

**OWNERSHIP AND PERPETUAL USUFRUCT
IN THE VALUATION OF UNDEVELOPED REAL PROPERTY
ON THE EXAMPLE OF PARALLEL MARKETS**

Iwona Foryś, Ph.D., Associate Professor

*University of Szczecin
Faculty of Economics and Management
Institute of Econometrics and Statistics
Mickiewicza 64, 71-101 Szczecin, Poland
e-mail: iwona.forys@usz.edu.pl*

Radosław Gaca, Ph.D. Eng.

*Independent researcher
e-mail: radoslaw.gaca@gmail.com*

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Abstract

The paper presents an analysis of the trade in undeveloped real property in two cases: the ownership title and perpetual usufruct. The aim was to find the relation between the values of these rights in parallel markets, which allows to evaluate a better type of right to the property with a worse one. Such a solution is justified when the data is lacking in the local market. The solution is also frequently encountered in the practice of a property appraiser (Dobek, Suchoń, Wajszczuk, Wielicki, 2009). In the empirical study, the information used concerned the transactions concluded between the years of 2013–2015 in two surveying precincts in Bydgoszcz district. In both cases, two different rights to property were traded, however, their percentage share in the total number of transactions was significantly different. It enabled to determine a correction factor for both types of rights to property. The analyses were preceded by the examination of concluded agreements, in particular, the characteristics of the traded real properties.

Keywords: real property market, property valuation, rights to real property

JEL classification: R31

Introduction

The process of the real property valuation requires that a property appraiser should select similar real properties from a local market. The aforementioned similarity is defined in the Real Property Management Act (art. 4.6 of the Real Property Management Act), according to which a similar real property is to be understood as a real property that is comparable to the real property constituting the subject of the valuation, on account of the detailed range of the properties of such real properties: location, legal status, property designation, and the manner of use, but also other features affecting a real property value. Out of the above-listed catalogue of properties, a legal status needs to be stressed, which the legislator (art. 4.17 of the Real Property Management Act) additionally emphasises in a real property description, which includes both real property development status, technical and functional status, as well as the degree of fit-out with technical infrastructure devices, and the condition of real property surroundings, including:

- size,
- nature, and
- the degree of urbanisation

of the place where a given real property is located.

From the invoked regulations, it arises that a property appraiser, ought to, in principle, seek similar real properties among the properties subject to the same rights in property, and to concentrate on selecting the real properties from the area that satisfies the criteria of the local market (Gaca, 2016).

However, there are situations in the market when the appraised type of right to the property is very rarely traded, and, on those occasions, one needs to choose the transactions concluded on other, not always neighbouring, markets. Extending the market outside of the place in which the appraised real property is located, is allowed under a secondary legislation to the Real Property Management Act (*Order of the Council of Ministers of 21 September 2004 on real property valuation*). In a local market, when appraising the value of real properties, which owing to their individual characteristics and type are not traded, one can adopt transactional prices obtained for similar real properties in regional, national, and even international markets (Foryš, 2014). The competences of selecting a market type and area were left to a real property appraisal, who is guided by the subject matter, scope, purpose, and manner of evaluation as well as data availability when defining a market scope or the selection of parallel markets (Foryš, 2010).

The purpose of the study is to determine a relation between a market value of an ownership title and a perpetual usufruct title to undeveloped land in two parallel markets, which enables

valuating a title not traded in one of them. The information included in real property sales agreements (notarial deeds) in two separate surveying precincts of Bydgoszcz district, located in the close vicinity of Bydgoszcz, were used for the analysis. The results of the conducted research aim to confirm the legitimacy of applying a correction factor to the valuation of real properties that are not frequently traded in a local market.

1. Ownership title and the perpetual usufruct of land property in property valuation in conditions of low local market activity

The ownership title and the right of perpetual usufruct (RPU) open a catalogue of property rights in real property. A freehold ownership title is the highest, temporally unlimited ownership interest in property. It can be disposed of, transferred, inherited, and it can be encumbered with other rights. The disposal of a real property by the owner is only restricted by the principles of social coexistence and certain regulations of the law. Perpetual usufruct is a title similar to the ownership. It is also disposable, transferable, and inheritable, and it can be encumbered with other rights. From the point of view of the title owner, it differs from the freehold ownership title by the temporary right of possessing the property, and the need to pay annual fees and an initial fee. Since perpetual usufruct can be granted for a period from 40 to 99 years, after the period for which RPU has been granted, it expires. It may be extended for subsequent years. A land owner (a municipality or the State Treasury) may impose the period and terms of land development onto the person who acquires the right of perpetual usufruct, and a failure to satisfy such terms may result in sanctions: an increased annual fee for a failure to develop the land within the set time limit, dissolution of the perpetual usufruct agreement, and a demand to return a given real property (Dydenko, Hernik, Kijania, 2004). It is such situations that require the right of perpetual usufruct to be appraised.

For the purpose of determining the price of the undeveloped land property released into perpetual usufruct, and updating fees payable on that account, its market value as the subject of such a title is determined (Foryś, 2012), (Foryś, Gaca, 2016). To that aim, the sales transaction prices of undeveloped properties as the subject of such a title are used for comparison (Foryś, 2015). In such a valuation procedure, there are three methods of obtaining data for the comparison of the undeveloped land.

If titles to the undeveloped land are traded in the local market, a set of such prices is used as the basis for valuation. However, if in the local real property market (A) there are no transactions involving the ownership titles to the undeveloped properties, but there are

transactions involving the right of perpetual usufruct to such real properties, a similar market is then sought in terms of its size, nature, and urbanisation degree, in which the ownership titles and rights of perpetual usufruct of such undeveloped properties are traded (B). In such circumstances the following relation is determined:

$$C_A \text{ ownership}/C_A \text{ RPU} = C_B \text{ ownership}/C_B \text{ RPU}$$

from which C_A ownership title price in the valued A market is calculated.

In particular situations, in which in the local market only the right of perpetual usufruct is traded, and at the same time the information from parallel markets is lacking, then the value of the right of perpetual usufruct is determined as a quotient of the ownership title value and of the correction factor (w_k)

$$W_{uw} = W_w \times w_k,$$

where:

W_{uw} – the value of the real property as the right of perpetual usufruct,

W_w – the value of the real property as the subject of an ownership title, and

w_k – a correction factor defined by the following formula:

$$w_k = \left(1 - \frac{S_r}{R}\right) \times \frac{t}{T} + 0.25 \times \frac{T-t}{T},$$

where:

S_r – an annual fee rate, not higher than 3%,

R – an average capitalisation rate is determined on the basis of a real property market analysis by a property appraiser, not lower than 0.09 and not higher than 0.12,

t – the number of years of the unused period of perpetual usufruct, and

T – the number of years for which perpetual usufruct was granted.

Since it is a formula devised in the Real Property Management Act for a particular situation of settlements between parties, for instance in the case of perpetual usufruct agreement being dissolved (Art. 33.2 of the Real Property Management Act), or for determining a fee for transforming perpetual usufruct into the ownership title (Art. 69 of the Real Property Management Act), therefore, the application of the above formula and the valuation method requires a detailed substantiation to be provided by a property appraiser in an appraisal report (Witczak, 2005).

2. Empirical analysis of the correction factor of the value of the ownership title and perpetual usufruct

Two local real property markets in Bydgoszcz district were selected for the study: Murowaniec precincts in Białe Błota municipality and the Town of Koronowo. They feature single-family houses, while in Koronowo precincts, in the case of undeveloped land, the main trade predominantly involves ownership titles. This makes it necessary to reach for the transactions from the parallel markets in the situation of the insufficient number of transactions involving this form of the right to property, while in the other precincts, both types of the rights to property are traded, which allows to determine for those precincts a correction factor that measures the relation of the market price of the ownership title and of perpetual usufruct.

In both markets, the analysis concerned the transactions of undeveloped land designated for low-rise residential houses, which took place in the period from 2013 to 2015. In Koronowo precincts, 8 transactions involving perpetual usufruct were recorded in that period, as well as 61 transactions in the ownership titles, whereas in Murowaniec precincts, there were 24 transactions involving perpetual usufruct and 24 transactions in the ownership titles, which were described with the use of the following variables:

- a transaction date (dd–mm–yyyy),
- location in the precincts,
- type of acquired right (ownership, perpetual usufruct),
- total price (PLN),
- land area (m²), and
- a unit price (PLN/m²).

The analysis of the relations between the prices of the individual types of rights is preceded by the verification of their change over time, which would require a property appraiser to update the transaction prices for the time when the valuation is conducted. In the case of Koronowo precincts, a majority of the transaction prices oscillated within the range of 40–100 PLN/m² (Figure 1).

In the course of the entire analysed period, the amplitude of the price fluctuations in the specified range was close, however, no distinct growth trend or a decline trend of the prices emerged, which would suggest the need for their adjustment. Similarly, in the case of Murowaniec precincts, the price fluctuations encompass a similar range of 40–100 PLN/m² (Figure 2), and they do not indicate any need for their valorisation. Only in 2015, a greater concentration of the prices in the range of 40–65 PLN/m² could be observed, but, in that period, only one transaction

involved the right of perpetual usufruct, while the remaining ones concerned the ownership titles. The transaction prices in the specified area did not exceed 100 PLN/m².

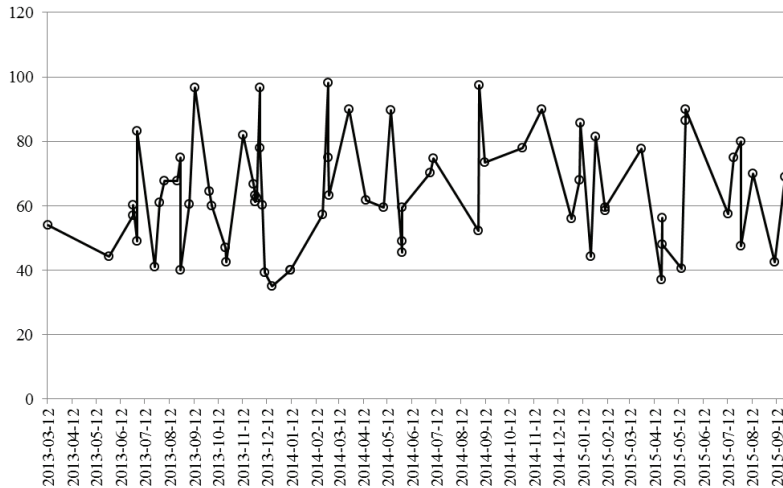


Figure 1. Dynamics of the transaction prices of undeveloped land in the years of 2013–2015 in Koronowo precincts (PLN/m²)

Source: authors' own work.

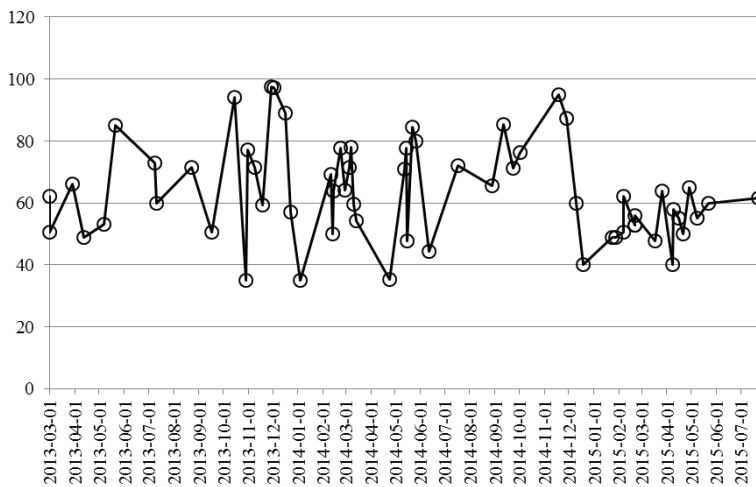


Figure 2. Dynamics of the transaction prices of undeveloped land in the years of 2013–2015 in Murowaniec precincts (PLN/m²)

Source: authors' own work.

For both types of rights to property, the distribution of the basic analysed variables (price per 1 m² and land area) are slightly asymmetric, which is indicated by the asymmetry factor (Table 1). A slight symmetry allows to assume average values for further calculation. An average value of the right of perpetual usufruct in Koronowo precincts amounted to 60.88 PLN/m², while that of the ownership title was 64.27 PLN/m².

In the second of the analysed precincts of Murowaniec, an average value of perpetual usufruct amounted to 56.59 PLN/m², while that of the ownership title was 67.98 PLN/m². The average area of the traded land plots in Koronowo precincts was lower in the case of the perpetual usufruct transactions (705 m²), and higher for the ownership titles (992 m²). The situation was reversed in Murowaniec precincts, where the larger land plots that were traded involved perpetual usufruct (1,138 m²), and the smaller plots involved the ownership titles (966 m²). However, in both precincts, the land plots sold for residential houses did not exceed the surface of 1,886 m².

Table 1. Descriptive statistics of variables for the analysed precincts

Statistics	Koronowo				Murowaniec			
	perpetual usufruct		ownership		perpetual usufruct		ownership	
	Price PLN/m ²	Area m ²	Price PLN/m ²	Area m ²	Price PLN/m ²	Area m ²	Price PLN/m ²	Area m ²
Average	60.90	705.00	64.30	922.00	56.60	1,138.00	68.00	966.00
Standard error	5.30	48.70	2.20	32.60	2.40	57.20	2.70	38.80
Median	60.13	655.00	61.30	923.00	53.00	1,088.00	71.00	936.00
Standard deviation	14.95	137.80	17.30	254.41	11.63	280.10	16.61	238.90
Flatness	0.26	2.53	-0.87	2.05	2.82	0.96	-0.36	0.73
Asymmetry	-0.29	1.67	0.28	1.16	1.38	0.93	-0.21	0.80
Minimum	35.00	581.00	37.00	500.00	35.00	699.00	35.00	519.00
Maximum	83.00	997.00	98.00	1,768.00	89.00	1,886.00	97.00	1,608.00
Total	487.00	5,640.00	3,921.00	56,263.00	1,358.00	27,320.00	2,583.00	36,722.00
Numerator	8.00	8.00	61.00	61.00	24.00	24.00	38.00	38.00

Source: authors' own work.

The relation between the area of the sold land plots and the price for 1 m² in the case of perpetual usufruct is negative and significant (-0.72 in Koronowo precincts and -0.44 in Murowaniec precincts). In the case of the ownership titles of the real property, the relation is statistically insignificant in both analysed precincts, which also arises from the insufficient diversity of the area of the sold real property, i.e. greater homogeneity of the analysed structures.

Table 2 summarizes the values of the relation of perpetual usufruct and the ownership title of the land property for the analysed precincts, calculated on the basis of the formula:

$$w_r = W_{uw} / W_w,$$

where:

w_r – a relation factor,

W_{uw} – the value of the real property as the right of perpetual usufruct,

W_w – the value of the real property as the subject of the ownership title.

Table 2. The values of the relation of perpetual usufruct and the ownership title of the land property for the analysed precincts

Precincts	Average price of the right of perpetual usufruct (PLN/m ²)	Average price of ownership title (PLN/m ²)	Relation factor value
Murowaniec	56.59	67.98	0.832
Koronowo	60.88	64.27	0.947

Source: authors' own work.

In the case of Murowaniec precincts, the difference between the average prices of the ownership titles and of perpetual usufruct amounted to 17% (factor 0.832), whereas in Koronowo precincts it was merely 5.3% (factor 0.947). Only eight transactions involving the right of perpetual usufruct were recorded in Koronowo precincts, hence the result may raise some doubts. For that reason, one may attempt to use the relation between both types of rights to property from the parallel market, i.e. Murowaniec precincts, and appraise the average value of perpetual usufruct of the land in Koronowo precincts according to the following formula:

$$C_{uw} / C_{wl} (\text{Koronowo}) = C_{uw} / C_{wl} (\text{Murowaniec}),$$

where the calculated value of perpetual usufruct in Koronowo precincts is equal to:

$$C_{uw} / 64.27 = 0.832,$$

which eventually gives $C_{uw} = 53.47$ PLN/m². The calculated value is by 5.5% lower than the average value of the right of property determined on the grounds of the eight transactions involving perpetual usufruct, which took place in the precincts. It means that the use of the parallel market, which is more developed for the determination of the calculated value, is justified even in the situation when it would be possible to find the value on the basis of only several transactions involving a given type of right to property in the market proper, owing to the location of the appraised real property.

Conclusions

The conducted analysis confirms the justifiability of applying the relation factor from the parallel market in the situations when no transactions in the appraised type of right to property are traded in a local market. The stability of the obtained relation in the long-term also means that the direct application of real properties of various legal status for the purpose of comparison would decrease or respectively increase the appraised value. However, for the purpose of making generalizations, further analyses of other sets of parallel markets are necessary, which would enable finding a permanent relation between the values of both types of rights to property.

The acquired results can serve as a contribution to a further discussion on the diversification of the market value of both types of rights to property, as well as on the justification of applying the formula for the correction factor of the ownership titles into perpetual usufruct proposed in the Real Property Management Act.

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