Framework of Strategic Management Model for Strategy *Europe 2020*: Diachronic Analysis and Proposed Guidelines

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Since the beginnings of 1957, the European Union has always been aimed at promoting the development and cohesion of the Member States. Competitiveness as well as sustainable development have therefore long been focal points among strategic goals of the European Union. These goals were therefore documented in some strategies, namely European Single Market programme, the Lisbon Strategy and the Europe 2020. The Lisbon Strategy was aimed at turning the European Union into the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion by 2010. However, it was obvious that the Lisbon goals have not been achieved and a new strategy, Europe 2020, was hence initiated.

Many Lithuanian and foreign authors analyzed (Tamosiuniene et al., 2007; Daugeliene, 2008; Grybaite, Tvaronaviciene, 2008; Melnikas, 2008; Tvaronaviciene et al., 2008; Martinkus et al., 2009; Kirch, 2010; Balezentis et al., 2010) the situation of Lithuania and other Baltic states in a global economic system during the processes of globalization and European Union (EU) integration. However, the need for the evaluation of the Lisbon Strategy's outcomes and proposal of guidelines for ongoing strategy Europe 2020 is still topical. Hence this study focuses on the improvement of the open method of co-ordination and thus the implementation of strategy Europe 2020 by integrating quantitative methods with respect to the experience gained during the implementation of the Lisbon Strategy. This study is aimed at proposing a framework for a strategic management model dedicated to successful implementation of the new strategy Europe 2020. This article is organized in four sections according to the following tasks defined in order to achieve the aim: 1) to overview main the strategies dedicated to promoting competitiveness of the European Union, namely the Lisbon Strategy and strategy Europe 2020; 2) to assess efforts of the EU Member States in seeking Lisbon goals applying multi-criteria evaluation method MULTIMOORA; 3) to evaluate reliability of selected structural indicators applying multiple correspondence analysis; and 4) to summarize the proposed guidelines for the new strategy Europe 2020 according to the results of this study and other works. The novelty of this study lies in the fact that it introduces the application of multi-criteria decision making methods in EU policy making procedures. Multi-criteria evaluation method MULTIMOORA as well as multiple correspondence analysis were the most important methods of the research.

Analysis of EU Member States performance in the implementation of the Lisbon Strategy resulted in describing three groups of states and structural indicators: high performance group, medium performance group, and low performance group. Moreover, indicators of youth education attainment level, business investment and employment rate of older workers, are not highly correlated with economic performance of certain Member States and therefore can be regulated uniformly at the European level. These findings can be considered as the premises for successful EU-level targets translation into those for certain groups of countries.

The synthesis of proposals for target-setting and transformation methodology resulted in framework for strategic management model dedicated to successful implementation of strategy Europe 2020. The model should encompass: 1) selection of targets for the EU, certain groups of states and separate Member States; 2) mutual learning enabling to transfer the best practice among member States; 3) development of appropriate structural indicators, equally identifying all dimensions of sustainable development; 4) benchmarking (selectonovation) principles applied for an effective distribution of EU support among Member States. Multi-criteria methods (e. g. MULTIMOORA) can be successfully applied in such benchmarking.

Keywords: *European Union, Europe 2020, Lisbon strategy, sustainable development, strategic management, MULTIMOORA, dominance theory, multiple correspondence analysis.*

Introduction

Competitiveness as well as sustainable development have long been focal points among strategic goals of the European Union (Begg, 2008; Heidenreich, Bischoff, 2008; Zeitlin, 2008; Fischer et al., 2010). These goals were therefore documented in some strategies, namely European Single Market programme (1986–1992; see European Commission, 1985), the Lisbon Strategy (European Council, 2000) and the Europe 2020 strategy (2010–2020; see European Council, 2010). Situation of Lithuania and

other Baltic states in global economic system during the processes of globalization and European Union (EU) integration was analyzed in many studies (Tamosiuniene et al., 2007; Daugeliene, 2008; Grybaite, Tvaronaviciene, 2008; Melnikas, 2007, 2008, 2010; Tvaronaviciene et al., 2008; Martinkus et al., 2009; Kirch, 2010; Balezentis et al., 2010). Some studies were focused on the competitiveness and development of the Baltic region (Bernatonyte, Normantiene, 2009; Saboniene, 2009; Snieska, 2008; Snieska, Draksaite, 2007).

The Lisbon Strategy was adopted in 2000 in order to achieve the aim of becoming the most competitive economy in the world through 1) creating competitive, dynamic and knowledge-based economy; 2) modernizing European Social model; and 3) paying sufficient attention to environmental issues (Zgajewski, Hajjar, 2005; Kedaitiene, Kedaitis, 2009; Codogno et al., 2009; Steurer et al., 2010). However, it was obvious that the Lisbon goals have not been achieved and a new strategy, Europe 2020, was hence initiated (Fischer et al., 2010). Consequently, it is very important to evaluate outcomes of the Lisbon Strategy and to propose guidelines for ongoing strategy Europe 2020.

Since structural indicators identifying the Lisbon goals cover all dimensions of sustainable development (Ciegis et al., 2009a; 2009b; Codogno et al., 2009; Shmelev, Rodriguez–Labajos, 2009), the Strategy can be considered as one of a sustainable development. There are various multi-criteria evaluation methods developed (Kaplinski, 2009; Turskis et al., 2009; Turskis, Zavadskas, 2010a, 2010b; Snieska, Bruneckiene, 2009; Peldschus et al., 2010; Zavadskas et al., 2010; Antucheviciene, 2010; Klijoniene et al., 2010) which can be successfully applied in the analysis of the EU Member States performance during the implementation of the Lisbon Strategy. The Multi-Objective Optimization by Ratio Analysis plus Full Multiplicative Form (MULTIMOORA) method, proposed and developed by Brauers and Zavadskas (2006; 2010), will be used to evaluate relative positions and progress of the European Union Member States during 2000–2008. Multiple correspondence analysis will be used to explain patterns of indicators' relationships in different groups of Member States.

The scientific problem of the article can be summarized in the following question: how to improve the open method of co-ordination and thus the implementation of strategy Europe 2020 by integrating quantitative methods with respect to the experience gained during the implementation of the Lisbon Strategy.

Object of the research is structural indicators of the European Union Member States covering period of 2000-2008.

The aim of the research was to propose the framework for the strategic management model aimed at successful implementation of the new strategy Europe 2020. The following *tasks* were defined in order to achieve the aim: 1) to overview the main strategies dedicated to promoting competitiveness of the European Union, namely the Lisbon Strategy and strategy Europe 2020; 2) to assess the efforts of the EU Member States in seeking Lisbon goals applying multi-criteria evaluation method MULTIMOORA; 3) to evaluate the reliability of selected structural indicators

applying a multiple correspondence analysis; and 4) to summarize proposed guidelines for the new strategy Europe 2020 according to the results of this study and other works. The *novelty of this study* lies in the fact that it introduces the application of multi-criteria decision making methods in EU policy making procedures. The results from MULTIMOORA and multiple correspondence analysis methods are important when evaluating the performance of the Lisbon Strategy during 2000–2008, thus providing the basis for the proposal of framework for a strategic management model for strategy Europe 2020.

The enumerated methods were used in the study: diachronic analysis of scientific literature and legal acts, synthesis and summation, multi-criteria evaluation method MULTIMOORA, multiple correspondence analysis.

The Lisbon Strategy and strategy *Europe 2020*

The most recent European Union strategies for the improvement of competitiveness are overviewed in this section. The Lisbon Strategy covers period of 2000–2010, while the new strategy Europe 2020 – that of 2010–2020.

The Lisbon Strategy was adopted at Spring European Council in Lisbon, March 23–24, 2000. The main objective of the strategy was defined as turning the European Union into *the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion* (European Council, 2000). On one hand, up and promising economic situation in the EU enabled, while on the other hand growing influence of the United States required the adoption of such strategy (Kedaitiene, Kedaitis, 2009; Fischer et al., 2010).

Targets of the Lisbon Strategy are identified by either performance or policy indicators. Performance indicators refer to economic outputs while policy indicators are the results of governmental decisions. Initially there were three main objectives defined, namely 1) the creation of competitive, dynamic and knowledge-based economy; 2) the modernization of European Social model; and 3) a sufficient attention to environmental issues by applying appropriate policy-mix (European Council, 2000; Codogno et al., 2009).

The open method of co-ordination was defined as an instrument of the Lisbon Strategy's implementation (Heidenreich, Bischoff, 2008; Zeitlin, 2008). This method encompasses 1) joint identification and definition of objectives to be achieved (adopted by the European Council); 2) joint introduction of measuring instruments (statistics, indicators, guidelines); and 3) international comparison of the Member States' performance (monitored by the European Commission). In addition, the practice of structural indicators application was developed. Currently, there are 79 structural indicators describing efforts of Member States in achieving Lisbon goals. They are classified into six groups: 1) general economic background; 2) employment; 3) innovation and research; 4) economic reform; 5) social cohesion; 6) environment. It is possible therefore to analyze integration and convergence processes in various approaches.

However, it soon became clear that the Lisbon Strategy had been struggling and high level group chaired

by Wim Kok affirmed that the strategy needs to be reviewed (Commission …, 2004). Brussels European Council thus updated the strategy in 2005, henceforth called the Lisbon Strategy for Growth and Jobs. A new instrument, namely the National Reform Programme, enabling the Member States to set their short-term objectives was introduced.

The renewed Lisbon Strategy had two headline targets to be reached by 2010: overall employment rate as close as possible to 70% and R&D spending to reach 3 per cent of GDP (both are policy targets). The following additional goals can be outlined (Codogno et al., 2009):

1. Investing in people and modernising labour markets. This target is identified by such indicators as employment rate (60 per cent for women, 50 per cent for workers aged 55–64), available childcare (90 per cent availability for pre-school children), rates of participation in education processes (at least 85 per cent of 22 year olds should have completed upper secondary or a higher level of education).
2. Unlocking business potential, especially for SMEs. The target is quantifiable through policy indicators reflecting legal reductions, e. g. time required for setting up business.
3. Investing in knowledge and innovation. R&D expenditure by businesses (to amount to 67% of total R&D) and high-speed internet penetration rate (100 per cent availability in schools) are peculiar to this goal.
4. Energy and climate change. Policy indicators for this goal include the reduction of greenhouse gas emissions (by 20 per cent), the share of the renewable energy (20 per cent), the increase of energy efficiency thus saving up to 20 per cent in the energy consumption, the share of biofuels in overall petrol and diesel consumption (to be increased up to 10 per cent). The first three targets are so-called "20/20/20" targets.

The last improvement of the Lisbon Strategy was accomplished by adopting Community Lisbon Programme 2008–2010 (Commission …, 2007a) together with Integrated Guidelines for Growth and Jobs 2008–2010 (Commission …, 2007b). The need for improving abilities to use globalization benefits was stressed while keeping the strategy organized into economic, social and environmental sections.

The ongoing economic crisis raised new challenges for the European Union; therefore, a new strategy *Europe 2020* was proposed by the European Commission (2010) and adopted in the European Council (2010). It was stated, that *strategy will help Europe recover from the crisis and come out stronger, both internally and at the international level, by boosting competitiveness, productivity, growth potential, social cohesion and economic convergence* (European Council, 2010). The five EU headline targets for strategy Europe 2020 are summarized in Table 1.

Table 1

Headline targets of the strategy Europe 2020 and appropriate structural indicators

No.	Headline targets	Structural indicators
1.	Raising the employment rate for women and men aged 20-64 to 75%	Employment rate by gender, age group 20-64
2.	Raising combined public and private investment levels in research and development to 3% of GDP	Gross domestic expenditure on R&D (GERD)
3.	The "20/20/20" climate/energy targets should be met (including an increase to 30% of emissions)	Greenhouse gas emissions
		Share of renewables in gross inland energy consumption
		Energy intensity of the economy
4.	The share of early school leavers should be under 10% and at least 40% of the younger generation should have a tertiary degree	Early leavers from education and training
		Tertiary educational attainment by gender, age group 30-34
5.	Promotion of social inclusion, in particular through the reduction of poverty, with aim to lift at least 20 million people out of the risk of poverty and exclusion	Population at risk of poverty or exclusion
		People living in households with very low work intensity
		At risk of poverty after social transfers
		Severe material deprivation

Source: European Council, 2010.

Some authors (Fischer et al., 2010) argue that the Lisbon Strategy faced failure mainly because of supply-side and market-liberal orientation (Kedaitiene, Kedaitis, 2009). The growing need for more sustainable approach in the new strategy therefore should be outlined.

Assessment of the EU Member States' performance according to MULTIMOORA method

This section contains overview of the development of the MULTIMOORA method, the presentation of calculus and empirical analysis of the EU Member States' efforts in seeking for Lisbon goals.

Multi-Objective Optimization by Ratio Analysis (MOORA) method was introduced by Brauers and Zavadskas (2006) on the basis of previous researches (Brauers, 2004). This method was enhanced (Brauers, Zavadskas, 2010) and became MULTIMOORA (MOORA plus the full multiplicative form) thus improving its robustness. These methods have been applied in numerous studies (Brauers et al., 2007; Brauers, Ginevicius, 2009; Brauers, Zavadskas, 2009; Brauers, Ginevicius, 2010; Balezentis et al., 2010; Brauers et al., 2010).

The MOORA method was proposed by Brauers and Zavadskas (2006). MOORA method begins with the matrix X where its elements x_{ij} denote i-th alternative of j-th objective ($i = 1, 2, \cdots, m$ and $j = 1, 2, \cdots, n$). In this case we have $n = 12$ objectives – indicators – and

$m = 27$ alternatives – European Union Member States. MOORA method consists of two parts: the ratio system and the reference point approach.

The Ratio System of MOORA. The ratio system defines data normalization by comparing alternative of an objective to all values of the objective:

$$x_{ij}^* = \frac{x_{ij}}{\sqrt{\sum_{i=1}^{m} x_{ij}^2}},\qquad(1)$$

where x_{ij}^* denotes the *i*-th alternative of the *j*-th objective (in this case – the *j*-th structural indicator of the *i*-th state). Usually these numbers belong to the interval [-1; 1]. These indicators are added (if desirable value of indicator is maxima) or subtracted (if desirable value is minima) and summary index of state is derived in this way:

$$y_i^* = \sum_{j=1}^{g} x_{ij}^* - \sum_{j=g+1}^{n} x_{ij}^*,\qquad(2)$$

where $g = 1, \cdots, n$ denotes number of objectives to be maximized. Then every ratio is given the rank: the higher the index, the higher the rank.

The Reference Point of MOORA. Reference point approach is based on the ratio system. The Maximal Objective Reference Point (vector) is found according to ratios found in formula (1). The *j*-th coordinate of the reference point can be described as $r_j = \max_i x_{ij}^*$ in case of maximization. Every coordinate of this vector represents maxima or minima of certain objective (structural indicator). Then every element of normalized responses matrix is recalculated and final rank is given according to the deviation from the reference point and the Min-Max Metric of Tchebycheff:

$$\min_i \left(\max_j \left| r_j - x_{ij}^* \right| \right).\qquad(3)$$

The Full Multiplicative Form and MULTIMOORA. Brauers and Zavadskas (2010: 13–14) proposed MOORA to be updated by the Full Multiplicative Form method embodying maximization as well as minimization of purely multiplicative utility function. Overall utility of the *i*-th alternative can be expressed as dimensionless number:

$$U_i^{'} = \frac{A_i}{B_i},\qquad(4)$$

where $A_i = \prod_{j=1}^{g} x_{ij}$, $i = 1, 2, \cdots, m$ denotes the product of objectives of the *i*-th alternative to be maximized with $g = 1, \cdots, n$ being the number of objectives (structural indicators) to be maximized and

where $B_i = \prod_{j=g+1}^{n} x_{ij}$ denotes the product of objectives of the *i*-th alternative to be minimized with $n - g$ being the number of objectives (indicators) to be

minimized. Thus MULTIMOORA summarizes MOORA (i. e. Ratio System and Reference point) and the Full Multiplicative Form. Ameliorated Nominal Group and Delphi techniques can also be used to reduce remaining subjectivity (Brauers and Zavadskas, 2010: 17–19).

Empirical analysis of EU Member States' efforts in seeking Lisbon goals began with the definition of system of structural indicators (Table 2). The system consists of 12 indicators from the shortlist of structural indicators. Directions of optimization were also attributed to each indicator. For example, a rising level of unemployment has negative economic and social consequences (Martinkus et al., 2009; Korpysa, 2010) therefore it should be minimized.

Table 2

System of structural indicators used in diachronic analysis of EU Member States' performance during 2000–2008.

Structural indicators, abbreviations	*Desirable values*
I. General economic background	
1. GDP per capita in PPS (EU-27 = 100), GDP	Max
2. Labour productivity per person employed, LPR	Max
II. Employment	
3. Employment rate, EML	Max
4. Employment rate of older workers, EMO	Max
III. Innovation and research	
5. Youth education attainment level, EDU	Max
6. Gross domestic expenditure on R&D, GRD	Max
IV. Economic reform	
7. Business investment, INV	Max
8. Comparative price levels, CPL	Min
V. Social cohesion	
9. At-risk-of-poverty rate, POV	Min
10. Long-term unemployment rate, UEM	Min
VI. Environment	
11. Greenhouse gas emissions, GHG	Min
12. Energy intensity of the economy, ENR	Min

Data covering these indicators and period of 2000–2008 was obtained from EUROSTAT Structural Indicators database and are available from the authors upon request. Due to limited data availability three time points were chosen for the analysis, namely years 2000, 2004 and 2008. The data therefore covers 27 Member States, 3 years and 12 structural indicators, 972 observations in total.

The initial data was normalized according to the formula (1) then the formula (2) was used in order to obtain ranks of the Ratio System of MOORA. Formula (3) was applied for the ratios obtained according to formula (1), therefore resulting in ranks according to the Ratio System of MOORA. Finally, initial data was computed according to the formula (4), thus providing ranks of the Full Multiplicative Form. Final ranks for each year analyzed were obtained through the dominance theory (Brauers, 2004). The described procedure was repeated three times for years 2000, 2004 and 2008. The results are presented in Table 3.

The following main principles of the dominance theory were applied when summarizing ranks provided by different parts of MULTIMOORA. First of all, the three methods of MULTIMOORA are assumed to have the same importance. In the case of stakeholders or of their representatives like experts may have a different importance in an ordinal ranking but this is not the case with the three methods of MULTIMOORA. These three methods represent all existing methods with dimensionless measures in multi-objective optimization and consequently all the three have an important significance. *Absolute dominance* means that an alternative, solution or project is dominating in ranking all other alternatives, solutions or projects which are all being dominated. This absolute dominance shows as rankings for MULTIMOORA: (1–1–1), i. e. each part of MULTIMOORA provided the rank of 1 for a certain alternative. *General dominance* in two of the three methods is of the form: (a–1–1); (1–b–1); or (1–1–c), whereas the *overall dominance* is that one which occurs in all of the three methods, e. g. (4–3–3) against (7–5–5). The principle of *Transitiveness* is also important: if the alternative *a* dominates over the alternative *b* and *b* dominates over the alternative *c* then also *a* will dominate over *c*. The last principles are those of equability. *Absolute equability* has the form**:** (a–a–a) for the 2 alternatives. *Partial Equability* of 2 on 3 exists e. g. (5–a–7) and (6–a–3).

Table 3

Diachronic analysis of the EU Member States' relative positions (ranks) according to preset system of structural indicators and MULTIMOORA method, 2000–2008

	Ranks according to the Ratio System of MOORA			Ranks according to the Reference Point of MOORA			Ranks according to the Full Multiplicative Form			**Final ranks (MULTIMOORA)**			Changes in final ranks	
	2000	2004	2008	2000	2004	2008	2000	2004	2008	**2000**	**2004**	**2008**	2000-2004	2004-2008
Austria	5	5	5	2	2	4	4	5	3	**4**	**4**	**4**	0	0
Belgium	9	11	12	4	7	10	11	11	12	**9**	**11**	**12**	-2	-1
Bulgaria	27	27	27	27	27	27	27	27	27	**27**	**27**	**27**	0	0
Cyprus	18	18	17	26	24	19	17	16	13	**18**	**17**	**15**	1	2
Czech Rep	12	13	13	14	15	16	12	13	14	**12**	**13**	**13**	-1	0
Denmark	3	3	4	1	3	6	2	1	2	**1**	**1**	**3**	0	-2
Estonia	22	19	16	19	18	20	20	18	16	**20**	**18**	**16**	2	2
Finland	4	4	3	8	9	7	7	7	4	**7**	**7**	**5**	0	2
France	11	10	10	9	10	11	10	10	10	**11**	**10**	**10**	1	0
Germany	7	9	9	7	8	9	8	9	9	**8**	**9**	**9**	-1	0
Greece	19	21	21	20	19	15	19	20	21	**19**	**20**	**21**	-1	-1
Hungary	17	16	22	17	17	21	18	17	22	**17**	**16**	**22**	1	-6
Ireland	10	8	8	12	11	3	9	8	8	**10**	**8**	**8**	2	0
Italy	16	15	19	13	12	13	15	15	18	**15**	**15**	**18**	0	-3
Latvia	20	17	18	23	22	23	22	21	19	**21**	**21**	**19**	0	2
Lithuania	24	22	15	21	21	22	21	22	17	**23**	**22**	**17**	1	5
Luxembourg	2	2	2	10	6	1	1	3	6	**3**	**3**	**2**	0	1
Malta	21	23	25	25	20	18	25	23	26	**25**	**23**	**25**	2	-2
Netherlands	6	7	6	5	1	2	5	6	5	**5**	**5**	**6**	0	-1
Poland	23	26	23	18	23	24	23	25	24	**22**	**25**	**23**	-3	2
Portugal	14	20	20	16	16	17	14	19	20	**14**	**19**	**20**	-5	-1
Romania	25	24	24	24	25	25	26	26	25	**26**	**26**	**24**	0	2
Slovakia	26	25	26	22	26	26	24	24	23	**24**	**24**	**26**	0	-2
Slovenia	13	12	11	11	14	14	13	12	11	**13**	**12**	**11**	1	1
Spain	15	14	14	15	13	12	16	14	15	**16**	**14**	**14**	2	0
Sweden	1	1	1	3	4	5	3	2	1	**2**	**2**	**1**	0	1
United Kingdom	8	6	7	6	5	8	6	4	7	**6**	**6**	**7**	0	-1

As we can see from Table 3, there were no cases of absolute dominance in either year. However, Sweden remained in the first place during the whole period. For instance, holding rank of 1 from the Ratio System (RS), 3 from the Reference Point (RP), and 3 from the Full Multiplicative Form, Sweden generally dominated Luxembourg (2–10–1) in two parts of the MULTIMOORA,

namely by RS and RP. Hence, Luxembourg was attributed with the final rank of 2 in 2000. Noteworthy, Sweden dominated over the remaining states by transitivity. The same procedures were applied for all the remaining countries and repeated for each year analyzed.

The final ranks of the EU Member States during the investigation period are presented in Table 3. Consequently,

these states can be grouped in three groups according to their performance in seeking for the Lisbon goals. Such countries as Sweden, Luxembourg, Denmark, Austria, the Netherlands, Finland, Ireland, United Kingdom, and Germany can be described as best performing. Contrary, another group of states, namely Latvia, Portugal, Greece, Hungary, Poland, Romania, Malta, Slovakia, and Bulgaria, was peculiar with the lowest achievements in implementing the Lisbon Strategy.

However, there were no significant changes in final ranking observed. For example, Estonia and Lithuania had made the most robust ascent in 2000–2008 according to structural indicators: these states rose by four and six places from the rank of 20 to 16 and from 23 to 17 respectively. Cyprus, Finland, and Ireland can be mentioned among those states successfully achieved higher relative positions when implementing the Lisbon Strategy. On the other hand, Hungary descended through 5 places, whereas Portugal by some 6 places, supposedly due to economic problems in 2008. Italy, Greece, Denmark, and Belgium also faced descent when implementing the Lisbon Strategy. Moreover, Estonia and Lithuania rose from the lowest performance group to medium one. Portugal and Hungary, in turn, moved towards opposite direction.

Therefore it can be concluded that some states need to have their National Lisbon Implementation Programmes revised in order to successfully achieve cohesion with other EU Member States. Distribution of EU support funds should also be planned with respect to these findings.

Application of a multiple correspondence analysis for the assessment of the EU Member States' performance

Multiple correspondence analysis is an extension of correspondence analysis method introduced by Benzecri (1979) and Greenacre (1984). It allows examining the pattern of relationships (correlations) between several categorical variables (Karagiannis, 2008; Greenacre, 2010). Multiple correspondence analysis can be used for the analysis of nominal variables, therefore quantitative variables need to be recoded into nominal ones (i. e. binary variables). A Burt table is then formed and χ^2 metric used for further analysis of the relationships between variables. In addition, this method enables to discover hypothetic summarizing indicators describing data as a whole (like in factorial analysis).

Since the data analyzed consists of quantitative indicators, we needed to categorize the data into three groups, namely minimum, medium and maximum. Every indicator was thus recoded into three-level binary indicators, (100, 010, and 001) representing three groups mentioned above. The intervals for these groups were calculated according to mean and standard deviation of each structural indicator of a certain year:

$$f(x_{ij}^t) = \begin{cases} min, x_{ij}^t \le \overline{x}_j^t - 0.5\sigma_j^t; \\ med, \overline{x}_j^t - 0.5\sigma_j^t < x_{ij}^t \le \overline{x}_j^t + 0.5\sigma_j^t; \\ max, \overline{x}_j^t + 0.5\sigma_j^t < x_{ij}^t. \end{cases}$$

where x_{ij}^t denotes the *j*-th indicator of the *i*-th Member State during period *t*, and $\overline{x}_j^t$ with σ_j^t being mean and standard deviation respectively of the *j*-th indicator during period *t*. The initial data was transformed into logical table containing binary values only (both available upon request). Further analysis was performed using statistical package *STATISTICA 8.0*.

Indicators of an employment rate of older workers and business investment were omitted from the analysis since they presented low significance. The results of a multiple correspondence analysis are presented in Fig. 1.

As seen in Fig. 1, there are three groups of points which can be identified as high, medium and low performance groups. The first factorial axis can be interpreted as identifying economic development of Member States. The second factorial axis can be interpreted as describing social and environmental development.

High performance group is represented by the highest values of social and economic indicators. Highest GDP per capita (GDP3), expenditures on R&D (GRD3), comparative price levels (CPL3) and labour productivity (LPR3) identify sound economic situation in a high performance group. Furthermore, the lowest rates of unemployment (UEM1), at-risk-of-poverty (POV1) and the highest rates of employment (EML3) represent stability in a social sector. The lowest energy intensity (ENR1) and medium category greenhouse gas emissions (GHG2) indicate the need of improvements in an environmental dimension.

Medium performance group covers medium level values of economic indicators, medium and low level values of social as well as environmental indicators. Medium GDP per capita (GDP2), labour productivity (LPR2) and expenditure on R&D (GRD2) are peculiar to this group of indicators. Social dimension in this group is described with medium levels of employment (EML2) and long term unemployment (UEM2) as well as the highest rates of at-risk-of-poverty (POV3) and minimum levels of youth education attainment (EDU1). Medium energy intensity of economy (ENR2) and highest greenhouse gas emissions (GHG3) are those environmental structural indicators correlated with a medium performance group.

Low performance group is represented by the lowest values of economic indicators, namely GDP per capita (GDP1), labour productivity (LPR1), comparative price levels (CPL1) and expenditures on R&D (GRD1). Minimum level of employment (EML1), medium rate of poverty (POV2) and high level of long term unemployment (UEM3) are characteristic for a social dimension of the low performance group. Environmental dimension of the low performance group covers the lowest values of greenhouse emissions (GHG1) as well as the highest energy intensity (ENR3) supposing the need for modernization in this group.
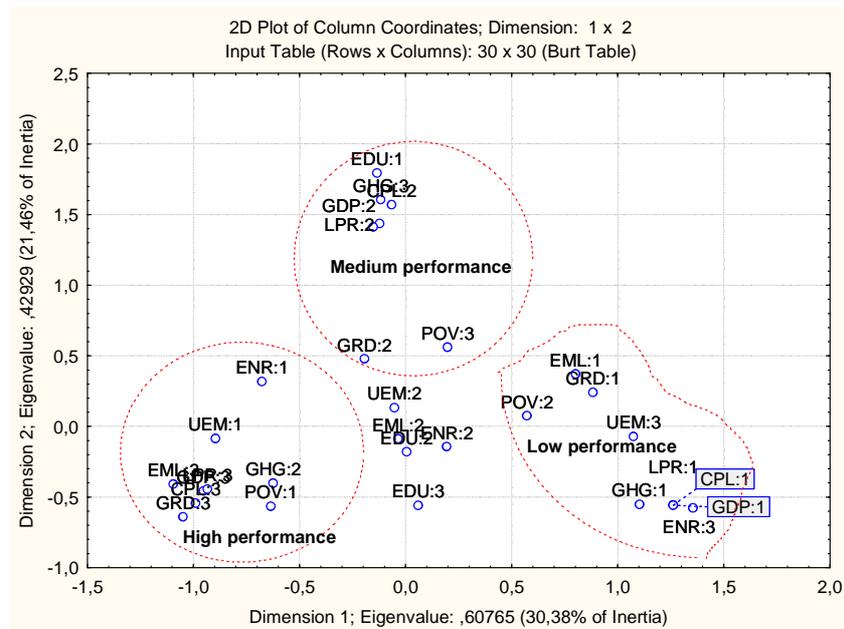
Figure 1. Plot of relationships between structural indicators (EU, 2000–2008).

Discrepancies of certain indicators raise some remarks for objectives of the Lisbon Strategy. First of all, indicators that are not correlated with either group of performance, namely youth education attainment level, business investment and employment rate of older workers, are not highly correlated with economic performance of certain Member States and therefore can be regulated uniformly in European level. The highest risk of poverty and greenhouse gas emission rates are observed in a medium performance group, hence reforms in appropriate areas are necessary.

In addition, a supplementary column identifying Member States was added in the analysis. Distances between states in the Euclidean space was displayed thus revealing the pattern of relationships between them. Member states were grouped into three performance groups virtually in the same way as this was done by the MULTIMOORA method.

Guidelines for strategy *Europe 2020*

This section synthesizes proposals for the improvement of strategy Europe 2020 rising from this and various other studies (Codogno et al., 2009; Fischer et al., 2010; Saltelli et al., 2010).

According to the results of our analysis, a novel approach towards management and implementation of the strategy Europe 2020 can be offered. The approach is based on the integration of the open method of co-ordination (OMC), multi-criteria decision making (MCDM) methods, and the practice of structural indicators (SIs). Whereas the OMC defines the procedure of implementation of strategy, the application of MCDM and other quantitative methods enables to explicitly describe the prospective actions to be taken in that implementation. Noteworthy, SIs are the basis for a quantitative analysis as well as international comparison in general.

The Lisbon Strategy, predominantly oriented towards supply-side and market-liberal means, has failed (Fischer et al., 2010). The strategy Europe 2020, should therefore be expanded and cover not only economic growth but also include qualitative and sustainable economic development. Social productivity in Europe could be increased only if social and environmental aims were given an equal importance with economic integration.

In accordance with past experience of the Lisbon Strategy there are some measures proposed for strategy Europe 2020 (Fischer et al., 2010). The new economic policy guidelines should therefore include: 1) improvement of macroeconomic coordination thus enabling a new policy-mix in the EU; 2) management of debt levels hence ensuring fiscal stability in the face of demographic transition; 3) adoption of Social Stability Pact for Europe; 4) development of low-carbon economy based on sustainable growth model; 5) consolidation of the Single Market; and 6) encouraging investment as well as research activities. In addition, the following employment policy guidelines are proposed: 1) creation of active policy for more and decent jobs; 2) development of inclusive labour markets by balancing flexibility and social security (so called *flexicurity*); 3) enhance fair employment relations and promote equal opportunities; 4) setting new targets for gender- and age-specific employment policies; 5) promotion of fair wage policies and thus macroeconomic stability; 6) guarantees for the funding of the welfare state; and 7) promoting training and education.

However, some authors (Saltelli et al., 2010) argue that the Lisbon agenda lacks sustainability. The six groups of structural indicators are distributed in such a pattern: four groups resemble economic dimension of sustainable development (i.e. general economic background, employment, innovation and research, economic reform), one group is dedicated for social dimension (social cohesion) and another one for environmental dimension

(environment), whereas institutional dimension of sustainable development remains represented by separate indicators only. Therefore more systemic approach for sustainability is needed when preparing policies for the new strategy Europe 2020.

Since this study and other investigations (Karagiannis, 2008; Martinkus et al., 2009; Baležentis et al., 2010) have defined existing differential between EU Member States, it is actual to apply selectonovation and strategic management methods especially when considering financial support programmes. Hence, the need for accounting and benchmarking of the performance occurs. Benchmarking system should consist of the system of indicators and multi-criteria evaluation methods (e. g. MULTIMOORA).

The question of indicators relies on policy of strategic targets selection. Targets in strategy Europe 2020 should be used according to the following principles (Codogno et al., 2009):

- *The final goals for the EU should be defined more strictly* thus making the choice of intermediate targets easier. Furthermore, the total number of intermediate targets should be reduced.
- An effective mechanism for *transforming EU-wide targets into national ones* needs to be developed. Medium- and short-term targets may be set by separate member States themselves.
- *Benchmarking system* embodying the practice of structural indicators and evaluation methodologies should be used to evaluate the quality of reforms aimed at achieving the targets as well as the progress made.

In this section we will discuss the latter two issues in-depth. The practice of EU-wide targets' transformation into national targets should be formed in the following ways (Codogno et al., 2009):

a) *The EU-wide target can be used for every Member State*. Currently this is the most common practice. However, it causes some inconsistence, since better performing states are not challenged when lower goals are set; on the other hand, the deadline has to be set in relation to the weakest performers. This approach hence is not suitable for the strategy mainly because of the relatively short period covered by it.

b) *A specific target can be set for each Member State*. This can be achieved either by permitting each state to set its own target or confirming these national targets at the EU level. The first option causes risk of setting unambitious goals and the latter causes the risk of blocking the decision by some states.

c) Member States can be grouped into appropriate groups according to their economic performance (as it was done in this study) and *uniform targets for each group* can be set thereafter.

The target translation therefore becomes the two-dimensional problem. Firstly, we have to realize which objectives (as well as respective indicators) can be regulated at the EU or lower levels. Secondly, it is important to recognize the polarization of the EU Member States and thus appropriately define certain relatively homogenous groups of them. The ante-preceding section described the possible way of classification of the EU

Member States according to their performance. The MULTIMOORA method was applied in order to classify the Member States. The EU-wide targets can therefore be effectively translated into those for respective groups of Member States. For instance, the performed analysis shows that the most challenging objectives should be defined for Sweden, Luxembourg, Denmark, Austria, the Netherlands, Finland, Ireland, United Kingdom, and Germany; whereas Latvia, Portugal, Greece, Hungary, Poland, Romania, Malta, Slovakia, and Bulgaria should be expected to make slower progress towards the economic and social, convergence. On the other hand, the preceding section provided us with a certain pattern of SI values observed in Member States during 2000–2008. It revealed that some indicators, namely youth education attainment level, business investment, and employment rate of older workers, do not necessarily need to be adjusted for an appropriate groups of Members States, whereas many others do.

Considering all the above, strategic management model (Fig. 2) for successful implementation of strategy Europe 2020 should encompass: 1) selection of targets for the EU, certain groups of states and separate Member States; 2) mutual learning enabling to transfer the best practice among member States; 3) development of appropriate structural indicators, equally identifying all dimensions of sustainable development; 4) benchmarking (selectonovation) principles applied for effective distribution of EU support among Member States. The financial support in turn should encourage the mutual learning processes. Hence multi-criteria decision making methods can provide with a basis for classification of the countries, determination of directions of mutual learning processes, and distribution of financial support. Indeed this is a generalized framework, whereas separate iterative analyses should be performed for the respective areas of development.
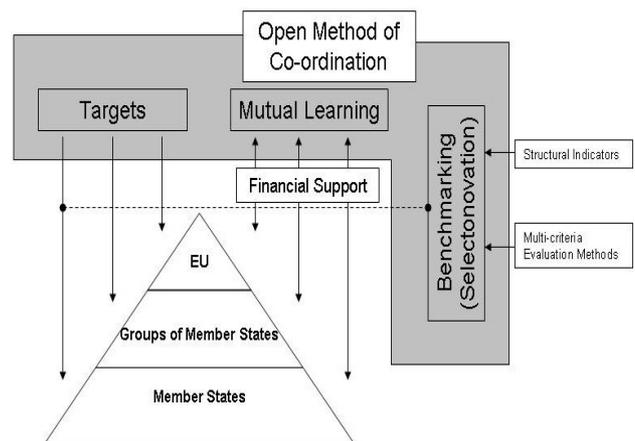

Figure 2. The framework of conceptual strategic management model for implementation of strategy Europe 2020

Conclusions

1. Competitiveness as well as sustainable development has long been focal points among strategic goals of the European Union. However, recent global economic perturbations strengthened the need of the Lisbon goals revision and a new strategy, Europe 2020, was hence initiated.

2. The main targets of strategy Europe 2020 are the following: 1) raising the employment rate for women and men aged 20-64 to 75%; 2) raising investment levels in research and development to 3% of GDP; 3) meeting the "20/20/20" climate/energy targets; 4) reducing the share of early school leavers to 10% and ensuring that at least 40% of the younger generation should have a tertiary degree; and 5) promoting of social inclusion, in particular through the reduction of poverty, with aim to lift at least 20 million people out of the risk of poverty and exclusion.

3. The application of MULTIMOORA method enabled to identify the most advanced and backward countries. Analysis of EU Member States performance in the implementation of the Lisbon Strategy resulted in describing three groups of states and structural indicators:
   - high performance group (Sweden, Luxembourg, Denmark, Austria, the Netherlands, Finland, Ireland, United Kingdom and Germany);
   - medium performance group (France, Slovenia, Belgium, Czech Republic, Spain, Cyprus, Estonia, Lithuania, and Italy);
   - low performance group (Latvia, Portugal, Greece, Hungary, Poland, Romania, Malta, Slovakia, and Bulgaria).

4. The application of multiple correspondence analysis technique was successful and thus revealed the pattern of relations between certain structural indicators in EU Member States. Indicators of youth education attainment level, business investment and employment rate of older workers, are not highly correlated with economic performance of certain Member States and therefore can be regulated uniformly in European level.

5. The performed analysis encompassing above mentioned quantitative methods together with the synthesis of proposals for target-setting and transformation methodology resulted in the framework for a strategic management model dedicated to successful implementation of strategy Europe 2020. The model should encompass: 1) selection of targets for the EU, certain groups of states and separate Member States; 2) mutual learning enabling to transfer the best practice among member States; 3) development of appropriate structural indicators, equally identifying all dimensions of sustainable development; 4) benchmarking (selectonovation) principles applied for an effective distribution of EU support among Member States. To cap it all, this study proved that multi-criteria evaluation methods, e.g. MULTIMOORA, can be successfully applied in such benchmarking.

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Strategijos „Europa 2020" įgyvendinimui skirto strateginio valdymo modelio schema: chronologinė analizė ir siūlomos gairės

Santrauka

Regiono konkurencingumo skatinimas ir darnus vystymasis buvo vieni iš svarbiausių strateginių tikslų jau nuo Europos integracijos pradžios (1957 m.) (Begg, 2008; Heidenreich, Bischoff, 2008; Zeitlin, 2008; Fischer et al., 2010). Šie tikslai buvo įtvirtinti daugelyje strateginių Europos Sąjungos dokumentų: Europos Vieningosios rinkos programoje (1986–1992 m. laikotarpis), Lisabonos strategijoje (2000–2010 m. laikotarpis) ir naujoje strategijoje „Europa 2020" (2010–2020 m. laikotarpis). Lietuvos ir kitų Baltijos valstybių situacija pasaulinėje ekonomikos sistemoje globalizacijos ir Europos Sąjungos integracijos metu analizuota daugelyje darbų (Tamošiūnienė et al., 2007; Daugėlienė, 2008; Grybaitė, Tvaronavičienė, 2008; Melnikas, 2008; Tvaronavičienė et al., 2008; Martinkus et al., 2009; Kirch, 2010; Baležentis et al., 2010). Didelis dėmesys konkurencingumui skiriamas daugelyje mokslinių darbų (Bernatonytė, Normantienė, 2009; Sabonienė, 2009; Snieška, 2008; Snieška, Drakšaitė, 2007).

Lisabonos strategija buvo priimta 2000 m. siekiant paversti Europos Sąjungą konkurencingiausia ekonomika pasaulyje įgyvendinant šias priemones: 1) konkurencingos, dinamiškos žinių ekonomikos sukūrimas; 2) Europos socialinio modelio atnaujinimas; 3) pakankamas dėmesys aplinkosaugai ir darniam vystymuisi (Zgajewski, Hajjar, 2005; Kėdaitienė, Kėdaitis, 2009; Codogno et al., 2009; Steurer et al., 2010). Baigiantis Lisabonos strategijoje numatytam laikotarpiui, akivaizdu, kad joje numatyti tikslai sunkiai įgyvendinami pasaulinės ekonominės krizės sąlygomis, todėl pradėta rengti nauja strategija „Europa 2020" (Fischer et al., 2010). Taigi šiuo metu yra labai svarbu įvertinti Lisabonos strategijos rezultatus ir pasiūlyti naujas strategijos „Europa 2020" gaires.

Lisabonos strategijos įgyvendinimo procesus identifikuojantys struktūriniai rodikliai apima visas darnaus vystymosi dimensijas (Čiegis et al., 2009a; 2009b; Codogno et al., 2009), todėl ši strategija gali būti laikoma darnaus vystymosi strategija. Darnaus vystymosi strategijai įvertinti tinkamiausi daugiakriterio įvertinimo metodai (Kaplinski, 2009; Turskis et al., 2009; Turskis, Zavadskas, 2010a, 2010b; Snieška, Bruneckienė, 2009; Peldschus et al., 2010; Zavadskas et al., 2010; Antuchevičienė, 2010; Klijonienė et al., 2010). Brauers ir Zavadsko (2006; 2010) pasiūlytas ir išplėtotas metodas MULTIMOORA (metodas, remiantis daugiatikslės optimizacijos santykių dydžių analize ir pilnoji sandaugos forma (angl. *Multi-Objective Optimization by Ratio Analysis plus Full Multiplicative Form)* šiame tyrime taikomas santykinėms Europos Sąjungos valstybių narių pozicijoms 2000–2008 m. įvertinti. Dauginės atitikties analizės metodas taip pat taikomas Europos Sąjungos valstybėms ir struktūriniams rodikliams klasifikuoti.

Tyrimo objektas – Europos Sąjungos valstybių narių struktūriniai rodikliai, *tyrimo periodas* – 2000–2008 m. *Tyrimo tikslas* – pasiūlyti koncepcinio strateginio valdymo modelio, skirto sėkmingam strategijos „Europa 2020" įgyvendinimui, gaires. Tikslui pasiekti iškelti šie *uždaviniai*: 1) apžvelgti pagrindines Europos Sąjungos konkurencingumo skatinimo strategijas, t.y. Lisabonos strategiją ir strategiją „Europa 2020"; 2) įvertinti Europos Sąjungos valstybių narių pažangą siekiant Lisabonos strategijos tikslų taikant MULTIMOORA metodą; 3) įvertinti pasirinktų struktūrinių rodiklių patikimumą ir juos klasifikuoti taikant dauginės atitikties analizės metodą; 4) apibendrinti šio tyrimo ir kitų darbų rezultatus pasiūlant naują strateginio valdymo modelį. Šiame darbe pirmą kartą apibendrinami MULTIMOORA ir dauginės atitikties analizės metodu gauti duomenys siekiant įvertinti Lisabonos strategijos įgyvendinimą Europos Sąjungos valstybėse narėse 2000–2008 m., taip siekiant sudaryti efektyvų strategijos „Europa 2020" strateginio valdymo modelį.

Tyrime taikyti šie **metodai**: chronologinė mokslinės literatūros ir teisės aktų analizė, sintezė ir apibendrinimas, daugiakriterio įvertinimo metodas MULTIMOORA, dauginė atitikties analizė.

Straipsnį sudaro keturi skyriai, atspindintys tyrimo uždavinius. Pirmajame skyriuje apžvelgiama ir analizuojama Lisabonos strategijos bei strategijos „Europa 2020" vystymosi istorija. Antrajame skyriuje, taikant MULTIMOORA metodą, analizuojama Europos Sąjungos valstybių padėtis įgyvendinant Lisabonos strategiją. Trečiajame skyriuje klasifikuojami struktūriniai rodikliai taikant dauginę atitikties analizę. Ketvirtajame skyriuje apibendrinami strategijos „Europa 2020" įgyvendinimo tobulinimo pasiūlymai.

Lisabonos strategija buvo priimta 2000 m. Pagrindinis strategijos tikslas – *transformuoti Europos Sąjungos rinką į konkurencingiausią ir dinamiškiausią žinių ekonomiką pasaulyje, užtikrinančią darnų ekonomikos vystymąsi su daugiau ir geresnių darbo vietų ir socialinę sanglaudą* (European Council, 2000). Lisabonos strategija buvo peržiūrėta (Commission …, 2004) ir pavadinta *Lisabonos strategija augimui ir darbo vietoms*. Pagrindiniai Lisabonos tikslai: investavimas į žmogiškuosius išteklius ir darbo rinkų modernizavimas; verslo potencialo išlaisvinimas ir smulkiojo verslo skatinimas; investicijų į mokslą ir technologijas skatinimas; energetinio efektyvumo didinimas ir darnaus vystymosi užtikrinimas. Galima išskirti du svarbiausius Lisabonos strategijos įgyvendinimo mechanizmus: atvirąjį koordinavimo metodą (Heidenreich, Bischoff, 2008; Zeitlin, 2008) ir nacionalines reformų programas. Lisabonos strategijos tikslų įgyvendinimas, identifikuojamas 79 struktūriniais rodikliais, skirstomas į šešias grupes: 1) ekonominė aplinka; 2) užimtumas; 3) inovacijos ir moksliniai tyrimai; 4) ekonominės reformos; 5) socialinė sanglauda; 6) aplinka. 2010 m. priimta naujoji strategija Europa 2020 (European Commission, 2010; European Council, 2010), turinti užtikrinti konkurencingumo didinimą naujomis sąlygomis. Šiuo metu nurodomi šie pagrindiniai strategijos tikslai: 1) padidinti 20–64 m. amžiaus gyventojų užimtumo lygį iki 75 proc.; 2) siekti, kad privačiosios ir viešosios investicijos į mokslinius tyrimus ir eksperimentinę plėtrą sudarytų 3 proc. BVP; 3) įgyvendinti klimato kaitos stabdymo ir energetinio efektyvumo didinimo programą; 4) nebaigusių mokyklos vaikų skaičių sumažinti iki 10 proc., o turinčiųjų bent aukštesnįjį išsilavinimą skaičius turi siekti 40 proc.; 5) skatinti socialinę sanglaudą ir mažinti skurdą (mažiausiai dar 20 mln. gyventojų turi būti užtikrintas aukštesnis nei skurdo lygio pragyvenimas).

Remiantis 12 struktūrinių rodiklių apimančia struktūrinių rodiklių sistema, Europos Sąjungos valstybių padėtis įvertinta MULTIMOORA metodu. Gauti rezultatai ir dominavimo teorijos (Brauers, 2004) taikymas leido suskirstyti valstybes nares į tris grupes pagal santykinę pažangą siekiant Lisabonos strategijos tikslų. ES valstybėms narėms suteikti galutiniai rangai pateikti 3 lentelėje. Atsižvelgiant į šiuos duomenis, valstybes sąlygiškai galima suskirstyti į tris grupes pagal jų pasiektą pažangą įgyvendinant Lisabonos strategiją. Labiausiai pažengusių valstybių grupei priskirtinos Švedija, Liuksemburgas, Danija, Austrija, Nyderlandai, Suomija, Airija, Jungtinė Karalystė ir Vokietija. Priešingai, Latvija, Portugalija, Graikija, Vengrija, Lenkija, Rumunija, Malta, Slovakija ir Bulgarija gali būti laikomos mažiausiai pažengusiomis įgyvendinant Lisabonos tikslus. Tačiau reikšmingesnių santykinės padėties kitimo atvejų pastebėta nedaug. Pavyzdžiui, Estija ir Lietuva buvo santykinai didžiausią pažangą 2000–2008 m. pasiekusios valstybės. Jos pakilo atitinkamai 4 ir 6 pozicijomis (iš 20 į 16 vietą ir iš 23 į 17). Aukštesnes pozicijas pasiekė Kipras, Suomija, Airija. Vengrija nusileido penkiomis vietomis žemiau, o Portugalija – šešiomis. Šiose valstybėse iš tiesų buvo rimtos ekonominės problemos. Italija, Graikija, Danija ir Belgija tyrimo periodo pabaigoje (2008 m.) taip pat užėmė žemesnes pozicijas nei pradžioje (2000 m.). Beje, Estija ir Lietuva perėjo iš mažiausiai pažengusių valstybių grupės į vidutinės pažangos grupę. Priešingi procesai pastebėti Portugalijoje ir Vengrijoje.

Atlikus dauginę atitikties analizę, buvo išskirtos trys grupės (didelio, vidutinio ir mažo rezultatyvumo) rodiklių ir valstybių, kurioms būdingi atitinkami rodiklių rinkiniai. Didelio rezultatyvumo grupei priskiriami geriausią ekonominę, socialinė ir aplinkosauginę situaciją apibūdinantys rodikliai. Kai kurie rodikliai nepriskirti nei vienai iš minėtų grupių, taigi strategijose jie gali būti nurodomi kaip bendri Europos Sąjungos tikslai.

Naujausiuose tyrimuose (Saltelli et al., 2010) nurodomi pagrindiniai tikslai, kuriems įgyvendinti dėmesį turi skirti strategija „Europa 2020". Ekonominė politika turėtų siekti šių tikslų: 1) stiprinti makroekonominį koordinavimą; 2) valdyti valstybių skolas, užtikrinant fiskalinį stabilumą demografinių pokyčių akivaizdoje; 3) priimti socialinio stabilumo sutartį; 4) mažinti anglies dioksido emisiją kuriant darnų ekonomikos augimo modelį; 5) plėtoti vieningą rinką; 6) skatinti investicijas ir mokslinę veiklą. Socialinė politika turėtų siekti šių tikslų: 1) formuoti darbo vietų kūrimo politiką; 2) plėtoti lanksčias ir socialinę apsaugą užtikrinančias darbo rinkas; 3) užtikrinti skaidrias įdarbinimo sąlygas ir lygias galimybes; 4) skatinti mokymąsi ir kvalifikacijos kėlimą; 5) skatinti skaidrią atlyginimų politiką. Strategijos tikslų nustatymas turėtų remtis šiais principais (Codogno et al., 2009): 1) svarbiausi tikslai turi būti aiškiai apibrėžti; 2) turi būti numatytas Europos Sąjungos tikslų transformavimas į nacionalinius tikslus; 3) turi būti sukurta efektyvi pažangos įvertinimo sistema. Šiame darbe siūloma įvertinimo sistemą sudaryti sujungiant apskaitos sistemą ir daugiakriterio vertinimo metodų taikymą. Apskaitos sistema turi remtis struktūriniais rodikliais, tolygiai atspindinčiais visas darnaus vystymosi dimensijas. Vertinti gali būti taikomas MULTIMOORA ir kiti metodai. Europos Sąjungos tikslai į nacionalinius gali būti keičiami trimis būdais (Codogno et al., 2009): a) visoms valstybėms nustatant vienodą siektiną rodiklio reikšmę; b) kiekvienai valstybei narei nustatant atskirą siektiną rodiklio reikšmę; c) sugrupuojant valstybes nares į atitinkamas efektyvumo grupes ir nustatant siektinus rodiklius kiekvienai iš jų.

Atsižvelgiant į tyrimo rezultatus, pasiūlyta strateginio valdymo modelio, skirto sėkmingam strategijos „Europa 2020" įgyvendinimui, schema. Pagrindiniai koncepcinio modelio schemos komponentai: 1) efektyvus Europos Sąjungos, valstybių grupių ir atskirų valstybių tikslų nustatymas; 2) bendrojo mokymosi procesų, leidžiančių dalytis gerąja ES valstybių narių patirtimi įgyvendinant strategijos tikslus, sukūrimas; 3) struktūrinių rodiklių, tolygiai atspindinčių visas darnaus vystymosi dimensijas, sukūrimas; 4) pažangos įvertinimo sistemos, susidedančios iš apskaitos ir daugiakriterio įvertinimo metodų, taikymas klasifikuojant valstybes nares ir skirstant finansinę paramą. Daugiakriterio vertinimo metodai (pvz., MULTIMOORA) gali būti sėkmingai taikomi atvirojo koordinavimo metodo procesuose, ypač vertinimo procese. Šiame tyrime buvo išskirtos trys valstybių grupės, kurioms galima nustatyti skirtingus strateginius tikslus atsižvelgiant į jų pažangą įgyvendinant strategiją. Dauginės atitikties analizės rezultatai parodė, kad daugumos skirtingų dimensijų struktūrinių rodiklių lygiai yra tarpusavyje susiję. Taigi būtų netikslinga nustatyti aukštus socialinio išsivystymo ar aplinkosaugos tikslus ekonomiškai silpnai išsivysčiusioms valstybėms ir atvirkščiai. Pakartotinis daugiakriterių metodų taikymas įvairiose srityse leistų efektyviau įgyvendinti atvirojo koordinavimo metodo procesus ir ES strategijas.