



National Household Travel Survey 2010

Introduction

Transport Malta, together with the Ministry for Infrastructure, Transport and Communications, commissioned PricewaterhouseCoopers to conduct a National Household Travel Survey, on 26th May 2010. This survey was the third one of its' kind in Malta. The first two were held in 1989 and 1998 respectively.

The first survey was undertaken by the Planning Services Division of the Works Department, as part of the preparation of the Structure Plan for the Maltese Islands, and also to feed into a national transport model, which was being developed together with British consultants, Colin Buchanan & Partners.

The second survey was conducted by PriceWaterhouseCoopers (PwC) on behalf of the then Planning Authority, also to feed into an updated national transport model. Through this model, land-use scenarios were tested to see how the development of new land can affect the road travel.

A single National Household Travel Survey (NHTS) should give very valuable information, providing a very clear picture of the travel patterns of the Maltese population, and allowing us to plan transport infrastructure better, both in terms of road and public transport services. However, given that there are another two previous such surveys, the 2010 National Household Travel Survey (NHTS2010) gives us a third point to plot on our graph of changing traffic trends.

Methodology

Being the third in a series of surveys, this year's NHTS was granted the benefit of hindsight. Therefore whilst the 2010 survey sought to be consistent with the previous surveys in terms of overall methodology and the type of data collected, it was also an opportunity to correct the few inefficiencies and anomalies noted after the 1998 survey.

The management and execution of the whole project was a particularly important aspect to be changed. In 1998 the survey preparatory work had been shared between the consultants and the then Planning Authority, and this had led to several difficulties in the overall management of the project. Therefore this year the whole project was allocated to the consultants to manage, and a project coordination committee was set up which included a Chief Officer from Transport Malta together with transport and planning officers who had been involved in one or both of the previous surveys. In this way the consultants could work at their agreed pace and have regular guidance and assistance from the coordination committee. This

worked well particularly with regard to ensuring the survey material reflected the 2010 objectives. It also ensured that the questionnaires and travel-diaries remained user-friendly and free from contradictory questions or mistranslations between the Maltese and English versions.

From the previous years' experiences, marketing the survey during the lead up to Survey Day was another crucial part of the project. There was clearly a greater availability of media this year and the consultants took full advantage of this; from setting up an NHTS2010 website where respondents could complete their diaries; to providing training sessions at selected local council premises; and regular SMS reminders on the day. As in previous years this was supplemented by simple effective interviews and announcements on popular TV and radio shows in the weeks before the event.

This year the sample selection was taken from the local council electoral register and proportioned to a statistically representative number of households at a district level (with districts as defined by the NSO). The list of households was then proportioned further according to the size of the local council areas within each district. This combined the two approaches of the previous surveys where in 1989 the district level had been used (prior to the set up of local councils), and in 1998 the sample of households had been apportioned directly at local council level. Ultimately this meant that a smaller response rate would give similarly accurate results; and in fact in 2010 the target had been 6000 households with 6,666 actual responses, whereas in 1998 the target had been 8000 households with 7,855 actual responses.

Results and comparisons to previous NHTSs

The NHTS2010 questionnaires were answered by 6,666 households containing a total of 16,952 persons. Between them, these people made 41,771 trips during the survey day.

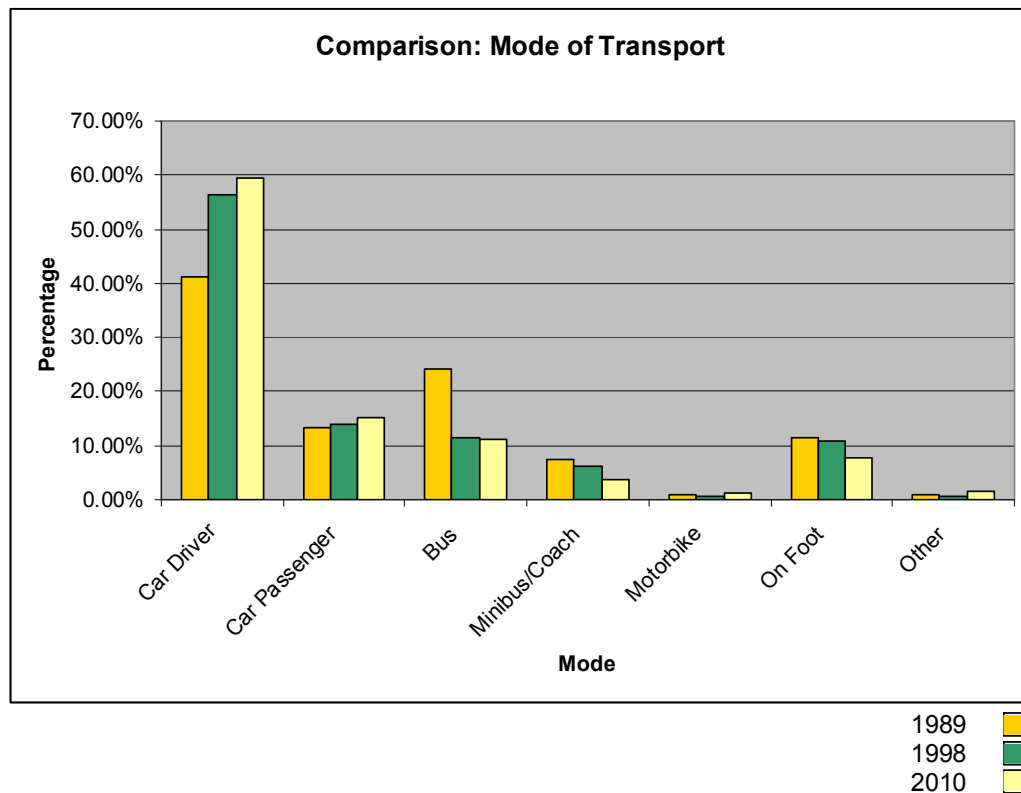
A National Household Travel Survey reveals very important information regarding the origin and destination of these trips, and the NHTS2010 even goes into detail by street name (whereas previous HTSs recorded only general localities). This is very useful information that is used when assessing proposals for new road infrastructure or public transport systems and connections. The data is available in a multi-dimensional matrix, with the 41,771 trips distributed according to origin, destination, mode of transport, time of trip, purpose of trip, etc. Unfortunately, this would be impossible to reproduce on a report, and therefore the following is a selection of sets of data that have been extracted from the NHTS2010 and which are considered to be important in terms of planning and national interest. It should be noted that given the amount of data available, any combination of variables may be used to extract specific queries; these would of course be dependent on what that particular request is trying to establish; for the purposes of this report, a sample of possible outputs is presented, which show some of the most significant changes between HTSs.

The most important result of a National Household Travel Survey is the "Modal Split", which shows the means of transport used for the different trips.

The table below shows this Modal Split and how it has changed in comparison with the previous two surveys.

Mode of transport	1989	1998	2010
Car Driver	41.3%	56.4%	59.4%
Car Passenger	13.4%	13.8%	15.2%
Bus	24.3%	11.4%	11.3%
Minibus/Coach	7.4%	6.2%	3.7%
Motorbike	1.0%	0.7%	1.1%
On Foot	11.6%	10.9%	7.6%
Other	0.9%	0.6%	1.7%

Table 1: Comparison of Mode of Transport



Graph 1: Comparison: Mode of Transport by HTS Year

The Table below shows the difference in the 2010 Modal Split, between Malta and Gozo.

Mode of transport	Malta (only)	Gozo (only)	Malta and Gozo
Car Driver	60.0%	56.2%	59.4%
Car Passenger	14.7%	17.4%	15.2%
Bus	12.2%	6.8%	11.3%
Minibus/Coach	4.0%	2.3%	3.7%
Motorbike	0.7%	2.8%	1.1%
On Foot	7.4%	8.5%	7.6%
Ferry	0.2%	5.0%	1.0%
Other	0.7%	1.0%	0.7%

Table 2: Comparison of Mode of Transport between Malta and Gozo

These results can be compared with similar international data. The following is the modal split in the 27 EU countries in 2007, by length of passenger kilometres travelled.

	Car	Public Transport
Austria	75.7%	24.3%
Belgium	79.3%	20.7%
Bulgaria	70.6%	29.4%
Czech Republic	69.9%	31.1%
Cyprus	80.9%	19.1%
Denmark	80.1%	19.9%
Estonia	76.7%	23.3%
France	83.9%	16.1%
Finland	84.3%	15.7%
Germany	84.4%	15.6%
Greece	78.8%	21.2%
Hungary	59.5%	40.5%
Ireland	81.6%	18.4%
Italy	81.8%	18.2%
Latvia	81.8%	18.2%
Lithuania	90.7%	9.3%
Luxembourg	84.8%	15.2%
Malta	80.5%	19.5%
Netherlands	83.2%	16.8%
Poland	82.3%	17.7%
Portugal	82.3%	17.7%
Romania	69.3%	30.7%
Slovenia	85.1%	14.9%
Slovakia	69.9%	30.1%
Spain	79.7%	20.3%
Sweden	82.6%	17.4%
United Kingdom	86.1%	13.9%

Source: Eurostat, ITF (2007)

Table 3: Comparison of Mode of Transport in the EU

Nevertheless, because of the size of Malta, which is often compared to a small European city, it may also be important to compare to specific cities within the EU. These are more comparable, because of the distance travelled in each trip, since the table above includes long distance travel between cities, which account for large proportions of the passenger kilometres travelled.

City	Inhabitants	Car	Public Transport	Foot & Cycle
Amsterdam (Netherlands)	718,000	34%	16%	47%
Groningen (Netherlands)	170,000	36%	6%	58%
Delft (Netherlands)	93,000	40%	7%	49%
Copenhagen (Denmark)	562,000	33%	20%	47%
Arhus (Denmark)	280,000	51%	15%	32%
Odense (Denmark)	1,983,000	57%	8%	34%
Barcelona (Spain)	1,643,000	29%	39%	32%
L' Hospitalet (Spain)	273,000	28%	36%	35%
Mataro (Spain)	102,000	43%	8%	48%
Vitoria (Spain)	215,000	17%	16%	66%
Brussels (Belgium)	952,000	54%	26%	10%
Gent (Belgium)	226,000	56%	17%	17%
Bruges (Belgium)	116,000	53%	11%	27%
MALTA	400,000	74.6%	15.0%	7.8%

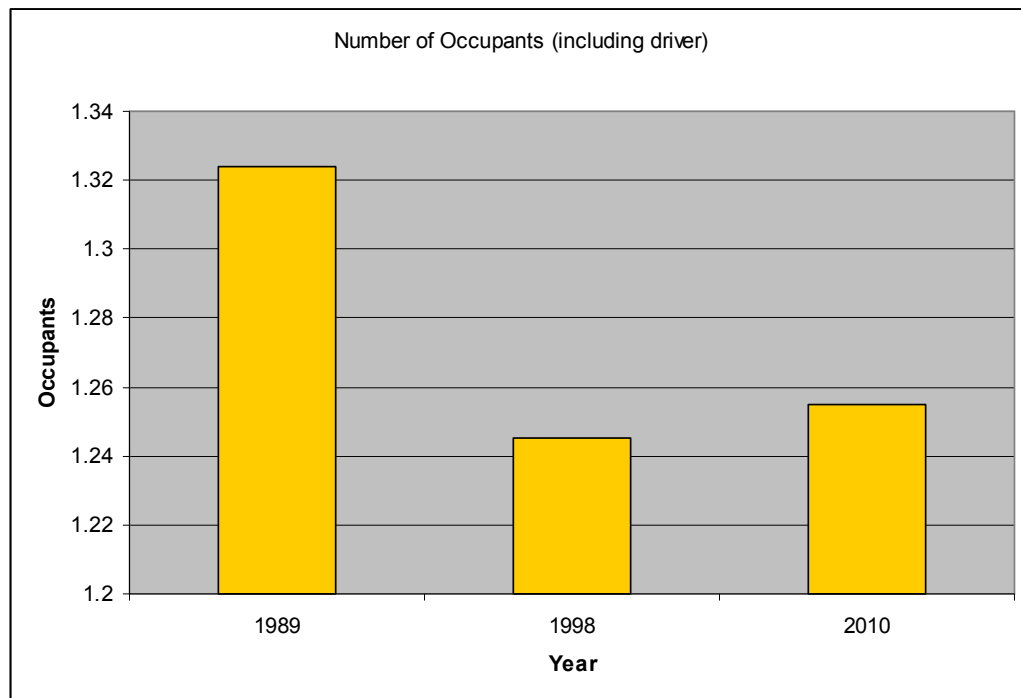
Source: ADONIS (1998)

Table 4: Comparison of Mode of Transport by Similar Region

The average number of people in a car is also a good indicator of how efficiently we are making use of our resources. The table below shows how this has changed over the past three surveys.

	1989	1998	2010
Number of Occupants (including driver)	1.324	1.245	1.255

Table 5: Car Occupancy

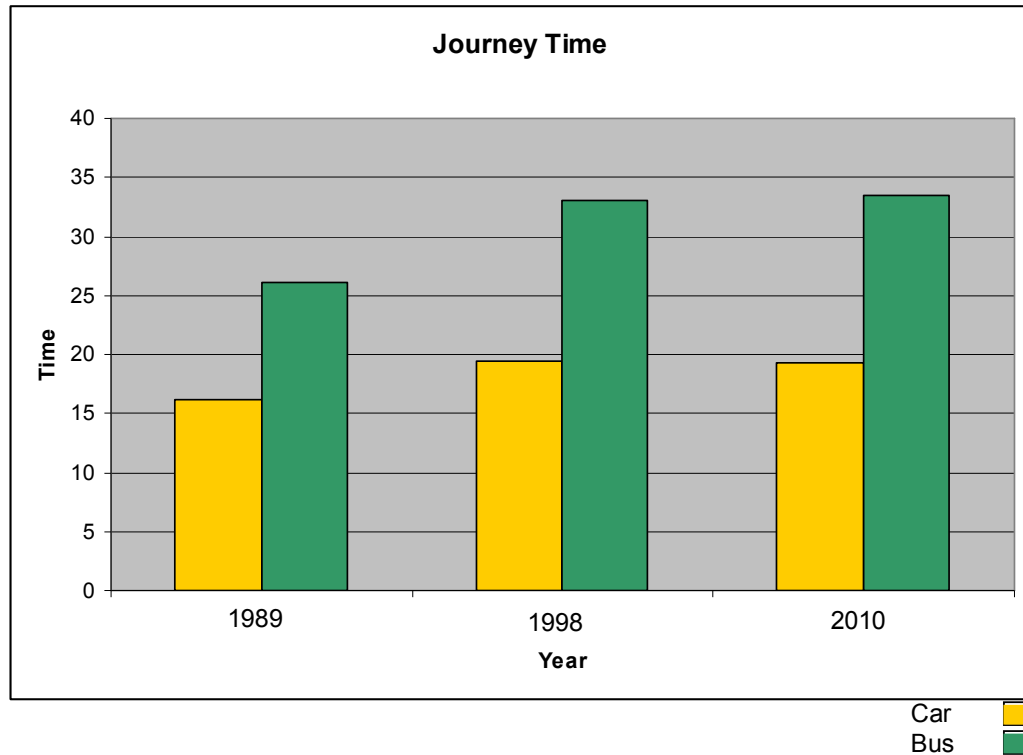


Graph 2: Car Occupancy

The HTS can also give us information about the time taken for each trip, in view of the fact that respondents jot down the start time and finish time of each trip. This data should be considered as very approximate, since experience shows that most respondents generally round off to the nearest 5 minutes, and in a place where trips are generally short, this rounding off may have a considerable impact on the accuracy of the data. Nevertheless, when compared with the same results from previous HTSs, it should give us a general indication of whether times are increasing or decreasing. The table below shows the times for car and bus trips over the three surveys.

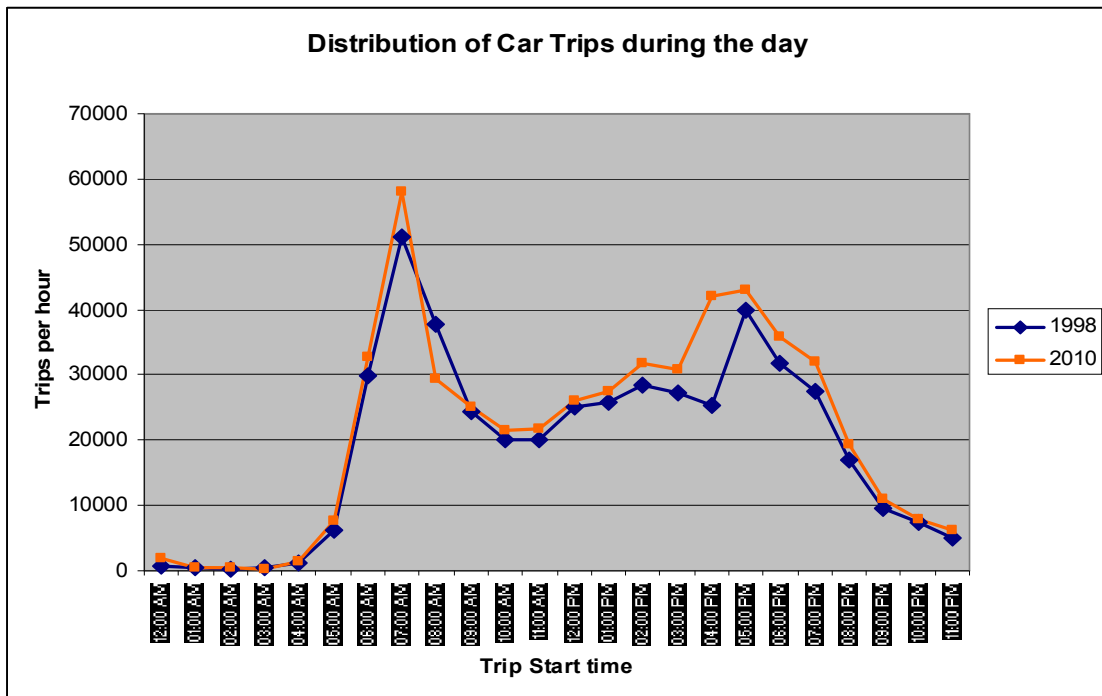
Time taken for trip (in minutes)	1989	1998	2010
Car	16.2	19.5	19.3
Bus	26.1	33.0	33.5

Table 6: Journey Time



Graph 3: Journey Time

The HTS also records the start and finish time of each trip and can therefore estimate the distribution of trips during the day. The graph below shows the comparison of distribution of car trips between 1998 and 2010. Throughout the day, there was an increase of 11% in car trips from 1998 to 2010.



Graph 4: Distribution of Car Trips

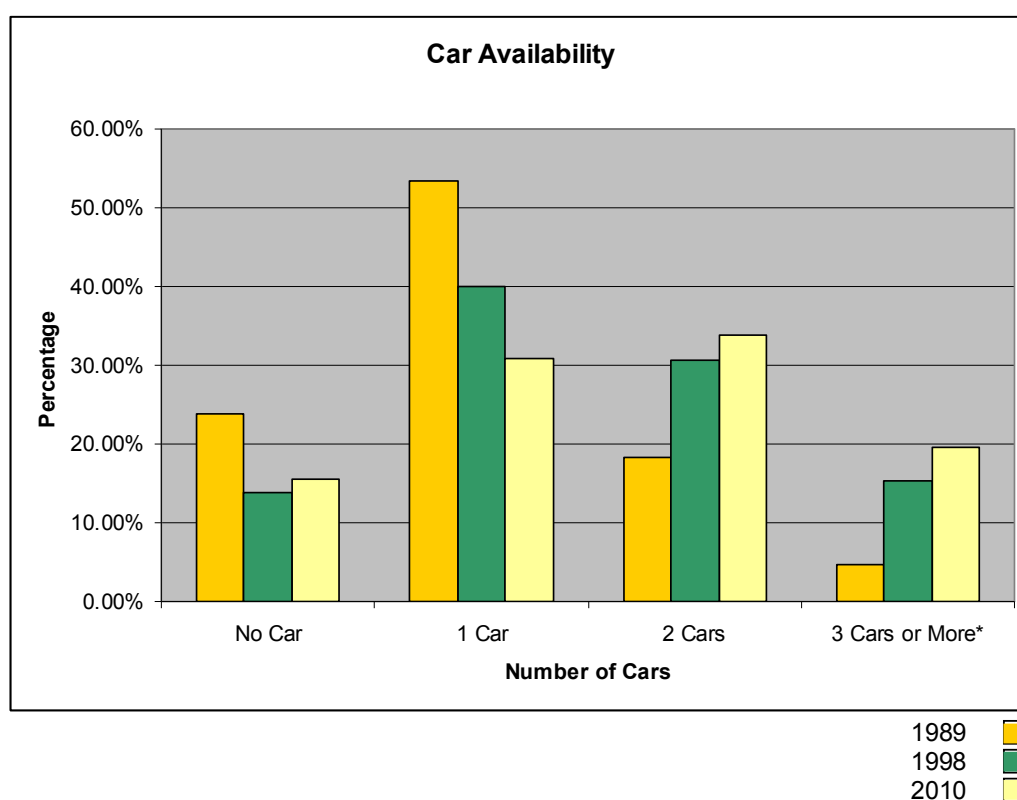
Car availability to households is yet another important indicator, because although the modal split shows the modes that are being used for trips, potentially there may be a higher number of cars which are available for use by the household.

The table below shows the comparison for the three surveys.

	No Car	1 Car	2 Cars	3 Cars or More*
1989	23.8%	53.3%	18.2%	4.7%
1998	13.8%	40.0%	30.7%	15.4%
2010	15.6%	30.9%	33.9%	19.6%

* In 2010, the questionnaire included another possible answer to this question - i.e. 4 cars or more; therefore the figure of 19.6% for 2010 is to be split into 12.5% having 3 cars and 7.1% having 4 cars or more

Table 7: Car Availability

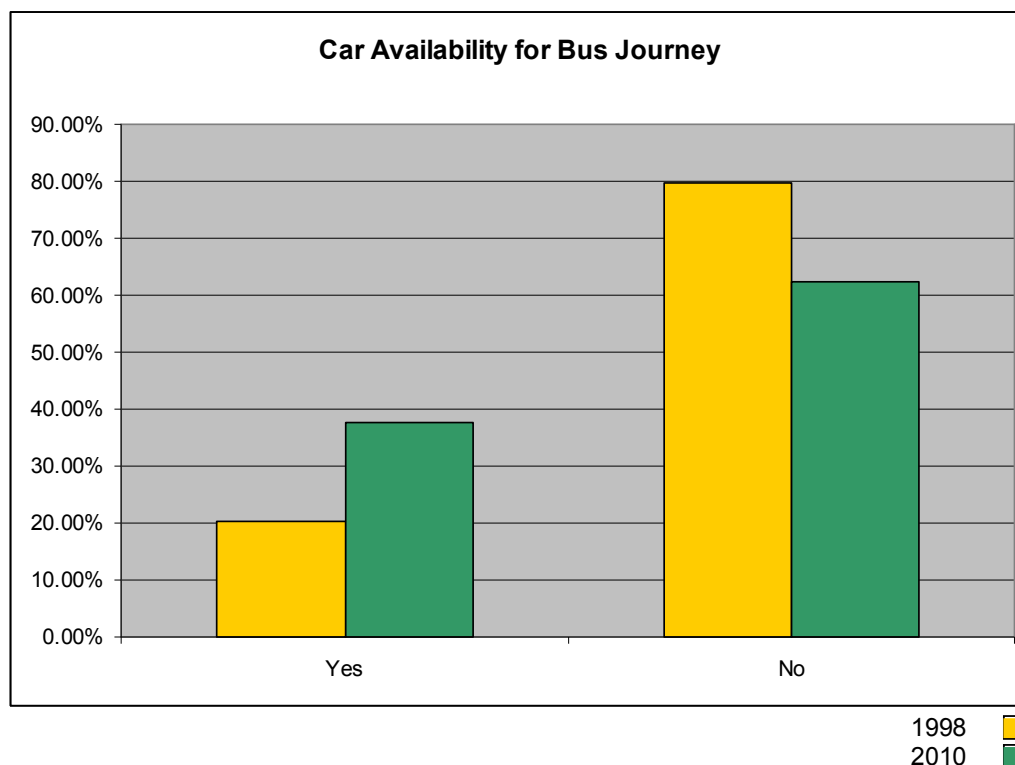


Graph 5: Car Availability

The respondents who claimed to have used the bus for a particular journey were asked whether a car was available for them to make that particular trip. This gives an indication of how many trips were made by bus because there was no alternative and those which despite an alternative being available, still chose to make the trip by bus. This again shows the potential modal shift from bus to car, if conditions to use the bus worsen. The table below compares the results to 1998.

Was Car Available for Bus Trips	Yes	No
1998	20.4%	79.6%
2010	37.6%	62.4%

Table 8: Car Availability



Graph 6: Car Availability for Bus Journey

Respondents were also asked about the distance of their home from the nearest bus stop. This gauges the level of penetration of the bus service into the urban area, as this is constantly changing due to new areas being built up. The table below shows the results for the three HTSs.

Distance to Nearest Bus Stop	1989	1998	2010
Less than 2 min	75.0%	30.2%	29.1%
2 to 5 min		42.6%	46.0%
5 to 15 min	25.0%	23.7%	21.3%
More than 15 min		3.4%	3.7%

The 1989 HTS split the responses as "less than 5 minutes" or "more than 5 minutes" only

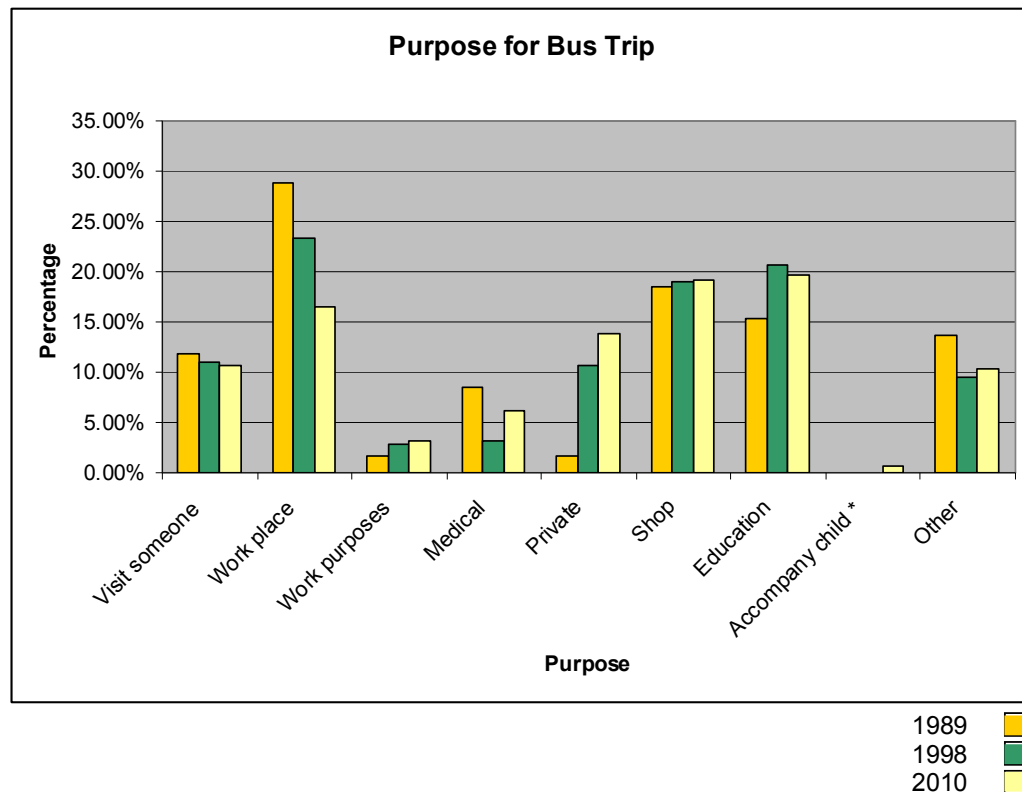
Table 9: Distance to Nearest Bus Stop

The HTS also provides data related to the reason why a trip was made. This is particularly important for land-use and transport planners when new land-uses are being proposed. The table below shows the percentage distribution of bus trips by purpose, but it excludes trips made back home. Such return trips represent approximately 40% of all trips, but are essentially not the principal purpose for the entire trip being made.

Purpose of Bus Trip	1989	1998	2010
Visit someone	11.9%	11.0%	10.7%
Work place	28.8%	23.4%	16.5%
Work purposes	1.7%	2.8%	3.1%
Medical	8.5%	3.2%	6.2%
Private	1.7%	10.7%	13.9%
Shop	18.5%	19.0%	19.1%
Education	15.3%	20.7%	19.6%
Accompany child *	~	~	0.6%
Other	13.6%	9.5%	10.3%

* the purpose "accompany child" was only introduced in NHTS2010

Table 10: Purpose for Bus Trip

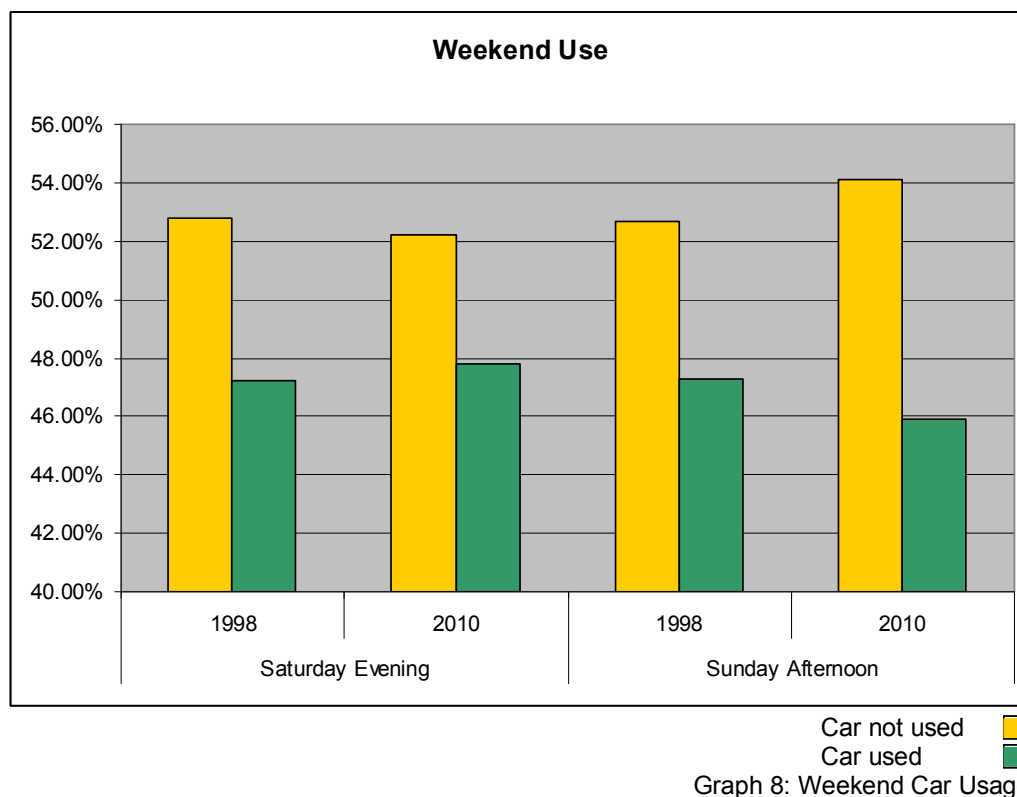


Graph 7: Purpose for Bus Trip

Although Survey Day in the NHTS is on a Wednesday, which represents the typical daily travels, the questionnaire also queried the use of vehicles on Saturday evening and on Sunday afternoon. The following are the results, compared to 1998.

		Car not used	Car used
Saturday Evening	1998	52.8%	47.2%
	2010	52.2%	47.8%
Sunday Afternoon	1998	52.7%	47.3%
	2010	54.1%	45.9%

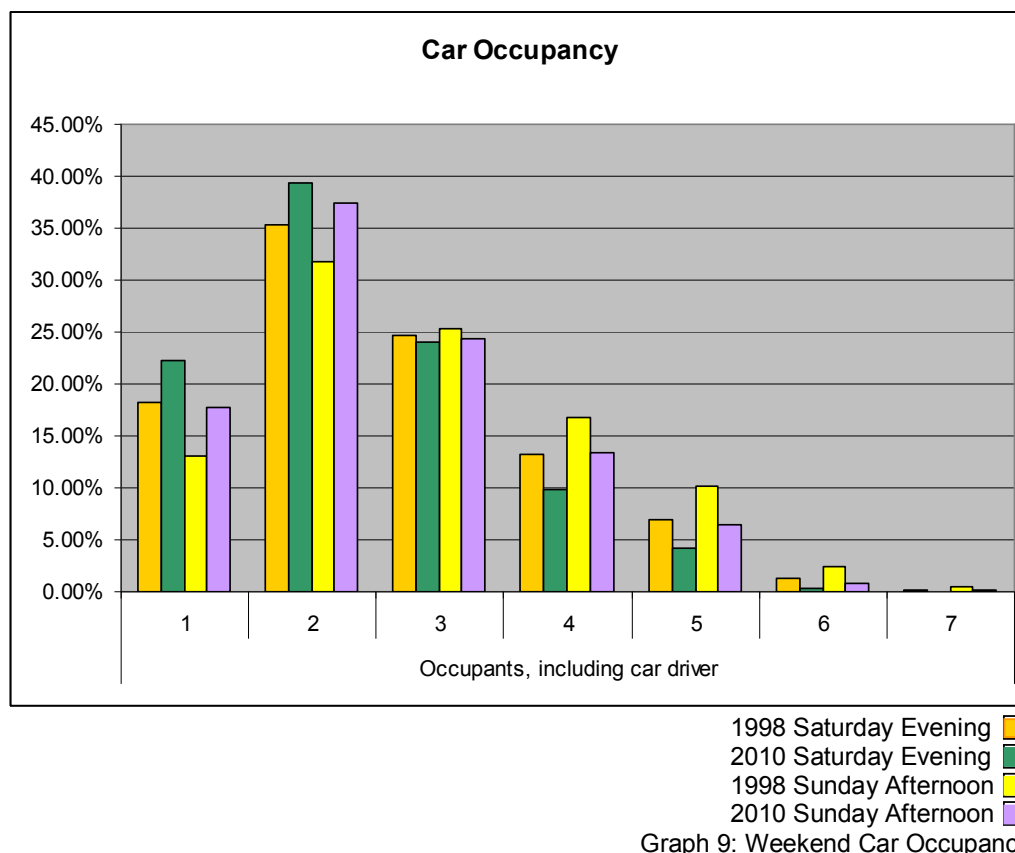
Table 11: Weekend Car Usage



Out of the vehicles used over the weekend, the NHTS tried to establish their efficiency by calculating the number of occupants. The following results emerged.

		Occupants, including car driver						
		1	2	3	4	5	6	7
Saturday Evening	1998	18.3%	35.4%	24.6%	13.2%	7.0%	1.3%	0.2%
	2010	22.2%	39.3%	24.1%	9.8%	4.2%	0.4%	0.0%
Sunday Afternoon	1998	13.0%	31.8%	25.4%	16.8%	10.2%	2.5%	0.5%
	2010	17.7%	37.4%	24.3%	13.4%	6.4%	0.8%	0.1%

Table 12: Car Occupancy



Graph 9: Weekend Car Occupancy

This translates into the following average car occupancy for the weekend travel.

		Average car occupancy
Saturday Evening	1998	2.60
	2010	2.36
Sunday Afternoon	1998	2.89
	2010	2.56

Table 13: Weekend Car Occupancy

Results unique to NHTS 2010

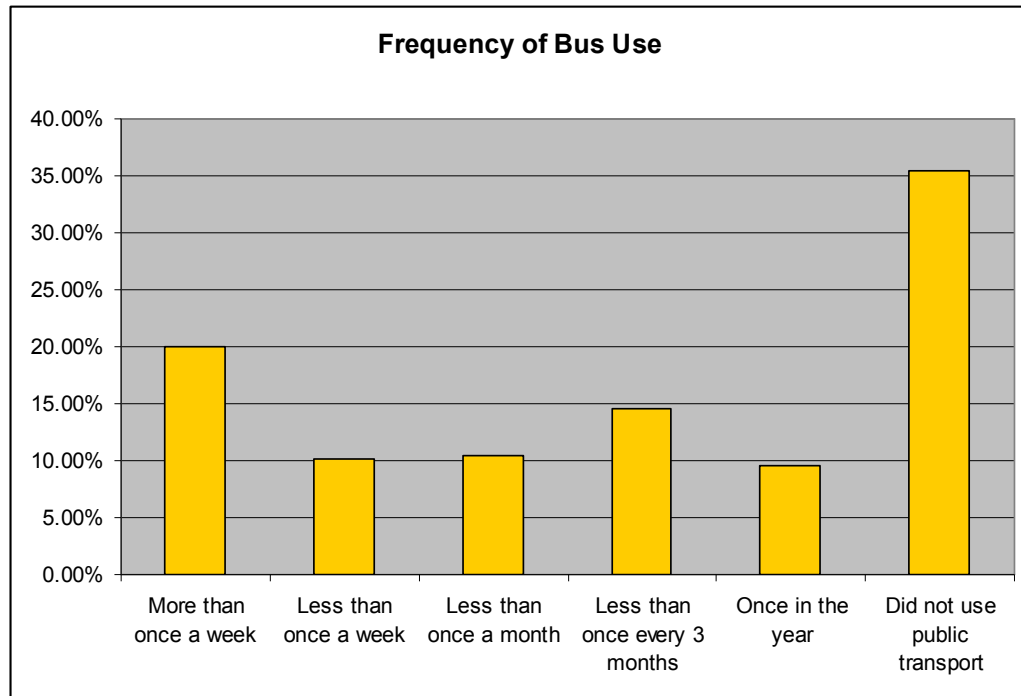
The NHTS included a number of questions which were not present in the previous NHTSs and therefore cannot be compared in the same way as the ones shown above. Nevertheless, these results are important not only to be able to compare them to future NHTSs, but also as stand-alone data.

A number of questions included referred to the imminent bus reform. In fact, one question deliberately asked whether the respondents were aware of the public transport reform. Only 69.6% said that they have heard of the reform.

Another question asked about the frequency with which all respondents use the bus. These are the results:

How many times did you use the bus in the last year (frequency)	
More than once a week	20.0%
Less than once a week	10.2%
Less than once a month	10.4%
Less than once every 3 months	14.5%
Once in the year	9.6%
Did not use public transport	35.4%

Table 14: Frequency of Bus Use



Graph 10: Frequency of Bus Use

The same respondents were also asked about their use of public transport whilst being abroad. Only **43.6%** claimed to have used public transport abroad in the past 3 years. Persons who made their trips by car were also asked whether they would be willing to use public transport for that particular trip, if the quality of the service improved. **36.3%** of car drivers and **48.1%** of car passengers answered “yes” to this question.

The database provides the opportunity to profile certain types of travellers. The following tables show how the two extremes of bus users are split by sex, age and position within the household.

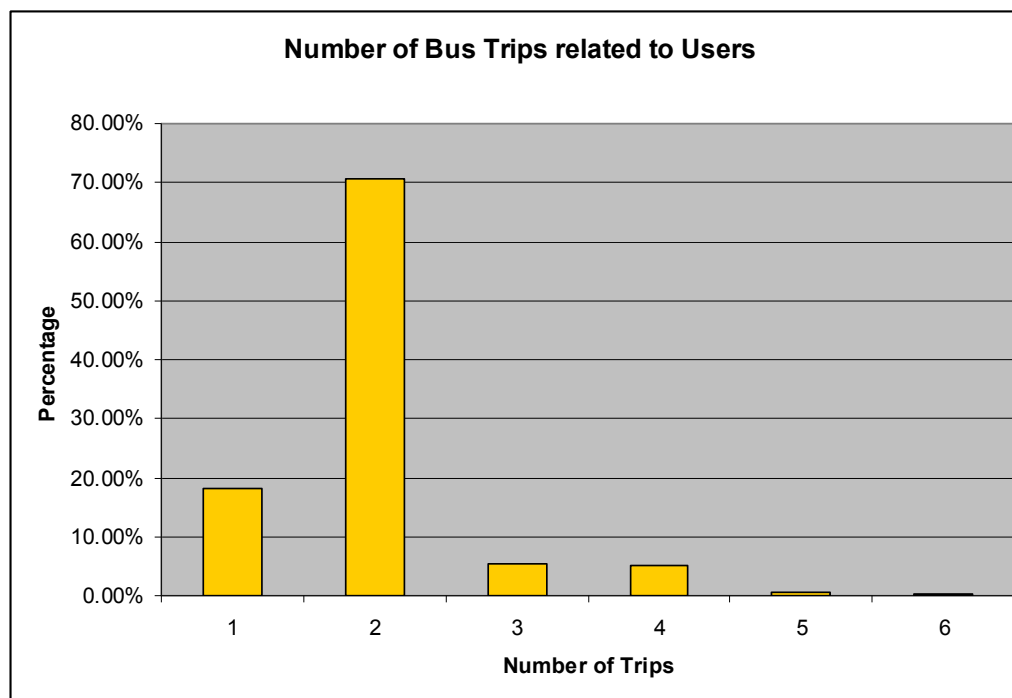
	Age	Regular bus users	Non-bus users
Male	11-17	7320	2997
	18-40	8626	31036
	41-60	4880	29944
	61+	8176	14469
		29003	78446
Female	11-17	6485	2247
	18-40	13485	18814
	41-60	11794	13913
	61+	11901	14897
		43664	49872

Table 15: Respondents who indicated they use the bus more than once a week or not once in a year
(Factored up)

The travellers who claimed to make use of the bus more than once a week were cross-tabulated with the number of trips that they made during Survey Day and the following pattern emerged:

Regular Bus Users (more than once a week)					
Number of Public Transport Trips during Survey Day					
1	2	3	4	5	6
6742	26092	1969	1862	193	107
18.2%	70.6%	5.3%	5.0%	0.5%	0.3%

Table 16: Number of Bus Trips related to Users



Graph 11: Number of Bus Trips related to Users

Other new questions related to the disabled, so that decision makers become even more aware of the difficulties that people with disability encounter, especially when travelling. The general questionnaire asked respondents whether they have some sort of disability and **5.5%** claimed that they have. However, when cross-tabulating with the trips, it resulted that only **3.5%** of the trips were actually performed by people who claim to have a disability.

In view of the different categories of disability, it was important to know how these are distributed. The general questionnaire established the percentage of disabled persons within each category, and reads as follows:

Category of Disability	Percentage
Restricted mobility & use a wheelchair	8.4%
Restricted mobility & do not use a wheelchair	42.3%
Total visual impairment	2.0%
Partial visual impairment	13.8%
Total hearing impairment	1.8%
Partial hearing impairment	10.6%

Intellectual impairment	5.1%
Mental health condition	5.9%
Other impairment	10.0%

Table 17: Category of Disability

The trip diary part of the survey established how disabled people in the different categories travelled:

Category of disability	Mode used to travel									
	Car driver	Car pass.	Bus	Coach	On Foot	Motor bike	Bicycle	Ferry	Taxi	Other
Restricted mobility & use a wheelchair	48%	16%	9%	6%	9%	3%	0%	3%	0%	6%
Restricted mobility & do not use a wheelchair	41%	25%	13%	3%	16%	1%	0%	0%	0%	0%
Total visual impairment	0%	21%	43%	7%	13%	0%	0%	0%	0%	0%
Partial visual impairment	34%	25%	18%	4%	17%	0%	0%	1%	0%	0%
Total hearing impairment	40%	10%	30%	20%	0%	0%	0%	0%	0%	0%
Partial hearing impairment	43%	14%	20%	3%	17%	1%	0%	1%	0%	1%
Intellectual impairment	9%	25%	23%	34%	9%	0%	0%	0%	0%	0%
Mental health condition	39%	24%	10%	13%	12%	0%	2%	0%	0%	3%
Other impairment	44%	12%	18%	5%	20%	0%	0%	0%	0%	0%
All disable persons	38.6%	20.7%	16.2%	6.4%	15.8%	0.7%	0.1%	0.4%	0%	0.9%

Table 18: Travel Modes of Disable Persons

As parking charges became more common in the last decade, it was also important to assess how much people are paying for parking in the different localities. The table below shows the percentage of trips, following which the owner had to pay for parking. These are split by destination of trips, in order to separate the return trips (to home) from all other trips.

Trips	Percentage paying for parking		
	Total Trips (factored up)	Trips for which a parking fee was paid	
		No. of Trips	% of total Trips
to home	220,655	449	0.20%
to other locations	309,932	8,583	2.77%

Table 19: Percentage of trips, after which payment for parking was effected

The following table shows how many people claim to have paid for parking and the amount that they have paid.

Number of persons paying a parking charge	Parking charge							
	0c-49c	50c-99c	€1.00-€1.99	€2.00-€2.99	€3.00-€3.99	€4.00-€5.99	€6.00-€9.99	over €10
Attard	107	0	21	0	21	0	0	0
Birkirkara	21	21	43	21	0	0	0	0
Birzebbuga	0	0	21	21	0	0	0	0
Floriana	21	193	257	364	64	86	0	0
Ghajnsielem	0	0	0	0	0	0	21	0
Gharb	0	0	21	0	0	0	0	0
Gzira	0	21	21	0	0	0	0	0
Hamrun	0	0	21	0	0	0	0	0
Luqa	0	21	321	214	21	21	0	21
Marsascalea	0	21	21	0	0	0	0	0
Marsaxlokk	0	0	21	0	0	0	0	0
Mellieha	0	21	0	21	0	0	0	0
Mgarr	21	0	0	0	0	0	0	0
Mosta	0	128	86	43	0	0	0	0
Msida	150	321	450	278	128	128	21	0
Nadur	0	21	21	0	0	0	0	0
Naxxar	0	0	0	21	0	0	0	0
Paola	21	0	21	0	0	21	0	0
Pembroke	21	0	0	0	0	0	0	0
Pieta'	0	0	21	0	0	0	0	0
Qala	0	0	21	0	0	0	0	0
Qormi	0	21	21	0	0	0	0	0
Rabat (Gozo)	0	21	193	0	0	0	0	0
Rabat (Malta)	0	0	21	0	0	0	0	0
San Gwann	0	0	21	21	0	0	0	0
St. Julian's	21	236	128	171	107	86	0	0
St. Paul's Bay	0	0	0	21	0	0	0	0
Sannat	0	0	21	0	0	0	0	0
Santa Venera	21	0	0	0	0	0	0	0
Siggiewi	0	0	21	0	0	0	0	0
Sliema	43	150	364	193	128	236	43	0
Valletta	43	343	771	728	171	150	64	0
Xaghra	0	21	21	0	0	0	0	0
Zebbug (Gozo)	0	0	21	0	0	0	0	0
Zebbug (Malta)	21	0	0	0	0	0	0	0
Zurrieq	0	21	0	0	0	43	0	0
Total	514	1585	2998	2120	642	771	150	21

Table 20: Parking Charges

Another aspect which is changing the travel habits is internet shopping, and it was therefore felt that the NHTS2010 should find out how many people are actually using this facility, which was hardly in use during the previous NHTS. **40.1%** of household respondents said that they had carried out at least one internet transaction over the past year.

Valletta results

In the period between the 1998 and the 2010 NHTS, a significant transport-related change was carried out in Valletta, namely the introduction of the Controlled Vehicular Access (CVA), together with other initiatives, such as the introduction of a park-and-ride scheme and pedestrianization of a number of streets. These were all aimed at reducing the dependency of the car, especially on trips going into Valletta.

Therefore, it was appropriate to analyse the results of the two NHTSs (1998 and 2010) to check what changes occurred that can be attributed to these measures taken in 2006.

The modal split of trips arriving in Valletta is a good indicator and the following tables show how this has changed since 1998, both in terms of percentages, as well as in terms of total number of trips.

Trips ending in Valletta	1998	2010
Car driver	39.5%	30.9%
Car passenger	11.4%	9.8%
Bus	44.6%	53.0%
Minibus/Coach	1.5%	4.0%
Motorbike	0.5%	0.1%
On foot	2.4%	2.0%
Other	0.1%	0.2%

Table 21: Modal Split for trips ending in Valletta (excluding internal Valletta trips)

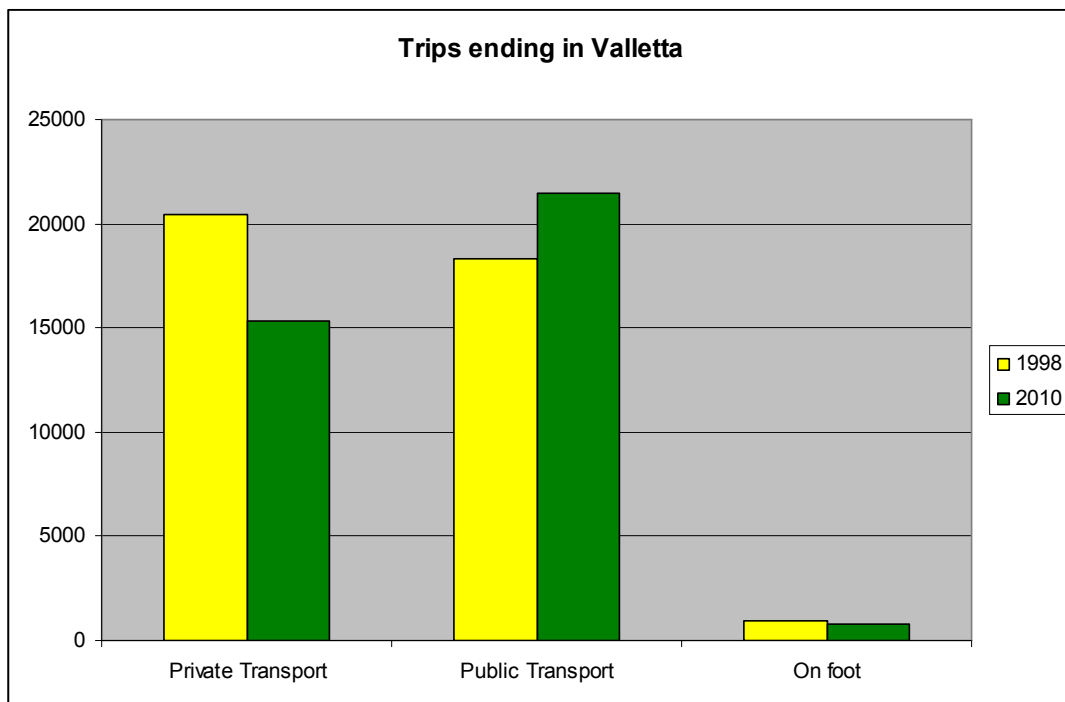
Trips ending in Valletta	1998	2010
Car driver	15,708	11,608
Car passenger	4,522	3,688
Bus	17,731	19,935
Minibus/Coach	595	1,495
Motorbike	187	45
On foot	696	767
Other	51	44
Total	39,763	37,583

Table 22: Number of trips ending in Valletta (excluding internal Valletta trips)

The following table, shows the modal split defined by the reason for the trip to Valletta. The amounts are the actual figures from the survey (out of a total of 6,666 responding households)

Trips ending in Valletta by mode and purpose	Return home	Visit	Work-palce	Work-purpose	Medical	Private	Shop	Education	Accomp. child	Sports	Entertain-ment	Other
Car driver	35	14	191	71		45	42	19	38	17	2	19
Car passenger	19	3	34	15		13	23	16	4	14		19
Bus	20	28	121	15	7	195	310	35	1	87	7	26
Minibus/Coach		1	38	4		2	9	4		8		
Motorbike			1				1					
On foot	27	8	23	3		9	17	1	2	18	5	3
Other	1		1									

Table 23: Modal Split to Valletta, by reason for trip

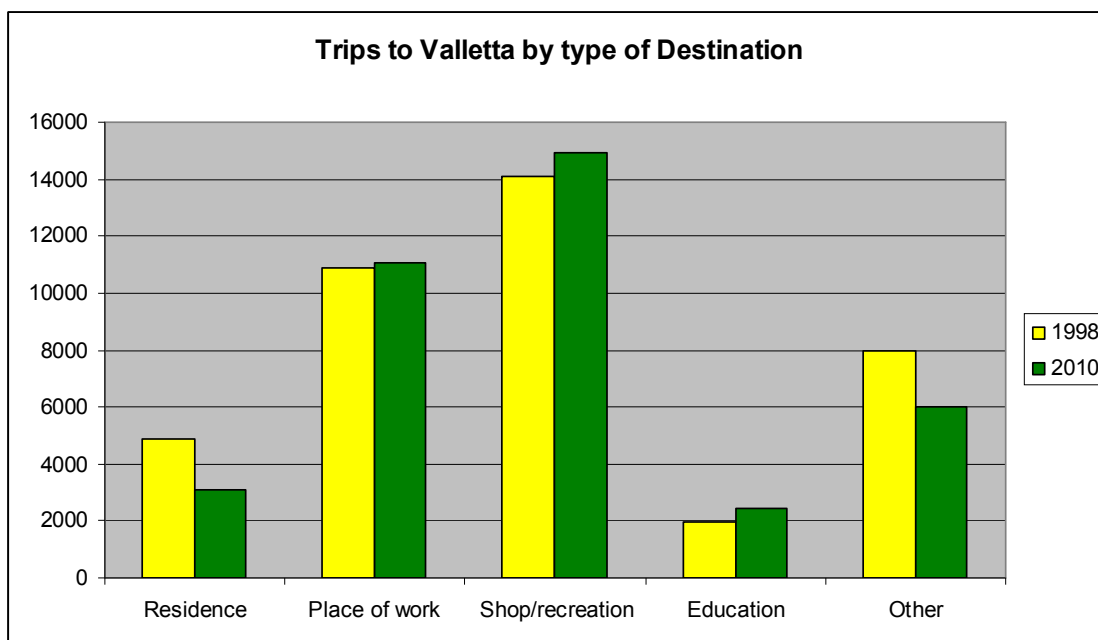


Graph 12: Trips Ending In Valletta (excluding internal Valletta trips)

The questionnaire also elicited answers about the type of place that was visited and the reason for the trip. These are the results for trips ending in Valletta in 1998 and 2010:

Type of place visited in Valletta	1998		2010	
	Percentage	Trips	Percentage	Trips
Residence	12.3%	4,875	8.2%	3,089
Place of work	27.3%	10,874	29.5%	11,090
Shop/Recreation	35.4%	14,093	39.7%	14,935
Education	5.0%	1,969	6.6%	2,467
Other	20.0%	7,953	16.0%	6,001
TOTAL		39,763		37,583

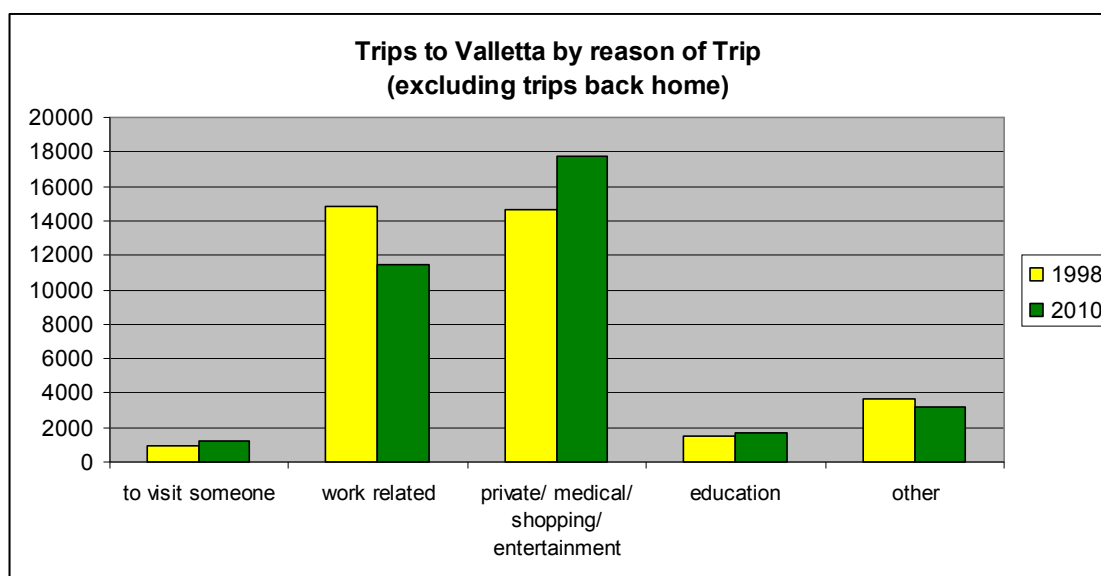
Table 24: Type of Destination in Valletta



Graph 13: Type of Destination in Valletta

Reason for trip to Valletta (excluding trips returning home)	1998		2010	
	Percentage	Trips	Percentage	Trips
to visit someone	2.8%	986	3.4%	1,197
work related	41.6%	14,825	32.5%	11,457
private/shop/entertainment	41.2%	14,679	50.3%	17,707
education	4.2%	1,486	4.7%	1,662
other	10.4%	3,692	9.1%	3,191
TOTAL		35,667		35,214

Table 25: Reason for Trip to Valletta



Graph 14: Reason for Trip to Valletta

The results of car availability for bus users was applied to Valletta and compared with the rest of Malta in the following table.

Was car available for bus trips	VALLETTA		ALL MALTA + GOZO	
	Yes	No	Yes	No
1998	37.6%	62.4%	20.4%	79.6%
2010	47.8%	52.2%	37.6%	62.4%

Table 26: Availability of Car for Bus Users to Valletta (c.w. All of Malta)

The persons using the bus to Valletta were also profiled separately by age and sex in the table below.

	11-17	18-40	41-60	60+
Male	706	1177	1627	3746
Female	664	2697	3489	4131

Table 27: Arrivals to Valletta by Bus

In view of the introduction of the CVA, it was also interesting to note the charges that people pay for car trips that entered Valletta, split by the hour during which they arrived.

		Parking Charge in Euros, for cars entering Valletta							
		no charge	01 - 49c	50c - 99c	€1.00- €1.99	€2.00- €2.99	€3.00- €3.99	€4.00- €5.99	€6.00- €9.99
Start of the hour during which trip ended in Valletta	1:00 AM	0	0	0	0	0	0	0	0
	2:00 AM	0	0	0	0	0	0	0	0
	3:00 AM	1	0	0	0	0	0	0	0
	4:00 AM	0	0	0	0	0	0	0	0
	5:00 AM	6	0	0	0	0	0	0	0
	6:00 AM	17	1	2	0	1	0	0	1
	7:00 AM	70	0	2	9	3	0	2	2
	8:00 AM	67	0	5	10	7	2	1	0
	9:00 AM	26	0	2	6	8	2	2	0
	10:00 AM	25	0	0	2	3	1	1	0
	11:00 AM	17	0	0	2	3	1	0	0
	12:00 PM	12	0	1	1	0	0	0	0
	1:00 PM	18	0	0	0	2	1	0	0
	2:00 PM	8	0	0	0	0	0	0	0
	3:00 PM	18	0	1	3	1	0	0	0
	4:00 PM	19	0	1	2	1	0	1	0
	5:00 PM	27	1	2	1	2	0	0	0
	6:00 PM	17	0	0	0	0	0	0	0
	7:00 PM	8	0	0	0	0	0	0	0
	8:00 PM	10	0	0	0	0	1	0	0

9:00 PM	8	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0
11:00 PM	5	0	0	0	0	0	0	0

Out of a sample of 6,666 households

Table 28: Parking charges for cars entering Valletta

Analysis

The modal split shows that despite the improvements that were carried out over the last decade in public transport, this sector has lost patronage when compared to the private car. Although the loss was not as significant as in the preceding decade, the combined use of scheduled and unscheduled service dropped from 17.6% in 1998 to 15% in 2010, with the unscheduled service registering the greater drop (from 6.2% to 3.7%). When considering scheduled bus service on its own this dropped very slightly (by 0.1%), especially when considering the halving of patronage between 1989 (24.3%) and 1998 (11.4%). The losses were mainly contained due to improvement in the sector as well as other projects such as the CVA to Valletta which discourage the use of the car.

Nevertheless, car use has still increased from 70.2% in 1998 (for both drivers and passengers) to 74.6% in 2010. This gain was not only accomplished to the detriment of public transport, but also to walking, which saw a drop from 10.9% to 7.6% - much more significant than the drop from 11.6% to 10.9% in the previous decade. This is worrying, because in a society which is trying to promote a healthy lifestyle, the number of trips made on foot has decreased dramatically, with more people opting to perform these trips by car.

The average number of occupants per car (including driver) rose slightly from 1.245 to 1.255, following a significant drop in the previous decade. This prevention of a further decrease was mainly due to the constraints that are being created on the car - both intentionally, such as through the CVA and other parking schemes, and unintentionally, as a result of the congestion that the car-use itself is creating. Therefore people are starting to make a conscious effort to share cars, in order to save on parking charges and on time spent searching for a parking space. However, the figure of 1.255 is still very low, signifying that out of every four cars being driven on the road, on average there will be three drivers on their own and one car with a driver and one passenger.

Interestingly, when taking weekend travel, this average number of occupants shoots up to over two people. In 1998, the number of occupants on Saturday evening was 2.60 whereas on Sunday afternoon, this was 2.89. These figures dropped to 2.36 and 2.56 respectively in 2010. This obviously shows that although in general, there is better efficiency over the weekend; this is being lost with considerable drops in the last 12 years.

The time taken for each trip, as explained above is not a particularly accurate indicator, but nonetheless gives a good idea of the time being wasted in traffic. The significant increase between 1989 and 1998 (3 minutes for car trips and 6 minutes for bus trips) was not repeated in the last decade. In fact, trip times remained fairly stable, and this could mean that infrastructure was improved significantly in order to keep up with the increase in traffic. The introduction of bus lanes in certain strategic locations also helped to retain the average bus trip duration at the same level as 1998.

The trip distribution of car trips remained fairly constant between 1998 and 2010, with a higher peak being registered in trips starting in the morning peak (07:00 - 08:00). The afternoon peak in 2010 seems to be spread over more hours, with the trips starting between 16:00 and 17:00 nearly equalling those starting an hour later. This may, in part be responsible for the average time taken for each trip remaining fairly constant, since drivers are travelling more at “off-peak” hours, in order to meet less congestion.

The car availability table above shows that whereas households without a car increased from 13.8% to 15.6%, those with more than one car also increased significantly, especially households with 3 or more cars (from 15.4% to 19.6%). The increase of no-car households is very probably due to the increase in households occupied by single elderly people. According to NSO statistics, the single households occupied by a person over 65 years increased from 8% in 2000 to 9.2% in 2008. Similarly, households with two adults (one or both over 65) with no dependent children increased from 10% to 11.5% over the same period.

Nevertheless, this figure is severely offset by the increase of multi-car families, signifying that overall more people within the households have access to a car, and potentially the number of car trips can be even higher than it is now.

The table showing car availability for bus-users is encouraging, because it shows that although there was a slight drop in bus patronage, this could have been much worse as the car availability was 37.6% in 2010 when compared to 20.4% in 1998. Therefore the potential for bus users switching to car was even higher, but for some reason, these trips remained within the public transport. The main reason is highly likely to be the fact that more people are getting tired of getting stuck in traffic congestion and although the bus is not immune to congestion, at least someone else is doing the driving.

Public transport seems to have penetrated more closely to where people live in the last 12 years, since the table showing distance to nearest bus stop has gone back up to 1989 levels, where 75.1% of respondents have claimed to live within 5 minutes from the nearest bus stop (whereas this was 72.8% in 1998).

The table showing purpose of bus trips does not show a significant change between 1998 and 2010. The most noteworthy change is the drop from 23.4% of bus trips to work in 1998 to 16.5% in 2010. This shows that more people are depending on means other than the bus to get to work. Unfortunately, as the modal split table

shows a drop in unscheduled bus service patronage, this cannot be substituting the bus trips for work and therefore these are primarily being substituted by car trips.

The data about week-end use of the vehicle shows that in this sector very little has changed about use and the only significant difference is a slight drop in Sunday afternoon use from 47.3% in 1998 to 45.9% in 2010. The more significant change, already mentioned above is the drop in efficiency with regards to occupants per vehicle. Whereas during the week, there has been a slight improvement in this indicator, the weekend shows a drop of 0.24 passengers per car on Saturday evening and 0.33 persons on Sunday afternoon. During the weekend, people tend to have more social trips and therefore group more in one car, when compared to the more work-related trips carried during the week, which are typically single-occupant trips - hence the higher figure during the weekend. However, the severe drop in weekend vehicle-occupancy is mainly due to the fact that there are fewer constraints on the car during the weekend, than there are during the week. For example, in Valletta, there are no parking charges on Saturday evening or Sunday afternoon. Furthermore, with the exception of a few hotspots such as Paceville, traffic in the weekends has not yet reached the level of saturation that it has during the week, and therefore travellers may feel more comfortable using more vehicles, when compared to 1998. Nevertheless, this is a worrying situation, since traffic congestion seems to be seeping into time slots of the week where so far there has been little or no congestion.

The results which have been extracted for the first time during the NHTS2010 cannot be compared to previous data, but are important to be used especially to be able to plan a better bus service and to gauge the improvements over the coming years.

The fact that 3 out of 10 respondents are oblivious to the reform that is currently going on within the public transport sector, does not augur well for the same reform. Although the matter has been given ample publicity and seems to be in the news often, there are still over 30% who claim not to be aware of the pending reform. These are the drivers who will be the hardest to convince about changing their habits and switching (even for occasional journeys) to public transport.

The table showing frequency of users of public transport shows that there is a consistent 20% of the population who use the buses regularly, but also another 20% who make occasional use of the bus (at least every three months) and although this may be considered as infrequent, significant improvement to the public transport system may be enough to start attracting these people into making more use of public transport. It will be much more difficult with the remaining 60%, since these obviously use public transport in case of "emergency" - i.e. when their car is being repaired etc. In this case, constraints on car-use need to accompany the improvement in public transport.

The question about using public transport whilst abroad gave a most unexpected answer. It was a common perception, especially amongst transport planners, that nearly everyone uses public transport when they are abroad. This figure is even less than the amount of people who claim to have used public transport in Malta at

least once in the last year (64.6%). This result is not so much an important indicator, but had the percentage been much higher than the 64.6%, it would have been a good argument in favour of trying to make people use Maltese public transport even more. Nevertheless, the figure of 43.6% relates to the households interviewed, out of which there surely is a percentage of household members who did not travel in the last three years. Unfortunately, it is not possible to determine this percentage.

The interest of public transport planners will obviously be aroused by the answers to the question about whether a traveller would be willing to perform a journey (which up till now has been made by car) using an improved public transport system. With 36.3% of car drivers and 48.1% of car passengers agreeing, this may mean that the bus share of the mode can potentially rise from its current level of 11.2% to 40%, whereas the car driver and car passenger shares fall to 38% and 8% respectively.

The results from the profiling of frequent bus users and of total non-bus-users are interesting, although unfortunately not unexpected. 60% of frequent bus users are female whereas 61% of non-bus-users are male.

Regular bus users (who claim to make more than one journey a week) have contributed to 72.8% of total bus users during the Survey Day.

The data about disabled people should give rise to concern, since the discrepancy between the figures of 5.5% (disabled persons out of the whole community) and 3.5% (trips made by disabled persons) signifies that more disabled people are making less trips than non-disabled people. In fact, out of all disabled people, 17.1% stayed at home on Survey Day, whereas only 5.6% of non-disabled people stayed at home on the same day. This is exacerbated by the fact that 37% of wheelchair-bound persons and 23.4% of persons with restricted mobility (but not wheelchair-bound) stayed at home. This must be sending a clear message that our travel infrastructure is not properly geared up for the disabled, especially the ones with restricted mobility. This infrastructure ranges from narrow sidewalks, steep ramps, steps in pavements as well as inaccessible buses. These all need to be improved to give disabled persons as equal a chance of travelling independently as non-disabled ones.

Parking charges have been recorded to have been paid in 36 different localities on Survey Day, although as expected the areas where most charges occurred were Valletta, Floriana, Sliema, St. Julian's, Msida (Mater Dei Hospital) and Luqa (airport). Nevertheless, the list shows that parking charges are becoming more common in other areas, signifying that parking congestion is seeping through these localities as well.

The Internet Shopping indicator of 40.1% was expected with a high use of internet within the Maltese community. This will obviously need to be monitored in future NHTSs to check trends, which may in the long term reduce trips for shopping.

The Valletta results are very encouraging, especially the modal shift towards more sustainable modes in the last 12 years. Before the Controlled Vehicular Access scheme was introduced to Valletta, the capital city already had a healthy modal split,

with 47.2% of trips arriving by bus (when compared to the 11.4% on a national scale). This was considered both as a good start, but also as one where significant improvements would be difficult. However, results now show that the share of the bus has actually risen to over 53%, with the share of car drivers falling from 41.8% to 30.9%. The share of the coach/mini-bus increased from 1.6% to 4.0%, showing that there was a significant take-up in the Park-and-Ride scheme. However, more importantly is the fact that the Park-and-Ride did not actually take away from the share of the bus, but from the car.

These results need to be considered also against a backdrop, where there was an actual drop to trips made into Valletta, from 39,763 in 1998 to 37,583 - a drop of 5.5%. However, most of the drop resulted from residents returning home – i.e. in 2010, there were less residents making trips out and back into Valletta when compared to 1998. In fact, excluding residents, the number of trips to Valletta fell from 35,667 in 1998 to 35,214 in 2010 – representing a drop of 1.3%. Interestingly, the most significant drop was from work related trips (either commuting or work errands) – approx 3,400 trips less in 2010. Also the number of visitors entering Valletta for shopping, entertainment, medical, religious and other private reasons, increased by over 3,000 from 1998 to 2010. This was probably an indirect effect of the removal of the V-Licence, which previously did not allow cars without a V-Licence to enter Valletta, not even in times when there was no congestion. The removal of this licence (replaced by the CVA) allowed more people to enter Valletta by car for the occasional visit, whereas before cars without a V-Licence were not allowed to enter Valletta at all. Furthermore, the fact that the CVA does not operate after 6pm has encouraged more people to enter Valletta in the evenings, for recreation purposes. This is also evident from the number of new restaurants that have been opened in the capital city in the last decade.

Conclusion

The salient results from the NHTS2010 show that dependency on the private car has increased overall from 1998 to 2010, albeit at a much slower rate than between 1989 and 1998. This was to be expected, mainly because of the fact that the country is reaching saturation point in traffic capacity. Also, one has to consider that the rate of growth of the economy was not as prominent in the last 12 years, when compared to the previous 9 years.

The slower growth in car-use is also attributed to the several restraint schemes that have been put into place over the last 12 years, namely the CVA in Valletta, but also a number of parking schemes in several towns. The improvement to the bus services, with the introduction of a considerable number of new routes has not only helped in this slower growth of car-use, but has also ensured that the bus maintained its 1998 share of the global trips.

The results show that the transport situation is still far from being sustainable. With three out of every four trips being carried out by private car, there is considerable scope for improvement. The low car occupancy rate also suggests that there is ample space to make our roads more efficient.

Nevertheless, the results are not all doom and gloom, and the Valletta-related results are certainly heartening, because it has been proven that the situation can be reversed, with proper planning. Also encouraging is the claim by a considerable number of car users that they are willing to switch their trips to more sustainable modes if these are significantly improved. This, together with the imminent reform in the public transport should ensure that the modal split table in the next NHTS will look much healthier than it is now.