

**Vladimír KULIL<sup>1</sup>**

## SPECIAL INFLUENCES AFFECTING THE PRICE OF REAL ESTATE

## ZVLÁŠTNÍ VLIVY PŮSOBÍCÍ NA CENU NEMOVITOSTÍ

**Abstract**

The subject matter of this thesis is a proposal for a method of valuation of special effects that may have impact on real estate prices. It deals with proposed procedures for valuation of intangible assets, and definitions of such property. Special effects are in particular name, historical value, design, quality of layout, security aspects, accessibility, conflict groups of inhabitants in or near the property, and location. The value of special effects can be calculated as the difference between usual and material value of such property without coefficients of merchantability.

**Keywords:**

Special influences, real estate prices, intangible assets, goodwill, badwill, coefficients of merchantability.

**Abstrakt**

Předmětem příspěvku je návrh způsobu ocenění zvláštních vlivů, které působí na cenu nemovitostí. Jedná se o návrh postupů pro praktické oceňování tohoto nehmotného majetku a jsou navrženy jeho definice. Zvláštními vlivy jsou zejména jméno, historická hodnota, design, kvalita dispozice, aspekty bezpečnosti, dostupnosti, přítomnosti konfliktních skupin obyvatelstva v nemovitosti nebo blízkém okolí a poloha. Hodnotu zvláštních vlivů lze vypočítat jako rozdíl mezi hodnotou obvyklou a věcnou hodnotou majetku bez koeficientů prodejnosti.

**Klíčová slova**

Zvláštní vlivy, ceny nemovitostí, nehmotný majetek, goodwill, badwill, koeficienty prodejnosti.

**SS INTRODUCTION**

The price of movable property, intangible assets and companies is, besides usual economic factors, affected by special influences. These influences also include so called genius loci (the special atmosphere of a place), they have no material substance and they can have considerable or decisive impact on the property price.

For pricing, clear methodology should be available to enable division of each property into material and intangible part. It has not been unequivocally determined yet.

The property price always comprises both material and intangible part. According to the philosopher René Descartes, the outside world consists of two substances, spirit (thinking) and matter. Thereafter the proposition holds true that what does not go through a person's mind, does not exist and has no value for him or her.

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<sup>1</sup> Ing. Vladimír Kulil, Institute of Pricing Property, Faculty of Economics, VSB-Technical University of Ostrava, Sokolska 33, 701 00 Ostrava, tel.: e-mail: vladimir.kulil@vsb.cz.

## **2 SURVEY OF THE PRESENT SITUATION CONCERNING THE ISSUES**

### **2.2 Terminology**

The definitions of the terms mentioned below are based on legal regulations and established practice as far as evaluation in the Czech Republic and all over the world is concerned. The terminology including the definition of market value (also general price, market price) and established price (also administrative price), which is defined by a valid pricing regulation derived from the definitions stated especially in the act on pricing property n. 151/1997 Coll. [7] and in the act on prices n. 526/1990 Coll. as amended [8].

### **2.2 Special influences**

Special influences which affect real estate prices can be defined as influences of intangible nature creating residue between market value (market price of a real estate) and time price of a real estate. If the difference is positive, it is a case of goodwill, if it is negative, it is a case badwill. There is no other intangible property in real estates.

On the basis of its nature, intangible property of goodwill and badwill kind can be divided into intangible property with material medium (e.g. a building of material substance incorporates architectonic quality – surplus value of intangible nature) and intangible property without material medium (e.g. good reputation of a building where an outstanding person lived).

### **2.3 The present knowledge of the issues**

There is a consensus in the way of pricing material part of property. Disunity and substantial lack of clarity can be found with intangible property, mainly with the item of the property of good reputation type (goodwill). This intangible property occurs with real estate, it is a case of the analysed special influences.

In German and Anglo-Saxon countries, itemization of special intangible influences depends on the specialist who defines and evaluates them himself or herself [1, s. 498 - 542]. In Great Britain, the fundamental document for pricing is so called Red Book (RICS), where the procedure is similar. The system of pricing of intangible assets in the USA, Canada, Hong Kong, Japan, China, Poland, Russia and western Europe [3, s. 130 - 361]. The situation in these areas is similar, pricing intangible assets is not determined by a definite list of items and no concrete unequivocal method is stipulated.

In Slovakia, intangible influences are part of Slovak pricing regulations [6] in the area of methods of positional differentiation. Up to 21 factors of intangible influences have been defined for buildings and 22 factors for land.

In the Czech Republic there is a system of pricing intangible assets according to pricing regulation for determining established price [7]. It is a high-quality elaborate system which is a principal support for pricing in the Czech Republic for market value as well [1, s. 585, s. 145-163]. The system has gradually been developed and improved since 1997 aiming at approximating established prices to market values in maximum extent.

Therefore in real estate at present, special intangible assets are partially considered while pricing intangible property, but incoherently and without mutual interconnection among cost, revenue and comparative methods.

Land is usual part of companies and real estate and without solving methodology for land property cannot be divided into the above mentioned categories. Dividing property into material and intangible part is not solved in available literature and in methodologies worldwide.

The methods suggested lower supplement in more detail methods for calculating special intangible influences for property pricing. It will enable dividing price into material and intangible part for calculation according to the Czech pricing regulations as well as for price common in the Czech Republic and abroad.

## 2.4 Historical context

Intangible property of goodwill type has been traded for centuries. The meaning of the term goodwill appeared in literature as early as 1571 in England, originally it was good will [4, s. 76-77]. Loose translation of this term – “well in the future” indicates its timelessness, the subject of pricing especially according to revenue value being the capitalization of future incomes from this intangible property.

Since 1990 are especially methodologies for pricing know-how, industrial law, advantageous contracts and trademarks [2, s. 393-411]. The value of good reputation and other special influences has not been solved up to now. Historical methodologies before 1900 do not have to be inquired into, they can be perceived as development methods whose principles were use for pricing by common (earlier called general) price from 1900 to 1948. In the period between 1949 a 1989 this property was not usually priced in market value in former Czechoslovakia, so the corresponding objective methodology from that time is not available either.

Property pricing methodologies from the period between 1900 and 1948 are exceptionally valuable for creating present methodologies. For experts and appraisers, earlier methodologies mean interconnection with historical theoretical development which spans forced interruption of continuity in the period from 1948 to 1989. For the Czechoslovak Republic territory, the period of pricing from the period between 1918 - 1948 includes Appraisal Codification [5, s. 151-162], government regulations on prohibition of increasing prices n. 175 from 1939 (so called stop price) [1, s. 441 - 450] as well as the methodologies of pricing all property for the purpose of war reparation recognized internationally for Europe; these methodologies are deposited in archives of central bodies of state administration, e.g. the Ministry of Foreign Affairs of the Czech Republic.

For pricing intangible property, special intangible influences were already considered at that time. Thus very thorough, surprisingly sophisticated and still very inspiring methodologies are available.

## 3 THE SUGGESTION OF THE SOLUTION PRESENTING NEW FINDINGS

### 3.1 Content of special influences

For further research it is necessary to specify, what is the subject of goodwill and badwill property. According to the author and the available literature, only the value of intangible advantages and disadvantages resulting from the property value and subsequent good or bad reputation of a company or real estate in accordance with § 24, par. 4 of the law on pricing property n. 151/1997 Coll.

According to the International Pricing Standards IVS [10, s. 417-418], goodwill or badwill in market value is the difference between market value of the property and summation of pricing individual cost items of the property. In real estate cost item is only time price.

### 3.2 The way of pricing special influences

For pricing goodwill and badwill in real estate, comparative, revenue and cost methods will be applied. In each method used, price will be modified with regard to direct special influences, i.e. good or bad reputation and other similar influences, which will affect the level of market value.

On the basis of these sources market value will be determined. Table n. shows the list of the suggested groups of influences

Goodwill (*GW*) or badwill (*BW*) amount will be the difference between market value (*MV*) and time price (*TP*) according to the relation:

$$GW (BW) = MV - TP. \quad (1)$$

Market value  $MV$  can be found by multiplying time price  $TP$  (reproduction price reduced by wear, alternatively material value) by merchantability coefficient  $MC$  according to the relation:

$$MV = TP \times MC, \quad (2)$$

$$MC = MV / TP. \quad (3)$$

Merchantability coefficient  $MC$  is defined as the ratio between average factual selling prices and average time prices of objects of comparable type in record time and place. If we take into account merchantability coefficient in the calculation, we in fact directly evaluate the level of special influences, i.e. intangible property (goodwill or badwill), because time price fully comprises material part of the property.

It follows that the level of the determined merchantability coefficient  $MC$  directly defines the amount of goodwill (badwill), and thus the rate of intangible property. This rule applies to all immovable and moveable property, for companies as well as for the property of public corporations. Goodwill is the difference between revenue price and time price only if revenue price is equivalent to market value.

Final evaluation of special influences will be carried out by summation of deductions and surcharges with conclusive justification. Only influences with really justifiable impact on real estate price can be taken into account. Percentage surcharge and deduction rates with the determined one hundred items of the suggested special influences must be considered both from the viewpoint of cost and especially from the viewpoint of market value – market value, i.e. influence on merchantability of a particular piece of real estate in real time and place, namely on the basis of responsible, professional appraisal by an expert and sensitive ethical approach including the principle of caution.

Material part of the property in real estate can be defined as the condition of land without human reallocation as a basis for its activities. It is only vegetation layer – soil for natural cover subject to protection and restriction for utilization by the state. The owner can only use the land, it is not a case of full ownership [1, s. 387 - 388]. Material part of the land price is of negligible value then, because it cannot be commonly traded. According to the mining law [9, §2], mineral resources are neither part of land nor part of its price. Land without vegetation layer have no material part. E.g. it is possible to mine bare rock, land remains, only its shape and altitude changes.

Land cannot be reproduced, there is no wear and thus no material value – time price. This holds true all over the world. Land price includes only intangible goodwill.

Intangible part of land price comprises both the influence of human activity, i.e. any rise or depreciation in value, and a person's view of land considering its favourableness for a particular use.

### **3.3 The proposal of supplementing the methodology for pricing influences for real estate by established price.**

At present, according to the Czech pricing regulation [7], merchantability coefficient  $C_m$  for takes goodwill and badwill into account mainly with respect to location established prices. In the cost method, there is 1 influence for real estate itself and 4 influences for the surroundings. For example the influence of floods is missing. There are about 30 influences for land. In the comparative method there are up to 35 influences and in the revenue method 10 special influences. An expert is also allowed to consider other influences which are not listed.

Using a more complex list of special influences seems to be beneficial and more precise as far as calculation is concerned for all types and methods of pricing. All influences cannot be covered in advance, the author suggests one hundred influences in ten groups to be used for buildings and land.

### **3.4 Cost pricing with merchantability coefficient $MV_{MC}$**

Standard cost methods and the established basic average merchantability coefficient  $C_m$  in the location according to market research will be applied in pricing. The stated basic merchantability coefficient will be determined for the standard of the average quality of intangible property in a particular place and time. The established basic  $C_m$  will also include the influence of location. For

real estate in the Czech Republic, current merchantability coefficients  $C_m$  ascertained according to the pricing regulations can be used as the average standard as well.

Basic  $C_m$  will be modified according to the following items comprising special influences by the corresponding percentage points. Using the resulting total  $MC$  after including all special effects will be properly justified. Percentage ranges are only recommended, they have been determined by an expert appraisal and with respect to the specified ranges according to the current as well as previous pricing regulations valid in the Czech Republic since 1997 [7]. Rates must be applied sensitively with the principle of caution depending on real demand in the market. The recommended rates are valid uniformly for all priced groups of buildings and land.

The suggested list of special influences and the recommended range of modifying  $MC$  compared to the average quality:

$$MV_{CM} = TP \times MC, \quad (4)$$

$$MC = C_m \times \left( 1 + \sum_{i=1}^{10} MC_i \% \times 0.01 \right). \quad (5)$$

If administrative merchantability coefficient  $C_m$  [7] is not determined or if it does not correspond to the average market price, it is determined by expert appraisal.

### 3.5 Revenue value $RV$

In revenue pricing, goodwill (badwill) will be priced by appropriate modification of the extent of capitation by means of adequate surcharge and deduction compared to the average standard of real estate quality. Identical correction of summation of influences according to the cost method is suggested, because the standard extent of capitation which is linked to the material part of property should be modified only by the aspects of nonmaterial property, namely in relation to the aspect of the degree of risk in the future connected with the property.

The extent of capitation  $P$  established for the calculation of revenue value will be modified by the identical percentage rate according to price influences (modification of risk surcharge) compared to real estate of standard nature with average extent of capitation  $k$  and average amount of profitability risk. Revenue value in general in calculation according to the formula for perpetual annuity is a quotient of net annual revenue  $NR$  and the extent of capitation  $P$  in percentage:

$$RV = NR / P\%, \quad (6)$$

$$P\% = k\% + 0.10 \times \left( \sum_{i=1}^{10} MC_i \% \right). \quad (7)$$

### 3.6 Comparative value $CV$

In comparative pricing, comparison will be made with the average real estate standard in relation to goodwill (badwill). Comparative value  $CV$  will be modified by the rate  $\pm \sum KPi$  compared to the real estate comparative value average  $Ph$  without these special influences. Using comparative indexes must be appropriately justified.

Identical influences and rates of individual groups of items from n. 1 to n. 10 will be used to compare with the compared real estate. If objects of adequate quality are available, it is also possible to use direct comparison in relation to other real estate considering the existing special influences:

$$PH = Ph \times \left( 1 + \sum_{i=1}^{10} MC_i \% \times 0.01 \right). \quad (8)$$

### 3.7 Market value

According to the above mentioned cost, revenue and comparative pricing, market value will be determined. The amount of special influences – goodwill or badwill – will be the difference between market value and cost price of the property without MV (time price TP).

The extent of detriment in connection with servitude will be calculated in a standard way e.g. by revenue method and subtracted from real estate market value. Maximum deduction is not determined.

## 4 APPLICATION OF METHODS – THE EXAMPLE OF CALCULATION FOR THE HOFFMANN HOTEL IN KLDNO



Fig. 1: The Hoffmann Hotel – front view

After general reconstruction and loft conversion, which was carried out between 1998–1999, the Hoffmann Hotel in Kladno is in excellent technical condition, the overall layout and furnishing is luxurious and elegant. The original building is from 1905, the extensions were added in 1928 and 1941. It is a brick four-floor historical hotel in Art Nouveau from world-famous, highly regarded Vienna architect Josef Hoffmann (1870 – 1956) according to the architectural design from 1903. The author is the co-founder of the architectural style Vienna Art Nouveau. The building is registered in the list of immovable cultural monuments of the Czech Republic. The land is without defects with a new garden restaurant and a small park. Safety and privacy are ensured as well as above standard architectonic and historical value.

Goodwill can be expressed for the cost method by increasing the merchantability coefficient MC by 18 % according to the rates in the following table n. 2 compared to the average in the locality. In revenue pricing, the revenue value will increase by means of decreasing the level of capitation by 18 % compared to standard hotel without specified goodwill. Market value will be determined from the above mentioned methods and according to the comparative method which will include surcharge by 18 % compared to average standard real estate. Real estate goodwill will be the difference between market value and cost price without MC (TP).



Fig. 2: The Hoffmann Hotel – the interior

Tab. 1: The appraisal of the price of special intangible influences

Number of influence	A. Intangible pricing influences by modifying $C_m$ per item	Recommended range %	Appraisal
1.	Favourableness of the location	(from -10% to +10%)	1
2.	Real estate name, prestigiousness, dominance	(from -10% to +10%)	4
3.	Historical value, cost of preservation of monuments	(from -10% to +10%)	4
4.	Architectonic rendering, the quality of disposition, view	(from -10% to +10%)	5
5.	Safety, users' privacy, conflict inhabitants in the surroundings	(from -70% to +10%)	2
6.	Danger of floods, landslides, damage from transport, bad smells, air pollution	(from -25% to 0%)	0
7.	Dangerous disposition and harmful material, radon	(from -10% to 0%)	0
8.	Transport accessibility with respect to the average standard in the surroundings	(from -10% to +10%)	1
9.	Impact of terraced housing, a building inside a row or at its end.	(from -10% to 0%)	0
10.	Pricing perspective of real estate and other influences	(from -10% to +10%)	1
	In total		+18%

## 5 CONCLUSION

Real estate have only two part of market value. It is material time price modified by special influences, which is intangible property of goodwill type in case of positive influence and badwill in case of negative one. If merchantability coefficient is used in pricing, it will directly quantify the amount of intangible property. Byly navrženy kontrolovatelné postupy pro oceňování tohoto nehmotného majetku.

Goodwill or Badwill as a summary of special intangible influences in market value is calculated as a difference between common property price and its time price. This rule is generally applied to both movable and immovable property and companies.

Material part of land can be defined only as support, as Earth's surface without manmade changes and legal acts. In standard cases land does not have material part of the price, only intangible goodwill. Intangible part of the land price is represented by all rights and activities connected with human activity on the land including construction. Therefore intangible part of the land price is not determined as a random amount, but it directly reflects a particular building or surface finish located or planned there.

The proposed methodology enables divide each movable, immovable including land and company property into material and intangible part with precision sufficient for practical use.

The owner of intangible part of real estate price is the investor who finances or planes construction changes in this real estate. Goodwill and badwill induced by investments in the surroundings of the priced real estate automatically gratuitously passes to the owner of this real estate if it is not a case of purchase of land in public interest.

The proposed methodology has been tested in practice and assessed. Pilot pricing of special influences on a price unit for a portfolio of sixty selected pieces of real estate in the Czech Republic and abroad has been carried out. Model examples for pricing special influences show that caution and expert's experience is necessary. Price modification  $\pm 10\%$  with regard to special influences is acceptable with common above standard or below standard real estate. Surcharges or deductions up to  $30\%$  can be applied only in special cases of quality or substantial defects. Above the limit  $\pm 30\%$  it is possible to price influences only exceptionally, when the market will accept this distinction. It can be a case of badwill, e.g. a group of influences n. 6 of the methodology with conflict population in the surroundings with security thread for users, where even higher deduction from the price can be accepted.

The advantage of the proposed methodology is defining special influences in real estate in almost exhaustive list of one hundred items in ten groups. An expert appraises the existing influence by the established percentage value; neither the rate level nor the types of influences are not strictly determined in the methodology.

The methodology explains pricing assets of property in real estate. The proposed methodology defines the character of intangible property in real estate as goodwill or badwill. In purchase and expropriation in public interest it is possible to unequivocally define the originator and therefore the owner of particular intangible property. E.g. an investor of the future public structure is the owner of price increase (goodwill) between the value of construction area and the value of the original agricultural land.

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#### **Reviewers:**

Doc. Ing. Kubečka Karel, Ph.D., Department of Building Structures, Faculty of Civil Engineering, VŠB-Technical University of Ostrava.

Ing. Petr Ort, Ph.D., Bankovní institut vysoká škola, a.s., Prague.