A CASE STUDY OF SOCIOECONOMIC INFLUENCE ON THE USE OF PUBLIC TRANSPORT IN KOTA KINABALU URBAN AREA, MALAYSIA

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Abstract

This study examined the socioeconomic influence on the use of public transportation. A survey involving 987 respondents was conducted within the Kota Kinabalu city centre area. Research data was analyzed using descriptive that generated frequencies and percentages and also Chi-square tests to assess statistical relationships between two categorical variables. The results revealed that income and vehicle ownership are critical factors affecting the use of public transport. Other variables include age, employment, employment sector, marital status and a working spouse. These variables significantly affect the usage frequency of public transport by respondents. However, there are no significant statistics defining gender use of public transport. Socioeconomic variables can be utilized as a guide for relevant authorities to formulate strategies aimed at enhancing the efficiency of public transportation shortly.

Keywords: Public transport, socioeconomic, income, vehicle ownership.

Abstrak

Kajian ini bertujuan mengenal pasti pengaruh sosiodemografi terhadap penggunaan pengangkutan awam. Kajian menggunakan kaedah kaji selidik terhadap 987 responden yang dijalankan di sekitar pusat Bandaraya Kota Kinabalu. Data kajian dianalisis menggunakan statistik deskriptif dan inferensi yang menghasilkan kekerapan dan peratus, serta ujian Chi-square bagi mengaitkan dua pemboleh ubah. Hasil kajian menunjukkan pendapatan dan pemilikan kenderaan adalah faktor utama yang mempengaruhi penggunaan pengangkutan awam, termasuk pemboleh ubah lain seperti umur, status pekerjaan, bangsa, taraf perkahwinan dan pasangan yang bekerja. Pemboleh ubah tersebut juga mempengaruhi secara signifikan kekerapan

penggunaan pengangkutan awam responden. Namun, secara statistiknya tiada signifikan antara jantina ke atas penggunaan pengangkutan awam. Pemboleh ubah sosiodemografi ini boleh dijadikan panduan kepada pihak berkuasa dalam merancang strategi sasaran pengguna pengangkutan awam pada masa akan datang.

***Kata kunci**: Pengangkutan awam, sosioekonomi, pendapatan, pemilikan kenderaan.*

Introduction

The development of the nation has a direct impact on the transportation sector. The increasing mainly private vehicles on the road have resulted in various adverse outcomes such as an increase in the number of accidents, congestion, delays and environmental degradation issues. Several transportation policies have been framed and enacted to counter this situation. It has become a national mission to increase the usage of public transportation. As stated by Banister (2005), it is a time that resources (financial) invested in the construction of infrastructures (roads) be incorporated into an investment that has to do with public transport. The construction of new roads or road widening is not the best alternative because of the high costs involved and limited available land. In fact, the negative impact may be more pronounced with this move as drivers take to the new routes and avoid non-upgraded routes (Eliot, 1974).

Kota Kinabalu, the capital of Sabah is located in the eastern part of Malaysia and separated from the mainland by the South China Sea. The vision of city planners, as stated in Kota Kinabalu's 2030 Structure Plan is to transform the capital into Nature and Maritime City by 2030. Included among its objectives is the provision of an efficient and smooth-running public transportation system. The main challenge is to come up with a system that can convince the populace to use public transport instead of private vehicles (KKCH, 2008).

To achieve these objectives, it is essential to identify public transport users. With this in mind, this study was conducted to determine the relationship

between the socioeconomic characteristics of customers and the use of public transport. As defined by Guequierre (2003), the relationship between sociodemographic elements and transportation is complex whereby the transportation pattern itself is closely related to population size, age, income and the number of households in a settlement.

The Sabah Development Department (1999) in its research titled *'Public Transport Masterplan Study for Kota Kinabalu, Sandakan and Tawau,'* linked the influence of income to car ownership. Its findings also indicate that households with an income above RM2, 500 can afford to own a private vehicle, and 63 percent will use their cars whereas only 37 percent will be using a public transport. Table 1 shows the household income for 1996 and projections for 2000 and 2010.

Table 1 Household income projections, Kota Kinabalu

Household Incomes	1996 (%)	2000 (%)	2010 (%)
Above RM2,500	38	42	63
Less than RM2,500	62	58	37

Source: Sabah Development Department (1999)

Thus, a strategy should be designed with the objective of enhancing the attractiveness of public transport to increase its usage. The pertinent question is, what are the factors influencing the use of public transport? Some researchers are of the opinion that socioeconomic factors significantly affect the travel patterns of the population and the choice of transportation modes (Best & Lanzendorf, 2005; Boarnet & Sarmiento, 1998). This study intends to identify the relevant socioeconomic characteristics and their relationship to the use of land-based transportation modes within the city of Kota Kinabalu. In this study, the focus is only on mini buses and transit buses.

Previous Studies

The choice of a transport mode is influenced by various factors. Results from previous studies revealed that age, gender, employment status, the employment sector, income, marital status, a working spouse and vehicle ownership influence the usage of public transportation (Taylor & Fink, 2003).

The use of public transport influenced by many factors which are separate from two categories; internal factors and external factors (Taylor & Fink, 2003; Carr, 1986). Internal factors refer to the policies and the agencies responsible for the quality of public transportation services, whereas external factors include fuel prices, land use and development growth. Socioeconomic factors such as age, income, employment status and gender, which is play a major role in determining the rate of public transport usage (Taylor & Breiland, 2007).

According to Hine and Mitchell (2003), the age factor is closely related to the selection of a transportation mode. Youths (20 – 25 years) and retirees (50 years and above) use public transport frequently while adults (26 – 50 years old) prefer using private vehicles. Cahill (2010) noted that retirees undergoing the aging process will experience a gradual decline in physical and sensory efficiency. Thus, this will eventually result in them driving less and using public transport more. Newbold et al. (2005) in their study in Canada on seniors 65 years old and above, detected differences in their travel patterns compared to when they were younger. As they are now retired, unemployed and possibly enduring failing health, most of them rely more on private transport and less on public transport. Zeitler et al. (2012) during their study in the suburbs of Brisbane, Australia, observed that people aged 57 years and above chose private vehicles because public transportation vehicles were not equipped to service the elderly, especially those with health problems.

Employment status influences the usage of modes of transportation. Hovell et al. (1975) in their study found that retirees and who are not working or working part-time use public transportation more often compared to other users who are working full-time. Hine and Mitchell (2003) in their study at Leith, Castlemilk and Coatbridge (Scotland) found that the unemployed, part-time workers, singles and teens are inclined to travel by public transportation. Ryley (2006), states that most students, part-time workers and the unemployed prefer to use public transportation.

Hine and Mitchell (2003), Pendakur (1984) and Iles (2005), had the opinion that public transportation is usually associated with the low-income

group. Pendakur (1984) said that public transport is vital to the major cities in the Asian region as it's a very convenient mode of travel for moderately low-income residents, especially in getting to their workplaces. Joseph and Catherine (2003) found that the low wage earners in Hong Kong favor public transportation. Studies done by Mazdi and Jamilah (2006) established that the variables of overall household income and earning power of the head of the family influence the choice of a transportation mode. Dieleman, Dijst and Burghouwt (2002) in their study on public transportation in the Netherlands observed that high-income families and couples with children prefer the use of private vehicles. Giuliano and Dargay (2006) in a comparative study between the United Kingdom (UK) and United State (US). states that people with low incomes are resorting to the use of public transportation. They also found that age, gender and income affected the amount of travelling and can also influence the choice of transportation modes.

While there are no significant differences in the travelling patterns of men and women, there are considerable differences in their destinations. Men make their way to work while women make trips to schools, recreation centres or shopping centres. Fewer women use private vehicles compared to men. Grieco, Pickup and Whipp (1989), concluded that women prefer the use of buses and walking to make short trips to their destinations. Men, on the other hand, prefer the use of private vehicles and high-speed trains or the monorail for long distance trips. Hjorthol (2000), noted that with a married couple, the man will use the private vehicle if it is the only vehicle they own. However, women do travel by private vehicles before and after their spouses' working hours to send children to school and fetch them after school, make shopping trips, etc. As such, during this period, the vehicle will mostly be used by the wife (Mauch & Taylor, 1997 and supported by Gordon, Kumar & Richardson, 1989). Turner and Niemeier (1997), observed that women make shorter trips than men, but for a greater variety of reasons.

Many studies have proven that vehicle ownership is directly related to the usage of public transport. White (1976), said that several external factors that can influence the use of public transport. Among them is private vehicle ownership. People will not use public transport if they have a private vehicle except for situations in which the vehicle is being used by a family member,

under repair or damaged. Mirmoghtadaee (2012), Paulley et al. (2006), pointed out that the rate of car ownership and the amount of income is in a negative relationship to the use of public transport with the two variables reducing the dependence on public transport. Private vehicle ownership is lower among those living in rented houses, pensioners and single individuals; hence, they are potential public transport users. There are also housewives and teens who do not use private vehicles even if their families own one because it is being used by other family members (Hillman, 1975).

Hine and Mitchell (2003) also found that marital status affects the use of public transport as married couples tend to choose the use of private vehicles over public transport. Sultana (2005) says that there is an assumption that married couples work far from home. However, the findings reveal that due to housing affordability, married couples live in locations close to their workplaces. As a result, they will prefer using private vehicles. Ryley (2006) in his study at Edinburgh noted that families' especially large ones, are more inclined to use private vehicles compared to the single person.

Research Methodology

The findings are obtained through the distribution of survey forms from the city centre. The locations include bus stops, on board buses, shopping centres, the governments and private sector agencies. Through this survey, potential users of public transportation can be identified and targeted. The overall sampling was 987 from a population 500,000. The questionnaire was divided into three parts: (A) demographics, (B) the travel characteristics of respondents and (C) the characteristics of respondents who use public transportation. Demographic characteristics such as age, gender, employment status, sector of employment, income, marital status, and car ownership are variables that relate to the use of public transportation. Descriptive analysis was used to analyze demographic data to reflect the frequency and percentage distribution of respondents. Inferential analysis was used to analyze socioeconomic relations, and the chi-square test was utilized to analyze the link between the characteristics of travel and the usage of public transportation.

Research Results

i) Respondents' Demographic Characteristics

Table 2 shows the majority of respondents are between 20 – 24 years of age (20.1 percent), next are respondents between 25 – 29 years of age (18.2 percent), followed by respondents between 30 – 34 years of age (16.3 percent). Female respondents outnumber male respondents by 5.7 percent. 52.4 percent are female and 46.7 percent are male. Most respondents work full-time (74.0 percent), only a few works part-time (7.6 percent) and the unemployed stood at 1.3 percent. Students ranked the second highest in numbers (12.9 percent). The majority of respondents are government servants (44.4 percent), followed by those in the private sector (27.8 percent), and the statutory sector (6.6 percent). The income of between RM800 – RM1500 was attributed to the high number of respondents (24.3 percent), followed by those earning <800 (19.1 percent) and those earning between RM2001 – RM3000 (15.8 percent). Slightly more than half the respondents (50.2 percent) are married, 46.9 percent are single, and the rest (2.9 percent) are widowers/widows. Working married couples recorded 71.4 percent and married couples with one working spouse recorded 28.6 percent.

Table 2 Demographic information of respondents

No	Character	Statistic
1	Age	15 – 19 years old (8.2 percent), 20 – 24 years old (20.1 percent), 25 – 29 years old (18.2 percent), 30 – 34 years old (16.3 percent), 35 – 39 years old (11.3 percent), 40 – 44 years old (7.9 percent), 45 – 49 years old (7.3 percent), 50 – 54 years old (6.9 percent), 55 – 59 years old (1.5 percent), 60 years old and above (0.5 percent)
2	Gender	Male (46.7 percent), Female (52.4 percent)
3	Employment Status	Full time (74.0 percent), Part time (7.6 percent), Unemployed (1.3 percent), Students (12.9 percent). Housewife (2.5 percent), Retired (0.4 percent), Others (1.3 percent)
4	Sectors	Government (44.4 percent), Private (27.8 percent), Statutory (6.6 percent), Self Employed (6.0 percent)
5	Income	<RM800 (19.1 percent), RM801 – RM1500 (24.3 percent), RM1501 – RM2000 (14.1 percent), RM2001 – RM3000 (15.8 percent), RM3001 – RM4000 (5.8 percent), >RM4000 (4.9 percent)
6	Marital Status	Single (46.9 percent), Married (50.2 percent), Widow/Widower (2.9 percent)
7	Spouse	Working (71.4 percent), Not Working (28.6 percent)

ii) Vehicle Ownership

Findings from the data reveal that 61.8 percent of respondents own a private vehicle. This statistic is almost parallel to the projection reported by the Department of Sabah State Development (1999) that it is highly possible that 37 percent of the population earning less than RM2,500 will not own a private vehicle in 2010.

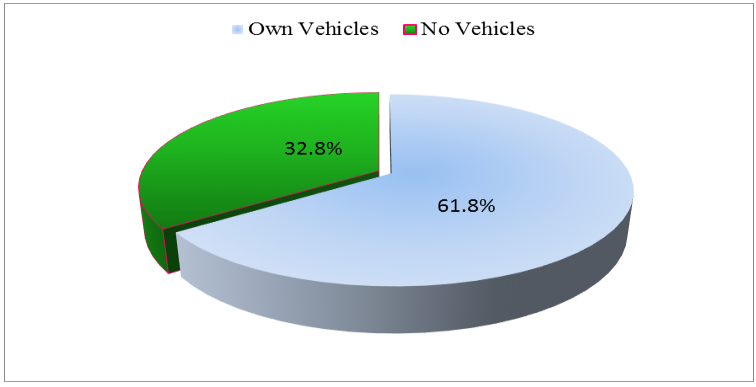

Figure 1 Vehicle ownership

iii) The Usage of Public Transport

Most of the travelling using public transport are work related and considered a daily routine. The results show that 59.0 percent of the population use public transport for work related reasons, 15.5 percent for travelling to schools, 10.9 percent for shopping trips, 8.7 percent for recreational purposes and 5.9 percent for other purposes. Only 25.4 percent of the population uses public transports on a daily basis, 38.5 percent do so occasionally or, when necessary, 24.4 percent used public transport a long time ago and 11.7 percent have never used public transport.

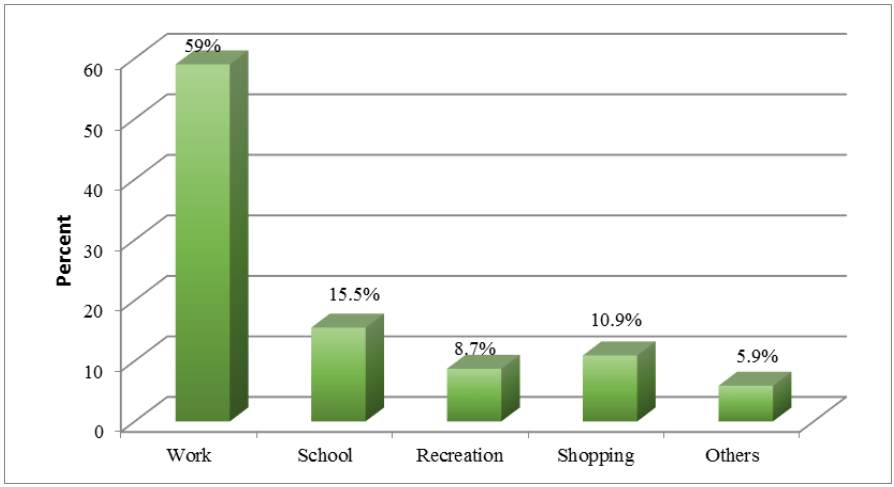

Figure 2 Usage of public transport

iv) Public Transportation Usage and its Relation to the Socioeconomic Situation of Respondents

This section discusses the findings of the study and the demographic and socioeconomic variables involved in determining the differences in the frequency of public transport usage for journeys made by the respondents.

a. Age

Chi–square test results ($X^2 = 190\ 112$, df = 27, $p < 0.001$) revealed a significant link between age and the usage of public transport. Follow-up test results showed that significantly more respondents aged between 20 – 24 years ($X^2 = 321.64$, df = 9, $p < 0.001$) use public transport daily (49 percent), respondents aged 15 – 29 years old use public transport only when necessary ($X^2 = 153.24$, df = 9, $p < 0.001$), while respondents aged 25 – 34 years old ($X^2 = 101.15$, df = 9, $p < 0.001$) used public transport a long time ago. The frequency distribution displayed in Table 2 reveals that with increasing age respondents rely less on public transportation, but revert to it upon retirement at the age of 50 and above.

Table 3 Public transport users based on age

Frequency of Using Public Transport	Age									
	15 – 19 years (%)	20 – 24 years (%)	25 – 29 years (%)	30 – 34 years (%)	35 – 39 years (%)	40 – 44 years (%)	45 – 49 years (%)	50 – 54 years (%)	55 – 59 years (%)	> 60 years (%)
Every Day	45.7	49.0	23.5	18.6	12.5	15.4	6.9	11.8	13.3	20.0
Occasionally	48.1	40.0	40.2	32.9	38.4	30.8	36.1	39.7	46.7	80.0
Long Time Ago	3.7	8.5	27.9	32.9	32.1	35.9	37.5	25.0	20.0	.0
Never	2.5	2.5	8.4	15.5	17.0	17.9	19.4	23.5	20.0	.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

b. Gender

The Chi-square test results did not show any significant relationship between gender and the frequency of public transport usage. Both men (35.8 percent) and women (40.9 percent) use public transportation only when necessary. However, the frequency distribution displayed in Table 4 shows a slight difference between men and women who use public transport on a daily basis with the men recording 24.9 percent and the women 25.5 percent. This distribution reveals that women use public transport more than men. 27.8 percent of men and 21.6 percent of women used public transportation a long time ago shown that men convert more quickly to a private vehicle if they had to.

Table 4 Usage of transport modes based on gender

Frequency of Using Public Transport	Gender	
	Men (%)	Women (%)
Every day	24.9	25.5
Occasionally	35.8	40.9
Long time ago	27.8	21.6
Never	11.5	12.0
TOTAL	100	100

Figure 3 shown that 17.6 percent of women and 14.8 percent of men used public transportation whereas 27.8 percent of women and 22.3 percent of men used private vehicles. 2.1 percent of women and 1.4 percent of men. More women (2.1 percent) made their way to destinations by walking compared to men (1.4 percent), while 4.2 percent of women and 1.8 percent of men used rented or other vehicles. However, when it came to travel using motorcycles, men registered 6.7 percent and women 1.1 percent. Thus, it is

clear that women travel for a variety of reasons, especially those related to the needs of their families. These include the sending of children to school, fetching them from school, shopping, etc. (Carr, 1986; Gordon et al., 1989).

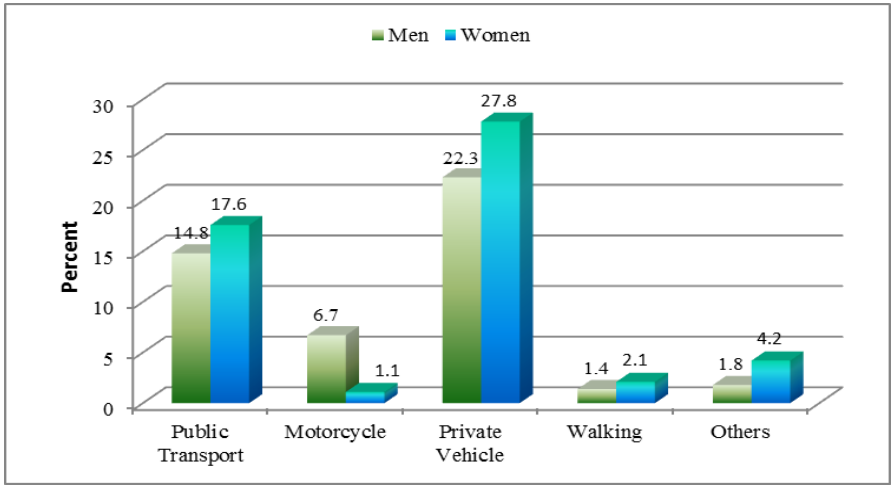

Figure 3 Usage of transport modes based on gender

c. Employment Status

The Chi-square test results (X^2 = 119 927, df = 18, p <0.001) revealed a significant relationship between employment status and the use of public transport. Follow-up test results (X^2 = 359.59, df = 5, p <0.001) showed that respondents working on a full-time basis (36.7 percent) use public transport only when necessary and only 19.4 percent use public transportation daily. Similarly, more unemployed respondents (76.9 percent), housewives (60 percent) and retirees (50 percent) use public transport only when necessary compared to those who do so on a daily basis. Meanwhile, an increasing number of part-time workers (41.3 percent) and students (52.0 percent) are using public transportation on a daily basis. Topping the list of respondents who used public transportation a long time ago are full-time employees (29.3 percent) as shown in Table 6 demonstrated that this group has the potential to own private vehicles shortly.

Table 5 Usage of public transport based on employment status

Frequency of Using Public Transport	Employment Status						
	Full-time workers (%)	Part-time Workers (%)	Unemployed (%)	Students (%)	Housewives (%)	Retirees (%)	Others (%)
Every Day	19.4	41.3	15.4	52.0	28.0	0	23.1
Occasionally	36.7	33.3	76.9	41.7	60.0	50.0	53.8
Long Time Ago	29.3	18.7	7.7	5.5	8.0	25.0	15.4
Never	14.6	6.7	0	0.8	4.0	25.0	7.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

d. Employment Sectors

The Chi-square test results (X^2 = 181 348, df = 12, p <0.001) reveal that there is a significant relationship between employment sectors and public transport usage frequency. The test results took into account the residual values of the highest number of respondents working in the government sector who used public transportation a long time ago (X^2 = 270.55, df = 3, p <0.001) and the highest number of respondents working in the private sector who use public transport on a daily basis (X^2 = 110.20, df = 3, p <0.001). Respondents who work in other sectors only use public transport when necessary. Table 6 shows that the majority of respondents working in the public sector (37.8 percent) used public transportation a long time ago. The same percentage of respondents who work in the private sector use public transportation on a daily basis while 37.5 percent of those in this sector use public transportation only when necessary. Respondents in the statutory body (41.5 percent), the self-employed (39.0 percent) and others used public transportation only when necessary.

Table 6 Usage of public transport based on employment sector

Frequency of Using Public Transport	Employment Sector				
	Public Sector (%)	Private Sector (%)	Statutory (%)	Self-employed (%)	Others (%)
Every Day	10.7	37.8	18.5	37.3	22.1
Occasionally	34.6	37.5	41.5	39.0	36.4
Long Time Ago	37.8	14.9	30.8	13.6	28.0
Never	16.9	9.8	9.2	10.2	13.5
TOTAL	100.0	100.0	100.0	100	100

e. Income of Respondents

The Chi-square test results (X^2 = 321 812, df = 18, p <0.001) revealed a significant relationship between income and the use of public transportation. The test results take into account the significant residual values. Respondents with an income of <RM800 use public transport on a daily basis (X^2 = 160.64, df = 3, p <0.001). Respondents earning between RM800 – RM1500 (X^2 = 136.96, df = 5, p <0.001) use public transport only when necessary and respondents with an income of > RM2001 (X^2 = 46.97, df = 5, p <0.001) used public transport a long time ago. The distribution frequency in Table 7 shown that the percentage of respondents who use public transport decrease with an increase in income.

Table 7 Usage of public transport based on income

Frequency of Using Public Transport	Income					
	<RM800 (%)	RM800 – RM1500 (%)	RM1501 – RM2000 (%)	RM2001– RM3000 (%)	RM3001– RM4000 (%)	>RM4000 (%)
Every day	49.7	22.9	16.5	5.8	1.8	.0
Occasionally	34.4	46.3	38.1	31.4	19.3	22.9
Long time ago	11.6	23.8	36.0	38.5	52.6	31.3
Never	4.2	7.1	9.4	24.4	26.3	45.8
TOTAL	100.0	100.0	100.0	100	100	100

f. Marital Status

The Chi-square test results (X^2 = 114 911, df = 6, p <0.001) reveal that there is a relationship between marital status and the use of public transportation. The test results (X^2 = 175.08, DF = 6, 2 <0.001) show that respondents who are single using public transportation more either on a daily basis (38.4 percent), or only when necessary (39.1 percent). On the other hand, 12.5 percent of married respondents use public transportation daily and 38.1 percent do so only when necessary. 37.9 percent of widows/widowers use public transport on a daily basis and 34.5 percent use public transport only when necessary.

Table 8 Usage of public transport based on marital status

Frequency of Using Public Transport	Marital Status		
	Single (%)	Married (%)	Widow/Widower (%)
Every Day	38.4	12.5	37.9
Occasionally	39.1	38.1	34.5
Long Time Ago	16.0	32.7	17.2
Never	6.5	16.7	10.3
Total	100	100	100

g. Working Spouse

The Chi-square test results ($X^2 = 129\ 302$, df = 6, $p < 0.001$) reveal that there is a relationship between a working spouse and the use of public transportation. Results of follow-up tests showed that significant ($X^2 = 85\ 050$, df = 3, $p < 0.001$) used public transport while her partner was not working, significant ($X^2 = 21\ 895$, df = 3, $p < 0.001$) demonstrates the use of public transport only when necessary. Frequency distribution in Table 9 shows that 23.1 percent of respondents with non-working spouses use public transport daily compared to 9.0 percent of respondents with working spouses. 37.0 percent of respondents with working spouses used public transportation a long time ago compared to 20.3 percent of those with non-working spouses suggests that more respondents with working spouses use private vehicles.

Table 9 Usage of public transport based on working spouse

Frequency of Using Public Transport	Working Spouse	
	Working Spouse (%)	Not Working (%)
Every Day	9.0	23.1
Occasionally	36.7	41.3
Long Time Ago	37.0	20.3
Never	17.4	15.4
Total	100	100

h. Vehicle Ownership

The Chi-square test results ($X^2 = 694\ 702$, df = 2, $p < 0.001$) revealed a relationship between vehicle ownership and the use of public transportation. Follow-up test results show that a significant ($X^2 = 328\ 029$, df = 3, $p < 0.001$) number of respondents who do not own private vehicles are dependent on the use of public transport. Frequency distribution in Table 10 below shows that

more than half the respondents (57.1 percent) who do not own private vehicles use public transport daily while 37.6 percent do so only when necessary. This is in contrast to respondents who own private vehicles where only 6.1 percent of them use public transport daily and 38.8 percent do so only when necessary.

Table 10 Usage of public transport based on vehicle ownership

Frequency of Using Public Transport	Vehicle Ownership	
	No (%)	Yes (%)
Every Day	57.1	6.1
Occasionally	37.6	38.8
Long Time Ago	3.7	37.1
Never	1.6	18.1
TOTAL	100	100

v) Frequency of Use of Public Transport

Follow-up testing was conducted to compare the frequency use of public transport daily, occasionally, a long time ago and never use public transport by the socioeconomic variables of age, employment status, a sector of employment, income, marital status, a working spouse and vehicle ownership. The results indicated that there is a significant relationship between variables and the frequency of use of public transport. Table 11 shows that the respondents (high residual value) using public transport daily are students and young talents (aged 20 – 24 years) during the early stages of their careers, low wage earners who are mostly employed in the private sector and singles who do not own a private vehicle. Respondents who use public transport 'only when necessary' (occasionally) are those who are a few years into their careers, those in the lower middle-income group, government or private sector workers, those who are married with working spouses and those who own private vehicles. At this stage the possibility exists that spouses may share the use of a private vehicle. Respondents who used public transport 'a long time ago' are mostly mature adults, those in the middle-income group, those working in government sectors, those who are married, and those who own private vehicles. At this age, most of the respondents are stable in their careers, married with children, and own cars. There is also the possibility that the respondents may possess more than one private vehicle. The employment status variable dominates with full-time employees, establishing themselves as the group that use public transportation most frequently.

Table 11 Usage of public transport based on socioeconomic

	Age	Employment Status	Employment Sector	Income	Marital Status	Working Spouse	Vehicle Ownership
Every Day	20 – 24 years	Part-time workers, Students	Private	>RM800	Bachelor	Not working	No
Occasionally	20 – 29 years	Full-time workers	Government, Private	RM800 – RM1500	Married	Working	Yes
Long Time Ago	27 – 34 years	Full-time workers	Government	>RM2001	Married	Working	Yes
Never	30 – 34 years	Full-time workers	Government	>RM4000	Married	Working	Yes

vi) Possibility of Using Private Vehicles

Respondents who do not own private vehicles were provided with a six-level Likert scale response to the possibility of using private vehicles shortly. Figure 4 shows that the majority of respondents (44.5 percent) responded with 'very likely' and only 1 percent responded with 'very unlikely'. This chart reveals that 95.2 percent of respondents indicated a desire to own private vehicles, and this suggests that car ownership will rise in the future.

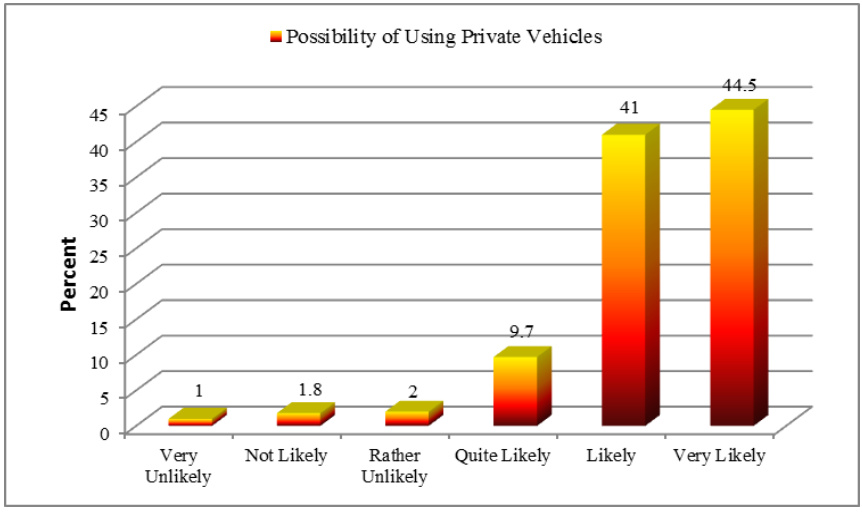

Figure 4 Possibility of using private vehicles

Discussion and Conclusion

This paper discusses the results of a study on the modes of transport and how the frequency of use of public transport is influenced by the socioeconomic background whereas it is very limited studied by researchers. Test results demonstrated that background variables and the socioeconomic situation of individuals influence the choice of transport modes (either public transport or private vehicles). Statistical analysis revealed that users who are full-time workers, governmental staff, adults, those in the steady-income group and those married with a working spouse have the potential to own private vehicles. Public transport is mostly used by teenagers, the unemployed (students and housewives), part-time workers, those in the low-income group and singles. However, does not imply that those in this category do not have the potential to own vehicles. A secure financial situation and a stable family life in the future can lead to vehicle ownership. The authorities need to consider all issues, including internal factors, to encourage the use of public transportation by all levels of society.

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