Student Housing Market: An Evaluation Model for the Identification of the Investment Opportunities in the Major European Cities

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Abstract. The student housing market is emerging as a strategic sector for real estate investment in Europe, driven by an increase in demand for international and local student accommodation. This study proposes a valuation model based on the analysis of the break-even point for the rentable surface to determine the economic feasibility of projects for the redevelopment of existing buildings into student housing units. The approach was applied to 15 selected European university cities, given to local specificities in terms of costs. The results demonstrate that break-even points exhibit considerable variation between cities, shaped by factors such as labour costs, property values and rents. This study presents a replicable methodological framework for identifying the most attractive investment prospects and underscores the value of comprehensive local analysis in the planning of student housing projects. The practical implications extend to real estate investors, policy makers and stakeholders engaged in urban regeneration within a European context.

Keywords: student housing · financial feasibility · real estate investments · purpose-built student accommodation · evaluation model · break-even analysis · optimal rent

1 Introduction

The student housing market in Europe has undergone a significant transformation in recent years, becoming one of the most strategic sectors for property investment. According to recent data, the volume of investment in the sector will exceed €9 billion in 2019, demonstrating growing interest from institutional and private investors [1]. The European student population has more than 20 million students enrolled in higher education institutions, a number that is steadily increasing thanks to international mobility promoted by pro-European programmes such as Erasmus+ and the attractiveness of European universities to students from all over the world.

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Over the last six years, more than 400 student accommodation projects have been implemented in Europe, responding to the growing demand for adequate student accommodation. This expansion has led to increased competition in the sector, making it essential to analyse key issues such as the sustainability of business models, innovation in services offered and understanding local market dynamics [2].

A key element to examine is the change in the nature of services provided by student accommodation facilities over the years. Whereas in the past student accommodation was limited to providing essential rooms and basic services, today we are witnessing a move towards facilities that offer a complete living experience. Modern student residences include facilities such as communal study and leisure areas, gyms, co-working spaces, high-speed internet connectivity, advanced security services and social activity programmes. This evolution responds to the needs of a more demanding generation of students who seek not only accommodation, but an environment conducive to personal and academic growth.

The sector offers many opportunities, including stable returns estimated at between 4% and 7%, steady demand fuelled by a growing student population and the potential to contribute to urban regeneration through the redevelopment of existing buildings. However, there are also significant limitations and risks. Market saturation in some cities, the variability of local regulations, the challenges of acquiring suitable property and the impact of global factors such as pandemics or changes in migration policies can all have a negative impact on returns [3].

Another important consideration is the scale of student projects. While large cities offer larger markets that allow for the development of larger facilities, smaller university towns may offer attractive opportunities for smaller but less competitive projects. Investors should therefore carefully consider the optimal size of the project in relation to the local market, student needs and available resources.

In terms of regulatory and financial support, there are European programmes that can co-finance interventions in the field of student housing, although there is no specific legislation dedicated exclusively to this area. For example, the European Regional Development Fund (ERDF) and the European Social Fund Plus (ESF+) provide funding for projects that promote social cohesion, inclusion and sustainable development. These funds can be used to co-finance the upgrading of buildings for student education, especially if the projects contribute to wider objectives such as energy efficiency, social innovation and urban regeneration.

The European Investment Bank (EIB) also provides financing and technical assistance for infrastructure projects, including education and student housing. These financial instruments can reduce the cost of capital for investors and improve the economic viability of projects.

In conclusion, the student housing market in Europe offers significant opportunities, but requires careful analysis of several key issues. Understanding market trends, such as the evolution of services offered and student expectations, is crucial to developing successful projects. Investors need to consider the limitations and associated risks, including regulatory changes, competition and demographic dynamics. The proposal of

an evaluation model based on break-even point analysis represents a useful tool to support strategic decisions in the real estate sector, with particular reference to the planning of investments in student housing.

Determining the financial feasibility of interventions in this area requires the application of advanced valuation techniques that allow an accurate analysis of the costs, revenues and risks associated with the projects [4, 5].

One of the most widely used techniques is net present value (NPV) analysis, which makes it possible to assess the return on an investment by calculating the difference between the present value of expected cash flows and the initial investment [6]. For example, [7] describe the application of NPV in the context of real estate investments, including student housing projects.

The internal rate of return (IRR) is another basic tool used to compare the profitability of different projects or to assess whether an investment meets the minimum return required by investors [8–10]. In the context of student housing, IRR helps to understand the potential for returns compared to other types of property investment.

Cash discount analysis has been used in many studies to assess the financial feasibility of student housing projects. [11] use this method to analyse the investment performance of student housing in Australia, highlighting the stable returns and risk-return characteristics of the industry.

Sensitivity analysis is essential for understanding how variations in key parameters affect the profitability of a project. [12] highlight the importance of this technique in assessing the impact of factors such as employment rates, rents and construction costs on the financial viability of real estate projects.

The break-even point analysis can be used to determine the level of employment or rent required for revenues to cover total costs. [13] stress the importance of this technique for investors wishing to understand where a project becomes profitable.

The academic literature has also explored the application of more flexible methods, such as real options, to assess management flexibility in property development projects. [14] discuss the use of real options to incorporate uncertainty and the possibility of adapting decisions based on market developments.

Risk assessment through probabilistic analysis and scenarios has been used to address the uncertainty associated with student accommodation projects. [15] highlight the importance of incorporating risk analysis into financial assessments in order to improve forecasting accuracy.

Concrete examples of the application of these techniques can be found in experimental studies. [16] analysed the financial feasibility of sustainable student housing projects using discounted cash flow analysis, taking into account environmental and economic benefits. Another important contribution is that of [17], who examined the impact of sustainability certificates on the profitability of property investments, including student housing, highlighting how they can positively affect long-term returns. Research from Jones [18] provides an in-depth analysis of the European student housing market, using valuation techniques to identify investment opportunities and emerging trends in the sector. [19] uses data analytics to assess the performance of the UK student housing sector, providing insights into returns, employment rates and future prospects. [20] has

analysed the student housing market in continental Europe, applying financial valuation techniques to identify cities with the best investment opportunities. In the academic sphere, [21] examined the impact of student demand on the housing market, using econometric models to assess the financial implications for investors. Finally, [22–24] examined investment strategies in the student housing sector, discussing the challenges and opportunities associated with financial valuation and risk management.

2 Aim

This study provides a useful tool for determining the economic viability of existing student housing refurbishment projects through an evaluation model based on break-even analysis. The starting point is a common case study with known parameters which, depending on the local characteristics of 30 selected European cities in terms of fixed costs, variable costs and unit revenues, enables investors to identify the most profitable investment opportunities and develop targeted risk mitigation strategies. In order to determine the optimal area for renting and allocating student rooms in 30 European cities, this work examines the impact of costs and revenues on the determination of the break-even area. It also indicates the amount of optimal annual revenue, i.e. the amount that would ensure the break-even point is reached, while maintaining the rental area and investment in the cities considered. In this sense, a scenario analysis is carried out based on the difference between the estimated annual revenue and the optimal annual revenue for student housing projects with a rental area of 2,472 square metres.

This approach makes it possible to determine the minimum level of occupancy required for the rental income to fully cover the total costs, thus avoiding the risk of an operating deficit. Particularly in the context of a competitive and fragmented market such as that for student accommodation, the break-even point (BEP) allows technical considerations to be integrated with local specificities in terms of housing demand and rent levels.Understanding the break-even point is crucial for making strategic decisions on production, pricing and resource management.

The practical implications of this research go beyond investors. Policy makers and stakeholders interested in urban regeneration can use this information to promote policies and initiatives that support the sustainable development of the sector. Public-private partnerships, facilitated by European co-financing programmes, can help speed up the implementation of projects that not only meet the needs of students, but also contribute to the economic and social vitality of European cities.

3 Case Study

A building of about 7 floors and 2,678 sqm should be realized for student housing. The project identified consists of the refurbishment of an existing disused building of the same size in a semi-central urban area of each of the major 15 universities European city. The project provides medium quality spaces for rooms, study rooms, restaurant, gym, hall, laundry, terrace and garden. The assumptions made are:

- The building to be renovated is bought by the private investor involved in the intervention considering a share of public co-financing equal to the 50% of the acquisition cost;
- The entire refurbishment is concluded within 1 year, so the time effects are not considered;
- The surfaces of the building are established according to Table 1.

Table 1. parameters of the renovation building

Surface	Sqm
Total	2,678
Rooms	2,142
Restaurant	107
Gym	54
Hall	80
Laundry	54
Study rooms	107
Terrace	54
Garden	80

3.1 Analysis of Demand and Offer in the Considered European Cities

The student accommodation market in major European cities is growing strongly, with increasing demand and diversifying supply. This is being driven by a number of factors, including increased international student mobility, the attractiveness of European universities and changing housing preferences. Demand for student accommodation has grown exponentially in recent years. Cities such as London, Paris, Berlin and Amsterdam attract large numbers of international students due to the presence of world-renowned universities.

London, for example, has more than 400,000 university students, while Paris has more than 330,000. However, the availability of beds in halls of residence does not match demand: London has around 96,000 beds, while Paris has around 75,000, with a coverage rate of 24% and 22% respectively. By comparison, cities such as Rome and Lisbon suffer from a much lower supply of less than 10%, forcing most students to turn to the private rental market, which is often expensive and not suited to their specific needs. This imbalance forces many students to turn to the private market, which is often characterised by high costs and inadequate infrastructure. The graph in Fig. 1 shows the student population, the number of beds available and the supply deficit to be covered in the 30 European cities considered in this work.

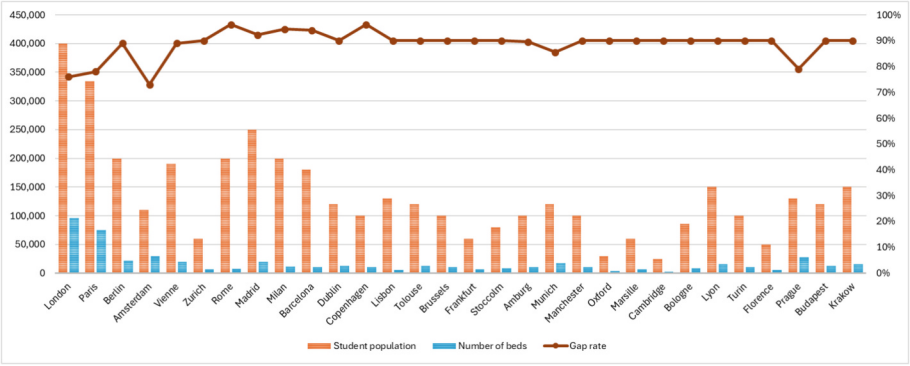


Fig. 1. Student population, number of beds available and supply gap to be covered

It can be seen that there are only 16,672 beds available for an average student population of 135,167, resulting in an average supply shortfall of 89% in the cities surveyed.

To meet their housing needs, a large proportion of Europe's student population looks for private rental accommodation, which is not available in the public sector. Private rentals offer more options in terms of location and size, but can be more expensive and less suited to the specific needs of students. In terms of accessibility, student accommodation is often close to universities or well served by public transport, reducing travel time and costs. On the contrary, cheaper private rentals are often located far from universities, in suburban or peripheral areas, increasing travel times and reducing student mobility. Modern student accommodation offers a range of services designed to meet the needs of students. Private operators such as The Student Hotel, Scape and DoveVivo have introduced innovative housing models that combine accommodation with shared spaces, premium services (gym, co-working, leisure areas) and advanced technological infrastructure. The Student Hotel, for example, has opened facilities in Paris and Amsterdam that provide students with modern and multifunctional spaces. These models are changing the perception of student accommodation, making it more of a community and learning space than a dormitory. However, private rentals can offer more privacy and flexibility in terms of guests and house rules.

New student accommodation tends to be more sustainable, built with ecological materials and with green certifications. Private rented accommodation, especially in cities with mature housing markets such as Vienna or Barcelona, often does not meet the same environmental standards.

In cities such as Berlin and Munich, the growing demand for student accommodation has led to intense competition for access to public housing, which offers lower costs than private accommodation. In response, many local governments are promoting initiatives to encourage the construction of new housing, but expansion is often hampered by a lack of building land and high construction costs.

The cost of student accommodation varies considerably from city to city. In cities with mature property markets, such as Amsterdam, London and Zurich, the price of a room in a premium private residence can exceed €1,000 per month, while in public or

subsidised residences, such as those run by the CROUS in Paris, the cost can fall to €250-€400. In cities such as Milan, the average cost of a room in a private residence is around €600–800, a low price that reflects the scarcity of supply. On the other hand, cities such as Krakow and Budapest offer significantly lower costs, making them particularly attractive to students on a limited budget.

Key challenges in the student housing market include affordability, sustainability and the need for flexible solutions for international students. For example, while Amsterdam and Dublin are known for their high housing costs, innovative solutions such as hybrid residences combining shared accommodation and student housing are emerging. At the same time, the environmental impact of buildings has become a key issue: many new buildings, such as those in Berlin and Copenhagen, are designed with sustainability certificates and environmentally friendly materials.

In terms of opportunities, cities such as Lisbon, Budapest and Krakow represent emerging markets with great development potential. Demand is growing but supply is still limited, making these cities particularly attractive to investors. Milan, despite its competitive property market, is experiencing significant growth in the private student housing sector, with operators such as Camplus expanding their presence.

3.2 Methodology

In the design of European student housing projects, break-even analysis is a crucial tool for determining the minimum floor area to be built and rented in order to make the project financially sustainable. To calculate the break-even point (BEP), two main categories of costs are distinguished: fixed costs and variable costs. Fixed costs are those that remain the same regardless of the rental of the premises, such as the purchase cost of the building to be refurbished, technical and general expenses, legal fees and renovation costs [25, 26]. Variable costs, on the other hand, vary in direct proportion to the rental area of the premises, such as cleaning costs, maintenance and the normal profit of the entrepreneur. The calculation of the BEP in this case can be expressed in terms of the net rental area required, which is obtained by the equation:

$$\begin{aligned} Break\text{-}even\ point\ &= total\ fixed\ costs/(Monthly\ unit\ revenue\ per\ room \\ &\quad -\ Monthly\ variable\ unit\ cost\ per\ room) \end{aligned}$$

In this equation, the denominator is the contribution margin per unit, i.e. the part of the unit revenue that helps to cover fixed costs after deducting variable costs. Total fixed costs include the purchase cost of the building to be refurbished, technical and overhead costs and legal fees. Variable costs, on the other hand, include expenses such as utilities, routine maintenance and cleaning costs, which are proportional to the area actually occupied. The numerator therefore reflects the need to cover non-letting costs, while the denominator represents the net margin per unit area, which is the difference between the average achievable rent and the variable costs.

The use of breakeven analysis in this context allows key operational questions to be answered for strategic planning. For example, it can be used to estimate the minimum employment rate as a function of the built up area and local economic parameters. It also shows how variations in rents or operating costs can affect the sustainability of the project.

The analysis is particularly useful in scenarios characterised by high uncertainty, such as those resulting from fluctuations in student housing demand in relation to external factors such as university policy or demographic dynamics. However, the use of breakeven analysis in the student housing sector has some critical features. The assumption of linearity in variable costs and revenues can be restrictive, given that the size of the project may generate economies of scale or diseconomies of scale. The heterogeneity of the European market also requires careful contextualisation of the economic parameters used. Break-even analysis should therefore be complemented by forecasting tools that take into account risk scenarios and demand variability.

3.3 Data Collection

In the application of break-even analysis to the economic evaluation of property refurbishment projects for student accommodation, the collection and preliminary analysis of data is a crucial stage in ensuring the accuracy of the estimates and the validity of the conclusions (Table 2). The key data include the unit market value of the building to be refurbished, expressed in €/m^2, determined by analysing the local property market and taking into account quotations of properties similar to the one under study and located in semi-urban areas of the 30 selected cities. This value is used to calculate the incidence of technical, general and legal costs. These components include the cost of design, technical and administrative advice and the cost of formalising the sales documents. To these are added the unit renovation costs, calculated in €/m^2, which summarise the expenditure required to bring the property up to a standard appropriate to its specific use as student accommodation. These parameters are the main inputs for determining the total fixed costs.

For the unitary variable costs, defined on a monthly basis per room (€/room/month), it is essential to include all recurring costs associated with the routine management and maintenance of the property. These costs include cleaning, utilities (electricity, water, gas and connectivity), routine maintenance (routine repairs) and administrative management (e.g. staff costs or any outsourcing of management). This data was collected through market research in each of the selected cities, taking into account local characteristics such as cost levels, regulations and differences in energy consumption related to the local climate. Data was collected and analysed from sector reports and professional associations, documentation of projects already carried out, local and national observatories, public databases and local reports.

The integration of these variables makes it possible to adapt the analysis to territorial and sectoral specificities, improving the model's ability to reflect real market conditions. The data collected thus form a coherent framework for calculating the break-even point, the basis for a robust economic evaluation and for optimising design and management decisions.

The unit fee was determined as the average of the monthly fees charged by comparable institutions already operating in the cities surveyed. The analysis was based on a representative sample of 30 European cities, selected on the basis of academic relevance, student market dynamics and availability of reliable data. Data was collected through detailed market research, including analysis of digital rental platforms (e.g. specialist student accommodation portals), sector reports and direct checks with local operators.

The primary objective was to obtain a realistic picture of the average rent in each city by normalising the data to take into account factors such as location, room size, services offered and maintenance status. This approach has enabled the creation of a reliable and standardised database, which is necessary to ensure the comparability of results between different geographical areas. The unit rent taken into account also takes into account the rental of rooms to tourists during certain periods of the year (summer, Christmas and Easter holidays).

The average of the rents recorded was calculated with particular attention to the statistical representativeness of the sample, excluding abnormal or non-periodic data. In addition, the effect of local variables, such as university policy and public or private housing supply, which can have a significant impact on price levels, was taken into account. This methodology has allowed the definition of a key parameter for the calculation of the unitary contribution margin, which is fundamental for the estimation of the area needed to reach the break-even point (break-even point).

The use of an average fee based on current and localised market data is a key element in ensuring the accuracy of economic assessments. Rigorous data collection not only ensures that assumptions are realistic, but also allows the analysis to be adapted to the specificities of the local context, thereby improving the robustness of project conclusions.

Cities such as Zurich (14,000 €/m^2) and Paris (12,500 €/m^2) have significantly higher property market values than Eastern European cities such as Krakow (2,600 €/m^2) and Budapest (2,850 €/m^2). This reflects increased housing pressure and strong demand in economically advanced cities. However, cities such as London (10,000 €/m^2) and Amsterdam (10,500 €/m^2) remain high, but in line with their strategic location and service offering.

Restructuring costs tend to be homogeneous in mature markets, averaging around 1,400–1,700 €/m^2. However, cities such as Zurich (1,785 €/m^2) and London (1,728 €/m^2) have the highest costs, reflecting the high value of the property market. Emerging markets, on the other hand, have significantly lower costs, such as Krakow (880 €/m^2) and Budapest (912 €/m^2), which can attract investment in high-return projects.

Technical and general costs vary considerably in percentage terms, from a minimum of 18% in Berlin and Hamburg to a maximum of 25% in Italian cities such as Rome and Bologna. This may indicate regulatory or structural differences in the management of refurbishment projects.

Legal fees vary widely, with cities such as Zurich (0.3%) having the lowest costs, while others such as Brussels (13%) and Rome (9.5%) have much higher rates. This may reflect differences in national regulatory requirements.

Operating and maintenance costs are significantly higher in the city of Zurich (275 €/ m^2) and London (250 €/m^2), probably due to the high quality of services required.

Eastern cities such as Krakow (125 €/m^2) and Budapest (125 €/m^2) keep maintenance costs very low, favouring projects with lower running costs.

Figure 2 shows the impact of the various items used to calculate fixed costs in the 30 selected cities.

The figure shows how the economic and regulatory environment of each city has a significant impact on the structure of fixed costs. These data are essential for assessing the economic viability of student housing projects in different markets and for identifying

Table 2. Sample of data used in the analysis

City	Unit market value of the property [€/m^2]	Unit cost of refurbishment [€]	Technical and general expenses [%]	Legal fees [%]	Unit average management and maintenance cost [€/month/room]
London	10,000.00	1,728.13	24	1.8	250
Paris	12,500.00	1,595.63	22	6.9	215
Berlin	6,000.00	1,448.75	18	7.5	175
Amsterdam	10,500.00	1,575.00	22	6.5	225
Vienne	7,000.00	1,461.88	19	5.0	175
Zurich	14,000.00	1,785.63	24	0.3	275
Rome	5,000.00	1,360.00	25	9.5	175
Madrid	6,000.00	1,423.75	21	7.5	150
Milan	7,000.00	1,448.13	25	7.5	185
Barcellona	6,000.00	1,423.75	21	1.5	170
Dublin	5,250.00	1,350.94	23	1.5	235
Copenhagen	6,000.00	1,432.81	22	0.8	215
Lisbon	3,750.00	1,082.19	20	6.5	150
Tolouse	3,500.00	1,164.06	22	6.8	150
Bruxelles	4,500.00	1,275.00	22	13.0	175
Francoforte	5,800.00	1,330.63	18	7.5	215
Stoccolm	6,200.00	1,452.19	22	3.5	225
Amburg	5,000.00	1,330.63	18	7.5	210
Munich	6,500.00	1,425.00	24	7.5	235
Manchester	4,000.00	1,275.63	24	1.8	185
Oxford	5,000.00	1,370.00	24	1.8	215
Marsille	3,150.00	1,164.06	22	6.8	150
Cambridge	5,200.00	1,320.00	24	1.8	215
Bologne	3,500.00	1,085.00	25	9.5	150
Lyon	3,750.00	1,154.69	22	6.8	150
Turin	3,150.00	1,041.25	25	9.5	150
Florence	4,250.00	1,116.88	25	9.5	150
Prague	3,350.00	969.06	19	4.5	125
Budapest	2,850.00	912.19	19	4.5	125
Cracovia	2,600.00	880.94	19	2.5	125

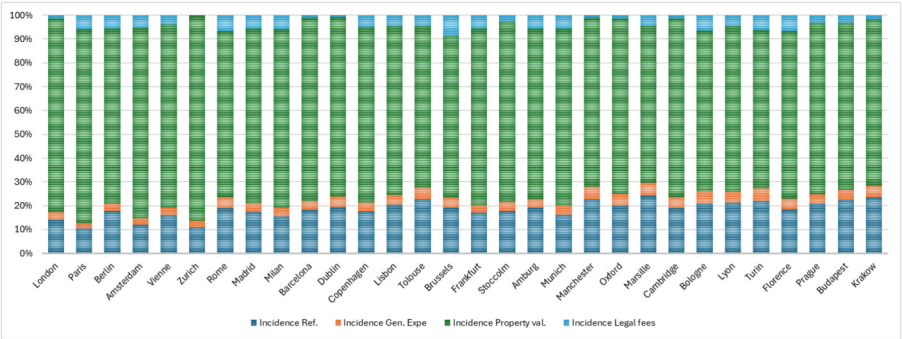


Fig. 2. Incidence of the items considered for the calculation of fixed costs in the 30 selected cities

cities that offer more favourable investment opportunities in terms of total costs. Cities in Northern Europe, such as Copenhagen and Stockholm, have a more balanced distribution between the different components, but with a lower incidence of overheads than markets in Southern Europe. Cities with relatively low property costs, such as Marseille, Lyon and Toulouse, appear to have a better balance of fixed costs between the different components, with a relatively higher weight of renovation costs compared to property value.

Property value (in green) is the dominant component in almost all cities, reflecting the importance of the local property market in total costs. Cities such as Zurich, Paris and London show a high incidence of this component, in line with their high cost property markets. In Eastern European cities such as Krakow, Budapest and Prague, this influence is relatively small.

Restructuring costs (in blue) and overheads (in orange) show significant variability, with a generally higher incidence in Italian cities such as Rome, Bologna and Florence, where the percentage of overheads is higher than average.

Legal fees (in light blue) show high variability: they are particularly low in cities such as Zurich and Copenhagen, probably due to more favourable or simpler regulations. On the contrary, cities such as Brussels show a significant incidence of this component, well above the average.

Figure 3 shows the monthly unit rent per room recorded in the 30 selected cities.

This chart provides a clear picture of the market differences in student housing across Europe. Cities with higher prices require innovative management strategies to attract students, while those with lower prices offer investment opportunities for low-cost housing projects. In addition, the concentration around certain averages suggests the existence of well-defined market segments, useful for the strategic positioning of new student housing projects.

The highest monthly room prices are found in London (€1,823) and Zurich (€1,553), confirming the strong demand in highly urbanised cities with high student densities. Eastern cities such as Krakow (€675) and Budapest (€675) have the lowest values, in line with lower living costs and economic demand. Cities in southern Europe, such as Marseille (€810) and Lisbon (€810), also have relatively low prices, suggesting investment opportunities in less saturated markets. Cities such as Paris (€1,350), Amsterdam

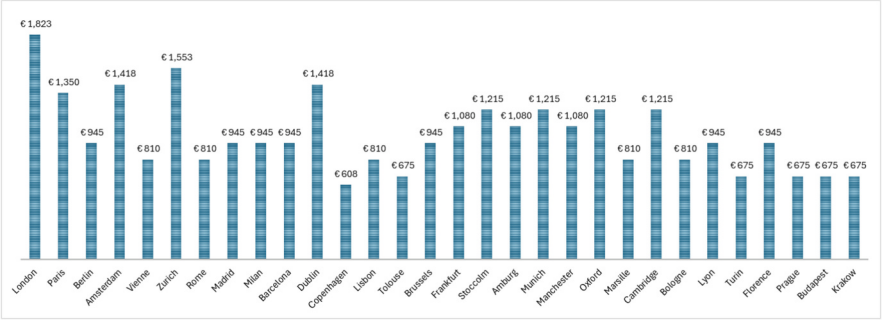


Fig. 3. Monthly unit rent per room in 30 selected cities

(€1,418) and Copenhagen (€1,418) are in the mid-to-high range, indicating a combination of high quality of life and moderate availability of student accommodation. The analysis shows a significant concentration of cities in the price range around €945 (e.g. Berlin, Milan, Madrid, Barcelona and Brussels), suggesting that this is the most common threshold for urban markets with a balanced combination of supply and demand.

3.4 Application and Results Discussion

The results of the break-even analysis in the 30 European cities considered show how different market dynamics and economic parameters affect the amount of land required to balance costs and revenues. Figure 4 shows the results obtained: the horizontal axis shows the value of the normalised area, while the size of the circles represents the actual amount of land required.

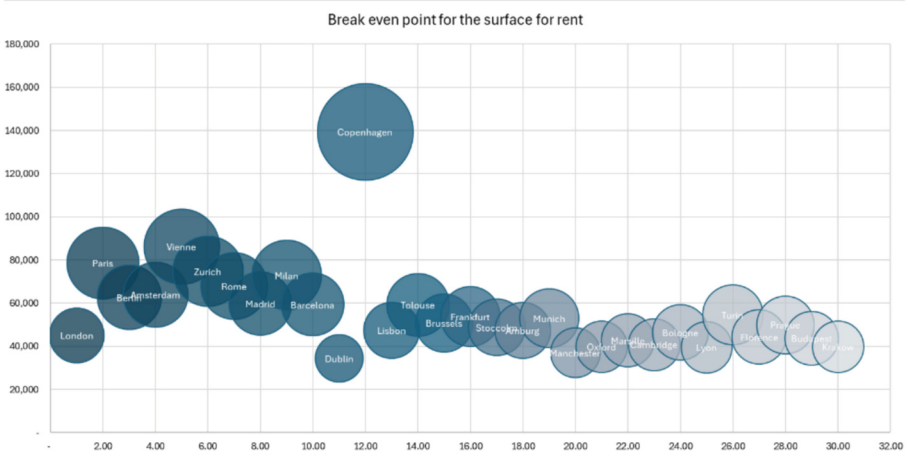


Fig. 4. Variation of the break-even rentable surface in the 30 cities

The cities of Western and Northern Europe (London, Zurich, Amsterdam) are in the low floor area requirement range, indicating markets where high yields are generated by the density of space per square metre.

The cities of Eastern and Southern Europe (Krakow, Budapest, Marseille) are grouped on the right, with a larger floor area required to compensate for the gap between average costs and rents. London, Paris, Zurich and Amsterdam are on the left of the graph. These cities require less space to break even, thanks to higher rents that allow fixed and variable costs to be covered by lower rental volumes.

The relatively small circles indicate the feasibility of small-scale housing projects in these cities, despite the high initial costs associated with land values.

Cities such as Milan, Barcelona, Madrid and Vienna show average values for the area required. These cities belong to moderate rental markets that require investment in larger projects than London, but are still competitive in terms of scale and cost.

The size of the circles suggests that these markets can support medium-sized projects, which are particularly attractive to investors with a medium-term horizon.

Copenaghen rappresenta un caso unico, con una superficie da realizzare e affittare significativamente maggiore rispetto ad altre città. Questo potrebbe derivare da un mix di costi elevati di costruzione e gestione combinati con canoni di locazione relativamente bassi rispetto ai mercati ad alto reddito.

Other cities such as Toulouse, Prague, Budapest and Krakow also require large areas to break even. However, their position on the right-hand side of the graph reflects lower unit costs and a reliance on economies of scale to compensate for reduced margins.

Cities with small areas offer investment opportunities for targeted housing projects, which require higher initial capital but generate a rapid return thanks to high rents.

Large cities require long-term strategies based on economies of scale, with larger but potentially less risky investments at lower cost per unit area.

3.5 Scenario Analysis and Discussion

The graph shows a scenario analysis based on the difference between the estimated annual revenue and the optimal annual revenue for student housing projects with a fixed rental area of 2,472 square metres in the 30 European cities concerned. The circles are grouped into clusters (cluster 1, cluster 2 and cluster 3) reflecting different market dynamics and levels of difference between estimated and optimal revenues. The map in Fig. 5 shows how this difference varies geographically and highlights relevant trends.

Cities in Cluster 1 (light yellow), such as Lisbon, Madrid, Tolosa, Prague and Budapest, show a relatively small difference between estimated and optimal revenues. This suggests that in these markets the economic conditions (rents and unit costs) allow costs to be covered with a floor area close to break-even. These cities are attractive for investment in emerging or less saturated markets. However, revenue growth in these markets may be constrained by moderately low fees.

Cities such as Amsterdam, Berlin, Brussels, Copenhagen and Stockholm fall into an intermediate (blue) cluster. Here the difference between estimated and optimal revenues is more significant than in cluster 1, probably due to higher fixed and variable costs compared to Southern and Eastern European markets. These cities have mature markets with

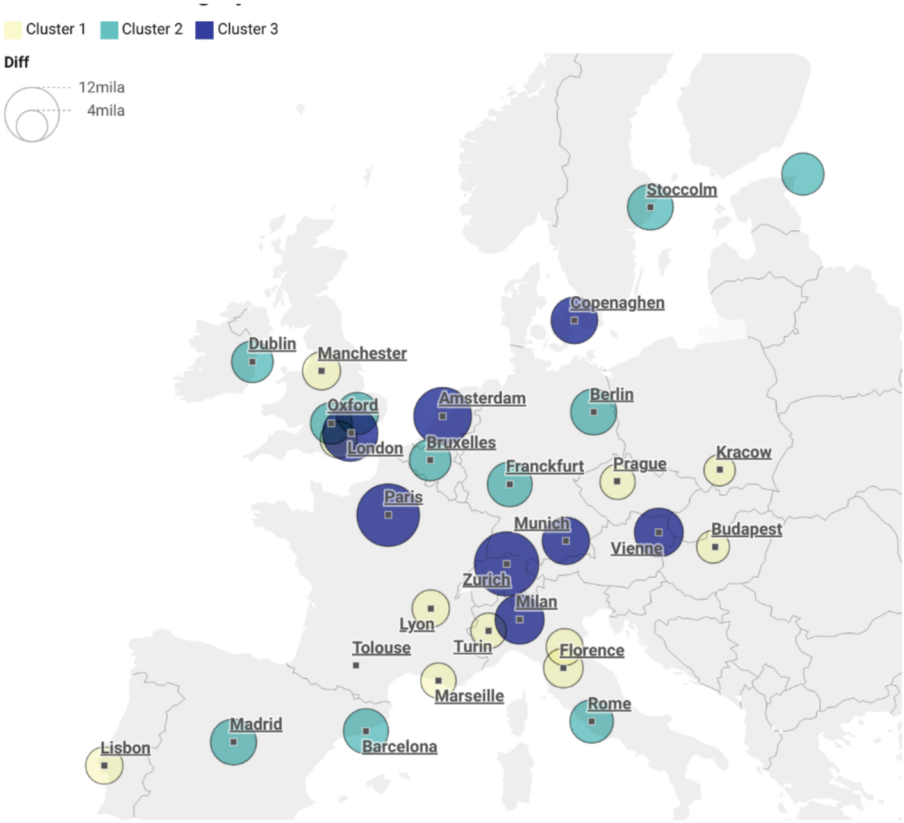


Fig. 5. Student housing optimal annual revenues differences

high entry costs, but also sustainable revenue opportunities if projects are implemented on a larger scale.

Within Cluster 3 (blue), cities such as London, Zurich, Paris, Milan, Munich and Oxford show a large difference between estimated and optimal revenues. In these markets, unit costs (especially fixed costs) are very high, requiring a significant increase in revenues to reach optimal levels of economic sustainability. Although these markets are characterised by high rents, high property pressures and development costs require aggressive strategies to maximise employment and reduce unit costs.

Cluster 1 represents an attractive opportunity for low-risk investment, with relatively stable markets and less exposure to high property costs. Cluster 3, on the other hand, requires more sophisticated investment strategies and greater scale to maximise returns and achieve economic equilibrium. Cities in Western and Northern Europe, such as London, Zurich and Copenhagen, are in the area with the largest difference between estimated and optimal income due to higher costs that are not fully offset by rents. Cities in Eastern and Southern Europe, such as Prague, Budapest and Marseille, show a much smaller difference, reflecting cheaper markets and more favourable dynamics for student housing projects.

4 Conclusions

The student housing market in Europe has developed significantly in recent years, becoming a key sector for property investment. In 2019, the volume of investment will exceed €9 billion, reflecting growing interest from institutional and private investors. There are more than 20 million students in higher education in Europe, a number that is constantly growing thanks to international mobility encouraged by programmes such as Erasmus+ and the attractiveness of European universities to students from all over the world. The present work provided a useful tool for determining the economic viability of existing student housing refurbishment projects through an evaluation model based on break-even analysis. The starting point was a common case study with known parameters which, depending on the local characteristics of 30 selected European cities in terms of fixed costs, variable costs and unit revenues, enabled investors to identify the most profitable investment opportunities and develop targeted risk mitigation strategies. The analysis of the results obtained highlights the differences in the economic dynamics of student housing projects in Europe, with particular attention to the variability of costs, rents and floor space required to break even. In terms of EU policy implications, the outcomes could suggest to stimulate sustainable investment in the sector with a share of public co-financing in order to increase the spread of this type of intervention. However, the break-even model has limitations related to simplified assumptions, such as the use of historical data and linearity of costs and revenues, which do not always reflect the complexity of the student housing market. Additional challenges arise from external factors such as fluctuations in demand, economies of scale and local regulations, as well as the lack of quality elements such as student preferences and competition from other housing solutions.

Future research developments could include dynamic evaluation techniques based on simulations of multiple scenarios and the use of geospatial tools to assess the economic viability of projects according to their location. In addition, the analysis could be extended to other property sectors such as offices and retirement homes. Finally, the applicability of the model in non-European contexts requires adjustments for regulatory and economic differences. Although useful for planning European funding policies, the breakeven model is only a starting point for a more in-depth and multi-dimensional analysis of the sector. The present study is consistent with the objectives of the *PRIN 2022 project INSPIRE – Improving Nature-Smart Policies through Innovative Resilient Evaluations*, as it develops a methodological framework for supporting resilient and sustainable investment decisions in urban contexts. By focusing on student housing, the research addresses key themes such as the adaptive reuse of existing buildings, the efficient allocation of resources, and the assessment of economic sustainability through dynamic and replicable tools. These aspects are consistent with the INSPIRE project's aim of improving policy effectiveness through nature-smart and innovation-driven evaluation approaches, especially in relation to urban regeneration and inclusive development policies.

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