

Status of Transit Surveys

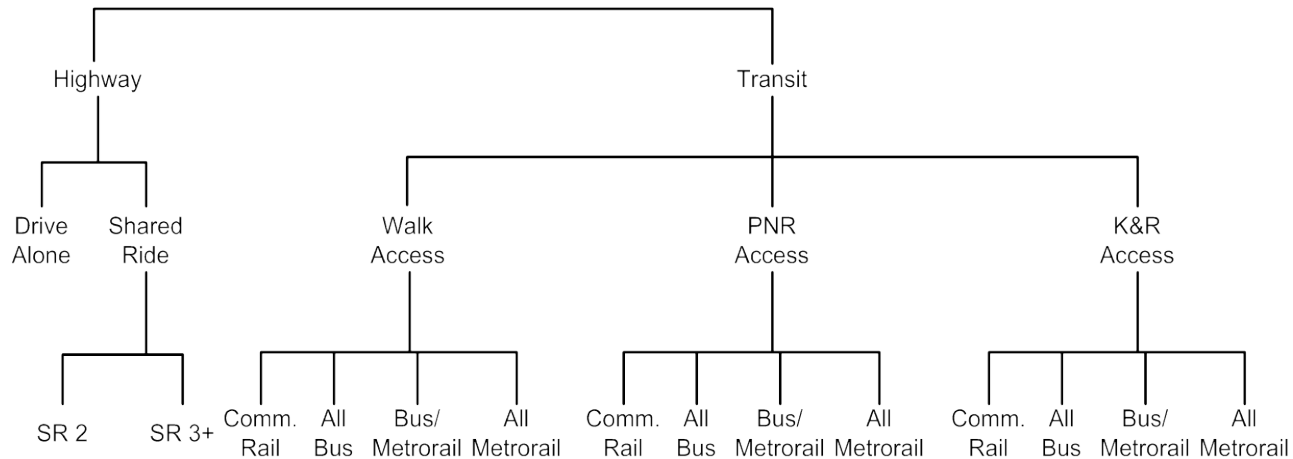
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Overview

- Calibration of the version 2.3 mode choice model requires target ridership for each submode



- These targets will be obtained from:
 - 2007 and 2008 Metrorail On-Board Surveys
 - 2008 Bus On-Board Surveys/Counts
 - Commuter Rail On-Board Surveys/Counts



Disposition of Transit Surveys

- Metrorail On-Board Surveys
 - 2007 Metrorail Survey (WMATA)
 - 2008 Metrorail Survey (MTA)
- Bus 2008 survey
 - Geocoded and cleaned
 - Not trip linked
 - Not all inclusive
- 2007 MARC survey (extracted from MTA Baltimore survey)
- 2007 VRE survey
 - Not factored, cleaned or geocoded
- Surveys that we still need:
 - Factored VRE 2006 survey



Metrorail Survey

- How is 2008 Metrorail survey different from 2007?
 - 2008 Metrorail survey instrument similar, but more detailed:
 - Includes mode of access to first transit vehicle, in addition to access to Metrorail station
 - Includes rider household income
 - Fewer records geocoded (36,153 in 2008 and 44,531 in 2007)
 - Expanded by origin-destination pairs of stations instead of just origin stations
 - Trips internal to the TPB modeled area are expanded to the total daily Metrorail trips, while in 2007 Metrorail survey, the sum of internal and external trips is expanded to the total daily ridership



Which Survey to Use

- While the 2007 WMATA Metrorail survey instrument is the one that has been used in the past, the 2008 MTA survey includes information important for modelers
- Before electing to use the 2008 Metrorail survey, it is desirable to compare trip splits by purpose, mode of access and origins/destinations
- Since survey instruments are different, before a comparison can be drawn, the following inconsistencies need to be accounted for:
 - The 2008 Metrorail survey includes an additional “job-related” purpose, which does not have an equivalent in the 2007 Metrorail Survey
 - Unlike the 2007 Metrorail survey, the 2008 survey does not include mode of access to Metro station for all entries



Job-related trip purpose

- The 2008 Metrorail survey includes a “job-related” trip purpose, which is then added to the work trip purpose to obtain home-based-work trips
- However, the 2007 Metrorail survey does not include a similar purpose and the HBW trips are comprised only of those trips where the attraction trip purpose is work
- Thus, the job-related trip purpose would have been classified as either HBS or HBO purpose in the 2007 Metrorail. Since the split between these categories is unknown, the home-based job-related trips are evaluated separately in the forthcoming analysis



Mode of Access to Metro

- Unlike the 2007 Metrorail survey, the 2008 survey does not have mode of access to the Metro for all observations
- Thus, the surveys that include mode of access to the Metro need to be reweighted to the total number of Metrorail trips
 - The expansion was done by boarding station and time period (same methodology as used to expand the unweighted 2007 Metrorail trips to the total trips)



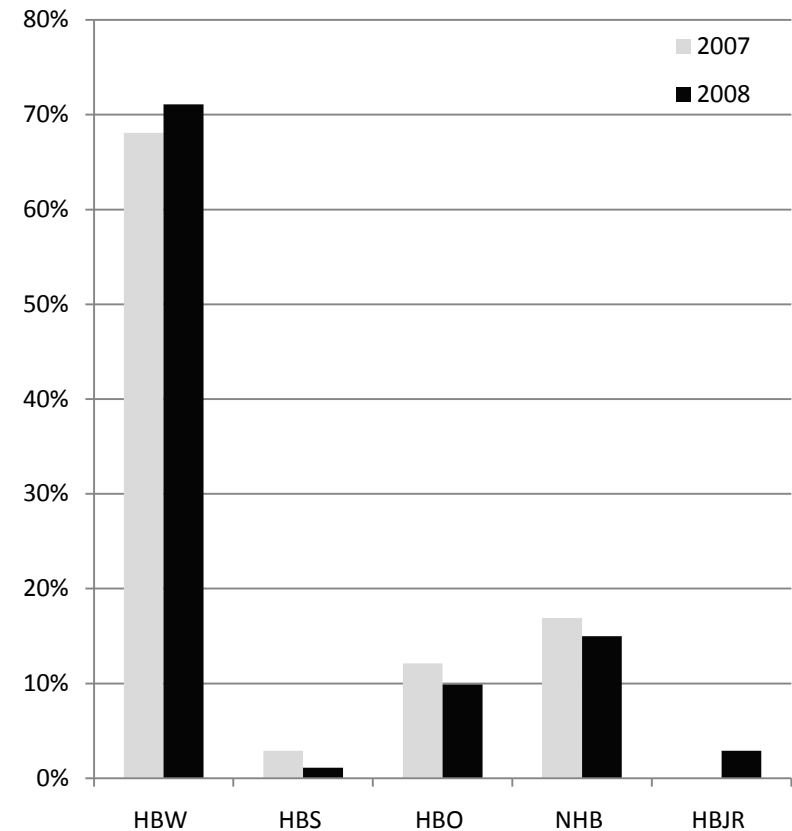
2007 vs. 2008 Metrorail Trip Shares by Trip Purpose

2007 Metrorail Trips by Trip Purpose

	HBW	HBS	HBO	NHB	Total
Trips	488,858	20,615	86,804	121,476	717,754
Share by Purpose	68.1%	2.9%	12.1%	16.9%	100.0%

2008 Metrorail Trips by Trip Purpose

	HBW	HBS	HBO	NHB	HBJR	Total
Trips	558,636	8,755	77,818	117,459	22,953	785,621
Share by Purpose	71.1%	1.1%	9.9%	15.0%	2.9%	100.0%



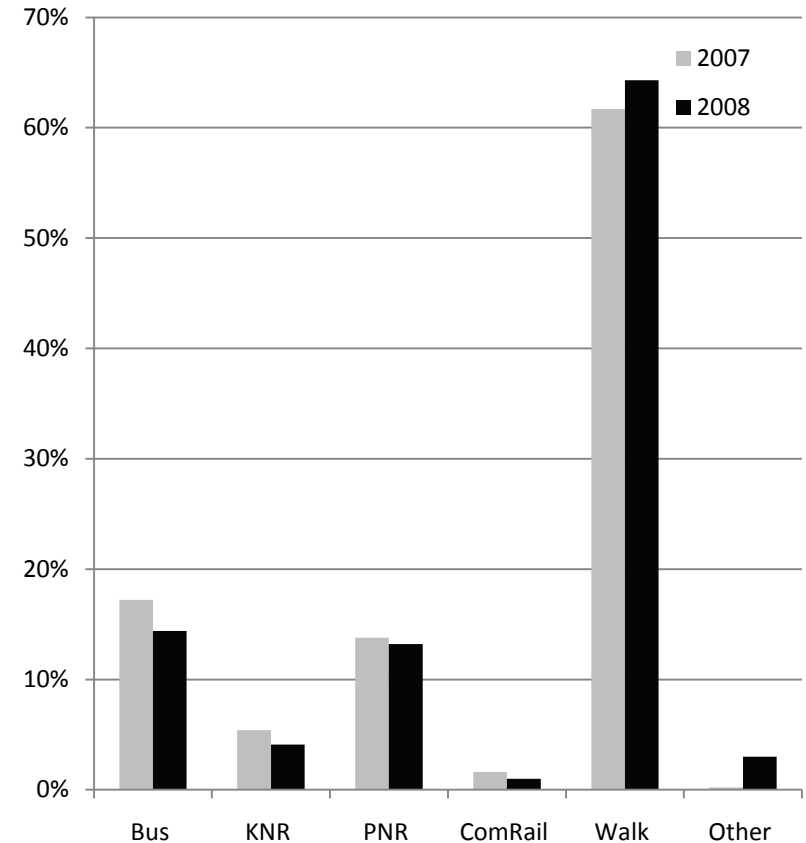
2007 vs. 2008 Metrorail Trip Shares by Mode of Access to Metro

2007 Metrorail Trips by Mode of Access

	Bus	KNR	PNR	ComRail	Walk	Other	Total
Trips	123,460	38,541	99,352	11,541	443,178	1,682	717,754
Share by Mode	17.20%	5.40%	13.80%	1.60%	61.70%	0.20%	100.00%

2008 Metrorail Trips by Mode of Access

Access Mode	Bus	KNR	PNR	ComRail	Walk	Other	Total
Trips	112,862	32,015	103,934	8,166	505,159	23,483	785,621
Share by Mode	14.40%	4.10%	13.20%	1.00%	64.30%	3.00%	100.00%



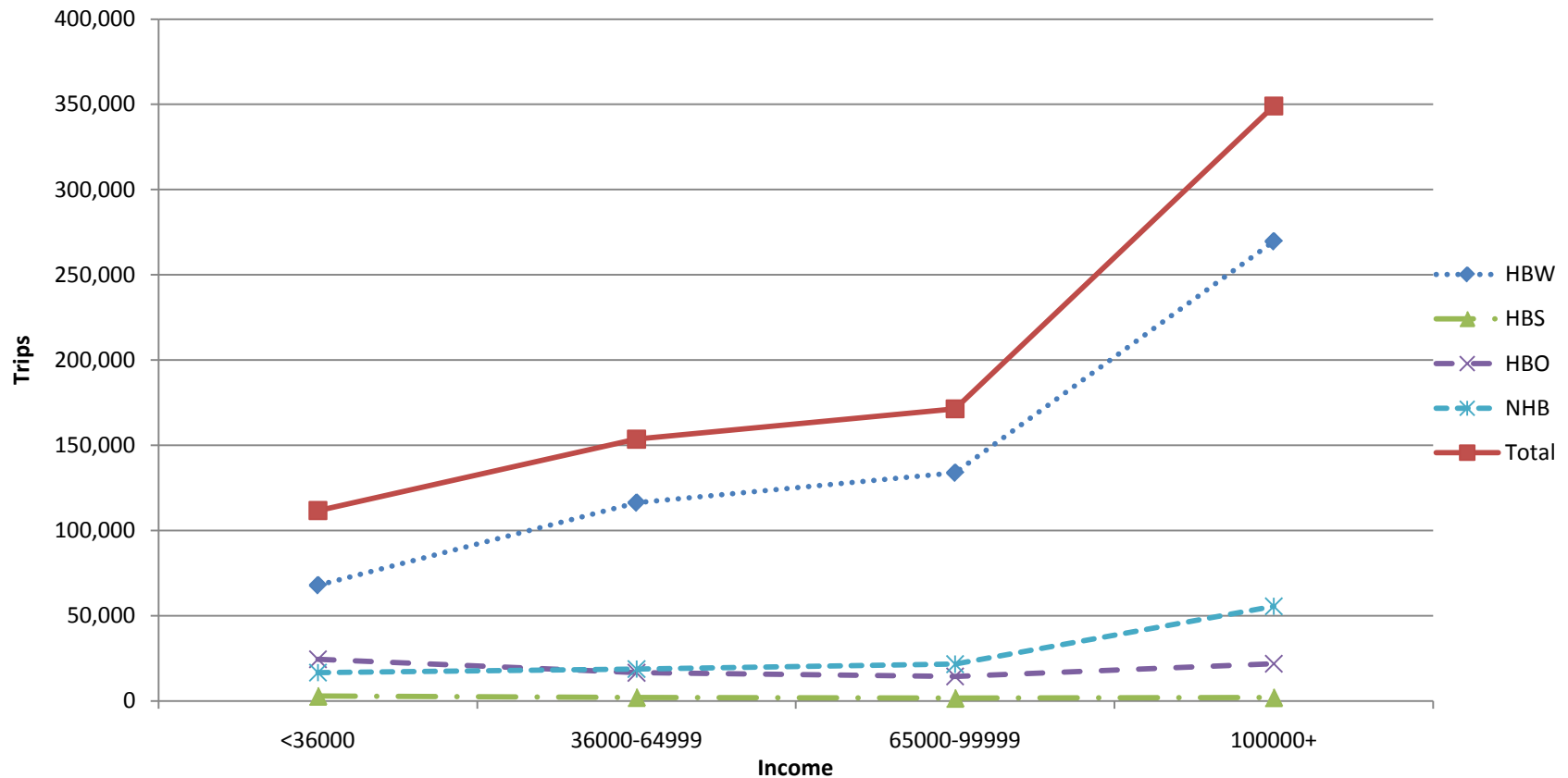
Difference in Trip Shares between 2007 and 2008 Metrorail Survey

(2008-2007)

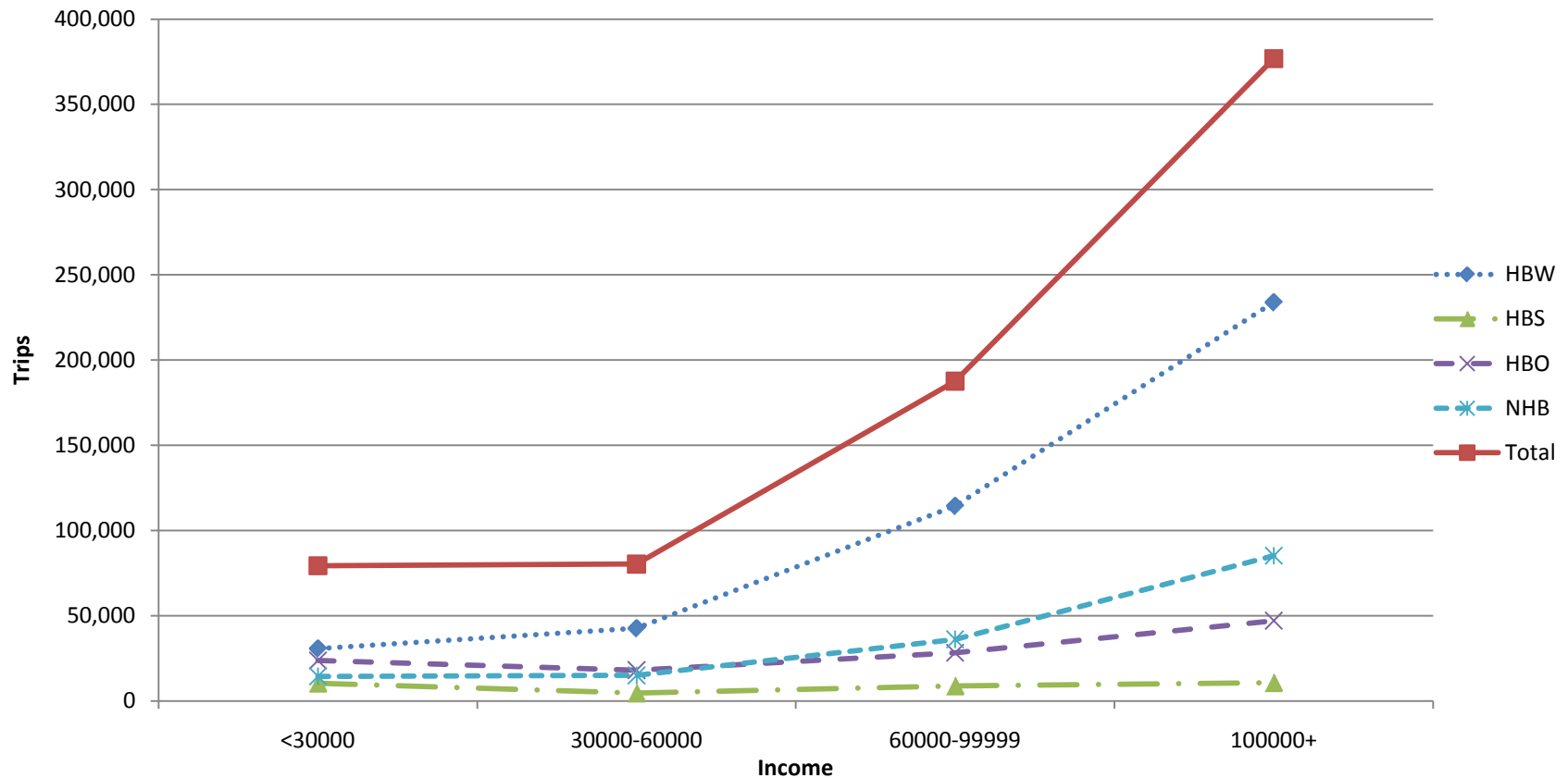
Access mode	HBW	HBS	HBO	NHB	Total
Bus	-1.7%	0.7%	-7.9%	-5.3%	-2.8%
KNR	-1.3%	-0.4%	-2.2%	-1.0%	-1.3%
PNR	-1.3%	-1.8%	-1.2%	0.1%	-0.6%
Rail	-0.6%	1.0%	-1.1%	-0.5%	-0.6%
Walk	2.4%	-0.5%	8.8%	2.6%	2.6%
Other	2.4%	1.0%	3.6%	4.1%	2.8%



Metrorail 2008 Survey, HH Income Distribution by Trip Purpose



HTS 2007, HH Income Distribution by Trip Purpose



Results of the Comparison

- Overall, the 2008 Metrorail survey trip shares by access mode and trip purpose match the 2007 Metrorail survey trip shares well
 - There are slightly more HBW trips in the 2008 survey (71.1%) as compared to the 2007 survey (68.1%)
 - The walk mode of access share has increased, while the bus share decreased by about 3%
- Income distribution by trip purpose is consistent between 2007 and 2008 Metrorail surveys



Conclusions

- We plan to use the 2008 Metrorail survey for model calibration work
 - Includes household income
 - Includes mode of access to first transit vehicle
- Thanks to MTA and PB Consult for providing us with the survey results
- TPB will consolidate other surveys and begin assembling targets

