

Best Practices and Real-World Challenges

A Discussion with Experts from The Netherlands

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The Netherlands as a Case Study



The Netherlands: An overview



Netherlands has 17.9 million inhabitants

compare to Pennsylvania (13.0 million) New York (20.2 million)

Netherlands is 41,850 km²

compare to Maryland (32,131 km²) and West Virginia (62,756)

Netherlands is constitutional monarchy

Netherlands has property tax on municipal and state level

Netherlands has polder boards that also levy property tax



The Netherlands: An overview



Netherlands has a special Act for Real Estate Assessment

Netherlands has current market value as base for taxation

Netherlands has annual revaluation and annual rate setting

Netherlands has exclusions for agricultural land, churches and public roads (etc.)

Netherlands has relief for people with low income



Lessons from The Netherlands



Market Value as a Tax Base



BloombergView

ECONOMICS

To Fight Inequality, Tax Land



MAR 3, 2015 9:00 AM EST

By [Peter R. Orszag](#)

In the lasting debate over Thomas Piketty's book on outsized returns on capital, a significant fact has been obscured: If you exclude land and housing, capital has not risen as a share of the U.S. economy.

The Tax Base and Tax Rates



“For most taxpayers, it doesn’t feel *fair* for homeowners with lower-value property to pay the same amount as those with much higher-value homes.”

“It is advisable that governments have the authority to set the tax rates yearly because that allows them to adjust the rates to balance increases and decreases in the real estate market.”

Market Value as a Tax Base



Long history of bases for taxes

- frontage of house (along the Dutch canals)

- Number and size of windows

1970 Municipal tax

- Area based (but with some indicators of value)

- Market value

Because of court decisions:

- Area based was not appropriate

1995

- Market value because:

- understandable and verifiable for taxpayer

- Data several municipalities can be combined (for state tax)



Regular Revaluations



“As council tax valuations have passed the milestone of being 20 years out of date, the absurdity of the status quo becomes ever more apparent. Any property tax requires regular revaluations, and this process should begin as soon as possible.”

-Mirrlees Review

Regular Revaluations: The Dutch experience

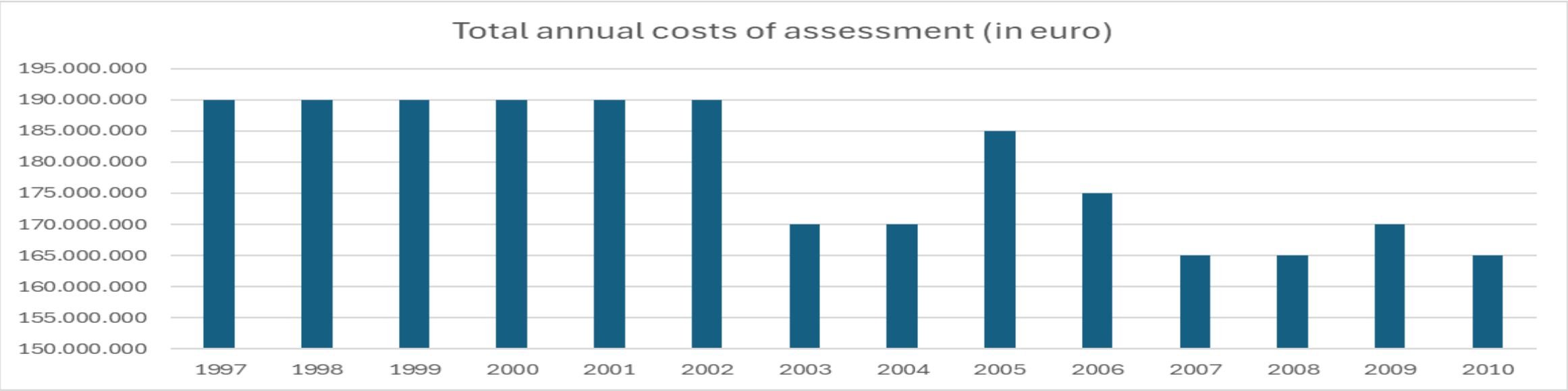


- 1970's start of property tax for municipalities
 - Market value or area based
 - "Revaluation" every 5 years
- 1995 Start of special Act for Real Estate Assessment
 - Current market value for tax municipality, polder board and state
 - Revaluation every four
- 2009 First year with annual revaluation

Regular Revaluations: The Dutch experience



Tax Year	1997-2001	2001-2004	2005 -2006	2007	2008	2009	2010
Valuation Date	1-1-1995	1-1-1999	1-1-2003	1-1-2005	1-1-2007	1-1-2008	1-1-2009



Tax Relief: Special Exemptions and Abatements



“Special tax provisions have an addictive quality, in that they create distortions and inequities, which create a case for other special provisions, which begs for even more.”

-Richard Dye, Daniel McMillen, and David Merriman

Types of Tax Relief



MOTIVE	BASIS	TYPE		
		Exclusion	Exemption	Discount
Reducing negative side effects/ stimulation	🏠	+/-	+	++
	↑	--	-	-
Equalization/ parity	🏠	--	-	--
	↑	--	-	+++
Efficiency/ Practicalities	🏠	+++	+	+/-
	↑	+/-	+/-	--

Tax Relief in The Netherlands



The most important exclusions in the Netherlands:

Agricultural land

Rationale: importance of food production especially after WWII (stimulating)

Churches

Rationale: political

Public roads

Rationale: limiting money transfer between governments (efficiency)

Tax Relief in The Netherlands (2)



But also rate differentiation:

Different tax rates (municipalities) for residential versus non-residential properties

And:

For non-residential property, both the owner and the user pay taxes.

In 2006 the tax for users of residential property was abolished (because of a electoral pledge).

The fact that all exclusions etc. limit the tax base has become a problem in the last decade.

But abolishing one of the exclusions (or the entire set of exclusions) is too politically difficult.

New Valuation Models



	Strengths	Weaknesses
Traditional CAMA	Easy to set up Readily available	Basic approaches Data limitations
AI/ML	Data capabilities	“Black box” – challenge for communication
Spatio-temporal Methods	Improved location data “Black box” challenge for communication	Computationally intensive Limited off-the-shelf availability

Automated Valuation Models in the Netherlands (residential)



- **Regression models**
 - Often rather straightforward applications of multiple regression models
 - Mostly used in the densely populated west
 - “Aided” by group and individual overrules
- **Direct comparison models**
 - Groups based on location and/or property types
 - Valuation by comparison between the object and several reference sales within the group
 - “Aided” by group and individual overrules

Overrules are caused by jurisprudence in the Netherlands. Based on a high court ruling, the transaction price is the assessed value if the sale happened **close** to the valuation date

Developments of Automated Valuation Models in the Netherlands



1. Availability and use of new valuation models

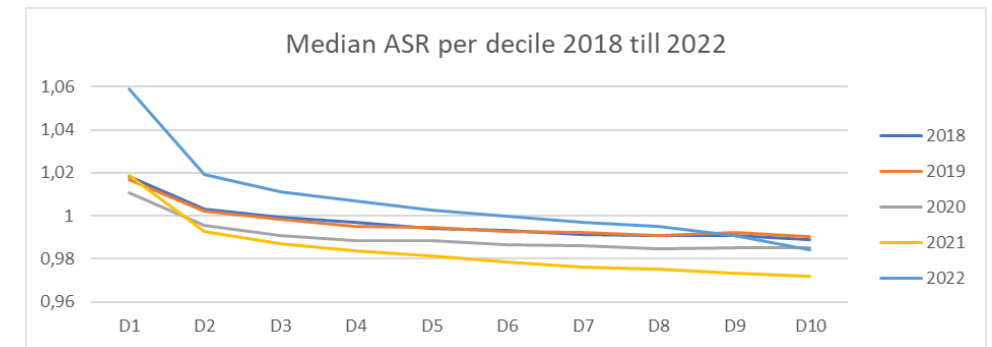
- AI-based models
- Mostly based on random forest algorithms
- Used as a “value check” or confidence indicator

2. Wider adoption of accountability documentation

- Encompasses more than just AVMs (Data quality, skills of appraisers, etc.)
- Aids in explainability, addendum to valuation report

3. Deployment of validation models for oversight purposes

- To detect group and individual overrules
- Systematic quality control for unsold properties



Statistical Measures of Assessment Equity and Quality



“Regardless of the statutory assessment rate, a well-performing assessment office will produce assessments that are close to the statutory percentage of market value on average. To evaluate assessment performance, the standard practice for residential properties is to compare assessed values to sales prices using sales that take place near the assessment date”

- Daniel McMillen and Ruchi Singh

Statistical Measures of Assessment Equity and Quality



Since 1995: primarily statistical measures based on central tendency measures:

$$\text{Ratio } A = \frac{\text{sum of assessed values}}{\text{sum of sale prices}}$$

And

$$\text{Ratio } B = \frac{\left(\frac{\text{sum of assessed values}}{\text{sum of sale prices}} \right)}{\text{number of sales}}$$

Since 2018: Dutch translation of the IAAO Standard on Ratio Studies

Gradual acceptance and use of Median Ratio, COD as quality indicators

PRD and PRB to a lesser extent, but more emphasis on systematic analysis vertical equity

Developments in Statistical Measures of Assessment Equity and Quality in The Netherlands



1. **More clarity on acceptable levels of (Standard on Ratio Studies based) quality indicators**
 - High court ruling skews results (legally required sales price chasing)
 - “Comply or explain” principle is leading in the Netherlands
2. **Inclusion of (Standard on Ratio Studies based) quality indicators in assessment software and communication with oversight agency**
3. **Use of visual representations of quality indicators (mostly median ratio and COD per decile)**
4. **Use of more indicators for consistency, especially for vertical equity**
 - In line with findings of the IAAO Statistical Tools and Measures Task Force (2024) and McMillen & Singh (2023)
 - Lincoln vertical equity app as a facilitator for calculations (Dutch translation is pending)

Administration, Oversight, and Data



“The importance of data quality has been magnified by the recent and rapid advancements in data analytics as a discipline, transcending all industries in economies around the world.”....

“Conclusions on the data quality of the assessor’s input based solely on the outcome (assessments) can be treacherous.” ...

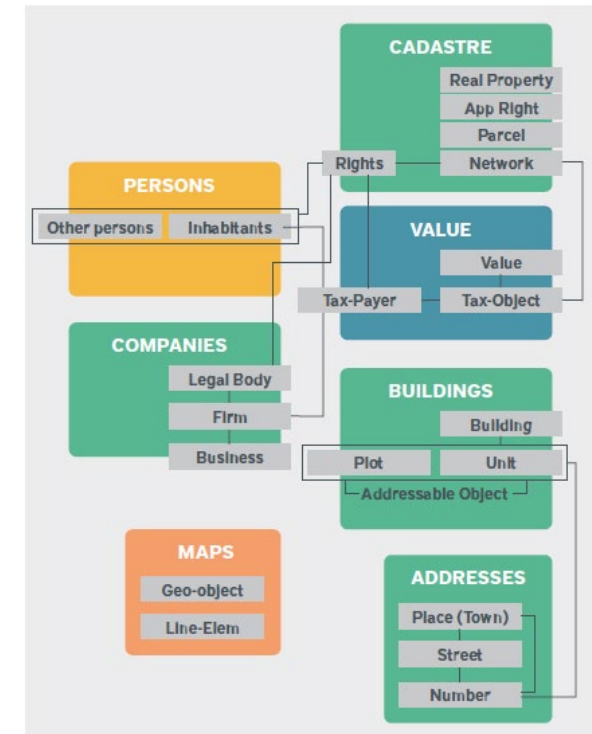
“While the use of good-quality data by assessors does not guarantee high-quality assessments, the use of poor-quality data renders the task considerably more challenging.”

- IAAO Standard on Data Quality (2021)

Main topics of The Netherlands Council for Real Estate Assessment



- **Quality of data used for the assessment and for using the assessment for taxation**
 - Assessment data should be complete, current and interoperable
 - Data is largely part of a system of base registers (broader use, multiple sources)
 - Data sharing between governments
- **Assessed value should reflect real market value**
 - Emphasis on market level, mutual value differences and consistency
 - Comply or explain otherwise no publication of the tax roll
- **Communication with the taxpayers**
 - Quality of the valuation report
 - Punctuality of assessments and results of objections



Position of The Netherlands Council for Real Estate Assessment



- **Independent oversight agency**
 - Board consists of: municipalities, polder boards, state government and independent members
 - Financed by: municipalities, polder boards and state government
 - Position guaranteed by: regulations in the special Act for Real Estate Assessment
 - Directly accountable to the public -> State of the WOZ
- **Knowledge center for real estate assessment**
- **Cooperation between oversight agencies**
 - Other parts of the system of base registers also have their oversight agencies



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