STRATEGIC APPROACH FOR EVALUATION OF THE ENTERPRISE COMPETITIVENESS

STRATEGICKÝ PŘÍSTUP PRO HODNOCENÍ KONKURENCESCHOPNOSTI PODNIKŮ

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Abstract: *This paper determines the importance to evaluate all the enterprise competitiveness components for competitive advantage. It shows a complex approach to assessing the competitiveness, using the statistical techniques and methods of strategic analysis. Stages of such an evaluation are defined, using a method based on the theory of effective competition; Matrix BCG; Balanced Scorecard (BSC). Offered to include SWOT-analysis to the stages of analysis using BSC.*

Keywords: *enterprise competitiveness; methods of the enterprise competitiveness evaluation; evaluation method based on the theory of effective competition; Matrix BCG; SWOT- analysis; Balanced Scorecard (BSC)*

Abstrakt: *Článek stanovuje, že je důležité vyhodnotit všechny součásti konkurenceschopnosti podniku pro konkurenční výhodu. Ukazuje komplexní přístup k hodnocení konkurenceschopnosti, na základě statistických metod a metod strategické analýzy. Etapy tohoto hodnocení jsou definovány pomocí metody založené na teorii efektivní hospodářkké soutěže; Matrix BCG; Balanced Scorecard (BSC), SWOT analýza.*

Klíčová slova: *konkurenceschopnost podniku; metody hodnocení konkurenceschopnosti podniku; metody hodnocení založené na teorii efektivní hospodářské soutěže; Matrix BCG; SWOT analýza; Balanced Scorecard (BSC)*

JEL Classification: L 21

1 INTRODUCTION

In the current context of rapid development of competition both on the domestic and foreign markets, ensuring the enterprises competitiveness acquires special urgency. Therefore the assessment of the enterprise competitiveness is important and necessary.

To the issue of evaluation and ensuring the enterprise competitiveness in modern economic research was paid enough attention in Ukraine; however, the strategic methods of analysis for assessing competitive advantage are not used a lot. Therefore, the aim of research is to define the possibilities of assessing competitiveness based on using strategic methods of analysis.

2 THEORETICAL ASPECTS OF ENSURING THE ENTERPRISE COMPETITIVENESS

To achieve long-term success, work to ensure enterprise competitiveness should be carried out in all spheres and in all aspects of its activities. Hence, the key components of ensuring enterprise competitiveness are: production, marketing, finance, innovation, management, human resources and organizational culture (December 2006). Let us examine in detail each of the components for determining its role in ensuring the enterprise competitiveness.

To the production component of the enterprise competitiveness belongs range, assortment of the goods and the size of production. The marketing component provides market research and advertising activity. Financial component characterizes the degree of liquidity and enterprise solvency. An innovative component determines the possibility of realization of scientific researches and engineering works (SREW).

However, on our opinion, the basis of all these components is human resources and organizational culture, which determines the quantitative and qualitative composition of the staff, the type of leader, communications and procedures. Along with human resources is placed management component, to which belong: style and management methods, adaptive capabilities of an enterprise (Minchinska, Derevyanko 2013).

In general, the success of an enterprise depends on all components of its activities. However, the underlying factor, on our opinion, is the staff. In particular, the availability of company staff and its efficiency influence on the amount and timeliness of all work, productivity of using technical and

technological base and as a consequence, the effectiveness of the activity in general.

Therefore, the analysis of the main components of enterprise activity allows drawing conclusions about the impossibility of an adequate assessment of the enterprise competitiveness taking into account only financial, industrial and commercial aspects of the activity. On our opinion, production, marketing, financial and innovative components are derivatives from human resources and management, since they will only result in the effective usage of human potential.

3 METHODOLOGICAL APPROACHES TO EVALUATION OF THE ENTERPRISES COMPETITIVENESS

Let us consider the classification methods for assessing competitiveness, which means their division into separate groups according to some criterion (Yatsura, Zamroz 2011). Often such sign is the form of presentation of the results of the evaluation, according to which secrete graphic, matrix, calculated and combined (cash-matrix, cash-graphic) methods.
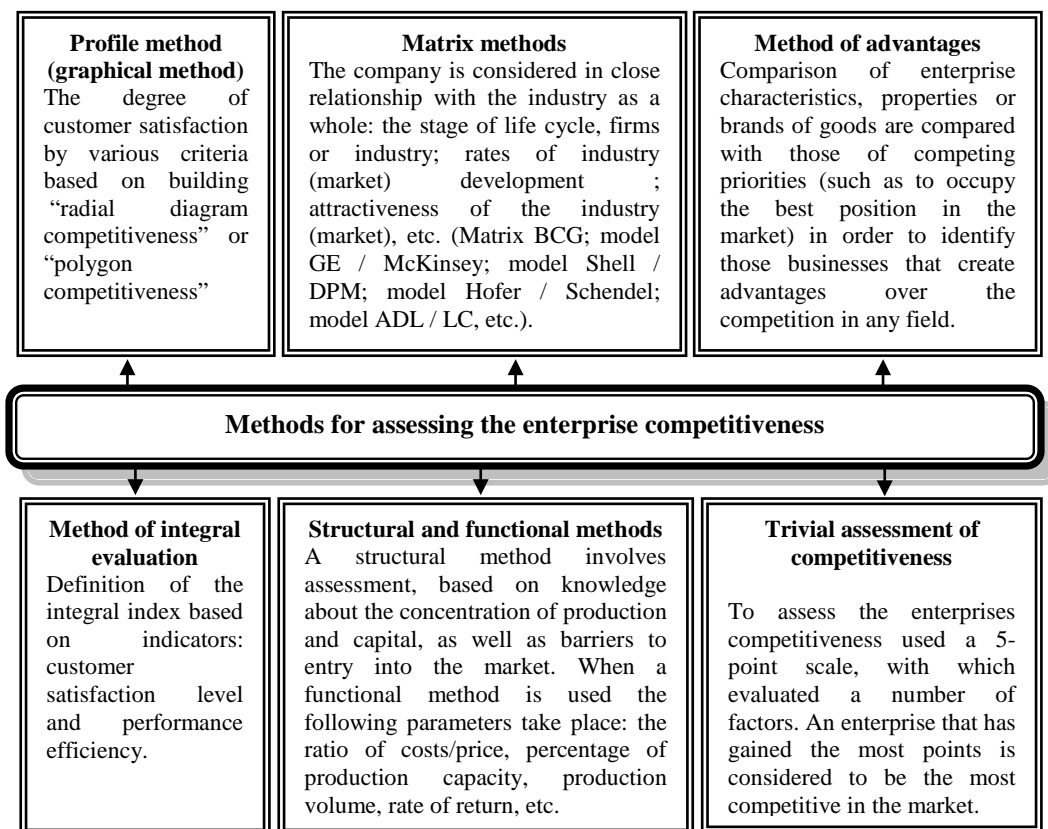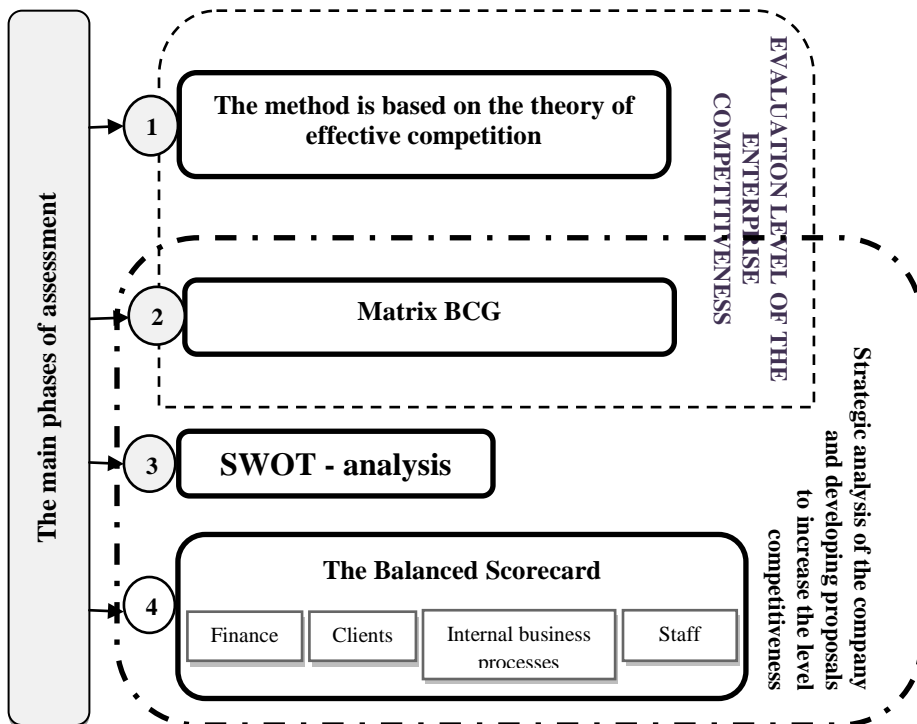
Profile method (graphical method) The degree of customer satisfaction by various criteria based on building "radial diagram competitiveness" or "polygon competitiveness"	**Matrix methods** The company is considered in close relationship with the industry as a whole: the stage of life cycle, firms or industry; rates of industry (market) development ; attractiveness of the industry (market), etc. (Matrix BCG; model GE / McKinsey; model Shell / DPM; model Hofer / Schendel; model ADL / LC, etc.).	**Method of advantages** Comparison of enterprise characteristics, properties or brands of goods are compared with those of competing priorities (such as to occupy the best position in the market) in order to identify those businesses that create advantages over the competition in any field.

Methods for assessing the enterprise competitiveness

Method of integral evaluation Definition of the integral index based on indicators: customer satisfaction level and performance efficiency.	**Structural and functional methods** A structural method involves assessment, based on knowledge about the concentration of production and capital, as well as barriers to entry into the market. When a functional method is used the following parameters take place: the ratio of costs/price, percentage of production capacity, production volume, rate of return, etc.	**Trivial assessment of competitiveness** To assess the enterprises competitiveness used a 5-point scale, with which evaluated a number of factors. An enterprise that has gained the most points is considered to be the most competitive in the market.

Figure 1: Classification of methods for evaluation of the enterprise competitiveness

For the analysis of the evaluation methods (fig. 1), we've selected the matrix "Boston Consulting Group, which provides long-term analysis and strategic vision in competitiveness and ensuring competitive advantage. Also considered is the appropriate use of such methods of strategic analysis, as SWOT analysis and the Balanced Scorecard. Among the estimation methods of competitiveness that are not related with the strategic analysis, in research was used method based on the theory of effective competition, which involves the calculation of a competitiveness coefficient using expert estimates. Assessment of enterprise competitiveness offers to conduct the following phases (fig. 2).

Figure 2: Comprehensive approach for evaluation of the enterprise competitiveness

Characteristics of these estimation methods of competitiveness are shown below (Tab. 1).

Table 1: Methods of evaluation of the enterprise competitiveness, which were used during the analysis

Method names	Characteristic	Phases of assessment
The method based on the theory of effective competition	The most competitive are those enterprises, where all departments and services are organized the best. The efficiency of the activity of each structural unit affects resource completeness. Evaluation of the effectiveness of each of the units involves the assessment of the effectiveness of resources. The basis of the method is the evaluation of a group indicators (criteria of competitiveness): -the financial health of the enterprise; -production activities; -organization promotion and marketing of the products.	1. Calculation of individual indicators of the enterprise competitiveness and interpreting them into relative values (points). For interpreting indicators into relative values a 15-point scale is used. In this case, the 5-th points means that the indicator has a lower level than basic; in 10-12 points- the same level as basic; in the 15-th-higher than basic. 2. Calculation criteria of the enterprise competitiveness according to the selected indicators. 3. Calculation coefficient of enterprise competitiveness.
SWOT-analysis	Analysis of external and internal environment of the organization. Analysis of the subject strengths, weaknesses of the internal environment, opportunities and threats of the internal environment of the organization.	1. Identify the level of factors impact, which influence on the enterprise; 2. Determining the probability of use of opportunities and their influence (derivation of the matrix opportunities); 3. Determining the probability of threats and their influence (derivation of the matrix of threats); 4. Evaluation of the internal environment factors (method for determining the profile of the internal environment); 5. Defining links between the most influential weaks and strengths, threats and opportunities (matrix of SWOT-analysis).
Matrix BCG ("Boston Consulting Group")	Allows to categorize each Strategic Business Unit (SBU) by market segment against main competitors and the pace of annual growth in the industry; determine which SBU occupies a leading position on the market; a previous distribution of financial resources between the SBU.	1. Collection and analysis of data (attractiveness industry; competitive position of the enterprise; the opportunities and threats for the enterprise on external environment; the resources and staff qualification); 2. Composing and analysis of portfolio business matrixes for insight into current and future enterprise portfolio; 3. Determine the desired business portfolio according to options that would be the best to achieve the goals.
Balanced Scorecard (BSC)	Provides integration of financial and non-financial indicators with regard to causal relationships between them; detailed monitoring of the activity of the company in strategic focus; efficiency and effectiveness of management decisions; control of the most important financial and non-financial indicators of activity (business effectiveness in general, individual business processes, departments and personnel resources). Represents not only the system of measuring the efficiency of enterprise activity in strategic focus, but also full-featured management system.	1. Determining strategic goals 2. SWOT analysis and determining factors of success 3. Defining indicators and their target values 4.Determining methods of calculation indicators 5. Causal chain of strategic goals 6. Cascading strategic goals 7. Strategic activity plan 8. Supports, renewal and development of BSC

Source: composed by the author according to the data ЯЦУРА, В.В., ЗАМРОЗ, М.В. 2011. Аналіз методів оцінки конкурентоспроможності підприємств. Вісник Волинського інституту економіки та менеджменту, 2011, № 2, С. 45-53; ЄФРЕМОВ, В.С. 1998. Стратегия бизнеса. Концепции и методы планирования. Учеб. пособие. М.: Финпресс,

1998. 192 c. ISBN 5-8001-0014-4 ZANDER, <u>R. S.</u> 2005. SWOT Analysis I: Looking Inside for Strengths and Weaknesses, chapter 2, excerpted from: Strategy: Create and Implement the Best Strategy for Your Business. Boston, Massachussetts: Harvard Business Press, 2005. 17 p.; ZANDER, <u>R. S.</u> 2005. SWOT Analysis II: Looking Inside for Strengths and Weaknesses, chapter 2, excerpted from: Strategy: Create and Implement the Best Strategy for Your Business. Boston, Massachussetts: Harvard Business Press, 2005. 19 p.; THOMPSON , A.A., STRICKLAND A.J. 1995. Crafting & implementing strategy : Text and readings . Chicago : Richard D. Irwin, Inc., 1995. 539 p. ISBN: 0256150273; KAPLAN, R.S., NORTON, D.P. 1996. The Balanced Scorecard: Translating Strategy into Action. Boston: Harvard Business School Press, MA, 1996. 304 p. ISBN-13: 978-0875846514.

To assess the enterprise competitiveness taking into account all components we chose the Balanced Scorecard (BSC), but there are other methods of assessment (Tab. 2).

Table 2: Comparative characteristics of alternative methods of selection enterprise strategies that are based on more efficient use of staff

№ п/п	Name	Group factors of choice strategy	Goals	Strategy
1.	The Balanced Scorecard (BSC) Authors: Norton D., Kaplan, R. (1990).	1 – finance – clients; 2 – training and career growth; 3 – internal business processes.	Intended for the evaluation of innovation, training and education of staff, development of products and services, competence of employees and corporate culture.	Innovation in human resources strategy
2.	Method of management and motivation of staff ("Management by Objectives") Author: Peter Drucker (1954)	SMART: 1 – S - Specific 2 – M – Measurable; 3 – A – Achievable (Realistic); 4 – R - Results-focused; 5 – T- Time-bound.	Defining at the beginning of the period (month, quarter) for organizations, divisions, departments and employees clear goals will influence on the premium part of the wages of employees .	The strategy of improving labour productivity
3.	Method S5 Author: Kaoru Ishikawa (1960)	1 – sort-branch 2 – rational location 3 – cleaning 4 – S-standardization of 5- S-improvement	Focuses on ordinary workers and changing their attitude to their activity.	Staff development strategy
4.	TPS (Total Performance Scorecard)	1 - The Balanced Scorecard 2 - total quality 3 - performance management 4 - management competencies	Refers to maximum personal development of all employees and the optimal use of their ability to achieve the highest rates.	Innovative human resources strategy

Source: composed by the author according to the data АДУШКІН, А.Е. 2009. Эволюция и современное развитие концепции сбалансированной системы показателей. Аудит и финансовый анализ, 2009, № 4, С. 380-383.

However, they focused on the staff without consideration of its impact on the efficiency of enterprise activity as whole (method S5), limited the use of the current period of functioning of the organization (SMART) or take into account to a greater extent personality as workers can be identified only when conducting the detailed internal analysis (TRS).

4 EVALUATION OF THE ENTERPRISE COMPETITIVENESS IN COMPARISON WITH THE MAIN COMPETITORS ON THE MARKET

4.1 Evaluation of the competitiveness of enterprises using method based on the theory of effective competition

Pro For evaluation the level of competitiveness first, we used a method based on the theory of effective competition (applies to complex methods of estimation) (Klimenko, 2006). This evaluation covers all the most important areas of economic activity of the enterprise, eliminates duplication of individual indicators, allows quickly and objectively determination the position of the enterprise among the major competitors. Comparison of indicators in different time intervals gives the possibility to use this method as a variant of operational control. The disadvantage of the method is the complexity of the calculations and the difficulty of obtaining the necessary information.

Calculation method of competitiveness implies evaluation of three or four groups of competitiveness indicators or criteria with subsequent integral index calculation. First, we distributed competitiveness indicators and criteria of the company Agroholding "Kernel" and its main competitors – Agropromholding "Astarta-Kyiv" and "Bunge" on the market of sugar and oil-fat production (tab. 3).

Table 3: Indicators and criteria for the calculation of the enterprise competitiveness

Indicators of competitiveness	The place of the indicator in the evaluation	The way of calculating indicator
1. The efficiency of the production activity of the enterprise		
1.1. The production costs per commodity unit, UAH.	Shows the efficiency of production expenses.	Gross cost / Volume of production
1.2. The profitability of the goods	Characterizes the profitability of production of the goods.	Profit from sales / Total cost of production
1.3. The profitability of production	Characterizes the efficiency of enterprise operation.	Net profit / Production costs
2. Financial position of the enterprise		
2.1. Return on equity (ROE)	Measures the efficiency of equity.	Net Profit / Equity
2.2. The solvency ratio	Measure the ability of a company to meet its long term debts.	Equity capital / Total liabilities
2.3. Absolute liquidity ratio	Shows the means that there are sources covering current liabilities.	Cash / Current Liabilities
2.4. Current assets turnover ratio	Indicates how efficiently enterprise is using its current assets to generate revenue.	Sales revenue /Average current assets
3. The effectiveness of sales and promotion of products		
3.1. Profitability of sales	Characterizes the profitability of enterprises on the market.	Profits from sales / Sales

After distribution of indicators and criteria for calculating competitiveness, we have determined the level of influence of each of the individual indicators of competitiveness in production, finance and marketing groups, and defined on the basis of their performance in the group integral by the method of expert estimations (direct placement).

Target group functions competitiveness indicators will be as following:

$$C_{pe} = f(0{,}3K_{cost}; 0{,}35K_{gprof}; 0{,}35K_{pprof}) \rightarrow max \qquad (1)$$
$$C_{fp} = f(0{,}15K_{ROE}; 0{,}28K_{solv\bullet}; 0{,}19K_{abs\,liq}; 0{,}38P_{turn\,ratio}) \rightarrow max \qquad (2)$$
$$C_{esp} = f(1K_{prof\,sales}) \rightarrow max \qquad (3)$$

Taking into account coefficients weights we have following target function integral index of the enterprise competitiveness (Cec):

$$C_{ec} = f(0{,}35C_{pe}; 0{,}35C_{fp}; 0{,}3C_{esp}) \rightarrow max \qquad (4)$$

According to this method we estimate level of the competitiveness of the agricultural enterprises that are leaders in the market of sugar, oil and fat

production: Agroholding "Kernel" Agropromholding "Astarta - Kyiv" and the company "Bunge". The calculations were made on the basis of financial reporting for the years 2007-2012 (Official sites Agropromholding "Astarte - Kyiv", "Kernel" and "Bunge").

The calculation of the group enterprises competitiveness indicators are presented in Tables 4, 5 and 6.

Table 4: Calculation of the competitiveness for Agropromholding "Kernel" using a method based on effective competition in years: 2007-2012

Indicators of competitiveness	The way of calculating indicator	2007	2008	2009	2010	2011	2012
1. The efficiency of the production activity of the enterprise							
The production costs per commodity unit, UAH.	Gross cost / Volume of production	0,76299	0,76090	0,69746	0,69516	0,75804	0,78776
The profitability of the goods, %	Profit from sales / Total cost of production	0,31158	0,31432	0,43379	0,43848	0,31921	0,26946
The profitability of production, %	Net profit / Production costs	0,07309	0,16496	0,18561	0,21428	0,15718	0,17028
2. Financial position of the enterprise							
Return on equity (ROE), %	Net Profit / Equity	0,25116	0,18899	0,37916	0,2513	0,22688	0,2374
The solvency ratio	Equity capital / Total liabilities	0,40991	1,39721	1,04441	1,16349	1,76638	1,40112
Absolute liquidity ratio	Cash / Current Liabilities	0,42736	0,47812	0,66274	0,16894	0,29342	0,19009
Current assets turnover ratio	Sales revenue /Average current assets	0,00402	0,00737	0,00973	0,00537	0,00596	0,00537
3. The effectiveness of sales and promotion of products							
Profitability of sales, %	Profits from sales / Sales	0,23773	0,23916	0,30255	0,30481	0,24197	0,21227

Table 5: Calculation of the competitiveness for Agroholding "Astarta-Kiev" using a method based on effective competition in the years 2007-2012.

Indicators of competitiveness	The way of calculating indicator	2007	2008	2009	2010	2011	2012
1. The efficiency of the production activity of the enterprise							
The production costs per commodity unit, UAH.	Gross cost / Volume of production	0,76204	0,78019	0,64441	0,58505	0,63731	0,70989
The profitability of the goods, %	Profit from sales / Total cost of production	0,36792	0,35992	0,5247	0,71064	0,62474	0,41395
The profitability of production, %	Net profit / Production costs	0,3215	-0,07889	0,35636	0,62377	0,4524	0,50248
2. Financial position of the enterprise							
Return on equity (ROE), %	Net Profit / Equity	0,21699	-0,13182	0,2485	0,38287	0,28529	0,21774
The solvency ratio	Equity capital / Total liabilities	1,34573	0,4963	1,04962	1,45596	1,16476	1,35435
Absolute liquidity ratio	Cash / Current Liabilities	0,02576	0,01268	0,09258	0,0327	0,06075	0,10642
Current assets turnover ratio	Sales revenue /Average current assets	1,00664	1,37047	1,19213	1,15462	0,95288	0,5829
3. The effectiveness of sales and promotion of products							
Profitability of sales, %	Profits from sales / Sales	0,28037	0,28081	0,33812	0,41576	0,39815	0,29386

Source: composed by the author according to the data Official site of "Astarta-Kyiv".
[online]. Available from Internet:
<http://astartakiev.com/en/for_investors/financial-results.htm >

Table. 6: Calculation of the competitiveness for Agropromholding "Bunge" using a method based on effective competition in years 2007-2012.

Indicators of competitiveness	The way of calculating indicator	2007	2008	2009	2010	2011	2012
1. The efficiency of the production activity of the enterprise							
The production costs per commodity unit, UAH.	Gross cost / Volume of production	0,93354	0,92323	0,97128	0,94506	0,95356	0,95549
The profitability of the goods, %	Profit from sales / Total cost of production	0,07119	0,08315	0,02957	0,05813	0,0487	0,04659
The profitability of production, %	Net profit / Production costs	0,00614	-0,01543	0,01152	0,000045	-0,00034	0,00238
2. Financial position of the enterprise							
Return on equity (ROE), %	Net Profit / Equity	0,02731	-0,10073	0,04525	0,00016	-0,00157	0,00866
The solvency ratio	Equity capital / Total liabilities	0,54586	0,58121	0,94909	0,93359	1,07813	0,7223
Absolute liquidity ratio	Cash / Current Liabilities	0,11105	0,12435	0,08909	0,05778	0,1202	0,05955
Current assets turnover ratio	Sales revenue /Average current assets	2,60656	3,99013	3,55818	2,8901	4,47463	2,53957
3. The effectiveness of sales and promotion of products							
Profitability of sales, %	Profits from sales / Sales	0,06646	0,07677	0,02872	0,05494	0,04644	0,04451

Source: composed by the author according to the data Official site of "Bunge". [online].
Available from Internet: <http://www.bunge.com/>.

Table 7: Results of calculating the value of group competitiveness indicators for Agroholdingu "Kernel" Agropromholdingu "Astarta-Kyiv" and "Bunge" in the years 2007-2012.

Indicators \ Period	2007	2008	2009	2010	2011	2012
Agroholding "Kernel"						
The efficiency of the production activity of the enterprise, C_{pe}	0,363528	0,396016	0,426026	0,437012	0,394146	0,390236
Financial position of the enterprise, C_{fp}	0,235174	0,513208	0,478927	0,397612	0,586634	0,466081
The effectiveness of sales and promotion of products, C_{esp}	0,237728	0,239165	0,30255	0,304811	0,241973	0,212267
Agropromholding "Astarta-Kyiv"						
The efficiency of the production activity of the enterprise, C_{pe}	0,469913	0,332421	0,501693	0,642555	0,568191	0,533716
Financial position of the enterprise, C_{fp}	0,796771	0,64238	0,801768	0,910066	0,742565	0,653602
The effectiveness of sales and promotion of products, C_{esp}	0,280374	0,280811	0,338119	0,415757	0,398153	0,293859
Company "Bunge"						
The efficiency of the production activity of the enterprise, C_{pe}	0,307129	0,300672	0,305764	0,303881	0,302995	0,303783
Financial position of the enterprise, C_{fp}	1,168529	1,687507	1,641567	1,370647	2,024837	1,179893
The effectiveness of sales and promotion of products, C_{esp}	0,066461	0,076768	0,028717	0,054937	0,04644	0,044513

Source: composed by the author according to the data Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>; Official site of "Astarta-Kyiv". [online]. Available from Internet: <http://astartakiev.com/en/for_investors/financial-results.htm >; Official site of "Bunge". [online]. Available from Internet: <http://www.bunge.com/>.

Summary on integrated indicators of enterprise competitiveness is presented in table 8.

Table 8: Integral indicators of the competitiveness for Agroholding "Kernel" Agropromholding "Astarta-Kyiv" and "Bunge" for 2007-2012.

Enterprise name	Years					
	2007	2008	2009	2010	2011	2012
Agroholding "Kernel"	0,280864	0,389978	0,407498	0,383562	0,415865	0,363391
Agropromholding "Astarta-Kyiv"	0,527452	0,425423	0,557647	0,668145	0,57821	0,503719
Company "Bunge"	0,536418	0,718893	0,690181	0,602566	0,828673	0,532641

Source: composed by the author according to the data Official site of company Bloomberg. [online]. Available from Internet: <http://www.bloomberg.com/>; Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>; Official site of "Astarta-Kyiv". [online]. Available from Internet: <http://astartakiev.com/en/for_investors/financial-results.htm >; Official site of "Bunge". [online]. Available from Internet: <http://www.bunge.com/>.

The data of tab. 8 shows that leader among the investigated enterprises in the years 2007-2012, was company "Bunge", what can be explained by financial

indicators of activity. Company "Kernel" in terms of competitiveness took third place.

4.2 Evaluation of the enterprise competitiveness by means of a matrix "Boston Consulting Group" (BCG)

To clarify the results of the analysis of the enterprise competitiveness, we will use the most common matrix methods for strategic evaluation of enterprise competitiveness - matrix "Boston Consulting Group" (BCG) (Yefremov 1998).

To analyse the competitive advantages of Agroholding "Kernel" we have used the performance of its key strategic business units (SBU). To study the life cycle of each SBU, on the X-axis we postpone the place on market that is occupied by each SBU relatively to major competitor, on the Y-axis market growth.

To determine the growth rate of the market (GRi) for each SBU, we find the increase in demand that we express through changes in reported operating income in 2012 compared to 2009. These market share and growth rate of cash flows are shown in tab. 9.

Table 9: Calculations to construct BCG matrix for Agroholding "Kerne" for 2012 compared to 2009.
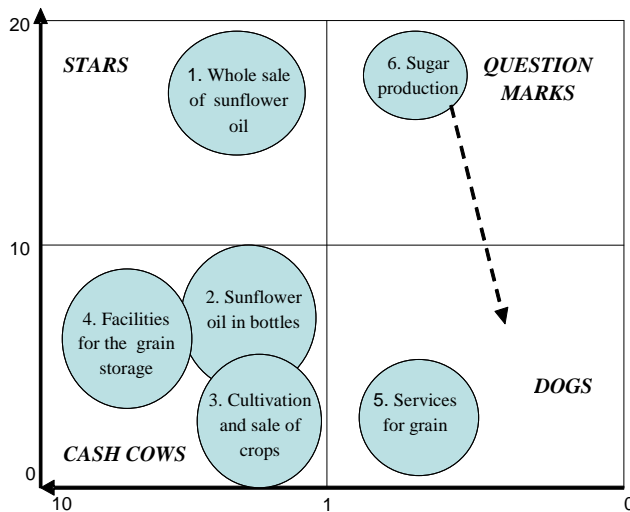
	Market share (MSi)	The growth rate of the market (GRi)
Whole sale of sunflower oil	$MS_1 = \dfrac{\text{"Kernel"}}{\text{"Cargill"}} = \dfrac{36\%}{14\%} = 2,57 > 1.$	$GR_1 = \dfrac{165,9 - 54,65}{54,65} \cdot 100\% = 203,57\%.$
Sunflower oil in bottles	$MS_2 = \dfrac{\text{"Kernel"}}{\text{"Cargill"}} = \dfrac{32\%}{22\%} = 1,45 > 1.$	$GR_2 = \dfrac{32,3 - 27,23}{27,23} \cdot 100\% = 18,62\%.$
Cultivation and sale of crops	$MS_3 = \dfrac{\text{"Kernel"}}{\text{"L.Dreyfus"}} = \dfrac{8\%}{7\%} = 1,14 > 1.$	$GR_3 = \dfrac{11,9 - 21,41}{21,41} \cdot 100\% = -44,42\%.$
Facilities for the grain storage	$MS_4 > 1$ (the company owns the largest network of silos for storing grain, with total capacity of 2,7 million. t. grain)	$GR_4 = \dfrac{26,1 - 27,23}{27,23} \cdot 100\% = -4,15\%.$
Services for grain handling	$MS_5 = \dfrac{\text{"TBT"}}{\text{"TIS-Grain"}} = \dfrac{4 \text{ million t.}}{4,5 \text{ million t.}} = 0,89 < 1.$	$GR_5 = \dfrac{12,5 - 28,79}{28,79} \cdot 100\% = -56,58\%.$
Sugar production	$MS_5 = \dfrac{\text{"Kernel"}}{\text{"Astarta"}} = \dfrac{250\,000 \text{ млн т}}{370\,000 \text{ млн т}} = 0,68 < 1.$	-*

* Since sugar production was initiated only in the second half of 2011, there is no basis for comparison of growth of demand and cash flows

In fig. 3 are shown growth rates of cash flows for the 20-point scale and data previously found by using the BCG matrix.

Figure 3: The Matrix "growth-share market", BCG for Agricultural Holding "Kernel" for 2012 compared with 2009

Source: made by the authors according to Table. 8

Analysis allows determining the development strategy for each strategic business unit that will result in increasing the enterprise competitiveness:

- Sugar production refers to the type of "Question mark". Because of recent problematic situations on the sugar market, for this SBU can be used the reduction strategy;

- Wholesale of sunflower oil (2.57, 19.52) is characterized by type of "stars". This strategy will be relevant for SBU supporting goods on the market;

- Sunflower oil in bottles (1.45, 5.82) is intended primarily for domestic sales. In this case the strategy costs would be optimal;

- A significant market share in the sale of crops means competitive advantage. It can be explained by the level of production costs which results of biases strategy;

- Opening a network of facilities for the grain storage and buying terminal - it results of cost leadership strategies;

- "Services for grain handling" after calculations referred to type of "dog". It means that reduction strategy is used.

The evaluation of the competitiveness of the investigated enterprise, based on the method of effective competition with combined indicator for assessing competitiveness, suggests that the company "Kernel" takes the third place with a level of 36.34 % compared to Agropromholding "Astarta – Kyiv" (50.37 %) and the company "Bunge" (53.26 %). Only the segment of wholesale of sunflower oil has a leading position (market share is 36 %), according to an analysis BCG matrix. The analysis indicates a relatively high competitive position of individual SBU.

5 PROPOSALS TO INCREASE COMPETITIVENESS OF THE AGROPROMHOLDING "KERNEL" ON THE BASIS OF BALANCED SCORECARD

Traditional approaches to evaluate company activity effectiveness are based, usually, on evaluation, exclusively, of financial indicators. Balanced Scorecard (BSC) supports measurement of financial performance, but also provides assessing management and other components of the activity. Thus, in particular, BSC takes into account the staff component in improving the enterprise competitiveness and provides integration of financial and non-financial indicators with regard to links between them. In addition, BSC represents not only a system of evaluation of enterprise activity effectiveness, but also long-term development strategy of the enterprise.

We have improved the method of calculation of the balanced scorecard by clearly defining the phases of analysis:

1. SWOT analysis and the determinants of success;

2. Identifying goals;

3. Identification of indicators and target values for the calculation of these indicators;

4. To Develop plan strategic initiatives and support its implementation, improving and development of the BSC.

According to certain phases of the research the analysis of the internal and external environment Agroholding "Kernel" using SWOT-analysis (tab. 10) was initially conducted.

Table 10: SWOT-analysis of the factors of internal and external environment for Agroholding "Kernel".

	Strengths (S)	Weaknesses (W)

Internal environment	1. Production company enjoys stable demand
	2. Implementation of ecotechnologies:
	    a. protection of the environment;
	    b. reduce the cost of fuel;
	3. Strong position in the market segments, well-known leader.
	4. High capacity of export terminals.
	5. Prices available to all categories of customers.
	6. Quick adaptation to customer needs.
	7. Highly qualified staff.
	8. Columna System Software – technology oil refining.
	9. Elevator capacity.
		1. Use of outdated technology, the focus is not on modernization but on the expansion of the company;
		2. The high level of dependence on climate conditions;
		3. Illiquidity of cultivation of sugar beets;
		4. Limited market in the sugar segment.

	Opportunities (O)	**Threats (T)**
External environment	1. Purchase prospective capacities in Russia. 2. Competitive pricing in the grain sector. 3. Vertical Integration. 4. Favorable political situation for the company in Ukraine. 5. Adjusted social policy as a way of promoting the growth of the number of target consumer groups and increase their loyalty.	1.Unstable political climate in the country where the company has its activity. 2. Possibility of poor harvest of grain and sunflower. 3. Increasing competition. 4. Soy market attractiveness.

Source: composed by the author according to the data Official site of company Bloomberg. [online]. Available from Internet: <http://www.bloomberg.com/>; Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>.

The SWOT-analysis of the functioning of the Agroholding "Kernel" has more strengths than weaknesses in the domestic environment and excess capacity over threats in the external, which explains the high competitive advantages of Agroholding "Kernel" on the market.

Table 11: Matrix SWOT-analysis for interrelation of the most influential relations between weak and strong factors and internal threats and opportunities of the environment functioning Agroholding "Kernel".

	Strengths (S) Solution: support? develop?	Weaknesses (W) Solution: liquidate? What exactly is it? in what order?
Opportunities (O) Solution: use?	Buying in Russia the grain terminal in the port of Taman for $265 million through an agreement a Ukrainian holding company will start to operate in the market as trader and expects to take about 9% of Russian exports. Grain terminal complex "Taman" has become one of the largest in Russia. It is located in the southwestern part of the Taman Peninsula and places grain elevators that operated 80 tons of grain extendable up to 220 tons, and two berths with a total capacity of handling 3 million tons (in terms - to increase to 5 million tons).	It is necessary to focus on the acquisition of competitors. This will improve the industrial base and increase company capacity, for the other competitor it will be less. Company "Kernel" acquired one of the largest players in the market of sunflower oil, its direct competitor - Allseeds company in 2010.
Threats (T) Solution: alleviate?	In this case it is advisable to begin to provide another service, or to increase their number, for example elevator's power. Since 2014, it is planned to build 6 elevators. Elevator capacity provides an opportunity to provide services to around two thousand Ukrainian agricultural enterprises. Such a step will increase competitiveness and, consequently, increase the number of clients.	Rejection of sugar business. Sugar factories acquired "Kernel" after buying one of the largest domestic producers of sugar "Sugar Union" Ukrros. "Verevskiy Andrii said he was willing to sell four sugar factories - Chortkivskiy sugar plant, sugar plant Palmirskiy, Orzhitsky Sugar Factory Ltd. and"Zukrovii "(sugar plant in Kharkiv region).

Source: composed by the author according to the data Official site of company Bloomberg. [online]. Available from Internet: <http://www.bloomberg.com/>; Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>.

Then the table was formed where data analysis of previous phases was used, namely factors of internal and external environment and set strategic goals, which are reflected in the activities areas of the Argoholding "Kernel" (Kaplan RS, Norton DP, 1996): financial, client, internal business processes and prospects for training and staff development (Table 12). Each direction (right-hand side of the table) can have multiple purposes.

Table 12: Crosstab analysis of strategic goals, external and internal environment of the enterprise in terms of its main areas of the BSC methodology.

Factors		Strategic goals	Direction
External	Internal		
1. Competitive pricing in the grain segment. 2. Vertical integration.	1. The products of the company has stable demand. 2. Prices available to all categories of buyers.	Increase profitability of equity, net profit and sales volumes.	**Finance**
1. Purchase prospective capacities in Russia. 2. Adjusted social policy as a way of promoting the growth of the number of target consumer groups and increase their loyalty.	1. Strong position in the market segments, well-known leader. 2. Quick adaptation to customer needs.	Market Share: Russia (secure success in the Russian market for the further development of the company); Ukraine (improved maintenance of agriculture by using of gained experience).	**Clients**
1. Possibility of poor harvest of grain and sunflower. 2. Soy market attractiveness.	1. Illiquidity of cultivation of sugar beets. 2. Limited market in the sugar segment.	Development of its distribution network, load capacity, increase grain handling.	**Internal business processes**
1. Implementation of ecotechnologies: a. protection of the environment. 2. Highly qualified staff.	1. Use outdated technology, the focus is not on modernization but on the expansion of the company;	Staff professional development of customer relationship management.	**Staff**

Analyzing the efficiency of the company "Kernel" by BSC method 5 parameters were selected for each direction (Horvath, P., 2000). For further analysis, we have defined the weight of each indicator based on its impact on the enterprise (Table 13).

Table 13: The weight of key efficiency indicators in BSC direction for company "Kernel"

№ п/п	Indicators (X_i)	The weight of indicator (M_i)
1. Finance		
1.1.	Absolute liquidity ratio ($C_{abs.liq.}$)	0,20
1.2.	Total liquidity coefficient (C_{tl})	0,18
1.3.	Long-term loans ratio (C_{lt})	0,14
1.4.	Return on Equity (*ROE*)	0,23
1.5.	Return On Assets (*ROA*)	0,25
2. Clients		
2.1.	The share of market segment «Whole sale of sunflower oil» (SM)	0,24
2.2.	Proportion of export volumes of transshipment terminals Kernel in comparison with Ukraine (PV_{abs})	0,22
2.3.	The level of unprofitable assortment groups in the total volume (P_{tot})	0,18
2.4.	The ratio of average product prices to average market prices for similar products of competitors (C_{ap})	0,20
2.5.	The weight of the normal receivable ($W_{norm.rec.}$)	0,16
3. Internal business processes		
3.1.	Proportion of main products in total output ($C_{p.t.out}$)	0,25
3.2.	Coefficient planned increase in sales ($C_{p.incr.s}$)	0,20
3.3.	Turnover ratio of current assets (C_{tr})	0,18
3.4.	The coefficient of profitability ($C_{c.prof.}$)	0,22
3.5.	Coefficient of production rhythm (C_{rhythm})	0,15
4. Training and development		
4.1.	Coefficient of staff training (C_{st})	0,26
4.2.	Return in Labour (*ROL*)	0,22
4.3.	The fate of the spending on staff training and development ($Fs_{tra.dev.}$)	0,16
4.4.	The actual amount of assets on the 1st worker (Aaa_{worker})	0,16
4.5.	The share of staff in the total personnel of Bunge competitor (SS_{tpbc})	0,2

In the next phase of evaluation we calculated parameters for each of the enterprise activity components and compared their values with standard (Table 14).

Table 14: Results of the analysis of the enterprise activity indicators of the Agroholding "Kernel" by Balanced Scorecard (BSC) in 2012

Component	Name of indicator	Indicator's score	
		calculated	standard
Finance	Absolute liquidity ratio ($C_{abs.liq.}$)	0,19	0,2…0,3
	Total liquidity coefficient (C_{tl})	2,63	More than 1
	Long-term loans ratio (C_{lt})	0,584	Slow growth
	Return on Equity (*ROE*)	0,1018	Not less than 1%
	Return On Assets (*ROA*)	0,1744	Optimal 10-20%

Clients	The share of market segment «Whole sale of sunflower oil» (SM)	$0,36^2$	More than ¼ of market
	Proportion of export volumes of transhipment terminals Kernel in comparison with Ukraine (PV_{abs})	$0,0147^3$	-
	The level of unprofitable assortment groups in the total volume (P_{tot})	$0,1429^4$	More than 30 %
	The ratio of average product prices to average market prices for similar products of competitors (C_{ap})	$1,0592^5$	More than 5 UHR
	The weight of the normal receivable ($W_{norm.rec.}$)	12,56%	Not more 40% assets
Internal business processes	Proportion of main products in total output ($C_{p.t.out}$)	$43,29^6$	Near 50%
	Coefficient planned increase in sales ($C_{p.incr.s}$)	$0,1127^7$	-
	Turnover ratio of current assets (C_{tr})	1,8991	Growth
	The coefficient of profitability ($C_{c.prof.}$)	12,51%	On a level 25%
	Coefficient of production rhythm (C_{rhythm})	$25,67\%^8$	Growth
Staff training and development	Coefficient of staff training (C_{st})	$0,1765^9$	Growth
	Return in Labour (*ROL*)	12,57	Growth
	The fate of the spending on staff training and development ($Fs_{tra.dev.}$)	$0,117^{10}$	Decrease
	The actual amount of assets on the 1st worker (Aaa_{worker})	127,602	-
	The share of staff in the total personnel of Bunge competitor (SS_{tpbc})	0,5667	-

[2] Kernel market share in Ukraine in different segments: wholesale of sunflower oil - 36%; the production and sale of sunflower oil in bottles with a market share - 32%; grain exports from Ukraine - 8.7%.

[3] Kernel increased handling volumes in the export terminals by 89.2% - up to 740.13 million tons, in Ukraine increased by 0.8% - up to 113.195 million tons, for export transportation was growth of 706.68 million tons (increase by 18.2%).

[4] Sugar segment

[5] For research were examined commodity prices of leading brands Kernel (December 2012): "Shedrii Dar", "Stozhar", "Chumak Domashnia" and "Chumak Zolota" (oil, refined, 1 liter) - 15.99; 15.89; 16.99 and 16.29 USD. For comparison oil was taken "Oleyna" of company "Bunge" - 15.38 USD

[6] Let us find share wholesale of sunflower oil and oil in bottles in total amount (main production)

[7] As published in 2012 fiscal year report "Kernel" it was planned to increase revenue in 2013FY from 2.157 to 2.4 billion.

[8] Processing of sunflower seeds increased in Q1 FY 2013 in comparison with the same period of 2012 FY by 60.2% - to 458.1 thousand tons. Refined oil production - 24.3 thousand tons, 26.7% less. Production oil in bottles - fell by 28.2% - to 20.3 thousand tons, increased selling liquid sunflower oil by 89.3% - up to 199 tons, sales of bottled oil was reduced to 26.34%. Sales of grain increased by 22.2% - to 509.6 thousand tons

[9] The share of workers who raised the qualification in terms of new working methods, in the total number of employees. At the end of FY 2012, the number of employees was more than 17,000 people. Training and development during this period concerned about 3000 employees.

[10] Training is the integration and support of organizational transition to a new level of managment. During FY 2012, the company "Kernel" spent about 0.2 million USD on training and development of its employees.

I. 2007. Збалансована система показників. Харків: Фактор, 2007. 176 с. ISBN 978-966-312-710-1; Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>.

The integral group indicator of single activity direction can be calculated using the formula:

$$K_i = \sum_{i=1}^{n} (X_i \cdot M_i)$$

where: Mi - the weight of each indicator;

Xi- indicators that characterize each BSC direction within i-index.

After the calculation of integral indicators for each group, we obtained the total cumulative indicator of activity in all areas:

$$Itot = I_{finance} \cdot I_{clients} \cdot I_{business\ processes} \cdot I_{staff} = 0,7543$$

To interpret the results we used the following evaluation scale:

- from 0 to 0.35-meets the basic strategies of change "reduction or withdrawal from the business" or "Restructuring". The company operates inefficiently.

- from 0.35 to 0.70-meets the basic strategies of changes "Adjustment" or "Optimization". Enterprise needs to review planning and management decisions.

- from 0,70 to 0.85-meets the basic strategies of change "Development" or "Optimization", i.e. the efficiency rates are high enough.

- from 0.85 to 1 corresponds to the basic strategies of change "Development" or "Advance", i.e. of high activities.

Calculated total integral index Agroholding "Kernel" allows us to draw conclusions about the feasibility to choose the strategy changes "Development" or "Optimization". Performance indicators in all 4 aspects of activity are quite high, they are close to the optimal value or even coincide with it. In this case, on our opinion, it is appropriate to implement an overall corporate strategy of concentrated growth, such as market development strategy.

6   SUMMARY

Methodological approaches to evaluate the enterprise competitiveness shall include in addition to statistical methods that assess only the actual activity of the company, also the methods of strategic analysis. Strategic methods make possible not only to assess the competitive position of the company on a specific date, but also to develop strategic measures to improve it. Thus, given sequence of evaluation phases gives opportunity to evaluate the enterprise competitiveness more accurately and to develop proposals to improve it.

7   REFFERENCES

АДУШКІН, А.Е. 2009. Эволюция и современное развитие концепции сбалансированной системы показателей. Аудит и финансовый анализ, 2009, № 4, С. 380-383.

ГЕРШУН, А.М., НЕФЕДЬЕВА, Ю.С. 2005. Разработка сбалансированной системы показателей. Практическое руковод¬ство с примерами. М. : Олимп-Бизнес, 2005. 128 с. ISBN: 978-5-9693-0105-4.

ЄФРЕМОВ, В.С. 1998. Стратегия бизнеса. Концепции и методы планирования. Учеб. пособие. М.: Финпресс, 1998. 192 с. ISBN 5-8001-0014-4.

ІВАКІНА, І. 2007. Збалансована система показників. Харків: Фактор, 2007. 176 с. ISBN 978-966-312-710-1.

КЛИМЕНКО, С.М. 2006. Управління конкурентоспроможністю підприємства: Навчальний посібник. К.: КНЕУ, 2006. 527 с. ISBN: 978-966-483-036-9.

МИНЧИНСЬКА, І.В. 2013. Персонал як визначальна складова забезпечення конкурентоспроможності підприємства. Економічний аналіз : зб. наук. праць, 2013, Вип. 14, частина 4, С. 185-196. ISSN 1993-0259.

Official site of company Bloomberg. [online]. Available from Internet: <http://www.bloomberg.com/>

Official site of "Astarta-Kyiv". [online]. Available from Internet: <http://astartakiev.com/en/for_investors/financial-results.htm >

Official site of "Kernel". [online]. Available from Internet: <http://www.kernel.ua/en/financial/reports/>.

Official site of "Bunge". [online]. Available from Internet: <http://www.bunge.com/>.

ПОНОМАРЬОВА, І.В. 2009. Реалізація стратегії розвитку підприємства за допомогою збалансованої системи показників. Економічний простір : зб.наук. пр., 2009, № 27, С. 202-210.

ХОРВАТ, П. 2000. Сбалансированная система показателей как средство управления предприятием. Проблемы теории и практики управления, 2000, № 4, С. 108–113.

ЯЦУРА, В.В., ЗАМРОЗ, М.В. 2011. Аналіз методів оцінки конкурентоспроможності підприємств. Вісник Волинського інституту економіки та менеджменту, 2011, № 2, С. 45-53.

ZANDER, R. S. 2005. SWOT Analysis I: Looking Inside for Strengths and Weaknesses, chapter 2, excerpted from: Strategy: Create and Implement the Best Strategy for Your Business. Boston, Massachussetts: Harvard Business Press, 2005. 17 p.

ZANDER, R. S. 2005. SWOT Analysis II: Looking Inside for Strengths and Weaknesses, chapter 2, excerpted from: Strategy: Create and Implement the Best Strategy for Your Business. Boston, Massachussetts: Harvard Business Press, 2005. 17 p.

KAPLAN, R.S., NORTON, D.P. 1996. The Balanced Scorecard: Translating Strategy into Action. Boston: Harvard Business School Press, MA, 1996. 304 p. ISBN-13: 978-0875846514.

PORTER, M.E. 1980. Competitive Strategy: Techniques for Analyzing Industries and Competitors. New York: Free Press, 1980. 396 p. (Republished with a new introduction, 1998). ISBN-10: 0684841487.

THOMPSON , A.A., STRICKLAND A.J. 1995. Crafting & implementing strategy : Text and readings . Chicago : Richard D. Irwin, Inc., 1995. 539 p. ISBN: 0256150273.

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