NEW APPROACHES TO EFFICIENCY ESTIMATION IN STRATEGIC PLANNING

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Abstract

Nowadays small and medium enterprises face many challenges connected with every field of its performance. Business modeling generation and strategic planning are the main factors, which can lead an enterprise to the high level position of the industry in a long term.

The competitiveness strategy of small and medium enterprises is the main driver for efficiency and development. How the strategy can be estimated? Is it possible to understand if the strategy is the most suitable to compare with others? The topic helps to find answers.

New methodology of efficiency in strategic planning is represented in the topic. The methodology includes the integrated efficiency index, which helps to choose the best strategy of the existing options. The index is worked out for strategic controlling and competitiveness of companies.

Key words: Strategic Planning, Strategy, Efficiency Estimation, Competitiveness of Companies, Integrated Efficiency Index.

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Introduction

Company's development depends on strategic challenges, which should be managed by the strategic planning system. The efficiency system helps to reach strategic aims and provides competitive advantages for a company, also it deals with external opportunities and worries by using internal strong sides and avoiding weaknesses. The main question is to estimate the efficiency of the strategic planning system. It could be done with indicators that show strategic changes the most. The indicators could be financial and non financial. Every company could choose their own indicators, also for companies, which operate in the same industry, the number of indicators could be variable. In the article the common system is

offered, which can be modified depends on company's needs. The system was developed in accordance with the international practice of economic analysis.

A modern strategic planning theory includes a number of criteria to choose the optimal strategy. Every author offers his own number, which is very similar one to another. The most fundamental analysis was made by Arthur A. Thompson and A. J. Strickland in their book "Strategic Management: Concepts and Cases" (Thompson & Strickland, 2007). Two types of criteria are offered: mandatory and variable. The mandatory criteria include such as: environment conformity (internal and external), competitive advantages providing and efficiency. Other criteria, which could be variable, are: full coverage of all key aspects of the company's activities, internal consistency of elements, risks, flexibility, etc. The desirable criteria could not directly influence to strategy choices.

However, one question we still need to answer: which indicators do we need to use for the best strategy evaluation?

1   Methodology of a strategic planning estimation

During last 10-15 years many indexes of financial analysis were developed, together with new methodologies of the strategic goals estimation. In 1990, Robert S. Kaplan and David P. Norton, professors from Harvard Business School, made a research aimed to find new approaches in strategic goals estimation and ways to increase company's operations efficiency. The result is a system of Balanced Scorecard (BSC), which is represented in the work "The Execution Premium: Linking Strategy to Operations for Competitive Advantages" (Kaplan & Norton, 2008).

The BSC system shows logical connections of company's aims and operation indexes, also non-financial indexes are used. The main idea is following: a goal could be reached only if it can be measured by some indicators. BSC covers the following operation spheres of a company:

- Financial indicators, which show company economic situation to holders and investors;
- Customer indicators, which orient to professional interests of consumers;
- Business processing indicators, which are aimed to optimization process;
- HR indicators, which include trainings and welfare programs for company's personnel. To learn more about new approaches in HR management and employee

performance for organizational competitiveness see works of Martin Šikýř (Šikýř, 2011).

However it's impossible to compare different strategies by using the system, because in BSC there is no priority index to measure efficiency.

That's the main reason why we need a new methodology approaches in the estimation of a strategic planning efficiency. New approaches should allow us to analyze particular changes in strategic planning process of a company. Also the methodology would be oriented to compare different strategies and choose the optimized one for an enterprise.

2 Efficiency indicators in an enterprise operations estimation

As it was mentioned before there are two main groups of indicators: financial and non-financial.

In financial analysis, the most important indicators that are used in operations estimation and strategic planning of a company are following (Brigham & Ehrhardt, 2011):

- Earnings before interest, taxes, depreciation and amortization (EBITDA);
- Earnings before interest and taxes (EBIT);
- Net operating profit after taxes (NOPAT);
- Net cash flow (NCF);
- Free cash flow (FCF);
- Return on invested capital (ROIC);
- Expected return on invested capital (EROIC);
- Weighted average cost of capital (WACC);
- Market value added (MVA);
- Economic value added (EVA);
- Value of operations (V_{op}).

Which one of these indicators could be used to estimate the system of strategic planning and management in an enterprise? All of them are very helpful in financial analysis but it's impossible to choose only one for the strategy estimation. A full picture these indicators give all together. These indicators estimate financial side of the problem, so they could be referenced to the financial criteria, described above. However indicators could be just a part of the integrated index (see Table 1).

In addition to financial indicators, there are non-financial indicators, which could be related to other two mandatory criteria: environment conformity (internal and external) and competitive advantages providing. Including these criteria in the integrated index of the strategic planning efficiency estimation is a critically important step, which allows to modelling a complete strategic planning system in an enterprise.

In summary, we need to create the integrated index, which would include different indicators of:

- Environment conformity (internal and external);
- Competitive advantages providing;
- Financial efficiency.

3   Integrated index of strategic planning efficiency estimation

According to above conclusions, the integrated index should include many different indicators, which could fully describe business-processes and a strategic planning system inside a company. At the beginning, let's fill needed indicators into Table 1. Then we separate these indicators into five levels. At zero level is represented the integral index of strategic planning (IISP). At first level we can see mandatory indicators of environment conformity (internal and external), competitive advantages providing and financial efficiency. Then we separate these indicators into specific indicators.

Table 1: The list of strategic planning estimation indicators

Strategic planning estimation indicators by the level of its generalization				
0 level	1 level	2 level	3 level	4 level
Integral index of strategic planning (IISP)	Compliance with the environment	Compliance with the external environment	Availability of resources	Reliability of suppliers (НПост)
				Dependence on suppliers (СЗПост)
			Demand of goods	Reliability of buyers (НПок)
				Customers influence (СВПок)
			Competition	The intensity of competition (ИКонкБ)
				Market share (ДР)
				Integration of the main competitors (СИКонк)
			Industry drivers	Industry globalization (ГО)
				Economic trends in the industry (ЭТО)
				M&A in the industry (СиП)
				Development of technology (РТ)
				Changes in legislation and public policy (ЗГП)
				Risks for business (НР)
			Trends of the industry	Stage of the industry life cycle (ЖЦО)
				Overall attractiveness of the industry (ПО)
		Compliance with the internal	Provision of human resources	Labour productivity (ПТ)
				Personnel qualification (КП)

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		environment	Prevision of assets	Tangible and intangible assets (А)
				Competitive opportunities (КонкВ)
				Reputation of the company (РП)
Competitive advantages		Quality of goods	Reliability	Preservation (Сохр)
				Reliability (Без)
				Durability (Долг)
				Maintainability (Рем)
			Environmentally friendly	Toxicity (Токс)
				Acoustics (Ак)
			Manufacturability	Labour costs in manufacturing (ТПр)
				Labour costs for the repair (ТРем)
				Labour costs of operations (ТЭкспл)
			Safety	Explosiveness (Взр)
				Flammability (Пож)
				Safety consumables (БЭМ)
				Traumatic (Травм)
			Standardization and unification	Standardization (С)
				Unification (У)
			Economy and novelty	Economy (Эконом)
				Novelty (Нов)
			Patentability and design complexity	Patentability (Патент)
				Design complexity (СК)
		Preference of customers	Price of goods	Unit costs (Себ)
				Profitability of operations (РентОД)
			Recognition and design	Design (Диз)
				Recognition of goods by customers (УзнПок)
				Goods differentiation (Диф)
		Technologies of production	Development of technologies	R&D
Financial efficiency		Indicators of business activity	Earnings of an enterprise	EBIT
				EBITDA
				NOPAT
		Indicators of return	Return on invested capital	ROIC
				EROIC
		Indicators of a company costs	Cost of capital	WACC
			Value added	MVA
				EVA
		Indicators of cash flow	Cash flow	NCF
				FCF
			Value of operations	Vop

Source: Compiled by authors

The composition of evaluating indicators is a set of the most important parameters for the strategic planning efficiency estimation in the industrial enterprise. However the set of indicators could be supplemented if necessary, in a case of specifying a particular enterprise.

For the efficiency estimation of a strategic planning system in an enterprise, we offer the dimensionless integral index IISP, which was developed by its profile modelling (see Fig. 1). IISP includes all indicators represented in Table 1.

A strategy's profile is based on the set of IISP, which includes above indicators of all levels. The circle of estimation field, where a strategy's profile is building, is divided into

equal sectors by radial rating scales. The number of radial rating scales depends on the number of estimation indicators. Scale sectors are calibrated in such a way for not extending beyond the estimation field (for example, from 0 to 1).

Fig. 1: The profile of the integral index of strategic planning (IISP)
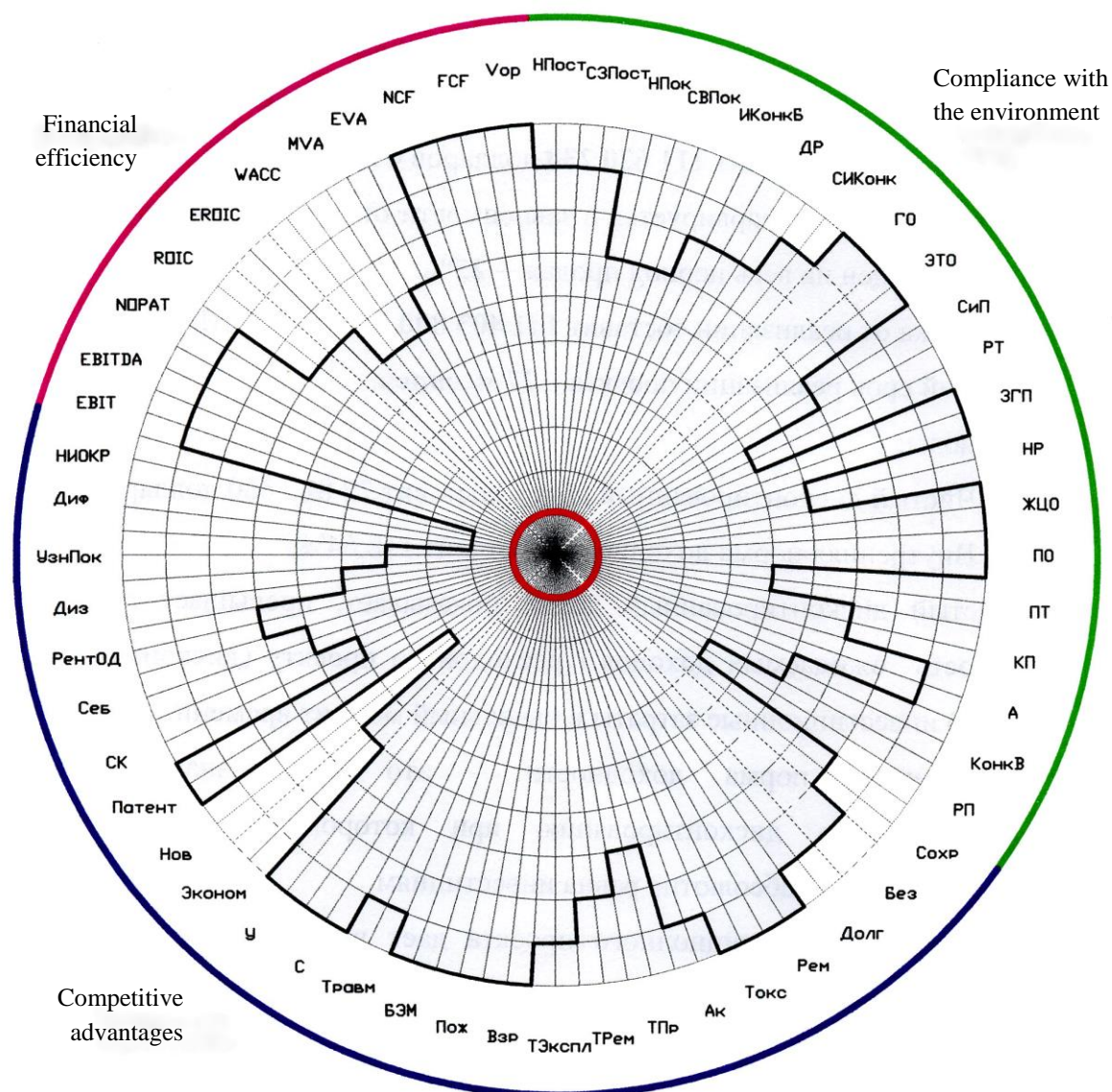
Source: Developed by authors

More to the centre of the circle, the less is the value of the estimated indicator, and in a case of 0 point – the indicator is absent. If at least one on indicators is 0 rated, it indicates that the strategy is not meeting the mandatory criteria and should be reconsidered. Take in account that every company can supply its own set of indicators to develop the most suitable model and specify its operations. To learn more about Russian industries competitiveness, see papers of Vladimir Sekerin (Sekerin & Burlakov, 2013) and Ekaterina Panevina (Panevina, 2013), and about Russian automotive industry – my paper (Boyko, 2013).

Indicators, that could not be measured quantitatively, should be evaluated by experts in a point scale. The profile is modelling according to the equal sectors, with the same square of every sector, because the significance (weight) of every indicator is the same. Also there is a possibility to modeling a specialized company's profile and give more weight to the prioritized indicators. This can be done by changing the internal angle of the sector. By increasing the angle – the area of the indicator becomes bigger and its weight increases respectively, in comparison with other indicators, and conversely.

Determination of IISP means to find the total square of the profile (Boyko, 2009). In Fig. 1 every indicator has the same weight, so every internal angle $a = 2\pi/n$, where n – the number of indicators in a set. The square of the sector $S_i = \pi \cdot r_i^2 / n$. Then we should summarize all the squares of all sectors.

The formula for calculating the square of the figure, which is inscribed inside the circle with radius r=1, would be the following:

$$S_{prof} = \sum_{i=1}^{n} S_i = \frac{\pi}{n} \times r_1^2 + \frac{\pi}{n} \times r_2^2 + ... + \frac{\pi}{n} \times r_i^2 = \frac{\pi}{n} \times \left(r_1^2 + r_2^2 + ... + r_i^2 \right) = \frac{\pi}{n} \times \sum_{i=1}^{n} r_i^2 \ ,$$

where: S_{prof} – square of profile for the developing strategy, sq. units;

             S_i – square of i-segment for the developing strategy, sq. units;

             r_i – radius of the i-segment of profile, which is equal to the value of i-indicator, units.

Calculation of the integral index of the strategic planning efficiency (IISP) is represented in the following formula:

$$IISP = \frac{S_{prof}}{S_{total}} = \frac{\sum_{i=1}^{n} r_i^2}{n \times r^2} = \frac{\sum_{i=1}^{n} r_i^2}{n} \ ,$$

where: S_{total} – total square of the evaluation field, sq. units;

             r – radius of the evaluation field, in this case r=1, units.

In the case of different indicator's weights, the formula of the profile square is the following:

$$S_{prof,N} = \sum_{i=1}^{n} r_i^2 \times j_i \ ,$$

where: j_i – weight of the i-indicator, and $\sum_{i=1}^{n} j_i = 1$.

The integral index of the strategic planning efficiency with different weights (IISP$_N$) is the following:

$$IISP_N = \sum_{i=1}^{n} r_i^2 \times j_i$$

Conclusion

This new approach allows to accumulate financial and non-financial indicators in the integral index. In that way two and more strategy alternatives could be modelling in one evaluation profile, which makes easy to compare them. Also the strategies of the main competitors could be modelling and analysed.

The methodology allows not only compare different strategies, but also estimate the efficiency of management in a company, by comparing profiles of following periods. Also the comparative analysis in several Russian enterprises showed that there is a "red zone", and if a company reaches it – the consequences could be hard.

In addition, the approach allows to develop the universal index – IISP, which estimates the efficiency of a strategic planning system in an enterprise and includes different set of indicators, as financial and non-financial. The main plus of IISP is the possibility to compare its volume of different strategy ways and choose the most optimized one. This tool could also be used in operating and financial fields.

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