

The influence of mechanism for strategic management on the formation of the regional aspect of development

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Abstract— The work is devoted to considering implementation mechanism for strategic management tool given as construction of the market competitor chart. In illustration thereof the author examines the enterprises of petrochemical complex in the Republic of Tatarstan manufacturing and marketing their final product, namely, truck tires. Total products sales within the term of 2011-2012 were taken for analysis. Such activities as market share and growth rate reflecting change dynamics were used in statistical formulas for economic design. A market competitor chart based on the design being made was prepared for enterprises engaged in truck tires manufacturing in chemicals sector.

Key words— strategic management, cluster, market share, growth rate, market competitor chart, market relative concentration ratio, cost of goods manufactured.

I. INTRODUCTION

The researches on the strategic management, the competitive strategy, the competitive advantage of business were conducted by different scholars. Strategic management is defined as a system of action programs which form sustainable competitive advantages for a corporation, its division and its business units in a strategic planning period.[11] Competitive strategy must grow out of a sophisticated understanding of the structure of the industry and how it is changing. In any industry, whether it is domestic or international, the nature of competition is embodied in five competitive forces: the treat of new entrains, the treat of substitute products or services, the bargaining power of buyers, and the rivalry among existing competitors. [6] The resources and capabilities of a firm are the central consideration in formulating its strategy: they are primary constants upon which a firm can establish its identity and frame its strategy and they are the primary sources of the firm's profitability. [14] A theory of competition should be required to explain not only why economies premised on competing firms are superior to economies premised on cooperating firms in firms of the quantity, quality, and innovativeness of goods and services, but also the phenomenon of firm diversity in market-based economies. [15] So the essence of formulating competitive strategy is relating a company to its environment. Forces outside the industry are significant primarily in a relative sense; since outside forces usually affect all firms in the industry, the key is found in the differing abilities of firms to deal with them. [7] Later this theory of strategic management was used in others researches of scholars. They are obtained a detailed understanding of competitive arena used the principles of M. Porter. This method explodes the supplier/competitor/buyer boxes of the "five forces" model to mirror the total channel from the first link in the supply chain to the final consumer. [2] Some scholars give the definition of the regional economic ares, the industrial enterprises resource potential, the growth points of the economic area of the region. [5]

The information base of the research comprises data by the enterprises official annual reports, regional statistical offices.

II. OBJECTIVES

Resource-based economy advancement peculiar to the Russian Federation governs the trends of ongoing dynamics for key industry enterprises, primarily, for process plants representing one of the most significant sectors of national economy. The industrial complex enterprises possess substantial potential to rationally promote solution of problems in conversion of national economics to innovation-based development via integrated modification.

Industrial complex enterprises operational effect implies re-engineering and enhancement of administrative process within the frames of corporate management concept making possible to take into consideration high dynamic ability of external environment for production sphere economic operators and to create long-term competitive advantage meeting the owners' demands and providing the enterprises viability in strategic outlook.

Believe M. Porter's expert opinion, attraction and profitability of a productive industry depend on its competitive structure defined by the following elements: the threat of new competitors entry, the suppliers' bargaining ability, the buyers' bargain on price, the jeopardy of substitute product and substituent services entry and rivalry between the competitors available. [8]

The industry attractiveness evaluation proposed by P. Drucker is based on the analysis of the following elements: market capacity, market growth rates, competitors' number, competitive intensity, industrial capacity and profitability, industry entry and withdrawal barriers, commodity type, the threat of substitute product entry, technology shifts, the demand for capital investment, integration activities, demand for economies of the scale, product innovation, suppliers' impact, state regulation and buyer's power as well. The first lines in the given instruction are occupied by growth rates and number of rivals evaluation, density of competition estimating. [10]

III. RESEARCH METHODOLOGY

Construction of the market competitor chart for the industry under examination appears to be one of the ways to determine industry power relation and to highlight strategic locations of rival firms.

Construction of the market competitor chart comprises three stages: grouping the market firms depending on their market share and its growth and finally compiling the results in matrix form.

In the capacity of the object under study let us examine the market of tires manufacturing inside the territory of the Russian Federation. The chemical industry comprising the manufacture of tires within the territory of the Russian Federation is represented by the following industrial enterprises:

[1] JSC “Kordiant”, (JSC K),

[2] JSC “NizhnekamskTire”,

[3] LLC “Nokian Tyres”,

[4] JSC “Amtel”,

[5] JSC “Altayski group of tire manufacture enterprises”,

[6] LLC “Micheline, Russian Company of tires manufacture”,

[7] LLC “Nizhnekamsk plant of truck tires” (LLC NPTT),

[8] Private Company (ZAO) “Petroshina”,

[9] LLC “Nizhnekamsk truck tires plant. Total sales revenue of the abovementioned enterprises and the designs being made are shown in Table 1. [1]

To achieve the goals stated by the Strategy of chemicals industry development on the territory of the Russian Federation, action items of state support measures was formed and the following initiatives with highest priority were selected:

[1] creation of chemical industrial parks;

[2] elaboration of regulations for chemical produce application;

[3] national projects assignment;

[4] provision of own component framework;

[5] tax incentives of investments;

[6] amelioration of financial resources afford ability;

[7] support of export marketing activities.

TABLE 1.

TOTAL SALES OF THE ENTERPRISES

Firm number	Sales revenue in 2011 (ps)	Sales revenue in 2012 (ps)	Firm market share in 2011 (%)	Firm market share in 2012 (%)	Market share growth rates (%)
1	10210.0	9045.3	24.26	21.75	89.65
2	9855.6	10306.1	23.42	24.78	105.81
3	9219.9	11245.3	21.91	27.04	123.41
4	8774.9	5222.4	20.85	12.56	60.24
5	1405.3	1338.9	3.34	3.22	96.41
6	1142.0	1386.6	2.71	3.33	122.88
7	969.7	2228.0	2.3	5.36	233
8	322.0	335.0	0.77	0.81	105.19
9	187.9	480.1	0.45	1.15	255.56
Total:	42087.3	41587.7	100	100	

Final calculation of indices is presented in Table 2. [9]

TABLE 2.
FINAL CALCULATION OF INDICES

Firms ranking according to market share	Firms ranking according to market share growth rates
1. Leader in the market — maximal share 27.04 %	1. Leader in the market— maximum growth rate of the market share 255.56 %
2. Market outsider— minimal share 0.81%	2. Market outsider— minimum growth rate of the market share 60.24 %
3. Arithmetic mean of the market share for all firms— 11%	3. Arithmetic mean of the market share growth rate — 132.46 %
4. Weak firms: № 5-9	4. Weak firms: № 1-6, 8
5. Strong firms: № 1- 4	5. Strong firms: № 7, 9
6. Arithmetic mean of the market share for weak firms group — 2.77 %	6. Arithmetic mean of the market share growth rate for weak firms group: 100.51 %
7. Arithmetic mean of the market share for strong firms group— 21.53 %	7. Arithmetic mean of the market share growth rate for strong firms group: 244.28 %.

IV. FINDINGS AND ANALYSIS

Subsequently, the market competitor chart in the sphere of tires manufacture inside the territory of the Russian Federation will be as follows (see Table 3):

Figures from Table 3 show that the firms - leaders in the market of tires manufacture in the chemicals industry within the territory of the Russian Federation occupy weak market positions according to market share growth rate. Among the outsiders of the industry we see enterprises improving their competitive positions – they are numbers 7 and 9. Among the outsiders are also the enterprises under the numbers 5,6,8 with small market share deteriorating their market positions that significantly endangers them. Overall, though, the market leaders left behind their nearest competitors according to the market share level and in the nearest future they would be in no fear. At the same time tough competitive struggle for final product (tires) market is observed inside the leaders’ group since they belong to different vertically-integrated systems. JSC “Nizhnekamsk Tire” is a member of petrochemical complex JSC “Tatneft”, while LLC “Nokian Tyres” is the affiliated undertaking of Finnish company, JSC “Kordiant” is comprised of the following enterprises: JSC “Omsktire”, JSC “Yaroslavsky tyre plant”, JSC “Voltire - Prom”, Private Company (ZAO) “Kordiant-East”, LLC “Tire Trial Center “Vershina”, LLC Technical Research Centre “Intire”. At that, JSC “Sibur Holding” appears to be the creditor of JSC “Amtel”.

TABLE 3.
THE MARKET COMPETITOR CHART FOR
TRUCK TIRES MANUFACTURING IN CHEMICALS
SECTOR INSIDE THE TERRITORY
OF THE RUSSIAN FEDERATION.

Classification by market share growth rate	Leaders 21.53 — 27.04	Strong competitive position 11 — 21.53	Weak competitive position 2.77 - 11	Outsiders 0.81 — 2.77
1. Dynamic improvement of competitive position 244.28 — 255.56				9
2. Improvement of competitive position 132.46 — 244.28			7	
3. Deterioration of competitive position 100.51 — 132.46	2, 3		6	8
4. Dynamic deterioration of competitive position 60.24 — 100.51	1	4	5	

V. CONCLUSIONS.

It must be borne in mind that the search of competitive advantages may have no sense in case the market does not provide opportunities for economic growth, for instance, its monopoly degree is very high. Market capacity and the principles of its distribution among the rivals, the intensity of competitive struggle are, on the one hand, key factors determining force of business attraction and on the other hand, basic parameters defining competitive advantages. Their estimation is necessary for specification of potential for upward movement at the merchandise market under consideration.

To estimate the market monopoly degree that is inversely proportional to the intensity of competitive struggle, the following ratios shown in the Table below are used:

TABLE 4.
CONOMIC AGGREGATES determining the
principles of market segments distribution between the rivals.

Indicator	Content of the indicator	Utilization disadvantages
CR4	Quadruple concentration ratio characterizing mutual share of four firms with maximum commodity volume at the market under analysis.	The ratio that can implicitly increase the market monopoly degree since it takes no account of product import and the effect of high concentration among the purchasers.
CR10	The concentration ratio designating mutual share of ten firms with maximum commodity volume at the market under consideration.	It is hard to use for the commodities and services market formed by vertically integrated undertakings of mining industry and manufacturing sector considering that the number of such undertakings cannot exceed 10.
IL	Lind's index is calculated merely for several largest enterprises making up the nucleus of the segment	takes no account of the situation on market «periphery» what substantially falsifies information of the market as a whole.
IHH	Herfindahl-Hirschman index estimating analyzed market shares equitability for the firms	This index appears to be not eventual outcome so far as further analysis of concentration ratios concerning foodstuff.

Considering the ratio of the largest enterprises in the given market and off take share under their control and provided the factor of the market relative concentration being in excess of 1, the market is reported to be competitive both in the base period (2011) and in the period under review (2012). This goes to show the availability of competitive struggle and high level of marketability for the final product (tires) inside the territory of the Russian Federation. Base values and calculation data are presented in Table 5.

TABLE 5.
BASE VALUES FOR CALCULATING THE FACTOR OF
THE CHEMICALS INDUSTRY MARKET RELATIVE
CONCENTRATION IN TIRES MANUFACTURING
WITHIN THE TERRITORY OF THE RUSSIAN
FEDERATION

Economical indicator title	Economical indicator accounting result
1. The share of the largest enterprises in the market total number (%).	44,44 %
2. The largest enterprises' share in the market total volume of sales in 2011.	90 %
3. The largest enterprises' share in the market total volume of sales in 2012.	86 %
4. The factor of the market relative concentration in 2011.	1.7
5. The factor of the market relative concentration in 2012.	1.78

TABLE 6.
HERFINDAHL-HIRSCHMAN INDEX AS SCREENING
INSTRUMENTS IN COMPETITION
OF THE CHEMICAL INDUSTRY ON THE TERRITORY
OF THE RUSSIAN FEDERATION

Firm number	Sales revenue in 2011 (ps)	Sales revenue in 2012 (ps)	Firm market share in 2011	Firm market share in 2012	Firm market share in square	Firm market share in squared
1	10210.0	9045.3	0.2426	0.2175	0,0589	0,0473
2	9855.6	10306.1	0.2342	0.2478	0,0548	0,0614
3	9219.9	11245.3	0.2191	0.2704	0,0480	0,0731
4	8774.9	5222.4	0.2085	0.1256	0,0435	0,0158
5	1405.3	1338.9	0.3340	0.0322	0,0011	0,0010
6	1142.0	1386.6	0.0271	0.0333	0,0007	0,0011
7	969.7	2228.0	0.0230	0.0536	0,0005	0,0029
8	322.0	335.0	0.0077	0,01	0,0001	0,0001
9	187.9	480.1	0.00450	0.0115	0,00001	0,0001
Tot al:	42087.3	41587.7	1	1	0,2076	0,2028

Some scholars put the HHI in three different subclasses, unconcentrated ($HHI < 1000$), moderately concentrated ($1000 < HHI < 1800$ and change in $HHI > 100$), and highly concentrated ($HHI > 1800$ and change in $HHI > 50$). Others seem to distinguish only between two classes, namely a class of unproblematic merges, which encompass all merges with $HHI < 1000$, merges with $1000 < HHI < 2000$ with change in $HHI < 250$, and merges with $HHI > 2000$ and change in $HHI < 150$, and another class of other merges, which require a deeper competitive assessment. [17]

The above mentioned enterprises possessing high competitive capacity that makes possible to be proved to form the industry nucleus. Thus, for instance, JSC "Nizhnekamsk Tire" being a member of petrochemical complex JSC "Tatneft" holds inner raw material suppliers – JSC "Nizhnekamskneftechim" and JSC "Nizhnekamsktechuglerod".

TABLE 7.
SHOWS THAT THE ABOVE ENTERPRISE HAS THE
OPPORTUNITY TO USE INNER TRANSFER PRICES
THAT IN ITS TURN ALLOWS TO DIMINISH THE COST
OF ONE PRODUCTION UNIT (SEE TABLE 5).

Indicators	2011	2012
Volume of products sold (thous.,ps)	9856	10306,1
Cost of products sold (thous.,rubles)	21118873	16346418
Cost of one production unit (rubles)	2142,74	1586,09

Practice of the given ratios using makes possible to get merely scaled-up standards designed for mutual managerial decisions at the level of the whole market of comparable product. But to elaborate specific strategies of behavior for the market subjects these ratios are not sufficient. The statement that competition is possible only among sellers while purchasers serve merely in the function of external effects, is taken as a basis of the existing methods.

The author's follow-up study will concern determining the dependence of market competition intensity on structural configuration of the market.

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