

# 2017-2018 REGIONAL TRAVEL SURVEY BRIEFING: INITIAL FINDINGS OF OBSERVED DAILY TRIPS

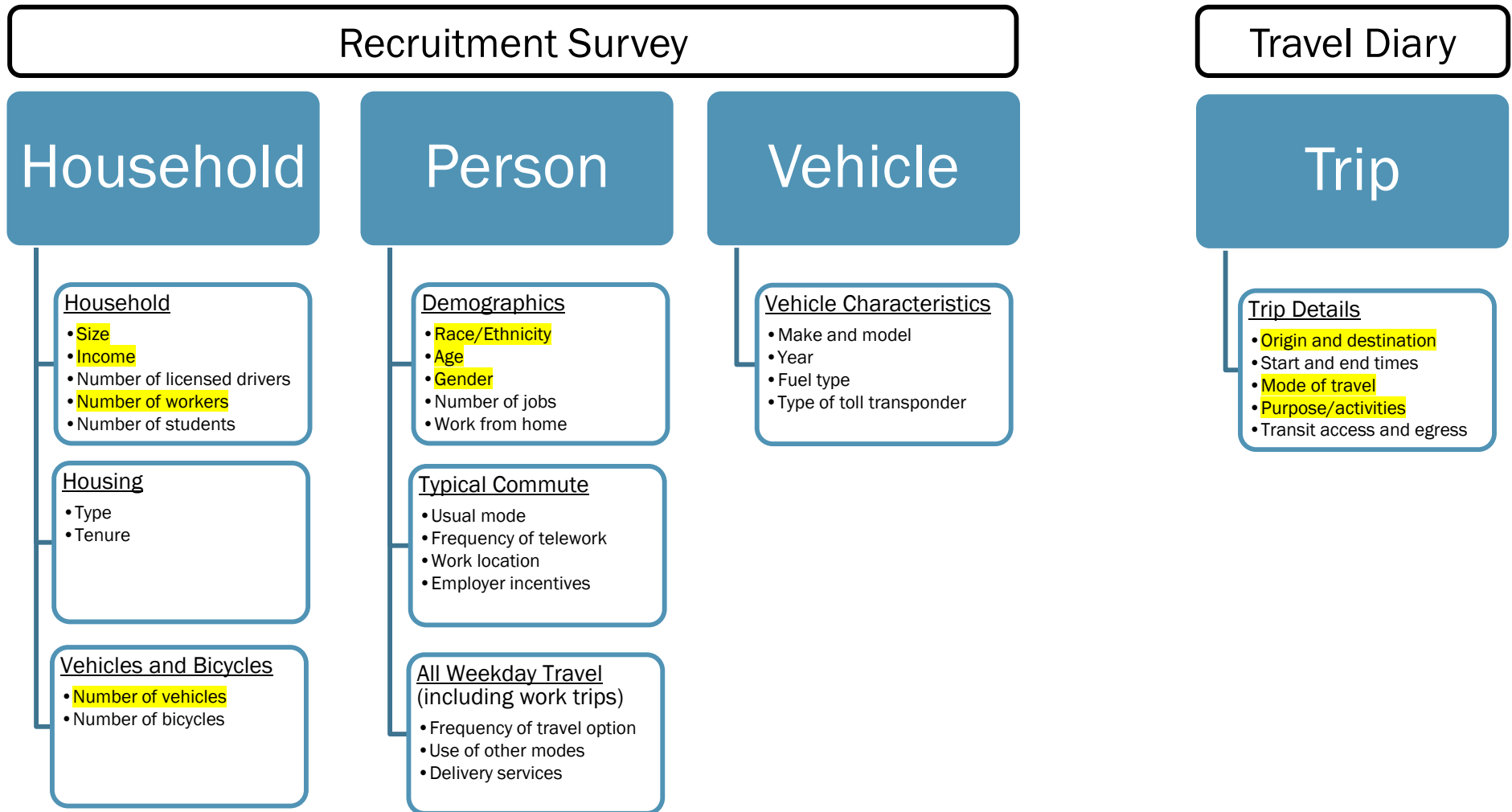
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TPB Transportation Planner

Travel Forecasting Subcommittee  
September 18, 2020



# Overview of Regional Travel Survey Information



# REGIONAL TRAVEL SURVEY



Planning Our Future Together

## Trip File

- Weekday trip rates
- Trip purpose/activity
- Mode share
- Trip destination

## Household File

- Cross tabulations by household size, no. of workers, household income, no. of vehicles, households with children

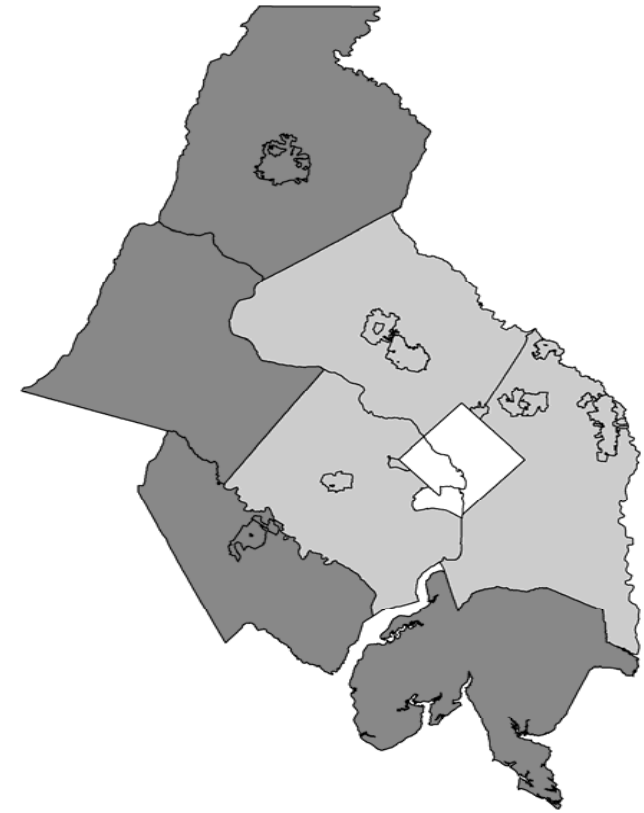
## Person File

- Cross tabulations by age, gender, race/ethnicity

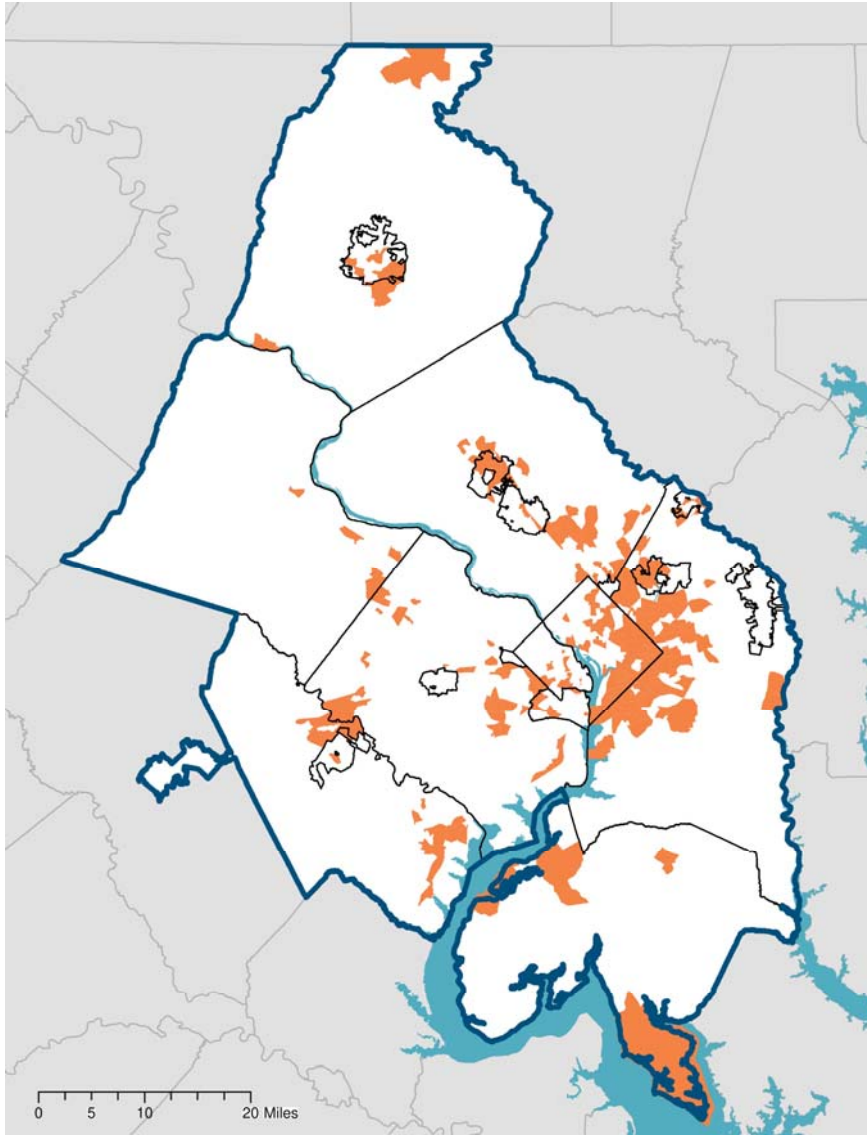
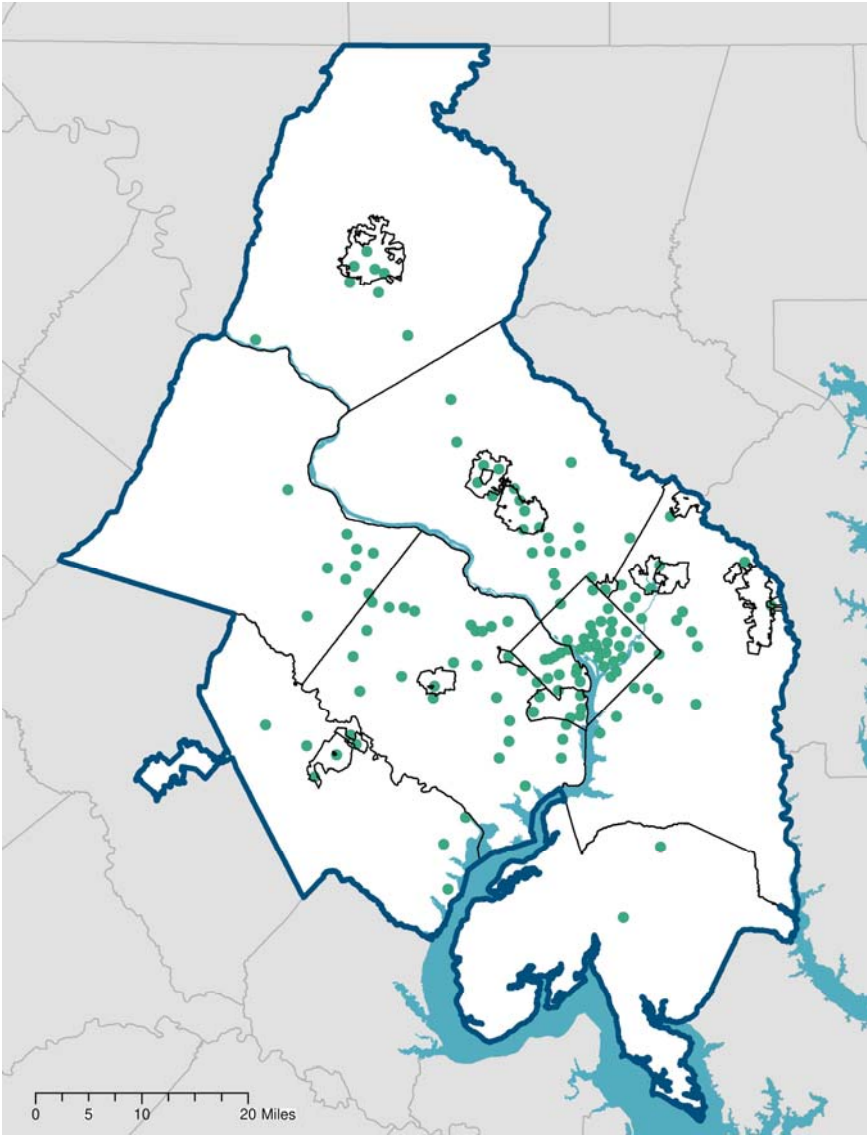


# Sub-Regional Areas

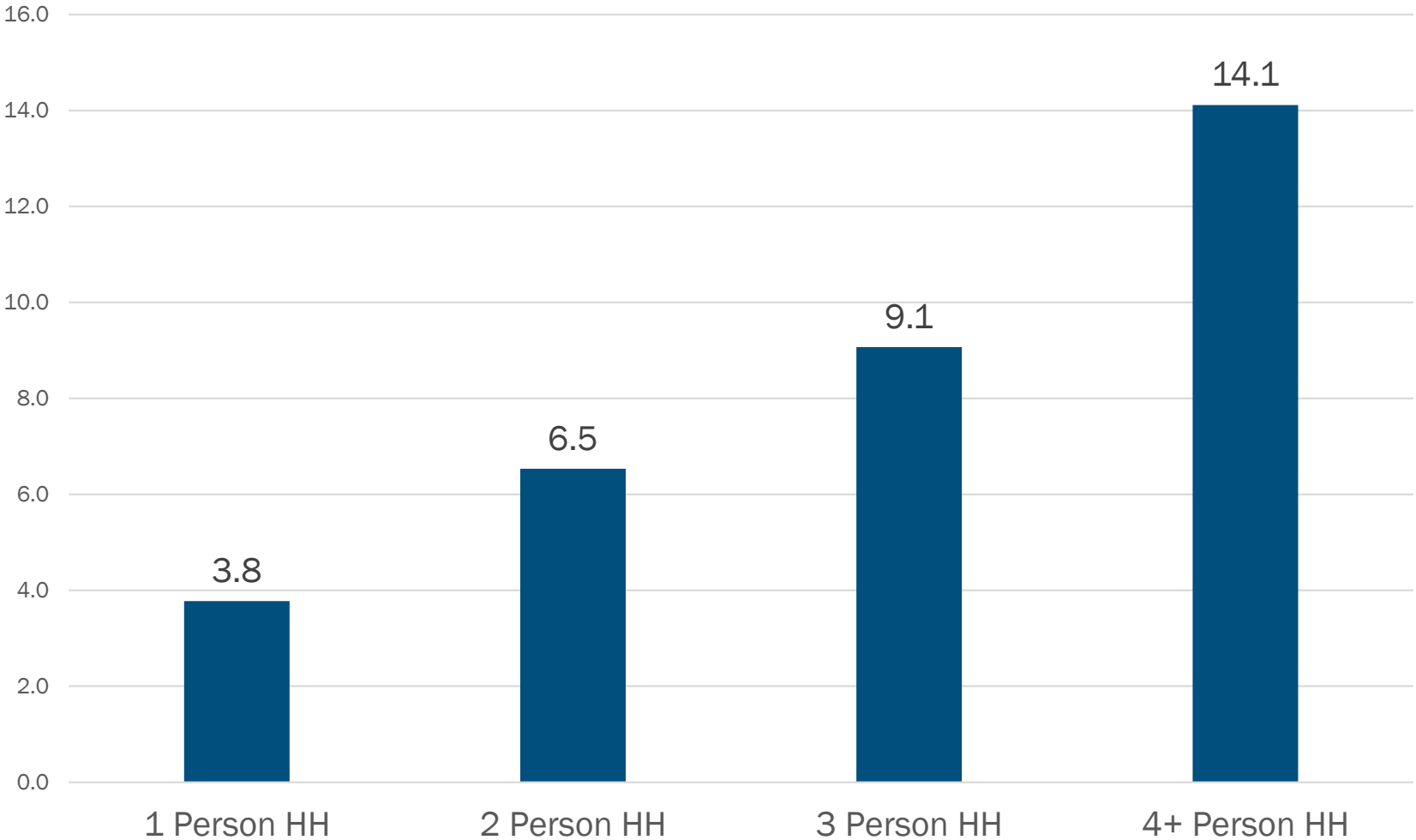
Sub-Area	Jurisdiction
Core	District of Columbia
	Arlington County
	City of Alexandria
Inner Suburb	Montgomery County
	Prince George's County
	Fairfax County, including City of Fairfax and City of Falls Church
Outer Suburb	Charles County
	Frederick County
	Loudoun County
	Prince William County, City of Manassas, and City of Manassas Park



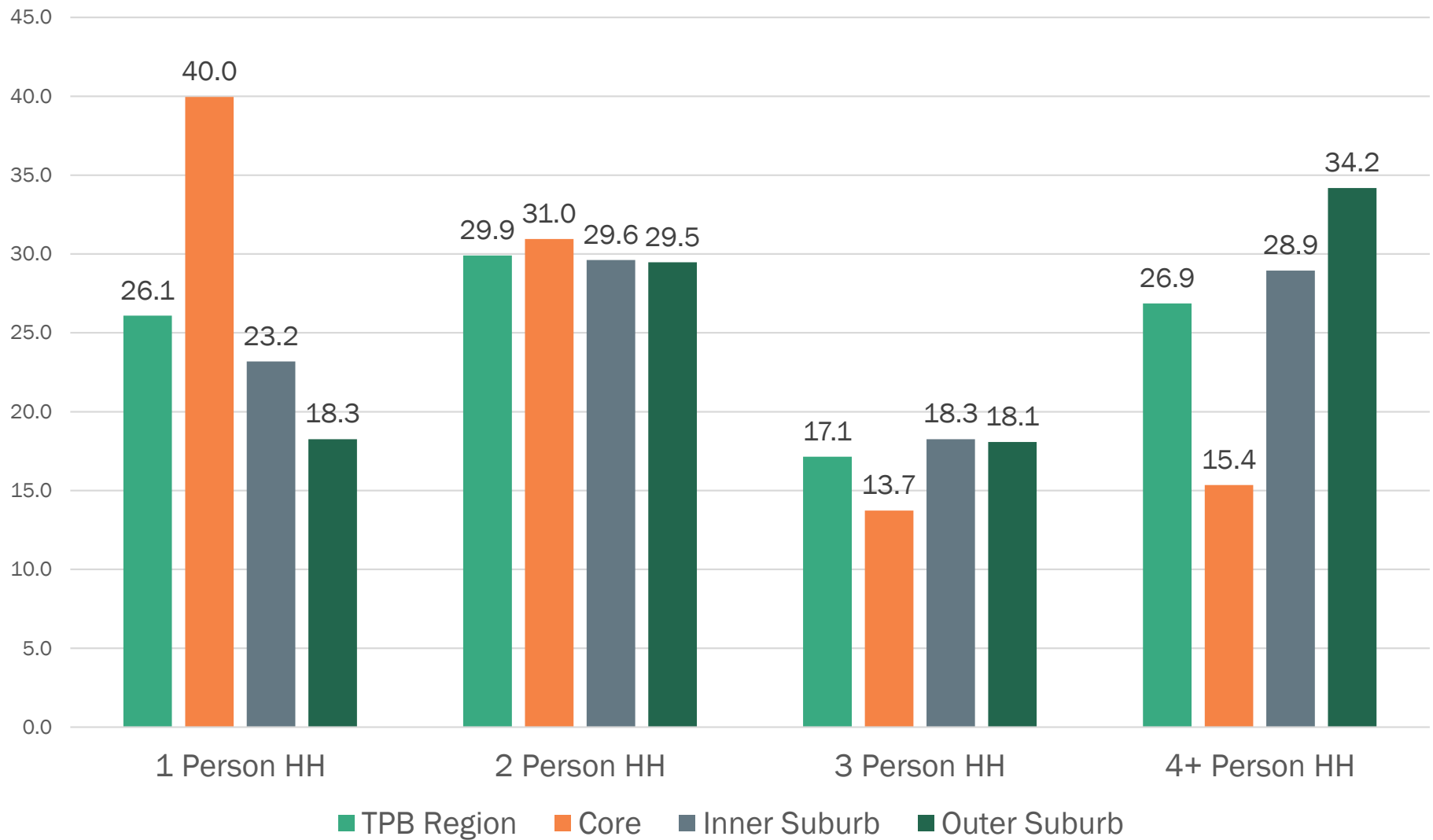
# Activity Centers and Equity Emphasis Areas



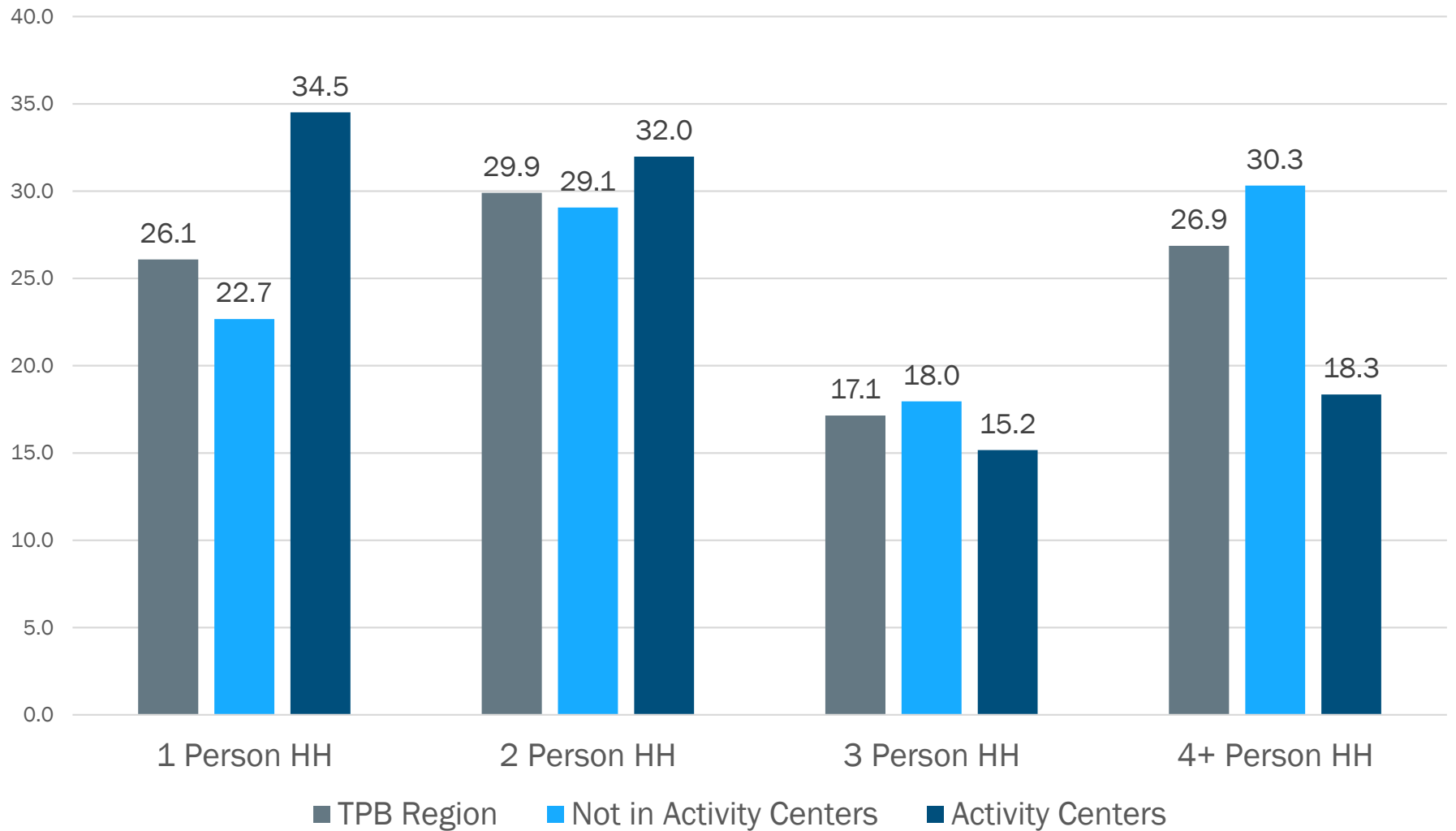
# Weekday Household Trip Rate by Household Size



# Household Size Distribution by Sub-Area

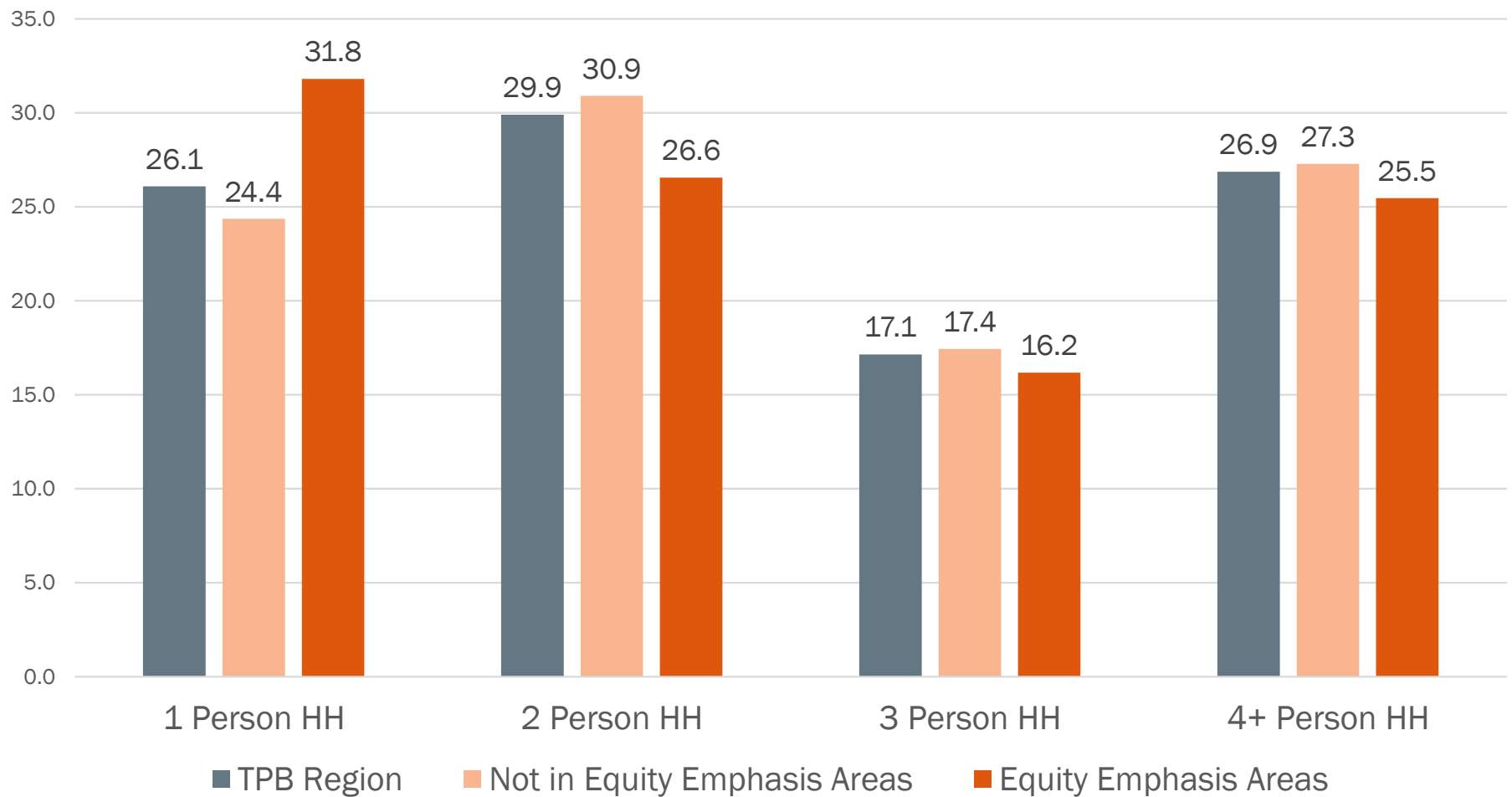


# Household Size Distribution by Activity Center

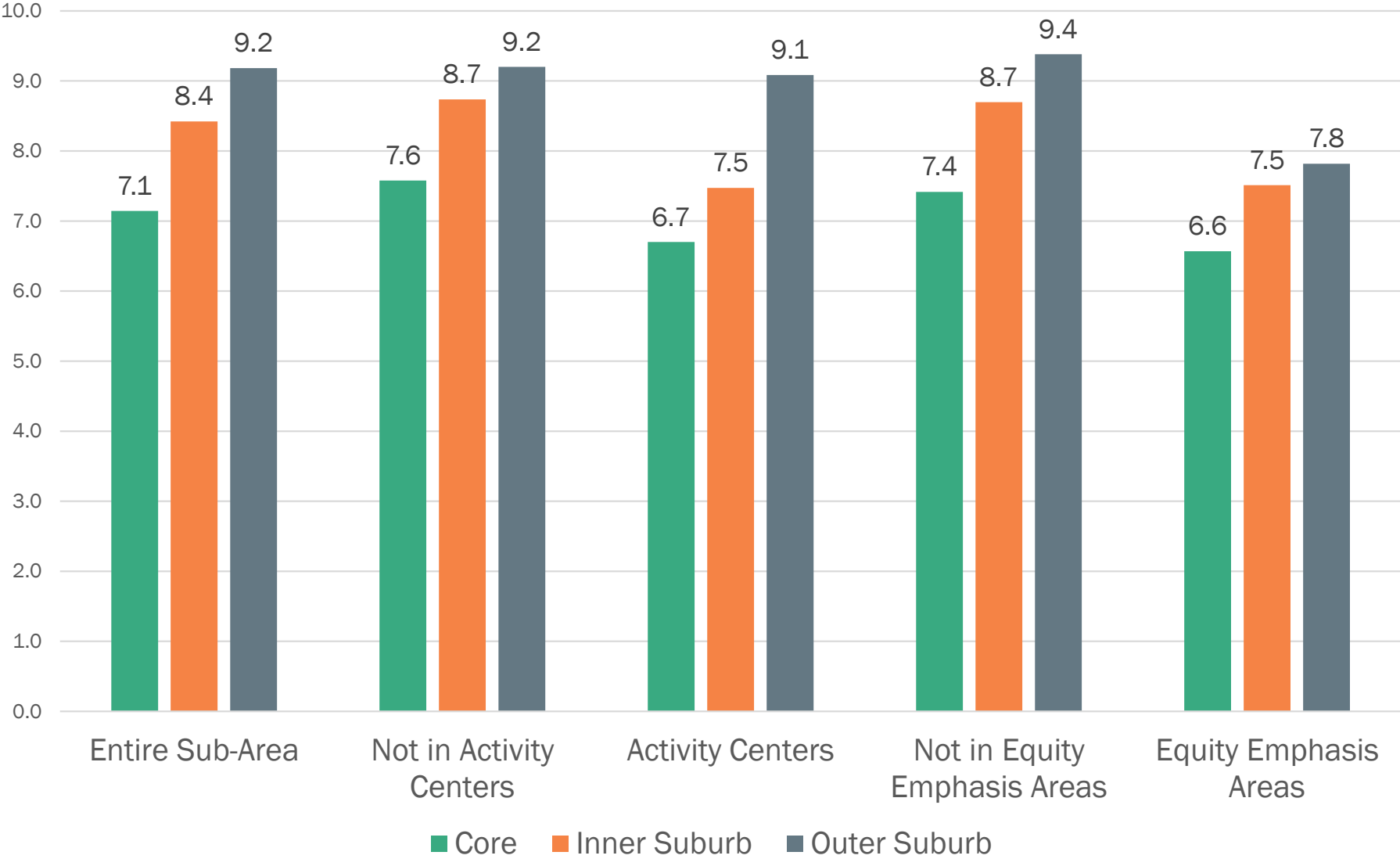




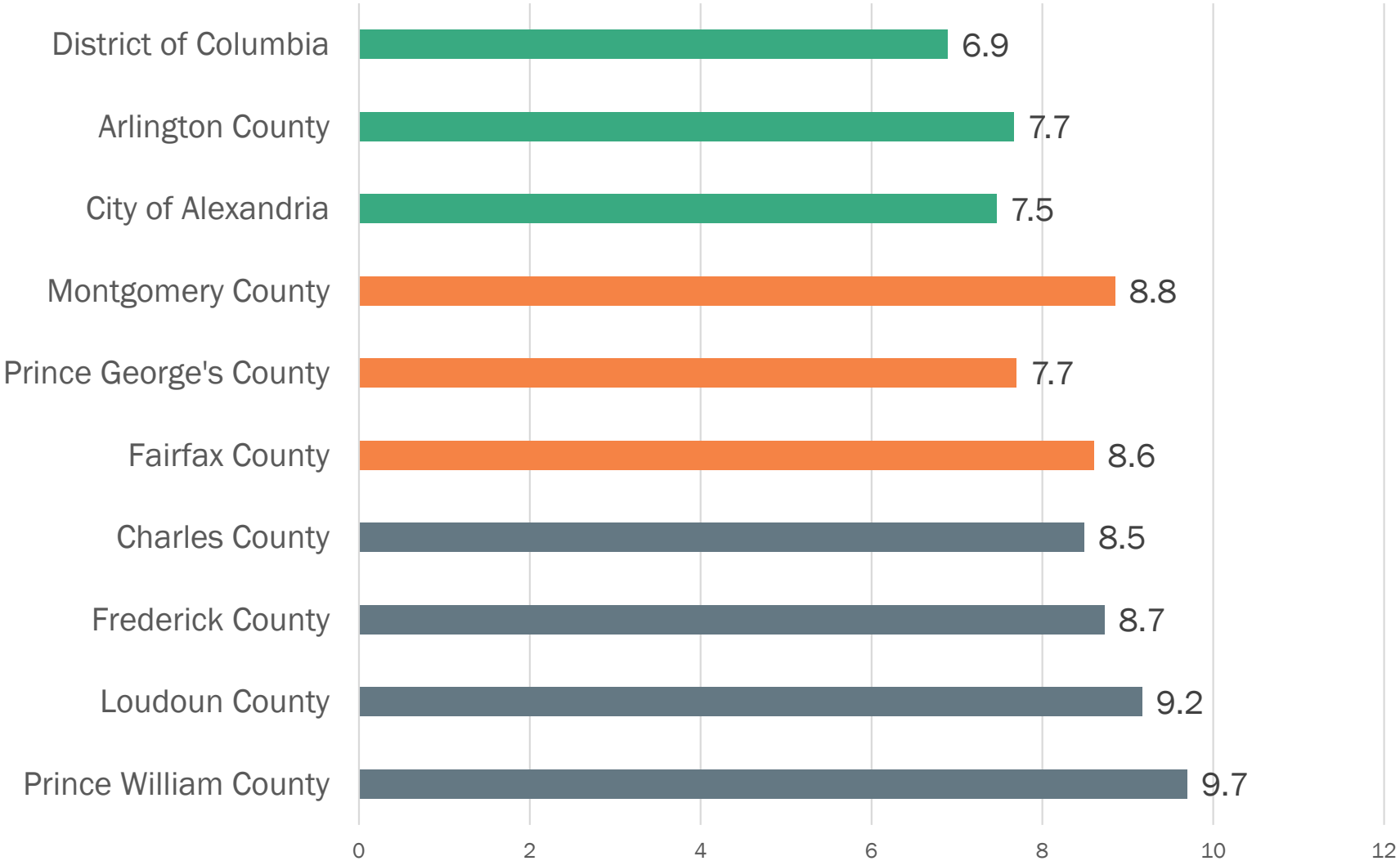
# Household Size Distribution by Equity Emphasis Area



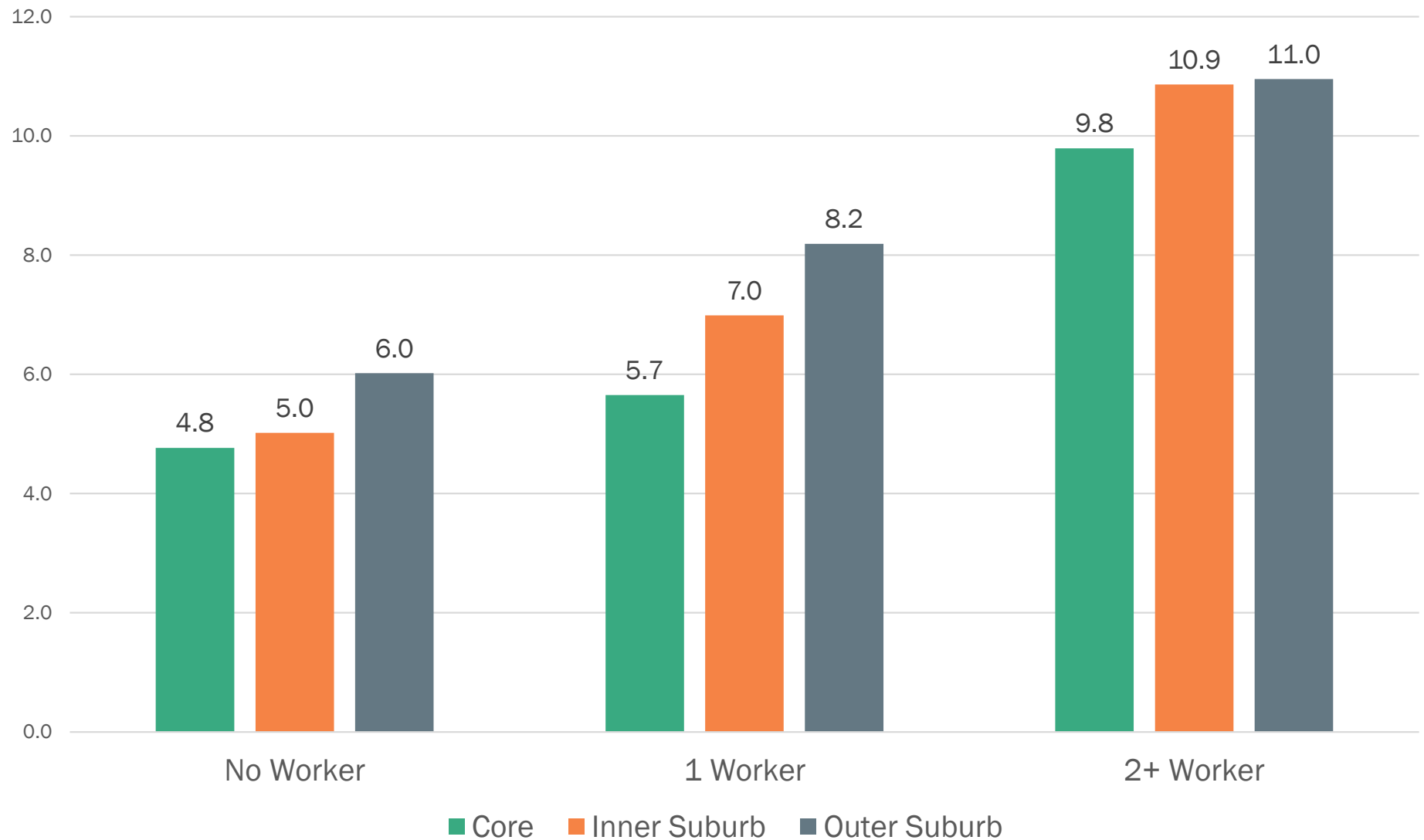
# Weekday Household Trip Rate



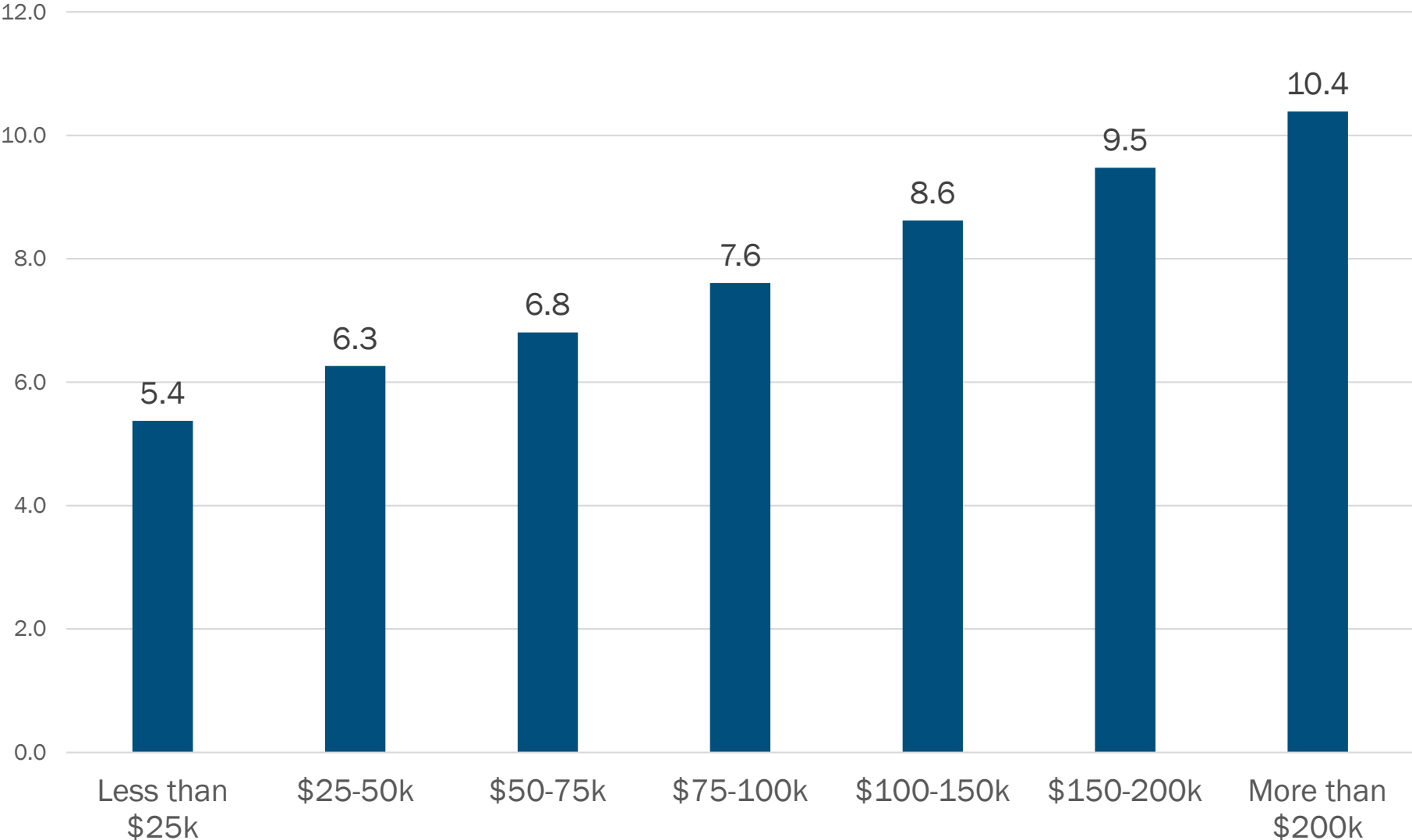
# Weekday Household Trip Rate



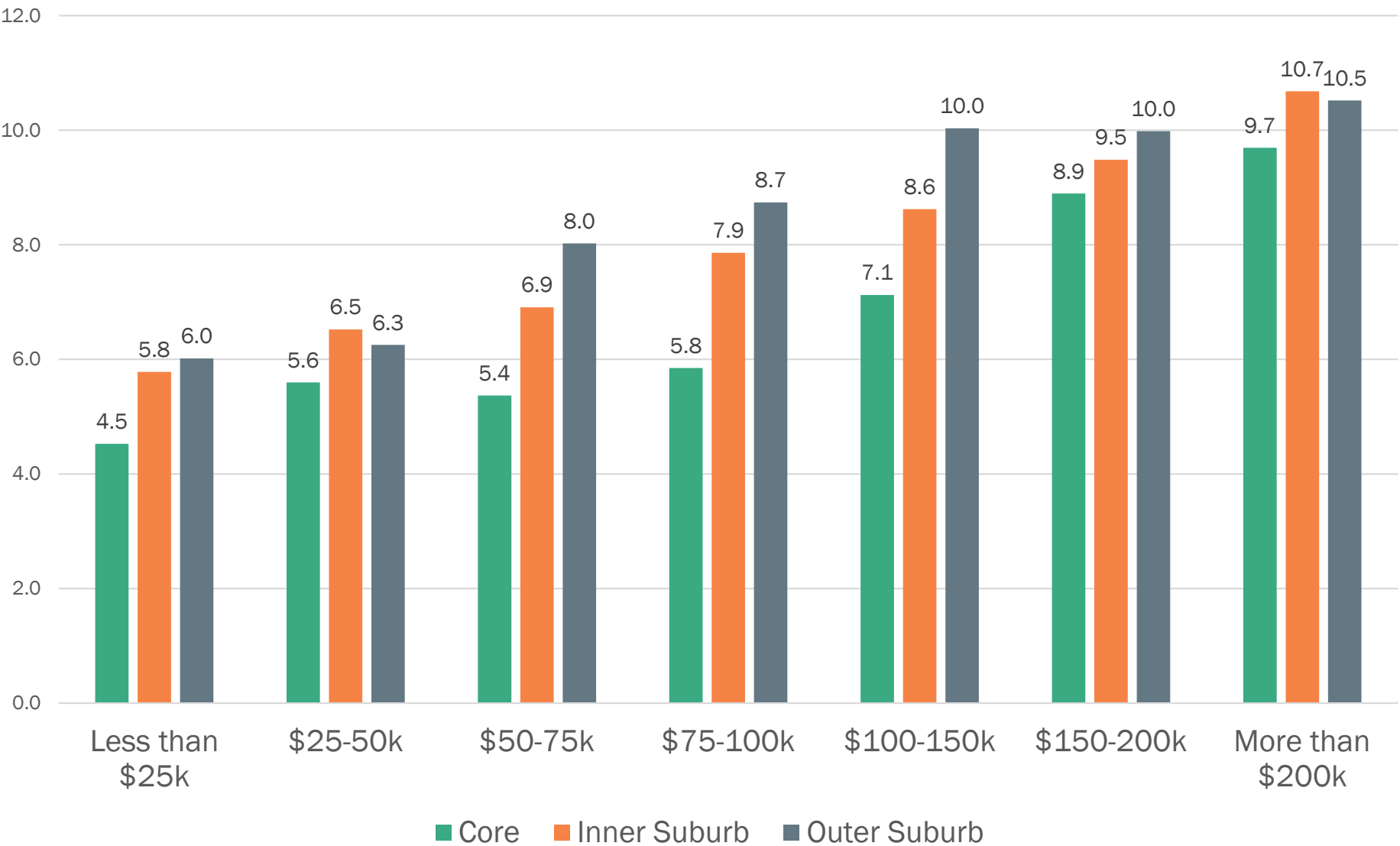
# Weekday Household Trip Rate by Workers



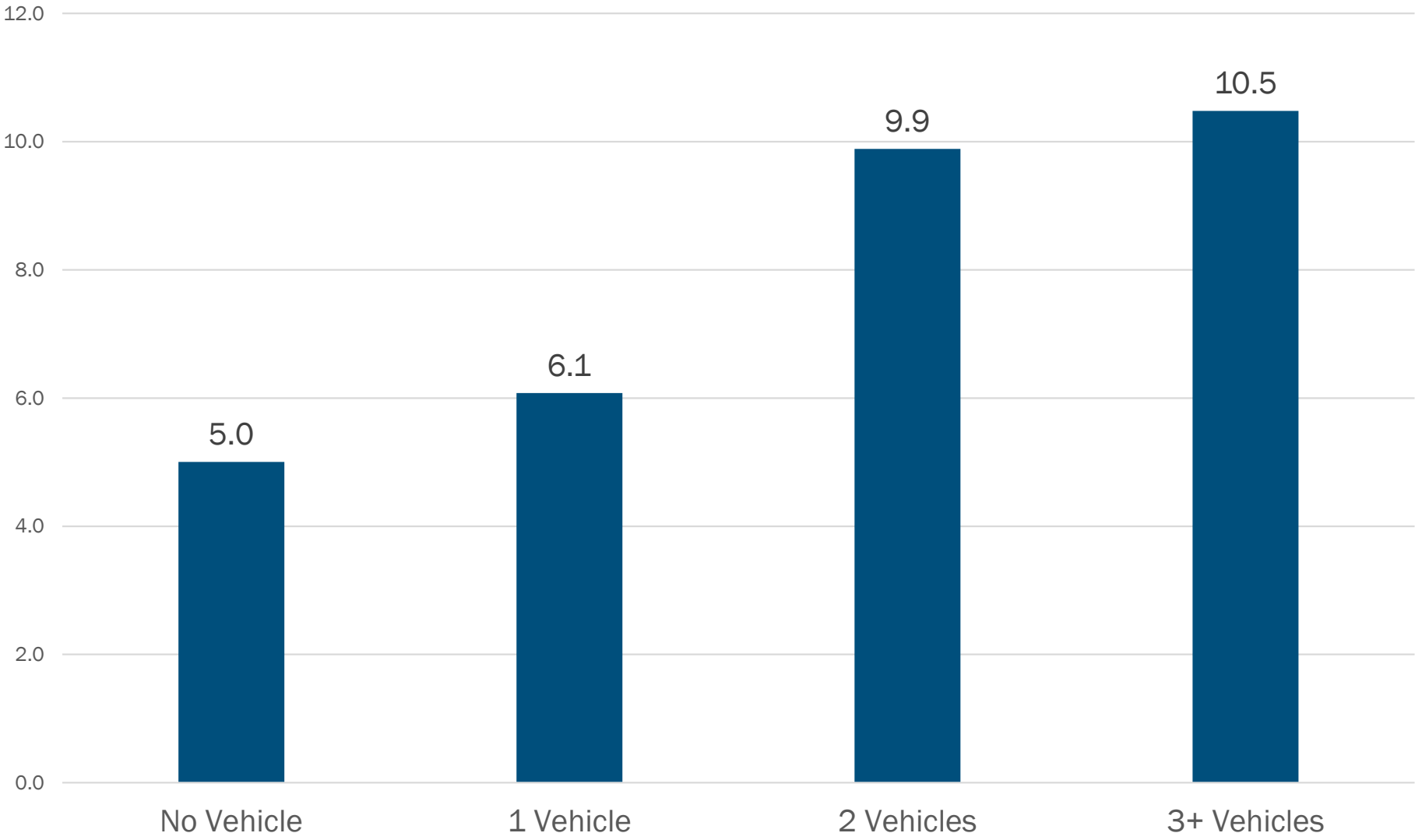
# Weekday Household Trip Rate by Household Income



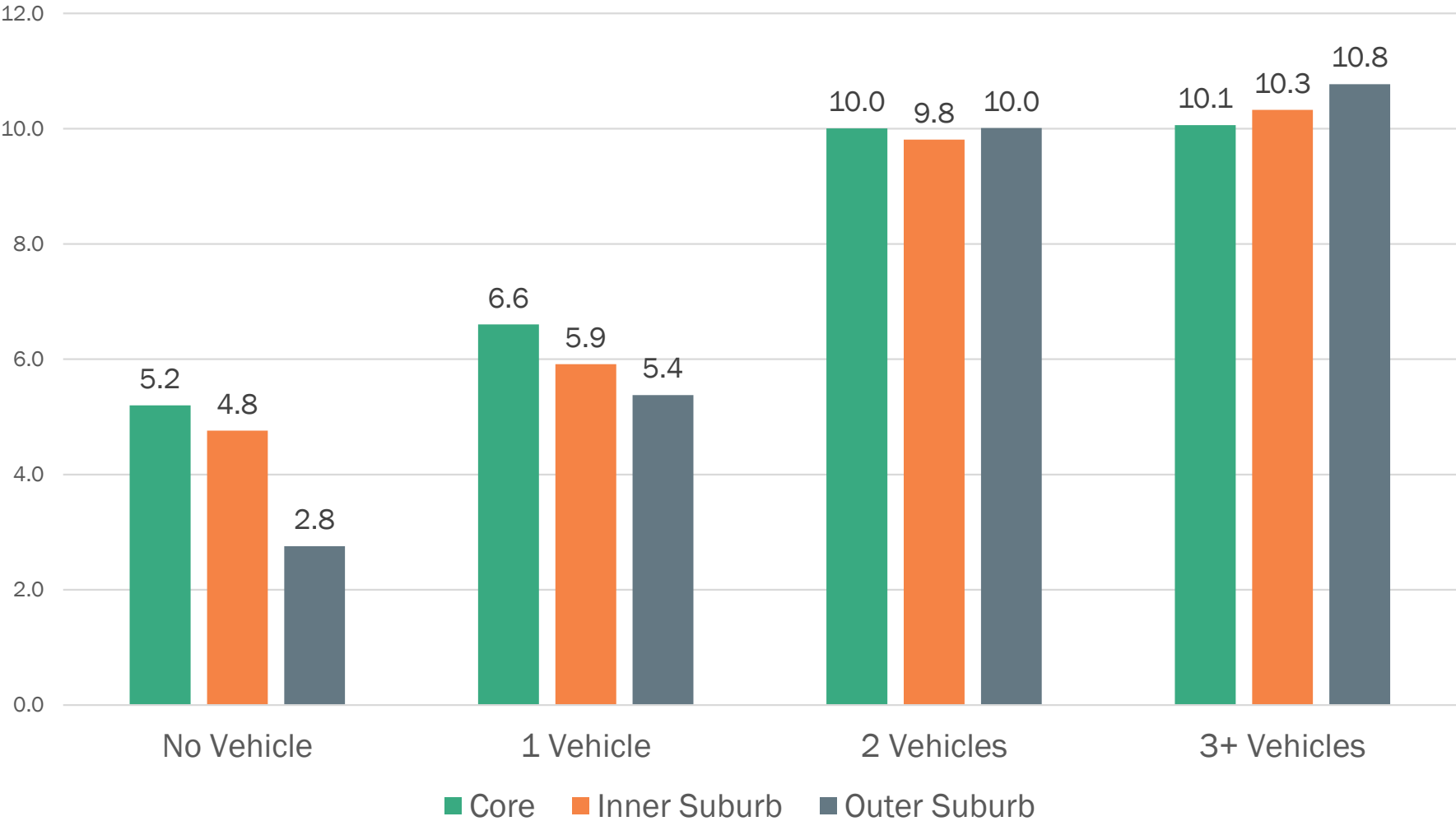
# Weekday Household Trip Rate by Household Income



# Weekday Household Trip Rate by Household Vehicle

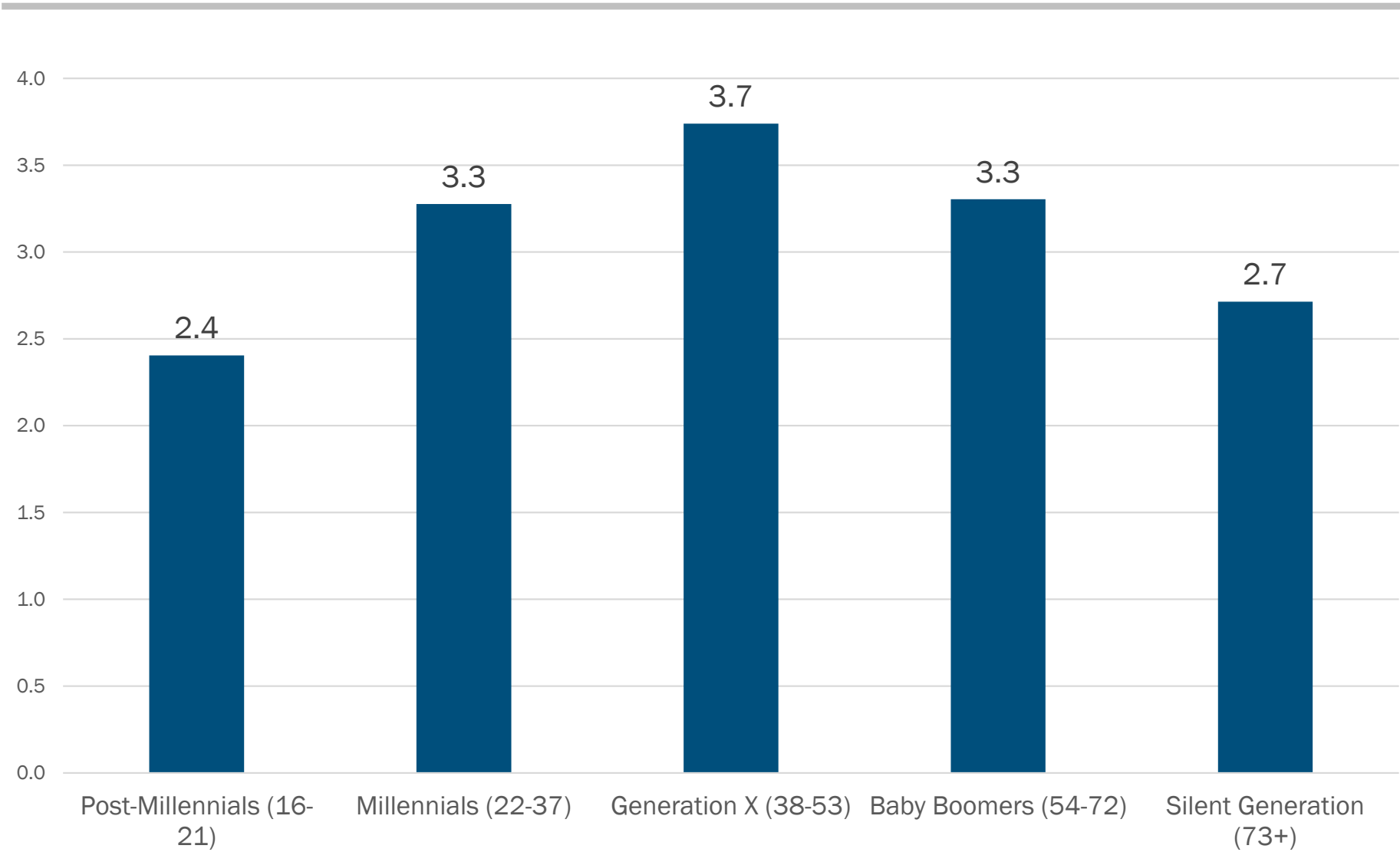


# Weekday Household Trip Rate by Household Vehicle

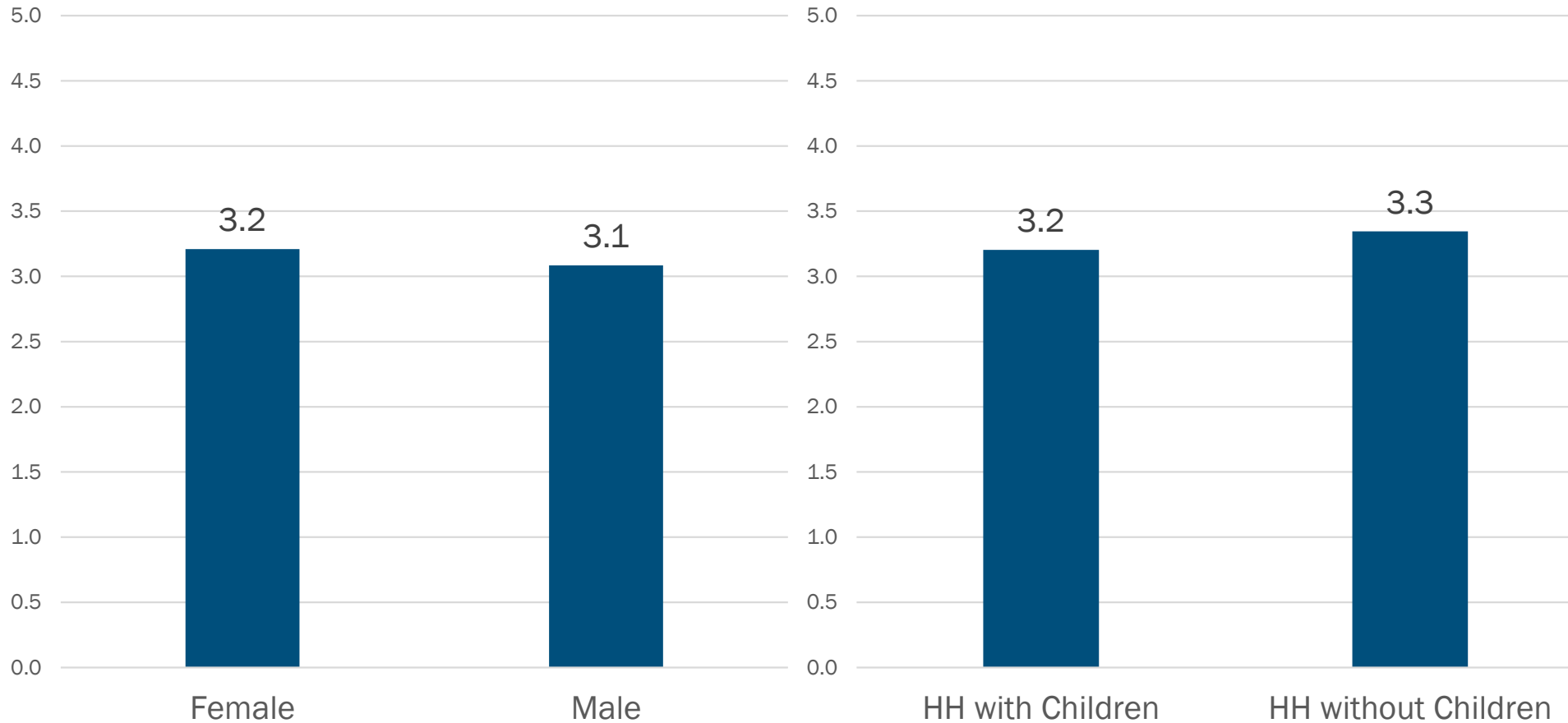




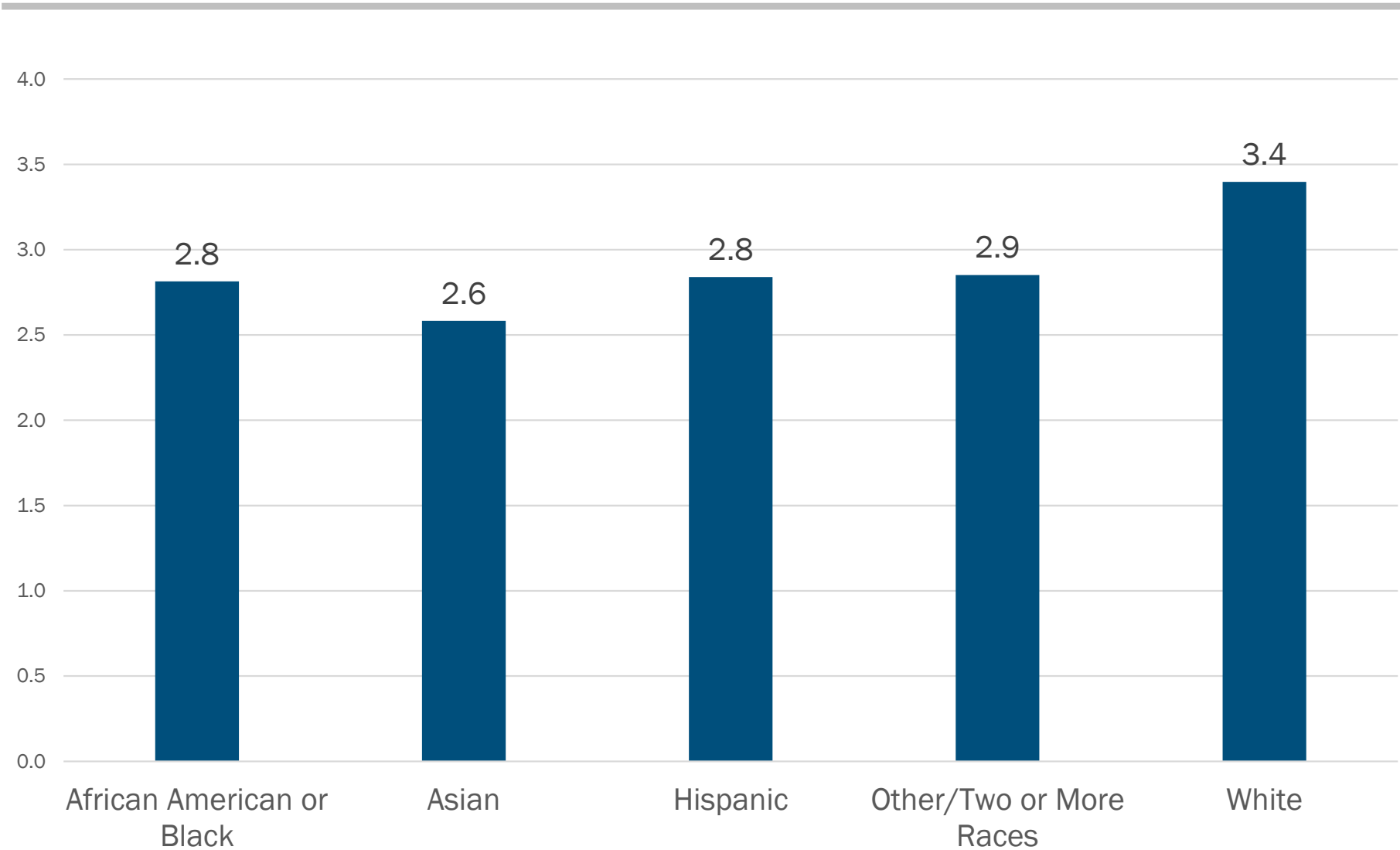
# Weekday Person Trip Rate by Age Group



# Person Trip Rate by Gender and Households with Children



# Weekday Person Trip Rate by Race/Ethnicity



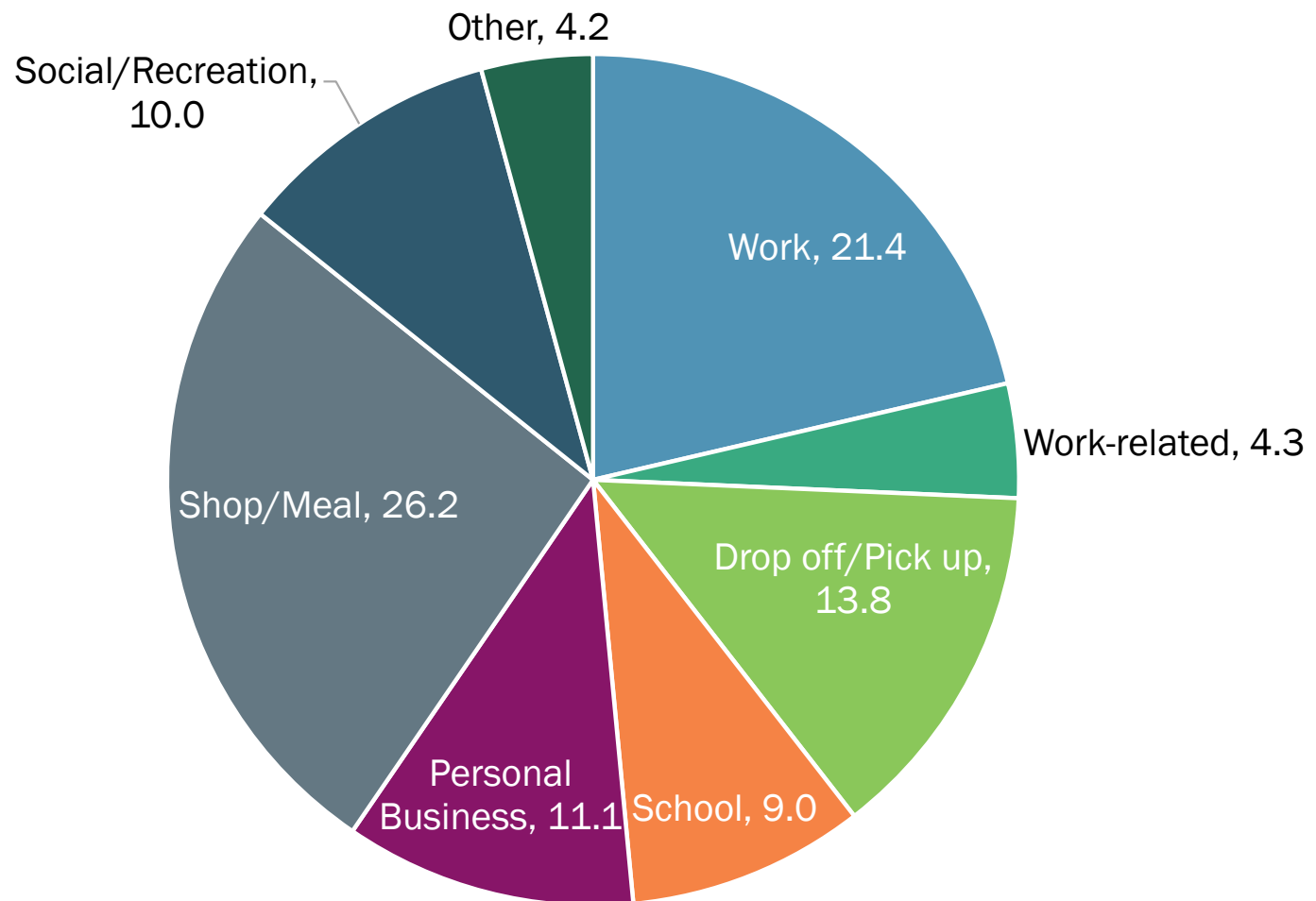
## Summary of Weekday Person/Household Trip Rates

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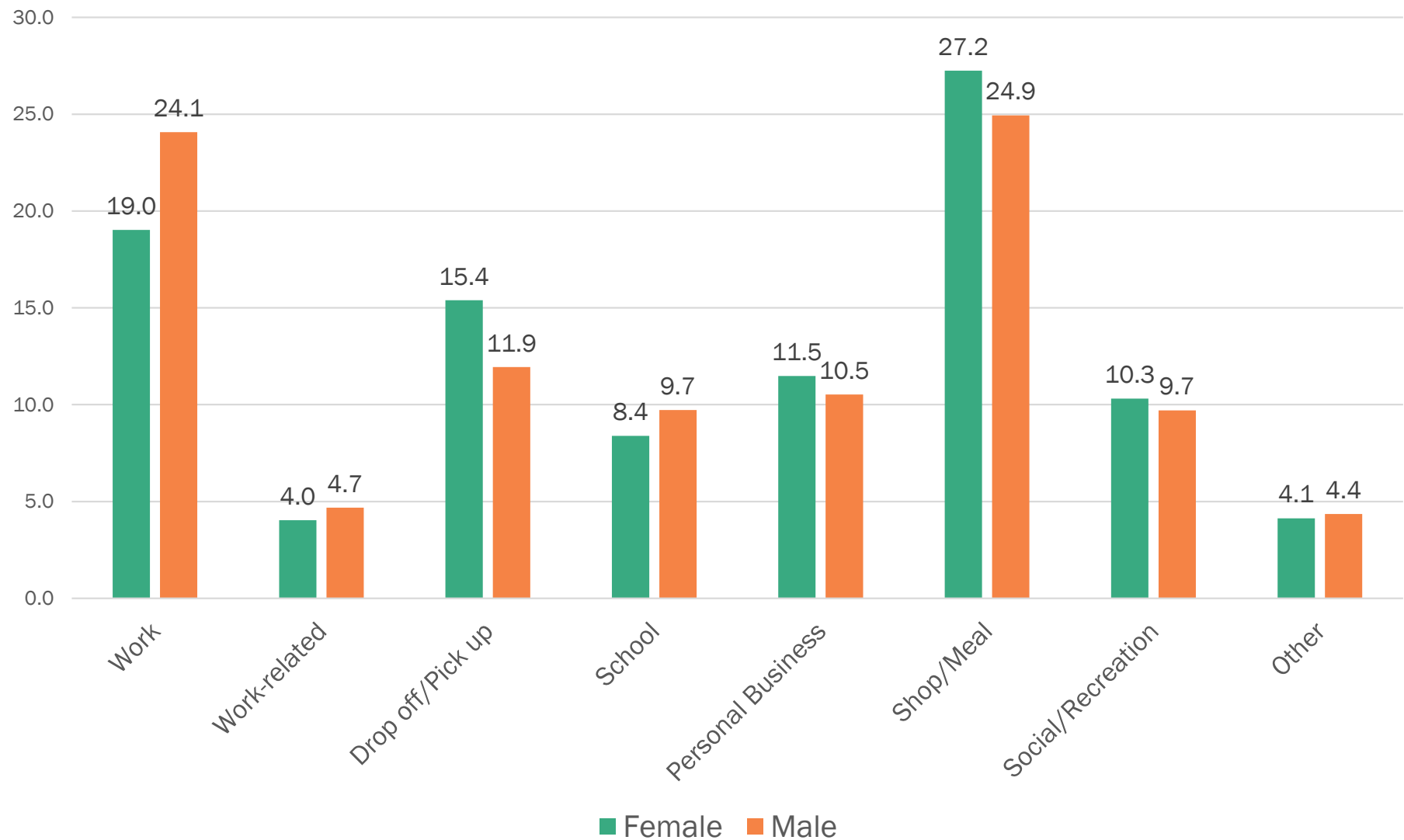
- Household trip rates increase from core to outer suburbs
- Household trip rates lower in equity emphasis areas
- Trips per household increase with household income
- No vehicle households take fewer trips per household than households with vehicles
- Post-millennials take fewer trips per person than other age groups
- Non-Hispanic whites take more trips per person than other race/ethnic groups



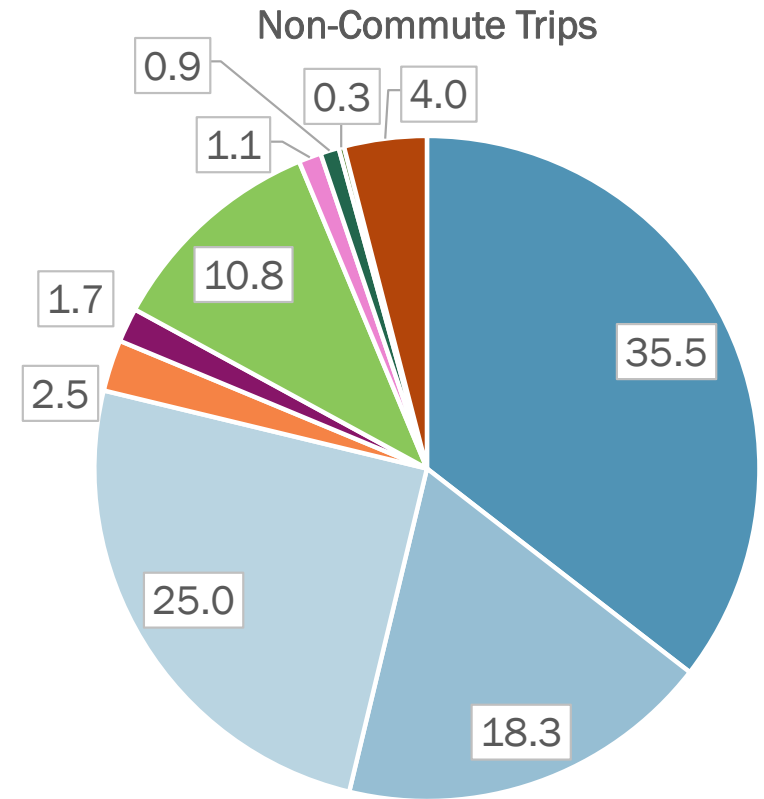
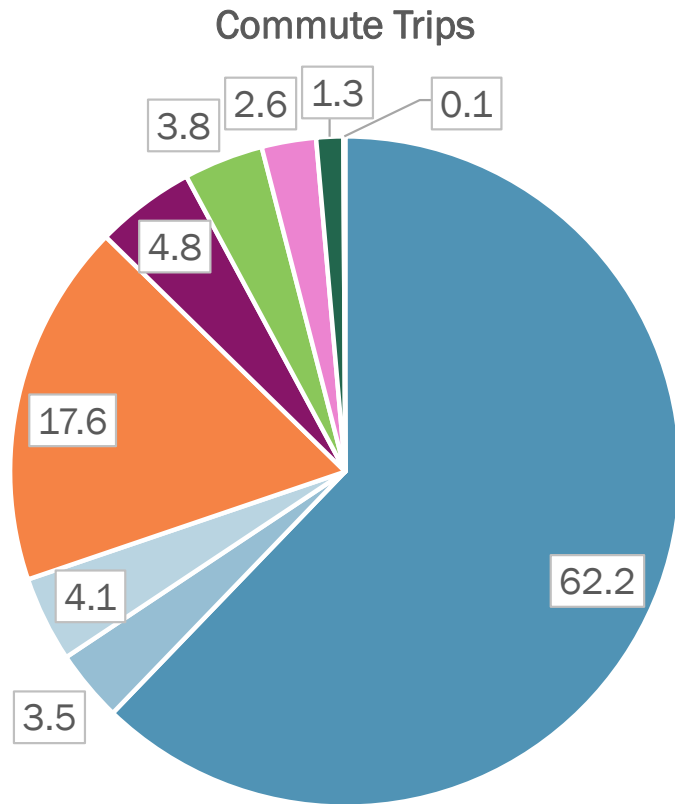
# Daily Trip Share by Purpose (All Modes – TPB Region)



# Daily Trip Share by Purpose (Gender)



# Mode Share of Weekday Trips (TPB Region)



- Drive Alone
- Drive Others
- Auto Passenger
- Rail Transit
- Bus Transit
- Walk
- Bike
- Taxi/Ride-Hail
- Other

- Drive Alone
- Drive Others
- Auto Passenger
- Rail Transit
- Bus Transit
- Walk
- Bike
- Taxi/Ride-Hail
- Other
- School Bus



# Mode Share of Commute Trips by Sub-Area, Activity Center, and Equity Emphasis Area

Commute Mode	Core	Inner Suburb	Outer Suburb	Not in Activity Centers	Activity Centers	Not in EEAs	EEAs
Drive Alone	31.9	67.4	80.3	67.8	49.1	65.0	52.3
Drive Others	1.8	3.6	4.9	3.9	2.5	3.4	3.8
Auto Passenger	2.5	4.0	6.1	4.4	3.5	4.0	4.4
Rail Transit	31.7	17.0	4.4	14.7	24.2	16.8	20.2
Bus Transit	9.8	3.4	3.2	4.1	6.4	3.8	8.2
Walk	11.2	2.2	0.5	0.9	2.3	3.4	5.3
Bike	7.6	1.4	0.4	2.2	7.8	2.5	3.1
Taxi/Ride-Hail	3.4	0.9	0.1	2.0	4.1	0.9	2.7
Other	0.1	0.1	0.1	0.1	0.0	0.0	0.0

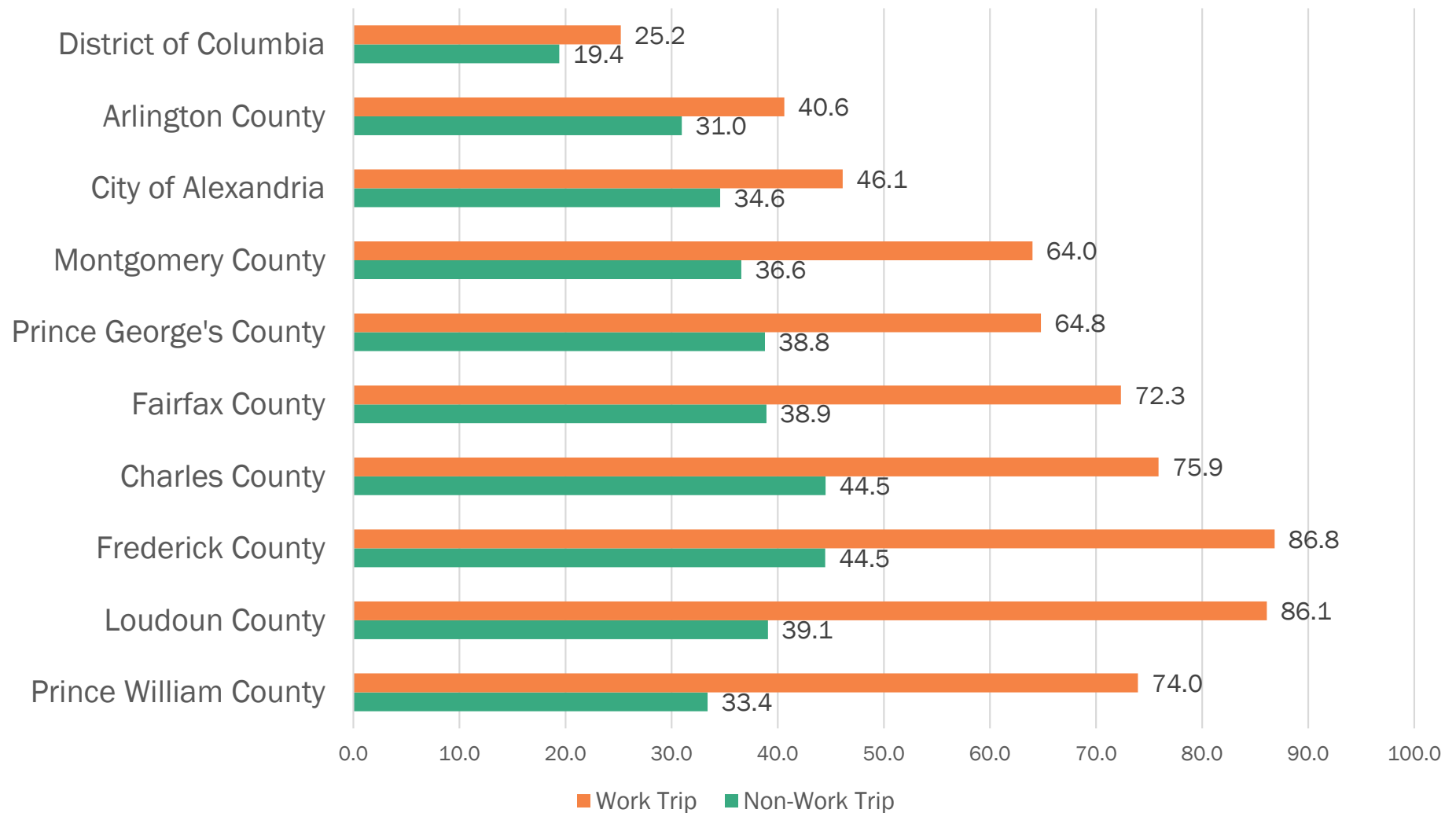




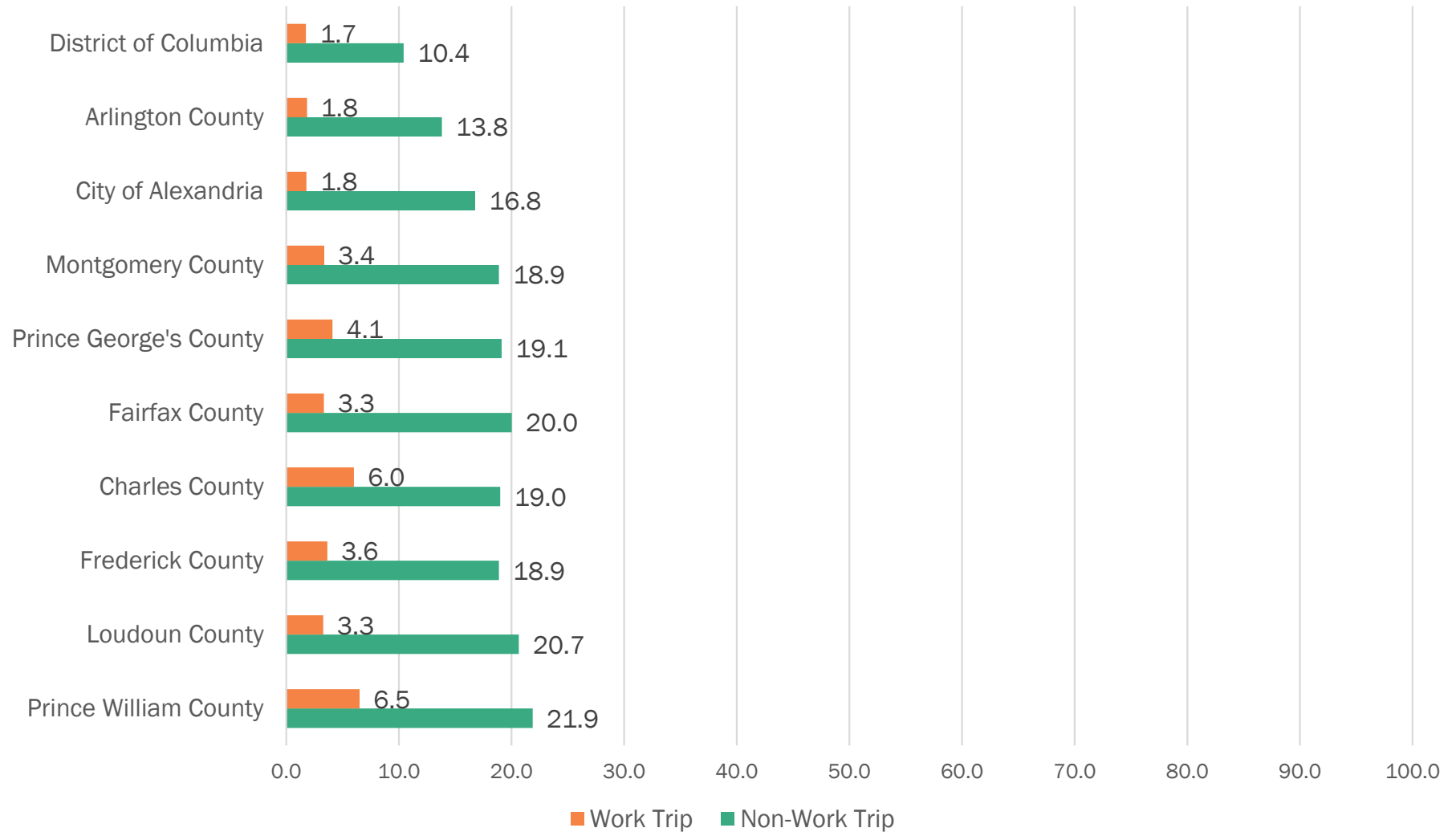
# Mode Share of Non-Commute Trips by Sub-Area, Activity Center, and Equity Emphasis Area

Non-Commute Mode	Core	Inner Suburb	Outer Suburb	Not in Activity Centers	Activity Centers	Not in EEAs	EEAs
Drive Alone	24.6	38.0	38.5	36.9	31.1	36.6	31.1
Drive Others	12.2	19.4	20.6	19.1	15.6	18.8	16.3
Auto Passenger	16.4	26.0	29.8	26.4	20.6	25.5	23.1
Rail Transit	6.5	1.8	0.7	2.0	4.1	2.1	4.2
Bus Transit	4.3	1.3	0.3	1.4	2.4	0.9	4.9
Walk	28.3	7.4	4.1	8.0	19.3	10.0	13.9
Bike	2.9	0.8	0.2	0.9	1.6	1.0	1.5
School Bus	1.4	4.4	5.4	4.3	3.2	4.2	3.4
Taxi/Ride-Hail	2.9	0.6	0.2	0.7	1.7	0.8	1.4
Other	0.5	0.2	0.1	0.2	0.4	0.3	0.2

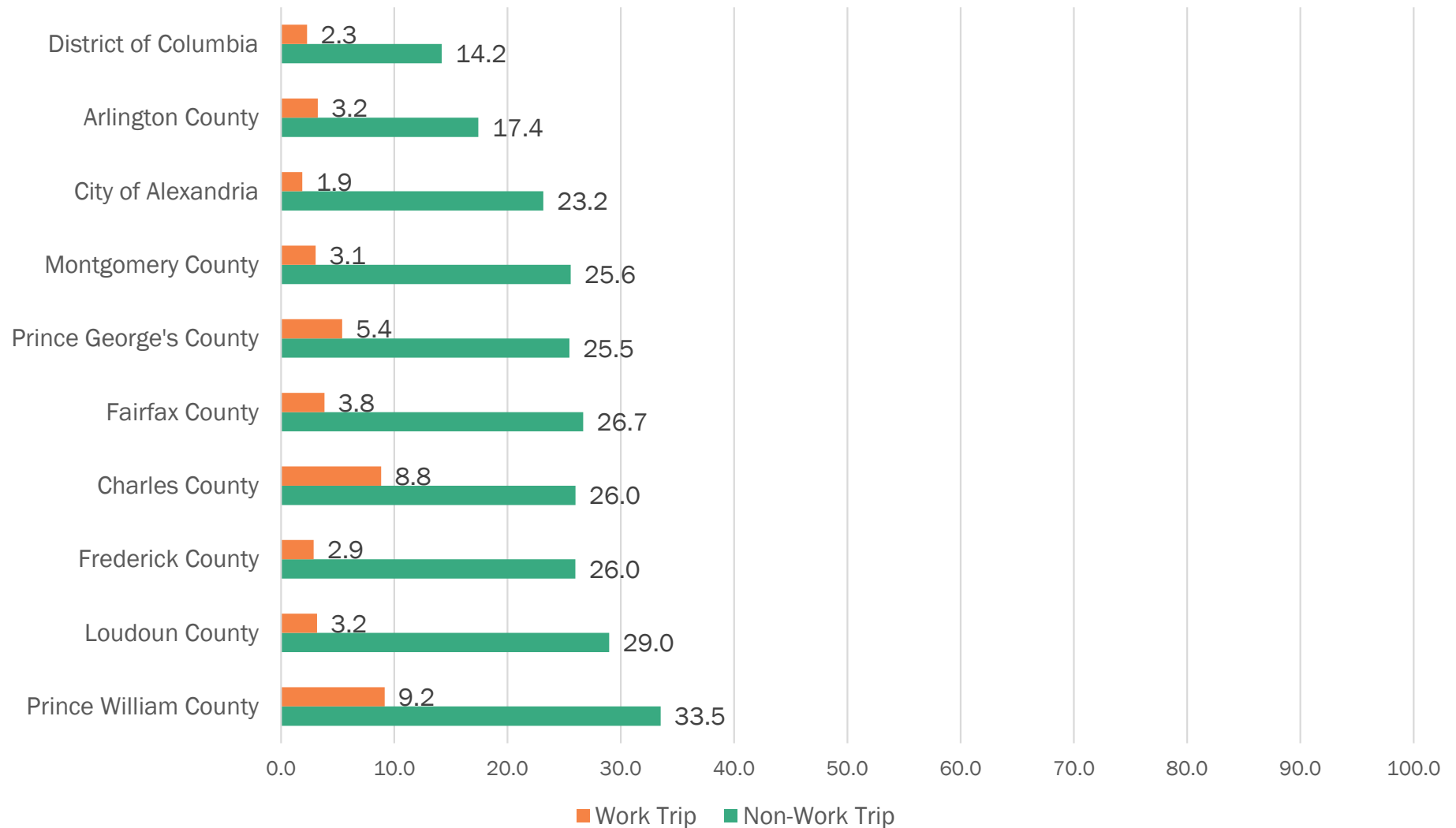
# Mode Share of Weekday Trips – Drive Alone



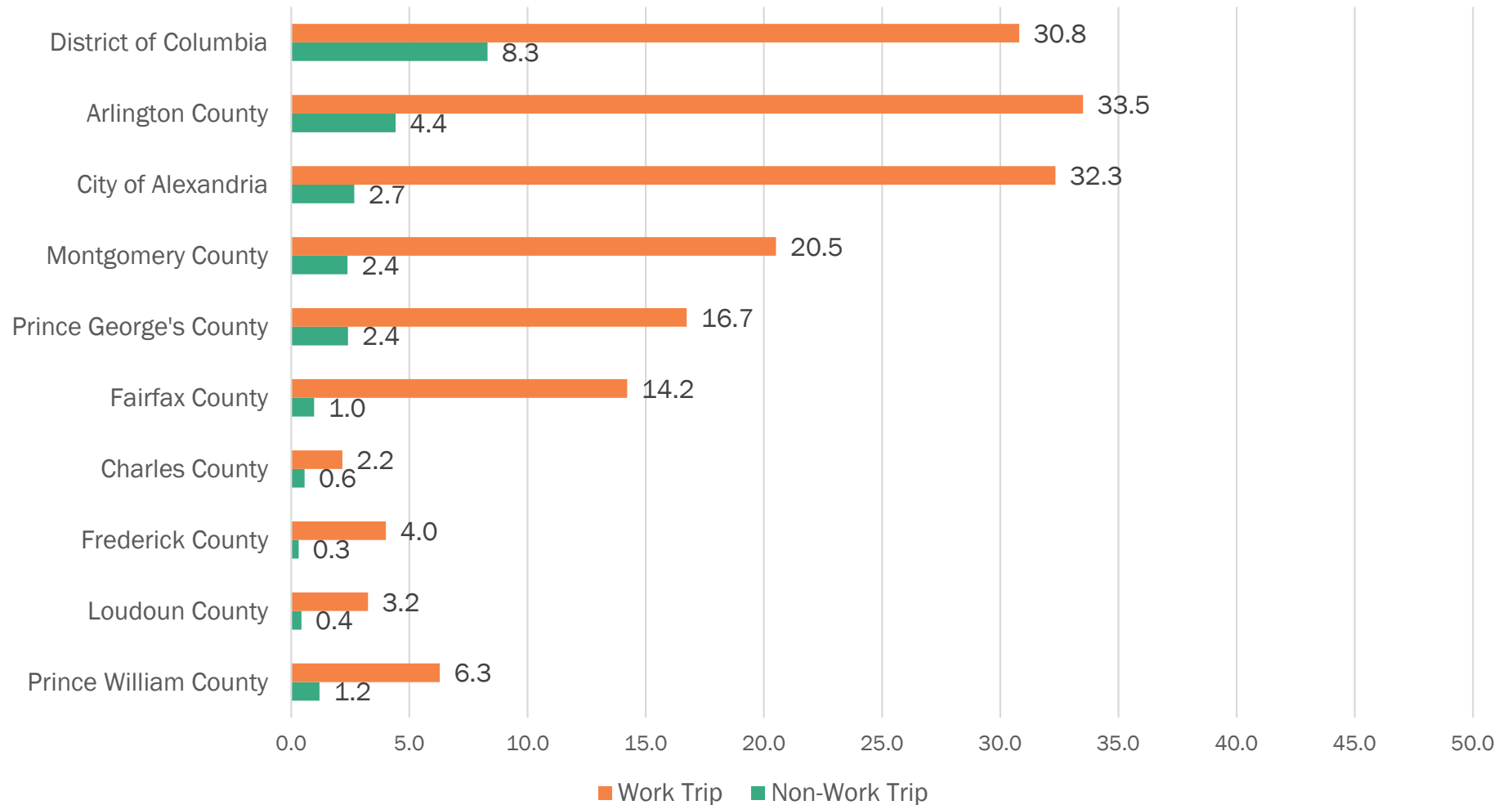
# Mode Share of Weekday Trips – Drive Others



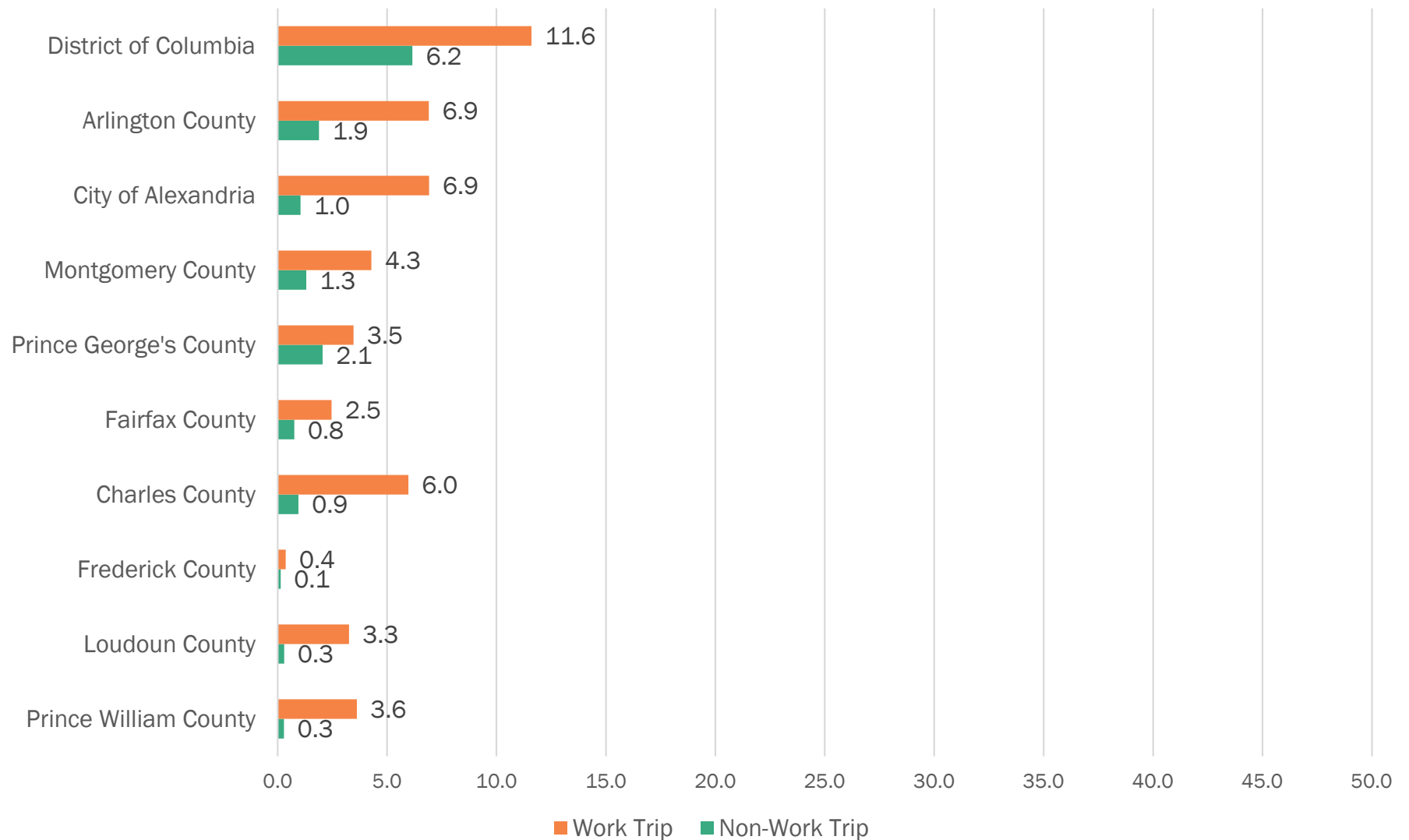
# Mode Share of Weekday Trips – Auto Passenger



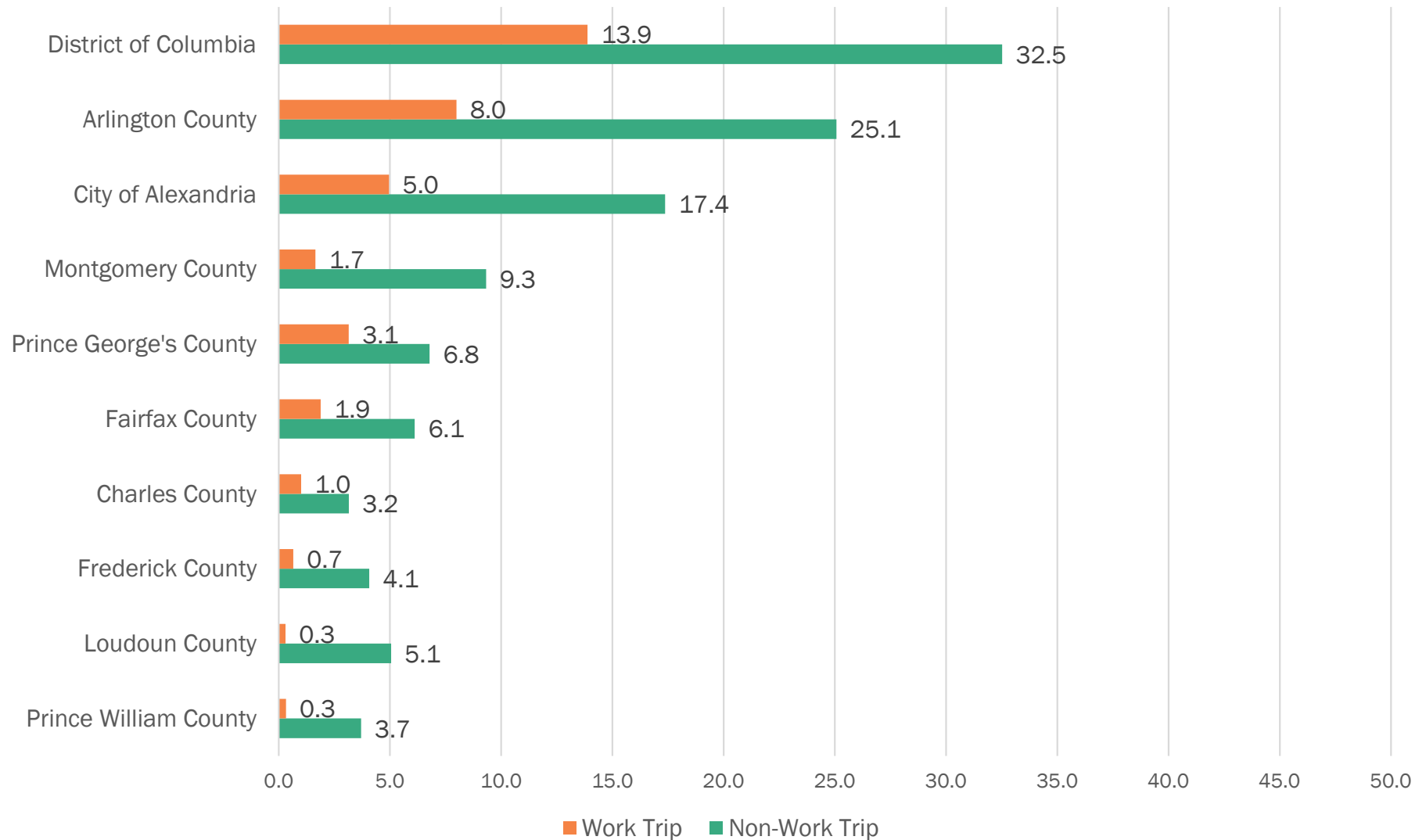
# Mode Share of Weekday Trips – Rail Transit



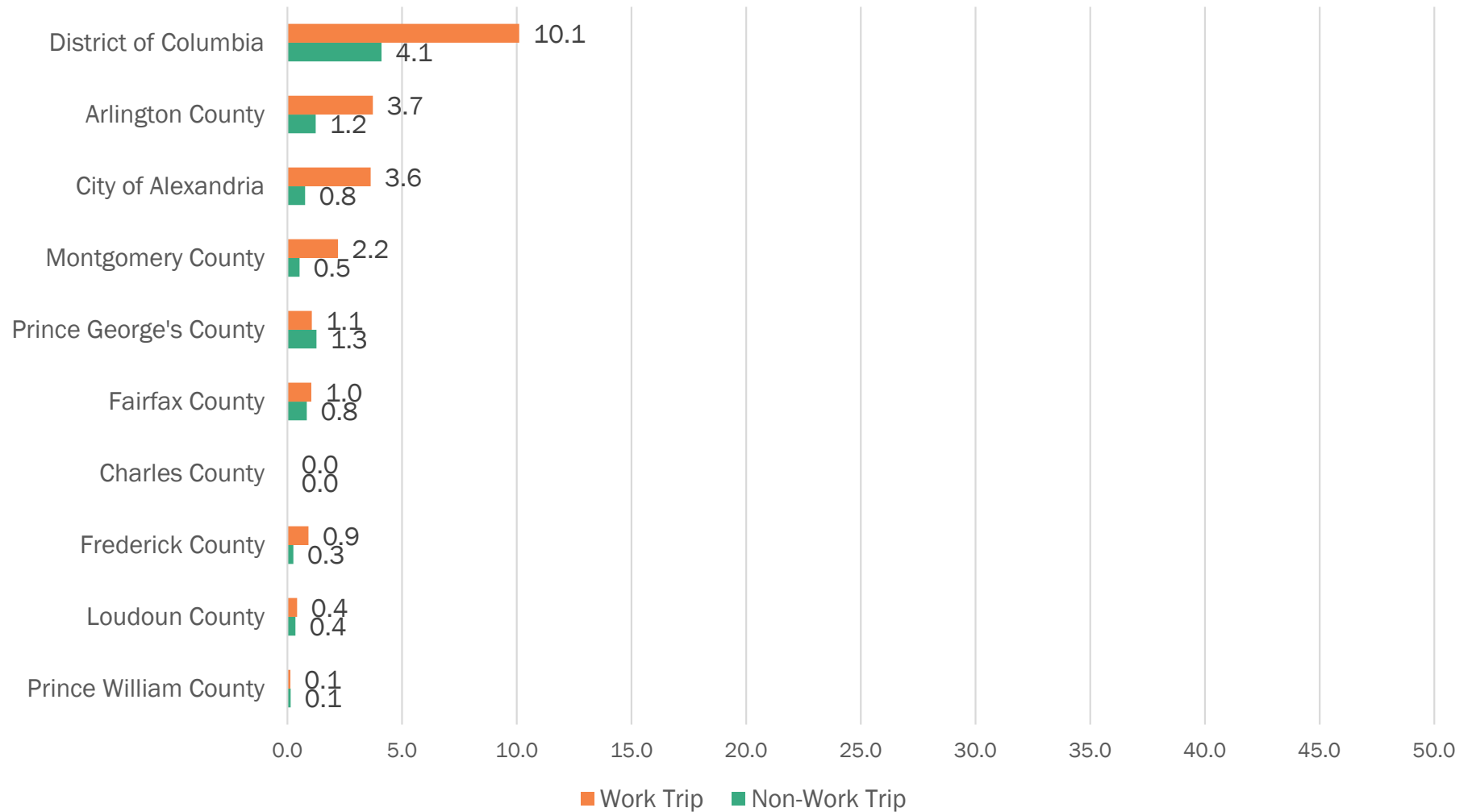
# Mode Share of Weekday Trips – Bus Transit



# Mode Share of Weekday Trips – Walk

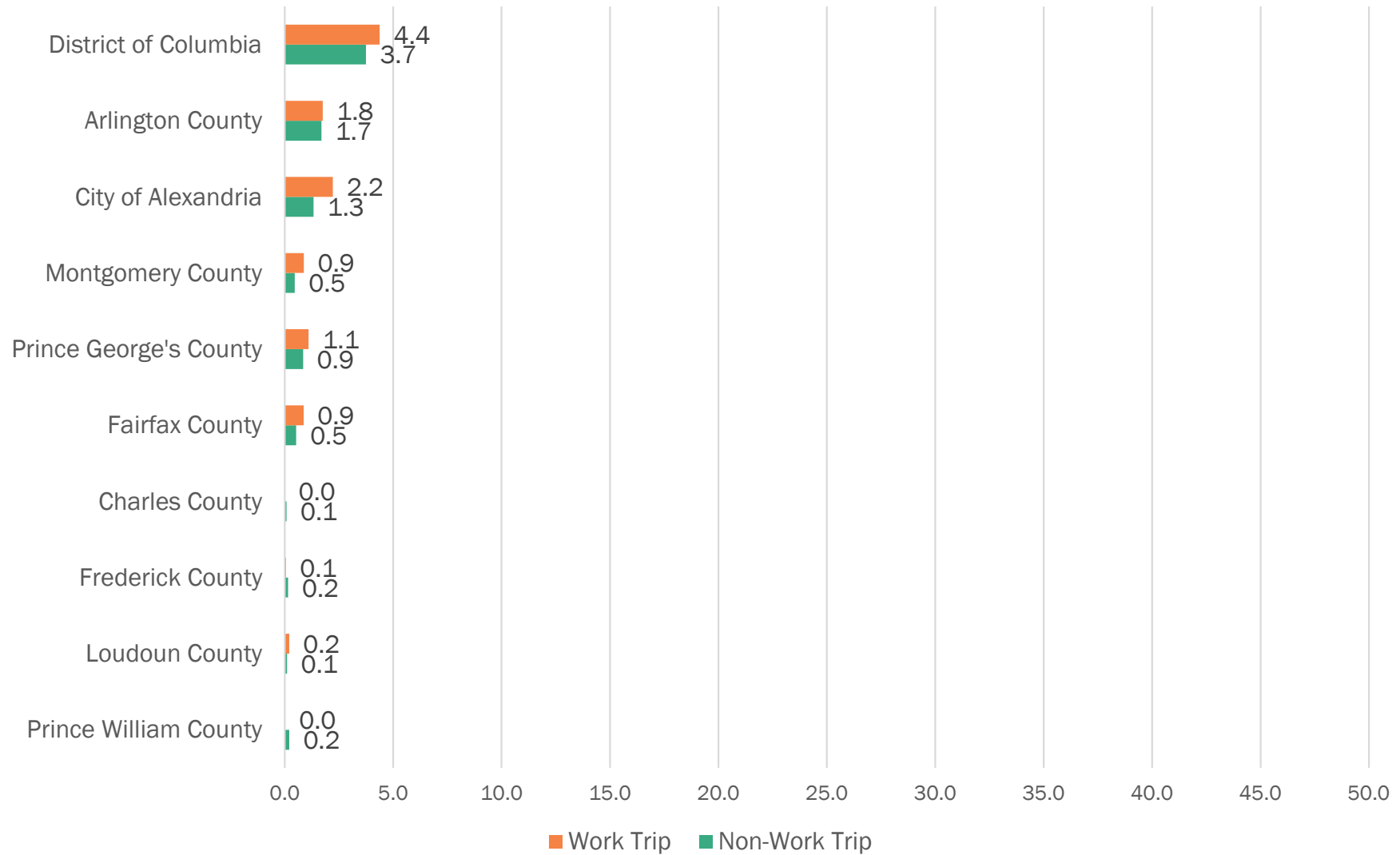


# Mode Share of Weekday Trips – Bike





# Mode Share of Weekday Trips – Taxi/Ride-Hail



# Summary of Mode Share of Weekday Trips

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- Highest share of transit, walk/bike, and taxi/ride-hail in the core, largest share of auto trips in the outer suburbs
- Higher share of transit, walk/bike, and taxi/ride-hail in activity centers and equity emphasis areas
- More drive alone and transit trips for work trips; more walk trips for non-work trips
- More than one-third of commute trips in the TPB region are non-SOV (single occupancy vehicle) trips
- Nearly one-quarter of commute trips are transit trips
- Nearly one-fifth of work trips in the core are by walk/bike



# Mode Share by Household Income – Work Trips

Commute Mode	Less than \$25k	\$25-50k	\$50-75k	\$75-100k	\$100-150k	\$150k-200k	More than \$200k
Drive Alone	45.7	58.8	61.1	61.6	62.3	64.3	64.3
Drive Others	3.0	5.5	4.1	3.2	3.4	3.6	2.8
Auto Passenger	9.5	6.3	4.3	3.8	4.2	4.1	2.8
Rail Transit	15.8	12.9	16.5	19.4	17.5	18.2	18.1
Bus Transit	12.0	8.0	5.8	4.0	5.5	3.2	3.5
Walk	7.9	4.1	4.2	4.5	3.6	3.4	3.3
Bike	2.8	1.9	1.6	1.9	2.4	2.4	4.2
Taxi/Ride-Hail	3.4	2.4	2.2	1.6	1.0	0.8	1.0



# Mode Share by Age – Work Trips

Commute Mode	Post-Millennial (16-21)	Millennial (22-37)	Generation X (38-53)	Baby Boomer (54-72)	Silent Generation (73+)
Drive Alone	55.1	56.1	64.7	68.5	77.1
Drive Others	0.6	3.4	4.2	2.9	1.3
Auto Passenger	15.4	4.0	2.9	3.1	3.9
Rail Transit	9.4	20.1	16.7	16.6	9.0
Bus Transit	7.0	5.0	4.7	4.6	1.2
Walk	7.1	5.6	3.3	2.0	4.3
Bike	1.2	3.7	2.6	1.4	0.0
Taxi/Ride-Hail	3.1	2.1	0.9	0.7	0.7



# Mode Share by Gender and Household with Children – Work Trips

Commute Mode	Female	Male	HH with Children	HH without Children
Drive Alone	61.7	62.6	64.9	60.5
Drive Others	3.5	3.4	4.7	2.7
Auto Passenger	4.7	3.6	5.1	3.5
Rail Transit	18.1	17.1	14.6	19.4
Bus Transit	4.7	4.9	4.6	4.9
Walk	4.0	3.7	2.4	4.7
Bike	1.6	3.5	2.7	2.6
Taxi/Ride-Hail	1.6	1.1	0.8	1.6



# Mode Share by Race/Ethnicity – Work Trips

Commute Mode	African American	Asian	Hispanic	Other/Two or More Races	White
Drive Alone	59.9	65.8	59.9	60.1	62.5
Drive Others	3.5	3.6	6.9	1.5	3.1
Auto Passenger	5.3	3.6	6.9	7.1	3.5
Rail Transit	19.0	15.9	13.6	21.7	17.7
Bus Transit	6.1	4.5	6.5	3.0	4.4
Walk	2.6	3.8	3.2	4.3	4.2
Bike	0.4	1.6	1.7	2.0	3.5
Taxi/Ride-Hail	3.1	1.2	1.4	0.3	1.0



# Mode Share by Household Vehicle – Work Trips

Commute Mode	No Vehicle	1 Vehicle	2 Vehicles	3+ Vehicles
Drive Alone	1.3	43.7	69.5	82.3
Drive Others	0.2	2.8	4.4	3.5
Auto Passenger	2.9	4.5	4.0	4.2
Rail Transit	43.4	28.2	14.0	7.1
Bus Transit	20.6	7.4	3.2	1.1
Walk	15.3	6.8	2.5	0.6
Bike	7.8	4.5	1.8	0.9
Taxi/Ride-Hail	8.4	2.1	0.6	0.1



# Commute Destinations of Households

Commute Mode	Core to Core	Core to Inner Suburb	Inner Suburb to Core	Inner Suburb to Inner Suburb
Drive Alone	27.5	66.3	44.4	72.0
Drive Others	1.7	1.8	3.5	3.6
Auto Passenger	2.5	2.2	4.0	4.0
Rail Transit	33.2	19.5	42.3	11.5
Bus Transit	10.6	3.6	3.3	4.5
Walk	12.4	1.7	0.4	2.7
Bike	8.4	1.9	1.9	1.4
Taxi/Ride-Hail	3.5	3.0	0.2	0.2





# Looking Ahead: Next Steps

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- Continue analysis of the RTS trip file
- Examine changes in observed travel between 2007/2008 and 2017/2018 for the TPB region
- Prepare technical documentation and the public release version of the RTS data files



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Transportation Planning Board

**REGIONAL**  
TRAVEL SURVEY



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