THE MODEL OF THE INTEGRATED COMPETITIVE STRATEGY OF AN ENTERPRISE UNDER THE CONDITIONS OF OLIGOPOLIC MARKET

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Abstract. The article presents the original and scientifically brand new model of the integrated competitive strategy of an enterprise under the conditions of oligopolic market, followed by the case of empirical application. The integrated competitive strategy of an oligopolic enterprise is considered to be the concerted set of partial (detailed) competitive strategies (implemented simultaneously or in sequence) targeting the certain elements of internal and external environment of an enterprise, determining its strategic position and influencing performance. The complex evaluation of estimated impact of the partial competitive strategies on the performance criteria is implemented (multicriteria evaluation methods are applied) in order to indicate the detailed strategies, having the highest potential influence on the performance (to be selected to form the integrated competitive strategy), and to determine their scale (weights in the structure of the integrated strategy). The results of empirical application of the model are proposed to be employed to set up long-term goals and choose the main directions of business strategy of an enterprise, to distribute financial, human and other resources for strategic actions to be designed and implemented.

Keywords: competitive strategy, oligopolic market, multicriteria evaluation.

1. Introduction

Business strategy is a response to rapidly changing, hardly forecasted environment of an enterprise; moreover, it is considered to be a proper tool to affect the environment in a favourable manner in order to achieve the performance meeting the expectations of business owners. Theoretical sources of strategic management distinguish between two main levels of business strategy: corporate and competitive. The former is related to large, diversified companies and includes the strategic actions of operating a portfolio of business units (entering a new market, withdrawing from a market, distributing resources among business units); the latter encompasses the strategic actions of a business unit or of a non-diversified enterprise to capture the strategic position, achieve and maintain long-term competitive advantage seeking for favourable financial performance in the certain market or industry.

Competitive strategy is aimed at achieving long-term competitive advantage due to superior, compared to competitors, strategic position in the market (Porter 1979, 1998a, 1998b) or unique, valuable, non-mobile resources and capabilities (Prahalad, Hamel 1990; Peteraf 1993; Grant 1991; Barney 1991; Teece *et al.* 1997). Modern theoretical models of analyzing enterprise's competitive potential and forming business strategy, coupled by empiric research of that kind, are dominated by the balanced view of enterprise's environment affecting business strategy (Ginevičius, Podvezko 2004; Raudeliūnienė 2007; Bivainis, Staškevičius 2004;

Korsakienė 2004; David 2007); although, some of them rely on resource advantages or market positioning only (Časas 2000; Sekliuckienė 2006).

The scholars of strategic management propose a wide range of variously classified business strategies, with their application depending on the goals and strategic position of an enterprise: Porter's cost leadership, differentiation and focus generic strategies, Ansoff's growth strategies, the strategies of vertical integration and diversification, offensive and defensive strategies, strategies implemented during specific stages of industry evolution (growth, maturity, decline), strategies depending on enterprise's relative position in the market (leader, challenger, follower, nicher), etc (Ansoff 1984; Porter 1998a, 1998b; Thompson *et al.* 2005; David 2007; Kotler, Keller 2006; Ginevičius 1998; Raudeliūnienė 2007).

The strategies mentioned above are not related to the specific market or industry structure. The choice of oligopoly as the market structure under research is based on its common occurrence and considerable relative scale in Lithuanian economy (Ginevičius, Krivka 2009), complicated and ambiguous strategic conduct of oligopolic enterprises, coupled by potential inefficiency of oligopolic market structure itself. Strategic decisions of oligopolic enterprises are often related to the oligopoly models developed in game theory: cartels and other agreements on coordination of actions, the first and the second mover advantage, competition of prices or quantities produced, entrance deterrence (Von Neumann, Morgenstern 1953; Friedman 1969, 1971; Ginevičius, Krivka 2008).

The *problem* raised in the article is developing the complex model of enterprise's competitive strategy under the conditions of oligopolic market, based on theoretical concepts of strategic management and modern methods of quantitative evaluation, affording ground for forming the competitive strategy that achieves goals and expected performance of an enterprise. The *aim of the research* is to design and apply in practice the original model of forming the integrated competitive strategy of an oligopolic enterprise, enabling to assess the strategic alternatives to be implemented and form the competitive strategy meeting the expectations of business owners.

2. The model of the integrated competitive strategy

The model of the integrated competitive strategy is designed in three steps: forming the set of partial competitive strategies (the elements of the integrated strategy), selecting the performance criteria of an enterprise, and setting-up the mathematical tools for evaluation.

2.1. The partial competitive strategies

The integrated competitive strategy of an oligopolic enterprise is considered to be a concerted set of partial (detailed) competitive strategies, targeting the certain elements of internal and external environment of an enterprise, determining its strategic position vis-à-vis competitors. The analysis of strategic conduct in the context of the coordinated set of partial strategies, on one hand, reflects the conditions of oligopolic market, where enterprise's reaction to changing environment involves a wide range of factors, having considerable impact on its strategic position and performance, with no simple strategy able to affect all the relevant elements of environment; on the other hand, a simplified and forthright strategy would soon be identified by competitors, and their response would diminish the results of strategy application. Eighteen partial competitive strategies are proposed to be included in the model:

1. Market expansion strategies (bringing new customers to join the market, widening the range of purposes and occasions for consumption).

2. Entrance deterrence strategies.

3. Strategies targeting market segments (creating new market segments, seeking for leadership in the specific segment).

4. Marketing and promotion strategies (creating and maintaining brand names, advertising and other promotion measures, design and packing of the product).

5. Product development strategies (modification and improvement of goods and services, designing products batches).

6. Strategies aimed at creating the contingent of permanent customers (stimulating consumer loyalty, increasing switching costs, improving after-sale service).

7. Strategies targeting suppliers (diversification of supply, forming and maintaining long-term relations with reliable suppliers, backward vertical integration or diversification).

8. Strategies targeting distribution channels (diversification of distribution, forming and maintaining long-term relations with reliable distributions channels, forward vertical integration or diversification).

9. Strategies targeting complements of the product (cooperation with producers of complements, diversification into complements' markets or industries).

10. Strategies of developing and maintaining human and managerial resources.

11. Strategies of developing and maintaining technological resources.

12. Strategies of developing and maintaining information systems.

13. Strategies aimed at gaining and maintaining a good name and reputation of the enterprise.

14. Offensive strategies (price war and other forms of savage competition)

15. Defensive strategies (defending market share, offence deterrence)

16. Response strategies.

17. Collaboration and cooperation strategies.

18. Follower strategies (imitation of competitors' goods and services, repeating the actions of successful competitors, following competitors' pricing).

The partial competitive strategies comprise the unique integrated competitive strategy of an oligopolic enterprise with its exclusiveness (and barriers protecting from imitation) based on two dimensions: the set of the partial strategies implemented, and the scale of each partial strategy (their relative weights in the structure of the set). The partial competitive strategies are selected and their scale is determined with regards to their expected contribution to enterprise financial performance.

2.2. The performance criteria

Enterprise performance in the model is defined by the summarised financial indicator, comprised of the detailed performance indicators, directly affected by the partial strategies. To select the performance criteria, traditional profit-loss analysis is

assumed (Juozaitienė 2007; Gronskas 2005), while the integrated indicator is decomposed into the detailed indicators, characterising enterprise's residual demand, its revenues from one unit of sales and costs to one litas of sales:

1. The number of newly attracted customers indicates the result of enterprise's competitive activities attracting new consumers that join the market, or taking over competitors' clients.

2. The number of customers lost shows enterprise's abilities to stimulate customer loyalty and repeated consumption, to defend from competitors' actions aimed at taking over own clients.

3. Intensity of consumption indicates how often customers purchase and consume enterprise's goods or services.

4. Material value of goods or services characterises the utility gained from material features of goods or services consumed.

5. Consumer-realised non-material value of goods or services is considered to be the additional customer satisfaction from goods or services, for which he is willing to pay more than assumed material value: the prestige of a brand name or producer, correspondence to fashion trends or individual preferences, etc.

6. Flexible pricing and price discrimination indicate enterprise's abilities to set the prices of goods or services freely (independent from other entities involved: competitors, distribution channels, government) and flexibly; also the capabilities to differentiate goods or services according to value and price dimensions with regards to customer needs and paying ability.

7. Costs of sales to one litas of sales indicate the costs of producing or purchasing (to resell) goods or services and depend on enterprise's internal resources and capabilities, accompanied by its relations with suppliers.

8. Distribution costs to one litas of sales depend on enterprise's resources and capabilities in case it sells goods or services itself, or on its relations with distribution channels.

9. General and administration costs to one litas of sales reflect the management efficiency, enterprise's size and the effect of scale economy, the capabilities of controlling fixed costs.

The first three detailed indicators determine enterprise's sales in units of goods or the number of its clients, the indicators 4 to 6 directly influence the prices of goods or services set – the subsystem of the indicators 1 to 6 determines enterprise's revenues from selling goods or services. The rest of the indicators are associated with enterprise's costs of producing and selling goods (providing services) – with their inclusion in the model, the summarised (integrated) enterprise performance criterion is considered to be the ultimate financial result, i.e. profit or loss.

2.3. The tools for assessing the partial competitive strategies

The purpose of the assessment is, by applying appropriate quantitative methods, to determine the set of favourable detailed competitive strategies, comprising enterprise's integrated competitive strategy, and to estimate the scale of the partial strategies chosen. The corresponding mathematical problem involves the evaluation of the partial competitive strategies with regard to their influence on the detailed performance indicators – to solve a problem of that kind, multicriteria evaluation methods, developed throughout the recent years and widely applied in construction (Zavadskas et al. 1998, 2001, 2008; Ginevičius et al. 2008a), economics and management (Ginevičius et al. 2005, 2008b; Ginevičius, Podvezko 2004), seem to be the appropriate tool.

The alternatives to be assessed are the partial competitive strategies, selected to be implemented by the enterprise ($j = 1,...,n$) – each of them is assessed with regard to the impact on the detailed performance criteria ($i = 1,...,m$). The expected influence of a partial competitive strategy on each detailed performance indicator is measured by points (r_{ij} ranging from –3 to 3), depending on the direction and strength of the effect: 1/–1 positive and negative weak impact respectively, 2/–2 – medium-strength impact, 3/–3 – strong impact, 0 – neutral impact.

The coefficients of potential influence of enterprise's internal and external environment on the application of each partial strategy are estimated as follows: 2 – environment is favourable for implementing the strategy, 1 – environment is neutral, 0.5 – environment is unfavourable. The positive values (from 1 to 3) of the partial strategies' impact on the performance criteria are multiplied by the coefficients above, while the negative values are divided: it is assumed that favourable environment strengthens the positive effect of the implemented strategy and weakens the negative effect, and vice-versa.

The experience of the recent research (Ginevičius et al. 2008a, 2008b) suggests that the phenomenon under analysis to be assessed by applying several multicriteria methods seeking for higher reliability of results; moreover, in order to minimize the subjectivity of the specific method, the average ranks are accepted to be the ultimate

result. To successfully combine several multicriteria evaluation methods, it is important to form a "bunch" of correlating methods (Ginevičius, Podvezko 2008). SAW, TOPSIS and VIKOR methods are selected for the assessment of the partial competitive strategies, refusing three other widely applied multicriteria techniques: Sum of Ranks and Geometric Average are rejected because of ignoring weights of criteria (that would distort the results of evaluation); COPRAS seems to be inappropriate because of the evaluation scale of the partial strategies' impact, which assumes all the criteria to be maximizing.

SAW method calculates the sum of normalized weighted values ($\widetilde{r}_{ij}$) of all criteria for each *j*-th object (alternative) (Ginevičius *et al.* 2005, 2008a, 2008b; Ginevičius, Podvezko 2008):

$$S_j = \sum_{i=1}^{m} \omega_i \widetilde{r}_{ij} . \tag{1}$$

TOPSIS method indicates the best and the worst solutions with regard to each criteria (Opricovic, Tzeng 2004; Ginevičius *et al.* 2008a, 2008b; Ginevičius, Podvezko 2008):

$$V^* = \left\{V_1^*, V_2^*, ..., V_m^*\right\} =$$
$$= \left\{\left(\max_j \omega_i \widetilde{r}_{ij} / i \in I_1\right), \left(\min_j \omega_i \widetilde{r}_{ij} / i \in I_2\right)\right\}, \tag{2}$$

$$V^- = \left\{V_1^-, V_2^-, ..., V_m^-\right\} =$$
$$= \left\{\left(\min_j \omega_i \widetilde{r}_{ij} / i \in I_1\right), \left(\max_j \omega_i \widetilde{r}_{ij} / i \in I_2\right)\right\}, \tag{3}$$

where: I_1 is a set of maximizing criteria, I_2 is a set of minimizing criteria. The distance of each alternative to the best and the worst solutions is calculated:

$$D_j^* = \sqrt{\sum_{i=1}^{m} \left(\omega_i \widetilde{r}_{ij} - V_i^*\right)^2} , \tag{4}$$

$$D_j^- = \sqrt{\sum_{i=1}^{m} \left(\omega_i \widetilde{r}_{ij} - V_i^-\right)^2} , \tag{5}$$

followed by the TOPSIS criterion, which maximum value corresponds to the best alternative:

$$C_j^* = \frac{D_j^-}{D_j^* + D_j^-} . \tag{6}$$

VIKOR is based on three evaluation criteria S_j, R_j and Q_j, calculated by the following formulas (Opricovic, Tzeng 2004; Ginevičius *et al.* 2008a, 2008b):

$$S_j = \sum_{i=1}^{m} \omega_i \widetilde{r}_{ij}, \tag{7}$$

$$R_j = \max_j \left(\omega_i \widetilde{r}_{ij}\right), \tag{8}$$

$$Q_j = v \frac{S_j - S^*}{S^- - S^*} + (1-v)\frac{R_j - R^*}{R^- - R^*} , \tag{9}$$

where: $S^* = \min_j S_j$, $S^- = \max_j S_j$, $R^* = \min_j R_j$, $R^- = \max_j R_j$, v is the majority criterion, equalled to 0.5 (Ginevičius *et al.* 2008b). The lowest values of S_j, R_j and Q_j indicate the best alternatives.

3. The case of empirical application

The proposed model is applied to the enterprise operating in an oligopolic market. The questionnaire, submitted to the office of the enterprise, applies for the following data:

1) by the means of direct evaluation (Ginevičius *et al.* 2005, 2008a), to estimate the weights of the detailed performance criteria ω_i;

2) to choose the partial competitive strategies the enterprise is willing to implement (from the list of eighteen strategies assumed in the model);

3) to estimate the impact of the enterprise's internal and external environment on the application of each partial strategy chosen;

4) to estimate the expected influence of each partial competitive strategy chosen on the detailed performance indicators.

The filled questionnaire (Table 1) provides the input data for the multicriteria evaluation of the partial competitive strategies. The evaluation is performed by three selected methods (Table 2). High correlation of the results obtained (Table 3) confirms the compatibility of the methods, while the ultimate ranks are derived from the averages of the multicriteria methods applied.

The results of the multicriteria evaluation enable to rank the partial competitive strategies, chosen by the enterprise, according to the expected impact on its performance. In the current case the integrated competitive strategy could be composed of the following partial strategies, having significant expected influence on the enterprise performance: strategies of developing and maintaining technological resources, market segment strategies, marketing and promotion strategies, strategies targeting suppliers and distribution channels, and response strategies. Assume the enterprise disposes sufficient resources, the integrated competitive strategy could have a wider scope to include market expansion and product development partial strategies, also the strategies of developing and maintaining human resources and information systems; however, in such a case the integrated strategy would be too complicated, probably lacking concentration on the main success issues.

Table 1. Input data for the empirical application of the integrated competitive strategy model

No	Description	Environment impact estimates						The criteria for assessing the partial competitive strategies (description, number, weight)								
		External environment			Internal environment			1	2	3	4	5	6	7	8	9
		favourable	unfavourable	neutral	favourable	unfavourable	neutral	The number of newly attracted customers	The number of customers lost	Intensity of consumption	Material value of goods or services	Consumer-realised non-material value of goods or services	Flexible pricing and price discrimination	Costs of sales to one litas of sales	Distribution costs to one litas of sales	General and administration costs to one litas of sales
								0.08	0.08	0.14	0.09	0.24	0.09	0.18	0.06	0.04
1	Market expansion strategies	x		x			x	2	0	2	1	1	0	1	0	0
2	Entrance deterrence strategies															
3	Strategies targeting market segments	x			x			3	0	2	2	2	2	0	0	0
4	Marketing and promotion strategies	x		x				3	0	2	2	3	1	1	0	0
5	Product development strategies	x		x				1	0	1	1	1	1	0	0	0
6	Strategies aimed at creating the contingent of permanent customers		x			x		2	2	2	0	0	1	0	0	0
7	Strategies targeting suppliers	x			x			1	0	0	0	0	1	2	0	0
8	Strategies targeting distribution channels	x		x				2	0	1	1	1	1	1	1	0
9	Strategies targeting complements of the product															
10	Strategies of developing and maintaining human and managerial resources	x			x			1	0	0	0	0	0	0	1	2
11	Strategies of developing and maintaining technological resources	x			x			2	0	1	1	2	1	1	0	0
12	Strategies of developing and maintaining information systems	x			x			2	0	0	0	0	0	0	2	0
13	Strategies aimed at gaining and maintaining a good name and reputation of the enterprise			x			x	2	0	0	0	1	1	0	0	0
14	Offensive strategies															
15	Defensive strategies			x			x	1	1	1	-1	-1	0	-1	1	0
16	Response strategies	x			x			2	1	1	0	0	0	-1	-1	0
17	Collaboration and cooperation strategies															
18	Follower strategies															

Table 2. The results of the multicriteria evaluation of the partial competitive strategies

The partial competitive strategies	The results of the evaluation (method, estimate values, ranks)						The ultimate results of the evaluation	
	SAW		TOPSIS		VIKOR		Sums of ranks	Ultimate ranks
	S_j	R	C_j	R	Q_j	R		
Market expansion strategies	0.068	8	0.306	6	0.574	5	19	7
Strategies targeting market segments	0.166	1	0.556	2	0.250	2	5	2
Marketing and promotion strategies	0.107	3	0.455	3	0.316	3	9	3
Product development strategies	0.052	10	0.224	8	0.628	6	24	8
Strategies aimed at creating the contingent of permanent customers	0.037	11	0.122	12	0.872	12	35	12
Strategies targeting suppliers	0.084	5	0.420	4	0.723	7	16	4
Strategies targeting distribution channels	0.073	7	0.287	7	0.572	4	18	6
Strategies of developing and maintaining human and managerial resources	0.074	6	0.189	10	0.833	11	27	9
Strategies of developing and maintaining technological resources	0.141	2	0.564	1	0.085	1	4	1
Strategies of developing and maintaining information systems	0.052	9	0.210	9	0.818	10	28	10
Strategies aimed at gaining and maintaining a good name and reputation of the enterprise	0.028	12	0.135	11	0.787	9	32	11
Defensive strategies	0.023	13	0.087	13	1.000	13	39	13
Response strategies	0.095	4	0.309	5	0.749	8	17	5

In order to estimate the scale of the partial competitive strategies (i.e. their weights in the structure of the integrated strategy), S_j values of SAW method are taken into account. Assume the integrated competitive strategy is composed of six partial strategies, having the highest impact on the performance, the normalized values $\widetilde{S}_j$ ($\sum_{j=1}^{6} \widetilde{S}_j = 1$) would indicate the relative scale of the selected detailed strategies, enabling to design the structure of the integrated strategy (Fig. 1). The structure of the integrated competitive strategy, on one hand, reflects the expected contribution of every detailed strategy to the enterprise performance; on the other hand, the shares of the partial competitive strategies are considered to be the quantitative indicators for the purpose of setting up long-term goals and choosing the main directions of business strategy of the enterprise, distributing financial, human and other resources for the strategic actions to be designed and implemented.

4. Conclusions

The article proposes scientifically brand new, complex approach to forming competitive strategy, based on the assumption that an oligopolic enterprise implements the strategic actions of various purposes and directions, treated as composite elements of enterprise's integrated competitive strategy, i.e. partial competitive strategies. The strategy of an oligopolic enterprise is multiple and complex, therefore it should be divided (decomposed) into the partial competitive strategies in order to estimate the impact of certain strategic activities on the performance, to make suggestions for business strategy development and modification.

The expected impact of the partial competitive strategies on the performance indicators is assessed by applying multicriteria evaluation methods, enabling to compare the strategic alternatives intended to be implemented, to select the most efficient partial strategies and estimate their scale (weights in the structure of the integrated strategy).

Table 3. Correlation of the multicriteria evaluation results

	SAW	TOPSIS	VIKOR
SAW	1.000	0.945	-0.857
TOPSIS	0.945	1.000	-0.905
VIKOR	-0.857	-0.905	1.000
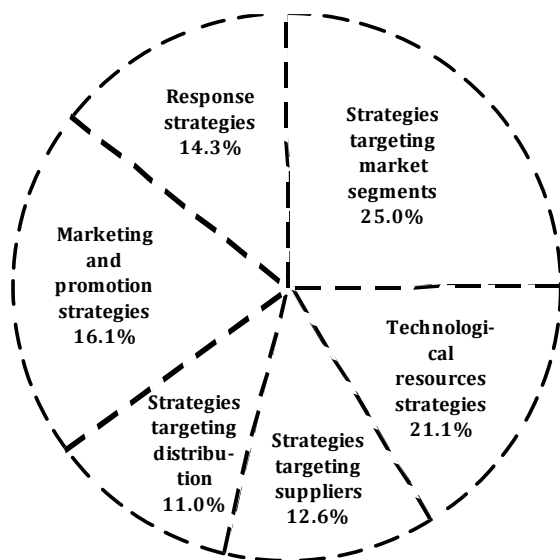
Fig. 1. Proposed structure of the integrated competitive strategy of the enterprise under analysis

The presented model is considered to be the tool for designing competitive strategy of an oligopolic enterprise, allowing complex, quantitative comparison of strategic alternatives with regard to performance indicators. The results of the empirical application of the model could be used for the purpose of choosing the main directions of the enterprise's business strategy, distributing financial, human and other resources for the strategic actions to be designed and implemented.

The further research could be related to wider application of the model and its adjustment according to the results obtained; also, to the analysis of interrelations between the factors of competitive environment and enterprise's strategic conduct by applying the model to enterprises, operating in different oligopolic markets or industries.

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