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THE ANALYSIS OF ASSESSMENT METHODS OF COMPETITIVENESS OF THE LATVIAN ECONOMY

For promotion to the degree of Doctor of Economics

Subbranch: National Economy of Latvia

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Abstract

The aim of the doctoral dissertation is to investigate and assess methods of and approaches to assessing competitiveness of the economy, and, by making comparison of assessment of number of individual aspects of position and dynamics of competitiveness of the Latvian economy derived by different methods, to develop a competitiveness assessment tool for the Latvian economy.

Part 1 of the doctoral dissertation deals with the object of research, i.e. the concept of competitiveness of the economy, its evolution and contemporary interpretation, includes the author’s interpretation of the concept of competitiveness of the economy within the framework of the dissertation and develops the criteria for general determination of competitiveness or non-competitiveness of an economy. At the same time, Part 1 discusses different strategies of a number of countries to ensure competitiveness of their economies and the respective approaches to the assessment of the latter. Part II of the doctoral dissertation tackles the subject of the research by critically evaluating the content of various indicators and methods as well as their interpretation in the context of assessing individual aspects of competitiveness of the economy. Part II also presents the process of developing a table for systematization of economic assessment indicators and methods which is based on three major aspects: the approach to the competitiveness assessment of an economy (aggressive or sustainability approach), the object (position or dynamics), and the scope of assessment (individual aspects or complex assessment). Part III provides a critical insight into a number of documents of the Latvian development strategies and specifies problems related to the competitiveness assessment of the economy. On the basis of methodology dealt with in Part II, the author of this research analyses several competitiveness aspects of the Latvian economy in line with both the aggressive approach and sustainability approach, providing a confirmation for the proposed hypothesis that interpretation discrepancy of the concept of competitiveness of the economy and some of its indicators may lead to differently perceived competitiveness position and dynamics of competitiveness of the economy for the same period of time. In Part III, the author develops and provides a sound reasoning for a competitiveness assessment mechanism of the Latvian economy using the obtained assessment results and considering the problems identified in the Latvian strategic development documentation.

The main findings obtained in the course of doing research for the doctoral dissertation have been published in seven scientific articles (including a monograph) and a scientific article, written and submitted for review; the theses of an international scientific conference have also been published. The outcomes of the doctoral dissertation have been presented at seven international conferences. The author has participated in the development of three scientific projects.

The doctoral dissertation consists of 187 pages. It is supplemented with 46 charts, 8 tables and 8 appendices. The outcomes of the dissertation can be employed in developing
documentation for economic strategy and taken as the basis for regular competitiveness surveys in Latvia. The scheme proposed by the author for the assessment of economic competitiveness may prove an effective tool in developing the domestic economic policy and be applied in international practice as well.
General Description of the Doctoral Dissertation

The significance of the doctoral dissertation. The concept of competitiveness of economy has recently come into the focus of contemporary economic analysis, with economists not unanimous about the exact contents of the respective analysis and the ways of interpreting the developments in various indicators. Raising competitiveness is among the key activities stipulated in the long-term economic development strategy documents of a large number of countries, Latvia including; nevertheless, the definition of competitiveness is not always in place and the framework of its assessment is more often than not obscure. Even in the presence of an agenda and clearly defined criteria for its attainment, it is possible that the latter are incompatible, while the qualifying indicators may not be indicative of a definite direction of developing competitiveness. However, the selected assessment approach and opting for certain indicators determine the behaviour. Meanwhile, the focusing on this or that indicator and as if being concerned with its favourable dynamics alone (e.g. via pronounced efforts to lower the real effective exchange rate or to push up the export share in the global market) are not enough to assume that this behaviour simultaneously means the anxiety to achieve a higher level of well-being or implies the level of population’s satisfaction with the life in the country. Competitiveness, including competitiveness of an economy, is not an observable and scalar variable, the economic theory presents divergent interpretations of it, and contradicting explanations of employed indicators and their usefulness sometimes surface. Similarly, the Latvian economic development policy still lacks a systemic approach to the competitiveness assessment, hence reducing the opportunities of improving the Latvian competitiveness position. Due to it, the author first interprets the competitiveness concept within the framework of the dissertation, conducts systematisation of the economic competitiveness assessment methods, approaches and indicators, and develops a tool for the competitiveness assessment of the Latvian economy which would enable evaluation of the attainment of strategic goals. The author puts forth a hypothesis: interpretation discrepancies of the concept of competitiveness of the economy and some of its indicators may lead to differently perceived competitive position and dynamics of competitiveness of the economy for the same period of time.

The aim of the doctoral dissertation is to investigate and assess methods of and approaches to assessing competitiveness of an economy, and, by making comparison of assessment of number of individual aspects of position and dynamics of competitiveness of the
Latvian economy derived by different methods, to develop a competitiveness assessment mechanism for the Latvian economy.

In compliance with the aim of doctoral dissertation, the tasks herein include:

- to analyse the competitiveness concept, its evolution and economic interpretation and define the concept of competitiveness of economy within the framework of the dissertation;
- to analyse and systematise the approaches, methods and key indicators used in competitiveness assessment of an economy;
- to develop a set of criteria for general defining of an economy as competitive or non-competitive;
- to methodologically modify, develop and interpret individual competitiveness indicators within the context of competitiveness assessment of the Latvian economy;
- to assess some competitiveness aspects of the Latvian economy, including a comparison of indicators produced by employing different methods;
- to develop a mechanism for competitiveness assessment of the Latvian economy;
- to come forth with conclusions and recommendations for launching a Latvian economic competitiveness assessment scheme aiming at an improved position of the Latvian economic competitiveness.

**The object of the research** is competitiveness of economy.

**The subject of the research** covers economic competitiveness assessment approaches and methods, and indicators describing the competitive position and dynamics of competitiveness of the Latvian economy.

**The theoretical and methodological framework of the dissertation.** The doctoral dissertation has been prepared on the basis of classical and modern economic theories tackling interstate economic relations and their underpinning motivation as well as the contemporary extension of the theory, according to which living standards and sustainable allocation of resources are considered a measure of competitiveness. From a conceptual point of view (to define the concept of competitiveness of the economy), the author primarily relied on the findings of S. Garelli, F. Ezeala-Harrison, J. Stiglitz, H. H. Chartrand, P. Krugman, M. Porter, D. S. Cho, H. Ch. Moon, J. H. Dunning, Ph. Gugler, J. B. Barney, and D. N. Clark. The methodology and set of indicators employed herein come from academic sources, both Latvian
and foreign (of Ireland, the UK, the Czech Republic, Greece, Croatia, the US and Spain) and international (e.g. of IMD and WEF, the World Bank and other institutions) practical research; author's modification and interpretation of individual indicators is likewise included. According to global practices, the assessment of competitiveness is primarily based on the comparison of local indicators with either the respective indicators of other countries or those of the past. Consequently, ranking is conducted, the analysis of dynamic series is carried out, and comparative analysis of indicator structure is made. Among the methods used by the author herein to assess various aspects of economic competitiveness, mention should be made of the method of statistical analysis of indicators, structural analysis and concentration valuation by Herfindahl-Hirschmann index, graphical analysis of time series, seasonal adjustment, and regression. Indicators of real exchange rates and market shares are calculated from trade turnover data by applying the method of double weighted exports (DWE). In order to estimate market shares, the author introduces an export expansion index. The estimates for labour force and capital costs are computed as unadjusted indicators and as indicators adjusted by value added (VA) deflator and purchasing power parity (PPP). Qualitative indicators both published (e.g. capacity utilisation estimates, competitiveness assessment changes reported by businesses) and unpublished (e.g. the author used expert interview techniques to poll investors' opinions underpinning investment decisions and to identify cooperation between businesses and the science sector) are used.

**Research limitations.** The standards for dissertation size and continuous evolution of the competitiveness concept confine the scope of analysed competitiveness definitions and assessment methods: not all practically used definitions or methods can be captured. Nevertheless, the author has made an attempt to systematise those published approaches that most frequently have been used in historical and contemporary literature, placing a particular focus on the latest ones and those related to Latvia, and, likewise, to provide modifications and distinctive interpretation opportunities of various indicators. Due to the reasons above, the research cannot discuss the practical application of all methods described herein, and the given set of factors impacting competitiveness shall not be treated as complete and fixed.

In order to highlight some problems in addressing and assessing competitiveness of the Latvian economy and due to the limits set on the dissertation size as well as the absence of certain indicators, the author conducted the assessment of some aspects of competitiveness position and the related dynamics (in contrast to complex assessment) in accordance with both the aggressive and the so-called sustainable assessment approaches, and compared the results obtained by employing distinctive methods.
The assessment of certain indicators and factors affecting them, e.g. professional assessment of natural resources renewal, effects of political factors, interstate trade agreements and their impact on expediency, and a number of legal aspects in such areas as labour and tax legislation, does not fall within the author's professional competence; nevertheless, these factors, though not subject to detailed estimation, are treated as essential (with expert interview outcomes testifying to it) and included as a component in the Latvian economic competitiveness assessment scheme developed by the author.

The framework formulated by the author for the assessment of competitiveness of economy does not foresee a focus on priority branches or their identification with the aim to secure special state support for boosting competitiveness.

Due to limited availability of data, some of the international comparisons were not performed, particularly for qualitative indicators and certain cost structure indicators (e.g. the relative unit energy cost dynamics computed by the author for such sectors as industry and transport).

**The structure and size of doctoral dissertation.** The dissertation consists of three parts (187 pages) tackling historic evolution and contemporary definition of the concept, dealing with theoretical and methodological framework, capturing the assessment of certain competitiveness aspects of the Latvian economy and presenting the development of a mechanism for the competitiveness assessment of the Latvian economy. The dissertation also comprises 8 tables and 46 charts, with 8 appendices enclosed.

**The structural framework of the doctoral dissertation.** In order to attain the goal set, Part I of this dissertation is dedicated to the object, i.e. the concept of competitiveness of the economy, its evolution and modern interpretations; likewise, the author formulates her own definition of the concept of competitiveness of the economy and presents the criteria for general determination of competitiveness or non-competitiveness of an economy. Also, Part I discusses various competitiveness strategies of a number of countries and their respective approaches to the assessment. Part II of the doctoral dissertation tackles the subject of the research by critically evaluating the content of different indicators and methods as well as their interpretation in the context of assessing individual competitiveness aspects of the economy. Part II also presents the process of developing a table for systematization of indicators and methods of the competitiveness assessment of economy, which is based on three major aspects: the approach to the competitiveness assessment of economy (aggressive or sustainable), the object (position or dynamics), and the scope of assessment (individual aspects
or complex assessment). Part III of the research provides a critical appraisal of a number of documents of Latvian development strategies and specifies problems related to the competitiveness assessment of economy. On the basis of methodology dealt with in Part II, the author of this research analyses several aspects of the competitiveness of the Latvian economy in Part III in line with both the aggressive approach and sustainability approach, providing a confirmation for the proposed hypothesis that interpretation discrepancy of the concept of competitiveness of economy and some of its indicators may lead to differently perceived competitive position and dynamics of competitiveness of the economy in the same period of time. In Part III, the author develops and provides a sound reasoning for a competitiveness assessment mechanism of the Latvian economy, using the obtained assessment results and considering the problems identified in the Latvian strategic development documentation.

Theses to be defended

- Although the concept of competitiveness is widely used in strategic development documentation of the Latvian economy and the objective to boost competitiveness appears among the priority development goals, the competitiveness assessment of Latvian economy lacks a systematic approach, without which a targeted policy of economic development, *inter alia* including competitiveness of the economy, loses much of its effectiveness.

- In the context of competitiveness of the Latvian economy, the conventional indicators for price and cost competitiveness as well as changes in the market share indicators should be treated with caution: these indicators can be modified and should be interpreted in the context of resources utilization, changes in the resources allocation in the economy, diversification of supply, and opportunities to meet the demand in the environment of growing welfare.

- The competitiveness estimates, expressed as ranks, emphasize the role of superiority position in the assessment of competitiveness. Their interpretation should be cautious due to several reasons: few of such ranks are taken into account by international companies in their foreign investment decision making process; a high position in business environment ranking vis-à-vis a lower rank in the competitiveness index may be indicative of the lowest level of competitiveness strategy, *i.e.* passive adjustment (as is the case of Latvia).

- In many aspects, competitiveness of the Latvian economy is weak from the point of view of both the aggressive and sustainable approaches (rising relative levels of prices
and costs, increasing emigration of the population, low capacity utilisation in manufacturing, passive adjustment strategy in promoting competitiveness, inflexible foreign trade policy, decreasing relative profitability, high energy dependence, etc); nevertheless, the dynamics of some other aspects points to certain position improvements (growing market shares, more pronounced expansion of exports, gradually increasing capacity utilization in manufacturing over a prolonged period, abating energy intensity, etc).

- In order to improve the competitive position of the Latvian economy, a consistent assessment scheme should be developed.

**The period of research** differs in the theoretical and practical parts of the dissertation due to the need to present definite cases and data availability either for one country or for cross-country comparisons. Thus, for instance, the time series, in the main, are not essential for the assessment of economic competitiveness position. The description of methods *per se* does not require the latest or, on the contrary, possibly older data (e.g. in Part II of the dissertation). The analysis in Part III covers the time period mainly from the early 1990s to year 2008, with detailed data from national accounts missing (not available until December 2009); to emphasize their topicality, some indicators rely on quite recent short-term data. Where need be, the data have been extrapolated or interpolated.

**Scientific innovations**
- The definition of competitiveness of economy;
- Systematisation of the methods, approaches and main indicators for the assessment of the position and dynamics of economic competitiveness by the following factors: the approach (aggressive or sustainable), the object (position or dynamics), and the scope of assessment (individual aspects or complex assessment);
- The development of criteria for general determination of competitiveness or non-competitiveness of economy.

**Practical innovations**
- The development of certain indicators for assessing some competitiveness aspects of an economy,
  - introducing an alternative assessment of market shares, using total output share as a measure;
• introducing and calculating an export expansion index for Latvia, its main trade partners and some other world countries ranking high in international competitiveness and business environment assessments;
• introducing a unit energy cost indicator into the cost competitiveness analysis capturing information about the utilisation of resources and related costs in a sector or economy as a whole;

The development of a scheme for the assessment of Latvia's economic competitiveness.

Author's practical contribution to the assessment of Latvia's economic competitiveness finds expression in the practical demonstration and comparative analysis of various theoretical methods (methods and indicators that are acknowledged across the world but are not used in Latvia in comparative analysis of competitiveness of economy):
• the assessment of certain competitiveness aspects of the Latvian economy and comparison of the results have been conducted by using a variety of assessment methods, among them
  o calculation of the double weighted exports (DWE) matrix and its employment in the estimation of REER of the lats and calculation of Latvia's export market share;
  o interpretation and methodological specification of some competitiveness assessment approaches and indicators (e.g. interpretation of international ranking, market share assessment methods and interpretation);
  o unit capital cost calculation for the Latvian economy: net effect and adjusting by purchase power parity (PPP) and exchange rate ratio;
  o use of unit energy cost indicator in the cost competitiveness analysis and its calculation for Latvia in the context of effective resources utilization;
  o computation of relative profitability and relative export margin for Latvia vis-à-vis its major trade partners (MTPs);
• a survey of investors' stances has been conducted using expert interview techniques with the aim to find out the role of the factors underlying investment decisions and company cooperation with the education and science sectors. Investment experts from foreign companies investing in Latvia and international companies not making investments in Latvia have been interviewed;
• comparative analysis of a number of conjuncture and welfare indicators in an economic competitiveness environment has been made.

**Approbation.** The author has discussed competitiveness of the economy related issues and presented the findings of the doctoral dissertation at the following events

• as researcher of scientific project No. 2008/ZP-104 "Competitiveness of the Latvian Economy and the Role of Investments in Its Enhancement", project leader E. Dubra,

• as research assistant of the University of Latvia project 2007./ZP-12 "Investment Strategy for Boosting Latvia's Economic Competitiveness in Foreign Markets", project leader E. Dubra,

• as doctoral student, participant in the project LU- 5 "Assessment of Latvia's Competitiveness and Growth Prospects in the EU Integration Process" under Professor E. Dubra and Professor L. Frolova in 2004,

• dealing with computation and analysis of competitiveness indicators of economy at the seminars for students of the Faculty of Economics and Management at the University of Latvia (LU),

• participant and reporter at scientific conferences.

The basic findings of the dissertation have been analysed in 7 articles, including a monograph. One scientific article has been written and submitted for review, and the theses of one scientific conference have been published. The findings of the research have been presented at 7 scientific conferences. The author has taken part in the development of 3 scientific projects and "Human Development Report of Latvia 2006/2007".
Main Findings of the Doctoral Dissertation

1. Competitiveness of the economy as a dynamic concept

Part I of the dissertation analyses the research object. The literature of economic science abounds in a vast application of the competitiveness concept, capturing competitiveness of the state, people, companies, exports, economy, etc. The author concludes that, notwithstanding the vast application in the economic science and the fact that competitiveness often appears among the major national goals for economic development, the very concept of the phenomenon often is not specified or the framework for its assessment defined either in the documents or practical research papers. However, the concept and perception of competition and competitiveness have been under a constant impact of historically evolved systems of values, hence the need to define competitiveness of the economy at least within a certain research or document surfaces.

The discussion of the concept of competitiveness of the economy (and competitiveness in the economic science in general) focuses on issues whether competition is a self-evident primary or an artificially maintained element of competitiveness, with competing rather implying the ability to coexist and, specifically in economics, to be able to satisfy one's own needs without prejudice to other economic agents at the current junction and in the future as well. In many cases, competitiveness is understood as a superior position stemming from the so-called exclusivity of goods or services or artificially maintained advantages of business environment. These qualities are the underpinning factors for earning higher profits on account of weaker market partners that might be lacking information, resources or skills; they, however, are likely to be unsustainable, with interpretation conflicting with the co-existence idea if satisfying needs prevails in the interpretation of economic competitiveness. The majority of researchers (e.g. M. Porter; Kim Ch. W., J. B. Barney, D. N. Clark) associate competitiveness with some existing advantage, although the latter may come from different sources. The research of competition based on trade flows is represented by F.Ezeala-Harrison; the aggressive strategy, with an emphasis on political (safety) aspect of competitiveness, is supported by C. V. Prestowitz. The so-called "knowing-the-winner" approach is often used in international research, e.g. working papers of the IMF, the WEF, etc. P. Krugman and J. Stiglitz widely discuss the topic of unfoundedly heightened aggressiveness in the external market; this problem was also in the focus of H.H.Chartrand who rather treats competitiveness from the point of view of fitting in, while M. Casson highlights the differences between competitiveness of companies and countries.
Proceeding from theoretical findings on competitiveness at various levels of the economy and on the basis of evolving contemporary economic thinking, the author defines competitiveness of the economy as a quality that is inherent in the economy as a system: from the positional point of view, it is "fitting" in the region or the economic model of major trade partners, while from the point of view of dynamics it is the ability to effect changes in such an economic model by implementing a sustainable conception of managing the existing resources (production factors) or by prompt adjustment to the changes brought about by other regional countries or major trade partners.

At the same time in the theoretical part, the author develops the criteria that allow for identifying the non-competitiveness problem of an economy without plunging deep into the analysis of competitiveness. In line with the proposed definition of competitiveness the economy, the author also specifies general criteria for its assessment. An economy can be classified as non-competitive, if it protractedly complies with one (or in the short run – with more than one) of the following criteria:

- the country receives and uses free of charge foreign financial assistance (excluding the aid to do away with the aftermath of natural disasters), which suggests that the existing economic structure, its resources management model and the mode of maintaining international economic relations cannot ensure the meeting of the population's needs;
- country's living standards fall behind and simultaneously diverge from those of the MTPs, the region or the rest of the world;
- the number and/or proportion of people (in the presence of also negative migration balance) emigrating abroad is rising;
- the country is involved in military conflicts with another state/region that affect its territory as well as availability and allocation of resources.

In Part I, the author discusses various strategies to ensure competitiveness of the economy and competitiveness assessment schemes launched by some countries, e.g. Ireland, the US, Greece, Croatia, and the Czech Republic. The author concludes that several countries and regions (e.g. the US and the EU) pursue the goal to become most competitive in terms of economy, which points to mutually exclusive objectives and the prevalence of aggressive approach in their competitiveness strategies.

Part II tackles the subject of the doctoral dissertation, with the author critically valuating the methods and main indicators used in assessment of various competitiveness aspects of the economy and pointing to inconsistencies, weaknesses and advantages in their interpretation as well as their application to Latvia’s economic circumstances.

The summary of Part II and the system of economic competitiveness assessment methods and indicators build on the following factors:

1) the approach to assessment of competitiveness of the economy (aggressive or sustainability approach), which dominates the formulation of the concept;

2) the position (excluding dynamics) or dynamics (excluding assessment at a definite period of time) of the object under review;

3) the scope of assessment (individual aspect (-s) or complex assessment).

Under aggressive approach, the author classifies those methods and indicators which 1) enable (and whose aim it is) to identify a superior position of an economic agent, including a country and economy, over another economic agent or 2) by which it is possible to reveal the ability of an economic agent to outpace or outdo (in an area of activities or quality) another player and/or occupy its market share. It is simultaneously obvious that the first instance addresses the status or position, whereas the second is related to dynamics.

By sustainability approach\(^1\) to the assessment of competitiveness the author implies such an assessment that addresses the economy in terms of the so-called fitting in and resources management. Sustainability is defined as a quality of economic functioning. The economic development framework is thought to be sustainable, provided that by the existing economic management model it is possible to meet the needs of economic players in a way that does not prejudice the provision of similar living standards also in the future. Undeniably, this aspect has certain constraints in terms of resources: they may be replaceable, renewable or non-renewable. As with the aggressive approach, the position and dynamics may figure as the subject of competitiveness assessment of the economy also for sustainable approach (see Table 2.4).

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\(^1\) According to the definition under Programme for promoting commercial competitiveness and innovation for 2007 – 2013, sustainable development is an integrated and balanced development of community’s welfare, environment and economy, meeting the current social and economic needs of the population, which provides the compliance with the environmental standards without prejudicing the prospects of meeting the future generations’ needs, and ensures preservation of biological diversity.
<table>
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<th>Position assessment: comparison with indicators in other countries, desired position or equilibrium position</th>
<th>Dynamics assessment: comparison with the respective past position or position changes vis-à-vis other countries or target value</th>
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<td>1. Analysis of market shares</td>
<td>1. At the national level, analysis of possibly wider range of indicators (many individual aspects), with conclusions building on whether the majority of indicators point to a weak or strong competitiveness position</td>
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<td>2. Assessment of trade potential</td>
<td>2. At the global level, ranging by the so-called excellence principle estimating a wide range of indicators (acknowledged assessments at the international level by the IMF, WEF, World Bank and other institutions)</td>
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<td>3. Analysis of trade flow structure and its diversification *</td>
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<td><strong>Assessment of individual aspects</strong></td>
<td><strong>Complex assessment</strong></td>
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<tr>
<td>1. Analysis of changes in price and cost levels</td>
<td>1. At the national level, analysis of possibly wider range of indicators (many individual aspects), with conclusions building on whether the majority of indicators point to a weak or strong competitiveness position</td>
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<td>2. Analysis of changes in foreign trade structure indicators and market shares</td>
<td>2. At the global level, ranging by the so-called excellence principle estimating a wide range of indicators (acknowledged assessments at the international level by the IMF, WEF, World Bank and other institutions)</td>
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<td>4. Analysis of changes in business environment indicators</td>
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<td><strong>Assessment of individual aspects</strong></td>
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<td>1. Capacity utilisation level (polling data)</td>
<td>Extensive summary of individual aspect assessment where the judgement is solely made in regard of economy being competitive or non-competitive; the judgement builds on the prevalence of positive/negative evaluation</td>
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<td>2. Development of human resources (education, health, reasons of migration)</td>
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<td>6. Comparative analysis of availability of goods and services and the degree of their utilisation</td>
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<td><strong>Assessment of individual aspects</strong></td>
<td><strong>Complex assessment</strong></td>
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<td>Assessment of growth rate and forecasts for indicators under Sector 3 (primarily for Group 1-5 indicators)</td>
<td>Extensive summary of individual aspect assessment where the judgement is solely made in regard of competitiveness position strengthening or weakening; the judgement builds on the prevalence of positive/negative assessment of changes</td>
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* The table has been devised by the author.
Although some of the indicators may be employed in both assessment approaches – the aggressive and the sustainability approach, the author would like to draw attention to the context and interpretation of their analysis. Thus, for instance, the author presents the diversification analysis of the VA structure and trade flows in the first part of the table. From the positions of the aggressive approach, the focus is on extensive production and exports of goods and services with high value added; consequently, the analysis might aim at identifying dependence on exports or imports of certain goods (including the indicators of energy dependence). In a similar way, the analysis of business environment indicators, if directed towards artificial creation of advantages vis-à-vis other countries in an effort of attracting investment or reducing costs, should be looked upon as a kind of competition, hence these respective indicators should fit into the context of aggressive assessment. It may materialise as a competition with certain tax or export policy discriminatory conditions between countries, licensing, etc.

For a generalised analysis, the author interprets the position assessment of competitiveness of the economy as a comparison of a certain indicator or system quality inherent in it at a definite moment of time (e.g. foreign trade structure or trade potential utilisation level in this or that year, etc) with

- the preferable system status, if such has been determined beforehand;
- another similar system (e.g. the economy of one country versus the economy of another one).

The assessment of the dynamics, in turn, captures

- the comparison of certain indicators or a position change with the respective values of the past (within the economy), evaluating compliance of the dynamics with the desired status (rising/falling);
- changes in certain indicators or position vis-à-vis the respective desired value (within the economy), evaluating the trend (converging or diverging);
- changes in certain indicators or the position vis-à-vis other economic agents (globally – other countries) in a definite period of time, evaluating the trend (converging or diverging).

A weakness of assessing a separate indicator is that consistent sticking to a single indicator (e.g. unit labour cost, per capita GDP, rank in an international listing, etc) may render the attainment of its target value an end in itself, ultimately depriving this single
indicator of the ability to describe the competitiveness position or changes in it (as context is missing) and giving rise to inadequate economic policy.

The so-called comprehensive studies also often suffer from certain weaknesses. Thus, the abstraction from the concept definition and goal setting in competitiveness strategies tends to lead to simultaneously conflicting strategic aims, which, in turn, may result in contradictory or loose assessment; meanwhile, the recommendations may contain tasks that are difficult to accomplish at a time.
1. The Problem of Competitiveness Assessment of the Economy and Its Possible Solutions in the Context of Improving the Competitive Position of the Latvian Economy

In Part III of the dissertation, the author briefly discusses the assessment of Latvia's economic competitiveness presented by other authors (M. Bitāns, Z. Leduskrasta, G. Dāvidsons, M. Kazāks), analyses strategic documents related to Latvia's economic development, focuses on some competitiveness aspects of the Latvian economy using the methods and modifying and demonstrating interpretations of the indicators dealt with in Part I and Part II, and devises a mechanism for assessing competitiveness of the Latvian economy.

In Part III, the author finds substantiation for the hypothesis above: distinctive interpretations of one and the same indicator, as a rule, result in different perspectives in regard to the competitive position and dynamics of competitiveness of the economy (e.g. valuation of international ranks, real exchange rate estimates); distinctive competitiveness indicators, at the same time, suggest different assessment. Thus, for instance, from the aggressive assessment side, an appreciation of the real exchange rate is indicative of weakening competitiveness, whereas expanding market shares and higher diversification of foreign trade in goods and services (a decrease in HHI) point simultaneously to its improvement.

By employing different methods, the author arrives at the assessment of Latvia's export market shares (as Latvia's export shares in imports of MTPs, their total supply and region's aggregate output); it demonstrates the expansion of the market shares which for the same period of time may differ by around 40%. The author computes the supply matrix for 1995 – 2008 for major trade partners of Latvia and uses it in the estimation of market shares and also in the calculation of weights for real exchange rate computations.

In order to estimate aggressiveness of the external market, an export expansion index is introduced and computed (see Chart 3.1); it denotes the ability of the country to generate income from exports taking into account the fact that the number of population involved in the process is changing. Likewise, the author concludes that the expansion of Latvian exports in 1994–2008 had been more pronounced than showed by the indicator unadjusted by the number of population and larger than for other new EU Member States, Russia or China. Export expansion in many developed countries with a higher competitiveness rank at an international level, on the other hand, is becoming weaker due to the other economies gradually converging towards higher income levels and some of them (e.g. the Netherlands, Germany, etc) recording population growth due to migration. The export expansion index is obtained by doing multiplication of the index of market share changes against the base (expressed as fractions of
unity, calculated as country's export share in global exports) and the index of population changes against the base, both for the same period of time. As the number of population is rapidly shrinking in Latvia, the obtained result shows that the ability of one inhabitant to make export income for the Latvian State has steeply increased over time.

![Chart 3.1. Comparison of countries with an increasing export expansion index](image)

When measuring expansion in terms of country and world export ratios, the focus is on the aggressive approach to competitiveness aspect of a national state (aggregate ability of the residents of a definite territory to take certain market shares, to overwhelm competitors, etc); when this indicator is adjusted by the number of population, we obtain such an expansion value that is more relevant for capacity. With regard to Latvia, it could be stated that the ability of one inhabitant to generate export income has increased more rapidly than in most major trade partners. However, this does not ensure a higher competitiveness position, as due to serious economic problems strong emigration from the country, testifying to population's discontentment with the life, is observed (see the text hereafter).

The author computes and evaluates different indicators of price and cost competitiveness. Despite a gradual convergence of relative price and cost levels of Latvia and its major trade partners, differences are still in place in absolute terms; from the point of view of aggressive assessment approach, they underpin Latvia's favourable economic competitiveness position. The level of the real effective exchange rate of the lats increases if

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1 The computations and diagram are developed by the author using Eurostat trade statistics, the WTO data (http://www.wto.org/english/res_e/statis_e/Statis_e.htm#database, cited 10.12.2009) and the UN data on world population (http://spreadsheets.google.com/ccc?key=phNtm3LmDZENoqUmTikF9DA, cited 10.12.2009).
periodically updated weights calculated by DWE method are used instead of simple weights of the foreign trade turnover, yet without any significant effect on this indicator's trend.

Using the approach of J. Felipe, the author calculates unit labour costs and unit capital costs for the Latvian economy (e.g. adjusted by PPP, VA deflator, etc); it is found that, from the point of view of costs, competitiveness of the Latvian economy has weakened under the impact of both labour and capital costs. Additionally, a unit energy cost indicator for industry and transport sector is introduced as a measure of cost competitiveness and calculated; it is found that the ratio of energy costs to total value added in industry and the transport sector in Latvia has substantially increased on account of steeply rising unit energy costs, pointing to the need to address such problems as energy dependence, energy diversification and economic utilisation, and capacity utilisation. The author using energy balance data published by the CSB of Latvia (consumption of some energy resources in industry) until 2008, data from national accounts on VA and output in industry and the transport sector, Eurostat data on prices of electricity and gas (in absolute terms) for industrial customers, and data of the EC Directorate-General for Energy on fuel prices, including taxes.

The calculation of relative export profitability indicators (following S. Bravo and E. Gordo) has led to an assumption that in the period of buoyant economic growth the indices of relative profitability and unit margin both decreased in Latvia and its major trade partner countries; however, the drop in Latvia's indicators was notably more pronounced resulting in a steep decline in relative export margin since 2004 (see Chart 3.2).

![Chart 3.2. Dynamics of Latvia's relative export profitability (2000 = 100%)](chart3.2)

1 Author's computations using Eurostat, CSB and Goskomstat data.
The level of responsiveness in expert interviews both with foreign company experts investing in Latvia and those who do not invest as well as experts from Latvian companies investing abroad, was extremely low; nevertheless, the submitted answers show that when companies are making investment decisions they rely on their own systems of indicators, with international assessments quite insignificant. The analysis of international institutions' research in the field of competitiveness and business environment prompted that their findings should be interpreted with precaution: the attempts to take an ever higher position in the WEF or World Bank Doing Business assessments do not always lead to strengthening in the competitive position. For instance, the introduction of a specific comparison of relative positions of the two indicators enabled the author to conclude that a relatively higher position in the Doing Business assessment is typical for countries (Latvia including) with a low competitiveness assessment in the WEF global competitiveness index, hence specific non-competitiveness caused, artificially maintained or naturally arising traits of business environment (primarily associated with lower costs, shorter period needed to accomplish transactions, less documentation, etc) are reflected, making the respective country more attractive in investors' eyes.

From the positions of sustainable approach, the author detects certain resources related competitiveness problems, among them continuously low capacity utilisation in manufacturing that gives rise to extra costs (according to situation survey data obtained by using methodology of the European Commission, capacity utilisation in manufacturing in Latvia substantially lagged behind the majority of the EU countries even in 2003–2007, i.e. the years of economic prosperity). Accumulated capital per employed person is at a low level and the price level, e.g. in 2000–2007, converged towards the EU15 more dynamically than did the volume of consumption and investment in real terms. It is interesting to note that after 2005 the real volume of investment started to diverge from the line describing a proportional level of prices and real consumption (see Chart 3.3).
Chart 3.3. Convergence of price level and real consumption for actual individual consumption and capital goods in Latvia

Consumer confidence is also at a low (predominantly negative) level even in the years of the economic prosperity, migration of the population out of the country, at the same time, becomes more noticeable (negative migration balance), and the income distribution gap is widening. Chart 3.4 uses an absolute emigration variable (the number of population), while in the event of radical changes a relative variable, e.g. the number of population that have left the country, could be used. For the period between 1995 and 2005, a closer correlation between consumer confidence and population emigration is observed, and the value of determination coefficient rises to 0.58. Nevertheless, the relationship becomes notably looser when the points describing the 2007–2008 financial crisis and its effects are included in the sample: emigration tended to increase again despite the crisis in other countries confining it somehow, yet the confidence level did not drop substantially behind the -50% margin.

1 Author's diagram using Eurostat data.
In Part III 3, the author of the research deals with the documentation related to the Latvian long-term economic development and identifies a competitiveness assessment problem. The author finds (Section 3.1) that at this junction a consistent scheme for Latvia's competitiveness assessment is missing and competitiveness of the economy is not regularly evaluated at the national level; consequently, the attainment of economic policy goals becomes more cumbersome. Despite one of the strategic documents for economic growth defining competitiveness (The Competitiveness and Innovation Framework Programme), the definition is not complete, whereas the other policy documents are not correlated with the defined concept, the application of which, at the same time, lacks consistency.

The mechanism for assessing Latvia's competitiveness developed by the author in this part first foresees the defining of the concept, the development of an assessment scheme and an eventual institutional framework for the assessment (involved institutions). A similar scheme would be effective in a general case and in the competitiveness assessment of the

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1 Author's diagram using population migration data of the CSB and confidence indicators released by the European Commission.
economy of a definite country as well (with some employed indicators or their interpretation as distinctive elements).

The author would classify an economy which is characterised by any of the non-competitiveness assessment criteria dealt with in the doctoral dissertation and Part I herein, as non-competitive, with the central purpose of the upcoming analysis consisting in identifying the causes of processes and opting for economic and social measures to avert them. If a country does not comply with any of the criteria, competitiveness or non-competitiveness can be determined by the principle of it "fitting" with its market supplies, management of resources, etc, into the economy of a region or mutually closely related country group. Meanwhile, the measure of its competitiveness would be convergence or divergence of its living standards vis-à-vis major trade partners or the respective region.

The author maintains that competitiveness assessment of a single country, e.g. Latvia, should focus on some specific aspects that might possibly point to the presence or absence of problems depending on general perception of competitiveness (i.e. whether competition is primary); however, it is not necessary to tackle all indicators that are theoretically sound or often widely used in competitiveness assessment in the world. Hereinafter, the author describes her own mechanism developed for the competitiveness assessment of the Latvian economy on the basis of discussions presented in previous parts.

The author strongly believes that the assessment of competitiveness should first start with an exact specification of the competitiveness concept, i.e. what status of the economy is deemed to be a welcome position. The methods to be employed and selection of indicators and instruments to obtain them should follow afterwards by involving respective institutions and processing and analysing data. Even though the sustainability approach to defining and assessing competitiveness seems more preferable to the author, the mechanism for assessing Latvia's economic competitiveness first provides an opportunity to chose the strategy for competitiveness assessment and provision (aggressive or sustainability approach; see Chart 3.1). It is important due to several reasons:

- the sustainability approach could be more suitable for the nature of economic competitiveness on a wider scale, yet the desired system status is more difficult to formulate;
- the problem of so-called moral hazard: a country to be the first to fully refrain from aggressiveness strategy in the foreign market may be controlled economically/politically if other countries continue to practice it; on the other hand, another country that pays more attention to use of resources and environment-friendly technologies (within sustainability strategy of meeting the needs of the
society) may not benefit if other countries do not follow suit, thus losing the motivation;

- implementation of an independent economic policy differs across countries;
- data for the application of aggressive approach are often more readily accessible; moreover, countries with a competitiveness problem often record low living standards (low income and consumption levels), which may be associated with insufficiently captured foreign market (inadequate international cooperation); in this respect, it may be important to analyse export expansion and other so-called aggressiveness indicators and underlying factors.

Chart 3.5 shows that the general scheme of economic competitiveness assessment is the same, irrespective of the chosen strategy. The main differences refer to defining the desired system status and stages (1), (2), (3), and (4) when definite competitiveness indicators and specific assessment methods are used. The author proceeds with explaining the above referred assessment stages.
Chart 3.5. A scheme for assessing Latvia's economic competitiveness

1 Developed by the author.
**Determination of the desired system status.** If Latvia's economic competitiveness is judged by the aggressive approach, it is important to estimate Latvia's world market share and to know how the trade potential is used, to what extent Latvia outpaces other countries in technology terms, business indicators and other comparisons. In other words, the formulation of desired status requires a set of definite measurable competitiveness factors, e.g. outpacing neighbouring countries in terms of high technology exports to total exports, major trade partners in terms of export expansion index in the circumstances or either constant or growing local population, etc. The formulation undoubtedly should rest on a sound basis (e.g. it would not be reasonable to set an objective to outdo exports of a much bigger economy in absolute terms). From the point of view of sustainability approach, the formulation of an accurate objective is more problematic, if higher living standards figure as a general end, as in many areas subjective perceptions would be in place; nevertheless, attempts should be made, to the extent possible, to opt for such a formulation of living standards which would capture consumption opportunities and resources utilisation (in this case, indicators in terms of value would be unwelcome as they may distort the perception of investment and utilisation due to changes in prices).

(1) **System status assessment against the desired status (aggressive approach)** is primarily associated with the activity in the foreign market. What indicators would be suitable for the aspects of Latvia's economic competitiveness? In Section 3.2 of the doctoral dissertation the author shows that the estimation of the market share expansion is related to the problem of optimum level. If it is obvious that living standards are low and the domestic market small, the promotion of exports and expansion of the market share may seem reasonable; thus for instance, in this context the position of Latvia's economic competitiveness may be estimated either by the level of domestic supply or export expansion index proposed by the author (export expansion of a national state is measured as an export share in total global exports adjusted neither by population nor by employment changes). It is quite obvious, however, that this indicator loses its relevance over time. From the positions of aggressive approach, Latvia can be considered a so-called catching-up economy or an economy chasing others in terms of convergence; if so, the focus should be on aspects related to income earning prospects. From the point of view of foreign trade, diversification matters, whereas in the context of export expansion, the growth in exports of high value added goods and the respective export ratio should be estimated taking into account the fact that the share of domestic inputs in the production of the respective goods and services is sufficiently strong. The assessment of the trade balance and current account would not be reasonable in the circumstances of large imports of capital goods for industrial restructuring, yet at a higher
level of economic development these indicators become significant in terms of equilibrium. In this respect and in the case of Latvia where the level of accumulated capital, as showed by the author in Part III, is extremely low, the assessment of the import and export structure ranks significant: for a so-called catching-up economy it is important that imports are not dominated by consumer goods and services until a definite level of accumulated capital is reached. The findings that result from international assessments also serve well in the context of the aggressive approach, yet ranking should be interpreted with caution: e.g. a high position in the rank of Doing Business can testify to the absence of competitiveness and scaled-down standards for potential investors, which ultimately may undermine the positions of domestic investors. In the context of aggressive approach, the attraction of foreign investment or promotion of domestic investment may rely on artificially maintained advantages, yet these business environment support aspects, like any other supportive mechanism, should be treated cautiously due to the risk of certain disproportions emanating or strengthening in the economy. Although legal aspects of business environment are similarly significant, the author does not present a detailed analysis of them in her research but maintains that terms and conditions of interstate agreements, e.g. the ability to reach economically valid, non-discriminatory terms, are noteworthy for the assessment of the competitive position of the economy by both approaches. To this end, the focus should be not only on customs tariffs and commodity certification issues, e.g. the proportion of export or import value or volume in natural terms to be subject to trade restrictions in tariff or non-tariff barrier terms, but also on production and trade quotas as well as political relationships with eventual economic implications (and vice versa). The author believes that due to the limited resilience of the Latvian economic policy which is constrained by the participation in the EU and other factors, this would be a more effective approach to assessing trade potential utilisation than, say, gravitation models.

From the point of view of aggressive approach, it is vital to maintain an adequately low level of unit costs and prices in absolute terms vis-à-vis such goods of other countries that are easy to compare in terms of competitiveness, i.e. competing for the place in the market; yet not every price fall in the domestic market should be looked upon as strengthening the competitive position, for it can be a reflection of competitiveness when a lower price does not drive higher earnings due to market expansion but rather minimises losses by maintaining demand in real terms. This strategy is not sustainable.

(2) The assessment of dynamics against the desired status should cover a protracted period of time to compare indicator values under Section (1) with the desired values during the period of change (convergence or divergence can be determined also in the
event if the desired value undergoes changes over time (see Chart 3.1)). The dynamics of competitiveness can be estimated irrespective of the position assessment, yet effectiveness of individual indicators should be considered. Thus, for instance, the assessment of REER dynamics and equilibrium for Latvia may not contain sufficient information about some aspects of the aggressive assessment approach to economic competitiveness due to several reasons:

1) importance (weights) of currencies included in the REER calculation cannot be estimated by the country of goods' origin due to statistical peculiarities;

2) as a result of exports depending on imports, the dynamics of the REER of the lats and trade flows for intermediate goods and capital goods so far has suggested symmetric changes: export growth is related to import growth in the periods of a more favourable REER developments;

3) with productivity improving and international cooperation expanding, the Latvian market shares and the export expansion index have increased despite unfavourable real exchange rate trends in some years between 1994 and 2008.

Consequently, the employment of the real effective exchange rate in the competitiveness assessment of the Latvian economy is not primary, as in the convergence circumstances a higher REER is associated with essential structural and qualitative adjustments in those indicators that are used in its calculation (productivity, price level), which also renders the assessment of REER equilibrium difficult.

(3) According to sustainability approach, a competitive economy (from the point of view of position) is characterised by population's satisfaction with life in a particular territory and the existing political system where they can take the advantage of current opportunities and find new ones without prejudicing the prospects of future generations to enjoy the same or even higher living standards. The author maintains that the derivation of specific indicators (on many of them, information is scanty) would be vital in this respect, for instance:

- what value added has been generated using domestically produced resources-efficient technologies, and whether these technologies have won support (via strong demand, transfer traditions, etc) outside the country;

- the resources utilisation assessment: adequate or excessive amount vis-à-vis the produced amount of goods and services (in relation to capacity maintenance costs, changing production inputs later captured by prices);

- the ability to agree on fair trade terms with partner countries (this issue can be tackled also by the aggressive approach, if the existing terms and conditions are deemed unfair and artificially reducing country's export share in the global market, whereas in
sustainability context, it may be an issue of distribution of and accessibility to goods, services and technologies for consumption);

- the general amount of available goods and services (regarding living standards, the author believes that real consumption in terms of natural units (in their most general sense) is a more suitable indicator than per capita GDP (substantiated hereinafter);

- utilisation of the given goods and services by an adequately vast number of community members, as
  - community deems them effective;
  - community can afford to consume them;
  - consumption is compatible with the regional/global consumption (e.g. means of communication, transport vehicles and their parameters, technical parameters of household appliances and office equipment, health care services, the knowledge base and compatibility of educational services, etc);

- low inequality level of income distribution (the Gini coefficient is low or on a downward trend; it is essential as, when income differences among population groups increase, even if on productivity grounds, the living standard gap is the first to widen and for the part of the community exhibiting higher productivity it is more difficult to find adequate demand capable of paying; consequently, such a system is not sustainable: either mutual support instruments come to the fore or the economy overall enters a period of cyclical stagnation);

- the proportion of population on a regular basis using/not using particular household appliances, cars, international flights, modern means of communication, up-to-date payment systems, etc. (the author believes that it is more efficient to relate these indicators with modal, not average indicators of other countries; likewise, their interpretation is more informative than percentages or per-1 000-inhabitant figures of available appliances, internet users, etc, for the latter may be structurally biased, e.g. the number of units per 1 000 inhabitants may include those inhabitants possessing several computers, telephone numbers, lost or unused telephone cards, payment cards, etc; it is possible, at the same time, that sufficiently large numbers of population do not use the above positions at all, thus reducing their opportunities vis-à-vis the population with higher income and consumption).

Overall, the compliance of the existing position with the desired status should be estimated with a particular focus on the following aspects:
The ability of a country to offer sustainable resource management samples to the rest of the world is confirmed by technology transfers (to other countries from the country under review) and innovations, e.g. in the area of effective and economic resources utilisation (at constant or improving living standards).

(4) In assessing the dynamics of economic competitiveness using sustainable approach, the focus is on changes, over time, in the indicators referred to under Point (3) and the underpinning factors. Information presented under Point (3) is supplemented with such other indicators as the Gini coefficient (it is not expected to increase in a competitive economy), consumer confidence (indicator of positive balance) and its trends, capacity utilisation (possibly higher), energy intensity (possibly lower), consumption and income levels, migration trends, etc. Changes in consumption behaviour, life quality, and environmental indicators shall be analysed in this context. A number of affecting factors can be involved: indicators of price and cost competitiveness (discussed in Part II), openness of trade, expansion and contraction of foreign trade, diversification of trade and production structures (national, of goods, technological), terms and conditions of trade with other countries, changes in accumulated capital, domestic economic policy, etc; the dynamics should, however, be dealt with in a different environment, i.e. without focusing on export expansion as an end in itself but rather determining whether changes in these indicators have a positive or negative effect on welfare (or do not affect it at all) and population's satisfaction with the life in this respective country. Nevertheless, it is particular relevant economic policy decisions having long-term effects that primarily appear as factors affecting sustainability of competitiveness of the economy, e.g. legislation governing external economic relations, cross-border contracts, issues of structural policy in relation to education, social system (subsequently including tax policy and the overall role of the public sector), etc.

Engaging in the competitiveness assessment of an economy (applying the scheme presented in Chart 3.6 and analysing the aspects discussed herein) actually results in comparison with the target values (indicators of other countries, values of the past,
equilibrium status, etc), without aiming at a rank or identification of conditions leading to superior position over another country.

As has been noted before, a system (economy) that for a protracted time period complies with any of the non-competitiveness criteria shall be assessed as non-competitive, with further analysis focusing on the causes of dissatisfactory processes and entailing appropriately relative economic policy decisions. Thus, for instance, currently Latvia complies, in part, with two criteria: first, the financial crisis has spurred emigration, with the migration balance being negative also in the years of economic prosperity, which is indicative of the presence of systemic problems; second, despite Latvia figuring as atypical recipient of humanitarian aid, the existing mechanism of international financial assistance can be well interpreted as an acknowledgement of competitiveness problems.

If, abstracting from the current situation and assessing Latvia's economic competitiveness as a general case, it is found that the system does not comply with any non-competitiveness indicator, the desired system (economic) status, i.e. a superior position over a country, group of countries or a region or the so-called "fitting" position, shall be first determined. As, according to the author, this is an issue of political nature to a large extent, it falls into the competence of the Ministry of Economics of Republic of Latvia and should be resolve in cooperation with the Ministry of Regional Development and Local Government whose Latvian National Development Plan incorporates a large number of economic policy dilemmas. Practical assessment of competitiveness could be conducted by the Ministry of Economics in cooperation with the CSB of Latvia, the Institute of Economics of the Latvian Academy of Sciences, public opinion research organizations, industry experts and other bodies (to obtain data).

In order to obtain a more detailed assessment than may be offered by descriptive analysis,

- the assessment of some aspects referred to under Points (1)–(4) (irrespective of their number) shall be marked as satisfactory or unsatisfactory (as corresponding or not corresponding to the target value, converging or diverging);
- by adding up the number of satisfactory and unsatisfactory assessments, an overall assessment of economic competitiveness is obtained;
- the obtained assessment shall determine further recommendations and behaviour: whether the goals set and research methods used shall be reviewed (updated), information expanded, current economic policy pursued or altered, and what actions in what areas shall be taken.
In a general case, the author recommends abiding by the following principles in the competitiveness assessment of the economy both by aggressive and sustainability approach:

1) **competitiveness does not automatically imply intensification of external trade** but foresees an opportunity to engage in economic cross-border relations. Theoretically, a country may be sufficiently competitive, provided it satisfies all needs of the population and effectively manages the resources, without caring much about the offer from the world outside. However, such seemingly self-sufficing economy may apparently substantially diverge vis-à-vis the rest of the world (incompatible communication devices and transport, distinctive payment and settlement systems, lack of language proficiency, etc), which may figure as a serious risk factor when the desire/need to communicate with the rest of the world emerges (e.g. meeting the needs due to the shortage of resources would depend on success of joining global economy, etc);

2) compatibility of consumption and/or production referred to above to a great extent implies "fitting in" (referred to in the definition), while the **ability to adjust** depends on how much consumption and production diverge vis-à-vis the rest of the world, and how adequate the accumulated physical and human capital is to meet those community needs which drive the country to engage in cross-border economic relations;

3) **reproductive capacity** and **compatibility of resources utilisation in the economy** are vital;

4) **not all innovations shall be automatically treated as something valuable and sustainable;** innovation shall not become an end in itself or an object which is artificially protected to generate lavish income but rather a novelty to effectively supplement the existing commodities or services or whose usefulness is acknowledged by the community (or the rest of the world);

5) from the methodological point of view, **economic ranking in consecutive order is not always necessary;** countries or economies may be simply grouped as competitive (in the region, globally, vis-à-vis major trade partners) and non-competitive in either or none of the geographical distribution above, i.e. they are presently unable "to fit in"; their resources allocation and cross-border relations do not permit such "fitting" and the development of reasonable and sustainable concepts for goods, services and resources utilisation without external aid.
Main Conclusions and Recommendations

Conclusions

1. Despite being wide-spread, the concept of competitiveness lacks a uniform definition in the economic theory; the author finds two main aspects that render the process of defining cumbersome:

- intention to define competitiveness in a general sense, although historically the evolution and usage of the concept have been many-sided, e.g. personal, company, local, economic, export, long-term, national, global and other types of competitiveness;
- resolving whether competition is primary and determining the related desired system status, i.e. superiority position or performance continuity.

2. The author has defined economic competitiveness as a quality inherent in the economy as a system: from the point of view of position, it is "fitting" in the economic model of the region or major trade partners, whereas from the point of view of dynamics it is the ability to introduce changes in the given economic model by implementing sustainable concepts of disposable resources (production factors) management or quick adjustment to changes brought about by other regional countries or MTPs.

3. According to the systematisation developed by the author, the methods of competitiveness assessment of the economy can be classified:

- **by approach** (the aggressive approach focuses on the market share method, relative price and cost comparison, trade potential method, real exchange rate equilibrium method and other methods and indicators, according to which countries are ranked as winners or losers; the sustainable approach is related to the methods assessing living standards and sustainable resources allocation and utilization);
- **by assessment object** (position or dynamics). Position can be judged by respondents' satisfaction with the desired system status at a defined moment of time or a static comparison with other countries, while dynamics is assessed on the basis of comparison with the previous system status or its desired status (converging with or diverging from it);
- **by assessment scope**: whether it is complex or of individual aspects.
4. Competitiveness strategies of economies across the world most often focus on achieving superiority position over other competitors (US and EU definition), which is affected by the historical development and political factors.

5. The implementation of competitiveness strategies of economies is made difficult by addressing minimisation and maximisation problems at a time. Thus for instance, strategies of the aggressive approach build on a continuous reduction of unit costs and consumption boosting, which can give rise to a so-called excessive consumption problem. In the case of aggressive approach, the desired or ultimate status of certain system aspects can be determined, e.g. the marginal value of unit labour costs is close to zero or the maximum market share is a complete dominance in the market; a weakness of sustainability approach consists in the fact that it is more difficult to define the desired status of system, and there exists a so-called "moral hazard" problem if other countries opt for the aggressive approach.

6. A consistent system of competitiveness assessment of the Latvian economy is not in place in Latvia, and the existing strategic documents for the development of national economy do not reveal any direct link between the definition of competitiveness and mechanisms for its attainment.

7. Building on the application of distinctive competitiveness assessment methods in Latvia, the author finds that:
   - the application of methods depends on the selected approach, either aggressive or sustainability approach; the documents related to the economic development in Latvia (e.g. the Latvian National Development Plan) contain several dilemmas without giving preference to any of the directions;
   - methods either expressly suitable or unsuitable for the assessment of Latvia's economic competitiveness are small in number;
   - REER computed using the DWE weights shows that Latvia's ability to make profit from price differences in the domestic and foreign markets has weakened more than could be inferred from REER, which is calculated using trade turnover weights. DWE weights lead to more pronounced changes in the REER rate in cases of serious shocks, while the trend remains broadly unchanged;
   - the application of REER in the assessment of Latvia's competitiveness is restricted, for the market shares (in major trade partner countries, their imports and overall
supply) tend to expand in periods of appreciation; in the same periods, domestic income is likely to rise as well;
- ranking countries by assessing individual aspects of competitiveness can produce a distorted insight and should be interpreted with caution;
- for the purpose of assessing trade potential, flexibility of economic policy and its individual aspects (tariffs, production and trade quotas, etc) in the context of the EU trade policy would serve as a better instrument than e.g. a formal gravitation model. Cases of other countries vividly demonstrate that gravitation models include many dummy variables testifying to the significance of other factors along with the size and distance of the economy, the latter rapidly losing importance nowadays;
- some data to conduct an assessment according to the sustainability approach are absent (on resources utilisation aspects, migration causes, etc).

8. The application of distinctive methods, approaches and indicators may produce both a favourable and unfavourable competitiveness assessment of the Latvian economy simultaneously for the same period of time.

9. Several traits typical for countries striving for low costs due to low levels of accrued capital and some other indicators point to a weak competitiveness position of the Latvian economy and unfavourable dynamics of it.

- Positive ratings of international rating companies build on low labour, real estate registration, import and export transaction costs, a low total tax burden, a relatively simple tax collection system, and quick procedures for licensing and import and export transactions. As a result, the position assigned to Latvia in Doing Business is much higher than, e.g. the WEF Global Competitiveness Index ranking.
- The author concludes that the development indicators of the main factors impacting competitiveness of the Latvian economy fit well into the modal interval of the countries in the WEF survey, yet they differ substantially from the averages of Latvia's MTPs (with efficiency of labour and commodity markets as an exception);
- As of aggressive assessment approach, the author concludes that the indicators of Latvia's price and cost competitiveness have deteriorated under the impact of both labour force and capital costs:
  - the author uses modified indicators of unit labour costs and unit capital costs and finds that, adjusted by purchasing power parity, unit labour costs in 2000 –
2007 increased 1.77 times (1.25 times if unadjusted and 1.94 times if adjusted by VA deflator);

- the respective increases in unit capital costs are 1.63, 1.06, and 1.78 times;
- the rise in unit capital costs is driven by the low initial level of accumulated capital which is almost 3 times lower than that of the MTPs, which, in the main, are the EU15 countries.

- The author introduces an indicator of unit energy costs for industry and transport sector into analysis of cost competitiveness, and finds that even it is difficult to compute a relative measure including data for MTPs like relative ULCs etc. (due to the lack of enough data from the published energy balances), a measure calculated solely for Latvia rise of 12%-27% per annum in energy costs since 2005, that could be driven by:
  - low productivity,
  - higher energy intensity than in the majority of MTPs,
  - strong dependence on energy and high concentration in the energy resources supply market.

- A declining relative profitability in the period of economic prosperity is indicative of the growth mainly fuelled by the strengthening in domestic demand.

- Weaker trade diversification in the breakdown by country (in favour of the EU) implies low resilience of the Latvian economic policy.

- For Latvia, low levels of both accrued capital and capacity utilisation in manufacturing are typical (15%-20% below the EU average); this may suggest either mutual imbalances in the use of resources due to which spare capacity occurred even in the period of economic prosperity, or a value generation problem due to weak demand or lack of innovative solutions for meeting consumers’ needs.

- The Latvian economy is characterised by high energy dependence (particularly on natural gas (100%) and electricity (>1/3)), this being an obstacle on the way of implementing cost reducing strategies.

- The trend of population emigration was intensifying in the period of economic prosperity (2004–2007) and after it as well; over a longer period of time it correlates with the rise in consumer confidence and income indicators.

- In the period of economic prosperity, inequality of income distribution tends to increase (rising Gini coefficient).

- The current strategy of the Latvian economic development builds on the lowest level of competitiveness, i.e. ability to adjust, and the reduction of costs.
10. Nevertheless, some aspects should be assessed positively:

- Using the aggressive assessment approach, the author calculates various descriptive indicators of market shares (export share in imports of trade partners, output share in total regional output, the share calculated by the demand provision matrix) and concludes that according to them Latvia's share in the markets of major trade partners increased 2.1, 2.6, and 2.9 times respectively in 1997–2008; this assessment of competitiveness is in contradiction with the dynamics of price and cost competitiveness indicator for the same period of time.

- The author introduces an export expansion index, a measure of the growth in country's export share in global exports in certain periods of time adjusted by population changes. The export expansion index for Latvia (or the ability to generate per capita income from exports) in 1994–2008 increased around 3.7 times, considerably faster than in most major trade partners.

- Since the early 1990s, the diversification of Latvia's foreign trade has increased (Herfindahl-Hirschmann index decreased several times) in terms of goods and services, and exports boast a higher share of high technologies; this enables generation of higher income from foreign trade transactions.

- An upward trend in a number of price and cost indicators during the past years notwithstanding, the respective level in absolute terms remains lower than in MTPs on average (labour, energy costs).

11. The development indicators of the main factors impacting competitiveness of the Latvian economy fit well into the modal interval of the countries in the WEF survey, yet they differ substantially from the averages of Latvia's MTPs (with efficiency of labour and commodity markets as exception). The assessment by competitiveness indices from international surveys and research papers should be treated cautiously: focusing on a higher rank in the table does not preclude eventual divergence vis-à-vis MTPs.

12. From expert interviews the author concludes that foreign companies, irrespective of their investment activities in Latvia, practice the involvement of students and academic staff in the research, whereas the experts identify country or company reputation as the primary factor driving their investment decisions; the field of activities, macroeconomic stability and political environment also appear as decisive aspects. *Doing Business* by the World Bank and the WEF GCI assessment is 2-3 points of 5 possible.
**Recommendations**

1. Alongside with the country ranking, the assessment of economic competitiveness in global terms (international organisations) should focus on the extent to what the resource allocation and their management model currently practiced in each respective country meets the needs of its inhabitants.

2. According to the definition of economic competitiveness formulated by the author in the doctoral dissertation, general assessment criteria are proposed herein to be used by international organizations in comprehensive competitiveness surveys, and domestic institutions like the Ministry of Economics, the Bank of Latvia, and the Ministry of Foreign Affairs in assessing competitiveness of the Latvian economy to grade it as non-competitive in the case of it complying with any of the following criteria in a longer period of time:
   - the country receives and uses foreign financial aid free of charge (excluding the financing to do away with the aftermath of natural disasters), which suggests that the existing economic structure of the country, its resources management model and the mode of maintaining international economic relations cannot ensure the meeting of population's needs;
   - country's living standards fall behind and simultaneously diverge from those of the MTPs, the region or the rest of the world;
   - the numbers of emigrating people and/or the emigration rate (also in the presence of a negative migration balance) are rising;
   - the country is involved in military conflicts with another state/region affecting the territory of the respective country as well as the availability and utilisation of resources.

3. As international assessments of e.g. Doing Business or the WEF Global Competitiveness Index are cumbersome in their essence, i.e. they demand vast data stocks on a large number of countries, data collection is time consuming, data may be out-of-date, some country data may be missing or non-comparable, data can have aspects irrelevant for Latvia's competitiveness assessment (e.g. data on the spread of malaria) or be short of important aspects for Latvia, the Ministry of Economics of Republic of Latvia should conduct the competitiveness assessment of the Latvian economy and publish its results.
4. The Department of Entrepreneurship Competitiveness of the Ministry of Economics of Republic of Latvia and the Department of Structural Economic Policy in cooperation with the Institute of Economy of the Latvian Academy of Sciences and sector experts should undertake the competitiveness assessment of the Latvian economy and publishing of its results, probably conducting it on the basis of the competitiveness assessment scheme developed in the dissertation and taking account of the following assessment process stages:

- if the system (economy) complies with any of the criteria under Paragraph 2 of Recommendations, the economy shall be defined as non-competitive, and relevant economic policy decisions shall be made;
- If the system does not comply with any criteria under Paragraph 2 of Recommendations, the desired status of the system (economy) shall be first determined: superiority position over another country, a group of countries or region, or the "fitting in" position. As this largely is a political issue, it is in the competence of the Ministry of Economics and Ministry of Regional Development and Local Government whose Latvian National Development Plan contains a large number of dilemmas;
- to estimate compatibility of the current position with the desired status, placing particular emphasis on the following indicators and methods to obtain them:
  - methods of polling and/or expert interviews regarding the indicators of living standards and business environment (assessment by economic agents of their prospects to satisfy needs);
  - resources assessment (natural, human, capital): capacity and the rate and prospects of renewal;
  - comparison of the obtained results with regional countries or MTPs to identify the degree of "fitting";
- specify changes in desired status of the previous period (by using, in line with the selected approach, such indicators of aggressive or sustainability approach described in Section 3.3 of the doctoral dissertation as the market share, profitability, consumption habits, life quality, ecology);
- if the desired status is not attained, opt for the activities to be carried out in the upcoming period; if the desired status has been attained, the economy should be considered competitive and further development goals are to be set;
- in order to obtain more specific results than descriptive analysis can provide,
individual aspects of economic competitiveness should be marked as satisfactory or unsatisfactory irrespective of their number (complying or not complying with the target value, converging or diverging); by adding up the number of satisfactory and unsatisfactory estimates, the total economic competitiveness assessment is obtained; the latter finding is a determinant of recommendations and further activities: whether the goals set and methods applied are to be reviewed (updated), information added, economic policy continued or altered, what steps in what directions taken, etc.

5. The Central Statistical Bureau of Latvia and public opinion research organizations, e.g. "Latvijas Fakti", should get involved in the assessment of economic competitiveness, ensuring data availability, collection, compilation and publishing on a number of competitiveness aspects of the economy, e.g.

- causes of population current and potential emigration;
- renewal of resources in the economy;
- the share of value added generated by domestically produced energy-efficient technologies and information about eventual support to such technologies outside the country.

6. In terms of economic policy, the determination of priority branches is risky, as it may unreasonably prioritise branches that do not promote competitiveness of an economy or improve the respective position. **Priority branches or sectors should be replaced by priority activities.**

- As the economic policy in Latvia is deemed to be rather inflexible, it should be used to its full capacity, with the Economic Relations and Development Cooperation Policy Department of the Ministry of Foreign Affairs and the Latvian representatives of the EC and the European Parliament more actively entering intergovernmental discussions about the employment of certain tools:
  - the impact of production, trade and pollution quotas on the development of some sectors should be estimated;
  - the impact on Latvia's economic competitiveness of distinctive foreign trade policies vis-à-vis different countries in the context of foreign trade should be assessed.
- **The Ministry of Finance** should introduce amendments to tax legislation stipulating income tax privileges for companies that engage in research activities, cooperate with educational establishments, employ would-be specialists (the latter was found to be a widely spread practice in international companies).

- **The Ministry of Finance** should work out long-term tax policy standards to stabilise business environment from the institutional side and consider the introduction of a progressive personal income tax scheme, a step currently underpinned by the age structure and growing inequality in income distribution (or the Gini coefficient), which is an impediment to the economic progress as the level of high value added progressively diverges from that of consumption.

**Author's publications on the subject of dissertation**

**Scientific publications**

**Paula D.** *Latvijas tautsaimniecības konkurētspējas vērtējums: pretrunu cēloņi un aktuālas risinājumu iespējas*. Paper prepared for presentation at international scientific conference in December 2009 in Daugavpils; submitted for review, theses have been published.


Published practical research


Author's presentations of research findings at scientific conferences

- Presentation at the University of Latvia 67th conference of monograph "Competitiveness of Latvian Economy and Significance of Investment for its Promotion".
- Report at University of Latvia 66th conference on completion of Project 2007./ZP-12 "Investīciju stratēģija Latvijas ekonomikas ārējās konkurētspējas veicināšanai".
- Presentation of "Baltijas valstu ārējās konkurētspējas aspekti konverģences procesa kontekstā" at a conference of Baltijas Forums in May 2007 in Riga.
- Presentation of "Latvijas ekonomikas ārējās konkurētspējas pārmaiņu ietekme uz galveno makroekonomisko rādītāju dinamiku" at the University of Latvia 65th international conference in February 2007.
- Presentation of "Impact of Convergence Process on External Competitiveness of Economy" at the University of Latvia 64th conference in February 2006.
• Presentation of "Contents of Competitiveness Indicators and Their Possible Interpretation" at University of Latvia 62nd international conference in February 2004 in Riga.