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The Demographic Impact on Car Ownership in Kuala Lumpur

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Abstract
Transportation is essential to the evolution of cities because it facilitates the flow of both people and goods, and it also plays a role in the expansion of economic activity by determining how easily land can be accessed at different levels. As the number of people living in cities continues to balloon at an alarming rate, so does the urgent requirement for more and better transportation infrastructure. According to many individuals from rural areas who have moved to Kuala Lumpur for the employment opportunities, which are predominantly centred in the central city area of Malaysia, fast urbanisation has resulted in numerous issues, including traffic congestion. Due to the limited availability of public transit, many Malaysians have been driving their own automobiles to work for some time. In this study, it is necessary to have a deeper understanding of the social and demographic perceptions of continuing car ownership. The purpose of the study is to evaluate how gender, age, experience in the form of education, and household income group influence preferences. In selected regions of Kuala Lumpur, data were gathered utilising a quantitative research technique involving a questionnaire survey. The research was conducted utilising a sample of 370 locals. The survey findings were analysed descriptively using frequency analysis and simple statistical analyses. The results reveal that gender, education, age, and household income affected car ownership among Klang Valley people in Malaysia. The discovery will add to the evolution of ongoing conversations and ideas on sustainable transitions.
Keywords: Demographic Characteristics, Urban Transportation, Car Ownership and Kuala Lumpur

Introduction

Simultaneously, the growth of urbanisation alters transportation demand, impacting the growth of the transportation industry (Zhang et al., 2022). According to Baum (2009), vehicle ownership can stimulate employment if mobility efficiency enhances employment options and job searches. Vehicles, for instance, can reduce the likelihood of physical separation from employment possibilities. As car ownership has increased, negative externalities associated with mobility, such as noise and traffic congestion, have increased. According to a number of studies, the concept of "forced car ownership" has also been linked to low-income households with high and rising transportation costs. Due to the inefficiency of other forms of

transportation and walkability in the Kuala Lumpur, car ownership is a requirement for survival in metropolitan areas.

Unfortunately, in Kuala Lumpur people will select between private ownership and public transportation due to the fact that movement from house to job has become a daily occurrence. To get around, particularly to get to work, people may drive alone or carpool using private ownership transportation, while others may walk or drive to transit for alternative modes of transportation such as bus, commuter train, LRT, and MRT. This demonstrates that the Malaysian public transportation system remains inefficient. In terms of vehicle ownership, the registration of new registered vehicles in Malaysia is increasing at a rate that is disproportionate to the population and road traffic (Shafie & Mahmud, 2020). This results in traffic congestion issues in large cities, particularly Kuala Lumpur. According to information collected by the Road Transport Department through 31 December 2019, there are currently 31,2 million registered automobiles in Malaysia (Sadali, 2020). According to a statement made by the Ministry of Transportation, this data also suggests an average yearly increase of more than one million new automobiles (BERNAMA, 2020). If the trend of increasing the number of new vehicles registered each year continues, then traffic congestion and challenges connected to management problems in the road transport sector would expand significantly in the coming years.

This study provides a quantitative analysis of the demographics of car ownership and their influence on stated interest in continuing to use their own vehicle. The objectives of this paper are as below:

- To investigate how perceptions and attitudes toward car ownership vary by gender.
- To investigate how perceptions and attitudes toward car ownership vary by education.
- To investigate how perceptions and attitudes toward car ownership vary by age.
- To investigate how perceptions and attitudes toward car ownership vary by household income group.

Primarily the survey distributed to more than 300 respondents throughout Kuala Lumpur and supplemented with a comprehensive literature review and bivariate statistical analysis. It believes that by doing so, it will be able to demonstrate the more complex social processes that govern how potential adopters in Malaysia think about and calculate various aspects of mobility. This study also seeks to contribute to ongoing discussions regarding energy and transportation policy, environmental change drivers, and transitions towards sustainability.

Consistent with previous empirical research, this study's results were not used to develop a specific theory or model. Depending on the circumstances, the findings may be utilised to validate existing approaches or to build whole new ones (Knox-hayes et al., 2013; Marquart-Pyatt et al., 2014; Unsworth & Fielding, 2014). It would also highlight the novelty of emphasising car ownership in Malaysia, which is extremely uncommon in the literature, as well as the rarity of analysing a sample of hundreds of people who own vehicles and of considering a nexus of demographic characteristics, such as gender, education, occupation, age, and household income group, rather than focusing on a single or two demographic characteristics. Therefore, this is a confirmatory study, as it tests and verifies already published theories, as opposed to an exploratory study, which generates wholly new hypotheses (Cherp et al., 2018).

Literature Review

Car Ownership

Numerous previous studies on mode choice of transportation have focused on situations where the private automobile has a dominant market position (Golob & Hensher, 1998), but non-motorized modes such as bicycles and walking play a smaller role (Dev & Biswas, 2020). In such situations, all kinds of public transportation are the natural adversary of the private automobile. Consequently, numerous research have focused on the choice between public transportation and driving a car. Golob & Hensher (1998); Allen and Meyer (1990) examined methods to encourage users to utilise public transportation more frequently. They emphasised that the most cost-effective way to achieve this development is to increase the costs of automobile use while simultaneously lowering driving's general appeal. One of the primary reasons why people choose to commute by car rather than bus is because it is quicker.

When travelling by public transportation and purchasing separate tickets for each passenger, relative expenses may appear significantly greater, especially when travelling with family. According to Srichuae et al (2016) the use of public transit diminishes as the number of automobiles on the road rises. The individual who has initial access to a newly purchased automobile is more likely to utilise it. Unless extraordinary conditions exist, his or her trips will be eliminated by public transportation. In addition, additional family members may travel as passengers on portions of their trips, such as a youngster being taken to school or a weekend family gathering. Increasing automobile and driver's licence ownership, wage growth, and a decline in the real cost of car ownership were the primary factors that influenced personal travel habits in the previous two decades (Friman et al., 2017).

Relationship Between Demographic Characteristics and Car Ownership

Oakil et al (2016) found that the effect of urbanisation level on automobile ownership varies considerably by household composition. For instance, married individuals are more likely to own a vehicle than unmarried individuals, regardless of their place of residence. In high-density locations, young singles were substantially less likely to own a car than those with families. The study by Westin et al (2018) suggests that age and education level have a positive effect on car ownership via logistic regression analysis. Residential neighbourhood also has some impact, suggesting a moderate neighbourhood effect on automobile adoption. However, the most major factor influencing automobile ownership is an individual's personal standards. In addition, the study by Mann & Abraham (2006) indicates that acquiring social status through expensive cars is not contingent on using them for all trips, although this may be gender-dependent. For instance, although guys preferred more expensive autos than females, only males deemed these automobiles inappropriate for commuting. Age enables marketers to determine how a person's wants and needs change as he or she ages (Royne Stafford, 1996). Yaya et al (2015) discovered that there was no correlation between car ownership, gender, and perceived quality. Nonetheless, the study indicates that individuals with a bachelor's degree or higher may be more responsive to commercials advocating car ownership.

According to Soltani et al (2018), life transitions such as retirement, community support networks, gender, age, ethnicity, cost, and even opinions towards mobility options were included into sociodemographic factors to determine car use among the elderly in Iran. Men rely on autos more than women, who utilise a variety of modes of transportation. As their needs increase and their abilities decline, ageing individuals usually modify their travel

patterns significantly. Occasionally, family members who are aware of the elevated risk of vehicular accidents associated with ageing prompt these alterations (Li et al., 2012; Takahashi et al., 2017). However, for many, the private automobile is still essential for sustaining independence (Nakanishi & Black, 2015; Schwanen & Paez, 2010). In fact, individuals aged 75 to 84 are disproportionately dependent on autos (Cui et al., 2017; Schmöcker et al., 2008). Only old age (at least 85 years old) drives many individuals to give up driving. Men are more likely to swap walking and public transportation for driving when this occurs, whereas women are more likely to rely on others for rides (Boschmann & Brady, 2013). Men, who are more car-dependent, may have a more difficult time adapting to this change, especially in the absence of efficient and user-friendly public transportation (Feng, 2017).

Numerous studies have indicated that an individual's income influences their travel habits. However, concentrating just on money obscures other crucial factors. Due to the fact that income varies between men and women and during a person's life, it is essential to consider the impact of demographic characteristics such as age and gender when attempting to explain travel behaviour. For instance, Domingo (2021) claimed that the dependent variable, distance driven, reveals that women and older persons spend less time driving, whereas family wealth has a positive effect on car distance travelled. To obtain a more complete picture of a person's social embeddedness, it is necessary to integrate additional demographic data, such as education level and occupation. All of these factors influence a person's decision to own or not own a private automobile. These qualities also influence the length of time households anticipate retaining a vehicle (Yamamoto & Kitamura, 2000). Numerous recent studies address the role of demographic characteristics such as family size, age, and sex-specific cohort effects in understanding past and future variability in private transportation demand, going beyond cross-sectional variation in private car use needs. Domingo (2021) found that household characteristics are major predictors of automobile ownership and driving patterns.

Methodology

A non-probability convenient sampling approach was utilised to collect the data for the survey, which was conducted in various Kuala Lumpur, Malaysia, residential areas. To collect data on car ownership demographics, the online structured questionnaire and a face-to-face survey with two sections containing a total of 12 items were utilised primarily. In addition to other questions, the first section of the surveys requested basic demographic information such as gender, education, age, as well as more sensitive areas such as household income categorization. In the second segment, there are a total of seven questions pertaining to the intent to continue using one's own vehicle, all of which contribute to the car ownership component. The first question regarding automobile ownership is a necessity of modern living. Secondly, automobile ownership increases life's convenience. The respondents were then asked whether automobile ownership is a reflection of individual success and family affluence. In addition, the fact that they now own a vehicle and drive to work in heavy traffic makes them appear more respectable. The final inquiry was whether they were concerned about their commute to work owing to a traffic accident.

Psychological research on survey design, for instance, have indicated that people are more inclined to be truthful when they are in an impersonal setting. Internet surveys outperform telephone surveys, which exceed in-person surveys, in terms of eliciting real responses, because individuals are more forthcoming when they are alone than when others

are around (Stephens-Davidowitz, 2017). As a consequence, 370 randomly selected respondents who were recruited through a face-to-face survey and an online version among residents in Kuala Lumpur.

Using frequency and single-level statistical analysis, the survey data were analysed descriptively. While the majority of research uses a more robust statistical method, such as multivariate analysis, cluster analyses, or stated choice experiments, many studies go beyond demographics to identify underlying characteristics that explain for a portion of the demographic relationships while controlling for others (Axsen & Kurani, 2013; Hackbarth & Madlener, 2016; Morton et al., 2017). Consequently, exploratory bivariate statistical tests were done in order to determine whether there are any discernible relationships, impacts, or differences between demographic characteristics and car ownership.

Results and Discussion

Respondents Demographic Profile

In this survey, both male and female respondents were queried regarding their perspectives and perceptions regarding on continued use of their own vehicles. 59.5% of responders were female, while the remaining 40% were male. According to the findings of this study, 50.3% of the respondents were between the ages of 21 and 30. In addition, the group of the family income group comprised 83.2%, or B40 (RM 4849). 33.5% of respondents had a Matrikulasi/ ASASI/ Diploma/STPM or an equivalent degree of education. Table 1 depicts the demographic characteristics of the respondents.

Table 1
Respondent's demographic profile

Characteristic	Frequency	Percentage (%)
Gender		
Male	150	40.5
Female	220	59.5
Total	370	100.0
Education Level		
No Formal Education	13	3.5
Primary School	15	4.1
Secondary School	93	25.1
Matrikulasi/ ASASI/ Diploma/STPM or	124	33.5
equivalent	106	28.6
Bachelor Degree or equivalent	29	5.1
Master/ PHD	370	100.0
Total		
Age Group		
20 years old and below	33	8.9
21 years old-30 years old	186	50.3
31 years old-40 years old	59	15.9
41 years old-50 years old	46	12.4
51 years old and above	46	12.4
Total	370	100.0

Household Income Group		
B40 (< RM 4849)	308	83.2
M40 (RM 4850-RM 10959)	56	15.1
T20(> RM 10961)	6	1.6
Total	370	100.0

Gender and Car Ownership

According to our findings, gender has a consistent and statistically significant influence on the relationship to continued usage of own vehicle. As Table 2 summarize below, women are more likely to agree with the statement of vehicle ownership is one of the necessities of the modern life (51.9% of females versus 35.7% of males). With this comes a higher percentage of women that suggest the vehicle ownership improving the convenience of life (52.4% of females versus 37.3% of males) and vehicle ownership is a symbol of individual success (42.2% of females versus 28.4% of males). Besides female also agreed that vehicle ownership is a symbol of a family's wealth (30.5% of females versus 24.6% of males). Therefore, they agreed that it make them look good to own a vehicle now (37.8% of females versus 27.3% of males) and driving to work with high traffic volume is normal to females (43.2% of females versus 27.8% of males). However, for the statement of not worried about their journey to and from work due to traffic accident tend to be more male agreed than female (33.8% of males versus 25.1% of females).

Table 2
Gender Differences in Preferences for Car Ownership

Items	Male	Female	Other/ Prefer not to agree	Chi-Square
Vehicle ownership is one of the necessities of the modern life	35.7%	51.9%	12.4%	$S^2(20, n\text{-}370) = 45.859$, p=0.001
Vehicle ownership improving the convenience of life	37.3%	52.4%	10.3%	
Vehicle ownership is a symbol of individual success	28.4%	42.2%	29.4%	
Vehicle ownership is a symbol of a family's wealth	24.6%	30.5%	44.9%	
It make me look good to own a vehicle now	27.3%	37.8%	34.9%	
Driving to work with high traffic volume is normal to me	27.8%	43.2%	29.0%	
I am not worried about my journey to and from work due to traffic accident	33.8%	25.1%	41.1%	

It is obvious that some of the data support outdated male-female stereotypes or that the various tactics work against one another to maintain the use of one's own vehicle. Females are found to be more likely to own cars than males, which is consistent with (Lee & Cheah, 2020) result that gender is significantly related to car ownership. Contrary to research

by (Bjørner & Leth-Petersen, 2005; Nolan, 2010; Raphael & Rice, 2002), which found that men are more likely than women to own cars. Perhaps this is a result of the higher likelihood of sexual harassment on Malaysian public transportation (Pal, 2008). When riding public transit, especially at rush hours, women may feel uneasy. There are noticeable variations between men and women simultaneously in the Kuala Lumpur. Therefore, it would seem that gender affects preferences independently of the ongoing usage of one's own car, or at the very least determines them.

Education and Car Ownership

In our research, we discovered that education has a considerable impact on preferences for certain types for continued usage of own vehicle. As Table 3 indicates, regarding continued usage of own vehicle, through the use of survey questions pertaining to the environmental effects of driving a car, we discover a statistically significant difference between levels of education and environmental consciousness. Interestingly, people with education level at Matrikulasi/ ASASI/ Diploma/STPM or equivalent and degree or equivalent are more likely to agree with the statement of vehicle ownership is one of the necessities of the modern life (29.5%, 27% and 31.1% for the rest education level). With this comes a higher percentage of this education level group that suggest the vehicle ownership improving the convenience of life (45.9%, 37.8% and 32.4% for the rest education level) and they also indicate that vehicle ownership is a symbol of individual success (22.4%, 20.3% and 27.8% for the rest education level)). Besides they also agreed that vehicle ownership is a symbol of a family's wealth (16.5%, 17.6% and 21.1% for the rest education level). Therefore, they agreed that it makes them look good to own a vehicle now (21.9%, 18.4% and 31.1% for the rest education level) and driving to work with high traffic volume is normal to all of them (21.9%, 22.4% and 26.7% for the rest education level). However, for the statement of not worried about their journey to and from work due to traffic accident all education levels indicated that they do not agreed with the statement (52.3%).

Table 3
Education Differences in Preferences for Car Ownership

Items	No formal education	Primary school	Secondary school	Matrikulasi/ Asasi/STPM/Diploma or equivalent	Bachelor degree or equivalent	Master/PHD or equivalent	Other/ Prefer not to agreed	Chi-Square
Vehicle ownership is one of the necessities of the modern life	3.0%	3.5%	20.0%	29.5%	27%	4.6%	12.4%	$S^2(100, n-370) = 200.478, p=0.000$

Vehicle ownership improving the convenience of life	3.0%	3.5%	21.1 %	25.9%	27.8%	4.9%	13.8 %
Vehicle ownership is a symbol of individual success	2.7%	3.2%	18.1 %	22.4%	20.3%	3.8%	29.5 %
Vehicle ownership is a symbol of a family's wealth	1.6%	2.2%	14.3 %	16.5%	17.6%	3.0%	45.8 %
It make me look good to own a vehicle now	2.4%	2.7%	17.8 %	21.9%	18.4%	1.9%	34.9 %
Driving to work with high traffic volume is normal to me	2.7%	2.7%	17.3 %	21.9%	22.4%	4.1%	28.9 %
I am not worried about my journey to and from work due to traffic accident	2.2%	2.7%	15.9 %	15.1%	8.9%	3.2%	52.3 %

The results of the current study show that those with higher education are more likely to purchase a car than people without postsecondary education. This supports the finding from (Raphael & Rice, 2002; Westin et al., 2018)that people with higher education levels are more likely to possess an automobile than people with lower education levels. The claim is that educated people generally hold better positions in organisations, which increases their likelihood of purchasing cars because cars are frequently seen as status symbols (Siwar et al., 2015).

Age and Car Ownership

Age analyzed by divided them into categories such as 20 years old and below, 21-30 years old, 31-40 years old, 41-50 years old and 51 years old and above. Age is identified influences the continued usage of own vehicle. The results stated that people in age group 21-30 years old indicate the most agree with all the statement compared to others as in Table 4 below. They agree with the statement of vehicle ownership is one of the necessities of modern life (44.6%). With this comes a higher percentage of people in age group 21-30 years old that suggests vehicle ownership improves the convenience of life (44.9%) and vehicle ownership is a symbol of individual success (34.9%). Besides they also agreed that vehicle ownership is a symbol of a family's wealth (25.4%). Therefore, they agreed that it make them look good to own a vehicle now (30%) and driving to work with high traffic volume is normal to females (36.8%). The statement of not worried about their journey to and from work due to traffic accident also tends to be agreed by this age group (41.6%).

Table 4
Age Differences in Preferences for Car Ownership

Items	20 years old and below	21-30 years' old	31-40 years' old	41-50 years' old	51 years old and above	Other/ Prefer not to agree	Chi-Square
Vehicle ownership is one of the necessities of the modern life	7.6%	44.6%	13.8%	11.6%	10.0%	12.4%	$S^2(80, n-370) = 124.487$, p=0.001
Vehicle ownership improving the convenience of life	8.4%	44.9%	13.8%	11.9%	10.8%	10.2%	
Vehicle ownership is a symbol of individual success	7.6%	34.9%	9.5%	8.9%	7.0%	32.1%	
Vehicle ownership is a symbol of a family's wealth	6.8%	25.4%	8.4%	7.0%	7.6%	44.8%	
It make me look good to own a vehicle now	7.3%	30.0%	10.0%	9.2%	8.6%	34.9%	
Driving to work with high traffic volume is normal to me	5.1%	36.8%	10.5%	7.6%	11.1%	28.9%	
I am not worried about my journey to and from work due to traffic accident	6.2%	41.6%	8.9%	7.6%	8.9%	26.8%	

It is interesting to note that the current study finds no discernible differences in car ownership between the elderly and young people, but middle-aged people are more likely to possess a car than children. This observation is in line with research by (Dargay, 2001; Lee & Cheah, 2020), which shows that the likelihood of initially owning a car rises with age. Therefore, it may be said that younger people are more prone to drive, but older people are more devoted to taking public transportation. In actuality, older folks may have more physical limitations while driving than younger adults, and as a result, they value car ownership less. Another contributing factor is that older persons frequently have larger families, necessitating their purchase of cars. This claim has to be supported by subsequent studies using family size as a covariate due to data limitations.

Household Income and Car Ownership

The household income group analyzed by subsequently placing in categories which is B40, M40 and T20 and it also identified how it influences the continued usage of own vehicle. The results stated that B40 household income group have higher percentage for all the statements compared to M40 and T20 group. B40 group agree with the statement of vehicle ownership is one of the necessities of modern life (72.4%). With this comes a higher percentage of them

that suggest the vehicle ownership improving the convenience of life (74.1%) and vehicle ownership is a symbol of individual success (59.2%). Besides, the B40 group also agreed that vehicle ownership is a symbol of a family's wealth (46.5%). Therefore, they agreed that it makes them look good to own a vehicle now (54.1%) and driving to work with high traffic volume is normal to them (59.7%). The statement of not worried about their journey to and from work due to traffic accident tends to be higher percentage among B40 group which is (48.9%). The result is summarized as in Table 5 below.

Table 5
Household Income Differences in Preferences for Car Ownership

Items	B40	M40	T20	Other/ Prefer not to agree	Chi-Square
Vehicle ownership is one of the necessities of the modern life	72.4%	13.5%	1.6%	12.5%	$S^2(40, n\text{-}370) = 63.732$, $p=0.010$
Vehicle ownership improving the convenience of life	74.1%	14.1%	1.6%	10.2%	
Vehicle ownership is a symbol of individual success	59.2%	10.0%	1.4%	29.4%	
Vehicle ownership is a symbol of a family's wealth	46.5%	7.3%	1.4%	44.8%	
It make me look good to own a vehicle now	54.1%	9.7%	1.4%	34.8%	
Driving to work with high traffic volume is normal to me	59.7%	10.0%	1.4%	28.9%	
I am not worried about my journey to and from work due to traffic accident	48.9%	8.4%	1.6%	41.1%	

Contrary to the findings of, income is found to be statistically significant in affecting car ownership, with the B40 group having more cars than the M40 and T20 groups (Beckman & Goulias, 2008; Dargay, 2001; Golob & Hensher, 1998; Nolan, 2010). Automobiles are seen as common consumer goods, although persons with higher incomes tend to be more able to afford them than those with lower incomes. The B40 group, however, is more likely to buy a car as a result of the inefficiency of public transit in their places of residence and employment, according to the results of the current study. The current location of the B40 group of workers is incompatible with the Klang Valley's current transportation system. This B40 group might therefore have a lengthier commute to work. The low-income group commutes to work using a minimum of two modes of transportation, according to studies on the mobility needs of the low-income population (Serulle & Cirillo, 2016). While a B40 individual who owns a private car will drive themselves to work.

Conclusion

In summary, demographics have a big and complex influence on car ownership. We notice a relationship between gender and continued usage of a female-oriented vehicle, as well as

education toward Matrikulasi/ASASI/STPM/DIPLOMA or analogous, as summarised in Table 6. The impact of age is more obvious, with individuals aged 21 to 30 having the highest concentration of continuous usage of their own vehicle. The B40 group indicates a preference for continuing to use their own car, in contrast to some of the studies, whilst the household income group correlates with continuing to use their own vehicle and increased daily travel demands. Finally, data reveals that, due to the inefficiency of public transit in the Klang Valley, preferences for it as a method of transportation differ little across demographic categories.

Table 6
Correlations Between Demographics and Continued Usage of Own Vehicle

Items	Gender (Male)	Education (Matrikulasi/ ASASI/STPM /DIPLOMA or equivalent)	Age (21-30 years old)	Household Income Group (B40 Group)
Vehicle ownership is one of the necessities of the modern life	-0.009	0.073	-0.082	0.051
Vehicle ownership improving the convenience of life	-0.007	0.077	-0.047	0.054
Vehicle ownership is a symbol of individual success	-0.061	-0.030	-0.007	-0.014
Vehicle ownership is a symbol of a family's wealth	-0.116*	0.011	0.030	0.007
It make me look good to own a vehicle now	-0.055	-0.129*	0.068	-0.025
Driving to work with high traffic volume is normal to me	0.025	0.058	0.043	-0.005
I am not worried about my journey to and from work due to traffic accident	-0.051	-0.036	0.083	-0.037

Notes: ** Correlation is significant at the 0.01 level * Correlation is significant at the 0.05 level.

This study adds in two crucial ways to ongoing discussions about policy, change, and transitions in a range of situations, even though its goal was to make an empirical rather than a theoretical or conceptual contribution. In order to discourage people from continuing to commute with their own vehicles even when they have reached end of life vehicle, it first gives context for the Kuala Lumpur's energy transition, or more specifically, its ongoing shift to efficient public transportation. By relating various aspects of the development of transportation infrastructure and their interactions with sustainable economic growth from the viewpoint of residents in the Kuala Lumpur areas, it will make a contribution to the field of transportation policy strategy. The findings show that despite being aware of the drawbacks such heavy traffic and congestion, many still choose to commute in their personal vehicles. This is because there is not any other choice for them because local public transportation is still limited. As a result, having a good transportation system will have a bigger effect on long-term economic development, especially for the B40 group, which has the lowest income. Then, it will improve the existing policy, known as the National

Transportation Policy 2019-2030 (NTP 2019-2030), in the future. In our opinion, the current shift to efficient public transportation in the Klang Valley is contemporary and geographically pertinent because it illuminates how diverse groups of actors view the change, particularly how demographic factors can affect knowledge, habits, and preferences.

Finally, the research results help shape continuing debates and perspectives on the topic of sustainable transitions (Cherp et al., 2018; EEA – European Environmental Agency, 2017; Loorbach et al., 2017). Demographics are frequently seen as part of the landscape, acting as latent and slowly changing elements of the sociotechnical system alongside political ideologies or macroeconomic trends, despite the fact that values and culture are thought to operate at multiple scales, such as niches and regimes (Schot & Geels, 2008). This study shows, in a nutshell, how demographic factors may function as predeterminants of behavioural antecedents or preferences for greener means of transportation. Broader societal factors like temporary unemployment, a gain in wealth, or the advent of chronic illness as one ages may be just as essential in determining transition preferences and individual adoption patterns as innovation patterns and infrastructure availability. Therefore, the acceptability and desirability of sociotechnical routes are influenced by these demographics.

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