

Analysis of Impact Factors on the Real Estate Market: Case Slovenia

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crossref <http://dx.doi.org/10.5755/j01.ee.23.4.2566>

The real estate market is very important for every country, not merely because it ensures construction structures and infrastructure necessary for life and work, but also because it has a strong, multiple impact on the development of nation's entire economy. Real estate market trends are strong indicator of trends in the entire economy.

Trends on the real estate markets have changed notably in recent years. As early as two years ago, the main characteristics of these real estate markets were domination of demand over offer, quick sales of apartments and a lack of "choosiness" on the part of buyers, all of which was accompanied by rising real estate prices, which has not abated in nearly two decades. Over the past two years, the conditions have changed notably: transactions are few, offer is dominating over demand, buyers are choosy, while apartment prices are falling.

In the past, little attention has been paid to the problems we are about to study. Some researches have been conducted; however, none were developed so as to be applicable to the entire territory of Slovenia. For the very facts stated above, we decided to study and present the impact factors on the Slovenian real estate market using a practical example.

The answers obtained through a structured survey questionnaire give rise to several questions. One of these questions is also what the primary factors are and how to form the best selection thereof. To determine them, it was our task to monitor the key factors. We obtained some of the information from past research and put them into the time context. Determining the goals and strategies, we elaborated a plan of the system for establishing the factors, and monitored the volatility of the selected indicators.

Included into the research were also investors, real estate owners, tenancy right holders, real estate users, administrators, managers, tenants, real estate agencies and companies, design and construction companies, as well as other individuals across Slovenia, with varying durations of work experience and varying education levels.

With the research that follows, we wanted to present the factors which most affect the real estate prices on the Slovenian real estate market, resulting in their rise or fall respectively.

The role, significance and usage of the assessed parameters on the real estate market are important for efficient operation of construction company. There is a growing interest for modifying and determining the causes of the assessed parameters. Knowledge of conditions on the real estate market is extremely important for efficient and successful operation of an organisation. An analysis of the real estate market and the operation of construction companies represent a starting point for revamping it.

The goal of the research is to define the factors that must be taken into account for an analytical forecast of future trends in the fluctuation of real estate prices.

We have established that the main group of impact factors is associated with economic growth, interest rates, construction quality, speed of real estate sales and accessibility of funding sources.

Keywords: *real estate market, construction, real estate prices, market factors, interest rates.*

"The operation is partially funded by the European Union through the European Social Fund. The operation is performed under the Operational Programme for Human Resources Development for the period 2007 -2013, development priorities: Promoting entrepreneurship and adaptability, Priority Guideline 1.1.: Experts and researchers for competitive enterprises. "

Introduction

Four years ago we spoke of a flourishing construction sector. Fast growth in real estate has been perceived for a long time. But because of the good economic situation, positive responses of investors, contractors, politicians and economists, the situation seemed obvious and very welcomed. Construction companies have had a lot of work

and investors have been income supported and well situated. Construction industry brought country from five to seven percent of GDP. Banks were satisfied, because investors hired credits at high interest rates for a longer period. Because of positive responses of all participants in the property cycle, legislation also did not change significantly.

Many experts predicted that this situation would persist for a period of five to seven years. In this period, a normalisation or existence of the real estate market was to be expected.

As early as in 1993, Shiller (2003) warned that, due to poor protection of real estate prices in the past, their future decline would cause concern among owners. He also said that in the future real estate prices started to decline.

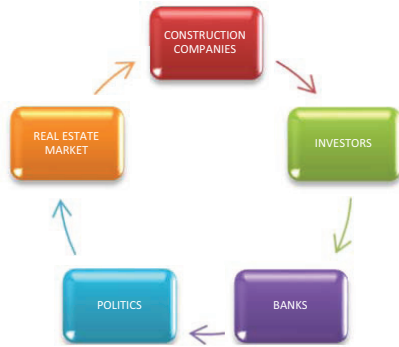


Figure 1. Dependence of the real estate market



Figure 2. Real estate market before the financial crisis

Because then the stable situation in the housing market and 18-years constant annual growth of property prices, unfortunately experts, investors, owners, construction companies, economists and politicians have not devoted attention to factors that affect on property prices.

In 2008 it was detected first downs in property prices. House prices have dropped significantly until 2011. As the construction industry has a major impact on the economy, the financial crisis occurred, pronounced that no one expected it.

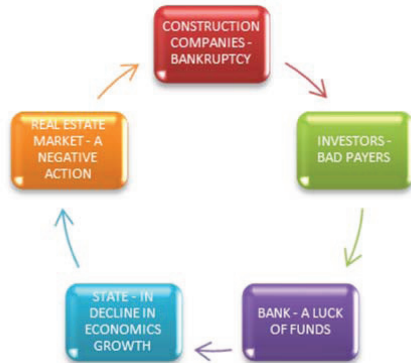


Figure 3. Real estate market in financial crisis

Too late, but nevertheless the situation has led to a number of issues, experts and analysts property sector. Several of construction companies are looking for answers to the questions. Also investors and property owners were worried. They found out that a system should be created to monitor regularly and examine the factors which would affect the growth or decline in property prices in Slovenia.

Also Case and Shiller (2003) in their study noted that the results of measurements of different factors affecting the real estate market are necessary to implement and monitor regularly. They found out that investors who live in developed cities believe that property prices can maintain the level and that is less price risk felt only at very high price levels. According to the research they considered that investors are thinking wrong.

Due to the different reflections of real estate professionals, investors, owners of construction companies, economists and the state, a vital question raises, therefore, which are influential factors that led the Slovenian economy in an unenviable position. Similarly, Cirman (2006) also questioned in her study. It was noted that the set of factors that affect the real estate market is very large, but the question is which of these factors makes an impact and how to make the best set of these factors.

Korosec (2008) says that there are external and internal factors making an impact on the real estate market. We narrowed them down to the internal ones, since we are assessing the case of Slovenia.

In further research, we wanted to solve the problem at least partially. We focused on a few selected factors to which we have not devoted much attention in the past and tried to establish their influence and interdependence. Those factors are:

- credit conditions,
- inflation,
- economic growth,
- interest rates,
- type and location of the property,
- speed of sales real estate,
- SBI.

In order to monitor the factors affecting the real estate market there are to many different indicators and methodologies available for determining their value. Prasad and Richards (2008), have established too that real estate prices are dependent on methodologies selected in different ways. The authors indicate the significance of obtaining as much information as possible on real estate characteristics.

In the past, impact of those factors was discussed by few experts, but their results did not reach out to participants in the housing market enough in their ears.

Guo et al., (2011) wrote, that the real estate market has big impact on the economic growth. But he find out that the traditional mode of the real estate on operation is disadvantageous to the realization of national economic interest, restricts the amendatory process of national living environment, hinders the efficiency of market economy. They also find out that the facilitation of the development of real estate industry on economic growth can be carried out by the two aspects of the development and the scale of real estate. First of all, the sales of the real estate directly promote the development of the sales industry of the real

estate, in addition, due to the improvement of the living environment, it increases the promotion of real estate industry on related industries such as decoration, furniture, electric equipment and so on.

Interest rates also are very important for real estate. Ciurlia and Gheno (2009) wrote that real estate derivatives market allows participants to manage risk and return expository form to property, without buying or selling directly the underlying asset. Such a market is growing very fast, hence, the need to rely on simple yet effective pricing models is very great.

In order to take into account the real estate market sensitivity to the interest rate term structure, there was presented a two – factor model where the real estate asset value and the spot rate dynamics are jointly modelled. The pricing problem for both European and American option is then analysed and since no closed – form solution can be found a bidimensional binomial lattice framework is adopted. The model proposed is able to fit the interest rate and volatility term structures.

Ewing and Payne (2003) wrote that to date there has been a considerable concern with evaluating the performance of real estate returns or determining the significance of fundamental state variables. They find out that shocks to monetary policy, economic growth, and inflation all lead to lower than expected returns, while a shock to the default risk premium is associated with higher future returns.

Frappa and Mesonnier (2010) in their research find robust evidence of a significant positive effect of inflation targeting on real house price growth and on the house price – to – rent ratio.

The inflation also has a great influence on successfulness and profit of companies. Thus inflation reduces real interest rates, and yet the inflation impetus means that nominal interest rate will conform as quoted by Ewing and Payne (2003) and Lennert (2008).

The fact that inflation reduces investments, economic growth and future yields was also ascertained by Clark (1993). Huizinga (1993) and Zion et al., (1993) claimed that inflation leads to lower stabilities of relative prices which cause higher uncertainty of investments. Feldstein and Summers (1979) also ascertained that higher inflation leads to higher income taxes of artificial persons.

The extent of interest's sensibility depends of how many changes of investment projects will happen in the expected inflation. Hevert et al., (1998a, b) have investigated the sensibility of inflation's growth caused by changes of interest rates and ascertained that the growth is generally less sensible on interest rates than on property.

Recent growth of apartments' prices refers to different mechanisms as for example "extravagant expectation" of future rise of prices which extend over social epidemic as wrote Shiller (2007) or price assignment at transactions in connection with combination of inflation and monetary illusion as written by Brunnenmeier and Julliard (2008). By the study we wanted to represent what we do have to be careful about to reject quoted mechanisms.

Important factors in determining property prices are also the type and location of the property.

In their study, Hinkelman and Swidler (2008) wonders if it is possible to reach a high correlation among present real estate prices and a future price portfolio by establishing the base limit and drawing up a long-term agreement. The research shows that there is no simple adjustment for future real estate prices, and the base limit may be subject for further risk. Namely, different properties may be evaluated with the relevant future indexes. The specifics may lie in differences with respect to the year, real estate property size, style or asset amortisation.

In this study we hypothesized an important factor affecting the price of real estate and property speed of sales.

Opinion on the impact of stock index future on the property was divided, which is subsequently confirmed in our study. Some studies investigate the impacts of movements or volatilities of stock prices on REITs, Ambrose and Bian (2010), Cotter and Stevenson (2006), Devaney (2001), Stevenson (2002)), but their conclusion regarding the direction of causal relationship between real estate markets and stock markets tends to be weak. Lee et al., (2012) in their study found that there is a strong link between the Stock Exchange Index and real estate.

The major economic crisis, may bring about an additional standstill and increased risks on capital markets, which will have an impact on the workings of real estate systems, says Lipej (2008). The same author argues that the real estate market needs access to basic data and information, in particular, to market prices and time trends. For a market to be successful, it needs to be ensured that it has transparency, ownership security, efficient cadastral and land registry systems allowing quick, reliable and price-wise acceptable access to real estate data for users.

Influential factors in the real estate market were also explored by Psunder (2009). He has established that real estate growth has been accompanied by very favourable impact factors. The named impact factors affecting real estate growth or decline are: household income, demographic and social indicators, offer and funding costs, the impact of the state. The author also states that even greater damage to the construction sector and construction market may be inflicted by higher inflation (higher funding costs), which results in lower demand for real estate properties and puts pressure on prices.

The purpose of this research is mainly based on the figure and determines the influential factors in the real estate market, which are associated with investors, construction companies, economists and politicians.

The aim of this research is a desire to normalize the real estate market, taking into account several possible influencing factors. Survey is very important in terms of construction and real estate companies. Because of the current situation and ignorance, monitoring and influencing factors fell into serious financial trouble. Many companies have even filed for bankruptcy.

Also in their study, Bianconi and Yoshino (2012) examined what shapes the market performance of firms in the real estate sector in Brazil. They found that the U.S. economy greatly affects the development of real estate markets.

Therefore, the determination of market prices of real estate, real-time monitoring and deals of influential factors

in the housing market is necessary for existence and growth in construction and real estate companies.

In the past, there was a problem that we have not studied with the particular attention. Some researches were made but did not develop any factors affecting the market price of real estate.

The research will be welcomed by investors, construction companies, economists and politicians.

Methods

On the basis of theoretical knowledge, available literature, consultations and existing data, obtained through a structured survey questionnaire, we attempted to establish the use of the assessed parameters. They are associated with schedules, locations, real estate value, advertised and actual real estate prices, discounts, loans, interest rates, the type of real estate property, with execution quality, speed of sales, etc.

We tried to answer all the questions by using descriptive and analytical research methods, a structured survey questionnaire comprised of closed-type questions, a correlation analysis, data obtained at the Statistical Office of the Republic of Slovenia, the Geodetic Administration of the Republic of Slovenia, the Slovenian real estate portal (SLONEP.net), real estate agencies, investors and potential buyers, Slovenian construction companies and banks.

Zietz *et al.*, (2008) have demonstrated, in their study and with its results, that varying characteristics of real estate properties account for their varying sales prices. Previous studies on the effects of the characteristics of the sales price with respect to the square metre surface or age of a real estate property have shown quite varying results. However, their study has provided interesting results, which specifically imply that some variations may be accounted for by varying real estate prices. Particularly interesting is the fact that the characteristics of high-priced apartments are presented to the buyers in a way that is completely different from presentations of the characteristics of low-priced apartments. The findings indicate that the greatest variations pertain to the square metre surface (with high-priced apartments, it is 2.5 times larger than with low-priced ones), size of land lot, number of bathrooms, flooring types... Other things have an approximately constant effect on price (garage, distance from the city...). Although deviations in real estate characteristics were also rated differently with respect to areas, it is good to add the results mentioned above to the research and the explanation of real estate prices.

The research conducted by Wheaton and Nechayev (2008) for 1998 – 2005 includes inflation and real estate prices during that period. To solve this case, by using benchmarking, they took into consideration the rise in demand, population and income growth and the reduction of interest rate. A similar research was also conducted in 2006 by Shiller (2006), who compared the rise of real estate prices to actual interest rates. All these authors have established that the decline of real estate prices is excessive. They say that real estate prices are influenced by the local situation, and changes of income, employment and national interest rates. Therefore, if the market starts to

decline, the injected funds will be too large for the investor, who will have to leave the apartment.

Theoretically and practically alike, the field under consideration is thus very broad – we narrowed it down to just residential real estate properties (apartment buildings, houses and land lots intended for apartment construction). Problematic and interesting is also the variety in investment projects in construction (location, size, schedules...) and there seems to be a lack of literature on the assessed specific field, as well as a lack of practical experience and knowledge in the field of real estate.

For this reason, by using specific descriptive and explicative questions, we attempted to interpret the forecasts as to the percentage of the rise of real estate properties sold in 2009 compared to 2009; is there a positive correlation among higher loan volumes and real estate values, rise of real estate transactions and speed of sales; how do the participants' sex, age, the place of origin, education and work experience impact the opinion on the statement that “purchasing a real estate property offers protection against inflation”; is there a positive correlation between economic growth, including real estate transactions, and ever-increasing discounts for real estate construction; is there a positive correlation among declining interest rates, higher prices and growing real estate transactions; do the type and location of a real estate property influence its value and speed of sale, while certainly being an influence in declining prices of real estate properties on good locations; do the participating women and men believe that the construction quality has an influence on the value and quicker sale of a real estate, and do the sex and education of the survey participants have an influence on the opinion that the growth of the Slovenian Stock Exchange Index has an impact on rising real estate transactions.

The hypotheses implied in the explicative questions, as well as explicitly in declarative sentences, were empirically verified and tested in practice by using statistical software and analyses. By using descriptive statistics, an analytical method without thesis after generalisation beyond the scope of collected data, we demonstrated the frequency distributions (graphical and tabular views) and measures of correlation (Pearson correlation coefficient).

For these and examples, we verified the calculated values and percentages by specific regions (Ljubljana, Maribor, Koper, Nova Gorica, Novo Mesto, Postojna, Slovenj Gradec, Celje, Murska Sobota and Kranj). A hundred and fifty participants from the specific population across Slovenia were included in the non-random sample.

Results

For the forecasts we researched and wanted to confirm, we were assisted by primary data obtained from structured phone interviews and secondary data obtained from SLONEP, GURS and SURS (for the 2007 – 2009 period) and processed with statistical computer software.

The participants' views were measured on the five-degree Likert scale. The forecasts were verified with a correlation analysis and accepted; in case the correlation coefficient was positive and significantly different from zero, the analysis was rejected.

a.1. the participants believe that the following number of offered (advertised) real estate properties was sold in 2007:

Table 1

Percent of offered advertised real estates in year 2007

% of real estate sold	Likert coefficient	Number of participants	%
0-20%	1.00	2	1.33
21-40%	2.00	22	14.67
41-60%	3.00	64	42.67
61-80%	4.00	53	35.33
81-100%	5.00	9	6.00

But most participants, as many as 64, believe that 41-60% of offered (advertised) real estate properties were sold in 2007.

The participants believe that the following number of offered (advertised) real estate properties was sold in 2009:

Table 2

Percent of offered advertised real estates in year 2009

% of real estate sold	Likert coefficient	Number of participants	%
0-20%	1.00	47	31.33
21-40%	2.00	72	48.00
41-60%	3.00	27	18.00
61-80%	4.00	3	2.00
81-100%	5.00	1	0.67

As many as 72 participants believe that 21-40% of offered (advertised) real estate properties were sold in 2009. With the data from SURS in mind, we may say that the value of construction works performed fell in February 2009 by 25 % compared to February 2008 (by 17.4 % on buildings, and by 31.8 % on construction engineering structures). The value of construction works performed increased in February 2009 by 43.6 % compared to the 2005 average (by 51.5 % on buildings, and by 35.1 % on construction engineering structures).

The value of construction works performed fell in December 2008 by 4.1 % compared to December 2007. The value of the works on buildings declined by 7.9 %, and by 0.6 % on engineering structures.

Therefore, the value of construction works between 2007 and 2009 declined by 29.1%, as rightly predicted by the survey participants.

The unseasoned index of the value of construction works performed rose in December 2008 by 33.2 % compared to 2000. The unseasoned value of the works on buildings rose by 55 %, and by 30.6 % on engineering structures.

b.1. the correlation coefficient between variables 1 (loan conditions influencing the real estate value and speed of sale) and 2 (higher loan volumes influencing rising real estate prices) amounts to 0.114 (minor correlation); however, it is not significantly different from zero at significance level 0.05 ($p = 0.164$), which means that the data do not corroborate a correlation between these two variables.

There is no positive correlation among higher loan volumes and real estate values, the rise of real estate transactions and the speed of sales. Namely, the participants almost completely agree that loan conditions are influencing real estate values and speed of sales, but remain undecided over the opinion that higher loan volumes are influencing rising real estate prices.

Table 3

Display influences of credit conditions on value of real estate and speed of sale, and influence comprises loans on rise of prices of real estate. Correlations

		VAR00001	VAR00002
VAR00001	Pearson Correlation	1	.114
	Sig. (2-tailed)	.	.164
	N	150	150
VAR00002	Pearson Correlation	.114	1
	Sig. (2-tailed)	.164	.
	N	150	150

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.114(a)	.013	.006	.80332

a Predictors: (Constant), VAR00002

ANOVA(b)

M		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.265	1	1.265	1.961	.164(a)
	Residual	95.508	148	.645		
	Total	96.773	149			

a Predictors: (Constant), VAR00002

b Dependent Variable: VAR00001

Coefficients(a)

M		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Const.)	3.847	.224		17.184	.000
	VAR00002	.085	.060	.114	1.400	.164

a Dependent Variable: VAR00001

c.1. The question of “whether purchasing a real estate property offers protection against inflation” was responded to by 81 men, accounting for 54 % of all survey participants, and 69 women, accounting for 46 % of all participants. Using the SPSS software, we established that as many as 69 % of the total surveyed men and 72 % of the total surveyed women believe that purchasing a real estate property does offer protection against inflation. We also established that 63.16 % of participants aged 20-30 are of the same opinion, as are 64.58% of participants aged 31-40, 78.05 % participants aged 41-50, 81.82 % participants aged 51-60, as well as 100 % of participants aged 61 and over. The question of how the participants’ level of education influences the above-mentioned question yields interesting results. Specifically, participants with vocational, secondary and post-secondary education

remained neutral, participants with higher professional education, on average, responded negatively, while those with university education and holders of master's and doctor's degrees responded positively.

Participants with work experience of 5 years or below, as well as those with 5-10 years of work experience believe that purchasing a real estate property offers no protection against inflation. Participants with work experience of 10 – 20 years responded negatively on average, while those with over 20 years and over 30 years of work experience, on average, believe that purchasing a real estate property offers no protection against inflation.

Participants from Ljubljana, Maribor and Murska Sobota believe that purchasing a real estate property offers no protection against inflation. Participants from Novo Mesto and Slovenj Gradec remained undecided. However, participants from Celje, Koper, Nova Gorica, Kranj and Postojna believe that purchasing a real estate property does offer protection against inflation.

It seems that the participants' sex, age, place of origin, education and duration of work experience have different impacts on the responses to the question.

d.1. based on the results of correlation analysis of data from across Slovenia, we established that the correlation coefficient between variables 3 (decline of economic growth influencing declining real estate transactions) and 4 (percentage of difference between the (lower) final sale (actual, agreed) price and the advertised real estate price) amounts to 0.048 (minor correlation); however, it is not significantly different from zero at significance level 0.05 ($p = 0.558$), which means that the data do not corroborate a correlation between these two variables. We did the same for specific areas in Slovenia, with similar results.

The opinion of Slovenian citizens is, therefore, that declining economic growth does have an impact on declining real estate transactions, resulting in ever-growing discounts for real estate construction; however, there is no positive correlation between the variables.

e.1. the results of correlation analysis indicate that the correlation coefficient between variables 5 (the lower the interest rates, the higher the real estate transactions) and 6 (the lower the interest rates, the higher the real estate prices) amounts to 0.427** (partial correlation), and is equal to zero at significance level 0.05, which means that the data fully corroborate a correlation between these two variables.

Table 4

Display - decline of economic growth influencing declining real estate transactions and percentage of difference between the (lower) final sale (actual, agreed) price and the advertised real estate price. Correlations

		VAR00003	VAR00004
VAR00003	Pearson Correlation	1	-.048
	Sig. (2-tailed)	.	.558
	N	150	150
VAR00004	Pearson Correlation	-.048	1
	Sig. (2-tailed)	.558	.
	N	150	150

Therefore, a positive correlation does exist among declining interest rates, higher prices and growing real estate transactions. Interestingly enough, however, data by specific regions vary significantly, and some regions do not corroborate this.

Table 5

Display of correlation - the lower the interest rates, the higher the real estate transactions and the lower the interest rates, the higher the real estate prices. Correlations.

		VAR00005	VAR00006
VAR00005	Pearson Correlation	1	.427(**)
	Sig. (2-tailed)	.	.000
	N	150	150
VAR00006	Pearson Correlation	.427(**)	1
	Sig. (2-tailed)	.000	.
	N	150	150

** Correlation is significant at the 0.01 level (2-tailed).

		VAR00005	VAR00006
VAR00005	Pearson Correlation	1	.338
	Sig. (2-tailed)	.	.218
	N	15	15
VAR00006	Pearson Correlation	.338	1
	Sig. (2-tailed)	.218	.
	N	15	15

f.1. the correlation coefficient between variables 7 (does the real estate type and location have a significant influence on the value and sale of the real estate property) and 8 (declining real estate prices have no influence on the prices of real estate properties on good locations) amounts to 0.030 and is not significantly different from zero at significance level 0.05 ($p = 0.717$), which means that the data do not corroborate a correlation between these two variables. The type and location of real estate property influence its value and speed of sale, while having no influence on declining prices of real estate properties on good locations.

Table 6

Display of correlation - does the real estate type and location have a significant influence on the value and sale of real estate property and declining real estate prices have no influence on the prices of real estate properties on good locations. Correlations.

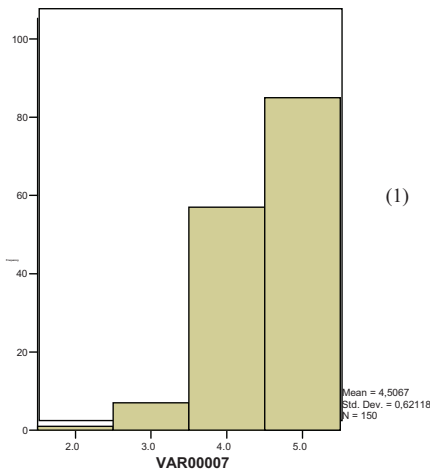
		VAR00007	VAR00008
VAR00007	Pearson Correlation	1	.030
	Sig. (2-tailed)	.	.717
	N	150	150
VAR00008	Pearson Correlation	.030	1
	Sig. (2-tailed)	.717	.
	N	150	150

The participants believe that the type and location of real estate property influence its value and speed of sale, while they also believe that declining real estate prices have no influence on the prices of real estate properties on good locations.

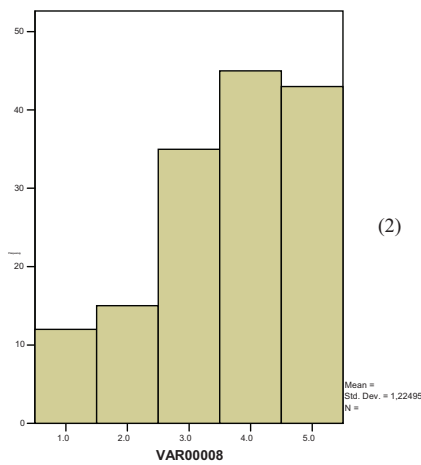
Table 7

Display - construction quality influences the value and quicker sale of real estate property

Likert coefficient	Number of participants	% of participants
1.00	1	0.67 %
2.00	14	9.33 %
3.00	24	16.00 %
4.00	53	35.33 %
5.00	58	38.67 %
	150	100.00 %



(1)



(2)

Figure 4. Graphic display of correlation – does the real estate type and location have a significant influence on the value and sale of real estate property (1) and declining real estate prices have no influence on the prices of real estate properties on good locations (2)

g.1. using statistical software we obtained data indicating that as many as 38.67 % of participants believe that construction quality influences the value and quicker sale of a real estate property. Only 0.67 % of participants disagree.

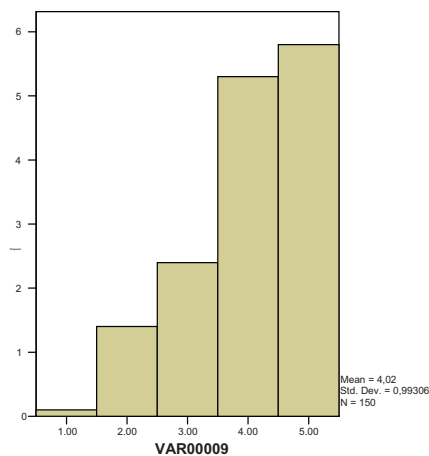


Figure 5. Graphic display - construction quality influences the value and quicker sale of real estate property

Table 8

Display - growth of stock exchange index (SBI) influencing the growth of real estate transactions. Correlations

		VAR00010	VAR00011
VAR00010	Pearson Correlation	1	.039
	Sig. (2-tailed)	.	.632
	N	150	150
VAR00011	Pearson Correlation	.039	1
	Sig. (2-tailed)	.632	.
	N	150	150
		VAR00012	VAR00011
VAR00012	Pearson Correlation	1	-.028
	Sig. (2-tailed)	.	.738
	N	150	150
VAR00011	Pearson Correlation	-.028	1
	Sig. (2-tailed)	.738	.
	N	150	150

Using statistical software we obtained data indicating that as many as 38.67 % of participants believe that growth of stock exchange index (SBI) influences the growth of real estate transactions. Only 0.67 % of participants disagree. Interestingly enough, 2.06 % of participants with university education are not quite as convinced about this as participants with higher professional education.

Table 9

Display - growth of stock exchange index (SBI) influencing the growth of real estate transactions, round degree of education interviewees

Likert coef.	1	2	3	4	5	6	7	Skupaj	Percent.
1.00			1					1	0.67 %
2.00	1	1	1	4	6		1	14	9.33 %
3.00		6	6	6	6			24	16.00 %
4.00		15	6	15	17			53	35.33 %
5.00	2	10	11	16	15	4		58	38.67 %
Total	3	32	25	41	44	4	1	150	100 %

The table suggests that 1.25 % of surveyed men believe that growth of real estate index (SBI) has no influence on rising real estate transactions, while 14.80 % of them believe that growth of real estate index (SBI) does have an influence on rising real estate transactions. Most participants – as many as 35.80 % – remained undecided. 0.00 % of surveyed women believe that growth of real estate index (SBI) has no influence on rising real estate transactions, while 15.95 % of them believe that growth of real estate index (SBI) does have an influence on rising real estate transactions. Most participants – as many as 36.23 % – remained undecided.

Table 10

Display - growth of stock exchange index (SBI) influencing the growth of real estate transactions, round sex of interviewees

Likert coefficient	1.00	%	2.00	%	Total
1.00	1	1.25	0	0.00	0.63
2.00	13	16.05	10	14.49	15.26
3.00	29	35.80	25	36.23	36.02
4.00	26	32.10	23	33.33	32.72
5.00	12	14.80	11	15.95	15.37
Total	81	100	69	100	100

Discussions

Empirical research on the influence of various factors and indicators on Slovenia's real estate market is very scarce. Changes on the real estate market result in varying investor expectations, as well as requirements regarding changes to the structure, quality, location and price of real estate property.

In accordance with the set hypotheses, verified by using data obtained through a structured questionnaire and correlation coefficients, we established that the influence of various factors has a varying percentage of impact on real estate prices. By means of the processed hypotheses, we identified just a few of the ways of thinking.

The results have shown that sales of offered (advertised) real estate properties declined in the 2007 – 2009 period. Due to falling real estate sales, real estate prices declined simultaneously. Based on already conducted research, we may say that declining prices are influenced by various factors.

One of these factors is the volume of loans, which, as suggested by the research, has an impact on real estate values and speed of sales. It was also established that declining economic growth does have an impact on declining real estate transactions, resulting in ever-growing discounts.

It is true, though, that purchasing a real estate property represents a better financial investment in the long term than any other investment, thus also offering protection against inflation. A real estate property maintains, or gains, value.

Interest rates also play an important role. Declining interest rates and growing inflation have an influence on rising real estate transactions, and vice versa. We identified a positive correlation among declining interest rates, higher prices and growing real estate transactions. One of the factors influencing the value and quicker sales of real estate properties is the construction quality. Schedules and time of sale also have a great impact on the speed of sale of a real estate property. The longer a real estate property is on sale, the higher the percentage of the discount offered.

As already established by Zietz *et al.*, (2008) in their study, the location is a very influential factor in terms of real estate prices and speed of sales.

The more interesting results obtained through the research are the following:

- real estate properties on good location have no influence on declining real estate prices, and
- the participants remained undecided whether the stock market index (SBI) factor has any influence on real estate transactions or not.

Conclusions

With the research we find out:

- the scope of works from 2007 to 2009 declined by 29.1 %;
- the participants almost completely agree that loan conditions are influencing real estate values and speed of sales;
- the participants' sex, age, place of origin, education and duration of work experience have different impacts on the responses to the question “whether purchasing a real estate property offers protection against inflation”;
- the opinion of Slovenian citizens is, that declining economic growth does have an impact on declining real estate transactions, resulting in ever-growing discounts for real estate construction; however, there is no positive correlation between the variables;
- there exists a positive correlation among declining interest rates, higher prices and growing real estate transactions;
- the participants believe that the type and location of real estate property influence its value and speed of sale, while they also believe that declining real estate prices have no influence on the prices of real estate properties on good locations;
- using statistical software we obtained the data indicating that most of participants believe that construction quality influences the value and quicker sale of real estate property;

- 1.25 % of surveyed men believe that growth of real estate index (SBI) has no influence on rising real estate transactions, while 14.80 % of them believe that growth of real estate index (SBI) does have an influence on rising real estate transactions. Most participants – as many as 35.80 % – remained undecided. 0.00 % of surveyed women believe that growth of real estate index (SBI) has no influence on rising real estate transactions, while 15.95 % of them believe that growth of real estate index (SBI) does have an influence on rising real estate transactions. Most participants – as many as 36.23 % – remained undecided.

System planning and assessment of factors influencing the determination of their importance in influencing the price of real estate is increasingly requested theme by investors, construction companies, economists and politicians.

In order the system will be established, it will be necessary to examine many different methodologies, and then to select the most suitable. Also it will be necessary to make further research, which will be similar to this. With the research it will be necessary to determine the importance and interdependence of individual, perhaps not so far dealt with the factors, influencing changes in property prices. In order not to repeat the financial crisis,

all influential factors necessary to be monitored and their volatility determined.

Researching and recording of influential factors will be the one which will have greatly impact on the Slovenian economy and the consequent movement of the real estate market.

The system for identification and treatment of influential factors developed to allow recovery of real estate market with minor fluctuations in property prices.

With the establishment of influential factors it will be certainly needed to learn how to work effectively and otherwise forget about taking the principles and techniques that are now considered to be examples of good practice.

Some interesting, even unexpected results were revealed by the present study.

No one can predict when the crisis will come to an end – what remains is to determine and contemplate how to eliminate it as soon as possible. In view of the fact that Slovenia is a small country which models its anti-crisis measures after the US and Germany, Slovenians faced a million-dollar question of how to solve this.

It is encouraging, though, to see that construction is one of the first activities embarking on a positive cycle.

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Veiksnj, daranj itak nekilnojamojo turto rinkai, analiz: Slovėnijos pavyzdys

Santrauka

Nekilnojamojo turto rinka yra labai svarbi kiekvienai šaliai, nes ji garantuoja reikalingų ir būtinų gyvenimui ir darbui struktūrų ir institucijų veiklą, taip pat ji daro stiprią, daugkartinę įtaką visos šalies ekonomikos plėtrai. Nekilnojamojo turto rinkos kryptys yra stiprus rodiklis visos šalies ekonomikoje.

Apie statybų sektoriaus klestėjimą mes kalbame tik metus ar dvejus. Daugelis ekspertų numatė, kad statybų klestėjimo laikotarpis išsilauks penkerius ar septynerius metus. Vėliau buvo tikimasi, kad nekilnojamojo turto rinka stabilizuosis. Tačiau niekas nesitikėjo ir nenumatė, kad daugelį pasaulio šalių užgrius intensyvi finansinė krizė.

Per pastaruosius metus nekilnojamojo turto rinkos kryptys pastebimai pasikeitė. Dar prieš dvejus metus pagrindinė nekilnojamojo turto rinkos savybė buvo ta, kad paklausa viršijo pasiūlą: buvo parduodami visi butai, o nemažai norinčių juos įsigyti negalėjo, nes nuolat jų trūko. Tai lėmė nekilnojamojo turto kainų didėjimą, kuris laikėsi du dešimtmečius. Situacija pasikeitė per pastaruosius trejus metus: pasiūla viršija paklausą, sudaroma gerokai mažiau sandorių, pirkėjai tapo reiklesni. Šie dalykai sąlygojo butų kainų kritimą.

Problemoms, kurias mes norime iširti, praityje buvo mažai skiriama dėmesio. Anksčiau atliktais tyrimais pasinaudoti galima tik iš dalies, nes nė vienas iš jų nebuvo iki galo išbaigtas ir jų nebuvo galima taikyti visoje Slovėnijos teritorijoje. Šiame tyrime, pasinaudodami iš dalies anksčiau gautais duomenimis, bus siekiama iširti ir parodyti veiksnus, kurie daro įtaką Slovėnijos nekilnojamojo turto rinkai, tam tikslui pasinaudodami praktišku pavyzdžiu.

Remdamiesi teorinėmis žiniomis, turima literatūra, konsultacijomis ir esamais duomenimis, gautais atlikus struktūrizuotą apklausą, pabandėme nustatyti apskaičiuotų parametru panaudojimą. Jie yra susiję su grafikai, buvimu vietomis, nekilnojamojo turto verte, skelbiamomis ir tikromis nekilnojamojo turto kainomis, nuolaidomis, paskolomis, pelno normomis, nekilnojamojo turto nuosavybės tipu, su atlikimo kokybe, pardavimų trukme ir t.t.

Išanalizavus struktūrizuotos apklausos anketos gautus atsakymus, kilo keletas klausimų. Vienas iš jų: kas lemia pradinius, nekilnojamojo turto pasirinkimo veiksnus ir kaip pasiekti, kad būtų pasirinktas geriausias variantas. Siekiant juos nustatyti, pirmiausia buvo tikrinami pagrindiniai veiksniai. Tyrimo metu panaudota dalis informacijos, gautos iš ankstesnių tyrimų. Ji susieta su dabartine situacija. Nustatant tikslus ir strategijas, buvo sudarytas sistemos veiksniais nustatyti planas ir tikrinamas pasirinktų rodiklių kintamumas.

Į tyrimą taip pat buvo įtraukti investuotojai, nekilnojamojo turto savininkai, nuomotojai, nekilnojamojo turto vartotojai, administratoriai, vadovai, nuomininkai, nekilnojamojo turto agentūros ir kompanijos, projektavimo ir statybos kompanijos, taip pat ir asmenys, turintys Slovėnijoje skirtingos trukmės darbo patirtį ir išsilavinimo lygį.

Tolesniame tyrime buvo siekiama išsiaiškinti ir parodyti veiksnus, kurie labiausiai veikia nekilnojamojo turto kainas Slovėnijos rinkoje ir kurie turi didžiausią įtaką kainų kilimui ir kritimui.

Apskaičiuotų parametru reikšmė ir panaudojimas nekilnojamojo turto rinkai yra svarbūs, nes pasinaudodamos rezultatais statybos kompanijos galėtų našiai dirbti. Dabartiniu metu didėja susidomėjimas apskaičiuotų parametru priežasčių modifikavimu ir nustatymu. Duomenys apie nekilnojamojo turto rinkos sąlygas yra ypač svarbūs našiam ir sėkmingam organizacijos darbui. Nekilnojamojo turto rinkos analizė ir statybų kompanijų veikla atskleidžia dalykus, kuriuos reiktų peržiūrėti ir keisti.

Tyrimo tikslas yra apibrėžti veiksnus, į kuriuos reikia atsižvelgti atliekant analitinę nekilnojamojo turto kainų svyravimo kryptų prognozę. Nagrinėjama sritis yra labai plati, todėl šiame tyrime buvo apsiribojama tik gyvenamojo nekilnojamojo turto tyrimu (daugiabučių namų, namų ir žemės sklypų namų statyba). Taip pat problemiška ir įdomi yra investavimo į statybos projektus įvairovė (vieta, dydis, planai ir kt.). Tačiau šia tema trūksta mokslinės literatūros, taip pat pasigendama išsamių teorinių dalykų, susijusių su praktine patirtimi ir žiniomis apie nekilnojamojo turto trūkumus.

Tai lėmė, kad panaudodami konkrečius ir aiškinamuosius klausimus, mes pabandėme suprasti 2007 metais parduoto nekilnojamojo turto kilimo procentinės išraiškos prognozes lyginant su 2009; siekėme išsiaiškinti ar egzistuoja teigiama koreliacija tarp didesnių paskolų apimčių ir nekilnojamojo turto vertės, nekilnojamojo turto sandorių daugėjimo ir greitų pardavimų. Buvo siekiama išsiaiškinti kaip dalyvių lytis, amžius, kilmė, išsilavinimas ir darbo patirtis sąlygoja požiūrį į teiginį, kad „nekilnojamojo turto pirkimas siūlo apsaugą nuo infliacijos“; ar egzistuoja teigiama koreliacija tarp ekonominio augimo (įskaitant nekilnojamojo turto sandorius ir vis didesnes nuolaidas nekilnojamojo turto statybos sektoriuje); ar egzistuoja teigiama koreliacija tarp mažėjančių pelno normų, aukštesnių kainų ir daugėjančių nekilnojamojo turto sandorių; ar nekilnojamojo turto tipas ir vieta daro įtaką jo vertei ir pardavimo greičiui „ar vyrai ir moterys tiki, kad statybos kokybė daro įtaką nekilnojamojo turto vertei ir greitesniam pardavimui, ir ar tirtų dalyvių lytis ir išsilavinimas daro įtaką nuomonei, kad Slovėnijos fondų biržos indeksas daro įtaką nekilnojamojo turto sandorių daugėjimui.

Aiškinamuosiuose klausimuose ir aiškiai suformuluotuose atsakymų sakiniuose numanomos hipotezės buvo empiriškai patikrintos ir praktikoje, panaudojant statistinę programinę įrangą ir analizę. Naudojant aprašomąją statistiką, analitinį metodą, po apibendrinimo nepateikiant teiginių greta sukauptų duomenų, mes pademonstravome paskirstymų dažnumą (grafikai ar panaudodami lenteles) ir koreliacijos priemones (Pearson-o koreliacijos koeficientas).

Mes patikrinome teiginiais ir pavyzdžiams apskaičiuotas konkrečių regionų vertes ir procentinę išraišką (Ljubljana, Maribor, Koper, Nova Gorica, Novo Mesto, Postojna, Slovenj Gradec, Celje, Murska Sobota ir Kranj). Tyrimo dalyvavo šimtas penkiasdešimt dalyvių iš visos Slovėnijos.

Remiantis nustatytais hipotezėmis, patikrintomis panaudojant duomenis, surinktus panaudojant struktūrizuotas anketas ir koreliacijos koeficientus, mes nustatėme, kad įvairių veiksnių įtaka daro skirtingos procentinės išraiškos įtaką nekilnojamojo turto kainoms. Panaudodami apdorotas hipotezes, mes nustatėme tik kelis pasirinkimo būdus.

Anksčiau pateikti rezultatai parodė, kad 2007 – 2009 metų laikotarpiu siūlomo (reklamuojamo) nekilnojamojo turto kainos smuko dėl nekilnojamojo turto pardavimų kritimo. Remdamiesi jau atliktu tyrimu, galime teigti, kad mažėjančioms kainoms įtaką darė įvairūs veiksniai.

Vienas iš jų yra paskolų apimtis, kuri, kaip manoma tyrime, daro įtaką nekilnojamojo turto vertei ir pardavimų greičiui. Taip pat buvo nustatyta, kad ekonomikos augimo mažėjimas daro įtaką nekilnojamojo turto sandoriams: jų taip pat mažėja, o tai sudaro prielaidas kuo didesnėms nuolaidoms atsirasti

Tačiau žinoma, kad nekilnojamas turtas tai viena iš geriausių ilgalaikių finansinių investicijų, lyginant su kitomis investicijomis. Nekilnojamojo turto įsigijimas - tai kartu ir tam tikra apsauga nuo infliacijos, nes nekilnojamas turtas išlaiko arba vėliau įgauna dar didesnę vertę.

Pelno norma taip pat yra svarbi. Mažėjanti pelno norma ir auganti infliacija daro įtaką nekilnojamojo turto sandorių daugėjimui ir atvirkščiai. Mes nustatėme teigiamą koreliaciją tarp mažėjančių pelno normų, aukštesnių kainų ir nekilnojamojo turto sandorių daugėjimo. Vienas iš veiksnių, darančių įtaką nekilnojamojo turto vertei ir greitesniam pardavimui, yra statybų kokybė. Pardavimo grafikai ir laikas taip pat daro didelę įtaką nekilnojamojo turto pardavimo greičiui. Kuo ilgiau nekilnojamas turtas parduodamas, tuo didesnė siūloma nuolaida.

Kaip savo darbe jau nustatė Zietz, J. ir Zietz, E.N. ir Sirmans, G.S. (2008), vieta, kuriame yra nekilnojamas turtas yra labai svarbus veiksnys kalbant apie nekilnojamojo turto kainų ir pardavimo greitumą.

Be prieš tai turinčių įtaką nekilnojamajam turtui veiksnių yra paminėtini šie įdomesni rezultatai:

- geroje vietoje esantis nekilnojamas turtas nedaro įtakos nekilnojamojo turto kainų smukimui,
- dalyviai liko neapsisprendę, ar fondų biržos indekso veiksnys darė kokią nors įtaką nekilnojamojo turto sandoriams, ar ne.

Nepaisant visko, ilgam laikotarpiui nekilnojamas turtas yra saugi ir patikima investicija. Naujo nekilnojamojo turto statyba ir toliau bus plėtojama.

Labiausiai nekilnojamojo turto rinką lemiančių veiksnių nustatymo ir jų kintamumo kontroliavimo sistemos planavimas daro didelę įtaką Slovėnijos nekilnojamojo turto rinkos plėtrai.

Krizės laikotarpiu išliks tik stiprios, profesionalios statybų organizacijos, išmanančios įvairiausių dalykus, susijusių su statybomis. Neabejotinai rinka greitai susinormalizuos. Svarbūs bus darbų atlikimo laikas, kokybė ir įvertinimas. Investuotojai bus daug atsargesni ir reiklesni.

GURS analitikų prognozės, kurias galima rasti SLOnep portale (2010) numato, kad šiuo metu nekilnojamojo turto rinka atsigaus. Tačiau, tai vis dar nereiškia, kad nekilnojamojo turto krizė baigėsi. Reikia tikėtis lėto ir ilgo atsigavimo, kai kainos daugiau ar mažiau svyruoja pagal ekonominės krizės išplitimą. Tačiau, krizė vis dar gali pagilėti bet kuriuo metu. Panašiai galima laukti ir svarbių skirtumų specifinėse rinkose ir sluoksniuose kokybės ir mikrolokacijos požiūriu, bei mažiau amžiaus požiūriu.

Investavimo projekto plėtotė ir apskaita daro labai didelę įtaką Slovėnijos ekonomikai, kartu ir nekilnojamojo turto rinkos tendencijoms.

Niekas negali numatyti kada baigsis krizė – lieka tik nustatyti ir sugalvoti, kaip kiek įmanoma greičiau ją pašalinti. Atsižvelgiant į faktą, kad Slovėnija yra maža šalis, kuri modeliuoja savo antikrizines priemones po JAV ir Vokietijos, slovėnai susidūrė su milijono dolerių vertu klausimu kaip tai išspręsti. Tačiau neabejotinai galima teigti, kad statybos sektoriaus veikla yra viena iš pirmųjų veiklų, pradedančių teigiamą ciklą.

Mes turime išmokti imtis kitokios veiklos kiek įmanoma sėkmingiau, kol užmiršime principus ir metodus, kurie iki šiol tarnavo kaip pradiniai veiklos taškai.

Tai - būsimų tyrimų tema.

Raktažodžiai: *nekilnojamojo turto rinka, statyba, nekilnojamojo turto kainos, rinkos veiksniai, pelno norma.*

The article has been reviewed.

Received in September, 2011; accepted in October, 2012.