Sustainable Development of Real Estate Market and its Assessment Opportunities: Case Study of Latvia

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Abstract:
Nowadays, more and more attention is being paid to the country's economic development, for which sustainable development of real estate market is important. The topicality of the research is driven by variety of regulations, economic and environmental issues worldwide and the research has a high social, economic and environmental importance. The aim of the research is to analyse significant aspects of sustainable development of real estate market, and to make its assessment in Latvia. Questions that have a high importance for sustainable industry development were analysed in the research as well. Research methods include a combination of quantitative and qualitative research methods, such as analysis, synthesis, statistical data processing, focus group and expert questionnaire and other methods. The survey is focused sectors Construction and Real Estate Operations – primary on managers and employees of enterprises who are working in development of building projects, construction of residential and non-residential buildings, real estate agencies, management of real estate on a fee or contract basis, renting and operating of own or leased real estate, buying and selling of own real estate. Theoretical overview includes world and European experience on the research question and the related problems. The research includes integrated approach of assessment of the real estate market.

Key words: Assessment, case study, Latvia, real estate market, sustainable development

1.Introduction

The aim of the research is to analyse significant aspects of sustainable development of real estate market, and to make its assessment in Latvia. Questions that have a high importance for sustainable industry development were analysed in the research as well. Research methods include a combination of quantitative and qualitative research methods, such as analysis, synthesis, statistical data processing, focus group and expert questionnaire and other methods. The survey is focused sectors Construction and Real Estate Operations – primary on managers and employees of enterprises who are working in development of building projects, construction of residential and non-residential buildings, real estate agencies, management of real estate on a fee or contract basis, renting and operating of own or leased real estate, buying and selling of own real estate. Methodological steps of index calculation was approbated in the study by Kauškale and Geipele (2017). Additive aggregation and pair comparison methods are used for data aggregation (Gan et al., 2017). For instance, the framework for evaluating sustainability indicators in the real estate industry (Rogmans, Ghunaim, 2016) was more

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focused on unit evaluation. Theoretical overview includes world and European experience on the research question and the related problems. The research includes integrated approach of assessment of the real estate market.

2. Theoretical Overview of Problematic Issues of Sustainable Development of the Real Estate Market

The current important aspect of the national strategic development plans around the world is the development of sustainable investment environment (Vanags, Butane, 2013). For example, the main focus of the sustainable development strategy in Lithuania was on "eco-effectiveness indicator", including energy and other natural resource consumption per GDP unit, emissions of pollutants per GDP unit and other criteria (Lepkova, 2010, as cited in Kauškale, Geipele, 2016c).

As part of ESG criteria (economic, social and governance) (European Political Strategy Centre, 2017), the governmental factors have been analysed separately for financial evaluation and are of great importance especially for investment analysis (Binovska, Kauškale, Vanags, 2018). Governmental factors are considered political and legal factors in the analysis. The summary of problematic factors affecting the sustainable development of the real estate market, including the international experience grouped by economic, social and environmental dimensions globally are shown in Table 1.

Table 1. Problems and Difficulties of Sustainable Development of the Real Estate Market – International Experience (Source: developed by the authors on the basis of Kauškale et al., 2017; Kauškale, Geipele 2016a, 2016b, 2016c; Geipele et al., 2014)

Factor	Statement	Main problem
Economic	- "Pei Kuang (Kuang, 2014) in a model found an important interconnection, which not always was covered by the real estate analysis, that in a collateral-constrained economy house prices depend on quantities on the leverage ratio".	"Economy house prices depend on quantities on the leverage ratio"
	- "Real estate imbalances influence on bank stability is comparable with the impact of nonperforming credit shares, cost efficiency and liquidity levels, and universal banks have more advantages than the specialized banks for portfolio diversification" (Koetter, Poghosyan 2010).	"Real estate imbalances influence on bank stability"
	- According to the research by Eddie C. M. Hui and Ka Kwan Kevin Chan (2014), "correlation of a type of asset market between two countries usually increases during a financial crisis, i.e., they either move up together or, more commonly, move down together, and even correlation between different types of asset markets may increase too".	"During a financial crisis, correlation of a type of asset market between two countries usually increases, i.e., they either move up together or, more commonly, move down together"

	- "Real estate needs effective management in order to generate income in a greater degree than other assets" (Asaul, 2004).	"Real estate needs effective management (peculiarity)"
	- "Large price jumps exist in the international securitized real estate markets in the crisis and non-crisis periods" (Li J., Li G., Zhou Y., 2015).	"Large price jumps exist in the international securitized real estate markets"
	- "Simon Kuznets in his work "Economic Growth and Income Inequality" (1955) believed that economic growth in poor countries increased the income gap between rich and poor people".	"Economic growth in poor countries increased the income gap between rich and poor people (income inequality problems)"
	- "Real estate is inseparable from human economy in its social form, and all plans of social reform should be better directed toward an appropriate distribution of economic goods" (Menger, 1871).	"In some cases plans of social reform were not directed toward an appropriate distribution of economic goods"
	- "John Kenneth Galbraith (1958) was convinced that the economic imbalances were resulting also from the consumer society, because too many resources were driven to production of goods but the inadequate resources were driven to the public needs and infrastructure".	"Too many resources were driven to production of goods but the inadequate resources were driven to the public needs and infrastructure".
	- "The individual personality preferences affect the real estate market equilibrium and outperform significant macroeconomic consequences" (Ben-Shahar, Golan, 2014).	"The individual personality preferences affect the real estate market equilibrium and outperform significant macroeconomic consequences (behavioural aspects)"
	- "Significant indicator for the forecasting of the period of the following bust is the magnitude of boom growth, and for the forecasting of cycles it is important to mention that the previous cycle does not always repeat the previous cycle and it cannot be a point of reference for forecast in all situations" (Hui, Wang, 2015).	Difficulties in forecasting
Social	- "Population growth and economic development are marked as ubiquitous drivers of environmental change with a special attention to energy, transport, urbanization and globalization" (UNEP, 2012).	"Population growth and economic development are marked as ubiquitous drivers of environmental change (negative

| | - "Demographic trends are part of urban dynamics, and can affect residential area as large housing estate" (Hatemi-J, Roca, Al-Shayeb, 2014, p. 123.).

 - "It is expected that in 2050 over a quarter of the population will be aged over 65 years, compared to about 15 % nowadays" (Manders et al., 2012).
 - "As the ageing of population is observed in some regions in the world, the necessity and importance of age-friendly building construction will also grow" (Staube et al., 2016). | tendencies)"
 "Demographic tendencies can lead to difficulties in construction industry, social problems"

 Ageing of population |
| **Environmental** | - "Construction and demolition waste has become a critical issue as the volume of construction activity was undertaken globally, therefore the construction waste disposal charging schemes have been marked in economies as the most effective ways of managing construction waste" (Lu, Peng, Webster, Zuo, 2015).

 - "Agricultural land is projected to expand globally at diminishing rate" (Manders et al., 2012).

 - "Interconnection between pollution and the level of income is important as well. The Environmental Kuznets' Curve (EKC) hypothesis" (Kuznets, 1955).

 - "The complexity of increase of green building construction for all market participants arises from the fact that sometimes environmental, economic and social aspects are also contradictory" (Guo, Ma, 2008).

 - "In energy policy implementation, special attention should be paid to a range of planning and managing problems of energy efficiency, energy issue should be solved also at district level (Actiņa, Geipele, Zeltiņš, 2015) and special attention should be paid to energy efficiency process management" (Actiņa, 2015). | "Construction and demolition waste has become a critical issue because of the volume of construction activity being undertaken globally"

 "Reduction in agricultural land expansion predictions (while growing of population)"*

 "Interconnection between pollution and the level of income (risk)"
 "Environmental, economic and social aspects may be contradictory"

 "Range of planning and managing problems of energy efficiency" |

On the basis of the model of contractionary and motivating factors of sustainable development of the real estate market and construction industry (Kauškale et al., 2018), the authors offers the model of motivating and contractionary factors affecting sustainable development of the real estate market by levels, which is shown in Table 2.

Table 2. The Model of Motivating and Contractionary Factors Affecting Sustainable Development of the Real Estate Market by Levels (Source: developed by the authors)

Level	Motivating factors	Contractionary factors
National	Increase in economic activity Changes in development of promoting laws Globalization Changes in demography – rapid growth of people living in urban areas Policy support – importance of funding and government support Pressure to innovate – open innovation, increased competition, innovation spiral and other Tax policy Increase in housing affordability International opportunities	Inflation risk Interest rate risk Legislative risk Environmental risk Lack of consistent and long-term policy frameworks (national and sub-national), including regulations and incentive schemes Ineffective national tax system Government decisions are not focused on the development Absence of the real long-term economic development plan Monetary policy is oriented to the exchange rate rather than to price stability Economic cycles (recession, crisis) High tax burden, tax rates, policy instability Threat of the loss of foreign market and currency fluctuations
Industry	High operating yield, average profitability of the industry (economic factor), financial opportunities of the enterprise. Increase in economic activity, economic factors characterising economic recovery, increase in the number of buyers, increase in investment volume, etc. Infrastructure, demographic factors, increase in demand Emergence of new technologies	Slowdown in market rise, Lack of adequate financing models; High level of competition in a sector or insufficient competition (lack of competition), which does not stimulate the development of industry, incompetence of employees, advertising restrictions, industry development risks – monopoly for any market participant; Small market, too closed or too open market; Lack of local raw materials – for construction industry; Greater exposure to raw material price fluctuations; Dependence on the changes in the global economy; Decrease in demand / purchasing capacity, real estate cycles.
Enterprise	Financial consideration, enterprise reputation, benefits for employees – higher salary opportunities, good working conditions, growth opportunities, interesting work, etc., implementation of motivating theories	Selective risk; Increase in the impact of the buyers and suppliers; Business risk; Financial risk (liquidity risk, management risk)

(Herzberg and other motivation theories), internal drivers, strategic management priority, employee involvement, costing, health and safety, marketing issues, profit opportunities, external driver, legislation and regulations, market pressure, public pressure. Globalization for owners of the enterprises: organisation maintenance, capital raising, dividends, high salaries, development of the company. Developers: opportunities for selling real estate units to the local and foreign clients, brand awareness, increase in market share, by reducing the market share of other competitors, revenues from real estate rent. Banks: There is interest in an increase in the number of customers; obtaining the credit amount (from real estate sellers who sold the real estate to foreign customers and paid back credits to the bank %). Providers of marketing external services: revenues from ads, etc. Development of different types of marketing communications Local community, real estate market development (minus – housing availability). Opportunities for selling real estate. Money is partially remaining in the country, which is contributing to the national development. National, state organisations. Largest taxpayers. Taxes increase expenses for the acquisition of real estate.	Lack of awareness and leadership particularly related to challenges in making the business case; Workforce capacity and the need for proper skills and collaboration along the value chain to implement the right solutions; Difficult start; Limited capital and competition for resources; Shortage of actionable information tailored to grocery stores; Failure to consider all benefits over project life; Lack of specific integrated design methods adapted to grocery store retrofits; Need for reliable data to support business case; Incorrect assessment of demand – low production volume and too high costs; Insufficient production capacity and efficiency compared to foreign competitors; Absence of the enterprise strategy; Price adjustment efforts in the EU; Variable overall price level, selective risk; Inadequately educated workforce (legal complexities); Acquisition risks, entitlement risks, site risks; Market full lease-up risks; Operating risks, sale risks, timing risks; Growth of influence power of buyers and suppliers.

Note: Factors are developed based on Peterson, Gammill, 2010; WBCSD Publication Library, Energy Efficiency in Buildings 2.0 (n.d.); WBCSD Publication Library, Energy Efficiency in Buildings. Action Plan (2015); Baccarne, Mechant, Schuurman (2014); Hines, 2001; Peiser, Frei, 2005; Lapigin, Y.N., Lapigin D., 2009; Wofford, Clauretie, 1992.

Taking into account the fact that the investments in the real estate market and construction industry are of great importance, they are also affecting national economy development (Kauškale, Geipele, 2015b).

Since 2005, based on Klaus Schwab's idea of 1979, the World Economic Forum has been publishing the Global Competitiveness Index (GCI) developed by Xavier Sala-i-Martín in collaboration with the World Economic Forum (World Economic Forum, The Global Competitiveness Report Schwab, 2016) – basic requirements subindex, efficiency

enhancers subindex and innovation and sophistication factors subindex. Competitiveness is defined as "the set of institutions, policies and factors that determine the level of productivity of the economy, which in turn sets the level of prosperity that the country can achieve" (World Economic Forum, The Global Competitiveness Report Schwab, 2016). According to the Global Competitiveness Index 2016–2017 Rankings, the top 10 countries with the highest sustainability rating are shown in Table 3.

Table 3. The Global Competitiveness Index 2016–2017 Rankings (2016) and Doing Business Rankings: World Bank, 2017 (compiled by the authors)

No.	Country (a)	Score	DB dealing with construction permit (for countries a)	Registering property	Score in Ease of Doing Business	Country rank (b)	Dealing with construction permit (for countries b)	Registering property
1.	Switzerland	5.81	62	16	33	New Zealand	3	1
2.	Singapore	5.72	16	19	2	Singapore	16	19
3.	United States	5.70	36	37	6	Denmark	1	11
4.	Netherlands	5.57	32	76	30	Korea, Rep.	28	39
5.	Germany	5.57	20	10	28	Hong Kong, SAR China	5	55
6.	Sweden	5.53	27	9	10	United States	36	37
7.	United Kingdom	5.49	14	47	7	United Kingdom	14	47
8.	Japan	5.48	50	52	34	Norway	21	14
9.	Hong Kong SAR	5.48	5	55	5	Georgia	29	4
10.	Finland	5.44	16	11	13	Sweden	27	9
49.	**Latvia**	**4.45**	**49**	**22**	**19**	**Rank (19)**	**20**	**9**
30	**Estonia**	**4.78**	**8**	**6**	**12**	**Rank (12)**	**5**	**2**
n.d.	**Lithuania**	**n.d.**	**12**	**3**	**16**	**Rank (16)**	**2**	**1**

n.d. – no data

a) according to the Global Competitiveness index. Note: The Global Competitiveness Index captures the determinants of long-term growth. Recent developments (such as Brexit, commodity price changes and market volatility) are reflected only in-so-far as they have an impact on data measuring these determinants. The Index should be interpreted in this context. Scale ranges from 1 to 7, 2015–2016 rank out of 140 economies; 2016–2017 rank – according to the 138 economies (according to the Global Competitiveness Report, 2016, p. 232).

b) according to Ease of Doing Business (World Bank)

The results of Global Competitiveness Index 2016–2017 and the analysis of the most problematic factors of doing business in construction and real estate areas help identify the factors that affect sustainable development of the real estate market; the comparison of situation in the Baltic States provides a comparative analysis showing the areas where improvements can be carried out.

3. Methodology

The assessment of sustainable development of the real estate market should have a complex multilevel approach with particular adaptation to the real estate market of Latvia. The entrepreneurial environment is constantly changing, so the decisions made should be analysed not only in terms of the business cycle and real estate cycle, but also from the perspective of the influencing PESTEL factors. The PESTEL dimensions and subcriteria affecting sustainable development of the real estate market are described and analysed in this Subchapter of the Thesis. The authors have developed and summarised the PESTEL criteria affecting sustainable development of the real estate market, as each of these factors influences sustainable development in general and sustainable development of the real estate market in particular. The model of assessment of factors of sustainable development of the real estate market is shown in Fig. 1.1.
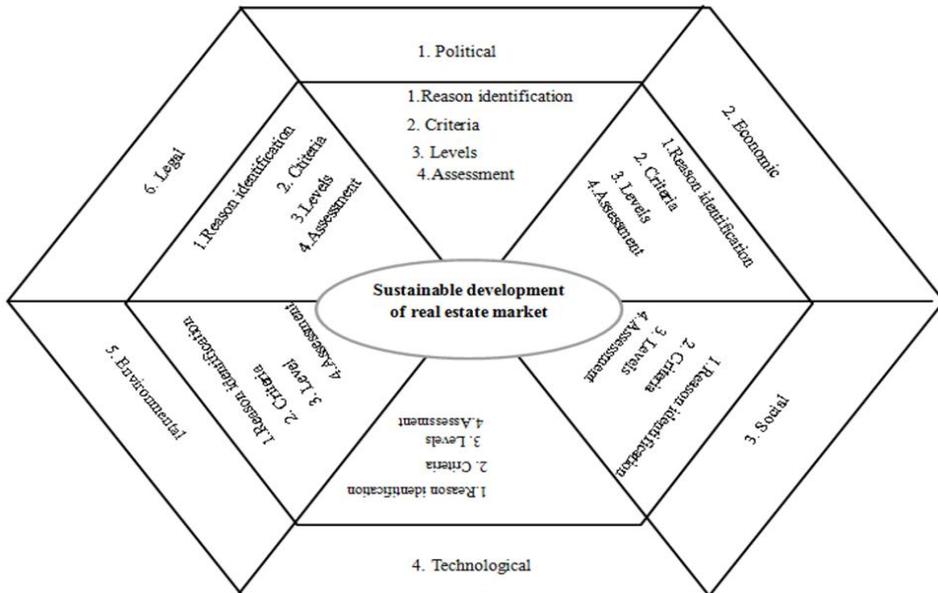
Figure 1. The schematic model of the assessment of factors of sustainable development of the real estate market
(Source: developed by the authors)

After argumentation of the necessity of evaluation of each factor that has been identified through complex analysis of literature and in two focus groups (Kauškale et al., 2017), the criteria for each group have been identified. The PESTEL dimensions and subcriteria affecting sustainable development of the real estate market are shown in Table 4.

Table 4. PESTEL Dimensions and Criteria Affecting the Real Estate Market (Kauškale, Geipele, 2017)

Factor(s)	Criteria
Political	Political stability, real estate industry regulation, internal political problems, international relationships, level of corruption
Economic	GDP in volume, % change, GDP per capita, private final consumption in volume, %, investments in volume, %, international trade balance, mln euro, current account – total, mln euro, inflation, %, unemployment, by age groups, by industry, by gender etc., %, labour cost index, %, employment, %, industrial producer prices, %, industrial production, %, construction production, %, inflation, government finance – government deficit/surplus, %, general government gross debt, %, economic sentiment indicator, *index*, 3 months interest rate, %, long-term government bond yields, %, euro-dollar exchange rate, $, number of enhanced mortgages, investments in construction, real estate investments, deposit rates, level of profit inside industry, number of registered real estate purchase agreements, mortgage interest rates, purchasing power parities, average salaries, wage level within the branch, material prices, labour costs, price of resources, real estate price level, house price index, real estate rent prices, number of registered rents, real estate taxes, tax burden, real estate

	vacancy rates for various types of real estate, new construction volumes, new issued building permits etc.
Social	The demographic situation in the country – number of inhabitants, population density, net migration, birth balance, average family/households size, age level, income by age and gender, level of education, structure of employment, national culture and traditions, unemployment rate in the country, employee turnover of the sector, housing affordability, Gini coefficient, S80/S80 quintiles, population density, which is particularly important in central business districts and high-rise residential neighbourhoods, educational characteristics, skill levels, and employment categories, which are particularly important in industrial or high-technology districts, age levels, which are particularly important in residential neighbourhoods, household size employment levels and types of employment (temporary, seasonal, or chronic), extent of crime.
Technological	Construction technology and equipment development, new construction materials and resources in the market, customer relationship management computer technology development, etc.
Environmental	Citizens' ability and desire to buy eco-home or demand for eco-homes (green buildings), sustainability of construction of units, impact of construction of units on the environment, number of buildings with green building certification, CO_2 emissions, environmental taxes in general and by economic activity, resource productivity, energy efficiency, environmental protection expenditures, health and wellbeing, indoor environmental quality, land use, innovation, materials, resources, energy affordability, pollution, renewable technologies, transport, ecology waste, water, green building certification indicators, climate change and other indicators in the construction industry and overall in the country.
Legal	Valid legislation and decision-making speed, international law, European directives, changes in the construction and real estate business market related laws, legal aspects of zoning and land use, legal aspects of construction, entrepreneurship, environmental regulations, special assessments and other factors.

The matrix of the factors affecting development of the real estate market (REMDIF) is shown in Equation 1.

$$\text{REMDIF} = \begin{pmatrix} P_{11} & P_{12} & P_{13} & ...P_{1i} & ... & P_{1n} \\ E_{21} & E_{22} & E_{23} & ...E_{2i} & ... & E_{2n} \\ S_{31} & S_{32} & S_{33} & ...S_{3i} & ... & S_{3n} \\ T_{41} & T_{42} & T_{43} & ...T_{4i} & ... & T_{4n} \\ E_{51} & E_{52} & E_{53} & ...E_{5i} & ... & E_{5n} \\ L_{61} & L_{62} & L_{63} & ...L_{6i} & ... & L_{6n} \end{pmatrix}$$

(1)

Methodological steps of index calculation was approbated in the study by Kauškale and Geipele (2017). PESTEL factors also affect economy, real estate market and decision-making of investments of construction at the same time, but it is necessary to take into account that each country has its own characteristics and availability of information. Pair analysis and expert evaluation methods are used for factor weighting that previously were

analysed and developed in the territory development index calculations and REF. Weighted arithmetic mean can be used for sensitivity analysis and quantification of uncertainty in sustainability assessment (Pollesch, Dale, 2015). Additive methods should not be used in case of interaction among indicators. The IBM SPSS Statistics version 25.0.0 and Excel are used for statistical data analysis. The proposed methodological solution is more focused not on sustainability criteria of the real estate unit, but on the assessment of the overall development of the real estate market. The factors affecting sustainable development of the real estate market should also be analysed at multiple levels, at least at the industry and national levels.

Methodology of the survey: research, using the qualitative and quantitative approach. Data collection has been performed using PAPI (Paper and Pencil Interviews) and focus group interview. The respondents are the representatives of the real estate agencies, managers of real estate on a fee or contract basis, managers of the building projects, construction of residential and non-residential buildings, civil engineering, renting and operating of own or leased real estate, buying and selling their own real estate. Structure of respondents has been developed according to NACE 2.rev. classification (European Commission, 2006) and includes the described groups of respondents. *Having performed a complex scientific and practical analysis, a focus group interview has been developed and the feedbacks of the experts received. The direct interview method has been used. Focus group method has been chosen for the acquisition of research results, and the focus has been put on highly professional and educated experts in the question under research. "Nominal groups" are groups of participants, who do not interact and may not even meet (Marczak, Sewell, n.d.). Nominal group technique has also been applied by Brauers, Lepkova (2003). Nominal group technique – a group of especially knowledgeable experts. Nominal group technique: a format for focus groups (Sumsion, 2002).*

The data collection has been performed using the survey method – expert evaluation, and approbation has been implemented within focus group meeting. The focus group has been moderated by the author of the research. Focus groups have been originally called "focused interviews" or "group depth interviews" (Linton, 2005). Focus groups can be homogeneous or heterogeneous, and the group participants should have depth knowledge of the topic under discussion. Length varies from 1 to 2 hours; the number of participants is 6–12. There should also be a *skilled moderator*. Open-ended (to generate qualitative data) or closed-ended (to generate quantitative data) questions can be included. It is necessary to draw up a report of findings. "Data analysis could include:
- bullet list of information learned;
- comparative analysis of two solutions;
- summary of responses collected for each question;
- focus group or brainstorming workshop, which involves eight to ten" (Erzah, 2011).
Focus group is a widely used practice also nowadays (Carey, 2015; Baxter et al., 2015). As cited in the study by Kauškale et al. (2018), "the main purpose of focus group research is to draw upon respondents' attitudes, feelings, beliefs, experiences and reactions in a way in which would not be feasible using other methods, for example, observation, one-to-one interviewing, or questionnaire surveys, and focus groups can help to explore or generate hypotheses (Powell, Single, 1996) and develop questions or concepts for questionnaires and interview guides (Hoppe et al., 1995; Lankshear, 1993). A.H. Van de Ven and A.L. Delbecq (1972) as well as Gallagher et al. (1993) stated that the selected

individuals should have experience, expertise and perception that relate to the problem being explored. They suggested that there should be eight members per group and that several sessions should be conducted for different groups.

The questionnaire is of qualitative and quantitative character, as a structure of question is mixed and methods are integrated. Triangulation methods have been used in the research. The answers to the questionnaires included three variants – ranking responses, evaluative and alternate responses. In the survey, open-ended and close-ended questions have been used, as well as discussions have taken place and conclusions have been drawn. The research has demonstrated that there are problems in sustainable development of the real estate market by assessing the affecting factors and identifying the possible areas of improvement. Maxwell qualitative research design (Maxwell, 2005) has been used to develop the questionnaire. The conducted research includes goals, methods, conceptual framework and validity, which are integrated in the research methodology. Maxwell qualitative research design is shown in Figure 2.
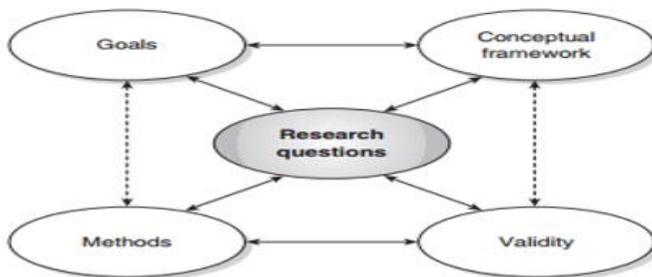
Figure 2. Interactive model of the research design (Maxwell, 2010, p. 217)

The expert interview as a method of data production has already played a significant role anyway, and the empirical social research as a frequently used instrument for data collection resulted from the expert interviews. In expert interview, there can be qualitative and quantitative orientations. In this sense, exploratory interviews help thematically to structure the research area and to generate hypotheses. The knowledge-oriented focus of the experts is also recommendable and dedicated to moderation technology, non-interventionist moderation ideal and methodological orientation to research process (Mayring, 2010). Data processing included validation, sorting, summarisation, aggregation, analysis, reporting. Focus group discussions included:
• development of guidelines for organisation of focus group;
• management of focus group;
• analysis of results.
The questions of survey included quantitative and qualitative aspects.
Sampling: The survey focuses on the managers and employees of the enterprises who are operating in the economic sector "Real Estate Operations" (L68) and "Construction" (F41), such as managers and employees of real estate agencies, managers of the real estate sector on a fee or contract basis, managers of the building projects, construction of residential and non-residential buildings, civil engineering, renting and operating of

own or leased real estate, buying and selling of own real estate and delegated from real estate, construction, finance, environmental and academic sectors (interdisciplinary).
Included areas of experience
L68 – Real estate activities
•L68.1 – Buying and selling of own real estate
•L68.2 – Renting and operating of own or leased real estate
L68.3 – Real estate activities on a fee or contract basis
•L68.3.1 – Real estate agencies
•L68.3.2 – Management of real estate on a fee or contract basis.
The survey in particular also included the following areas: Construction of Buildings (F41), Construction of Residential and Non-residential Buildings (41.1) and Development of Construction Projects (41.2), Financial and Insurance Activities, as these activities are important for the sustainable development of real estate market.

4. Assessment of Sustainable Development of the Real Estate Market: Case of Latvia

For the assessment of sustainable development of the real estate market in Latvia, a qualitative research technique has been implemented and a survey has been developed. According to the Public Process Research Centre (2012), the qualitative research also provides deeper insight into the problems of society, understanding of the attitudes and actions motivation, being closer to the respondent (more qualitative responses), and a possibility to change research parameters in the course of research. Qualitative research methods used in the present research include expert questionnaires, focus group and observation methods.
According to the University of Leicester (University of Surrey, n.d.), "qualitative research data collection methods are time consuming; therefore, data is usually collected from a smaller sample; therefore, the qualitative research requires more resources, and data collection approaches for qualitative research involved both (which has also been done during the research process):
1.   the direct interaction with individuals on a one-to-one basis;
2.   and the direct interaction with individuals in a group setting".
The aim of the survey – to identify the main problems of the real estate market, the factors affecting its development and other issues related to sustainable development of the real estate market.
The survey focuses on the real estate market experts who are operating in the economic sector of transactions in the real estate market, and on the experts in the field of science, whose research and scope of activities are associated with real estate for more than 10 years, 28 % of experts are representatives of the academic area as well. Information about the survey is provided in Table 5.

Table 5. Information about the Focus Group and the Survey (developed by the authors)

Criterion	Ratio
Type	Focus group discussion and expert interviews
Date	30 June 2016 11 August 2016

Period of questionnaire	2016 M6, M7, M8
Description of experts and their qualification	The survey focuses on the real estate market experts who are operating in the economic sector "Real Estate Operations" and "Construction", and on the experts in the field of science, whose research and scope of activities are associated with real estate – a group of especially knowledgeable experts representing real estate, construction, finance, environmental and academic sectors (interdisciplinary)
Focus group	19 experts
Survey unit	Experts
Professional experience of experts	10 years and more
Number of respondents – participants of the survey (nominal group)	17

Structure of the respondents – area and education, some experts' work in more than one area. Structure of the respondents and their education are shown in Figs. 3a and 3b.

a)   b)
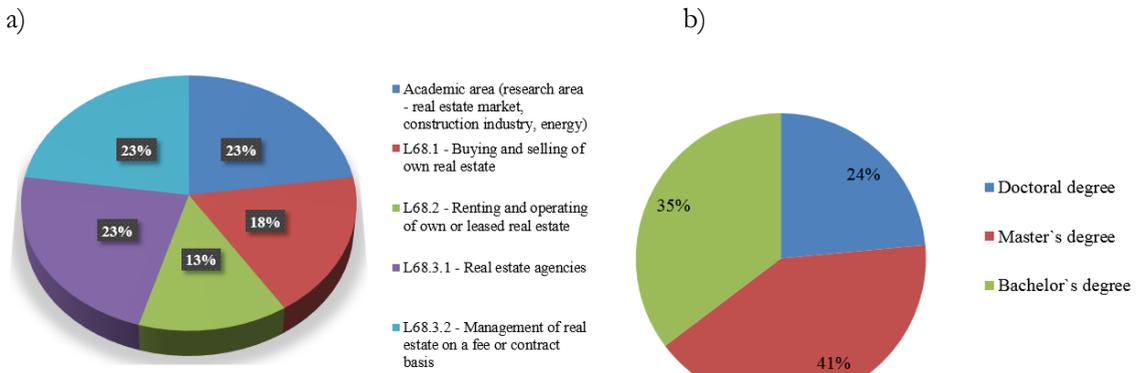
Figure 3a. Structure of the respondents
Figure 3b. Education of the respondents
(Source: own work based on the survey)

Three main problems are ranked by relevance order, evaluated by the frequency of the answers of the respondents. The full range of problems has been identified previously in Kauškale, Geipele (2016b).

Table 6. Three Main Problems of Sustainable Development of the National Economy, Real Estate Market and Construction Industry, Mentioned by the Experts (Source: own work based on the survey)

Problematic areas of the development of the national economy	Problematic areas of the development of the real estate market	Problematic areas of the development of the construction industry

- Tax system and social system. Necessity for equal income distribution and for effective use of resources - Regional policy improvements - Impact of international factors	- Cyclical development nature of the real estate market – imbalance. Necessity to achieve sustainable development - Sensitivity of the real estate market and its participants to external factors and economic development - Real estate market overheat	- Significant impact of external factors – impact of the economic development and real estate market - Investment returns - Availability of financing

The motivating and contractionary factors for sustainable development of the real estate market by levels have been identified. Three main factors selected by the experts are shown in Table 7. The full range of factors is provided in Table 2.

Table 7. Three Main Motivating and Contractionary Factors for Sustainable Development of the Real Estate Market by Expert Evaluation (Source: own work based on the survey)

Level	Motivating factors	Contractionary factors
Enterprise	Financial consideration Strategic management priority Changes in personnel	Failure to consider all benefits over project life Legal complexities Financial risks
Industry	High operating yield Increase in the number of buyers Increase in investment volumes	Lack of adequate financing models Small market Decrease in demand / purchasing capacity
Macroeconomic	Increase in economic activity Tax policy Increase in housing affordability	Lack of consistent and long-term policy frameworks Tax system and tax burden Policy instability and changes in legislation

Bureaucracy, the administrative load of the building authority, lack of labour resources, lack of responsibility, specific management problems, the aging of the housing market, social factors have been recognised by the experts as problems, because all other factors depend on the quality and condition of the society development level, the average salary funding and support (taxes), the demographic situation, political decisions, businessmen's orders to the law developers, unstable legislation, fiscal instability and imbalances, political stability, international relations, stability in the laws, raising of public awareness (clients, companies). All these factors are important and interrelated; therefore, they cannot be individually separated. The assessed PESTEL subfactors,

which are the most important for sustainable development of the real estate market, are shown in Table 8. Full set of factors is shown in Table 4.

Table 8. Important Subfactors of Development of the Real Estate Market and Its Evaluation by Experts (Assessment: 0 – no affect, 10 – maximum effect) (Source: own work based on the survey)

Factor	Average	Median	St. dev.
Political	8.35	8	1.03
Economic	9.03	9	0.88
Social	7.79	8	1.27
Technological	6.18	6	1.58
Environmental	5.88	5	2.00
Legal	7.82	8	3.38

The development level of each PESTEL factor in the current situation according to a 10-point scale (0 – not developed; 10 – perfectly developed) and the calculated factor weights according to the expert evaluation are shown in Figs. 4 and 5, respectively. The sum of all influences is equal to "1".
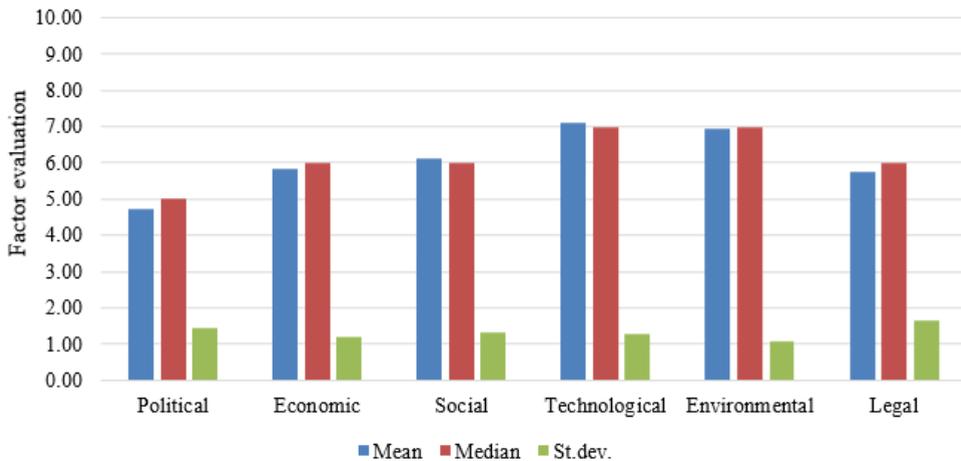

Figure 4. Development level of PESTEL factors in the current situation according to a 10-point scale (0–not developed; 10 – perfectly developed) (Source: own work based on the survey)
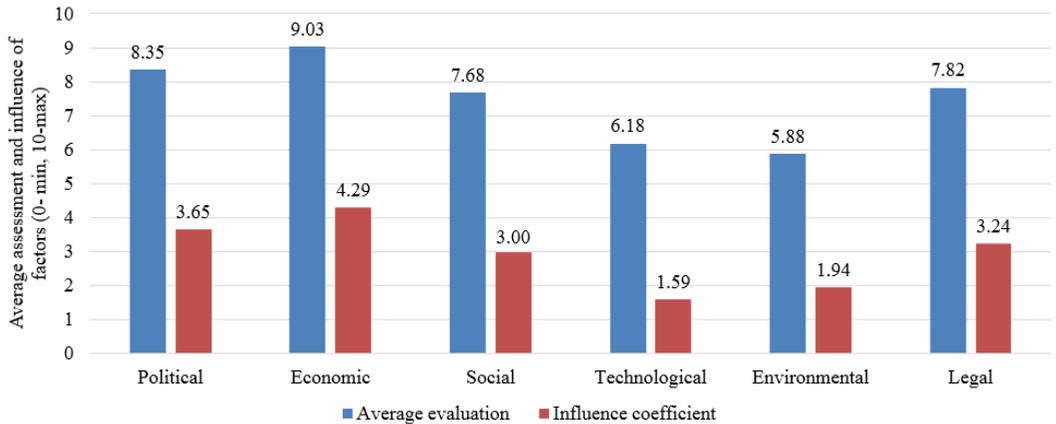
Figure 5. Factor weights according to a 10-point scale (0 – not developed; 10 – perfectly developed). (Source: own work based on the survey)

The impact of environmental factors on sustainable development of the real estate market has been identified as lower than that of other indicators. It shows a problem of attitude and knowledge of environmental problems and green building sector. This may be related to the fact that this factor cannot affect the development of the real estate market immediately, for example, in comparison with economic factors, and the situation in general is evaluated as good. However, as it has been analysed in Chapters 1 and 2, taking into account the international practices, environmental factors can have a great impact on the development of the real estate market. The growth and yield indicators of the real estate market are shown in Table 9.

Table 9. Growth and Yield Indicators of the Real Estate Market (Source: own work, based on survey)

	Growth rate of the real estate market (increase in price level)	Yield (from investments into real estate)	Yield (from entrepreneurship in the real estate sector)	Yield in the construction sector
Low	below 3 %	below 5 %	below 6 %	below 9 %
Average	from 3 % to 7 %	from 5 % to 10 %	from 6 % to 12 %	from 10 % to 17 %
High	from 7 % to 10 %	from 10 %	from 12 %	from 17 %

At present, according to the real estate market reports, such as Colliers International (2017a; 2017b), Ober-Haus Real Estate Advisors (2017), the market growth rates can be considered average, but in some sectors – high. Such development trends and the increase in profit are also related to indicators of macroeconomic development (Kazāks, 2017).
Growth and yield indicators of the real estate market are also changing during cyclical development. By using Equations 3.4, 3.5 and 3.6, the real estate market development

index is 0.587 (58.7 %) according to the results of calculations using the pair comparison method.

The assessment of the impact of factors by levels and evaluation of the current situation (the case of Latvia) are provided in Table 10.

Table 10. The Assessment of the Impact of the Factors and Current Situation by Levels, Q2 and Q3 2017 (the case of Latvia) (Source: own work based on survez)

Level	Influence on the Real Estate Market (strong/average/low) Points from 0 (min) to 100 (max)	Current influence (positive/neutral/negative) Points from 0 (min) to 100 (max)
International	Strong (93.75) Average (6.25) Low (0.00)	Positive (7.14) Neutral (28.57) Negative (64.29)
Macroeconomic, state level	Strong (89.61) Average (9.74) Low (0.65)	Positive (7.14) Neutral (42.86) Negative (50.00)
Regional	Strong (56.25) Average (37.50) Low (6.25)	Positive (14.29) Neutral (35.71) Negative (50.00)
Industry	Strong (93.33) Average (6.67) Low (0.00)	Positive (23.08) Neutral (69.23) Negative (7.69)
Enterprise	Strong (29.41) Average (47.06) Low (23.53)	Individual case for each enterprise
Household	Strong (56.25) Average (31.25) Low (12.50)	Individual case for each household
Individual	Strong (37.50) Average (43.75) Low (18.75)	Individual case for each individual

As mentioned by Löwe (1928), every cycle is individual and it is required to analyse the situation in the whole system. Real estate market participants are affected by a variety of external factors and risks. The answers to the question "How often do you face the lack of information?" are provided in Figure 6.
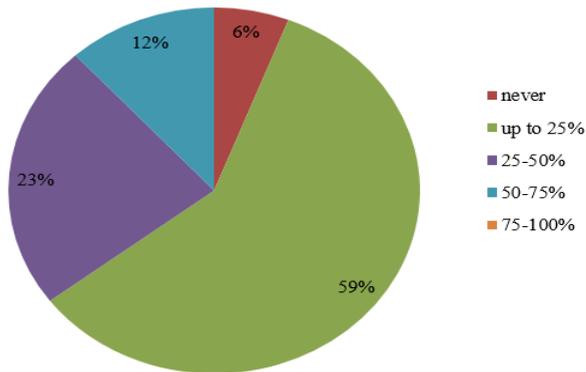
Figure 6. Respondents' responses
(Source: own work based on survey)

The international, macroeconomic and industry development has a strong influence on market participants, and, as there are a variety of risks within the industry, it is important for government and policy makers to carry out a detailed market analysis, trend identification, recession preventive activities and real estate market cooling measures. Entrepreneurs should make a detailed market analysis, focus on acquisition of profits and take preventive activities to avoid unplanned situations in some cases. Individual analysis is necessary in decision-making. The assessment of the importance of the mentioned factors for business planning in the real estate market is shown in Table 11.

Table 11. The Factors Affecting the Planning of Entrepreneurship in the Real Estate Market
(Source: own work based on survey)

Data	Average evaluation	Median	St.dev.
International information	6.53	7.00	1.79
Macroeconomic indicators – GDP, inflation, world economy	7.65	8.00	1.28
Industry development indicators	7.41	8.00	1.54
Company's activities, demand and supply, competitor's activity	7.88	8.00	1.57
Contact with market participants	7.71	8.00	1.87

Influencing factors of entrepreneurship in the real estate market and their significance are shown graphically in Figure 7.
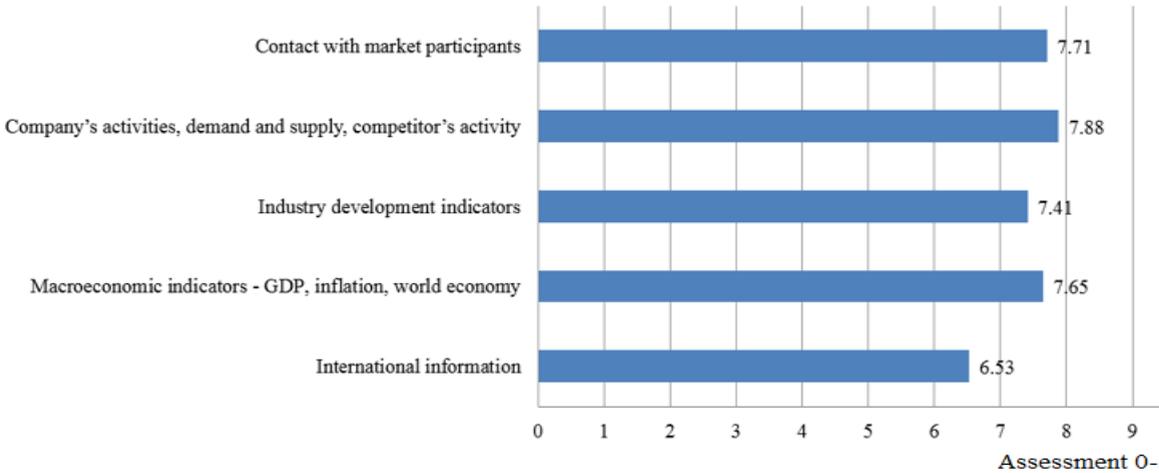
Figure 7. Influencing Factors of Entrepreneurship in the Real Estate Market and their Significance (x̄; 0 – does not influence; 10 – strongly influence) (Source: own work based on survey)

The answers to the question "What knowledge and information do you lack and would like to receive for successful entrepreneurship in the framework of planning of the real estate activity?" are shown in Figure 8.
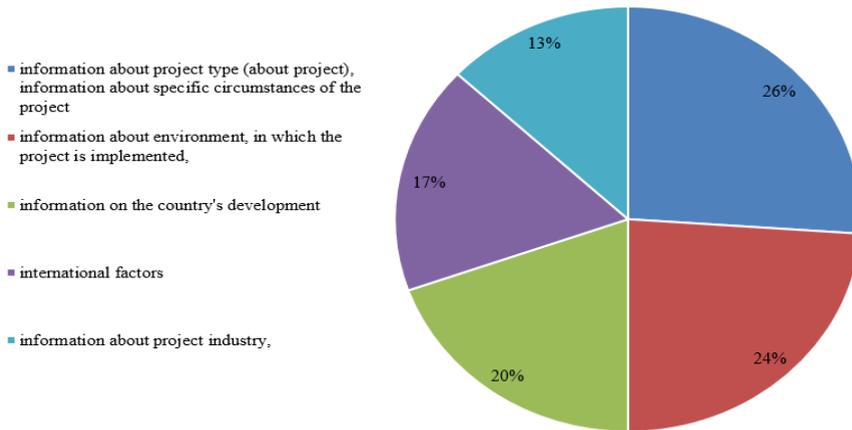
Figure 8. Respondents' responses regarding the type of information they lack (Source: own work based on survey)

The answers to the questions "Which factors should be taken into account for the reduction of risks?", "Are any informative anti-crisis measures being taken by the companies while investing?" are the following: legal requirements for non-residents, legislative peculiarities, energy efficiency and sustainability indicators for buildings. The causes for unsuccessful entrepreneurship in the Latvian real estate market (several answers are possible) are mentioned in Table 12.

Table 12. Questions Regarding the Development of the Real Estate Market (Source: own work based on survey)

Question / parameter	Mean (10=max)
Do you evaluate the real estate market as stable? (0 – not stable; 10 – very stable)	5.74
Please evaluate the accuracy of the real estate market forecasts in accordance with a 10- point scale (0 – not accurate; 10 – very accurate)	5.59
Please evaluate the accuracy of received information in accordance with a 10-point scale (0 – not accurate; 10 – very accurate)	6.25
Housing affordability in Latvia (total) – expert evaluation	5.43
Is the available information optimal? Assessment for the society for the entrepreneurs	 6.8 7.65
How important are the environmental factors and environment development for sustainable development of the real estate market?	7.35
How important is the green building certification system for you/your clients?	Important – 5.88 Not important – 4.12
Do the real estate market participants have the sufficient knowledge in sustainable construction? Possible answers "Yes", "No", "Partially"	Yes – 0.00 No – 2.53 Partially – 7.65

Evaluation of environmental factors plays an important role in sustainable development of the real estate market. The respondents' recommendations are as follows:
- the introduction of tax relief and simplification of the construction process of green building, work for the public sector together with the investment companies, promotion of green building by law, promotion of the state policy in this area, conclusion of the intention agreements;
- more favourable conditions are important, the material security is a key issue, additional financing is an important factor for the investments, which will bring benefit in 15–25 years, the sequence of importance according to the survey results;
- it is also necessary to know the costs and advantages of green building, to receive information on energy efficient solutions, to receive information about the cooperation of local government with the society and businesses, there is no structured information about green buildings and their costs, no information about the definition of concepts, lack of aggregated information from one resource on the long-term benefits and impact on health;
- there should be the promotion of macroeconomic stability, predictable changes (in the number of laws, tax policy, etc.), it is necessary to build qualitative and aesthetic units, while minimising the costs – both of the construction and of further maintenance of the unit, m2 price reduction, % reduction in the rate; the average wage increase;
- the necessity of BIM implementation, creation of the policy approach stability, the planning process rationalization, advertisements with energy performance certificates, the successful use of the European Fund, the investors' attraction, political

decisions, the development of tourism (that can be important for the commercial sector of real estate – hotels);
-          the sanitary-engineering provision of buildings for the units of historical type;
-          changes in legal requirements for non-residents, the rapid changes in the law;
-          energy efficiency problems and sustainability indicators for buildings;
-          improvement of legal process;
-          lack of information and difficulties in planning (difficulties in forecasts).
It has been mentioned in the replies that there is a lack of information about tax relieves and other relieves provided by green construction, about the ecological construction materials, ultimate economy, fundraising opportunities, lack of general knowledge, advertising and striving for the purest life. Sustainability can be analysed at different levels.

Conclusions

The analysis of the problems of sustainable development of the real estate market and construction industry has shown that the solution opportunities can be implemented at different (multiple) levels. The analysis includes a multi-level and complex information analysis approach and integration of political, economic, social, technological, environmental, legal and other aspects of sustainable development into analysis. In the course of the research, the real estate market and the factors affecting sustainability have been analysed in the integrated way. The approbation of the research has demonstrated that the market participants faces the lack of information. A complex approach to the analysis of the development of real estate market can positively affect the awareness of the private sector and decision-making of participants of the real estate market.
The role of the public sector is reflected in the regulation of socio-economic processes, interaction of the economy and real estate market development, as well as in the main challenges and directions of Latvia's Sustainable Development Strategy 2030. It can be recommended to introduce a separate subchapter to the stability program of country, or programs related to sustainable development of the real estate market. The concept of sustainability should be promoted at all levels and adapted to daily life as well. To solve the lack of financing mentioned as a problem by respondents, it is recommended to more actively provide information to entrepreneurs and hire additional personnel for consultation and assistance regarding renovation, infrastructure development and other possible projects.

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