

The Real Estate Market Development Impact on Life Quality - Main Aspects Tendencies and Important Regulations

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Abstract: Improvement of the quality of life is one of the main economic policy tasks in many countries. The research topicality is being determined by the fact that quality of life and real estate are interrelated parameters and are essentially interdependent. The *aim of the research* is to identify the key socio-economic aspects of the quality of life and the real estate, with a view to provide scientific and practical recommendations for improvement of the quality of life. The research is focused on Latvia. The study provides the analysis of the number of scientific literature, scientific articles and statistical databases. Quantitative research methods, comparison method and statistical analysis methods have been used in the study. Demand for real estate is affected by environmental development, as well as significantly associated with quality of life, so the research issue has been approached in an integrated manner. The results of the study underline the importance of the connection of quality of life and real estate in both short and longer term. The real estate market should solve a number of related sustainable development issues. The study results and recommendations can be applied to the industry regulation and planning of the improvement of the overall quality of life.

Keywords: adult life quality, real estate market, sustainability, regulation, environment.

Introduction

Real estate in its social role is a reflection of the quality of life, as well as a tool for improvement of this quality of life - and this can be applied to all segments of the real estate, residential areas, potential improvements, it is also affected by the construction and the surrounding environment development trends in general and many other aspects. Quality of life and real estate are interrelated parameters and are essentially interdependent. One of the main economic policy tasks in many countries is improvement of the quality of life. As was researched (Beslerová, Dzuričková, 2014), quality of life is a very complex concept. Important are also market affordability indexes, because they show combination of such factors as average salary, down payments and interest rates, depending on housing affordability index calculation methodology. Increasing evidence of a direct association between unaffordable housing and poor mental health, as the effects of general financial hardship, can be observed (Mason, Baker, 2013). The environment quality highlights a role of the real estate price, accessibility and other local land-use variables (Chiarazzo, Caggiani, 2014).

It is proved, that house price dynamics are a local phenomenon, and there are important economic differences among cities, and also in cities where housing supply is quite inelastic, prices will be higher comparing to rents, and house prices usually are more sensitive to changes in interest rates (Himmelberg, Mayer, 2005). At the same time, price is one the most important factors in process of choosing real estate by households and business representatives. For defining real estate value, for example such evidences are also important - proximity to fast public transit, clean air, high-quality schools, major universities, and environmental amenities are as well capitalized into real estate prices (Zheng, Kahn, 2008).

Methodology

The study provides the analysis of the number of scientific literature, scientific articles and statistical databases. Quantitative research methods, comparison method and statistical analysis methods have been used in the study. Demand for real estate is affected by environmental development, as well as significantly associated with quality of life, so the research issue has been approached in an integrated manner. The practical part of research is focused on Latvia.

Theoretical aspect overview

The importance of real estate market regulations is associated with a fact, that land-property markets should take on modified forms of governance, they are not “free” markets that work as prescribed by classic economics (Alexander, 2014). At the same time there is a significant positive correlation between urban real estate prices and urban economic openness (Wang, Yang, 2011).

In context of sustainable investment environment there are such important aspects of enhancement of sustainable competitiveness (Vanags, Butane, 2013, 1225):

- economic growth,
- social cohesion,
- employment,
- competitive power in international competition,
- using resources in an efficient and sustainable way,
- minimizing negative environmental impacts.

Significant is to define a manner by which the enterprise is delivering value to customers, that entices customers to pay for value, as converts these payments to profit (Teece, 2010). At the same time, higher self-reported quality of life has better educated, brighter, higher social class people (Cheng, Green, 2014). The outstanding quality and durability of buildings that is delivered to the owner or occupier will lead to a better quality of living and to a better quality of life (Musa, Mohammad, 2014). Buyers pay a significant premium for good workmanship quality and well constructed real estate in the beginning appreciate at a significantly higher rate than prices for average quality house (Ooi, Le, 2014). For evaluation of sustainability of dwelling renovation, such factors can be taken into account – performance, economic factors, usability and social factors (Risholt, Time, 2013). Commercial real estate leases tend to be longer in developed economies, common law legal systems and also in countries with less corruption (Titman, Twite, 2013). There is a difference between income expectations from long-run, sustainable sources of employment and the primarily speculative expectations of profit from subjective values within one real estate market (Lejano, Stokols, 2013).

Great importance in life quality, as well in real estate market development, has a sustainability topics. In Israel in recent decades the high rate of population growth, coupled with rapid economic development and limited space and natural resources, has generated great pressure on already scarce land and water resources (Gal, Hadas, 2013). The movement toward environmental sustainability is one of the largest cross-disciplinary trend of the last few decades, including real estate discipline (Krause, Bitter, 2009). Sustainability indicators function groups pointed out by W.R. Blackburn in Table 1.

Table 1

Sustainability indicators functional groups (Blackburn, 2007, 192)

<ul style="list-style-type: none"> • Business development (mergers and acquisitions) • Business planning • Charitable giving; Foundation • Communications; Public relations; Community relations • Corporate governance; Corporate secretary • EHS (Environment, health and safety) • Ethics; Business practices • Facilities engineering; Energy management • Finance • Government affairs; Public policy 	<ul style="list-style-type: none"> • Human resources; Employee relations • Information Technology (IT) • Internal Audit • Investor Relations • Law • Manufacturing • Quality • Research and Development; Product Design) • Risk Management • Sales and Marketing; Distribution • Security • Supply Chain (Supplier Management; Purchasing)
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One of incisive sustainability valuation tools is The Energy Performance Certificate, but it has some problems regarding energy performance evaluation, especially about independent expert practices, but the energy classification range is correct to reduce the effects of value fluctuation (Fabbri, Tronchin, 2011). The value of real estate consists from the set of factors. Important to mention, that

understanding of the price and trading patterns in the housing market also have important welfare and business-cycle implications (Edelstein, Qian, 2011). The life cycle model of consumption implies conviction that real estate appreciation may be associated with higher wealth, triggering higher consumption, in such way increasing the current account deficit (Aizenman, Jinjark, 2009).

Also property tax expenses indicate higher costs for housing capital that is followed by lower demand and lower price for housing capital (Bischoff, 2012). Fiscal sustainability is one of the factors, that is affecting real estate market and life quality, so special attention should be paid to fiscal policy regulation. To archive fiscal sustainability, following conditions have to be fulfilled (Morais, Aragao, 2014, 424):

- a) the programs are to be internally solvent and liquid;
- b) the program shall not deteriorate the overall fiscal balance; especially, the additional public debt caused by the program shall comply with the set rules and control indicators for the whole public debt;
- c) the fiscal management within the program shall ensure robustness with respect to different vulnerabilities as fluctuation of the interest, exchange and growth rates, distortive behavior regarding tax evasion, investment, consummation, savings and other risk phenomena to be detected;

Housing affordability is one of the most important indicators, that also can characterise the country, in which research are being made. The most unaffordable housing in 2013 was in Hong Kong, that broke all the records, the follows New Zealand and Australia (10th Annual International Housing Affordability Survey, 2014). On example of China, it is suggested to improve affordability of housing for local people, because according to calculations average citizen in Beijing has to work for 39 years continuously (without any other additional expenses) to buy one hundred square meter real estate (Xie, Yu, 2011). Calculations revealed that by all groups of criteria, the most sustainable housing market is in Denmark, closely followed by Germany and Sweden, and criteria which most influence the housing affordability, is insufficient government expenditure for housing and community amendments in the Baltic States, Spain, Finland, Sweden, Denmark and UK – for evaluation housing market sustainability in each of the selected countries was analyzed in six criteria groups - general economic, housing stock, housing affordability, population and social conditions, housing quality and environmental quality (Nuuter, Lill, 2015).

Practical part

Life quality influence variety of macroeconomic indicators, and real estate market development tendencies as well.

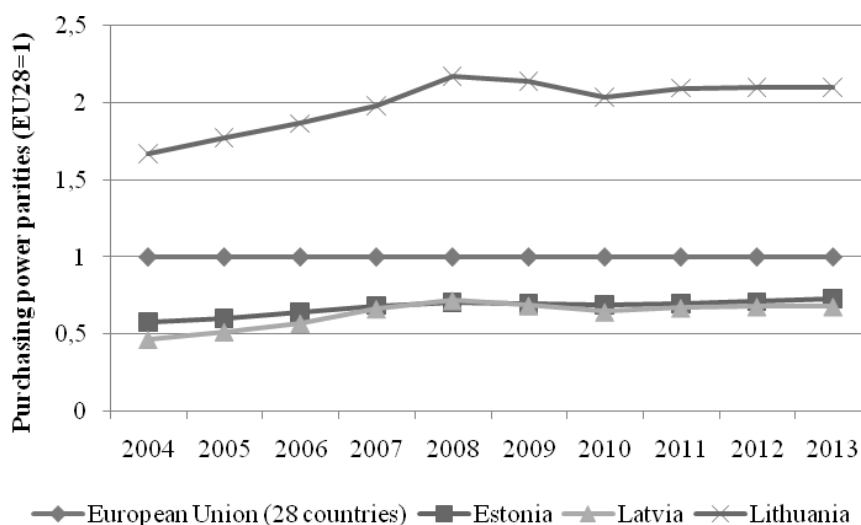


Figure 1. Purchasing power parities (EU28=1) Data: Eurostat. figure made by authors.

Purchasing power parities scaled to the sum of expenditures of the EU Member States expressed in euro, purchasing parities shows how many units of national currency one would need in that country in order to maintain the purchasing power of one euro in the EU (Eurostat metadata, 2014). Purchasing parities of Baltic States (EU28=1), are observed in Figure 1.

Purchasing parities in Latvia in construction branch are observed in Figure 2, and the highest rate is especially for civil construction activities, lower rating – for residential buildings.

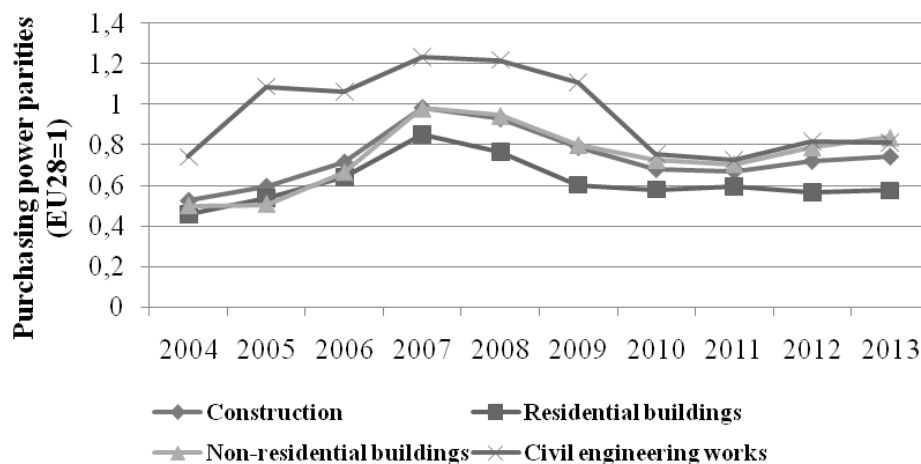


Figure 2. Purchasing power parities in Latvia. Data: Eurostat, figure made by authors.

Demographic aspects are affecting economic situation in each country, and changes in economic situation significantly influences social aspects and life quality. In Figure 3 crude rate of net migration plus statistical adjustment per 1 000 persons of the average population in shown. According to Eurostat metadata, crude rate is calculated as the ratio of the number of events to the average population of the respective area in a given year, and for easier presentation, it is multiplied by 1 000 and the result is therefore expressed per 1 000 persons of the average population. In Europe this rate in researched period from 2004 to 2013 always has a positive indicators, then in all Baltics States is an opposite situation, especially in Lithuania and Latvia.

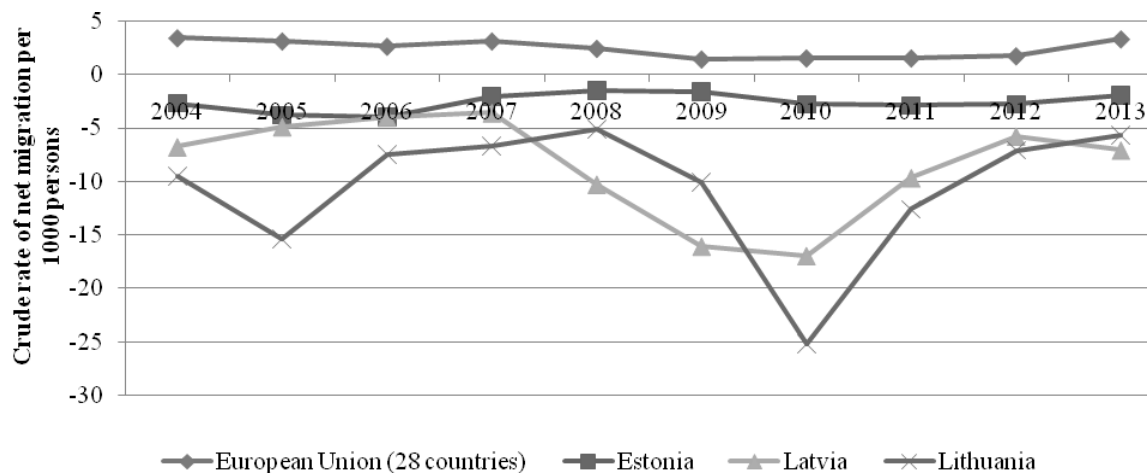


Figure 3. Crude rate of net migration plus statistical adjustment per 1 000 persons of the average population. Data: Eurostat, figure made by authors.

Inequality of income distribution - S80/S20 income quintile share of Baltic States is observed in Figure 4.

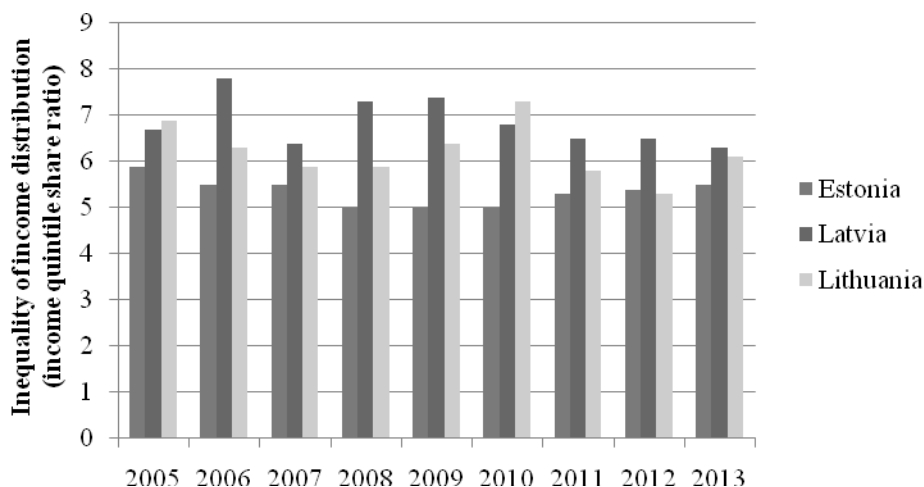


Figure 4. Inequality of income distribution - S80/S20 income quintile share.

Data: Eurostat, figure made by authors.

Comparing inequality of income distribution - S80/S20 income quintile share in Baltic States, the biggest inequality is observed in Latvia. For detailed economic growth calculations there are attempts to analyse characteristics such as economic diversity, international trade, real income of the population, the level of tax burden, the volume of savings, and economic infrastructure (Hajduová, Andrejovský, 2014). In Figure 5 net savings in EU-28, Estonia, Latvia and Lithuania are observed.

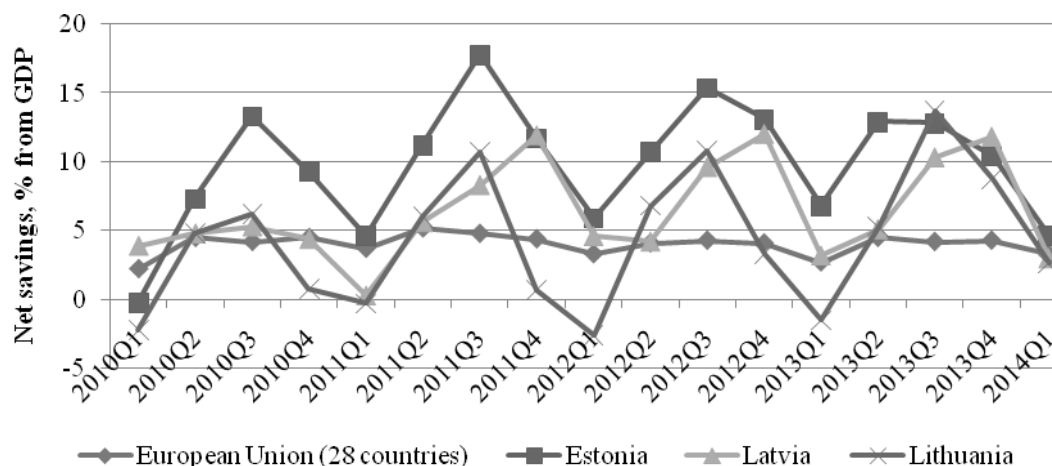


Figure 5. Net savings in Baltic States, % from GDP. Data: Eurostat, figure made by authors.

Net savings has a seasonal character – as observed in Figure 5, but in EU-28 in general the seasonal character of savings is not so pronounced. Type of dwellings in urban and rural area in Latvia are observed in Figure 6.

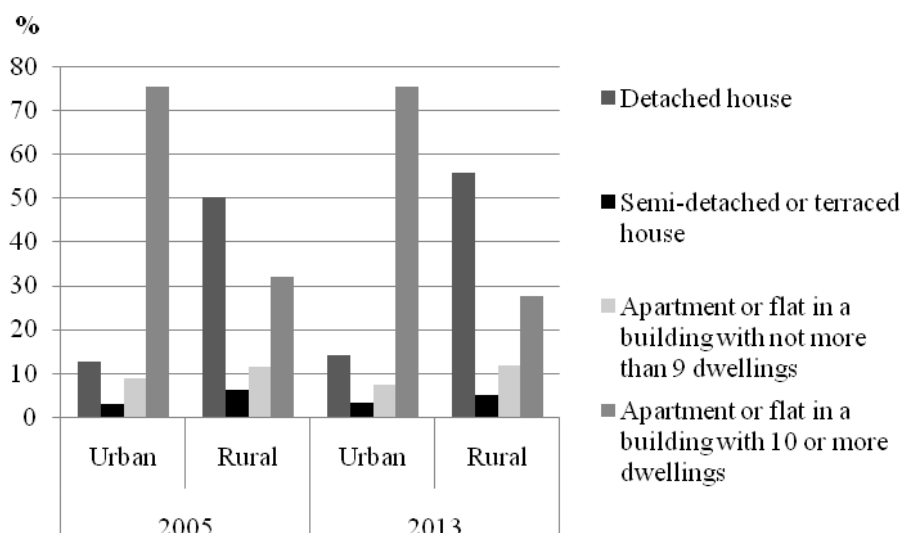


Figure 6. Type of dwellings in urban and rural area in Latvia, %.

Data: Central Statistical Bureau of Latvia (Statistikas datubāzes, 2015), figure made by authors.

There was not a significant change in 2005 and in 2013, the most popular type of dwelling in Latvia in urban areas are apartments or flats with 10 or more dwellings, but in rural areas most popular are detached houses, then follows apartments or flats with 10 or more dwellings. It is found that regional house prices influence regional consumption (Campbell, Cocco, 2007). Also number of construction enterprises differs between regions of Latvia, what is observed in Figure 7.

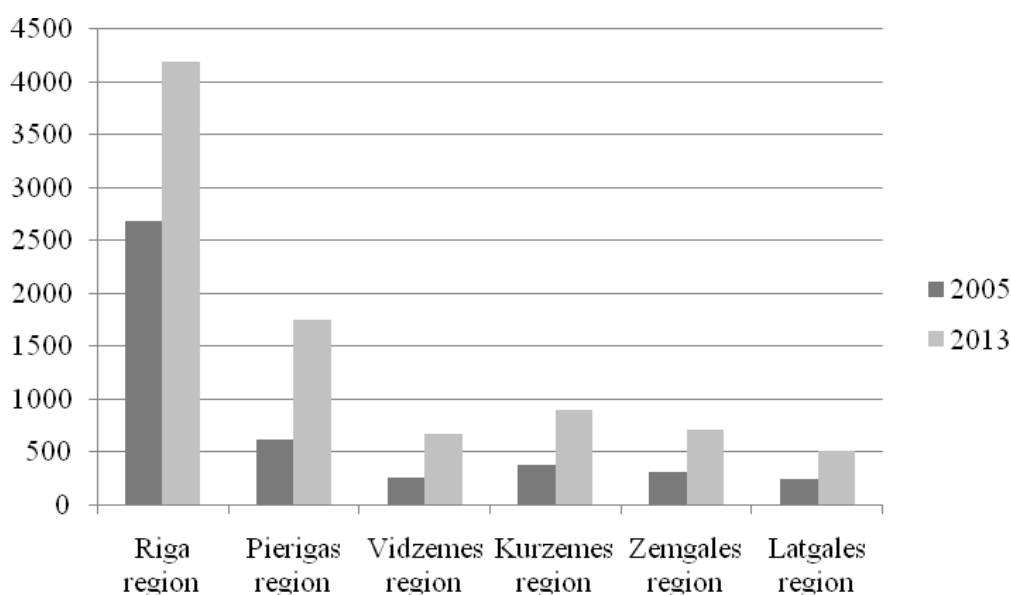


Figure 7. The number of construction enterprises in regions of Latvia in 2005 and 2013.

Data: Central Statistical Bureau of Latvia (Statistikas datubāzes, 2015), figure made by authors.

Analyzing educational activities and job related education activities in engineering, manufacturing and construction, the number of them has grown from 2007 to 2011, what is observed in Figure 8 and had a positive tendency.

Important is a fact, that even though the economy might improve in terms of GDP per capita, it may lag in final consumption expenditure per capita, experience relatively high unemployment rate: indicators that may be more directly related to the well-being of residents (Leontjevs, Dovladbekova, 2014). According to Doing Business Report (Economy ratings, 2014) June 2014 data, ease on doing business has Singapore, also other aspects are there on the high level, just registering property (24th

place), resolving insolvency (19th place) has lower ratios. Latvia in ease of doing business in June 2014 had a 23rd place.

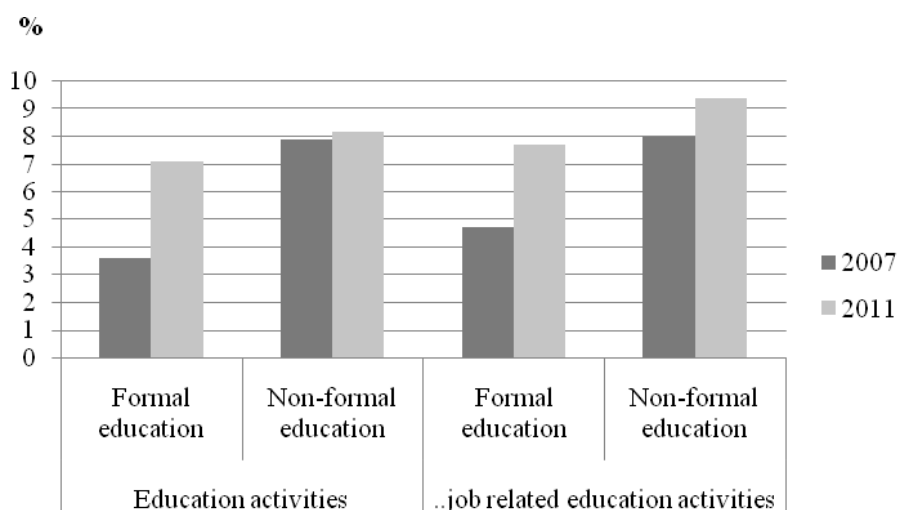


Figure 8. Educational activities and job related education activities in engineering, manufacturing and construction.

The higher position Latvia has in enforcing contracts (16th place). Business environment is especially important for economics of each country, because it has strong connection with income of inhabitants, and life quality as well.

Results and discussion

The results of the study underline the significance of the connection of quality of life and real estate and economic development in general. Better Life Index definition (OECD better Life Index Executive Summary, 2014, 1) is an interactive web-based tool created to engage people in the debate on well-being and, through this process, learn what matters the most to them; OECD is calculating it in 11 topics: community, education, environment, civic engagement, health, housing, income, jobs, life satisfaction, safety and work-life balance. For calculations of housing indicators OECD includes following – dwellings facilities, housing expenditures, number of rooms per person. In theory there is variety of options for quality of life measurements, during this research predominantly socio-economic aspects and role of real estate in life quality were analysed. By analyzing variety of solution options, one of them could be behaviour. Behavior is often at the root of environmental issues, and behavioural innovations can change the traditional borders between ‘weak’ and ‘strong’ sustainability, and that has lower cost than monetary incentives technological improvements (Beretti, Figuières, 2013).

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Conclusions

Improving quality of life should be one of the main economic policy tasks. Quality of life is being influenced by such socio-economic factors as housing affordability, income distribution, level of average wages, demographic indicators, real estate market development in urban and rural areas, purchasing power parities, net savings, fiscal sustainability, educational activities and other factors. For improvement of life quality, it is suggested to solve sustainable development problems, to improve variety of socio-economic and real estate market development indicators, as well supporting entrepreneurship activities. Regulation of economic development significantly affects quality of life – by reducing unwished fluctuations and improving macroeconomic indicators there is a possibility to achieve higher quality of life and achieve higher position in global ratings.

Bibliography

1. *10th Annual International Housing Affordability Survey: 2014 Ratings for Metropolitan Markets*. International Housing Affordability Survey. Introduction by Alain Bertaud. Stern School of Business, New York University, p. 58. [online] [13.01.2015]. Available at <http://www.demographia.com/dhi2014.pdf>
2. Aizenman J., Jinjark Y. (2009). Current account patterns and national real estate markets. *Journal of Urban Economics*, Vol.66 pp. 75–89. doi:10.1016/j.jue.2009.05.002
3. Alexander E. R. (2014). Land-property markets and planning: A special case. *Land Use Policy*, Vol. 41, pp. 533–540; [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.landusepol.2014.04.009>
4. Beretti A., Figuières C., Grolleau G. (2013). Behavioral innovations: The missing capital in sustainable development? *Ecological Economics*, Vol. 89, pp. 187–195. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.ecolecon.2013.03.004>
5. Beslerová S., Dzuričková J. (2014). Quality of life measurements in EU countries. *Procedia Economics and Finance*, Vol. 12, pp. 37 – 47; doi: 10.1016/S2212-5671(14)00318-9
6. Bischoff O. (2012). Explaining regional variation in equilibrium real estate prices and income. *Journal of Housing Economics*, Vol. 21, pp. 1–15. doi:10.1016/j.jhe.2011.11.002
7. Blackburn W. R. (2007). *The sustainability handbook : [the complete management guide to achieving social, economic and environmental responsibility]* / London, Sterling, VA: Earthscan, p. 803.
8. Campbell J.Y., Cocco J. F. (2007). How do house prices affect consumption? Evidence from micro data. *Journal of Monetary Economics*, Vol. 54, pp. 591–621. doi:10.1016/j.jmoneco.2005.10.016
9. Cheng H., Green A., Wolpert M., Deighton J., Furnham A. (2014). Factors influencing adult quality of life: Findings from a nationally representative sample in the UK. *Personality and Individual Differences*, Vol. 68, pp. 241–246. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.paid.2014.04.026>
10. Chiarazzo V., Caggiani L., Marinelli M., Ottomanelli M. (2014). A Neural Network based model for real estate price estimation considering environmental quality of property location. *Transportation Research Procedia*, Vol. 3, pp. 810 – 817. doi: 10.1016/j.trpro.2014.10.067
11. Doing Business (2014). Economy ratings. [online] [13.01.2015]. Available at <http://www.doingbusiness.org/rankings>
12. Edelstein R., Qian W. (2011). Short-term Investors and Housing Market Dynamics. *IRES Working Paper Series IRES2011-036*. National University of Singapore. [online] [10.01.2015]. Available at www.ires.nus.edu.sg/workingpapers/IRES2011-036.pdf
13. Eurostat. *European Statistics Database*. [online] [13.01.2015]. Available at http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database
14. Eurostat metadata. Eurostat. [online] [13.01.2015]. Available at http://ec.europa.eu/eurostat/cache/metadata/en/prc_ppp_esms.htm
15. Fabbri K., Tronchin L., Tarabusi V. (2011). Real Estate market, energy rating and cost. Reflections about an Italian case study. *Procedia Engineering*, Vol. 21, pp. 303-310. doi: 10.1016/j.proeng.2011.11.2019
16. Gal Y., Hadas E. (2013). Land allocation: Agriculture vs. urban development in Israel. *Land Use Policy*, Vol. 31, pp. 498–503. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.landusepol.2012.08.013>
17. Hajduová Z., Andrejovský P., Beslerová S. (2014). Development of quality of life economic indicators with regard to the environment. *Procedia - Social and Behavioral Sciences*, Vol. 110, pp. 747 – 754, doi: 10.1016/j.sbspro.2013.12.919
18. Himmelberg C., Mayer C., Todd. S. (2005). Assessing High House Prices: Bubbles, Fundamentals, and Misperceptions. *The Open Access Publication Server of the ZWB – Leibniz Information Center of Economics*, Staff Report no. 218, in Cooperation with Federal Reserve Bank of New York. [online] [10.01.2015]. Available at <http://hdl.handle.net/10419/60694>
19. Krause A. L., Bitter C. (2012). Spatial econometrics, land values and sustainability: Trends in real estate valuation research. *Cities*, Vol. 29, pp. 19–25. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.cities.2012.06.006>

20. Lejano R.P., Stokols D. (2013). Social ecology, sustainability, and economics. *Ecological Economics*, Vol. 89, pp. 1–6. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.ecolecon.2013.01.011>
21. Leontjevs J., Dovladbekova I. (2014). Has the Crisis Come to an End: Assessments by Latvian Residents. Proceedings of Riga Technical University Conference *Scientific Conference on Economics and Entrepreneurship* (SCEE 2014). Vol. 55., Riga, RTU
22. Mason K.E., Baker E., Blakely T., Bentley R.J. (2013). Housing affordability and mental health: Does the relationship differ for renters and home purchasers? *Social Science & Medicine*, Vol. 94, pp.91-97. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.socscimed.2013.06.023>
23. Morais A. C., Aragao J.J.G., Yamashit Y., Orrico R.D., Dourado A.B.F. (2014). Analysing the fiscal sustainability of transit investment projects: The case of the metropolitan railway of Brasília. *Research in Transportation Economics*, Vol. 48, pp. 422-428. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.retrec.2014.09.069>
24. Musa M.F., Mohammad M.F., Mahbub R., Yusof M.R. (2014). Enhancing the Quality of Life by Adopting Sustainable Modular Industrialised Building System (IBS) in the Malaysian Construction Industry. *Procedia - Social and Behavioral Sciences*, Vol. 153, pp. 79 – 89. doi: 10.1016/j.sbspro.2014.10.043
25. Nuuter T., Lill I., Tupenaite L. (2015). Comparison of housing market sustainability in European countries based on multiple criteria assessment. *Land Use Policy*, Vol. 42, pp. 642–651. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.landusepol.2014.09.022>
26. *OECD Better life index - Executive Summary*. OECD. [online] [13.01.2015]. Available at http://www.oecdbetterlifeindex.org/media/bli/documents/BLI_executive_summary_2014.pdf
27. Ooi J.T.L., Le T.T.T., Lee N.-J. (2014). The impact of construction quality on house prices. *Journal of Housing Economics*, Vol. 26, pp. 126–138. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.jhe.2014.10.001>
28. Risholt B., Time B., Hestnes A.G. (2013). Sustainability assessment of nearly zero energy renovation of dwellings based on energy, economy and home quality indicators. *Energy and Buildings*, Vol. 60, pp.217–224. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.enbuild.2012.12.017>
29. Teece D. J. (2010). Business Models, Business Strategy and Innovation. *Long Range Planning*, Vol. 43, Issue 2-3, pp.172-194. doi: 10.1016/j.lrp.2009.07.003
30. Titman S., Twite G. (2013). Urban density, law and the duration of real estate leases. *Journal of Urban Economics*, Vol. 74, pp. 99–112. [online] [13.01.2015]. Available at <http://dx.doi.org/10.1016/j.jue.2012.10.003>
31. Vanags J., Butane I. (2013). Major Aspects of Development of Sustainable Investment Environment in Real Estate Industry. *Procedia Engineering*, Vol. 57, pp. 1223 – 1229. doi: 10.1016/j.proeng.2013.04.154
32. Wang S., Yang Z., Liu H. (2011). Impact of urban economic openness on real estate prices: Evidence from thirty-five cities in China. *China Economic Review*, Vol. 22, pp. 42–54. doi:10.1016/j.chieco.2010.08.007
33. Xie H., Yu Z., Wu J. (2011). Research on the sustainability of China's real estate market. *Procedia Engineering*, Vol. 21, pp. 243-251. doi: 10.1016/j.proeng.2011.11.2011
34. Zheng S.Q., Kahn M.E. (2007). Land and residential property markets in a booming economy: New evidence from Beijing. *Journal of Urban Economics*, Vol. 69, Issue (2), pp. 743-757. doi:10.1016/j.jue.2007.04.010
35. Statistikas datubāzes [Statistic Database]. Latvijas Centrālās Statistikas Pārvaldes Portāls [Central Statistical Bureau of Latvia]. [online] [13.01.2015]. Available at <http://www.csb.gov.lv/dati/statistikas-datubazes-28270.html> (In Latvian)