

## Paper for ERES 2007 conference

# An Inventory of Municipal Real Estate

### The case of The Netherlands

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### Abstract

The ROZ/IPD Property Index was established in 1994 to publish an independent index of directly held real estate in the Netherlands. From 2006, the ROZ Property Index has also measured the characteristics of real estate owned by local government in the Netherlands. The ROZ municipal benchmark measures characteristics of the portfolio size as well as real estate expenses and income, in 8 large cities<sup>1</sup>. Local government real estate portfolios consist of buildings like town halls, primary and secondary schools, theatres, fire stations, community centres and sports centres.

A survey back in 1995 indicated a total value of € 30 to € 50 billion for the entire public sector real estate portfolio, based upon replacement costs<sup>2</sup>. The Dutch Statistical Office also carried out a survey of the balance sheets of Dutch municipalities and determined the book value of municipally-owned buildings at € 9.5 billion at the end of 2002<sup>3</sup>. The book value increased in 2002 by € 1.3 billion. However, the book value is heavily influenced by the age of the buildings and it is hard to connect it to present market values.

The authors have carried out a survey on the size of the municipalities' real estate portfolios. The survey is based on three different approaches. The first is a literature review based on the annual reports of municipalities. Second is a survey held by the ROZ jointly with Vastgoedmarkt, a Dutch Real Estate Journal. The third and last approach is based upon more detailed information from the participants in the ROZ Real Estate Benchmark for municipalities. In none of the three cases is there 100 % coverage of the market, and the figures have been extrapolated to obtain figures for the whole Dutch market.

The paper will give an indication of the total real estate portfolio by size (area) and value. Where possible, the total universe is broken down by type of building and type of use by the local government authority.

**Key words:** PREM, municipalities, portfolio, market size

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<sup>1</sup> These cities are Almere, The Hague, Eindhoven, Enschede, Leiden, Nijmegen, Rotterdam and Utrecht.

<sup>2</sup> P.J. van Hulten, P.P. Kohnstamm, L.B. Uittenbogaard, *Publiek onroerend goed: het beheer van de vastgoedvoorraad in de kwartaire sector*, 1995

<sup>3</sup> Dulk, Den, W.J., *Boekwaarde vaste activa gemeenten in 2002 gestegen tot 51,7 miljard euro*, 2004.

## Introduction.

Because of the task City Municipalities have in society, they own and rent or indirectly subsidise a large amount of real estate. Since this type of real estate is not so much market oriented but more based upon its use for society, it is not easy to determine its value. A pilot for benchmarking of real estate in the hands of City Municipalities has been running in the Netherlands since 2005 for eight cities, amongst them Rotterdam, The Hague and Utrecht. Based on the preliminary results, a joint initiative was set up at the beginning of 2007 between the Dutch real estate magazine Vastgoedmarkt and ROZ to draw up an initial estimate of the total stock of City Municipalities' real estate in the Netherlands. The results of this survey have been presented at the Vastgoedmarkt annual national conference and are reproduced in this paper.

## Previous literature

The size of the real estate market has been studied for some time. The purpose of those studies is to obtain reliable estimates of the total size by property type or by ownership. Several studies have been carried out to determine the investment market size internationally. A recent example is the European market dimensions study, which is an inventory of the potential investment market<sup>4</sup>. Other publications examine the total stock by property type in the Netherlands. The number of dwellings is 6.9 million<sup>5</sup>, the office stock is 43.9 million sq. m.<sup>6</sup>, the retail stock is 26.4 million sq. m.<sup>7</sup>, and 4.5 million sq. m. is owned by universities<sup>8</sup>. Several studies have also been carried out in the Netherlands based on the ownership:

- Institutional investments in real estate are valued at € 65 billion in the Netherlands<sup>9</sup>;
- Investments by private investors are worth approximately € 35 to € 45 billion in the Netherlands<sup>10</sup>;
- Investments by central Government are valued at € 4.5 billion (book value)<sup>11</sup>

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<sup>4</sup> Hordijk, A.C., Valuation and construction issues in real estate indices, 2005.

<sup>5</sup> VROM, cijfers over wonen 2006, 2007.

<sup>6</sup> Bak, R.L., Kantoren in cijfers 2006, statistiek van de Nederlandse kantorenmarkt, 2007

<sup>7</sup> Locatus, Retail Handboek 2007, Kengetallen voor de detailhandel, 2007.

<sup>8</sup> Theeuwen, R.J.E., Strategisch huisvestingsmanagement, Universitair vastgoed, 2003.

<sup>9</sup> Hordijk, A.C., Valuation and construction issues in real estate indices, 2005.

<sup>10</sup> Nijmeijer H., e.a., Het vastgoedbeleggingsbeleid van de Nederlandse particuliere vastgoedbeleggers 2005, 2005.

<sup>11</sup> VROM, Jaarverslag Rijksgebouwendienst 2006, 2007.

- The Dutch Statistical Office also carried out a survey of the balance sheets of Dutch municipalities and calculated the book value of municipally-owned buildings at € 9.5 billion at the end of 2002<sup>12</sup>.

So far, , no study has been carried out to identify the market value of the municipally-owned buildings. International research on the portfolio size of government generally focuses on central government. Seilheimer<sup>13</sup> mentions the total public sector as having assets of over € 800 billion in Germany; this includes healthcare, cultural purposes, education and buildings owned and used by the government.

## Dutch local government

Dutch local government has a number of tasks. The main policy areas (with the type of real estate associated with the policy area mentioned in brackets) are:

- Welfare (community centres in neighbourhoods and nursery schools);
- Culture (theatres, museums, schools of music, libraries);
- Own organisation (town hall, workshop);
- Education, where local government is only responsible for the accommodation (primary and secondary schools);
- Sport (sports centres, indoor swimming pools);
- Other policy areas (football stadiums, church towers, car parks, children's farms);

For the above-mentioned policy areas, the municipalities own buildings. But not all properties are owned by them. Some municipalities lease offices for their organisation. On the other hand, social foundations may rent buildings on the local market. There is a trend for other organisations, like social housing corporations, to include welfare facilities. Recently, several lease transactions took place in the Netherlands, see table 1.

Table 1. Overview of recent lease transactions.

City	Kind of building	Sq. m.	Year
Rotterdam	Several departments	64.500	2002
Utrecht	Town Hall	64.000	2004
Hengelo	Unknown	15.000	2003
Rotterdam	Tax department	10.750	2007
Rijswijk	Town Hall	10.000	2005

This paper discusses only the real estate owned by local authorities.

<sup>12</sup> Dulk, Den, W.J., Boekwaarde vaste activa gemeenten in 2002 gestegen tot 51,7 miljard euro, 2004.

<sup>13</sup> Seilheimer, Immobilien-Portfoliomanagement für die öffentliche Hand, 2006.

## **Methodology**

This inventory is based on three different approaches:

- A. Book value.
- B. A survey carried out by ROZ in cooperation with Vastgoedmarkt.
- C. Results from the ROZ municipal real estate benchmark.

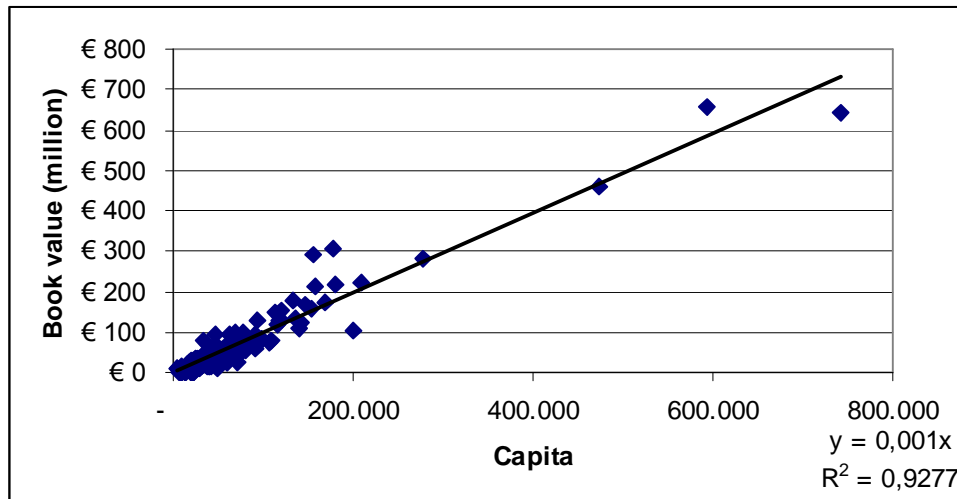
Based on those three approaches, an estimate of the total size of Dutch municipal real estate assets has been made. The results represent an initial inventory. The total actual size could differ from the estimate due to the limited response to the survey and the small number of participants in the municipal benchmark. The three methods are discussed separately.

### **A. Book value**

All municipalities in the Netherlands are required to keep a financial record of the book value. The book value is calculated at historic costs plus additional capital improvements minus cumulative depreciation. The depreciation is the yearly repayment on the original loan the local authority obtained when the decision was made to buy or have a certain building developed (note: the loan could be lower than the construction costs, due to an initial subsidy). The book value differs considerable from the market value, which will be discussed in the remaining part of this paper.

All municipalities have to produce an annual report, which gives the (book) value of their assets. The book value of 190 municipalities related to the number of inhabitants is shown in figure 1. There is a clear relationship between the population and the book value, due to the need for more facilities for a larger population. The book value of these municipalities is extrapolated to the others, where no data was available. The total book value will be approximately € 16 billion.

Figure 1. Relationship between the book value (end 2005) and the population.



The relationship between the book value and the market value of the property becomes weaker as time goes by. Some of the real estate has already been in the hands of the City for a very long time and has a book value of zero. Information about the investments of the municipalities is also available in their annual reports, but not in all cases.

Table 2 shows net investment by Dutch municipalities. Based on net investments of approximately € 1.5 in the past two years (extrapolated to represent the whole Dutch market) and depreciation of approximately € 0.6 billion (extrapolated), the book value is as expected less than the market value of the properties. The book value can be expected to be less than the market value due to inflation, increases in construction costs and higher land values.

Table 2. Net investment by Dutch Municipalities

Year	Number of municipalities	Population	Net investment	Depreciation
2002	All (source: Dutch statistical office) <sup>14</sup>	16,200,000	€ 1.0 billion	€ 0.4 billion
2005	127 of the 458 Dutch municipalities	7,568,019	€ 804 million	€ 342 million
2006	93 of the 458 Dutch municipalities	5,481,896	€ 609 million	€ 240 million

The nature of the municipality's real estate doesn't make it very liquid. Most of it is related to its contribution to society such as sports facilities, welfare, culture, art, its own accommodation and some commercial facilities. As one can imagine, these types of real estate are not often traded and it is therefore difficult to estimate a market value. The only point at which market value comes up is when the council decides to redevelop at the end of the real estate's life and/or function. Other methods therefore have to be found to come up

with some kind of estimate of the value. First of all, a sophisticated system for real estate appraisal is in place in the Netherlands. When possible, a market valuation is determined based upon a gross initial yield approach, but as mentioned above, market valuation of this type of real estate is very rare. In that case, the value is estimated on the basis of depreciated replacement costs, which will give an estimate of the value in use in its present condition. A second estimate can be obtained from the replacement costs themselves, which is required by the insurance companies. Those figures are available and include the construction costs of rebuilding, excluding the costs of the foundations and the land. In this survey, these two methods have also been used to estimate the value of the municipality's real estate.

## **B. Survey**

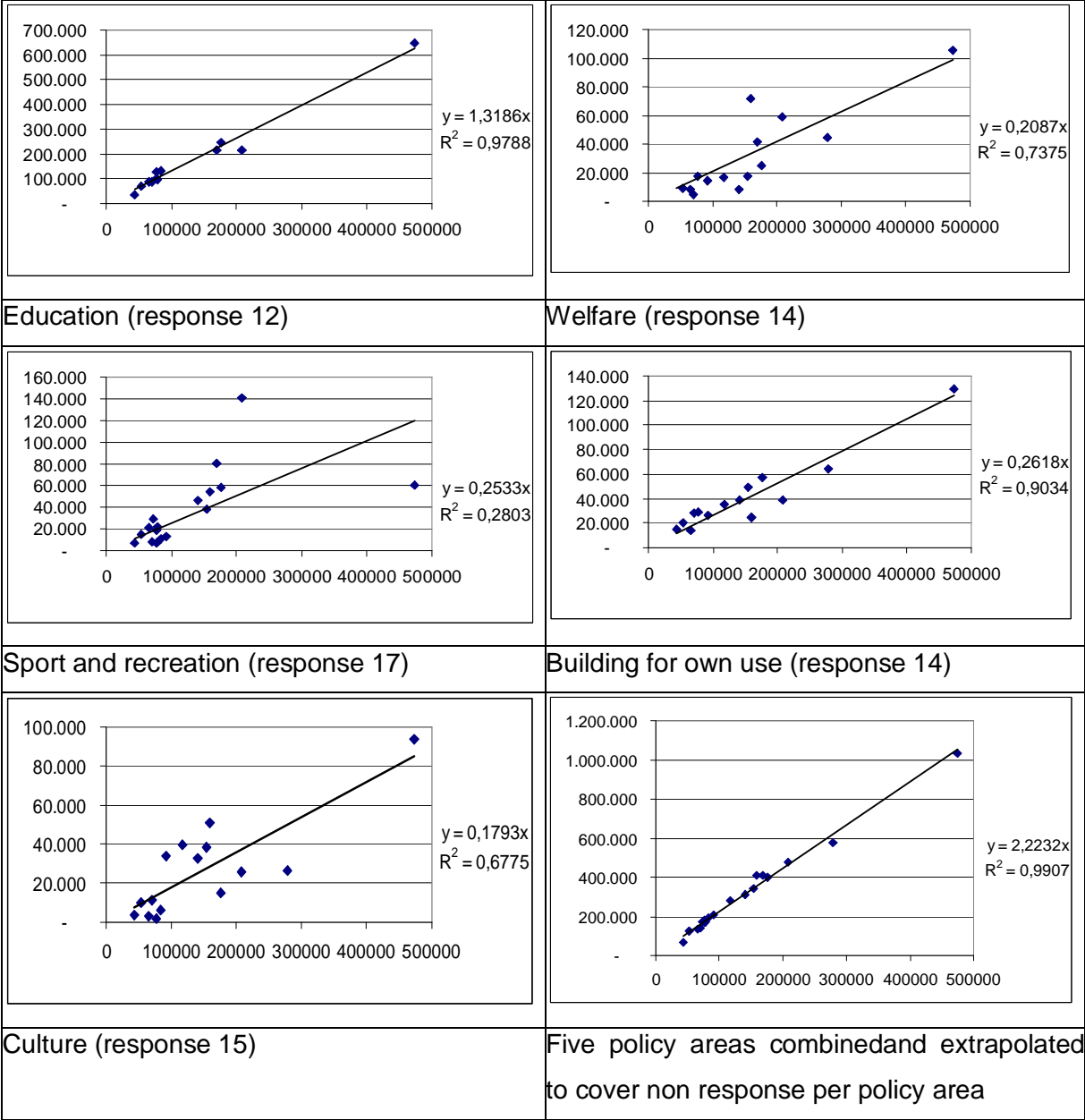
ROZ in cooperation with Vastgoedmarkt sent out a survey to every municipality in the Netherlands with a population over 50,000. From the survey sent out (68) we received 19 useful responses covering a population of 3 million, which represents 20 % of the Dutch population. The majority of the municipalities (25) which didn't respond are in transition to a central real estate department in the organisation. When there isn't a central real estate organisation there is a lack of data on the total real estate portfolio and the total income and costs of the real estate.

In the survey, information was requested about the real estate organisation and the portfolio size and value. The results for the size will be discussed in this paper. Not all respondents gave all the requested information on their real estate portfolio. In the figures below, the relationship between the portfolio size and the population is shown for the five most important policy areas and the total. The total is based on the sum of the five policy areas mentioned in the overview; when no data on the particular policy area is available, the average is used.

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<sup>14</sup> Dulk, Den, W.J., Boekwaarde vaste activa gemeenten in 2002 gestegen tot 51,7 miljard euro, 2004.

Figure 2. Overview of portfolio size (sq. m.) and population for the different policy areas. The population is shown on the x-axis and the portfolio (sq. m.) is shown on the y-axis.



The relationship between the floor space and the population isn't clear for all policy areas. Education shows the strongest relationship and sport and recreation the weakest. Possibly local policy on sport and recreation influences the results strongly. The sum of the five policy areas shows a strong relationship with the population size. Besides the five policy areas mentioned above, municipalities own other real estate. The other real estate is approximately 0.5 sq. m. per capita. The total portfolio size per capita is 2.7 sq. m. The results by policy area and the total floor space are shown in table 3.

Table 3. Portfolio size in sq. m.

Policy area	Sq. m. per capita	Total Dutch stock (million sq.m.)
Education	1.32	21.6
Welfare	0.21	3.4
Sport and recreation	0.25	4.1
Buildings for own use	0.26	4.3
Culture	0.18	3.0
Other	0.5	8.2
Total	2.72	44.3

Besides data on the portfolio floor space, data was also collected on the book value and the market value. The market value is based on the property tax value determined by the local authority. Data on the square meter values are shown in table 4. The covered floor is the total sum of the floor space on which data was received from the respondents.

Table 4. Book and market value per sq. m.

Policy area	Weight	Book value		Market value	
		€ sq. m.	Covered floor space sq. m.	€ sq. m.	Covered floor space sq. m.
Education	49%	€ 321	2,352,131	€ 582	1,522,039
Welfare	8%	€ 264	434,082	€ 705	434,082
Sport and recreation	9%	€ 302	334,565	€ 687	357,800
Culture	7%	€ 305	515,537	€ 624	526,726
Buildings for own use	10%	€ 765	531,489	€ 1,103	531,489
Other	19%	€ 281	434,329	€ 715	500,513
Total	100%	€ 343		€ 679	

Based on the data supplied here, an estimate can be made of the floor space of municipal real estate in the Netherlands. Based on the total book value of € 16 billion and the average book value of € 343.- per sq. m., the total floor space is approximately 47 million square meter.

### C. Benchmark results of 8 major cities in the Netherlands

The third source for the determination of the portfolio size is the ROZ real estate benchmark. The benchmark is more exact due to the fact that the participants in this benchmark have to deliver data on property levels, but the market coverage is lower. In 2006 the benchmark consisted of 8 municipalities, over 1,300 properties, a total floor space of 2.2 million sq. m. and an estimated market value of € 1.8 billion.

Due to the detailed delivery, checks have been made on each individual property as part of the quality control, followed by some adjustments of the data by the participants if data turned out to be incorrect. Therefore it is useful to make a comparison between the results from the survey and the results from the benchmark. In table 5, both results are shown for the market value. The results for the market value are higher in the benchmark compared with the survey results. This could be caused by the different city composition of the sample, but it could also be due to better quality data. Probably the 'real' market value lies somewhere between the two figures. The total average market value is calculated based on the weighting determined in the survey, instead of the weighting in the benchmark.

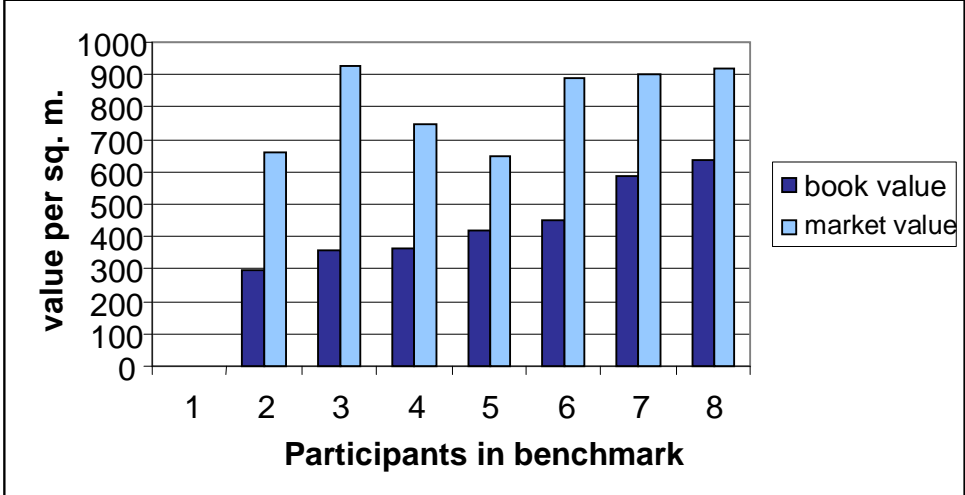
Table 5. Comparison between results of the survey and the ROZ benchmark.

Policy area	Weighting in benchmark	Weighting in survey	Market value per m2	
			Survey	Benchmark
Education	12%	49%	€ 582	€ 756
Welfare	16%	8%	€ 705	€ 747
Sport and recreation	16%	9%	€ 687	€ 683
Culture	14%	7%	€ 624	€ 849
Buildings for own use	23%	10%	€ 1,103	€ 1,159
Other	19%	19%	€ 715	€ 757
Total	100%	100%	€ 679	€ 795

The weighted average (based on the delivered data in the benchmark instead of a weighting on the survey results discussed earlier) in the benchmark gives an average book value of € 466 and a market value of € 868 per square meter. Based on those results, one could say the market value is 1.9 times the book value. Due to the fact that not all participants deliver data on their entire portfolio, there are differences between the book and market value. In figure 3, the differences for seven participants are shown. One participant was excluded due to the fact that the book values are influenced by the history of that municipality. This particular municipality was built on reclaimed land and all assets were received by the local

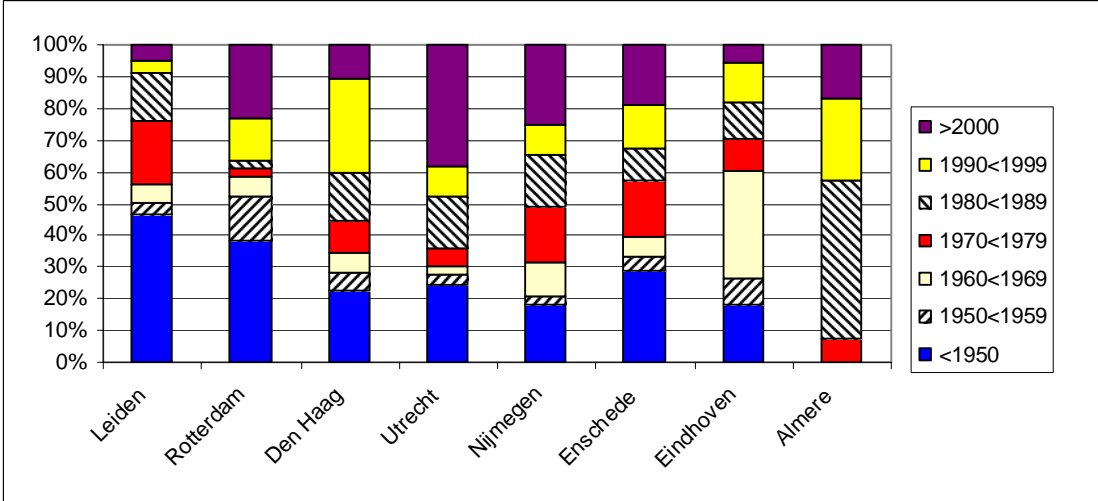
authority in 1995 from the central Dutch government for € 0.- and have a current book value of € 0. When the lowest and highest multiplier are excluded, the multiplier ranges from 1.6 to 2.5. The main differences are caused by the differences in the book value and not the market value. The market value varies from € 650 - € 900 per square meter per participant.

Figure 3. Book value and market value per participant in the ROZ real estate benchmark.



One possible reason for the differences between the book values and the market value is the age of real estate portfolios. In figure 4, the composition of the portfolio by year of construction is shown. There are large differences in the age categories per participant. Due to the depreciation underlying the book values, a substantial effect on the average book value of each portfolio appears. One remark should be made: in some cases the data in the benchmark doesn't cover the whole real estate portfolio of the municipality.

Figure 4. Composition of the portfolio per age band in the ROZ-benchmark.



## Results

The three different methods show different results which are discussed below:

### A. Book value

The total book value of € 16 billion at an average book value of € 343 / sq. m. gives a floor space of 47 million square meters, while at an average book value of € 400 / sq. m., it gives a floor space of 40 million square meters. Both the survey and the benchmark results have similar multipliers of 2.0 and 1.9 for changing the book value into the market value. This results in a market value of approximately € 30 billion.

### B. Survey

The survey results give a total floor space of 44 million square meters. Based on a book value of € 343 per square meter, this gives a total book value of € 15 billion. The average market value of € 679 per sq. m. gives a total market value of € 30 billion.

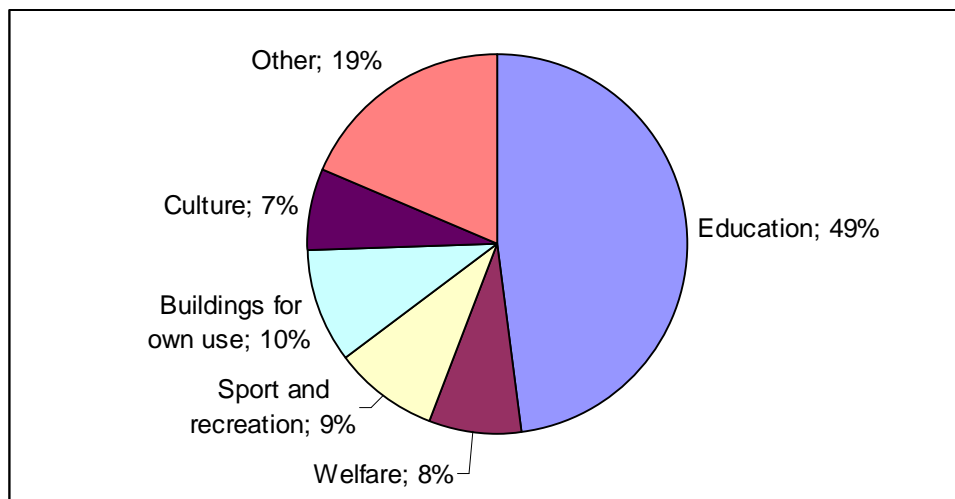
### C. Benchmark results

The weighted market value is € 795 per square meter. Based on the determined floor space of 40 – 47 million square meters, this results in a total market value of € 31-37 billion. If the average floor space (44 million) and a bandwidth for the market value per sq. m. is being used from € 650-900, the market value varies between € 29 billion and € 40 billion. Based on the determined multiplier of 1.9, this gives a book value of € 15-20 billion.

## Conclusion

The results for the different methods are in line with each other. Based on the three methods, we can give an estimate of the total portfolio size by value, floor space and by composition. The book value is € 15-20 billion, the market value € 30-37 billion and the total floor space is 40-47 million square meter. The size based on total floor space is comparable to the total office stock in the Netherlands. The value almost equals the total investments of private investors in the Netherlands. The municipal portfolios composition is shown in figure 4.

Figure 4. Composition of the Dutch Municipal real estate portfolio by policy area.



Although the figures are in line with each other, one remark should be made. Mostly the data of a small number of large municipalities has been used for the determination of the total market size. The average figures for the Netherlands could be different. Therefore, to make the results more reliable, it would be necessary to enlarge the survey as well as the size of the benchmark.

### Further research

This is an initial inventory of the market size of municipal real estate in the Netherlands, based upon a bottom-up approach. The size is larger than expected compared with earlier assumptions.

Further research is required to increase the reliability of the findings. It would also be useful to obtain more information from outside the Netherlands on market sizes of municipal real estate to provide more reference material and best practices for the Dutch market. In the Dutch market, some municipalities tend to sell a part of their portfolio to improve their financial position in the short run. The Dutch situation is similar to the German situation, where cities sell large residential portfolios to improve their financial position.

Possibly some international research is or will be available on the influences in the long run, or joint research on city municipalities' real estate could be carried out.