Subcommittee to Study the Transport Needs and Provision of Concessionary Public Transport Fares for Persons with Disabilities

Information Paper for Meeting on 15 January 2007

PURPOSE

At the Subcommittee meeting on 10 July 2006, the Administration undertook to conduct a survey on the travelling characteristics of persons with disabilities (PWDs) who are recipients of Disability Allowance (DA) or assistance under the Comprehensive Social Security Assistance Scheme (CSSA) with 100% loss in earning abilities, so as to gain a better understanding of the general travel behaviour of the target beneficiaries of fare concession. This paper sets out the key findings of the survey.

THE SURVEY

2. In July 2006, the Health, Welfare and Food Bureau commissioned, through open tendering, the Social Sciences Research Centre of the University of Hong Kong to conduct a survey on the travelling characteristics of the PWDs stated in paragraph 1. The main objectives of the survey were:

(a) to identify the general travel behaviour of the target respondents;
(b) to evaluate the factors affecting choice of public transport mode by PWDs;
(c) to estimate the travel expenditures of the PWDs for each public transport mode; and
(d) to understand the likely impact of concessionary fares.

3. The survey covered a sample population of around 85,000 PWDs, drawn in accordance with actual payment records maintained by the Social Welfare Department as at 30 June 2006. This figure is lower than the figure of 95,000 estimated at the start of 2006.

4. Around 3,000 PWDs were chosen from the target population. Survey data were collected during 7 September – 16 October 2006 through telephone and face-to-face interviews.

FINDINGS OF THE SURVEY

5. An executive summary of the survey is attached at **Annex**.

6. Members may wish to note that answers to the hypothetical questions related to travelling behaviour and expenditure under fare concessions and the estimated change in revenue of public transport operators should be read with caution and can only serve as a reference, as answers of the surveyed PwDs cannot be tested until a real fare concession comes into effect.

7. Key points of the findings of the survey according to the survey agency are as follows-

(a) Respondents each on average spent $45.8 weekly on public transport. Amongst all the transport modes, the respondents spent $15.4 on buses ($11.1 spent on Kowloon Motor Buses on average), followed by $8.2 on taxis and $5.2 on other vehicles. For bus, Kowloon-Canton Railway (KCR), Light Rail Transport (LRT), Mass Transit Railway (MTR) and tram (the five selected modes)**,** $27.5 were spent on these five modes in total per week;

(b) To summarize the factors affecting the choice of transport modes, convenience of alighting locations, the only choice around the starting point and convenience of boarding locations were the three main reasons for choosing most of the transport modes with efficiency added for KCR, MTR and taxi, cost for tram and ferry and special facilities for Rehabus;

(c) The main reasons for not using the selected modes of transport were very similar, the most common reason was that they rarely or do not need to travel by it, followed by no service to the respondents' destination and depending on whether they need to use it. Also, a significant proportion of respondents claimed that they rarely or never go out was their reason for not using transport even with concessions. It is noteworthy that after concessions, very few PWDs report that fares restrict them from using any of the selected modes of transport;

(d) Under the three possible fare concession options covered in the survey: (i) public holiday concession; (ii) non-peak hour concession (hours

except Monday to Friday from 700am to 930am, 5:00pm to 800pm, and Saturday from 7:00am to 9:30am); and (iii) full day concession, the total weekly expenditure per PWD on MTR, KCR, LRT and tram was found to increase. The total weekly expenditure per PWD on buses was estimated to increase ONLY under public holiday concession. The increase in weekly expenditure per PWD is not evenly spread across the five transport modes, with the major increases being for the MTR and KCR; and

(e) Since half of the respondents were already existing bus users, the proportion of new users and the expected amount spent by them were relatively small, leading to a net reduction in weekly cashflow under the non-peak hour concession and full day fare concession.

****

Health, Welfare and Food Bureau
Environment, Transport and Works Bureau
January 2007

Annex

THE UNIVERSITY OF HONG KONG
SOCIAL SCIENCES RESEARCH CENTRE
Director: Professor J. Bacon-Shone *(PhD Birmingham)*
香港大學
社會科學研究中心
主任: 白景崇教授

EXECUTIVE SUMMARY
SUBMITTED TO
THE HEALTH WELFARE AND FOOD BUREAU

Survey on the Public Transport Needs of Persons with Disabilities Executive Summary

Social Sciences Research Centre

The University of Hong Kong

15th January, 2007

Executive Summary

Section One: Travel Characteristics and Travel expenditure Incurred

E1.1 Background Information

E1.1.1 The Social Sciences Research Centre (SSRC) of The University of Hong Kong was commissioned by the Health Welfare and Food Bureau of the HKSAR Government to conduct a sample survey to assess the traveling characteristics and to estimate the travel expenditures of the Persons with Disabilities (PWDs) who are the recipients of Disability Allowance (DA) or Comprehensive Social Security Assistance (CSSA) with 100% loss in earning capacity. Survey data were collected through telephone interviews and face-to-face interviews from 7th September to 16th October 2006 (excluding 1st, 2nd, 8th, 14th and 15th October 2006).

E1.1.2 The main objectives of the survey were:

- To estimate the travel expenditures of the PWDs for each public transport mode.
- To identify the general travel behaviour of the target respondents.
- To evaluate the factors affecting choice of public transport mode by PWDs.
- To understand the likely impact of concessionary fares.

E1.1.3 Information from the respondents about their traveling characteristics including purpose, origins and destinations, mode of transportations used and the impact of different possible concessions was enumerated. Demographic information such as age, working or studying status, personal and household income was also collected during the interviews.

E1.1.4 PWDs are defined as those who have at least one of the following conditions:

- Physical handicap (PH)
- Visual impairment (VI)
- Hearing impairment (HI)
- Speech impairment (SI)
- Mental illness (MI)
- Autism[i]
- Mental handicap (MH)

E1.1.5 The target respondents were the PWDs aged between 12 and 65, classified into the following categories:

- Recipients of Normal Disability Allowance (NDA) and Higher Disability Allowance (HDA).
- Recipients of Comprehensive Social Security Assistance (CSSA) receiving the standard rates for those 100% disabled or requiring constant attendance in institutions or the community.

E1.1.6 The overall combined response rate was 88.0% for all the telephone and face-to-face interviews conducted. The response rate for the telephone interviews alone was 87.6% and for the face-to-face interviews alone was 91.4%.

E1.1.7 A total of 84,595 PWDs in the target categories were identified by the Social Welfare Department and all the estimates and tables presented are weighted according to the respective PWD population, except the table presenting the sampling

[i] Autism PWDs are grouped with Mental Illness (MI) in this survey.

of the surveyed PWDs in this survey.

E1.2 Personal Information

E1.2.1 In this survey, 1,977 interviews were completed by the PWDs and the remaining 1,183 interviews were completed by their carer[ii] who takes care of the respondents' daily life.

E1.2.2 Amongst the 3,160 respondents who participated in this survey, males (50.7%) and females (49.3%) each comprised about half of the population.

E1.2.3 Nearly ten percent of the respondents were living in Tuen Mun (9.6%) and another 9.5% living in Yuen Long, which were the two largest groups. Only 1.3% of them were living in Wan Chai and 1.2% were living in Islands. 55.5% of the respondents were living in the New Territories (31.1% living in the New Territories West and 24.4% living in New Territories East), and 29.7% of them were living in Kowloon and 14.7% living in Hong Kong Island.

E1.2.4 More than one-sixth of the surveyed PWDs were aged between 50 and 54, which is the largest age group followed by respondents aged 55-59 (15.7%) and 45 to 49 (14.5%). Only 2.3% of the respondents were aged below 15.

E1.2.5 At the beginning of the questionnaire, respondents were asked to define their disability types and the kind of allowance currently received[iii]. Nearly half of the surveyed PWDs reported that they had a physical handicap (45.2%) and another forty percent were suffering from mental illnesses (43.7%). Only 1.5% claimed they were suffering from autism. Regarding the type of allowance, more than half of the surveyed PWDs said that they were currently receiving DA (8.7% of them were receiving Higher DA and 90.2% receiving Normal DA, 1.1% did not provide relevant information), while 36.9% reported that they were receiving CSSA.

[ii] The carer answered the questionnaire may not be the person who accompanies the PWD for traveling.

[iii] Self-defined disability status and types of allowance receiving reported by the PWDs. Multiple responses allowed.

E1.2.6 The following table summarizes the overall number of successful interviews by combined type of disability and financial support (type of disability and financial support of the surveyed PWD refers to the database provided by SWD rather than the self-reported status):

Disability	**Overall**	**CSSA: 100% disabled**		**CSSA: constant attendance**		**DA**	
		Institution	Community	Institution	Community	Higher	Normal
VI	8.6% (273)	-	0.1% (4)	-	-	0.4% (14)	8.1% (255)
HI	8.3% (261)	0.3% (8)	2.2% (71)	-	-	-	5.8% (182)
MI	30.7% (971)	7.9% (250)	8.9% (281)	0.9% (29)	0.7% (21)	1.6% (52)	10.7% (338)
MH	7.4% (233)	0.3% (8)	0.3% (8)	0.0% (1)	-	2.8% (88)	4.1% (128)
PH	45.0% (1422)	3.4% (108)	6.3% (201)	2.7% (88)	5.5% (171)	13.7% (426)	13.5% (428)
Total	100.0% (3160)	11.8% (374)	17.9% (565)	3.7% (118)	6.1% (192)	18.4% (580)	42.1% (1331)

E1.2.7 72.3% of the respondents were neither working nor studying. The remaining respondents were either students (10.6%) or working (17.7%).

E1.2.8 73.0% of the 556 surveyed workers were working full-time, the rest (26.9%) were part-time workers.

E1.2.9 Amongst the 335 PWDs who were students, 80.5% of them were full-time students and the remaining 19.5% were part-time students.

E1.2.10 Most of the respondents not working or studying were unable to go to school or work due to their disabilities (66.3%). One-sixth of them were home-makers, 9.4% were unemployed and 7.7% of them have retired.

E1.2.11 Only 1.4% of the surveyed PWDs owned at least one vehicle. Amongst the 46 surveyed vehicle owners, 41.7% of them have a disabled person parking permit.

E1.2.12 Only 1.5% of the surveyed PWDs said that they will drive when go out.

E1.2.13 A quarter of the respondents reported the need for mobility aids when traveling. The most common aids were crutches (47.6%) and wheelchair (38.5%), including 34.2% for manual wheelchair and 4.3% for electrical wheelchair.

E1.2.14 Most of the respondents had personal monthly income of HKD4,000 or below (73.8%). Only 2.1% of them reported personal monthly income of more than HKD10,000.

E1.2.15 A quarter of the respondents had household monthly income of HKD10,000 or above, which is the largest income group followed by income of HKD4,000 or below (21.6%). One-fifth of them did not know the monthly income of their household (19.3%).

E1.3 Travel Characteristics: An Overview

E1.3.1 The surveyed PWDs were asked about their trips (where “Trip” means a journey with a main purpose and a single destination which can consist of several sub-trips) made the day before being interviewed including all the characteristics such as the main purpose of the trips, frequency of making trips etc.

E1.3.2 After that, details of each sub-trip (where “Sub-trip” means a single journey

on one mode of transport) were recorded including the time taken, starting point and destination, mode of transport used and the reasons for using that transport mode.

E1.3.3 Near half of the respondents were traveling within the New Territories. 50.8% of the weekday trips and 50.2% of the Sunday or public holiday trips started in the New Territories. Eastern District, Yuen Long, Tuen Mun, Kwai Tsing and Sha Tin were the most popular districts during the last weekday, Sunday or public holiday.

E1.3.4 The trip purposes for weekday and Sunday or public holiday had some differences. Apart from returning home, having social or recreational activities and handling daily living matters were common purposes for both weekday and Sunday or public holiday trips. However, going to work or school was a common purpose for weekday trips while having leisure or volunteering activities was a common purpose for Sunday or public holiday trips.

E1.3.5 More trips made during Sunday or public holiday involved carers[iv] accompanying the surveyed PWDs than for weekday trips. Regarding other trip characteristics, the weekday and Sunday or public holiday trips were similar.

E1.3.6 Reasons for selecting the transport mode were reported by the respondents for weekday and Sunday or public holiday trips. It is found that the day of trip has little effect on the respondents' choice of transport mode.

E1.4 Travel characteristics during the last weekday (Monday to Saturday)

E1.4.1 A total of 3,384 trips were made during the last weekday in the survey period. Regarding the starting point of the surveyed PWDs on weekdays, 9.3% of them started their trips in Tuen Mun, followed by trips started in Eastern district (8.4%) and Sha Tin (8.5%). Only 0.8% of reported trips started outside Hong Kong. The most popular trips amongst the respondents were trips within the same district, approximately half of the trips made during weekdays were within the same district (50.4%), 6.4% reported they travel within Tuen Mun and 5.5% within Yuen Long.

E1.4.2 In this survey, peak hours were defined as 7:00am to 9:30am and 5:00pm to 8:00pm on Monday to Friday and 7:00am to 9:30am only on Saturday. Around one third of the trips on Monday to Friday started during peak hours (33.1%) and the remaining 66.9% during non-peak hours. While on Saturday, only 14.0% of the trips started during peak hours.

E1.4.3 More than half of the trips made by the surveyed PWDs have three sub-trips (58.5%) which have a mean travel time of 46.8 minutes. The overall mean travel time for weekday trips was 50.2 minutes.

E1.4.4 For respondents traveling during weekdays, returning home (43.4%), social/ recreational activities (13.0%), handle daily living matters (12.8%), and go to work/ school (12.6%) were the main purposes of trips.

E1.4.5 Over four-fifth of the trips made during weekdays reported use of a vehicle (81.0%). Nearly one-fifth of the trips made during weekdays had other people accompanying the PWDs during the trips (18.9%). More than a quarter (27.1%) of the trips were made less than once a week and 8.2% of the trips were made every day of the week.

E1.4.6 Slightly more than seventy percent of the respondents went out during the day before the interview day (71.1%). While less than half of the respondents used vehicle at least once (41.9%) and 13.3% of them required a carer to accompany them

[iv] "Carer" refers to a person who accompanies the PWD for traveling on public transport.

during the weekday trips.

E1.4.7 Amongst the respondents who made at least one trip during the last weekday, a larger proportion who were females, full-time students or younger respondents (especially those aged below 25), required a carer to accompany them on at least one trip. Besides, more PWDs who had mental handicap or were receiving Higher DA required assistance from a carer.

E1.4.8 To summarize the factors affecting the choice of transport modes on weekdays, convenience of alighting locations (31.7%), the only choice around the starting point (27.1%) and convenience of boarding locations (25.5%) were the three main reasons for choosing the transport modes. Overall, only 13.9% of the respondents claimed that their choices were mainly related to the fare of the chosen mode, although this factor was more common for those using the tram or ferry.

E1.5 Travel characteristics during last Sunday or public holiday

E1.5.1 A total of 1,940 trips were made during the last Sunday or public holiday. The three most popular starting points were Eastern District (9.0%), Kwai Tsing (8.5%) and Yuen Long (7.9%). Again, about half (50.0%) of the trips made during the last Sunday or public holiday were trips within the same district, and 5.8% reported they travel within Eastern District.

E1.5.2 During Sunday, more than half of the trips started between 8:30am and 12:00noon (53.8%). A similar amount of trips started during this timeslot for trips on a public holiday (47.8%) as well.

E1.5.3 More than half of the Sunday or public holiday trips made by the surveyed PWDs consisted of three sub-trips (57.5%) with a mean travel time of 46.6 minutes. The overall mean travel time amongst the trips made by the respondents on Sunday or a public holiday was 49.2 minutes.

E1.5.4 Returning home (42.0%), Social/ recreational activities (16.8%), handling daily living matters (14.8%) and leisure/ volunteering activities (10.0%) were the main purposes of trips made on Sunday or a public holiday.

E1.5.5 Eighty percent of the Sunday or public holiday trips reported use of transport vehicle (80.5%). Over a quarter of the trips made had a carer accompanying the PWDs during the trips (27.6%).

E1.5.6 One third of the Sunday or public holiday trips were made less than once a week (33.4%) and 61.4% of trips were made at least once a week.

E1.5.7 More than half of the surveyed PWDs went out during the previous Sunday or public holiday (54.3%). More than half of the respondents used a vehicle at least once (52.8%) and 12.2% of them required a carer during the Sunday or public holiday trips.

E1.5.8 Amongst the respondents who made at least one trip during the last Sunday or public holiday, more PWDs who are females, full-time students or younger respondents (especially those aged below 30) required a carer to accompany them when making trip. In terms of disability types and allowance received, more PWDs who had mental handicap, visual impairment or were receiving higher DA required the assistance from the carer.

E1.5.9 Convenience of alighting locations (30.4%), the only choice around the starting point (24.8%) and convenience of boarding locations (24.2%) were the three main reasons suggested by the respondents when they choose the transport modes for

Sunday or public holiday. Overall, less than one-sixth of the respondents claimed that they chose a particular transport mode because of a reasonable fare or cheap fare (14.3%), however, like weekdays, this reason was more common amongst those using the tram or ferry.

E1.6 Travel expenditure Incurred

E1.6.1 A total of 3,384 trips (7,962 sub-trips) were made by the 3,160 respondents who reported their trips on the last weekday (from Monday to Saturday), 41.7% of them made at least one trip on that day. Amongst the respondents, one-fifth of them traveled by bus (20.2%), 9.3% by GMB and 7.5% by other vehicles[v]. According to the average amount spent per respondent during weekdays**,** $2.3 was spent on bus, which is the highest amongst other modes of transport.

E1.6.2 On the other hand, a total of 1,940 trips (5,288 sub-trips) were made by the respondents who reported their trips on the last Sunday or public holiday (28.3% of the respondents made at least one trip during the last Sunday or public holiday). Slightly less than one-sixth of them traveled by bus (13.7%), 6.3% by GMB and 5.7% by other vehicles. The average traveling expenditure per PWD was $4.4 ($1.6 was spent on the bus).

E1.6.3 Concerning the day of week, PWDs had higher average traveling expenditure on the last weekday ($6.9) than on the last Sunday or public holiday ($4.4).

E1.7 Weekly total travel expenditure per PWD eligible for concession

E1.7.1 The average weekly total expenditure on all modes of public transport per PWD is $45.8. The respondents spent $15.4 on buses ($11.1 spent on KMB on average), followed by $8.2 on taxis and $5.2 on other vehicles. For the five selected transport modes (bus, KCR, LRT, MTR and tram)**,** $27.5 was spent on the five modes in total per week.

E1.7.2 Respondents who had visual impairment ($57.0) or mental handicap ($52.3) spent slightly more than the respondents with other disability types on traveling. Respondents who had visual or hearing impairment spent more on bus, KCR, LRT, MTR and tram, with an amount of $44.3 and $41.1 respectively, than on other transport modes. Respondents who did not have a physical handicap spent a significant proportion of their travel expenses on bus, while the respondents who had a physical handicap spent substantially more on taxis ($11.5) than the other respondents.

E1.7.3 Respondents receiving Normal DA ($31.4) spent more on trips using the five selected modes than the respondents receiving Higher DA ($14.5). The respondents receiving CSSA living in institution only spent $5.9 on average on bus, KCR, LRT, MTR and tram per week, which is the lowest amongst the expenditures within the six allowance groups. Concerning the total weekly travel expenses, respondents receiving CSSA and living in an institution only spent $16.2 per week, which is significantly less than CSSA recipients living in the community ($40.7).

[v] "Other vehicles" included Red minibus, Resident shuttle bus, Private car, Company or school bus etc.

E1.8 Limitations

E1.8.1 One of the major concerns was that the PWDs who had hearing impairment or mental handicap needed to be handled with great care from the process of obtaining consent to the data collection process. The particular difficulty of obtaining consent for the respondents who had hearing impairment was noticed at the stage of contacting the PWDs to ask for their agreement before the commencement of the project. The number of successful interviewed hearing impairment cases was only 260 out of a total of 3,160 cases. Applying post-stratified weighting to the data should have minimized the effect of contact problems in particular disability groups.

E1.8.2 Some of the trip or sub-trip information was lost if the interviews were completed by the carers. For example, the trip purposes, reasons for choosing particular mode of transport or the length of the sub-trips often could not be answered by carers.

E1.8.3 Some of the expenditure estimates include estimated travel for the carers, which may be significantly under or overestimated. This is because we assumed that carers paid the same amount as PWDs on trips where the PWDs reported needing a carer. In reality, some of the PWDs may need more than one carer when making their trips, but we assumed only one carer in our estimation. On the other hand, the carers' fee was assumed to be the same as the PWDs fare, whereas the carers may actually be paying more (if the PWD is a child) or less (if the carer is elderly) than the PWD fare.

Section Two: Fare Concession Impact

E2.1 Background Information

E2.1.1 Before the commencement of the survey, members of the LegCo Subcommittee to Study the Transport Needs of and Provision of Concessionary Public Transport Fares for Persons with Disabilities (the Subcommittee) requested the administration to consult the disabled community and public transport operators about providing fare concession to the PWDs, including two railway corporations, the franchised bus companies and tram operator. The five modes of bus, KCR, LRT, MTR and tram were selected and listed in the questions related to hypothetical fare concession.

E2.1.2 The requirement was specified in the third Subcommittee Meeting of the Legislative Council to Study the Transport Needs of and Provision of Concessionary Public Transport Fares for Persons with Disabilities meeting held on 16 February 2006.

E2.1.3 At the Subcommittee meetings on 10 July 2006, Members of the Subcommittee requested that the survey should include questions to assess how PWDs would change their use of public transport services, particularly the additional trips that would be made, if fare concessions were provided on the above five modes. Having regard to Subcommittee members' request, hypothetical questions were included in the questionnaire to ask respondents to estimate their change in public transport usage or expenditure on buses, MTR, LCR, LRT and tram if 50% fare concession for PWDs were provided on Sunday/public holiday only, during non-peak hours on all days or whole day throughout the year.

E2.2 Limitations

E2.2.1 The answers to all the hypothetical questions can only be used as a reference, as the answers of the surveyed PWDs cannot be tested until a real fare concession comes into effect.

E2.2.2 General difficulties in answering hypothetical questions were noted during the survey. The surveyed PWDs generally found it quite difficult to answer the percentage increase in use of a mode of transport under different hypothetical concessions even if they were a current user of that mode of transport. They found it even more difficult to estimate their likely weekly expenditure of modes of transport that they are not current users of, under the hypothetical concessions. The missing values affect the estimation of the cashflow and the revenue forgone, so alternative estimation methods were introduced. For the percentage increases, the mean increase for those who could answer this question was used to impute the missing increase for those who could not answer. This is reasonable as it automatically scales current use. For new customers, the missing amount of weekly expenditure was estimated in two different ways. Firstly, we estimated using the mean amount for new customers who could estimate expenditure, which should be an upper bound on expenditure. Secondly, we assumed that new customers who could not estimate the amount would spend very little, so we estimated zero weekly expenditure. This should serve as a lower bound for estimated expenditure.

E2.2.3 It was not practical to assess substitutional effects (i.e. any decrease in use of one transport mode as a result of increase in other modes, so the estimates may show a positive bias as a result, although the major substitution effect is likely to be on modes without concession).

E2.2.4 Citybus offers a 50% full-day concession to passengers aged over 60 years. This is implicitly accounted for by asking for the respondents about actual expenses. However, it was not explicitly taken into account for the questions on possible new concessions which imply that there is an additional concession, however only 3 respondents were in this situation. The same situation exists for PWDs who enjoyed other concessions now, such as the student 50% full-day concession when using the MTR (there are 52 respondents in this situation).

E2.3 Fare concession impact: An Overview

E2.3.1 Based on the responses from the surveyed PWDs to the hypothetical questions, amongst those five transport modes, the bus was leading in the proportion of current users (53.5%), followed by the MTR (24.8%), LRT (11.4%) and KCR (11.3%). Only 5.5% of the respondents were using the tram at least once a week.

E2.3.2 An average increase of more than 100% in trips for existing customers was reported for the MTR and KCR under full day fare concession, 103.57% and 101.52% were reported respectively.

E2.3.3 Increases in trips for existing customers were also recorded for the bus (72.41%), LRT (70.33%) and tram (69.96%). But the increases were not as large as those for the KCR and MTR.

E2.3.4 More than one-third of respondents not usually using MTR would consider using it under the full day concession (37.80%, comprising 28.43% of the total population), followed closely by bus (32.40%, comprising 15.07% of the total population), and KCR (30.40%, comprising 26.96% of the total population).

E2.3.5 Amongst the respondents who could estimate the expected amount to be spent on a particular mode of transport under the full day fare concession, the KCR was leading in the average estimated weekly amount to be spent ($30.62). The MTR was in the second place ($27.09) and the bus in the third place ($22.32).

E2.4 Fare concession impact by transport modes

E2.4.1 A quarter of the surveyed PWDs traveled by MTR at least once a week (24.8%). The mean percentage increase in trips for these current users ranged from 48.5% (public holiday concession) to 103.6% (full day concession). 12.3% (public holiday concession) to 16.3% (full day concession) of the respondents expected to start using MTR under the concession, the average amount estimated to be spent on the MTR by new customers also increasing from $18.09 (public holiday concession) to $27.09 (full day concession) per week.

E2.4.2 11.3% of the surveyed PWDs were current KCR users. The current users expected to increase their usage by 50.6% under public holiday concession and by 101.5% under full day concession. 11.6% (public holiday concession) to 14.9% (full day concession) of the respondents expected to start using KCR at least once a week under the concession. The new customers are estimated to spend $22.02 (public holiday concession) to $30.62 (full day concession) per week.

E2.4.3 11.4% of the PWDs were current users of LRT and they expected to increase their usage by 40.03% (public holiday concession) to 70.33% (full day concession) under the different fare concession options. The estimated percentages of new customers were expected to increase, ranging from 6.1% (public holiday concession) to 8.0% (full day concession). The estimated amount to be spent on the LRT by new customers ranged from $18.68 (public holiday concession) to $21.14

(full day concession) per week.

E2.4.4 More than half of the respondents were regular bus users (53.5%), which is far more than the proportion of regular users of the other four modes. The mean percentage increase in trips for existing users ranged from 39.7% (public holiday concession) to 72.4% (full day concession). Under the concessions, 7.6% (public holiday concession) to 9.0% (full day concession) of the respondents expected to start using the bus, and they expected to spend $16.05 (public holiday concession) to $22.32 (full day concession) per week.

E2.4.5 The tram has the smallest proportion of current users amongst the five selected transport modes in this survey (5.5%). The mean percentage increase in trips under concession ranged from 44.0% (public holiday concession) to 70.0% (full day concession). It is expected to have 6.0% (public holiday concession) to 7.6% (full day concession) new customers under the concessions and the new users expected to spend $6.95 (public holiday concession) to $10.90 (full day concession) per week.

E2.5 Estimated expenditure per PWD after concession

E2.5.1 Estimated travel expenditure per specific transport mode under different kinds of fare concession (by peak, non-peak or public holiday concessions) was calculated according to the respondents current trip fare for the existing customers. Under the 50% concession, the cost of the trips were separated into three different sums according to the trip making time and the corresponding concessionary timeslots (if the trip making time was within the concessionary timeslots, 50% concession were applied to the fare, vice versa). Additional usage (in percentage) under fare concession was also considered during the calculation of the estimated travel expenditure.

E2.5.2 For the new customers, the estimated expenditure was calculated according to the amounts they were willing to spend per week under different concessionary timeslots.

E2.5.3 For the respondents who could not answer the percentage of usage increase (for existing customers) or the weekly amount of money increase (for new customers) under different concessions, the mean of the valid responses were used to impute the missing data to estimate the upper bound of the cashflow and the revenue forgone under hypothetical concessions. The missing weekly expenditures of new customers were estimated as zero to provide a lower bound for the expenditure under concessions. So, the estimated weekly cashflow and revenue forgone are presented in ranges rather than single estimates.

E2.5.4 The surveyed PWDs were asked to estimate the amount they expect to spend under 50% fare concessions for three different timeslots (Sundays & Public Holidays, Off-peak and full day) on the five selected transport modes. The total weekly transport expenditure for the selected modes (MTR, KCR, LRT, Bus & Tram) per PWD is estimated as $27.53 with no concession, $39.66 under the public holiday concession and $43.8 under the full day concession. However, the increase is due to new customers, as the figures allowing only for the increase in use for existing customers are $26.30 under the public holiday concession and $19.94 under the full day concession.

E2.5.5 The estimated increase is not evenly spread across the five selected modes, with the major increases being for MTR and KCR. For MTR, the estimated weekly expenditure is $6.04 with no concession, increasing to $9.72 with the public holiday concession and $12.18 under the full day concession. Again, excluding new customers, the rates show small declines to $5.78 under the public holiday concession and $4.47

under the full day concession.

E2.5.6 Regarding the use of the KCR, the weekly total expenditure per PWD was $4.30 under no concession, increasing to $8.72 under the public holiday concession and $11.31 under the full day concession, while excluding new customers, the rates decrease to $4.07 under the public holiday concession and $3.05 under the full day concession.

E2.5.7 Reflecting the smaller coverage area for the LRT the weekly estimate per PWD is $1.59, increasing to $3.64 under the public holiday concession and $4.28 under the full day concession. Without new customers, the figures reduce to $1.51 under the public holiday concession and $1.07 under the full day concession.

E2.5.8 The concessions have much less effect on the spending behavior of bus users. Respondents normally spent $15.35 per week on the bus, increasing slightly to $16.67 under the public holiday concession and decreasing slightly to $14.53 under the full day concession. Excluding new customers, the expenditure on bus reduces to $14.70 under the public holiday concession and $11.17 under the full day concession.

E2.5.9 Only $0.25 per PWD per week was spent on tram amongst the respondents without concession. Without new customers, the amount spent is quite stable, with $0.24 under the public holiday concession and $0.19 under the full day concession. Including new customers shows an increase that is large in percentage terms to $0.91 under the public holiday concession and $1.53 under the full day concession.

E2.5.10 Amongst the disability types, the full day concession raises the overall weekly averages above $40, and all the allowance types show a substantial increase in weekly average expenditure of $15 to $20 under the full day concession, the increases are mainly due to new customers under the concessions.

E2.6 Reasons for no increase in using public transport with concessions

E2.6.1 The main reasons reported for not using the MTR even if there is a 50% fare concession were depending whether they have the need to use the MTR (36.1%), rarely/ never go out (30.6%) and rarely/ no need to use MTR (27.4%), 13.8% reported no service to the respondents' destination and 7.6% claimed that the boarding locations were inconvenient. Only 5.3% of the respondents claimed that one of the reasons for not using MTR was still due to the fare.

E2.6.2 Regarding the reasons for not using the KCR under a 50% fare concession, rarely/ no need to use the KCR (40.2%), depending on the need to use the KCR (33.8%) and rarely/ never go out (24.6%) were the main reasons. Apart from the mentioned reasons, 16.6% of the respondents claimed that the KCR has no service to their destination. Only 3.1% of the respondents claimed that it is related to fare issue.

E2.6.3 The reasons for not using the LRT under the fare concession were rarely/ no need to use the LRT (46.9%), depending on the need to use the LRT (21.5%) and rarely/ never go out (20.2%). Another 32.7% reported that the LRT has no service to the respondents' destination. Fare issue was not one of the main issues reported by the respondents, only 1.7% of them mentioned about this.

E2.6.4 The main reasons for not using the bus under the 50% fare concession were depending on the need to travel by bus (46.6%), rarely/ never go out (25.6%) and rarely/ no need to travel by bus (19.7%). Some of the respondents claimed that the difficulties in boarding and alighting (4.9%) hindered them from traveling by bus. Regarding the fare issue, only 3.1% of the respondents reported this reason.

E2.6.5 The main reasons for not using the tram under the fare concessions were

rarely/ no need to travel by the tram (39.3%), no service to the respondents' destination (33.3%) and depending on the need to travel by tram (17.0%). Besides, nearly one-sixth of the respondents claimed that they rarely or never go out (15.7%). Besides, insignificant amount of respondents reported fare issue (1.2%).

E2.6.6 The main reasons for not using the selected modes of transport were very similar, the most common reason was that they rarely or no need to travel by it, followed by no service to the respondents' destination and depending on whether they need to use it. Also, a significant proportion of respondents claimed that they rarely or never go out was their reason for not using transport even with concessions. It is noteworthy that after concessions, very few PWDs report that fares restrict them from using any of the selected modes of transport.

E2.7 Cashflow and revenue increase under the impact of fare concession

E2.7.1 In this survey, the estimated weekly cashflow presents the difference in monetary terms between the weekly revenue of particular transport operator under the different 50% fare concessions (when taking into account the usage of potential new customers under concession and the increased usage by the existing customers under concession) and the normal fare. Negative cashflow implies the increased customers and usage after concession are unable to cover the decrease in cashflow due to the 50% concession offered when compared with normal fare, while positive value implies that more money can be earned under fare concession when compared with normal fare.

E2.7.2 On the other hand, the weekly revenue forgone presents the figures from a different angle. After taking into account the usage of potential new customers under concession and the increased usage by the existing customers under concession, the revenue forgone presents the difference between the normal fare and the fare under 50% concession. That is, how much money will not be received because of the 50% concession by each transport operator.

E2.7.3 The meaning of "Existing customer" was those who usually use particular transport modes at least once a week, while the meaning of "New customer" was those who would start to use a particular transport mode under hypothetical fare concession.

E2.8 Cashflow and revenue increase under the impact of fare concession: Excluding new customers

E2.8.1 Excluding the new customers who claimed that they would start to use a particular mode of transport under fare concession, the overall weekly cashflow for the five selected modes recorded a reduction, ranging from $104,052.88 (public holiday concession) to $642,191.14 (full day concession).

E2.8.2 The maximum weekly revenue forgone estimated for the five selected modes ranged from $192,216.98 (public holiday concession) to $1,686,673.26 (full day concession).

E2.8.3 Amongst the current users of the five modes of transports, bus was leading in the decrease in weekly cashflow, ranging from $55,341.07 (public holiday concession) to $353,893.36 (full day concession), followed by MTR (ranging from $21,890.33 to $133,018.96), KCR (ranging from $20,020.57 to $106,067.27) and LRT (ranging from $6,276.85 to $43,789.20).

E2.8.4 Only a tiny decrease in cashflow was reported for the tram. The decrease in

cashflow ranged from $524.06 (public holiday concession) to $5,422.57 (full day concession). The reason for this was the low tram usage.

E2.9 Cashflow and revenue increase under the impact of fare concession: Including new customers

E2.9.1 Taking into account all the five transport modes and including all the new customers under concession, the full day fare concession is estimated to result in the greatest overall increase in weekly cashflow. The increases in overall weekly cashflow under the full day fare concession ranged from $499,778.17 to $1,378,495.91.

E2.9.2 The estimated maximum weekly revenue forgone under full day concession ranged from $2,828,642.57 to $3,707,360.32 including new customers.

E2.9.3 Apart from the bus, there were increases in weekly cashflow after including all the new customers under fare concession for the other four selected transport modes.

E2.9.4 For bus, weekly cashflow is estimated to decrease under non-peak hours (ranging from $83,280.95 to $175,933.94) and full day fare concession (ranging from $69,261.14 to $184,147.74) including all the new customers.

E2.9.5 Bus recorded the maximum weekly revenue forgone amongst five selected modes of transport, i.e. $1,229,300.69 estimated under the full day fare concession.

E2.9.6 Amongst the other four transport modes (MTR, KCR, LRT and tram), the maximum increase in weekly cashflow ranged from $280,146.30 to $593,017.53 estimated under full day concession of KCR, closely followed by MTR (ranging from $240,295.70 to $519,089.95).

E2.9.7 The increases in weekly cashflow of LRT and tram were the least amongst the other four selected transport modes. The maximum increase for the LRT and tram ranged from $98,920.19 to $227,525.70 and $64,563.72 to $108,123.86 estimated under full day concession respectively.

Section 3: Conclusion of the Survey

E3.1 The average weekly total expenditure on all modes of public transport per PWD is $45.8. The respondents spent $15.4 on buses ($11.1 spent on KMB on average), followed by $8.2 on taxis and $5.2 on other vehicles. For the five selected transport modes (bus, KCR, LRT, MTR and tram), $27.5 was spent on the five modes in total per week.

E3.2 To summarize the factors affecting the choice of transport modes, convenience of alighting locations, the only choice around the starting point and convenience of boarding locations were the three main reasons for choosing most of the transport modes with efficiency added for KCR, MTR and taxi, cost for tram and ferry and special facilities for Rehabus.

E3.3 The main reasons for not using the selected modes of transport were very similar, the most common reason was that they rarely or no need to travel by it, followed by no service to the respondents' destination and depending on whether they need to use it. Also, a significant proportion of respondents claimed that they rarely or never go out was their reason for not using transport even with concessions. It is noteworthy that after concessions, very few PWDs report that fares restrict them from using any of the selected modes of transport.

E3.4 From the respondents' responses to the above questions, cost was not the most important factor affecting the choices of transport, as other reasons such as the convenience of alighting or choices available around the starting point are more important. However, under the hypothetical 50% fare concession, existing customers were stimulated to increase use, while other PWDs were stimulated to start using particular transport modes. Caution is necessary, though, as the answers to the hypothetical questions and the estimated change in revenue can only serve as a reference. Respondents may have expressed an interest in using the transport modes under fare concession without careful consideration of all the implications, such as the increased expenditure by any carers needed.

E3.5 Under different fare concession options, that is, public holiday concession , non-peak hour concession (hours except Mon-Fri 700am-930am, 500pm-800pm & Sat 700am-930am) and full day concession, the total weekly expenditure per PWD on MTR, KCR, LRT and tram is found to increase. The total weekly expenditure per PWD on buses was estimated to increase only under public holiday concession. While the increase in weekly expenditure per PWD is not evenly spread across the five transport modes, with the major increases being for the MTR and KCR.

E3.6 There were increases in weekly cashflow in MTR, KCR, LRT and tram including all the new users under concessions. However, because half of the respondents were already existing bus users, the proportion of new users and the expected amount spent by them were relatively small, leading to a net reduction in weekly cashflow under the non-peak hour concession and full day fare concession.

E3.7 The overall estimated weekly expenditure for bus, MTR, KCR, LRT and tram combined per PWD under concession ranges from $33.44 to $43.82. While it is hard to validate these estimates directly, some reference can be made to the current weekly travel expenditure across all transport modes per PWD of $45.8 and across the five selected modes of $27.53. Thus, while there is a significant increase in estimated total expenditure for the five selected modes, if there is some substitution of transport modes without concession by modes with concession, then the total expenditure across all modes may not be too different before and after concessions, suggesting that the estimates of expenditure under concession have at least some face validity.