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Drobne, S., Grilj, T., Lisec, A. 2009. Real estate market activity in Slovenia in 2000-2006. Geodetski vestnik, 53, 3: 561-579.

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REAL ESTATE MARKET ACTIVITY IN SLOVENIA IN 2000-2006

DEJAVNOST TRGA NEPREMIČNIN V SLOVENIJI V OBDOBJU 2000–2006

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UDK: 332.7(497.4)“2000/2006”

Klasifikacija prispevka po COBISS-u: 1.01

ABSTRACT

This paper examines a particular aspect of Slovenian real estate market that is still developing – real estate market activity. Only two decades ago, Slovenia still had a socialist, planned economy, so there is a lack of tradition in the fields of both the real estate market and analysis of that market. The former only started to develop with the transition to the market-oriented economy in the beginning of the 1990s. Significant progress was observed in the second half of the 1990s, due to the favourable economic development of the country. In our research, we focused on the real estate market development in the 2000-2006 period, which was marked by major changes in legislation and other institutional backgrounds, directly or indirectly referring to the field of real estate and real property. The development of the real estate market in Slovenia was examined for a given period on the basis of the available market data, which have been acquired from the Tax Administration of the Republic of Slovenia; the real estate market activity development is analysed by statistical regions and types of real estate. The results show general developments in the Slovenian real estate market for the given period and, in particular, the influence of institutional and legal factors on real estate market activity.

KEY WORDS

real estate, land, real-estate market, real-estate statistics, statistical region, Slovenia

POVZETEK

Prispevek obravnava poseben vidik razvijajočega se trga nepremičnin v Sloveniji, to je dejavnost trga nepremičnin. Slovenija nima tradicije na področju trga nepremičnin in njegovih analiz, saj je še pred dvema desetletjema imela socialistično ureditev in plansko gospodarstvo. Trg nepremičnin se je v Sloveniji začel razvijati s tranzicijo v tržno usmerjeno gospodarstvo v začetku devetdesetih let prejšnjega stoletja. Velik napredek je bilo zaznati v drugi polovici devetdesetih, ko je bil tudi opazen splošen gospodarski razvoj države. V raziskavi smo se osredotočili na analizo trga nepremičnin v obdobju 2000–2006, zaznamovanem z večjimi spremembami zakonodaje in drugih institucionalnih okvirov, ki neposredno ali posredno urejajo področje nepremičnin in pravic na nepremičninah. Na podlagi razpoložljivih tržnih podatkov, ki smo jih pridobili na Davčni upravi RS, smo proučevali razvoj trga nepremičnin v Sloveniji v obravnavanem obdobju, pri čemer smo analizirali predvsem dejavnost oziroma razvoj trga nepremičnin po statističnih regijah in vrsti nepremičnine. Rezultati kažejo splošen razvoj trga nepremičnin v Sloveniji v obdobju 2000–2006, ko so na njegovo delovanje pomembno vplivali institucionalni oziroma pravni dejavniki.

KLJUČNE BESEDE

nepremičnina, zemljišče, trg nepremičnin, statistika nepremičnin, statistična regija, Slovenija

1 INTRODUCTION

It is widely recognised that real estate markets play an important role in the competitive position of mature economies. An efficient real estate market requires a clear definition and sound administration of property rights, minimum set of restrictions on property usage consistent with the common good, simple and inexpensive transfer of property rights, market transparency in all matters and availability of capital and credit (ACE, 1999). For this reason, various studies have analyzed regulatory, administrative and legal constraints in real estate markets. Furthermore, real estate transactions and cadastre procedures have recently attracted much attention (see Šumrada, 2006; Zevenbergen et al., 2007; Lisec et al., 2007, 2008). Monitoring and analyzing real estate markets have become very important issues in every market economy in order to support transparency, institutional effectiveness and consequently efficiency of real property market. Furthermore, real estate market analyses provide guidance for many decision makers – both in private and public sector – involved in the real estate management and development (Schmitz and Brett, 2004).

As typical for the countries of Central and Eastern Europe, Slovenia has no tradition in real estate market and consequently in real estate market analyses due to former planned economy. In the early 1990s, Slovenia experienced a profound change in the political and socio-economic ideology. That period, known also as transition period, is often referred to as the time of economic transition where the earlier command style economy was progressively transformed into market economy. In real property matters this period was characterized by the re-establishment of the legal basis for private property and the enactment of certain acts to support restitution of property and compensation (denationalization). Due to relatively late liberalization of the market and for other socio-economic reasons, the real estate market in Slovenia was noticeably less active in the first decade of the market economy than in other post-socialist Central and Eastern European countries (see ACE, 1999). The situation changed in the period that followed, when Slovenia decided for the integration into international communities, including the European Union (EU). One of the key requirements of EU for accession of all Central European countries (CEC), including Slovenia, was the establishment of free market economies. This required a whole range of new or changed laws, regulations and institutions. Central to this objective was the privatisation of lands (private property rights) and the establishment of efficient real property markets. For these reasons, EU and many other countries and international organisations have committed significant resources to support land administration, and particularly cadastral projects, in Central Europe since 1992 (Bogaerts et al., 2002). In Slovenia, legal matters have been accompanied by the institutional change, modernization of technical infrastructure, and introduction of financing mechanisms and property valuation connected to market value. In the past decade, several legal changes have characterized the Slovenian real estate market, including new legislation related to the fields of spatial planning, construction, real estate and property evidencing, etc.

As already highlighted by Adair et al. (2005), a key issue in the development of land markets and real estate markets is the availability of timely and accurate market data and the ability to

interpret these data in an appropriate way. From this perspective, the Real Estate Registration Modernization Project has to be mentioned, coordinated by the Surveying and Mapping Authority of the Republic of Slovenia (SMA), which formally concluded in 2005. The project aimed at increasing the efficiency and effectiveness of real estate administration systems in Slovenia by improving the registration system, upgrading the legal framework for real estate transactions, establishing an agricultural land use monitoring system to meet the European Union (EU) accession requirements, and designing and testing a market-based property valuation and tax system (World Bank, 2005). There are still some unsolved issues like data quality and real estate property tax implementation. However, the Slovenian real estate market has undergone a dramatic transformation towards increased transparency in the past decade. In the 1990s there were hardly any high quality real estate market reports, practically no real estate transaction databases and no potential to measure performance. Academic institutions, research organizations, statistical office, brokers, consultants, banks and the emergence of the Internet have all contributed to the improvement of the market transparency in the course of the last few years. Based on the Real Property Mass-Appraisal Act (2006), the Mass Real Estate Valuation Office at the SMA was established, responsible also for the provision of public access to real estate market data (Real Estate Market Record). Since 2007, the SMA has been monitoring the real estate market and publishing quarterly and annual reports on the Slovenian real estate market. As stated by the SMA, Slovenia is characterized by an uneven socio-economic development of different parts of the country, which is also reflected in the real estate market. Consequently, there are big differences between regional markets and even in local markets within them. While in urban area the real estate market is already developed, the market activity is still low in certain areas. In addition, the activity and development of real estate market has been different between groups (types) of real estates (The 2007 Slovenian real estate market report, 2008; The 2008 Slovenian real estate market report, 2009). In general, the Slovenian real estate market was characterized by steady development and the increase in the number of real estate transactions in the period 2005-2007, while 2008 was marked by a drastic decline in the number of real estate transactions, as was the trend worldwide due to the world financial and economic crisis.

Less is known about the development of the Slovenian real estate market in the first years of the new millennium, which was profoundly denoted by dynamic legal framework of property transactions and favourable economic progress. Additionally, this period was characterized by Slovenia's entry into the European Union in 2004. The objective of our research was to analyse how these phenomena have affected real estate market in Slovenia. For this purpose, the activity of real estate market was studied for the period 2000-2006. The activity of the real estate market is discussed in connection to the socio-economic conditions, Slovenia's accession to EU and profound changes in the legal framework of property transactions in the study period.

2 METHODOLOGY AND MATERIALS

2.1 Real estate market data

The analysis of the real estate market activity is based on transaction data acquired from the Tax

Authority of the Republic of Slovenia, which is the most complete source of the Slovenian real estate market data for the study period (2000-2006). Based on the Tax Procedure Act (1996), the Tax Authority of the Republic of Slovenia has been responsible for the maintenance of the evidence on real estate transactions for the purpose of taxation on real estate transfer since 1999. The attributes of the evidence are structured for the real estate transfer taxes assessment and control. In the database, all real estate transactions should be evidenced, except the transactions which are not subject to the real estate transfer tax, such as new buildings that are subject to the Value Added Tax (VAT). For the collection and maintenance of real estate transactions data the local branches of the Tax Authority are responsible, collecting data based on the obligatory declaration form for tax assessment on real estate transfer. The payment of the real estate transfer tax is precondition for the registration of a new owner of the real property that assures the legal security of the property right's holder (see Lisec et al., 2007). Despite some missing data (attributes) for some records, this database had been the most appropriate evidence about real estate transactions in Slovenia until 2007. In 2007, a new database on real estate transactions was established at the Surveying and Mapping Authority of the Republic of Slovenia, as already mentioned. However, the Tax Authority still maintains data on real estate transactions for the purpose of real property transfer tax assessment, but the declaration form for the real property transfer tax assessment changed slightly in 2007¹.

The database on real estate transactions at the Tax Authority distinguishes two main groups of real estates (DURS, 2008): (a) land and (b) buildings. Under the land the following subtypes of real estates are given (a1) building land (which can be utility-equipped building land, utility-unequipped building land, and functional land), and (a2) agricultural (including forest) land. Buildings refer to the following subtypes of real estates: (b1) commercial real estates, (b2) apartments, (b3) family houses, (b4) garages, (b5) cottages, (b6) buildings with land and (b7) others.

For the purpose of our analysis, transaction records were acquired from the real estate transaction database at the Tax Authority, with total of 283,829 transaction records for the period 2000-2006. There were 1158 inappropriate records for real estate market activity analysis (incomplete records or evidently incorrect records). For this reason, 282,671 data records were taken into consideration for further research. Such an extensive database requires advanced use of IT and mathematical methods². Beside the comprehensive transaction data, the real estate market activity analysis was based on selected socio-economic data, mainly acquired from the Statistical office of the Republic of Slovenia (SURS, 2009), and on formal spatial data on administrative units, acquired from the Surveying and Mapping Authority of the Republic of Slovenia (GURS, 2008).

¹ Decree on the form for the declaration of tax assessment on real estate transfer was announced in 1999 in the Official Gazette of the Republic of Slovenia (15th April, 1999, No. 26). With the new Tax Procedure Act (2006), new declaration form came into force on 1st January 2007 with some new attributes.

² Klemenc (2005) analysed the real estate transaction database from the Tax Authority having used data mining methods. Based on approximately 100,000 data records for the period 1999-2002, he tried to identify some rules and correlations between transaction price of the real estate and attributes of the real estate.

2.2 Spatial unit of the analysis

Spatial unit of the real estate market activity analysis is the area, which presents the Slovenian local administrative unit (municipality).³ Nowadays (in 2009), the country is represented by 210 municipalities, but for our study, 192 municipalities have been considered, since this was the situation in the beginning of the study period in 2000. In 2002, there were some changes in local administrative units (municipalities); with the Act Amending the Establishment of Municipalities and Municipal Boundaries Act (2002), new municipalities were established and/or renamed. With the aim of providing comparable annual data on real estate market activity in the municipalities and statistical regions, the analysis of Slovenian real estate market activity in 2000-2006 was done for the state of the municipalities in 2000. Contrary to our approach, the annual real estate market activity in Slovenia would not be comparable at the level of municipalities.

For better overview of the real estate market development in Slovenia, the real estate market activity was additionally studied at the level of 12 statistical regions, which equal the NUTS 3 level according to the Nomenclature of Territorial Units for Statistics at the Statistical Office of the European Communities - Eurostat. The spatial determination of real estate transactions by the municipality in the database at the Tax Authority was therefore adequate for the purpose of our study.

2.3 Study period

The analysis of the real estate market activity in Slovenia was implemented for the period 2000-2006. This period was marked by the increase in the number of real estate transactions. Development of the Slovenian real estate market in the study period coincided with the favourable economic development, production growth, falling unemployment, relatively low inflation rate, and growth of living standard as the consequence. However, there were a number of changes in legislation referring to the real estate market, which might have had a significant influence on the real estate market activity. In addition, the accession to the European Union in 2004 brought a dose of uncertainty on one hand and a lot of expectations on the other hand to the Slovenian real estate market. The real estate market was further influenced by the progress of highway construction and of other important infrastructure, which contributed to the improved accessibility to the bigger supplying centres (see Liseč and Drobne, 2007; Drobne et al., 2008; Liseč et al., 2008). In our study, we tried to evaluate the impact of the above mentioned factors on the real estate market activity. In particular, we exposed the correlation between economic growth (gross domestic production) and real estate market activity, the influence of the Slovenia's accession to the European Union on real estate market activity, and the reflection of changed legal framework directly or indirectly influencing the real estate market.

The year 2000 was chosen as the first year of our study period, mainly due to limited data on real estate transactions before 2000. The database on real estate transactions at the Tax Authority was

³ Municipality (on the higher level statistical region) as spatial unit of the real estate market analysis is important from the aspect of providing opportunity to link market data to other statistical data.

established in 1999, but there were several incorrect and missing data records for the year 1999. The limitation of our study period up to 2006 was done due to several reasons. Establishment of the Real Estate Data Records at the Surveying and Mapping Authority of the Republic of Slovenia in 2007 was an important step towards transparency of the real estate market and represents a systemic source of real estate market data in Slovenia (beside the data from the Tax Authority, also notaries, real estate agents, administrative units and municipalities are legally obliged to submit data on completed real estate transactions to the SMA). Furthermore, in 2007 Slovenia introduced new currency (Euro), which brought a new dimension in the economic environment. Last but not least, the reason was also that in 2006 new municipalities were introduced, which makes it difficult to compare the annual real estate market activity at the level of municipalities.

3 RESULTS AND DISCUSSION

3.1 Slovenian real estate market in 2000-2006

Trusting data on real estate transactions acquired from the Tax Authority, there were 283,829 real estate transactions in Slovenia in the period 2000-2006. Due to incompleteness of data records on real estate transactions, there were 282,671 data records (transactions) included into further analysis of real estate market activity. In Table 1 and Figure 1 the number of transactions for each type of the real estate as structured in the database at the Tax Authority is presented, for each year in the period 2000-2006.

Type of real estate	Total	Year						
		2000	2001	2002	2003	2004	2005	2006
Total	282,671	28,107	28,586	30,357	33,357	50,105	52,593	59,566
utility-equipped building land	15,990	3571	1616	1317	1177	2652	2857	2800
utility-unequipped building land	37,864	3464	3262	3427	3336	6578	7507	10,290
functional land	15,769	1176	1150	1447	1053	3492	3912	3539
agricultural land	73,610	5861	5936	6026	9133	13,402	14,812	18,440
commercial real estates	17,868	2202	2448	2520	2493	2967	2719	2519
apartments	73,819	7287	8579	9879	9838	12,736	12,517	12,983
family houses	22,680	2264	2723	2813	3206	3958	3683	4033
garages	8917	947	1204	1103	1253	1528	1456	1426
cottages	2559	247	280	279	342	495	467	449
buildings with land	9684	734	849	1105	1098	1556	2024	2318
others	3911	354	539	441	428	741	639	769

Table 1: Annual activity (number of transactions per year) of the real estate market by the type of real estate (classification according to the data from the Tax Authority) in Slovenia for the period 2000-2006.

From Table 1 and Figure 1 constantly increasing activity of the real estate market can be noticed (increasing number of transactions) in Slovenia in the study period. According to the analysed data, the total annual number of real estate transactions was multiplied by 2.12 in the analysed six years. The main progress in the real estate market activity was in the market of buildings with land (the number of transactions in 2000 was multiplied by 3.16 in 2006) and agricultural land (the number of transactions in 2000 was multiplied by 3.15 in 2006), while the least change was

detected in the utility-equipped building land market. In the period 2000-2006, the core of the real estate market activity was represented by the market of apartments (26.1 %) and agricultural land market (26.0 %). According to the number of real estate transactions in 2000-2006, the markets of apartments and agricultural land were followed by the markets of utility-unequipped building land (13.4 %), family houses (8.0 %), commercial real estates (6.3 %), utility-equipped building land (5.7 %), functional land (5.6 %), building with land (3.4 %), other types of real estate (1.4 %) and cottages (0.9 %). From Figure 1, an outstanding increase in the real estate market activity (number of real estate transactions) can be further noticed in 2004. The reason for this jump in the number of real estate transactions is discussed below (see 4.4), where the influence of legislation (change of legislation) on the real estate market activity is analysed.

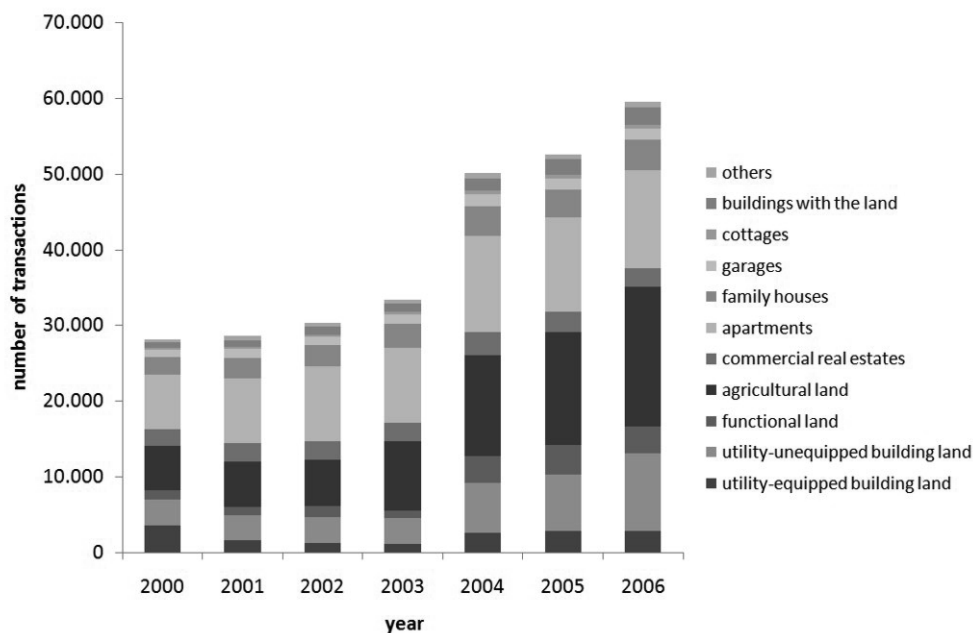


Figure 1: Annual activity (number of transactions per year) of the real estate market by the type of real estate (classification according to data from the Tax Authority) in Slovenia for the period 2000-2006.

A detailed analysis of the time line of real estate market activity by the type of real estate, classified according to the data from the Tax Authority, showed that from 2000 to 2006 the major progress in the number of transactions was in the real estate market of agricultural land. Focusing on the progress of the market activity, the agricultural land market was followed by the market of utility-unequipped building land, functional land and utility-equipped building land. Based on further analysis of the real estate market development for the construction objects, major progress is obvious in the activity of apartments market, which is followed by family houses market, and then in succession the markets of buildings with land, garages, commercial real estates, cottages, and finally all other real estates.

An overview of the real estate market activity in the municipalities for the study period further

showed that outstanding municipalities in the number of real estate transactions were in particular the municipalities with important municipalities' centres such as Ljubljana (36,318 transactions or 12.8 % of all transactions in Slovenia) and Maribor (19,973 transactions or 7.0 %). Municipalities with two larger Slovenian urban centres Ljubljana and Maribor are followed by the municipalities of Koper (10,085 transactions or 3.6 %), Novo mesto (7285 transactions or 2.6 %), Celje (6285 transactions or 2.2 %), Kranj (5250 transactions or 1.8 %), Nova Gorica (4480 transactions or 1.6 %), Domžale (4424 transactions or 1.6 %), Lendava (4356 transactions or 1.5 %), Slovenska Bistrica (4337 transactions or 1.5 %), Jesenice (4260 transactions or 1.5 %), Piran (3980 transactions or 1.4 %), Krško (3705 transactions or 1.3 %), Trebnje (3266 transactions or 1.2 %), Ajdovščina (3235 transactions or 1.1 %), Brežice (3233 transactions or 1.1 %), Radovljica (3081 transactions or 1.1 %), Ormož (3070 transactions or 1.1 %), Velenje (3014 transactions or 1.1 %), Litija (2871 transactions or 1.0 %), Ptuj (2797 transactions or 1.0 %), Murska Sobota (2738 transactions or 1.0 %). The share of real estate transactions in the rest of the Slovenian municipalities represented less than 1.0 % of the total number of transactions in the period 2000-2006. Figure 2 shows the real estate market activity for the Slovenian municipalities. In addition, the annual number of real estate transactions in 2000-2006 for the statistical regions is given.

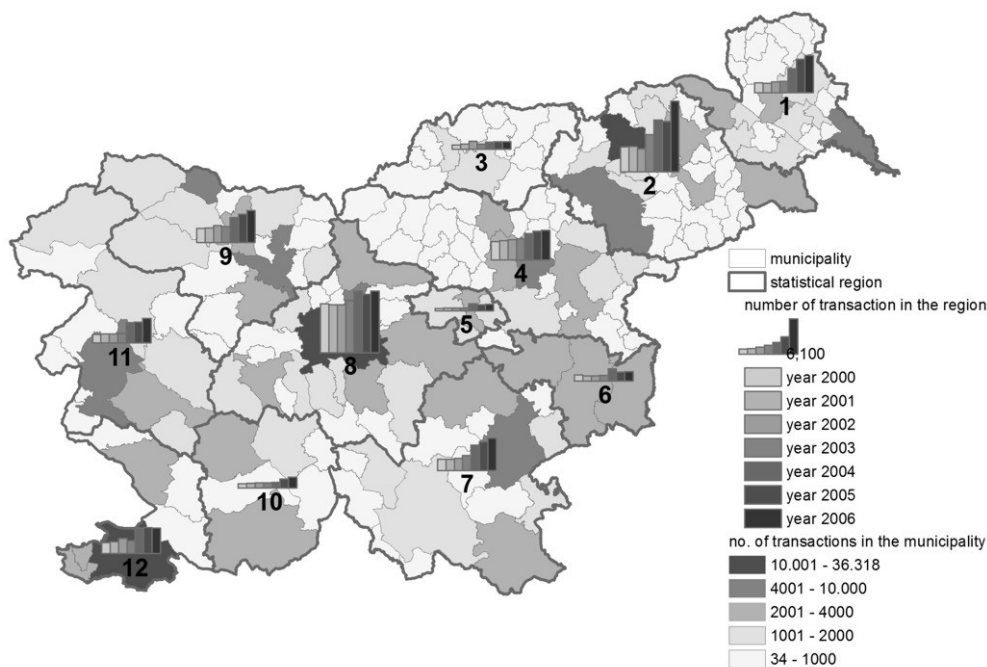


Figure 2: The number of real estate transactions in Slovenian municipalities and the annual number of transactions in the statistical regions for the period 2000-2006 (ID of statistical regions in Table 2).

Based on the anticipation that the number of population is correlated with the real estate market activity, the evident real estate market activity was expected in the municipalities of Ljubljana and Maribor. However, more astonishing was the finding that there were some from the aspect

of population small municipalities with unexpected high number of real estate transactions in the study period (for example Lendava). The analysis of the real estate market activity by the type of real property showed that in Lendava, as an outstanding municipality from the above mentioned perspective (number of real estate transactions per capita), the agricultural land market represented the prevailing real estate market in the study period.

In continuation, we analysed the real estate market activity for each year in the period 2000-2006. In some of the municipalities the number of real estate transactions was multiplied in the successive years by more than 10. In that case there appear the question and need for further research, if we want to understand the real estate market - what is the reason for such an obvious increase in the real estate market activity? An example of the influence of highway construction in Slovenia on the activity of real estate market has already been studied (Liseč and Drobne, 2007; Drobne et al., 2008; Liseč et al., 2008). Figure 2 also shows the time line of the real estate market activity in the Slovenian statistical regions for the period 2000-2006 (the number of real estate transaction per year). The regression coefficient analysis of the transaction number growth in the statistical regions by the year shows that the most evident increase in the number of real estate transactions was in the eastern part of the country, in particular in the Podravska and Pomurska statistical regions, followed by the Jugovzhodna Slovenija, Gorenjska, Goriška, Obalno-kraška, Osrednjeslovenska, Savinjska, Notranjsko-kraška, Spodnjeposavska, Zasavska and Koroška statistical regions. Table 2 shows the activity of real estate market in the statistical regions by the type of the real estate in the study period.

ID	Statistical region	Total	utility-equipped building land	utility-unequipped building land	functional land	agricultural land	commercial real estates	apartments	family houses	garages	cottages	buildings with the land	others
	<i>Slovenia</i>	<i>282,671</i>	<i>15,987</i>	<i>37,860</i>	<i>15,763</i>	<i>73,594</i>	<i>17,867</i>	<i>73,808</i>	<i>22,680</i>	<i>8916</i>	<i>2559</i>	<i>9683</i>	<i>3954</i>
1	Pomurska	23,428	186	3608	1089	13,019	709	1960	1141	112	185	1186	233
2	Podravska	49,063	4293	7679	1775	12,818	2599	12,100	3727	1283	240	1747	802
3	Koroška	7574	420	1125	521	1152	596	2601	610	321	65	36	127
4	Savinjska	28,018	793	4032	943	6588	1980	7750	1536	647	286	2924	539
5	Zasavska	5359	150	222	668	741	351	2178	422	376	33	172	46
6	Spodnjeposavska	9073	436	818	396	4417	386	1091	498	74	176	747	34
7	Jugovzhodna Slovenija	23,254	1132	2582	1580	11,525	851	2352	1680	251	400	697	204
8	Osrednjeslovenska	65,189	3364	9044	2339	6777	5754	24,951	6401	4371	352	719	1117
9	Gorenjska	25,126	2871	1304	3230	4063	1299	8531	1738	841	281	767	201
10	Notranjsko-kraška	7542	570	936	288	2650	490	1534	692	88	42	201	51
11	Goriška	17,283	941	2993	1424	5766	1018	2502	1695	270	174	316	184
12	Obalno-kraška	21,762	831	3517	1510	4078	1834	6258	2540	282	325	171	416

Table 2: The number of real estate transactions in the statistical regions by the type of real estate (classification according to the data from the Tax Authority) in Slovenia in 2000-2006.

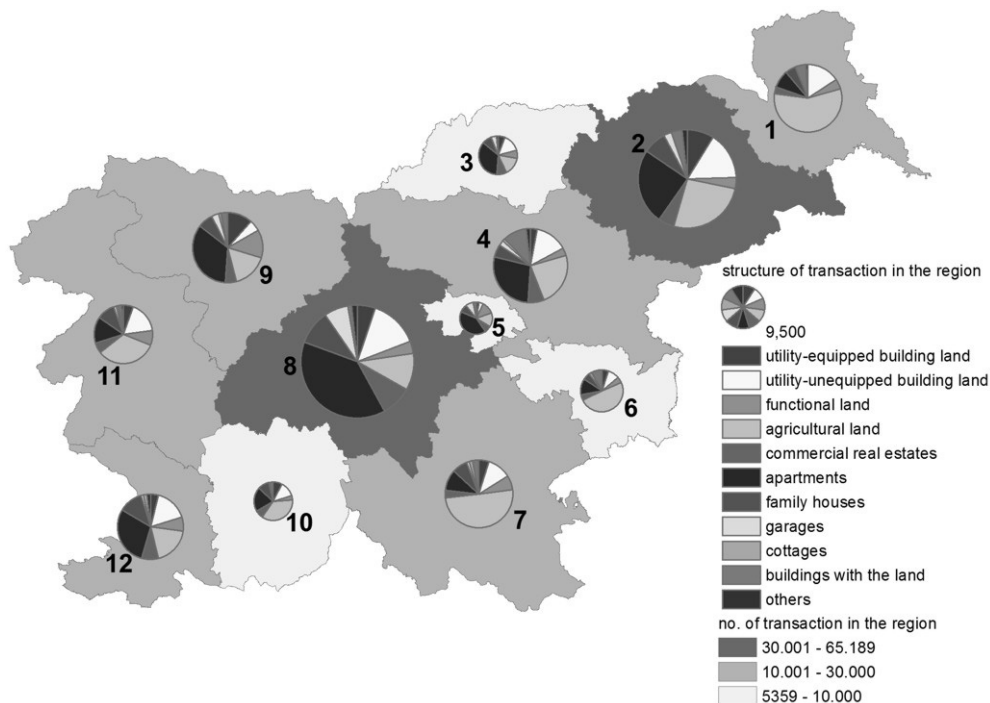


Figure 3: The number of real estate transactions in the statistical regions by the type of real estate (classification according to the data from the Tax Authority) in Slovenia in 2000-2006 (ID of statistical regions in Table 2).

From Table 2 and Figure 3 it can be concluded that the core statistical region regarding the real estate market activity (the number of real estate transactions) in the study period was the Osrednjeslovenska region, representing 23.1 % of all real estate transactions in Slovenia, followed by Podravska (17.4 %), Savinjska (9.9 %), Gorenjska (8.9 %), Pomurska (8.3 %), Jugovzhodna Slovenija (8.2 %), Obalno-kraška (7.7 %), Goriška (6.1 %), Spodnjeposavska (3.2 %), Koroška (2.7 %) and finally the Zasavska statistical region with 1.9 % share of real estate transactions. When considering the number of population in the statistical regions, the real estate market activity per capita was the highest in the Obalno-kraška region, followed by the Pomurska, Jugovzhodna Slovenija, Podravska, Notranjsko-kraška, Goriška, Spodnjeposavska, Osrednjeslovenska, Gorenjska, Zasavska, Savinjska and Koroška statistical regions.

The analysis of the real estate market activity for the period 2000-2006 by the type of real estates shows that there was an important share of statistical regions with prevailing transactions of agricultural land in the study period: the Pomurska, Podravska, Spodnjeposavska, Jugovzhodna Slovenija, Notranjsko-kraška and Goriška statistical regions. In the rest of the statistical regions, the transactions of apartments and utility-unequipped building land predominated. In the Pomurska statistical region, the agricultural land market was outstanding (55.6% of all transactions in the region), followed by the market of utility-unequipped building land (15.4%)

and apartments (8.4%). In Podravje markets of agricultural land (26.1%) and apartments (24.7 %) were noticeably the most active real estate markets, followed by the utility-unequipped building land market (15.7%). In Koroška the market of apartments prevailed (34.4%), while the activity of the agricultural land market (15.2%) and utility-unequipped building land market (14.9 %) were similar. In the Savinjska region the apartments market (27.7%) and agricultural land market (23.5%) were followed by the utility-unequipped building land market (14.4%). In the Zasavska region the first place belonged to the apartments market (40.6%), while the agricultural land with noticeably fewer transactions was on the second place (13.8 %) followed by functional land (12.5 %). In the Spodnjeposavska region the agricultural land market prevailed (48.7%), followed by the apartments market (12.0 %) and utility-unequipped building land (9.0 %). Similar situation was in Jugovzhodna Slovenija where transactions of agricultural land prevailed (49.6 %), followed by the utility-unequipped building land market (11.1 %) and apartments market (10.1%). In the Osrednjeslovenska region significant activity was noticed in the apartments market (38.3%), while the functional land market (13.9%) and agricultural land market (10.4%) were less active. The transactions of the apartments prevailed further in Gorenjska (34.0%), followed by the agricultural land (16.2%) and functional land (12.9%). In the Notranjsko-kraška region agricultural land market was the most active (35.1%), followed by the apartments market (20.3%) and utility-unequipped building land market (12.4%). Similar situation was in the Goriška region where agricultural land market was outstanding (33.4%), followed by the utility-unequipped building land (17.3%) and apartment market (14.5%). In the Obalno-kraška region the apartments market (28.8%), agricultural land market (18.7%) and utility-unequipped building land market (16.2%) represented the most active real estate market.

Focusing on the type of transactions, sale was the prevailing type of real estate transactions in Slovenia in the period 2000-2006 (119,390 or 42.2 % of all transactions according to the data from the Tax Authority), followed by inheritance (80,014 or 28.3 %), other types of real estate acquisition (31,878 or 11.3%), deed of gift (27,161 or 9.6%), expropriation (4318 or 1.5%), acquisition of new construction (4291 or 1.5%), real estate change (2435 or 0.9%) and denationalization (1484 or 0.5%). Here, incompleteness of data records has to be emphasized, since there were 11,700 (4.1%) real estate transaction data records with missing data on type of real estate transaction. Nevertheless, all numbers of real estate transactions by the type of transaction were characterized by similar steady increase following the trend of real estate market development.

3.2 Influence of socio-economic and macroeconomic factors on the real estate market activity

In 2000-2006, the Slovenian real estate market was definitely influenced by the favourable socio-economic and macroeconomic environment that provided an important support to the real estate market development. How these propitious circumstances influenced the real estate market is not simple to determine; however, there is a significant consensus that the number of real estate transactions was increasing in the study period despite raising prices. According to statistical data (SURS, 2009), the gross domestic product (GDP) was constantly in rise and the same

holds true for the employment in Slovenia. Advantageous socio-economic conditions provided better purchasing power and higher demand in the real estate market as the consequence. Figure 4 shows the number of real estate transactions per year in correlation with the annual gross domestic product per capita in Slovenia in 2000-2006. Here, the polynomial regression model of the third degree seems to be the best approximation to represent the correlation between GDP per capita and real estate market activity. This regression model already indicates the slow-down of the real estate market activity in the following year (see The 2007 Slovenian real estate market report, 2008; The 2008 Slovenian real estate market report, 2009).

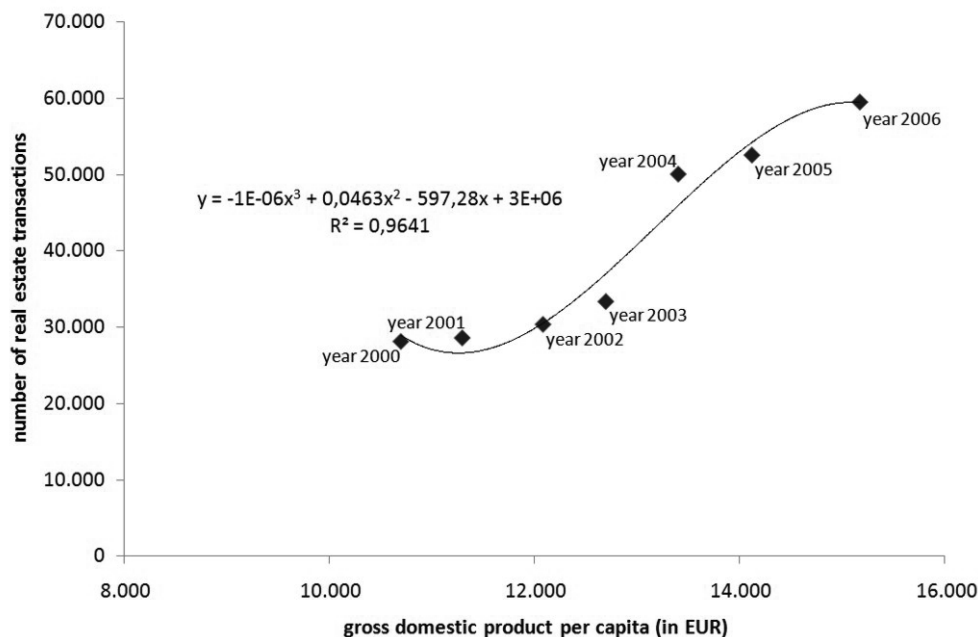


Figure 4: Correlation between the annual gross domestic product per capita in EUR and the number of real estate transactions in Slovenia in the period 2000-2006.

In continuation, the correlation between the average annual gross domestic product per capita in the statistical regions and the average annual number of real estate transactions in the corresponding statistical region was studied for the period 2000-2006. The results show that there is a positive linear correlation between the studied variables with the coefficient of correlation 0.73 (the risk of this statement is 1%). Looking at Figure 5, there are the Podravska and Pomurska statistical regions with outstanding average annual number of real estate transactions in the study period with regard to the average annual GDP per capita in the region. The reason for this deviation in the (predominantly agrarian) statistical regions can be found in the above-average agricultural land market activity (see Table 2). In the regression model presented in Figure 5 almost 54% variability in the average annual number of real estate transactions can be explained with the average annual GDP per capita in the statistical regions. When excluding the Podravska and Pomurska statistical regions, the linear regression model fits the data much better ($R^2 = 88\%$). From Figure 5 it can be further concluded that there was under-average

number of transactions per year in the Obalno-kraška and Goriška statistical regions regarding the average annual GDP per capita in the statistical regions.

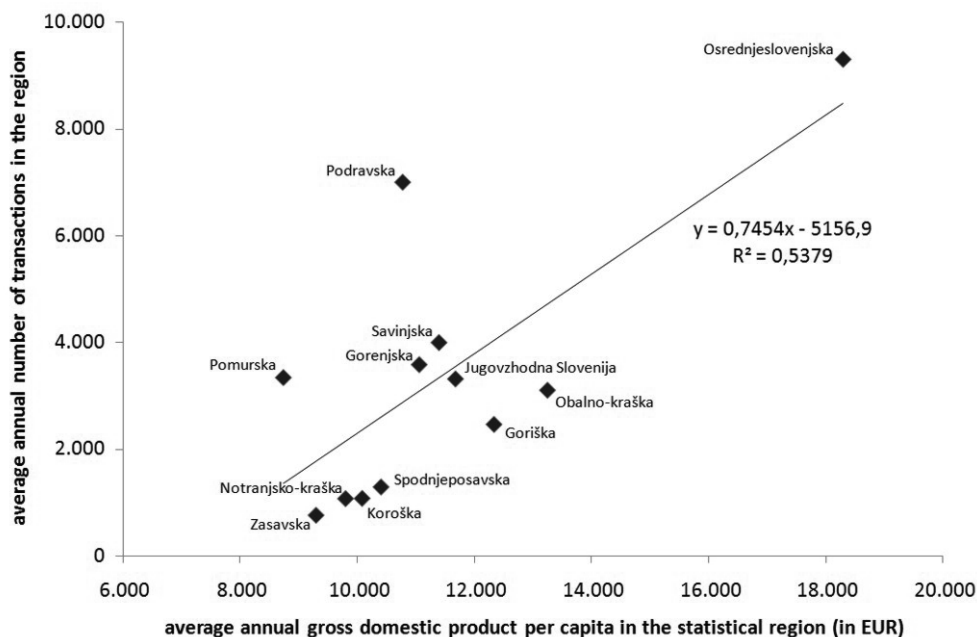


Figure 5: Correlation between the average annual gross domestic product per capita in the statistical region (in EUR) and the average annual number of real estate transactions in the region in the period 2000-2006.

3.3 Influence of accession to the European Union on the real estate market activity

In Slovenia, there was a noticeable rise in the real estate market activity (a huge jump in the number of real estate transactions) in 2003 and 2004, as already evident from Figure 1. This dynamic era in the real estate market was also characterized by the Slovenian accession to the European Union, when the previously relatively closed real estate market became interesting for the EU citizens. The open real estate market for the EU citizens could be the reason for this outstanding jump in the Slovenian real estate market activity. According to the data from the Tax Authority of the Republic of Slovenia there were only 1825 real estate sales to foreigners in the period after the Slovenian entry into the EU (1 of May 2004) and until the end of 2006.⁴ The majority of the new real property rights holders were from Great Britain and Italy, an important share, however, represented also citizens of Austria and Germany (Figure 6).

Foreigners were interested in buying different types of real estates, but their interest was mainly characterized by location. Their main interest was concentrated in the Obalno-kraška region (304 transactions), Pomurje (278 transactions), Gorenjska (212 transactions) and the vicinity of Nova Gorica with Karst landscape as well as the basin of River Soča (207 transactions), which

⁴ Participation of foreigners in the Slovenian real estate market before the accession to the EU was studied by Dragolič (2004); the main finding of his research was that the participation of the foreigners in the Slovenian real estate market was negligible in the period before the Slovenian entry into the EU (between 1st February 1999 and 1st May 2009).

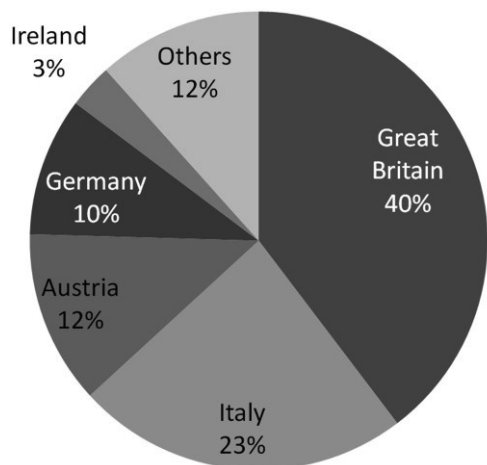


Figure 6: Foreigners who bought real estates in Slovenia in 2000-2006 by the state of their citizenship.

together represented 2/3 of all real estate purchases by foreigners in Slovenia in 2000-2006. In the coastal region (municipalities of Izola, Koper, Piran and Sežana) there were prevailing Italian buyers of real estates (70% of all foreigners). Due to the unexpected high prices of real estates at the Slovenian coastal region, there was and still is a limited demand for real estates also from the side of foreigners (non-Slovenian citizens). The prevailing share of Italian buyers of real estates was noticed also in the Karst hinterland where mainly old farms were the objects of purchase. Old inexpensive farms were the main object of interest also in Pomurje, where the buyers were predominantly from Great Britain (50% of all foreigners who bought real estates in the region), followed by Austrians (25% of transactions) and Germans.

At the annual level, foreigners represent on average only 1% of all real estate transactions in Slovenia. They have found real estates in less developed areas, which has also led to the rise of real estate market prices. However, there are other alternative countries that are opening their real estate markets and are interesting for the EU citizens, for example Croatia (Fabjan, 2006). Here, the increase in real estate transactions by non-Slovenian citizens with the Slovenian EU-entry has to be emphasized, but the share of these transactions is really low and the EU accession can not be the reason for the high jump in the number of real estate transactions in 2003 and 2004.

3.4 Influence of changed legal framework on the real estate market activity

There have already been discussions about the influence of legal/institutional circumstances on the real estate market and about the legal gap in the sense of preventing speculation in land use change in Slovenia (Liseč, 2008; Grilj, 2009). It was ascertained that in particular in 2003 there were some significant modification of the legal background having exposed The Law of Property Code (2002, came into force on 1st January 2003), The Construction Act (2002, came into force on 1st January 2003) and The Spatial Planning Act (2002, came into force on 1st January 2003).

A detailed analysis of the real estate market activity in Slovenia shows that there was a significant rise (jump) of the number of real estate transactions in 2004 when compared to the situation in 2002 (Table 1). In 2004 the number of real estate transactions was almost doubled when compared to the market activity in 2002 (from 30,357 real estate transactions in 2002 to 50,105 transactions in 2004). In particular, there was an evident rise of the number of agricultural land transactions (from 6026 transactions in 2002 to 13,402 transactions in 2004). This finding stimulated us to investigate the (change of) legal background of the agricultural land market. Beside the change of legal background, which commonly affected all (sub-)types of real estate market, The Agricultural Land Act (2003)⁵ with its origin in 1996, which mainly regulates the agricultural land market, changed a lot. There were a number of new acts indirectly influencing the agricultural land market, such as The Spatial Planning Act (2002) and The Construction Act (2002). The Spatial Planning Act (2002) abolished Article 8 of The Agricultural Land Act (1996), which aimed at protecting rural land against urbanisation and strictly regulated the agricultural land use change; the abolished article had its origin in the eighties. The Agricultural Land Act (1996) changed also due to The Construction Act (2002) which cancelled articles 11, 12, 13, 14, 15, 16 and 112 that had introduced a special payment for approved agricultural land change, earmarked for the purpose of suitable agricultural land policy. There were some other legal changes referring to the agricultural land market in 2003, where the most important issues were related to the reduction of rural land market restrictions and less controlled agricultural

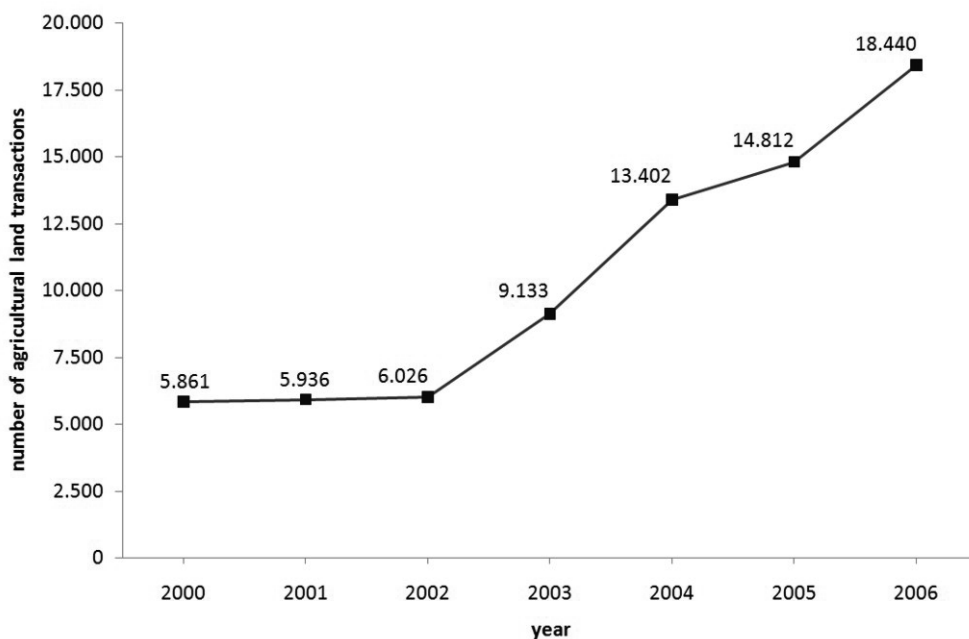


Figure 7: The number of agricultural land transactions in Slovenia in the period 2000-2006.

⁵ Official consolidated text of the Agricultural Land Act (2003) considered also the Decision of the Constitutional Court of the Republic of Slovenia repealing Chapter III (Agricultural land transaction) of the Agricultural Land Act with one year suspension deadline (2002).

and forest land use change. Here, a legal gap appeared, which also provided more space for speculations in the agricultural land market. The analysis of the agricultural (and forest) land market shows that there was evident accelerated real estate market activity in 2003 and 2004 (Figure 7).

This dynamics in the agricultural land market activity was partly caused also with the construction of the highways in those years (Lisec and Drobne, 2007; Drobne et al., 2008; Lisec et al., 2008). However, it seems that the most outstanding change happened in the agricultural land market activity when compared to the other real estate submarkets. For this reason, we tried to examine the statement that the changed legislation (that came into force on 1st January 2003) influenced in particular agricultural land market activity. With the aim to test our statement, we compared the rise of the number of agricultural land transactions with the rise of the number of other real estate transactions. For this purpose we designed a contingency table (Table 3) of the average annual number of agricultural land transactions and other real estate transactions for two characteristic periods, which were shaped on the basis of legal/institutional change that regulated the real estate market (the main changes came into force on 1st January 2003).

	average annual number of agricultural land transactions	average annual number of other real estate transactions
Before change of legislation (2000-2002)	5941	23,084
After change of legislation (2003-2006)	13,947	35,242

Table 3: Contingency between the number of real estate transactions and periods of different legal backgrounds that directly or indirectly shaped the real estate market in Slovenia in the period 2000-2006.

From the test of contingency between the number of real estate transactions, where we distinguished two groups of real estates, agriculture land and other real estates, and the periods of different legal backgrounds that directly or indirectly shaped the real estate market in Slovenia, we can conclude that the changed legal background in 2002-2003 referring to the agricultural land influenced the agricultural land market activity with a statistical significance ($\alpha \ll 0.001$): while the average annual number of agricultural land transactions was multiplied by 2.35 after 2002, the average number of other real estates transactions was multiplied only by 1.53.

5 CONCLUSIONS

The Slovenian real estate market has undergone a dramatic transformation towards increased transparency in the past decade. Since there have been available real estate market reports for the last few years we tried to find out some characteristics of the fast developing Slovenian real estate market which characterized the period 2000-2006. Following the favourable socio-economic progress of the country there was an evident increase in the number of real estate transactions in the study period. The differences in the economic status of the statistical regions/ municipalities were reflected also in the real estate market activity in the regions/ municipalities. However, it has been shown that there is evident correlation between the number of real estate transactions and gross domestic product, where there are some deviations in particular in the

areas with the prevailing agricultural landscape (the Pomurje and Podravje statistical regions). Consequently, it can be concluded that the economic growth in the period 2000-2006 was one of more important sources of real estate activity in Slovenia.

Ascertaining the high increase in the real estate market activity in the second half of the study period, the assumption about the influence of the EU entry on real estate market activity appeared. Despite the open market and the membership in the European Union, the rate of foreign participation in the Slovenian real estate market has remained low. Furthermore, special attention was paid to the dynamic legal/institutional circumstances in the study period that indirectly or directly regulate or influence the real estate market. Although there were changes in the legislation (in particular in 2002 and 2003) directly or indirectly related to the real estate market/management, which were common for all the subtypes of real estates in Slovenia, there were obvious additional novelties in the legislation referring to the agricultural land. The first important legal change in 2002 concerned the reduction of rural land market restrictions based on the provision of the Constitutional Court that invalidated the article that the purchaser of rural land had to be a farmer or a person qualified for agricultural/forest production. This change was followed by a number of changes which in general brought fewer restrictions and less control over the agricultural land use and agricultural land market. Based on the test of contingency we can conclude that there has been a significant jump in the number of agricultural land transaction when compared to the other real estates transactions in Slovenia after the changed legislation came into force in 2003 ($\alpha \ll 0.001$).

Here, the need for further research on the effectiveness of land use change control appears (controlling urbanization), which has been the topic of several scientific and professional debates on the questions: How to balance sustainable spatial development with the market forces? How to be efficient enough in protecting natural resources (the land) but at the same time have an efficient legal/institutional framework for overall progress of the society?

Acknowledgement

Authors thank the Tax Authority of the Republic of Slovenia for the data on the real property transactions for the period 2000-2006 and the Surveying and Mapping Authority of the Republic of Slovenia for the digital data from the Register of Spatial Units.

REFERENCES:

Act Amending the Establishment of Municipalities and Municipal Boundaries Act. Official Gazette of the Republic of Slovenia, 14th June 2002, No. 52, 5265-5266.

Bogaerts, T., Williamson, I.P., Fendel, E.M. (2002). The role of land administration in the accession of Central European countries to the European Union. Land Use Policy, 19(1):29-46.

ACE (1999). The development of Land markets in Central and Eastern Europe. Final Report Project P21218R. EC Brussels, ACE program.

<http://www.blominfo.co.uk/PDFs/ACE/AllAcedocument.pdf> (20th July 2009).

Adair, A., Allen, S., Berry, McGreal, S. (2006). Central and Eastern European property investment markets: issues of data and transparency. Journal of Property Investments & Finance, 24(3):211-220.

Decision repealing Chapter III of the Agricultural Land Act with one year suspension deadline, No. U-I-266/98-72. Official Gazette of the Republic of Slovenia, 28th March 2002, No. 27, 2262-2267.

Dragolič, M. (2004). Trg nepremičnin v Evropski Uniji – ekonomsko ali politično vprašanje? Primeri Danske, Avstrije in Slovenije. Graduation Thesis. Ljubljana. University of Ljubljana.

Drobne, S., Lisec, A., Bogataj, M. (2008). GIS Analysis of Rural Land Market in Slovenia. AGILE 2008 Conference: Taking Geoinformation Science One Step Further. Girona.

DURS (2008). Podatki o transakcijah nepremičnin v Sloveniji za obdobje 2000-2006 (=Data on real estate transactions in Slovenia for the period 2000-2006). Tax Authority of the Republic of Slovenia. Ljubljana.

Fabjan, R. (2006). Primerjava trga nepremičnin v Sloveniji in na Hrvaškem. Graduation Thesis. Ljubljana. University of Ljubljana.

Griji, T. (2009). Aktivnost trga nepremičnin v Sloveniji v obdobju 2000-2006. Graduation Thesis. Ljubljana. University of Ljubljana.

GURS (2008). Digital data from the Register of Spatial Units. Surveying and Mapping Authority of the Republic of Slovenia. Ljubljana.

Klemenc, J. (2005). Uporaba metod rudarjenja podatkov za analizo nepremičninskih transakcij v Republiki Sloveniji in izgradnjo modela za tržno vrednotenje nepremičnin. Master's thesis. Ljubljana. University of Ljubljana.

Lisec, A. (2007). Vpliv izbranih dejavnikov na tržno vrednost zemljišč v postopku množičnega vrednotenja kmetijskih zemljišč. Doctoral Dissertation. Ljubljana, University of Ljubljana.

Lisec, A., Ferlan, M., Lobnik, F., Šumrada, R. (2008). Modelling the rural land transaction procedure. Land Use Policy, 25 (2), 286-297.

Lisec, A., Ferlan, M., Šumrada, R. (2007). UML notation for the rural land transaction procedure = Postopek transakcije ruralnih zemljišč v zapisu UML. Geodetski vestnik, 51 (1), 597-608.

Lisec, A., Drobne, S. (2007). Spatial multi-attribute analysis of land market - a case of rural land market analysis in the statistical regional of Pomurje. In L., Zadnik Stirn (ed.), S., Drobne (ed.), SOR '07 proceedings, Proceedings of the 9th International Symposium on Operational Research in Slovenia. Ljubljana. Slovenian Society Informatika (SDI), Section for Operational Research (SOR) (233-240).

Lisec, A., Drobne, S., Bogataj, M. (2008). The influence of the national development axes on the transaction value of rural land in Slovenia. Geodetski vestnik, 52(1), 54-68.

The 2007 Slovenian real estate market report (2008). (= Poročilo o slovenskem trgu nepremičnin za leto 2007). Ljubljana: The Surveying and Mapping Authority of the Republic of Slovenia.

http://prostor.gov.si/jv_etn/servlet/VrniDatoteko?id=8 (6th June 2009).

The 2008 Slovenian real estate market report (2009). (= Poročilo o slovenskem trgu nepremičnin za leto 2008). Ljubljana: The Surveying and Mapping Authority of the Republic of Slovenia.

http://prostor.gov.si/jv_etn/servlet/VrniDatoteko?id=32 (6th June 2009).

Schmitz, A., Brett D.L. (2001). Real Estate Market Analysis: the Case Study Approach. Washington, Urban Land Institute.

SURS (2009). Statistical Yearbook 2008. Statistical Office of the Republic of Slovenia. Ljubljana.

Šumrada, R. (2006). Modelling Real Estate Transactions with UML. Ljubljana, Geodetski vestnik, 50 (4): 597-608.

World Bank (2005). Implementation Completion Report (SCL-44980) for a Real Estate Registration Modernization Project. Report No: 34628.

The Agricultural Land Act. Official Gazette of the Republic of Slovenia, 25th Oct. 1996, No. 59, 5132-5149.

The Agricultural Land Act, Official Gazette of the Republic of Slovenia, 9th June 2003, No. 55, 6456-6471, official consolidated text.

The Construction Act. Official Gazette of the Republic of Slovenia, 18th Dec. 2002, No. 110, 13084-13132.

The Law of Property Code. Official Gazette of the Republic of Slovenia, 17th Oct. 2002, No. 18, 9559-9583.

The Real Property Mass-Appraisal Act. Official Gazette of the Republic of Slovenia, 16th May 2006, No. 50, 5329-5333.

- The Tax Procedure Act. Official Gazette of the Republic of Slovenia, 2nd Apr. 1996, No. 18, 1477-1498.*
- The Tax Procedure Act. Official Gazette of the Republic of Slovenia, 16th Nov. 2006, No. 117, 12331-12399.*
- The Spatial Planning Act. Official Gazette of the Republic of Slovenia, 18th Dec. 2002, No. 110, 13057-13083.*
- Zevenbergen, J., Frank, A., Stubbj r, E. (2007). Real Property Transactions: Procedures, transaction costs and models. Delft.*

Received for publication: 20 July 2009

Accepted: 28 August 2009

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