

Stakeholder Approach to Identification and Analysis of Value Creation Drivers*

Olga EFIMOVA, Ph. D., Professor

*Economic Analysis Department, Financial University
oefimova2002@mail.ru*

Veronica SAMOHINA

*Economic Analysis Department, Financial University
universam92@mail.ru*

Abstract. The study presents the methodology of identification, selection and analysis of the value creation drivers. At the first stage of the study groups of key stakeholders were selected and their interests were estimated. The results of analysis helped to identify the indicators that reflect the mutual interests of the company and the stakeholders. Then, in the next step, based on the provided econometric model the most significant factors of the value creation were determined. The practical part of the research was carried for Group Cherkizovo as example.

The study has allowed to generate practice-oriented methodology for the identification, selection and analysis of the creating value drivers. The proposed methodology can be applied to any companies without significant corrections.

Аннотация. В исследовании представлена методология выявления, отбора и анализа факторов создания стоимости компании. На первом этапе исследования проводится отбор групп ключевых стейкхолдеров, анализ их интересов и определение показателей, отражающих взаимные интересы компании и стейкхолдеров. На следующем этапе на основе разработанной эконометрической модели выявляются наиболее значимые факторы создания стоимости компании и группы ключевых стейкхолдеров. Практическая часть исследования осуществлялась на примере компании ОАО "Группа Черкизово". Проведенное исследование позволило сформировать практико-ориентированную методологию выявления, отбора и анализа факторов создания стоимости компании. Предлагаемая методология может быть применена к любой выбранной для анализа компании без внесения существенных корректировок.

Key words: Stakeholders, stakeholder analysis, value creation, stakeholder value, value drivers identification.

INTRODUCTION

In recent decades (for Russia this period can be estimated as a much shorter time interval) there have been very significant changes in the understanding the ultimate goals of companies, ways to measure their achievements, as well as the choice of specific performance indicators. The idea that the purpose of business is value creation is getting more common. This approach is well known as Value-Based Management, or VBM (managing for value); it has replaced the former one, oriented solely on profit.

Accordingly, for the purposes of evaluating the company performance that were based primarily

on the quantitative analysis of profitability (ROA, ROE, ROCE, and others) indicators characterizing the ability to create value-added (EVA, MVA, SVA, SFROI) are used.

Among the reasons that led to change in the priorities of efficiency criteria selection the following should be outlined:

- Usage of traditional measures of profit and profitability allows varying the accounting estimates;
- Traditional measures based on accounting profit and profitability ratios calculation ignore some kinds of intangible assets;
- Risk factors and required return on invested capital are excluded from consideration;

* Стейкхолдерский подход к выявлению и анализу факторов создания стоимости.

- Focus on getting results in the current period and ignoring the possible effect in the future. A typical example of this is return on investment indicator (ROI) and its modification, which tends to decrease during the period of investment that may force to refuse profitable projects;

- Emphasis on internal factors. At the same time, to compete in the market successfully it is necessary to take into account external factors such as actions of competitors and customer satisfaction;

- Historical nature of the data used for the calculation of financial indicators;

- Lack of a coherent vision of business, the inability to build a business model for identifying the most important success factors and their interaction.

Despite the differences in calculation they all are based on common approach — value creation is recognized if actual return on investment is higher than the required return. Taking into account that the required rate of return is usually used the weighted average cost of capital (WACC) it is possible to conclude that added value is created only when companies get a return on invested capital that exceeds the cost of capital. The logic in this case is the following: the return on investment must be higher (or not less) than the value of its financing.

In view of this, the assessment of business performance in the long term is primarily based on indicators of value creation.

Despite the growing popularity of the value approach, both in theory and in practice there is a number of critical issues that need additional consideration. Among them, especially, it is necessary to highlight the following:

- What kind of company value (market, shareholder, other) should be considered as the objective function?

- Who and how creates value for business?

- What is the goal of value creation?

- How do market participants share created value, and others.

- We will try to assess the situation and questions raised.

BACKGROUND & THEORY

The concept of VBM is aimed at solving the strategic objectives of the organization by focusing on the key drivers of value. However, all of the measuring instruments for value added (EVA and others) evaluation are based on the calculation and interpretation of solely financial performance. At the same

time, as it has been repeatedly discussed and argued in a huge number of domestic and foreign researches (Berman S.L., Wicks A.C., Koteha S., 1999; Cornell B., Shapiro A.C., 2007; Erkki K. Laitinen, 2004; Perrini, F. & Tencati, A., 2006), the key conditions of long-term value creation are connected with non-financial factors such as competitive advantages, customers and staff loyalty, supply chain and others. Moreover, non-financial factors affect financial performance. As result it is possible to conclude that the effective management of non-financial factors allows the company to achieve success, that can be measured by financial indicators (sales dynamics, optimize the cost of capital optimization, economic value added creation). In this case financial ratios are used as a benchmark.

To sum up it can be concluded that analysis of long-term value creation is based on both financial and non-financial factors evaluation.

There are different approaches that became internationally known, which are based on integrating financial and non-financial factors. Well-known in Russia and abroad are the system of comprehensive economic analysis of entities by A.D. Sheremet, Balanced Scorecard of Kaplan and Norton (Balanced Scorecard), SMART system by Cross and Lynch, and others.

Non-financial value drivers, ensuring long-term value, are formed with the participation and under the influence of a wide range of stakeholders (individuals and legal entities). The value of relationships with these parties is so high that, along with the theory of shareholder value the concept of stakeholder value (the stakeholder approach) is getting more popular.

Currently the stakeholder approach is a strategic management tool of long-term value creation. It is based on the understanding that the external and internal stakeholders, interacting and often conflicting with both the company itself and with each other, have a direct impact on its long-term sustainability.

The key concept of stakeholder theory of the firm is the idea that the goal of the company is much broader than wealth for its owners. It takes into account not only the interests of the owners, but also a much wider variety of agents — the stakeholders (Freeman R.E., 2010).

Considering the requirements and interests of the various stakeholders leads to increasing confidence in the organization that contributes to relational capital creation, and thus in turn creates the necessary (though not sufficient) condition for stakeholder value creation.

Table 1. Comparative analysis of shareholder and stakeholder value creation approaches*.

Aspects of comparison	Shareholder value approach	Stakeholder value approach
Kind of decisions	Financial decisions relating to raising and investing of capital	Strategic decisions of comprehensive character
Area of implementation	Valuation	Strategic management
Methods of analysis	Quantitative	Qualitative
Persons and parties interested in the analysis	Shareholders, Investors	Stakeholders
The subject of analysis	Cash Flow	Communications
Resources	Financial	All resources, including financial, operational, human, natural, intangible.

* Based on research of Figge F., Shaltegger S. (Figge F., Shaltegger S., 2000).

The stakeholder value concept is based on its key statements, such as:

- The value is not created solely by the organization itself or inside;
- The value is under the influence of external factors, risks and opportunities forming the environment in which the company operates;
- The value creates by joint efforts through relationships with stakeholders (customers, suppliers, society etc.).
- The value depends on the availability, accessibility, management of resources and types of capital (financial, industrial, intellectual, natural and social) that stakeholders provide (Freeman R.E., 2010).

There is a fundamental question of the relationship between shareholder and stakeholder value approaches – whether they are alternative or complementary. The position of authors is that these concepts cannot be regarded as mutually exclusive. Moreover, the concept of stakeholder value is a logical development of the shareholder value concept, because it allows to identify and to analyze the factors of shareholder value creation over the long term. Table 1 shows the results of a comparative analysis of two approaches to support this thesis.

As we can see, there is complementary relationship between the two concepts. Management of economic benefits in the form of market value or shareholder value added requires identification and analysis of non-financial factors discussed above. Non-financial value drivers, such as staff qualification and motivation, customer loyalty, effective communication, environmental and social responsibility, innovation, impact on the relevant financial drivers: sales, profit, return on invested capital, EVA, and as result influence market capitalization.

The recognition of relationship factors requires further study of the impact of non-financial factors on key indicators of value. Firstly it is necessary to find out which non-financial factors are most im-

portant for the analyzed company, and therefore the analysis of the interaction with which stakeholders is a priority for the company.

HYPOTHESIS DEVELOPMENT

The above-mentioned analysis highlights the dependence of firm's value and its sustainable long-term growth on the effectiveness of company's interaction with stakeholders to a significant extent. This, in turn, indicates the necessity of identification and the consequent prioritization of stakeholders, as the selection of the most significant factors influencing the firm's value can only be made possible by means of appropriate identification of the most influential stakeholders. Taking into account that effective company value management is not possible without identification of the most important factors of influence, the above-mentioned analysis results in formulating the following hypotheses:

Hypothesis 1. It is possible to develop the model that would combine both financial and non-financial factors in order to evaluate their influence on stakeholder's value of a firm.

Hypothesis 2. This model will allow to separate significant factors from insignificant, and to provide quantitative assessment of the impact of significant factors on stakeholder's value of a firm.

Hypothesis 3. While electing factors for the model it is crucial to take into consideration business sector specifics and strategy of the firm in study.

RESEARCH METHODS

In order to test the formulated hypotheses a research is conducted, based on applying modern econometric methods, such as regression analysis. The database for the research was created mainly by using sources such as firm's accounting and finan-

Table 2. Key stakeholders selection.

Key stakeholders	Factors of stakeholder value creation	Comments
State	Taxes	Tax rates reflect the quantification of the relationship between the state and the firm.
Business owners	EVA	Economic value added reflects the amount of value added created by a firm over a period. Business owners care about company development and gaining in a long-term perspective, so, from the point of view of business owners, EVA appears to be optimal as a factor of creating stakeholders value.
Consumers	Price for 1 kg of pork	Quantitative factor that significantly influences consumers' decision to purchase or not to purchase the firm's goods.
Staff	Salary	Salary is an economic expression of the employees' motivation to continue working for Cherkizovo company.
Competitors	Revenue of OMPK	Cherkizovo company and OMPK company are direct competitors, which means that they compete for the volume of consumer demand for the produced goods. The volume of consumer demand is directly related to the firm's sales volume, which, in turn, correlates with the volume of revenue.

Table 3. Factors of creating stakeholder value of a firm for each group of significant stakeholders. Semi-annual data was taken for Cherkizovo Group over the period of 2008 to 2013:

Index	Index calculation methodology
Taxes	Index was taken from income statement of Cherkizovo Group.
EVA	Index was calculated according to formula: $EVA = NOPAT - WACC * CE$ – NOPAT – operating profit after income tax; Operating profit and income tax rates were taken from the income statement of Cherkizovo Group. Calculation of NOPAT is presented in Table 4. – CE – capital employed; Volume of capital employed is calculated as a sum of total liabilities of a firm and its equity excluding current liabilities. Calculation of CE is presented in Table 5. – WACC – weighted average cost of capital; WACC data was taken from Bloomberg database and presented in Table 6.
Price for 1 kg of pork	Index was taken from Bloomberg database.
Salary	Index was taken from accounting reports of Cherkizovo Group.
Revenue of OMPK	Index was taken from income statement of Cherkizovo Group.

Table 4. Formation of research information base.

	Taxes, thousand dollars	Operating Profit, thousand dollars	NOPAT, thousand dollars
2008	1 462	103 468	102 006
6 months of 2009	2 112	62 933	60 821
2009	-3 347	140 190	143 537
6 months of 2010	3 246	84 861	81 615
2010	4 145	166 968	162 823
6 months of 2011	2 465	75 402	72 937
2011	5 819	168 454	162 635
6 months of 2012	2 400	107 794	105 394
2012	-14 281	232 139	246 420
6 months 2013	3 855	25 121	21 266
2013	2 121	88 664	86 543

Table 5. NOPAT calculation.

	Current liabilities	Long-term liabilities	Capital	Free sources of funding	CE
2008	344 357	362 268	425 149	140 822	990 952
6 months of 2009	226 193	366 136	454 561	119 217	927 673
2009	217 072	407 640	545 405	130 948	1 039 169
6 months of 2010	189 227	381 429	600 756	116 723	1 054 689
2010	306 367	494 931	638 586	138 773	1 301 111
6 months of 2011	459 770	622 837	755 902	188 653	1 649 856
2011	358 315	575 125	757 441	171 925	1 518 956
6 months of 2012	338 965	529 778	833 200	159 959	1 541 984
2012	564 702	549 232	950 963	195 476	1 869 421
6 months 2013	552 261	564 483	925 301	173 969	1 868 076
2013	533 502	535 084	952 481	212 061	1 809 006

Table 6. WACC data from the Bloomberg database.

Period	WACC	Period	WACC
2008	0,035	2011	0,07
6 months of 2009	0,035	6 months of 2012	0,07
2009	0,098	2012	0,044
6 months of 2010	0,098	6 months 2013	0,044
2010	0,115	2013	0,083
6 months of 2011	0,115		

cial statements, sustainability statements, industry analytics, as well as data taken from Bloomberg database.

The suggested hypotheses were tested on the example of OJSC Cherkizovo Group. At the first stage of research a firm industry analysis as well as company strategy analysis was conducted. This stage resulted in identification and prioritization of stakeholders that are most significant for the firm. The stakeholders that were recognized as the most significant for Cherkizovo Group are as follows:

State. This is primarily connected with the fact that the firm operates in Russian meat industry, and this industry is getting considerable financial support from the state, for instance, by subsidized interest rate, which eventually affects the cost of raising debt capital.

Business owners. Without this group of stakeholders the existence of a firm would not be possible, as these are business owners that provide such indispensable asset as owner's equity.

Consumers. Revenues and profit of a firm mostly come from selling the goods to the consumers. This makes existence of a firm impossible without this group of stakeholders.

Staff. In modern world human capital is considered to be one of the most important resources, thus, when considering the interests of stakeholders, such group as firm's employees cannot be ignored.

Competitors. The Russian meat industry market where Cherkizovo Group operates is highly competitive, so direct competitors of a company in question have strong influence on the results of company's activities, for example, on company's revenues. Against this background, this stakeholders group should also be considered when building a stakeholders value of a firm creation model.

At the second stage of the research a quantitative index that reflects mutual interests of a firm and its stakeholders in a best way, was assigned to each of the groups of stakeholders.

The following tables provide information used and reflect the sequence of calculations.

Market value of the firm was used for estimating firm's value, as this index reflects market evaluation of a firm, and therefore by definition takes into consideration maximum number of factors and data sources available on the market.

Thus, at the second stage of research database was developed to be used in further research.

Table 7. Formed information base of research.

	Market value of the company	Taxes	EVA	Price for 1 kg of pork	Revenue of OMPK	Salary
	Y	X1	X2	X3	X4	X5
2008	2929,1468	1462	67322,68	1,986551724	13963154	80004
6 months of 2009	10930,52145	2112	28352,445	1,646495726	8284202	30118
2009	18931,8961	-3347	41698,438	1,759603175	17311388	66450
6 months of 2010	28161,70555	3246	-21744,522	1,600630631	8589332	38056
2010	37391,515	4145	13195,235	1,9736	18852057	78387
6 months of 2011	30741,59745	2465	-116796,44	2,422719298	10094241	50681
2011	24091,6799	5819	56308,08	2,873032787	22276587	110819
6 months of 2012	24015,52355	2400	-2544,88	2,450336134	12041010	64370
2012	23939,3672	-14281	164165,476	2,327822581	25795195	131611
6 months 2013	24598,7635	3855	-60929,344	2,285798319	12828203	77884
2013	25258,1598	2121	-63604,498	2,493809524	26043260	153738

MODEL SPECIFICATION AND REGRESSION ANALYSIS

Research was conducted with the help of modern econometric methods and regression analysis. Reference econometric model reflects a numerical dependency of stakeholder value of a firm as a function of selected factors of creating stakeholder value of a firm. In this research reference econometric model is expressed by the following regression equation:

$$Y = a_0 + a_1 * x_1 + a_2 * x_2 + a_3 * x_3 + a_4 * x_4 + a_5 * x_5 + u, \text{ where}$$

Y – stakeholder value of a firm, expressed numerically as market capitalization of a firm. This is endogenous variable, that depends on several regressors: x_1, x_2, \dots, x_5 .

x_1, x_2, \dots, x_k – factors of stakeholder value of a firm creation. These are exogenous variables that explain endogenous variable Y.

X1 – tax rate for Cherkizovo Group;

X2 – EVA for Cherkizovo Group;

X3 – price for 1 kg of pork;

X4 – revenue of OMPK;

X5 – salary for Cherkizovo Group employees.

Dependence between stakeholder value of a firm and selected factors is represented as a sum of products of factor scores and specific coefficients, as, from economic point of view, it is suggested that each factor contributes to creation of stakeholder value of a firm.

The following tests were consistently applied to initial specification of regression model:

I. In order to select an optimal functional form for regression model Schwarz information criterion was implemented.

The concept of Schwarz information criteria suggests that when selecting the best out of all possible options of functional forms of regression equations that were tested, the model with the lower value of BIC is the preferred one.

$$BIC = \ln \tilde{\sigma}^2 + \frac{(k+1) \ln n}{n}, \text{ where}$$

$\tilde{\sigma}^2$ – sample variance of the residuals calculated as residual sum of squares divided by the number of observations.

(k+1) – number of independent variables, including intercept. In this case (k+1) equals to 6.

n – number of observations. In the case of this research n equals to 11.

Implementation of Schwarz information criterion resulted in developing the following econometric model that reflects the stakeholder value as a function of selected factors:

$$Y = a_0 + a_1 * x_1^3 + a_2 * x_2 + a_3 * x_3^3 + a_4 * x_4^3 + a_5 * x_5^3 + u,$$

II. In order to test the significance of the model F-test was conducted. In an F-test observed F-statistic from Table 8 is compared to F-critical. Observed F-statistic for this model equals to 6.234, while F-critical equals to 4.347. As F-critical is less

Table 8. Least squares method for the t-test.

Regression statistics				
Multiple R	0,876077324			
R-squared	0,767511477			
Normalized R-squared	0,535022955			
Standard error	6357,143776			
Observations	11			
	df	MS	F	F – significance
Regression	5	133415850,3	3,301287603	0,107962307
Residue	5	40413276,98		
In total	10			
	Coefficients	t-statistic	P-value	Lower 95%
Y-intersection	16488,39167	3,778687715	0,012907261	5271,598082
Variable X 1	-3,00522E-09	-0,888274024	0,415076201	-1,17021E-08
Variable X 2	-0,159674561	-3,690700396	0,014135336	-0,270888283
Variable X 3	-40,61537617	-0,097215263	0,926332063	-1114,573778
Variable X 4	4,20405E-18	3,119446102	0,026268671	7,39699E-19
Variable X 5	-2,06158E-11	-3,067142992	0,027874303	-3,7894E-11

than F-observed, the regression model in question is recognized as significant.

III. In order to test the significance of the regressors in the model least squares method and t-test were applied. The significance of the regressors is verified by testing significance of corresponding regression coefficients. T-test method suggests that for each of the coefficients in the model observed t statistic is compared to critical t-value.

Conducting a t-test for the econometric model proved the following regressors to be statistically significant: intercept, regressor X2 (EVA), regressor X4 (revenue of OMPK company) and regressor X5 (salary of Cherkizovo company’s employees).

The resulting econometric model is as follows:

$$Y = a_0 + a_2 * x_2 + a_4 * x_4^3 + a_5 * x_5^3 + u_t$$

IV. Pairwise correlation coefficients were used to test the model for multicollinearity, or correlation between regressors which would not allow the recognition of obtained results as distinct and suitable for definitive interpretation.

In regression model in study regressors X4 and X5, namely revenues of OMPK company and salary of Cherkizovo company’s employees, demonstrate collinearity. From the point of view of common sense, such result can be motivated by the fact that both companies operate on the same market of Russian meat industry. In order to eliminate the negative influence of multicollinearity on the quality of the model and further interpretation of obtained results, the cause of multicollinearity, namely one of the multicollinear variables is to be eliminated. Regressor reflecting the salary of Cherkizovo company’s employees was removed within this research. Thus, at the stage of primary testing the final version of the regression model was as follows:

Table 9. Values of pair correlation coefficients for significant covariates.

Corr (X2; X4^3)	0,38999867
Corr (X2; X5^3)	0,157428741
Corr (X4^3; X5^3)	0,937138161

$$Y = a_0 + a_2 * x_2 + a_4 * x_4^3 + u_t$$

V. Goldfeld-Quandt test and Durbin-Watson test were conducted on the model to detect the presence of heteroskedasticity and autocorrelation in the residuals correspondingly. Presence of heteroskedasticity and autocorrelation in the model decreases the quality and precision of obtained evaluations of model parameters, and eventually decrease the quality of interpretation of obtained results. Goldfeld-Quandt test and Durbin-Watson test conducted on studied model demonstrated the absence of heteroskedasticity and autocorrelation in the residuals.

VI. Confidence interval method was applied to the model to test its reliability. Results of application of this method indicate that the regression model under study can be recognized as reliable.

Thus, application of modern econometric methods resulted in developing reliable regression model of high explanatory and predictive power, and precision. This model contains only significant regressors, so that only truly significant factors of value creation are included:

$$Y = 15767,285 - 0,141 * x_2 + (4,36E - 18) * x_4^3$$

ECONOMIC INTERPRETATION OF OBTAINED RESULTS

Conducted analysis of stakeholder value of Cherkizovo Group demonstrated that EVA and OMPK company revenue are significant factors of creating stakeholder value of this company. For every standard unit increase in EVA there will be a 0.141 standard unit decrease in stakeholder value of Cherkizovo Group. Decrease in stakeholder value as firm's value added increases over a period may seem unexpected as a result, but can be explained by the fact that stakeholder value reaction to increase or decrease in EVA lagged behind. Consequently, EVA may have been positively correlated with stakeholder value of a firm, if this factor were represented as lagged variable.

Developed regression model demonstrated positive correlation between stakeholder value of the firm and revenue of OMPK company which is direct competitor to Cherkizovo company. This means that increase in OMPK company revenue is followed by increase in stakeholder value of Cherkizovo company. This can be explained by the fact that both companies are operating on the same market of Russian meat industry, and thus are both prone to the tendencies of this market, such as seasonality of demand. In this case economic meaning of the intercept in the model

is the impact of unaccounted factors on stakeholder value of a firm.

It should also be mentioned that EVA index reflects not only firm's relationships with stakeholders, but also with the state, as in order to compute this index it is needed to consider WACC, which value directly depends on the state subsidizing firm's interest rate on loan.

Thus, EVA and OMPK company revenue are recognized as significant factors of creating stakeholder value for Cherkizovo company, while business owners, direct competitors and the state appear to be key stakeholders.

RESULTS OF HYPOTHESES TESTING

The first hypothesis claimed that a model could be developed that would allow to combine both financial and non-financial factors in order to evaluate their impact on stakeholder value of a firm. Indeed, the conducted research demonstrated that such model could be obtained. The model developed as the result of research is reliable and possesses predictive and explanatory power. Comprehensive analysis of industry segment where the firm operates as well as analysis of the firm's strategy and specific features of its operations should be included in processes of building a database for developed model and selection of significant factors. Accounting and financial statements, sustainability statements, firm industry analytics, as well as data taken from independent databases, e.g. Bloomberg database, can serve as sources of information for primary data.

The second hypothesis suggested that the model would allow to separate significant factors from non-significant, and to quantitatively evaluate the impact of significant factors on stakeholder value of a firm. As a result of the application of econometric methods, such as t-test and F-test, to the model, the analysis of overall significance of the model and significance of each separate factor was provided. As a result of this stage of research, the significant regressors — those that influence the creation of the value of a firm — were selected.

The third hypothesis indicated that in order to select the proper factors for the model it is necessary to take into account industry specifics and strategy of a firm in study. This hypothesis proved to be correct, as both firm's strategy and industry specifics (e.g. active financial support to the industry provided by the government) were considered when selecting the factors of stakeholder value creation for initial regression model, and this prevented from omitting such an important stakeholder as the state is. At the same time,

the regression model did not include cattle food suppliers as significant stakeholder, as Cherkizovo Group is a vertical integrated group and thus provides food for its livestock from its own resources, whereas for other companies in this industry it would be vital to include cattle food suppliers into the model as they would appear to be key stakeholders.

CONCLUSION

This research demonstrates the application of developed methodology of identification, selection and analysis of factors of creating a firm's stakeholder value, through the example of Cherkizovo Group. In addition, the developed methodology can be used for analysis of stakeholder value creation factors for any company. The example of Cherkizovo Group demonstrates the algorithm of application of this methodology, which includes, first of all, the identification of key groups of stakeholders for a firm in study. Secondly, it includes the estimation of key stakeholders' interests and conversion of qualitative interests into corresponding quantitative variables. Next stage is building initial regression model that reflects dependence of stakeholder value of a firm from selected potential factors of value creation. Modern econometric methods help to eliminate non-significant factors stepwise, while the model is checked for overall significance, quality and reliability. The resulting regression model allows to draw conclusions about which factors influence a firm's stakeholder value creation, and to provide a quantitative estimation of their influence. This algorithm can be applied to any firm.

Undoubtedly, the application of this algorithm for a specific firm demands that the firm's industry sector, strategy and operations specifics, as well as limits on available database, are to be taken into account. Nevertheless, the methodology of analysis itself stays unchanged.

Thus, the developed methodology appears to be practice-oriented instrument that helps firms to build relationships with key stakeholders in an effective way. This allows business owners and firm's top management to gain an opportunity of having successful long-term sustainable development, as well as a possibility to manage the value of the firm in most effective way.

REFERENCES

ACCA, Deloitte (2010). Hitting the notes, but what's the tune? An international survey of CFOs' views on narrative reporting: A report from ACCA in partnership with Deloitte. Research Publications.

- Bebbington, J. (2007). *Accounting for Sustainable Development Performance*. London: Elsevier.
- Bell, S. & Morse, S. (2008). *Sustainability Indicators: Measuring the Immeasurable?* (2 ed.). London: Earthscan.
- Berman S.L., Wicks A.C., Koteha S., Jones T.M. (1999). *Does stakeholder orientation matter? The relationship between stakeholder management models and firm financial performance*. *Academy of Management Journal* 42, 488–506.
- Boston Consulting Group — BCG (2012), "The 2012 Value Creator report — Improving the OODS: Strategy for superior value creation", Research Publications.
- CFA Institute, (2007). *A Comprehensive Business Reporting Model: Financial Reporting for Investors*, Charlottesville.
- Cornell B., Shapiro A.C. (1987). *Corporate stakeholders and corporate finance*, in: *Financial Management*, vol. 16, 514.
- Donaldson T., Preston L.E. (1995). *The stakeholder theory of the corporation: concepts, evidence, and implications*, in: *Academy of Management Review*, vol. 20, #1, 65–91.
- Dunphy, D. D., Griffiths, A. & Suzanne, B. (2007). *Organizational Change for Corporate Sustainability: A Guide for Leaders and Change Agents of the Future* (2 ed.). London: Routledge.
- Erkki K. Laitinen, (2004) "Nonfinancial Factors as Predictors of Value Creation: Finnish Evidence", *Review of Accounting and Finance*, Vol. 3 Iss: 3, pp.84–130
- FEE (2011). Environmental, Social and Governance (ESG) indicators in annual reports *An introduction to current frameworks*. FEE Sustainability Group
- Figge F., Shaltegger S. (2000). *What is stakeholder value? Developing a catchphrase into a benchmarking tool*. Published in association with United Nations Environment Program
- Freeman R.E. (2010) *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Friedman, A. L. & Miles, S. (2006). *Stakeholders: Theory and Practice*. New York: Oxford University Press.
- Gibson, R. B., Hassan, S., Holtz, S., Tansey, J. & Whitelaw, G. (2005). *Sustainability Assessment: Criteria and Processes* London: Earthscan.
- ICAEW, (2009), Development in new reporting models. Information for Better Markets
- IFAC (2009). *Developments in the Financial Reporting Supply Chain: Results from a Global Study among IFAC Member Bodies*, New York
- MacLean, R., & Rebernak, K. (2007). Closing the credibility gap: The challenges of corporate responsibility reporting. *Environmental Quality Management*, 16 (4), 1–6.
- Perrini, F. & Tencati, A. (2006). Sustainability and stakeholder management: The need for new corporate performance evaluation and reporting systems. *Business Strategy and the Environment*, 15 (5), 296–308.
- Post, J., Preston L., Sachs S. (2002). *Redefining the Corporation: Stakeholder Management and Organizational Wealth*. Stanford University Press.
- Steurer, R, Langer, M., Konrad, A., Martinuzzi A. (2005). *Corporations, Stakeholders and Sustainable Development: A Theoretical Exploration of Business–Society* *Journal of Business Ethics* (2005) 61: 263–281.