Paradigm

DOES THE VIEW AFFECT THE PRICE OF AN APARTMENT?

Marcin Bas[1]*

[1] *University of Szczecin, Aleja Papieża Jana Pawła II 22A, 70-453 Szczecin, Poland, e-mail: marcin.bas@usz.edu.pl, ORCID: 0000-0002-2396-2494*

* *Corresponding author*

ARTICLE INFO

Keywords:

window view, housing market, real estate

JEL Classification:

C31, C51, R31

ABSTRACT

The objective of the present study is to estimate the impact of the view from the apartment on the unit price using econometric methods. The present study was conducted on data from 2015-2024 relating to similar prefabricated buildings located in Szczecin, Poland. The data from the secondary market concerning transactions involving dwellings in buildings constructed using prefabricated technology in the 1960-70s were used. The objective of the present study is to identify any regularities that may exist in relation to the impact of the view of the apartment's windows on pricing. The survey has the capacity to assist in the determination of the manner in which diverse perspectives regarding views from windows are perceived by real estate market participants. The research hypothesis that the view from the apartment window has a statistically significant impact on its unit price is examined. The research does confirm that the view from the apartment window has an impact on dwelling prices.

Citation: Bas, M. (2025). Does the view affect the price of an apartment? *Real Estate Management and Valuation*, *33*(4), 86-95. https://doi.org/10.2478/remav-2025-0037

1. Introduction

The view from an apartment depends on many factors, including any obstacles like nearby buildings or infrastructure, especially in dense urban areas. This can influence potential buyers' perception of such apartments as more or less attractive. Thus, the price paid for a given apartment may depend not only on the type of view, but also on its quality. In areas with minimal urban development, the view from apartment windows is typically unobstructed. However, in densely populated urban areas, the view from apartment windows is often obscured by the proximity of other buildings. This can reduce interior apartment light and comfort. Lower-floor apartments are particularly vulnerable to poor views and light.

Researchers have studied how views affect prices. This phenomenon has been the focus of extensive research by scientists worldwide, leading to significant insights regarding price heterogeneity and the role of the view. Studies have examined the impact of apartment views on market prices. The findings indicate that views are a significant factor in residential property valuation. The type and quality of views lead to positive and negative price impacts, respectively, depending on context and location (Fung & Lee, 2012; Hassett et al., 2025; Hui & Liang, 2016; Peng et al., 2025; Turan et al., 2021).

Window views are a significant factor in determining residential quality and real estate prices. Apartment prices within the same estate can vary significantly due to factors such as floor plan, floor level, and direction, with direction and floor level directly influencing the view (Jim & Chen, 2009; Magnus et al., 2011). The type and quality of the view from an apartment can lead to substantial variations in property prices, even within the same building and for otherwise identical indoor environments (Fung & Lee, 2012; Oh et al., 2025; Peng et al., 2025). Homebuyers are willing to pay a premium for apartments with desirable views, with reported price increases ranging from 1% to as much as 147%, depending on the type and quality of the view and the geographic context (Damigos & Anyfantis, 2011; Fung & Lee, 2014; Turan et al., 2021).

Research consistently finds that views of water bodies such as lakes, oceans, rivers, and harbors have a significant positive effect on the price of apartments. For example an increased proportion of water views through windows has a significant positive effect on property prices in high-rise buildings (Peng et al., 2025). Properties with significant sea views can command a 12.4% higher premium, and a one square meter increase in sea view can lead to a 0.4% increase in selling price (Martín & Yepes, 2024). In Singapore, sea views are estimated to increase prices by 17–20% (Fesselmeyer & Seah, 2018). In turn, in Hong Kong, the highest-quality ocean views increase prices by 60%, while the lowest-quality views still add 8% (Hui & Liang, 2016). From the another study we know that the ocean views can add up to 147% to land values in some cases (Lavee & Baniad, 2013). On the other hand panoramic ocean views in New Zealand increase property value by 65%, while partial views add 40% (Damigos & Anyfantis, 2011; Lavee & Baniad, 2013). A study from Tel-Aviv informs us that a full sea view increases luxury apartment value by 47.7% (Lavee & Baniad, 2013). Sea view can be connected with a view of the harbour. Harbor views in Hong Kong add 2.97% for full views and 2.18% for confined views (Damigos & Anyfantis, 2011; Jim & Chen, 2009).

Researchers also studied the lake view. It was noticed that lake views can incur a premium of 7% to 18% in Denmark and the United States, while lagoon views have a smaller impact (+0.14%) (Hassett et al., 2025). Lakefront properties with lake views can see value increases of 127%, while other properties with lake views see an 18% increase (Damigos & Anyfantis, 2011). In turn a house with a lake view near Lake Erie increases value by 89.9% (Wen et al., 2014). A similar phenomenon exist in Geneva, Switzerland, where water views increased housing rent prices up to 57% (Turan et al., 2021), whereas in Guangzhou, proximity to water bodies raised housing prices by 13.2% (Damigos & Anyfantis, 2011). Nevertheless there were conflicting findings. In Guangzhou, river visibility was found to decrease apartment prices by 0.215%, most likely as a result of its pollution, indicating that not all water views are universally desirable and that visual quality and the local context are not without influence (Li et al., 2021).

Views of green spaces and parks have been shown to increase property values. Garden views have a positive effect on property value in Hong Kong (Hui et al., 2012; Turan et al., 2021). Park views, in turn, are specifically valued for their amenity, separate from recreational value (Jim & Chen, 2010). Study conducted in Aalborg, Denmark, shows that the presence of parks has been demonstrated to be correlated with higher housing prices (Panduro & Veie, 2013). In another study a view of greenery increases the price of an apartment, although this effect may vary depending on the type of greenery: a view of a park can increase the price by about 10% and a view of semi-public gardens, by as much as 23% (Chen & Li, 2017; Jim & Chen, 2006). A Hong Kong study found that neighborhood parks raise property prices by 16.88%, mostly due to their beauty and proximity, and have the greatest impact on home buyers' decisions (Jim & Chen, 2010). On the other hand. forest views can attract a premium of 4.9% in Finland and 6-12% in the Netherlands (Damigos & Anyfantis, 2011). Nevertheless, negative impacts for such types of the views were noticed in other studies. The presence of grass and bare ground was associated with significant negative impacts on housing prices in high-rise buildings (Peng et al., 2025).

Research has shown that mountain views can negatively affect apartment prices. In Hong Kong, broad mountain views decreased prices by 6.7%, and confined mountain views were statistically insignificant (Damigos & Anyfantis, 2011; Jim & Chen, 2009; Turan et al., 2021). In turn, in Athens, Greece, unpleasant views (including some mountain views) decreased prices by up to 25% (Turan et al., 2021). It is worth noticing that certain views, such as those of bare ground, roads, barren land, or cemeteries, are associated with negative impacts on apartment prices (Dou et al., 2023; Fung & Lee, 2014; Peng et al., 2025).

Street views and nearby buildings have been linked to lower housing prices. Street views reduce prices by 3.7% in Hong Kong (Jim & Chen, 2009; Turan et al., 2021). Avenue and street views generate negative effects on property value, especially compared to sea and garden views (Hui et al., 2012). Building views, are generally found to be insignificant or negative (Dou et al., 2023; Jim & Chen, 2009). Sky views and building views (which may include offices) also reveal negative effects on housing prices in Shanghai (Dou et al., 2023).

In turn landmark views and orientation are significant. A view of a Shanghai landmark increases property values by 6%, with a further 4% premium for south-facing orientation (Lu, 2018). Also south-facing orientation alone is associated with a 14% premium in property value (Lu, 2018). In Shanghai buyers were willing to pay 7.2% more for south-facing apartments than north-facing ones (Zhong et al., 2022). In turn a study in Beijing found that apartments in historical urban areas are more sensitive to their orientation. Buyers prefer southern-facing apartments and will pay a 7.8% premium. West-facing apartments are the least popular (Song et al., 2019). In South China, apartments with both southward and northward windows are preferred for optimal sunlight and ventilation, leading to higher prices. Westward facing windows are less desirable due to excessive heat (Jim & Chen, 2006). Westward exposure was also undesirable in the results of a study conducted in Poland which indicated that buyers value dwellings with an eastern exposure more than those with a western exposure. Potential buyers valued apartments with eastern exposure on average 12.13% higher (Bas, 2024). Also, a San Diego study shows that homes facing east-west directions receive higher property values compared to those facing the north-south (Ma & Narwold, 2019).

The floor level changes the content and quality of the window view. The impact of views can be influenced by apartment height, with higher floors generally commanding higher premiums due to broader views (Hui et al., 2012; Koster et al., 2012; Li et al., 2020; Lu, 2018). Higher floors are often preferred due to better views and access to sunlight, which also translates into a higher price (Fesselmeyer & Seah, 2018; Fleming et al., 2018; Magnus et al., 2011). In turn openness provided by sky and distant views is valued by buyers, and property agents often highlight such features for higher profits (Li et al., 2025). However, in some cases, a sky view has been found to have a negative effect on prices (Dou et al., 2023).

Research examined how rail infrastructure affects property prices. The findings are nuanced, with both positive and negative effects reported, often depending on factors such as distance from stations, city characteristics, and project stages. A view of and proximity to rail infrastructure generally have a positive effect on apartment prices. However, the impact is context-dependent, varying by distance, project stage, city characteristics, and neighborhood socioeconomic status. Some studies report neutral or negative effects, highlighting the importance of local factors in determining the overall impact on apartment prices (Guarini et al., 2025; Huang & Du, 2021; Li & Huang, 2020; Lin & Du, 2017; Seo & Nam, 2019).

Studies have examined the relationship between electricity infrastructure - particularly transmission lines and pylons - and property values, including apartments. The main concern is the disamenity effect caused by the visual presence, as well as potential concerns about electromagnetic fields, which can influence residents' perceptions and, consequently, housing prices (Brinkley & Leach, 2019; Füss et al., 2025; Hoffmann et al., 2025; Rambonilaza et al., 2024). Power lines generally reduce housing prices, depending on their proximity and characteristics of such structures. Reported reductions in housing prices due to power lines and waste-to-energy facilities range from 2% to 10% (Hoffmann et al., 2025). The visual impact of overhead powerlines is described as "mixed", with some studies noting that if transmission lines are paired with access to open land, they may be considered amenities, and burying the lines could improve property values (Brinkley & Leach, 2019).

In turn industrial areas impact apartment prices, with positive and negative findings depending on the context. Studies generally find industrial views unfavorable, lowering apartment prices when viewed as polluting or hazardous (Contreras et al., 2014; Graziano et al., 2025; Sander & Haight, 2012). However, there are exceptions. In some urban contexts where industrial areas are seen as employment centers rather than sources of pollution, or where redevelopment is anticipated, proximity to industrial areas may have a neutral or even positive effect on apartment prices (Czembrowski et al., 2016; Tang & Wong, 2021). The magnitude and direction of the effect can vary depending on local context, the nature of the industrial area, and whether the area is undergoing renewal or redevelopment (Graziano et al., 2025; Tang & Wong, 2021).

Studies indicate access to commercial facilities can raise apartment prices. In Boston, access to commercial areas is associated with higher housing prices. In Hong Kong, proximity to shopping centers increases housing prices, and in Geneva, access to shopping facilities has a positive effect. In Hangzhou, the operation of a shopping mall is associated with an over 10% increase in the price of properties located in mall-adjacent areas (Yang et al., 2019). Contrarily, another study found that the presence of shopping centers can have a negative impact on apartment sale prices, suggesting that, despite the convenience, people may not find living near shopping centers attractive (Czembrowski et al., 2016).

One study found that social infrastructure affects property prices. Apartment sale prices were only influenced by green spaces and six of the eleven identified amenities: middle schools (negative), high schools (positive), universities (positive), playing fields (negative), shopping centers (negative) and industrial areas (positive). The reasons for the negative impact of middle schools and playing fields are not readily apparent. In contrast, the reasons for the other factors are relatively clear (Czembrowski et al., 2016).

Another study found that landmark churches have no significant impact on housing prices. In contrast, non-landmark everyday churches, which are actively used for congregational services, yield negative effects on apartment prices. This suggests that not all church views are valued equally, and the type and usage of the church play a role in determining their impact on property values (Franco & Macdonald, 2018).

It is worth noting that Polish researchers have studied how the view affects prices, though not always directly. Studies usually indirectly analyzed the above case by analyzing such features like noise, local zoning plans, distance to green places and other aspects of property surroundings (Bas, 2024; Batóg et al., 2019; Chwiałkowski et al., 2022; Chwiałkowski & Zydroń, 2021; Czembrowski et al., 2016; Czembrowski & Kronenberg, 2016; Solecka et al., 2022; Sylla et al., 2019; Szczepańska et al., 2016; E. Szopińska et al., 2019; K. Szopińska et al., 2020; Trojanek et al., 2018).

According to a methodology applied most studies use hedonic pricing models to estimate the value of views (Hui & Liang, 2016; Peng et al., 2025). There is considerable variation in results due to differences in methodology, geographic context, and definitions of view quality and GIS-based approaches may offer more standardized assessments of view quality (Osland et al., 2022).

In conclusion, the presence, type, and quality of window views are major determinants of apartment prices, with water and green views commanding the highest premiums, while certain views such as bare ground, roads, and cemeteries reducing property values. The impact is context-dependent and influenced by orientation, floor level, and local preferences, highlighting the importance of thoughtful urban and architectural design (Damigos & Anyfantis, 2011; Hui & Liang, 2016; Jim & Chen, 2006; Peng et al., 2025; Turan et al., 2021).

Real estate markets are local, not global. This leads to micro-worlds with their own laws. it is therefore important to monitor global trends in the context of individual markets. To understand the impact of the view from the apartment window on the unit price, an extensive analysis of many cities and countries is necessary.

The purpose of the study is to econometrically estimate that the view from the apartment window has a statistically significant impact on its unit price. The research hypothesis was formulated as follows: the view from the apartment window has a statistically significant impact on its unit price. The research hypothesis presented in this article is based on observations of the market for apartments in buildings facing only one direction, which facilitated the identification of the view.

2. Material and methods

The study was carried out to assess the impact of the view from the windows in dwellings on unit prices using an econometric model. Information on concluded market transactions was used. Python was used to carry out the calculations. The dependent variable is the logarithm of the price per square meter of residential unit area. The ordinary least squares method was used. More sophisticated models weren't used because it's the first stage of investigating the impact of the view from the windows.

This study was conducted on data from similar buildings in Szczecin, which is one of the largest Polish cities, situated near the Polish-German border. Dwelling transactions in the similar 58 prefabricated buildings built from 1960-1970s were selected for the study. Buildings were located in three different districts (Downtown, North, West) but for the purposes of the study, transactions from North district were grouped with the Downtown district buildings.

The choice of the database was not random. The dwelling transactions used had two rooms and faced only one direction. For the purpose of the study, this was very convenient because it was possible to check the exact line of the view from the dwellings on the map in Szczecin's spatial information system. The fact that the apartments as well as the buildings were similar and built around the same time allowed us to ignore the building's technical condition.

Another advantage of the selected transactions was that the buildings were in different parts of the town and had different surrounding neighborhoods. The buildings investigated have eleven floors, with the last floor having a different layout. Sales transactions of the 11th floor apartments were excluded from the study. Observations concerning three-room apartments were also excluded, as they would distort the similarity of the comparative material.

The characteristics that were the subject of the study were: the year of the transaction, area, distance from the center, location in the district, location in terms of the floor, obstacle in view, different views such as: residential high height, residential low height, commerce, park and gardens, urban greenery, rail infrastructure, roads, energy infrastructure, garage, office, and other, such as social infrastructure (schools and playgrounds, churches, kindergarten, hospitals). Due to the fact that the above mentioned social infrastructure facilities occurred individually in the field, they were combined into a single feature.

The initial stage of the research entailed conducting a statistical analysis of the market characteristics of the properties included in the study. The subsequent stage in the process entailed the introduction of zero-one variables for each property's quantitative attribute state, with the exception of the distance from center variable. Subsequently, a log-linear regression model was estimated. The dependent variable in this study was a logarithm of the unit price of real property. The structure of the model is as follows:

$$\ln(Y) = \alpha_0 + \alpha_1 year2016 + \alpha_2 year2017 + \alpha_3 year2018 + \alpha_4 year2019 + \alpha_5 year2020 + \alpha_6 year2021 + \alpha_7 year2022 + \alpha_8 year2023 + \alpha_9 year2024 + \alpha_{10} area + \alpha_{11} distance + \alpha_{12} location + \alpha_{13} floor + \alpha_{14} v_{front} + \alpha_{15} v_{building_{high}} + \alpha_{16} v_{building_{low}} + \alpha_{17} v_{commerce} + \alpha_{18} v_{green_{park_{and_{gardens}}}} + \alpha_{19} v_{green_{urban}} + \alpha_{20} v_{other} + \alpha_{21} v_{rails} + \alpha_{22} v_{road} + \alpha_{23} v_{energy_{infrastructure}} + \alpha_{24} v_{garage} + \alpha_{25} v_{office} + u \quad (1)$$

where:
ln(Y) - the natural logarithm of the dwelling unit price;
$\alpha_0, \alpha_1, \alpha_2, \ldots, \alpha_k$ - model parameters; *u* - error term;

Fig. 1. An example of prefabricated buildings covered by the study in the diverse downtown area. *Source:* own study.

The variables that were found to be suitable for examination by characteristic states are described below. With the exception of distance, all of the variables were binary qualitative variables.

Variables year2016 - year2024 represents the transaction year. Area describes usage area: smaller (35.44 - 39.01 m^2) and larger (45.06 - 47.90 m^2). Location represents buildings in a specific city district (West, Downtown/North). Distance - quantitative variable, referring to the distance from city center (Brama Portowa). Floor - location in terms of floor: up to 4th, from 5th to 10th. V_front - stands for obstacle within 50 m from the building. V_building_high - the view of a residential high building. V_building_low - the view of a residential low building. V_commerce - the view of shopping centers and small commerce. V_park_and_gardens – the view of a park or allotment gardens. V_green_urban - the view of urban greenery. V_other - the view of social infrastructure (elementary school, school playground, church, public kindergarten, hospital). V_rails - the view of rail infrastructure. Table 1 shows basic descriptive statistics for quantitative variables.

Table 1

Summary statistics of quantitative variables

	price per sqm [PLN]	area [m2]	distance [km]
minimum	3 119,07	35,44	1,087
first quartile	4 458,27	37,97	2,284
median	5 903,23	46,45	2,781
average	6 040,83	42,71	2,781
third quartile	7 453,82	47,45	2,781
maximum	11 591,15	47,90	5,283
observation		464	

Source: own study.

eISSN: 2300-5289

3. Results

The model was constructed with the objective of interpretation, with the aim of evaluating the strength of the observed effect, the direction of the relationship between the variables, and the statistical significance of the observed data. The initial version of the model did not achieve the objectives of the study. Consequently, the backward stepwise regression method was employed to systematically eliminate variables, with the objective of retaining the model with the highest value of the coefficient of determination, while ensuring the significance of the parameters was maintained.

Two version of the models were presented. Defining the level of significance for $p<0.1$, the following variables remained in the model: y2016, 2017, y2018, y2019, y2020, y2021, y2022, y2023, y2024, area, distance_center, location, v_buidings_front, v_commerce, v_other, and v_rails. Where the level of significance was defined as for $p<0.05$, the variables: distance_center and location were excluded from the model. Despite the fact that $p=0.05$ for variable y2016, the feature was left in the final model.

The results of the baseline, middle and final model estimation are presented below in Table 2, and the information about the fit of the created models is provided in Table 3.

Table 2

Parameters of the estimated models:

Baseline/ p<0.1 /p<0.05	Coefficient			Standard error			t			P>|t|		
intercept	8.2866	8.3138	8.2475	0.048	0.040	0.027	173.934	207.177	309.722	0.000	0.000	0.000
y2016	0.0665	0.0601	0.0607	0.032	0.031	0.031	2.112	1.938	1.963	0.035	0.053	0.050
y2017	0.1021	0.0945	0.0952	0.033	0.032	0.032	3.113	2.946	2.967	0.002	0.003	0.003
y2018	0.2353	0.2304	0.2283	0.030	0.030	0.030	7.818	7.798	7.714	0.000	0.000	0.000
y2019	0.3310	0.3265	0.3282	0.032	0.032	0.032	10.360	10.312	10.353	0.000	0.000	0.000
y2020	0.4860	0.4815	0.4836	0.031	0.031	0.031	15.608	15.708	15.754	0.000	0.000	0.000
y2021	0.5613	0.5578	0.5632	0.030	0.030	0.030	18.702	18.872	19.018	0.000	0.000	0.000
y2022	0.6751	0.6740	0.6777	0.031	0.031	0.031	21.481	21.789	21.906	0.000	0.000	0.000
y2023	0.6886	0.6823	0.6816	0.031	0.030	0.030	22.527	22.764	22.709	0.000	0.000	0.000
y2024	0.8192	0.8147	0.8172	0.033	0.033	0.033	24.621	24.943	25.113	0.000	0.000	0.000
area	0.0761	0.0784	0.0801	0.013	0.013	0.013	5.834	6.081	6.199	0.000	0.000	0.000
distance_center	-0.0132	-0.0162		0.010	0.009		-1.277	-1.760		0.202	0.079	
location	-0.0280	-0.0362		0.017	0.015		-1.668	-2.386		0.096	0.017	
floor	0.0157			0.013			1.205			0.229		
v_front	-0.0235	-0.0393	-0.0368	0.018	0.016	0.016	-1.297	-2.463	-2.302	0.195	0.014	0.022
v_building_high	-0.0251			0.022			-1.134			0.258		
v_building_low	-0.0114			0.021			-0.534			0.593		
v_commerce	0.0583	0.0576	0.0646	0.033	0.030	0.028	1.781	1.894	2.303	0.076	0.059	0.022
v_park_and_gardens	0.0138			0.027			0.514			0.608		
v_green_urban	0.0147			0.019			0.761			0.447		
v_other	-0.0522	-0.0440	-0.0453	0.026	0.023	0.022	-2.000	-1.895	-2.055	0.046	0.059	0.040
v_rails	-0.0536	-0.0608	-0.0466	0.028	0.021	0.020	-1.895	-2.935	-2.369	0.059	0.004	0.018
v_road	-0.0023			0.016			-0.146			0.884		
v_energy_infrastructure	-0.0107			0.023			-0.456			0.648		
v_garage	-0.0319			0.021			-1.531			0.127		
v_office	0.0119			0.048			0.249			0.804		

Source: own study.

Table 3

Model fit:

Dep. Variable:		In price per sqm		R-squared:	0.807	0.805	0.802
Model:		OLS		Adj. R-squared:	0.796	0,798	0.796
Metod:		Least Squares		F-statistics:	73.47	115.2	129.9
No. obs.		464		Prob (F-statistic):	1.49e-139	3.80e-147	6.51e-148
Df Residuals:	438	447	449	Log-Likelihood:	281.58	278.37	275.12
Df Model:	25	16	14	AIC:	-511.2	-522.7	-520.2
Covariance Type:		nonrobust		BIC:	-403.5	-452.4	-458.2

Source: own study.

The White's test statistic is 65.3813 and the corresponding p-value 0.4285. The residuals are not heteroscedastic.

The variance inflation factor was calculated. Given that almost each of the VIF values for the explanatory variables in the regression model are between 1 and 3, multicollinearity is not a problem in the study. The Runs test value is -0.818 and the corresponding p-value is 0.414. We have sufficient evidence to say that the model specification is correct.

The models shows a good fit (R-squared = 0,802), which means that about 80.2% of the variation in the logarithm of prices can be explained by the included independent variables. Adj. R-squared is 0.796. On the other hand, the p-value in the F-test is Prob (F-statistics) = 6.51e-148, which means that the analyzed variables have a significant effect on the unit price.

This paper confirms the hypothesis put forward at the beginning of the study, according to which the view from the apartment window has a statistically significant impact on its unit price. This was confirmed by the parameters for the features 'v_buidings_front, 'v_commerce', 'v_other' and 'v_rail', which turned out to be significant with coefficient values (-0.0368, 0.0646, -0.0453, -0.0466).

4. Discussion

The survey confirms that the view from the apartment window has a statistically significant impact on its unit price. In literature review, a high range of magnitude in price premiums related to the view. The literature reports housing price increases due to views (Hassett et al., 2025; Turan et al., 2021). Homebuyers are willing to pay extra for a property with a good view, depending on the type and quality of the view (Fung & Lee, 2012, 2014; Osland et al., 2022). The value of a view varies inversely with distance from the waterfront, with closer proximity increasing the premium (Damigos & Anyfantis, 2011; Fung & Lee, 2012; Jim & Chen, 2009; Osland et al., 2022). The effect of views can be both positive and negative, depending on the type (e.g., water vs. mountain vs. street) and local preferences (Damigos & Anyfantis, 2011; Jim & Chen, 2009; Li et al., 2021; Osland et al., 2022; Turan et al., 2021). The perception of an image from the window is influenced not only by the arrangement of visible objects, but also by lighting and color (Kocaoğlu & Olguntürk, 2018), which influence the psychological perception. These conditions can vary depending on the time of day, season, or weather. To objectify future analyses of the view from a window, it would be valuable to quantify the visual complexity parameters, which would allow them to be included in a statistical approach.

The study confirmed findings from the literature review. The view of the other buildings, as defined by the attribute 'v_front', is associated with lower apartment prices. The height of the building in the line of sight did not matter. The presence of a building in the line of sight was associated with a price decrease of -3.61%. The 'v_commerce' feature, which relates to the view of commercial buildings, has a positive correlation of 6.67%. In such a case, the feature needs to be tested in future studies. The parameter most likely proved to be significant because these types of buildings were observed in good locations as well as being much more lower than the buildings from the database. It is worth noting that the study also showed a negative correlation between the view of social infrastructure (e.g. schools, sports fields, kindergartens, churches and hospitals) and unit price (-4,43%). According to the author, further research is required on a different sample to investigate this feature. Similarly, the 'v_rail' feature, which relates to the view of railway infrastructure, showed a similar correlation (-4,55%). In this case, however, the negative correlation is justified, given that such infrastructure is usually associated with noise.

The limitation of this survey is that the view from the window of the dwellings was described based on information found in Szczecin's spatial information system. From the author's point of view, this was the only objective information that could be found, as it is impossible to have a look out of each apartment window. Nevertheless, the way of describing the view used in the study can probably get very accurate data when compared to the view that inhabitants actually have. The next limitation is that, in this study, only transactions from high buildings (11-storey blocks of flats) were used. That is why, in next analysis, it is recommended to also use data from lower buildings (e.g. 4-storey or even lower). This is because the results should be verified in other parts of the city with similar housing.

5. Conclusions

The effect of views on apartment prices is substantial and varies by view type, quality, and local context. Water and green views consistently command premiums, while mountain, street, and building views may reduce prices. The magnitude of these effects is highly variable, reflecting differences in methodology, geography, and buyer preferences (Damigos & Anyfantis, 2011; Dou et al., 2023; Fesselmeyer & Seah, 2018; Fung & Lee, 2012; Hassett et al., 2025; Hui et al., 2012; Hui & Liang, 2016; Jim & Chen, 2009; Li et al., 2021; Lu, 2018; Martín & Yepes, 2024; Peng et al., 2025; Turan et al., 2021).

The study shows that an obstructed view from the apartments window in urban areas is associated with lower unit price of the dwelling. On average, the unit price for apartments that have buildings directly in front of their windows is -3.61% lower. The study also confirmed that the perception of the commerce view was positive, with a percentage of 6.67%. In contrast, the perspective of social infrastructure has been found to be associated with negative outcomes, exhibiting a -4.43% decrease. In the presence of rail infrastructure, the percentage is reduced by 4.55%. It is possible that this is not an incident, as rail or social infrastructure are typically associated with noise.

Conclusions can be drawn from the research in terms of implications for urban planning and design. Urban planners and architects can enhance apartment values by optimizing window placement, building orientation, and the integration of green and water features in the environment. Design strategies, such as maximizing openness, incorporating green spaces, and mitigating unfavorable views, can improve both property values and the residents' well-being (Jim & Chen, 2006; M. Li et al., 2025; Peng et al., 2025; M. Song et al., 2025).

The findings yielded by the research provide a valuable insight into the existing state of knowledge regarding view of windows in residential properties, with a particular focus on high-prefabricated buildings from the 1960-70s located in urban areas.

References

Bas, M. (2024). Impact of the Apartment's Window Exposure to World Directions on Transaction Price. *Real Estate Management and Valuation, 32*(4), 44–54. https://doi.org/10.2478/remav-2024-0034

Batóg, J., Foryś, I., Gaca, R., Głuszak, M., & Konowalczuk, J. (2019). Investigating the impact of airport noise and land use restrictions on house prices: Evidence from selected regional airports in Poland. *Sustainability (Basel), 11*(2), 412. Advance online publication. https://doi.org/10.3390/su11020412

Brinkley, C., & Leach, A. (2019). Energy next door: A meta-analysis of energy infrastructure impact on housing value. *Energy Research & Social Science, 50*, 51–65. https://doi.org/https://doi.org/10.1016/j.erss.2018.11.014 https://doi.org/10.1016/j.erss.2018.11.014

Chen, W. Y., & Li, X. (2017). Cumulative impacts of polluted urban streams on property values: A 3-D spatial hedonic model at the micro-neighborhood level. *Landscape and Urban Planning, 162*, 1–12. Advance online publication. https://doi.org/10.1016/j.landurbplan.2017.01.012

Chwiałkowski, C., & Zydroń, A. (2021). Socio-economic and spatial characteristics of Wielkopolski National Park: Application of the hedonic pricing method. *Sustainability (Basel), 13*(9), 5001. Advance online publication. https://doi.org/10.3390/su13095001

Chwiałkowski, C., Zydroń, A., & Kayzer, D. (2022). Assessing the impact of selected attributes on dwelling prices using Ordinary Least Squares Regression and Geographically Weighted Regression: A case study in Poznań, Poland. *Land (Basel), 12*(1), 125. Advance online publication. https://doi.org/10.3390/land12010125

Contreras, V., Garay, U., Santos, M. A., & Betancourt, C. (2014). Expropriation risk and housing prices: Evidence from an emerging market. *Journal of Business Research, 67*(5), 935–942. https://doi.org/https://doi.org/10.1016/j.jbusres.2013.07.013 https://doi.org/10.1016/j.jbusres.2013.07.013

Czembrowski, P., & Kronenberg, J. (2016). Hedonic pricing and different urban green space types and sizes: Insights into the discussion on valuing ecosystem services. *Landscape and Urban Planning, 146*, 11–19. https://doi.org/https://doi.org/10.1016/j.landurbplan.2015.10.005 https://doi.org/10.1016/j.landurbplan.2015.10.005

Czembrowski, P., Kronenberg, J., & Czepkiewicz, M. (2016). Integrating non-monetary and monetary valuation methods – SoftGIS and hedonic pricing. *Ecological Economics, 130*, 166–175. https://doi.org/https://doi.org/10.1016/j.ecolecon.2016.07.004 https://doi.org/10.1016/j.ecolecon.2016.07.004

Damigos, D., & Anyfantis, F. (2011). The value of view through the eyes of real estate experts: A Fuzzy Delphi Approach. *Landscape and Urban Planning, 101*, 171–178. Advance online publication. https://doi.org/10.1016/j.landurbplan.2011.02.009

Dou, M., Gu, Y., & Fan, H. (2023). Incorporating neighborhoods with explainable artificial intelligence for modeling fine-scale housing prices. *Applied Geography (Sevenoaks, England), 158*, 103032. Advance online publication. https://doi.org/10.1016/j.apgeog.2023.103032

Fesselmeyer, E., & Seah, K. Y. S. (2018). The effect of localized density on housing prices in Singapore. *Regional Science and Urban Economics, 68*, 304–315. Advance online publication. https://doi.org/10.1016/j.regsciurbeco.2017.12.002

Fleming, D., Grimes, A., Lebreton, L., Maré, D., & Nunns, P. (2018). Valuing sunshine. *Regional Science and Urban Economics, 68*, 268–276. Advance online publication. https://doi.org/10.1016/j.regsciurbeco.2017.11.008

Franco, S. F., & Macdonald, J. L. (2018). The effects of cultural heritage on residential property values: Evidence from Lisbon, Portugal. *Regional Science and Urban Economics, 70*, 35–56. https://doi.org/https://doi.org/10.1016/j.regsciurbeco.2018.02.001 https://doi.org/10.1016/j.regsciurbeco.2018.02.001

Fung, Y. W., & Lee, W. L. (2012). Developing a simplified parameter for assessing view obstruction in high-rise high-density urban environment. *Habitat International, 36*, 414–422. Advance online publication. https://doi.org/10.1016/j.habitatint.2012.01.001 PMID:32287699

Fung, Y. W., & Lee, W. L. (2014). Development of price models for architectural and environmental quality for residential developments in Hong Kong. *Habitat International, 44*, 186–193. Advance online publication. https://doi.org/10.1016/j.habitatint.2014.06.004 PMID:32287701

Füss, R., Kürschner Rauck, K., & Weigand, A. (2025). Residential rent externalities of photovoltaic systems: The relevance of view. *Regional Science and Urban Economics, 114*, 104138. https://doi.org/https://doi.org/10.1016/j.regsciurbeco.2025.104138 https://doi.org/10.1016/j.regsciurbeco.2025.104138

Graziano, M., Fiaschetti, M., Gross, J. W., Alexander, K. A., Longo, A., & O'Higgins, T. (2025). A room with a blue view: The impact of Blue Economy activities on housing prices across Scottish regions. *Journal of Rural Studies, 117*, 103632. https://doi.org/https://doi.org/10.1016/j.jrurstud.2025.103632 https://doi.org/10.1016/j.jrurstud.2025.103632

Guarini, M. R., Roma, A., Sabatelli, E., & Segura-de-la-Cal, A. (2025). Intrinsic and extrinsic attributes in real estate pricing: Insights for sustainable urban planning strategies. *Land Use Policy, 153*, 107543. https://doi.org/https://doi.org/10.1016/j.landusepol.2025.107543 https://doi.org/10.1016/j.landusepol.2025.107543

Hassett, K., Tikoudis, I., Alexander, G., Saliou, A., Stapper, L., & Oueslati, W. (2025). Revisiting urban environmental amenities: A review of housing price impacts and policy perspectives for equitable amenity provision. *Cities (London, England), 167*, 106263. Advance online publication. https://doi.org/10.1016/j.cities.2025.106263

Hoffmann, C., Byrukuri Gangadhar, S. S., & Müsgens, F. (2025). Smells like green energy: The impact of bioenergy production on residential property values in Germany. *Energy Economics, 145*, 108404. https://doi.org/https://doi.org/10.1016/j.eneco.2025.108404 https://doi.org/10.1016/j.eneco.2025.108404

Huang, Z., & Du, X. (2021). How does high-speed rail affect land value? Evidence from China. *Land Use Policy, 101*, 105068. https://doi.org/https://doi.org/10.1016/j.landusepol.2020.105068 https://doi.org/10.1016/j.landusepol.2020.105068

Hui, E. C. M., & Liang, C. (2016). Spatial spillover effect of urban landscape views on property price. *Applied Geography (Sevenoaks, England), 72*, 26–35. Advance online

Hui, E. C. M., Zhong, J. W., & Yu, K. H. (2012). The impact of landscape views and storey levels on property prices. *Landscape and Urban Planning, 105*, 86–93. Advance online publication. https://doi.org/10.1016/j.landurbplan.2011.12.002

Jim, C. Y., & Chen, W. (2010). External effects of neighbourhood parks and landscape elements on high-rise residential value. *Land Use Policy, 27*, 662–670. https://doi.org/10.1016/j.landusepol.2009.08.027

Jim, C. Y., & Chen, W. Y. (2006). Impacts of urban environmental elements on residential housing prices in Guangzhou (China). *Landscape and Urban Planning, 78*, 422–434. Advance online publication. https://doi.org/10.1016/j.landurbplan.2005.12.003

Jim, C. Y., & Chen, W. Y. (2009). Value of scenic views: Hedonic assessment of private housing in Hong Kong. *Landscape and Urban Planning, 91*, 226–234. Advance online publication. https://doi.org/10.1016/j.landurbplan.2009.01.009

ka, K., Krajewska, M., & Kwiecień, J. (2020). The impact of road traffic noise on housing prices–Case study in Poland. *Real Estate Management and Valuation, 28*(2), 21–36. https://doi.org/10.1515/remav-2020-0013

Kocaoğlu, R., & Olguntürk, N. (2018). Color and visual complexity in abstract images. *Color Research and Application, 43*(6), 952–957. https://doi.org/https://doi.org/10.1002/col.22266 https://doi.org/10.1002/col.22266

Koster, H. R. A., van Ommeren, J., & Rietveld, P. (2012). Bombs, boundaries and buildings: A regression-discontinuity approach to measure costs of housing supply restrictions. *Regional Science and Urban Economics, 42*, 631–641. Advance online publication. https://doi.org/10.1016/j.regsciurbeco.2012.02.007

Lavee, D., & Baniad, G. (2013). Assessing the value of non-marketable land: The case of Israel. *Land Use Policy, 34*, 276–281. https://doi.org/https://doi.org/10.1016/j.landusepol.2013.04.004 https://doi.org/10.1016/j.landusepol.2013.04.004

Li, J., & Huang, H. (2020). Effects of transit-oriented development (TOD) on housing prices: A case study in Wuhan, China. *Research in Transportation Economics, 80*, 100813. https://doi.org/https://doi.org/10.1016/j.retrec.2020.100813 https://doi.org/10.1016/j.retrec.2020.100813

Li, M., Xue, F., & Yeh, A. G. O. (2025). Efficient and accurate assessment of window view distance using City Information Models and 3D Computer Vision. *Landscape and Urban Planning, 260*, 105389. https://doi.org/https://doi.org/10.1016/j.landurbplan.2025.105389 https://doi.org/10.1016/j.landurbplan.2025.105389

Li, X., Chen, W. Y., & Hin Ting Cho, F. (2020). 3-D spatial hedonic modelling: Environmental impacts of polluted urban river in a high-rise apartment market. *Landscape and Urban Planning, 203*, 103883. Advance online publication. https://doi.org/10.1016/j.landurbplan.2020.103883

Li, X., Chen, W. Y., Cho, F. H. T., & Lafortezza, R. (2021). Bringing the vertical dimension into a planar multilevel autoregressive model: A city-level hedonic analysis of homebuyers' utilities and urban river attributes. *The Science of the Total Environment, 772*, 145547. Advance online publication. https://doi.org/10.1016/j.scitotenv.2021.145547 PMID:33770890

Lin, B., & Du, Z. (2017). Can urban rail transit curb automobile energy consumption? *Energy Policy, 105*, 120–127. https://doi.org/https://doi.org/10.1016/j.enpol.2017.02.038 https://doi.org/10.1016/j.enpol.2017.02.038

Lu, J. (2018). The value of a south-facing orientation: A hedonic pricing analysis of the Shanghai housing market. *Habitat International, 81*, 24–32. https://doi.org/https://doi.org/10.1016/j.habitatint.2018.09.002 https://doi.org/10.1016/j.habitatint.2018.09.002

Magnus, J. R., Wan, A. T. K., & Zhang, X. (2011). Weighted average least squares estimation with nonspherical disturbances and an application to the Hong Kong housing market. *Computational Statistics & Data Analysis, 55*, 1331–1341. Advance online publication. https://doi.org/10.1016/j.csda.2010.09.023

Martín, R., & Yepes, V. (2024). Valuation of landscape intangibles: Influence on the marina management. *Ocean and Coastal Management, 259*, 107416. https://doi.org/https://doi.org/10.1016/j.ocecoaman.2024.107416 https://doi.org/10.1016/j.ocecoaman.2024.107416

Oh, D., Heo, J., Jang, H., & Kim, J. (2025). Evaluating psychophysiological responses based on the proximity and type of window view using virtual reality. *Building and Environment, 270*, 112575. Advance online publication. https://doi.org/10.1016/j.buildenv.2025.112575

Osland, L., Östh, J., & Nordvik, V. (2022). House price valuation of environmental amenities: An application of GIS-derived data. *Regional Science Policy & Practice, 14*, 939–960. Advance online publication. https://doi.org/10.1111/rsp3.12382

Panduro, T., & Veie, K. (2013). Classification and valuation of urban green spaces - A hedonic house price valuation. *Landscape and Urban Planning, 120*, 119–128. https://doi.org/10.1016/j.landurbplan.2013.08.009

Peng, C., Xiang, Y., Huang, W., Feng, Y., Tang, Y., Biljecki, F., & Zhou, Z. (2025). Measuring the value of window views using real estate big data and computer vision: A case study in Wuhan, China. *Cities (London, England), 156*, 105536. Advance online publication. https://doi.org/10.1016/j.cities.2024.105536

Rambonilaza, T., Dubé, J., & Ay, J.-S. (2024). External costs of high-voltage overhead transmission lines: Evidence from a causal approach in rural France. *Environmental Impact Assessment Review, 109*, 107639. https://doi.org/https://doi.org/10.1016/j.eiar.2024.107639 https://doi.org/10.1016/j.eiar.2024.107639

Sander, H. A., & Haight, R. G. (2012). Estimating the economic value of cultural ecosystem services in an urbanizing area using hedonic pricing. *Journal of Environmental Management, 113*, 194–205. https://doi.org/https://doi.org/10.1016/j.jenvman.2012.08.031 https://doi.org/10.1016/j.jenvman.2012.08.031 PMID:23025985

Seo, W., & Nam, H. K. (2019). Trade-off relationship between public transportation accessibility and household economy: Analysis of subway access values by housing size. *Cities (London, England), 87*, 247–258. https://doi.org/https://doi.org/10.1016/j.cities.2018.11.004 https://doi.org/10.1016/j.cities.2018.11.004

Solecka, I., Rinne, T., Caracciolo Martins, R., Kytta, M., & Albert, C. (2022). Important places in landscape – investigating the determinants of perceived landscape value in the suburban area of Wrocław, Poland. *Landscape and Urban Planning, 218*, 104289. https://doi.org/https://doi.org/10.1016/j.landurbplan.2021.104289 https://doi.org/10.1016/j.landurbplan.2021.104289

Song, H. S., Wilhelmsson, M., & Zheng, M. (2019). Buyer's willingness to pay for dwellings with different orientations. *International Journal of Strategic Property Management, 23*(6), 450–466. https://doi.org/10.3846/ijspm.2019.10430

Song, M., Xu, M., Wang, Y., Lu, S., Gong, X., Si, R., & Xu, F. (2025). Is more vegetation always better? Evaluation of restorative benefits and preference for window views. *Building and Environment, 272*, 112660. https://doi.org/https://doi.org/10.1016/j.buildenv.2025.112660 https://doi.org/10.1016/j.buildenv.2025.112660

Sylla, M., Lasota, T., & Szewrański, S. (2019). Valuing environmental amenities in peri-urban areas: Evidence from Poland. *Sustainability (Basel), 11*(3), 570. Advance online publication. https://doi.org/10.3390/su11030570

Szczepańska, A., Krzywnicka, I., & Lemański, G. (2016). Urban Greenery as a Component of Real Estate Value. *Real Estate Management and Valuation, 24*(4), 79–87. Advance online publication. https://doi.org/10.1515/remav-2016-0032

Szopińska, E., Kazak, J., Kempa, O., & Rubaszek, J. (2019). Spatial form of greenery in strategic environmental management in the context of urban adaptation to climate change. *Polish Journal of Environmental Studies, 28*(4), 2845–2856. https://doi.org/10.15244/pjoes/92244

Tang, B., & Wong, K. T. (2021). Threshold effects of incremental redevelopment of an industrial property on a residential neighbourhood. *Landscape and Urban Planning, 208*, 104037. https://doi.org/https://doi.org/10.1016/j.landurbplan.2020.104037 https://doi.org/10.1016/j.landurbplan.2020.104037

Trojanek, R., Gluszak, M., & Tanaś, J. (2018). The effect of urban green spaces on house prices in Warsaw. *International Journal of Strategic Property Management, 22*, 358–371. https://doi.org/10.3846/ijspm.2018.5220

Turan, I., Chegut, A., Fink, D., & Reinhart, C. (2021). Development of view potential metrics and the financial impact of views on office rents. *Landscape and Urban Planning, 215*, 104193. Advance online publication. https://doi.org/10.1016/j.landurbplan.2021.104193

Wen, H., Bu, X., & Qin, Z. (2014). Spatial effect of lake landscape on housing price: A case study of the West Lake in Hangzhou, China. *Habitat International, 44*, 31–40. https://doi.org/https://doi.org/10.1016/j.habitatint.2014.05.001 https://doi.org/10.1016/j.habitatint.2014.05.001

Yang, L., Chau, K. W., & Wang, X. (2019). Are low-end housing purchasers more willing to pay for access to basic public services? Evidence from China. *Research in Transportation Economics, 76*, 100734. https://doi.org/https://doi.org/10.1016/j.retrec.2019.06.001 https://doi.org/10.1016/j.retrec.2019.06.001

Zhong, Y., Lu, J., & Li, Z. (2022). Impact of access to sunlight on residential property values: An empirical analysis of the housing market in Shanghai. *International Journal of Strategic Property Management, 26*(5), 385–396. https://doi.org/10.3846/ijspm.2022.18004