization achieves its operational results. Every company has a mission which defines the reason for its existence and the goals it pursues in its operations.

The proposed versatile adaptable model for assessing competitiveness of business organizations, as stated above, focuses on the factors or components which company management is able to control. The reasons behind this stem from the view that the assessment of the internal factors provides information on the status of the studied parameters and reveals company's potential to fully utilize any changes in the external environment.

When studying external environmental factors for the purpose of assessing competitiveness, it is possible to use the following functional directions: marketing, production (for industrial companies), finances, human resources management, innovations, management. These are separated in individual modules and indicators related to the evaluated company operations – in submodules. This means that the modules can be selected and grouped depending on the objectives of the research. The assessment of competitiveness and the subsequent comparative analysis covering various time periods require that the structure of the research model be retained.

One of the problems when assessing the internal business environment is the selection of indicators to be used in the assessment of the individual modules. The indicators reflect the features of the modules which accumulate the results of company's management efforts and sufficiently accurately represent its competitive levels. Another important aspect is the possibility for easy access to the information needed to make a quantitative assessment of the levels of the indicators. Indicators must be selected carefully so as to avoid their being accounted for twice in the overall business organization's competitiveness score.

The author suggests that the internal competitive advantages which define the market position of a business organization be grouped based on the six most important business operations separated in modules (M):  
 Product/service competitiveness (M1);  
 Company's financial condition (M2);  
 Marketing activities (M3);  
 Production effectiveness (for industrial companies) (M4);  
 Innovation activity (M5);  
 Company's human resources (M6);  
 Management (M7);  
 The "Product/service competitiveness" module is mandatory (permanent) for the assessment (See figure No. 1), and the rest can be modified depending on the size of the company, business operations, company's conditions and objectives.

## RESULTS

The next step is assessment of the *modules which is conducted individually for each module and represents an overall index of the submodules or indicators included in the respective module, with the former including the scores and weighting factors.*

Evaluation of module levels allows to reveal the strengths and weaknesses of the business organization and use it as a stepping stone for further substantiated management decisions. Also, comparisons can be made with other companies from the sector, with similar companies from other countries, with the condition of the respective field across Europe and around the world.

The overall score for business organization's competitiveness is determined by the formula:  
 $KP = w_1Co + w_2M1 + w_3M2 + w_4M3 + w_5M4 + w_6M5 + w_7M6 + w_8M7$ , where:  
 Co – score for the external environment;  
 M1, M2, M3, M4, M5, M6, M7 – scores for the modules;  
 $w_1, w_2, w_3, w_4, w_5, w_6, w_7, w_8$  – the respective significance factors.

All constituting indicators of the formula used to determine the overall competitiveness score have a score range from 1 to 7. Based on the score, it is possible to analyze the impact of each individual module as well as each of its constituting submodules. This can support company management when defining the

primary actions aimed to achieve maximum increase in competitiveness.

- The proposed model for assessing competitiveness of industrial companies is not exhaustive. It can be supplemented, and some of the listed components can be substituted by others depending on researchers' needs subject to the principles of conducting company competitiveness studies as mentioned earlier.
- The presented approach is inherently versatile and adaptable in terms of the measured aspects of the internal environment. The main objective of its specific development is to be primarily used by field experts.
- The approach adds yet another aspect to the multitude of existing approaches toward assessing competitiveness of business organizations and it is associated to a great extent with the search for universal technology rather than a universal approach.
- The approach also allows to assess aspects of human resources management which constitutes a new element in the general assessment of business organizations' competitiveness.
- The approach, as already mentioned, focuses on the internal business environment of the company by employing a modular concept based on company functions (activities). The argument behind this is that it allows for easier association between theoretical processes and field processes and it also makes it possible for the field researchers to analyze both individual modules and their role as competitive advantages and to obtain reliable overall score of company's competitive position as well as to evaluate any future consequences.
- This approach is a methodological foundation and methodology algorithm which can be helpful for practitioners. Its reliability has been tested by validating the described technology in a research titled "Possibilities for enhancing competitiveness of companies operating in the Non-ferrous metals sector" (3).

## CONCLUSION

The approach which researchers decide to apply in their work must be reliable while providing the capability for a more precise *diagnosis of the causes leading to a particular level of competitiveness of business organizations.*

From a point of view of the rapidly changing business environment which entails multiple changes in the organizational aspect, the inherent versatility and adaptability of the model allow researchers to select key parameters depending on the operational specifics of companies and their size. The approach presented in the paper allows researchers to assess and analyze the competitiveness of business organizations and to identify possibilities to enhance competitiveness.

#### REFERENCES

1. Ministry on Innovations and Growth, <https://www.mig.government.bg/politiki-i-strategii/industriya-4-0/>

*MILUSHEVA V.*

2. Georgiev R., Konkurentsia i firmena aktivnost, S. 2017
3. Milusheva V., Vazmozhnosti za povishavane na konkurentosposobnostta na firmi ot tsvetnata metaluriga, Ecobelan publishing house, 2020
4. Milusheva V., Otsenka na konkurentosposobnostta na industrialnata firma, Ecobelan publishing house, P. 2020
5. Velev M., Otsenka i analiz na firmenata konkurentosposobnost, "Softtrade", S., 2004
6. Milusheva V., Vazmozhnosti za povishavane na konkurentosposobnostta na industrialnata firma (po primera na KCM AD, Aurubis Buglaria AD, Asarel-Medet AD), S. 2013