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TOWARDS NATIONAL REAL ESTATE ACCOUNTS: THE CASE OF SLOVENIA

Abstract:

Conceptual issues of establishing national or “satellite” real estate accounts are discussed, as well as their relevance for the concerns of modelling and comparing of property transactions and their costs. First steps towards such accounts and the difficulties involved are illustrated with the Slovenian case and some data.

1. Introduction

Satellite accounts are described in the System of National Accounts (UN, 1993) or SNA. SNA is a monumental work by all the major international statistical agencies establishing international standards for statistical description of national economies worldwide. This description is mainly, but not only, in monetary terms to enable aggregation and comparison of diverse flows and stocks. In EU, the SNA is applied through the European System of Accounts (Eurostat, 1995) or ESA, which is enforced through the EU legislation. The SNA chapter 21 on satellite accounts does not set firm standards but only provides draft guidelines for the evolving work of providing statistical description of particular fields of policy interest. These fields kind of surround the central SNA framework, so their accounts are called “satellite”. The most of work of applying these ideas has been done by the OECD, which has so far provided guidelines for the health (OECD, 2000), environment (UN 2003), agriculture (OECD, 1999) and tourism (OECD, 2000) accounts. OECD generally avoids the term “satellite” as too confusing to the general public, so I decided in this paper to use the term “national”. To the best of my knowledge, no formal initiative has so far been proposed to the OECD or any other agency to start work on real estate accounts. The OECD manuals as pioneering efforts strike a balance between policy needs and resource and data availability and are still a far cry from the ambitious ideas described in SNA.

So what does the SNA mean by satellite accounts? To describe statistically a part of economy of particular policy interest, the idea is to use as much as possible of the central SNA framework, and extend it where necessary with other definitions and variables, in particular also non monetary. The central framework includes standard classifications of products and services, of activities, of institutional sectors, of transactions, of purposes and of accounts. There are two main advantages in analysing a policy field (“a segment of society” or “a market”) using this standard framework. This way, one can use comparable definitions across countries and in time and second, one can see the relative importance of the field in the economy and its links with the rest of the economy. These reasons are also important for the real estate segment of society and for the goals of this project, so we are trying, despite obstacles, to make progress in this direction.

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An obvious first step to proceed is to define a field of interest, in order to enable measurement and comparison of its size, structure and links with the rest of the economy. The second step could then be to identify, what statistical offices have available and could be used from the central SNA framework. The third step would be to identify other data needs and sources to meet these needs. The fourth step would then be the actual production of accounts and the fifth their analysis and recommendations for policy purposes. In this paper, we shall try to make some progress concerning the first three steps.

2. Identifying the real estate field

The SNA covers all the transactions and “other flows” in the economy, both market and non market, as well as the stocks, and presents them in the framework of accounts and balance sheets. Although in our projects we are mainly concerned with the cost of real estate transactions (Lavrac 2004, Blandy and others 2004), these costs are strongly linked to and based on the transactions of conveyance of property and underlying changes in stocks of property, to the transactions concerning services provided by the real estate itself, and to the ancillary transactions enabling and servicing the former two main types. So our proposal is to define real estate accounts to cover the links with these transactions and not just to cover the “cost of transactions account” focusing on the ancillary services only, without links to the main transactions. It will be obvious though, that achieving such an ambitious goal is a long term project and we have to be realistic as to what can be achieved by our particular Cost G9 action. Any empirical data at this stage can mainly serve to clarify conceptual issues and it is largely premature to expect policy recommendations, although data may provide some glimpses of differences between countries.

Although the whole of society uses real estate, and the substantial part also produces real estate services, to define the real estate field or/of activity we have to be much narrower in scope. Let us first consider if we can live with the definition of the activity as used in the national accounts. One of the 60 divisions of A60 level of NACE rev. 1.1. standard classification of activities (Eurostat, 2004), belonging to the higher category K, is #70 Real estate activities:

Table 1: Real estate activities according to NACE Rev. 1.1.

K	Real estate, renting and business activities		
70	Real estate activities		
70.1	Real estate activities with own property		
70.11	Development and selling of real estate	<p>This class includes:</p> <ul style="list-style-type: none"> - development of real estate projects: <ul style="list-style-type: none"> • bringing together financial, technical and physical means to realize real estate projects for later sale, whether for residential buildings or other 	<p>This class excludes:</p> <ul style="list-style-type: none"> - development and construction work of a real estate project by a construction unit, see 45.2
70.12	Buying and selling of own real estate	<p>This class includes:</p> <ul style="list-style-type: none"> - buying and selling of self-owned real estate: 	

		<ul style="list-style-type: none"> • apartment buildings and dwellings • non-residential buildings • land 	
70.2	Letting of own property		
70.20	Letting of own property	<p>This class includes:</p> <ul style="list-style-type: none"> – letting and operating of self-owned real estate such as: <ul style="list-style-type: none"> • apartment buildings and dwellings • non-residential buildings, including exhibition halls • land 	<p>This class excludes:</p> <ul style="list-style-type: none"> – operation of hotels, rooming houses, camps, trailer camps and other non-residential or short-stay lodging places, see 55
70.3	Real estate activities on a fee or contract basis		
70.31	Real estate agencies	<p>This class includes:</p> <ul style="list-style-type: none"> – intermediation in buying, selling, renting and appraising real estate 	
70.32	Management of real estate on a fee or contract basis	<p>This class also includes:</p> <ul style="list-style-type: none"> – rent-collecting agencies – facility management, janitorial activities such as managing/offering activities ranging from: <ul style="list-style-type: none"> • facility operation • cleaning and maintaining the premises of a building 	

One can see, that this definition of activity excludes construction activity, which is a separate higher level activity in NACE. Also, and more disturbing for the purposes of our project, it for example excludes surveying , notaries and similar as business activities to be found in the division #74, and public administration activities, to be found in division #75 (there is no sublevel to distinguish public activities involving real estate). On the other hand, this activity is exercised not only by business subjects but by definition also by households living in their own dwellings (so called imputed rent). I am leaving open to debate if this definition of activity is the best one. A satellite account can bring together for its purposes activities from different parts of a standard classification. NACE for example does not know the activity of tourism, so tourism accounts bring together hotels, travel agencies and the rest as necessary. As another option, one can get involved in the statistical debate involving next revisions of standard classifications. At present, almost all of them are in different stages of being revised.

An activity is defined as a group of units producing as their main product or service the one which is defining the activity. Standard classification of products and services CPA (Eurostat

2004) is at the P60 level a mirror image of activity classification NACE rev.1.1. Let us assume for the moment that the definition of the real estate activity as described by the table 1 is the right one. Real estate services are in principle a different concept as a real estate activity and can in principle also be used for defining a real estate satellite account. Units active in real estate can namely produce also other, so called secondary services. Vice versa, real estate services can be produced as secondary services also by units, classified into different other activities. In Slovenia, real estate services are a wider concept than real estate activities, exactly 408 versus 365 billion sit in 2000 (see totals of tables 2 and 3), as some of these services are produced by other activities. Let us illustrate this point by selecting real estate rows and columns from the Slovenian supply and use tables. Balance of supply and use of real estate services is provided in the table 2 in the Annex, and the balance of real estate activities is in the table 3 in the Annex. Supply and use tables are supposed to be regularly produced by EU member states, so they can be compared.

Comparison of real estate transactions is not the direct goal of this paper. We rather discuss methodological issues, so we deliberately left original absolute figures in the tables so that balancing can be more clearly understood. Still, for the international reader interested in the economic meaning of Slovenian figures we are providing here some benchmark figures and converters. Slovenian gross domestic product (GDP) in 2000 was 4252 billion sit, so real estate services are (408/4252) 9,6 % of it (remember: including imputed rent – in Slovenia, some 90 % of dwellings are owner occupied). Exchange rate to euro in 2000 was 205 sit for 1 euro so Slovenian GDP was 20,7 billion euro or 10371 euro per capita. In purchasing power it represented some 68% of EU15 average. Most of the figures in international comparisons can be made comparable by calculating them as % of GDP or per inhabitant. Slovenia's population is almost 2 million.

3. Desired versus available content of national real estate accounts

A desired content of national real estate accounts should reflect the need for a comprehensive and internationally comparative analysis of a real estate market of a country, in order to provide a basis for national policy advice. Ideally it should cover both the market for real estate services, primary and ancillary, as defined somewhat in the previous chapter, and capital real estate transactions, that is trade in new and existing real estate assets. It should describe financing of these transactions and the transaction costs from the point of all the institutional sectors involved, in particular enterprises, banks, government and households.

So the content of real estate accounts should be wider than the scope of the real estate activity itself, which we tried to define in the previous chapter, as the links of this activity with the rest of the economy should be brought into view as well. The capital transactions should be linked to the changes in stocks and the stock of real estate, with its structure and distribution. Monetary estimates should be accompanied with simple underlying physical estimates, like the number of people, of dwellings, parcels, square meters, transactions or cases, to enable meaningful international comparisons per unit.

Little of all that is readily available for a fairly typical country like Slovenia. But we should avoid the practice often seen in the national statistical offices to statistically describe only what is statistically available, instead to define what is relevant and to provide rough estimates if necessary. Policy measures, like business decisions, sometimes have to be taken only on the basis of expert judgement, and can not be postponed till necessary surveys are put into place.

Our best estimate at this moment is, that the real estate services in Slovenia today amount to some 10 to 15 % of GDP, with some 2 to 3 % of GDP of that belonging to ancillary services. If we add some 6% for the construction activity we reach almost 20 % of GDP related to real estate.

The turnover on the real estate capital market for existing real estate (without construction) is about 1,5 billion euro (see for example Kozar 2002) or some 7% of GDP, this low share reflecting the underdeveloped real estate market in Slovenia. This turnover is the result of some 30000 transactions annually. Only some 30 % of it is intermediated through real estate agencies. Only a small share of financing comes through mortgages.

There are some 700 000 dwellings (Statistical office, 2004, Kozar, 2002), about the same as the number of households, with some 70 m² of average floor space, and only some 7000 new dwellings per year. There are a lot of census data on the distribution of dwellings. The revenues of some 200 real estate management companies serving this market amount to some 100 mil euro annually.

This is just some basic information about the real estate market, we can not go here into details. National accounts of Slovenia on their own are not detailed enough to shed much light on the real estate market. In particular, there are as yet no detailed accounts by institutional sector, so there are no figures expected by SNA 1993, like Acquisitions of existing tangible fixed assets (transaction #5112 in SNA) or Acquisitions less disposals of land and other tangible non-produced non financial assets (transaction # K.21) by sector. Also, there are as yet no balance sheets. Different other data on real estate sector exist but are scattered. But several big integrated public databases, driven by the desire to introduce property taxation, will become operational in the next years, so the data situation should get better.

We tried to dig a bit deeper to reveal some operations of government services serving real estate market. COFOG classification of government purposes is here of no help, as it is too rough. One has to collect instead annual reports of different government bodies and the detailed government budget information. It is easier when the whole of an agency can be attributed to real estate services, like Surveying and mapping authority of the Republic of Slovenia (Surveying...2003). Its budget in 2003 was some 20 mil euro, with some 550 employees and 20000 km² (the surface of Slovenia) and some 6 mil parcels to administer. Its cost recovery rate at the moment is only some 5%.

It is more difficult if a service is hidden inside a wider public function. This is a case of the court system in Slovenia. Its services related to the real estate market include mainly inheritance cases, neighbour, restitution, housing and similar cases, enforcement procedures involving real estate and land registry. We can try to provide a rough estimate of the split of the courts budget based on the number of cases (Ministry of Justice, 2004). The budget of the courts, if we understood the complicated system correctly, amounts to some 100 mil euro. The courts in the year 2003 solved 570000 cases, and about the same amount is unsolved backlog, which is slowly increasing. They did it with about 700 judges and 2200 employees. They solved about 24000 inheritance cases, 14000 diverse real estate cases, 6600 real estate enforcement cases and 220000 land registry cases (only a minority of apartments are as yet registered). To sum up, real estate cases amount to some 46 % of all cases. With somewhat unrealistic assumption that they are as demanding as other cases, the budget for them would be 46 mil euro. That would leave us with a rough estimate of 46 mil euro spent for real estate court services or some 180 euro per case. I am leaving it to the discussion, if in international

comparison perspective this is realistic and if such kind of statistical exercises are a useful way to proceed towards a national real estate account.

References:

Blandy S., Cirman A., Cormack P., Dehesh A., Hills S., Hunter C., Juznik L., Lavrac I., Stevens R.: Deliverable One: Interim Report on WP5 Context and Existing Instruments of Reurbanisation in Each City. EU Fifth Framework Programme: Reurbanisation on Condition of Demographic Change, Sheffield Hallam University and Faculty of Economics Ljubljana, Sheffield 2004.

Ministry of Justice of the Republic of Slovenia: Courts statistics for the year 2003, Ljubljana 2004-10-12

Eurostat: European System of Accounts ESA 1995, Luxembourg 1996.

Eurostat: Ramon: Eurostat's Classification Server
([Http://europa.eu.int/comm/eurostat/ramon/](http://europa.eu.int/comm/eurostat/ramon/)), 2004

Kozar. A.: Real Estate Market in Slovenia. The FIABCI European Study Days, Porto 2002.

Lavrac I.: Transparency of Real Estate Market and Transaction Cost in Slovenia. Cost G9 Action: Modelling Real Estate Transactions. Ljubljana meeting, 2004

Lavrac I., Kalin J.: Findings in Compiling Supply and Use Tables in Slovenia: Lessons for the Transition of Data Sources. 13th International Conference on Input-Output Techniques, Macerata, Italy 2000. International Input-Output Association 2000

Surveying and Mapping Authority of the Republic of Slovenia: Activities Report 2003

Statistical Office of the Republic of Slovenia: Input-output tables for 2000. Ljubljana 2003.

Statistical Office of the Republic of Slovenia: Web home page:
[Http://www.stat.si/eng/index.asp](http://www.stat.si/eng/index.asp), 2004

Stuckenschmidt H., Stubkjaer E., Schlieder. (Eds). The Ontology and Modelling of Real Estate Transactions, Ashgate, Aldershot, UK (2003)

OECD: Economic Accounts for Agriculture, 1999

OECD: Measuring the Role of Tourism in OECD Economies: The OECD Manual on Tourism Satellite Accounts and Employment, 2000

OECD: A System of Health Accounts, 2000

UN/EC/IMF/OECD/WB: Integrated Environmental and Economic Accounting, 2003

UN/EC/IMF/OECD/WB: System of National Accounts, New York 1993.

Annex:

Table 2: Balance of supply and use of real estate services, Slovenia 2000, in mio sit at current prices.

Source: Statistical Office of the Republic of Slovenia (2003)

NACE A60			Real estate services (# 70 of CPA P60) row of supply table at basic prices, including transformation into purchasers' prices	Real estate services (#70 of CPA P60) row of use table at purchasers' prices
1	1	Agriculture, hunting and related service activities	254	506
2	2	Forestry, logging and related service activities	144	340
3	5	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	3	4
4	10	Mining of coal and lignite; extraction of peat	204	11
5	11	Extraction of crude petroleum and natural gas; service activities incidental to oil and gas extraction excluding surveying	0	0
6	12	Mining of uranium and thorium ores	0	0
7	13	Mining of metal ores	11	0
8	14	Other mining and quarrying	37	40
9	15	Manufacture of food products and beverages	396	890
10	16	Manufacture of tobacco products	1.006	215
11	17	Manufacture of textiles	78	222
12	18	Manufacture of wearing apparel; dressing and dyeing of fur	147	159
13	19	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	36	191
14	20	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	101	201
15	21	Manufacture of pulp, paper and paper products	271	292
16	22	Publishing, printing and reproduction of recorded media	414	819
17	23	Manufacture of coke, refined petroleum	9	4

		products and nuclear fuel		
18	24	Manufacture of chemicals and chemical products	405	761
19	25	Manufacture of rubber and plastic products	169	353
20	26	Manufacture of other non-metallic mineral products	183	294
21	27	Manufacture of basic metals	9	156
22	28	Manufacture of fabricated metal products, except machinery and equipment	173	1.012
23	29	Manufacture of machinery and equipment n.e.c.	493	734
24	30	Manufacture of office machinery and computers	0	664
25	31	Manufacture of electrical machinery and apparatus n.e.c.	250	325
26	32	Manufacture of radio, television and communication equipment and apparatus	67	382
27	33	Manufacture of medical, precision and optical instruments, watches and clocks	101	388
28	34	Manufacture of motor vehicles, trailers and semi-trailers	23	440
29	35	Manufacture of other transport equipment	3	82
30	36	Manufacture of furniture; manufacturing n.e.c.	97	546
31	37	Recycling	57	5
32	40	Electricity, gas, steam and hot water supply	213	247
33	41	Collection, purification and distribution of water	155	16
34	45	Construction	2.024	3.341
35	50	Sale, maintenance and repair of motor vehicles and motorcycles; retail sale of automotive fuel	911	2.991
36	51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	5.842	10.599
37	52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	5.809	7.846
38	55	Hotels and restaurants	983	3.191
39	60	Land transport; transport via pipelines	1.939	695
40	61	Water transport	42	59
41	62	Air transport	45	81
42	63	Supporting and auxiliary transport activities; activities of travel agencies	8.221	1.108

43	64	Post and telecommunications	484		1.973
44	65	Financial intermediation, except insurance and pension funding	1.955		3.313
45	66	Insurance and pension funding, except compulsory social security	0		936
46	67	Activities auxiliary to financial intermediation	75		628
47	70	Real estate activities	361.547		2.149
48	71	Renting of machinery and equipment without operator and of personal and household goods	0		45
49	72	Computer and related activities	221		1.456
50	73	Research and development	85		249
51	74	Other business activities	4.744		7.525
52	75	Public administration and defence; compulsory social security	81		9.542
53	80	Education	1.102		909
54	85	Health and social work	643		1.621
55	90	Sewage and refuse disposal, sanitation and similar activities	143		87
56	91	Activities of membership organisation n.e.c.	8		256
57	92	Recreational, cultural and sporting activities	604		650
58	93	Other service activities	9		412
59	95	Private households with employed persons	0		0
60	99	Extra-territorial organisations and bodies	0		0
		Total	403.027	Total	71.961
		Imports c.i.f.	1.363	Final consumption expenditure by households	327.873
		Total supply at basic prices	404.390	Final consumption expenditure by non profits	0
		Trade and transport margins	0	Final consumption expenditure by government	2.283
		Taxes on products	4.145	Gross fixed capital formation	5.497
		Subsidies on products (minus)		Changes in inventories	
		Total supply at purchasers' prices	408.535	Exports f.o.b.	921
				Total final use	336.574
				Total use	408.535

Table 3: Balance of real estate activities Slovenia 2000, in mio sit at current prices.
Source: Statistical Office of the Republic of Slovenia (2003)

CPA P60			Real estate activities (#70 of NACE A60) column of supply table at basic prices, including transformation into purchasers' prices, Slovenia 2000, current prices, mio sit	Column of use table at purchasers' prices, Slovenia 2000, current prices, mio sit
1	1	Products of agriculture, hunting and related services	0	1.051
2	2	Products of forestry, logging and related services	0	0
3	5	Fish and other fishing products, services incidental to fishing	0	42
4	10	Coal and lignite; peat	0	0
5	11	Crude petroleum and natural gas; services incidental to oil and gas extraction excluding surveying	0	382
6	12	Uranium and thorium ores	0	0
7	13	Metal ores	0	0
8	14	Other mining and quarrying products	0	12
9	15	Food products and beverages	0	3.596
10	16	Tobacco products	0	243
11	17	Textiles	0	1.386
12	18	Wearing apparel; furs	0	40
13	19	Leather and leather products	0	298
14	20	Wood and products of wood and cork (except furniture), articles of straw and plaiting materials	0	153
15	21	Pulp, paper and paper products	0	557
16	22	Printed matter and recorded media	0	1.755
17	23	Coke, refined petroleum products and nuclear fuel	0	3.611
18	24	Chemicals, chemical products and man-made fibres	0	482
19	25	Rubber and plastic products	0	311
20	26	Other non-metallic mineral products	0	1.128
21	27	Basic metals	0	175
22	28	Fabricated metal products, except machinery and equipment	0	1.705
23	29	Machinery and equipment n.e.c.	0	1.173
24	30	Office machinery and computers	0	214

25	31	Electrical machinery and apparatus n.e.c.	0	63
26	32	Radio, television and communication equipment and apparatus	0	3
27	33	Medical, precision and optical instruments, watches and clocks	0	13
28	34	Motor vehicles, trailers and semi-trailers	0	245
29	35	Other transport equipment	0	131
30	36	Furniture; other manufactured goods n.e.c.	0	70
31	37	Recovered secondary raw materials	0	6
32	40	Electrical energy, gas, steam and hot water	0	2.498
33	41	Collected and purified water, distribution services of water	0	192
34	45	Construction work	315	15.919
35	50	Trade, maintenance and repair services of motor vehicles and motorcycles; retail trade services of automotive fuel	0	340
36	51	Wholesale trade and commission trade services, except of motor vehicles and motorcycles	0	198
37	52	Retail trade services, except of motor vehicles and motorcycles; repair services of personal and household goods	1.767	203
38	55	Hotel and restaurant services	427	2.234
39	60	Land transport and transport via pipeline services	26	242
40	61	Water transport services	0	1
41	62	Air transport services	0	1
42	63	Supporting and auxiliary transport services; travel agency services	35	20
43	64	Post and telecommunication services	281	2.997
44	65	Financial intermediation services, except insurance and pension funding services	81	1.658
45	66	Insurance and pension funding services, except compulsory social security services	0	910
46	67	Services auxiliary to financial intermediation	19	299
47	70	Real estate services	361.547	2.149
48	71	Renting services of machinery and equipment without operator and of personal and household goods	0	108
49	72	Computer and related services	6	1.395

50	73	Research and development services	0		75
51	74	Other business services	691		13.440
52	75	Public administration and defence services; compulsory social security services	0		372
53	80	Education services	0		707
54	85	Health and social work services	0		423
55	90	Sewage and refuse disposal services, sanitation and similar services	0		1.382
56	91	Membership organisation services n.e.c.	0		93
57	92	Recreational, cultural and sporting services	0		563
58	93	Other services	55		291
59	95	Private households with employed persons	0		0
60	99	Services provided by extra-territorial organisations and bodies	0		0
		Total activity	365.251	Total intermediate consumption	67.557
				Compensation of employees	7.357
				Other net taxes on production	4.261
				Consumption of fixed capital	124.546
				Operating surplus, net	161.530
				Total value added at basic prices	297.694
				Total output at basic prices	365.251