

People's Perception of Public Transport Services in Oman

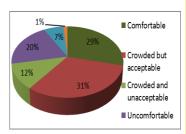
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Graphical abstract



Abstract

The role of public transport services is crucial in ensuring mobility. The Sultanate of Oman has shown a remarkable growth in the last three decades in almost all areas except in the development of public transport infrastructure and services. Currently, Public transportation is a pressing concern for Oman and is attracting much attention, especially in light of increasing traffic congestion and safety concerns. This research followed a public needs assessment and opinion survey approach and covered 2000 respondents in the Al Batinah region of Oman. A quantitative analysis was initially performed using the SPSS, which was later followed by a qualitative analysis. The specific objectives were to conduct a socio-economic feasibility analysis towards the establishment of an effective public transport system in Oman and to study residents' requirements, sharing habits, traveling behaviors, expenditure and expectations towards public transport in Oman. The study concludes that public transportation in Oman is still in its infancy, and the introduction of a public transport system has taken an unusually long time. People realize the need for a better system, but their knowledge of different transport modes and their use is very limited. People's attitudes towards using public transport are positive; however, they much prefer to use their own cars. The nearest substitute to the personal car is the taxi, which largely fulfills the role of public transport, barring very few bus lines. On the socio-economic front, this study does not find any major obstacles to the adoption and use of public transportation in Oman.

Keywords: Public transport; Oman; people's perception; socio-economic

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■1.0 INTRODUCTION

Public transportation services are vital for civic life. The need for an effective public transportation service is felt in every country. Well implemented and managed public transportation systems are crucial to society, industry, and government alike. Every country has public transport users, apparent or latent, who need and value different modes of public transport as a means to reach various destinations.

Even in developed countries, the use of public transport is growing. For example, in the United States, transit use has risen 21% in the last five years. In 2000, Americans used public transport 9.4 billion times, representing the highest transit ridership in 40 years. According to the American Public Transport Association (APTA), the economic benefits of transit are manifold for both the transit riders and the business community. Some of these benefits are stimulation of economic health, prosperity and development; relief from traffic congestion; increased vitality of major cities; good connections between workforces and workplaces; reduced energy consumption; clean air standards; and generation of jobs created by the transit sector. Other factors that encourage the establishment and use of public transportation systems are increases in fuel prices, reducing family budgets, and a concern to control pollution (http://www.publictransportation.org).

Oman is one of the fast emerging economies in the Middle East. Oman is an Arab state in southwest Asia, which is situated

along the Arabian Sea and the Gulf of Oman and is bordered by the United Arab Emirates (UAE) to the northwest, Saudi Arabia to the west. The Al Batinah region (which is now divided into North and South) of Oman consists of twelve wilayats and is home to a big portion of Oman's population. Despite its prominence as a key region, Al Batinah does not offer good options of public transportation to commuters. People either use the few available shared taxis or are overly dependent on their private cars. While the former situation is inconvenient, the latter leads to an unnecessarily high-traffic volume, causing an increase in the number of accidents and a higher individual expenditure on transport. Al-Batinah region attracts the largest number of fatalities caused by road accidents in Oman.² Furthermore, a high proportion of a typical salary goes into meeting transportation expenses and, as a result, people are left with a lower disposable income. The expenses with the rise in the prices of consumables have reduced the standard of living of certain groups of people to a subsistence level 3

Public transportation is a pressing concern for Oman and is attracting much attention, especially in light of increasing traffic congestion, safety concerns, and inflation. Although towns in Al Batinah do not yet suffer the gridlock traffic congestion that has already plagued Muscat, they will not remain unaffected for long. Transport authorities need to act before Muscat-like problems are duplicated in other townships. Currently, Al Batinah region occupies a premium place in the industrial development of the

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country. It is undergoing tremendous growth in industrial establishments and there are further plans to relocate more enterprises from Muscat to this region. The present road system connects the main towns in Al Batinah to the local and transnational traffic in a single main artery – on the highway connecting Dubai and Muscat. Such a structure invites congestion, for there are no alternative routes. Despite these threats and inconvenience, public transport has not taken any significant strides in the past decades. Facing the acute shortage of different modes of public transport, this study studies the perception of residents towards public transport.

■2.0 SITUATION ANALYSIS AND THE OBJECTIVE OF THE STUDY

Public transport services in Oman, so far, have been restricted to shared taxis and buses, which are necessarily limited. Taxis, coach and bus services are the sole public transport services in Oman, and these cover selected routes between the capital Muscat and a few cities (http://www.omanet.om/english/useful/transport.asp). Currently, these services do not fulfill the transit needs of the public. Taxis are the most significant form of public transport followed by bus with limited services. Buses are infrequent and people do not rely much on them for their day to day journeys. Taxis are used more frequently than buses but are unmetered, and fares are dictated most of the time by the taxi drivers. Ferries are present on a few selected circuits. Trains, trams, metros, monorails, rails, articulated buses, or trolley buses, which are often found in Europe and other countries, are not yet present in Oman. The success of initiatives taken by different emirates in UAE, its neighboring country in the area of public transport has given a good lead to rest of the Arab world. It could be said, therefore, that Oman has a primitive public transport system. Although the world witnessed the evolution of the first organized form of public transport services in Paris in 1662 4, Oman's National Transport Company (ONTC) is still struggling to establish an organized, frequent, and quality-oriented bus service to its residents. Currently, ONTC operations are limited to 10 long-distance routes within the Sultanate. While public transport agencies across the globe are engaged in dealing with higher-order challenges such as carbon-footprints and energy conservation, Oman is still hoping to win public support to promote the use of public transport within the country.

Road accidents in Oman have become a major concern to families and communities at large.⁵ Oman records the highest death rate from road accidents in the GCC. The Global Road Safety Report 2013 of WHO reveals a figure of 30.4 deaths per 100,000 people which were registered in 2010.6 While economizing on fuel has been one of the major concerns for the introduction of public transport in many countries, road safety has been a pressing need for Oman, which is a fuel surplus country and has not much to claim in the history of public transport. The role of the ONTC, established in 1972 and re-established in 1984 by Royal Decree 59/84 to operate public transport services to every part of the Sultanate, has been limited to long haul services only. ONTC, however, has planned to reintroduce urban-suburban services with new airconditioned buses, and to upgrade all the present interior and international routes to centers such as Sur, Buraimi, Dubai, and Abu Dhabi, with brand new coaches (see www.ontcoman.com). However, the demand for public transport in Oman still remains unfulfilled. Oman is considering building a total of 1061 km railway track linking the industrial cities along the four routes for

passenger and cargo transport.⁸ Additionally, increasing attention is being given to the development of road networks (in the form of structural plans and construction of expressways) and public transport.⁹

The objective of this study was to study the status of public transport in Oman, to assess people's awareness and perceptions of public transport, and to find out answers to questions related with the adoption and use of public transport. These questions are covered a range of issues, e.g., the means of public transport currently being used, their perceived benefit, people's frequency of traveling, most popular destinations, reasons behind using personal cars, occasions requiring public transport, public transport experience, use and constraints, and inclination and preference.

■3.0 APPROACH AND METHODOLOGY

The study took the form of a public needs assessment and opinion survey. The respondents in the targeted areas were selected using a quota sampling. However, efforts were made to maintain randomness similar to that which could be obtained by using stratified sampling. As a rule of thumb, every third house in each settlement in the study areas was approached to contact the respondents. Altogether, a sample of 2000¹ people was taken from the targeted settlements of the Al Batinah region in proportion to their actual population in 2007, as shown in Table 1.

Table 1 The composition of the quota for the surveyed population

Town	Population*	Quota
Sohar	119983	520
Shinas	51465	220
Liwa	28712	125
Saham	94908	415
Al Khaburah	51876	220
As Suwayq	114246	500

*Source: Statistical Year Book 2008, Issue 36, October 2008, Ministry of National Economy, Sultanate of Oman

Contiguous places were marked, and a survey plan and itinerary were developed to survey each region. Responses from native and expatriate residents concerning public transport issues were collected using questionnaires by trained student data enumerators. The questionnaires were produced in Arabic and English and were pilot-tested twice for their content and question clarity. The questionnaires carried both open and close-ended questions to secure the opinion of the respondents. The data were analyzed using qualitative and quantitative methods of analysis, supported by the SPSS statistical software and MS Excel application. The transcripts from open-ended questions were generated and analyzed qualitatively. The analysis and findings were validated by further discussion with the entire research team, student enumerators, and a wider audience. The results accord with the findings of the pilot study published in the Journal of Public Transportation. 10 Thus, internal validity was ensured through pilot testing and debriefing, and external validity through replication. In a separate exercise, the results of the analysis were discussed with

The population was 461,190 for the six regions in 2007. A 95% confidence level with 2% confidence interval leads to 2389 of sample size using web

key officials, academics, the business sector, and other stakeholders in a joint seminar conducted at Sohar University, in association with UITP. The findings were shared and discussed with a large audience.

The following sections of this report present the findings, analysis, discussion, and conclusions of the study. The first section analyzes and summarizes closed-ended responses. This is followed by an analysis and summary of open-ended responses. Finally, a deeper analysis using cross comparisons is offered.

■4.0 ANALYSIS AND FINDINGS

Table 2 presents a demographic profile of sample respondents who participated in this survey. It is evident that the majority of the respondents were Omani nationals - both male and female. The majority had a secondary or higher education, a low monthly income, and were less than 50 years of age. The profile further indicates that most of the respondents lived in suburban areas. Married people outnumbered unmarried people, and people holding driving licences outnumbered those who did not. Overall, the sample was representative, although there were higher proportions of educated and working people among the respondents than in the general population. This was because such people came forward to respond when someone knocked at the door of a household to collect the data.

Table 2 Demographic profile of sample respondents (N = 2000)

Attribute	Percentage
Nationality	
Omani	91
Non-Omani	9
Education	
Higher	30
Secondary	46
Primary	16
None	9
Monthly Income	
Less than OMR 200	54
Between OMR 200 and OMR 500	29
More than OMR 500	17
Work Status	17
Services	57
Business	13
House hold duties	14
Unemployed	8
Student	9
Gender	
Male	67
Female	33
Age	
Less than 30	56

Attribute	Percentage
Between 30 to 50	36
More than 50	7
Marital Status	
Unmarried	42
Married	56
Divorced/Widowed	2
Driving License	
Have	59
Don't have	41
Resident of	
Urban area	18
Rural area	82

Figure 1 shows the composition of the respondents and their affiliations within the Al-Batinah region. This composition establishes that the samples conformed to the sampling plan, and that each proportion was representative of their actual distribution in the population.

Table 3 represents respondents' familiarity with different regions within Oman. It is evident that respondents were familiar with most of the regions of Oman; however, the majority were familiar with the Al-Batinah and Muscat region.

Table 4 indicates that personal automobiles dominate the modes of transport used; 48 percent of the respondents claimed that they use cars. Family cars are used by those who do not own personal cars (30% of the cases).

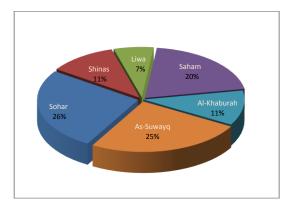


Figure 1 Respondents' affiliation to Al-Batinah region

Agglomerating the responses of the users of car-pooling, buses, and taxis; not more than 20% of respondents were found sharing vehicles for their transport needs. While the majority use taxis, the share of bus services (ONTC/ Chartered services) is minimal. Other means of transport that emerged in the open-ended response were official transport, school buses, motorbikes, and bicycles.

Table 3 People's familiarity with the regions within Oman

	Responses*			
Regions in Oman	N	Percent	Percent of Cases	
Muscat	967	21.0%	48.6%	
Batinah	1835	39.9%	92.2%	
Musandam	169	3.7%	8.5%	
Buraimi	515	11.2%	25.9%	
Dakhiliyah	239	5.2%	12.0%	
Sharqiyah	212	4.6%	10.6%	
Dhahirah	230	5.0%	11.6%	
Wusta	132	2.9%	6.6%	
Dhofar	301	6.5%	15.1%	
Total	4600	100.0%	231.0%	

^{*}Multiple response data

As indicated in Table 4, one of the reasons for the low dependence on public transport is the availability of personal automobiles. Almost 50% of the respondents claimed that they own

Among the non-owners, the majority (62%) claimed that they cannot afford one. However, there were some (16%), who claimed that they can manage without a personal car (Table 5).

Table 4 Means of transport currently being used

Means	Responses		
	N	Percent	Percent of
			Cases
Personal Automobile	938	43.1%	48.8%
Family Car	587	27.0%	30.5%
Friends, Relatives or	165	7.6%	8.6%
Neighbors' Car			
Car pool	80	3.7%	4.2%
Taxis	380	17.5%	19.8%
ONTC/Chartered services	25	1.1%	1.3%
Total	2175	100.0%	113.1%

^{*}Multiple response data

Other reasons that emerged for not having a car were availability of official transport, lack of a driving license, fear of driving, pick up and drop off by family members, and old age.

Table 5 Reasons for not having a car

		Responses				
N	Percent	Percent of				
		Cases				
90	10.5%	11.6%				
541	62.8%	69.8%				
144	16.7%	18.6%				
86	10.0%	11.1%				
861	100.0%	111.1%				
	90 541 144 86	90 10.5% 541 62.8% 144 16.7% 86 10.0%				

^{*}Multiple response data

Figure 2 gives the composition of the respondents with respect to their use of public transport. While the majority (41%) travel very rarely by public transport, only 17% of the respondents use public transport daily to meet their transport needs.

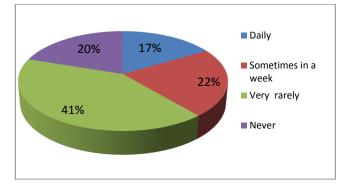


Figure 2 Frequency of traveling using public transport (N=1998)

Among the reasons cited for not using public transport regularly, the prominent ones are not feeling the need, unavailability of services (between origins and destinations), and the poor connections/ transfers. Other reasons that emerged in an openended response were availability of personal or official transport; long waiting times; discomfort; and slow, undependable, and unmetered services. Table 6 presents the reasons for not using public transport on a regular basis.

Table 6 Reasons for not using public transport regularly

Reason		Responses	S
	N	Percent	Percent of Cases
No service where I am or where I want to go	358	14.8%	21.3%
I can't afford it	195	8.0%	11.6%
Poor connections or transfers	260	10.7%	15.5%
I don't know about it	46	1.9%	2.7%
Limited hours of operation	215	8.9%	12.8%
I don't feel safe	267	11.0%	15.9%
I don't know how to use bus services	82	3.4%	4.9%
I don't need it	1002	41.3%	59.7%
Total	2425	100.0%	144.5%

^{*}Multiple response data

Although most of the respondents prefer public transport for long distance travel, they also confirmed its need for within-city or short-distance travel (Table 7).

Table 7 People's preferences for public transport

Type of travel		Response	S
	N	Percent	Percent of Cases
Within city	663	27.8%	33.9%
Short distance travel	609	25.5%	31.1%
Long distance travel	1113	46.7%	56.8%
Total	2385	100.0%	121.8%

^{*}Multiple response data

For most of the respondents, transport services to city-centers or sougs are important. However, they also need transport to visit hypermarkets and recreational places (Table 8). The majority of open-ended responses witnessed a general response of 'everywhere'. Other places that people need public transport to visit are hospitals, schools, airports, workplaces, tourist spots, Haj/Omra², Muscat, UAE, and other neighboring countries.

Table 8 Places people need public transport to visit

Destination	Responses		
	N	Percent	Percent of
			Cases
City Centers or Souqs	1074	47.5%	66.5%
Hypermarkets	556	24.6%	34.4%
Recreational Facilities	630	27.9%	39.0%
Total	2260	100.0%	139.9%

^{*}Multiple response data

Respondents made suggestions of ways to improve public transport. In order to meet their public transport needs, the majority of the respondents suggested the introduction of newer transport modes, more services to towns, and more vehicles on the existing routes, in decreasing order of priorities (Table 9). Other suggestions that emerged from the open-ended responses were mainly related to development of newer transport modes, roads, and routes; and improvements/ extensions to the existing ones.

Table 9 Suggestions for improvements in public transport

Suggestions	Responses		
	N	Percent	Percent of Cases
More public transport on existing routes	751	21.9%	39.6%
More services to towns	870	25.3%	45.9%
Improvement of longer stretches of dedicated or express services	677	19.7%	35.7%
Introduction of newer modes of transport	1137	33.1%	59.9%
Total	3435	100.0%	181.1%

^{*}Multiple response data

Respondents revealed a mixed awareness about the perceived benefits of public transport. The majority acknowledged its potential for reducing traffic congestion and the number of accidents. Other major perceived benefits are presented in Table 10

Table 10 Perceived benefits of public transport

Perceived benefits		Respo	nses
	N	Percent	Percent of Cases
Reducing traffic congestion	1170	20.6%	59.8%
Reducing number of accidents	1170	20.6%	59.8%
Reducing cost of travel	928	16.4%	47.4%
Improving work efficiency	518	9.1%	26.5%
Linking rural and urban areas	798	14.1%	40.8%
Conserving oil resources	567	10.0%	29.0%
Conserving the environment	521	9.2%	26.6%
Total	5672	100.0%	289.7%

^{*}Multiple response data

² Hajj/Umrah, in Islam, is the annual pilgrimage to Mecca, Saudi Arabia. See http://en.wikipedia.org/wiki/Hajj

When discussing different modes of public transport, the respondents indicated their preference in decreasing order for taxis, large-buses, train, and mini-buses (Table 11). Other options that emerged as open-ended responses were airplanes and ships.

Table 11 Forms of public transport preferred

Modes of transport		Responses		
	N	Percent	Percent of Cases	
Large Bus	624	25.4%	31.8%	
Mini Bus	395	16.1%	20.2%	
Taxis	924	37.6%	47.1%	
Train	515	21.0%	26.3%	
Total	2458	100.0%	125.4%	

^{*}Multiple response data

Figure 3 presents people's perceptions of using public transport services. Almost 60% of the respondents consider it acceptable, although a large number of respondents (31%) perceive public transport services as crowded. Twelve percent of the respondents consider it 'crowded and unacceptable' and 20% perceive public transport as uncomfortable.

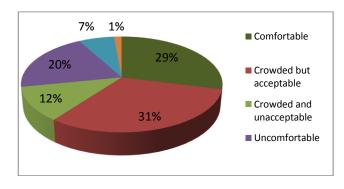


Figure 3 Public perception of public transport services (N = 1972)

Though people rely heavily on their private and family cars, they still use taxis or buses for travel. Figure 4 presents maximum monthly expenditure on transport. While 24% of respondents spend between OMR 10-20 on transport, 41% spend more than OMR 20.

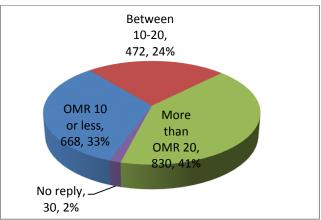


Figure 4 Maximum monthly expenditure on transport

A majority (73%) of the respondents felt the need for public transport while a quarter did not (Figure 5).

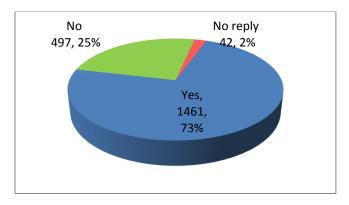


Figure 5 Whether public realize the need for public transport

Occasions when members of the public feel they need public transport are presented in Figure 6. Only 21% of the respondents expressed the need for public transport on a day-to-day basis, and 25% said 'sometimes in a week'. A low percentage (9%) of the respondents denied feeling such a need, while a considerably high percentage (15%) of the respondents refrained from commenting.

Cross comparisons of Table 6, Figure 5, and Figure 6 reveal that where 59.7% of the respondents categorically expressed that they did not need public transport, 73% recognized its need in subsequent probing, and except for 9% who categorically denied its need, and 15% who were silent, 88% of the respondents expressed a need for public transport services, albeit with different frequencies. This indicates that greater awareness and the provision of public transport services have the potential to convert non-users into active users.

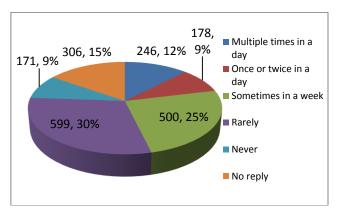


Figure 6 Composition of people feeling the need for public transport

Figure 7 shows the public's perception of public transport benefits. The height of the bars indicates that people are in strong agreement that public transport benefits society. Respondents express a moderate level of agreement that public transport is convenient, economic, and comfortable. However, public perceptions are mixed about safety aspects. A relatively high number of respondents perceive that public transport is not particularly safe.

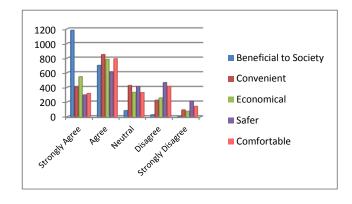


Figure 7 Public perception of public transport benefits (N= 2000)

Furthermore, as Figure 8 indicates, respondents agree to use public transport in general, but are often reluctant to use it in summer. Their opinions are divided over the issue of sharing public transport with people of the opposite sex, and also on the issue of whether socio-cultural barriers prohibit the use of public transport. Respondents significantly disagree about sharing public transport with the opposite sex, but refute, collectively, that socio-cultural barriers affect their use of it. They further disagree that the use of public transport belittles their status.

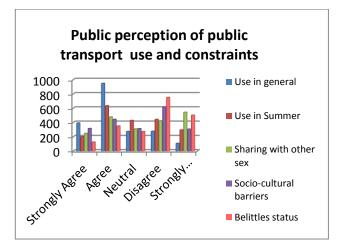


Figure 8 Public perception of public transport use and constraints (N= 2000)

The results of the survey show that a majority of respondents have had a positive experience with public transport in the past, and have a strong inclination to use it in the future. However, they still show a considerable preference for using a personal car to meet their transport needs (Figure 9).

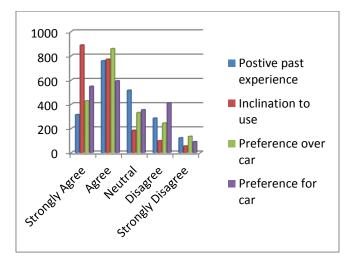


Figure 9 Public transport experience, inclination and preference (N= 2000)

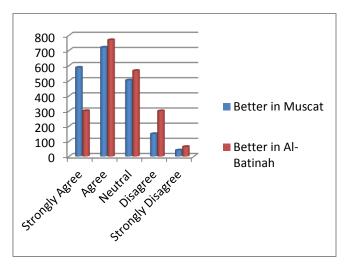


Figure 10 Public perception of public transport service (N= 2000)

Figure 10 compares public perception of public transport services in Muscat, Al-Batinah, and other regions of Oman. Respondents rate the services in Muscat as better than those in the Al Batinah region. However, services in both regions are rated higher than in other parts in Oman.

4.1 Public Perception and Demographics

This section examines the findings from the perspective of demographics such as nationality, level of education, schooling, and income. From a nationality perspective, sharing transport with a person of the opposite sex was more acceptable to non-Omanis than to Omanis (t = 4.978, df = 1991, sig = 0.000). Overall, it was observed that as people become more educated in Oman, they spend more money on transportation but use public transportation less frequently, consider it less safe and convenient, and tend to dislike sharing it with others. Monthly income had a positive relationship with car ownership (Somer's d= -0.056, sig. =0.004), but a negative relationship with the use of public transportation (Somer's d= -0.199, 0.000). A considerable number of respondents owned a car and had a monthly income less than 200 OMR, but spent more than 20 OMR monthly on transport. This revealed that transportation costs constrained the livelihood of some poorer respondents. Nevertheless, the majority of respondents have a

strong preference for using private cars. This together with the scanty public transport services, safety concerns, poor connections or transfers, and limited hours of operations discussed previously impose major challenges to the adoption and use of public transportation. The maximum monthly expenditure on public transport differed significantly between urban and sub-urban dwellers ($\chi^2 = 7.899$, df = 2, sig. = 0.019).

Car ownership was higher among people with a higher work status (businessmen or employees). Elderly people accepted the statements that use of public transport belittles their social status (Somer's d =0.067, sig. =0.004) and socio-culture barriers prevent them from using public transport in Oman (Somer's d=0.062, sig. =0.009). Nevertheless, they expressed their willingness to use public transportation in contrast to younger respondents who were more inclined to use personal cars. Although both female and male respondents expressed agreement with the merits of public transportation, females significantly contradicted males by disagreeing that public transport is safer than private transport (t= -5.312, df = 1998, sig. = 0.000), that they don't mind sharing taxis with passengers of the other sex (t= -12.746, df =1998, sig. = 0.000), and that socio-culture barriers do not prevent them from using public transport in Oman (t= 5.440, df =1998, sig. = .000). Although significant difference in perception was observed with respect to marital status, married respondents exhibited comparatively higher car-ownership and maximum monthly expenditures on transport.

■5.0 CONCLUSION

Public transportation services are vital for civic life as they are important for ensuring basic access, mobility, and safety for the masses. Public transportation is a pressing concern for Oman and is attracting much attention and thought, owing to the increased traffic congestion in many regions and a concern about safety aspects. Except taxis, there are not many options for people to commute. People's perceptions of the merits of public transport are positive, but their exposure with different modes of public transport is limited. Besides the availability and level of service, use of a personal car is the biggest barrier against the use of public transport. The study revealed that almost half of the respondents own cars; 30% depend on their family cars; and only 20% use taxis and buses to meet their transport needs. While the majority does not feel the need for public transport, others report that unavailability of services (between origins and destinations), poor connections/ transfers, availability of official transport to some people, long waiting hours, discomfort, slow, and undependable services are the main reasons for not using public transport regularly. Therefore, the use of personal cars will dominate all modes of transport unless different modes are offered to the common public. People mainly prefer public transport for long-distance travel and desire large buses and trains, in addition to taxis. Currently, there are few claimers for public transport services. Use of public transport during the summer months, lack of willingness on the part of females to share public transport with males, status consciousness, and affinity to cars are the major barriers. Finally, it can be concluded that public transportation in Oman is still in its infancy. The current mix of public transport is not sufficient. introduction of a public transport system has taken an unusually long time and needs more attention and commitment. People realize the need for a better system, but their knowledge of different transport modes and their use is very limited. People's attitudes towards using public transport are positive; however, they much prefer to use their own cars. The nearest substitute to the personal car is the taxi, which largely fulfils the role of public transport, barring a very few bus lines. On the socio-economic front, this study does not find any major obstacles to the adoption and use of public transportation in Oman. However, there is an urgent need for certain policy initiatives, innovative solutions, and the provision of basic public transport services to induce people to adopt and use public transport as a part of their lives.

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