

# THE BENEFITS OF THE LIVERPOOL CITY REGION CONCESSIONARY TRAVEL SCHEME FOR ELDERLY AND DISABLED TRAVELLERS

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## 1. INTRODUCTION

Concessionary travel passes (CTPs) provide free off-peak travel on buses for older and disabled people in Great Britain (these are referred to as elderly and disabled concessionary passes throughout this paper), plus, in some areas, other travel opportunities funded locally for local residents, including travel in the morning peak and on rail.

In this paper, we report some of the findings of a study quantifying the benefits of CTPs in the Liverpool City Region (LCR), which consists of Merseyside and the district of Halton. We focus on the findings from Merseyside, where there is a much higher volume of travel.

In Merseyside, in addition to the provisions of the English National Concessionary Travel Scheme<sup>1</sup> (ENCTS) which covers local bus travel in England, CTP holders also benefit from discretionary, local transport services on bus, rail and ferry. In the 2013-2014 financial year nearly 36 million bus trips in Merseyside were made by elderly CTP holders and nearly 10 million trips were made by those with disabled passes. Nearly 8 million trips were made by rail, by both elderly and disabled CTP holders.

The objectives of the study were, firstly, to understand the travel patterns of older and disabled concessionary pass holders in the LCR region and, secondly, to assess the social and economic benefits of the schemes as they are now and if they were changed. To do this, we interviewed 1,001 older and disabled concessionary pass holders to collect information about all of their travel and how they used their pass in a typical week. We also asked them to imagine how their travel plans would be different if the concessionary scheme was changed, in particular if there was no concessionary travel scheme at all for elderly users, or disabled residents could not travel for free during peak hours.

This paper contributes to the literature in several ways. Firstly, it provides quantitative and qualitative information on how CTP holders view and use their passes. Secondly, it uses survey data on actual and hypothetical travel behaviour to quantify the benefits of the overall scheme. Finally, it provides information on the value of a concessionary scheme that involves multiple transport modes.

In the UK, two estimates of the costs and benefits of concessionary bus passes for the elderly and disabled have been reported: one by Greener Journeys (2014), a consortium of the large bus companies, and the other by the Passenger Transport Executive Group (PTEG 2013), which represents the strategic transport bodies serving the six largest city regions outside London. These reports follow a “before and after” approach, quantifying the benefits of concessionary schemes based on observed travel changes before and after the introduction of a scheme. In each case the valuation of the scheme is relative to a business-as-usual (full-fare) scenario. A further study using a cost-benefit (CBA) approach to value concessionary travel was

undertaken by Green, Steinbach et al. (2014). The study considered the impact of free travel for 12 to 17 year olds in London, focusing on benefits in terms of accident and personal safety as well as direct benefits to transport users. Another relevant study is the estimate of the contribution of older people to the British economy carried out by the WRVS (2011), which found that older people contribute more to the British economy through taxation, spending in shops, employment and voluntary work, than they cost in terms of pensions, healthcare and welfare payments. The proportion of these benefits that are related to travel has been estimated by Mackett (2014c).

The paper is organised as follows. In Section 2, the evaluation methodology is described. The findings from the quantitative survey are presented in Section 3. Section 4 then sets out the cost-benefit analysis undertaken to evaluate the benefits of the existing concessionary travel scheme in Merseyside. The key findings are summarised in Section 5.

## **2. METHODOLOGY**

### **2.1 Data collection for evaluation**

Because it is not possible to observe how pass holders would actually respond to hypothetical changes to the scheme, we rely on stated intentions data, specifically how travellers say they would alter their travel behaviour (and expenditure) given particular changes to the scheme. In terms of data collection, this involved surveying elderly and disabled pass holders regarding their current travel behaviour, including the use of their CTP. Demand for travel under the current set-up forms the baseline for the evaluation.

Details of the existing Merseyside concessionary travel schemes are presented in Table 1. Respondents were then presented with a series of hypothetical scenarios reflecting changes to the scheme and asked how their travel might change. As one of these scenarios, elderly survey participants were asked to imagine how their travel would be affected if there was no longer a concessionary travel scheme. For Merseyside residents aged 60 and over, this meant no free off-peak travel by bus or rail. For disabled respondents, the scenario was no free travel on bus or rail during peak times. From these data we can compute the value of the existing schemes relative to having to pay a full fare for travel. Comparing the cost-benefit outcomes of our study with outcomes from other published schemes allows us to benchmark the survey results.

The survey data, which covers one week of travel by participants, were collected in February and March 2015. They have been weighted to reflect total annual rail and bus trips. Analysis of NTS data for the over 60s in the northwest and Merseyside for 2007 to 2010 indicates that trips made in February by this group are approximately equal to the annual average and those made in March are slightly above average. Reported changes to trips made as a result of scheme changes are also weighted to reflect total annual trips, and so if respondents indicate that they would no longer make a trip in the survey week because of deterioration of the scheme conditions then this will be weighted to reflect the change for all weeks in the year. Thus reported travel changes to the scheme are likely to represent an overestimate, since over the longer term travellers may reduce the frequency with which they make journeys and not stop them completely.

Table 1 Existing concession schemes available to elderly and disabled residents of Merseyside in addition to ENCTS

	Merseyside concessionary schemes		ENCTS
	Elderly concession scheme	Disabled concession scheme	
<b>Modes</b>	rail/bus/ferry <sup>2</sup>	rail/bus/ferry <sup>2</sup>	bus
<b>Fee</b>	free	free	free
<b>Time restriction</b>	any time Mondays to Friday, except journeys starting between 6.31 a.m. and 9.29 a.m.	any time	off-peak - defined as 09.30 to 23.00 weekdays and any time weekends/public holidays
<b>Age/disability restriction</b>	60 years	categories A to G <sup>3</sup>	state pension age
<b>Geographical restriction</b>	bus – within 5 Merseyside districts rail – within 5 Merseyside districts plus Chester (Wirral line) and Ormskirk (Northern Line)	as for elderly concession	all local bus services in England

## 2.2 Quantitative assessment of costs and benefits

For the assessment of the socio-economic impacts of the existing scheme, we use a cost-benefit approach, monetising as far as possible all benefits and costs of changes to the existing concessionary fare scheme. Desk research was undertaken to identify the relevant impacts. These encompass:

- Changes in travel benefits to concessionary transport users due to fare and service frequency changes; fare changes have an impact on travel demand and subsequently service provision.
- Changes in travel benefits to other transport users and operators due to service frequency changes, for example, increased travel by concessionary pass holders may lead to increases in service frequency for fare-paying passengers.
- Externality costs including costs due to congestion, accidents, infrastructure, noise, local air quality and greenhouse gas emissions.
- Wider economic impacts
- Impact on local retailers through changes in shopping and leisure expenditure.
- Health benefits of active travel, as a result of walking and cycling to use public transport services.
- Costs to local transport authority (LTA).

Pass holders benefit from concessionary schemes because they provide greater opportunity to travel, for example to shop, to participate in other leisure activities, to access medical services and to visit friends and relatives. They also benefit from the fare saved when making a journey and service enhancements brought about by operators who provide extra services to carry the additional demand generated by the scheme. Thus, in the cost-benefit analysis of the transport impacts, monetised benefits for users are determined not only from fare changes and the influence these have on their travel but also the cost of time spent travelling. A fare increase, for example, would lead to reduced travel demand from those who were no longer willing to pay for the journey (generated demand) as well as a higher fare for those who continue to travel (non-generated demand). The expected decrease in service frequency arising as a result of the reduced demand<sup>3</sup> leads to increased travel times for existing users, the value of which is also quantified.

Any change in service frequency results in a corresponding change in (marginal) operating cost for the local transport operator. Under the terms of the reimbursement scheme, the operator is compensated by the local transport authority for the fare revenue foregone for those who would have travelled anyway (non-generated demand) and, in some cases, the additional operating costs for generated trips. There is also a loss (the deadweight loss) from subsidising travel for those concessionary travellers who made the trip at below this marginal cost, which is subtracted from the consumer benefits in the analysis.

Other transport users also experience changes in benefits due to service frequency effects. For example, in the short term, they may benefit from improved public transport services brought about because of the increased demand for bus and rail services by those with CTPs.

When a public transport trip is substituted by a car trip (or vice versa), then the change in equivalent car kilometres driven can be estimated. This enables the impact of change in car use on congestion, infrastructure, local air pollution and greenhouse gases, noise, infrastructure and accident costs to be calculated. These externalities are also relevant when a rail trip is substituted by bus. In both cases the impact is not limited to other road users but also has a wider societal cost.

The standard approach for the appraisal of transport schemes also relies on the assumption that all other markets are functioning perfectly. Hence the changes in the benefits (consumer surplus) enjoyed by transport users from the transport market also determine the impacts on other markets. Thus changes in the cost of transport affect the amount of expenditure on other markets, and these are included in the evaluation of benefits.

A number of wider impacts that recognise additional effects not covered by assessment of travel impacts alone are also included in transport appraisal<sup>4</sup>. These include the effect of transport on agglomeration, reflecting that clustering of employment centres increases labour productivity, which is relevant for this local study of a mainly urban region. We apply an approach calculated for the ENCTS as whole (PTEG 2013) to the LCR to account for the effect of changes in transport costs (including service frequency effects) on access to employment in the region. We also collected data on potential wider economic benefits from voluntary work, caring and employment activities of concessionary pass users, but these were found not to be significant in the survey.

Data on shopping and leisure expenditure are not often collected in the context of travel behaviour surveys. In our survey, we collect data on reported leisure and retail

expenditure, however we have no information on how this money might otherwise be used when it is reported that a trip would no longer be made. We assume that the main impact of the concessionary travel scheme is to shift expenditure from one sector or location to another, hypothesising that it is not spent on retail and leisure in the LCR.<sup>5</sup> These changes in expenditure have an impact on local retailers and this can be formally captured in their producer surplus: the increase in revenue above the cost of supply.<sup>6</sup> The role of expenditure is otherwise captured in the transport user benefits and indirect effects on the economy through agglomeration effects.

The direct health benefits of active transport (cycling or walking as part of any journey) are also to be monetised. These are discussed in further detail in Chapter 4.

Changes in the travel behaviour of concessionary pass holders may also have an impact on social service and hospital transport costs for outpatient visits if these are provided by the local authority, and on taxi services and family or friends who provide lifts. There is also evidence that using public transport can ease the transition from driving for older people (Mackett 2014a). The quantification of these impacts was beyond the scope of this study. Although qualitative data were collected in the survey relating to the impact of concessionary travel on quality of life, mental health, social exclusion and well-being, these are not presented here.

Finally, we note that the area of interest for the assessment is the Liverpool City Region (LCR). Benefits that accrue to residents of the LCR who are users of the schemes, other transport users and the wider local economy of the region are included in the analysis. On the cost side, we consider only the costs to the local transport authority of the existing scheme and changes to it. These were provided by the LTA. Costs and benefits to the Exchequer from indirect taxation are excluded.

### **3. TRAVEL BEHAVIOUR FROM QUANTITATIVE SURVEY**

#### **3.1 Survey methodology**

Following a pilot survey, 1,001 interviews were conducted with residents of the LCR, who had elderly and disabled concessionary passes. The survey was conducted between 3 and 22 March 2015 using a computer-assisted telephone interview methodology. Substantial effort was made to conduct some of the interviews outside of working hours and the overall response rate was 28 per cent.

Quotas were specified to ensure that the sample contained enough disabled pass holders (quota = 80 per cent elderly, 20 per cent disabled), enough respondents in Halton to quantify the impacts of changes to CTPs for this district (quota = 75 per cent Merseyside, 25 per cent Halton) and to ensure that the sample included people who used their pass for rail travel (at least 15 per cent of the sample used their pass for rail travel). All of the quotas were met. The sample was then reweighted to reflect the actual distribution of passes across the different pass types and districts.

Because the key objective of the survey was to assess the impact of changes to concessionary passes on travel patterns, respondents who reported that they 'never' used their concessionary pass or that they used it 'less often' than once a month for rail or bus travel were excluded from main part of the survey. These formed a relatively small proportion of respondents (8 per cent of respondents from Merseyside and 18 per cent of respondents from Halton).

As part of the survey, respondents provided detailed information on the trips that they had made during the previous week. There was a concern about whether

respondents would be able to recall trips made up to a week ago during the telephone interview, and therefore respondents were asked directly about how easily they were able to recall such trips (this was also an area specifically investigated in the pilot study). We found that respondents seemed easily able to recall their trips and were confident about them. Respondents also seemed able to imagine how their trip-making might change under different concessionary fare scenarios.

Data on trips has been reweighted to reflect the distribution across districts, as well as taking into account that people who were more likely to make trips were included in the trip diary. They have also been reweighted to reflect total annual trips by bus and rail. The same weights have been used for analysis of the reported baseline trips and to the full-fare alternative scenario. All reported findings, except where explicitly indicated, reflect results from the weighted sample.

Table 2: Data collected in the survey

<b><i>Socio-economic information</i></b>	<b><i>Health and well-being</i></b>	<b><i>Travel information</i></b>
Age	ONS well-being questions	Type of pass
Gender	Current health	Frequency of use of bus pass
Household size	Difficulty in getting around on foot	Frequency of use of rail pass
Driver licence holding		Travel diary (7 days)
Car access		Assessment of ability to provide travel data
Internet access		Qualitative value of passes
Employment status		
Home tenure		
Monthly income / housing expenditure		

Table 2 contains a summary of the key information collected in the survey. The following trip information was collected in the travel diary component of the survey:

- Day of journey
- Mode of journey
- Origin and destination district, of journey
- Expenditure if shopping or leisure journey
- Time spent in volunteering and activities looking after others
- Estimates of journey time, walking time and journey length
- Journey start time
- Use of concessionary pass.

The same travel diary information was also collected for the full-fare alternative scenario.

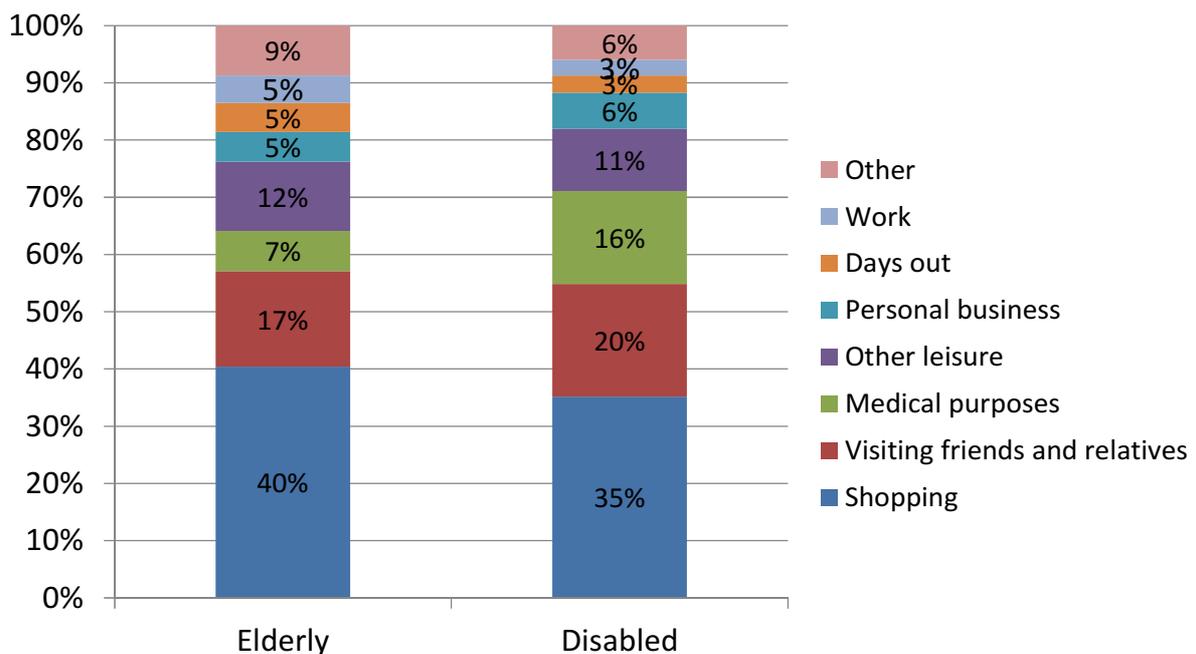
### 3.2 Current behaviour from travel diary

We found that over three-quarters of respondents used their travel pass at least one or two days a week to make bus journeys. Disabled pass holders used their pass more frequently (79 per cent) than those with older people's passes (76 per cent). About a quarter of Merseyside residents on the scheme used their concessionary pass for rail travel at least one or two days a week.

Nearly half of all trips made by older pass holders were made by public transport (43 per cent by bus and around 5 per cent by train), with concessionary passes being used for over 95 per cent of those journeys. Disabled pass holders used public transport even more, with nearly all public transport journeys by disabled pass holders made using their concessionary pass (98 per cent).

Nearly half of the journeys made by older pass holders (40 per cent) were for shopping purposes. In addition 17 per cent of trips were for visiting friends and relatives and another 17 per cent for leisure. These findings are consistent with National Travel Survey data for the northwest region. For disabled pass holders, 35 per cent of journeys were for shopping, 20 per cent for visiting friends and relatives and 11 per cent for other leisure purposes. Journeys for medical purposes were also quite important, reflecting 16 per cent of all journeys made by disabled pass holders. These findings are illustrated in Figure 1. Older pass holders who made shopping or leisure trips were observed to spend an average of £29.50, excluding travel costs, per trip. The average expenditure for disabled pass holders was £26.76. These figures are consistent with expenditure of £29.90 per shopping trip by bus cited in a House of Commons Transport Committee report published in 2011.

**Figure 1 Trip making by journey purpose for CTP holders**



### **3.3 Stated behaviour under full-fare alternative for elderly pass holders**

When asked how not having a concessionary pass would impact their travel in the week prior to the survey, residents in Merseyside with elderly concessionary passes said that they would no longer make 37 per cent of the journeys they made by bus and 46 per cent of the journeys they made by train. The vast majority of trips that would no longer be made are trips made for shopping (65 per cent), followed by visiting friends and relatives (14 per cent), other leisure trips (8 per cent) and days out (5 per cent). A small number were for healthcare (3 per cent), other personal business (2 per cent) and work (2 per cent). Trips for shopping, days out and leisure will impact spending. Trips made to the City of Liverpool are mostly affected (48 per cent of the trips that would not be made were to the City of Liverpool).

Individuals also said that that they would transfer a substantial number of the journeys that they currently make by bus or rail if they did not have a concessionary pass. Specifically, 25 per cent of their bus journeys and 13 per cent of their rail journeys would be transferred to other modes. Journeys made by bus would primarily be transferred to car, but also to walking (it is noted that some respondents still indicated that they would make bus journeys, after considering their options). Journeys made by train would be primarily transferred to car (again some respondents indicated that they would still make rail journeys, after considering their options). Concessionary pass holders would pay the full fare for 38% of bus trips and 41% of rail trips they currently undertake.

As noted earlier, we believe that changes to trip-making are likely to be overestimated, because reported changes are weighted to reflect annual totals. Thus, if a respondent said that they wouldn't make a trip that they made in the previous week, this change is assumed to happen in all weeks of the year. Moreover, whilst respondents were able to imagine not making a specific trip or switching to an alternative mode, they were much less likely to indicate that they would change destinations, for example by shopping at a local store instead of travelling to another district. About 4 per cent of trips were amended in this way. This also suggests that trip changes are likely to be overestimates. This has some additional implications for the changes in spending on retail and leisure. In the travel diary, respondents provided the expenditure associated with a trip. If, for a given scenario, a respondent indicated that a trip would no longer be made, it was assumed that this expenditure would also not be made (and those who continued to travel would spend the same amount as before). Additional questions on changes to shopping behaviour were therefore not asked, mainly because the survey was already very complex. Hence, any change in retail and leisure spending associated with changes to the existing scheme is likely to be an overestimate, as some spending would be made on other trips or by other means, when taken in the context of an annual average rather than a single week.

### **3.4. Quality of life and well-being**

Survey respondents were also asked a number of qualitative questions relating both to the impact of concessionary travel on their quality life and their general wellbeing.

We found that 92 per cent of respondents agreed or strongly agreed that having a concessionary pass improved their quality of life; there were high levels of consistency across all pass holders, regardless of age or gender. A similarly high percentage also agreed with the statement 'My concessionary pass makes access to shopping, leisure and medical services easier'.

## 4. COST-BENEFIT ANALYSIS

### 4.1 Evaluation of the current scheme for elderly pass holders

Using the stated changes in travel behaviour by the elderly reported in the previous section, we determine the benefits of the existing concessionary scheme for the elderly relative to the costs of implementing the scheme. The components of this cost-benefit analysis are presented in column 2 of Table 3 below. These form the basis for the discussion in this section. Columns 3 and 4 contain the findings from two assessments of the ENCTS. We compare our results with these in Section 4.2. All results are reported as *benefits per unit cost of implementation*, i.e. the benefit returned per unit of cost.

**Table 3: Results of the cost-benefit analysis for the existing scheme in Merseyside and ENCTS in England**

Benefit per unit cost	Value of existing scheme in LCR - elderly only	Value of ENCTS Greener Journeys (2014)	Value of ENCTS PTEG (2013)
Benefits to CTP holders (a)	1.57	1.44	1.19
Benefits to other transport users through service level changes (b)	0.82	0.48	0.11
Social benefits from reduction in externalities (congestion etc.) (c)	0.13	0.21	0.17
Wider Economic Impacts <sup>8</sup> (d)	0.05	not measured	0.07
Health benefits (e)	0.45	0.49	0.06
Wider Economic Benefits (voluntary work) (f)	Negligible	0.32	not measured
Benefits to local retailers (g)	0.22	n/a	n/a
<b>Benefit-cost (BC) ratio, transport only [(a)+(b)+(c)]</b>	<b>2.52</b>	<b>2.13</b>	<b>1.47</b>
<b>Total Benefit-cost ratio</b>	<b>3.24</b>	<b>2.94</b>	<b>1.60</b>

The main benefits from the existing concessionary schemes are to the pass holders themselves: these consist of the effect of free travel on those who would have made the trip anyway and benefits from additional trips made by new users. In Merseyside, the number of concessionary pass holder bus trips is quite high relative to total public transport ridership (approximately 45 per cent in the off-peak period), so if there is a substantial reduction of concessionary pass holders travelling there would be a substantial reduction in service frequency, which impacts on travel service conditions for other users. The alternative is also true – with increased travel demand comes increased service frequency and improved service conditions for other users. The Merseyside scheme also includes rail travel. Reported data from the survey indicates that 65 per cent of generated trips under the existing scheme

are completely new trips rather than being switched from other modes. A proportion of journeys shift from car (23 per cent). The changes in external costs are relatively modest as car journeys are replaced by new bus journeys.

In terms of the cost-benefit analysis, changes in shopping expenditure occur in a number of ways. Firstly, money that does not have to be spent on travel under the concessionary scheme becomes available for expenditure on other goods, including retail expenditure. This effect is already taken account of in the calculation of user benefits for concessionary travellers. Secondly, there are changes in benefits to local retailers through the amount of revenue they earn. Given that no cost data for retailers were available, we assume the profit margin to be a small percentage of the expenditure total. As an indicative example in Merseyside, a 5 per cent margin would correspond to a change in benefit of £6.7million/year (0.23 per unit of cost). Very few respondents in the survey indicated that they would change the destination of their trip if the concessionary scheme was withdrawn. We therefore assume that the benefits of any retail and leisure expenditure no longer made in the LCR accrue outside the region. Finally we note that, as discussed in section 3, the methodology used in the survey to derive changes in spending also introduces some uncertainty.

Wider economic impacts arising from changes in employment and productivity (agglomeration effects) have been calculated at a national level for the ENCTS (PTEG 2013) as a fixed percentage (46 per cent) of congestion costs. Applying a similar approach to the LCR, we obtain a benefit £1.4 million/year (0.05 per unit cost) (see Table 14). Concessionary travel for voluntary work was found to be negligible in our survey.

The health benefits associated with active travel are based on all reported walking and cycling as part of any journey. The average time spent walking as part of a car journey is less than that of a bus or rail journey so that generated concessionary bus and rail trips, including those shifting from car, will increase the amount of active travel and its impact on health. It should be borne in mind that the monetised values are not strictly applicable to the elderly, although these values are regularly used in this market. Moreover, other studies which do focus on the elderly also report active travel and health effects. Coronini-Cronberg et al. (2012) analysed NTS data for England for 2005–08 and found that older people in England with a free bus pass seem more likely to participate in active travel (walking and cycling) and travel by bus, and to undertake regular walking than those without, regardless of their socio-economic status. From their analysis of the English Longitudinal Survey of Ageing (ELSA), Webb et al. (2012) concluded that older people who used public transport were less likely to be obese and less likely to become obese than those who did not.

Cost data for the study were provided by the local transport authority. Under the 'no better off and no worse off' principle (DfT 2012), commercial bus operators are reimbursed for fare revenue they would have received anyway from passengers who would have made the trip if they had to pay a fare (non-generated trips). Fare revenue from new (generated trips) is not covered as this would make them better off than without the concessionary scheme. They are, however, reimbursed for the costs of running additional services to cope with new demand, so they are not worse off. The non-generated and generated trips reported in the survey for the existing scheme match the relative proportion of these trips currently used by the LTA in their reimbursement of transport operators quite closely; this suggests that the respondents' view of the impact of concessionary travel on their trip making behaviour is consistent with the provider. The data are less consistent for rail.

Overall we find that the existing Merseyside scheme brings significant benefits to the regions for all transport users, as well as health benefits associated active travel and benefits from expenditure on retail and leisure.

#### **4.2 Comparison of the LCR and national ENCTS schemes**

The results of the evaluations of the ENCTS by Greener Journeys and PTEG are presented in Columns 3 and 4 of Table 3, respectively.<sup>9</sup> It is interesting to compare these with the LCR results (Col 2), given the different methods used to determine demand for concessionary travel. There are additional differences that need to be taken into account. As a national scheme, the ENCTS covers a range of metropolitan and rural areas with different transport characteristics, while the LCR is predominantly metropolitan. Metropolitan areas generally have much greater public transport use than other areas, with almost twice as many bus passengers as even other predominately urban areas. Secondly, the evaluation of the LCR scheme differs from the ENCTS evaluations because we are interested in changes in benefits and costs to the LCR rather than at the national level. Hence local benefits to producers are included, but taxation effects are not.

While changes in travel demand for the LCR scheme come directly from the survey, for all the evaluations the effects of changes in service frequency on the demand for bus travel by other users rely on estimates using an elasticity value. This occurs because the increase in the number of people travelling using concessionary bus passes would lead to improvements to the bus service which would attract some people who do not have bus passes because of the lower average waiting times. The standard elasticity value of 0.6 is used in this study and by Greener Journeys (2014). A lower value of 0.3 has been used in the PTEG (2013) study as they expect service levels to be less responsive to changes in demand and this is reflected in lower benefits to other users. Applying this parameter to our data would reduce the benefits to other transport users by approximately half (0.42 instead of 0.82). A similar effect is seen for the health impact of active travel, where different values are obtained depending on the calculation methodology employed, whereas a common approach was used for the calculation of wider economic benefits.

Finally, the cost component of the BC ratios depends on the reimbursement model used and the fare and additional cost assumptions. Local cost data were provided for the LCR region; the same reimbursement model for commercial bus operators was used throughout.

There are clearly some differences both in the types of non-transport benefits taken into account in the Merseyside and ENCTS evaluations and how these are calculated, with some uncertainty in the parameters used. Including these effects provides at least an indication of the potential socio-economic value of the scheme to the region.

With all differences and caveats aside, the valuations are reassuringly similar, suggesting confidence in the quality of the survey results.

### **5. SUMMARY AND CONCLUSIONS**

In this paper we have presented a methodology for evaluating the benefits of concessionary travel in a region using survey data which included information on reported and hypothetical travel behaviour. Although there were a number of differences between the local scheme and other concessionary schemes with

published evaluations, we were able to undertake a comparison to help determine the quality of the survey data. This exercise indicated that the calculations based on the survey data were of a reasonable order of magnitude. In addition, there was good agreement between the number of generated and non-generated bus trips determined from the survey and used by the LTA in their operator reimbursement. Overall, we found that the social and economic benefits of the scheme for elderly users are several times higher than the costs of providing it. This is in line with the findings of the ENCTS evaluations.

The survey also allowed us to understand the current travel behaviour of CTP holders and how they view the concessionary schemes. The existing concessionary travel schemes in the LCR for older and disabled travellers are well used and valued by users. They are used for a range of purposes, with shopping being the most popular. Again, the reported expenditure was in line with other published findings.

## Notes

<sup>1</sup> There is a comprehensive review of the impacts of the ENCTS in Mackett (2014a), with a summary in Mackett (2013), and an assessment of the success of the scheme in achieving its political objectives in Mackett (2014b).

<sup>2</sup> Ferry is outside the scope of this study.

<sup>3</sup> This is the Mohring effect.

<sup>4</sup> DfT (2014a).

<sup>5</sup> For each scenario in the survey, respondents were given the option to change their destination as well as changing mode or not making a trip. Hence we assume that this retail spend does not accrue to the LCR.

<sup>6</sup> At a national scale, these changes in local producer surplus are offset by changes in other parts of the economy unless there are overall changes in labour supply or income taxes, which are captured in the wider impacts.

<sup>7</sup> <http://www.publications.parliament.uk/pa/cm201012/cmselect/cmtran/750/750.pdf>

<sup>8</sup> These are W1 benefits in the notation of WebTAG transport appraisal guidelines

<sup>9</sup> Own calculations to convert to common format using the results presented in the two reports.

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