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Faculty of Engineering Economics and Management  
Institute of Building Entrepreneurship and Real estate Economics  
Department of Civil Construction and Real Estate Economics and Management

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**ENSURING COMPETITIVE ENTREPRENEURSHIP  
MANAGEMENT  
FOR MANUFACTURING WOOD PRODUCTS  
IN LATVIA**

**Resume of the Ph. D. Paper**

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**PH. D. PAPER**  
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**ECONOMICS**

Ph. D. Paper has been prepared in the Department of Civil Construction and Real Estate Economics and Management of the Institute of Building Entrepreneurship and Real Estate Economics of the RTU Faculty of Engineering Economics and Management Ph. D. Paper for the acquisition of the scientific degree of the doctor in economics is publicly approbated on 20<sup>th</sup> April 2012 in the RTU P - 09 Promotion Council meeting, Riga Technical University Faculty of Engineering Economics and Management, Meža street 1/7, room 309, at 10.00.

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**CONFIRMATION**

With this I certify that that I have worked out this Ph. D. Paper, which has been submitted to Riga Technical University for the scientific degree of doctor of economics. Ph. D. Paper has not been submitted to any other University for the scientific degree.

Kristīne Fedotova \_\_\_\_\_

\_\_\_\_. \_\_\_\_\_, 2012.

Ph. D. Paper is prepared in Latvian language. It has 182 pages, including an introduction, 3 chapters, conclusions and proposals, bibliography, 11 Annexes, 34 tables, 104 pictures and 15 formulas. In the research 162 bibliographical and other information sources has been used.

Ph.D. Paper and its resume are available in the Scientific Library of Riga Technical University at Kipsala Street 10, Riga.

Reviews of Ph.D. Paper can be sent to: RTU P-09 Promotion Council secretary, professor, Dr. Habil.oec. Anatolijs Magidenko, Riga Technical University, 1/7Meža Street, Riga, LV-1048, Latvia.

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## GENERAL OVERVIEW OF THE PH. D. PAPER

### Research topicality

Manufacturing of wood products includes forest resources, manufacturing of products, trade and consumption in one system in which all components are closely connected. Its sub-sectors, forestry and wood industry, are mutually “dependent” (*according to the statistical classification of economic activities: A-Agriculture, Forestry and Fisheries, and the C-Manufacturing*). Forestry is engaged in forest maintenance, preservation, orderly exploitation and renewal, while the forest industry processes raw materials from forests (forest resources), primary production and processing, or value-added products. Forest and wood resources as an integral part of nature and their related actions include economical, ecological and social aspects. It is possible to earn income and preserve the value of forest and its landscape attractiveness by deliberate management ensuring principles of sustainable development. Based on capacity figures of wood resource extraction in Latvia, should admit that the wood products manufacturing firms should take the lead in Latvian economy. The author draws attention to the fact that the forest resource extraction and restoration of these resources need to respect the “principle of proportionality” - to find solutions for strategic decision-making Latvian forest resources, sustainable use, subject on competitiveness based management as competitive business management system component principles. Necessity to implement the balanced long term development of forest industry is emphasized in the „*National program for Latvia's forests and its related industries*” (2002). The instruction No.273 of CM of Republic of Latvia “*Guidelines for development of forest and its related industries*” is emphasizes that one of priorities for sustainable development, now and in future, is a long term management of Latvia`s forest by maintaining the biodiversity, productivity, capacity of regeneration, viability and ensuring of important ecological, economical and social functions on the local, national and global level with no threats to other ecosystems.

Topicality of the research is connected with the significant role of wood products manufacturing in the Latvian economy, because geographical position, amount of forest and its quality set belonging to the states where forest products serves for the local production as well as takes significant place in foreign trade. Given the economic slowdown of 2008, Latvian timber products can be regarded as a “crisis time” option. Therefore it is necessary to find solutions for further development of industry by balancing the extraction of wood resources and figures of forest regeneration for ensuring of sustainable development and also to develop proposals for improving the competitiveness of local wood products in the market,

taking into consideration on competitiveness based management as competitive business management system component conditions for wood products manufacturing.

**The Goal of Ph. D. Paper** is by identifying on competitiveness based management as competitive business management system components and the nature of the assessment of its theoretical aspects, to provide scientific solutions and practical proposals for competitiveness based management of wood products manufacturing in Latvia. In order to achieve the aim of research the author puts forward the following tasks:

- analyze the nature of competition law and its economic aspects of the competitiveness based management services;
- evaluate the role of driving the competitiveness based management of forest products;
- identify and describe the concept of competitiveness and the nature of the content;
- carry out determinants of competitiveness and affecting the performance and competitiveness of the assessment methods for evaluation on competitiveness based management of Latvian wood products;
- investigate and assess the wood production and wood products used in the manufacture of wood resources in the context of the Latvian economy;
- assess the Latvian economic development opportunities in the context of wood products manufacturing;
- assess on competitiveness based strategic management solutions for wood products;
- develop the complex evaluation of business expertise competence on competitiveness based management in wood products manufacturing;
- develop scientific and practical solutions on competitiveness based management for wood products manufacturing in Latvia;
- develop practical recommendations on competitiveness based management as competitive business management system component of wood products manufacturing and increasing competitiveness of enterprises.

### **The research object and subject**

The study **object** is on competitiveness based management of the companies operating in wood products manufacturing market. **The Subject** of the research is on competitiveness based management as a component of competitive business management system of wood products manufacturing in Latvia, as condition for the sustainable economic development.

Within the framework of the development of this Paper, the following **restrictions** were defined:

Aspects of competitiveness based management which are considered to be components of the competitive business management system ensuring theoretical and information management, not including legal, technical, technological and financial aspects of the competitive management are addressed in this Doctoral Thesis Paper. Due to the limited volume of the Paper, within the framework of one study, it is impossible to look at all related issues.

- Research period for different data used in this Paper varies. This can be explained by limited availability and reliability of the statistical data and other data related to the issues regarding manufacturing of wood products. In general, in the study of this Doctoral Thesis Paper period the period from 2006 to 2010 is covered, however, some of the wood products industry development indicators are available only until 2009. The doctoral thesis and all data referring to the management of the manufacturing of wood products in Latvia included in this Paper are prepared by 31 March 2011.
- Due to the fact that on competitiveness based management principles can be implemented not only in commercial enterprises, corporations, and other legal entities, but these principles can be implemented also in non-legislative establishments, for instance, in state institutions, local municipalities, and in operation of other organizations. The author of the doctoral thesis includes all of these concepts in one common – the company, within the framework of this Paper, is considered to be any economic establishment having any form of the ownership or, taking into account the organizational structure, any business unit.
- Within the framework of this study, sex, age, social status, etc. of the respondents of the survey who are representatives of the companies operating in the market of manufacturing of the wood products, are not taken into consideration.
- Developed scientific and practical solutions regarding on competitiveness based management as competitive business management system component in manufacturing of wood products and enhancing business competitiveness of the company, is of unique and general importance. The author of the study assumes that economic, social, and other processes at different periods of transition and different transitional stages in Latvia have identical principles, and have common characteristics similar trends.

### **Theoretical and methodological basis of the research**

Various studies, research and publications of Latvian and foreign economic scientists, and specialists (V.Bikse, J.Caune, V.Praude, J.Beļčikovs, J.Niedrītis, G.Lībermanis, M.Porters, Ā.Smīts, F.Kotlers, F.Naits, A.Maršals, J.Šumpeters, R.Fathutdinovs, A.Kuļešova,

A.Judanovs, etc.), as well as proceedings from scientific conferences and seminars serve as the basis of theory and methodology for the current research. To achieve the aim of the research, during development of the study conventional theoretical research methods, such as analysis and synthesis methods, information analysis and gathering methods, comparison, data grouping and other methods, normative study of documents, as well collection of statistical materials, etc. research methods were used. **Information base** consists of scientific literature, Latvian laws and other legislative acts, determining provisions of activities related to forest sector, published and unpublished data of Ministry of Economics of the Republic of Latvia and Ministry of Agriculture of the Republic of Latvia, published data of Central Statistical Bureau of Latvia, electronic resources, data bases, publications in the media and research results of the author.

### **Thesis put forward for the defense**

- The concept of competitiveness and understanding of its economic content is an important issue influencing business results and forecasting of development trends that includes wide spectrum of different aspects and is the basis for making strategical decisions regarding development of solutions of the increase of the competitiveness and production efficiency of manufacturing wood products that is a component on competitiveness based management of the companies operating in this market.
- Increase of the competence of the producers of wood production in relation to the competitiveness of the theoretical and practical knowledge and development of the implementation of the possible solutions for increasing the competitiveness, the main focus should consider to the usage of the benefits of the competitiveness based management.
- Due to the fact that forest cultivation is cyclic, it is important to make strategic decisions regarding balanced extraction of wood resources and their use in order to implement sustainable management principles.
- Forest is the main resource and biggest treasure of Latvia, therefore it is considered to be „green gold” of Latvia, which covers half of state territory and thus, the evaluation of the investment of the manufacturing of wood products and its contribution to the national economy, is so significant.

### **PhD work hypothesis**

Successful implementation of the competitiveness based management aspects depends on the level of competence of the producers of the wood production. Competitiveness level of the companies involved in the manufacturing of the wood products would be higher if the

businessmen have more accurate and comprehensive knowledge, expertise and skills in implementation of the competitiveness based management, understand the most important business tools for increasing the level of competitiveness for sustainable development, which focuses on the competitiveness based management in order to develop the manufacturing process of timber production in the entire value-added chain of wood products.

### **Scientific novelty**

- A set of the definitions for the *competition*, *competitiveness* and *on competitiveness based management* has been developed, as a result of comparing definitions given by foreign and Latvian researchers and evaluating them, determining advantages and disadvantages of each given definition, as well as providing assessment of definition for the *management* and its importance in manufacturing of wood products in accordance with the competitiveness based management principles.
- Refined the competitiveness based micro and macro management information and logical model, identifying the factors affecting the competitiveness and the impact of setting, providing a detailed view of the factors affecting timber production management environment has been developed for the first time.
- Unified, complex competitiveness based management system, which includes the economic content of the competition concept, preconditions for its development and evaluation of the way of its expression, reflecting the competitive nature of the concept, and the economic nature of the emerging internal and external factors and evaluation of theoretical approaches and practical solutions for timber production in Latvia has been developed.
- Positive and negative factors influencing the competitiveness of wood products manufacturing companies has been defined and selected, its classification based on the survey results acquired during the research regarding the complex assessment of competitiveness based management competence of entrepreneurs operating in wood production market has been worked out.
- Distribution channel strategy information synthesis model for making strategic decisions based on the distribution strategy development process of competitiveness based management, summarizing the spread of channel strategy and determining their strengths and weaknesses has been developed by the author.

### **Approbation and practical application of the results of the research**

Research process and results have been published and presented in scientific conferences and seminars. The author of Ph. D. Paper has taken part in several scientific research projects,



within examined issues of wood products, the possibilities of its using in ecological construction, house renovation, housing rehabilitation, as well as on competitiveness based management problems and possible solutions:

- *Funding models of housing renovation in Latvia*: Scientific development activities within the RTU fundamental and applied research project, Nr.2011/27, 2011;
- *Issues of Resource Using Efficiency in the Construction Industry in Circumstances of Increased Demand*: Scientific Research project, No.R7357, 2008;
- *Development Problems and Solutions of Real Estate Market and Construction Industry*: Scientific Research project, No.R7216, 2007;
- *Analysis, Problems and Solutions of Economical Aspects Influencing Real Estate Market Development*: Scientific Research project, No.ZP-2007/14 „,” - 2007;

Theoretical and practical results of the Ph.D. Paper have been approbated and used also in the study process in professional bachelor study program “Real estate management”, teaching subjects „Marketing in Building Construction”, „Real Estate Marketing”, „Real estate Market and Advertising”, “Ecological Management”, as well teaching professional master study program “Civil construction and Real Estate Management” subjects „Strategic Marketing Management in Civil Construction” and “Ecological System Management”.

The developed competition, competitiveness and on competitiveness based management definition as a competitive business management system component the scientific depth approved the RTU Institute of Building Entrepreneurship and Real Estate Economics Working Group.

## **Publications**

**Doctoral thesis results are presented in seven publications in internationally recognized reviewed scientific editions:**

- 1.Fedotova K. The Timber Utilization Opportunities in the Ecological Construction./co-author I.Geipele// Management and Sustainable Development. - Sofia: University of Forestry, 13. (2011), pp.112-118. ISSN: 1311-4506
- 2.Fedotova K. Timber in ecological construction and its promotion./co-auth. I.Geipele// 51<sup>st</sup> International Scientific conference of Riga Technical University subsection "Real Estate economics and Building Entrepreneurship" scientific conference proceedings. October 15-16, 2010. - Riga: RTU, 2011. - pp.6.-12. ISBN: 978-9934-10-113-7
- 3.Fedotova K. Possibilities to increase competitiveness in changeable environment conditions./co-auth. I.Geipele// 50<sup>th</sup> International Scientific conference of Riga Technical

University. October 15-16, 2009. Proceedings - Riga, RTU, 2009. - CD. - Pp.74.-81. ISBN: 978-9984-32-173-8

- 4.Fedotova K. The competitiveness of business in the Latvian countryside: Ways to enhance./co-auth. I.Geipele// Economic science for rural development - Rural and Regional/ Proceedings of the international scientific conference// Academy of agricultural and forestry sciences of Latvia. Nr.12. - Jelgava, Latvia University of agriculture, 2007. - Pp.246.-253. ISBN: 978-9984-39-199-1
- 5.Fedotova K. Strategic Management of Marketing in the Increasing of the Competitiveness./ co-author I.Geipele// “Towards knowledge-based economy” & “Enterprise management: diagnostics, strategy, effectiveness”. Scientific proceedings.-Riga, RTU, April 12-13, 2007. - CD. - Pp.126.-133. ISBN: 978-9984-768-6
- 6.Fedotova K. Distribution channel alternate strategy as one of management improvement aspects in Latvian country-side./ co-author I.Geipele// Rural Development in the Expanded Europe at the beginning of the 21<sup>st</sup> Century: The International Scientific Conference „Economic science for rural development - 2005”. Proceedings. Nr.8. Jelgava: Academy of Agricultural and Forestry Sciences of Latvia, 2005. - p.101. - 111. ISBN: 9984-576-221
- 7.Fedotova K. The problems of commercial`s competitiveness in context with EU.// The international Scientific Conference “Business options, problems and solutions concerning globalization”. April 24, 2004. Proceedings. - Riga: Turiba, 2004.- pp.127.-134. ISBN: 9984-766-05-5

**Research process and results have been published and presented in international scientific conferences and seminars:**

- 1.Fedotova K. Theoretical and practical aspects of competitiveness valuation in building entrepreneurship./co-auth. I.Geipele// 52<sup>nd</sup> International Scientific conference of Riga Technical University. Theses of report. Riga, RTU, 2011. - p.38.
- 2.Fedotova K. The timber utalization opportunities in the ecological construction./co-auth. I.Geipele// XIII<sup>th</sup> International scientific conference „Management and sustainable development 2011”, March, 25-27, 2011, Yundola, Bulgaria. - p.72.
- 3.Fedotova K. Timber in ecological construction and its promotion./co-auth. I.Geipele// 51<sup>st</sup> International Scientific conference of Riga Technical University. Theses of report. Riga, RTU, October 15-16, 2010. - p.29.
- 4.Fedotova K. Possibilities to increase competitiveness in changeable environment conditions./co-auth. I.Geipele// 50<sup>th</sup> International Scientific conference of Riga Technical University. Theses of report. - Riga, RTU, 2009. - p.22.

- 5.Fedotova K. Marketing strategies in the choice of real estate company./co-auth. O.Bočkāns// Materials of 50<sup>th</sup> RTU student`s conference. April 2009. - Riga: RTU, 2009.-p.82.
- 6.Fedotova K. Communication complex role in property management field./co - auth. A.Puriņa// Materials of 50<sup>th</sup> RTU students conference. April 2009. - Riga: RTU, 2009. -p.99.
- 7.Fedotova K. The competitiveness of business in the Latvian countryside: Ways to enhance /co-auth. I.Geipele// Economic science for rural development - Rural and Regional. - Jelgava, Latvia University of agriculture, 2007.
- 8.Fedotova K. Strategic Management of Marketing in the Increasing of the Competitiveness./co-auth. I.Geipele// “Towards knowledge-based economy”& “Enterprise management: diagnostics, strategy, effectiveness”.- Riga, RTU, April 12-13, 2007. - p.126.
- 9.Fedotova K. Improving of the competitiveness in the construction business./co-auth. A.Ratniece// Materials of 48<sup>th</sup> RTU students conference. April 2007. - Riga: RTU, 2007.- p.98.
10. Fedotova K. Trends of forest industry development in Latvia./co-auth. I.Geipele// 47<sup>th</sup> International Scientific conference of Riga Technical University. The problems of development of national economy and entrepreneurship. Theses of report. - Riga, September 21-23, 2006. - Riga, RTU, 2006. -p.30.
11. Fedotova K. Distribution channel alternate strategy as one of management improvement aspects in Latvian country-side./co-auth. I.Geipele// Rural Development in the Expanded Europe at the beginning of the 21<sup>st</sup> Century: The International Scientific Conference „Economic science for rural development - 2005”. - Jelgava: Academy of Agricultural and Forestry Sciences of Latvia, April 27-28, 2005.
12. Fedotova K. The problems of commercial's competitiveness in context with EU.// The international Scientific Conference “Business options, problems and solutions concerning globalisation”. - Riga, Turība, April 23, 2004.
13. Fedotova K. Problems of competitiveness in Latvia related with Sustainable Development./co-auth. I.Geipele// The 5<sup>th</sup> Annual International Conference“ Conditions of Sustainable Development: New Challenges and Prospects”. - Riga, LBA, September 11-12, 2003.
14. Fedotova K. Distribution channels and activity of company./co-auth. I.Geipele// Materials of 43<sup>rd</sup> RTU students and masters scientific and technical conference. - Riga: RTU, 2002. - p.3.

## Structure of the Ph. D. Paper

The Thesis Paper consists of an introduction, the content which is outlined in 3 main chapters, conclusions and proposals, bibliography, and Annexes.

*In Chapter 1* the essence of the competitiveness and its legal-economic aspects as well as its importance in regard to the competitiveness-based management as a component of the system ensuring competitive entrepreneurship for manufacturing wood products in Latvia as a condition for sustainable economic development, is discussed. Figures of the Latvian economy related to the manufacturing of wood products are described in Chapter 1. The overall description of the manufacturing of wood products in Latvia is given there as well. The author, within the framework of this chapter, also analyses the impact of the wood production industry to the national economy showing the main operational indicators, structure of the timber resource extraction and consumption as well as identifying foreign trade indicators characterizing the dynamics and its importance towards the competitiveness-based management.

Features of the competitiveness concept in manufacturing wood products, its contents and factors affecting the competitiveness, the interference of the competitiveness-based management methods are described by the author *in Chapter 2* as well as the competitiveness-based strategic management providing opportunities for production of the wood products in Latvia are assessed.

Chapter 3 discusses development of scientific and practical solutions related to the manufacturing of wood products. On the basis of the complex assessment of the results obtained from the survey regarding the entrepreneur competence implementing competitiveness-based management in manufacturing wood products, the author gives solutions for the increase of the competitiveness, considering the most important tools for competitiveness-driven management in wood production market in Latvia. Within the framework of this chapter, the author provides scientific and practical solutions for increase of the competitiveness-based strategic management considering the main important tools for implementation of competitiveness-based management in wood production industry in Latvia.

There are 182 pages, without annexes, in this Paper. In the research there are 104 figures, 34 tables, 15 formulas and 11 Annexes, which illustrate and explain the content of the research, included. For the PhD Paper development 162 sources of information in Latvian, English and Russian languages have been used.

## MAIN SCIENTIFIC ASPECTS OF THE PH. D. PAPER

### 1. Theoretical evaluation of competitive business management ensuring

#### 1.1. Nature of competition and its legal and economic aspects

Competition created by the market economy is the main driving force for the development of mutually operating entities of the sectors of particular area. In the conditions of free trade and growing degree of its globalization, sectors of Latvian economy must compete with other domestic sectors of national economy and rival with imported products the manufacturers of which want to participate in meeting the market demand for products by offering higher quality and/or lower price. Consequently, the competitive environment and the forms in which the companies of economic sectors work directly affect their competitiveness. Definition of competition as a competitive business management system component, the author of the study was examined and approved by the RTU Institute of Building Entrepreneurship and Real Estate Economics Working Group, using the focus group method, which consists of companies, institutions and organizations representatives. After studying the various formulations of competition and their aspects, the author the term “*competition for wood products manufacturing*” defines as: *two or more players to compete through price and non price competitive conditions, and are in a situation where they can compete on the same or interchangeable wood products manufacturing or realization in the relevant market.*

Competition as the main driving force of market economy is an important precondition of functioning market mechanism, its principle - equal opportunities for development of business initiative: promotion of fair competition in the Latvian economy is the main priority of all governmental institutions. Given the fact that competition is determined by balance of powers on the market, decreasing the number of market participants, market concentration increases as well as possibility for entrepreneurs to agree on prices, range of products and territory which is contrary to the interests of consumers. The author believes that effective competition driving companies to facilitate a targeted focus on competitors' excessive market power. Competition policy is a business tool that provides the legal means to any individual of the society according to their abilities to offer the market products and services, to fight for market conquest, and compete in the market, offering more and better goods and services, thereby increasing their competitiveness. By contrast, to consumer competition policy that provides a choice of goods and services which best meet the needs of each.

## **1.2. Characteristics of Latvian economy in context of wood product manufacturing**

Economic base of any country is developed material, technological and scientific base, which makes it necessary to think and act economically and "prudent" to a limited resource conditions to obtain the greatest benefit from the use of resources. Country's economic structure is divided into industries and service sectors. For many years the service sector has taken the leading place in the Latvian economic structure by. The shift of economic structure "in favor of the" service industries were during the previous years (from 2005 to 2007) of strong economic growth, due to the growth that at that time mainly was based on domestic demand stimulus, which contributed to the rapid development of service industries. By contrast, investment in manufacturing during the economic development phase was much lower - 5% (even falling behind the total at EU-level), which was also reflected as economic growth indicators in Latvia. It should be noted that economic activity in sectors of the national economy of Latvia is closely linked to both internal and external demand dynamics. In turn, during the economic recession the production in rapidly declining in sectors that are focused on the internal demand. Due to the financial crisis (from 2008 to 2009) significantly decreased both internal and external demand in Latvia, as well as in most EU countries. This period influenced trade, hotel and restaurant sectors services, as well as made a significant impact on the output of construction sector, while manufacturing sectors were affected by the decrease in production, mainly related to foreign demand. Some positive signs, indicating the economic "recovery" appeared in the second half of 2009, when gradually began to increase production volumes, which in some manufacturing sectors was over the previous year (2008) levels, and thus, gradually decreased the pace of decline in manufacturing. Due to the development of service sectors more positive growth indicators were observed in the sectors related to trade.

When assessing investment of the Latvian national economy sectors in foreign trade, the author concludes that in 2010 the most significant commodity exports consisted of wood and wood products, metals and their products, as well as agricultural and food product exports, while imports of goods were dominated by metal, chemical and engineering of products.

Manufacturing share of exports in 2010 were almost 60% of total industry sales. Analyzing the share of manufacturing exports, the author concludes that most of the sectors for more than 50% of total production are exported.

Based on export promotion and foreign investment attracting policy framework, objectives and deliverables to be determined by "*Latvian goods and services export promotion and attracting foreign investment guidelines for 2010 to 2016*" to recognize that export promotion

is set to be one of the Latvian economy the main drivers of growth. Given the fact that *export promotion* has been identified as one of the Latvian economic policy challenges significantly to increase the economic competitiveness to ensure sustainable development.

Referring to the above, the author concludes that manufacturing investment in the Latvian economy is significant. Largest manufacturing industry is wood products manufacturing, which exports ~70% of output is set as one priority of the Latvian economy sectors.

Taking into account that the forest and wood is a key resource for Latvia, the author believes that further development of the wood products manufacturing and increasing the competitiveness of companies involved in these business activities and promotion of the wood product export could be one of the “crisis time” solutions in the context of the Latvian economy, thus wood products manufacturing management, which is purposefully focused on increasing competitiveness of wood products manufacturing it is considered as the solution for increasing the total wood products manufacturing competitiveness.

### 1.2.1. Wood products manufacturing

Forest and wood is the main resource and wealth of Latvia from its very beginning. When it “came”, there was also a need to identify its wealth and manage it. Wood resources provide domestic consumption, and allow the wood and its products to be exported, making a major contribution to the Latvian economy. Wood products manufacturing can be characterized by several phases (Figure 1.1.).

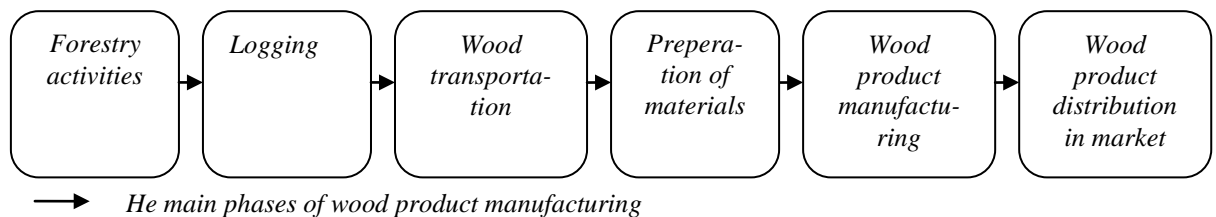


Figure1.1. The main phases of wood manufacturing

In the first phase it is necessary to identify the availability of wood resources (wood quantity, price, supply, wood quality, delivery conditions, etc.). It should be noted that the development of wood volume dynamics of the country affected by many factors, including general economic situation, wood prices in the market, supply and demand structure and regulatory framework for the country. The author draws attention to the competitive environment direct impact of wood products manufacturing companies between the wood resource extraction point of view, based on the extraction of wood resources in compliance

with the conditions specified period of time (e.g., wood resource extraction volume restrictions).

During the extraction of wood resources, wood processing, wood products manufacturing stage and finished wood products distribution in market stage in these activities involved companies are affected by various risks (safety, financial, environmental, social, political etc. risks). The author stresses that the success of the unique and diverse risk management of wood products manufacturing is essential in order to gain competitive advantage at both local and global market.

Latvian wood products manufacturing companies have been successfully developed, however, increased competition in local and global market, more and more attention need to be paid to corporate risk identification, impact assessment and to minimize the development and implementation of preventive measures for wood products manufacturing on competitiveness based management.

#### **1.2.2. Characteristics of wood resources used in wood products manufacturing the context of Latvian economy**

Although in Latvia there is no gold, no oil, is forests that cover half of the territory of the country - it is essential to economic development. The significance of wood product manufacturing in a state basically can be described by two indicators, first, the *forest land area*, second, *the role of wood product manufacturing in a national economy*.

As it is indicated by the statistic data, forests in Latvia cover approximately 50% of the total territory of the state (more than 3 mil. ha). Besides, if the total area of the country is not taken into account but only the land area, it would constitute 51% (forest area of the world occupies about 30.3%, but in the Europe - 33%) of the total area of the country. In comparison with the beginning of 20<sup>th</sup> century the forest area has changed a lot (increased at about 55%). The information of the the State Land Service records indicate that unused agricultural areas in Latvia increase from year to year. It could be possible to promote a growth of forest covered area at the expense of unused agricultural areas, mainly in private sector. It is forecasted that in future Latvia's forest covered area could increase till at about 60%. The forest covered area has increased in all regions of Latvia.

Not only the total figure of forest covered area characterizes a situation of the country, but forest covered area per capita is another indicator to describe the situation. In the world it is 0.6 ha, in Europe (apart from Russian Federation) - 0.32 ha, in Latvia - 1.2 ha (3.7 times more than in Europe on average). The most forest-rich country is the Russian Federation (5.8 ha),



Finland (4.2 ha) and Sweden (3.1ha). Figures related to the forest covered areas per capita in the regions of Latvia varies (in the region of Aluksne - 5 ha, but in the region around Riga - only 0.16 ha), which significantly affects the impact(?) of forestry in economic and development of particular regions.

Characterization of changes in the breakdown by ownership rights of forest resources brings to the conclusion that responsibility for the long term management of forest resources in Latvia, at the current moment is splitted between state and private forest owners - state forests - 47%, but private forests - 53%. Proportion of private forests significantly differs in various regions of Latvia (more private forests are in the region of Preili, Kraslava, Cesis, Ventspils and Jelgava).

Characterization of forest use intensity shows that in the years of prosperity the total amount of wood products in Latvia has reached 13 mil.m<sup>3</sup> and it was tenth largest between the EU countries (Lithuania produced 5,9 mil.m<sup>3</sup>, but Estonia 5,4 mil.m<sup>3</sup> of wood).

In the forests of Latvia there are more than 60 types of trees and shrubs, however only eight types of them play the main role in the formation of forests. Mainly three types of trees form the forest in Latvia - pine, spruce and birch (about 74% of total forest area). The rest of forest land areas are occupied by gray alder, aspen tree, ash and oak. Proportion of birch and other deciduous trees increases in the forests of Latvia, because agricultural land continues to overgrow with deciduous trees, as well as private forest clearings often are regenerating with various types of deciduous trees, although previously the main types were pine or spruce. According to the analysis of data regarding proportional division of tree types in Latvia and their changes during last five years, it is possible to conclude that the most significant decrease in amount and percentage is between pines (about 132 thousand ha), that needs to be taken into account in assessing wood products manufacturing opportunities.

The author admits that not only foresters, but also wood products manufacturers require some knowledge about various types of trees, their peculiarities, possibilities of usage, and possible factors influencing the quality, in order to carry out different measures related to forestry and wood products manufacturing that are quite different for each type of tree.

Forest owners, who regenerate, grow and cut out forests, admit that "you cannot just take from forest, but you need to invest in it back as well". It is necessary to admit that growing a forest is a cyclical process, because the forest cannot recover from nothing - it should be regenerated and grown to give yields.

In the last twenty years the wood volume has increased for about 200 mil.m<sup>3</sup> (about 10 mil.m<sup>3</sup> in a year), because while trees are growing, the wood value increases, that according to the current estimates of the State Land Service makes 16.5 million m<sup>3</sup> per year.

Forest fires cause a big loss for Latvia's forests. In most cases the forest fires are caused by people's careless actions with fire. According to the State Forest Service information, the largest number of fire cases was in 2006 (about 2000 cases).

Analyzing the data of amount of cut wood, it is obvious that in 2010 about 2,25 mil.m<sup>3</sup> of wood was cut that is more than a year before (12,9 mil.m<sup>3</sup> of wood , 7,64 mil.m<sup>3</sup> of which have been obtained in the state forests and 5,3 mil.m<sup>3</sup> gotten in forests of private owners, municipalities and other owners). Amount of cut wood in state forests has decreased (for 0,09 mil.m<sup>3</sup>), but in the other forests it has increased (for 2,3 mil.m<sup>3</sup>). According to the State Forest Service information, in 2010 the amount of illegally cut wood, compared to 2009, has increased. In 2010 approximately 10.6 thousand m<sup>3</sup> of wood have been cut illegally (in 2009 the figure was 6.2 thousand m<sup>3</sup>), and this causes losses not only for forest manager, but also for the whole society.

Analyzing costs of preparing the wood resources (deforestation costs) in wood products manufacturing, and their structure which includes preparing of wood, delivery by the road and transportation to the point of loading, it is recognizable that in the main wood cutting places and process of thinning the highest costs are associated with transportation.

In order to ensure the sustainable development of management it is necessary to regenerate the cut wood resources (forest) which is complicated process for covering uncovered areas with forests. The main task of forest regeneration is to grow a productive and qualitative forest that matches up to all forestry demands. This can be done by artificial (seeding or planting) or natural regeneration according to given growing conditions and appropriate types of trees. Analyzed available data about forest regeneration, allows admitting that regeneration of forests in Latvia is being implemented very successfully, although an index of regeneration works differs from year to year because of various conditions (reasons), the regeneration is being done every year. In accordance with the State Forest Service information, about 32.2 thousand ha of forest in Latvia was regenerated in 2010, including state-owned forest - 13.4 thousand ha, forest of other owners - 18.8 thousand ha. Regeneration of forest is ensured in natural and artificial ways. Analyzing available data of artificial regeneration of forests in Latvia, it should be admitted that about half of the regenerated forest area has been regenerated in an artificial way, so recreation is as a result of pre-planned actions. Comparing to year 1991, resources of recreated forests have doubled and it leads to conclusion that forest

owners do not speak about forest resources to realize wood products manufacturing only in today's context, but also in future form - they think and act with diligence.

### 1.3. Dynamics of foreign trade and its impact on competitiveness based management

Analyzing and evaluating Latvian wood product contribution to the state foreign trade, author acknowledges that for the successful and sustainable development for wood products manufacturing it is necessary to balance import and export volumes. The above statement means that need to make greater use of local wood resources for the needs of local market. An important part of Latvian wood products exports consists of wood products with a relatively low added value. In order to analyze dynamics of import and export, it is useful to look at key trends related to import and export activities of wood products manufacturing (Table 1.1., Figure 1.2.).

Table 1.1.

Import and export of the forest industry, thous. Ls

	2003	2004	2005	2006	2007	2008	2009	2010
Export, thous. Ls	682814	757793	831918	846311	1058248	864334	699329	1020050
Import, thous.Ls	191411	250358	295466	344307	493874	344525	204232	269971

At the end of 20<sup>th</sup> century the export of the wood products has increased several times, therefore the contribution of wood products manufacturing into the total value of Latvian export is so significant (in 1993 the export value of wood industry products was 80.5 mil.Ls, in 2003 - 682.8 mil.Ls, and in 2007 - exceeded 1.05 billion Ls).

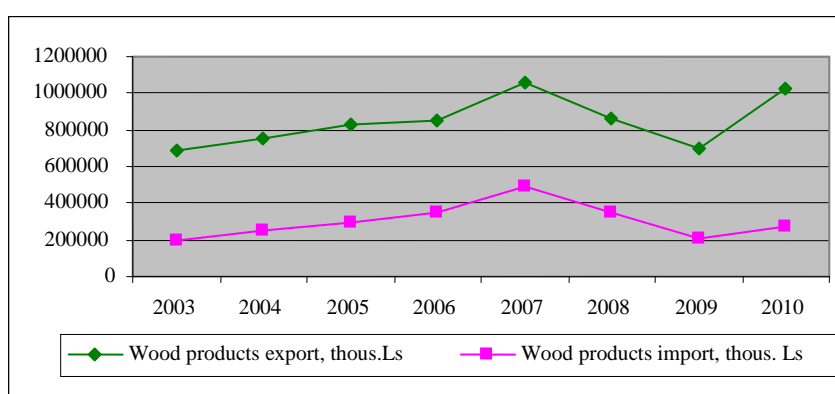


Figure 1.2. Volume of the Latvian forest export and import, thous. Ls

With economic slowdown on export markets, caused by overall economic downturn, the export value of wood products decreased in 2008 and reached the level of level of 2006 (846.3 mil.Ls), but in 2009 the export value was even less (699.3 mil.Ls). Due to the economic recovery measures which improved the situation on export markets, in 2010 the export value of

wood products returned at the level of 2007. Major exporters of forest industry products are Britain, Germany and Sweden.

Analyzing the import figures of wood products, it is obvious that the first indications of decrease of the import value were in 2008. Compared to the previous year, the Latvian wood products import value decreased up to 31% (in 2007 the import value was 490.8 mil.Ls, in 2008 - 334 mil.Ls). In 2009 the import value was 200 mil.Ls and in 2010 it increased to 270 mil.Ls.

In regard to the previously analyzed data, the author can conclude that wood products manufacturing data confirm the significance of wood products manufacturing in national economy. Forest owners interest to make a profit from their property as soon as possible, because the market experiences high demand for wood resource can be explained by tendencies of wood products manufacturing development, availability of wood resource and other factors influencing the industry. Demand in the internal market for wood resources to some extent has increased the competition for wood resources in the market.

## **2. Theoretical aspects of wood products manufacturing on competitiveness based management**

### **2.1. Concept of competitiveness, its economic content**

The economic science considers that competitiveness is an ability to compete with the analogous objects (goods or services) on a specific market by using the competitive advantage (price, quality, etc.) to achieve the objectives. Competitiveness as a complex economic category can be analyzed in several levels of management: products competitiveness; company's competitiveness; industry's competitiveness; national competitiveness.

Nevertheless, at each of these levels it is possible to identify different factors that influence competitiveness, among all of the analytical levels of competitiveness there is strong internal and external relationship present. The competitiveness, at the national and sector level, depends on the ability of *specific product manufacturer (service provider) to offer the competitive product (service)*, which means the ability of the specific manufacturer (service provider) to give preference by offering its products on the market. However, at each management level the analysis and evaluation of competitiveness could have their specific features.

After studying the definitions of the competitiveness in the economic literature, the author draws attention to explanations of "failures", in the definitions of competitiveness, mostly it is stressed that the competitiveness associated with the *price* and *quality*. The author believes

that competitiveness is not only identified with these aspects, as the afore-mentioned factors are related more directly to the company's internal environmental factors. Factors of the external environment also have a significant impact on the competitiveness, its form of expression and aspects of its management for sustainable development.

The definition of competitiveness as a competitive business management system component, the author of the study has discussed with and it has been approved by the RTU Institute of Building Entrepreneurship and Real Estate Economics Working Group, using the focus group method, which consists of companies, institutions and organizations representatives. Based on the previous research, the author proposes the following *wood products manufacturing competitiveness* definition: *an indicator complex that distinguish wood products supply from competitors' wood products supply to serve the public needs and requirements and development of sustainable economic.*

Based on the fact that in the economic literature authors in competitiveness definitions as the factors affecting the competitiveness mainly notes the price and quality, the author during the development of the research found out that “understanding” of competitiveness and its forming factors of wood products manufacturing companies. Summarizing business views regarding the concept of competitiveness and its influencing factors, it seems that most of the companies surveyed (~94%) expressed the view that competitiveness is related to price, quality, and the price-quality ratio.

The author points out that the price and quality are only part of the competitiveness affecting factors, as well as the factors that are “invisible” or in other words, they show their influence only indirectly, when changes occur or the expression of any of the competitiveness factors that influence on competitiveness is prevail.

Based on the aggregated results, describing the business of knowledge in terms of competitiveness, the author concludes that the business level of competence of the issue of competitiveness is low, in order to promote wood products manufacturing company`s understanding of competitiveness issues, it is necessary to run activities of company on competitiveness based management solutions for driving process efficiency at all levels.

The author stresses that within the company there should be accurate compliance of management system with the company's technological level, which merges the company's logistics activities related to information flow, wood products manufacturing, employees, the flow of energy planning, regulation and control. In addition, the greater the difference is formed between the company's administrative and technical levels, the sooner the company will lose its competitiveness. The author stresses that, first of all, the competitive company

means skilled management and a clear wood products manufacturing organization, as well as it is able to provide and increase woods production manufacturing advantages.

In the economic literature some authors have defined the term “management” as a set of actions, including planning, organization, coordination, motivation and control, focused on the company's employees, financial, material and information resources for better use in order to achieve business goals with greater efficiency. Some authors believe that running a business is to predict and steer future events so that decisions taken by the company as a result of the identified objectives. As a key management function it is usually referred to planning, organizing, management and control.

Based on the close relationship between the company's management performance and its competitiveness, the author points out that for companies in competitive conditions in the context of achieving and increasing competitiveness effective management making decision at all levels of management is of invaluable contribution.

The author believes that the task of competitiveness improving is closely linked to individual performance indicators and achievement of all business process. One of the main conditions for achieving business competitiveness is a new innovative solution implementation which also provides advanced technology and modern management methods used, the flexibility of wood products manufacturing, coherence and security of continuity.

The definition on competitiveness based management as a competitive business management system component, the author of the study has discussed and it has been approved by the RTU Institute of Building Entrepreneurship and Real Estate Economics Working Group, using the focus group method, which consists of companies, institutions and organizations representatives.

The author, based on the study of economic literature, *competitiveness* and *management* definition, offers the following *on competitiveness based management wood products manufacturing* definition: *set of operations, including planning, organization, coordination, motivation and control, which focuses on the complex design and implementation that distinguish wood products supply from competitors' wood products supply, providing a complete enterprise resource use, in order to achieve higher levels of business efficiency, serving the public needs and requirements and development of sustainable economic.*

Summarizing competitiveness factors and the correlation of product, company, industry and national level, the author has developed Figure 2.1, which reflects the correlation of the aforementioned factors. By this developed model the author wants to draw attention to the very wide view on the competitiveness and its multiple dimensions, because factors of

competitiveness in the world market, at the national level, within industry, at enterprise level and at the level of wood product itself, although their way of expression is a little bit different, they will affect the competitiveness at any of the levels. As it is shown in the developed model, in the center there is a consumer (buyer).

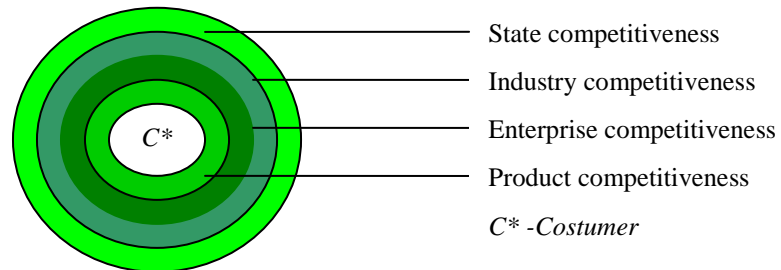


Figure 2.1. Complex model of the levels of competitiveness factors

Based on the explanation of the definition of the competitiveness, one of the key business objectives is to fulfill customer expectations and needs, which means that the consumer will be the one who “evaluate” the level of competitiveness, therefore, it is essential to develop on competitiveness based management solutions at all levels.

## **2.2. Interference of wood products manufacturing on competitiveness based management methods**

It is possible to adopt various classical models on competitiveness based management of wood product manufacturing, which allow identifying factors affecting the competitiveness and their way of expression. Based on the previous research, the author concludes that the concept of competitiveness is complex, at enterprise level it is generally understood to be wood product consumption and the cost of a set of characteristics that determine its success in the market, meaning, the goods outweigh the other in circumstances where there are many similar wood products, which compete with each other. The main condition for efficient business operation and development is the ability to offer goods and services on the market with the most favorable terms - to be competitive.

Competitive environment analysis for each company is directly related to the competitive assessment of the sector which focuses on the competitiveness based management. Attractiveness of wood product manufacturing is determined by potential profit that depends on the company’s competitiveness. Potential profit of wood product manufacturing can be assessed by analyzing the mutual interaction of various environmental powers, which affect the competitiveness.

For assessment of the company's strengths, weaknesses, opportunities and threats there is a need for profound knowledge and skills to identify and analyze the forces acting within the particular sector in order to develop possible solutions of the competitiveness based management.

One of the possible methods of evaluating the competitive environment to identify competitive advantages on competitiveness based management is to use the benefits of M.Porter's five forces model. This is essentially the company's competitive environment structured toolkit, designed to measure these forces and their interference. While all businesses should be competitive, the nature of competition of each sector is quite different. Summarizing the world's experience, M. Porter has pointed out five factors that determine the internal attractiveness of long-term profitability which can be reached in the market or its segment: *competitors, potential market participants, goods - substitutes, buyers and suppliers*. It should be noted that Porter's five forces model is classically used for assessment of company's strengths, weaknesses, opportunities and threats in the given sector. The author believes that this model can be successfully applied as one of the competitive assessment models and on competitiveness based management methods, as forming part of the "forces" clearly affects competitiveness indicators .

Competitiveness is composed of a number of its elements that can be divided into two major parts: *product quality* and *commercial term* (distribution strategies, promotion activities, etc.). Conformity of goods for the market and specific needs of consumers, besides its quality, technical, economic and esthetic demands, is determined by commercial and other marketing rules (price, delivery time, distribution channels, service quality, technical support, credit facilities, etc.). Referring to Porter's model, it can be concluded that the competitiveness elements are attributable to each of the five factors.

According to the factors affecting the competitiveness of enterprises, the author of the study has compiled them by creating a model where the factors on competitiveness based management are scattered as the factors of internal and external environment (Figure 2.2.).

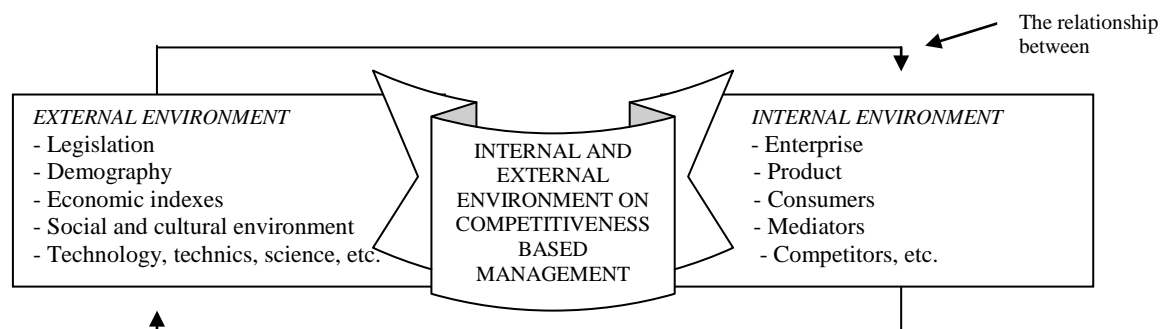


Figure 2.2. Informative logical model of internal and external environment on competitiveness based management



This classification reflects the idea of the potential influence of competitive factors and their strategic management. External environmental factors cannot be controlled by company, but they can adapt its activities to the situation on the market focusing its activities on the competitiveness based management. Quite the opposite is the situation with the internal environmental factors - the company chooses such market strategy and tactics that can maintain and increase their competitiveness based on competitiveness based management. Doing the comparison with company's main competitors of the sector, its strengths and weaknesses should be assessed as well as the possible changes that might appear within the feasible strategy. It is appropriate to do comparison by taking into account the following indicators: quality of goods or services, customer service, customer satisfaction, financial position, technical equipment, basic skills, staff training and their loyalty.

Based on the fact that there are experts who believe that the base of competitiveness should be locked for not in the external environment, but in the company itself, in order to find a way to enhance its own competitiveness in the framework of on competitiveness based management, must be clear about what company want to achieve in order to be able to create competitive advantage. Competitive advantage should be achieved and maintained, because competitors strive to achieve the same level, so it is possible to use factors that would help to maintain this advantage as long as possible (barriers to imitation, competitors' capabilities, as well as the overall dynamics of industry).

Assessing the competitiveness of production, company, sector or a country, variety of qualitative and quantitative methods can be used. It is possible to use one of the most successful competitive detection algorithms - "Porter's diamond", which is able to combine the comparative advantages of qualitative analysis of the national and enterprise levels, based on the cluster of socioeconomic indicators, which describe internal and external factors affecting the competitiveness. Assessing the competitiveness of wood products manufacturing, the "Porter's diamond" model can be used, and it is traditionally used in evaluation of national competitiveness. The author of this study believes that factors that forms the model not only characterize the country's competitiveness, but it successfully can be applied in wood products manufacturing level as well, thereby using opportunities on competitiveness based management offered by this model. The afore-described model helps to define links between the major forces affecting the market, affect of changes in demand and related industries, as well as influence of economic policy and opportunities of development. All of these elements form the system of competitive assessment, in which a change of each element causes changes in the rest of elements and leads to the new steady-state of the competitiveness.

Four of these factors affecting the competitive advantage are the so-called extended factors mutually influence each other among the wood products manufacturing companies: manufacturing conditions; demand conditions, binding and supporting industries, the company's strategy, its structure and competition. Any of the afore-mentioned factors affects the other ones. Besides the advantages of a single factor can cause or intensify additional benefits of other factors.

Advantages of each factor cannot be interpreted as precondition of competitive advantage for the entire wood products manufacturing. Only interference of advantages between all of the factors ensures self-reinforcing effect of the system. *Additional* factors (unexpected events - the possibilities and public policy) may increase or decrease competitive efficiency of wood products manufacturing companies. Public policy should stimulate demand for wood products with higher added value, ensure a competitive environment, and stimulate the formation of the expanded factors and integration of wood products manufacturing companies. The author has included in the model “*environmental conditions*” influence because changes in the economy can affect all the factors included in the model.

To determine the competitiveness of Latvian wood products manufacturing the set of the socioeconomic indicators is developed, by analyzing certain wood products and competitive advantage of their manufacturing companies in domestic, EU and global markets, as well as all development strengths and weaknesses of wood products manufacturing. With Latvian wood product manufacturing is understood the whole manufacturing and distribution chain (vertical integration chain) of wood products, which combines both stages - production and sale of finished product to the final consumer is understood. The above-mentioned set of indicators is used in the assessment of the main interconnection of wood products manufacturing in Latvia, using Porter's model principles. The socioeconomic system used for assessment of Latvian wood products manufacturing combines the analytical indicators for each level of competitiveness. This system of indicators allows assessing the fundamental factors of competition, which characterizes the competitive advantages of wood products manufacturing in the domestic and foreign markets and determines signs of individual companies as well.

The competitiveness of Latvian wood products manufacturing can be assessed by two aspects taking into account the potential of its competitiveness in various markets: in the domestic and foreign (mainly EU and world) markets. The competitiveness of the wood products manufacturing in domestic market is determined by the structure of wood products manufacturing, indicators of wood and wood products manufacturing productivity and

efficiency, amounts and dynamics of non-financial investments, including foreign investments, support for wood products manufacturing and its dynamics. Wood products manufacturing competitiveness on external markets may be determined by comparing to other countries the dynamics of Latvian wood products export and import, price level of wood and wood products, workers' average (neto) monthly wage.

Competitiveness of wood products manufacturing can be divided in *internal* and *external* competitiveness. *Internal wood products manufacturing on competitiveness based management* the author defines as follows: *ability to purchase the necessary resources in an appropriate quantity and quality, competing with other national sectors in the market of available national resources in order to use the obtained resources in producing of competitive wood products, contributing to the increase in gross domestic product.*

In the internal competitiveness of wood products manufacturing the main attention is paid on the national resources and their allocation on the market for all national sectors' demand and internal supply. Price is the main criterion for assessment of the demand and supply conformity on the resources' market. It means that sector as well as other economic operators, in the circumstances of resource limitations, should offer the price for resources taking into account the overall demand and supply.

*External wood products manufacturing on competitiveness based management* the author formulated as follows: *ability to produce competitive wood products in response to technological rules for a price no higher than the price offered by potential foreign competitors, in response to all eligibility requirements of the country where the wood product is produced.*

During the period from 2004 to 2007, the rapid growth of wood products manufacturing and other national industries caused negative side effects - increase of prices of resources and final product. In the national economy of Latvia this negatively affected the competitiveness of economic entities and it indirectly promoted the increase of competitiveness of the woods products produced by foreign companies. From the national economy entity's point of view it is important to purchase the necessary wood product of certain quality characteristics and potentially more favorable conditions. Therefore, the external competition, in this case has a positive impact on wood products manufacturing companies inside the country by making them constantly take care of *innovative products, advanced technologies and materials, improvement of labor organization in order to reduce production costs*, thereby moving its operations to the competitiveness based management. As a result, it makes it possible to provide wood products to consumer offering more attractive conditions, which in result increase companies competitiveness in both domestic and foreign markets. This means that the internal and

external competitiveness of companies involved in wood products manufacturing are interrelated and complementary.

Competitiveness of wood products manufacturing is formed by competitive advantages, which can be divided into two large groups: *natural* and *acquired* competitive advantages. In the wood products manufacturing's set of *natural advantages* quality and quantity of national resources are considered as the highest priority which participate in the production and formation of conformity and amount of produced wood products. National land area and market capacity are interrelated and complementary factors involved in shaping of natural competitive advantages. It should be noted that there is a very close connection between two groups of advantages - natural competitive advantages are participating in development of acquired advantages and acquired advantages allow developing natural competitive advantages, thereby the author concludes that competitiveness is a result of usage of competitive advantage. *Acquired advantages* of wood products manufacturing can be considered as a key indicator for ensuring internal and external competitiveness. The wood products manufacturing ability to efficient use of existing resources can be considered as a major advantage out of all acquired competitive advantages. To ensure this, it is necessary to reduce inefficient use of resources in various wood product manufacturing cycles. Efficient use of resources is closely related to the company's management ability to react flexibly to the internal and external factors affecting wood products manufacturing. For maintaining and increasing of competitiveness on competitiveness based management it is important to ensure the conformity of wood product to customer's changing requirements and legislation that regulates the process.

Wood products manufacturing competitiveness indicators can be classified by the following characteristics: the *scale* of competitiveness (internal, external and global competitiveness), *type* of competitiveness (competitiveness in the market of resources, in the domestic market of finished goods, in the foreign market, attracting of foreign investors).

Evaluating wood products manufacturing's *domestic* and *external* competitiveness factors, it seems that they are directly dependent and closely connected. Domestic competitiveness expression with the acquisition of resources and credit attracting options, attraction of non-financial investments, as well as the vital role of the internal competitiveness of the position in domestic market, as well as the competitiveness of domestically-produced wood products. External competitiveness is characterized by foreign financial resources that are available for acquisition opportunities, or the competitiveness of foreign resources markets. Attraction of foreign financial investment plays an important role in the external competitiveness,

competitiveness in foreign trade markets as well as the competitiveness of attraction of foreign-sourced material investment.

For assessment of wood products manufacturing competitiveness on competitiveness based management it is possible to use several *absolute* and *comparative* indicators. *Absolute* indexes for assessment of domestic competitiveness are *manufactured product, added value of manufactured products, workforce involved in the industry, year average value of funds that are available for companies, value of current assets used in manufacturing of good and its absolute increase and changes in the reference period*, etc. indexes. *Absolute* indexes for assessment of external competitiveness are, for example, *changes in growth of total amount of foreign investment which is contributed or accumulated in the companies during the reference period, growth of foreign investments amount received in a year, changes in amount of product export and import and changes in a balance of product export and import*.

The indicators of import and export are used in external competitiveness evaluation compared with other economic sectors. Wood products manufacturing indicators of competitiveness are used for comparison with selected object - related indicators of any other economic sector or individual company. The use of absolute indicators of wood products manufacturing competitiveness assessment is quite limited. For their practical use it is necessary to identify economically and technologically compliant, mutually related absolute indicators, which may be used for evaluation of competitiveness. Significantly to choose objects that may be included in assessment of competitiveness - economic sectors competing on market of industry or resources, as well as corresponding period of competitiveness assessment, as well as to compare competitiveness indicators characterizing changes in competitiveness of selected evaluation period and to assess and interpret results. Figures of wood products manufacturing competitiveness are used for *comparison* of different development process intensity and efficient use of resources available to the industry with existing and potential competitors. For analysis and evaluation of competitiveness it is possible to use the following comparative indicators: *efficient use of labor in the industry, efficient use of available capital, efficient use of current assets, labor intensity of added value of produced goods, efficient use of money spent on remuneration of labor* and other indicators. Presented system allows draw the following conclusions on their practical use on competitiveness based management. System consists of two parts - absolute and comparative indexes of competitiveness, each of these sets of indicators would be included in the evaluation change of the wood products manufacturing internal and external competitiveness, should be taken into consideration that competitiveness is changing all the time, according to changes of economical development cycles and submits



The author in figure 2.3. summarized the main on competitiveness based management theoretical guidelines in wood products manufacturing, that related with different levels of competitiveness, its influencing factors and influence of environment conditions on competitiveness, and the main instruments of competitiveness management. The author of this study considers that reflected theoretical knowledge would be developed and expanded in a follow-up research.

### **2.3. Options of wood products manufacturing on competitiveness based strategic management**

For the companies involved in wood products manufacturing on competitiveness based management process it is appropriate to use the the afore-mentioned advantages of strategic management. Strategy is one of the main and most complex functions of the business policy, especially if the issue is related to competitiveness factors. The author notes that the developed strategy does not ensure success, the developed strategy should be effectively managed and the work performed should be assessed to succeed. Consequently, the strategy consists of a planned action and the necessary improvements - previously unplanned action. It is important to balance wood products manufacturing's external environment possible changes to the "discovery" of wood products manufacturing companies' internal problems and development of possible solutions. It is necessary to choose optimal and economically, socially and environmentally balanced development "way" taking into account internal and external factors of wood products manufacturing, it means, it is necessary to choose the appropriate strategy and tactics for strategic decision-making in managing the competitiveness.

In the promotion work, getting acquainted with the benefits of strategic management in the process of strategic decision-making, the author stresses that the concept of strategy has historically been associated with military operations. For example, one dictionary explains it like *war science and art of general planning and realization of large-scale combat operations*. In general, the competitive environment can be considered as the "*battle field*", but strategic plans for reaching goals as the "*war science and art*".

Implementation of strategic competitiveness development contains processes of strategic planning and management for reaching the company's goals, therefore it is necessary to coordinate the environment affecting factors with expression of external environmental factors. For successful implementation of strategic goals there is a need for effective strategy formulation and creation by specific methods and activities.

On the basis of advantages of strategic management and its broad range of applications, the author believes that to maintain competitiveness and its management, it is necessary to implement on competitiveness based strategic management in three levels: *corporate, business and functional level*. It is important to point out that the aim of strategic management of competitiveness is to enable the company to find out what distinguish it from its competitors, and create its own competitive advantage.

Summarizing the strategic competitiveness management advantages, the author of this study created on competitiveness based management model, which reflects the competitiveness management implementation guidelines (Figure 2.4.).

In this model the author has demonstrated the main differences of high quality wood products manufacturing and on competitiveness based management. The main and most significant differences can be observed directly in the approach of wood product manufacturing, as “quality wood product” it will not always be “competitive wood product” because the quality is only one part of the competitive product characteristics.

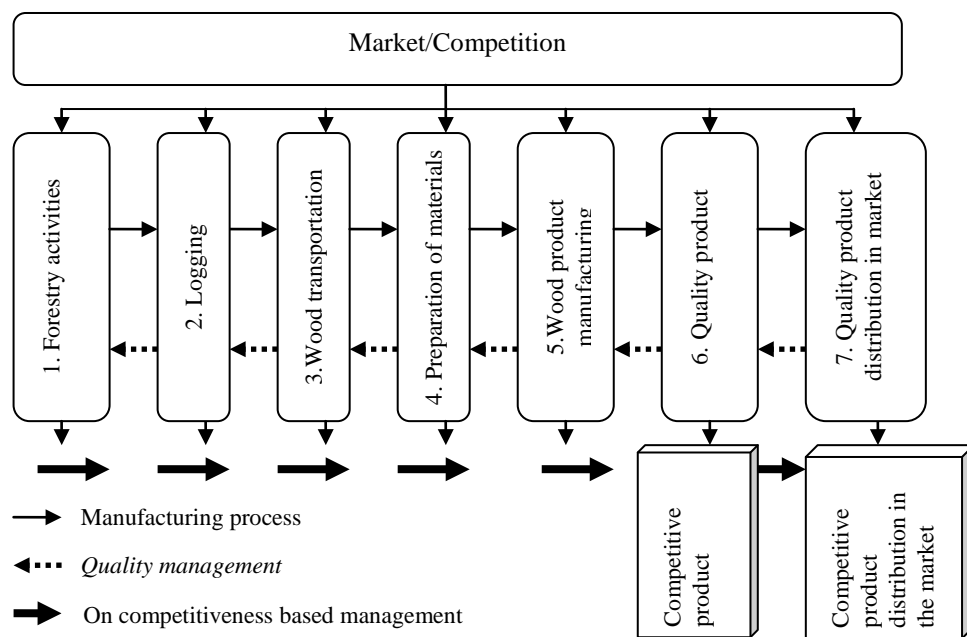


Figure 2.4. On competitiveness based management in wood products manufacturing

Important role *on competitiveness based management* and enhance the competitiveness is strategic management decisions related to the company's long-term objectives by developing appropriate solutions for wood products manufacturing organization and management implementation at all levels of company, taking into account the wood product characteristics (price, quality, value of using, design, packaging etc.), distribution strategies, and market promotion, etc. activities.



### **3. On competitiveness based management scientifically practical solutions in wood products manufacturing**

#### **3.1. Complex assessment of the competence of entrepreneurs on competitiveness based management in wood products manufacturing**

The author has highlighted hypothesis about competence level of entrepreneurs interfering dynamics on competitiveness based management of company's own competitiveness in market, therefore it is important in wood products manufacturing involved companies view assessment on wood products manufacturing trends, competitiveness nature and importance of wood products manufacturing and sustainable development of companies involved in wood products manufacturing, which is focused on competitiveness based management of wood products manufacturing throughout development of added value chain of wood products manufacturing. The target group included 207 in involved large, medium and small wood products manufacturing companies from different regions of Latvia. Senior executives of these companies were selected to be *target respondents*, as their view on issues related to competitiveness that is a key strategic management decisions making of company's development.

One of the aims of research was to find out opinion of companies about general situation in wood products manufacturing in Latvia and its contribution into national economy, confirm or deny the hypothesis. Within the framework of research opinion of representatives of surveyed companies` related to competitiveness concept, its meaning and importance of the competitiveness of business development was found. The competitiveness self-esteem of companies was carried out and advantages of particular company in comparison with other companies were found out. With the aim to identify positive and negative factors affecting the competitiveness of businesses in the study there were included issues that characterize companies in the market (company size, number of employees, turnover, etc.). All companies, which are related to wood products manufacturing in Latvia were interviewed in order to have better overview of Latvian wood products manufacturing actions as well as to clarify the main problems and their possible solutions for development of competitiveness.

Evaluating the study results, the author acknowledges that the companies questioned on the concept of the competitiveness and its content, largely identify it with price, quality, and the price-quality ratio. The concept of competitiveness should be perceived more widely, because the price and quality are not the only factors that affect competitiveness of the company, it also affects the system of certification, innovative solutions, manufacturing technologies,

business organizational structure, business leaders knowledge and expertise, the corporate responsibility, logistics solutions, distribution strategy, wood products market promotion activities, communication strategies, etc. factors.

Assessing the factors, which are negatively and positively affecting the competitiveness of wood products manufacturing companies, it is recognized, that the main positive factors are employees and companies experience, as well quality of goods and accessibility of resources. Companies are aware of those positive factors in the internal environment of their companies. Therefore it is significantly for wood products manufacturing companies to move its strengths to use external opportunities directing its activities on competitiveness based management. Assessing the factors, which are negatively affecting the competitiveness of companies, the main factors that were mentioned are public policy and accessibility of resources, many of the companies could not clearly formulate their views, because they believe that there are many issues that are not organized yet, and “sometimes there are contradictions in the actions of national legislative power and executive power”. Taking into account positive and negative factors affecting the company's competitiveness indicated by the companies themselves, the author of the study acknowledges that some of these factors are company's internal environmental factors, but some are external environmental factors. During the study development gaining on competitiveness based management in wood products manufacturing involved entrepreneurs complex assessment results of the competence, the author has identified and selected positive and negative factors influencing competitiveness of the companies involved in wood products manufacturing and has developed the classification by types of factors, influence, nature and scope (Figure 3.1.).

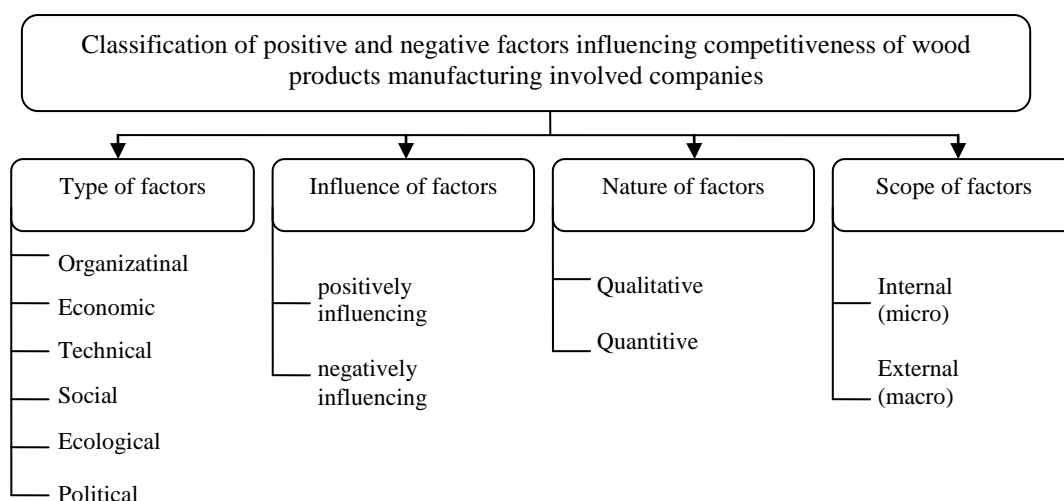


Figure 3.1. Classification of positive and negative factors influencing competitiveness of wood products manufacturing involved companies

Summarizing the obtained results with respect to companies' main advantages over their competitors, as the main advantages should be mentioned the availability of resources (availability of wood resources, skilled and loyal staff availability) and company's experience, the fifth of the respondents are unable to define their own competitive advantage, part of them says that their company does not have any advantage, but some express the view that "everyone is equal". Companies see the competitive advantages exactly inside the companies, that indicates the necessity for companies to find strength and development potential of the internal environment, arranging and optimizing supply of resources, production processes, product distribution, as well as implementing and activating the strategic decision-making processes for business development and increase of competitiveness, on competitiveness based management. The author draws attention to the fact that a competitive industry, first of all, means having there competitive companies.

### **3.2. Key instruments on competitiveness based management in wood products manufacturing**

Based on previous research results, gathered in wood products manufacturing involved entrepreneurs complex assessment of competence, as well as industry experts' assessment, the author concludes that the important part of wood products manufacturing development on competitiveness based management ranks wood products manufacturing development, which includes strategic management decisions and solutions adoption of timber resources to optimize the flow of wood products across the value-added chain, as well as interference with the wood products manufacturing related industries. The author emphasizes that logistics solutions on competitiveness based management of resource flows and wood products method of distribution choice is crucial.

Clarifying the views of companies that distribute products themselves, about half admitted that they used transport the company has, but other companies are used logistics services company to implement distribution, in turn, some of the companies using any of the other way, known only to himself. The author concludes that companies use different models of distribution for delivery of resources and manufactured goods to the necessary destination

Based on the analytical assessment of wood products manufacturing in Latvia, investigated concept of competitiveness economic, social and environmental content, as well as assessment of competitiveness and competitiveness management methods and their practical applications, the author as one of the potential solutions of increasing the competitiveness of companies involved in wood products manufacturing, highlights implementation of

optimization of logistics process that focuses on competitiveness based management. The author emphasizes that logistics issues in competitiveness increasing context of companies involved in wood products manufacturing is considered as very important aspect. Based on the above mentioned, it is necessary to find ways to select and develop such strategic solutions of distribution systems for companies in a competitive environment which would provide an opportunity to make company operations more efficient and improve their competitiveness by adopting strategic decisions for the optimal choice of distribution strategy and implementation on competitiveness based management.

Strategies of distribution are associated with “channels”, which are used by the company to make their wood products available for consumers. The economic literature suggests that traditional “channels of distribution” are structures, organized by buyers and sellers which prevent the “gap” in time and space between producers and consumers. Taking into account the increasing requirements of consumers for the products and availability *at the desired location, time and quantity*, it is necessary to acquire some new technologies of consumer service in order to accurate determination and realization of customer expectations and needs, using on competitiveness based management opportunities, thereby ensuring realization of company’s strategic goals and increasing its competitiveness. Development of above-mentioned factors results with changing of distribution system and its expression form, because wishes and needs of consumer are directly subordinated to technological development, consequently they are changing as well.

*Logistics is understood as a comprehensive and systematic planning, regulation and control of information, materials, production, labor, and energy flow.* This means that the essence of logistics is to find optimal solutions for delivery of materials and goods to the desired location and at the right time, by ensuring an efficient transport and the transportation, associated with the materials for production, finished goods and stocks, in order to reduce the total costs. Product delivery from the manufacturer to the purchaser or the final consumer, is traditionally known as the distribution, but the use of logistics concept in the research to some extent shows the extend area of logistic issues and range of functions to be performed.

Implementation of logistic functions begins when the extraction of wood resources has been planned by assessing and defining accessibility to the resource supply point. Next step is the process of preparing wood (logging), during which the logistic functions are performed by assessing and choosing the efficient way and optimal route of transportation of wood resources, conditions and storage options of wood resources are determined as well as means of transportation by which wood resources will be delivered to the storage site are decided

upon. Planning of wood product manufacturing, planning of expected work and other resources for its implementation as well as planning of the finished wood products delivery and its implementation to the consumer, moreover, it should be done in a way that this “product route” would take less time and be at low costs, that will affect the final price of product, which in turn will affect the demand and wood product competitiveness in market is done. Thus, the market is just the final delivery point of product, but the manufacturer can significantly increase its efficiency if it takes into account market requirements and the available information before solving the logistic issues. This modern approach is a base for the wider use of logistic actions in optimizing of resource flow and increasing of efficiency on competitiveness based management in wood products manufacturing. Logistic tasks associated with already finished products and include the planning and control of the physical flow as well as development for meeting maximum of consumers requirements.

Implementation of logistics process allows increasing the efficiency of company’s actions on competitiveness based management, under several conditions - logistic linking with the company's corporate strategy, detailed development of logistics operations, identifying the optimal level of logistics service, etc. Main criteria of logistics are *quality*, *time* and *costs*, but the central element of its system is a consumer, therefore the development of logistics system by involving all “entities” of this system is considered as one of the solutions of increasing competitiveness of wood products manufacturing.

To fulfill the main task of logistic it is necessary to solve a number of sub-tasks for establishing of *efficient control system*, which would detect inefficient processes by comparing the chances and risks, incomes and expenses, opportunities and needs; functionally coherent and technologically rational *organizational structure of the business*; *effective management system*, optimizing the materials, information and other flows, which provides cost-minimizing, maximizing available capacity filling on competitiveness based management conditions.

The peculiarity of wood products manufacturing is that in addition to changes in internal infrastructure by the impact of economic activities the conditions of production are affected, which to some extent, depend on: place and time of wood preparation; cutting composition (tree species, felling quality); weather conditions; the region's overall development level of infrastructure.

In accordance with the provision of logistic system’s efficient functioning, one of the logistics tasks is to reduce the *time consumption* for implementation of logistics process. The total costs of logistics functions implementation can be reduced by reducing the execution time

of logistics functions. It would be possible to reduce the costs of storage by shortening the storage period for stocks of raw materials in the warehouse. The optimization of manufacturing process would lead to shortening of time used for wood product manufacturing and by shortening the storage period for wood products it would be possible to reduce the costs of product storage. *Transportation* of production plays a very significant role in the process of reducing of total time and logistics costs. In order to evaluate the possibilities of wood resource and wood products transportation in the territory of Latvia, the author by making an analytical assessment of total Latvian “road network”, (Latvian roads, ports, and railway), concludes that choosing the best mode of transportation need evaluate advantages and disadvantages related with economic, environmental and also social aspects. Undoubtedly, it would be possible to reduce the total time of carrying out the functions of logistics as well as costs by reducing the time for storage the finished wood products at the warehouse before these goods reach the final consumers. Finally, the time it takes to deliver products to the consumer concludes the whole cycle of logistic tasks.

One of the ways to optimize the logistic process on competitiveness based management would be development of companies` logistic networks, which would help to coordinate and monitor the flow of resources as well as options of production distribution. Such unified system would allow increasing of manufacturing efficiency, reducing the time necessary for purchasing of resource, more efficient use of warehousing as well as reducing the time of the product's "way" to its final consumer, thereby increasing the competitiveness.

Based on above mentioned logistics functions and tasks, options for increasing the company's competitiveness as the main factors of logistics' development and rising the level of operating efficiency, the author mentions development of the resource gathering system; optimization of wood processing and wood products manufacturing processes, as well creation of system for efficient wood product distribution, based on the implementation of strategic decisions on competitiveness based management.

Acquainted with the explanation of distribution channels provided in the economic literature, the author concludes that they are similarly defined, but with minor nuances. The author's explanation of distribution channels is the following: *interconnected chain of people, institutions or agents, involved in the flow of goods to the consumer, together with informative, financial, advertising and other types of actions, ensuring the product's attractiveness and usefulness for the sale to consumer in convenient time, desired location and quantity.*

Taking into account the fact that the distribution channel's task is to fill the space between production and sale in space, quantity and quality, the importance of necessity for increasing

the level of produced goods' competitiveness reflects not only in Latvia, but also elsewhere in the world. The main role of distribution channel is relocation of products from their producers to the consumers, eliminating the "gaps" in time, space and property law, which separate the products and services from those who would like to use them. Without manufacturers, retailers and final consumers several institutions (banks, insurance companies, goods storage companies, and transportation companies) are participating in this process, however they do not have the ownership of the product, they are not actively involved in buying and selling activities. Taking into consideration that all participants in any distribution channel meet some of the distribution functions (research work, trade promotion to the market, organization of negotiations, contact building, financing, risk-taking, transfer of ownership rights, physical movement of goods, payment function as well as product adoption), the most important task is to determine which participants of distribution channel will perform specific actions.

Distribution channel's strategy is a unified concept, which determines how resources should be used for creation of distribution channel, linking producers and consumers, which ensure the availability of products and its related services to the target segment. There are several essential questions related to the distribution sector: extensiveness of distribution, how to use the compound distribution channels for covering different segments, how to modify the channel for adapting environmental changes, how to handle the conflict situations between the distributing channels and use of vertical systems in order to establish control over them. Each of these strategic issues should be looked at in its relation to various circumstances on competitiveness based management.

In practice, the most of companies that are involved in the wood products manufacturing, in choosing the distribution channel's strategy are more focused on its benefits, but do not take into account its weaknesses. Advantages and disadvantages of distribution strategies indicate that there is no ideal direction or guidance which might be followed by a company, therefore it is necessary to evaluate the advantages and disadvantages associated with alternatives of those strategies.

Summarizing distribution channel's strategies, determining its advantages and disadvantages, the model of informative-logistic distribution channel strategy has been created, showing the alternatives of choosing the distribution strategy on competitiveness based management that could be used as informative model in distribution channel strategy choosing process (Figure 3.2.).

All of these components should be taken into account, making strategic decisions when choosing distribution channel strategy. Choosing of the distribution channel's strategy is a

very responsible step for the company to be taken, because the decision-making process is influenced by many factors - specialization, product, and target buyer's characteristics.

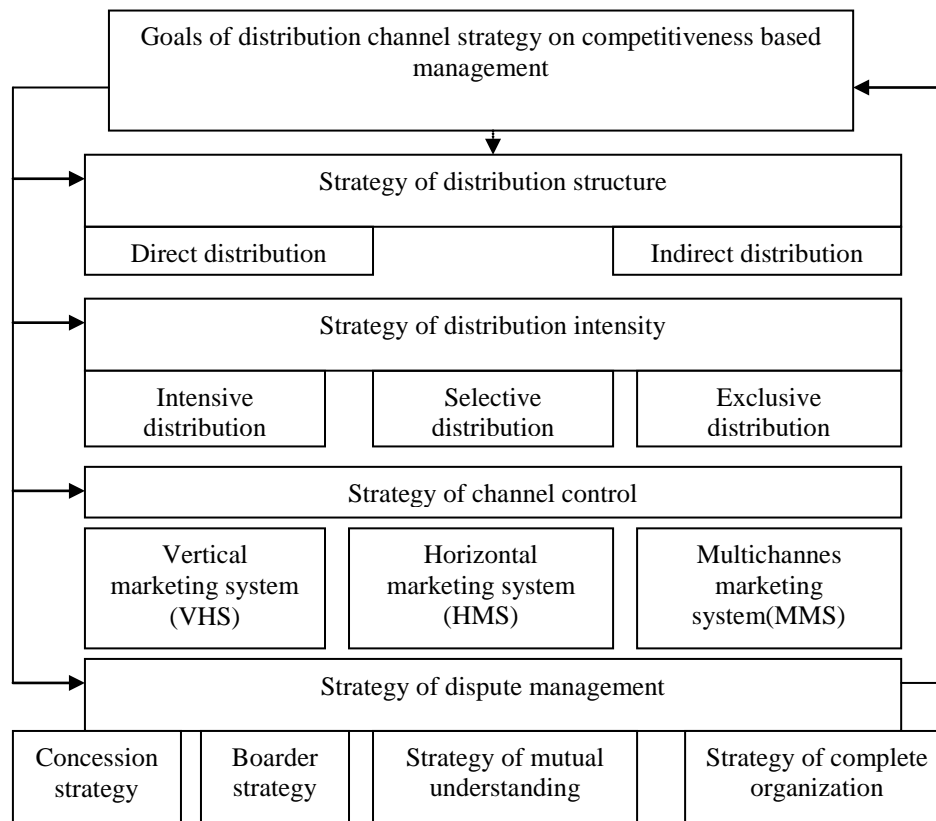


Figure 3.2. Distribution channel strategy information synthesis model

Based on the foregoing, the author as one of the proposals to wood products manufacturing involved companies recommend to use summarizing model of informative-logistic distribution channel strategy as support tool for strategic decision-making of distribution channels strategy for determining the effective wood products distribution in market, which is one of the most important instruments on competitiveness oriented management of wood products manufacturing.

Based on previous research findings related to the intensity of the use of wood resources in wood products manufacturing, the author concludes that wood recourses and wood products utilization in the related sectors in Latvia is relatively low. To sum up, viewpoint of companies involved in wood production manufacturing and industry experts regarding domestic application of wood recourses in wood products manufacturing can be seen that the export structure is still dominated by wood products with relatively low added value, which generally means inefficient domestic wood recourses utilization in wood products manufacturing. Based on this conclusion, the author of this study believes that the local wood



products can be successfully used in construction, which is one of wood products manufacturing related industries.

Based on the important global climate change and carbon dioxide (CO<sub>2</sub>) emissions increase trend in the atmosphere, greater use of wood in construction is considered one of the emissions “reduction” options, as CO<sub>2</sub> accumulated in the wood remains in the timber throughout the product cycle.

In view of in recent years the world and the Latvian people are increasingly an effect upon the global climate change, although climate change effects of different processes in complex interference, it is difficult to predict, however, building on the studies conducted so far, the author wishes to highlight important trends: rising water levels in oceans and seas, changes in natural habitats, increase in temperature. As majority of scientists indicate, the main cause of global warming negative world climate change are the increasing carbon dioxide's (CO<sub>2</sub>) emissions in the atmosphere. It is believed that at least 60% of observed climate changes occur because of increased CO<sub>2</sub> emissions caused by human actions.

According to results of specialists' studies, comparing the environmental impact of different building materials, manufacturing of various plastic materials makes the greatest load to the environment, while one of the smallest loads to the environment is caused by wood. Wider use of wood in construction to make better use of Latvian natural advantages, therefore it is necessary to find solutions for the implementation of measures for the wider use wood in construction, thus stimulating to increase wood products competitiveness on competitiveness based management. Referring to the CEI-Bois project "Roadmap 2010", the author notes that it was expected that by 2010, wood will be a key material in construction and decoration. The author concludes that to achieve this need to solve a series of questions related to the Latvian wood for construction, including construction wood fire. Latvian wood is used mainly in small house construction, but larger buildings (schools, halls, etc); it is mainly used for roof structures. An important role in wood for Latvian also holds the energy industry, wood residues and deteriorated wood would intensify use of heat and energy production, better use of local wood resources directly to local market needs by replacing fossil fuels with biomass. In turn, forest recreation function implementation, as well as forest tourism development, the role of the future is increasing, it is necessary to develop strategic solutions and support tools.

## CONCLUSIONS AND RECOMMENDATIONS

Taking into account the topicality of the study that is related to impart role of the wood production in the national economy of Latvia, because the geographical location, forest quantity and quality ranks Latvia among the countries in which wood products serve both for domestic consumption, as well as play an important role in foreign trade, the author believes that, having regard to the economic slowdown of 2008, the wood production must be considered as "crisis time" solution. Therefore, during the development of the Thesis, solutions for manufacturing of wood products for its further development, balancing the timber resource extraction and recovery indicators for insurance of sustainable development were found and proposals for increasing the competitiveness of the locally produced wood products in the market taking into account the conditions of the competitiveness-driven management were developed. Taking into consideration the topicality of the chosen research, the author of the study by carrying out the assessment of the theoretical aspects of the competitiveness-driven management in the wood production market has developed scientific solutions and practical proposals for manufacturing of wood products based on the components of the system of ensuring competitiveness-driven management.

Summarizing the results of the conducted research, the author draws out the following main **conclusions**:

1. A set of the definitions of *competition* and *competitiveness* applied to the manufacturing of wood products in which the most important characteristics required for the manufacturing of wood products are indicated, reflects the important role of wood production for ensuring competitiveness as component of the system of competitiveness-driven management.
2. The definition of *competitiveness-driven management* adapted for the manufacturing of the wood products means a set of actions, including planning, organization, coordination, motivation and control, which focuses on the complex design and implementation of timber products to distinguish it from competitors' offer, providing more complete use of enterprise resources to achieve higher efficiency of the company, satisfy public needs and meet its requirements as well as ensure sustainable economic development.
3. For the manufacturing of the wood products the system of the competitiveness-driven management reflects the main guidelines of the theoretical framework of the competitiveness-driven management as a component of the insurance of the system of competitiveness-driven management which are linked to different levels of the competitiveness, factors influencing

them and impact of the environmental conditions on competitiveness and the main tools of competitiveness management.

4. The competitiveness-driven management model for manufacturing of wood products developed by the author reflects guidelines for implementation of the competitiveness-driven management - the main and most significant differences in the competitiveness-driven management in manufacturing of wood products are observed mainly in the approach and implementation of the wood production process.
5. The system of internal and external competitiveness indicators for the manufacturing of the wood products developed by the author provides the opportunity to determine the internal and external competitiveness of the wood that is the basis for the overall assessment of the wood production. The current situation can be characterized as positive, which, in turn, is an indicator of the important role the wood products have in Latvian economy also in future.
6. Analyzing the national economy in regard to the wood production market and evaluating the manufacturing process of the wood products as well as developing characteristics of the timber resources used in manufacturing of the wood products used in regard to the national economy of Latvia, the author concludes that the timber is the major resource and greatest asset of the national economy, so it is essential to balance economic indicators of the extraction of timber resources and reforestation in regard to the sustainable development of the national economy, taking into account the cyclical nature of growing forests, adopting strategic decisions relating to the timber resource extraction and its use in manufacturing of wood products.
7. Based on the complex competency evaluation results of the entrepreneurs involved in wood production that was carried out during the development of the Thesis Paper work, the hypothesis regarding primary impact of the level of competence, knowledge and skills of the entrepreneurs operating in the market of wood product manufacturing company to the competitiveness of the company is substantiated. The author concludes that the wood products manufacturing operators' competence level regarding competitiveness-driven management, that is considered to be a component of the competitive business management system, is insufficient.
8. Results obtained at the end of the complex assessment of the competence level of the entrepreneurs involved in manufacturing of wood products allows to conclude that part of the entrepreneurs cannot define the company's competitive advantage, while most of the entrepreneurs competitiveness identify as a price and quality. This indicates relatively low level of the competence of the entrepreneurs regarding competitiveness-oriented management.

In general, evaluation of the data of the conducted study allows to draw out the conclusion that a level of competence of the entrepreneurs operating in the wood production market is closely related and determines the level of the competitiveness of the company that is achieved by implementing the principles of a component of ensuring the system of competitive management that justifies the author's hypothesis.

9. Development of wood product manufacturing should be balanced with other sectors of the national economy and their development, therefore, companies involved in wood product manufacturing should increase their awareness to all stages of the production process (growing for timber, gaining of timber, manufacturing of wood products, flows of timber resources, wood products, financial and information flow), thus ensuring sustainable development, aimed at raising the competitiveness of wood products in the market.

Based on the research results, the author has the following **recommendations**:

1. In regard to the manufacturing of wood products, the companies operating in this sector shall observe conditions for sustainable management related to forests and forest lands and their management by taking strategic decisions that are competitiveness driven in order to ensure economically and socially balanced usage of the timber resources, implementing the sustainable development principles at the same time preserving the biodiversity, taking into account the inherent forest recreational, ecological and environment stabilizing features.
2. Based on the relatively low value-added on exported wood products, the author recommends the companies operating in the wood production sector by implementing the "deeper" processing of the timber resources by exporting wood products with higher added value that would facilitate more efficient use of wood products in internal market. This would facilitate the development of new enterprises, create additional working places, reduce unemployment in the country that would lead to a greater contribution to the gross domestic product and facilitate the increase of public welfare level and sustainable development.
3. To ensure sustainable development of forests in Latvia and optimum acquisition of local timber resources for the companies involved in wood products manufacturing applying the principles of the competitiveness-oriented management, the author recommends import wood products with lower added value, but in the domestic market produces wood products with higher added value.
4. Taking into account the relatively small demand for the wood products in Latvia, the author suggests, by bringing together legislative power and opportunities of the government and the recommendations which are provided by wood production companies and organizations operating in this market and are related to the development of the support tools required for

alignment of the legislative environment to ensure domestic demand for the supply of locally produced wood products and increase the usage of timber in the production of wood products and related fields. Taking into consideration the opportunities for the State's economic recovery by encouraging greater use of wood in construction, secondary the forecasted renewal of the construction industry growth rates would be facilitated. Being aware of the situation in the energy sector, greater use of wood products and coordinated development of energy sector for facilitating the development of the energy independence in Latvia and for enhancing the complete recycling of wood products manufactured in the domestic market implementing the competitiveness-driven management as competitive business management system component would be encouraged.

5. The implementation of competitiveness-oriented strategic management in the companies involved in manufacturing of wood products requires the need to make strategic and tactical decisions to improve the logistics system required for ensuring implementation of future business activities.
6. There is a need to build closer relationship among producers of wood products, product processors and companies delivering the finished wood products to the consumers, thus reducing the domestic market's dependence on raw materials and finished wood products importers and setting for them a competitive advantage in the fight against imports of wood products in domestic market.
7. Closer integration of wood processors with the logistics and trading companies would facilitate investment opportunities to invest in highly specialized technologies and equipment, ensure wider access to the distribution channels of wood products, increase marketing effectiveness and reduce distribution costs and encourage new wood product development and improve the process of wood production.
8. Education and science integration in timber production and related industries has a crucial role for ensuring sustainable development for manufacturing of wood products ensuring competitiveness-driven management, therefore, the author recommends the responsible legislators of the Republic of Latvia to increase education quality in the vocational secondary and higher education that would be adjusted to the EU requirements and the world as well as its facilitate implementation of innovative solutions and introduction of high-tech solutions in the production of wood products and related fields thus contributing to raising the level of competences and skills of the entrepreneurs operating in the industry.
9. In order to increase the competitiveness in the manufacturing of wood products and related industries to improve the competitiveness-driven management, the responsible legislators

need to improve laws and regulations related to timber production by setting provisions for production of wood products in Latvia, harmonizing and balancing them with the provisions determined in international laws and regulations.

10. When legislators developing development goals of rural territories of Latvia, facilitating and controlling forest land re-forestation by implementation of the principles of sustainable management and ensuring application of correct forest management principles, it is necessary to assess the contribution of wood production and related industries sustainable and balanced regional development of Latvia and efficient land use, because in all regions in Latvian the increase in forest coverage is observed, Vidzeme region is the most forested, the least number of forests is in Latgale region, this affects the wood products industry that in turn has an impact on the economy of the particular region and its sustainable development.

Summarizing the results obtained in the conducted research, the author concludes that the issues related to competitiveness-driven management as a competitive business management system component should be addressed systemically – the competitiveness of the entire wood processing industry is influenced by the competitiveness of the companies operating in this market, therefore, improving the competitiveness of the competitiveness-driven management is closely related to the availability of high-quality wood resources, adequate infrastructure, high-quality products, implementation of innovative solutions in the operational activities of the wood products manufacturing companies thus gaining strategic management advantages, as well as applying logistics solutions in the wood products manufacturing in Latvia.