

MEASURES OF COMPETITIVE POTENTIAL OF ENTERPRISES

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Abstract

Competitiveness is an integral characteristic of the market economy. It determines operations of all businesses and forces enterprises to introduce innovations and use their resources reasonably. Competitiveness of an enterprise can be described by means of three dimensions (groups of variables): competitive standing, competitive potential, and competitive strategy (instruments of competing).

This paper is designed to determine measures of maximum importance to evaluation of an enterprise's competitive potential.

Its theoretical section is a critical review of literature concerning microeconomic conditions of enterprise competitiveness. Determining competitive potential of an enterprise serves to assess level of its competitiveness. The potential is understood as tangible and intangible resources that enable an enterprise to build its competitive advantage and to operate effectively in a market.

The empirical part discusses results of the author's research, using the Delphi method with 55 Polish and international experts (Slovakia, the Czech Republic, Serbia, Spain, the US), aimed at determining significance of measures of enterprise competitive potential.

Two research hypotheses concerning significance of the individual measures of an enterprise's competitive potential are posited in the article. Descriptive statistics are applied to verify the hypotheses.

Key words: enterprise, competitiveness, measures, competitive potential

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Introduction

Competition accompanies man in every field of action and its idea boils down to rivalry between a number of groups or individuals for attainment of the same objective (Manole et al., 2014; Maráková et al., 2016).

Competitive potential is a dimension of competition. It denotes material and non-material resources available to an enterprise and constituting a source of its competitive advantage. Competitive potential encompasses resources an enterprise should have and use to build, maintain, and strengthen its competitiveness.

This paper is aimed at determining measures of maximum importance to assessment of an enterprise's competitive potential.

Two research hypotheses are posited:

H1: In the opinion of experts, the measures related to financial condition, human capital and innovative activities of an enterprise are of great significance to determining an enterprise's competitive potential.

H2: Opinions of Polish and international experts vary a great deal as to significance of Corporate Social Responsibility as a measure of an enterprise's competitive potential.

The theoretical part of this paper applies the method of critical review of literature and the empirical section employs descriptive statistics.

1 Competitive potential as a dimension of competition

Specialist literature offers a great variety of definitions of enterprise competitiveness. In synthetic terms, it means more effective manufacturing and supply of products and services compared to competitors, ability to keep providing added value to enterprise stakeholders (Dwyer, Kim, 2003), being profitable and in the leading market position (Lombana, 2006). Competitiveness is commonly associated with innovation (Duda Gąsior, 2014; Wolak-Tuzimek, 2016), price, product quality, productivity of resources, production costs, CSR reporting (Lament, 2016) or the competitive advantage itself.

R. Huggins (2003) believes competitiveness means the ability to utilise individual, specific and valuable resources which are hard to imitate for competitors.

M. Gorynia (2010) has proposed describing enterprise competitiveness in three dimensions (groups of variables): competitive position, competitive potential and competitive strategy (instruments of competing). It is easy to note these three dimensions are closely interrelated. Competitive positions are results achieved thanks to the competitive potential used during a competition process, conducted according to a scheme set by a company's competitive strategy (Trąpczyński et al., 2016).

According to J. M. Stankiewicz (2005), competitive potential comprises all material and non-material resources of an enterprise necessary for operating in the arena of market competition.

Resources of an enterprise predetermine its competitiveness. Owing to characteristics allowing for effective competing, they constitute the only source of competitive advantage. These characteristics include first of all: strategic value, rarity, difficulty of imitation and substitution. Enterprises compete for resources that are unique and inaccessible to others. Not all elements of competitive potential are equally important. The resources credited with a minimum value as dependent on capabilities for their use come the lowest. Competences, sets of abilities and know-how of an organisation come a step above. Key competences, unique combinations of technology, knowledge and skills in an enterprise are top of the hierarchy.

2 Methods

The study was designed to collect opinions of independent experts and, on that basis, to identify key measures for assessment of enterprise competitive potential.

The Delphi method, developed in 1950s and 60s by the American organisation RAND, was employed (Kezar, Maxey, 2016).

The point of the method consists in a group of specialists working together – experts expressing their opinions on an issue by means of correspondence discussion.

Its classic version comprises several characteristics including (Rowe, Wright, 1999; Skulmoski et al., 2007; Matejun, 2012):

1. Independence of expert opinions.
2. Anonymity – to provide for relatively greater freedom and frankness of responses.
3. Repeatability – the method consists of two or more rounds expected to lead to a convergence (shared position) of expert opinion.
4. Information feedback – helping to modify responses based on opinions by other experts.
5. Statistical aggregation of expert responses – enabling quantitative analysis and interpretation of data.

The Delphi method involves selection of a group of experts and then distributing to them a survey questionnaire on a problem several times. It formalises and structures the process of group communication in order to collect and process views of the participating experts in an orderly manner. It is iterative and gradually approaches problem exploration/solution over successive stages or rounds, as part of which participants in the discussion

submit their ideas or assessments. After each round, the head of study (facilitator) develops conclusions and distributes them to the experts, who are requested to voice their opinions once again in light of the summary they receive. Special questionnaires are utilised in each round to generate a consensus among the experts using the information feedback and creative synergies. Subsequent rounds are not repetitions but creative expansions of earlier stages in line with the principle of hermeneutic circle (or spiral). The Delphi procedure ends with analysis and categorisation of empirical materials by means of quantitative and/or qualitative techniques.

The survey was conducted in March-July 2017 as a first round of the Delphi technique. 100 selected experts were sent a questionnaire and invited to take part in a study on microeconomic conditions of enterprise competitiveness. 55 experts, including 36 Polish and 19 international (from the Czech Republic, Spain, Serbia, Slovakia, and the US), participated in the first round.

The survey questionnaire consisted of three points, including one concerning competitive potential of enterprises:

1. Please determine significance of the particular measures of enterprise competitive potential on the following scale: 0-no significance; 1-low significance; 2-average significance; 3-high significance; 4-very high significance.

Descriptive statistics were applied to verify the hypotheses postulated. This is the fundamental method of describing statistical data that allows for clear and comprehensible summary of and conclusion from a survey. Position measures (average, median, and modal value) served to characterise the statistical group regardless of differences between its component units while measures of variability (standard deviation, coefficient of variation) characterised the statistical group considering differences between its component units.

3 Methods

The survey questionnaire contained 23 measures of enterprise competitive potential. 55 experts graded significance of the individual measures along a scale from 0 to 4. Analysis of the position measures, i.e. mean and median, shown in Table 1, indicates:

1. In the opinions of Polish experts, commitment of third-party capital compared to equity, quality assurance systems in place, certificates of products quality in place, efficient acquisition, transparent organisational structure of enterprise, convenient location of enterprise, and implementation of the corporate social responsibility concept were of

average importance to evaluation of enterprises' competitive potential. The mean for these measures ranged within 2.0-2.3 and was close to the median. Human capital and financial standing were of maximum significance to assessments of competitive potential. The means for quality of managerial staff and creativity of staff were 3.5 and 3.4, respectively, while the median was maximum. With reference to the measures determining financial condition of an enterprise, namely, liquidity and profitability, the median was 3.2 and a median of 4 was recorded for the former measure.

2. The international experts believed the following measures were of average significance to evaluation of enterprises' competitive potential: efficient acquisition, quality assurance systems in place, availability of required infrastructure, and transparent organisational structure of enterprises. The means ranged within 2.2-2.3. The greatest significance, on the other hand, was attributed to quality of managerial staff and innovative activities. The mean was 3.5 in both the cases.
3. There are major differences in perceptions of corporate social responsibility as a measure of enterprises' competitive potential. The Polish experts credited it with average significance (the mean of 2.2), whereas the international experts stated the CSR theory substantially (a mean of 3.0) influences competitive potential of an enterprise.

Tab. 1: Position measures in the opinions of Polish and international experts

Measures of competitive potential of enterprises	Polish experts		International experts	
	Mean	Median	Mean	Median
Liquidity ratios	3.2	4	3.1	4
Profitability ratios	3.2	3	3.2	3
Equity level in enterprise	2.7	3	2.6	3
Commitment of third-party capital compared to equity	2.3	2	2.5	3
Quality assurance systems in place	2.3	2	2.2	2
Certificates of products quality in place	2.3	2	2.6	3
Customers' loyalty	3.2	3	3.3	3
Well-developed network of distribution	3.1	3	2.8	3
Availability of required infrastructure	2.5	3	2.3	2
Proper management of IT infrastructure	2.5	2	2.6	3
Quality of managerial staff	3.5	4	3.5	4
Creativity of staff	3.4	4	3.3	4
Condition of plant and machinery	2.9	3	3.2	3
Research and development activities of enterprise	3.1	3	3.5	4
Mastery of technologies	3.1	3	3.4	3
Technical standard of products	3.1	3	2.9	3
Creation of strong product brand	3.2	3	3.4	3
Availability of materials	2.5	3	2.7	3
Service standard	2.6	3	3.0	3
Efficient acquisition	2.3	2	2.1	2

Transparent organisational structure of enterprise	2.0	2	2.3	2
Convenient location of enterprise	2.0	2	2.6	3
Implementation of the corporate social responsibility concept	2.2	2	3.0	3

Source: The author's own calculations

The position measures do not exhaust the analysis of significance of enterprises' competitive potential measures. Above all, they fail to indicate the degree of variability (dispersion) of the responses. Therefore, standard deviation, which shows how much a level of significance for the particular measures is distributed around the mean, and the coefficient of variability, providing information about the force of dispersion, were employed to continue the analysis. Values of selected variation measures are presented in Table 2.

Tab. 2: Variation measures in the opinions of Polish and international experts

Measures of competitive potential of enterprises	Polish experts		International experts	
	Standard deviation	Coefficient of variation (%)	Standard deviation	Coefficient of variation (%)
Liquidity ratios	0.95	29.76	0.95	29.76
Profitability ratios	0.80	24.73	0.80	24.73
Equity level in enterprise	0.86	31.76	0.86	31.76
Commitment of third-party capital compared to equity	0.74	32.54	0.74	32.54
Quality assurance systems in place	0.75	32.49	0.75	32.49
Certificates of products quality in place	0.84	37.37	0.84	37.37
Customers' loyalty	0.82	25.73	0.82	25.73
Well-developed network of distribution	0.90	28.65	0.90	28.65
Availability of required infrastructure	0.85	33.81	0.85	33.81
Proper management of IT infrastructure	0.91	35.99	0.91	35.99
Quality of managerial staff	0.61	17.41	0.61	17.41
Creativity of staff	0.69	20.25	0.69	20.25
Condition of plant and machinery	0.82	28.40	0.82	28.40
Research and development activities of enterprise	0.92	30.24	0.92	30.24
Mastery of technologies	0.83	27.04	0.83	27.04
Technical standard of products	0.81	26.15	0.81	26.15
Creation of strong product brand	0.94	29.71	0.94	29.71
Availability of materials	1.06	42.22	1.06	42.22
Service standard	0.91	35.55	0.91	35.55
Efficient acquisition	0.95	41.24	0.95	41.24
Transparent organisational structure of enterprise	0.77	39.25	0.77	39.25
Convenient location of enterprise	1.00	49.30	1.00	49.30
Implementation of the corporate social responsibility concept	1.06	48.72	1.06	48.72

Source: The author's own calculations

In conformity with the Polish experts' opinions, the maximum standard deviation (1.06) was noted for the measures of material availability and implementation of the corporate social responsibility concept, whereas the international experts' opinions were most dispersed

with regard to liquidity as a measure of an enterprise's competitive potential (1.13). Responses of Polish experts varied little for the measure of managerial staff quality (coefficient of variation 17.41%), whereas considerable variability (coefficient of variation above 40%) related to: availability of materials, efficient acquisition, convenient location of enterprise, and implementation of the corporate social responsibility concept. The international experts were the most unanimous in assigning significance to customers' loyalty (coefficient of variation 14.4 %), and fluctuated substantially as to attributing significance to availability of required infrastructure and transparent organisational structure of enterprise. Coefficients of variation for each of the measures were 43.8%.

Tab. 3: Descriptive statistics of measures of enterprise competitive potential in the combined opinions of Polish and international experts

Measures of competitive potential of enterprises	Position measures		Measures of variability	
	Mean	Median	Mean	Median
Liquidity ratios	3.1	4	3.1	4
Profitability ratios	3.2	3	3.2	3
Equity level in enterprise	2.7	3	2.7	3
Commitment of third-party capital compared to equity	2.4	2	2.4	2
Quality assurance systems in place	2.3	2	2.3	2
Certificates of products quality in place	2.4	2	2.4	2
Customers' loyalty	3.2	3	3.2	3
Well-developed network of distribution	3.0	3	3.0	3
Availability of required infrastructure	2.4	2	2.4	2
Proper management of IT infrastructure	2.6	2	2.6	2
Quality of managerial staff	3.5	4	3.5	4
Creativity of staff	3.4	4	3.4	4
Condition of plant and machinery	3.0	3	3.0	3
Research and development activities of enterprise	3.2	3	3.2	3
Mastery of technologies	3.2	3	3.2	3
Technical standard of products	3.0	3	3.0	3
Creation of strong product brand	3.2	3	3.2	3
Availability of materials	2.6	3	2.6	3
Service standard	2.7	3	2.7	3
Efficient acquisition	2.2	2	2.2	2
Transparent organisational structure of enterprise	2.1	2	2.1	2
Convenient location of enterprise	2.2	2	2.2	2
Implementation of the corporate social responsibility concept	2.5	2	2.5	2

Source: The author's own calculations

The combined opinions of the Polish and international experts (Table 3) demonstrate the measures associated with human capital, financial standing, and innovation activities of enterprises were of paramount importance. The means for these measures were within the range of 3.1-3.5. The experts' responses showed minimum variation with regard to quality of

managerial staff as a measure of competitive potential. This is proven by the lowest standard deviation (0.57) and coefficient of variation (16.34%).

Conclusion

Competitiveness of enterprises is a frequent subject of studies. However, specialist literature lacks synthetic research identifying key measures serving to assess levels of enterprise competitiveness. Competitive potential is one of three dimensions of enterprise competitiveness. It can be understood both narrowly and broadly. The former definition would primarily encompass resources which are or can be used by an enterprise. Defined broadly, on the other hand, competitive potential comprises not only resources of an enterprise in their broad sense, but also its culture, organisational and legal structure, strategic vision, and specific conduct.

In light of the author's research, which involved collecting expert opinions concerning significance of certain measures of enterprises' competitive potential, the hypotheses advanced in this paper can be said to be true. The results, presented by means of descriptive statistics, prove:

1. In the opinions of experts, the measures associated with human capital (customers' loyalty, quality of managerial staff, creativity of staff), financial standing (liquidity and profitability), and innovative activities (research and development, technical standard of products) are highly important to determinations of an enterprise's competitive potential. The mean for these measures ranges within 3.1-3.5. The experts' responses exhibited minimum variability as far as significance of managerial staff quality is concerned as a measure of competitive potential. This is demonstrated by the lowest standard deviation (0.57) and coefficient of variation (16.34%). The hypothesis H1 has been upheld.
2. The international experts believed implementation of corporate social responsibility in enterprises is highly significant as a measure of an enterprise's competitive potential. This is supported by a high mean, 3.3, and low variability of expert opinions (coefficient of variation 19.25%, standard deviation 0.58). The Polish experts, in turn, attributed an average significance to this measure, with highly variable and dispersed responses (coefficient of variation 48.72%, standard deviation 1.06). This implies H2 has been verified positively.

Measurements of enterprise competitive potential are a multi-dimensional area of study. The proposed set of measures is not ultimate and close-ended, therefore. It may be

extended with measures relative both to nature of business and macro-environment of enterprises.

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