

WASHINGTON-BALTIMORE REGIONAL AIR PASSENGER SURVEY – 2017

General Findings Report Highlights

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Planning Board

Regional Public Transportation Subcommittee

November 27, 2018



National Capital Region
Transportation Planning Board



National Capital Region
Transportation Planning Board

Overview

- Collect information on changing travel patterns and demographics
- Help determine airport terminal and groundside needs
- Survey every two years at region's three commercial airports
- Random sample of domestic and international flights during two-week period in October
- Passengers surveyed at departure gates while waiting to board flights



Survey Partners

- Metropolitan Washington Council of Governments (COG)
- National Capital Region Transportation Planning Board (TPB)
- Aviation Technical Subcommittee includes:
 - Maryland Aviation Authority (**MAA**)
 - Metropolitan Washington Airports Authority (**MWAA**)
 - District Department of Transportation (**DDOT**)
 - Federal Aviation Administration (**FAA**)
 - Virginia Department of Aviation (**DOAV**)
 - Washington Airports Task Force
 - Other interested groups

Key Findings

- **657 Surveyed Flights:** 582 Domestic, 75 International
- **Response Rate Decline:** 27.4% in 2017, down from 31% in 2015
- **TNC Mode Share Increase:** Taxis & TNCs reversed share of use – by 5%, respectively **TNCs= mobility service providers like Uber, Lyft*
- **User Preference:** Main reason for choosing primary means of transportation was Ease of Use (46.6%)
- **Dominant Travel Purpose by Airport**
 - Business: DCA
 - Families: BWI
 - Vacation: IAD



Key Findings Continued: Enplanements

- Annual air passenger enplanements in 2017 were 2.4 million higher (36.5 million) than in 2015 (34.1 million)
- Local origin enplanements increased at all airports :
 - BWI: +5%
 - DCA: +1.3%
 - IAD: +10%
- Connections increased at BWI and DCA, declined at IAD:
 - BWI: + 25%
 - DCA: + 29%
 - IAD: -1.4%



SURVEY PROTOCOL

Survey development, sample selection,
distribution, and response rate



Survey Development

The 2017 Regional Air Passenger Survey asked the following:

- Primary mode of transportation to airport
- Reason for selecting mode of transportation
- Ground Access Origin
- Ground Access Length of Travel Time
- Airport Origin and Destination
- Reasons for Airport Selection
- Airport Preference
- Trip Purpose
- Curbside drop-off and parking
- Check-in and bag check (curbside, kiosk, ticket agent)

Sample Selection

- Acquired flight schedule data (FlightGlobal/diio) for month of October for all three airports
- Arrivals eliminated from schedule data
- Conducted sampling selection process based on seats and market segmentation
- Conducted two random sample draws
- Resulted in a sample of **657 surveyed flights**
 - **582 domestic**
 - **75 international**



Flight Sample by Strata and Destination

Airport	Domestic		International		Total	
	Strata	Flights	Strata	Flights	Strata	Flights
BWI	96	223	7	13	103	236
DCA	96	222	5	9	101	231
IAD	85	137	42	53	127	190
Total	277	582	54	75	331	657

Strata were developed based on Origin, Airline, and Destination segmentation (ie: frequency)

Survey Responses: By Type & Rates

Survey Response	BWI	DCA	IAD	Total
At Airport Survey Response	8,668 99.5%	6,235 99.2%	7,335 99.6%	22,238 99.4%
Web Response	37 0.4%	51 0.8%	26 0.4%	114 0.5%
Mailback Response	8 0.1%	1 0.0%	3 0.0%	12 0.1%
Total	8,713 100%	6,287 100%	7,364 100%	22,364 100%
Response Rate	29.0%	26.8%	26.5%	27.4% (Average)



Response Rate: 2015 vs. 2017

Response Rate Decline: 27.4% in 2017, down from 31% in 2015

2015 Airport	Revenue Passengers	Completed Surveys	Response Rate
BWI	27,894	8,509	31%
DCA	27,298	8,240	30%
IAD	23,918	7,816	33%
Total	79,110	24,565	31%

2017 Airport	Revenue Passengers	Completed Surveys	Response Rate
BWI	30,412	8,808	29.0%
DCA	23,767	6,362	26.8%
IAD	24,564	6,517	26.5%
Total	78,743	21,687	27.5%



Distribution

- At-gate lobby interview (voluntary)
- Survey interviewers arrive 60-90 minutes prior to scheduled flight boarding
- Questionnaires distributed and collected before boarding
- Additional surveying options:
 - Online survey (smartphone, tablet, laptop)
 - Mail-back with pre-addressed/stamped envelope



TRENDS IN AIRPORT GROUND ACCESS

Ground trip origin, Mode of access, Mode selection, and Airport selection



Annual Air Passenger Trip Originations

Enplanement Type		BWI	DCA	IAD	REGION
Local originations (came by ground transportation)	<i>Number</i>	8,910	10,499	7,245	26,653
	<i>Percent</i>	67%	88%	64%	73%
Connected from another flight	<i>Number</i>	4,305	1,458	4,062	9,826
	<i>Percent</i>	33%	12%	36%	27%
Total Enplanements	Number	13,215	11,957	11,307	36,479
Percent of Region		100%	100%	100%	100%

Notes:

* Numbers are in Thousands

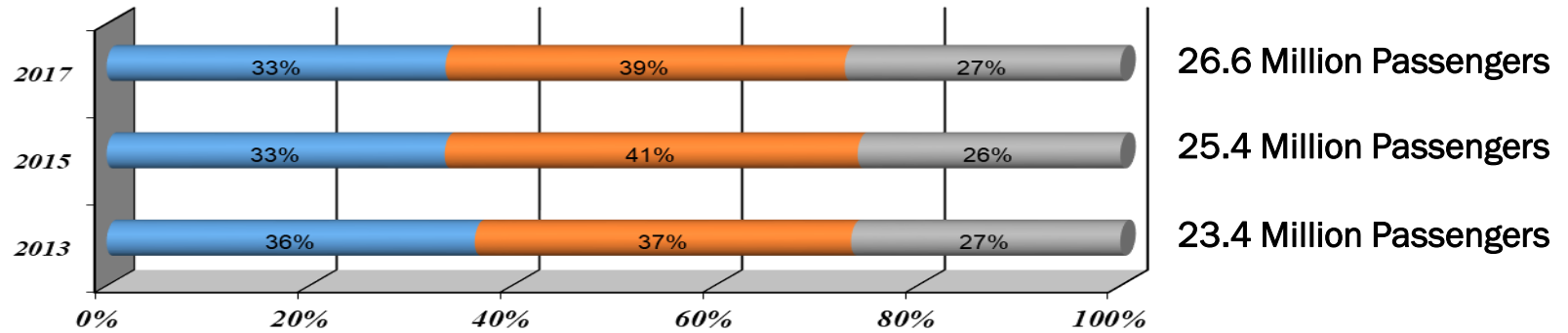
* Totals may not add due to rounding

* "Total Enplanements" includes passengers on domestic scheduled, commuter and international flights

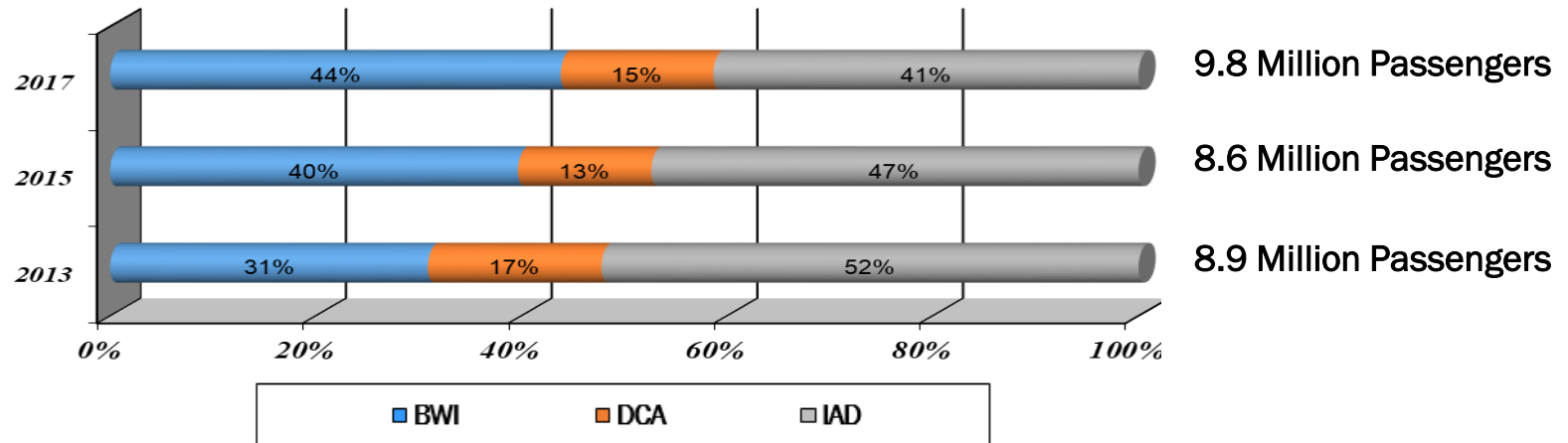


Airport Share of Locally Originating and Connecting Passengers

Local Originating Passengers



Connecting Passengers



Ground Trip Origin: By Airport and Year

Ground Trip Origin	BWI			DCA			IAD			REGION		
	2013	2015	2017	2013	2015	2017	2013	2015	2017	2013	2015	2017
Private residence	5,676 67%	5,380 65%	5,985 70%	4,398 51%	4,440 44%	4,940 49%	3,760 61%	3,800 61%	4,385 64%	13,834 60%	13,620 56%	15,310 60%
Hotel/motel	1,864 22%	2,071 25%	1,652 19%	3,161 37%	4,090 41%	3,755 37%	1,940 32%	1,884 30%	1,716 25%	6,965 30%	8,045 33%	7,123 28%
Passenger's regular place of employment	328 4%	258 3%	332 4%	349 4%	465 5%	488 5%	180 3%	195 3%	256 4%	857 4%	918 4%	1,076 4%
Another place of business	403 5%	340 4%	404 5%	511 6%	727 7%	747 7%	203 3%	268 4%	332 5%	1,117 5%	1,335 5%	1,483 6%
Other	160 2%	193 2%	228 3%	209 2%	269 3%	252 2%	58 1%	110 2%	126 2%	427 2%	572 2%	606 2%
TOTAL	8,431	8,242	8,601	8,628	9,991	10,182	6,141	6,257	6,815	23,200	24,490	25,598
Total Including Non-Respondents	8,498	8,484	8,910	8,687	10,367	10,498	6,214	6,596	7,245	23,399	25,447	26,653



Ground Trip Origin: By Resident Status

Ground Trip Origin		Resident	Non-Resident	Total
Private residence	<i>Number</i>	7,256	4,830	12,086
	<i>Percent</i>	89%	41%	61%
Hotel/motel	<i>Number</i>	109	5,154	5,263
	<i>Percent</i>	1%	44%	26%
Passenger's regular place of employment	<i>Number</i>	583	315	898
	<i>Percent</i>	7%	3%	5%
Another place of business	<i>Number</i>	107	1,076	1,183
	<i>Percent</i>	1%	9%	6%
Other	<i>Number</i>	75	361	436
	<i>Percent</i>	1%	3%	2%
TOTAL	Number	8,130	11,736	19,866
	Percent	100%	100%	100%

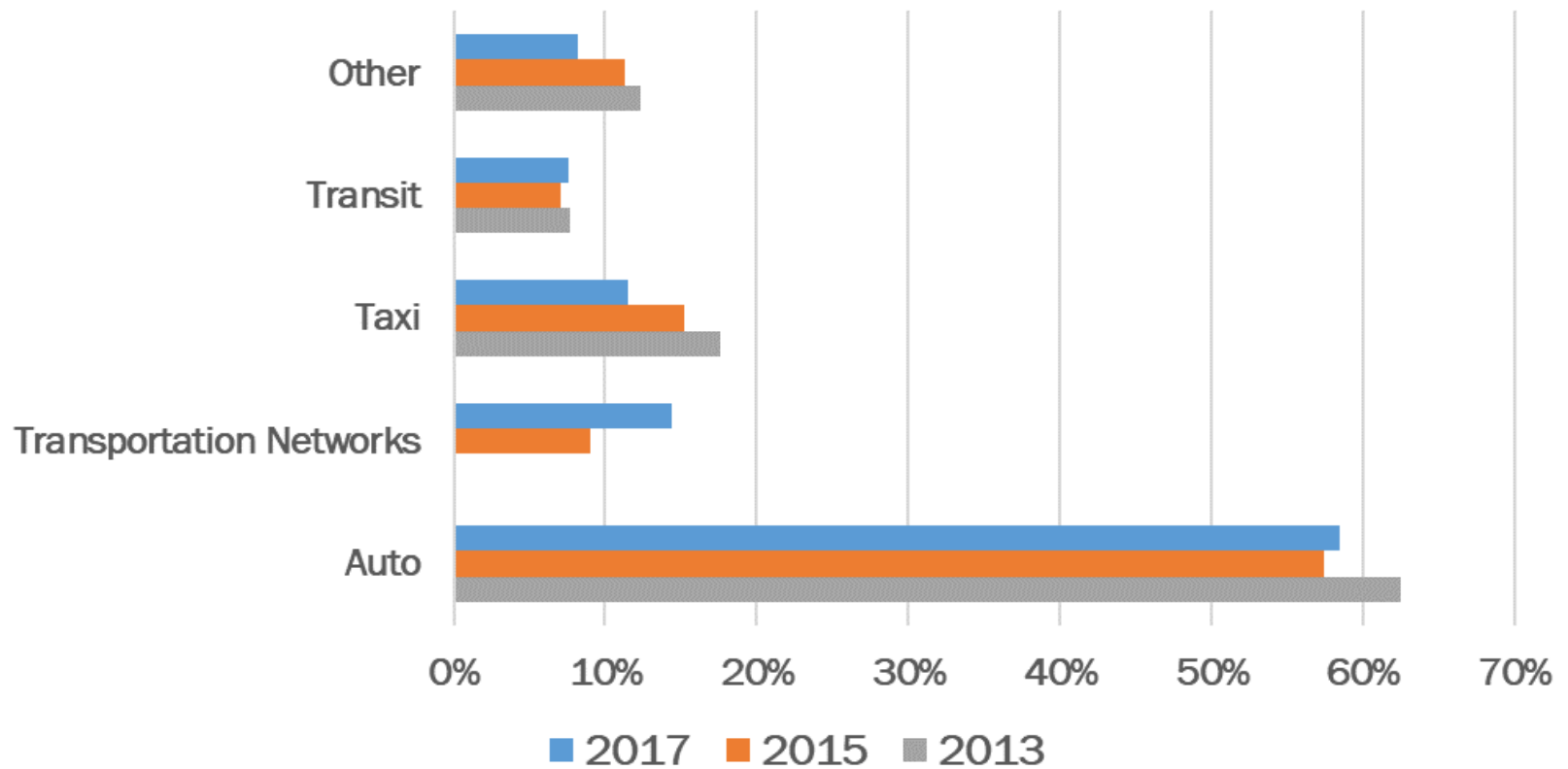


Mode of Access

- The most common mode of access to airport continued to be the automobile, accounting for 84% of total trips to all airport
- Metrorail usage at DCA increased to 13% from 12% in 2015
- 14% of the region's air passengers accessed the airport by TNC
 - 21% to DCA - almost double IAD and triple BWI
 - TNC users to DCA accounted for 60% of the regional total
 - The decline in taxicab and rental car trips to DCA could be attributed to TNCs



Mode of Access: 2013, 2015, 2017



Mode of Access: By Airport

Mode of Access		BWI	DCA	IAD	REGION
Private car	<i>Number</i>	5,299	2,889	2,866	11,608
	<i>Percent</i>	63%	29%	28%	47%
Rental car	<i>Number</i>	1,193	853	1,015	2,883
	<i>Percent</i>	14%	9%	10%	12%
Taxi	<i>Number</i>	303	1,783	2,481	2,845
	<i>Percent</i>	4%	18%	25%	11%
Transportation Network Companies (Uber, Lyft, etc)	<i>Number</i>	633	2,057	1,394	3,561
	<i>Percent</i>	8%	21%	14%	14%
Metrorail	<i>Number</i>	0	1,263	1,173	1,298
	<i>Percent</i>	0%	13%	12%	5%
Rail service	<i>Number</i>	217	62	11	304
	<i>Percent</i>	3%	1%	0%	1%



Mode of Access: By Airport - Continued

Mode of Access		BWI	DCA	IAD	REGION
Light Rail (BWI)	<i>Number</i>	53	0	0	53
	<i>Percent</i>	1%	0%	0%	0%
Airport bus/Van/Limo	<i>Number</i>	188	172	325	503
	<i>Percent</i>	2%	2%	3%	2%
Hotel/motel courtesy bus	<i>Number</i>	269	467	600	983
	<i>Percent</i>	3%	5%	6%	4%
Metrobus/MTA Bus	<i>Number</i>	94	16	73	223
	<i>Percent</i>	1%	0%	1%	1%
Other	<i>Number</i>	151	243	130	549
	<i>Percent</i>	2%	2%	1%	2%
TOTAL	Number	8,399	9,805	10,068	24,809
	Percent	100%	100%	100%	100%
Non-Respondents		511	291	640	640
Total Originations		8,910	10,096	10,708	25,449



Annual Originating Air Passengers by Mode of Access and Trip Purpose

Mode of Access		Work	Non-Work	Unknown	Total
Private car	<i>Number</i>	3,324	7,951	332	11,608
	<i>Percent</i>	35%	54%	46%	47%
Rental car	<i>Number</i>	1,297	1,509	78	2,883
	<i>Percent</i>	14%	10%	11%	12%
Taxi	<i>Number</i>	1,590	1,159	95	2,845
	<i>Percent</i>	17%	8%	13%	11%
Transportation Network (Uber, Lyft, etc..)	<i>Number</i>	1,663	1,821	77	3,561
	<i>Percent</i>	18%	12%	11%	14%
Metrorail	<i>Number</i>	528	736	35	1,298
	<i>Percent</i>	6%	5%	5%	5%
Rail service	<i>Number</i>	96	203	5	304
	<i>Percent</i>	1%	1%	1%	1%



Annual Originating Air Passengers by Mode of Access and Trip Purpose

Mode of Access		Work	Non-Work	Unknown	Total
Light Rail (BWI)	<i>Number</i>	20	31	2	53
	<i>Percent</i>	0%	0%	0%	0%
Airport bus/Van/Limo	<i>Number</i>	225	258	19	503
	<i>Percent</i>	2%	2%	3%	2%
Hotel/motel courtesy bus	<i>Number</i>	441	501	41	983
	<i>Percent</i>	5%	3%	6%	4%
Metrobus/MTA Bus	<i>Number</i>	54	159	11	223
	<i>Percent</i>	1%	1%	1%	1%
Other	<i>Number</i>	216	303	30	549
	<i>Percent</i>	2%	2%	4%	2%
TOTAL	Number	9,454	14,630	725	24,809
	Percent	100%	100%	100%	100%
Non-Respondents		546	888	411	1,844
Total Originations		9,999	15,518	1,136	26,653



Annual Originating Air Passengers by Mode of Access and Trip Origin

Mode of Access		Home	Non-Home	Unknown	Total
Private car	<i>Number</i>	10,077	1,465	65	11,608
	<i>Percent</i>	68%	15%	35%	47%
Rental car	<i>Number</i>	735	2,116	33	2,883
	<i>Percent</i>	5%	22%	17%	12%
Taxi	<i>Number</i>	862	1,961	22	2,845
	<i>Percent</i>	6%	20%	12%	11%
Transportation Network (Uber, Lyft, etc..)	<i>Number</i>	1,862	1,662	37	3,561
	<i>Percent</i>	13%	17%	20%	14%
Metrorail	<i>Number</i>	524	765	10	1,298
	<i>Percent</i>	4%	8%	5%	5%
Rail service	<i>Number</i>	153	151	0	304
	<i>Percent</i>	1%	2%	0%	1%



Annual Originating Air Passengers by Mode of Access and Trip Origin

Mode of Access		Home	Non-Home	Unknown	Total
Light Rail (BWI)	<i>Number</i>	23	30	0	53
	<i>Percent</i>	0%	0%	0%	0%
Airport bus/Van/Limo	<i>Number</i>	194	306	2	503
	<i>Percent</i>	1%	3%	1%	2%
Hotel/motel courtesy bus	<i>Number</i>	67	907	10	983
	<i>Percent</i>	0%	9%	5%	4%
Metrobus/MTA Bus	<i>Number</i>	106	111	6	223
	<i>Percent</i>	1%	1%	3%	1%
Other	<i>Number</i>	183	361	4	549
	<i>Percent</i>	1%	4%	2%	2%
TOTAL	Number	14,786	9,836	188	24,809
	Percent	100%	100%	100%	100%
Non-Respondents		525	453	867	1,844
Total Originations		15,310	10,288	1,055	26,653

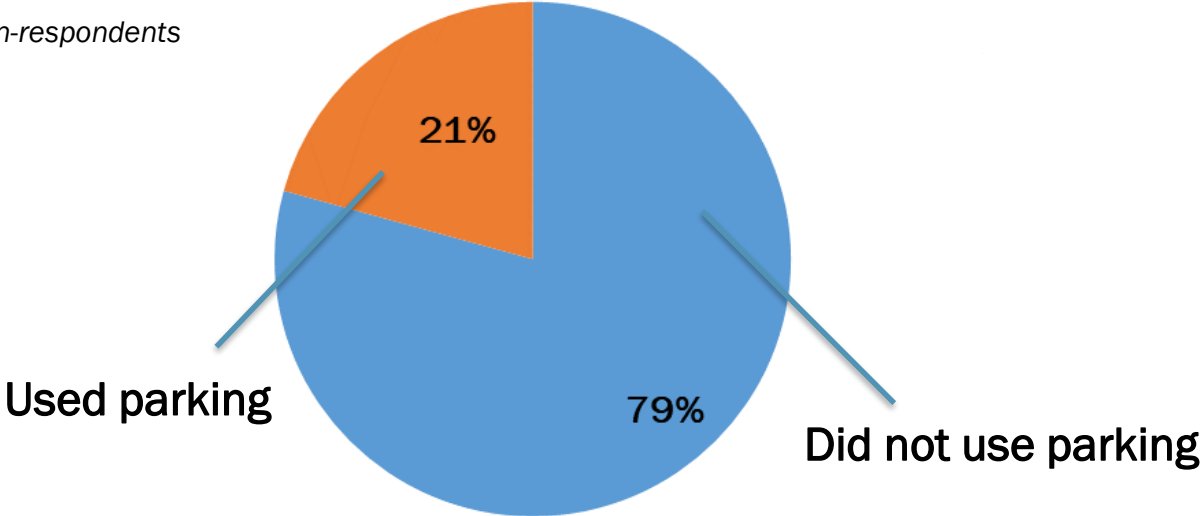


Annual Originating Air Passengers by Respondent Use of Parking Facilities

Parking Facility Use		BWI	DCA	IAD	REGION
Used Parking Facility	Number	2,854	961	1,335	5,150
	Percent	35%	10%	21%	21%
Not Parked	Number	5,417	8,858	5,133	19,408
	Percent	65%	90%	79%	79%
TOTAL		8,271	9,819	6,468	24,558

Notes:

* Totals do not include non-respondents



Mode Selection

Ease of Use as main reason for choosing mode

- Private Car
- Rental Car
- Transportation Networks
- Rail service (Amtrak, Mark)
- Airport Bus / Van/ Limo

Travel Time as main reason for choosing mode

- Taxi
- Metrorail
- Light Rail BWI

Comfort as main reason for choosing mode

- Metrobus/MTA Bus



Mode Selection

Reason for Choosing		BWI	DCA	IAD	Total
Cost	<i>Number</i>	526	157	209	892
	<i>Percent</i>	21.7%	17.5%	17.2%	19.7%
Reliability	<i>Number</i>	193	64	79	336
	<i>Percent</i>	8.0%	7.1%	6.5%	7.4%
Travel Time	<i>Number</i>	377	180	225	782
	<i>Percent</i>	15.5%	20.1%	18.5%	17.2%
Ease of Use	<i>Number</i>	1,154	421	540	2,115
	<i>Percent</i>	47.6%	47.0%	44.5%	46.6%
Comfort	<i>Number</i>	81	35	80	196
	<i>Percent</i>	3.3%	3.9%	6.6%	4.3%
Other	<i>Number</i>	95	39	81	215
	<i>Percent</i>	3.9%	4.4%	6.7%	4.7%
TOTAL		2,426	896	1,214	4,536



Airport Selection

Ground Access Considerations

- Closest airport
- Easy Road Access
- Convenient limo, bus, or rail service
- Good parking facilities

Air Service Considerations

- More convenient flight times
- Less expensive airfare
- Only airport with non-stop flights
- Only airport that serves market
- Frequent flyer specific airline

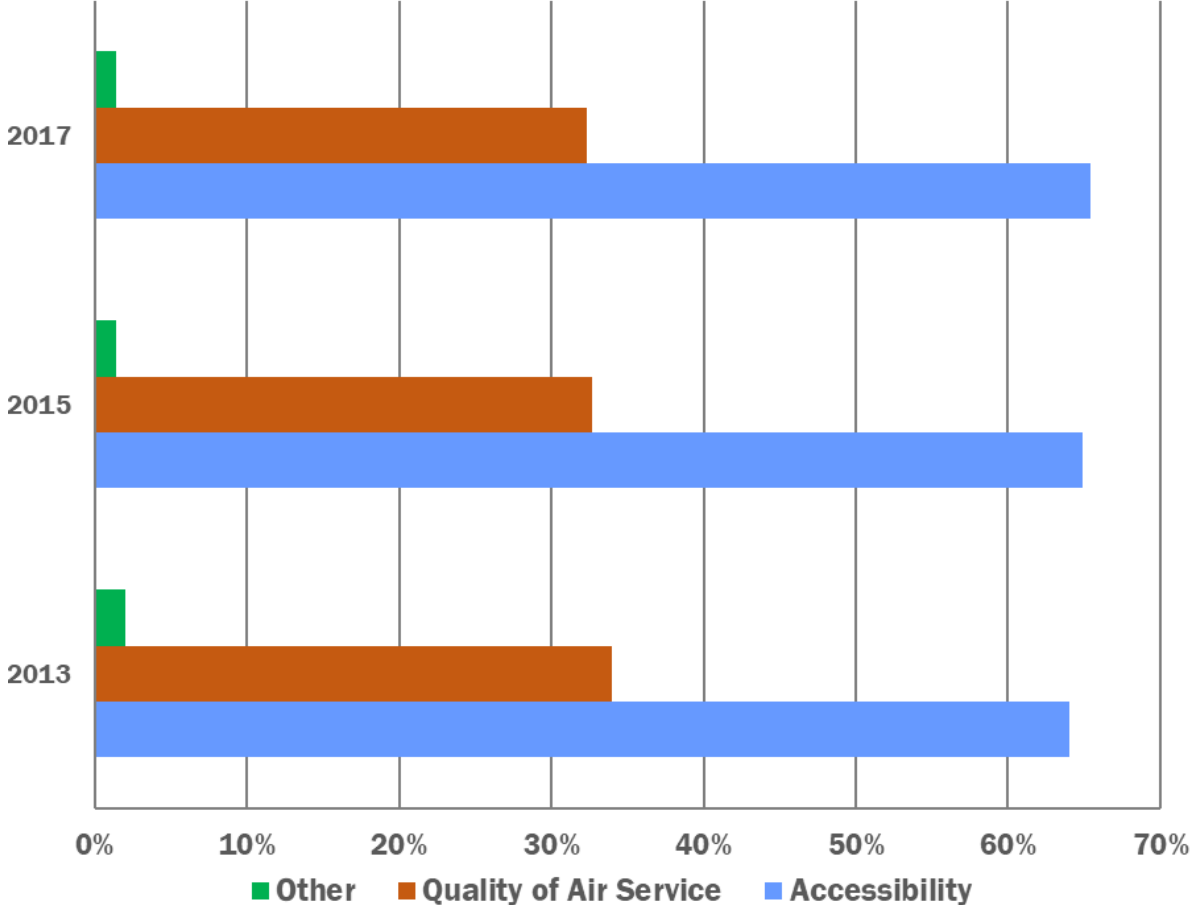


Airport Selection: Primary Reason

Primary Reason	BWI			DCA			IAD			REGION		
	2013	2015	2017	2013	2015	2017	2013	2015	2017	2013	2015	2017
<i>Accessibility</i>												
Closest airport	58%	60%	59%	65%	65%	70%	46%	47%	47%	58%	60%	60%
Better public ground transportation	1%	1%	1%	6%	6%	4%	1%	1%	0%	1%	3%	2%
Better access roads & parking	4%	5%	5%	2%	2%	1%	5%	3%	3%	5%	2%	3%
SUBTOTAL –Accessibility	63%	65%	65%	73%	73%	76%	52%	50%	51%	64%	65%	65%
<i>Quality of Air Service</i>												
More convenient flight times	6%	6%	7%	7%	7%	8%	11%	14%	15%	7%	9%	9%
Only airport with direct/non-stop flight	4%	4%	4%	4%	4%	4%	14%	11%	11%	5%	6%	6%
Less expensive airfare	22%	19%	19%	11%	11%	8%	15%	15%	16%	15%	15%	14%
Frequent flyer with specific airline	2%	2%	2%	2%	2%	2%	3%	3%	2%	3%	2%	2%
Only airport serving market	1%	1%	1%	1%	1%	1%	4%	4%	4%	4%	2%	2%
SUBTOTAL –												
Quality of Air Service	35%	33%	34%	25%	25%	23%	47%	47%	47%	34%	33%	32%
OTHER	2%	2%	1%	3%	3%	2%	1%	2%	2%	2%	1%	1%
TOTAL	100%	100%	100%	101%	101%	100%	100%	99%	100%	100%	99%	99%

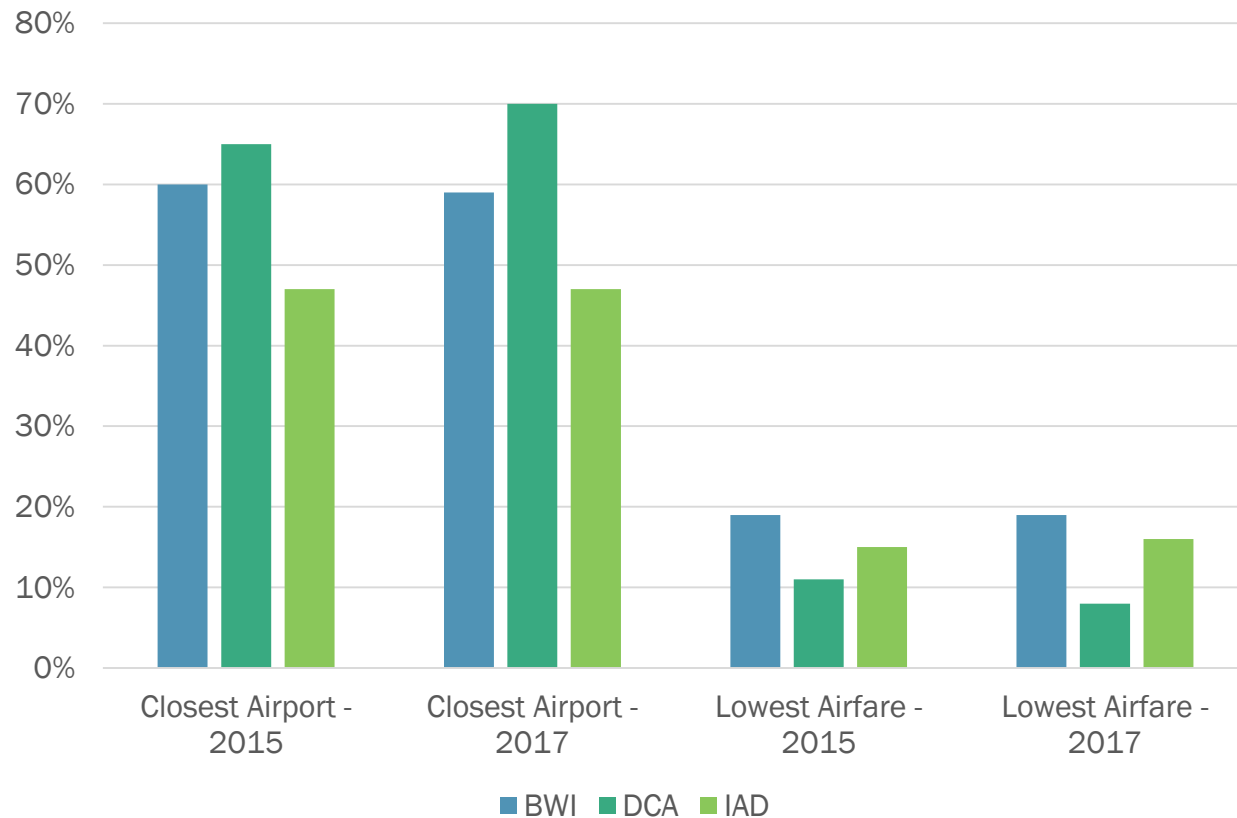


Airport Selection: Primary Reason



Users base airport selection on accessibility over quality of air service

Primary Reason for Selecting Airport



- Accessibility reasons remained unchanged with 65% when compared with 2015



AIR PASSENGER CHARACTERISTICS

Age, income, resident status, and trip
purpose



Air Traveler Characteristics

- In 2017, the majority of departing air travelers at the region's three major airports were middle-aged, affluent and non-resident
- Non-resident local originating air passengers accounted for 60%
- The share of resident departing passengers increased to 40% in 2017 from 35% in 2015
- The share of departing passengers under the age of 25 years and over the age of 65 years remained unchanged at 23% when compared with 2015 findings

Age: By Airport

Age Group		BWI	DCA	IAD	REGION
18 or Younger	<i>Number</i>	125	148	108	381
	<i>Percent</i>	2%	2%	2%	2%
19 to 24 Years	<i>Number</i>	705	645	407	1,757
	<i>Percent</i>	9%	7%	7%	7%
25 to 34 Years	<i>Number</i>	1,564	1,761	1,289	4,614
	<i>Percent</i>	19%	19%	21%	19%
35 to 49 Years	<i>Number</i>	2,073	2,705	1,780	6,558
	<i>Percent</i>	25%	29%	29%	28%
50 to 64 Years	<i>Number</i>	2,489	2,881	1,717	7,087
	<i>Percent</i>	30%	31%	28%	30%
65 or Older	<i>Number</i>	1,231	1,283	913	3,427
	<i>Percent</i>	15%	14%	15%	14%
TOTAL	Number	8,187	9,423	6,214	23,824
	Percent	100%	100%	100%	100%
Non-Respondents		723	1,076	1,031	2,830
Total Originations		8,910	10,499	7,245	26,654



Income: By Airport

Annual Household Income		BWI	DCA	IAD	REGION
Less than \$15,000	<i>Number</i>	221	212	182	615
	<i>Percent</i>	3%	3%	4%	3%
\$15,000 - \$24,999	<i>Number</i>	188	167	129	484
	<i>Percent</i>	3%	2%	3%	3%
\$25,000 - \$44,999	<i>Number</i>	439	326	323	1,088
	<i>Percent</i>	7%	4%	7%	6%
\$45,000 - \$79,000	<i>Number</i>	1,056	999	748	2,803
	<i>Percent</i>	16%	13%	16%	15%
\$80,000 - \$119,000	<i>Number</i>	1,334	1,443	878	3,655
	<i>Percent</i>	21%	19%	18%	20%
\$120,000 - \$159,000	<i>Number</i>	1,074	1,183	703	2,960
	<i>Percent</i>	17%	16%	15%	16%
\$160,000 - \$199,999	<i>Number</i>	728	923	540	2,191
	<i>Percent</i>	11%	12%	11%	12%
\$200,000 and up	<i>Number</i>	1,418	2,165	1,259	4,842
	<i>Percent</i>	22%	29%	26%	26%
TOTAL	Number	6,458	7,418	4,762	18,638
	Percent	100%	100%	100%	100%
Non-Respondents		2,453	3,086	2,488	8,027
Total Originations		8,911	10,504	7,250	26,665



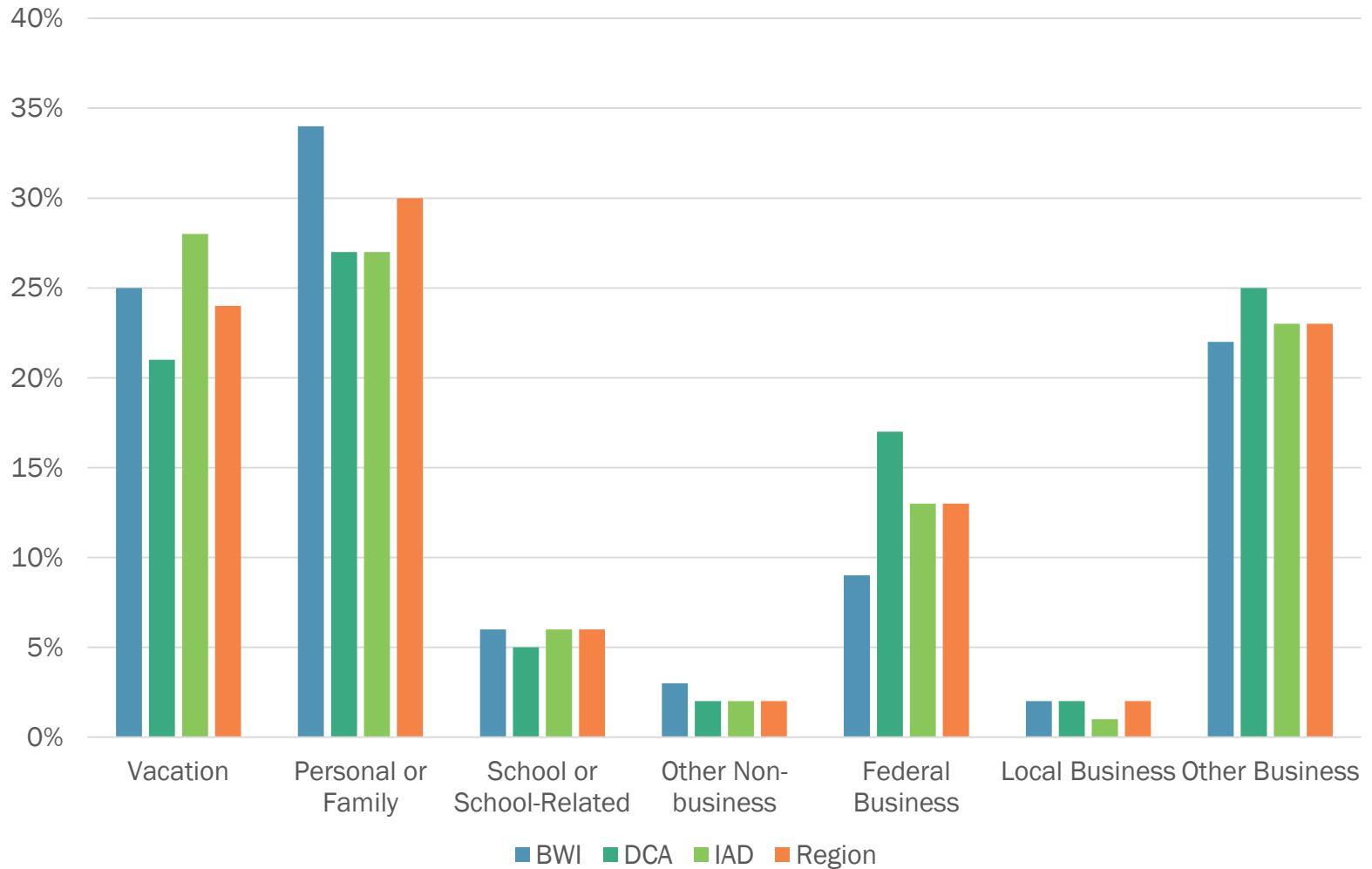
Airport Preference by Resident Status

Preferred Airport		Resident			Non-Resident			Total		
		2013	2015	2017	2013	2015	2017	2013	2015	2017
BWI Marshall	Number	3,176	2,285	2,631	2,929	3,163	3,038	6,105	5,448	5,669
	Percent	36%	34%	33%	25%	25%	26%	30%	28%	28%
Dulles	Number	1,645	1,433	1,515	1,859	1,596	1,485	3,504	3,029	3,000
	Percent	19%	21%	19%	16%	13%	13%	17%	16%	15%
Reagan National	Number	3,330	2,592	3,298	4,181	4,942	4,903	7,511	7,534	8,201
	Percent	38%	38%	41%	35%	40%	41%	37%	39%	41%
No Preference	Number	602	442	630	2,809	2,793	2,397	3,411	3,235	3,027
	Percent	7%	7%	8%	24%	22%	20%	17%	17%	15%
TOTAL	Number	8,753	6,752	8,074	11,778	12,494	11,823	20,531	19,246	19,897
	Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%

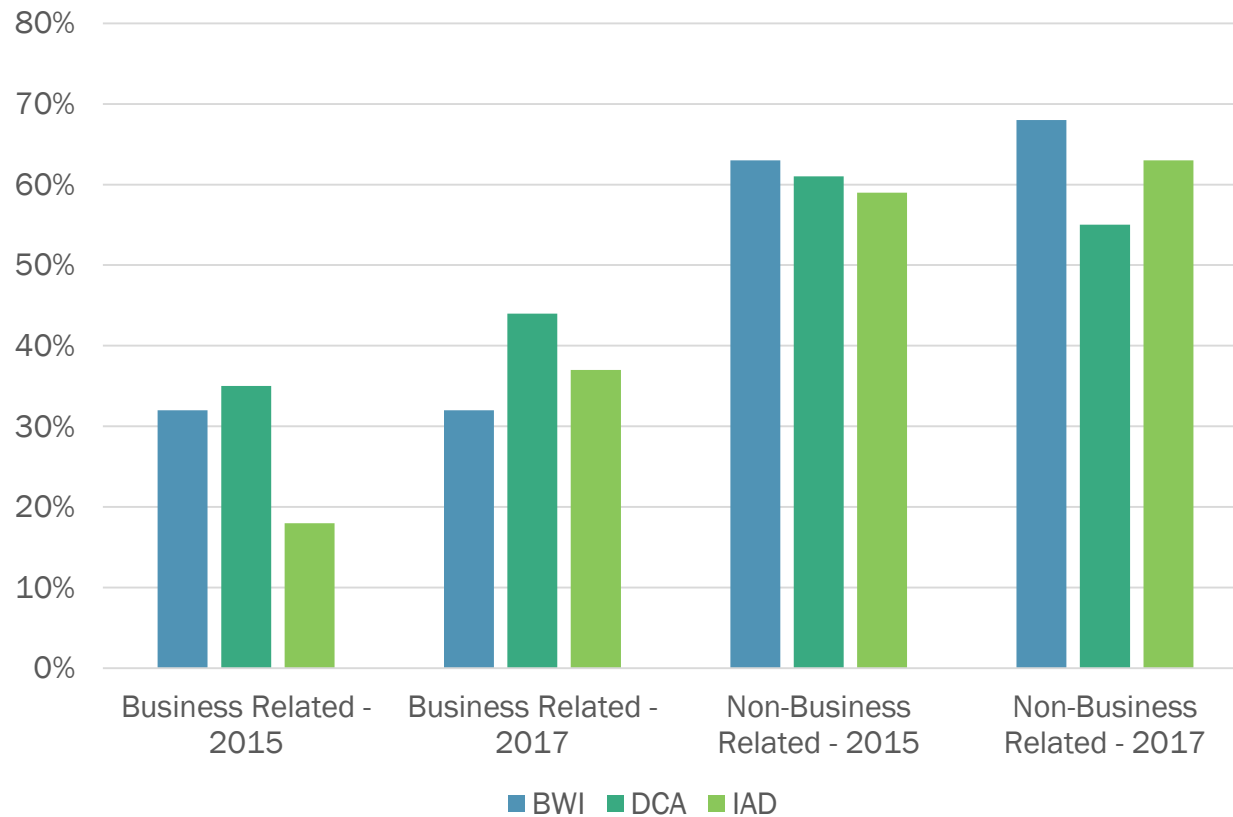
Notes:

* Totals do not include non-respondents and resident unknown

Trip Purpose



Trip Purpose: 2015 vs. 2017



- Business related trip purpose overall increased by 9% while non-business related trips 1% between 2015 and 2017



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[https://www.mwkog.org/
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