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Buses and the Economy II

A survey of expenditure of visitors to city and town centres

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ITS

1 BACKGROUND AND OBJECTIVES

This work profiles the types of expenditures undertaken in town/city centres and retail park locations, and establishes if there is any linkage with expenditure and accessibility. Both bus users and non-users have been compared in terms of their patterns of visiting and expenditures with respect to town/city centres and retail park locations. The report also establishes what factors influence people's choice of shopping location to help understand whether bus services could play a role in switching people back to shopping in town/city centres, and thus highlighting the role bus could play in regenerating these types of areas.
This survey builds upon an early survey carried out as part of the original Buses and the Economy[1] and the Town centre studies conducted in Greater London by Transport for London[2].

The key objectives of the survey have enabled the research team to understand and quantify, for bus and non-bus travellers, the following aspects of the research:

(a) Number of visits to different type of retail and entertainment locations
  - Town/City centres
  - Mega retail/entertainment centres
  - Retail parks
  - Entertainment complexes

(b) Reasons for visiting different types of locations
(c) Expenditure at each location by type of purchase
(d) Mode of access to each location
(e) Possibility of achieving modal shift to bus

These are reported and commented on in more detail in the Analytical Section of this report.

2 MOTIVATION FOR THIS STUDY

A number of previous studies have conducted surveys within specific retail locations[3][4] with some conducting repeated surveys over time to record changes[5]. For the most part these surveys were:

(1) Focused upon a specific location, such as a city centre or several locations within a city centre, such as a high street, a supermarket and a retail park
(2) Conducted on a face to face basis with respondents intercepted at the actual locations
(3) Confined to the activities being undertaken in that location on that particular day
(4) Recording the attractiveness of that location, individual expenditure, mode of travel, reasons for using that mode and the possibility of using alternative modes.

The number of similarities with our study provided useful inputs for our survey, particularly with the wording of questions and the specification of different categories of response. At

[1] Mackie, P., Laird, J. and Johnson D., (2012), *Buses and Economic Growth Final Report*, Greener Journeys, http://www.greenerjourneys.com/wp-content/uploads/2012/06/BusesEconomicGrowth_FINAL-REPORT.pdf
[2] TfL, (2003,2011,2013), Town Centre Study
[3] Clifton, K.J., Muhs, C., Morrissey, S., Morrissey, T., Currans, K., and Ritter, C., (2012), Consumer Behavior and Travel Mode Choices, Oregon Transportation Research and Education Consortium, www.kellyjclifton.com
[4] Coventry City Council (2011), Coventry City Centre Survey, *Annual Survey 2011, www.coventry.gov.uk*
[5] TfL, (2003,2011,2013), Town Centre Study

the same time however there were crucial differences which needed to be taken into account when designing the questionnaire and survey methodology, principally our survey was:

(a) UK wide (excluding London) and not centred around a specific geographical location
(b) Considered many different types of locations rather than just one location, e.g. City centres, town centres[6], retail parks and entertainment complexes
(c) Had a small survey budget which excluded face to face intercept interviews
(d) Focused more on the access mode, the alternative mode and modal shift in favour of bus.

These differences suggested that the use of an online survey that sampled from an online panel would provide the most cost effective and comprehensive method for conducting the survey for a number of reasons. Online panels offer the opportunity to access people from a UK wide perspective and because the survey was not location specific, respondents could have accessed any location provided it fitted into one of the location categories. They also overcome any difficulties that might arise from gaining permission to survey at specific locations, particularly shopping centres and retail parks. However, online panels do not allow probability based random sampling which would help us collect a nationally representative sample.

3 SURVEY METHODOLOGY

3.1 Sample Stratification

Discussions with our preferred market research partner (Accent) suggest that a total of 4,000 respondents would provide a sample that would allow statistical analysis between different sub-groups (eg between different modes of travel, location, and characteristics such as, car ownership, age and socioeconomic status). The non-probability sampling process was subject to a number of filters and quotas, outlined below, with recruitment monitored on a daily basis to ensure invites to specific cohorts of respondents were adjusted as appropriate. The sample was recruited to be in proportion with key demographic groups at a national level, such as gender and age.

1. Respondents should have visited one of the locations of interest within the last fortnight.

2. The respondent should have engaged in a shopping/service/leisure/recreational activity at some time during that visit, e.g. not just a residential/work/education related visit.

3. Any in-scope shopping activity would not be exclusively a supermarket shopping trip. We felt most of these supermarket only trips would be to large out of town or local stores which are not the market where town/city centres and are competing.

4. Respondents should have been aged 17+ and should not have been living in Greater London or have been visiting locations in Greater London.

5. Respondents should have been living in urban locations of >20,000 population with the caveat that if they resided in a Passenger Transport Executive (PTE), such as West Yorkshire, then they were to be included. The rationale behind the caveat being linked to the stronger bus networks that can be found in PTEs.

[6] The precise distinction between a town and city centre was left to the discretion of the respondent.

6. An initial 2,000 respondents were recruited randomly with regards to the main access mode they use – this helped to provide a base national picture of trip making and was used to weight the overall data set.

7. Another 2,000 top up respondents were targetted to ensure that overall the following quotas were sampled:

    - 40% bus
    - 40% car
    - 20% other

8. Age and gender quotas to reflect national representative segments (+/- 5%) with age quotas based on the following breaks in each region (NUTS1):

    - 17-24
    - 25-34
    - 35-44
    - 45-59
    - 60+

These quotas were adjusted when recruiting the top up sample of buses. Instead we used quotas based on the age of shoppers using the bus from the NTS. This reflected that bus users have a considerably different age/gender profile to the general population.

The regional quotas were also adjusted based on the fact that we were focusing on urban areas within these regions so based on the proportion of people in each region who were screened out because of living in a rural area, we adjusted the quotas to recruit more people in the more urban concentrated regions (eg East and West Midlands, North West) and fewer in the more rural regions (eg Wales, Scotland, North East),

We asked respondents about their on-line shopping habits but decided not to implement any quotas on the basis that whilst we had national on-line shopping figures by which to compare behaviours, our sample was not necessarily directly comparable. Whilst we might expect on-line shopping to be more prevalent in a sample recruited on-line, it is also the case that such a sample is more likely to shop *per se* than the average household. A sample of people who have made a non-grocery shop in the last 2 weeks are more likely to be on average more economically and socially advantaged than a random sample of households. As such we might expect more on-line *and* physical shopping activity.

3.2 Questionnaire Design

The starting point for the survey design was the earlier survey designed as part of the original Buses and the Economy study[7]. This was also an online survey aimed at panel respondents but which covered a much wider remit that peoples' expenditure at retail and entertainment locations.

[7] [7] Mackie, P., Laird, J. and Johnson D., (2012), *Buses and Economic Growth Final Report*, Greener Journeys, http://www.greenerjourneys.com/wp-content/uploads/2012/06/BusesEconomicGrowth_FINAL-REPORT.pdf

An adapted version was circulated to members of the steering group for some initial feedback in May 2013. In addition a review of other city centre surveys was undertaken with particular focus on phrasing, categories of response resulting in a second modified version of the questionnaire which was again circulated to the steering group for comments in June 2013. This resulted in a number of questions being made simpler to reduce the cognitive burden on respondents; some questions removed to reduce the length of the questionnaire; and changes to a number of the response categories. Finally, changes were made following the pilot survey (25/06/13) which picked up some minor question routing issues.

The final structure of the questionnaire is summarised as below with separate questionnaires developed to reflect how respondents last accessed a location, namely bus, car, rail, taxi, bus based park & ride[8] and active (walking/cycling) modes of transport.

Filter and Quota Questions

- Filter questions to screen out visits if the main reason for visiting the location was for work/residential/education purposes.
- Filter questions to make sure the most recent visit to a location was in the last fortnight.
- Filter questions to screen out Greater London residents or locations.
- Filter questions to screen out other locations not in scope.
- Quota questions for travel mode, age and gender.
- Quota questions for online shopping activity.

Reasons for Shopping and Expenditure Questions

- These are framed around the most recent visit to a location
- They record the activities and expenditure on all goods, services, leisure & recreation at a specific location.
- Whether this expenditure was in a group or individual context
- They record the reasons for visiting the location

Why Did You Travel by A Certain Mode & Would You Use Bus

- These identify the reasons for travelling by the mode you did
- What would make you make more trips by bus

Trip Frequencies

- To that particular location
- To all locations

Socio-Economic & Travel Availability Questions

- Income, employment, household characteristics etc.
- Availability of car, bus etc.

[8] Given the small sample size for PnRide (0.3%), this category was merged into 'other modes' for the majority of the analysis.

3.3 Survey Implementation and Description of the Data

Following a pilot survey of 46 respondents, the main survey was launched on 3rd July 2013, closing on 24th July, with data collected from 3,983 respondents. Initial analysis by Accent resulted in a final data set of 3,960 respondents who were judged to be in-scope. Table 3-1 and Table 3-3 provide an overview of the data collected, specifically the general socio-economic characteristics of the data and are based upon the non-weighted data set. In both tables the unweighted data has been used. Table 3-3 repeats Table 3-2 with weightings attached to reflect the modal usage reported for the first 2,000 respondents, who were selected from the on-line panel based upon the stratification as outlined in Section 3.1 but randomly by mode. All the results subsequently presented in this report are based on the weighted data.

Table 3-1: Socio-Economic Description of the Sample (unweighted)

	Age (Yrs)						
Gender	*18-24*	*25-29*	*30-39*	*40-49*	*50-59*	*60+*	*All Ages*
Male	4.8%	2.1%	5.2%	7.0%	8.7%	18.8%	46.6%
Female	11.8%	5.4%	8.4%	7.4%	7.8%	12.5%	53.4%
All	16.6%	7.5%	13.6%	14.4%	16.5%	31.3%	

	Income Categories (£s)									
	No work	*1-4,999*	*5,000-7,499*	*7,500-12,499*	*12,500-14,999*	*15,000-19,999*	*20,000-24,999*	*25,000-29,999*	*30,000-49,999*	*50,000+*
Personal Income	42.4%	8.8%	4.3%	7.8%	5.8%	8.6%	7.9%	5.2%	7.5%	1.7%
		<7,500	*7,500-12,499*	*12,500-14,999*	*15,000-19,999*	*20,000-24,999*	*25,000-29,999*	*30,000-49,999*	*50,000-69,999*	*70,000+*
HH Income		9.2%	11.4%	8.0%	12.9%	13.0%	10.3%	23.3%	7.9%	4.0%

	None	*GCSE*	*A Level*	*Degree*	*Professional*	*Other*
Qualifications	4.5%	38.6%	37.4%	35.4%	12.8%	3.1%

	Employed 1-30 hrs	*Employed >30 hrs*	*Homemaker*	*Student*	*Not Employ – Looking for Work*	*Not Employ – Not Looking for Work*	*Retired*	*Disabled/Can't work*
Employment	23.9%	22.1%	6.5%	10.8%	5.2%	1.5%	25.8%	4.1%

Table 3-2: Travel Characteristics of the Sample (unweighted)

	Yes	***No***								
Valid UK Driving License	68.9%	31.1%								
	Yes - Always	**Yes – Almost always**	**Yes – But infrequently**	**No – I never have access**						
Car/Van Availability	50.4%	9.0%	7.1%	33.5%						
	No	***Blue or Orange Badge***	***Concessionary Pass - Disabled***	***Concessionary Pass - OAP***	***Other***					
Free Travel	66.2%	6.8%	4.5%	25.6%	1.9%					
	City Centre	***Town Centre***	***Mega Centre***	***Retail Park/Outlet***	***Entertainment Complex***	***Retail & Entertainment Park***	***None of Above***			
Walking Distance Of	20.0%	47.5%	4.1%	18.0%	11.4%	5.7%	34.6%			
	Car/Van Driver	**Car/Van Passenger**	**Car/Van Bus PnRide**	**Motorcycle or Scooter**	**Bus**	**Rail**	**Taxi**	**Cycle**	**Walk**	**LRT/ Metro**
Access Mode	27.2%	10.9%	0.3%	0.3%	41.0%	4.1%	0.5%	1.4%	13.5%	0.8%

Table 3-3: Travel Characteristics of the Sample (weighted)

	Yes	***No***								
Valid UK Driving License	71.8%	28.2%								
	Yes - Always	**Yes – Almost always**	**Yes – But infrequently**	**No – I never have access**						
Car/Van Availability	54.9%	9.2%	6.0%	29.8%						
	No	***Blue or Orange Badge***	***Concessionary Pass - Disabled***	***Concessionary Pass – OAP***	***Other***					
Free Travel	69.7%	7.4%	4.0%	22.1%	1.8%					
	City Centre	***Town Centre***	***Mega Centre***	***Retail Park/Outlet***	***Entertainment Complex***	***Retail & Entertainment Park***	***None of Above***			
Walking Distance Of	20.3%	49.4%	4.2%	19.1%	12.1%	6.1%	32.8%			
	Car/Van Driver	**Car/Van Passenger**	**Car/Van Bus PnRide**	**Motorcycle or Scooter**	**Bus**	**Rail**	**Taxi**	**Cycle**	**Walk**	**LRT/ Metro**
Access Mode	36.0%	14.2%	0.4%	0.5%	22.1%	5.2%	0.7%	1.6%	18.0%	1.3%

4 ANALYTICAL RESULTS

The next set of tables (Table 4-1 to Table 4-11) and figures (Figure 4-1 to Figure 4-2) outline the key analyses of the data[i].

4.1 Trips by Location

Table 4-1 outlines some broad figures with regards to the locations respondents travelled to. It is worth clarifying that this relates to the most recent (within the last 2 weeks of the survey) visit to one of the locations listed in the table (excluding visits when the only purpose was as supermarket shop). So whilst respondents may have visited other locations in the last 2 weeks of the survey the trip considered for the purposes of the survey was the most recent one. This approach has the advantage of ensuring better recall from respondents, without compromising the representativeness of the trip making patterns given the large sample size. The broad picture to emerge from Table 4-1 is that around:

- 70% of shopping/leisure activity was locating either in city or town centres
- 30% of shopping/leisure activity was located at retail parks/outlets, of all forms

Table 4-1: Location of most Recent Shopping/Leisure Trip (%)

Location	Percentage	N
City Centre	31.0	1,228
Town Centre	38.2	1,512
Mega Shopping & Leisure/Entertainment	5.6	223
Retail Park/Outlet	17.9	708
Entertainment Complex	4.6	182
Retail and Entertainment Park	2.7	108
Total	**100.0**	**3,961**

Figure 4-1 illustrates the relationship between shopping locations and access mode. Over half of the trips in our sample were undertaken by car. Bus has the second highest mode share of 22% of all trips (and of those with limited availability to cars this rose to over 33%). Not surprisingly car dominates trips to retail parks/outlets which tend to have limited accessibility by public transport coupled with car parking facilities which are normally free.

Car is also the dominant mode for trips to town centres. Walk and cycle are very significant access modes for town centres, reflecting the close proximity of suburbs to town centres which makes walking a viable access option.

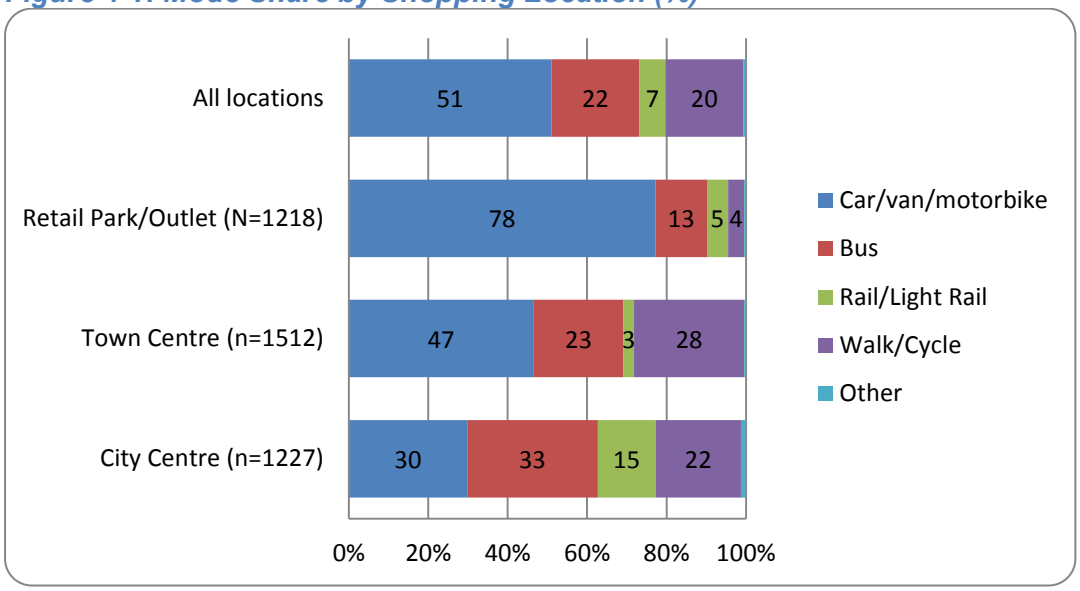
City centres provide the most even distribution of access modes, with bus and car vying with each other for the largest number of trips (around 30%). Although the reasons are not evidenced, this may reflect better bus provision and limited/more costly parking provision, particularly compared to out of town sites. Walk/cycle also perform strongly, with 22% of trips to city centres and 28% to town centres being made by these modes. This may reflect city centre living and the strong employment provisions in both of these areas.

Rail access also has a presence with 15% of trips being made by this mode, again it may be reflecting the accessibility of the rail network surrounding cities.

The overall picture is a plausible one by which:

- Access via public transport is strongest in towns and cities where the public transport network is typically more comprehensive than for out of town sites. Walking/cycling perform very strongly in both town centres and city centres. This is boosted by respondents accessing local high streets, particularly in cities which can have sizeable shopping/leisure areas within each suburb.

Figure 4-1: Mode Share by Shopping Location (%)



Average trip frequencies per person per month to locations are presented in Table 4-2. These figures have been calculated for all respondents regardless of what access mode they used for their most recent journey. These reflect the earlier tables with car journeys strongest for trips to town centres and retail parks/outlets. On average, individuals in our sample make almost 13 trips per month over all locations and modes[ii].

Table 4-2: Average Trip Frequencies to Locations by Access Mode per Month per Person

	City Centre	Town Centre	Mega Centre	Retail Park/Outlet	Entertainment Complex	Retail & Entertainment Park	All locations
Car – Driver + Passenger	1.11	1.99	0.59	1.11	0.36	0.36	**5.5**
Bus	1.16	1.06	0.19	0.21	0.13	0.10	**2.9**
Other Modes	1.53	1.84	0.24	0.30	0.15	0.10	**4.2**
All Modes	**3.8**	**4.89**	**1.02**	**1.62**	**0.64**	**0.56**	**12.5**
Total N	*3,961*	*3,961*	*3,961*	*3,961*	*3,961*	*3,961*	

Table 4-3 and Table 4-4 show similar trip information as Table 4-2, but separate trips by the access mode recorded for the respondent's most recent trip. Under the premise that the mode in question is likely to be the respondent's main mode of travel, we could consider these to loosely represent 'car users' and 'bus users', although clearly there are shades of grey between the two categories. The tables suggest that respondents who travel by car on their most recent trip are more likely to use that mode to access locations and less likely to travel by other modes vis-a-vis bus users with the exception of trips to city centre locations.

Those who use bus as the access mode for their most recent trip are more likely to travel by bus overall and make 14 trips per month, compared to 10 trips for those who used car as the access mode for their most recent trip.

Table 4-3: Average Trip Frequencies to Locations by Access Mode per Month – When Car Is the Access Mode of most recent trip

	City Centre	Town Centre	Mega Centre	Retail Park/Outlet	Entertainment Complex	Retail & Entertainment Park	All locations
Car – Driver + Passenger	1.51	2.94	0.78	1.60	0.47	0.48	**7.8**
Bus	0.32	0.34	0.05	0.08	0.05	0.04	**0.9**
Other Modes	0.38	0.57	0.07	0.14	0.06	0.04	**1.3**
All Modes	**2.21**	**3.85**	**0.9**	**1.82**	**0.58**	**0.56**	**9.9**
Total N	*1,987*	*1,987*	*1,987*	*1,987*	*1,987*	*1,987*	

Table 4-4: Average Trip Frequencies to Locations by Access Mode per Month– Bus as Access Mode of most recent trip

	City Centre	Town Centre	Mega Centre	Retail Park/Outlet	Entertainment Complex	Retail & Entertainment Park	All locations
Car – Driver + Passenger	0.77	1.22	0.42	0.66	0.23	0.24	**3.5**
Bus	3.56	3.14	0.52	0.55	0.31	0.24	**8.3**
Other Modes	0.56	0.75	0.11	0.17	0.08	0.09	**1.8**
All Modes	**4.89**	**5.11**	**1.05**	**1.38**	**0.62**	**0.57**	**13.6**
Total N	*877*	*877*	*877*	*877*	*877*	*877*	

4.2 Reasons for Choosing Locations and Access Mode:

The main reasons respondents gave for choosing specific locations are outlined in Table 4-5. Four key reasons (or three if 1 & 2 are merged) appear to dominate the respondents' stated location choice behaviour:

1. It has specific shops that respondents were interested in
2. It had a good range of shops
3. It was the closest location to the respondent
4. It was convenient to travel to by the respondent's chosen mode.

Whilst it is difficult to influence the proximity of shopping locations to the public these findings do suggest that shopping locations themselves can influence footfall by offering a good range of shopping outlets that will cater for potential customers.

Table 4-6 indicates that convenience is a key decision behind people's mode choice with regards to car and rail. The issue is much less important for bus where the dominant reasons chosen for using that mode are related to cost and poor access to car. For active modes, proximity to the location emerges as the key stated determinant of access mode, followed by cost, convenience, enjoying exercise and no access to car. Cost did not feature strongly for either car or rail users, who were dominated by convenience and travel time. In

addition rail users chose poor access to car and the avoidance of parking difficulties as reasons for using rail. Interestingly most respondents appear to have a choice in how they access locations with relatively small numbers indicating that they had no choice of access modes.

4.3 Expenditure by Location & Access Mode:

The tables on expenditure were calculated from respondents' estimated expenditures for a number of different shopping/leisure categories at the most recent location they had visited. Respondents' were asked to separate individual and group expenditure, with the latter allocated to the individual on a proportional basis given their group size. As a result, unless mentioned specifically, the expenditures recorded in Table 4-7 to Table 4-10 report average individual spend at each location.

Table 4-7 illustrates how average expenditure may differ depending upon whether an individual is shopping in a non-family group or as an individual, with the former likely to spend around £12 more per visit. An explanation for this could be that that a shopping/leisure trip in a non-family group is much more likely to be a social occasion enjoyed with friends with a greater propensity to spend longer in a location and to spend more too.

Table 4-5: Main Reasons Given for Choosing Location Types (%)

Main Reason	All Locations	City Centre (n=1,227)	Town Centre (n=1,512)	Retail Park/Outlet (n=1,218)
It has a good range of shops	21	25	15	24
It had specific shops that I was interested in	33	27	29	45
It has longer shop opening hours	1	1	0	2
It was a day out/opportunity to meet family/friends	7	10	6	5
It was the closest location to me	15	13	23	8
It was the only location that I could travel to	2	2	2	1
It was the least expensive location to travel to	1	0	1	1
It was convenient to travel to by chosen mode	10	10	13	5
I chose it because of poor weather	0	0	0	0
I could do shopping and other tasks at the same time	5	6	6	3
It had child care facilities	0	0	0	0
Other	5	6	5	3

Table 4-6: Main Reason for Choosing Specific Access Modes (%)

Main Reason	Car	Bus	Rail/Light Rail	Walk/Cycle
Cheaper/less expensive	8	23	8	19
Quicker	13	5	14	3
Easier/more convenient	39	17	32	15
More direct	2	3	6	1
Had heavy bags/shopping to carry	5	2	0	0
Travelling with children/disabled/elderly	5	1	2	0
More relaxing/comfortable	4	2	7	2
Safer	0	0	0	0
Avoids parking difficulties	0	14	9	2
Going to more than one place	7	1	0	1
Only method possible	5	4	1	2
Availability of parking	3	0	0	0
Low cost of parking	1	0	0	0
Live close by	3	2	0	27
Need/enjoy exercise/being healthy	0	1	0	15
No car/can't drive	0	19	14	10
Weather issues	0	0	0	0
Don't know	1	1	0	1
Other	5	4	4	1

Table 4-7: Average Individual and Group Expenditure (£ per trip)

	Average Expenditure	Median Expenditure	*N*
Individual – Not in a group	£58.64	£30.00	*2,166*
Individual – In a group	£70.51	£35.00	*1,350*
Family group – As a group	£102.72	£52.00	*1,401*
Family group – Per Individual	£41.25	£22.50	*1,401*
Overall - Per Individual	£50.67	£25.00	*3,961*

Table 4-7 also outlines the expenditure of family groups which per individual is lower than for individuals in non-family groups. This is likely to reflect the fact that children and or one of the spouses may not be actively spending money, even if money is being spent on them.

The average overall expenditure by access mode and location is shown in Table 4-8 and illustrates that car users are the highest spenders, particularly in city centres (£66), with bus not far behind, suggesting that bus users have a strong and significant role to play in the economies of town and city centres. We found that the difference between expenditure by Car and Bus users in city centres was statistically significant (at the 5% level) However, in Town Centres, Retail/Parks and taken over all locations, there was no significant difference in expenditures between the two groups. Furthermore, the results of the expenditure model, described in the appendix, show that when we control for differences in individual characteristics and trip making behaviour between those who access by car and bus, we find that there is no statistical difference in the expenditures undertaken at any location by the two modes. In other words we can find no evidence of an underlying modal effect on

expenditure for buses – if we could transfer car users to bus to the same location, there is no reason to expect them to spend less based on our findings.

Table 4-8: Average Overall Expenditure by Access Mode and Location Type (£ per Trip)

	City Centre	Town Centre	Retail Park/Outlet	All Locations	*N*
Car	£66	£48	£55	£55	*1,533*
Bus	£54**	£41	£55	£49*	*1,624*
Walk/Cycle	£41**	£29**	£49	£36**	*589*
All Modes[9]	**£56**	**£41**	**£55**	**£51**	*3,960*
N	*1,392*	*1,505*	*1,068*	*3,960*	

** indicates values which are statistically different from Car for that location at the 5% level of significance.
*indicates values which are statistically different from Car for that location at the 10% level of significance.

Table 4-9: Share of Total Expenditure by Access Mode and Location Type (%)

	City Centre	Town Centre	Retail Park/Outlet	All Locations
Car	34	48	58	48
Bus	29	22	18	22
Other Modes	36	29	23	30
All Modes	**100**	**100**	**100**	**100**

Table 4-9 uses the expenditure per trip figures from Table 4-8 and the trip frequency figures from Table 4-2 to show the modal share of total monthly expenditure per individual in the survey. On the assumption that the distribution of expenditure on the last trip is representative of distribution of expenditure on trips over the course of a month[10], the figures show that Bus travellers account for 22% of overall expenditure taken over all retail locations, and 29% of expenditure in City Centres.

Average expenditure by category of expenditure and location type is reported in Table 4-10. Purchases on clothing/cosmetics/jewellery accounted for the highest levels of average total spending at just over £15 per visit. Expenditure on food and drink was the second highest at £9.03, whilst the least amount is spent on Other Leisure at £1.44. There was however a great deal of variation across and between locations with regards to patterns of expenditure which appear plausible:

- Expenditure per trip on electrical goods was particular high across retail parks vis-a-vis town centres and to a lesser extent city centres, reflecting the propensity to find electrical retail stores at such locations.
- Expenditure per trip on services was highest in city and town centres where higher concentrations of services are to be found.

[9] Note that this includes rail which is not represented as a separate mode due to a small sample size of 194.

[10] Our expenditure figures correspond to the last trip people made and may not necessarily be a representative cross section of shoppers in a location on a particular day. The expenditure of people who make few trips may be under-represented as these people might be expected to spend more per trip, all else equal and we only make one observation per respondent. However, we found no indication that people who undertook fewer trips spent more per trip on average, in fact we found the reverse relationship, so we think it is appropriate to interpret the figures as equivalent to averages per trip.

- Mega centres such as Meadowhall and Bluewater generate particularly high levels of expenditure on clothes/cosmetics/jewellery (£33), followed by city centres (£19) reflecting the concentration of these retail outlets in both locations.
- Entertainment complexes account for the highest level of expenditure on Other Services, driven by expenditure on leisure goods such as cinema and ten pin bowling.

4.4 Impact of Bus Withdrawals:

Respondents who had used bus as an access mode on their last trip were asked the following specific question and given 6 possible responses:

"What would you have done if there was NO bus service to the location?"

1. *Travelled by another form of transport to the same location*
2. *Travelled by another bus to another location*
3. *Travelled using another form of transportation to another location*
4. *Do all/some of the activities I had planned online or via the telephone*
5. *Not do the planned activities*
6. *Other*

The results are presented in Figure 4-2 along with disaggregation according to whether the respondent has car availability or not. The overall figures suggest that in the absence of a bus service around 16% of those sampled would not have done that planned activity. Having access or no access to a car reduces/magnifies this figure respectively.

Clearly, this is a short run response but, taken at face value, the evidence would suggest that the withdrawal of a bus services would have a significant impact on the retail/leisure economies, the potential equivalent of reducing average bus spend at all locations from £49 to £41[11]. However, this could be an overestimate given at least some of the activities/expenditure may well be spent through other avenues such as online shopping

45% of people would continue to travel to the same location but use a different mode, whilst 24% would travel to a different location using a combination of bus (around 14%) and other modes (10%).

[11] Taking the £49 average spend for bus (all location) in Table 4-8 and applying a factor of 0.84 (derived from Figure 4-2, which illustrates 16% of respondents would not have carried out the activity they were going to do following the withdrawal of a specific bus service).

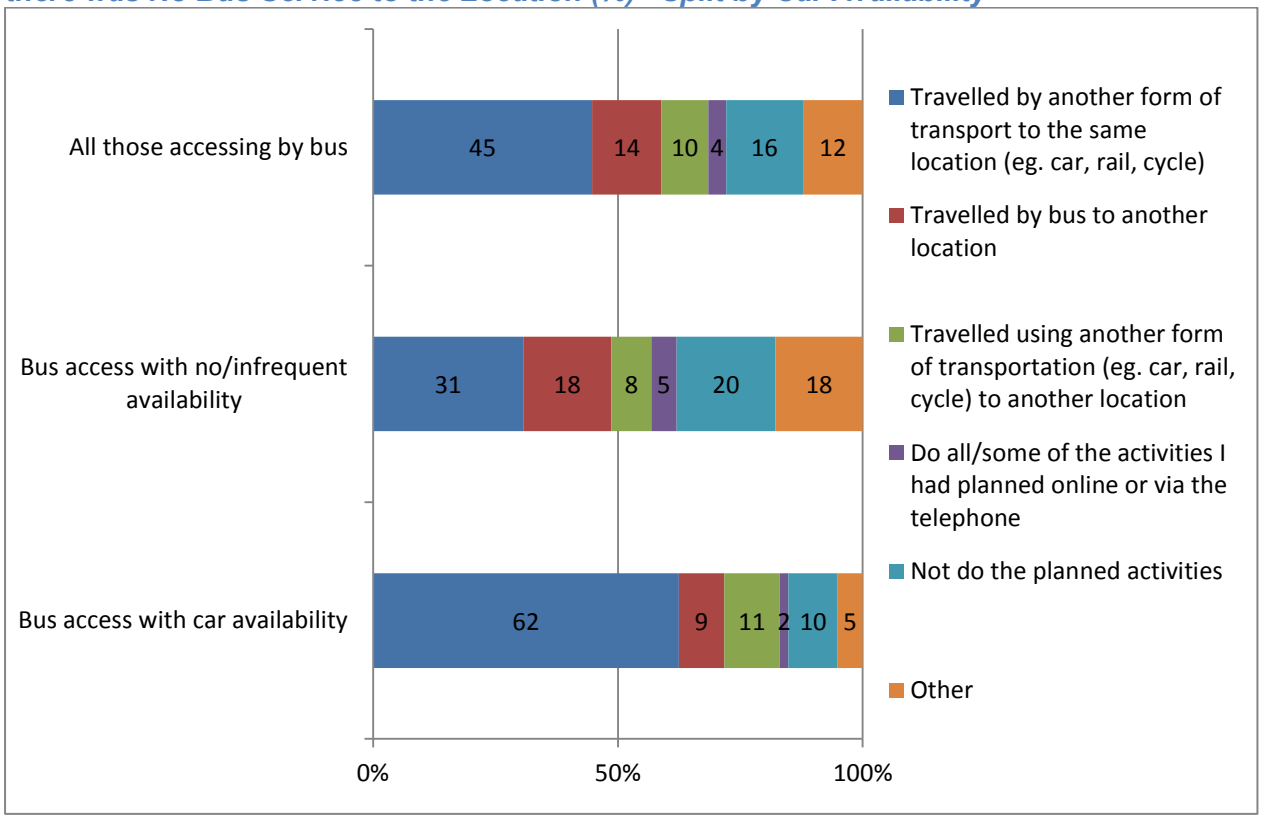
Table 4-10: Average Expenditure by Category of Expenditure and Location Type (£ Per Trip)

	City Centre	Town Centre	Mega Centre	Retail Park/ Outlet[12]	Entertainment Complex	N	Average Spend all locations
Shopping – Food & Drink[a]	£7.23	£10.16	£7.62	£11.64	£4.41	3,960	***£9.03***
Shopping – Clothes[b]	£18.83	£11.25	£33.49	£12.92	£7.85	3,960	***£15.20***
Shopping – Pharmaceuticals[c]	£3.21	£2.34	£3.90	£2.13	£1.32	3,960	***£2.65***
Shopping – Electrical[d]	£6.65	£3.78	£8.75	£17.80	£3.48	3,960	***£7.51***
Shopping Stationary[e]	£2.59	£1.79	£2.42	£2.01	£1.94	3,960	***£2.15***
Shopping – Other[f]	£2.93	£2.71	£2.79	£4.50	£0.86	3,960	***£3.03***
Services – Hairdresser[g]	£6.56	£6.43	£1.54	£1.38	£4.77	3,960	***£5.27***
Eating/Socialising[h]	£5.90	£3.32	£5.50	£2.60	£7.46	3,960	***£4.38***
Other Leisure[i]	£1.40	£1.19	£2.26	£0.68	£6.38	3,960	***£1.44***
Total Expenditure	**£55.33**	**£42.99**	**£68.23**	£55.66	**£38.48**	**3,960**	***£50.67***
Total N	*1,392*	*1,505*	*201*	702	*160*	*3,960*	*Na*

[a] shopping for food/groceries/alcohol/tobacco/newspapers/confectionary
[b] shopping for clothes/cosmetics/jewellery
[c] shopping for pharmaceuticals/toiletries
[d] shopping for electrical/household goods
[e] shopping for stationery/books/CDs/DVDs/leisure goods
[f] shopping for other items (excluding services such as travel agents, recreation, leisure and socialising)
[g] using services, e.g. banks, post-office, hairdresser, nail bar, travel agents
[h] eating out/socialising
[i] other leisure/recreation, e.g. cinema, music concert, bowling, ice skating

[12] Includes Retail & Entertainment Parks

Figure 4-2: Impact of Bus Withdrawals – What Would Bus Respondents Have Done if there was No Bus Service to the Location (%)– Split by Car Availability



Respondents were asked to name the main change which would encourage them to make more trips by bus to their last visited location. There is a wide distribution of reasons and Table 4-11 presents them, disaggregating between city/town centres and retail parks/entertainment centres to reflect the different access modes which predominates for both groups.

There are several cited factors that emerge across all four existing access modes with regards to encouraging respondents to make more bus trips to City/Town centres:

1. Lower fares – is the main change cited by respondents and is particularly echoed by those who currently walk/cycle.
2. More regular/frequent buses is the next most popular change indicated by respondents & is closely followed by direct bus routes, more reliable/punctual buses and faster journeys. All of which ties in with respondents desire for more convenient bus travel as outlined earlier in the report.
3. Existing bus users feel strongly that 'buses running later in the evening or on Sundays' would encourage their greater use of buses, whilst 8% of car users state categorically that they would never use bus. A view also held by 8% of those currently walk and cycle.

The figures are broadly the same for encouraging more bus trips to Retail Parks/Entertainment Centres albeit with some differences:

1. Direct bus routes vies with lower fares as the main reason cited by respondents to encourage their greater trip making by bus. 'More regular/frequent buses' is also given a stronger preference compared with trips to city/town centres.

Overall there would appear to be a clear disposition towards what are termed 'hard factors', namely changes in fares, journey time, frequency, reliability, access time and egress time, as opposed to changes in 'soft factors', e.g. more bus shelters, better information, cleaner buses.

Table 4-11: Main Change for Encouraging More Trips by Bus – City and Town Centres & Retail Parks/Entertainment Centres (%)

Main Change	Car		Bus		Rail/ Rail		Light	Walk/ Cycle
	City/ Town	Retail parks	City/ Town	Retail parks	City/ Town	Retail parks	City/ Town	Retail parks
More regular/frequent buses	12	12	11	13	8	4	11	13
More reliable/punctual buses	8	6	8	8	7	7	7	6
Faster journeys	7	6	7	7	14	9	5	4
Direct bus route	9	16	6	10	9	10	6	12
Greater priority given to buses	2	1	4	3	2	4	2	1
Less congestion	3	3	5	4	5	4	4	4
More seats on buses/less crowded buses	4	2	5	5	6	4	4	4
More comfortable journey	4	3	5	4	7	6	3	1
More shelters at bus stops	3	2	5	3	2	4	2	2
More seating at bus stops	2	2	5	5	2	5	2	2
Bus stop nearer home/destination	6	8	5	5	4	5	6	10
Buses running later in the evening or on Sundays	4	3	8	7	5	4	4	6
Improved ease of getting on and off buses	2	1	2	3	1	3	1	1
Better information about buses	4	4	4	4	4	6	4	5
Improved personal security	2	2	2	2	3	3	2	0
Cleaner buses	4	3	4	5	5	6	3	1
Lower fares	14	12	12	12	12	10	20	17
None of the above I would never travel by bus	8	10	0	0	4	3	8	10
Other	2	2	4	2	1	1	5	2

5 KEY LESSONS AND CONCLUSIONS

5.1 Trips

- In our survey, 70% of respondent's most recent trips were located in the city or town centres, 30% were located in retail parks/outlets
- Car accounted for over half of shopping trips, and dominated trips to retail parks/outlets and even town centres. Bus had the largest mode share with regard to trips to city centres.
- Of those with no or limited car availability, bus accounted for over a third of all shopping trips.
- In terms of trip frequencies (taken over the last month), on average we found individuals in our sample made 12 trips per month to the range of survey locations, with bus accounting for just under a quarter of these.
- Bus accounted for almost a third of trips to city centres and just over a fifth of trips to town centres.
- We found that those people who made their most recent trip by bus were likely to make more trips in total (and more by bus).
- We found the most important reasons for choosing location were the range and types of shops available and the proximity and convenience to access by the chosen mode. This suggests that the choice of locations can be influenced by transport accessibility.
- People chose bus on the grounds of cost primarily, but also due to lack of car access. Convenience and avoidance of parking difficulties were also key reasons. People chose Car and Rail primarily on the grounds of convenience.

5.2 Expenditures

- On average we found individual spend to be around £50 per trip. This varies by mode and location with those who accessed locations by car consistently spending more than bus passengers, by £5 per trip on average. Town centre trips involved the least expenditure.
- We found bus passengers are responsible for 22% of the expenditures across all locations and 29% in City Centres.
- We found that, all else equal, there is no significant difference in expenditure between car and bus travellers, ie if we could switch car travellers onto the bus, there is no predicted impact on expenditure per trip.

5.3 Impact of Changes in Bus Service

- We found that in the absence of a bus service, around 16% of those who used bus would not have undertaken their planned activity at all. 45% of people would switch mode, 24% would travel to a different location.

6 APPENDIX: INDIVIDUAL EXPENDITURE MODEL

In this section we present a simple econometric model of people's expenditure on their most recent trip (£). This work identifies whether there are statistically significant differences in expenditure by mode or by location, controlling for other individual level characteristics that we have collected.

The analysis utilised the variables detailed in Table 6-1 to control for differences in individual characteristics and trip purposes:

Table 6-2 reports the results from a regression model which estimates the impact of different individual and trip characteristics on average individual expenditure per trip. The constant coefficient gives the predicted expenditure of the base group/reference category. This group has the following characteristics:

- Mode and location: Trip by car to city centre,
- Gender: Female
- Location: Not in London/Southeast
- Household Income: Lowest income category
- Main Trip purpose: Food/grocery shopping
- Age: 60+
- Car availability: No car available

The reported coefficient value of £34.22 on the constant is the base predicted level of expenditure for this group (before the impact of trip making is taken into account). All reported coefficients should be interpreted as showing expected differences in expenditure for individuals from categories outside the reference group. An absolute t-statistic of 1.96 or above is taken as an indication of a significant difference in expenditure between the comparator and the base group (ie the difference is statistically different from zero at the 5% level of significance).

We find the difference in expenditure between bus and travellers to city centres is statistically insignificantly different from zero, so there is no evidence that expenditure by this group, all else equal, is different from those who travel by car to the city centre. We found that when the model was re-estimated with town centre, retail and, finally, entertainment parks as the base categories, each time there was no statistical difference in expenditure between car and bus passengers, all else equal. This indicates there is no underlying modal effect which causes differences in expenditure, ie if a car passenger switched their journey to bus, there is no indication they would spend less on a given trip.

We find that those individuals in the highest household income group (*hhinc_8to9*) spend almost £15 more per trip than those in the base category. Those with car availability (*car_avail*) spend almost £10 more per trip. We also find a significant and positive relationship between the number of trips (*trips*) made per month and the amount spent, around £1 extra per trip for each trip made.

Journey purpose is clearly a driver of expenditure: compared to those shopping for food/drink in the base category, those shopping for clothes/cosmetics (*purp_2*) spend on average £18 more per trip and those shopping for electrical/household goods (*purp_4*)

spending £42 more per trip. On the other hand, those using public amenities (*purp_8*) and other leisure/recreation facilities (*purp_10*) spend £22 and £24 less respectively than the base group.

Other differences in expenditures between different age groups, gender, South-East, lower income levels not reported above are not significant.

Table 6-1: Variables used in regression analysis

Mode and location Combination trip dummies	
Car_city centre (Base)	*1= Trip by car to city centre*
Car_towncentre	1= Trip by car to town centre
Car_retail	1 = Trip by car to a retail park/mega retail park
Car_ent	1 = Trip by car to a retail/ entertainment park or entertainment complex
Bus_city centre	1= Trip by bus to city centre
Bus_towncentre	1 = Trip by bus to a towncentre
Bus_retail	1 = Trip by bus to a retail park/mega retail park
Bus_ent	1 = Trip by bus to a retail/ entertainment park or entertainment complex
Rail_city centre	1= Trip by rail to city centre
Rail_towncentre	1 = Trip by rail to a towncentre
Rail_retail	1 = Trip by rail to a retail park/mega retail park
Rail_ent	1 = Trip by rail to a retail/ entertainment park or entertainment complex
Active_city centre	1= Trip by rail to city centre
Active_towncentre	1 = Trip by rail to a towncentre
Active_retail	1 = Trip by rail to a retail park/mega retail park
Active_ent	1 = Trip by rail to a retail/ entertainment park or entertainment complex
Other	1 = Other modes/locations NEC
Age dummies	
Age 60+ (Base)	*1= Age 60 or above*
Age5059	1= Aged 50-59
Age4049	1 = Aged 40-49
Age3039	1 = Aged 30-39
Age2029	1 = Aged 20-29
Age1719	1 = Aged 17-19
Main trip purpose dummies	
Purp_1 (base)	*1= Shopping for food/groceries/alcohol/tobacco/newspapers/confectionary*
Purp_2	1= Shopping for clothes/cosmetics/jewellery
Purp_3	1= Shopping for pharmaceuticals/toiletries
Purp_4	1= Shopping for electrical/household goods
Purp_5	1= Shopping for stationery/books/CDs/DVDs/leisure goods
Purp_6	1= Shopping for other items (excluding services such as travel agents, recreation, leisure and socialising)
Purp_7	1= Using services, e.g. bank, post office, hairdresser, nail bar, travel agents
Purp_8	1= Using public amenity, e.g. library, hospital, GPs, health centre, police stations
Purp_9	1= Eating out/socialising
Purp_10	1= Other leisure/recreation, e.g. cinema, music concert, bowling, ice skating
Household income dummies	
hhinc_1(base)	*1= less than £7,500*
hhinc_2to4	1= £7,500 to £19,999
hhinc_5to6	1= £20,000 to £29,999
hhinc_7	1= £30,000 to £49,999
hhinc_8to9	1= £50,000 or more
Other variables	
Male	1 = Male;0=Female
LSE_dum	1 = resident in London or South-East; 0 otherwise
Car_avail	1 = car/light van available; 0 otherwise
Trips	Number of trips to all locations by all modes over last month

Table 6-2: Regression Results – Estimated Individual Spend (£) per Trip

	Coefficient	*T-Stat*
(Constant)	34.222	4.088
car_towncentre	-15.655	-2.566
car_retail	-14.368	-2.364
car_ent	-9.158	-1.080
bus_citycentre	-7.705	-1.292
bus_towncentre	-16.839	-2.741
bus_retail	-15.457	-1.898
bus_ent	-8.819	-.756
rail_citycentre	-.563	-.065
rail_towncentre	32.509	1.903
rail_retail	27.657	1.400
rail_ent	-2.488	-.087
active_citycentre	-22.669	-2.859
active_towncentre	-30.141	-4.290
active_retail	1.328	.098
active_ent	-29.647	-1.746
other	46.847	2.425
age1719	2.738	.590
age2029	5.149	.908
age3039	-2.861	-.624
age4049	1.185	.270
age5059	4.730	1.131
male	2.038	.723
LSE_dum	3.961	1.054
hhinc_2to4	-2.116	-.421
hhinc_5to6	-1.227	-.232
hhinc_7	3.283	.618
hhinc_8to9	14.830	2.468
purp_2	18.438	4.581
purp_3	-2.691	-.374
purp_4	42.381	7.175
purp_5	-8.049	-1.082
purp_6	3.086	.441
purp_7	8.139	1.572
purp_8	-21.627	-3.019
purp_9	-6.211	-1.221
purp_10	-23.891	-3.918
car_avail	9.758	2.941
trips	1.059	11.535
Observations:3960 Adj R2: 0.08		

[i] All results presented here are weighted based on the mode shares from the first 2000 observations which were recruited without mode quotas.

[ii] Whilst it is not advisable to make direct comparisons between different datasets which have been captured in different ways, it is worth noting that, using the most recent National Travel Survey data from 2012, we found individuals made an average of 14 trips per month of a comparable nature to the activities focused on in our survey. This does not include trips in the NTS where food shopping is the primary purpose, as we have sought to focus on non-grocery related trips.