

Data Processing & Analysis of Passenger Characteristics from 2008 Bus Survey

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July 23, 2010

Datasets Used

- WMATA survey file (includes county bus systems)
 - home, origin, destination addresses
 - access/egress modes
 - bus on/off locations
 - demographic characteristics
- Fairfax Connector survey file
 - home, origin, destination addresses
 - access/egress modes
 - demographic characteristics

Determine Bus Only Passengers

- Use Access/Egress Modes & Geography
 - If Metrorail or Commuter Rail were also used then not bus-only
 - If both access/egress were non-motorized or private vehicle then bus-only
 - Bus access modes were examined using origin geography and bus-on geography for likelihood of rail use
 - Other and unknowns were examined and determined to be bus only or unknown which defaults to bus-rail
 - For bus-only respondents, those who had a bus-transfer were flagged

Total Number of Transit Vehicles Used

INCLUDING THIS BUS, how many TOTAL BUSES and TRAINS will you use in making this one-way trip?

- Respondents sometimes gave reasonable responses & sometimes illogical responses
- Solution – recreate variable based on access/egress modes and reported response

Detail of Recode of Number of Transit Vehicles Used

Original Response	Recoded Value				Total
	1 Bus	2 Buses or Trains	3 Buses or Trains	4 Buses or Trains	
1 Bus	206,460	10,460	1,678	533	219,131
2 Buses or Trains	77,244	212,448	2,175	576	292,444
3 Buses or Trains	20,163	7,917	80,205	251	108,536
4 Buses or Trains	6,890	2,504	222	22,149	31,765
Unknown	3,428	7,383	3,040	61	13,911
Total	314,184	240,712	87,320	23,570	665,786

Bus Only Status

Bus Status	Frequency	Percent
Bus Only (no transfer)	267,319	39.7
Bus Only (with bus transfer)	172,536	25.6
Bus-Rail	232,938	34.6
Total	672,794	100

- Two-thirds of Bus passengers are bus-only with only a third transferring to or from rail

Access Mode to Bus

- Predominate modes to/from bus
 - Walk
 - Bus transfer
 - Metrorail transfer

Access Mode	Bus Only	Bus-Rail	Total
Walked	299,491	81,486	380,977
Auto Dr/Parked	10,873	5,300	16,174
Auto Pass/Dropped Off	12,210	3,107	15,317
Auto Pass/Parked	2,696	658	3,354
Taxi	926	302	1,228
Bicycle	1,475	445	1,920
Bus Transfer	109,702	8,072	117,774
Wheelchair	1,175	196	1,371
Metrorail Transfer	0	118,840	118,840
MARC Transfer	0	1,659	1,659
VRE Transfer	0	1,252	1,252
AMTRAK Transfer	0	601	601
Other	400	1,113	1,513
Unknown	908	6,901	7,809
Total	439,856	229,931	669,787

Egress Mode(s) from Bus

- Respondents could check all modes they planned to use once they exited the bus
- 40 percent of respondents walked away from their bus
- 16 percent transferred to another bus
- 12 percent transferred to Metrorail
- 72 percent of respondents with unknown egress mode were made not bus only

Egress Modes	Bus Only	Bus-Rail	Total
Walked	306,886	94,678	401,565
Auto Dr/Parked	8,239	6,466	14,705
Auto Dr/Parked & Taxi	0	17	17
Auto Pass/Picked Up	3,259	825	4,084
Auto Pass/Parked	6,086	1,740	7,826
Taxi	1,682	413	2,095
Bicycle	1,458	195	1,653
Bus Transfer	98,011	8,995	107,006
Bus & Picked Up	400	19	419
Bus & Taxi	27	27	54
Bus & Bicycle	34	0	34
Bus & Metrorail	0	6,863	6,863
Bus, Metrorail & Taxi	0	6	6
Bus & VRE	0	13	13
Bus & Other	3	14	17
Wheelchair	1,341	270	1,610
Metrorail Transfer	0	81,108	81,108
Metrorail & Auto Pass	0	27	27
Metrorail & Picked Up	0	61	61
Metrorail & Taxi	0	40	40
Metrorail & Bicycle	0	47	47
Metrorail & MARC	0	9	9
Metrorail & Other	0	8	8
MARC	0	1,136	1,136
VRE	0	848	848
AMTRAK	0	368	368
Other	393	3,338	3,731
Other & Walk	6	19	25
Not Known	8,533	22,084	30,616
Total	436,358	229,635	665,992

HH Vehicle Availability

HH Vehicles Available	Bus Only	Bus-Rail	Total
0 Vehicles	53.1	37.7	47.8
1 Vehicle	27.8	33.0	29.6
2 Vehicles	12.5	18.9	14.7
3 or more Vehicles	4.5	6.0	5.0
Not Known	2.1	4.4	2.9
Total	100	100	100

- Half of the daily ridership does not have a household vehicle
- Bus-Rail riders are more likely to have a car available to the household

Bus Riders' Vehicle Availability

- Less than a third of riders had a vehicle available for their trip
- Nearly 40 % of bus-rail riders have a vehicle available for their trip

Vehicle Available for Trip	Bus Only	Bus-Rail	Total
Yes	24.1	37.5	28.7
No	72.7	57.1	67.3
Unknown	3.2	5.5	4.0
Total	100	100	100

Household Income

Household Income (%)	Bus Only	Bus-Rail	Total
\$ 10,000 or Less	22.4	12.5	19.0
\$ 10,001 - \$ 20,000	12.2	7.7	10.6
\$ 20,001 - \$ 30,000	12.2	10.1	11.5
\$ 30,001 - \$ 40,000	10.2	11.1	10.5
\$ 40,001 - \$ 50,000	7.2	9.2	7.9
\$ 50,001 - \$ 60,000	5.6	6.8	6.0
\$ 60,001 - \$ 70,000	4.3	5.1	4.6
\$ 70,001 - \$ 80,000	3.2	4.5	3.6
\$ 80,001 - \$100,000	3.9	6.6	4.8
\$100,001 - \$125,000	2.8	5.0	3.6
\$125,001 - \$150,000	1.8	3.6	2.4
More than \$150,000	3.0	5.7	3.9
Not Known	11.2	12.1	11.5
Total	100.0	100.0	100.0

- 2008 Metro Area median household income from ACS: \$85,000
- 69% of riders living in households with an income of less than \$70,000 were bus-only
- 52% of riders with household incomes greater than \$70,000 were bus only.

Origin-Destination by Jurisdiction

	Total Trips Originating	Intra-Jurisdictional Trips	Total Trips Ending
District of Columbia	197,874	135,778	202,185
Montgomery County	93,259	60,296	88,759
Prince George's County	60,982	29,077	58,859
Arlington County	25,857	8,299	29,074
Alexandria	16,198	6,262	18,174
Fairfax	53,754	29,513	49,750
Loudoun County	1,127	0	1,384
Prince William County	5,697	2,123	6,519
Frederick	2,060	1,678	1,992
Howard County	255	74	427
Anne Arundel County	611	8	586
Charles County	470	0	0
Stafford County	326	0	191
Carroll County	9	0	503
Remaining Jurisdictions	144	0	218



Questions?