

Article

Evaluating Pedestrianized Streets through New Urbanism Principles: A Comparative Study of Istiklal Street (Istanbul) and JBR (Dubai)

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Abstract: Pedestrianized streets have become important components of sustainable urban development due to their ability to enhance walkability, social interaction, accessibility, and quality of life. The principles of New Urbanism provide a framework for evaluating the effectiveness of pedestrian-oriented environments through factors such as connectivity, mixed-use development, transportation accessibility, sustainability, and urban design quality. Istiklal Street in Istanbul and Jumeirah Beach Residence (JBR) in Dubai are two prominent pedestrian-oriented destinations that attract residents and tourists through their diverse activities and urban experiences. Despite their different historical and cultural contexts, both streets aim to create vibrant public environments that support social and economic activities. This research evaluates the performance of both streets according to selected New Urbanism principles through a comparative analysis approach. The study examines walkability, connectivity, mixed-use diversity, housing, urban design quality, transportation systems, sustainability, and quality of life. The findings indicate that both streets successfully promote pedestrian activity and social interaction; however, each demonstrates different strengths. Istiklal Street exhibits stronger cultural identity, historical character, and urban density, while JBR provides superior pedestrian comfort through landscaping, shading, greenery, and street furniture. The study concludes that successful pedestrianized environments require a balance between cultural identity, accessibility, sustainability, and user comfort to achieve long-term urban vitality.

Keywords: New Urbanism, pedestrianization, walkability, urban design, Istiklal Street, JBR, comparative analysis, quality of life.

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1. Introduction

The increasing emphasis on sustainable urban development has encouraged cities worldwide to prioritize pedestrian-oriented environments. Pedestrianized streets contribute to environmental sustainability, public health, social interaction, and economic vitality by reducing dependence on private vehicles and enhancing the quality of urban life. Consequently, many contemporary urban design strategies are guided by the principles of New Urbanism, which promote walkability, connectivity, mixed-use development, accessibility, and human-centered public spaces.

According to [1], public spaces are strongly influenced by urban environmental factors and societal transformations. Their study identifies city image, urban environmental quality, and cultural facilities as important factors that contribute to the success of public spaces. Well-designed pedestrian environments can strengthen social interaction, improve urban vitality, and create a stronger sense of place. While in Silaci and Vitkova's article "Public spaces as the reflection of society and its culture" focuses on the significant changes of special structures, the importance of the role of spaces, also mapping and evaluating the public spaces focusing on the social development and cultural values.

The types of urban spaces are related to the activities of users, some physical barriers can reduce the attractiveness and usability of a space. A clear and defined public space is preferred for activities. The relation between people and space is defined as creation and co-creation of space by people.

The relationship between architecture, culture, and urban form is also essential in understanding the development of successful public spaces. [2] argues that architecture and culture are interconnected concepts, where built environments reflect the values, traditions, and lifestyles of societies. Urban spaces therefore become physical manifestations of cultural identity while simultaneously accommodating contemporary social and economic activities.

[3] emphasize the importance of integrating cultural dimensions into urban design and planning processes. Their research demonstrates that neglecting cultural identity in urban development can lead to social and psychological impacts on communities, whereas culturally responsive design can enhance the quality and vitality of urban environments.

One of the most influential planning approaches promoting pedestrian-oriented development is New Urbanism. The movement emerged as a response to automobile-dependent urban growth and advocates for walkable neighborhoods, mixed land use, interconnected street networks, accessible public transportation, and high-quality public spaces. New Urbanism aims to create sustainable and human-scaled environments that improve social interaction and quality of life.

This study focuses on two internationally recognized pedestrian-oriented destinations: Istiklal Street in Istanbul, Türkiye, and Jumeirah Beach Residence (JBR) in Dubai, United Arab Emirates. Although both locations function as major public and commercial destinations, they represent different urban contexts and development approaches. Istiklal Street is a historically significant pedestrian avenue characterized by its rich cultural heritage, mixed-use functions, and architectural diversity developed over centuries. In contrast, JBR represents a contemporary waterfront development designed according to modern planning principles and tourism-oriented urban strategies.

The comparison between these two urban environments provides an opportunity to evaluate how different historical, cultural, and planning contexts influence the implementation of New Urbanism principles. While Istiklal Street demonstrates the integration of heritage, culture, and urban activity within a historic setting, JBR illustrates the application of contemporary urban design strategies focused on pedestrian comfort, accessibility, leisure, and tourism.

Therefore, this research aims to evaluate and compare Istiklal Street and JBR based on selected New Urbanism principles, including walkability, connectivity, mixed-use development, mixed housing, quality architecture and urban design, transportation, sustainability, and quality of life. Through this comparative analysis, the study seeks to identify the strengths and limitations of each case study and explore how pedestrian-oriented urban environments can contribute to creating vibrant, sustainable, and socially inclusive public spaces.

This paper is based on investigating the extent of Istiklal Street and JBR satisfy the principles of New Urbanism and contribute to the development of successful pedestrian-oriented urban environments? The aim of this paper is to :

- Examine the characteristics of Istiklal Street and JBR as pedestrian-oriented public spaces and evaluating them according to selected New Urbanism principles
- Assess how historical and contemporary urban contexts influence pedestrian experience and urban quality.

- Provide recommendations for improving future pedestrian-oriented developments based on the findings of the comparative analysis.

2. Case Study

Pedestrian-oriented public spaces are crucial in modern urban development, enhancing walkability, social interaction, economic activity, and sustainability. This analysis focuses on two key pedestrian areas, Istiklal Street in Istanbul and Jumeirah Beach Residence in Dubai, to assess the application of New Urbanism principles in various urban settings.

The selection of these case studies is based on their significance as major public destinations that attract both local residents and international visitors. Although both streets function as pedestrian-oriented environments, they differ considerably in their historical background, urban form, architectural character, and development approach. Istiklal Street represents a historic urban corridor that evolved over centuries and reflects the cultural and architectural heritage of Istanbul [4], [5]. In contrast, JBR is a contemporary mixed-use waterfront development designed according to modern urban planning principles and tourism-oriented strategies.

The comparison of two streets illustrates the implementation of New Urbanism principles across varying cultural and geographical contexts. The study assesses both cases based on crucial New Urbanism criteria, such as walkability, connectivity, mixed-use development, architectural quality, increased density, transportation access, sustainability, and quality of life.

2.3. Comparison Study Between Istiklal Street & Jbr- New Urbanism Principles.

Istanbul's major arterial street, Istiklal Street, stretches 1.3 km through the center of the European side of the city. It runs from Taksim Square all the way down to Tunel, which is near Galata Tower and is one of the world's oldest metro stations. The street is known for having gathering places, leisure activities, and the most tourists attraction street in Istanbul.

JBR is a residential neighborhood yet a tourist destination in Dubai, a 1.7 km boulevard. It offers various activities, and entertainment facilities. Its known for being a shopping galore with many retails, boutiques, international brands, and a variety of outdoor pop-ups.

Both streets are known for being tourist attractions for their diversity, and activities that enhances the social interaction between locals and foreigners.

Table 2. Comparison between La-Rambla & JBR streets.

	STREETS	
	ISTIKLAL AVENUE	JBR
1. Walkability	Istiklal Street is pedestrian-friendly due to the restriction on car access and closely spaced buildings, which enhance visual connectivity. However, the street lacks tree cover and essential street furniture like benches and cycling racks.  Figure 1	JBR is a car-free, pedestrian-friendly street designed for jogging and walking, featuring rubber pavement, stone walkways, palm trees, and street furniture. It visually connects pedestrians to outdoor seating areas of nearby cafes and restaurants.  Figure 2
Result	Both are dedicated for pedestrian use and cars are not allowed to enter. Visual connection between pedestrians and activities is achieved in both avenues. Unlike Istiklal, JBR is a tree-lined walkway with street furniture along the path.	
2. Connectivity	Although Istiklal has an organic – grid arrangement, it is a clear straight path. The public realm activation and the pedestrian-priority network make walking through the street enjoyable & entertaining.  Figure 3	JBR is designed according to a grid system, which makes it a clear path and ease walking. The high-quality pedestrian street provides exciting & pleasure for pedestrians in the area.  Figure 4
Result	Both streets aimed to create a high-quality pedestrian street by providing the means to pleasure and entertain both local and international people.	

3. Mixed-Use & Diversity	Istiklal is a mixes-use street with several facilities -commercial (international shops brands), rental offices, upper floor apartments, educational facilities, etc.- Those facilities are used by locals, international, & tourists from all ages, races, and cultures.  Figure 5	JBR is also a mixes-use avenue with various commercial (international shops brands), offices towers, apartment towers, & entertaining facilities. Locals, visitors from abroad, and people of various ages, ethnicities, and cultures use such amenities.  Figure 6
Result	Both avenues are accommodating various facilities and are mixed-use spaces attracting diverse of locals, foreigners, and tourists. Yet, Istiklal and all of its facilities can be used by all classes of people, while JBR's facilities is used more by high-class people.	
4. Mixed Housing	• There are several renting apartments / motels in Istiklal with different views -on Istiklal, on a courtyard, on a side street, etc.- and the prices vary depending on the number of rooms, view, & number of guests. • The prices range between 200 – 600 AED/night for 2-4 adults+1-2 child.  Figure 7	• JBR have a variety of renting and sales apartments, villas, penthouse, etc. the view of each vary from the beach and marina to the street, therefore the prices will be different depending on the number of rooms & the view. • The prices range between 70,000 - 110,000 AED/year for renting a studio. And 45,000 – 200,000 AED/year for a villa  Figure 8
Result	Istiklal and JBR have various types of houses with different views and prices. Istiklal accommodation facilities is suitable for all people and classes, while on the other hand JBR's accommodations can be afforded by the higher-class society.	

5. Quality Architecture & Urban Design



Figure 9

Imageability: Taksim square is an open space at the beginning of Istiklal, then turns into an enclosed space with buildings along the street, and lately they have added small trees along the street in some zones to indicate the straight path more.

Legibility: The pedestrian path of Istiklal street is straight and clear due to the organization pattern of the buildings.

Enclosure: The tight connection between buildings and their height -mid-rise- along the street is a boundary like creating an enclosed space (street).

Transparency: Almost all of the buildings in Istiklal have huge transparent windows and doors, with enhance the visibility, transparency, and the relationship between the pedestrian outside the building to understand and see what's going on inside the building & vice versa.

Linkage: Istiklal street has specific building tones and materials (stone) that provide a physical and visual connection. Moreover, the continuity of windows and balconies enhances this connection.



Figure 10

Imageability: Jumeirah beach is a totally open space, with trees and water bodies distributed along the walkway. Since, JBR is designed according to a straight path and grid system it provides a clear pedestrian path for users.

Legibility: Jumeirah beach is a totally open space, with trees and water bodies distributed along the walkway. Since, JBR is designed according to a straight path and grid system it provides a clear pedestrian path for users.

Enclosure: JBR is not as enclosed as Istiklal because of the low-rise building along the path and the wide walkway.

Transparency: Also, in JBR they have used glass façades, and the cafes & restaurants provided outdoor seating areas, in this way they enhanced the visual connection between the people walking and setting, more over to see what kind of activity is within the buildings.

Linkage: JBR used the same materials for all buildings with the concrete sandy tones. Even all buildings along the street have a continuous façade and huge rectangular openings, to strengthen the connectivity between the buildings, the street, and the spaces around.

	 Figure 11 Complexity: Since the street have been through variety of eras and styles, so the elements differ from one building to the other -Doric columns, semi-circular arches, lintels, etc.- Yet those different physical elements are in harmony. Coherence: Many street reach Istiklal, either the main roads, the side streets, or underground transport systems. So, it's an easily accessible avenue. And all amenities are within 10-15 min. walking distance.	 Figure 12 Complexity: There are not as many elements as in Istiklal street, since its considered to be a newly developed area. But they added wooden shading elements on some of the buildings. Coherence: Even JBR can be easily reached by car through many bridges connecting 2 different areas together. As for the pedestrian accessibility, it can also be reached through the metro station at the area. Also, all the facilities are within 5-10 min. walking distance.
Result	Imageability: Istiklal starts as an open space then becomes an enclosed, while JBR is an open welcoming space. But both streets have clear paths. Legibility: Both streets are visually clear, Istiklal by the building's continuity, while JBR by the trees and water bodies that are lacking in Istiklal. Enclosure: Istiklal is an enclosure space bounded by buildings, whereas JBR is an open space with the waterfront. Transparency: The visual connection between pedestrian and the building's activities are achieved in both streets. Linkage: Many buildings in Istiklal were built using foreign materials, but some buildings were renovated using local materials. While in JBR they used the local material to reflect their culture. Thus, both streets enhanced the connectivity between buildings and street and spaces around by the color tones of the buildings. Complexity: The visual connection between pedestrian and the building's activities are achieved in both streets. Coherence: Both streets are easily accessible, and all facilities are within 5-15 min. walking distance.	
6. Increased Density	There is a huge density of buildings in Istiklal street, each with a different use, shop, and service. This	JBR is less dense in buildings than Istiklal street because the buildings in this street are low-rise buildings. But it

	will provide an entertaining place for people to work, live, and visit. It will also increase the use of resources and services within the street.  Figure 13	created a welcoming pleasant place for people with various facilities.  Figure 14
Result	Istiklal as well as JBR hosts different shops, services, and facilities to entertain people. Istiklal is a crowded building unlike JBR, that because the buildings are higher than the ones in JBR and directly attached to each other.	
7. Smart Transportation	Istanbul has a variety of transport systems that reaches Istiklal, the fastest is the underground metro. And within the street there are 2 transport ways, one is the tram line but might not be efficient when the street is crowded, the other one is the old Tunnel at the end of Istiklal.  Figure 15	To reach JBR, first take Dubai metro to DMCC station, then taking the tram line to get to JBR-1, JBR-2, and other areas on the same side of JBR.  Figure 16
Result	Both avenues have direct access to public transportation, that can be easily reached through.	
8. Sustainability	By pedestrianizing the avenue, they encouraged walkability and reduced the use of vehicles. But they have replaced all the local facilities to international ones.	They created a space can be used by both pedestrians and vehicles, still they are encouraging walkability and cycling by providing cycling tracks. But, similar to Istiklal they are promoting

	 Figure 17	international brands rather than local.  Figure 18
Result	Both streets were designed to motivate walkability and less cars, but JBR has dedicated a cycling track unlike Istiklal. Moreover, both encouraged the replacement of local brand shops with international brands.	
9. Quality of Life	Istiklal can be considered as a successful pedestrian street that enhances and encourages walkability by having all the needed facilities easily accessed within a 1.7 km street. With providing transportation to reach the area made it possible for people to depend on the public transportation more.	JBR is also an outstanding area combined both pedestrian walkway and vehicle road, still it increased the walkability providing the needed services within the reach of 10 min. walking. They also provided a transport system making it easy and fast for users to reach.
Result	Both Istiklal and JBR are pedestrian friendly streets where people can live, work, and entertain. Istiklal is lacking greenery and street furniture, in contrary with JBR.	

3. Conclusion

To conclude,

- Both Istiklal Street and JBR successfully promote pedestrian-oriented urban environments. Walkability and accessibility are enhanced through the concentration of mixed-use facilities within walking distance.
- JBR provides superior pedestrian comfort through landscaping, shading, greenery, and street furniture unlike Istiklal street.
- Public transportation systems improve connectivity and reduce dependence on private vehicles.
- Istiklal Street offers stronger historical character and cultural identity than JBR.
- Both streets demonstrate key New Urbanism principles, including mixed-use development, connectivity, and public realm activation.
- The comparison highlights the importance of balancing heritage preservation with contemporary urban needs. Additional seating, cycling infrastructure, and climate-responsive design strategies could improve the pedestrian experience in Istiklal Street.

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