ECONOMICS
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METHODIC OF ESTATE VALUATION IN POLAND[1] – ACTUAL STATUS

ABSTRACT. The paper analyses methodic of estate valuation in Poland. Author discusses types of values, aims of valuation and valuation procedures.

Introduction

Transition of Polish economy form centrally run to market system resulted in growing importance of various assets pricing, including real estate valuation. Need for asset pricing stems either from legal regulations or risk optimization. This refers to capital market, private and public sector assets management.

Real estate appraisal is defined as an "activity as a result of which one can assess value of estate". Such procedure is conducted by qualified valuer [2], and prepared opinion is called valuation survey. More over such surveyor may prepare other documents not being valuation survey which are opinions about:

- Opinions about estate market, advisory analysis.
- Assessment of estate investments and their development.
- Financial effects of issuing or changing spatial plans.
- Defining subject of independent dwelling property.
- Bank and mortgage lending value.
- Assessing estate value for transaction conducted by individual investor.
- Valuation of estate interpreted as investment according to regulations form Accounting Bill.
- Valuation of estate (fixed assets) according to regulations form Accounting Bill.

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[1] Paper analyses regulations effective on 31 January 2010 r.
[2] Qualified valuer is a person possessing qualification as listed in Real estate management Bill (ustawa o gospodarce nieruchomościami art. 191 – 197).

Crucial condition for pricing is employment of proper valuation techniques and procedures.

The paper presents definition and types of estate value and presents actual valuation methodic (used in Poland). Due to a limited size, analysis includes only basic assumptions and core of used methods.

Types of estate values

Term value is very common in science. Economic value is linked with goods (a set of properties of good) which posses:

- utility;
- rarity;
- availability.

In Economics there are two attitudes towards sources of value: production based and exchange based. Considering production attitude one can define value as production costs input. Cost is not interpreted in its past value (how big was input) but in category of replacement value (what input has to be made in order replace chosen good) and is described by cost of used production factors land, labor and capital.[3]

Production based value theory doesn't include market situation; relationships between demand and supply (quantity of goods which producers wants to sell and quantity of goods consumers want to buy at given price).

Market value is result of relationships between demand and supply. It is set by agents' behavior. Good which value is described by replacement cost in production may have either higher or lower market value. Such difference stems from relationships between demand and supply. In market economy value most commonly depends on demand-supply relationship. Economic value is measured by price, however price not always equals to value. This are two different categories. In case of real estate differences between price and value may stem:

- changes of demand and supply in selected market on chosen territory;
- non rational behavior of buyers and sellers;
- ability of agents to negotiate;
- turnover form;
- transaction conditions;
- legal regulations of estate turnover, especially in case of public estate.

Economic value in case of estate can be:

- usable value – defined as extent to which estate suits needs;
- transaction value – value in comparison to other goods;
- rental value – defined by yearly rent;
- replacement value – defined as cost of replacement minus depreciation value;
- market value–widely discussed in the paper;
- Mortgage lending value – defined on the basis of mortgage Bill (Ustawy o listach zastawnych i bankach hipotecznych[4]). Should be assessed on the basis of credit risk Above-mentioned value refers to long run pricing. That implies that its assessment should be very careful and should omit temporary disturbances;
- Estate tax value – Estimated for taxation purposes. Estimated value is a basis for estate tax . Presently, in Poland such tax is calculated on the basis of estates' space (per m^2), except tax on structure;

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[3] E. Kucharska-Stasiak, Nieruchomość a rynek, PWN, Warszawa 2005 r. s. 104
[4] Ustawa o listach zastawnych i bankach hipotecznych (tekst jednolity Dz. U. 2003 r., Nr 99, poz. 91)

- Fair value– stems from definition listed in Accounting Bill (Ustawy z dnia 29 września 1994 r. o rachunkowości)[5], and International Accounting Standards. Fair value is the amount for which an asset could be exchanged or liability settled, between knowledgeable, willing parties in an arm's-length trans action "(International Accounting Standards Board (IASB), International Accounting Standard"[6];
- Insurable value – calculated on the basis of replacement cost in case of buildings;
- Investment value or worth (or individual value) – value that depicts profits for particular investor. Valuation of such category bases on the investor's requirements or plans. i.e. possible rent, operational expenditure, financing of estate or management.

One can state that are many definitions of value used in valuation procedure both in theory and practice. More over there are differences among various countries stemming from estate market development. As a result trends aimed at unification of such definitions can be observed[7].

The definition of market value adopted in Poland (effective 01.06.2009) bases on recommendations of International Valuation Standards (IVS), European Valuation Standards (EVS) and EU directives .

According to 1.2 KSWP1 (Krajowego Standardu Wyceny Podstawowej Nr 1) „market value is amount for which property on market should exchange if market value criterions are meet"

Market value (p 3.1. KSWP1) is an estimated amount for which property should exchange on the date of valuation if willing buyer and seller in arm's length transaction acted without compulsion, knowledgeably, and estate was properly marketed.

The above mentioned definition is compliant to market value stated in International Valuation Standard 1. – „Market value as a base for valuation " (MSW1) and in European Valuation Standard „market value" (ESW1).

The detailed interpretation of definition is presented below[8].

„Estimated amount" – price expressed in terms of money (normally in the local currency), payable   for the property in an arm's length market transaction. Amount do not include special terms and circumstances (I.e bidding price in public tender).

Statement **„on the date of valuation"** means that estimated Market Value is time-specific to a given date. The valuation amount will reflect the actual market state and circumstances at the effective valuation date.

Term **„amount…should exchange"** means that estate's value equals to price on Day of valuation. This don not refer effectively paid or assumed price. **„Willing buyer and seller"** - buyer and seller are both interested in paying and receive market value for estate. **„On the arm length transaction"** - this implies that are no relationships between buyer and seller (such as parent and subsidiary companies) that can result in price level uncharacteristic of the market or make it inflated. **„Without compulsion"** „knowledgably and prudently" - This Assumption implies that no party of trans action is not forced to conduct it. Moreover both buyer and seller are fully informed about circumstances influencing value of estate, its actual and potential uses and state of the a market at the date of valuation. Statement**„ properly marketed"** means that   property would be exposed to the market in the most

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[5] Ustawa z dnia 29.09.1994 r. o rachunkowości (tekst jednolity, Dz. U. 2002 r., Nr 76, poz. 694)
[6] J. Konowalczuk, Wycena nieruchomości przedsiębiorstw, wyd. C. H. Beck, Warszawa 2009, s. 198
[7] European Valuation Standards 2009 TeGoVa, International Valuation Standards 2007, IV SC
[8] definitions are fully explained on: EUROPEAN VALUATION STANDARDS 2009 SIXTH EDITION,TEGoVA

appropriate manner to effect its disposal at the best price reasonably achievable in accordance with the Market Value definition.

Defining market value as a most probable price means that most efficient utilization of estate should be considered. Assuming such attitude is crucial for defining term "market value". Estimating market value one can assume that way of its utilization is possible, law abiding, economically viable and results in highest estate's value.

Purpose of estate valuation

Simultaneously with development of market economy number of circumstances in which estates are to be valued (either mandatory or non-mandatory) is rising. The need for valuation may stem from various reasons; social, legal and economic.

According to real estate management Bill (ustawa o gospodarce nieruchomościami z dnia 21.08 1997[9]) mandatory valuation is required especially in listed below circumstances:

- In the turnover of public estate (both in case of State Treasury and local authorities),
- In case of acquiring estate for public purposes,
- In case of estimation of compensation for expropriation,
- In estimation adjacent fees(fees paid in case of partition or unification, increase of value and if gmina is developing technical infrastructure),
- In case of right of primogeniture of an estate,
- In case of reimbursement of expropriated estate,
- In case of updating perpetual use fees and permanent administration of estate,
- In case of divesting or limiting right on property.

Cited bill presents longest list of circumstances in which valuation is mandatory. One has to mention that abovementioned circumstances are not only examples of valuation requirement Considering field of analysis conducted in the paper one can list more such circumstances:

- Transfer of property rights (sale, leasing),
- Estimation of contribution to legal person,
- Securing liabilities of creditor, estimation of planner fee (increase of value stemming from issuing or changing spatial plan),
- Property partition, inheritance matters,
- Insuring estate,
- Financial statement requirements,
- Estimation of compensation in case of asset damages,
- Estimation of tax dues,
- Estimation of various types of compensations linked with easement.

Estate valuation due to its functions in economy (information and advisory, decision making ,negotiations) globalization and development of estate market is a crucial element for effective decision making.

Methodic of valuation

Methods of valuation used in Poland were defined in REMB (Ustawa z dnia 21 sierpnia 1997r. o gospodarce nieruchomościami (tekst jednolity: Dz.U.2004r., Nr 261, poz. 2603) i Rozporządzenie Rady Ministrów z dnia 21 września 2004 roku w sprawie wyceny nieruchomości i sporządzania operatu szacunkowego (Dz. U. 2004 r., Nr 207, poz. 2109))[10].

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[9] Ustawa dnia 21 sierpnia 1997 r. o gospodarce nieruchomościami, Dz. U. 2004 r., Nr 261, poz. 2603 (zwana dalej u.o.g.n.)
[10] Rozporządzenie Rady Ministrów z dnia 21 września 2004 r.

According to this act there are selected attitude with separate methods, while detailed procedures of valuation are called techniques. According to art.150 . 1 of cited Bill valuation is aimed at estimation market value replacement value and other types of value listed in other regulations and value for taxation purposes.

The after mentioned regulation bases theoretical basis which should be considered in valuation procedure.

Table 1.Attitudes, methods and techniques of estate's valuation

Type of attitude, method and technique , Type of estimated value	Attitude	Method	Technique
Market value	Income	Investment	Simple capitalization
			Discount
		Profits	Simple capitalization
			Discount
	Comparative	Bi+comparison	Do no exist
		Average price correction	
		Market's statistical analysis	
	Mixed (conditionally)	Remainings	Do no exist
		Liquidation	Detailed
			Indicator
		Estimated parcel value	Do not exist
Replacement Value	Cost	Replacement costs	Detailed
			Joint elements
			Indicators
		Reconstruction cost	Detailed
			Joint elements
			Indicators
Other than market value	Attitudes, methods I and techniques used for market or replacement value estimation		

Source: Own on the basis of Rozporządzenia Rady Ministrów z dnia 21 września 2004 r. w sprawie wyceny nieruchomości i sporządzania operatu szacunkowego (Dz. U. 2004 r., Nr 207, poz. 2109)

Used attitudes, methods and techniques of valuation should:
- Assure unbiaised market assessment,
- Follow expectations about changes of factors influencing value,

- Follow existing market situation and take into consideration specific properties of estate as good,
- Assume that buyers and sellers behave rationally when price is set, and take into consideration information abut prices of comparable estate ,
- Take into account cost linked with investment in other estate market branches (different from branch of valued estate) or other types of investment,
- Consider equality rule between estate elements (parcel-building; price-income),
- Take into account marginal effectively rule In case of investment in estate (i.e. building), which implies that cost input not always results in higher value,
- Take into account additional income rule, which bases on production factor theory, which implies that additional income, after paying for production factors comes from land,
- Take into account optimal use of estate in the context of environment,
- Take into account both negative and positive influence of environment on estate's value.[11]

Comparative attitude – Assumption

According to legal regulations, one should assume that value of estate equals to amount for another comparable estate being subject to market turnover.

Employment of comparison attitude requires knowledge about prices of comparable estate and properties of such estates influencing price level. One can assume that in order to use comparison attitude properties of market branch should be known which implies that estate taken into comparison should be similar to valued estate if legal status, location, design are comparable.

Comparative attitude bases on Three methods' pair comparison, average price correction and market statistical analysis. First of above mentioned methods can be applied when transactions involving comparable estate are not numerous. Average price correction method can be used in case of at least a dozen transactions involving comparable estate were observed. Market statistical analysis can be used in mass transactions. Pair comparison methods assumes comparing valued estate with at least two very similar estates which were subject to market turnover and with known prices. In this case period not longer than two years prior to valuation date can be considered. Moreover such valuation should be subject to update (in order to include changes of comparable estate prices).

Average price correction assumes analysis of at least dozen transactions involving similar estates which were subject to market turnover and with known prices, conditions of sale and properties influencing price of comparable estate. Valuation of appraised estate bases on the average price adjustment using correction coefficients (which include different properties of compared estate).

Market statistical analysis is used in mass valuation procedure i.e. for taxation purposes. This methods assumes set of prices for representative estates. Such Value is estimated on the basis of transaction prices for Chosen gmina, and if there is no data price comes from neighboring gminas.

Estate's value is calculated using statistical methods. On has to notify that that there are many controversies linked with using his method for valuation of single, so it is more suitable to general analysis of estate market i.e. business cycles analysis or relationships between chosen sectors of market.

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[11] Wycena nieruchomości; Polska Federacja Stowarzyszeń Rzeczoznawców majątkowych, Warszawa 2000, s.55-65

Income attitude-assumptions

The main element of income attitude is gathering data about income or possible income (rent and non rental income) that can be obtained from valuated or similar to valuated estate. This attitude employs two methods: investment and profit. Investment assumes that estimated value depends on possible rental income. If such income cannot be estimated, profits are interpreted as share of estate's owner in business run on the estate (profits method).

Methods use in the income attitude are two techniques: compound interests(net or gross) and residual value. First method is used when estate's is able to generate income. The second technique is used if incomes generated by estate changes over time. Value of estate in the income attitude is defined as value if right to incomes from infinite period. Value is estimated using compound interest (net or gross) jest is estimated by multiplying achievable payments from valued estate by capitalization coefficient or by achievable yearly income by capitalization rate. This allows to calculate market value:

$$W_R = D \times W_k \quad \text{or} \quad W_R = \frac{D}{R}$$

where:

W_R – market value,
D – income form estate,
R – capitalization rate,
W_k – capitalization coefficient.

Income, capitalization ration or coefficient for market sector for valued estate. This indicators can be either gross or net, while commensuracy principle should be abided.

Value of estate in income attitude calculated on the basis of series of discounted future payments, comprises of residual value and discounted payments (But such calculation is conducted for so called forecast period. Residual value (RV) is a value of estate after end of period over which payments were discounted. Value is calculated using formula :

$$W_R = D_1 \times \frac{1}{(1+r)^1} + D_2 \times \frac{1}{(1+r)^2} + \dots + D_n \times \frac{1}{(1+r)^n} + RV \times \frac{1}{(1+r)^n}$$

where :

D_n – forecasted income at end of each year,
r – discount ratio,
RV – residual value.

Assuming incomes attitude one Has to notify that in such circumstances especially important is proper estimation of:

- Market rate of return (capitalization ratio and discount ratio),
- Operation expenditure (required in order to achieve profits form estate),
- Possible loses of income caused by uninhabited house and not reliable leasers.

Cost attitude – assumptions

Main assumption of cost attitude is fact that potential buyer will not be interested in buying estate for amount higher that replacement cost of estate.

Cost attitude is used for estimation replacement value. Replacement value equals to replacement cost deducted depreciation. This attitude assume independent valuation of parcel purchase and replacement of its elements (i.e. buildings).

Cost of purchase is assumed to be equal value of another estate with similar properties, while replacement cost for estate's elements equals to amount of money required to replace such elements (depreciation should be considered). Replacement value can be calculated using formula:

$$W_o = W_{rg} + K_o \; x \; (1 - \tfrac{S_z}{100})$$

where:

W_o – estate's replacement value,

W_{rg} – parcel value,

K_o – buildings' replacement cost,

S_z – buildings depreciation.

Cost attitude employs methods:

- Reconstruction cost. This method assumes reconstruction of valued building using same (or very similar) technology, materials, design , supervision cost.
- Replacement cost. Value of cost input required in order to build similar building using actual technology, materials, supervision cost etc.

There are two techniques used in cost attitude:

- Detailed technique - in order to estimate replacement a should calculate construction work input, blueprints and supervision.

The cost can be estimated using such technique :

$$K_o = \sum J_i \; x \; C_{ji} \, x \, (1 + W_{KD})$$

where:

K_o – Reconstruction cost,

J_i – type of work,

C_{ji} – price per unit of work,

W_{KD} – documentation, blueprint and supervision cost.

- Joint elements technique - bases on joint elements, using joint elements catalogs,
- Indicator technique - such technique bases on estimation of replacement cost by multiplying price indicator by number of base units for which it was calculated. Base unit are aggregate i.e. $1m^2$ of space, $1m^3$ or 1 meter. Indicative price is estimated on the actual process in the construction or on the basis of price catalogs.

Replacement value is calculated using formula:

$$K_o = Q \; x \; C_{jq} \, x \, (1 + W_{KD})$$

where:

K_o – Building's replacement cost,

Q – number of base units,

C_{jq} – indicative price,

W_{KD} – documentation, blueprint and supervision cost.

Mixed attitude – assumption

Methods used in mixed attitude are compilation of methods comparable, income and cost attitude. Mixed attitude is used for valuation of estate being subject to development

resulting in increased value. Such activities are building, renovation, decorating or other improvements.

Market value is estimated as a difference between price of estate after upgrade and average cost of construction work required for such upgrade (one should consider incomes form comparable estate).

$$W_P = W_N - (K + Z)$$

where :

W_P – pre upgrade value at a day of valuation,
W_N – value after upgrade,
$(K + Z)$ – upgrade cost and investor's profit .

If one has to estimate share of building in the whole estate value, formula is given by:

$$W_B = W_N - W_G - (K + Z)$$

where:

W_B – building's value,
W_G – parcel's value,
Value of upgraded estate can be estimated using income, comparative or cost attitude. The after mentioned method is called remain method. The next method used in the attitude is a liquidation cost method (till 2004 it was element of cost attitude).

Value of estate estimated using such method equals to purchase of parcel (value of comparable parcel is considered) deducted liquidation cost of existing elements of parcel. Value is raised by leftovers form liquidated elements.

Value of developed estate with elements to be removed is calculated using formula:

$$W_N = W_G + \sum W_{mi} \; x \; \left(1 - \frac{S_{zm}}{100}\right) - K_{roz}$$

where:

W_N – value of valued estate,
W_G – market value of estate,
W_{mi} – value of remains,
I – number of Chosen parcel,
$\left(1 - \frac{S_{zm}}{100}\right)$ - Coefficient of material requirements,
K_{roz} – cost of demolition.

Method of estimated parcel indicators i the lat method analyzed in the paper. It is used in valuation of farmland or forest which are not subject to market turnover. Value of agricultures parcel is calculated by multiplication of estimated indicator per 1 hectare of land and 1ha 1 deciton of rye grain or price per 1 m^3 of wood. Estimated indicators for parcel, depending on class of soil, habitat type and taxation region are listed in the appendix to Cited legal acts .

Conclusions

Estate's valuation is a as complex problem as subject of valuation. Valuation is conducted using proper rules and procedures. Methodic used in Poland Has some differences

in comparison to international standards. However one can notify gradual unification together with globalization is considered.

References

1. European Valuation Standards 2009 TeGoVa, International Valuation Standards 2007, IV SC
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