



HAL
open science

The more luxury, the less luxury?

Guillaume Toussaint, Arnaud Simon, Fabrice Larceneux

► **To cite this version:**

Guillaume Toussaint, Arnaud Simon, Fabrice Larceneux. The more luxury, the less luxury?. Journal of European Real Estate Research, 2025, 18 (3), pp.401-421. <10.1108/JERER-11-2024-0088>. <hal-05541569>

HAL Id: hal-05541569

<https://hal.science/hal-05541569v1>

Submitted on 7 Mar 2026

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons CC BY-NC 4.0 - Attribution - Non-commercial use - International License

The more luxury, the less luxury?

Guillaume Toussaint

DRM, Université Paris Dauphine – PSL, Paris, France

Arnaud Simon

Lab'Urba, Université Paris-Est Creteil Val de Marne, Creteil, France, and

Fabrice Larceneux

DRM, Université Paris Dauphine – PSL, Paris, France

Abstract

****Purpose**** – This article presents a quantitative analysis of the spatial clustering of the luxury housing market in Paris. It bridges the gap between the marketing and socio-geographical literature, two bodies of literature that cover the topic of luxury without really referring to each other.

****Design/methodology/approach**** – Our empirical strategy employs an instrumental variable (IV) approach combined with geographically weighted regressions (GWR) to address endogeneity concerns and spatial heterogeneity.

****Findings**** – Our research shows that (1) Luxury housing is not always a safe investment. (2) The Parisian luxury housing market has not experienced significant global growth over the last decade, although there have been slight increases in some niche markets. (3) Spatial clustering of luxury housing has a positive effect on prices, suggesting the existence of a “luxury premium,” but this effect is weaker in the upscale neighborhoods.

****Originality/value**** – This clustering may appear as a financial measure for gentrification dynamics.

****Keywords**** Scarcity, Housing market, GWR, Luxury intensity, Luxury premium

1. Introduction

There is little doubt that the luxury market has grown enormously over the last 2 decades (Atkinson, 2021; Atkinson et al., 2017; Lauermann, 2021), particularly because of gentrification or super-gentrification (Halasz, 2018; Lauermann, 2021). It has also created social dead spaces, which rely on purely financial purposes and, therefore, act as “safe deposit boxes.” However, at the same time, the marketing literature explains that luxury does not refer to a financial aspect but mainly to a range of emotions and perceptions (Wiedmann et al., 2007, 2009).

The research question documented in the present article, in this no-man’s-land between these two fields, is as follows. Socio-geographical analyses traditionally tend to be focused on the important expansion of the luxury housing market in specific geographical areas (certain districts of London or New York, for instance). However, a luxury product that expands greatly in a market might no longer be perceived as luxurious. A luxury product must be perceived as scarce (i.e. manufactured in small quantities voluntarily or due to limited natural resources). To sell a luxury product, a brand must make the buyer feel part of a small, privileged community with access to this product, the “happy few” (Bastien and Kapferer, 2012). This result raises questions about the expansion of luxury real estate. Can this market really expand spatially if its nature is linked to its scarcity? Additionally, is it really in its interest to intensify its expansion by running the risk of becoming standard housing?

The preponderance of luxury real estate is measured by its spatial distribution; to what extent does spatial clustering of luxury affect its value and its nature? Is it still luxury if luxury housing is predominant in the area? To answer this question, three assumptions are considered. A1: The luxury housing market acts as a “safe deposit box,” (i.e. a secure financial asset whose returns outperform conventional market returns; Fernandez et al., 2016). A2: The luxury housing market has intensified in Paris over the last few years, like in New York or London (Atkinson, 2021; Lauermann, 2021). A3: Spatial intensification of luxury properties has a negative effect on prices, as scarcity is a main determinant in the consumer purchasing process in the luxury market (Zhu and Ratner, 2015).

Those assumptions are explored for the Paris case study, which is particularly interesting for several reasons. First, Paris encompasses a sense of luxury in its collective imagination. Secondly, it is one of the world's most expensive cities, with exceptional architectural assets. Paris is also the capital of a highly centralized country (most of the political and economic

power centers of France are located in Paris). Finally, in addition to fueling a luxurious imagination, the Parisian market is France's most prominent luxury. It is dense but heterogeneous, offering a natural experience for this study.

The rest of the article is organized as follows. Section 2 synthesizes how the marketing literature approaches luxury products and juxtaposes it with the socio-geographical literature about luxury housing. Section 3 presents the Parisian case study, the database, and descriptive statistics. Section 4 details the methodology employed to determine the effect of luxury housing market intensity on prices. Section 5 discusses the geography of the intensity effect and analyzes its spatial heterogeneity. The last section concludes.

2. Literature review

This section is organized into two subsections. The first one is devoted to luxury products in general from the standpoint of the marketing research literature. The second is focused on how socio-geographical literature approaches the luxury housing market.

2.1 Luxury products

In the marketing literature, luxury is commonly defined as something unnecessary for basic living but deemed desirable for comfort or pleasure. It involves excess, high quality, and exclusivity and often comes with a high price. Luxury items or experiences are associated with status, social standing, or indulgence. It is generally introduced as a relative concept that changes according to individual perceptions (Amaldoss and Jain, 2005; Kapferer and Laurent, 2016), local culture (Aliyev and Wagner, 2018), social belonging (Kapferer and Laurent, 2016), and time (Berry, 1994; Mortelmans, 2005; Som and Blanckaert, 2015). One of the main characteristics of luxury is scarcity. Luxury is only accessible to a limited number of individuals, the "happy few." Scarcity may generate additional consumer interest in a product and encourage consumers to consume more (Aggarwal et al., 2011; Jang et al., 2015; Zhu and Ratner, 2015). This scarcity also makes luxury a social marker. Consumers emphasize its expense in displaying a real or imagined social status through conspicuous consumption (Veblen, 2017). For example, Kapferer (1997) states that luxury products are "those whose price/quality relationship is the highest of the market." Wiedmann et al. (2007, 2009) proposes a conceptual framework based on individual perceptions to elaborate on that point. According to individual sensitivity to perceptions such as perceived quality, usability, and prestige, this model describes whether individuals will perceive a product as luxury. Bachmann et al. (2019) also extends this model to the luxury brand.

Luxury is often linked to scarcity through the concept of exclusivity. Luxury goods or experiences are frequently limited in quantity, intentionally through organized production constraints or naturally due to the time or rare materials needed to create them. This limited availability may develop a sense of exclusivity and desirability, reinforcing the perception of luxury. The idea that something is scarce or hard to obtain may enhance its appeal and prestige and thus may increase its perceived value as a luxury item.

According to Yeoman and McMahon-Beattie (2011), the growth of wealth in society makes luxury products more accessible. To solve this contradiction of scarcity, De Barnier et al. (2012) categorizes the luxury market into three submarkets: accessible luxury, which can be consumed by a more significant number of people; intermediate luxury; and unreachable luxury. Brands wishing to remain in the luxury market always need to maintain a certain degree of exclusivity (i.e. a highly selective customer base), therefore enhancing the scarcity of their product (Yeoman and McMahon-Beattie, 2014). Other scholars document the inconspicuous consumption of luxury products (Eckhardt et al., 2015). Here, luxury consumption is related to subtle products, recognizable only to connoisseurs, and subtle signals are used to recognize other connoisseurs (Berger and Ward, 2010). Generally, consumers signal to social class members when they consume luxury goods (Han et al., 2010).

Luxury housing may convey this kind of signal effect on social positioning. For instance, Leguizamón (2010) shows that an increase in the average size of the nearest and most prominent houses in a neighborhood has a negative effect on the predicted house price for a given property. In contrast, an increase in the average size of the furthest and smallest homes in the neighborhood has a positive effect on the predicted price (those effects can be understood through identification/comparison mechanisms). Another example is provided by Zahirovic-Herbert and Chatterjee (2011), who establish that buyers accept paying a premium if the property name contains the words "country" or "country club" (this effect can be understood through brand marketing mechanisms). Chuon et al. (2017) also show that the luxury housing market has evolved beyond features such as exclusivity, location, and amenities. It is linked to emotional and symbolic aspects, too.

Real estate luxury: socio-geographical literature

The luxury housing market can also be approached through socio-geographical literature. One of the most documented aspects in this literature is undoubtedly the gated community. Those residential complexes, generally delimited by physical barriers, such as grids, are

accessible only to their inhabitants. They exist in numerous countries and have been studied in France by Le Goix and Webster (2008). Gated communities are generally presented as internationalized communities populated by influential individuals (Atkinson et al., 2005; Choon-Piew, 2011) practicing social grouping: "What matters is not where we are; what matters is that we are here." However, as underlined by Blakely and Snyder (1998) and Winarso et al. (2015), there are several types of gated communities. Not all were built to house wealthy, famous, or powerful individuals. For instance, Marseille in Southeast France contains an important development of gated communities populated by middle classes, probably for security reasons (Dorier and Dario, 2018). Consequently, equating luxury housing to gated communities is not a satisfying approach to analyzing this market. Researchers often consider the potential adverse effects of luxury real estate development on urban space. For Fernandez et al. (2016), the New York and London luxury real estate markets serve as "safe deposit boxes," which means that properties acquired by investors are quickly and easily resold at a significant profit. According to Wang (2022), prices in the luxury housing market have also returned to pre-COVID levels more quickly than in the least expensive markets. However, other scholars have proposed results that may question the "safe deposit box" characteristic of the luxury housing market. For instance, Hui et al. (2011) show that this market is just as sensitive as the conventional housing market to financial bubbles. Gupta et al. (2010) also establish that monetary shocks negatively affect the luxury segment. Hung et al. (2023) show that luxury housing premiums can become negative in recession periods.

For Atkinson (2019), developing luxury skyscrapers may contribute to creating "social dead spaces." Investors buy at a given time to resell later for a supposed capital profit, leaving the property empty during the holding period. According to several articles, large-scale investments in luxury real estate in megalopolises represent an extreme form of gentrification, or "super-gentrification" (Butler and Lees, 2006; Halasz, 2018; Lees, 2003). This super-gentrification is based on observations of the intensification of the luxury housing market, in which intensification refers to the increased size of the luxury housing market in areas that are already high-end or even luxurious (Lauermann, 2021). This super-gentrification process might affect the local population structure: Creating large luxury buildings would drive up prices in the neighborhood through a diffusion process (Lauermann, 2021; Liang et al. 2020), pushing out the middle classes.

3. Parisian luxury housing market and database

The luxury housing market

According to Bain and Company, the global luxury housing market was projected to reach €1,5tn in 2023. Between 2021 and 2022, international luxury prices rose by 3.5%. The five cities with the highest proportion of luxury housing are Dubai, Miami, New York, Madrid, and Paris.

In France, this market is relatively concentrated in a few departments: the Hauts-de-Seine with 1,668 luxury transactions (8.19% of the French properties above €1m in 2021), Paris with 1,128 transactions (8.18%), and the Yvelines with 838 transactions (4.20%). This set corresponds to Paris and its affluent western suburbs. On the French Riviera, the Var department represents 811 transactions (3.05%), and the Alpes-Maritimes with Nice and Cannes have 811 transactions (3.37%). Within Paris, the market seems to have expanded in recent years. Traditionally limited to the historic upmarket (6th through 8th districts), Barnes indicates an increase in the number of transactions in the 10th, 19th, and 20th districts, a phenomenon that has not been previously observed. In 2022, the average price per square meter for luxury was €14,633/m², and the average price per property was €5.47m. Evolution has been heterogeneous around the capital, with a price increase of around 12% in the 7th district and a drop of 10% in the 13th.

Database and retained definition for the luxury segment

The database used in this article is named DV3F for "land value requests and land files" and is processed by the CEREMA. Observed transactions come from the French notaries database and are registered in France every year from 2010 onwards. This database provides detailed information on the characteristics of each property and its location. For Paris, 288,549 unique transactions were registered from 2010 to 2021. Properties under €100, apartments smaller than nine square meters (the minimum legal surface area in France for the rental market), and houses (very rare in Paris) are removed. Outliers are also removed using an unbalanced interquartile method to the right. Quartiles are calculated by district and year to consider local spatial dynamics Kiel and Zabel (2008). After filtering, we obtain 260,353 unique transactions, or 90.22% of the initial base. This database contains invaluable information on the quality of buildings and housing because transaction amounts are cross-referenced with housing tax returns via a unique number. A few of the most expensive transactions may not be reported by notaries at the buyer's request, which prevents observation of the inheritance. However, these problems remain marginal, and this database allows for a pertinent analysis of luxury real estate in Paris.

Studying the evolution of the luxury market requires a definition for this segment. However, to our knowledge, there is no consensual definition. For instance, Lin and Jou (2005) describe typical luxury housing as “housing with rare spatial resources such as beautiful landscapes and good locations, and characterized by a high total price, a large living space, good facilities, and high prestige.” As relevant as it can be, this definition is nevertheless challenging to handle from a statistical perspective. For Lauer mann (2021) and Wang (2022), luxury real estate corresponds to all properties that exceed a mansion tax. One of the drawbacks of this definition is that it ignores market trends; if the market is rising, the luxury market size will automatically increase. Choi et al. (2020) adopt a definition based on the 10% of the most expensive housing in a given area. We retain this third definition because it offers greater sample stability from one year to another and considers price dynamics. It also relies on the relative aspect of luxury (in Paris, a family flat costs one million euros, but does it mean that it is luxury?).

4. Methodology

Intensification is defined as the process whereby luxury real estate development becomes denser and more dominant within already affluent and previously gentrified neighborhoods (Lauer mann, 2021 for New York). In this article, a static quantitative measure for this intensification process is proposed. Luxury housing market intensity is defined as the preponderance of the luxury housing market in a neighborhood. This indicator allows us to quantify the effect of a property's scarcity on the luxury housing market. The pricing model is initially presented using a basic approach and then by incorporating spatial variations.

4.1 Local intensity indicator and study dates

Intensity of the luxury housing market refers to the measure of the preponderance of the luxury housing market in a neighborhood. It corresponds to the local ratio between the number of luxury transactions and the total number of transactions in an area. We construct this indicator at the housing level to avoid problems in measuring gathering across sectors (notably the MAUP problem). The ratio of the number of luxury transactions to the total number of transactions within a 500-m radius of a dwelling is calculated for each luxury housing transaction. Intensity is estimated yearly, using all the transactions observed during the year of the luxury transaction.

This article presents a longitudinal study using data from 2010, 2015, and 2019; 2010 was the year following the subprime crisis. The market recovered from its losses and entered a stationary price regime. Next, 2015 corresponds to the year of the NOTRe and MAPTAM

laws in France, which strongly transformed the French planning policy by reinforcing the role of metropolises and realizing regional merging. It was also a year of price inflection, with prices rising again until 2019, probably due to the quantitative easing of the European Central Bank (Hallsten and Valdenström, 2020; Miyakoshi et al., 2020; Coën et al., 2022). As for 2019, it corresponds to the year just before COVID and containments, with a market peak.

Our luxury sample contains 2,514 observations for 2010 (24,959 in total, luxury + conventional), 2,394 (23,853 in total) for 2015, and 2,627 (26,234 in total) observations for 2019.

4.2 Estimating the average effect of intensity on luxury prices

Hedonic regression models are first estimated for the sample of luxury transactions. The theory of hedonic prices stems from consumer theory (Lancaster, 1966). It asserts that the utility derived from the consumption of a complex good is the sum of the utility of the characteristics of the good. Rosen (1974) expands on this theory, showing that there is a set of implicit markets in which these characteristics are traded. Thus, the price of housing results from a set of implicit bidding functions of a buyer and a seller, considering a set of characteristics.

Applied to real estate markets, housing value is described as the sum of the marginal prices of its characteristics. These marginal prices are decomposed using regression models. The "land" value is contained in the intercept. The formalized hedonic model can be written as follows:

$$y_i = \alpha + \sum_k^K \beta_k X_{ik} + \varepsilon_i$$

Where y_i is the logarithm of the housing price, X_{ik} a vector of k characteristics of the dwelling i , β_k the implicit market price of the characteristics, ε the error term.

4.3 Spatial heterogeneity of the luxury intensity

Linear hedonic models allow us to test the global effect of luxury intensity on luxury housing value. However, as shown in Figure 2, the luxury housing market in Paris is heterogeneous in terms of price and size levels. The development of a model that takes spatial heterogeneity into account might reveal different demand functions depending on the type of the market in which the dwelling is purchased.

To address this issue, we perform a geographically weighted regression (GWR) model (Brunsdon et al., 1996). GWR is a spatially varying coefficient method that adapts the local

regression technique to spatial econometrics. It estimates local regressions at given points in space based on the nearest neighbors. It creates the first spatial clusters of data, determined by a minimization algorithm based on the Akaike information criterion (Fotheringham et al., 2003). Then, it estimates N local regressions based on the N clusters found with the minimization algorithm. It is generally noted:

$$y_i = \beta_0(u_i, v_i) + \sum_k^K \beta_k(u_i, v_i)X_{ik} + \varepsilon_i \#(1)$$

where u_i, v_i are geographical coordinates of each observation.

5. Results and discussion

5.1 The geography of the intensity effect

Figure 3 presents luxury housing market intensity by district in 2019 and its variation between 2010 and 2019. The highest luxury housing market intensity was in the central west and the west of the city. In the 6th, 7th, and 8th districts, one in three transactions involved luxury housing. In the 19th district, less than 1% of transactions involved luxury housing.

Luxury housing market intensity varied from -5% in the 2nd district to +3.2% in the 17th district between 2010 and 2019. Therefore, in 15 districts among 20, luxury housing market intensity decreased. Those observations lead to refuting A2: If the luxury housing market stayed important in the upscale districts, it has not largely intensified over the last 10 years in Paris. In gentrifying districts, it is expanding slightly or even declining.

5.2 Luxury housing market intensity and ordinary least squares (OLS) results

Results of regressions for 2010, 2015, and 2019 are reported in Table 4. Moran's I test detects spatial autocorrelation of residuals (Moran, 1950). District-level fixed effects partially reduced and almost eliminated it in 2010. The adjusted R^2 values are between 0.498 and 0.635, indicating that the models perform well.

The price elasticities on the surface are significantly inferior to 1. In the luxury housing market, when the surface increases by 1%, the total price increases by approximately 0.6%, compared to an elasticity close to 1 for the conventional market. For large properties, the cost of an additional square meter decreases with size. Construction ratios and squared construction ratios are negative and positive, respectively, following the U-shaped curve Bourassa et al. (2003) observed. In Paris, a premium exists for ancient historical buildings, particularly those built during the Haussmann period, and the most recent ones.

Apartments between floors 1 and 3 are less expensive than those between floors 4 and 6

and even less than those above the 7th. On the contrary, prices on the ground floor are not significantly different. Here, a positive gradient exists. Prices increase with each floor in the luxury market because of the view of Paris (this result is generally not so clear for the conventional segment). An apartment with a terrace will sell for more, whereas a cellar will have no effect or a slightly positive effect. Spatial variables influence prices, too. Apartments near monuments will sell for more than apartments further away. Moreover, apartments near high social-position-index high schools will sell for more than apartments near low social-position-index high schools. The effect of high schools' social position index on luxury housing prices is underestimated by the OLS models.

The coefficients for luxury housing market intensity are positive and significant, meaning that an increase in the percentage of luxury housing sold within a 500-m radius leads to an increase in the predicted price. The 2SLS estimations (models 2, 4, and 6) perform well with R^2 s close to the R^2 s of OLS regressions. The Wu-Hausman and weak instrument tests show that the size of the luxury housing market is a relevant instrument for luxury housing market intensity. 2SLS regressions show a bias caused by the omission of time on the market in OLS regressions. The effect of luxury housing market intensity on prices is always overestimated in OLS regressions. In 2010, the OLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.845%. The 2SLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.522%. In 2015, OLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.661%. The 2SLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.415%. In 2019, OLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.674%, and the 2SLS estimation shows that an increase of 1% in luxury housing market intensity led to a price increase of 0.455%.

These results indicate that an expansion of the luxury housing market positively affects consumers' willingness to pay (WTP). Consumers are ready to pay more for luxury if the dwelling is located in a neighborhood that has an expanded luxury housing market, in contradiction to the literature on luxury products. Indeed, luxury products are purchased because of their perceived scarcity, mainly to differentiate oneself socially. In the luxury product market, the more widespread a product is, the less luxurious it is perceived to be. The opposite seems to be true for luxury housing. Consumers are willing to pay more to live in a neighborhood where luxury housing is ubiquitous; there seems to be a luxury premium.

Scarcity does not seem to be a feature consumers look for when buying luxury housing. These results deserve to be analyzed spatially, given the strong heterogeneity of the luxury housing market in Paris. How is this luxury premium distributed across space?

5.3 Spatial heterogeneity of luxury housing market intensity

This section looks at the spatial distribution of the luxury premium. Monte Carlo simulations are first performed to confirm the existence of spatial heterogeneity. A total of 1,000 regressions are run randomly, and p-values that test for the spatial variability of coefficients are calculated. Table 5 presents the results.

A p-value over 0.05 means that the effect of a feature on housing prices does not depend on its location. Thus, simulations show that luxury housing market intensity is spatially heterogeneous; its effect on housing prices is heterogeneous and depends on location. Those results justify the use of GWR models to measure the luxury premium's spatial heterogeneity.

Figure 4 presents the GWR coefficient estimated for luxury housing market intensity effect at each point where a luxury transaction occurred in 2010, 2015, and 2019. As a precautionary measure, we only interpret the coefficients of the points within areas of sufficient data density. Furthermore, following Brunson et al. (1996), we limit the direct use of t-values; strong spatial heterogeneity within an area is a better indicator of coefficient significance than t-values.

The lowest effects of luxury housing market intensity on luxury housing prices are globally in the west of Paris, in the historically most upscale districts (the 6th, 16th, and 17th), and in the west of the 7th and the 15th. In these areas, a 1% increase in luxury housing sold within a 500-m radius leads to a low predicted price rise (less than 0.5%). On the contrary, in the 3rd, 10th, 11th, and 12th districts, an increase by 1% point of luxury housing sold within a 500-m radius leads to a rise of the predicted price by more than 1% (i.e. more than 2 times compared to the west of Paris).

The luxury premium is lower in the historically most upscale districts of Paris. Figure 4 shows that this luxury premium decreased in the most upscale neighborhoods between 2010 and 2019. In 2010, it was located in the south of the 17th. In 2015, it spread all over the 16th district and diffused into the west of the 15th district. It has also expanded in the north of the 17th and 6th districts. In 2019, the luxury premium reappeared in the east of the 7th district. It stays small in the north of the 16th, the 17th, the west of the 8th, the 9th, and in the west of the 15th districts. Thus, the effect of an expansion of the luxury housing

market positively affects the consumers' WTP in the most upscale neighborhoods. However, this effect is relatively lower than in the less upscale neighborhoods. This indicates the presence of a scarcity effect: In these neighborhoods, a high proportion of housing is considered a luxury. Luxury housing is no longer a means of distinguishing oneself, and consumers will pay less for the luxury premium.

On the other side of Paris, the luxury premium is higher in the 10th, 11th, and 12th districts, as well as in the 3rd and 4th districts. The 3rd and 4th districts underwent a major gentrification process in the "90s", with the "Marais" (3rd and 4th districts), a former Jewish quarter that became known as a gay district and is nowadays an upscale neighborhood (Giraud, 2009). The 10th, 11th, and 12th districts are also known as gentrified districts but from the late "90s" onwards (Clerval, 2010). This gentrification process continues today.

Thus, an expansion of the luxury housing market affects the consumers' WTP more positively in the post-gentrified and gentrifying neighborhoods (more than 1%, i.e. 2 times more than in the upscale neighborhoods). In these neighborhoods, luxury housing is still a means of distinguishing oneself, and consumers will pay more for the luxury premium.

These results prompt two comments. First, the luxury housing market does not seem, at first sight, to be sensitive to scarcity. Indeed, the results reveal the presence of a luxury premium. When the market is more intensive (i.e. when there are more luxury transactions around a luxury dwelling), the consumer's WTP will be greater. It is the opposite for the luxury products market: For luxury products, when the products are rarer, the consumers' WTP for luxury is higher (Zhu and Ratner, 2015). GWR offers the opportunity to complete the analysis of the initial results. In the most upscale neighborhoods, where luxury housing is abundant, there is still a luxury premium, even if it is relatively lower compared to other neighborhoods. Even if the abundant presence of luxury housing in these neighborhoods does not discourage consumers from buying a luxury dwelling, the abundance of luxury housing on the market seems to reduce consumers' WTP for the luxury premium.

Those elements lead to a repudiation of A3. The expansion of the luxury housing market positively affects consumers' WTP for luxury housing. However, it decreases marginally with the degree of luxury housing market intensity, and it almost reaches zero in the most upscale districts.

As shown by Bouzols (2019), in Paris and in its upscale suburbs, luxury housing seems to be more relevant for its proximity to affluent social groups (close to the buyer) than for the dwelling itself. As luxury housing is scarcer in the mixed neighborhoods, an expansion of

the luxury housing market in these areas will affect, more importantly, the consumers' WTP. Thus, as a developer, it is more attractive to offer luxury housing in neighborhoods that are less concentrated in luxury housing, as the consumers' WTP will be higher. This desire for proximity to affluent social groups in low concentrated areas might be one of the driving forces behind gentrification dynamics in Paris.

Conclusion

The introduction formulated three assumptions. We now summarize the responses. First, the luxury Parisian market is not a “safe deposit box.” Over 12 years, it rose by 69% compared to 83% for the conventional market, and it has not offered better protection against losses in the post-subprime crisis. On the contrary, it turns out to be a less profitable investment than the conventional housing market.

Second, it has not intensified recently. In 15 districts, luxury housing market intensity has remained constant or decreased, and the correlation between the luxury housing market intensity variations and the number of transactions is small or null. If luxury tends to increase in a few gentrifying districts, it is not a general trend because it can also decrease in such districts. Luxury is mainly related to social grouping in the historically upscale districts with the highest income level. It does not diffuse to gentrifying areas. There is not yet any “luxury democratization” or “luxury expansion.”

The third assumption is undoubtedly the most important to correctly understand this market. It testifies to a tension between expansion and scarcity/exclusivity. As underlined by the marketing research literature, luxury is strongly related to scarcity and exclusivity. However, the consumers' WTP for luxury housing increases with the intensity of the luxury housing market. However, this increase is lower in the west, where the more expanded markets are located. This result shows that the luxury housing market is less sensitive to notions of scarcity and exclusivity and more sensitive to the social aspects of luxury, such as the desire to live in areas with people from a close social class.

These results also show that developers might be key initiators of gentrification dynamics. As developers, they have an interest in developing luxury housing in the east, in areas where the consumers' WTP for luxury housing is higher. This finding might be useful for developers and urban planners. If the municipality wishes to expand gentrification in certain neighborhoods, it can encourage the construction of luxury housing in certain areas. If it wishes to limit its effects, it can impose the construction or rehabilitation of social housing around each luxury development. Paradoxically, this would imply the development

of luxury complexes as part of a policy of diffuse social housing. This would involve refurbishing or converting dwellings into social housing alongside luxury housing to encourage a social mix in the area. It is possible to encourage developers to introduce this measure by means of the luxury premium they would have received by developing luxury housing in gentrifying areas.

This research was conducted for the Parisian market, and it would be interesting to test those results in other important metropolises. Moreover, from a marketing perspective, it would be interesting to conduct an analysis on the various kinds of buyers of luxury dwellings. Will a high-need-for-status consumer have the same WTP for luxury as a low-need-for-status consumer? If some results appear surprising or disturbing given the level of housing prices in the international metropolises, they may lead to another question. Isn't it living in the urban core and the close suburbs of global cities that is nowadays a luxury by itself—a metropolitan geographic luxury?

Bibliography

- Aggarwal, Praveen, Sung Youl Jun, and Jong Ho Huh (2011), "Scarcity messages," *Journal of Advertising*, 40 (3), 19–30.
- Aliyev, Farhad and Ralf Wagner (2018), "Cultural influence on luxury value perceptions: Collectivist vs. individualist luxury perceptions," *Journal of International Consumer Marketing*, 30 (3), 158–72.
- Amaldoss, Wilfred and Sanjay Jain (2005), "Conspicuous consumption and sophisticated thinking," *Management science*, 51 (10), 1449–66.
- Atkinson, Rowland (2019), "Necroarchitecture: Lifeless Dwellings and London's Super-Rich," *International journal of Urban and Regional Research*, 43, 2–13.
- Atkinson, Rowland, Sarah Blandy, John Flint, and Diane Lister (2005), "Gated cities of today? Barricaded residential development in England," *The Town Planning Review*, 76(4), 401–22.
- Bachmann, Frank, Gianfranco Walsh, and Eva K. Hammes (2019), "Consumer perceptions of luxury brands: An owner-based perspective," *European Management Journal*, 37, 287–98.
- Bastien, Vincent and Jean-Noël Kapferer (2012), *Luxe oblige*, Editions Eyrolles.
- Bauman, Z. (2000), *Community: Seeking Safety in an Insecure World*, Cambridge, UK.

- Berger, Jonah and Morgan Ward (2010), "Subtle signals of inconspicuous consumption," *Journal of consumer research*, 37 (4), 555–69.
- Berry, Christopher J (1994), *The idea of luxury: A conceptual and historical investigation*, Cambridge university press.
- Blakely, Edward J and Mary Gail Snyder (1998), "Forting up: Gated communities in the United States," *Journal of Architectural and Planning Research*, 61–72.
- Bourassa, Steven C., Martin Hoesli, and Vincent Peng (2003), "Do housing submarkets really matter?," *Journal of Housing Economics*, 12 (1), 12–28.
- Brunsdon, Chris, Stewart A. Fotheringham, and Martin E. Charlton (1996), "Geographically weighted regression: a method for exploring spatial nonstationarity," *Geographical analysis*, 28 (4), 281–98.
- Butler, Tim and Loretta Lees (2006), "Super-gentrification in Barnsbury, London: globalization and gentrifying global elites at the neighbourhood level," *Royal Geographical Society (with The Institute of British Geographers)*, ISSN 0020-2754, 467–87.
- Case, Karl E and Robert J Shiller (1987), "Prices of single family homes since 1970: New indexes for four cities," National Bureau of Economic Research Cambridge, Mass., USA.
- Choi, Wing Yee Kimburley, Annie HN Chan, and Anita KW Chan (2020), "Producing 'luxury' housing: Developers' strategies and housing advertisements in Hong Kong (1961–2011)," *Urban Studies*, 57 (16), 3252–80.
- Choon-Piew, Pow (2011), "Living it up: Super-rich enclave and transnational elite urbanism in Singapore," *Geoforum*, 42, 382–93.
- Clerval, Anne (2010), "Les dynamiques spatiales de la gentrification à Paris. Une carte de synthèse," *Cybergeo: European Journal of Geography*.
- De Barnier, Virginie, Sandrine Falcy, and Pierre Valette-Florence (2012), "Do consumers perceive three levels of luxury? A comparison of accessible, intermediate and inaccessible luxury brands," *Journal of Brand Management*, 19 (7), 623–36.
- Dorier, Élisabeth and Julien Dario (2018), "Les espaces résidentiels fermés à Marseille, la fragmentation urbaine devient-elle une norme?," *L'Espace géographique*, 47 (4), 323–45.
- Eckhardt, Giana M, Russell W Belk, and Jonathan AJ Wilson (2015), "The rise of inconspicuous consumption," *Journal of Marketing Management*, 31 (7–8), 807–26.
- Fernandez, Rodrigo, Annelore Hofman, and Manuel B Aalbers (2016), "London and New York as a safe deposit box for the transnational wealth elite," *Environment and Planning A: Economy and Space*, 48 (12), 2443–61.

- Fotheringham, A Stewart, Chris Brunsdon, and Martin Charlton (2003), *Geographically weighted regression: the analysis of spatially varying relationships*, John Wiley & Sons.
- Giraud, Colin (2009), "Les commerces gays et le processus de gentrification. L'exemple du quartier du Marais à Paris depuis le début des années 1980," *Métropoles*, (5).
- Gupta, Rangan, Marius Jurgilas, and Alain Kabundi (2010), "The effect of monetary policy on real house price growth in South Africa: A factor-augmented vector autoregression (FAVAR) approach," *Economic modelling*, 27 (1), 315–23.
- Halasz, Judith (2018), "The super-gentrification of Park Slope, Brooklyn," *Urban Geography*, 39 (9), 1366–90.
- Han, Young Jee, Joseph C. Nunes, and Xavier Drèze (2010), "Signaling status with luxury goods: The role of brand prominence," *Journal of Marketing*, 74, 15–30.
- Hui, Eddie Chi-Man, Ivan Ng, and Otto Muk-Fai Lau (2011), "Speculative bubbles in mass and luxury properties: an investigation of the Hong Kong residential market," *Construction management and economics*, 29 (8), 781–93.
- Hung, Chih-Hsing, Ming-Chi Chen, Shyh-Weir Tzang, and Chung-Chieh Cheng (2023), "Does high-end housing always have a premium luxury value? A theoretical and numerical study," *International Journal of Strategic Property Management*, 27 (4), 246–60.
- Jang, Wonseok Eric, Yong Jae Ko, Jon D Morris, and Yonghwan Chang (2015), "Scarcity message effects on consumption behavior: Limited edition product considerations," *Psychology & Marketing*, 32 (10), 989–1001.
- Kapferer, Jean-Noël (1997), "Managing luxury brands," *Journal of Brand Management*, 4 (4), 251–60.
- Kapferer, Jean-Noël and Gilles Laurent (2016), "Where do consumers think luxury begins? A study of perceived minimum price for 21 luxury goods in 7 countries," *Journal of Business Research*, 69 (1), 332–40.
- Lancaster, K. J. (1966), "A new approach to consumer theory," *Journal of Political Economy*, 74(2), 132–57.
- Lauermann, John (2021), "Luxury housing and gentrification in New York City, 2010-2019," *Urban Geography*, 43 (10), 1683–1701.
- Le Goix, Renaud and Chris J Webster (2008), "Gated communities," *Geography compass*, 2 (4), 1189–1214.
- Lees, Loretta (2003), "Super-gentrification: The Case of Brooklyn Heights, New York City," *Urban Studies*, 12, 2487–2509.

- Leguizamón, Susane (2010), "The Influence of Reference Group House Size on House Price," *Real Estate Economics*, 38 (3), 507–27.
- Liang, Chih-Min, Chun-Chang Lee, You-Hsin Lin, Zheng Yu, and Wen-Chih Yeh (2020), "The impact of luxury housing on neighborhood housing prices: an application of the spatial difference-in-differences method," *International journal of strategic property management*, 24 (6), 456–73.
- Lin, JH and SC Jou (2005), "High-income housing and their building blocs in Taipei: A case study of luxurious condominiums in Xinyi Centre," *Journal of Geographical Science*, 40, 17–43.
- Moran, Patrick (1950), "Notes on Continuous Stochastic Phenomena," *Journal of Regional Science*, 37, 17–23.
- Mortelmans, Dimitri (2005), "Sign values in processes of distinction: The concept of luxury," *Semiotica*, 2005 (157), 497–520.
- Rosen, Sherwin (1974), "Hedonic prices and implicit markets : product differentiation in pure competition," *Journal of Political Economy*, 82(1), 34–55.
- Sheppard, Stephen (1999), "Hedonic analysis of housing markets," in *Handbook of Regional and Urban Economics*, 1595–1635.
- Shiller, Robert J (1991), "Arithmetic repeat sales price estimators," *Journal of Housing Economics*, 1 (1), 110–26.
- Som, Ashok and Christian Blanckaert (2015), *The road to luxury: The evolution, markets, and strategies of luxury brand management*, John Wiley & Sons.
- Veblen, Thorstein (2017), *The theory of the leisure class*, Routledge.
- Wang, Bingbing (2022), "Housing market volatility under COVID-19: Diverging response of demand in luxury and low-end housing markets," *Land Use Policy*, 119, 106191.
- Wiedmann, Klaus-Peter, Nadine Hennigs, and Astrid Siebels (2007), "Measuring consumers' luxury value perception: a cross-cultural framework," *Academy of Marketing Science Review*, 7, 1–21.
- Wiedmann, Klaus-Peter, Nadine Hennigs, and Astrid Siebels (2009), "Value-based segmentation of luxury consumption behavior," *Psychology and Marketing*, 26, 625–51.
- Winarso, Haryo, Delik Hudalah, and Tommy Firman (2015), "Peri-urban transformation in the Jakarta metropolitan area," *Habitat International*, 49, 221–29.

- Wong, David WS (2004), "The modifiable areal unit problem (MAUP)," in *WorldMinds: geographical perspectives on 100 problems: commemorating the 100th anniversary of the association of American geographers 1904–2004*, Springer, 571–75.
- Yeoman, Ian and Una McMahon-Beattie (2011), "The changing meaning of luxury," in *Revenue management: A practical pricing perspective*, Springer, 72–85.
- Yeoman, Ian and Una McMahon-Beattie (2014), "Exclusivity: The future of luxury," *Journal of Revenue and Pricing Management*, 13 (1), 12–22.
- Zahirovic-Herbert, Velma and Swarn Chatterjee (2011), "What is the value of a name? Conspicuous consumption and house prices," *Journal of Real Estate Research*, 33 (1), 105–26.