Seminar 3. Real State mass appraisal systems and taxation

Real estate evaluation process regulations

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Real estate evaluation techniques and studies have traditionally been the field of two types of professionals, those working in the area of asset evaluation, including mortgage markets, and those employed in the Cadastre service. Until recently, these professionals were hindered by the lack of a good quality, ample bibliography, and also by the lack of forums where real estate evaluation could be considered as a discipline. A consequence of this situation was that the values handled were far from the reality of the real estate market, particularly in fiscal terms.

This situation has changed substantially in Spain in the last few years. Different evaluation methods have been thoroughly studied, and the methodology finally adopted is showing good results in practice.

Real estate evaluation methods

The principal methods of evaluation in use are the Method of Capitalization of Return, the Market Benchmark Method, and the Cost Method.

The Method of Capitalization of Return, based on converting net rent into capital, can use long and complex formulas, frequently taken from financial calculations, or formulas as simple as $V = R/i$ (1). Previously, this was the method most used.

However, in today's urban context, the Spanish rental market has shrunk considerably and for certain purposes, such as residential usage, it can no longer be considered a method that provides sufficiently reliable results.

The Market Benchmark Method consists of obtaining a sufficiently ample and representative number of market samples which are, after study and modelling, extended to all existing real estate. This is the method that will most reliably reflect the variations occurring in the urban market.

The Cost Method is based on obtaining the value as a sum of the cost of the different components that make up the real estate product, and can also give excellent results, especially if the situation of the real estate market is fairly balanced and free of tension from the viewpoint of offer and demand. Unfortunately, this situation is not very frequent.

This method, based on the following formula:

$$V_v = C + B + V_s + V_c = K (V_s + V_c) \ (2)$$

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(1) V=Value
   R=Rent
   i=capitalisation interest
(2) V=Sales Value   C=Costs   B=Benefits
   V_s=Value of land
   V_c=Value of construction

can be used, not so much to obtain the sales value of the finished real estate product, but rather to determine the construction cost by studying what it would take to «replace» the building from scratch; i.e. the method has been diverted to determine the building cost using the replacement method, and to obtain the value of land by using the residual method.

Methodology chosen in the spanish system

Regulations governing cadastral evaluation were very disperse as a consequence of unsystematic development over a long period of time. In 1982 the first attempt was made to consolidate the technical regulations for cadastral evaluation into a single figure (Ministerial Order), which was subjected in the following years to a succession of modifications, also via Ministerial Order, none of which were very signficant. During this period, the regulation did not directly confront the market, and the references to market value were always indirect. With the appearance of Law 39/1988, the technical regulation was re-addressed. With regard to evaluation, which is the subject of this Paper, the Law proposed that application begin in 1990.

This paved the way for the detailed development of the technical regulation, accomplished in 1989, and established a period during which to perfect a plan to update real estate values, described below, with the goal of adapting real estate evaluations in every municipality in a period of 8 years.

The selection of a methodology was determined by the legally established definition of cadastral value. Referring back to Law 39/1988, which regulates local taxation, we found two articles that would allow us to develop specific regulations to determine cadastral values. Firstly, Article 66.2 states that: «to determine the taxable base (of the Real Estate Tax) the value of the property will be considered to be its cadastral value, which will be established based on the market value of said property, and which in no case should exceed said market value»; followed by Article 67, which says:

1. The cadastral value of urban real estate is composed of the value of the land and the value of the buildings.

2. To calculate land value, all pertinent urbanistic circumstances will be taken into account.

3. To estimate the value of a building, in addition to urbanistic and construction aspects, the calcuation will take into account its historical and artistic characteristics, its use or dedication, its quality and age, and any other relevant factor.

These two articles of the Law must be viewed with the necessary flexibility for practical application, keeping in mind that the cadastral value must comply with the following basic requisites: **it must be fair, objective, and directly related to the market.** But the cadastral value is also a universal and constant value, i.e. it affects **all** real estate, all of which must at any given time have a value corresponding to its situation; this is not the case in other fiscal evaluations in which the assignation and use of the value (e.g. in the transfer of ownership) is linked to a given time (i.e. the time of transfer). The cadastral value is permanent, and not assigned just to liquidate a tax; rather, based on the existence of the cadastral value certain taxes are liquidated.

From this perspective, these articles of Law 39/1988 can be understood in the following terms:

— The market value referred to in the Law is not a price, but rather a theoretical value, obtained from the average market values resulting from the analysis of a given number of samples.

— Given the universal character of cadastral evaluation, it cannot and should not be understood that it is impossible to establish the cadastral value of a property that is not on the market. This would lead to determine values only for active properties, i.e. only those carrying a «For Sale» sign. Clearly, what the law intends to reflect is the potentiality of a property becoming active in the market, thus crediting it with a given value.

— Furthermore, article 67 of the law also addresses how the formulation of the cadastral value should be understood: as the sum of its components (land and building), but linked to its market value, when this exists, through the use of market co-effiicients.

We will now proceed to explain the general characteristics of the system used in Spain:

1.   Of the three basic methods of evaluation described previously, the one chosen is the Market Benchmark which, when reliable and recent sales data exists, is the most objective of the three.

2.   To guarantee the necessary coordination of values country-wide and to ensure the **objectivity** of the evaluation, the following steps are necessary:

2.1.   Establish a basic value module, M, reflecting the sales value of a collective residential real estate product, in an average building category in an average town, i.e. with a relaxed real estate market.

This Module should be established whenever modifications in the real estate market are detected. Previously, the module was reviewed annually. The current value is 135,000 ptas./sq.m. (Ministerial Order dated 18 December 2000).

2.2.   The next step is to define Unified Economic Zones of Land and Buildings, to which a basic module of land repercussion (MLR), co-efficients for each type of use, and a basic construction module (MBC) will be applied. In terms of both land and construction, these Zones define geographic areas where the real estate market is similar, which allows behaviour modulations. These zones are generally equivalent to the concept of municipal area although, in locations with very different average market values, several zones may be defined within a single municipal area).

2.3.   Following approval of the proposed MLR AND MBC assignation by the High Commission for Coordination of Urban Real Estate, preparation of the Evaluation Proposal in a given municipality begins with the performance of a market study that should contain the following:

1.   Analysis of territorial structure.

1.1.   Analysis of the physical and urban context, current and future situation.

2.   Analysis of urban planning.

2.1.   General description and objectives.

3.   Social and economic situation.

3.1.   Population growth since the last review at the municipal level.

3.2.   Rhythm of real estate construction.

3.3.   Employment level.

3.4.   Income level.

4.   Field information.

4.1.   Sample design.

4.2.   Sales market for new property.

4.3.   Sales market for used property.

4.4.   Market of building plot, by usage.

4.5.   Market for rental property.

4.6.   Analysis of building promotions indicating costs and benefits of the builder and costs and benefits of the promoter. Cost of land and construction.

5.   Dynamic of the real estate market.

5.1.   Detection of existing buying market and its behaviour.

5.2.   Detection of existing selling market and its behaviour.

5.3.   Building activity in new construction and rehabilitation.

5.4.   Construction of subsidised housing.

6.   Conclusions.

6.1.   A brief diagnosis of the current situation of the market under study (recessive, stable, growing) itemised for each of the zones defined in the study itself.

6.2.   Description of the most characteristic types.

6.3.   Average market values for each use and each type, distinguishing **a)** value of the real estate product (land and buidling), both new and used; **b)** value of unconstructed land [repercussion (VR) and unitary (VU)]; **c)** construction value (VC); **d)** rental value, in pesetas/sq.m/month.

7.   Cartography.

7.1.   General outline of urban planning. zoning ordinance.

7.2.   General outline of urban planning. Classification.

7.3.   Distribution of repercussion values.

7.4.   Distribution of unitary values.

7.5.   Location of sample units in the field information (sales prices)

7.6.   Value interval of value in each of the unified zones.

It is obvious that despite the extensive content and documentation that should form part of theMarket Study, in certain towns the available number of samples of a specific real estate product may be insufficien. It is therefore necessary to explain the process followed for the use of the benchmark method, with the following steps:

1.   Obtain field information, as representative as possible, of the real estateto be evaluated (in our case, of the entire real estate pool).

2.   Filter the field information until only truly reliable information is left regarding the description and representation of the urban market and its distribution.

3.   Stratify the samples, i.e. establish standard critieria for types of real estate in order to identify the most outstanding or relevant charcteristics. This consists of establishing, in principle, characteristics of the property that can be compared (area, building category, location, age, state of repair, etc.).

4.   Estimate the differences given by the market for each of the mentioned characteristics, which shows what stand out in each type of property, and what factors have more or less impact on price.

5.   Balance the corrected values of comparable properties, assigning a value as close as possible to the market value.

6.   Design a mathematical model which, using statistical techniques, allows for the estimation of unknown data based on known and available data, employing multiple regression analysis to estimate probable sales values from representatives samples .

Following completion of the Market Study, with the base of sales values, we will proceed to establish the component values of the property, i.e. land and building.

Land

Calculation of land value will take into account the impact of relevant urban circumstances, requiring detailed knowledge of the **town planning** under study.

1.   In general terms, the value of land when its development is a decisive factor in its price (i.e. sq.m. of built roof) will be calculated using the **residual method,** thus obtaining a **repercussion value** defined in pesetas per sq.m. of real or potential construction.

The basic formula is the following:

$$V_s = 1.40 \, (V_s + V_c) \, F_l$$

Legend:

V_s = Sales value in pta/m2 built.

V_i^s = Land value in pta/m2 of real or potential construction..

V_c = Construction value in pta/m2 constructed.

F_l = Location factor, evaluating the difference in the value of similar real estate property due to location, construction charactertistics and local social and economic circumstances that affect real estate production.

Based on studies of different building promotions, a factor of 1.40 factor covers the estimate of costs and benefits of the promotion.

2.   There are cases in which the construction ceiling is just one more factor in the price make up, but not the determining factor. In the cases mentioned below this can be evaluated by unitary value, defined in pta/ m² of land:

— When the small size of the town under study reflects the inexistence or scarce activity of real estate promotions.

— When it is a case of land on residential estates, open buildings, detached housing, or land used for sports activities, health services, relgious activity, general utilities, etc....

— For industrial land where edification is the consequence of the size of plots or the volume of buildings.

3.   Unconstructed plots, depending on the type of land per 1 and 2, will be evaluated by the repercussion applied to sq.m. of potential construction, or by unit applied to sq.m. of land area, both adjusted as necessary through application of co-efficients to correct land value.

4.   Under-constructed plots can be evaluated by repercussion applied to sq.m. of potential construction, or to sq.m. of construction already built. In the latter case, the result obtained can be increased to include the **evaluation of the right to overhang**, whenever this overhang or construction, unbuilt but possible to build within the limits established by the town planning, is unhindered by physical or building impediments.

5.   For over-built plots, i.e. those whose constructed area exceeds that established in the plan, the value of repercussion can be applied to the real constructed area.

Construction

The **replacement method** is used to calculate the value of buildings, and consists of evaluating their current cost, taking into account use, quality and historical and artistic characteristics, and making the necessary allowances for age and state of repair.

The co-efficient used to weight a building's age is calculated taking into account the principal use of the building and its quality, using a table with the following mathematical basis:

Age weighting of buildings

$$H = \left[1 - 1.5 \, \frac{d}{u.q.100} \right]^t$$

where:

H = age co-efficient

u = predominant use of the building

q = construction quality in accordance with established categories

t = full years since construction, reconstruction or total rehabilitation.

$$d = 1 \frac{t - 35}{350}$$

The results are given in the following chart:

Chart 1
Age weighting of buildings

t	H								
	Use 1			Use 2			Use 3		
Full years	Categories 3-4			Categories 3-4			Categories 3-4		
	1-2	5-6	7-8-9	1-2	5-6	7-8-9	1-2	5-6	7-8-9
0-4	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00	1,00
5-9	0,93	0,92	0,90	0,93	0,91	0,89	0,92	0,90	0,88
10-14	0,87	0,85	0,82	0,86	0,84	0,80	0,84	0,82	0,78
15-19	0,82	0,79	0,74	0,80	0,77	0,72	0,78	0,74	0,69
20-24	0,77	0,73	0,67	0,75	0,70	0,64	0,72	0,67	0,61
25-29	0,72	0,68	0,61	0,70	0,65	0,58	0,67	0,61	0,54
30-34	0,68	0,63	0,56	0,65	0,60	0,53	0,62	0,56	0,49
35-39	0,64	0,59	0,51	0,61	0,56	0,48	0,58	0,51	0,44
40-44	0,61	0,55	0,47	0,57	0,52	0,44	0,54	0,47	0,39
45-49	0,58	0,52	0,43	0,54	0,48	0,40	0,50	0,43	0,35
50-54	0,55	0,49	0,40	0,51	0,45	0,37	0,47	0,40	0,32
55-59	0,52	0,46	0,37	0,48	0,42	0,34	0,44	0,37	0,29
60-64	0,49	0,43	0,34	0,45	0,39	0,31	0,41	0,34	0,26
65-69	0,47	0,41	0,32	0,43	0,37	0,29	0,39	0,32	0,24
70-74	0,45	0,39	0,30	0,41	0,35	0,27	0,37	0,30	0,22
75-79	0,43	0,37	0,28	0,39	0,33	0,25	0,35	0,28	0,20
80-84	0,41	0,35	0,26	0,37	0,31	0,23	0,33	0,26	0,19
85-89	0,40	0,33	0,25	0,36	0,29	0,21	0,31	0,25	0,18
90-más	0,39	0,32	0,24	0,35	0,28	0,20	0,30	0,24	0,17

The date of a building's construction can be altered in the event that reform work has been done to achieve a better state of repair than the building would have if the reform had not been carried out. This requires a single framework to define potential reforms, as well as a single method of adjustment to guarantee standard treatment throughout the country.

The following cases can be distinguished:

Total rehabilitation – when the reform work complies with town planning or ordinance stipulations and if these do not exist, when the economic cost of the work is 75% of the amount it would cost to reconstruct the building, and whose building characteristics allow the assumption that in use, function and construction conditions the building has reached a condition equivalent to a new building.

Total reform – when reform work affects basic construction elements and represents more than 50% and less than 75% of reconstruction costs.

Medium reform – when reform work affects the facade or an element that alters construction characteristics and represents more than 25% and less than 50% of what it would cost to rebuild.

Minor reform – When reform work affects non-basic construction elements and represents less than 25% of what it would cost to rebuild.

Age will be established using the following formula:

$$D_a = D_c + (D_r - D_c) \, i$$

siendo:

D_a = Date of age for the purposes of applying the co-efficient in table H

F_c = True date of construction of the building

F_r = Date the reform is carried out

i = Co-efficient linked to the type of reform, with the following values:

i = 0,25 for minor reform

i = 0,50 for medium reform

i = 0,75 for total reform

i = 1,00 for total rehabilitation

Real estate product

There are certain characteristics of real estate property that affect, not the land value or the construction value, but the finished real estate product. Adjustment co-efficients must therefore be established to address these intrinsic and extrinsic characteristics of property.

The following are situations that can be foreseen:

— Functional depreciation or inadequacy due to inade-quate design, use or installations.

— Houses and premises considered inferior because their windows give on to closed facades.

— Properties impacted by unusual burdens or special external situations, such as those included in special plans for structural safety or affected by future roadworks, expropriation, etc.

— Real estate affected by a situation of appreciation or depreciation, i.e. when overpricing is detected on the real estate product, for proven reasons of excess market demand or the inexistence of similar products because of extraordinary building quality, or on the contrary, property for which a low price mut be established due to lack of market or obsolescence.

Evaluation of singular buildings

The foregoing paragraphs have outlined the methods used to estbabish the theoretical sales value of a property. However there is an important collection of real estate which because of their characteristics, given below, never enter the market, and for which no offer or demand exists.

This collection ofo properties can be split into two groups:

— Real estate whose original land and building value is or can be known, and whose current value can be obtained using investment actualization procedures.

— Real estate whose original land value is unknown and for which the application of a replacement value to establish the building cost is unreliable, due to the disappearance of the building techniques or artisan skills used at the time.

In the first group we find real estate such as motorways, nuclear plants, oil refineries, thermal plants, airport installations, camping sites, golf courses, etc. The Cadastre's central technical services perform a detailed study of costs on a sufficiently representative number of cases and transfer the appropriate instructions to the peripheral services in order to obtain standard results in the evaluation of these properties.

The second group includes singular buildings such as the Mezquita in Cordoba, the Alhambra of Granada, cathedrals, etc. In this case any value that we establish will only ever be symbolic, never representative.

Cadastral value

Although the Cadastre, as an inventory of real estate, has multiple purposes and uses, the cadastral value is mainly used as a fiscal instrument, and certain precautions must be adopted in determining cadastral value so that the variations that occur in the real estate market do not make modification necessary unless these variations are substantial.

To establish cadastral value, the theortetical market value, obtained using the procedures described previously, is multiplied by a market reference co-efficient, currently set at 0.50. Therefore, **cadastral values** obtained by application of established regulations and co-efficients are approximately 50% of the detected market values.

This 50% «padding» allows cadastral values a certain stability over time, but is is not advisable to maintain the same value for more than 8 years, even when during this period the values are adjusted to reflect inflation. Studies show that, independently of the economic situation, market changes produce modifications that make it necessary to establish new cadastral values to adjust them to the new situation of market values. ∎

Land appraisal new trends

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Although there are records of cadastral data dating back to the Roman Empire, today's Cadastre originated in the city-states of northern Italy in the Renaissance period, eminently for fiscal purposes but later stretching to include sectorial, spatial and functional objectives.

Historically, the principal source of wealth in the western world rested on the ownership and cultivation of the land, and it was on land that taxes were levied to sustain the budgets of the city and the state, the latter then only dawning, and which in the case of renaissance Italy constituted a single figure. Later, the interest of the tax authorities shifted to other types of taxes (trade, income, etc.) and within the field of real estate, from farm land to buildings (terrini-fabricati) and specifically, to real estate tax on urban housing.

From the spatial or geographic perspective, singular historical milestones appeared in different European countries that later underwent consolidation and systemisation, as in other areas of civil law. In this case, the Napoleonic Empire was particularly influential, designing a cadastre for purposes of taxation and probatory evidence but quickly reducing its scope exclusively to tax collection.

From the functional viewpoint, economic information, which was the main objective, shared space with other types of information such as mapping and property registration, especially the former which, with the development of topographical instruments, took a front seat because of the fact that in many countries the property register is separate from the Cadastre.

In our opinion, there is a shift in the importance of economic information versus cartographical information, due in part to the application of new technologies to improve and perfect mapping techniques, which became ever more exact; and also in part, to the growing complexity of economic information as agriculture moved from being a purely extractive activity to a complex business activity, in which the land loses its central and sometimes unique place in production. Thus, the importance of land was gradually overtaken by labour, and later, by technology.

This brief historical introduction is intended to mark the starting point from which to emphasize the ideas forming this Paper, such as the complexity of economic information in the cadastre and its variation over time, appraisal methodology, or the relationships that can be established between rustic, urban and environmental appraisal to jointly form a new global focus that could be denominated «territorial appraisal».

Economic cadastral information

In former times, when farming was elemental and limited to exploiting the land and employing cheap labour legally entailed to the land in a coercive relationship, with standardised crop systems that remained stable over long periods of time, to speak of economic performance or economic value of the land was practically the same thing, since market values were obtained using empirical rules deriving from more or less elaborate capitalization formulas. The economic information provided by the Cadastre often consisted of a single, easily calculated figure, linked to the economic yield of crops and exploitations. Over time, with the development of farming techniques, the role of the land in the agrarian production process has reduced and diversified, and thus the associated economic information has become more and more complex. Capitalization value does not match market value, and other values appear: value in use, greatest and best use, cadastral value, agricultural value, or objective and subjective values. Distinction is made between land yield and business profit (*reddito agrario* and *reddito dominicale* in Italian bibliography), the gross margin or the demand for the principle of ordinarity as a minimum condition of accurate calculation.

In fiscal terms, national legislations incorporated some of these concepts but almost always in a confused manner, since it is easier to legislate by simplification than to carry out the necessarily empiric economic studies to define exactly what should be taxed and how it should be calculated. Desk work predominates over work in the field, and the legal perspective over the economic and technical perspective.

In this context of a proliferation of economic concepts it is necessary, in our opinion, to lay down the minimum economic concepts that cadastral documentation should and can provide; but it may be useful to first question the existence of a cadastre whose only purpose is real estate taxation, or if it is better to address a cadastre of the future which could become a useful database, reaching far beyond its role in the administration of a single tax to what is referred to as a multi-functional cadastre, applicable to other taxes both for fiscal (transfer of owerniship, patrimony) and non-fiscal purposes including all manner of relations of the public administrations with citizens and of these among themselves, in the fields of administrative, civil and mercantile law. Although it might seem paradoxical, and although legislative efforts are seeking convergence, the different administrations do not legislate on a unique property value in their relationship with the citizen (expropriations, land ordinance, fiscality).

With regard to the convergence towards a single value, the only value that can perform this role is the market value or more exactly, the probable market value in the context of estocastic or probabilistic information. The minimum information that cadastral documentation should provide on real estate that is subject to exchange is the probable market value or band, this latter as narrow as possible. Real estate not subject to exchange (architectural heritage, archeological sites, environmental resources, etc.) should be evaluated by other methods (travel cost, contigent value, hedonic value, etc.) (3), all of which are used as substitutes, recommendable only when it is necessary to calculate a probable market value, or something minimally approximating it.

The market value or probable market value of a real estate property should be understood as the sale price if a recent transaction has occurred, or an estimate of the price or price band in which the sale of said property might be situated at the time of evaluation.

Although calculation of the market value of real estate is complicated, as seen below, it serves as a price estimator, and price is the only real thing existing in a market economy. It is also apparently the central element to establish the relationship between public administrations (taxation, expropriation, land ordinance, etc.) and the citizen, and also to establish relationships among different citizens via civil and mercantile legislation, because when citizens relate freely with each other they do so through the market value (price) although calculation, in certain circumstances, is complex (4).

Real estate as a productive asset and as a consumer good

In the context of real estate taxation, we might ask how useful the market value is as the central element to the effects of what until now has been the main aim of the cadastre:

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(3) See Romero.
(4) Land appraisal methodsare shown, among others, in Caballer (1998). Urban appraisal methodology can be seen in Ballestero y Rodríguez (1999) and in Caballer et al. (2002), among others.

taxation using the former land contribution, now the IBI. Does the market value truly represent the philosophy of this tax?

To answer this question correctly one must distinguish between properties that can be considered consumer goods, including housing, yacht moorings, parking lots or cemetery plots, and those that are business assets and should be considered production factors, such as farm land, offices, commercial premises, industrial installations, etc.

In the former case (principally housing), it is clear that the market value is the best indicator to establish the tax base, due to the decisive role that price plays in the market economy, as mentioned previously.

In the second case, the answer is more complicated, especially with regard to farm land, which requires a brief analysis.

We should first ask how appropriate the tax is, created as it was when land was the only source of wealth and to tax land usage was to tax the land owners' income; and its current validity since to tax a production factor when independent farmers are subject to income tax, and farming consortiums (cooperatives, SAT, SL, SA) are subject to corporate tax, would not seem to make sense. Unless some taxes are substituted for others —a proposal defended at one time by the confederation of Italian farmers— or rustic real estate tax, imposed by the local tax authority, is dedicated exclusively to the improvement of agricultural infrastructure.

On the other hand, recent studies on land markets show the loss of relevance of farming production as a variable that explains market value. Location (addressed later), expectations of alternative use and other factors, make the old formula of agrarian evaluation

$$V = \frac{R}{r} \qquad [1]$$

less and less explanatory.

Finally then, the principal justification to apply real estate tax on farm land would be the use of a scarce natural resource for purposes of production. Future trends in this regard are discussed in the last part of this article. Nevertheless, continuing with the natural resource theory, the concept that should serve as the tax base would have to be related to the productive capacity of the natural resource, i.e. an index representing the environmental conditions of the plot (climate, soil and availability of water) (5). On the other hand, the base would exclude improvements (plantations, protection, mechanisation, irrigation) for two reasons: because these are not natural resources, and because to tax improvements constitutes a direct attack on agricultural modernisation, to which the EU dedicates over half of its total budget.

Evaluation methodology

Estimation of the value of real estate, or to a larger and older extent, the value of farm land, is an activity dating back long before the concept of market even existed. In Egypt, three thousand years before Christ, the effect of floodings of the Nile on the surrounding farming plots was measured in order to establish a tax that can been considered the forerunner of the rustic IBI and in part, the forerunner of appraisal science in general.

(5) In the line of information on land and cadastral evaluation. Index Value Method, Monography of the Centre for Cadastral Management and Tributary Cooperation.

Since then, different procedures have developed, ordered more lor less algebraically, in parallel with the development of real estate economics, theoretical formulation and available instruments and techniques, up to the present day when three groups of methods can be distinguished, principally:

A) Synthetic or comparative methods

As their name indicates these methods are based on estimating a value by comparison of two or more properties whose sale price is a known quantity and the most influential factor. This information is used to calculate the unknown market value of other properties for which what is known is the value assumed by the explanatory characteristic.

Differents expressions can be used, as in Chart 2, all subject to be reduced to an expression of the type:

$$V = aX \qquad [2]$$

Or at the most:

$$V = aX + b \qquad [3]$$

Where
V = market value
X = explanatory variable
a y b = parameters of an equation without and with an independent term, respectively.

B) Analytical or capitalization methods

These consist of estimating a capitalization value, comparable to a market value when certain (difficult) hypotheses are satisfied, through the actualization of expected economic performance (rent, gross margin, cash flow). Their most common expression is [4] which, inserted into modern financial investment theory, involves admitting the achievement of highly restrictive hypotheses, such as unlimited duration of investment or constancy of performance.

That is, starting out with a general expression of the type:

$$V = \sum_{i=1}^{n} \frac{Q_i}{(1+r)^i} \qquad [4]$$

Where
Q_i = may be rent R, gross margin, profit or cash flow, in the year i
n = the number of years of investment
r = the rate of actualization or capitalization
and in the event that

$$Q_i = Q_0 \text{ en each year and } n \rightarrow \infty$$

you get

$$V = \frac{Q_0}{r} \qquad [5]$$

These conditions only occur in investment in land and in certain circumstances such as indefinite leases.

Although algebraic functions, typical of financial mathematics, are highly developed, they are of little use to explain market values due to their reduced explanatory capacity and the rigidity of their hypotheses.

Chart 2
Hedonic studies of land value appraisal

AUTHOR	PUBLICATION	VARIABLE TO BE EXPLAINED	EXPLANATORY VARIABLES	MODEL	R2
Moss (1997)	Amer.J.Agr.Econ.	Value of farm land in Florida (1960-94)	– Land rent – Cost of farming capital – Inflation rate	Double logarithmic	0.576
Barnard, Whittaker, Westenbarger & Ahearn (1997)	Amer.J.Agr.Econ	Value of farm land in 20 U.S. regions (1994-96)	– Productivity: dry or irrigated, wood or herbaceous, average size and productivity – Subsidies – Non-agricultural factors: industrial salary – State characteristics: avg rainfall, avg temperature and population	Linear logarithmic	From 0.4 to 0.66, depending on region
Roka & Palmquist (1997)	Amer.J.Agr.Econ.	Value of dry land in the Com Belt region (1995)	– Size of estate – Erosion – Population – Corn production – Type of business	Linear, logarithmic and double logarithmic	0.34
Boisver, Schmitt & Regmi (1997)	Amer.J.Agr.Econ.	Value of land in the Lower Susquehanna basin	– Corn productivity – Population density – Size of farm – Country sales/acre – Pollution	Double logarithmic and Box-Cox	0.4 to 0.6
Maddison (2000)	European Review of Agr. Econ.	Land values in England and Wales (1994)	– Plot surface – type of sale – Buildings – Milk quota – Location: population density, soil quality, risk of frost, wind velocity, rainfall, hours of sunlight and relative humitidity	Semi-logarithmic model	0.62

Source: author's work based on published works.

C) Econometric regression methods:

These are the newest methods, although they were first introduced in the United States during the second half of the 20th century (6). They consist of the estimate of a function such as:

$$V = f(x_1, x_2, x_3 \ldots x_n) \qquad [6]$$

using regression methods (principally minimums squared) where the endogenous variable to be explained is the market value, V, and the explanatory or exogenous variables that provide information are X. In principle, neither the number of variables, nor the function, f, linking them to V, have any restrictions.

It can easily be seen that the mathematical expressions of methods [1] to [5] above are simply individual cases of [6], in which a function of a single variable is used, linear with or without an independent term, implying total superiority, from

(6) The history of econometric evaluation methods applied to land can be seen in Bruce et al.

the theoretical viewpoint, of econometric methods over the rest. In practice, this superiority translates into:

1) The use of a single explanatory variable, rent R or a yield estimator in the analytical method, or the variable with the most influence on market value in the synthetic method, implies the explicit renunciation of the explanatory capacity of the remaining variables.

2) The use of linear functions implies establishing a strict proportionality between the market value variable and the explanatory variable along the entire band in which these variables take on value. This hypothesis is not always feasible because large properties frequently behave differently from small properties with regard to an explanatory variable. Experience shows a greater explanatory capacity (determination rate) when non-linear functions are used.

3) Within the linear functions, those having an independent term are preferable to those that don't. Graphically, this means that the straight line representing the function without an independent term passes through the origin; economically, it means that a property with an explanatory variable equal to zero, (e.g. rent R) should be

assigned a value equal to zero, a conclusion which, in general terms, bears no relation to reality.

4) The estimates by regression using minimum quadratic methods are, by definition, maximally probable (the sum of the distance between the data and the function is minimal), while the procedures giving rise to the expressions of synthetic and analytical methods driven by statistics (Chart 2) and expressions [1] to [5] are not.

Based on this analysis, which proves the superiority of econometric methods over the rest, one would expect their overall application both in the field of cadastral appraisal, and in the field of real estate evaluation in general; however, this does not occur. On the contrary, in their country of origin, the United States, they had scarcely been applied until recently, while since their introduction (7) in Spain, they have been applied partially to agrarian evaluation and urban appraisal (8).

Some equations obtained through these methods for the Spanish housing market are given in annex 1, taken from the quoted work, while Chart 3 summarises the research conducted for the farming estate market.

The fundamental reason preventing the generalised development of econometric models for real estate evaluation is the lack of enough databases to run multi-variable models and the problems of multi-co-linearity and heterocedasticity that frequently crop up.

Analogical evaluation

Analogical evaluation is a device that attempts to solve the difficulties inherent in the practical application of econometric evaluation methods. It has been applied with excellent results in the appraisal of companies (9) from the perspective of the stock exchange, and is now starting to be applied in the field of both urban and rustic real estate evaluation. It is based on two elements.

A) *Elaboration of analogical data bases*

It is common knowledge that the real estate market is not a transparent market, or at least not transparent enough to provide a sufficiently high number of genuine sales prices to feed, with a minimum of precision, multi-dimensional regression models. This lack of transparency is made worse by the fact that information on registered values, expropriation values or land ordinance values cannot be used, because they are not market values. Nor are the prices published in the major newspapers every day market values, or the appraisals used by the banks for mortgage purposes. But there is no doubt that, between each of these groups of values and the market value a certain relationship exists that can be defined as one of analogous conduct with regard to the explanatory variables, thence the term «values analogous to the market value» (V_a).

Because more information exists about analogous values, they can be used to calculate an analogical value using econometric regression models with several explanatory variables and, after calculation of the analogical value, to estimate the relationship between it and the market value, which is what we are trying to find out.

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(7) See Caballer (1998).
(8) See Caballer (1998).
(9) See Caballer and Moya.

Thus,

$$V_a = f' (x_1, x_2, x_3, \ldots\ldots\ldots x_n) \quad [7]$$

and

$$V = f'' (V_a) \quad [8]$$

The relation of analogy, f'', can be equality, symmetry or something more complex. For example, assuming that sales values, which can be considered analogical to market values, are 10% higher than market values, the function of f'' would be:

$$V = (1-0,1) \, V_a = 0,9 \, V_a \quad [9]$$

Something similar, but in the opposite sense, would occur with the evaluations for mortgage purposes.

B) *Grouping of exogenous or explanatory variables based on their auto-correlation:*

As the size of the regression grows, the incorporation of new explanatory variables increases the relationship fo auto-correlation between them, causing a loss of economic significance, since the mathematical variable is affected by a sign that does not match the economic interpretation. In order to overcome this hurdle, explanatory variables are grouped by factor, with the condition that the variables of a single factor are highly corelated to each other, and hardly at all to those belonging to another factor. When the equation is constructed, only one variable can be selected from each factor.

Territorial evaluation

As well as the previously mentioned differences between constructed real estate and land, an additional difference is the unlimited duration of investment in farm land versus the limited duration in buildings which, in appraisal practice, produces lower rates of capitalization for land than for buildings, offset by a greater security, a fundamental characteristic of decisions affecting the ownership of land, more or less camouflaged under agricultural protection policies.

However, trends would appear to indicate a future context in which the characteristics of land ownership, use, and holding, and consequently, of the market for and evaluation of land in industrialised countries, is gradually changing and converging with the housing market in what might be called a *territorial market*, and the economic interpretation of the whole as *territorial evaluation*. In this territorial evaluation the value of location will continue to play a major role, although it is not clear if it will be in the same sense as before.

There are three facts that, as a minimum, will form the basis in the 21st century of a new market for farm land and housing as the principal urban property.

Firstly, following a historical tendency that accelerated in the final years of the 20th century, we can foresee a growing loss of relevance of farm land as a factor of agricultural production. Effectively, since the birth of agriculture up until the beginning of the last century and the spread of the industrial revolution, land was considered to be the principal and sometimes only factor of agricultural production and in consequence, the principal source of wealth. The ownership, use and distribution of land, as well as the participation in the economy, access and stability of workers (slaves, serfs, labourers), known as the agrarian issue or agriaran reform, has been the subject of social and political confrontation since the times of the Roman republic, with the Graco brothers,

up to the present day. Currently, guerrilla claims, pacts and armistices still appear in the constitutions of all Latin American countries.

Land has been much more than a factor of agrarian production in the history of mankind, although even if that had been its only role it would still have been a major one. It has also been an instrument of military and political power, the sole source of survival for workers in latifundist areas, a symbol of social prestige, the recipient of savings, materializing pension funds before the existence of financial engineering, and consumer goods in the form of vegetable gardens, flower gardens or park land, for the enjoyment of the people.

For this reason, as mentioned previously, market research on land shows that its market value does not entirely depend on its economic output, as might be assumed from its role as a factor of production in accordance with neo-classic economic theory.

In general, the soil-less production of food and plants will lead to a situation in which the aspects not related to theh land's condition as a basic production factor will begin to be relevant. Food production will increasingly be linked to hydroponic soil-less farming, and other functions of the land, until now more or less masked by food production, will be developed.

Each hectare of hydroponic tomato farming in the Canary Islands produces three times more than the same surface uncovered, and 50% more than the same area in mesh farming. It is therefore realistic to imagine production in large soil-less installations that act as food factories, with the associated benefits of elimination of [chemical] treatments, efficient use of water resources, and the freeing up of land for environmental and leisure uses.

It is foreseeable that in the 21st centry water will replace soil as the principal factor of agrarian production.

Secondly, the relationship of man with the land will subsequently diversify and intensify in two ways: a greater demand of land for residential use (linked to the housing market) and land as a consumer good (leisure and the environment). Every year more than a million and a half acres (400,000 Has) in the United States and twenty million acres (5.000.000 Has) world wide convert from farming to alternative usages, a process that is especially intense in industrialised countries. This trend is not likely to slow down in the short term, due both to the growth of population and to the growing need for land per capita. Thus, land in certain parts is becoming an increasingly scarce resource.

Thirdly, the main characteristic of real estate evaluation is the location value, as seen in appraisal equations of housing in Spain in the context of provincial or city location, and less intensely, in the land market. Cities provide still further possibilities for definition, with different housing location values in the districts of a single city, as estimated by Chica for Granada, location of the first Congress on Cadastre in the Eruopen Union (see Annex 2). In future, the value of location will play a basic role in land appraisal, but the fact is that no one knows if it will follow the current centripetal tendency of the huge urban agglomeration in mega-cities or if on the contrary, tele-work, tele-shopping and tele-information will give rise to a more diffuse and extensive behaviour of the location value. ■

Appraisal and taxation experiences among the Members States

Mass appraisal systems and real estate taxation in United Kingdom

DIANE LEGGO
Valuation Office. United Kingdom

Legal Framework

General contents description

The property tax system in the United Kingdom is varied and to some extent has differences in each of the constituent countries, especially where there is a devolved government. The main taxes which lend themselves to a mass appraisal approach are non-domestic rating (NDR) and council tax (CT). These are taxes upon occupation and NDR is based on rental values whilst council tax bands relate to the capital values of domestic properties.

The Valuation Office Agency (VOA) is tasked by the Department of Transport, Local Government and Regions (DTLR) with supplying NDR and CT valuations in England and Wales and this activity is supported by local government and finance legislation. There is a well defined appeal system which is administered by the Valuation Tribunal service.

Scotland and Northern Ireland have different systems and separate agencies which support the activity.

Organisation

Structure

The VOA is an executive agency of the Inland Revenue. The organisation has a Chief Executive and Management Board and there are 22 Group Valuation Offices who cover England and Wales. There is also a Chief Valuer Scotland.

Offices

There are 84 offices in England, Wales and Scotland and these are brought together under 23 group management operations. The boundaries of such offices and Groups follow local authority and recognised DTLR regional boundaries.

Staff employed in the valuation procedures

The VOA employs approximately 4000 staff who are involved in valuation and associated administrative tasks.

Computer System description

Real estate database description

In respect of non-domestic properties the property database is extensive for the main bulk classes of shops, offices and industrial properties. Data in respect of the physical attributes of the property is held along with

analysed rental data. This data is kept on a central database and can be accessed from any VOA location. The rating lists, showing reference numbers, descriptions, address and rateable value are now also accessible on the Internet.

In respect of domestic property, the electronic database only contains the reference number, address and council tax band, in order that valuation lists may be produced and maintained.

Computer valuation process description

In respect of non-domestic properties, the valuation process is automated for bulk properties and other properties such as licensed property and schools also have separate automated valuation systems. The main system is driven by valuation scales which are linked to individual properties via identifiers which relate to physical attributes, location, age and use. The valuations are quality assured and further work is targeted on those valuations which exceed expected multiplier ranges. The same system is utilised to maintain the valuations, if there have been physical alterations or other changes which affect the valuation during the currency of the valuation list.

The domestic property system does not presently utilise a mass appraisal system but it is planned to develop a system for the next revaluation which comes into force in 2007.

System rates

Real estate database

Number of cities/cadastral parcels/ owners

There are 1.7m occupiers in relation to the non-domestic rating system and approximately 23m council tax occupations in England and Wales.

Updating degree

The non domestic valuation lists are revalued every 5 years and the council tax lists are to be placed on a 10 year review pattern.

Each list is maintained during the currency of the list and is typically updated every two weeks.

Name and type of the database manager

The data is held within a highly structured Oracle (Version 8.0i) relational database management system. This centralised database and application software are supported by an integrated cluster of Hewlett Packard servers running under the HP UX version 11.0i operating system. Users can access the system from any location in the country via a wide area network.

Mass appraisal System

The mass appraisal system for NNDR currently provides optimum performance for up to 2,500 concurrent users when carrying out a range of updates and enquiries. Prior to the last general revaluation of rates the system carried out 1.2 million first pass valuations over one weekend.

System evaluation

System strength description

For non-domestic revaluations, the system can now cope with a considerable number of valuations being run concurrently. It allows first pass valuations to be created for at least 80% of properties and it targets resource to those valuations which require more judgement skills.

There is no current system for domestic properties.

System weakness description

The system is complex and requires a considerable input of effort to set up the underlying scales and matrices which drive the mass appraisal valuations. Consistency of use by individuals within the organisation, continues to be a significant challenge.

The current CT system works with hard copy and tends towards hand-crafted valuations rather than the mass appraisal approach.

Future perspectives

It is expected that the non-domestic system will continue to be refined to ensure that it can deliver the revaluations on a 5 yearly basis whilst ensuring some of the complexity of usage is excluded.

The VOA are keen to develop a mass appraisal system which will support the proposed council tax valuations both now and in the future. ■

La méthode d'évaluation en France

BRUNO PARENT
Directrais Genèrale des impôts. France

Systèmes d'évaluation foncière en masse et fiscalité immobilière

Les biens fonciers nous intéressent ici en tant que gisements de ressources fiscales. Ils peuvent en effet être taxés à raison de leur détention, de leur utilisation, de leur transmission, ou à raison des plus-values constatées lors de leur vente.

À l'occasion des transactions immobilières de toute nature, il est facile et habituel d'asseoir des cotisations fiscales sur la valeur du bien mentionnée dans l'acte, éventuellement corrigée si elle paraît anormale.

En revanche, la situation est différente lorsqu'il s'agit d'asseoir la taxe foncière ou tout autre impôt annuel sur une valeur caractéristique de chaque bien. Il faut alors attribuer une base d'imposition équitable à tous les biens, exhaustivement.

Bien entendu, la recherche de l'efficacité conduit à développer des techniques d'évaluation en masse, puisque l'appréciation de la valeur systématiquement au cas par cas s'avère très lourde. Les réflexions sur les modalités d'évaluation en masse et leur utilisation fiscale paraissent pouvoir s'articuler autour de trois thèmes majeurs:
• les principes de base qui peuvent inspirer le système;
• les moyens susceptibles d'être mis en œuvre;
• l'adéquation du système aux objectifs fiscaux.

Les principes généraux qui peuvent inspirer le système

Deux principes de base

— En premier lieu, il paraît indispensable de construire un système équilibré entre *simplicité et réalisme.* En fait, il s'agit de trouver le meilleur compromis possible entre la *précision* de l'évaluation, qui requiert toujours un certain degré de sophistication, et *l'efficacité* de la méthode. Les systèmes très détaillés s'avèrent souvent d'un coût de gestion excessif et entraînent habituellement un espacement excessif de l'actualisation des valeurs. En revanche, les systèmes trop rudimentaires sont nécessairement peu équitables, et ne sont donc applicables que dans la mesure où le rendement attendu de l'impôt reste faible.

— En second lieu, on voudrait que le système soit aussi *transparent* que possible vis-à-vis des contribuables et des bénéficiaires de l'impôt.

Vis-à-vis des contribuables, les résultats produits par le système doivent demeurer lisibles et intelligibles. À défaut, on pourrait s'attendre à ce que les contestations se multiplient, et à ce que les explications, complexes, aggravent les frustrations des usagers. Pourtant, l'opacité peut sans doute être couverte par l'ancienneté, ou rester supportable en raison des montants en jeu.

D'autre part, l'administration chargée de l'évaluation se situe certes à l'origine d'impôts assignés à des contribuables, mais elle se comporte aussi en prestataire de service pour *le bénéficiaire de l'impôt,* qui est généralement une collectivité locale. Il paraît donc indispensable que les règles utilisées soient parfaitement admises et comprises par chaque partenaire.

Trois conditions de mise en œuvre

En pratique, la mise en œuvre de ces principes se heurte à des obstacles bien identifiés.

— L'évaluation en masse suppose la déclinaison de règles identiques dans des *zones géographiques homogènes.* La constitution de telles zones de manière fiable requiert l'existence d'un marché immobilier ou locatif significatif et d'outils d'observation de ce marché. Ces conditions font souvent défaut, au moins en partie.

— Il est également souhaitable de limiter *les distorsions inévitables entre les valeurs cadastrales et la réalité du marché.* Cela suppose de pouvoir actualiser les valeurs relativement fréquemment. En réalité, très peu de pays ont adopté un système permettant de satisfaire ce critère.

— Enfin, quelle que soit sa qualité, le système doit s'appuyer sur *un cadastre complet et actualisé.* Il n'est pas utile de s'étendre sur l'exhaustivité des données, premier gage de l'équité fiscale, mais il faut rappeler que le nombre de caractéristiques des biens décrites est un gage de réalisme des évaluations, et que la précision de leur description en est un de leur qualité.

Les moyens susceptibles d'être mis en œuvre

Une fonction universellement admise d'un système cadastral est d'identifier, de localiser et de décrire la propriété foncière. Aussi, les systèmes d'informations cadastraux, malgré leur diversité, ont en commun la caractéristique de comprendre les principaux facteurs de la valeur des biens, que sont leur localisation et leurs caractéristiques physiques.

La collecte des informations de base est susceptible de prendre des formes différentes. Mais les sources d'information se limitent aux constatations de l'administration et aux déclarations des propriétaires.

Une évaluation administrative appuyée sur des déclarations

D'une manière générale, dans la plupart des pays, la valeur cadastrale est fixée par l'administration. La participation du contribuable est généralement limitée à fournir à l'administration une description détaillée des biens. La valeur vénale ne fait l'objet de déclarations qu'à l'occasion des transactions immobilières, qui peuvent être très éloignées dans le temps pour une même propriété.

Il est donc nécessaire pour l'administration de se donner une méthode d'évaluation des valeurs cadastrales. La finalité fiscale de ces valeurs impose deux contraintes essentielles:

• la méthode d'évaluation doit être identique dans l'aire la plus étendue possible;

• elle doit rendre compte au mieux de la valeur réelle du bien, qui peut être définie comme sa valeur d'usage.

Les techniques d'évaluation

Sur cette base, l'application des observations du marché immobilier à l'évaluation en masse des biens fonciers est très diverse dans le détail, mais s'appuie traditionnellement sur trois grandes techniques:

• l'appréciation du prix de construction ou de revient;
• la comparaison à des biens similaires;
• le revenu susceptible d'en être obtenu.

L'observation du marché immobilier et locatif est donc le premier paramètre pris en compte dans l'évaluation en masse. Cette observation permet d'abord de déterminer les zones géographiques homogènes dans lesquelles la méthode pourra utilement s'appliquer.

Dans un deuxième temps, une classification des principaux types de biens facilite l'application d'une valeur unitaire à leurs caractéristiques (par exemple la superficie, en mètres carrés, éventuellement pondérés, pour les constructions, ou en hectares pour les terrains agricoles). Ainsi, suivant les pays, les propriétés bâties et les propriétés non bâties peuvent ou non faire l'objet d'évaluations distinctes.

Les propriétés peuvent être évaluées à partir des valeurs vénales ou à partir des valeurs locatives. Bien que chaque pays pose le principe d'une référence soit à l'une, soit à l'autre, ces deux méthodes se rapprochent souvent. En effet, lorsque le principe de la valeur vénale est retenu, il est généralement admis de fixer certaines valeurs par capitalisation de revenus; à l'inverse, si c'est le principe de la valeur locative qui prévaut, mais qu'aucun marché locatif ne fournit des évaluations pour certains biens, il est admis d'obtenir des loyers potentiels par application d'un taux de rendement moyen (terrains à bâtir par exemple en France).

L'actualisation des évaluations

Cela étant, l'utilisation fiscale de ces valeurs commande que les valeurs cadastrales soient aussi actuelles que possible, pour des raisons d'évolutivité et d'équité fiscales. En effet, comme il a déjà été indiqué, le dynamisme du marché immobilier peut entraîner des distorsions regrettables entre les valeurs réelles des biens et les bases d'impositions. Or l'actualisation régulière des évaluations foncières constitue un problème majeur pour la plupart des administrations. La difficulté s'accroît avec la durée séparant

deux révisions générales des bases et avec la dimension souvent nationale de l'opération.

Le rapprochement des centres de décision des réalités du terrain constitue un moyen efficace de remédier aux principales difficultés. Il paraît donc très utile d'associer le plus étroitement possible les collectivités locales aux décisions, qui les concernent au premier chef en tant que principaux bénéficiaires des produits de la fiscalité foncière. Le rôle de l'administration nationale peut alors être limité à une assistance technique et à la surveillance du respect de la législation. De plus, la résolution des litiges se trouve facilitée par les décisions locales en opportunité avant l'engagement de procédures administratives.

L'adéquation du système aux objectifs fiscaux

L'objectif principal de l'impôt foncier est le rendement fiscal: il s'agit de procurer des ressources aux finances publiques, et notamment des ressources propres aux collectivités locales. Cela est cohérent notamment avec le lien étroit entre le patrimoine foncier et le territoire local.

Cependant, il est fréquent que l'on cherche également par une taxation différenciée de certains biens (logements sociaux, locaux industriels, terrains à bâtir par exemple) à viser des objectifs sociaux ou d'incitation foncière.

Ces stratégies visant plusieurs objectifs peuvent être sources de contradictions.

Conclusion

En fait, les modèles de fiscalité foncière des pays de l'Union européenne sont très divers, tant du point de vue des techniques d'évaluation cadastrale que des objectifs fiscaux poursuivis et du rendement fiscal.

Chaque système possède bien entendu avantages et inconvénients, mais il est clair que les constructions les plus récentes sont celles qui permettent d'atteindre plus facilement les objectifs d'actualité des valeurs, d'efficacité administrative et de rendement fiscal. En revanche, les systèmes les plus anciens (dont la France est un exemple) s'avèrent très difficiles à moderniser.

La confrontation de nos expériences et de nos pratiques enrichira nécessairement nos réflexions et nos études particulières. Les travaux de ce séminaire doivent nous aider à identifier et à promouvoir les meilleures pratiques ainsi qu'à éviter les écueils les plus dangereux. ■

Evaluations des biens immobiliers du Belgium

MICHEL DECHEF
Administration du Cadastre. Belgium

Programme «mesures et evaluations»

C'est l'entité «Mesures et Evaluations» qui est chargée de la rationalisation des tâches d'estimation et d'évaluation, tant en valeur vénale, valeur locative, qu'en valeur de construction pour les biens immobiliers et mobiliers.

— Entité Mesures et Evaluations en tant que «Service Centre» principalement pour d'autres entités

— Rationalisation des tâches d'estimation et d'évaluation de biens mobiliers et immobiliers, tant en valeur vénale, valeur locative, qu'en valeur de construction:

• Uniformisation des méthodes d'évaluations, de l'unité de connaissance des valeurs immobilières (recoupement des valeurs, valeur forfaitaire unique), et de la mise en valeur du patrimoine de l'Etat

• Difficulté de fixer un revenu cadastral compte tenu de l'évolution contrastée des marchés immobiliers

• Recherche d'un meilleur traitement des dossiers fiscaux de tous les contribuables

• Raccourcissement du traitement des demandes d'estimations et d'évaluations venant des autres entités

• Amélioration de la qualité des estimations et de la précision des évaluations par une plus grande spécialisation des acteurs

• Accroissement de l'importance des biens mobiliers par rapport aux biens immobiliers

• Développement des critères d'évaluation des biens mobiliers

• Développement du concept de «Valeur Unique Fiscale»

— Rationalisation du traitement des litiges:

• Raccourcissement du traitement des délais et de l'efficacité de traitement des litiges

• Réduire le contentieux par une gestion pro-active des évaluations et mesurages grâce à l'expérience acquise en matière de traitement de litiges

• Développement d'un «Knowledge Centre» et ceci en étroite collaboration avec les programmes «Sécurité Juridique», «Services patrimoniaux» et «Etablissement de la réglementation et traduction en procédures de travail (Documentation patrimoniale)»

— Rationalisation de la gestion du plan cadastral.

Valeur venale

Selon TEGOVA (The European Group Of Valuers Assets – Belgium: c/o U.B.G. Rue du Nord, 76 – B 1000 Bruxelles), la VALEUR VENALE est représentée par le prix que l'on peut raisonnablement espérer obtenir, à la date d'évaluation, dans les conditions suivantes:

— le propriétaire désire vendre et quelqu'un désire acheter;

— on dispose d'une durée raisonnable de mise en vente, eu égard à la nature du bien et à l'état du marché;

— le bien est librement présenté sur le marché, avec une publicité non équivoque, suffisamment large et claire;

— les prix sont stables pendant la période envisagée;

— il est fait abstraction, sur le plan des références, d'une offre exceptionnelle émanant d'un acheteur placé dans des conditions particulières.

Valeur de construction

La valeur de construction, selon l'ABEX (Association Belge des Experts/Commission de l'Index du coût de la construction) représente le coût de la construction d'immeubles d'habitation en Belgique, dont les principaux éléments constitutifs sont les frais d'étude, la main-d'œuvre, les matériaux, les frais généraux et le bénéfice d'entreprises et des taxes.

Valeur locative

La valeur locative d'un immeuble est le montant équitable et normal du revenu qui est ou devrait être perçu

par le propriétaire en contre-partie de la cession à un tiers appelé locataire (pour une propriété bâtie, une terre non cultivée ou exploitée isolément) ou fermier (pour une terre cultivée dans un ensemble, une ferme ou une exploitation agricole), de la jouissance du bien.

Valeur locative normale

La valeur normale d'un bien peut être définie par le loyer qui serait obtenu du plus offrant si, à la date prise en considération, après une publicité suffisante, le bien était loué de la façon la plus adéquate.

Cette valeur locative normale est déterminée notamment par la comparaison avec les loyers obtenus, pour des biens de même nature et de situation analogue, lors de contrats de location réalisés dans des conditions normales à cette date.

Elle constitue par conséquent le point d'équilibre dans un marché normal, entre l'offre et la demande.

Une valeur locative est normale lorsqu'elle est induite d'une location anormale, dont le loyer n'est pas le résultat du libre jeu de l'offre et de la demande.

Par exemple: les loyers appliqués par les sociétés de logement social se révèlent le plus souvent comme étant anormaux puisque basés, notamment, sur la capacité contributive de chaque locataire pris individuellement.

Valeur locative brute selon le Code des Impôts sur les Revenus (art. 477, §3, CIR)

«Par revenu brut, on entend le montant cumulé du loyer et des impôts de toute nature acquittés par le locataire pour compte du bailleur, ainsi que la valeur en argent des charges, autres que les réparations locatives, résultant des conditions mises par le second à la location de l'immeuble. Si une charge consiste en une dépense une fois faite, elle est répartie sur toutes les années de la durée du bail.»

Valeur locative nette selon le Code des Impôts sur les Revenus (art. 477, §2, CIR)

«Par valeur locative normale nette, on entend le revenu normal brut diminué de 40 p.c. pour frais d'entretien et de réparations; la déduction porte sur le revenu afférent à la construction et aux dépendances bâties ainsi qu'aux dépendances non bâties à concurrence maximum de huit ares.»

Le revenu cadastral - definition (art. 471, §§1-2, CIR)

«§1er. Il est établi un revenu cadastral pour tous les biens immobiliers bâtis ou non bâtis, ainsi que pour le matériel et l'outillage présentant le caractère d'immeuble par nature ou d'immeuble par destination.»

«§2. Par revenu cadastral, on entend le revenu moyen normal net d'une année.»

Il est fixé actuellement sur base du marché immobilier du 1er janvier 1975.

Projet de valeur unique en matiere fiscale —l'avenir— le pari

Il s'agit d'une proposition reprenant des pistes de réflexion pour l'établissement d'une valeur unique fiscale.

Il convient au préalable d'indiquer que cette valeur doit, à l'origine, se fonder sur la réalité économique, qu'il faudra ensuite prévoir son évolution dans le temps sur base d'un certain nombre d'éléments statistiques, et procéder ensuite, selon un terme à définir, à certains ajustements en fonction de divers paramètres.

En effet, la maîtrise de la connaissance de l'évolution des valeurs immobilières dans le temps est une matière fort complexe, dont il est difficile de dégager des tendances générales à appliquer de manière individuelle pour chaque bien-fonds, compte tenu de la diversité des types de biens concernés et particulièrement des évolutions très contrastées en raison de la situation particulière de chaque bien. Comme nous l'envisagerons ci-après, le caractère de situation est l'élément le plus contraignant, dont il est malaisé de cadrer l'évolution dans le temps.

L'instauration d'une valeur unique fiscale, établie d'une manière bilatérale entre le propriétaire d'un fonds et l'administration fiscale, accessible à tous et pouvant donc être connue préalablement à toutes transactions immobilières, serait de nature à rencontrer les nombreuses doléances émises par les milieux professionnels de l'immobilier et les citoyens «consommateurs» à l'encontre de l'absence d'informations concordantes quant à la base d'imposition en matière de transactions de biens-fonds.

Cette valeur unique concernerait tous les biens immobiliers repris à l'allivrement cadastral, c'est-à-dire toutes les parcelles bâties et les parcelles non bâties.

Methode proposee

Dans le cadre du projet de valeur unique en matière fiscale, nous proposons d'établir la valeur initiale de construction pour chaque parcelle bâtie. En l'occurrence, il s'agit plus exactement d'une valeur de reconstruction qui devrait être attribuée de manière individuelle pour chaque bâtiment.

Selon notre expérience en la matière, pour les bâtiments à usage de logement, nous suggérons d'utiliser la méthode de l'Union des Géomètres Experts de Bruxelles (société royale fondée en 1876-méthode codifiée par Fr. Gabele et consorts en septembre 1993).

Pour les bâtiments industriels et exceptionnels, nous proposons de conserver la méthode —qui a fait ses preuves— utilisée par les géomètres-experts du Cadastre (application du taux de 5,3% de la valeur vénale normale de la parcelle à l'époque de référence —article 478 du Code des impôts sur les revenus).

Pour plus de renseignements, contacter par e-mail: francis.gabele@minfin.fed.be.

Remarques importantes

La modification de la base d'imposition en matière immobilière engendrerait l'obligation d'une concertation préalable et l'obtention d'un accord formel de la part des trois Régions et Communautés (Loi spéciale du 16 janvier 1989 relative au financement des Communautés et des Régions, modifiée par la loi spéciale du 16 juillet 1993 visant à achever la structure fédérale de l'Etat, ainsi que la loi spéciale du 12 janvier 1989 relative aux institutions bruxelloises) nécessitant de dresser un inventaire de toutes les dispositions légales et réglementaires prenant en considération le revenu cadastral ou la valeur vénale.

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Congres sur le Cadastre dans l'Union Europeenne

Le Royaume de Belgique a accueilli avec grande satisfaction cette initiative et y présentera ses objectifs en matière de réforme de l'administration du Cadastre belge dans le cadre de la nouvelle «institution» de la documentation patrimoniale.

Certains principes énoncés pour l'établissement d'une déclaration sur le Cadastre dans les pays de l'Union Européenne retiennent plus particulièrement l'attention.

En ce qui concerne l'Etat Fédéral belge, je retiens en particulier le fait que la parcelle est l'objet de base du Cadastre.

Sur le plan européen, la Belgique adhère à l'idée que les Cadastres doivent être gérés comme des bases de données ouvertes, pouvant incorporer d'autres informations propres à la parcelle, selon les nécessités de chacun des Etats membres et de l'Union Européenne.

Ainsi, en Belgique, les bases de données réunies sous une coupole (à créer) doivent permettre la gestion des impôts fonciers et la planification territoriale, ainsi que celle permettant une évaluation massive au travers d'applications informatiques.

Déjà en Belgique, l'information détenue au Cadastre est mise à la disposition de tous les citoyens ainsi que des entreprises. Les normes pour y accéder respectent les normes prescrites par la Commission de la Protection de la vie privée, notamment. En outre les prix fixés ne découragent pas l'accès à l'information.

L'information territoriale est mise à la disposition des administrations communales, régionales et fédérales. La collaboration et la coopération entre les services de ces différentes entités concourent à la conservation et à l'actualisation permanente de l'information cadastrale.

En conclusion

Créer un instrument fort, cohérent, compétitif, de coopération administrative et cadastrale européenne, adapté aux nouvelles réalités du monde est une priorité d'action.

Coopérer, c'est échanger, c'est être ouvert à l'experience des autres, à leurs questions, à l'originalité de leurs réponses. ■