Influence of Economic and Real Estate Market Fluctuations on Real Estate Entrepreneurship in Latvia

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Abstract—The position of real estate market phase in cycle is determined by variety of indicators that have a great significance for business planning. The purpose of the research is to identify how fluctuations of key macroeconomic and real estate market indicators influence construction and real estate business representatives and to define implementation of this knowledge in business management. Statistical, logical, data processing and analysis methods have been used in the research. The results of the research can be applied by real estate entrepreneurs, construction companies, developers, real estate investors and other market participants and for branch regulation improvements.

Keywords—business cycle; real estate cycle; national economy; entrepreneurship; real estate market; economic cycle; real estate investments; economic fluctuations; real estate

I. INTRODUCTION

The relevance of the research is being determined by the factor, that of investments in real estate operations and real estate development in many cases have long period of implementation, during which significant changes in real estate market and national economy can be observed. The purpose of the research is to identify how fluctuations of key macroeconomic and real estate market indicators influence construction and real estate business representatives and to define implementation of this knowledge in business management. For achievement of research objective following tasks were set:
- research of related scientific literature and research papers;
- scientific overview of theoretical aspects of researched question, including indicators that influence real estate market and national economy;
- analysis of macroeconomic development in Latvia for period from 2006-2013;
- the detailed complex analysis of real estate market fluctuations and development tendencies in Latvia;
- defining the influence of real estate and economic fluctuations on real estate entrepreneurship in Latvia and to develop recommendations for business representatives and branch regulation;

Real estate entrepreneurship strongly depends from real estate market and economic fluctuations, because it affects the level of profitability in the industry. Investments in construction projects and real estate operations often has a high level of risk, that is one of the reasons why it is strongly recommended to analyze real estate market trends, structure, influences and existing interconnections within market. Statistical, logical, data processing and analysis methods have been used in the research. The research object is real estate entrepreneurship in Latvia. The research subject is real estate market and economic fluctuations in Latvia. The results of the research can be applied by business sector representatives and for branch regulation improvements.

II. THEORETICAL ASPECT OVERVIEW

The real estate and economic cycles may have different reasons and different consequences, therefore is necessary to analyze this questions from different point of views, with an aim to develop tools how market participants can apply this knowledge. As any question in economics, cycles may have different effects – positive and negative – depending on phase of economic cycle, behavior and decision-making of market participants. An important role in study of this question also has behavioral sciences. For example, it was found, and that overconfidence generates overinvestment in booms that results in higher volatility, in comparison with situation of underinvestment in recession phase [1]. At the same time there are models, that include fact that agent can receive imperfect information and signals and use them in investment decision-making, for example, occasional recessions are a sign of a well-functioning economy, because they are reflecting the availability of good quality information on basis of which people act [2].
The business cycle can be defined as a short-term fluctuations of output around its trend, and cycles in demand are causes of cycles in actual output around a smooth trend growth path for potential output, however, potential output may itself be a subject to fluctuations [3].

Business cycles has been analyzed worldwide, important is also its connection to welfare - transitory and permanent shocks have different sources and separating welfare costs gives an opportunity to estimate the welfare costs of economic-growth variation and business cycles [4]. At the same time in all Euro area countries similar recessionary effects are caused by contractionary monetary policy shocks, but business cycle fluctuations in biggest European economies mainly are explained by area-wide shocks and other group of countries, including Greece, Ireland and Portugal, the national shocks play, in opposite, have a much greater role [5]. Globally, by analyzing 187 countries over the period of 1960–2007, a strong spatial comovement of economic volatility can be found, and during the period of international shocks (1973–86) the effect of geographical proximity on economic volatility comovement is strongest, but it almostly disappears over the era of globalization (1987–2007) [6]. Waves of innovations also can move the economy to a boom and the associated increase in productivity all over the business sphere raises purchasing power, flourishing research activities, but it is important to notice that Schumpeterian wave-like business fluctuations substantially differ from the type of fluctuations studied in modern business cycle theory [7]. Its influence on real estate entrepreneurship can be different, for instance, was analyzed, that volatility clustering effects have all REIT returns: for example, the behavior of the REIT returns in Singapore, Malaysia, Hong Kong and Thailand are similar, because fluctuations being caused mainly by the size effect; in Japan, Taiwan and South Korea, the REIT returns are mostly caused by the stock markets, and there is contagion effect in these countries, but in Japan because of leverage, contagion effects and size [8]. Housing sector is very important sector in national economy of every country, on the example of Singapore it also provides the largest form of savings of household wealth, and private housing sector, real estate prices and rent prices also impact Singapore’s competitiveness level in the world economy [9].

There are variety of causes of cycles and economic fluctuations, such as changes in investments, innovations, demand shocks, cash flow fluctuations, natural disasters and many other reasons. One of the most significant reasons are changes in investments. Investment opportunities in general are investments in:

- Real estate
- Real estate securities
- Stocks
- Bonds
- Mutual funds
- ETFs (exchange traded funds)
- Hedge funds
- Pension funds
- Treasury markets and others.

All types of investments are influenced by cycles and fluctuations. At the same time always exists one of the most important economic questions for market participants – to save or to spend. In emerging economies housing wealth, stock market wealth, incomes and personal consumption form long-run equilibrium relationship [10]. And there is a various interrelationships between stock market and the real estate market in Japan, fractionally integration with the real estate markets of China, Hong Kong, and Taiwan, and in some case it is important for policy makers to pay attention to the real estate market development to prevent volatility in the stock market [11].

Investments in real estate are one of the most popular types of investments worldwide. Investments in real estate operations or real estate development often have long period of realization, and important risk for any investor in this period changes in real estate market and national economy, that often occurs. Land development process is shown in Table 1.

<table>
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<tr>
<th>Stage I</th>
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<td>Initial Contact by Land Broker</td>
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<td>- Preliminary market study</td>
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<td>- Preliminary cost</td>
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<td>- Begin construction of improvements</td>
<td>- Implement financial</td>
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<td>- Implement design</td>
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TABLE I. LAND DEVELOPMENT PROCESS [12]
The study of real estate and monetary policy interconnection is important in understanding economic instability, it can result for example in effect on housing expenditure and asset price changes through real estate price changes [19]. The nominal interest rate, variations of external money, real activity is and important factor in explaining price level fluctuations [20]. European Central Bank monetary policy strategy, including monetary aggregates and the short-term interest rate share a common cyclical factor with production and prices [21]. It was also researched, that in the period of 1995-2012 global housing markets are bound together by nine long-run relationships [22]. It was also found that crisis in US real estate market had different impacts on the real estate markets integration with the world market, and UAE, Australian and US real estate markets, according to research results, became more globally integrated, but for instance the Japanese market integration level was lower [23].

Pei Kuang [24] in a model found important interconnection, that not always was covered in real estate analysis, that in a collateral-constrained economy house prices depends on quantities on the leverage ratio. Real estate imbalances influence on bank stability is comparable with impact of nonperforming credit shares, cost efficiency, and liquidity levels, and the same time universal banks have more advantages that specialized banks for portfolio diversification [25]. It was also researched, that banks also can create real estate cycles by their behaviour (for instance, expectation formation), and at the same time the rising of house price level has a positive effect on borrowers of mortgages, but it can result in higher mortgage burden as well [26]. At the same time domestic credit sector lending capacity matters for overall debt capacity of entrepreneurs [27]. In terms of growth of Chinese property markets (one of the most important components of China economic rise), important is that big Chinese companies, for example, state-owner enterprices, have no need in external investment financing, so there is not always necessary to pledge collateral to fund [28].

In practice often an imbalance between real estate demand and real estate supply is observed, and this is one of the reasons of real estate cycles. Internal and external factors are influencing real estate demand and supply that in turn is affecting real estate prices. Sometimes internal and external factors can influence real estate prices directly, for example changes in real estate tax rate. When increase in demand is observed, also increases a level of real estate prices and vice versa. A model of real estate price influencing factors is shown in Fig.1.

| estimates with contractors subject to closing -Submit plan for public approvals, submit package for financing | controls - Coordinate with contractors, consultants, public sector | controls with builders -Implement facility management and/or begin homeowner association |

Preliminary market studies and cost estimates are extremely important for every investor and entrepreneur. It is suggested to do them as detailed as possible, by defining all existing risks, including possible real estate market and economic fluctuations. Real estate market has a great role on the general development of the country, it has strong economical, social, environmental significance. In practice in general there are many investment approaches, for example Eurosif [13] classify social responsible investment strategies in the following way:

- Sustainability themed investment.
- Best-in-Class investment selection.
- Exclusion of holdings from investment universe.
- Norms-based screening.
- Integration of ESG factors in financial analysis.
- Engagement and voting on sustainability matters.
- Impact investing.

For policy makers it is important to have long term strategies also for building energy efficiency regulation and promotion, and raise the stakeholders’ confidence in investment in building energy efficiency, that improve investment environment as well [14]. For example, in Lithuania in sustainable development strategy the main focus was on „eco-effectiveness indicator”, including energy and other natural resource consumption per GDP unit, emissions of pollutants per GDP unit and other criteria [15]. As entreprices have a great influence on ecological issues and issues of sustainability, on of the main tool of sustainable development strategies for enterprices in Baltic States – in Latvia, Lithuania and Estonia, is a corporate social responsibility [16]. Great importance nowadays also have issues, related to behavioral sciences and behavioral economics, as well in analyzing real estate market and customer behavior. The individual personality preferences influence real estate market equilibrium and outperforms significant macroeconomic consequences [17]. Significant indicator for forecasting the period of following bust is the magnitude of boom growth, and for forecasting of cycles important to mention that previous cycle not always repeats previous cycle and it can’t in all situations be a point of reference for forecast [18].

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For investors, policy makers and other market participants is also important the analysis of demographic processes. Demographic tendencies are part of urban dynamics, that can affect residential area as large housing estate as well [29]. Real estate market analysis is especially important also for policy makers, because real estate market development also influence government revenue from property taxes, real estate transfer tax, the revenues from income taxes, the VAT on construction materials and other [30].

Real estate market can be characterized with supply and demand imbalances and shocks. Investment climate influences decision-making of market participants as well [31]. One of the main indicators in most OECD area for explaining the volatility of housing returns are changes in risk-premia and short-term interest rates, as well for the last 40 years changes in future returns expectations has been the main reason for housing market volatility in the OECD area [32]. Real estate market is characterized by volatility and fluctuations, so investment decisions have to be made very carefully.

III. PRACTICAL ASPECTS OF INFLUENCE OF ECONOMIC FLUCTUATIONS AND REAL ESTATE MARKET ON REAL ESTATE ENTREPRENEURSHIP IN LATVIA

The position of real estate market phase in real estate cycle is determined by variety of factors and indicators. In the current research such real estate market indicators in Latvia are analyzed:

- House price index for new and existing dwellings.
- Number of real estate purchase agreement.
- Number of registered buildings in Land Register.
- Number of registered rent activities.
- Number of enhanced mortgages.
- Non-financial investments in construction and real estate.
- Number of commercial companies within industry.
- Deposit and credit rates in credit institutions.
- Economic profitability in construction and real estate operations.
- Gross rental yields and other indicators.

Real estate market development in Latvia from 1995 to 2014 is characterized by fluctuations of variety of indicators, as well real estate cycles are observed. The biggest number of enhanced mortgages and real estate purchase agreements were in 2006, but the highest level of salaries and wages was in 2008, it means that availability of mortgages had a greater influence on number of purchase agreements if Latvia in 2006 than average salaries and wages. In 2009 number of enhanced mortgages decreased significantly. At the same time, number of rent agreements did not decrease as rapidly as number of real estate purchase agreements in period of recession. It can be explained by the fact, when purchase of real estate becomes less affordable, rent market is also affected, but not so essentially. Number of registered purchase agreements, rent agreements, enhanced mortgages and registered buildings in Land Register in Latvia from 1996 to 2014 are shown in Fig.2.
Increase in demand is one of the most important factors in construction and investment decision-making. In period from 2010 to 2014 a number of real estate purchase agreements increased by 35.90%. An increase in demand contributed an increase in number of registered buildings in Land Register and stimulated a construction process. In after crisis period, from year 2010 to 2014 total floor space of new residential buildings constructed has grown by 25.73%. Total floor space of new residential buildings constructed (thsd m²) is shown in Figure 3.

The highest total floor space of new residential buildings constructed was observed in 2007, and can be compared just with period of intensive residential building construction in 1980-ies. There was a significant increase in real estate investments in period 2010-2014 in Latvia (especially in Riga, Riga Region and Jurmala), but volumes of investments were still less than in 2008 (see Fig.4). Non-financial investments in construction in period from 2010 to 2014 have increased by 18.47%, but for real estate activities for the same period – by 21.39%. According to previous research [35], number of real estate deals in Riga and Riga region in 2013 amounted to 41.96 % from all real estate purchase deals in Latvia, as well as high gap between real estate purchase price in capital of Latvia and other regions were observed. At the same time, according to latest statistical information of A State Unified Computerized Land Register [33], in 2014Q4 and in first half of 2015 there
was a decrease in number of registered purchase agreements in Riga, but in 3rd quarter an increase of local demand for real estate was observed again.

![Graph showing non-financial investments in construction, real estate activities, and total investments in all sectors in Latvia (at constant prices of 2013, mln euro).](image1)

Data: Central Statistical Bureau of Latvia [34], figure made by authors

Very high difference between real estate prices and number of residential building permits was observed in 2006 (see Fig.5). Important also is a fact, that in period from 2006 to 2010, there were not big difference in house price index between new and existing dwellings, but after changes in Immigration Law of Latvia, that gave a possibility in certain circumstances to obtain temporary residence permit through real estate purchase in Latvia, house price index for new dwellings was increasing more rapidly, than for existing dwellings. In 2014Q4 the decrease of house price index were observed, by 44.86 points for new dwellings, and for 7.79 points for existing dwellings, in comparison with 2014Q3, and one of the important reasons were the new changes in Immigration Law and increase of minimal real estate purchase price for obtaining temporary residence permit in Latvia. So, as in 2015 number of registered purchase agreements also reduced, this are the one of signals for probable start of recession on real estate market in Latvia.

![Graph showing house price index for new and existing dwellings and residential real estate building permits.](image2)

_Data: Eurostat [36], Central Statistical Bureau of Latvia [34], figure made by authors_

Changes in real estate price level significantly influence the level of profitability within industry. At the same time the level of profitability in the industry influence decision-making of companies, operating within industry, and real estate investors. Improvements in economic situation also positively influenced a number of commercial companies in Latvia –
after year of crisis in Latvian economy in 2009, number of companies in construction industry and real estate operations had stable increasing tendencies in researched period (see Fig.6). The biggest number of companies has been registered in real estate activities, but smaller number - in civil engineering.

![Graph showing economic trends in Latvia](image)

**Fig.6. Economically active statistical units by main kind of activity (NACE Rev.2). Data: Central Statistical Bureau of Latvia [37], figure made by authors**

The number of commercial companies working in real estate activities from 2005 to 2013 has increased for 30.76%. Number of individual merchant and commercial companies has increased, at the same time number of self employed persons from 2005 to 2013 has slightly reduced (-12.52%). Number of economically active statistical units in real estate activities in 2005 and 2013 is observed in Figure 7. An increase of real estate and construction companies (Fig.6 and Fig.7) was also influenced by improvement of macroeconomic situation after phase of crisis.

![Bar graph showing economic activities in Latvia](image)

**Fig.7. Economically active statistical units by sectors: real estate activities. Data: Central Statistical Bureau of Latvia [34], figure made by authors**

For overview of economic fluctuations in Latvia such indicators as GDP, level of employment, inflation rate and net export were analyzed (see Fig.8). The expansion phase of the national economy of is observed in the researched period, at the same time special attention should be paid for improvement of some important indicators of development, for example, external balance of goods and services.
Development of real estate market is interconnected with economic development, with some time delays. Rapid changes in real estate market development tendencies the most significantly influenced construction of buildings. Economic profitability shows amount of profit per one unit of assets of enterprise [37]. Coefficient of economic profitability in construction industry and real estate operations after taxes shown in Fig. 9.

Great influence on economic profitability of construction companies had decrease in demand - reduction of number of buyers and its’ purchasing power. Investors worldwide are searching for higher risk premium and profits from invested capital. Often for big development projects bank financing is being attracted. During research period (from 2004 to 2013Q3) a gap between interest rates on deposit and interest rates on credit rates became much higher. Average weighted long term interest rates on deposits and credits in credit institutions in foreign currencies by quarters are shown in Figure 10.
From 2009 to 2013Q3 interest rate for deposits in foreign currencies declined significantly – from 3.5% in 2004Q1 to 1.4% in 2013Q4. Interest rates for credit have grown from 4.3% to 9.4% in the same time period. In 2014 Latvia joined Euro Area, but also for local currency in the researched period analogical tendencies were observed. As interest rates on deposits are at very low level, a tendency that investors are searching for good quality investment properties, also on international level, is understandable. In Latvia in the last years volumes of foreign direct investments in real estate are much higher than foreign direct investments in construction industry [38]. One of the most important indicators of real estate investments for investors are rental yields. Comparison of rental yields is shown in Figure 11.

Investors are searching for real estate objects with stable cash flow and satisfactory rental yields. Very high rental yields sometimes are interconnected also with heightened investment risk. The complex approach to real estate market analysis can minimize existing entrepreneurship risks, but effective policy planning can contribute to successful market development.

IV. CONCLUSIONS

The research investigates real estate market indicators analysis and its influences on real estate entrepreneurship in Latvia. In a complex approach such indicators were analysed: real estate price level for new and existing dwellings, number of real estate purchase agreements, number of registered buildings in Land Register, number of registered rent activities, number of enhanced mortgages, non-financial investments in construction and real estate, number of commercial companies within industry, deposit and credit rates in credit institutions, economic profitability in construction and real estate operations, rental yields and other indicators. Macroeconomic development of country affects real estate market in variety of aspects. An
increase in local and foreign demand contributed an increase in number of registered buildings in Land Register by 25.73% in period from 2010 to 2014 and stimulated a construction process in recovery phase after crisis in 2009. This, in turn, influenced supply of real estate, number of new built square meters from 2010 to 2014 has risen by 25.73%, but the first signals of probable recession occurred – decrease of house price index of new dwellings and decrease of number of purchase agreements in end of 2014, but situation changed after 2015Q3. Real estate market development and macroeconomic environment results also in rental yields and profits of real estate entrepreneurs. The number of commercial companies working in real estate activities from 2005 to 2013 has increased for 30.76. From 2009 to 2013Q3 interest rate for deposits in foreign currencies declined significantly - from 3.5% in 2004Q1 to 1.4% in 2013Q4. As the investors worldwide are looking for good quality real estate investment objects, special attention should be paid to development of business environment at different levels. The direction of further research is an application of behavioral sciences in real estate entrepreneurship and analysis of issues related to sustainable economy development.

According to conducted research for successful real estate entrepreneurship and business management it is suggested:
- real estate market phase in cycle is determined by variety of indicators that have a great significance for real estate entrepreneurship. For entrepreneurs it is recommended regularly to follow fluctuations on real estate market, in national economy and to analyse international real estate market - as a complex approach - and to use acquired knowledge in the strategic business planning and forecasting;
- for policy makers one of the priority aims should be an increase of purchasing power of local citizens, for example, by creating new working places and developing business environment. Attractive business environment can attract also foreign businesses, and this can significantly influence rent, residential and commercial property markets;
- construction of important infrastructure objects can improve logistics, business opportunities and can create additional financial inflows to construction industry and can have a positive effect on development of industry in general.

In business management practice there are variety of external factors that influence entrepreneurship. Business success often depends on application of different knowledge in risk minimization and searching of a new business opportunities. It is difficult to avoid all of existing industry risks, but as fluctuations of indicators of real estate market and national economy are one of significant industry risks, their inclusion in strategic business management can have a crucial role in success of entrepreneurship.

REFERENCES


BIography

Linda Kauškale, Mg.oec., is lecturer, PhD student, researcher assist. at Riga Technical University, Faculty of Engineering Economics and Management. With distinction has obtained Professional Master Degree in Civil Construction and Real Estate Management and qualification of Real Estate Economist. The Head of International Real Estate department at Ltd. ,,AVA HOLDING". Participated in international scientific conferences: IEOM-2015 in United Arab Emirates, International Conference on Environmental Engineering (ICEE-2014); Modern building Materials, Structures and Techniques (MBMST-2013), Vilnius, Lithuania, etc. Research focus – real estate market analysis, influence of real estate market cycle and economic cycle on development, interaction of socio-economic factors on entrepreneurship on real estate market and construction branch, sustainable environment development etc. Year 2014 - RTU Gold Fund graduate. Fall 2013 – FIABCI (International Real Estate Federation) grantee.

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