

The impact of monument status on office rents

ABSTRACT

This paper is one of the first to investigate the presence of a monument premium for commercial real estate. We study a sample of offices located in monuments that were offered for rent and match them with offices without that status in the proximity. We find convincing evidence for a large premium, but only outside the Randstad area. The matching is crucial. Controlling for the age of the buildings and the treatment of service costs does not change our findings.

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INTRODUCTION

Historic buildings are an important historic urban amenity. Such amenities contribute to an attractive living environment as can be verified by comparing the vivid centers of many older European cities that attract many tourists and the CBDs of many U.S. cities that are predominantly concentrations of employment (Brueckner, Thisse, & Zenou, 1999).

The desire to conserve older buildings is the main reason for listing them as monuments. The fact that they are regarded by many as attractive does not necessarily safeguard them from demolition as other uses of the land on which they sit may be regarded as even more profitable. Although this may suggest that listing has a negative impact on the value of real estate, empirical studies have often found that there is a premium associated with it. The probable explanation is that for many monuments the restrictions imposed by the protected status are not binding and that the monument status signals the valuable aspects of the building that explains the listing. The latter effect may be reinforced by eligibility for subsidies or favorable tax treatment that may be associated with monument status.

The evidence that the net effect of these opposing forces is positive is based almost exclusively on the housing market. There is almost no evidence

for commercial real estate. Like for residential real estate, offices listed as monuments – which can be mansions that are no longer used for residential purposes – can have high architectural or historical quality. This can make them attractive for particular firm types, such as notaries or lawyers. However, the restrictions imposed by the monument status can be more binding for commercial real estate than they are for housing. For instance the utility that the owner-occupier derives from the cultural heritage embodied in a property may boost her willingness to pay for it, while employees doing their job only experience hindrance from inconvenient room sizes, old fashioned heating technology, lack of parking space nearby, et cetera. It is therefore an interesting question if the results found for residential real estate also hold true for offices.

To answer it, we collected data on office rents in the Netherlands. More specifically, we gathered information about monuments that were offered for renting. To be able to make the appropriate comparison with other offices we added information about non-monuments located geographically close by. This gives us a data base in which we can match monuments with other offices, while controlling for local variables that affect their value.

The paper proceeds as follows. Section 2 discusses the literature about pricing differences between monumental buildings or buildings with a historicizing architecture and non-monumental office buildings in general. In Section 3, the data and methodology are introduced. Section 4 reports the results and section 5 concludes.

LITERATURE

In what was perhaps one of the first attempts to measure the economic value of architectural quality, Hough & Kratz (1983) studied the willingness to pay of tenants to be in office buildings with recognized aesthetic excellence. They found a premium for new buildings with these characteristics, but not for old ones. As noted above, the later literature switched attention to residential real estate. For instance, Asabere, Hachey, & Grubaugh (1989) found that premium prices are associated with 'older architectural styles' like colonial, federal, garrison and Victorian. In a second exceptional contribution studying commercial real estate, Fuerst, McAllister & Murray (2011) showed that commercial offices designed by 'signature architects' achieve rental premiums. Moreover, Ahlfeldt & Mastro (2012) showed that houses designed by Frank Lloyd Wright increase the value of other housing in their proximity, thereby demonstrating the presence of external benefits associated with building design.

Since monuments are often selected on the basis of aesthetic (as well as historical) quality, this is suggestive of the presence of a premium for monument. This is indeed confirmed by a series of studies including Coulson & Lahr, (2005); Coulson & Leichenko, (2001); Lazrak, Nijkamp, Rietveld, & Rouwendal, (2014); Noonan & Krupka (2011). Buitelaar & Schilder (2017) showed that new housing with characteristics that imitate older housing can also command a price premium. Although it is regularly acknowledged in these studies that listing can have negative as well as positive effects on property values, attention focuses on measuring the net effect which turns out to be usually positive for the housing market to which they all refer.

The present study focuses on the willingness to pay of tenants for the net effect of monuments status of office space. This is an internal benefit, but it is important to acknowledge that cultural heritage may also provide external benefits as is confirmed by many of the works cited above. Indeed Koster & Rouwendal (2017) show that the external benefits associated with investment in cultural heritage are substantial and probably outweigh the subsidies involved. The subsidies they consider do not concern housing and there is reason to expect that the cultural heritage embodied in the office monuments studied in this paper generate similar external effects that may justify the subsidies relevant to them.

DATA

The data we used were collected from online rent platforms¹. The focus was on buildings with a monument status that were offered for rent in the period beginning at the third quarter of 2016 and ending in the third quarter of 2017. We only considered buildings listed² in the National Register of Monuments of the Cultural Heritage Agency of the Netherlands as monuments. For every monument the rent platforms were checked on availability for rent, using enhanced address data. The enhancement consisted of structuring and controlling the addresses and descriptions about the location of the monument with the BAG³.

The platforms only provide information on asking prices.⁴ In this period 217 office spaces in monumental buildings are compared with 195 non-monumental buildings nearby. For each monument, we searched for nearby offices at a maximum distance of 750 meters ('as the crow flies'). To illustrate, a monumental former warehouse in the centre of Alkmaar was matched to a newly built office at a distance of 200 meters, which appears to provide a reasonable alternative location for the company currently using the monument. The average distance between monument and matched office in the sample is 472 meters, where a monument can be matched with one or more non-monumental objects. In many cases more than one match was found for

FIGURE III-1 ▶ SPREAD OF MATCHES OF MONUMENTAL OBJECTS WITH NON-MONUMENTS AND DISTANCE.

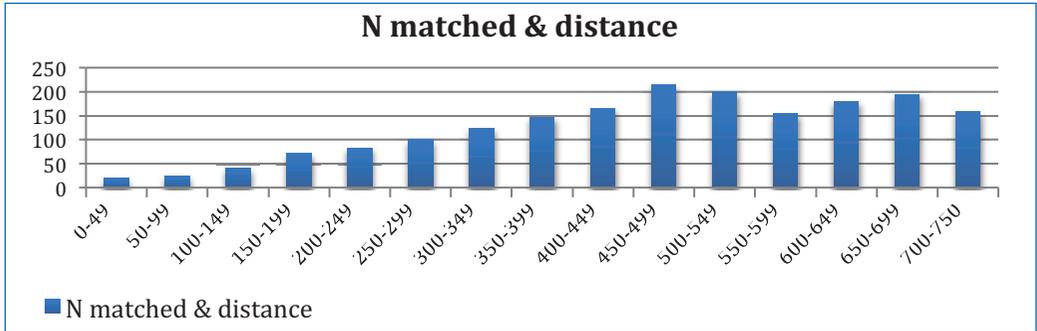
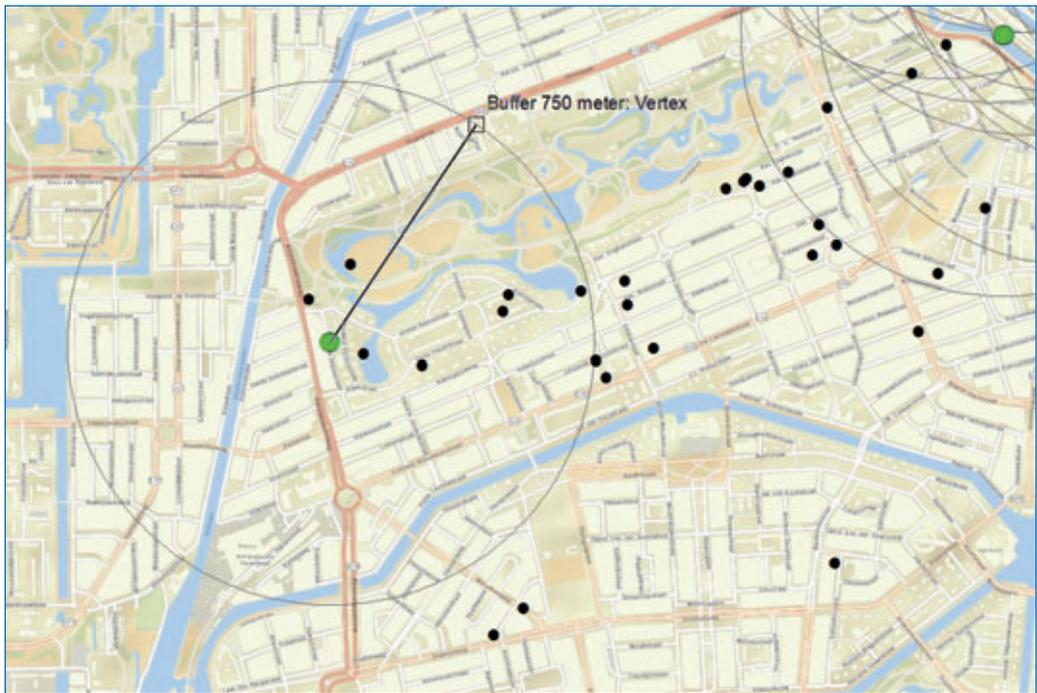


FIGURE III-2 ▶ LOCATION OFFICE SPACE IN MONUMENT (GREEN) AND NON-MONUMENTAL OFFICES (BLACK).



a monument. All such matches were included in the database. When no match could be found for monument, it was not included. Figure III-3 provides an illustration.

Information on office characteristics was often limited. At a minimum the address and the floor area was required. Where possible we noted the period of construction and information on service costs (who pays them and what is their value).

It will be clear from the description above that the dataset was constructed in such a way it eliminates the impact of site-specific locational factors, which are often difficult to observe by matching the monuments with the selected nearby objects. Formally, we use fixed effects at a fine geographical level. Apart from the matching based on distance, we also use 4 and 5 position postcode areas as the geographical units to which the fixed effects refer. The 4 and 5 position postcode areas are not circles

FIGURE III-3 ► EXAMPLE OF POSTCODE 4 AREA'S.



(see example 4 position postcode areas, figure III-3, but they usually include buildings at more than 750 meters distance. The 5 position postcode areas cover a few streets or parts of streets. The major disadvantage of the postcode areas is that their borders can separate offices that are very close to each other. An advantage can be that their borders often take into account natural or man-made barriers like waterways, railways and motorways which can separate areas that are substantial different in character, the small geographical distance notwithstanding.

The database we use contains information about 2,040 matches between monumental and non-monumental objects. Using the rent price information of office spaces in 207 monumental buildings. The average annual rent per sqm is just above €200 and is almost equal for monuments and other offices. More than 80% of the observation are from the three western provinces Noord-Holland, Zuid-Holland and Utrecht, which are the core economic region of the country.

Within this area the four big cities Amsterdam, Rotterdam, The Hague and Utrecht are the most important focal points of economic activity, with Amsterdam the most important. Almost three quarters of our observations refer to the four largest cities and almost two thirds to Amsterdam. Although most monuments are located in the western part of the country and many of them in the big cities with Amsterdam having the largest share, our data appear to be biased towards the Randstad area, although it should be noted that no data are available on the geographical distribution of monuments that are used as offices.

The lower part of Table 1 refers to service costs, which are generally regarded as an important variable that is closely related to rent, as such costs can be included as well as excluded from it. In our data, service costs are included only in the rents of approximately 2% of our observations. Service costs are known for half of the observations in the sample and amount to 10% of the net rent.⁵

TABLE 1 ► DESCRIPTIVES

Variable	# obs	Average	St. dev.	Min	Max
Monument	2,040	0.101	0.302	0	1
Rent/sqm	2,040	205.37	80.76	20.82	520
Core	2,040	0.821	0.383	0	1
Big4	2,040	0.749	0.434	0	1
Amsterdam	2,040	0.658	0.474	0	1
Service cost included	2,040	0.019	0.135	0	1
Unknown if service costs are included	2,040	0.225	0.418	0	1
Service costs per sqm	1,055	28,89	18,49	0.66	186.67

RESULTS

We use the natural log of the annual rent per sqm as the dependent. In the basic model only the monument status and the natural log of the number of sqm are used as explanatory variables. Table 2 presents the results. Model (1) does not have fixed effects and no monument premium is found. The other models use fixed effects to match monuments with objects that are close by. This has the effect of controlling for all (unobserved) factors that affect all objects belonging to a given group in the same way. Introduction of fixed effects at a detailed geographical level is therefore a powerful way to control for location factors. As discussed above, we can introduce fixed effects in three different ways. In model (2) fixed effects are present at PC4 level and we find a large and significant premium for monuments. Using PC5 fixed effects changes the results: the monument premium is

now insignificant and even the coefficient for floor area is only significant at 10%. Finally, when circular areas are used as basis for the fixed effects, we find a strongly significant monument premium of approximately 15%.

It seems possible that the monument premium differs over space. Been, Ellen, Gedal, Glaeser, & McCabe (2016) have recently found that preserved neighbourhoods on Manhattan commanded a positive premium in the less expensive areas and a negative one in the most expensive parts where pressure on the land is highest and the restrictions associated with monument status are binding hardest. To investigate this issue for the Netherlands, we interact a dummy for the three core provinces Noord-Holland, Zuid-Holland and Utrecht with the monument dummy.

TABLE 2 ► BASELINE SPECIFICATION

	(1)	(2)	(3)	(4)
Monument	0.035 (0.072)	0.101 (0.080)	0.302 (0.125)	0 (0.030)
Ln (Floor)	-0.185** (0.085)	-0.203*** (0.074)	-0.118* (0.064)	-0.203*** (0.014)
Fixed Effects	No	PC4	PC5	Circle
R ²	0.14	0.53	0.84	0.45
#obs	2,040	2,040	2,040	2,040

Standard errors are clustered at the level of the fixed effects (and PC4 for model (1)). There are 77 PC4 clusters, 247 PC5 clusters and 216 circular clusters. ***=significant at 1%, **=significant at 5%, * significant at 10%.

TABLE 3 ▶ RANDSTAD EFFECTS

	(1)	(2)	(3)	(4)
Monument	0.372*** (0.072)	0.295** (0.058)	0.372*** (0.072)	0.302*** (0.070)
Monument*Core	-0.281*** (0.078)		-0.266*** (0.090)	-0.258*** (0.082)
Monument*Big4		-0.225* (0.064)		
Monument*Amst			-0.024 (0.064)	-0.002 (0.060)
Ln(Floor)	-0.204*** (0.014)	-0.204*** (0.014)	-0.204*** (0.014)	-0.210*** (0.013)
Service cost included				0.281*** (0.064)
Unknown if service cost is included				-0.084*** (0.023)
Service cost when not included				0.002*** (0.0004)
Service cost missing				0.137*** (0.021)
Constr year cohort	No	No	No	Yes
Fixed Effects	Circle	Circle	Circle	Circle
R ²	0.46	0.46	0.46	0.51
#obs	2,040	2,040	2,040	2,040

Standard errors are clustered at the level of the fixed effects (and PC4 for model (1)). There are 77 PC4 clusters, 247 PC5 clusters and 216 circular clusters. ***=significant at 1%, **=significant at 5%, * significant at 10%.

The result is that for all four specifications used we find a much larger positive coefficient for the monument dummy and a negative coefficient of the same order of magnitude for its interaction with the core area. Except for the specification without fixed effects, the coefficients for the monument dummy and its interaction are significant at 5% or less. This suggests that monuments are strongly appreciated by firms but only outside the Randstad area, which is the economic core region of the Netherlands. We report the results of the regression using circular fixed effects as model (1) in Table 3.

To see if the monument premium is only muted in the large cities, we use in (2) the interaction with a dummy indicating that the monument is located in one of the four largest cities of the Netherlands: Amsterdam, Rotterdam, The Hague. Now we

find somewhat smaller effects for the monument dummy and its interaction, which suggests that the largest places are not so different from the rest of the western part of the Netherlands. Again, the equation using fixed effects based on circles is similar to those using fixed effects based on postcode areas.

To see if Amsterdam is special, we have also interacted a dummy for Amsterdam with that indicating monument status and used this interaction simultaneously with that for the three western provinces. Model (3) in Table 3 shows the results when fixed effects are based on circles. The result that Amsterdam does not significantly differ from the other parts of the Randstad is confirmed by the other specifications.

Although we have not much information about office characteristics, there is some that we can use. It is well known that reported or asked rents do not always tell the whole story about the cost of using real estate. In practice it can make a huge difference whether service costs are included or not. We have only information about this aspect for part of our sample. We have therefore introduced a dummy for service cost included in the asking rent jointly with a dummy indicating that this information is missing. We also know the value of the service costs for part of our sample and have included it in case the rent excluded these costs. Following the same logic as before, we introduced a dummy for unknown service costs in case they were excluded from the rent. Estimation results are reported as model (4) in Table 3. The estimated coefficients for monument status and its interactions hardly change. Nevertheless, the service costs variables are all very significant, which confirms the impression that they play an important role in the market. For instance, our results suggest that asking rents are some 30% higher if service costs are included.⁶

Finally, we have also included a number (11) of dummy variables referring to construction periods. This is in fact the only characteristic – apart from floor space – that is known for all objects in the sample. We find in most cases, this case included, strongly significant coefficients, although the results for the monument variables do not change. These dummies are also included in model (4) of Table 3.

CONCLUSION

In this paper the rents of offices situated in historical buildings are compared with those of non-monumental buildings in the proximity. We find a significant positive pricing effect in favor of monumental buildings of 15% when controlling for location through fixed effects defined on circles around monuments with a radius of 750m. Closer examination reveals that this effect does only occur outside the Randstad, the economic core region of the Netherlands, and that it is stronger there: around 30%. The premium appears to be absent everywhere in the Randstad, not just in the largest four cities. Amsterdam does not differ from the

other parts of the Randstad.

These findings are important because they indicate that the effort local and national Dutch governmental organisations put in to consolidating these buildings, often in collaboration with project developers, leads to a group of monumental objects which potentially can generate a structurally higher net rent. The higher rent can be interpreted as reflecting part of the social value associated with the refurbishment, which is often partly financed by subsidies or tax relief.

The absence of a monument premium in the Randstad area is a surprising finding. We related it to Been et al. (2016) who argue that historical districts in Manhattan only show a premium in areas where pressure on land use is relatively low. In the economic core area the negative impact of the restrictions associated with preserved status are larger than the positive vintage and related effects. This reasoning could also be relevant for the Randstad area. Alternatively, it may be the case that the larger and diversified local markets for real estate in the Randstad areas offer modern office buildings that are qualitatively similar to monuments that are not so often present outside this region.

ABOUT THE AUTHORS

Drs. Jan-Hylke de Jong is founder of research agency Fenicks BV, this company collects national information about the state of maintenance, use and vacancy of our monument portfolio. Jan-Hylke de Jong graduated in Spatial Planning at the University of Groningen on a thesis about real estate near infrastructure nodes.

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NOTES

- 1 For instance www.fundainbusiness.nl. Sometimes information from different sites providing complementary information about an object could be used.
- 2 Monuments designated by provinces and municipalities are not included in this research.
- 3 In The Netherlands a total of 16.335.579 buildings are registered in the Basisadministratie Adressen en Gebouwen (source BAG: 01-02-2018). Of this total group of buildings it is estimated that about 85.000 objects, consisting of voluminous monuments, are registered in the National Register of Monuments of the Cultural Heritage Agency of the Netherlands (Cultural Heritage Agency 2018). The proportion of National monuments is therefore $85.000/16.335.579 = 0,52\%$.
- 4 We thus have to assume that the difference between asking price and transaction price is not systematically different for monuments and other offices.
- 5 We would have liked to introduce other control variables, but the data set has clear limitations in this respect.
- 6 The coefficient for 'service cost included' equals 0.281, implying that such rents are $\exp(0.281) = 1.32$ times as high as those with service cost excluded and all else equal.

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