

## **Going West or Going East - Fundamental Changes in the German Property Tax System**

**Rene GUDAT, Germany**

**Key words:** property tax; value-based and area-based approaches; bases of assessment; German and European context

### **SUMMARY**

The property tax generates important revenue for local and federal authorities in every country. In some countries the revenue is connected to a special intention, in others it offers financial recourses for the public administration. One main aspect in levying property taxes is the basis of assessment. The main approaches to estimate the bases of assessment are either value-based or area-based. This paper describes the spread of different approaches for estimation of assessment values in Europe. At the moment, Germany is on the border between value-based approaches in West Europe and area-based approaches in East Europe. Fundamental changes are coming up. Currently, the Germany approach is a value-based approach based on historic values. But the German Federal Fiscal Court and the Federal Constitutional Court criticized tax assessment based on historic values. The basis of assessment is ought to be changed in the next few years. Now, the question in Germany is which basis of assessment should be used: either an area-based or a value-based approach or a combination. Beside the European Context, the paper will present the actual situation in Germany and the approaches previously discussed.

### **ZUSAMMENFASSUNG (GERMAN/ DEUTSCH)**

Die Grundsteuer stellt für die Gemeinden oder Bundesstaaten eine große Steuereinnahme dar. In einigen Ländern ist diese Einnahme zweckgebunden, in anderen steht das Geld zur allgemeinen Haushaltsfinanzierung zur Verfügung. Ein wesentlicher Punkt der Grundsteuer ist in allen Ländern die Bemessungsgrundlage. Diese lässt sich in Wert-basierte, Einheiten-basierte und Ansätze mit Selbstauskunft des Steuerpflichtigen über den Immobilienwert unterscheiden. Dieser Aufsatz soll die räumliche Verbreitung der verschiedenen Ansätze in Europa aufzeigen. Deutschland befindet sich aktuell im Grenzbereich zwischen den Wert-basierten Ansätzen in West- und Nordeuropa und Einheiten-basierten Ansätzen in Osteuropa. International sind Veränderungen absehbar. In Deutschland wird gegenwärtig ein Ansatz angewendet, der historische Werte nutzt. Dieser wurde jedoch vom Bundesverfassungsgericht und dem Bundesfinanzhof wegen seiner Bemessungsgrundlage kritisiert. In den kommenden Jahren wird die Bemessungsgrundlage der Grundsteuer daher reformiert werden. Die Frage, die sich dann stellen wird, ist, ob sich Deutschland an den ohnehin im umbruchbefindlichen Einheiten-basierten Ansätzen orientiert oder eine (Verkehrs-)Wert-basierte Lösung realisiert. Dieser

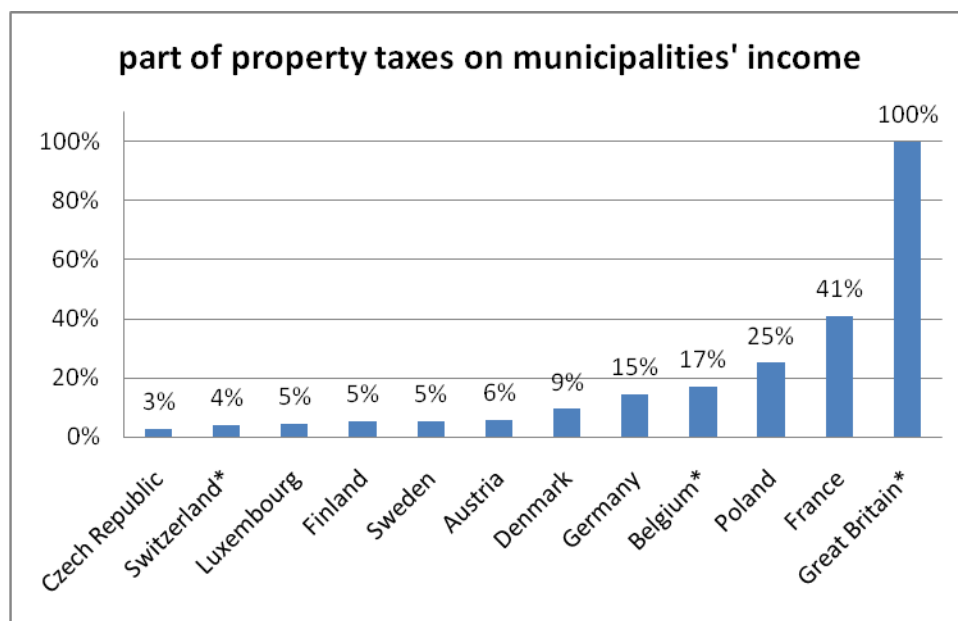
Aufsatz wird die Reformdiskussion zur Grundsteuer in Deutschland beschreiben und die vorgeschlagenen Modelle in den europäischen Kontext einordnen.

# Going West or Going East - Fundamental Changes in the German Property Tax System

Rene GUDAT, Germany

## 1. INTRODUCTION

The property tax generates important revenue for local and federal authorities in every country. In some countries the revenue is connected to special appropriation, in others it offers financial recourses for the public administration. In the majority of countries the property tax accord to the municipality. Figure 1 shows the part of property tax revenue on total revenue of the municipalities in different countries. The part of property taxes to finance municipalities is different. In some countries municipalities are financed completely by property taxes in others there is only a little amount or even no direct revenue of property tax to the municipalities. In those cases the states levies the property taxes and allot a part of the revenue indirectly to the municipalities.



**Figure 1:** Part of property taxes on municipalities' revenue in some European countries. In some countries (\*) a part of the property tax goes remains as federal revenue

## 2. FUNDEMENTALS ON BASES OF ASSESSMENT OF THE PROPERTY TAX

In some countries property tax is levied only on the land value. In the majority of countries the property tax is based on the value of land, building and structures. In hardly any country the property tax is levied only on the value of the building. For the estimation of the amount of property tax that is to be paid an assessment value is necessary. The valuation of assess-

ment value is topic of this paper. In many countries both land and buildings were assessed separately; there is one value for the land and another one for the building. The separation allows two different rates of assessment to be used for property tax.

The basis of assessment is a technical or monetary parameter, which is used for estimation of tax liability. For the valuation of the basis of assessment different approaches are possible. There are area-based, value-based and self assessment-based approaches (Bird & Slack, 2005). The value based approaches can be split up into market value-based and cadastral value based approaches.

Area-based approaches are normally based on area. The area factor is multiplied with an assessment factor. Usable Floor area or area of land can be used as area factor. The assessment factor could correct the use of buildings or the size of municipality. Often the assessment factor is described in a spatial zone. Sometimes area-based approaches are adjusted to the market level. Very often area-based approaches are used for the assessment of agricultural and forestry properties.

Value-based approaches use as value factor as basis of assessment. Generally this factor is linked to the market value based on the International Valuation standards (IVS) or a somehow approximation. The comparable sales method, the income capitalisation method or the replacement costs method can be used to estimate the market value. The land and property market is volatile and a valuation result refers to one single point in time (date of valuation). The dynamic market value is estimated by using contemporary transactions. Even the replacement value is to be adjusted to the market level to result a market value. Market values are characterized by their proximity to the market and their reference to an object. They could be estimated with mass appraisal approaches or individual valuation reports; valuation reports are assumed to have a higher accuracy. Within mass appraisal approaches similar objects are grouped and valued contiguously. The costs caused by application of mass appraisal approaches increases with spatial and factual differentiation of groups. But market value approaches requires an up to date data set and a regular revaluation, especially in volatile markets.

Cadastral Values are a value-based approach as well. They use lump sums for different variables. Cadastral values normally use rents of property. Rents are estimated as lump sum. Operational costs, vacancy rates and sometimes capitalisation rates are neither linked to the market nor a single property. In some countries there are huge differences between market and cadastral values. If cadastral values based in individual rents they are similar the best use market value at the same point of time. In many countries the greater the difference between date of valuation/ point of market and the point of assessment the greater the difference between market value and assessment value is. Unfortunately, large differences result a higher number of appeals. So it is necessary to have contemporary cadastral values: The larger the difference between the values the greater the amount of appeals.

Furthermore, there are some countries that use self-assessment approaches for the estimation of property taxes. The tax payer is asked to estimate the value of his own property. The au-

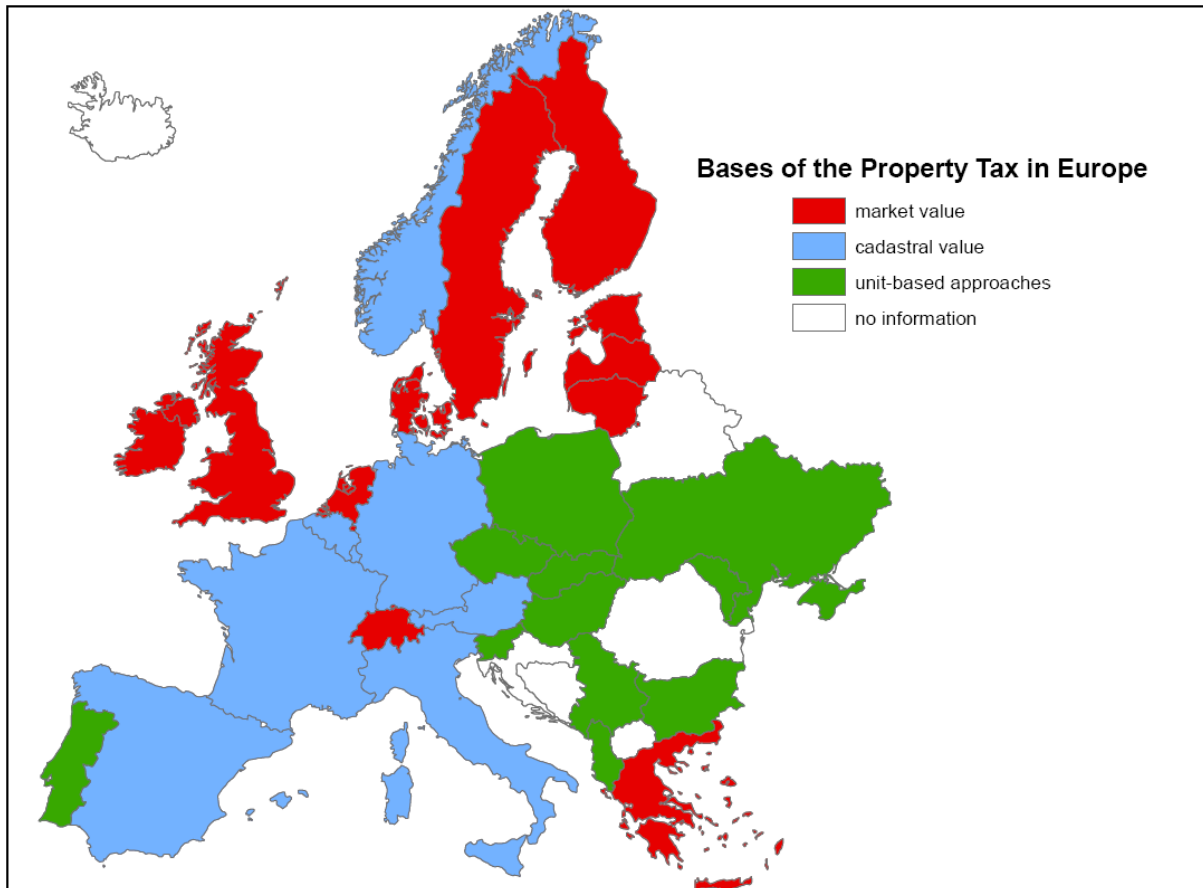
thority or another interested person gets the legal right to buy the property for this or a little higher value stated by the tax payer. The tax administration needs a lot of money to force the rule and buy property. However, there are problems for the laymen tax payer to estimate the value of their property. This form of assessment is not very common anymore (Bird & Slack, 2005).

Market values are internationally assumed to be the fairest basis of assessment for tax purposes. The neighbourhood of every single property could be considered. But, value-based approaches are expensive, time-consuming and require a lot of experts. Studies showed that mass appraisal approaches are able to estimate the basis of assessment in a tolerable accuracy in a shorter time. Mass appraisal approaches are not able to consider encumbrances and legal rights, but for tax purposes this doesn't matter. Cadastral values especially if they are based on historic values - and area-based approaches as well - are much cheaper and easier to assess. There are hardly any expenses for maintenance. If they are introduced once, they produce stable revenue. The traceability of area-based approaches for the layman is better than dynamic value-based approaches. But there is an inequality between taxpayers left in area-based approaches. Not every property with the same size and physical characteristics gets the same effects of the market. So single family houses next to a beautiful lake are not the same in value as a quite similar house next to a sewage plant.

### **3. BASES OF ASSESSMENT FOR PROPERTY TAXES IN EUROPE**

#### **3.1 Bases of property tax assessment**

There are different bases of assessment in Europe. The situation in different countries is compared in many different papers (Gudat, 2010; McCluskey, 2010; Yuan, Connolly, & Bell, 2009; Lim, McCluskey, & Davis, 2008; Rossmann, 2006; Van den Noord, 2005 and Arbeitsgruppe „Kommunalsteuern“ , 2003). There are both area-based and value-based property taxes in Europe; self assessment of property for property tax is not common. Value-based bases of assessment can be differentiated into static cadastre values and dynamic market values (see section 2). The spatial distribution is showed in Figure 2; for the illustration references named above have been used.



**Figure 2** The Figure shows the different bases of assessment of property tax and their use in Europe.

One can see a clear separation in Europe. On the one hand there are area-based approaches in some countries on the other hand there are value based approaches in other. Figure 2 shows area-based approaches situated in East Europe. Due to the breakdown of former centralised socialist governments there still is a lack of high quality and comprehensive information of ownership, cadastral information and market information. Private ownership of land and/ or building had been abolished in almost every eastern European country for decades. The reintroduction of an open market for real property leads to a volatile development of prices and overheated markets were assumed. In the beginning of the 19'90s area-based approaches were very common in East Europe (McCluskey, 2010). The OECD and the national policies review those approaches. The main contrasts are the differences to the market level and the inequality of tax objects and tax payers. Almost every of these countries tested value-based approaches practically. All of the tested approaches were based on market values. At the moment, the introduction of value-based property taxes delayed due to administrative and technical problems (Bird, 2004 and Serres, 2008). It is obviously, that the number of countries using area-based approaches will decrease.

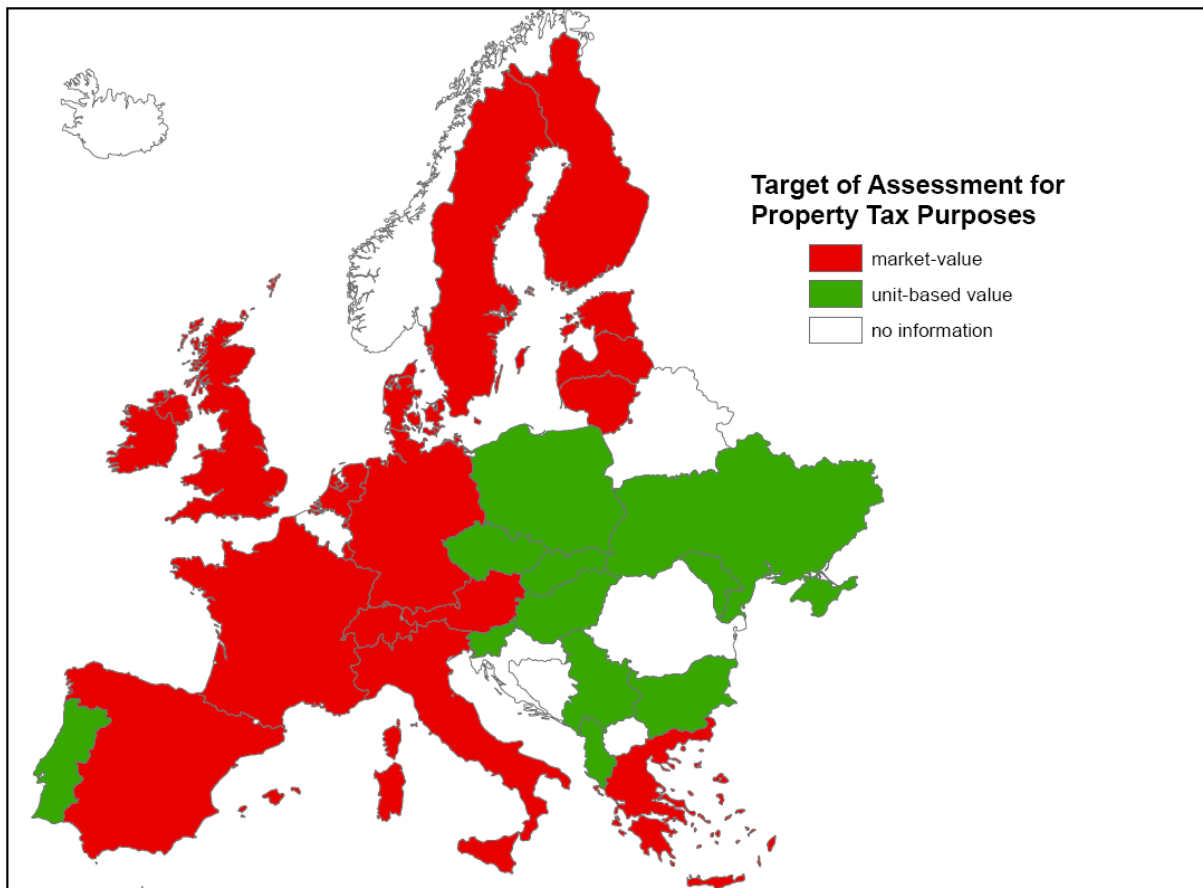
Figure 2 also shows many countries with cadastral values used as basis for property taxes; these countries are situated in the Central and South Europe. Cadastral values are approximations of market values. They are based on lump sum concepts for rent levels,

capitalisation rates and operational costs; e.g. in France and Spain. In some countries the parameters within a concept had been deducted from market level at a point in time back in the past; they are historic variables used in e.g. Germany, Austria and Belgium. Unlike values orientated on a volatile market level cadastral values are static. Cadastral values produce a stable revenue, but if a market level change the value of every single property and the assets of the tax payer change, too. The capitalisation of historic variables had been discussed on different national levels. Some national courts narrowed the use of these values for tax purposes. The Austrian Federal Constitutional Court prohibited the use for inheritance and gift taxes; the German one did as well. For some countries the OECD recommended adjustment of cadastral values to the market level. So one can assume the number of countries using cadastral values will decrease in future.

The third basis for property tax showed in Figure 2 are market values. Market values are used in northern European and some central European countries. These countries are told to have land and property markets on a highly developed economic level. Some of these also have a very volatile market level. In Finland, the UK and Sweden growth of about nearly 20 per cent in only one year occurred in some regions while other regions decline or remain static in the same year. Unlike bases using cadastral values these market-based values reflect current development of the land and real market. In many countries using market values there are collections of purchase prices and transaction details. The analysed results are used in mass appraisal approaches. Mass appraisal approaches commonly use components of the comparable sales or the income capitalisation approach. Besides this, there are approaches that use econometric models to analyse sales prices (Borst, McCluskey 2008; Thompson, Jr. 2008). Estimations of the quality and accuracy of mass appraisal approaches are rare and could be a topic for some future studies. Some practical evidences showed that there is only a small difference between market values and market value based assessment values in active markets (de Vries, Jansen, Lamain, Boelhouwer, & Coolen, 2006; Arbeitsgruppe "Grundsteuer auf der Basis von Verkehrswerten", 2010). Due to the developments in East Europe one can assume an increase of countries using approaches based on market values in Europe.

The research in different countries showed that especially former socialistic countries will change their system of property tax in the next few years; some preliminary studies have already been done. Besides area-based approaches static value-based approaches had been criticized for their inequality of taxpayers caused by historic values. One can assume that Figure 2 will become more painted red in the future.

### 3.2 Target of property tax assessment



**Figure 3:** The Figure shows different targets of assessment for property tax and their use in Europe. Market Values are due to dynamic Market Values and static Cadastral Values shown in Fig. 2.

While Section 3.1 shows the basis of assessment, this section shows a higher target of the tax bases. Both dynamic market and static cadastral values are finally market-based approaches; both targeting the market value. The cadastral value is just a simplification of the market value; it's an approximation. Area-based approaches are mainly used in East Europe; market values are used in West Europe instead (see Figure 3). As showed above, the spatial distribution is going to be changed. East Europe tries to perform property taxes based on market values. Area-based approaches are unable to recognise the development of land and real estate markets. But they are easier to administer and maintain by the tax administration. Although area-based approaches are easy to understand by the tax payer, they are still not fair. Valuation leading to the market value is difficult to understand for laymen, but due to paid attention on value effecting characteristic they produce tax equality. In many cases market values are estimated by using mass appraisal approaches. Examples from the Netherlands, Sweden and Denmark showed that costs can be minimized by an efficient process design of mass appraisal approaches and use of assessment results for third-party purposes (Kathmann, Kuijper 2006; Muller 2000; Muller 2005).

Experiences from other European countries in using market-based approaches showed that a



regular revaluation of assessment values leads to an evident reduction of appeals against property tax. Whether it stays unclear, if a low processing time and a reduced number of appeals justify a regular revaluation of all properties. In the end, it has to be noticed that even if the laymen tax payer couldn't understand every single part of valuation, he still owns an idea of the value of his/ her own property. So he is able to evaluate the value. In some countries like the United States and the United Kingdom tax payer can search the tax register to compare their taxes to the taxes of their neighbours. In a lot of countries it is possible to refute an assessment value by presenting a detailed valuation report for a single property.

#### 4. THE CURRENT PROPERTY TAX IN GERMANY

The property tax in Germany is levied on agricultural land, forest land and built and unbuilt sites. There are about 35 Million tax objects. The property tax is stable revenue for municipalities with yearly tax revenue of about 10.7 Billion Euros. The current property tax system uses standard assessment values, assessment factors and rates of assessment.

*property tax = standard assessment value × assessment factor × rates of assessment*

The standard assessment value (*Einheitswert*) was formally used for many different taxes, e.g. inheritance and gift tax and property tax. It is defined in the German tax valuation act. After a decision made by the Federal Constitutional Court in June 1995 the use of historical values is not longer allowed for purposes, which taxes different kind of goods. Immovable property had been taxed on a standard assessment value while shares and money were taxed on market values. The decision also said that the standard assessment value is not a market value. Nowadays, the standard assessment value is only used for the property tax. By law, the tax administrations ought to declare the standard assessment value every six years. So the assessment value should approximate the market value. But, the last declaration of market values was in 1964 for Western Germany and in 1935 in Eastern Germany; besides this there are some more dates, which are subject for assessment. At the moment, the standard assessment value is a historical value and is discussed to be reformed. The standard assessment value is the basis of assessment (for property tax) in Germany.

The assessment factor (*Steuermesszahl*) is an equal national factor to adjust standard assessment values countrywide. Different kinds of property use different assessment factors. For single family house it is 2.6 per mill, for semi-detached houses it is 3.1 per mill and for other purposes it is 3.5 per mill of the standard assessment value; for agricultural and forest land there is a special assessment factor. The national assessment factor allows the application of only one single rate of assessment for every municipality. The multiplication of the standard assessment value and the assessment factor results the taxable amount for the property tax for the object (*Steuermessbetrag*).

However, the rate of assessment (*Hebesatz*) is a factor of the municipality. Every municipality defines their own rate of assessment. It is to be used for all kinds of property. The rate of assessment is between 250 and 810 per cent of the taxable amount for the property tax; the average rate is 388 per cent in Germany. The rate of assessment orientates at the expenses of the

municipality. The taxable amount for the property tax and the local rate of assessment results the amount of property tax, which is to be paid.

So for a single-family house with a market value of 200,000 Euros the standard assessment value is much below the market level. It is assumed that the standard assessment value is 50,000 Euros. For single family houses an assessment factor of 2.6 per mill is to be used. The taxable amount for this property is 130Euros for every comparable property in the country. In a single municipality with an assumed rate of assessment of 400 per cent the amount of property amounts to 520 Euros.

The property tax in Germany is mainly criticised for its basis of assessment. A historical value doesn't consider the development of property markets of about 46 years; the property characteristics are still fixed on the level of 1964 or even before. The property market is developing quit volatile, but spatially different. This leads to an unequal treatment of tax payers. As the Federal Constitutional Court declared, there is inequality between different kinds of goods. By the way, due to different bases of assessment for different taxes there are higher expenditures for personal and time. So the property tax and especially the basis of assessment are to be reformed. First steps had been done nearly twenty years ago. But at the moment the models, which could be used, are still under construction (see section 5).

## **5. ATTEMPTS TO REFORM THE GERMAN PROPERTY TAX**

As showed in section 3 there are many reasons to reform the German property tax. As showed in section 4 there are different types for the basis of assessment in Europe. The following section will present the discussed models for a new basis of assessment. They will be analysed in the European context.

### **5.1 Discussed reform models in Germany – (First) three parts of the reform**

Up till now, there were three parts in the discussion to reform the German property tax system: The First Part started 1995, the second part started in 2002 and the third part started in 2006. All parts were caused by fundamental judicial decisions of national courts. They were followed by political debates. There is no doubt, that tax has to be reformed in future. But it is not clear how many more parts of discussion will be needed. Currently the property tax is legislated in national law, but federal states have an important participation.

#### 5.1.1 First Part: form 1995 to 2002

After the decision of the Federal Constitutional Court on levying inheritance taxes on standard assessment values in 1995 the responsible conference of finance ministers of the federal states and the federal republic introduced a working group to reform the property tax, some ideas had been made before. This working group was asked to prepare different models to change the basis of assessment. There were three different models prepared and tested by an assigned independent institute (Lehmbrock & Coulmas, 2001). The first model (so called model A) uses the area of land and the usable floor area. Both were multiplied with assessment factors: 0.1 Euro per square meter land and 0.5 Euros per square meter floor area. There was no connection to the market value of the property. This model only multiplies areas of the tax object.

$$\text{basis of assessment} = \text{land area} \times \text{assessment factor}_{\text{land}} \\ + \text{usable floor area} \times \text{assessment factor}_{\text{building}}$$

The second model (model B) also uses two parts: one for the land and another one for the building. The assessment value of the land ought to be estimated by using standardised ground values and the area of land. Unbuilt (100%) and built (70%) sites get different factors, so development of property could be promoted. The assessment value of the building ought to be estimated by using standardised replacement costs multiply them with the usable floor area and depreciate the value by age. In this model there was also a national assessment factor, which separates built and unbuilt sites another time. Although model B is value affected, it is obviously no market value. It doesn't consider value effecting characteristics very well.

$$\text{basis of assessment} = (\text{land area} \times \text{standardised ground value} \times \text{factor}_{\text{built/unbuilt}} \\ + \text{depreciation by age}(\text{replacement costs} \times \text{usable floor space})) \times \text{assessment factor}$$

The third model (Model C) is based on land values. It uses standardised ground values, the land area and an assessment factor. A modification of model C regarding the amount of land of every tax object had also been tested. This aforesaid model is a simple combination of value-based and area-based approaches, but they only consider unbuilt land values. The values of structures, which are normally the major part of the market value, were not included.

$$\text{basis of assessment} = (\text{land area} \times \text{standardised ground value} \times 0.8) \times \text{assessment factor}$$

The federal ministry of finance refused to start legislation. The federal states were asked to start legislation at this point, but they didn't do. The federal states were not able to compromise on one model. All of the models had some disadvantages. Major aspects were the introduction, the ability to maintain and administer the bases of assessment and the equality of tax payers.

### 5.1.2 Second Part: 2002 to 2006

In 2002, the property tax reform tried once again. The conference of finance ministers assigned Bavaria and Lower Saxony to develop a new model. In 2003, North Rhine-Westphalia replaced Lower Saxony in this working group. Both, North Rhine-Westphalia and Bavaria, presented a model in 2004 (so called *nomenclature model*). It was slightly different to the former model B. The value of the land ought to be estimated by using standardised ground values, which are considered to 70 % of their value for built properties. The Value of structures is estimated by using standardised replacement costs, which are given for five different types of buildings. The depreciation by age has been omitted.

$$\text{basis of assessment} = (\text{land area} \times \text{standardised ground value} \times \text{factor}_{\text{built/unbuilt}} \\ + \text{replacement costs} \times \text{usable floor space}) \times \text{assessment factor}$$

Within this model the tax administration or the local authorities got more relevance. This model is a combination of value-based and area-based approaches. But as in the previous part (see section 5.1.1) the initiative for legislation remained undone and the conference of finance

ministers noticed some need to adapt the model. One major criticism was the shift of tax burden for tax payers.

### 5.1.3 Third Part: 2006 and later

In November 2006 the Federal Constitutional Court pronounced the use of the standard assessment value inadequate for assessment using different bases of assessment. On the one hand there are values pointed in 1964 and on the other hand there are some pointed in 1935. This was against treatment of equality written in Article 3 of the German Constitution. The court explicitly accepted the use of mass appraisal approaches and market values as one possibility to estimate a fair basis of assessment. In 2010 four different models were presented. Only these models are available for decision at the moment. Older models are not considered.

The first model was presented by the federal states of Bremen, Berlin, Lower Saxony, Schleswig-Holstein and Saxony. This model is lean on approaches practically used in the Netherlands and Denmark for property tax purposes. By using property market transaction a multiple regression model is estimated by using value effecting characteristics. This multiple regression model produces standardised property factors in Euros of market value per square meter of area. So for the great majority of tax objects bases of assessment could be assessed. Only for special purpose objects or property for which there is no open market a special assessment is necessary. This model estimates a basis of assessment next to the market value (Arbeitsgruppe "Grundsteuer auf der Basis von Verkehrswerten", 2010).

The second model had been presented by the federal states of Bavaria, Baden-Wuerttemberg and Hesse. This model uses factors of equivalence to differentiate residential property, commercial property and unbuilt sites. Standardised ground values are not included in this model anymore. The model only uses land area and usable floor area. It is an area-based approach (Arbeitsgruppe der Länder Baden-Württemberg, Bayern und Hessen, 2010).

$$\text{basis of assessment} = (\text{land area} \times \text{equivalence factor}_{\text{land}} + \text{usable floor area} \times \text{equivalence factor}_{\text{building}})$$

There is another model combining the aforesaid model and the former *nomenclature model* (see section 5.1.2). Instead of using replacement costs equivalence factors ought to be used. A fourth model use single valuations for every single property in a standardised form like it has to be done for inheritance and gift tax.

At the moment, the models ought to be tested on their applicability. There are two main-streams within the discussion. One is for the market value-based model (first model), the other one is for the second model. The models will be presented to the conference of finance ministers in spring 2011. After that they will be discussed politically. Currently it is open, which von will be chosen.

## 5.2 Systematisation of the different reform models

**Table 1:** The different models discussed in Germany can be classified according section 4.1.

<b>Model</b>	<b>Type of approach</b>
<b>First part: 1995-2002</b>	
<b>Model A</b>	area-based
<b>Model B</b>	combined model
<b>Model C</b>	value-based
<b>Modified Model C</b>	combined model
<b>Second part: 2002-2006</b>	
<b>Nomenclature model</b>	combined model
<b>Third part: 2006 and later</b>	
<b>First model</b>	value-based
<b>Second model</b>	area-based
<b>Third model</b>	combined model
<b>Fourth model</b>	value-based

According to section 4.1 the different discussed model can be classified. Some of the models are area-based approaches similar to those used in Eastern Europe nowadays. Some of the discussed models are value-based approaches. One is directly orientated to those used in the Netherlands and Denmark. Some models are combinations of value-based and area-based models.

Within the combined models the value of the land is estimated using standardised ground values, which are reflecting a market level (value-based part), and a value of the building estimated by using lump sums or equivalence factors, which are area based and not adjusted to the market(area-based part). In particular, the assessment of buildings and structures seems to be difficult because of the amount of value effecting characteristics.

## 5.3 FURTHER CONCLUSION FOR THE DEVELOPMENT IN GERMANY

For valuation leading to a market value it is possible to estimate the market level. For the valuation of market values there is a variety of information available. The superior position obtains the 1960 introduced official committees of valuation experts. These committees are assigned by law to maintain purchase price collections and analyse them (Kertscher, 2004 and Kertscher, 2007). Official committees of valuation experts provide standardised ground values. Since the amendment of the Federal Building Code in July 2009 they are assigned to publish standardised property values including the value of land and building. This standardised property values are a similar to the result of the first model named in section 5.1.3. According to the law it should be no problem to use standardised property values or even the multiple regression model to estimate a basis of assessment. Standardised property values often fulfil the requirements on accuracy for valuation reports; the requirements on quality are normally higher than those for tax purposes. So in theory, it should be no problem to introduce a value-based property tax in Germany.

## 6. CONCLUSION

As showed in this paper property tax is very important for financing municipalities. So it is in Germany, too. For an equality of tax objects it is important to have an acceptable basis of assessment. There are different bases of assessment available. In Europe there are area-based approaches in the East, cadastral values in West and Central Europe and market values in the North; both cadastral values and market values leading to a value-based approach. Area-based approaches are criticized for their evident inequality. A lot of countries in East Europe are going to abolish area-based approaches and introduce value based approaches. Some countries in West and North Europe have showed the practical applicability of market value-based assessments for years. The international mainstream in Europe favours value-based approaches leading to a market value. This approaches taxes tax objects on their real value and reaches equality. The disadvantages on maintain and administer could be weakened by modern process design, mass appraisal approaches and automated data processing. The effects of advantages of value-based approaches outbalance the effects of the disadvantages clearly. Germany discusses different models. Some of these models are area based or combined approaches using parts of area-based approaches. Other models are value-based approaches. If Germany decides to introduce a area-based approach, it is to be supposed that there will be similar national and international criticism.

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## **BIOGRAPHICAL NOTES**

Rene Gudat was born in May 1982 in the north of Germany. He finished school in 2000. From 2002 to 2007 Rene studied geodetic engineering in Hanover and focuses on land and real estate management. Since 2007, he is PhD student at the chair of Professor Winrich Voß for land and real estate management at the Leibniz University of Hanover. Rene's research project deals with the improvement of transparency on the land and real estate market. His PhD thesis focuses on estimation of a ranking of important characteristics of the land and real estate market by using Multi-Criteria Decision Making (Decision Theory). Besides this, Rene is a member of different working groups that are specialised on valuation of property and the analyses of the land and property market. At the moment, Rene assists another group dealing with the reform of the property tax in Germany.

## **CONTACTS**

Rene Gudat  
Leibniz University of Hanover  
Geodetic Institute – Chair for land and real estate management  
Nienburger Straße 1  
30167 Hannover  
GERMANY

Tel. +49/511/762 3389  
Email: [gudat@gih.uni-hannover.de](mailto:gudat@gih.uni-hannover.de)  
Web site: <http://www.gih.uni-hannover.de>