Athenian's Preferences toward Public Space Redistribution

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Abstract

The practical design and equitable allocation of public space play a critical role in addressing contemporary urban challenges, including sustainability, mobility, and quality of life. This study explores the preferences of Athenian residents concerning public space redistribution, drawing on data collected from a comprehensive stated-preference survey involving 178 participants. The analysis focuses on individuals' mobility profiles, attitudes toward pedestrianisation, and perceptions of urban safety and convenience.

Findings reveal substantial support for both partial and complete pedestrianisation initiatives, with 66.7% of respondents expressing a preference for complete pedestrianisation where safety improvements are evident. The study employs advanced statistical modelling techniques, including logistic and multinomial regression, to further examine these preferences and evaluate the potential impacts of various pedestrianisation scenarios. These models incorporate demographic and geographic heterogeneity, enabling the simulation of realistic policy outcomes and aiding scenario-based urban planning.

The results underscore the significance of inclusive and context-sensitive urban planning that addresses residents' safety concerns and promotes sustainable mobility options. Policy recommendations highlight the need to prioritise pedestrian infrastructure, engage the public in planning processes, and communicate the tangible benefits of such interventions. Overall, this research contributes valuable insights to the discourse on sustainable urban development and supports data-driven policymaking for enhancing walkability and public space usability in metropolitan Athens.

Keywords: *Public space redistribution, Urban mobility, Pedestrianisation, Sustainable urban development, Policymaking.*

1. Introduction

In recent years, the concept of pedestrianisation has gained increasing importance in urban planning, particularly within large cities facing critical challenges related to congestion, pollution, and unsustainable transportation practices. As urban areas strive to adapt to the principles of sustainable development, the reallocation of public space emerges as a strategic priority, aimed at creating safer, more accessible, and environmentally friendly environments for pedestrians. However, the success of such interventions is contingent on public acceptance, which is shaped by personal habits, perceptions of urban change, and daily mobility experiences.

The reallocation of public space from motorised traffic to pedestrians has increasingly emerged as a central strategy in sustainable urban development. Contemporary literature highlights the

multidimensional value of pedestrianisation projects, particularly their capacity to enhance environmental quality, social interaction, public health, and economic activity (Gehl, 2011; Bertolini, 2005).

Public space is recognised as a regulatory factor of urban mobility. Its form, function, and accessibility influence how people move, interact, and experience their surroundings (Banister, 2008). Enhancing the walkability of urban areas not only improves environmental performance but also contributes to equitable and inclusive urban living (Litman, 2021).

Walkability itself is defined by several key dimensions: physical accessibility, safety, aesthetics, and connectivity. According to the World Health Organization and urban researchers, indicators such as sidewalk width and continuity, intersection density, green coverage, and pedestrian infrastructure quality are critical to assessing walkability (WHO, 2011; Kaparias, 2012). These parameters reflect the capacity of the urban environment to support non-motorised transport and human-scale design.

Pedestrianisation is often associated with increased use of public transport, as improved walking infrastructure supports better access to transit nodes (Cervero & Kockelman, 1997). Case studies from cities like Copenhagen, Paris, and Barcelona demonstrate the positive outcomes of converting car-dominated streets into pedestrian-friendly zones, including reductions in traffic congestion, increased local business activity, and enhanced public realm usage (Gehl, 2011; Cybriwsky, 1999).

In the context of Athens, challenges such as narrow sidewalks, illegal parking, and fragmented urban design have historically hindered efforts to promote walkability. While initiatives like the pedestrianisation of Dionysiou Areopagitou Street and parts of Ermou have been successful, broader acceptance of pedestrianisation remains contested. Public scepticism is often linked to concerns about accessibility, disruption to vehicle circulation, and inadequate planning transparency.

The limited presence of extensive empirical research on Greek urban settings further underlines the importance of locally grounded studies. Previous interventions, such as the "Great Walk of Athens", sparked significant public debate, revealing the need for participatory planning and rigorous impact assessment (Γιαννόπουλος, 2005).

Finally, methodological approaches such as stated preference surveys and regression-based modelling are widely used to capture public attitudes and predict behavioural responses to urban interventions (Kroes & Sheldon, 1986). These methods offer a flexible and cost-effective means of testing policy alternatives in hypothetical scenarios, thereby informing urban design decisions before implementation.

Athens presents a particularly complex urban landscape, marked by intense car dependency, inadequate pedestrian infrastructure, and limited quality public spaces. Although there have been notable pedestrianisation efforts, such as the transformation of Dionysiou Areopagitou and parts of Ermou Street, many areas of the city continue to struggle with illegal parking, narrow sidewalks, and traffic-dominated streets. The public's response to such interventions varies, often influenced by concerns about accessibility, safety, and disruption to daily routines.

This study investigates the preferences of Athenian residents regarding the redistribution of public space from vehicles to pedestrians. The research focuses on the acceptance or resistance to pedestrianisation initiatives based on a range of demographic, geographic, and socio-economic factors. Using a stated preference survey involving 178 residents of Athens and its suburbs, the study presents hypothetical scenarios that vary walking comfort, travel time, safety, and access constraints. Respondents were asked to choose among three options in each scenario: full pedestrianisation, partial pedestrianisation, or no change.

By analysing the collected data through logistic and multinomial regression models, the study aims to identify the variables that significantly affect support for pedestrianisation. These include both objective conditions, such as time and infrastructure, and subjective perceptions related to environmental quality and walkability. Through comparative model analysis, the paper offers empirically grounded insights to guide urban policy toward more human-centred, sustainable cityscapes.

2. Paper Outline

The paper titled “Athenian Preferences Toward Public Space Redistribution: Insights from a Preference Survey and Modelling Approaches” begins with an Introduction that sets the stage by discussing the growing pressures faced by urban environments, particularly in relation to sustainability, mobility, and quality of life. It underscores the importance of public space allocation as a strategic urban planning tool, highlighting the challenges and opportunities of pedestrianisation. Athens is introduced as a relevant case study due to its dense urban fabric and evolving transport dynamics. The section closes by outlining the paper's objective: to analyse public preferences regarding space redistribution using empirical data and advanced modelling methods, with the goal of informing urban policy and sustainable mobility strategies.

The Main Text begins with a section on Data Collection, describing the design and administration of a structured preference survey. The survey targeted 178 residents across various neighbourhoods in Athens and included questions about demographic characteristics, daily mobility behaviour, and attitudes toward pedestrianisation. Participants were also presented with scenario-based choices to simulate decision-making under different urban planning proposals (captured by g5 and g6 variables).

In the Descriptive Statistics subsection, the paper presents key characteristics of the respondent sample. It details age and gender distributions, dominant modes of transport, and general attitudes toward public space changes. The findings reveal widespread concern about safety and accessibility, alongside a strong preference for pedestrianized areas. Notably, younger respondents and those with active mobility habits showed greater openness to space redistribution.

The Methodology subsection outlines the modelling approach. Both logistic and multinomial regression models are applied to examine the influence of demographic, environmental, and behavioural variables on respondents' preferences. The modelling process includes steps to clean the data, reduce multicollinearity, and optimise variable selection using statistical criteria such as the Akaike Information Criterion (AIC), McFadden's Pseudo R-squared, and the Area Under the ROC Curve (AUC). Several reduced-variable models are developed to compare performance and interpretability, with attention to the inclusion of significant predictors and model parsimony.

In the Results section, the paper presents the outcomes of the best-performing models. It highlights key variables that significantly influence support for pedestrianisation, such as perceived travel time, road quality, environmental concerns, and income levels. The analysis shows that respondents generally favour full pedestrianisation when it enhances safety and comfort. Demographic insights further reveal that younger individuals and those without private vehicles are more receptive to changes in public space allocation. The models demonstrate high predictive validity, with some achieving AUC values above 0.85 and robust McFadden R^2 scores, affirming the strength of the chosen predictors.

The Conclusions drawn together the key insights of the research. The paper reaffirms that public preferences must be central to any urban planning effort, particularly when implementing projects like pedestrianisation. It offers actionable recommendations for policy-makers: prioritise safety and accessibility, design interventions based on local demographics and communicate the benefits of sustainable transport options. By grounding these recommendations in empirical evidence, the study

contributes to growing literature on inclusive, data-driven urban design. Lastly, the paper suggests directions for future research, including longitudinal studies and the incorporation of behavioural experiments to validate stated preferences.

3. Main Text

3.1 Data Collection

To understand public attitudes toward pedestrianisation in Athens, we developed and distributed a structured online questionnaire targeting adult residents (18+) of the city and its surrounding suburbs. The survey was conducted using Google Forms and gathered responses from a total of 178 participants, a sample size considered sufficient for behavioural studies of this nature. The goal of the questionnaire was to capture a wide range of factors influencing acceptance or resistance to public space redistribution, particularly in the form of pedestrian-only interventions.

The questionnaire was carefully designed and divided into four key sections. The first section collected information on the participants' mobility profile, including their primary mode of transport, frequency of travel, and common destinations. This section aims to establish a baseline understanding of existing travel behaviour.

The second section explored perceptions of the current state of pedestrian infrastructure and public space in Athens. It included questions regarding safety, comfort, accessibility, and personal experiences with walking in the city. An explanatory introduction clarified the difference between full and partial pedestrianisation to ensure consistent interpretation across respondents.

The third section presented eight hypothetical scenarios, based on the stated preference method. Each scenario asked participants to choose among three alternatives: (a) many pedestrianizations, (b) few pedestrianizations, and (c) no change. These scenarios varied according to factors such as additional or reduced travel time, improvement or decline in walking comfort and safety, and the ease or difficulty of performing daily activities (e.g., parking, deliveries). This design allowed for the simulation of realistic trade-offs that citizens might face if urban redesign policies were implemented.

Finally, the fourth section collected demographic and socio-economic data, including age, gender, income level, education, occupation, vehicle ownership, and household composition. These variables were essential for modelling purposes, enabling the identification of trends and correlations between personal characteristics and preferences for public space allocation.

In addition to gathering quantitative data, the survey's structure allowed for a nuanced view of respondent priorities and the perceived impact of pedestrianisation on urban life. The combination of behavioural, perceptual, and socio-demographic data provided a comprehensive dataset for subsequent statistical analysis.

3.2 Descriptive Statistics

Public sentiment toward pedestrianisation was notably positive. A clear majority, 66.7% of participants, expressed support for full pedestrianisation in at least some areas of the city, primarily motivated by anticipated improvements in safety and environmental quality (Figure 1). This support was particularly strong among younger respondents, especially those under the age of 35, who also indicated a higher willingness to switch to walking or cycling if infrastructure were upgraded to meet their needs.

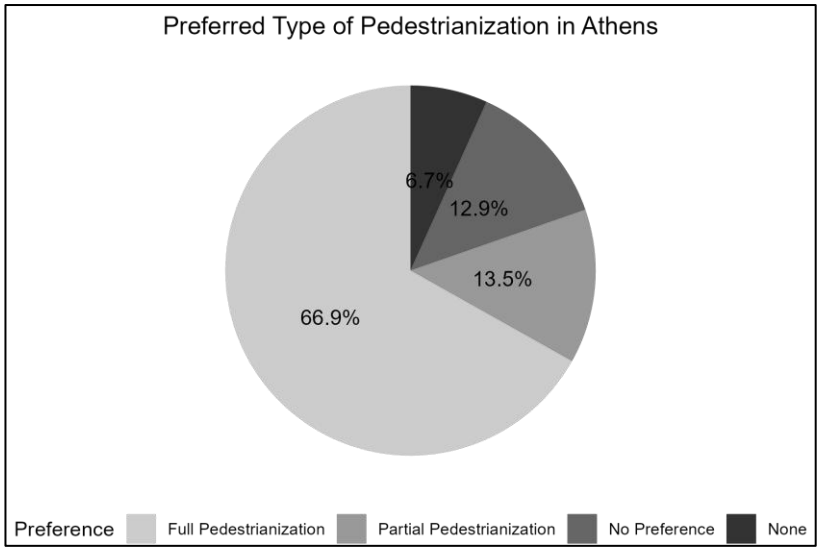

Figure 1: *Preference of Pedestrianisation in Athens*

Despite this openness, many participants highlighted substantial barriers to embracing active transport. Chief among these were the perceived inadequacy of pedestrian and cycling infrastructure and concerns about personal safety while navigating urban environments. These findings underscore the need for targeted improvements in urban design to encourage broader adoption of sustainable mobility options.

A detailed analysis of the survey responses revealed several insightful demographic and behavioural patterns among Athenian residents. From a demographic perspective, the sample was composed predominantly of female respondents (approximately 66%) (Figure 2), with the majority aged between 25 and 35 years (Figure 3). Education levels were relatively high (Figure 3), with more than 70% of respondents having completed tertiary or postgraduate education. Income levels varied, with a significant portion (nearly 60%) reporting annual personal income below €15,000, indicating economic diversity within the sample (Figure 4). Professionally, most participants were employed in the private sector, followed by self-employed individuals, students, and public employees (Figure 5).

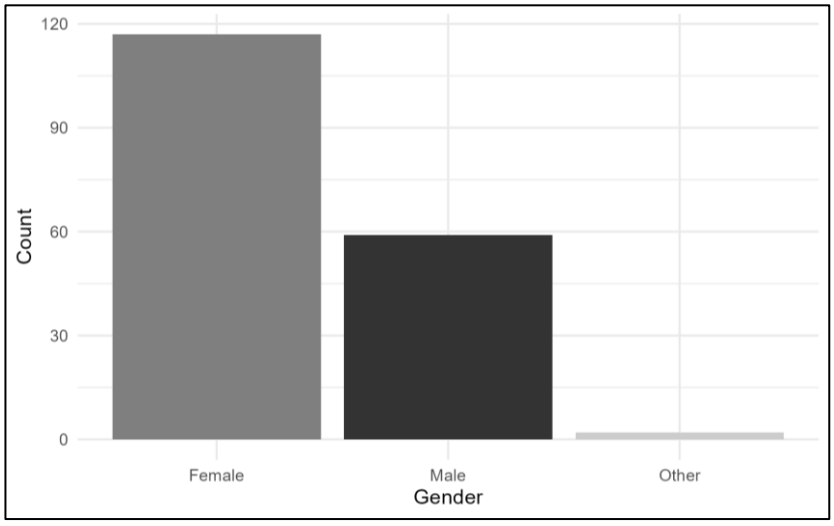

Figure 2: *Gender Distribution*

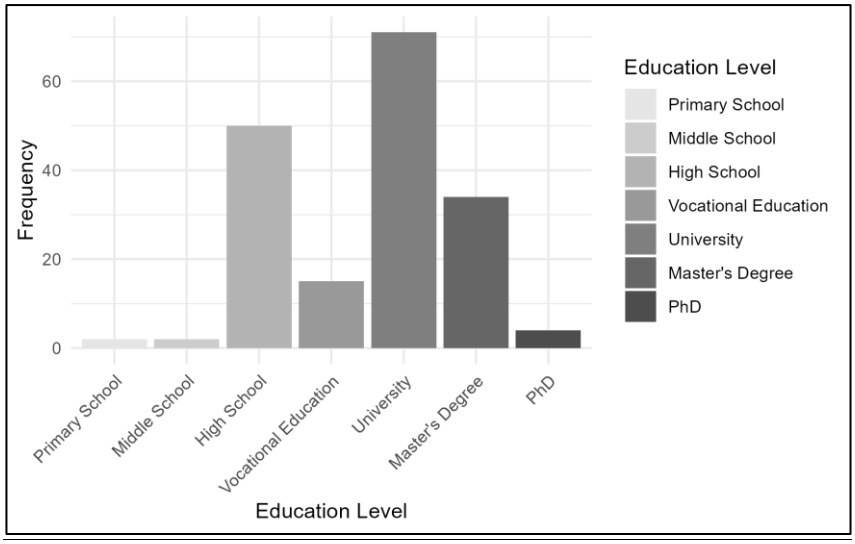

Figure 3: *Education Level Distribution*

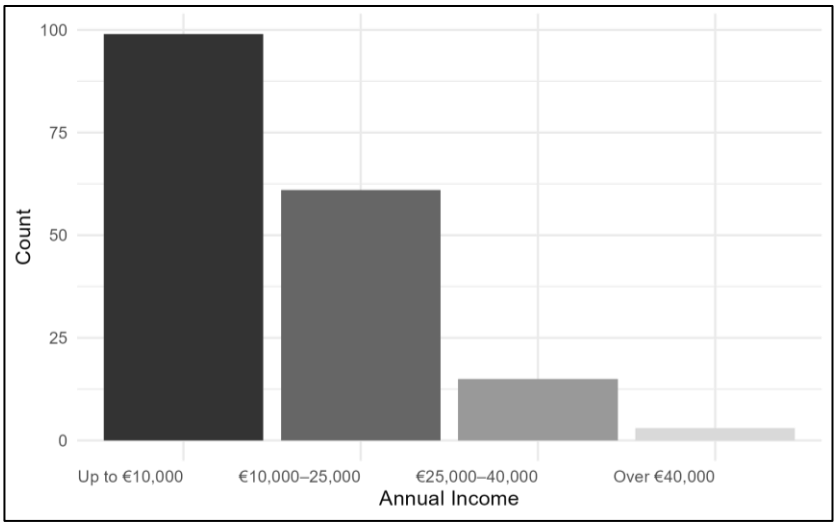

Figure 4: *Participant Distribution by Annual Income*

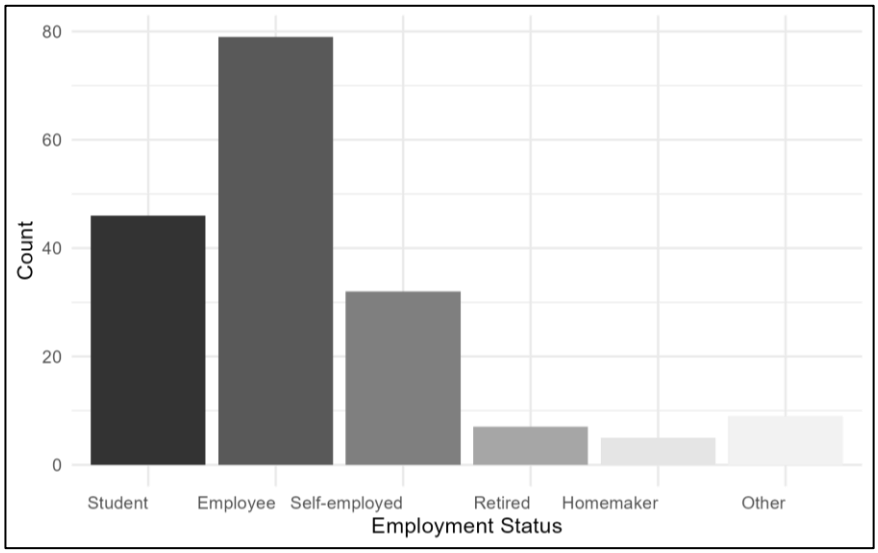

Figure 5: *Employment Status Distribution*

In terms of household characteristics, a substantial share of respondents lived in households of 2–4 members, with over a quarter cohabiting with children or elderly family members. Car ownership was common, with about two-thirds of participants reporting access to a private vehicle, while a smaller share (approximately 20%) also owned bicycles or electric scooters.

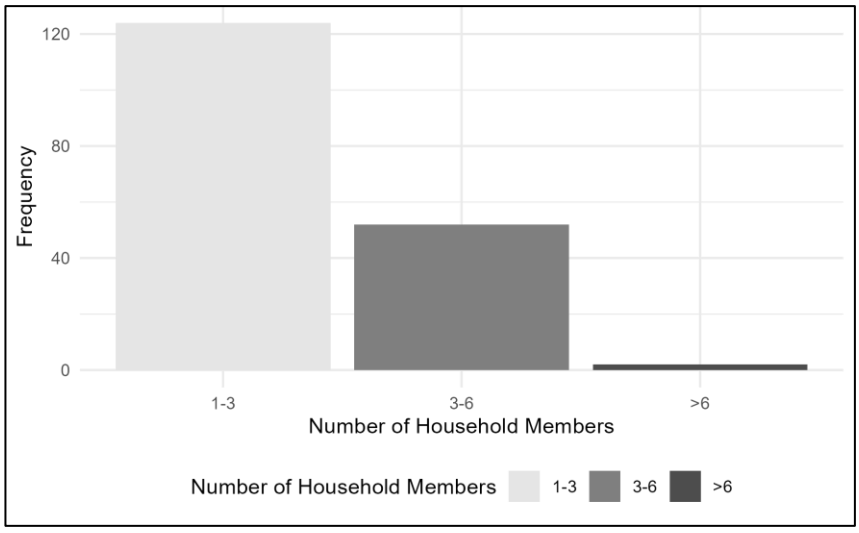

Figure 6: *Household Size Distribution*

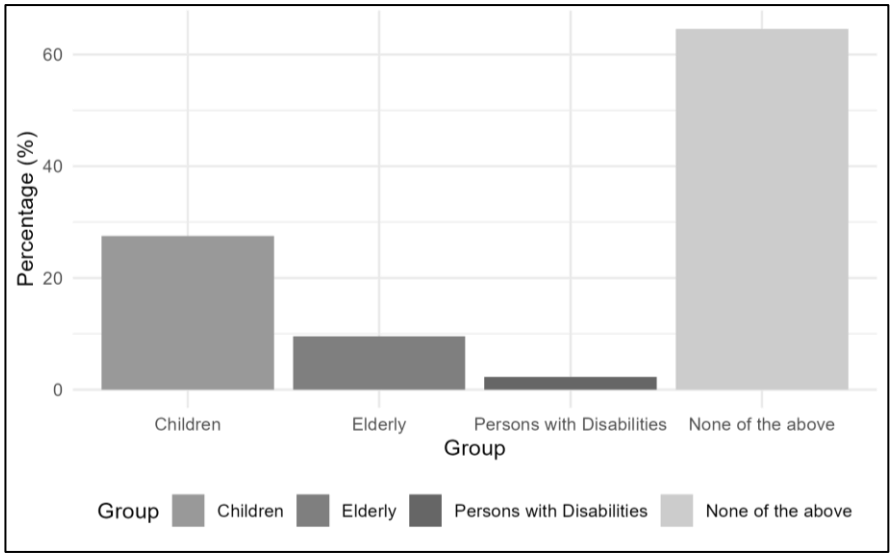

Figure 7: *Do You Live With Any of the Special Care Groups*

Mobility habits showed a heavy reliance on private vehicles for daily transportation, particularly for commuting purposes. Nevertheless, a notable portion of respondents (approximately 30%) reported frequent use of public transportation, and a smaller but significant group indicated walking as their primary mode of travel, especially for short distances and leisure (Figure 8).

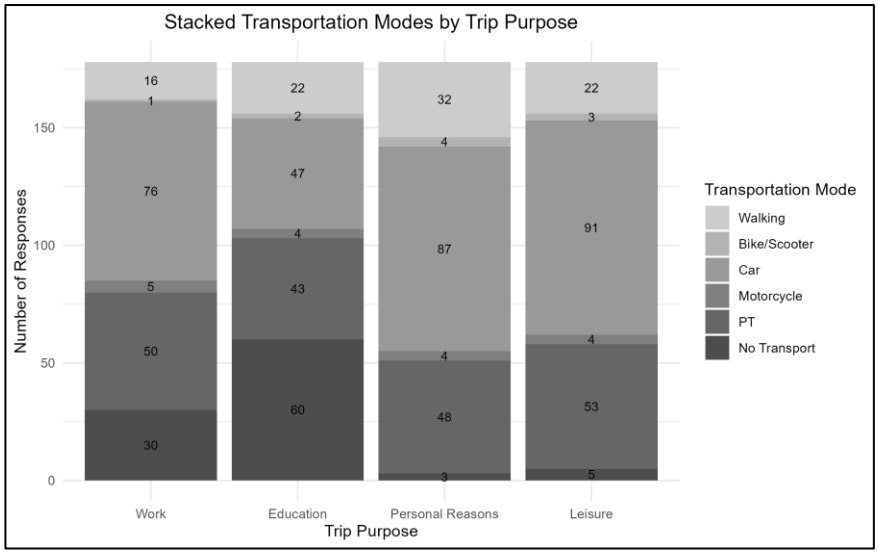

Figure 8: *Stacked Transportation Modes by Trip Purpose*

When asked about the presence and quality of pedestrian infrastructure in their neighbourhoods, most respondents expressed dissatisfaction, citing narrow sidewalks, poor maintenance, and a general lack of safety, especially at night. Approximately 69% stated that no significant pedestrianisation projects had occurred in their area in the past five years, underscoring the lack of visibility and implementation of such interventions (Figure 9).

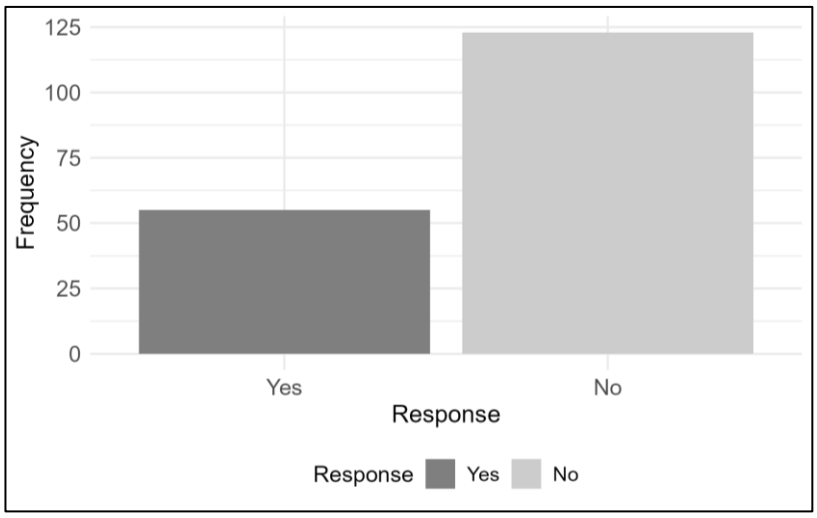

Figure 9: *Have Pedestrian Projects Been Implemented in Your Area?*

Support for pedestrianisation was strong, with two-thirds of the participants (62.9%), (Figure 10) favouring full pedestrianisation under appropriate conditions, particularly if safety and comfort were improved. Preferences were especially strong among younger adults and those already using active modes of transport. Respondents were also more likely to support pedestrianization if it did not significantly increase travel time or inconvenience daily tasks, such as shopping or childcare.

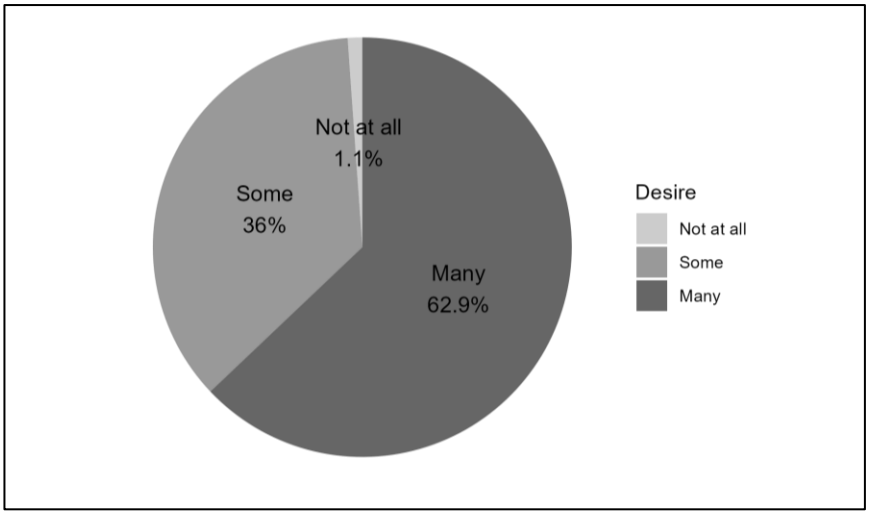

Figure 10: *Desire of Pedestrianization in Athens*

The descriptive statistics indicated a latent demand for improved walkability and public space in Athens. While the dependency on private cars remains high, there is clear support for policies that make walking safer and more convenient, particularly among specific demographic groups. These trends provide a critical foundation for the modelling analysis that follows.

3.3 Methodology

To evaluate the factors that influence public acceptance of pedestrianisation policies, we employed a robust statistical modelling framework grounded in both logistic regression (for binary outcome variables) and multinomial logistic regression (for multi-choice outcomes). These models allowed us to quantify the probability that a respondent would support a given level of pedestrianisation, ranging from no change to partial to full implementation, under varying contextual scenarios.

The dependent variables were constructed based on responses to stated preference scenarios. For the binary logistic regression, we focused on the variable g5_choice, which captured respondents' preferences between few or many pedestrianizations. For multinomial models, we retained the full spectrum of responses, including 'no change' as a base category, to explore nuanced differences in attitudes.

Independent variables included a broad set of predictors: demographic factors (age, gender, education, income), mobility characteristics (mode choice, vehicle ownership), and attitudinal indicators (perceived walkability, safety, comfort, environmental impact, and accessibility). To ensure model validity and reduce overfitting, we conducted stepwise variable selection using both forward and backwards selection algorithms based on the Akaike Information Criterion (AIC).

Collinearity diagnostics were performed using the Variance Inflation Factor (VIF) analysis, with thresholds applied to identify and remove redundant variables. Variables with VIF values exceeding 10 were excluded or restructured. Model robustness was assessed using several performance metrics:

- **Akaike Information Criterion (AIC)** for model parsimony
- **McFadden's Pseudo R-squared** as a measure of model explanatory power
- **Receiver Operating Characteristic (ROC) curves** and **Area Under the Curve (AUC)** for classification performance
- **Hosmer-Lemeshow goodness-of-fit test** to assess calibration

All models were developed in RStudio using the glm() function for logistic models and nnet::multinom() for multinomial regressions. Predictive accuracy and classification thresholds were evaluated using confusion matrices and cross-validation where appropriate.

Finally, several reduced models (with 7 to 14 variables) were created and compared to strike a balance between interpretability and statistical rigour. This multistep methodology enabled us to identify not only which factors most strongly predict public support for pedestrianisation, but also how those factors interact under varying policy scenarios.

4. Results

This study employed a series of reduced logistic regression models to identify the key determinants of public support for pedestrianisation in Athens (G5) and in proximity to respondents' homes (G6). Each model varied in the number of included variables, aiming to balance parsimony with predictive power. Performance was assessed using common metrics such as AIC, AUC, classification accuracy, and McFadden's pseudo-R^2.

G5 Models: Pedestrianisation in Athens

A series of reduced binary logistic regression models were developed to identify factors influencing support for general pedestrianisation policies across Athens (**Table 1**). The most extensive model (Model_14), which included 14 variables, demonstrated the highest explanatory power, with an AUC of 0.826 and McFadden's pseudo-R^2 of 0.266, indicating excellent fit. Key predictors included variables such as *a2_employment*, *a3_personal*, and *a5_time*, reflecting the significance of both practical travel needs and personal motivations for walking. The inclusion of environmental and perceptual indicators—such as *a5_greenspace*, *b1_roads*, *b1_speed*, and *b2_health*—further highlighted the critical role of perceived urban quality and accessibility in shaping support.

As models became more parsimonious, performance remained strong. For example, Model_10, with only 10 variables, retained a high AUC of 0.816 and accuracy of 79.2%, while preserving interpretive clarity. This model emphasized time efficiency, road infrastructure, and health perceptions as dominant influences. Models_9a and 9b confirmed these findings with slight variations, showing that time-related variables and concerns over parking, weather, and difficulty of movement (e.g., *d10*) are closely tied to public attitudes. Notably, simpler models such as Model_8a and Model_7a, while offering lower pseudo-R^2 values, still performed acceptably, with accuracies above 73%, making them suitable for quick assessments in policy contexts.

Demographic factors, particularly age and employment status, also played a role, although their influence was more pronounced in larger models. Importantly, across all model versions, the combination of mobility behaviour (e.g., relaxation and personal walking preferences) and perceptions of urban quality emerged as consistent and statistically significant predictors. This supports the view that a blend of lifestyle alignment and spatial quality drives pedestrianisation acceptance in Athens.

Table 1: Model Performance Metrics for Predicting General Support for Pedestrianisation in Athens (G5)

	Model										
VARIABLES	model_14	model_13	model_12	model_11	model_10	model_9a	model_9b	model_8a	model_8b	model_7a	model_7b
a2_employment	•	•									
a2_relax			•		•	•	•	•	•		
a3_personal	•	•	•		•	•	•	•	•	•	
a4_employment	•	•		•							
a4_personal	•		•		•	•	•	•	•	•	
a5_time	•		•		•	•	•	•		•	•
a5_weather	•			•							
a5_parking	•	•		•							
a5_cost		•									
a5_comfort	•										
a5_greenspace	•		•		•		•		•		•
b1_speed	•	•	•		•	•	•	•		•	•
b1_roads	•	•	•		•	•	•	•	•	•	•
b2_vechicle			•								
b2_parking			•		•	•				•	•
b2_health	•	•	•		•	•	•	•	•	•	•
b7_cyclist				•							
gender				•							
age	•	•		•							
employment				•							
income		•									
has_car				•							
has_bike				•							
d8			•								
d10			•		•	•	•	•	•		•

Model	Num_Vars	AIC	AUC	Accuracy	Hoslem_p	Pseudo_R2	Resid_Dev	Null_Dev	Dev_Diff	Max_VIF	Sig_Vars
model_14	14	1101.7	0.8260	0.7785	0	0.2661	1071.795	1460.34	388.549	2.2495	13
model_13	13	1148.8	0.8102	0.7852	0	0.2325	1120.829	1460.34	339.515	2.5581	11
model_12a	12	1129.9	0.8224	0.7852	0	0.244	1103.991	1460.34	356.353	1.4707	10
model_11	11	1408.3	0.6627	0.698	0	0.052	1384.351	1460.34	75.9931	1.3218	7
model_10	10	1133.7	0.8158	0.7919	0	0.2387	1111.753	1460.34	348.591	1.3777	10
model_9a	9	1135.7	0.8126	0.7919	0	0.236	1115.727	1460.34	344.617	1.3792	9
model_9b	9	1137.9	0.8100	0.7785	0	0.2344	1117.977	1460.34	342.367	1.3049	9
model_8a	8	1140.1	0.8094	0.7718	0	0.2316	1122.144	1460.34	338.200	1.3044	8
model_8b	8	1149.4	0.8049	0.7987	0	0.2252	1131.435	1460.34	328.909	1.3197	7
model_7a	7	1218.2	0.7861	0.7383	0	0.1768	1202.22	1460.34	258.125	1.3785	7
model_7b	7	1328.1	0.7268	0.7181	0	0.1014	1312.195	1460.34	148.149	1.2893	5

G6 Models: Pedestrianisation Near Home

When evaluating support for pedestrianisation specifically in residential areas (**Table 2**), models became more localised and perception focused. Model_12a achieved the strongest performance, with an AUC of 0.860, an accuracy of 79.2%, and all 12 variables statistically significant. This model confirmed that variables such as *a2_relax*, *b1_weather*, *a5_safety*, *d10*, and *has_bike* are highly influential in predicting support for nearby interventions. The inclusion of *g5_choice* in this model revealed a strong cross-influence between general and local attitudes, suggesting that broader beliefs about pedestrianisation carry over into support for changes in one's immediate environment.

Model_12b, which excluded *g5_choice*, retained a solid AUC of 0.799, illustrating that while the influence of general preference is substantial, localized perceptions alone are sufficient for reliable prediction.

Subsequent models (e.g., 12c and 12d) tested specific perceptual factors such as environmental impacts, accessibility, and perceived difficulty, showing moderate performance with slightly lower pseudo-R^2 and AUC values. Nevertheless, they reinforced the importance of emotional and sensory experiences in shaping attitudes.

More compact models, such as Model_10 (AUC = 0.788) and Model_8a (AUC = 0.844), proved that a concise set of 8–10 well-selected variables could predict local preference with strong reliability. These models emphasized perceptual comfort, ease of movement, and health benefits. Even Model_8c, which explored more behavioural dimensions like enjoyment and environmental quality, retained a respectable AUC of 0.807.

Overall, G6 models consistently showed that safety, accessibility, environmental quality, and comfort are central to public acceptance of pedestrianisation near the home. The strong performance of models with fewer variables suggests that even simple tools, grounded in perceptual data, can effectively guide neighbourhood-level planning. Importantly, these results also show the interconnectedness between personal experience, built environment characteristics, and transport behaviour in shaping public support.

Table 2: Model Performance Metrics for Predicting Support for Localised Pedestrianisation Near Residence (G6)

	Model G6										
VARIABLES	**model_12a**	**model_12b**	**model_12c**	**model_12d**	**model_11**	**model_10**	**model_9a**	**model_9b**	**model_8a**	**model_8b**	**model_8c**
a2_relax	●										
a5_accessibility	●	●			●	●	●	●	●	●	●
a5_env_impacts	●			●	●						
a5_time	●	●		●	●	●	●	●	●	●	●
a5_safety	●	●	●	●	●	●	●	●			●
b1_weather	●	●	●		●	●	●	●	●	●	●
b1_speed		●	●								
b1_barriers			●	●							
b1_roads	●	●								●	●
b2_distance			●	●							
b2_enjoyment				●							
b2_walkways			●								
b2_health	●	●		●	●	●	●	●	●	●	
b4	●	●		●	●	●					
g5_choice	●							●	●		●
income	●	●	●	●	●	●	●	●	●	●	●
d10	●		●		●	●	●		●	●	
d11				●							
has_bike	●	●		●	●	●	●	●	●	●	
has_car			●								

Model	Num_Vars	AIC	AUC	Accuracy	Hoslem_p	Pseudo_R2	Resid_Dev	Null_Dev	Dev_Diff	Max_VIF	Sig_Vars
model_12a	12	1143.037	0.860	0.7919	0	0.3142	1117.037	1628.71	511.669	1.8449	12
model_12b	12	1274.931	0.799	0.7181	0	0.2332	1248.931	1628.71	379.775	1.5904	12
model_12c	13	1333.063	0.781	0.6846	0	0.1987	1305.063	1628.71	323.643	1.8032	9
model_12d	11	1475.512	0.707	0.6711	0	0.1088	1451.512	1628.71	177.194	1.7959	9
model_11	10	1322.001	0.790	0.745	0	0.2018	1300.001	1628.71	328.705	1.6695	9
model_10	9	1320.357	0.789	0.7383	0	0.2016	1300.357	1628.71	328.349	1.5524	9
model_9a	8	1341.653	0.773	0.6913	0	0.1873	1323.653	1628.71	305.053	1.5036	8
model_9b	8	1210.247	0.829	0.7315	0	0.268	1192.247	1628.71	436.459	1.5270	8

model_8a	8	1184.129	0.844	0.7785	0	0.284	1166.129	1628.71	462.577	1.5544	8
model_8b	8	1319.054	0.788	0.7114	0.0086	0.2012	1301.054	1628.71	327.652	1.5192	8
model_8c	8	1264.410	0.807	0.7114	0	0.2347	1246.410	1628.71	382.296	1.5249	6

Overall, the results indicate that support for pedestrianisation—both city-wide and local—is driven by a blend of perceptual (e.g., safety, time, comfort), behavioural (e.g., relaxation or personal walking preferences), and demographic factors. The consistency of certain predictors across both G5 and G6 scenarios demonstrates the robustness of these variables in shaping public acceptance.

5. Conclusions

This study investigated the preferences of Athenian residents regarding the redistribution of public space from vehicles to pedestrians, with a particular focus on support for pedestrianisation in general (G5) and in the area directly surrounding one's residence (G6). Using a robust stated-preference survey and advanced regression modelling techniques, the research identified key demographic, perceptual, and behavioural factors that influence public acceptance of pedestrianisation initiatives.

The findings reveal that pedestrianisation is widely supported when framed around improvements in safety, accessibility, environmental quality, and comfort. A strong majority of participants expressed willingness to support full pedestrianisation, particularly when it leads to enhanced walking conditions and does not significantly disrupt their ability to perform daily activities. The models demonstrated high predictive validity, with AUC values exceeding 0.85 in the most comprehensive specifications and classification accuracy reaching over 79%. This confirms that public opinion on pedestrianisation can be reliably estimated using a well-selected set of behavioural, perceptual, and demographic variables.

In both G5 and G6 models, variables such as perceived time efficiency (*a5_time*), environmental impact (*a5_env_impacts*), road and walking infrastructure (*b1_roads*, *a5_accessibility*), and health considerations (*b2_health*) consistently emerged as significant. These results suggest that support for pedestrianisation is not only driven by socio-economic factors but is heavily influenced by how residents experience and evaluate their daily mobility environment. Importantly, the inclusion of general preference (G5) in the localized models (G6) further reinforces the interconnection between overall urban attitudes and immediate neighbourhood-level acceptance.

The policy implications of these results are clear: urban planning strategies aimed at reallocating public space should prioritise pedestrian safety and comfort, actively reduce perceived mobility barriers, and enhance environmental and social value in public realms. Public engagement should not only inform but also shape intervention design, ensuring that planning processes reflect local needs and foster a sense of shared ownership over urban transformation.

This research contributes valuable empirical evidence to the field of sustainable urban mobility and offers practical tools for data-informed policymaking in Athens and similar metropolitan contexts. Future research should consider longitudinal studies to track evolving attitudes post-implementation, and experimental interventions to assess behavioural responses in real-world settings. By grounding planning in public preference data and behavioural insight, cities can build more resilient, inclusive, and human-centred urban environments.

Conflicts of Interest: The authors declare no conflict of interest.

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