

# **THE ADVANTAGES OF A MIXED SYSTEM OF PROPERTY TAXATION**

*How different layers of government can use different bases for different property taxes, but still make use of the data collection of municipalities.*

**Ben P.P. Bervoets, Ruud M. Kathmann and Marco Kuijper**

**Key words:** ad valorem property tax, mixed system, risk management, valuation methods

## 1. INTRODUCTION

In the Netherlands local and central governments have the authority to levy property taxes. The property valuation system, which is a base for those taxes, can be characterized by central legislation and decentral execution. Up until 1995 municipalities, waterboards and the Netherlands Tax and Customs Administration (NTCA) each levied property taxes with a different tax base. In 1995 the Special Act for Real Estate Assessment entered into force. This act regulates that municipalities are responsible for the valuation of all properties, starting with a reassessment frequency of four years in 1995. Nowadays all properties are assessed annually. Not only the municipality itself, but also other layers of government profit from the work from the municipalities, as the latter are legally obliged to share their data and the assessed value with the other governments. The other governments are obliged to use this data. This way the three levels of government that levy property tax (the NTCA, municipalities and waterboards) do so by making use of the same value, that has been assessed by municipalities. This is not only efficient and transparent, but it also helps in the communication with the taxpayer.

One of the governments that make use of the data are the waterboards, who together form an independent layer of government that is responsible for the water management of the Netherlands, which is for the most part situated below sea level. These waterboards, also known as polderboards, levy an *ad valorem* tax on most built properties, but an area-based tax on most non-built properties. We call this a mixed system of property taxation.

We believe countries that are facing the challenge of introducing a property tax system, should consider a mixed system as such system can be designed to efficiently levy property taxes that are also considered fair and equitable. In our paper we examine the strengths and weaknesses of a property tax system in which different tax bases are applied. To do so we first explore the two most commonly used tax bases, which are *size (or area)* and *value (ad valorem)*. Next we describe the possibilities to combine different property taxes with different tax bases into a mixed system, the fundamental choices that need to be made with the consequent advantages and disadvantages. The aim of this paper is to provide the considerations surrounding mixed system of property tax and to give practical guidelines for implementation.

Parts of this paper are also published in previous work (see: Bervoets, Kathmann, & Kuijper (2017), Kathmann & Kuijper (2015), Kathmann & Kuijper (2006) and Kathmann & Kuijper (2016)).

## 2. TAX BASES: VALUE vs. AREA

In terms of tax bases applicable for property taxation many possibilities exist. However two of the most commonly applied bases are *area size* and *value*. In this paragraph we will briefly zoom in on these two types of tax bases and explore the advantages and disadvantages of these tax bases.

### *Taxation based on area*

One common type of property taxation is a system based on the size of real property. Historically some different methods are used, who basically all come down to a system of rating that is based on the plot size, the floor area of the buildings on that plot or any combination of both. How this size is measured and expressed and which unit is being used differs of course mainly depending on local customs.

There are certain advantages to a property tax that is based on the area of a plot or a building. First of all, the tax base is easy to understand by the taxpayers. These taxpayers should recognise the tax base that is used and/or otherwise would be able to easily verify it. Moreover, for the levying authority it is easy to determine the tax base, as it is a simple matter of measuring. The size of a plot may be registered in a cadastral system, or could otherwise easily be measured using, for example, GIS-tools. The size of a building could be measured using measuring tape or an electronic distance meter or even just a ruler, if accurate floor plans are available. Only a limited number of additional property data is needed for the taxation. This simple method of determining the tax base should lead to a only a very limited number of appeals, as it is based on objective characteristics of the property (Mirrlees, et al., 2011).

With regard to the tax morale, ratings based on size may lead to little controversy with taxpayers, as differences in the tax bases between one property and another can always be clearly traced back to tangible differences between these two properties. On the other hand it may be considered to be less fair if properties in more expensive parts of a jurisdiction are levied equally as properties in poor areas, simply because the both are the same size (McCluskey & Franzsen, 2013). We think a property tax that is based on the size of a property is a good alternative for an ad valorem property tax in areas with: (1) relatively low values, (2) a lack of availability of sales data; (3) relatively comparable values (very small differences in value); and (4) a low availability of property characteristics.

### *Ad valorem tax*

Under an ad valorem property tax we understand a type of tax that is levied on real property on the basis of its value. Although many different types of ad valorem taxes exist, they all have in common that the tax amount is based on "a" value of real property. Often the market value of the

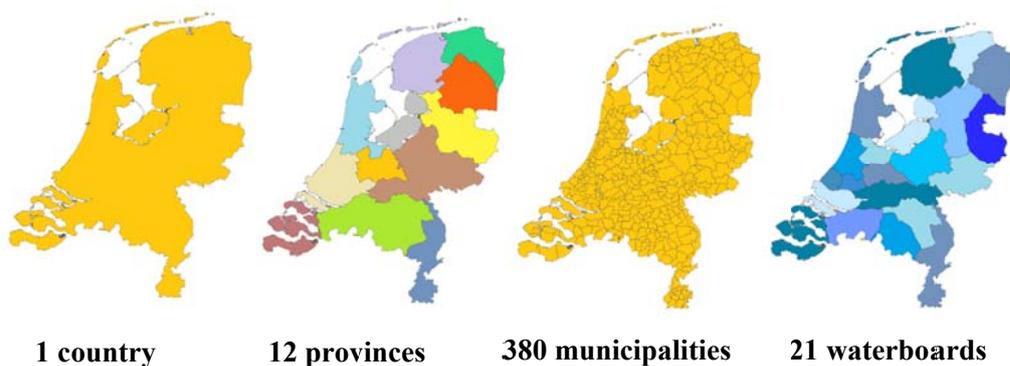
property is used as tax base. But the tax base could also be for example the rental value of a commercial building, the replacements costs of a building, the value of only a plot or also the value of its improvements. Regardless of which element of the real property is taxed or the type of value that is determined, in order to levy the tax, first all sorts of property characteristics have to be collected and registered. Next, these characteristics are used to determine a value.

Ad valorem taxes have some clear advantages over taxes that have other tax bases. First of all it is generally considered fair to tax a property on the basis of its value, because by doing so, differences in wealth are automatically taken into account. Indirectly the size of a property (as mentioned above) is also included in the value.

Among the disadvantages are the costs of the valuation process. Compared to a system that levies taxes on the basis of a single property characteristic, such as for example on the plot size, an ad valorem tax system requires much more data. It also requires specific valuation/taxation knowledge. Therefore the valuation itself can be a costly affair. This disadvantage is especially important for properties with a relative low value, because the cost of valuation of such a property can be lower than the revenues from taxing that property.

### 3. THE NETHERLANDS

The Netherlands is a decentralised unitary state with a central government and different forms of local and regional governments. The central government consists of the administration, ministries and also the National revenue office. The regional governments consist of 12 provinces and 21 waterboards. On a local level there are 380 municipalities.



*Figure 1. Governmental structure of the Netherlands*

Each layer of government has the authority to levy taxes. Except for the provinces, all governments levy property taxes. In this paper we focus on the two governments on the right hand side of the image above, municipalities and waterboards. In the following paragraph we will zoom in on the property tax system regarding these two layers of government.

#### 4. PROPERTY TAXATION IN THE NETHERLANDS

In this paragraph we describe the system for property taxation by municipalities and waterboards in the Netherlands. We zoom in on how these taxes are levied and which tax bases are applied. By doing so we explain how a mixed system, in which a government applies different tax bases for different types of properties, works in the Netherlands. Next we zoom in on the data management involved in this mixed system.

##### *Property Taxation by Municipalities*

On January 1st, 1995, the Special Act for Real Estate Assessment (in Dutch: Wet WOZ) was initiated. This law had the purpose to establish legislation for the definition and documentation of real estate property values for various taxes. The Special Act for Real Estate Assessment aims to realize the following purposes: efficiency, clarity, quality and uniformity. Initially the Special Act for Real Estate Assessment determined that all municipalities had to assess the value of all real estate properties every four years and that it was mandatory for other government organizations to use these assessed values for their taxation purposes. As of 2007 an annual appraisal has been introduced. This annual appraisal and assessment is done with the value reference date set one year prior to the year of use.

Municipalities organize the execution of the Special Act for Real Estate Assessment often in mutual shared service centers, but they also have the freedom to contract private businesses. There are no formal requirements for training and qualification of the assessment officers who are responsible for the valuation process. Municipalities are responsible for the execution of the Special Act for Real Estate Assessment and with that also for sufficiently trained and qualified personnel. There are, however, substantive guidelines for training and qualification requirements.

Municipalities can levy a municipal real estate property tax. For residential properties solely the owner pays taxes against an (often) lower tax rate than used for non-residential properties. For non-residential properties both the owner and the occupant pay tax (hence, an owner-occupant pays twice) and well against a higher tax rate.

Tax rates for owners of residential properties are between 0.1 and 0.2% of the WOZ-value. For non-residential properties tax rates can be twice that, besides the tax rate for the occupant. For an owner-occupant of a non-residential property the total tax rate for real estate property tax can add up to 0.6% of the WOZ-value. Only a few categories of real estate property are exempted. The most important exemptions are: public roads, agricultural land (agricultural buildings are being taxed), nature areas, churches and the real estate property of international organizations.

At the beginning of the year (January or February) the tax payer receives an assessment notification (document per mail, but increasingly in digital format). The tax payer often has the possibility to pay the bill in direct debit installments. The tax payer can examine the valuation report of his own real estate property (through internet) in order to justify the accuracy of the assessment. Tax payers can examine the WOZ-values of other residential properties (public availability) to check correct mutual relations between assessed values. Revenue is entirely for the municipality and can be used freely (within the municipal budget).

Tax payers can file a complaint to the municipality. This can be a complaint against the assessed value, or against the tax liability or the exemptions. The procedures for complaints against the assessed value (based on the Act for Real Estate Assessment) and against the tax matters (based on the Municipality Act) are the same. After rejection of the complaint, appeal is possible at three authorities. The first phase is to the District Court, subsequently to the Court of Appeal and ultimately there is appeal in cassation to the Supreme Court. There is a tendency to avoid formal complaints and appeals by providing the tax payers the opportunity to have informal contact with the assessment officer/tax officer after receiving the newly assessed value or by involving the tax payer, in one way or another, in the realization of the WOZ-value.

The municipality is fully responsible for the tax administration. For this administration the municipality makes use of various available base registers, such as the Base Register Cadastre and the Register of Persons (Inhabitants). For changes in real estate objects and construction/demolition the municipality makes sure the data used for the appraisal and assessment are in accordance with the registration of building permits and the base registration of addresses and buildings. There is no “obligation to file” for tax payers. However, tax payers are obligated to share information when the municipality asks for it. The tax administration in general is accurate, partly because of periodic comparison with the cadastral base registration and the base registration addresses and buildings and the “annual inspection” by tax payers.

#### *Property Taxation by Waterboards*

In a country in which more than half its citizens live below sea level and in which two thirds of its GNP is generated in this same area (Kabat, et al., 2009), water management is of vital importance for the country’s existence. The major part of this water management is executed by specialised governmental bodies, known as waterboards or polderboards (in Dutch: waterschappen or hoogheemraadschappen). These independent regional governmental bodies have been established since the 13<sup>th</sup> century and are charged with managing water barriers, waterways, water levels, water quality and sewage treatment in their jurisdictions. Their independency is considered very important for the assurance of proper water management and thus for the safety of the people. Rather than through control by the central government, the waterboard councils are directly

elected by the citizens living in the jurisdiction of each waterboard (Dutch Water Authorities, 2017).

Like municipalities, waterboards levy property tax for their funding. However unlike municipalities, waterboards receive no additional funding from the central governments and thus depend fully on their own tax revenues. Again, this expresses the independent position of waterboards towards the central government. The type of property taxes that waterboards can levy and the associated procedures are regulated in the Act on Waterboards. The most important tax levied by the waterboards is known as the water system tax (or "watersysteemheffing", in Dutch). This tax has different tax bases for different types of properties. An important division is made between *built*, *unbuilt* and *dual* properties. Built properties are taxed based on the value of the property. For instance a garden or other unbuilt land belonging to a building is considered part of the built property. Unbuilt properties, such as agricultural land or nature, are taxed based on the plot size of the property. For dual properties both tax bases are applied. Figure 2 gives a schematic drawing of the division into three different type of properties and the way in which these different types are included in the property taxation by the municipalities and the waterboards.

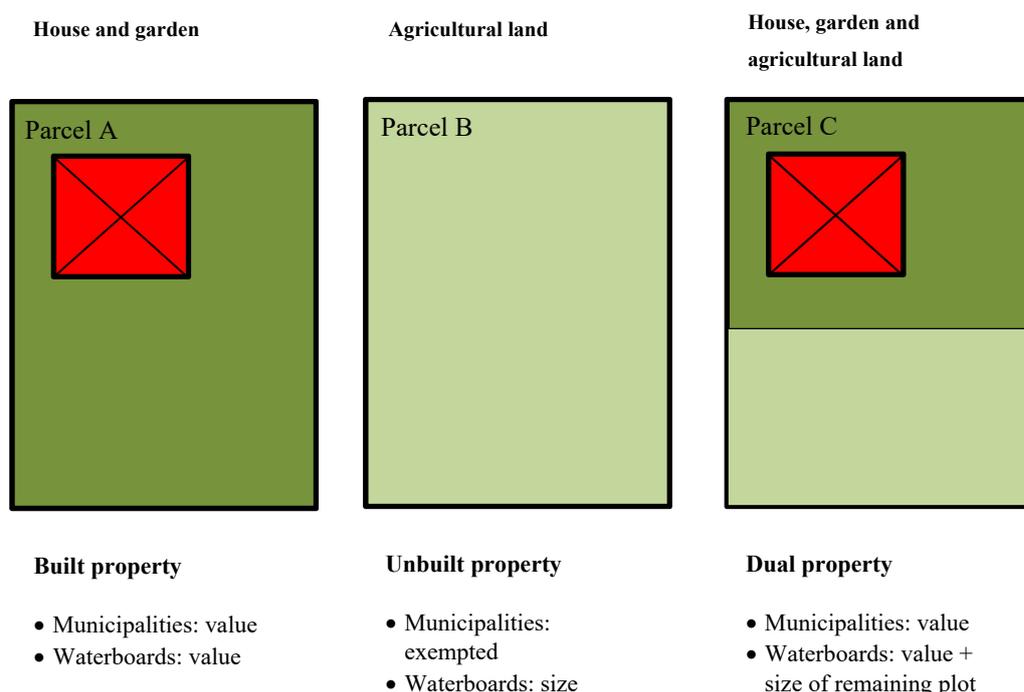


Figure 2: division of properties into built, unbuilt and dual properties

## Data management

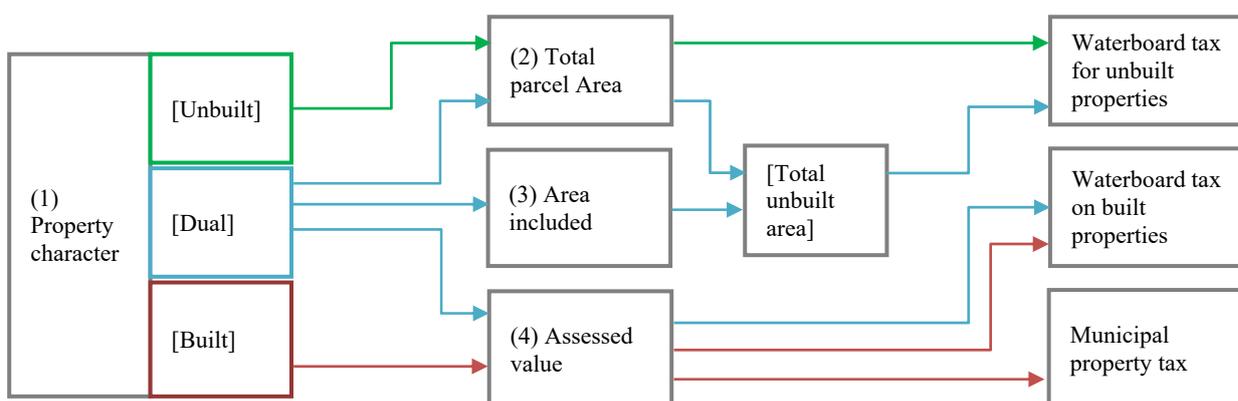
As described in the first part of this paragraph, the property tax system in the Netherlands relies heavily on the sharing of data between the involved parties. In practice this means municipalities are responsible for the lion's share of all registrations, such as for example the registration of taxable properties, their characteristics, the owner and occupier and for the annual assessment of the value. This data is shared with other governments through a system of key registers.

In this mixed system of property taxation it is crucial that data is shared on a reliable and structured manner. In order to ensure a uniform registration a standardised data model is developed, of which the use is obligatory for municipalities. Among many other data, there are four property attributes relevant for the functioning of the mixed system: (1) *Property character*, (2) *Cadastral area and parcels involved*, (3) *Parcel area included in value*, (4) *Assessed value*.

**Table 1: Relevant attributes for built, unbuilt and dual properties**

Unbuilt property	Dual property	Built property
<ul style="list-style-type: none"> <li>(1) Property character (Built/unbuilt/dual)</li> <li>(2) Parcel area and parcel ID</li> </ul>	<ul style="list-style-type: none"> <li>(1) Property character (Built/unbuilt/dual)</li> <li>(2) Parcel area and parcel ID</li> <li>(3) Area included in the value</li> <li>(4) Assessed Value</li> </ul>	<ul style="list-style-type: none"> <li>(1) Property character (Built/unbuilt/dual)</li> <li>(2) Parcel area and parcel ID</li> <li>(4) Assessed value</li> </ul>

Figure 3 shows the application of these attributes within the system of property taxation by municipalities and waterboard.



**Figure 3. Diagram of the data model for the mixed system**

Within this system these different attributes are used as follows:

- (1) *Property character*. For each property municipalities register the character (*built, unbuilt or dual*) of the property. The criterion for the distinction between built and unbuilt properties is the presence of any significant improvements on the land, such as buildings or constructions.

If a property with improvements includes any part without improvements (unbuilt part) that is exempted from municipal property tax, such as agricultural land or a nature area, the taxable property is registered as a dual property.

- (2) *Total parcel area and parcel ID.* In the municipal tax registrations a relation between taxable properties and the cadastral registration that is kept by the national cadastral agency is made. This means all cadastral parcels should be registered in the tax administration and vice versa each taxable property should be linked to a cadastral parcel. Among the data that is provided by the municipalities to the waterboards are the parcel identification number and the total plot size of the property.
- (3) *Area included in the value.* For the dual properties the municipality registers the size of the built parts of the parcel(s) that it has included in the total assessed value of the property. The area that is included in the assessed value of the property is included in the municipal property tax. By combining the *total parcel area* and the *area included in the value*, the waterboard can deduct the size of the property that is *unbuilt* and therefore should be taken into account in the waterboard tax on unbuilt properties.
- (4) *Assessed value.* The municipality determines the value of each property and uses this value as the basis for its own municipal property tax. This same value however is also provided to the waterboards, which use this value both for the taxation of *built* properties and for the built parts of the *dual* properties.

## 5. WHY A MIXED SYSTEM OF PROPERTY TAXATION?

As briefly described in paragraph 2 the two most commonly used bases of property tax, *value* and *size*, each have their own strengths and weaknesses, but the first is generally considered to be most fair and therefore is broadly accepted as the preferred base for property taxation. However depending on local circumstances, policymakers should take into account the different pros and cons of the different tax bases when a property tax system is introduced or developed. In general the costs of a tax administration based on value are higher and this is of course also important for policy decisions. This could lead to the conclusion that one specific tax base is chosen. However in many cases there are certain disadvantages entailing this tax base leading to the conclusion that a second tax base could be a viable option. Rather than to focus on introducing a property tax system with one specific tax base, we argue a mixed system, in which two tax bases are applied can provide specific benefits, because the individual advantages of different tax bases are exploited. Considering the advantages and disadvantages of the *value* and the *size* as tax bases as described in paragraph 2, the following advantages of a mixed system can be achieved.

In general, the greatest benefit of a mixed system is that the system can be more efficient, but yet still complies with principles of equitability. For instance in a system in which specific (complex) types of properties are taxed on the basis of their size, less specialist valuers are needed. If sales prices of certain categories of properties demonstrate only very small differences in value, it may be considered not to tax these properties on the basis of their value, because the small differences do not justify the costs for valuation. Basing the tax on the size of the property ensures equitability, as owners of larger properties are taxed higher. Also in contrast to the value of a property, the size of that property cannot be argued. Therefore less costs for objections and appeals are expected and taxpayers' trust may increase. Ultimately the higher efficiency and less need for specialists will help reduce costs for the property taxation, but also ensures the timely execution of levying procedures.

For jurisdictions that are introducing a system of property taxation, starting with a mixed system may help in the quick implementation, for example if only properties in well-functioning real estate markets need to be assessed. As urban areas often have a real estate market with sufficient numbers of sales, the taxation in those areas can be based on the value and the taxation on the rural areas can then be based on the size of properties. Mostly these urban areas with sufficient sales also have the highest level of values so revenues of the tax are sufficient to justify the costs of valuation.

## **6. DETERMINING CATEGORIES AND TAX BASES IN A MIXED SYSTEM**

Although theoretically many different categories with a corresponding number of tax-bases can be applied, we focus on a system that uses the two most commonly used tax bases: value and size. Influenced by the system applied in the Netherlands we build on the concept of taxation of unimproved (unbuilt, low value) land based on its size and improved (built, high value) land based on its value. The size of the land however can *mutatis mutandis* also be read as the size of the improvements. In the previous paragraph we answered the question what the benefits of a mixed system of property taxation in which two tax bases are applied are. The relevant subsequent question is how the distinction is made between the categories on which the two different tax bases are applied.

We distinguish three criteria for a distinction in applied tax base. First of all we see the possibility of a distinction based on the geographical location of properties. This means that certain areas are considered for taxation based on value whereas in other areas a taxation based on size is applied. With this method for instance urban areas can be selected for taxation based on value. This method addresses one of the largest disadvantages of an ad valorem tax being the impossibility of

adequately assessing properties in areas with a very small number of real estate transactions. Also it is expected that differences in value are smaller in rural areas than in urban areas, which would lead to only very small differences in the tax amount if the taxation would be based on the value of the property. Because of these small differences and because determining the value of a property in an adequate manner is generally more time and money consuming than determining the size of a property, applying a taxation that is based on the size of properties in a rural area, would mean that the levying of the tax can be done much more efficient, while yet the taxation complies with general principles of equity. The main disadvantage of this distinction is that there will always be borderline cases, where two otherwise comparable properties may be taxed on a different basis, leading to inequity.

The second possibly criterion for distinguishing different categories is the character of the property. In the Netherlands' this can be seen in the taxation by waterboards as described in the previous paragraphs, wherein built properties are taxed based on the value and unbuilt properties are taxed based on the plot size. A first advantage of this distinction is that it is very easy and clear how the two categories are demarcated. Another advantage can be found in the efficiency of the tax levying. Although the value of unbuilt land may on average be lower than that of land with improvements, the complexity of the valuation may be inversely proportional. If for instance the market value of agricultural land is to be assessed, elements such as the fertility of the land, the permitted use, alternative use etc. should be taken into account. In practice it means much expertise is needed and the valuation itself may be a costly affair, whilst the ultimate value and thus the tax amount may be relatively low. By using the size of the property as the tax basis, the levying can be done efficiently and again no serious infringement on the principles of equitability occur. A disadvantage of this distinction is that it could distort the real estate market and the development of land, as owners may be reluctant to build improvements if that would lead to a different tax regime. On the other hand it may enforce the optimized use of properties (McCluskey & Franzsen, 2013). An alternative division in categories based on the character of the property could be into residential and non-residential, with which for instance the taxation of businesses would be dependent of the value of the property and the taxation of citizens would be dependent on the size of the property.

The third viable option for a division into categories considers the value of properties. By taxing only properties with a certain minimum value on the basis of this value, similar efficiency gains may be achieved as not much time need to be spend on the assessment of properties that yield little tax revenue. If the real estate market in, for instance, certain rural areas or residential areas without land title is characterized by very low numbers of sales and low sales prices, this method in which properties on the low end of the market are taxed based on their size ensures an efficient levying of property tax. Compared to a distinction based on the geographical location of a

property, the distinction based on the value does not need to be revised frequently, as the low-end properties are selected automatically rather than based on their physical location. The most important disadvantage is that in any case still a certain assessment needs to be made in order to determine in which category for taxation the property should be included. Also there will be a major challenge in dealing with borderline cases. There will always be properties that will “switch” between the two categories frequently. In those cases extra care is needed to determine the applicable tax base, and high numbers of appeals are likely.

In table 2 the most important advantages and disadvantages of the different criteria for the distinction of categories are summarized.

**Table 2. Pros and cons of various distinctions in tax bases**

<b>Distinction between tax bases is based on:</b>	<b>Pros</b>	<b>Cons</b>
Geographical location (e.g. urban/rural areas)	<ul style="list-style-type: none"> <li>• Easy to determine</li> <li>• Can help to get direct revenues from certain improvements</li> </ul>	<ul style="list-style-type: none"> <li>• Frequent updating of boundaries is needed</li> <li>• Inequity in borderline cases</li> </ul>
Property character (e.g. built/unbuilt)	<ul style="list-style-type: none"> <li>• Easy to distinguish properties</li> </ul>	<ul style="list-style-type: none"> <li>• May cause market distortion</li> </ul>
The estimated value (e.g. exemption for properties with a low estimated value)	<ul style="list-style-type: none"> <li>• A lack of a (transparent) real estate market can be bypassed</li> <li>• No geographical division needs to be made.</li> </ul>	<ul style="list-style-type: none"> <li>• Every property has to be valued, but not all values are used for taxation</li> <li>• Borderline cases may face a frequent change in tax base</li> <li>• Difficult to manage the borderline cases</li> </ul>

The table shows that every distinction applied will have its own advantages and disadvantages. The criteria to determine the categories of properties that are taxed on a certain base will depend on the specific (local) circumstances. These choice for criteria for instance can be driven by the availability of data. For instance the broad availability and high quality of geographical information in combination with a transparent real estate market can easily lead to the choice for "market value" as a tax base. If such data is not available the choice for the size of a property as the tax bases is more obvious. Another consideration can be more politically driven, for instance when more or less market distortion is expected when a property tax system is introduced or when land development is expected to be hindered. In such case taxing improvements may lead to an obstruction on land development and taxation of the land based on the area may be considered. Also with the different tax bases more or less equality in taxation can be achieved if demanded.

## 7. CONCLUDING REMARKS

In many jurisdictions property taxes are part of the local or regional tax system. In many other jurisdictions the introduction of a property tax is considered. The main reason why property taxes are so popular is that it is considered a fair tax with many positive side-effects. In general, when developing a property tax system different tax bases can be considered. The *value* (with different possible definitions) and the *size* of a property are most commonly used. In this article we describe how different tax bases can be applied for different categories of properties in a “mixed property tax system”.

Furthermore, we argue that the actual market value as a tax base is probably most desirable but nonetheless there can be good reasons why the size of a property can function as an adequate alternative tax base. In those cases a property tax system with more than one tax base should be considered. In the Netherlands we have good experiences in the way regional governments known as waterboards apply the market value as the tax base for built properties and the parcel size as the tax base for unbuilt properties at the same time. As demonstrated in this paper a mixed system could also mean different governments levy different types of property taxes based on different tax bases, making use of the same data.

When considering setting up a mixed property tax system, using different tax bases for different (categories of) properties the following questions should be answered.

1. What logical distinction between properties can be made?
2. Which tax base can be applied for the different property categories?
3. What (political) goals are to be achieved with the introduction of a property tax and what are the possible side effects of the choices made?

The answers on these questions will depend on the specific situation in a jurisdiction and therefore can never be generic. For instance the availability of geographical information, the transparency of the real estate market and the level of education of government employees will influence the choices made and should therefore always be taken into account. "Look before you leap" is our motto.

## LITERATURE

- Bervoets, B. P., Kathmann, R. M., & Kuijper, M. (2017). Success factors for a system for property taxation and the consequent risks. The Hague.
- Dutch Water Authorities. (2017). *Water Governance. The Dutch Water Authority Model*. Den Haag: Opmeer B.V.
- Grover, R., Törhönen, M.-P., Munro-Faure, P., & Anand, A. (2015). Property Valuation and Taxation for Fiscal Sustainability and Improved Local Governance in the Europe and Central Asia Region. *Land Tenure Journal*(2).
- Kabat, P., Fresco, L. O., Stive, M. J., Veerman, C. P., Van Alphen, J. S., Parmet, B. W., . . . Katsman, C. A. (2009). Dutch coasts in transition. *nature geoscience*, 2(July), 450-452.
- Kathmann, R. K., & Kuijper, M. (2006). How to Evaluate Valuation Models? *Shaping the Change. XXIII FIG Congress*. München.
- Kathmann, R. K., & Kuijper, M. (2016). The three key principles for mass appraisal: data quality, data quality and data quality. *Land and Poverty Conference 2016: Scaling up Responsible Land Governance* . Washington.
- Kathmann, R. M., & Kuijper, M. (2015). Property valuation and taxation in the Netherlands. A case study conducted by the Netherlands Council for Real Estate Assessment. *Annual World Bank Conference on Land and Poverty 2015: Linking Land Tenure and Use for Shared Prosperity*. Washington.
- McCluskey, W. J., & Franzsen, R. (2013). Non-market Value and Hybrid Approaches to Property Taxation. In W. J. McCluskey, G. C. Cornia, & L. C. Walters, *A Primer on Property Tax* (pp. 287-30305). Oxford: Wiley-Blackwell.
- Mirrlees, J., Adam, S., Besley, S., Blundell, R., Bond, S., Chote, R., . . . Poterba, J. M. (2011). The taxation of land and property. In J. Mirrlees, S. Adam, S. Besley, R. Blundell, S. Bond, R. Chote, . . . J. M. Poterba, *Tax by Design* (p. 374). Oxford: Oxford University Press.