Exploring the Influencing Factors of Active Commuting Choices for Work-Related Trips: The Case of Athens

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Abstract

Urban centers worldwide are facing escalating challenges due to motorized road transport, creating an urgent need to promote active modes. This paper aims to investigate the factors influencing Athenians' choices towards active commuting options, specifically bicycles and scooters, for work-related travel, and assesses the acceptance of the "Bike to Work" scheme. A questionnaire using the stated preference methodology was developed, featuring twelve scenarios with and without cycling infrastructure, and varying factors like travel time, cost, and health benefits. Two multinomial logistic regression models analyzed preferences for active commuting under different cycling infrastructural conditions, and a binomial logistic regression model examined the acceptance of the scheme and its influencing factors. The findings indicate that health benefits significantly boost preferences for bicycles and e-scooters, while adequate cycling infrastructure mitigates the effects of longer commute times. Socio-demographic factors, such as age and profession, also influence commuting choices, highlighting the need for targeted interventions. The results underscore the importance of fostering positive perceptions of cycling sustainability and addressing safety concerns to enhance participation in the "Bike to Work" scheme. Policymakers should prioritize developing comprehensive cycling networks and implementing educational initiatives to promote active commuting, making urban transportation systems more sustainable and inclusive.

Keywords: active mobility, “Bike to Work” scheme, stated preference.

1. Introduction

Urban centers worldwide are grappling with increasing challenges due to motorized road transport, creating an urgent need to promote active modes of transportation, such as cycling. Currently, over 70% of the European Union's (EU) population resides in cities, a figure projected to rise to nearly 84% by 2050. Urban areas are responsible for 23% of the EU’s transport greenhouse gas emissions (European Commission, 2021). Specifically, transportation contributes to approximately 25% of the EU’s greenhouse gas emissions, with 75% of these emissions originating from road transport (European Environment Agency, 2024).

The promotion of sustainable modes of transport has garnered significant attention in recent years due to the adverse environmental and health impacts associated with traditional methods of transportation, such as the use of private cars (Agarwal et al., 2020). Encouraging alternative modes of transport, such as cycling, can help reduce traffic congestion, decrease air pollution, and improve

public health (Apasnore et al., 2017). Bicycles and scooters, whether electric or conventional, are zero-emission, efficient and low-cost means of urban transportation that also offers health co-benefits by promoting more active lifestyles and limit the use of private vehicles.

The most common purpose for urban trips is commuting to work, with the primary mode being driving a car (Eurostat, 2021). Therefore, special focus should be given to promoting sustainable modes of transport, especially for work trips in urban centers. The "Bike to Work" scheme has emerged as a promising initiative for encouraging cycling as a sustainable mode of transport (Branion-Calles et al., 2019). This program is designed to motivate employees to commute by bicycle by providing incentives such as tax benefits, subsidies for purchasing bicycles, and infrastructure improvements like bike racks and showers at workplaces and is already implemented in several countries likes United Kingdom, Ireland, and Netherlands.

A prime example of an urban city in need of cycling interventions is Athens, the capital of Greece. The city faces significant challenges due to its inadequate cycling infrastructure and the low modal share of active modes compared to motorized modes. The existing cycling infrastructure is not only limited but also poorly maintained, which deters potential cyclists and exacerbates the dominance of car usage. Furthermore, cultural attitudes and urban planning policies in Athens have historically prioritized motorized transport, contributing to traffic congestion and environmental pollution (Gavanas et al., 2015).

In that context, the purpose of this paper is twofold (1) to investigate the parameters that influence the choice of the bicycle or e-scooter as a mode for the work-related trips in Athens and (2) to investigate the acceptance of Athens' workforce towards the "Bike to Work" scheme. For this purpose, a questionnaire based on the stated preference methodology was designed and completed by 100 commuters. Based on the responses, two multinomial logistic regression models were developed to analyze Athenians' preferences for active commuting options under two conditions: the current state with inadequate cycling infrastructure and a hypothetical scenario with a comprehensive cycling network. Additionally, a binomial logistic regression model was constructed to examine the acceptance of the “Bike to Work” scheme and the factors influencing it.

2. Literature Review

2.1 Previous Studies on the Adoption of "Bike to Work" Schemes

The promotion of "Bike to Work" schemes has attracted significant research interest to encourage cycling for commuting. Agarwal et al. (2020) found that financial incentives like tax benefits and subsidies effectively motivate employees to ride. Non-financial incentives, such as improved cycling infrastructure and workplace facilities, also enhance participation (Vlastos, 2008). Supportive workplace policies and encouragement from employers positively influence employee participation (Gavanas et al., 2015).

However, barriers such as safety concerns, inadequate infrastructure, long distances, adverse weather, and cultural norms favoring car use hinder the adoption of these schemes (Apasnore et al., 2017). Branion-Calles et al. (2019) highlight that addressing these barriers with targeted interventions is crucial for the effective implementation of such scheme. Gender and socio-demographic factors also impact participation rates, with men participating more than women, and factors like age, income, and location influencing involvement (Buehler, 2012; Tsiolis, 2018).

Gavanas et al. (2015) report positive outcomes of "Bike to Work" schemes, including increased cycling rates, reduced car use, improved health, and lower carbon emissions. However, effectiveness varies based on environmental factors such as infrastructure quality, employer support, and local cycling culture (Duan et al., 2021).

2.2 Factors Influencing Employee Preferences for Cycling as a Mode of Commuting

The adoption of cycling as a mode of commuting is influenced by various factors that shape employee preferences and mode choice processes. Key factors include the availability and quality of cycling infrastructure, such as dedicated bike lanes, protected intersections, and secure bike parking, which positively influence perceptions of safety and convenience (European Parliament, 2010; Vlastos & Bakogiannis, 2010). Conversely, inadequate infrastructure can deter potential cyclists (Chen et al., 2018).

The distance between home and workplace and the estimated commuting time are significant determinants of cycling preferences, with shorter distances making cycling more attractive (European Cyclists' Federation, 2018; Gavanas et al., 2015). Health and fitness benefits, such as improved cardiovascular health and stress reduction, also play a crucial role in encouraging cycling (Bike Experience.Brussels, 2017; Transport for London, 2010).

Personal motivations and attitudes, including enjoyment of outdoor activities and support for environmentally friendly transport, influence cycling preferences (European Parliament, 2010; Logaras, 2001). Safety concerns and risk perception, such as fears of road accidents and personal safety, can discourage cycling. Enhancing safety measures and raising awareness about safe cycling practices can mitigate these concerns (DiGioia et al., 2017; Dill et al., 2012).

Weather conditions, such as rain and extreme temperatures, significantly impact cycling preferences. Providing alternatives during adverse weather, like access to public transportation and flexible work arrangements, can help (Graham-Rowe et al., 2011; Bakogiannis, 2016). Social norms and peer influence also shape cycling preferences, with positive social perceptions and encouragement from peers promoting cycling (Radel et al., 2017; Bamberg et al., 2011).

Access to information, resources, and support, such as cycling routes and safety guidelines, can facilitate cycling adoption (Eriksson et al., 2008; Pucher et al., 2011). Cost considerations, including savings on fuel and parking, and financial incentives through "Bike to Work" schemes, further motivate employees to cycle (Harms et al., 2014; Heinen et al., 2011). Cultural and institutional factors, such

as organizational policies and government initiatives promoting sustainability and active lifestyles, significantly influence cycling preferences (Raccioppi, 2002; Hamer & Chida, 2008). Understanding these factors is crucial for designing effective strategies to promote cycling, addressing barriers, and creating supportive environments to enhance cycling adoption (Chen et al., 2018).

3. The Survey

Data on driver preferences and attitudes towards active modes and the “Bike to Work” scheme were collected through an online questionnaire. The questionnaire consists of four parts and was completed by a total of 100 respondents.

The first section of the questionnaire consists of questions regarding the participants' travel details and characteristics. This introductory section aims to gradually immerse respondents into the research context, providing foundational information that will be crucial for drawing conclusions later. The second section explores respondents' views on bicycles and their use. It includes questions designed to familiarize participants with cycling and encourage them to think about the factors that might deter or motivate them to use bicycles for their daily commute. This section helps gauge the initial attitudes and potential barriers to adopting cycling as a mode of transportation.

The third section contains five key questions. The first four questions investigate preferences for using bicycles for commuting, aiming to understand why some might not choose this option. The fifth question presents twelve hypothetical scenarios, with and without cycling infrastructure, and varying factors like travel time, cost, and health benefits. Respondents must choose between conventional bicycles, electric bikes/scooters, or none of them (see Table2). Finally, the fourth section gathers demographic data such as gender, age, education level, occupation, and annual household income. In Table 1, descriptive statistics of the sociodemographic characteristics are presented.

Table 1: Demographic Characteristics

Parameter	Category	Share (%)
Gender	Male	64%
	Female	36%
Age	18-24	17%
	25-34	52%
	35-55	17%
	>55	14%
Profession	Private employee	32%
	Civil Servant	7%
	Freelancer	48%
	Other	13%
Income	<10,000	42%
	10,000-25,000	35%
	25,000-40,000	14%
	>40,000	9%

Presented below are two randomly selected scenarios from the twelve developed within the framework of the stated preference survey: one scenario includes adequate cycling infrastructure, and the other does not (current situation).

Table 2: Scenarios development in the framework of the stated preference survey

Scenario 2	**Current situation - poor cycling infrastructure**		
	conventional bicycle	**e-bicycle/ e-scooter**	**none of them**
Travel time change (%)	+10	+5	0
Travel cost change (%)	-20	+10	0
Health benefits	High	Low	0
Choice			
Scenario 7	**Hypothetical Situation - existence of adequate cycling infrastructure**		
	conventional bicycle	**e-bicycle/ e-scooter**	**none of them**
Travel time change (%)	-10	-15	0
Travel cost change (%)	0	+20	0
Health benefits	High	Low	0
Choice			

4. Results

This research aims to answer two primary questions. The first question investigates which parameters influence Athenians' choice of bicycles and e-scooters for work trips, considering scenarios with and without adequate cycling infrastructure. The second question examines the factors that affect the acceptance of the "Bike to Work" scheme. To address the first question, two multinomial logistic regression models were developed: one based on responses to the first six scenarios depicting the current situation with poor cycling infrastructure, and another based on the next six scenarios assuming the existence of sufficient cycling infrastructure in Athens (hypothetical situation). To address the second question, a binomial logistic regression model was developed with the dependent variable being the response to the question, “Would you be interested in using the 'Bike to Work' scheme if your employer provided a free bike for work?” with possible answers being Yes or No.

Logistic regression was chosen because it is well-suited for modeling categorical dependent variables and can handle multiple predictor variables, making it ideal for analyzing the factors that influence discrete choices such as transportation modes and program acceptance. This method allows us to estimate the probability of a certain choice being made based on the influencing parameters.

Before developing the models, the Spearman correlation among the examined variables was calculated to identify potential relationships and ensure that multicollinearity was not present, which could distort the model's results.

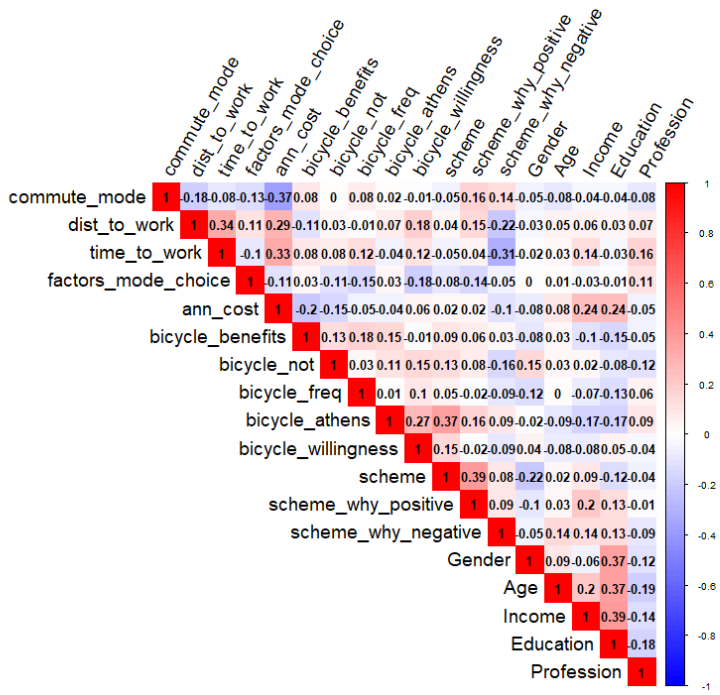

Figure 1: Spearman correlation heatmap

The final independent variables included in the active mode choice models with (Hypothetical Situation) and without (Current Situation) adequate cycling infrastructure are presented in the following table. The final models had a McFadden R^2 of 0.15, which is considered adequate for logistic regression models. Most independent variables are statistically significant at a 90% confidence level.

Table 3: Results of active mode choice models

Parameter	Category	Reference Category	Current Situation				Hypothetical Situation			
			Estimate	Pr(>|z|)	odds ratio		Estimate	Pr(>|z|)	odds ratio	
Choice = conventional bicycle VS none of them										
(Intercept)	-	-	-0.794	0.181	0.452		1.176	0.102	3.242	
Travel time	-	-	-0.012	0.346	0.988		-0.016	0.189	0.984	
Travel cost	-	-	-0.011	0.205	0.989		0.0001	0.987	1.000	
Health	-	-	**0.313**	**0.024**	**1.368**	*	**0.333**	**0.015**	**1.395**	*
time_ to_work	**20-45 min**	**0-20 min**	-0.113	0.625	0.894		0.531	0.045	1.700	*
	>45 min		**-1.324**	**0.002**	**0.266**	**	**-0.975**	**0.016**	**0.377**	*
bicycle_ benefits	**environment**	**health**	**-1.703**	**0.000**	**0.182**	***	0.202	0.611	1.224	
	congestion		-0.335	0.439	0.715		0.602	0.269	1.825	
	travel cost		**0.563**	**0.022**	**1.755**	*	**0.621**	**0.029**	**1.861**	*
Age	**25-34**	**18-24**	**-0.815**	**0.019**	**0.443**	*	-0.761	0.132	0.467	
	35-55		**0.879**	**0.029**	**2.409**	*	-0.172	0.760	0.842	
	>55		**-0.995**	**0.018**	**0.370**	*	**-1.020**	**0.072**	**0.361**	.
Profession	**Civil Servant**	**Private employee**	**1.077**	**0.000**	**2.936**	***	-0.383	0.174	0.682	
	Freelancer		-0.007	0.987	0.993		-0.105	0.807	0.900	
	Other		**0.682**	**0.073**	**1.978**	.	**-1.029**	**0.014**	**0.357**	*
Education	**Bachelor**	**Secondary education**	**-0.667**	**0.061**	**0.513**	.	-0.584	0.281	0.558	
	Master		0.101	0.795	1.106		**-1.225**	**0.031**	**0.294**	*

Income	**10K-25K**	**<10K**	0.103	0.710	1.108		0.042	0.879	1.043	
	25K-40K		-0.526	0.159	0.591		0.450	0.236	1.569	
	>40K		-0.584	0.174	0.558		-0.196	0.639	0.822	
Choice = electric bicycle or electric scooter VS none of them										
(Intercept)	**-**	**-**	-0.457	0.384	0.633		**2.768**	**0.000**	**15.923**	***
Time	**-**	**-**	-0.012	0.346	0.988		-0.016	0.189	0.984	
Cost	**-**	**-**	-0.011	0.205	0.989		0.0001	0.987	1.000	
Health	**-**	**-**	**0.313**	**0.024**	**1.368**	*	**0.333**	**0.015**	**1.395**	*
time_ to_work	**20-45 min**	**0-20 min**	-0.033	0.903	0.968		**1.253**	**0.000**	**3.502**	***
	>45 min		-0.152	0.734	0.859		0.457	0.270	1.579	
bicycle_ benefits	**environment**	**health**	**-2.435**	**0.000**	**0.088**	***	**-1.417**	**0.003**	**0.242**	**
	congestion		-0.331	0.484	0.718		0.430	0.436	1.537	
	travel cost		0.001	0.998	1.001		-0.070	0.822	0.932	
Age	**25-34**	**18-24**	-0.418	0.279	0.658		**-1.562**	**0.003**	**0.210**	**
	35-55		**0.764**	**0.100**	**2.147**	.	**-1.227**	**0.038**	**0.293**	*
	>55		**-1.026**	**0.042**	**0.358**	*	**-1.568**	**0.008**	**0.208**	**
Profession	**Civil Servant**	**Private employee**	**1.198**	**0.000**	**3.312**	***	**-0.688**	**0.027**	**0.502**	*
	Freelancer		-0.718	0.254	0.488		**-1.495**	**0.010**	**0.224**	**
	Other		0.243	0.581	1.274		**-2.227**	**0.000**	**0.108**	***
Education	**Bachelor**	**Secondary education**	**-0.649**	**0.098**	**0.523**	.	**-1.028**	**0.060**	**0.358**	.
	Master		-0.335	0.442	0.715		**-2.374**	**0.000**	**0.093**	***
Income	**10K-25K**	**<10K**	-0.025	0.934	0.975		0.009	0.977	1.009	
	25K-40K		**-1.560**	**0.002**	**0.210**	**	0.668	0.101	1.949	
	>40K		-0.177	0.709	0.838		-0.605	0.194	0.546	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Accordingly, the final independent variables included in the binomial logistic regression model which was developed to investigate the "Bike to Work" scheme acceptance in Athens were as follows:

- The variable "bicycle_athens" refers to the questionnaire question "Do you believe that bicycles are a sustainable mode of transport for commuters in Athens?" The responses are coded as: (1) Yes, definitely, (2) Yes for some, but not for everyone, (3) No, it's not practical for most people, (4) I don't know or have no opinion
- The variable "scheme_why_negative" refers to the questionnaire question "Why wouldn't you be interested in using the 'Bike to Work' scheme?" The responses are coded as: (1) I live too far from my workplace to bike, (2) I don't feel safe biking in the city, (3) I have physical limitations that prevent me from biking, (4) I prefer my current mode of transportation and don't want to change.
- The variable "gender" indicates the respondent's gender, with (1) indicating male and (2) female.

The final model had a McFadden R^2 of 0.2, which is considered adequate for logistic regression models.

Table 4: Results of "Bike to Work" scheme acceptance model

	Estimate	Standard Error	z value	Pr(>|z|)
(Intercept)	-1.523	0.924	-1.649	0.099
bicycle_athens (2)	0.075	0.951	0.079	0.937
bicycle_athens (3)	1.685	0.854	1.973	0.048
bicycle_athens (4)	3.393	1.519	2.234	0.025

scheme_why_negative (2)	-0.012	0.642	-0.019	0.985
scheme_why_negative (3)	-0.415	1.425	-0.291	0.771
scheme_why_negative (4)	1.248	1.202	1.038	0.299
gender (2)	-1.503	0.652	-2.304	0.021

5. Discussion

5.1 Active mode choice models

The analysis of multinomial logistic regression models provides insights into the factors influencing Athenians' choices between active commuting modes (conventional bicycles and electric bikes/scooters) and not choosing any active mode under different infrastructural scenarios for their work-related trips. The declared choice of conventional bicycle or e-bicycle/e-scooter, not significantly affected by the savings in travel time and cost, however significantly and positively affected by the health benefits to be induced from their use for daily commutes to work. Specifically, in the current and hypothetical situation, health benefits significantly increase the likelihood of choosing a conventional bicycle and electric bicycles or e-scooters, with an odds ratio of 1.4 ($p < 0.05$). These findings indicate that health improvements are a strong motivator for active commuting, regardless of infrastructure quality.

Commute time also play crucial roles. For conventional bicycles, a commute time of more than 45 minutes significantly reduces the likelihood of choosing this mode in both scenarios (current: odds ratio 0.266, $p = 0.002$; hypothetical: odds ratio 0.377, $p = 0.016$). In the hypothetical scenario with sufficient infrastructure, a commute time of 20-45 minutes increases the odds of choosing a conventional bike (odds ratio 1.700, $p = 0.045$). This suggests that adequate infrastructure can mitigate some of the deterrent effects of longer commute times. For electric bikes/scooters, a commute time of 20-45 minutes significantly increases the likelihood of choosing this mode in the hypothetical scenario (odds ratio 3.502, $p < 0.001$), highlighting the importance of infrastructure in making longer commutes more feasible for these modes.

Age and profession are also influential. Younger commuters (18-24 years) are less likely to choose conventional bicycles or electric bikes/scooters compared to other age groups, particularly in the current situation. Civil servants are more likely to choose both conventional bicycles and electric bikes/scooters in the current situation (odds ratios 2.936, $p < 0.001$, and 3.312, $p < 0.001$, respectively), but their likelihood decreases in the hypothetical scenario for electric bikes/scooters (odds ratio 0.502, $p = 0.027$) compared to private employees. This suggests a saturation point where further infrastructure improvements no longer significantly increase their propensity to switch, possibly due to already met needs or a preference for conventional bicycles under improved conditions. Improved cycling infrastructure can significantly influence freelancers' decisions to adopt electric bikes or scooters, highlighting the importance of adequate infrastructure in promoting active commuting among this professional group. This shift suggests that freelancers, who often have variable work

locations and schedules, find electric bikes/scooters a viable and attractive option when supportive infrastructure is in place.

Educational background also affects commuting choices. Those with a secondary education are more likely to choose conventional bicycles and electric bicycles/scooters in both situations. For electric bikes/scooters, having a master's degree significantly reduces the likelihood of choosing this mode in the hypothetical situation with adequate cycling infrastructure (odds ratio 0.093, $p < 0.001$).

Lastly, income levels exhibit a nuanced influence on the choice of active commuting modes. In the hypothetical situation with sufficient cycling infrastructure, income does not significantly affect the likelihood of choosing conventional bicycles or electric bikes/scooters, indicating a neutral stance towards active commuting modes regardless of income level. However, in the current situation with inadequate cycling infrastructure, middle-income individuals (25K-40K) show a significantly lower likelihood of choosing electric bikes/scooters (odds ratio 0.210, $p = 0.002$) compared to lower-income individuals suggesting that middle-income individuals are more sensitive to the lack of infrastructure and may perceive higher barriers to using electric bikes or scooters in the absence of adequate facilities. Overall, these findings underscore the multifaceted nature of commuting choices, influenced by personal, economic, and infrastructural factors.

5.2 "Bike to Work" scheme acceptance model

The results of the logistic regression model provide additional insights into the factors influencing the acceptance of the "Bike to Work" scheme in Athens. The variable "bicycle_athens" indicates respondents' perceptions of bicycles as a sustainable mode of transport for commuters in Athens. For respondents who believe bicycles are not practical for most people (bicycle_athens (3)), the estimated coefficient is 1.685 ($p = 0.048$), suggesting they are less likely to prefer the "Bike to Work" scheme compared to those who see bicycles as generally sustainable. Those who have no opinion on the matter (bicycle_athens (4)) are even less likely to use the scheme (coefficient 3.393, $p = 0.025$). These findings underscore the importance of positive perceptions of cycling sustainability in encouraging scheme participation.

The variable "scheme_why_negative" explores reasons for not being interested in the "Bike to Work" scheme. The factors related to safety concerns (scheme_why_negative (2)), physical limitations (scheme_why_negative (3)), and a preference for current transportation methods (scheme_why_negative (4)) were examined. Individuals who are satisfied with their current modes of transportation are less likely to participate in the "Bike to Work" scheme compared to those who live far from their workplace. In other words, employees who are content with their existing commuting methods, such as driving, public transport, or walking, show less interest in switching to the "Bike to Work" scheme. This could be due to factors like comfort, time efficiency, or the cost-effectiveness of their current mode of transportation. Additionally, the availability of safe cycling routes and secure bike storage may influence their decision.

Gender also plays a significant role in the acceptance of the "Bike to Work" scheme. The coefficient for gender (2) is -1.503 ($p = 0.021$), indicating that women are more likely to choose the scheme compared to men. This finding aligns with previous research highlighting gender differences in commuting preferences and behaviors, suggesting that women may be more open to adopting active commuting options when provided with adequate support and infrastructure (Handy & Xing, 2011). Understanding these gender-specific preferences can help in designing more inclusive and effective promotion strategies for the "Bike to Work" scheme.

6. Conclusion

This study investigates the factors influencing Athenians' choices for active commuting options, specifically bicycles and e-scooters, for work-related trips, and assesses the acceptance of the "Bike to Work" scheme. A questionnaire based on the stated preference methodology was administered, and multinomial and binomial logistic regression models were developed. These models analyzed Athenians' preferences for active commuting options under different cycling infrastructure scenarios and examined the acceptance of the “Bike to Work” scheme, identifying the factors that influence these choices.

The results from the models provide valuable insights for policymakers aiming to promote active travel modes such as cycling for work trips. Key findings indicate that health benefits significantly boost preferences for bicycles and e-scooters, suggesting that policies and campaigns should emphasize the health advantages of active commuting. Additionally, commute duration and the availability of adequate cycling infrastructure were crucial determinants. Policymakers should prioritize developing and maintaining comprehensive cycling networks to make longer commutes more feasible and attractive.

Furthermore, the impact of socio-demographic factors, such as age and profession, on commuting choices underscores the need for tailored interventions. Younger commuters and certain professional groups may require more targeted incentives and support to adopt active commuting. Educational initiatives and infrastructure improvements should be designed to cater to the specific needs of these groups, thereby enhancing the overall effectiveness of promotion strategies.

The binomial logistic regression model's findings on the acceptance of the "Bike to Work" scheme highlight the importance of public perception and satisfaction with current commuting methods. Individuals satisfied with their existing transportation modes are less likely to switch to the "Bike to Work" scheme. This suggests that for the scheme to be successful, it must offer clear advantages over current commuting options, such as improved convenience, cost savings, and enhanced safety. Additionally, fostering positive perceptions of cycling sustainability can significantly influence participation rates.

Further research should also delve deeper into the psychological and social factors influencing commuting choices, such as risk perception and social norms. Understanding these aspects can help

design more effective promotional strategies for active commuting. Moreover, investigating the specific needs and barriers faced by different demographic groups, such as older adults, and individuals with disabilities, will be crucial in creating inclusive and accessible active commuting programs.

This study has several limitations. The stated preference methodology relies on self-reported data, which can be subject to biases. The study also focuses primarily on quantitative data and incorporating qualitative insights through interviews or focus groups could enrich the understanding of underlying motivations and barriers.

In conclusion, promoting active commuting in urban centers like Athens requires a multifaceted approach that addresses health benefits, infrastructural improvements, and targeted interventions for different demographic groups. By understanding and addressing the diverse factors influencing commuting choices, policymakers can create more effective and sustainable urban transportation systems.

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