

# COMPARISON OF THE QUALITY OF LIFE IN HOUSING ESTATES FROM SOCIALIST AND POST-SOCIALIST ERA: THE CASE OF SLOVENIA

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## ABSTRACT

In Slovenia large housing estates were built during socialist era. The mass production of standardized construction modules offered a relatively speedy, cost-effective, and reasonably efficient approach to meet the substantial demand for housing necessary to accommodate the rapidly expanding urban population. This type of construction ended only after the collapse of Yugoslavia and the introduction of a new sociopolitical and economic framework. The shift to a market-oriented economy has brought new challenges, including changes in housing policy. The main consequence was that the state no longer assumed the role of the primary investor in providing housing for citizens. Private investors took over the role of the state, constructing residential buildings with fewer apartments. Mostly, these residential buildings were simply added to the existing infrastructure and were not built comprehensively with the broader needs of residents in mind. As a result, the concept of a housing estate has undergone a significant transformation in the post-socialist era compared to the previous socialist system. Based on the theoretical premise that housing is a commodity that significantly impacts residents' quality of life and their social values, this article proceeds from the hypothesis that the transition to a market economy has also changed the expectations and values of residents regarding quality of life, making large housing estates less attractive to them. Therefore, residents' beliefs about quality of life in socialist and post-socialist housing estates in Slovenia are compared. A comprehensive analysis of the results collected through a survey is presented, establishing their interrelationships and supporting them with residents' opinions and attitudes collected through focus groups. The conclusion develops guidelines and recommendations for proper regeneration of socialist housing estates and planning new housing estates in Slovenia with a view to ensuring the desired quality of living.

**KEYWORDS** *\_ quality of living, housing estates, socialist era, post-socialist era, comparison, guidelines and recommendations*

## INTRODUCTION

Large housing estates, characterized by their construction from prefabricated building materials and designed as high-density urban settlements, can be found in virtually every major city worldwide. In Europe, the proliferation of these large housing estates saw a significant upswing during the first two decades following the Second World War. According to research by Richard Turkington et al. (2004) and Rob Rowlands et al. (2009), the primary driving factors behind this phenomenon included: a) the necessity to address and mitigate the demand for housing arising from wartime destruction; b) poor housing conditions and population growth; c) an increased role of the state in housing provision, particularly in terms of financing its construction; d) an adherence to a modernist perspective on what constituted quality residential architecture and a favorable residential environment, and e) political backing for mass housing complexes, primarily funded by the state.

The industrial production of standardized building units offered a relatively swift, cost-effective, and reasonably efficient means of meeting the escalating housing needs of burgeoning urban populations (Knorr-Siedow, 1996). While large housing estates typically constitute only 3 to 7% of the overall housing supply in Western Europe, they account for a more substantial 20 to 40% of total housing stock in Central and Eastern Europe, regions predominantly under socialist political regimes following Second World War (Dimitrovska Andrews & Sendi, 2001; Temelová et al., 2010). In Western Europe, the construction of such mass housing complexes came to a halt much earlier than in Eastern and Central Europe, where the development of these housing estates continued until the late 1980s. This pattern also applied to Slovenia, which was part of Yugoslavia during that period. Construction ceased only after the dissolution of Yugoslavia and the advent of a new sociopolitical and economic system.

However, the transition from the former socialist system to a market economy ushered in various new challenges, including shifts in housing policy. Among the numerous changes in housing policy, one significant shift was the elimination of the state's prior role in mass housing provision, effectively marking the end of large housing estate construction. Instead, new typologies of collective housing emerged, primarily characterized by lower apartment buildings with fewer housing units. The key distinction lies in the fact that collective housing estates built after the transition to a market economy are comparatively smaller in terms of both physical space and population. Additionally, numerous examples exist of new developments where smaller multifamily apartment buildings are constructed as individual detached structures, detached from the concept of a large housing estate. Consequently, after the shift from a socialist to a market economy, the term "housing estate" now refers to a substantially different form of housing compared to the socialist era (Sendi & Kerbler, 2021). For this reason, this article distinguishes between two distinctive forms of collective living: a) socialist housing estates which refer to mass housing complexes constructed from the aftermath of the Second World War up to the late 1980s (1945–1990), b) post-socialist housing estates which allude to multifamily apartment complexes built after the transition to a market economy (1991 and onward) by analogy.

This article operates on the hypothesis that the altered social circumstances characterizing the post-socialist period have engendered new expectations among residents regarding their quality of life. This, in turn, may render housing estates from the socialist era less appealing to live in, as residents now hold higher expectations and demands for a superior housing standard and enhanced quality of the residential environment. These changed values concerning quality of life in housing estates, as perceived by the residents, align with Tone Klemenčič's (1985) treatment of housing as a commodity with physical and substantive characteristics. These characteristics serve as vital indicators of its utility or key metrics for measuring shifts in residents' social values, as reflected in their comprehension, perception, and requirements concerning quality of life. This hypothesis is subject to empirical testing through a case study conducted in Slovenia.

## Theoretical backgrounds

Large housing estates constructed after the Second World War throughout Europe, including Yugoslavia, drew inspiration from concepts formulated within the International Congress of Modern Architecture (CIAM; French: *Congrès internationaux d'architecture moderne*). CIAM, a significant organization even before the war, viewed architecture as an economic and political instrument capable of advancing societal well-being through architectural design and urban planning. The fundamental tenet of this movement was that urban social issues could be addressed through the strict functional segregation of residential areas, relocating residents to high-rise housing blocks interspersed with expansive green spaces. These estates were self-contained, providing all necessary services and infrastructure, earning them the moniker “functional cities” catering to various social classes (De Decker & Newton, 2009).

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Anne Power (1999) suggests that one of the primary drivers behind the proliferation and postwar popularity of large housing estates was the expected economic advantage. Besides easy access to affordable greenfield land on the outskirts of major cities, the replication of prefabricated residential high-rises in a single location was believed to be cost-effective. Additionally, standardized structural elements were anticipated to further reduce construction costs, with these elements being delivered in large quantities to construction sites and identically installed across numerous buildings. However, this approach also meant that any mistakes made during the design and construction of these housing estates were repeated multiple times.

In addition to these drawbacks, large housing estates have been associated with various negative aspects, encompassing physical, ecological, economic, housing, social, and other issues. Experts began highlighting these concerns in Western Europe as early as the 1970s (Murie et al., 2003; Turkington et al., 2004; De Decker & Newton, 2009; Bolt, 2018). The physical and environmental problems pertain to the uniform appearance of residential buildings, high building density, encroachment on green spaces, inadequately designed or unfinished public and green areas, the use of pollutants (e.g., asbestos), and the utilization of low-cost, unsustainable building materials (Musterd et al., 2017; Bolt, 2018; Hess et al., 2018). Economic and housing (financial) issues are linked to the high maintenance and energy costs arising from the use of less sustainable building materials, premature deterioration of building components (e.g., facades and roof structures) after a short period, increased infrastructure costs, and higher commuting expenses (Priemus & Metselaar, 1993; Hegedüs et al., 1996; Dekker & Van Kempen, 2004). Social challenges mainly stem from the high concentration of specific minority groups and economically disadvantaged households (Van Kempen et al., 2005).

In the early 1990s, Central and Eastern European nations transitioned from socialist, planned economies to market-based systems, impacting housing policy and construction. These changes mirrored shifts that had already occurred in Western Europe in the 1970s. The CIAM-inspired models of housing construction gave way to new spatial planning priorities, emphasizing better utilization and enhancement of underused or abandoned urban land, industrial complexes, and similar areas within settlements. In contrast to the socialist era, when mass housing construction was exclusively

undertaken by the state through publicly owned construction companies, private developers emerged as new players in the mass housing construction market (Sendi & Kerbler, 2021). Consequently, in all Central and Eastern European countries, including Slovenia, public spaces faced increasing pressure from potential developers perpetually seeking available spaces for new housing construction in sought-after locations (Sendi et al., 2009).

The design of multifamily apartment neighborhoods and the architectural aspects of buildings underwent significant transformations. Private developers' primary task was constructing apartment blocks on available land, with open green spaces and social services no longer obligatory elements of neighborhood design. The previous high-rise, high-density large housing estates on greenfield land were gradually replaced by new housing typologies characterized by shorter multifamily apartment buildings with fewer housing units, resulting in lower residential density. These new forms of buildings provided residents with a more pleasant living environment, fostering a connection to existing urban infrastructure, thereby enhancing their sense of urbanity. Statistical data (see Statistical Office of the Republic of Slovenia, 2012) indicate that post-socialist dwellings, averaging 75 m<sup>2</sup> in size, are larger than those in socialist housing estates, which average 55 m<sup>2</sup>. Furthermore, housing constructed by private developers generally exhibits higher quality in terms of building materials, modern design, and room arrangements (e.g., spacious living areas connected to dining rooms and kitchens). These improvements have led to enhanced housing standards and a broader range of housing options (Sendi & Kerbler, 2021).

## METHODS

The data were obtained based on a telephone survey (CATI method), which was carried out between May and June 2022 in housing estates in the two largest Slovenian cities: Ljubljana and Maribor. For the purpose of survey, a questionnaire was formulated based on findings on the quality of life in housing estates and current knowledge about the satisfaction, wishes, and needs of residents living in them. The questionnaire measured the residents' attitudes, perceptions, norms, values, and satisfaction related to the quality of housing and their lives in socialist and post-socialist housing estates. The questionnaire consisted of 94 questions, most of which were designed in the form of a Likert scale. Due to space limitations, this article only presents results for some selected questions or part of them.

The final number of surveys completed was seven hundred, which constitutes the sample of apartments and residents living in socialist and post-socialist housing estates. The sample represents 1.2% of all dwellings designated for sampling. Depending on the construction period of the housing estates, the sample includes 613 respondents (87.6%) that live in buildings from the socialist period and 87 respondents (12.4%) that live in buildings from the post-socialist period. In housing estates from both periods, two-third of respondents were female. The age of respondents ranges from twenty-four to ninety-six. Respondents in socialist housing estates have lived there for a longer period of time than those in post-socialist ones. They have resided in socialist housing estates for an average of thirty-five years, and in post-socialist ones for 18.5 years. Respondents that live in socialist apartments are more often the owners of these apartments (91%) than those that live in post-socialist apartments (77.9%) (Table 1).

Following the survey, focus group discussions were held with residents from both types of housing estates in November and December 2022. The statements made during these focus groups are complemented by the survey findings in the article.

**Table 1:** Descriptive statistics of respondents in the sample

Variable	Socialist	Post-socialist
<b>Housing status (%)</b>		
Owner/co-owner	91.0	77.9
Tenant	7.2	18.6
Other	1.8	3.5
<b>Sex (%)</b>		
Male	34.4	31.4
Female	65.6	68.6
<b>Education (%)</b>		
Primary school	5.1	1.2
Specialized high school	7.3	1.2
High school	41.9	22.1
College or university	45.7	75.6
<b>Average number of household members</b>		
	1.9	2.2
<b>Average years of residence</b>		
	35.1	18.5
<b>Average age of respondents (years)</b>		
	68.2	64.8
<b>Average income (euros)</b>		
	1,876.59	2,507.49

Note: Unanswered questions (missing values) and "I do not know" answers are not included.

## RESULTS

### Residential satisfaction

The residential satisfaction measurement was based on four key facets: a) apartments, b) multifamily apartment buildings, c) the outdoor built environment, and d) services. As the results showed, the residents, regardless of the housing estate, are satisfied with all key facets of the housing estates. However, a more detailed analysis showed that there are greater differences in the assessment of individual elements within the key facets of compared types of housing estates.

#### *Apartments and multifamily apartment buildings*

Residents of both types of housing estates rated satisfaction with individual elements of the apartment higher than elements of multifamily apartment buildings (Table 2). But the hypothesis is confirmed only by the residents' satisfaction with multifamily apartment buildings. The average satisfaction rating for all elements is 4.03 in the case of post-socialist housing estates and 3.95 in the case of socialist housing estates. In the case of apartments residents of both types of housing estates are generally equally satisfied with their apartments (average score 4.42). The most important difference in satisfaction, which is also statistically significant, is for the interior arrangement and appearance of multifamily apartment buildings. Residents of post-socialist housing estates rated this element at 4.19 on average, and residents of socialist housing estates at 3.85 on average. The former also rate maintenance, external arrangement, and general satisfaction with the residential building higher. But it is interesting, however, that residents of older housing estates are more satisfied with the quality of construction.

*"I'm generally satisfied with my life in Prule [housing estate], even though I live in a block from the 1950s, which was well-built, which is nice."* (Male, 56 years, Ljubljana, socialist housing estate)

**Table 2:** Satisfaction with apartments and multifamily apartment buildings (mean)\*

	Socialist	Post-socialist
<b>Apartment</b>		
Comfort	4.38	4.40
Maintenance	4.30	4.35
Size	4.42	4.44
Layout of rooms	4.37	4.31
Number of rooms	4.17	4.12
General satisfaction with apartment	4.42	4.42
<b>Multifamily apartment building</b>		
Construction quality	3.91	3.84
Maintenance	3.99	4.06
Energy performance	3.84	3.83
External appearance	4.07	4.13
Internal appearance (stairways, corridor, elevator, etc.)**	3.85	4.19
General satisfaction with building	4.06	4.15

Notes: \* Scale 1–5 (1 = not satisfied at all, 5 = very satisfied); unanswered questions (missing values) and “I do not know” answers are not included; \*\* significant independent-samples t-test of socialist versus post-socialist housing estate difference ( $p \leq 0.05$ ).

### **Outdoor built environment**

Even in the case of the outdoor built environment, it turned out that residents of housing estates from the post-socialist period are more satisfied with this, which also confirms the hypothesis. The outdoor environment was divided into three groups. Respondents evaluated its general characteristics, traffic arrangement, and paths within it. On average, residents of newer housing estates rated all three groups higher in comparison to their counterparts (4.04 vs. 4.00, 3.76 vs. 3.53, and 4.14 vs. 3.89).

Regarding **general characteristics**, the most important difference in satisfaction is for general orderliness (Table 3). Residents of socialist housing estates rated this with an average score of 3.90, and those in post-socialist housing estates with a score of 4.18. The difference is also statistically significant. In post-socialist housing estates, residents are also more satisfied with appearance, safety, peacefulness, and cleanliness. However, it should be emphasized that these characteristics were rated similarly highly by residents of older housing estates. Safety was rated the highest in both cases (i.e., 4.22 and 4.28). Green areas were rated similarly highly, but residents of socialist housing estates are more satisfied with them. Their assessment of green areas is also the highest among all general characteristics of the outdoor built environment (average score 4.29).

*“If I talk [from perspective] of my [neighborhood], Litostrjski bloki [housing estate], /.../ There are a lot of green areas. Many trees. Well, I think the main advantage here is precisely the abundance of greenery.”* (Male, 76 years, Ljubljana, socialist housing estate)

*“I’m from Fužine [housing estate] /.../ There’s an abundance of greenery [in the neighborhood] /.../ That’s the first thing that comes to my mind /.../ There are a lot of trees, they are already big.”* (Female, 55 years, socialist housing estate)

Construction density, playgrounds, and other outdoor public spaces were rated the lowest. However, greater satisfaction was detected in socialist housing estates with regard to construction density and playgrounds. There is a particularly significant difference in satisfaction regarding playgrounds.

Residents of newer housing estates rated this element with an average score of 3.67, whereas residents of older ones rated this element with a score of 3.91.

*“For example, there’s very little space between the multifamily apartment buildings /.../ and there is actually a bit of crowding.”* (Female, 51 years, Ljubljana, post-socialist housing estate)

*“Socialist constructions had a sense of community, so they had some communal spaces, playgrounds, open areas, but now that’s simply not there anymore in the new neighborhoods. Our courtyards are open, I mean playgrounds, in the old neighborhoods.”* (Male, 33 years, Ljubljana, socialist housing estate)

Similar to general characteristics, residents of post-socialist housing estates are also more satisfied with **traffic arrangements**, which is in line with the hypothesis. However, it should be emphasized that there is a statistically significant difference in satisfaction only in the case of parking spaces. Nonetheless, the average rating for both types of housing estates is low. Residents of newer housing estates rated this element with a score of 3.28, and residents of older ones with a score of 2.61 (Table 3). This is also the lowest average satisfaction score given by the residents of socialist housing estates for any of the elements evaluated in the survey.

*“Parking spaces are a problem because this was built for fewer cars. When I came here, there were only three cars, but now we have nowhere to park them.”* (Female, 80 years, Maribor, socialist housing estate)

In the case of **path arrangements**, residents of post-socialist housing estates expressed greater satisfaction with all elements evaluated. There are statistically significant differences in satisfaction with sidewalks (Table 3). The average satisfaction score for this element is 4.36 in newer housing estates and 3.96 in older ones. Residents of both types of housing estates are less satisfied with bicycle paths, but more satisfied with walking paths.

*“It would be possible to significantly encourage cycling, but the bike lanes should be 3 meters wide, not just 50 centimeters.”* (Male, 33 years, Ljubljana, socialist housing estate)

**Table 3:** Satisfaction with the outdoor built environment (mean)\*

	Socialist	Post-socialist
General characteristics		
General orderliness**	3.90	4.18
Construction density	3.87	3.77
Appearance	4.00	4.08
Safety	4.22	4.28
Peacefulness	4.04	4.10
Cleanliness	3.98	4.11
Green areas	4.29	4.21
Playgrounds	3.91	3.67
Other outdoor public spaces	3.80	3.94
Traffic arrangement		
Transport connections with other parts of city	4.49	4.45
Traffic density	3.50	3.56
Sufficient parking spaces**	2.61	3.28
Path arrangement		
Walking paths	4.12	4.26
Bicycle paths	3.61	3.79
Sidewalks**	3.94	4.36

Notes: \* Scale 1–5 (1 = not satisfied at all, 5 = very satisfied); unanswered questions (missing values) and “I do not know” answers are not included; \*\* significant independent-samples t-test of socialist versus post-socialist housing estate difference ( $p \leq 0.05$ ).

### Services

The results of residents' satisfaction with the services available in housing estates do not support the hypothesis. On average, residents of socialist housing estates expressed higher satisfaction with services in socialist housing estates (4.09 vs. 4.01). As many as eleven of the fifteen elements evaluated were rated higher than by residents of post-socialist housing estates (Table 4). For three, the responses of the residents differ statistically significantly depending on the period of construction of housing estates. These elements are schools, preschools, and grocery stores. Residents of socialist housing estates rated schools and preschools with the highest average satisfaction score among all elements evaluated (i.e., 4.64 for preschools in 4.59 for schools). On the other hand, the most important difference in the satisfaction rating is related to grocery stores. Residents of socialist housing estates rated this service with a score of 4.52, and residents of post-socialist housing estates with a score of 4.01. Eight other services with which residents of older housing estates are more satisfied in comparison to their counterparts in newer housing estates are public transport, post offices, banks, food services, personal care services, churches / places of worship, libraries, and leisure activities. A significant difference in satisfaction was especially seen in library accessibility; namely, 3.77 versus 4.01.

*“I am from Fužine [housing estate] /.../ Public transport, healthcare center, library, shops, cafes, banks, in short, it's like a small town; training facilities, playgrounds, and here, there are also public sports fields, not just school playgrounds.” (Female, 55 years, Ljubljana, socialist housing estate)*

*“I live in Na Jami [housing estate] /.../ The bus stop is nearby, the pharmacy is nearby, the post office is nearby, the store and the bank are nearby, and even the cafes are all together.” (Male, 76 years, Ljubljana, socialist housing estate)*

**Table 4:** Satisfaction with service accessibility in housing estates (mean)\*

	Socialist	Post-socialist
Public transport	4.33	4.23
School**	4.59	4.33
Preschool**	4.64	4.29
Pharmacy	4.45	4.54
Post office	4.08	4.01
Bank	3.91	3.89
Grocery store**	4.52	4.01
Health center	3.89	4.01
Dental clinic	3.57	3.66
Food services (e.g., restaurant, café)	4.06	4.01
Personal care services (e.g., hairdresser)	4.32	4.28
Cultural services (e.g., cinema, theater)	2.90	2.91
Library	4.03	3.77
Church / place of worship	4.08	4.02
Leisure activities (e.g., gym, education)	3.90	3.79
Overall satisfaction with housing estate	4.20	4.33



Notes: \* Scale 1–5 (1 = not satisfied at all, 5 = very satisfied); unanswered questions (missing values) and “I do not know” answers are not included; \*\* significant independent-samples t-test of socialist versus post-socialist housing estate difference ( $p \leq 0.05$ ).

At the end of the satisfaction evaluation of all elements, the residents also had to evaluate how satisfied they are with the housing estate in general. It turned out that the overall satisfaction with the housing estate is higher among residents of post-socialist housing estates (average score 4.33) than among their counterparts in socialist ones (average score 4.20). The difference is not statistically significant, but the result confirms the hypothesis. However, despite everything, it should be emphasized that the satisfaction rating for this element is high in both cases.

### **Significance of housing estates**

When determining the significance of housing estates for residents, elements of two facets of the housing estates were evaluated: a) the outdoor built environment elements and b) services in the housing estate. The results show that, on average, the elements of the first aspect are more significant for residents of post-socialist housing estates (average score 4.07 vs. 3.97), whereas the elements of the second are more significant for residents of socialist housing estates (average score 4.02 vs. 3.78). This is somewhat surprising because the satisfaction analysis showed that residents of newer housing estates are less satisfied with services whereas residents of older ones are less satisfied with the outdoor built environment. It would therefore be expected that lower satisfaction increases the significance level of these key facets. This shows that satisfaction is directly related to what residents consider significant. However, it should be emphasized that a more detailed analysis of significance nevertheless confirms expectations for some elements.

### **Outdoor built environment elements**

When analyzing the significance of the outdoor built environment elements, it was revealed that five out of seven elements are more important for residents of post-socialist housing estates (Table 5), which is in line with the hypothesis. These elements are proximity to public transport, proximity to walking paths, arranged bicycle paths, low construction density, and enclosure of the housing estate. Proximity to recreational areas and arranged green areas are more significant for residents of socialist housing. There are no statistically significant differences between the groups in these elements either. Arranged green areas are the most important to residents. They were evaluated with the highest rating in both types of housing estates: at 4.62 in socialist housing estates and 4.55 in post-socialist housing estates. These are followed by proximity to walking paths with average scores of 4.53 in older housing estates and 4.54 in newer ones, proximity to public transport (4.48 vs. 4.54), and low construction density. Among all the elements assessed, the least important for all residents is that the housing estates had to be gated. However, it should be emphasized that residents of post-socialist housing estates rated this element of the outdoor environment as more significant (average score 2.68) than their counterparts in socialist housing estates (average score 2.05). The difference is also statistically significant.

*“I live in Nova Grbina [housing estates], where we basically have a fence all around, and it's strictly locked. Even if someone from the housing estate goes out, the gates automatically close behind them. This can be bothersome. Not only from the perspective that there's no socializing, and people from other housing estates can't come and socialize, which I miss a lot, but also from the perspective that, for instance, those who live in the buildings further inside the housing estate, away from the entrance, have no delivery options or anything else. We have privacy, but it can be a bit bothersome that the housing estates are gated.”* (Male, 46 years, Ljubljana, post-socialist housing estate)

## Services

The results showed that all the services evaluated are more significant for residents of socialist housing estates, which does not support the hypothesis. As many as six average scores of evaluated elements are statistically significantly different between compared types of housing estates (Table 5). These are pharmacies, post offices, banks, grocery stores, dental clinics, and personal care services. However, it should be emphasized that the first four services listed are also important for residents of post-socialist housing estates because they were rated very high. The most important service for residents of both types of housing estates is grocery stores. In older housing estates, this service was rated with an average score of 4.77, and in newer ones 4.62. These are also the highest ratings among all the elements evaluated in the survey. Residents attributed much higher significance to this service than their actual satisfaction with it. Residents of socialist housing estates also expressed great significance for three other services that they are less satisfied with regarding accessibility than their counterparts in post-socialist housing estates. These are pharmacies, health centers, and dental clinics.

**Table 5:** Significance of selected outdoor built environment elements and services (mean)\*

	Socialist	Post-socialist
Spatial elements		
Proximity to public transport	4.48	4.54
Proximity to walking paths	4.53	4.54
Proximity to recreational areas	4.08	3.99
Arranged bicycle paths	3.83	3.90
Arranged green areas	4.62	4.55
Low construction density	4.22	4.29
Enclosure of housing estate (gated housing estate for non-residents; e.g., fence, barriers, no trespassing signs)**	2.05	2.68
Services		
School	4.02	3.68
Preschool	4.03	3.69
Pharmacy**	4.67	4.39
Post office**	4.47	4.18
Bank**	4.36	4.07
Grocery store**	4.77	4.62
Health center	4.49	4.25
Dental clinic**	4.35	3.94
Food services (e.g., pub, café)	3.39	3.36
Personal care services (e.g., hairdresser)**	3.97	3.62
Cultural services (e.g., cinema, theater)	3.25	3.20
Library	3.91	3.87
Church / place of worship	2.89	2.54
Leisure activities (e.g., gym, education)	3.72	3.53

Notes: \* Scale 1–5 (1 = not significant at all, 5 = very significant); unanswered questions (missing values) and “I do not know” answers are not included; \*\* significant independent-samples t-test of socialist versus post-socialist housing estate difference ( $p \leq 0.05$ ).

### Attitudes regarding housing estates

Regarding attitudes related to housing estates, two facets of the housing estates were evaluated: a) habitation experiences and b) inter-neighborly relations. On average, in both cases residents of post-socialist housing estates had more agreeable views, which supports the hypothesis. In general, the average score for agreement with the statements in both housing estates was higher regarding habitation experiences: 4.21 in socialist housing estates and 4.28 in post-socialist housing estates. The average rating of all statements in the case of inter-neighborly relations is also higher in post-socialist housing estates; namely, 3.26 versus 3.21 in socialist housing estates. Despite this, it should be emphasized that some statements were still rated higher by residents of older housing estates.

**Table 6:** Agreement with statements about habitation experiences and inter-neighborly relations (mean)\*

	Socialist	Post-socialist
Habitation experiences		
Meets all my criteria for pleasant living.	4.10	4.17
There are sufficient green spaces.	4.29	4.28
Suitable for all age groups.	4.24	4.38
Inter-neighborly relations		
Residents are good neighbors (willing to help, friendly, etc.).	3.81	3.95
Residents are connected with each other.	3.21	3.18
Residents share the same values.	3.02	3.11
Residents share a similar socioeconomic status.	2.98	3.08
Social diversity encourages contacts among residents.	3.02	2.97

Notes: \*Scale 1–5 (1 = do not agree at all, 5 = strongly agree); unanswered questions (missing values) and “I do not know” answers are not included.

#### Habitation experiences

Residents of post-socialist housing estates most agreed with the statement “The housing estate is suitable for all age groups.” The statement was rated with an average score of 4.38 (Table 6). On the other hand, residents of socialist housing estates most agreed with the statement “There are sufficient green spaces in the housing estate.” It was rated with an average score of 4.29. However, the residents of post-socialist housing estates rated it almost equally (4.28). It should be emphasized that all statements related to habitation experiences were rated very high, including the statement “The housing estate meets all my criteria for pleasant living,” which was rated by residents of newer housing estates with an average score of 4.17 and by residents of older ones at 4.10. There were no statistically significant differences between the average ratings of the two types of housing estates.

*“Here, there’s intergenerational living. Teenagers seek a street full of activity and entertainment, middle-aged adults are looking for easier accessibility and functionality, while the elderly, rightfully so, seek peace and quiet.” (Male, 45 years, Maribor, socialist housing estate)*

#### Inter-neighborly relations

There were also no statistically significant differences between the average ratings of the two types of housing estates regarding inter-neighborly relations (Table 6). Other than this, no statement referring to this key aspect was evaluated with an average score higher than 4. The statement “Residents of the housing estate are good neighbors (willing to help, friendly, etc.)” was rated the highest. It was evaluated higher by residents of post-socialist housing estates (3.95) than residents of socialist ones

(3.81). Residents of newer housing estates also rated the following statements higher: "Residents of the housing estate share the same values" and "Residents of the housing estate share a similar socioeconomic status". Residents of older housing estates rated two statements higher: "Residents of the housing estate are connected with each other" and "Social diversity in the housing estate encourages contacts among residents". In post-socialist housing estates, the latter was also the lowest-rated statement (average score 2.97).

*"The elderly people who came here together in the neighborhood are passing away, and new residents are moving in. Apartments are being rented out for tourism, for renting, or to students. Now there are only foreigners here, and there is no more social interaction."* (Male, 75 years, Maribor, socialist housing estate)

*"I have been living here since day one, for 44 years since I moved here, and I must say that relationships have always been genuine and friendly. You know, lately, people are becoming more closed off."* (Male, 72 years, Maribor, socialist housing estate)

## CONCLUSION

This article explored the quality of life in two distinct forms of housing estates constructed under different sociopolitical and economic systems: a) mass housing complexes built during the socialist era (1945–1990), and b) multifamily apartment complexes constructed during the post-socialist era (1991 and after), coinciding with the transition to a market economy.

While the hypothesis was not entirely supported, the research confirmed predictions that post-socialist housing estates offer superior housing standards and a better quality of the residential environment in specific aspects. Consequently, living in these estates is more appealing. The multifamily apartment buildings in these housing estates are well-maintained and boast a modern design, offering spacious and comfortable apartments. The outdoor built environment is characterized by cleanliness, safety, and tranquility, featuring low traffic density, ample parking spaces, well-structured walking and bicycle paths, and sidewalks. All of these elements collectively satisfy the needs, desires, and demands of residents for high-quality, contemporary living.

However, the research also uncovered significant shortcomings in post-socialist housing estates. Notably, they lack essential services and green spaces, which were distinctive features of socialist housing estates. This disparity reflects the differing sociopolitical and economic systems in which these two types of housing estates were developed. Although socialist-era housing estates featured massive, utilitarian high-rise buildings and basic prefabricated apartments, they emphasized meeting residents' daily needs. These estates were situated on the outskirts of cities, primarily near industrial complexes, with a pronounced focus on providing housing and comprehensive infrastructure and services for workers. Additionally, they incorporated extensive green areas, not only to promote healthier living environments and enhance the aesthetic appeal but also to facilitate social interactions, a key priority during the socialist era.

Despite their self-sufficiency and peripheral locations, socialist housing estates maintained excellent connectivity with city centers through robust public transportation networks—a stark contrast to the weaknesses observed in post-socialist housing estates. The shift in the sociopolitical and economic system saw private developers and financial capital emerge as the primary driving forces behind housing construction. While construction quality improved, offering more spacious apartments, shorter multifamily buildings, and a modern appearance, the focus on profit led to a reduction in outdoor spaces. Building plots became fully developed, resulting in the near absence or limited use of green areas within post-socialist housing estates. This, in turn, hindered social interactions among residents, a significant concern in contemporary, highly individualistic societies.

Post-socialist housing estates often consist of individual multifamily apartment buildings with

insufficiently planned social infrastructure and services. Furthermore, public transportation systems were not adapted to accommodate these new developments, even in cases of larger building plots where various developers pursued their visions independently. In such instances, cities should ideally coordinate the planning of common social infrastructure and facilities for the future housing estate, but this frequently does not occur, or it happens to a limited extent (e.g., grocery stores). These shortcomings collectively diminish the overall quality of life in post-socialist housing estates.

To enhance residents' quality of life, cities should adopt a more holistic approach when planning new housing estates. They should allocate a portion of the capital acquired from land sales to housing developers for constructing social infrastructure that caters to the future housing estate's residents. The development of this infrastructure should parallel the construction of housing estates. Additionally, cities should specify the extent of green areas developers should create adjacent to residential buildings or undertake the responsibility of establishing green spaces themselves. To elevate the quality of life in socialist housing estates, cities should embark on comprehensive regeneration efforts, prioritizing the refurbishment of residential buildings and the outdoor environment. Cities should also ensure that essential services remain accessible and green areas are adequately maintained.

However, ensuring a high quality of life for residents necessitates a holistic approach encompassing the planning of post-socialist housing estates and the regeneration of socialist housing estates. Future research should thus concentrate on methods to accomplish and implement this objective.

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