

Digital Purchase Price Collections - The German Way to Provide Transparency for Real Estate Markets

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Key words:

SUMMARY

Essential task of the independent German land valuation committees, consisting of valuers from various relevant sectors, is to provide transparency for the real estate market. The committees secretariats usually are located at local cadastre offices. Base and main aim of the committees work is the maintenance of a digital property transactions inventory (purchase price collection) and its proper evaluation. Nearly one million of sales contracts form the sound basis for all analyses carried out.

Besides the determination of average values, the latest software –including multiple regression analysis tools- supports production of plots, diagrams, indices and other influential factors on the way to open market values.

The speaker first introduces examples from German „Reports on Local Real Estate Markets“ with their fixed „standard prices“. Second, he presents efficient and powerful ways to computer assisted mass valuation for both built-up and non-built-up real estate.

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1. INTRODUCTION

The economic system of the Federal Republic of Germany is a free-market economy. All goods have their price if you trade them. Supply and demand determine the price. The same principles apply for real estate transactions. Preferred objects are of course more expensive, bad objects have a lower price.

It is rather difficult to monitor all transactions and it is even harder to track all purchase prices, if you do not work in this job every day. A lot of facts influence the price of a certain fixed asset.

The aim of my report is to provide an overview on the present state of valuation of land and buildings in the Federal Republic of Germany and the major developments within the last four decades.

The recent German history has shown, that in the new five federal states there is no knowledge about the problems of valuation of real estate. Reasons of time and efficiency have initially caused us to adopt simple methods as interim solutions. Today there is no difference in working between old and young states. The electronic data processing is a very good support for us.

But first, I will give a report on the ideas of valuation in Germany, which came up in the year 1960 together with the German „Bundesbaugesetz“ – the German Code for Building and Construction works.

2. VALUATION OF REAL ESTATE: THE GERMAN APPROACH

First of all it is important to point out, that valuation of real estate in Germany is split up into two parts.

The first one is the official valuation, represented by about 1500 official valuation committees or „public valuation boards“ (= Gutachterausschüsse für Grundstückswerte). Each valuation committee is responsible for a certain region or town, e. g. Berlin, Hamburg, München, Hannover, Bremen, Braunschweig, Wolfenbüttel, Göttingen, Northeim and so on. Each of them is composed of 10, 15 or 20 experts.

Beside the valuation committees, there are independent private experts (on valuation), performing special tasks within the whole spectrum of valuation, the so-called „publicly

appointed experts“, appointed from associations of architects, estate agents, chambers of commerce and so on.

The most important job of the official committees is to make the results of the local real estate markets understandable and more transparent for all citizens, not only for the experts working on real estate issues every day. This is particularly helpful for the local and federal authorities in the fields of town-planning and urban development, and for all people interested in all kinds of transactions of built-up or not built-up land.

The information on the value-level forms the basis for right decisions in relation to the whole real estate market.

The compulsory work of both institutions – independent experts and official valuation committees – are outlined in the following chapters.

3. LAND VALUATION COMMITTEES MONITOR THE PROPERTY MARKET

The „valuation committee“ is an independent group of experts, mostly consisting of civil engineers, architects, brokers, land surveyors, bank managers, agricultural experts and so on.

The main task of this group is to determine „standard prices“ or „guiding prices“ or „maps of recommended approximate values for land“ (= Bodenrichtwerte) for all types of property and to pass a resolution in form of the annual map of recommended approximate values for land, to be adopted, updated and edited at each „1st . of January“.

Types of adopted maps of recommended approximate values comprise:

- agricultural and forest areas,
- rural and urban areas with the destination „built-up“,
- trade/industrial areas,
- traffic-areas,
- areas with special usage rights,
- e. g. owner occupied flats or condominiums,
- rents (if possible),
- ...

If possible, these boards have to give information and details on the value of all kinds of buildings. The best thing would be to provide even the influencing attributes, which have been derived from all facts available.

The second huge task of the valuation boards is the issuing of market-value-certificates for both built-up and not built-up real estate, that are needed by private people, commercial companies, courts of justice or administration.

4. INDEPENDENT VALUERS

There is another possibility for issuing of market value-certificates: This work can also be carried out by external independent valuers of real estate. Relying on the same base information derived from the analytic results of the local valuation committee, which must be published as maps, statements or in tables, these valuers are also able to determine the market value of a special object.

Citizens, companies and everyone who needs a valuation can choose, whom they want to carry out this work. The costs are nearly the same. They can differ from one federal state to the other. I estimate, that boards will carry out roughly 10 to 20 % of all valuations across the whole country. The other 80 to 90 % are made by the private valuers.

Some figures of Lower Saxony, one of the 15 states of Germany with special valuation committees: Each committee performs about 100 to 500 valuations per year. If you add up the total numbers of one year about 100.000 valuation-certificates are issued for Lower Saxony by altogether 50 valuation committees.

By the way: These committees have to work with the whole team, when they are fixing the „standard prices“ and the annual „Reports on the Local Real Estate Market (= Grundstücksmarktberichte). When a decision on the value of a special object has to be made, it must be agreed by the chairman and two other experts.

How many members belong to one committee? – 10, 15 or 20, depending on the area of a town or region, the possible workload and the expertise of the members. The members do their job on a honorary basis. The chairman and all members of the committee are appointed by the state authorities, mostly for the time of five years. They are independent in their decisions, the authority cannot give any orders. Relevant laws, ordinances and decrees must be observed. The *chairleader of mayor`s office or leader of a rural district (???)*. In the office, where the chairperson is doing his main job, the „Geschäftsstelle des Gutachterausschusses“, „agency of land valuation committee“ or „committees secretariat“ is located.

This secretariat prepares all materials and documents needed for the work and tasks of the valuation committee, issues the valuation-certificates, drafts and maps and publishes them.

5. THE PURCHASE PRICE COLLECTION AS INFORMATION DATABASE

The main task of the staff in these agencies responsible for the valuation committee is the evaluation and interpretation of all contracts of sale of built-up or not-built-up land. This purchase price collection must be carefully maintained and evaluated, as it is the basis for all works of the valuation-committees as well as the private valuers.

Some figures: In an average cadastre office in Lower Saxony, normally up to four employees work for the valuation committee. In the largest cadastre office of Lower Saxony, in

Hannover, in fact 15 employees of a total staff number of 150 deal with real estate valuation. As you can see, about 10 % of the staff of a German „Katasteramt“ is working on valuation issues.

The average number of sales contracts for real estate per year in Lower Saxony is about 100.000. In each agency 1000 to 5000 contracts per year have to be dealt with.

The independent private valuers can apply for information from the purchase price collections. With regard to data protection, information must be made anonymous. Some special attributes are not given, e.g. house numbers or, geodetic co-ordinates of the object. The names of the contract partners are not stored in the database anyway.

It is possible to obtain the following details from each sales contract:

- the location of the property,
- the co-ordinates,
- the area,
- the building or flat,
- the price,
- e.g. rights, encumbrances, terms of payment,
- and so on.

But before you can evaluate the qualities of the object in reference to the sales price, you have to look for a lot of other information on the object. The next slides are showing the other information sources and the way of working.

Finally, a collection of sales contracts, consisting of three records or inventories is established:

- The map, showing all the realised contracts of sale, using a copy of the real estate map or a large scale topographical map.
- The inventory of purchase prices, kept and written paper-based or automatically (AKS).
- The register of images/photos of all sold buildings, taken only a few days after the selling-dates, in any case without any changes already made by the new owner.

6. PROCEEDINGS TO DETERMINE THE OPEN MARKET VALUE

of built-up or non-built-up real estate. There are three main determination methods:

1. direct value comparison (= Vergleichswertverfahren)
2. asset value method (= Sachwertverfahren)
3. investment method (productive value procedure) (= Ertragswertverfahren)

The most reliable and convincing way to value real estate is of course the first way: the direct value comparison, making use of a sufficient number of comparable objects. This is

definitely the best practice for all valuation committees, to make use of their inventories of purchase prices.

The regular methods of independent valuers are the other two methods, because they do not have enough transactions and purchase prices for the direct value comparison at hand. The amendment from 1990, allowing to provide information from the purchase price collection to independent honorary valuers is a good approach, but has not been applied sufficiently up to now.

Independent valuers mostly work with the investment method or the asset value method.

7. THE ANNUAL „MAP OF RECOMMENDED APPROXIMATE VALUES FOR LAND“

Valuation committees consist of analysts. They decide every year – to 1st of January – the „map of recommended approximate values for land“ for each municipality, mostly differentiated into special zones. Values are shown in fractions with definitions under the lines of the fractions, explaining the written declared value above the line of the fraction. Today Lower Saxon valuation-committees publish their maps in digital form (CD-ROM, Internet, e.g. <http://www.gutachterausschuesse-ni.de>).

The following maps will be explained afterwards: Maps for „Land, zoned for development“ and „Agricultural plots of lands“.

8. THE ANNUAL „REPORT ON LOCAL REAL ESTATE MARKETS“

The best solution for all working on valuation, is to publish an annual „Report on the Local Real Estate Market“ (= Grundstücksmarktbericht). The local market is analysed by the valuation committees and the following results are published:

- Index rows (= Indexreihen), showing the temporal development of open market values, distinguishing between all different kinds of real estate.
- Conversion factors (= Umrechnungsfaktoren) to adjust a named normal value, e.g. in relation to the area or quality of a not-built-up-land parcel or it's age, location, the condition or the current use of a building.
- Reference factors (= Vergleichsfaktoren)
- Reference values (= Vergleichswerte) for easy performance of a direct value comparison. It is common practice to work with
 - costs per square metre in relation to the land or the building,
 - factors to multiply the annual gross proceed (= jährlicher Rohertrag).
- Rents, leases applied to agricultural areas, site (building site), building, home, apartment. It is usual too, to work in this case with costs per square metre.

9. THE WAY FROM MANUAL TO DIGITAL MANAGEMENT AND EVALUATION

The structure and amount of the inventory's data are perfectly suited to be kept and analysed mechanically at first and automatically later. Although organisational aspects of the purchase price collection are handled in a different way in some of the German states, three common stages of development can be identified: The paper-based collection of purchase prices has gradually changed to maintenance of an automated inventory. Methods have changed from paper-based procedures to digital methods. Today, most land valuation committees prefer to make use of networking and GIS-supported valuation-systems.

9.1 First Stage of Development: Paper-based Collection and Analysis

In the first years of property assessment in the 60's and 70's the valuation committees had only very few technical assistance at hand. Typewriters and historical calculators were the only technical help in the beginning. The collection of purchase prices consisted of huge amounts of filing cards and maps, where the characteristics of each object were described and locally defined. In addition some valuation committees kept a collection of images of the sold real estate. All three collections had the disadvantage that they could only be kept and analysed manually.

A first step to run the inventory of purchase prices in a more automated manner started in the 1960's by using punch cards. These punch cards were available in different versions: starting with one row of punches at the top of the card, double or triple row punch cards, to punch cards with a slit. While the punch card with just one row of punches could only answer with „Yes“ or „No“, the others could store much more information and made it possible to use them for different kinds of selections.

The next step on the way to a much more economical and technically oriented inventory of purchase prices was the implementation of programmable pocket calculators. The instruction to derive the parameters needed for the property assessment could be done much more efficiently for the first time.

9.2 Second Stage of Development: Digital Management and Evaluation

An even more noticeable conversion took place in the early 1980's. The switch to digital management and evaluation of the inventory of purchase prices had reached a new dimension. The filing cards were not in use any longer and the data capture took place directly on screen. Right then, already demanded by the legislative for a long time, you could retrieve records of past transactions, mathematical indexes, comparable rents or properties etc. easier and much quicker than before.

It was not only speed that forced the move to a more and more automatic system. More powerful calculators have made it possible to run very complex analyses. The high value of the big amount of comparable values, collected in the past, was an advantage. Property

assessments and multiple regressions as part of the comparison method of valuation, has led to an inventory of purchase prices maintained in a more automated way and in a very sophisticated database.

Except for the digital inventory of purchase prices the other data and created products were still kept on paper. This changed with the transition to the third step of development.

9.3 Third Stage of Development: Network of GIS-based Management and Evaluation

Today the first land valuation committees have reached the third stage of development. They are on the way to a Property-Valuation-GIS. The essential aspect is the georeference. By georeferencing the results to each property it is possible to combine the data from other Geographic Information Systems with your application.

This is certainly a great advantage concerning data collection, data selection, evaluation and processing. Especially the variety of possibilities to present the results of different evaluations, becomes more and more important, for example in a map of recommended values for land as part of the annual report on the property market, in a CD-ROM product, on the Internet etc. It is possible to make the inventory of purchase prices accessible for customers with a justified interest, supported by the government in 1990, just because of these developments. Today, for example independent experts can apply for details of the inventory of purchase prices (not free of charge). The information they can access is much more detailed than just the records of past transactions or the report of the property market. We are talking about object-related information on sold objects.

It has to be mentioned, that in the German property valuation there is a restriction connected to this information. Because of the German data protection requirements, the information provided is presented in anonymous form. This means, that the information collected on each object that has been sold, is not completely given away. So information that is directly related to a comparable object, has to be rounded up or off or deleted. This could be, for example, the number of the parcel, house number or the co-ordinates of the comparable property, as well as a large scale paper map that shows every single parcel. However, small scale plots without property boundaries are fine.

Also the distribution of the image of the sold object, taken by the Valuation Office Agency, is restricted because of data protection requirements. „What a pity!“ most of the members of the land valuation committees say. Also their colleagues in other European countries are very surprised about these obligations in Germany. On the other hand they envy the German land valuation committees because of the very detailed and technically advanced inventory of purchase prices which includes every single transaction.

Moreover, the land valuation committees are able to substitute the disadvantage of „anonymity“ by very detailed evaluations of the comparable objects. In many reports on the property market, nearly all value-related data are shown, so experts can easily do without a

picture of the object or the exact details of the location of every comparable object in their market value reports.

10. EXPERIENCES WITH THE SYSTEM IN LOWER SAXONY

Against the background of the significantly increasing annual number of sold objects – the total number of contracts of sold properties rose from 50.000 per year in the beginning to 130.000 today – and because of the support of the modern IT-infrastructure and its ongoing development, the step by step creation of a digital inventory of purchase prices was the right thing to do.

Since 1984, thanks to the work of 50 land valuation committees, we have gained a huge amount of experience with the switch to digital management and computer-based evaluations of purchase prices in Lower Saxony. The Valuation Office Agencies are located at cadastre offices. In addition there exists a separate land valuation board in Lower Saxony, that combines the regional reports on the property market to a report for the whole state. A report on the property market for Germany is not yet available.

40 years after the official law came into effect, the property valuation has lost nothing of its meaning for the citizens and the different sectors of administration and economy. In the contrary, the land valuation committees are well established in the field of property valuation. Because of the wide range of products, they ensure a high level of transparency on the property market.

The controlling departments in Lower Saxony and in other states prove, that this level of transparency has its price. The fulfilment of the tasks related to the property valuation is expensive and yet not cost effective everywhere. (E.g. to evaluate the purchase price of an undeveloped property costs approximately 25 Euro, respectively 50 Euro for a developed property that includes buildings). It is absolutely necessary, that particularly the human resources are used cost effectively. The digital management of the inventory of purchase prices at the beginning of the 1980`s has been a first step in this direction. The new software-development over the last couple of years, and in particular the computer-based evaluations of the inventory of purchase prices, give us the opportunity to keep the high quality of the property valuation more economical.

11. DEVELOPMENT OF A „PROPERTY-VALUATION-GIS“

The technical development, presented by the project „Property-Valuation-GIS Lower Saxony“, including the concept of a digital object documentation and the development of more and better applications of the computer-based inventory of purchase prices is welcome. With the „Property Valuation System Lower Saxony“ the land valuation committees and Valuation Office Agencies are in possession of a system that meets the requirements of the future. The core tools of the systems are the inventory of purchase prices including the possibility to present the objects in an map as well as the computer-based evaluation and presentation of the records of past transactions. Considerations to improve the process of

generating reports also belong to the concept of a Property-Valuation-GIS that is already completely realised for Lower Saxony.

The aim of the system is to process all jobs and applications that could appear in a Valuation Office Agency and be solved by a computer from just one computer.

12. CONCLUSIONS

My five results, concerning more than 40 years of work to create transparency for the local property markets are:

- We need valuation committees to monitor the property market.
- We need a Purchase Price Collection to produce transparency.
- We need annually updated maps of recommended values, covering 100 % of the area.
- We need annual „Reports on Local Real Estate Markets “ with all important information around property markets
- There is no alternative to a Property-Valuation-GIS as designed and developed e.g. in Lower Saxony. Some German countries duplicated this product, other countries will consequently carry on to go this way.

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