ASSESSMENT OF SMALL AND MEDIUM-SIZED ENTERPRISES'COMPETITIVENESS LEVEL BASED ON DIRECT INTERVIEW

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ABSTRACT:
THE RESEARCH WAS BASED ON DIRECT INTERVIEWS WITH MANAGERS OF FIRMS, USING SPECIAL QUESTIONNAIRES, ON A SAMPLE OF 42 SMALL AND MEDIUM ENTERPRISES IN VÂLCEA COUNTY AND IT SUMMARIZES THE MANAGERS'RESPONSES TO QUESTIONS FOCUSED ON ASPECTS THAT CHARACTERIZE THE COMPANY'S COMPETITIVENESS.
AN IMPORTANT CRITERION FOR THE SELECTION OF COMPANIES FOR RESEARCH WAS THE MANAGERS'WILLINGNESS TO COOPERATE. ON THE OTHER HAND, THERE WAS PURSUED TO COVER THE FULL SIZE SCALE IN TERMS OF TURNOVER AND NUMBER OF EMPLOYEES, AND ALL ACTIVITY FIELDS SO THAT THE CHOSEN SAMPLE TO BE REPRESENTATIVE.

KEYWORDS: COMPETITIVENESS OF SMALL AND MEDIUM ENTERPRISES, COMPETITIVE POTENTIAL, COMPETITIVENESS STRATEGY, MARKETING RESEARCH.

INTRODUCTION

In order to assess the competitiveness of a company, it is operationalized this concept, which means to identify its determinants.

The concept of competitiveness of the company covers three dimensions[2]: competitive position of the enterprise, competitive potential and competitive strategy of the company.

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[2] M. Gorynia, *The competitiveness of Polish firms and the european union enlargement* (Poland: The Poznań University of Economics Review, 1(1), 2001), 48-68

Dimensions mentioned above were, in turn, issues of operationalization - have been suggested sets of variables describing the particular dimensions of company's competitiveness. As for the competitive position of the company had not been identified sufficiently suggestive determinants, there have been operationalized only the competitive potential of the enterprise and the enterprise's competitive strategy.

METHODS AND MATERIALS

STATISTIC REPRESENTATIVENESS OF THE SAMPLE

I will show that the sample's volume ensures the representativeness of the population observed. In this respect, we introduce the notations: N - volume of total population; n – sample's volume; σ – mean square deviation; α – significance threshold; Δ – limit of error; z_α – corresponding critical value to significance threshold α.

For unrepeatable survey (the units drawn from the reference population are not reintroduced back, so they can not be drawn again), to dimension a sample we use the formula[3]: $n = \frac{z_\alpha^2 \sigma^2}{\Delta^2 + \frac{z_\alpha^2 \sigma^2}{N}}$. Since in general, the mean square deviation σ is unknown, there is replaced with an estimation of it s', so from above formula we obtain: $n = \frac{z_\alpha^2 s'^2}{\Delta^2 + \frac{z_\alpha^2 s'^2}{N}}$. The estimation of mean square deviation s' there is the mean square deviation calculated for a sample obtained from a previous selective research.

The list of most known small and medium-sized enterprises in Valcea county contains 390 companies, so we have $N = 390$.

Also, we choose significance threshold $\alpha = 0{,}05$, which means that the sample is representative with a probability of $1-\alpha = 95\%$ (called safety coefficient), in the same time existing a risk equal with $\alpha = 5\%$. The critical value z_α is α - bilateral quantile for normal law normed, and its value is read from special tables. For $\alpha = 0{,}05$, we find $z_{0,05} = 1{,}96$.

[3]S. Manole, Op. cit., p.166

For the limit of error Δ, we choose a value equal to 10% of the scale's size. As the scale has values between 0 and 6, we take $\Delta = 0{,}6$.

As in a previous selective research similar to ours, carried out also for small and medium-sized enterprises in Valcea county, managers were asked for their opinion concerning instruments of competitiveness and of competitive potential (similar to instruments from this study), the highest value of the mean square deviation was 2.10, we take $s' = 2{,}10$.

Using the last of the above formulas, we get: $n = \dfrac{1{,}96^2 \cdot 2{,}10^2}{0{,}6^2 + \dfrac{1{,}96^2 \cdot 2{,}10^2}{390}} = 41{,}99$.

Therefore, sample's volume $n = 42$ ensures its representativeness for most known small and medium enterprises in Valcea county

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COMPETITIVE POTENTIAL

We believe that the competitive potential of the company is characterized by the following elements: 1. Funding possibilities of current activities; 2. Possibilities of financing from own founds the development; 3. Possibilities for financing the development from external resources; 4. Quality of production equipments; 5. Advance of production technologies; 6. Flexibility of production system; 7. Relative level of expenditures on research and development; 8. Staff's quality involved in R & D; 9. Ability to purchase buildings and modern technological solutions; 10. The quality level of management system; 11. The place ranked by quality's assurance issues; 12. Access to key resources; 13. Knowledge of current and future consumers'needs; 14. Knowledge of competitors; 15. Place ranked by marketing activities; 16. Quality of staff involved in marketing; 17. The relative level of marketing expenditures; 18. Quality of motivational system; 19. Staff's behavior towards change; 20. Professional level of employees; 21. Desire to improve skills; 22. Recognition of the company and its products on the market; 23. Company's reputation (image, good recognition).

Respondents are asked to choose from these items those which in their opinion, are determinants of competitive potential and to give them scores from 0 to 6 - depending on their importance for company and on the level at which the company applies these instruments. The significance of scale's values used for the importance of factors for the

company is as follows: 0 - no importance: 1 - very low importance; 2 - low importance; 3 - average importance; 4 - high importance; 5 - very high importance; 6 - enormous importance.

For scale's values expressing the factors'level where stands the firm, we have the following meanings: 0 - firm has the lowest level; 1 - the company has low level; 2 - the company has a relatively low level; 3 - the company has an average level; 4 - the company has a relatively high level; 5 - the company has a high level; 6 - the company has the highest level.

After centralization the results obtained, there were calculated arithmetic mean (m) and mean square deviation (σ) for each instrument with the formulas:

$$m = \frac{\sum_{i=1}^{n} x_i}{n} \quad ; \quad \sigma = \sqrt{\frac{\sum_{i=1}^{n} (x_i - m)^2}{n}} \quad .$$

Where: n – number of firms from the sample for which managers have ranked points for this instrument,

x_i – the score given to this instrument by the manager of company i, $i = 1,2,\ldots,n$.

The arithmetic mean for a particular instrument shows how managers summarize their impressions concerning this instrument - whether it's about its importance and which is the overall level of the instrument - whether it is about the level, where the firm applies it. Mean square deviation corresponding to a measure indicates the degree of dispersion of opinions expressed about that measure.

Also, there is of interest the coefficient of variation, expressed as the ratio between mean square deviation and the arithmetic mean: $v = \frac{\sigma}{m} \times 100$. This indicator is used as significance test of the mean's representativeness. In general, we believe that a value for this coefficient lower than 35% indicates a homogeneous community, where the mean is representative.

From assessment's results of the importance of competitive potential's instruments, it is interesting to note that from 23 determinants of competitive potential only 3 have the mean higher than 5.00 and only 3 had the mean lower than 3.00.

According to managers, the most important tools of competitive potential are: Company's reputation (image, good recognition) ($m = 5,43$); Recognition of the company

and its products on the market ($m = 5{,}24$); Knowledge of competitors ($m = 5{,}05$); Knowledge of current and future consumers'needs ($m = 4{,}95$).

At the same time, the following competitive potential's instruments are ranked with the lowest importance: The relative level of expenditures on research and development ($m = 2{,}31$); Quality of staff involved in R & D ($m = 2{,}53$); Possibilities for financing the development from external means ($m = 2{,}78$); The relative level of marketing expenditures ($m = 3{,}00$).

We note that the highest importance is given to informational factors, while factors related to research and development are evaluated with the slightest importance. Given the global financial crisis, it is somehow surprising that instruments like the possibilities of financing current activities and financing possibilities of development from own founds, obtained lower mean, namely 4.21, respectively 3.89. One possible explanation for the first instrument is that managers have made the necessary restructuring, so that the effects of the financial crisis are no longer perceived at their real magnitude and for the second is that since, during this period, managers aim less to develop activities, their financing possibilities'problem becomes less important.

Also we note that the views of managers concerning the importance of competitive potential's instruments differ a lot among themselves, which is justified by the fact that the mean square deviation and, to some extent, the coefficient of variation are high. Applicable are the following measures: Quality of staff involved in marketing ($\sigma = 2{,}38$, $v = 0{,}65$); Quality of production equipments ($\sigma = 2{,}21$, $v = 0{,}51$); Access to key resources ($\sigma = 2{,}17$, $v = 0{,}56$); Possibilities for financing the development from external means ($\sigma = 2{,}13$, $v = 0{,}77$).

Also, for some instruments, managers'opinions about their importance are quite "close". In this regard, we consider the following determinants: Company's reputation (image, good recognition) ($\sigma = 1{,}09$, $v = 0{,}20$); Recognition of the firm and its products on the market ($\sigma = 1{,}31$, $v = 0{,}25$); Knowledge of competitors ($\sigma = 1{,}41$, $v = 0{,}28$); Knowledge of current and future consumers'needs ($\sigma = 1{,}43$, $v = 0{,}29$).

It is noted that the above four instruments, for which the mean square deviation has the lowest values are at the same time, the most important instruments according to managers'opinion. In fact, we can say that only these ones and Employees'professional level ($v = 0{,}33$) and the Desire to improve skills ($v = 0{,}35$) are the managers'"close" views

concerning the importance of competitive potential's instruments, since corresponding coefficients of variation have maximum values of 0.35.

According to the assessment of the level at which, in managers'opinion, there are applied competitive potential's instruments for their companies, from 23 instruments of competitive potential, only 4 have the mean higher than 4.00 and only 2 have the mean's value lower than 2.00. Also, it can be observed that if we make hierarchies by the mean of these factors of competitive potential, for their importance and for the level at which the company applies them, then between the two classifications is little difference. At the same time, it's noted that for each instrument, the mean corresponding to its importance is superior to the mean corresponding to company's evaluation, with values between 0.35 and 1.11.

Competitive potential's instruments that have obtained the highest arithmetic mean are: Firm's reputation (image, good recognition) ($m = 4{,}52$); Knowledge of competitors ($m = 4{,}31$); Recognition of the firm and its products on the market ($m = 4{,}29$); Place ranked by quality's assurance issues ($m = 4{,}05$).

On the other hand, competitive potential's instruments which obtained the lowest mean as result of managers'assessment of their companies, are: Relative level of expenditures on research and development ($m = 1{,}85$); Quality of staff involved in R & D ($m = 1{,}92$); Possibilities for financing the development from external means ($m = 2{,}06$); Relative level of marketing expenditures ($m = 2{,}13$).

Firm's reputation, Knowledge of competitors, Recognition of own company and its products on the market and The place ranked by quality's assurance issues are the instruments which had the highest mean in managers'assessement of their companies. Also, these instruments have achieved high mean in the assessment of their importance. In contrast there are the measures related to research and development, financing possibilities from external means and relative level of marketing expenditures, which at the same time are ranked with the least importance.

Also we note that for most competitive potential's instruments the mean of the assessments of own companies by their managers is between 3.00 and 4.00, which corresponds to a medium and relatively high level.

In another order of ideas, the level at which, according to the manager, its own firm applies competitive potential's instruments differs a lot from one society to another for

most instruments, which results from the high values of mean square deviation. Determinants which registered the most "dispersed" values are: Access to key resources ($\sigma = 2{,}11$, $v = 0{,}75$); Quality of staff involved in marketing ($\sigma = 2{,}06$, $v = 0{,}80$); Quality of production equipments ($\sigma = 1{,}98$, $v = 0{,}61$); The quality's level of management system ($\sigma = 1{,}97$, $v = 0{,}54$).

Only for 3 instruments were obtained values quite "close" in the assessment of the level at which the company applies them, so that the condition for mean's representativeness is checked, namely: Firm's reputation (image, good recognition) ($\sigma = 1{,}17$, $v = 0{,}26$); Knowledge of competitors ($\sigma = 1{,}32$, $v = 0{,}31$); Recognition of the firm and its products on the market ($\sigma = 1{,}33, v = 0{,}31$).

The fact that for the other 20 instruments of the competitive potential there are big differences in managers'assessment of their own companies is justified by sample's heterogeneity, firms operating under very different conditions in many aspects (field of activity, type of company/industry, number of employees, turnover).

COMPETITIVENESS STRATEGY

Competitiveness strategy (competition) is characterized by the following instruments: 1. Price; 2. Quality; 3. Technological advance; 4. Complexity of the offer; 5. Packaging; 6. Timeliness of deliveries; 7. Terms of payment; 8. Advertising and sales'promotion; 9. Frequency of launching new products; 10. Distribution network adapted to client; 11. Range of services; 12. Quality of services; 13. Price of sevices; 14. Terms of warranty; 15. Brand of product.

The same as for the competitive potential, managers are asked to choose from these items those which represent in their opinion, instruments of competition and to rank them from 0 to 6 points, depending on their importance for company and on the level at which the company applies them. The significance of scale's values used for the importance of factors for the company is the same, namely: 0 - no importance; 1 - very low importance; 2 - low importance; 3 - average importance; 4 - high importance; 5 - very high importance; 6 - enormous importance. For the scale's values expressing the factors'level where stands the firm, we have the same meanings as for the competitive potential: 0 - firm has the lowest level; 1 - the company has low level; 2 - the company has a relatively low level; 3 - firm

has an average level; 4 - the company has a relatively high level; 5 - the company has a high level; 6 - the company has the highest level.

Once we have centralized the results obtained, there were calculated arithmetic mean (m), mean square deviation (σ) and coefficient of variation (v) for each instrument, both for importance and for the level at which the company applies it, using the formulas presented above for the competitive potential.

From the assessment's results of the importance of competition's instruments (competitiveness strategy), firstly we observe that from 15 competitive instruments, 2 have the mean lower than 3.00, 7 have the mean between 3.00 and 4.00, and 6 have the mean higher than 4.00.

The most important instruments of competitiveness strategy, according to the managers interviewed are: Quality ($m = 4{,}95$); Quality of services ($m = 4{,}55$); Timeliness of deliveries ($m = 4{,}22$); Complexity of supply ($m = 4{,}15$).

Taking into account the financial crisis which is affecting also our country, we would have expected than in above top rankings to appear also the instruments Price and Price of services.

Competitive instruments which obtained the lowest mean in importance's evaluation are: Frequency of launching of new products ($m = 2{,}82$); Packaging ($m = 2{,}93$); Distribution network adapted to client ($m = 3{,}44$); Brand of product ($m = 3{,}56$).

In another order of ideas, we note that the views of managers concerning the importance of instruments of competitiveness strategy differ a lot among themselves, which can be proved by the high values of mean square deviation. The most pronounced divergence of these views is observed for the following factors: Brand of product ($\sigma = 2{,}35$, $v = 0{,}66$); Distribution network adapted to client ($\sigma = 2{,}31$, $v = 0{,}67$); Packaging ($\sigma = 2{,}14$, $v = 0{,}73$); Timeliness of deliveries ($\sigma = 2{,}07$, $v = 0{,}49$).

Only for the instrument Quality ($v = 0{,}38$, $\sigma = 1{,}86$) we can say that the opinons of respondents about the importance for their own company are somehow "close".

We can also note that the instruments for which the coefficient of variation has the highest values, are at the same time, in a little different order, those which are ranked with the lowest importance.

From the companies'assessment by their managers, in terms of competitive instruments we find out that the average level to which firms apply competitive

instruments does not differ much from one instrument to another. Thus, from 15 instruments, only one has the mean higher than 4.00 and only 3 have the mean lower than 3.00, indicating that 11 have the level between medium and relatively high.

We can also notice that the hierarchies of competitiveness strategy's factors by mean for both their importance and for the level at which the company applies them are not much different. Also, it appears that the average level corresponding to the importance is higher than the average level corresponding firm's assessment, for each instrument with values between 0.16 and 1.00.

Competitive instruments with the highest mean for the level at which the company applies them are: Quality ($m = 4{,}20$); Quality of services ($m = 3{,}95$); Timeliness of deliveries ($m = 3{,}94$); Services'price ($m = 3{,}79$).

At the opposite pole, there are ranked the next competitive instruments: Frequency of launching new products ($m = 2{,}47$); Packaging ($m = 2{,}71$); Distribution network adapted to client ($m = 2{,}81$); Brand of product ($m = 3{,}06$).

Quality, Services'quality and Deliveries'timeliness represent the factors of competitiveness strategy which have obtained the highest mean both in firms'assessment by own managers and in assessment of their importance. On the other hand, Frequency of launching new products, Packaging, Distribution network adapted to client and Product's brand are the measures with the lowest mean for the level at which the company applies them, but also the instruments ranked with the least importance.

Also we can say that the degree of scores'scattering ranked by managers for own companies is high for all competitive instruments, which results from the high values of mean square deviation (and of coefficient of variation). The instruments of competitiveness strategy for which are obtained the highest variations: Brand of product ($\sigma = 2{,}11$, $v = 0{,}69$); Distribution network adapted to client ($\sigma = 2{,}05$, $v = 0{,}73$); Terms of warranty ($\sigma = 1{,}98$, $v = 0{,}58$); Timeliness of deliveries ($\sigma = 1{,}96$, $v = 0{,}50$).

The degree of dispersion of average scores obtained from managers'assessment of their companies is high for all competitive instruments, as the firms from the sample differ a lot in many ways, as I said earlier.

CONCLUSION

It was intended to be representative the sample of small and medium-sized enterprises in what concerns the following aspects: type of company, field of activity/industry, number of employees and turnover. This means that was covered the whole scale of quantitative variables (number of employees and turnover) and of all variants for qualitative variables (type of company and the field of activity).

To organize the survey, was drawn up a list of most known small and medium enterprises in Valcea county. In this list, companies were placed into 42 groups according to the following criteria: type of company, field of activity/industry, number of employees and turnover. There was picked up randomly a company from each group by lottery technique (the draw). So it is basically about a typical survey (stratified). To avoid non-responses or partial responses, in each group were eliminated companies whose managers are not cooperative. Therefore, for the selection of the sample has occurred another factor – managers'goodwill. This aspect indicates that the survey (and hence the sample) is, in fact, partially random. However, approximating this survey with the simple random sampling, in order to use the formulas described in 2.1 " Statistic representativeness of the sample " I made a pretty small error so that representativeness of the sample is maintained, but with a little lower probability.

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