



Ridehailing Services

MODE SUBSTITUTION PATTERNS AND SUSTAINABILITY
IMPLICATIONS: A FOCUS ON TRANSIT

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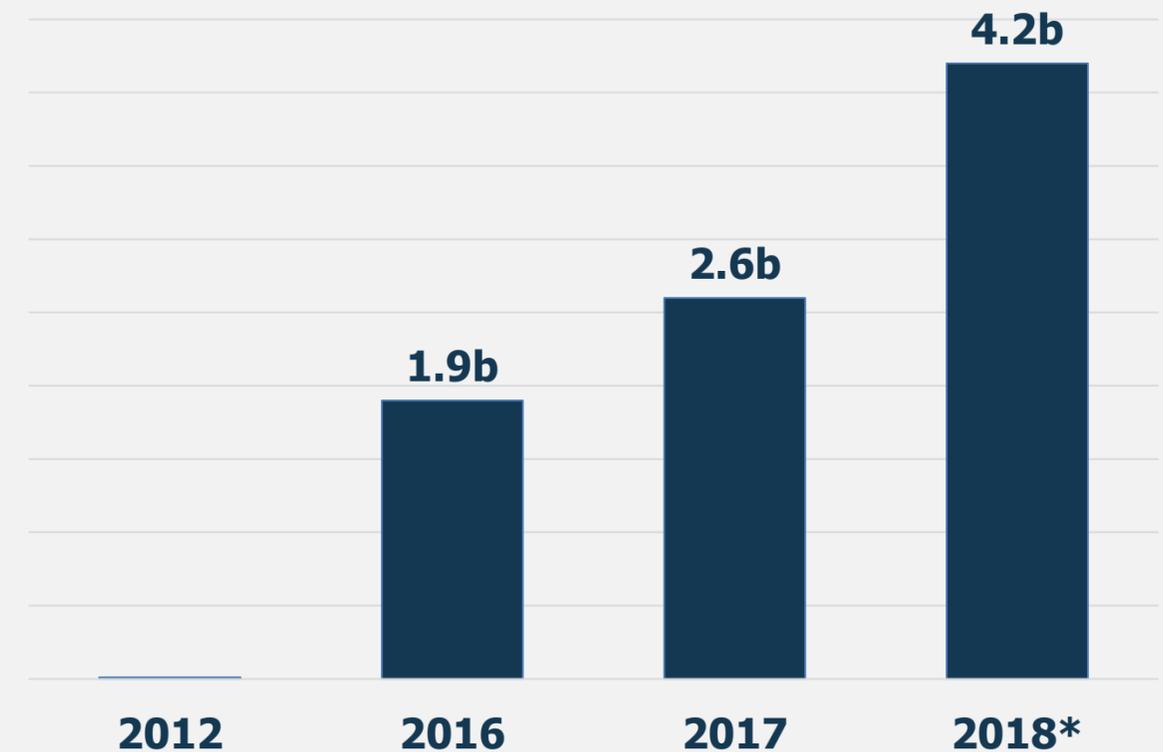
Ridehailing services

Beginning

- 2011: Uber launches to help wealthy people hail a limo
- 2012: UberX, Lyft, Via, etc. began arriving in U.S cities



Annual ridership



*2018 is projected.

Source: Growth and Impacts of New Mobility Services. Bruce Schaller, TRB 2018 Annual Meeting, Washington DC.

Ridehailing services

Impacts on



○ Mode choice

○ Car ownership / residential location

○ Activity engagement

○ VMT

○ Congestion

We are yet to fully understand the impacts of these services on the transportation system!

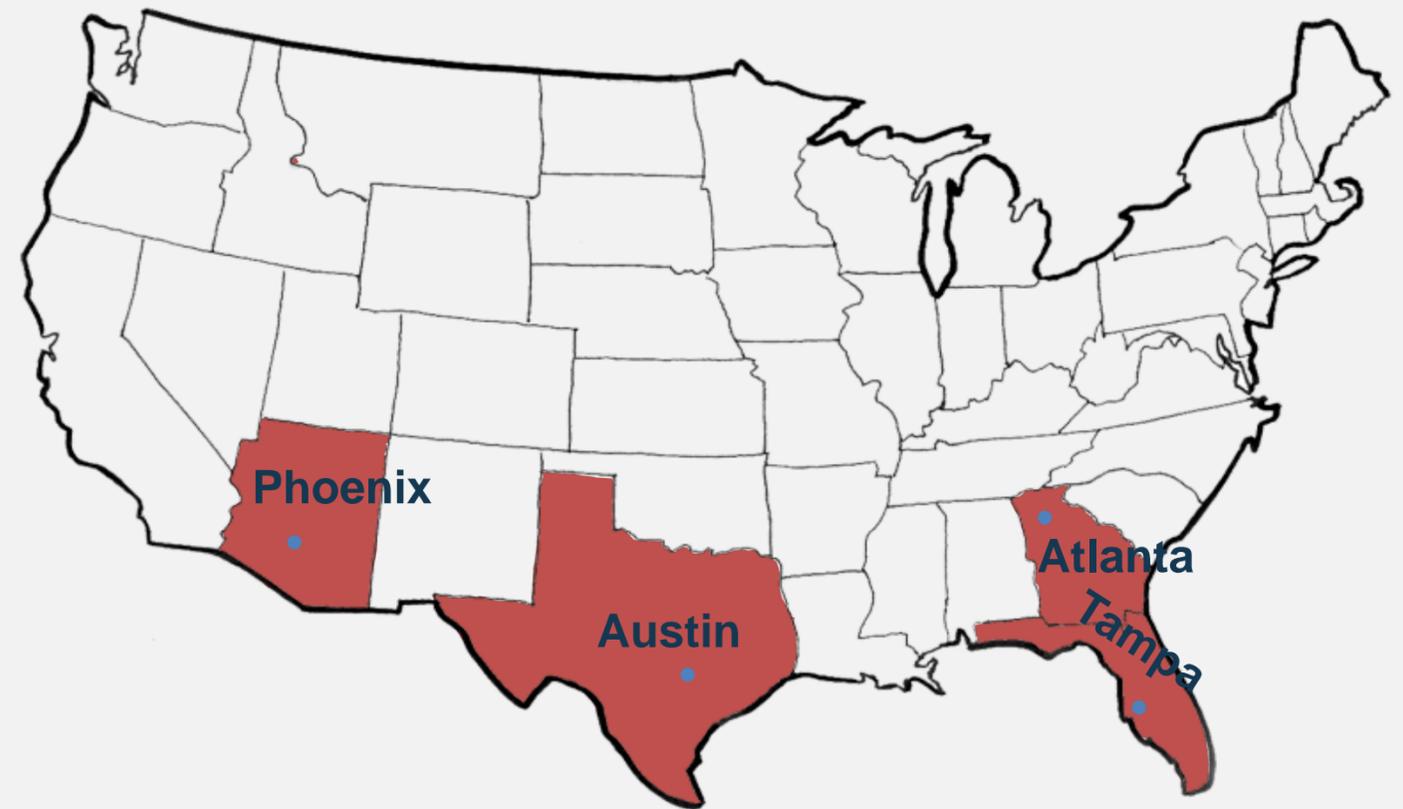
Research questions

- **How do ridehailing services affect mode switching patterns?**
- **Among ridehailing users, who complements/substitutes public transit?**

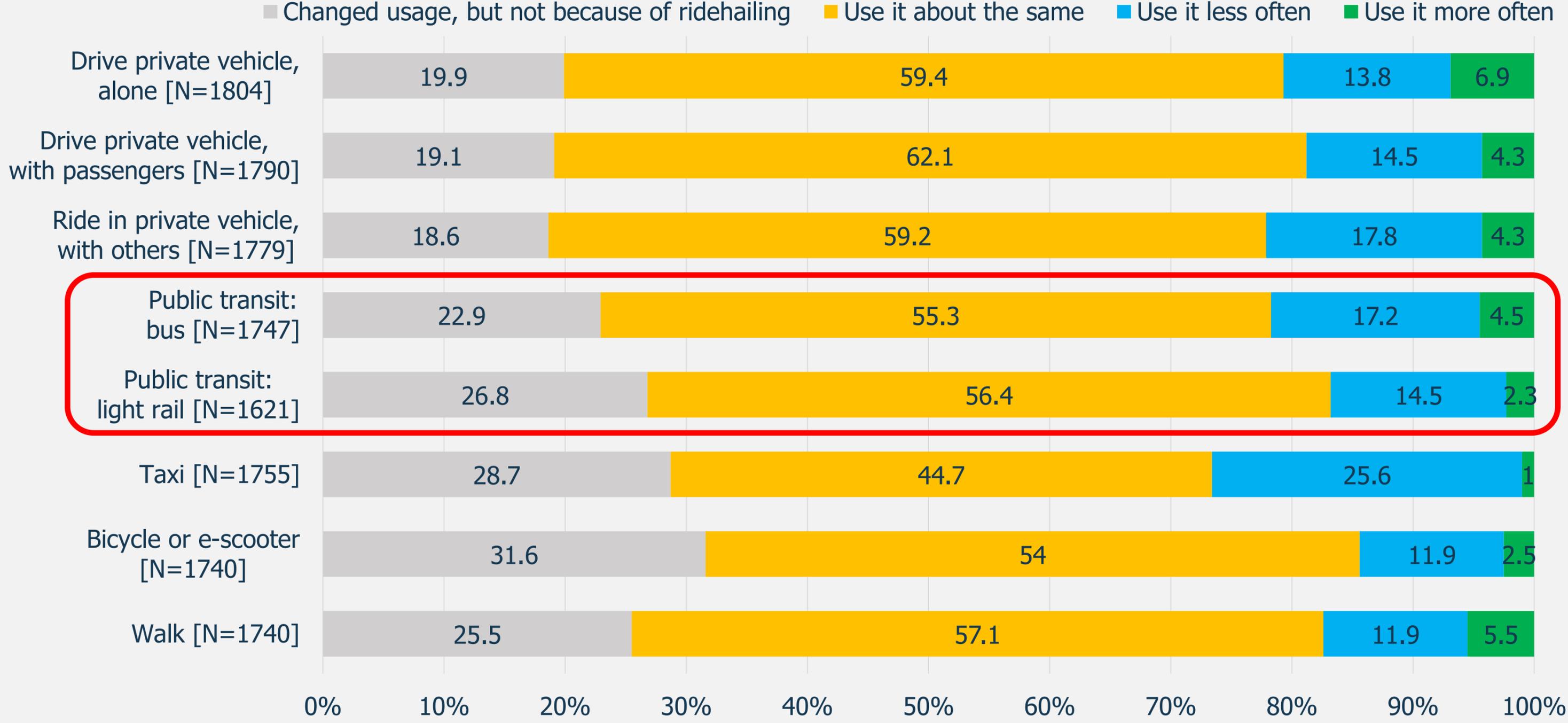
TOMNET/D-STOP Transformative Transportation Technologies (T4) Survey

- **Phoenix, Atlanta, Austin, and Tampa** metro areas
- Summer and Fall 2019 (pre-pandemic)
- Random address-based sample with online instrument
 - I. **Attitudes & Preferences**
 - II. Vehicle Ownership & Residential Location
 - III. Current Travel Patterns
 - IV. Mobility on Demand & Shared Mobility Services**
 - v. Autonomous Vehicles
 - VI. Background Information

	PHX	ATL	AUSTIN	TAMPA	Total
Sample Size	1,027	944	1,127	260	3,358



Changes in mode usage after using ridehailing services

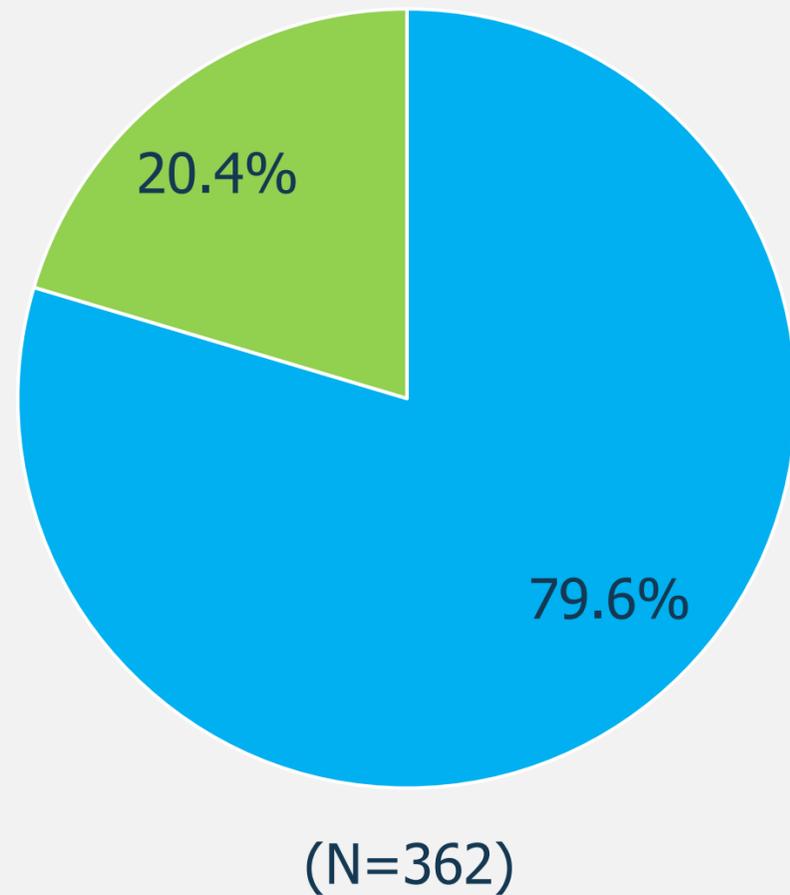


*Sample is weighted.

A focus on transit changers

Changing behavior

■ Substitute transit ■ Complement transit



Location

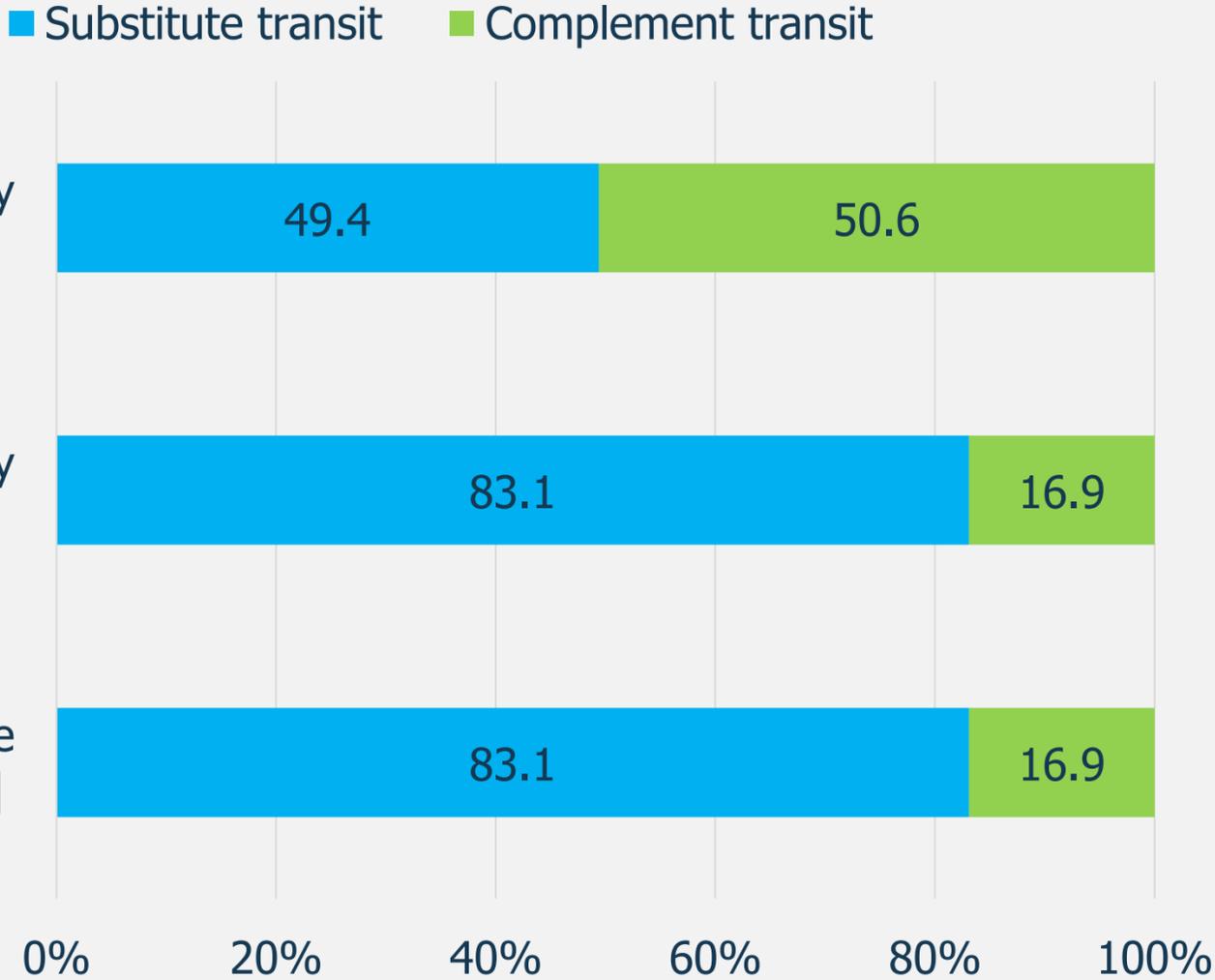
■ Substitute transit ■ Complement transit



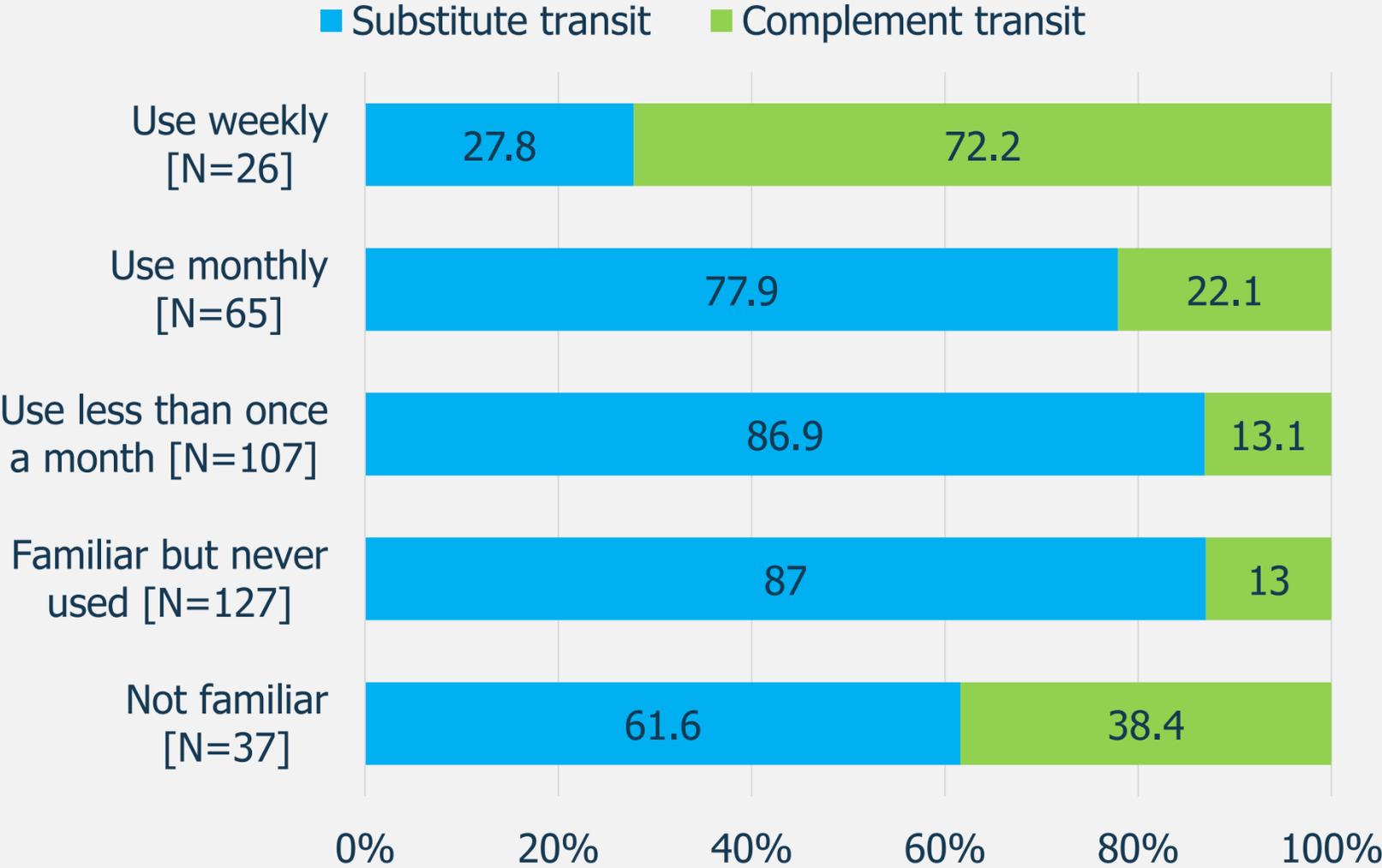
*Sample is weighted.

Ridehailing familiarity and usage

Private ridehailing



Shared ridehailing

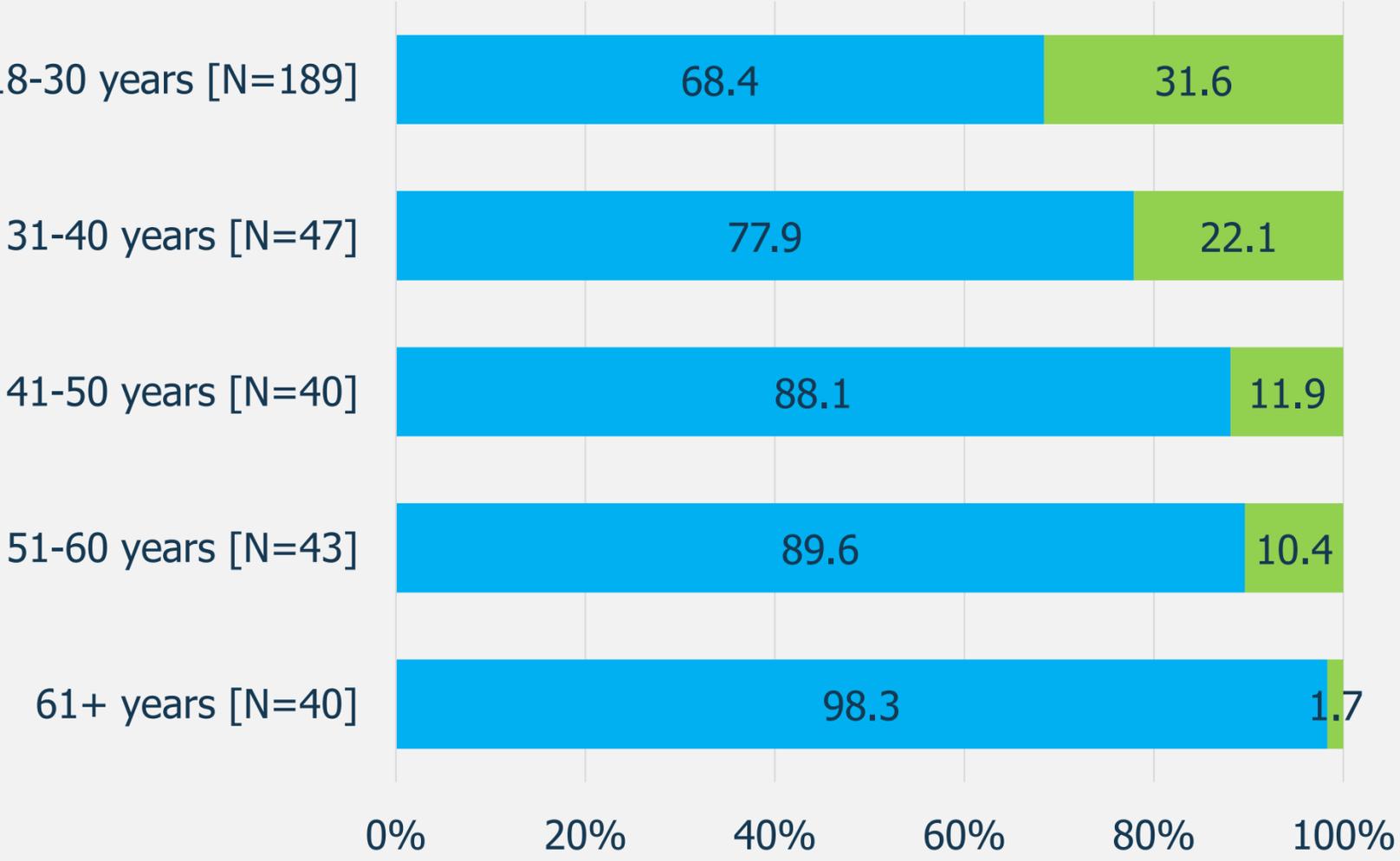


*Sample is weighted.

Socio-demographic attributes

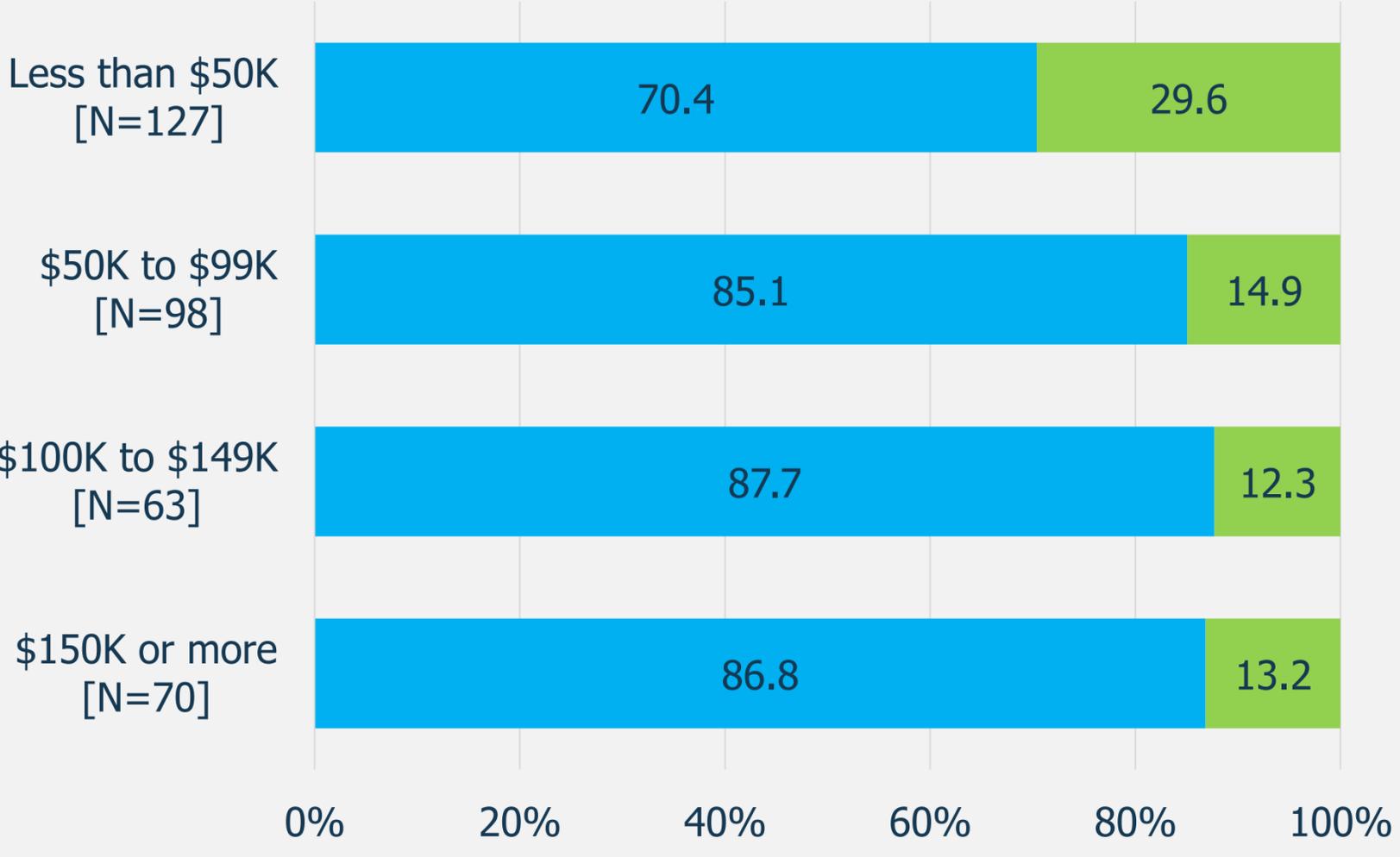
Age

■ Substitute transit ■ Complement transit



Annual household income

■ Substitute transit ■ Complement transit

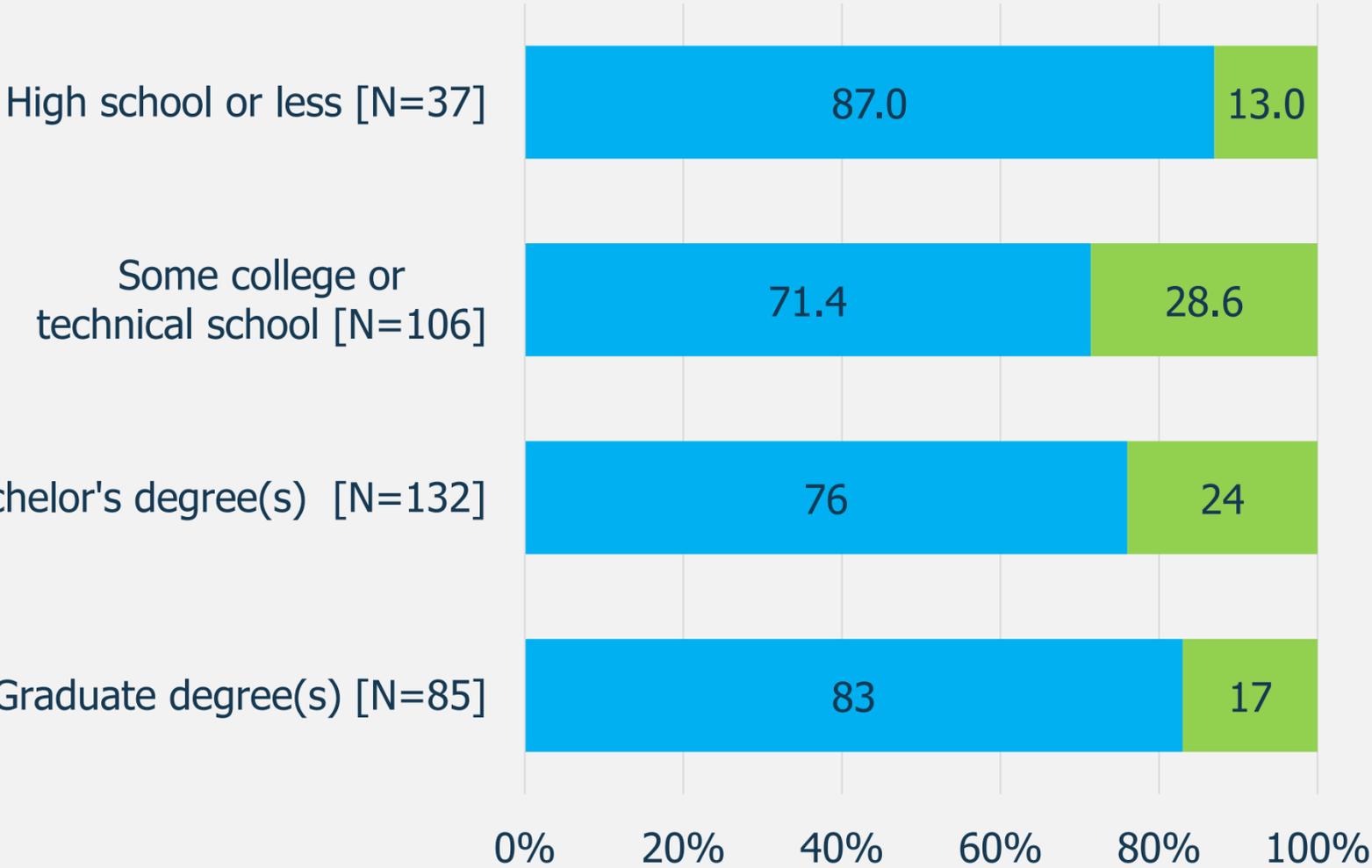


*Sample is weighted.

Socio-demographic attributes

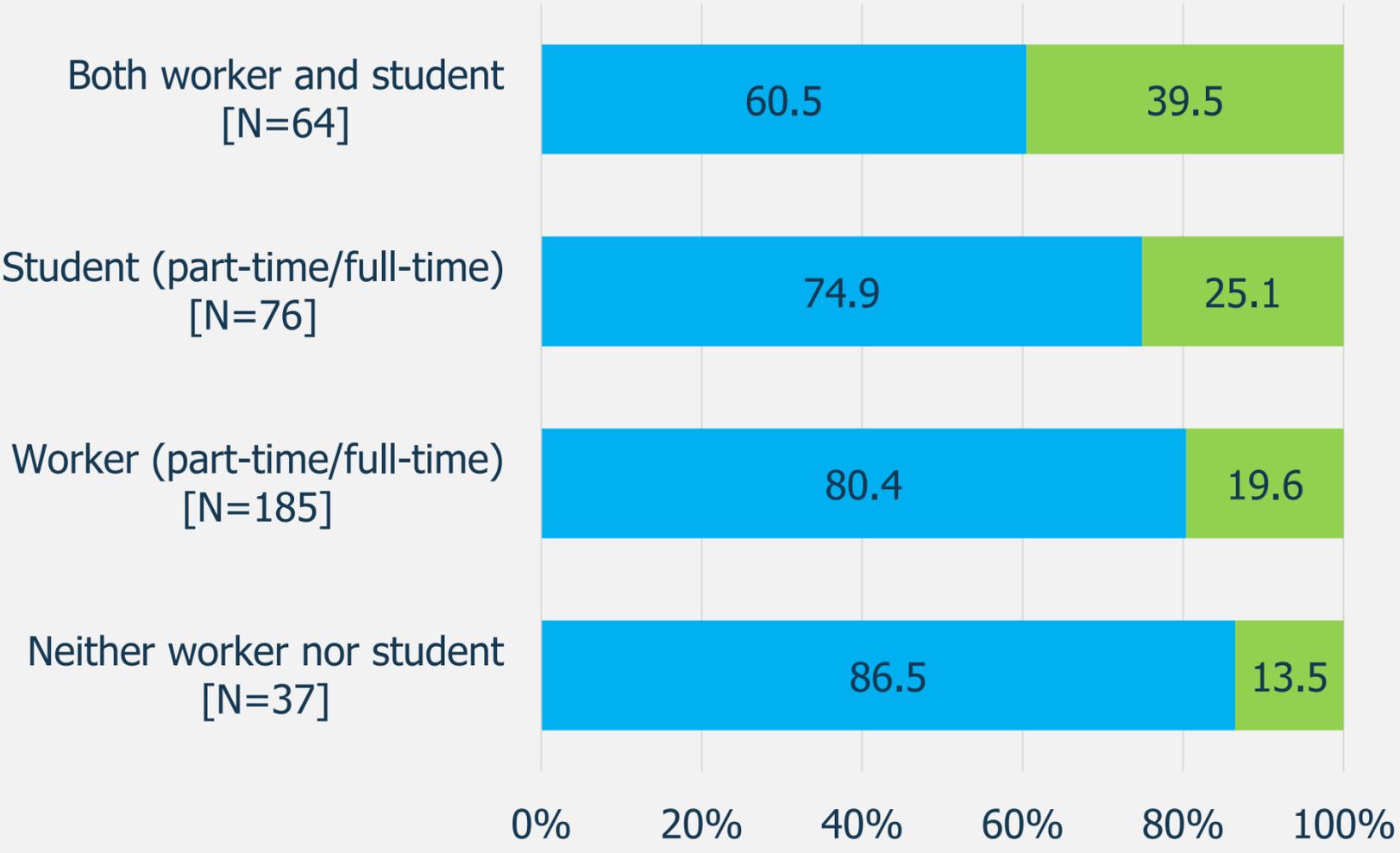
Education

■ Substitute transit ■ Complement transit



Employment

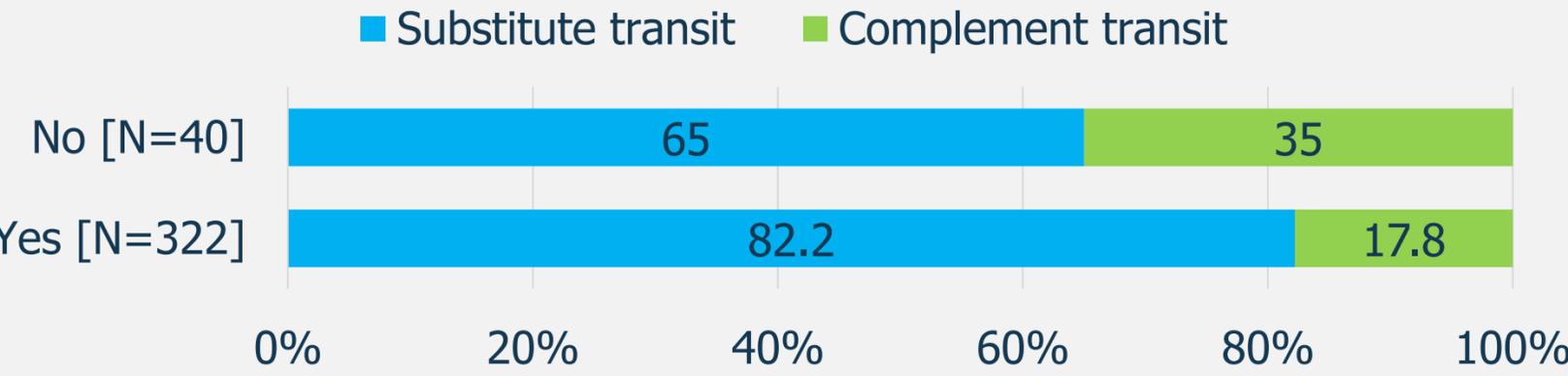
■ Substitute transit ■ Complement transit



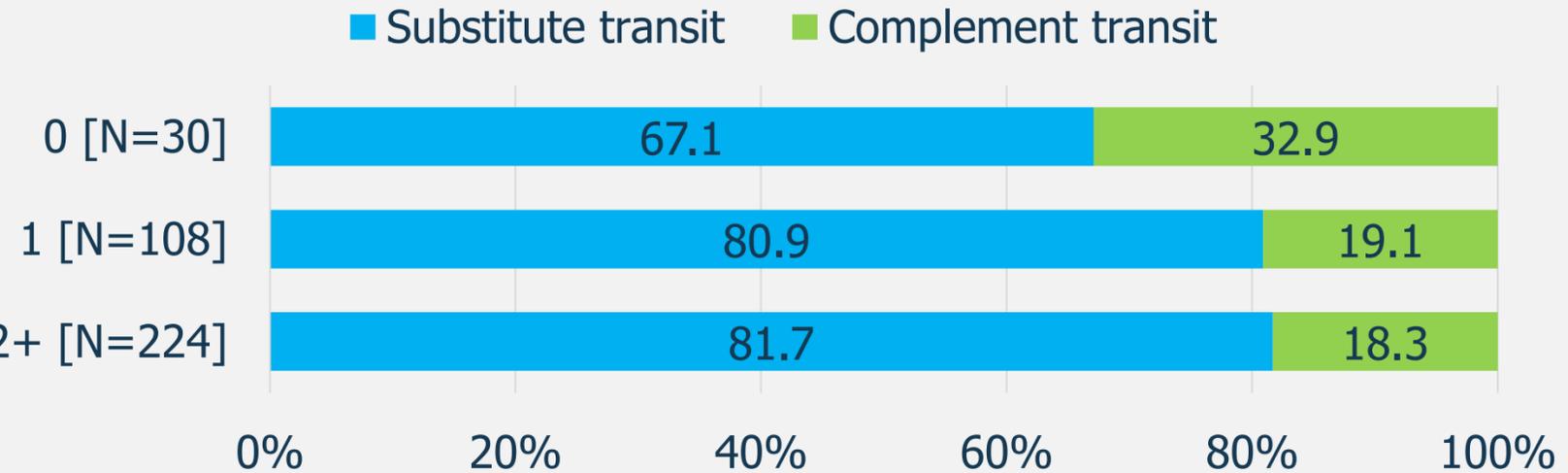
*Sample is weighted.

Mobility attributes

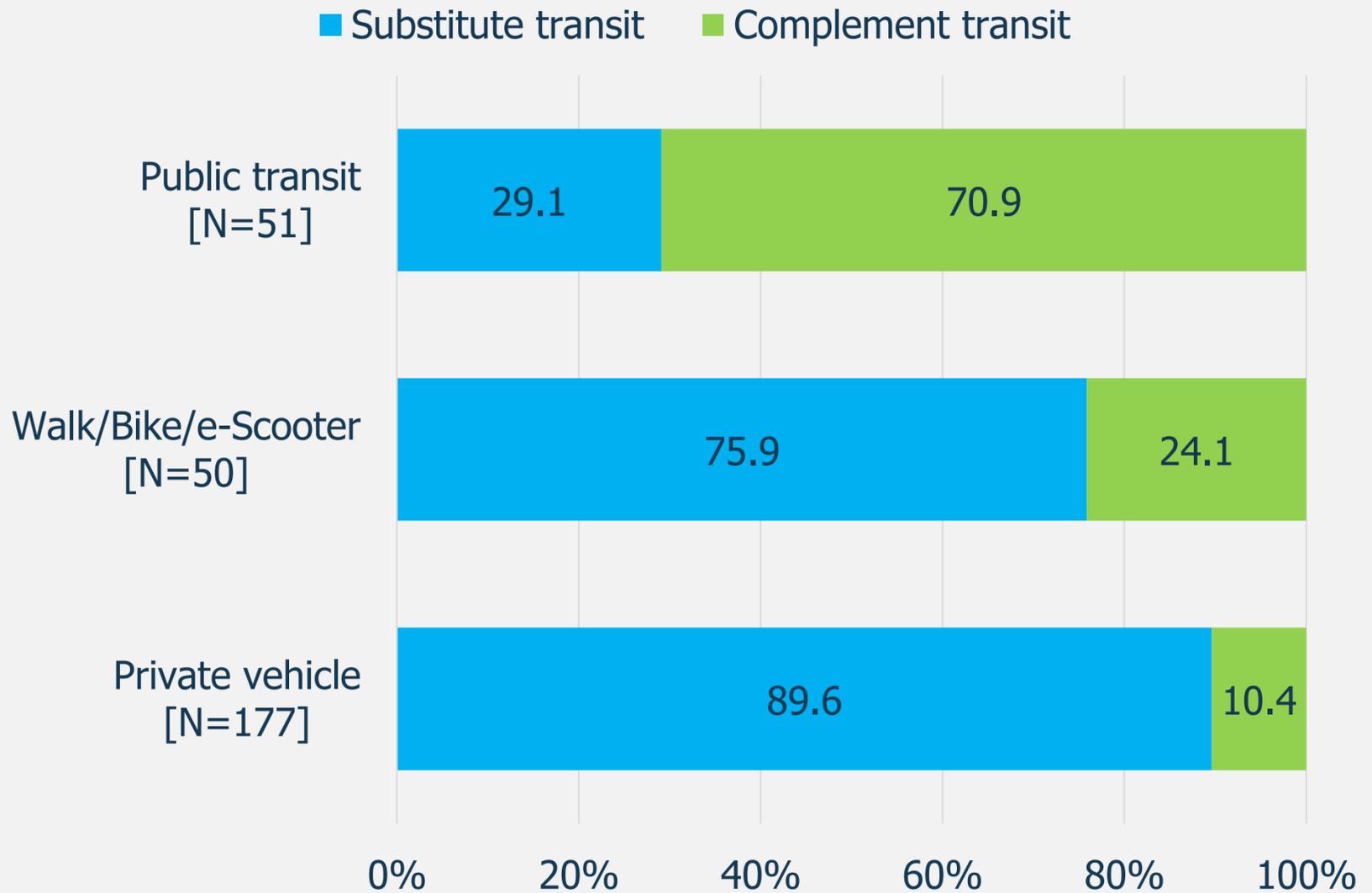
Driver's license



Household vehicles



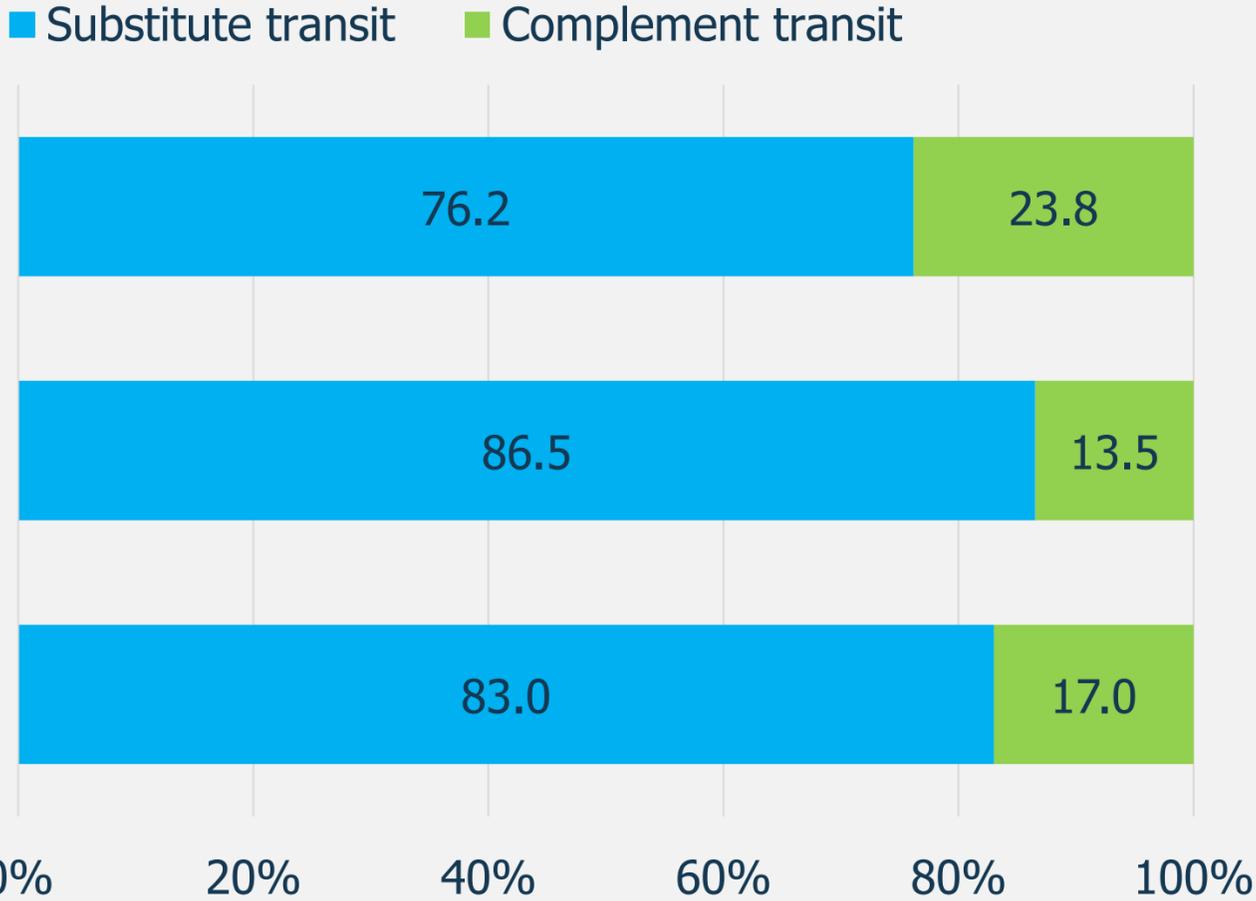
Commute mode



*Sample is weighted.

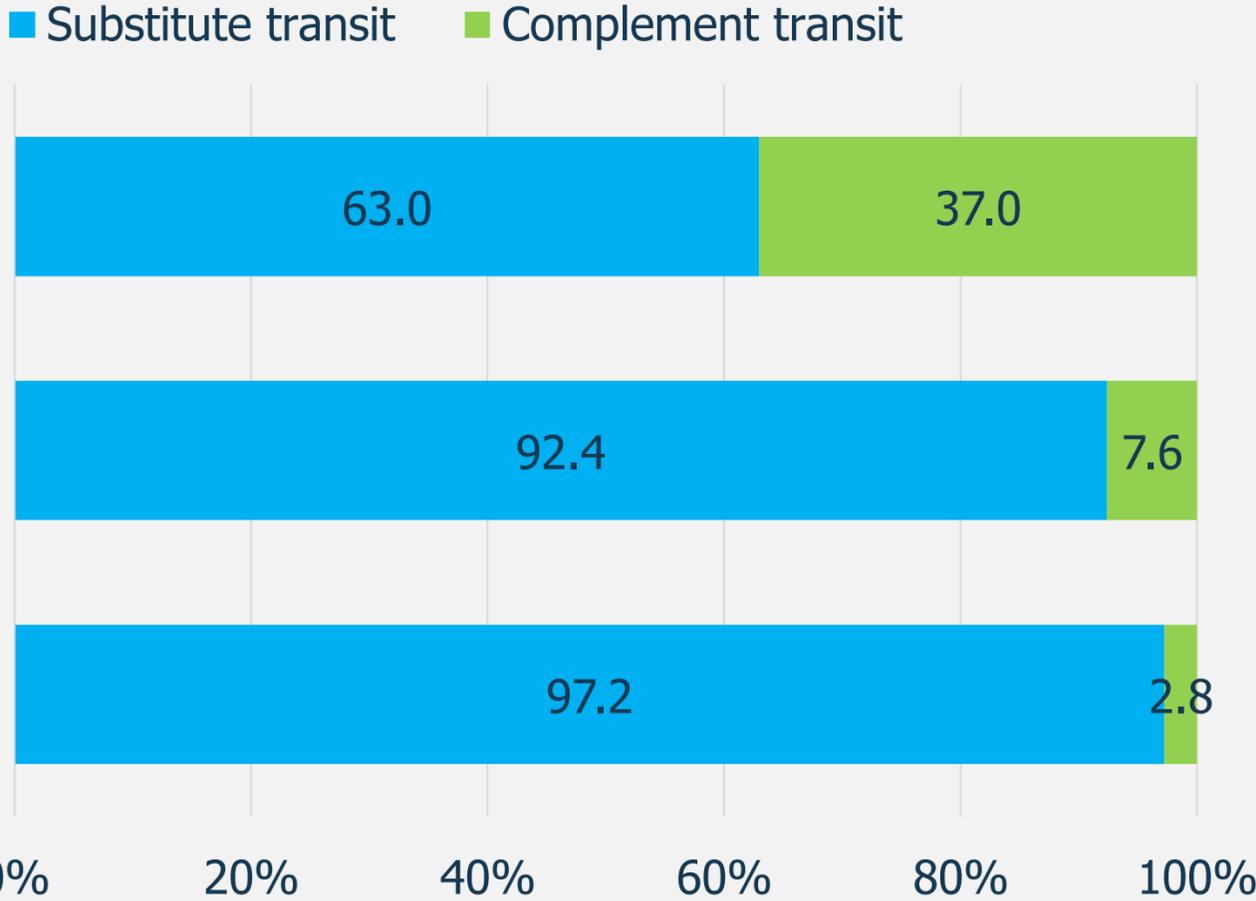
Attitudes towards technology and green modes

Tech-savviness



"I like to be among the first people to have the latest technology."

Green mode commitment

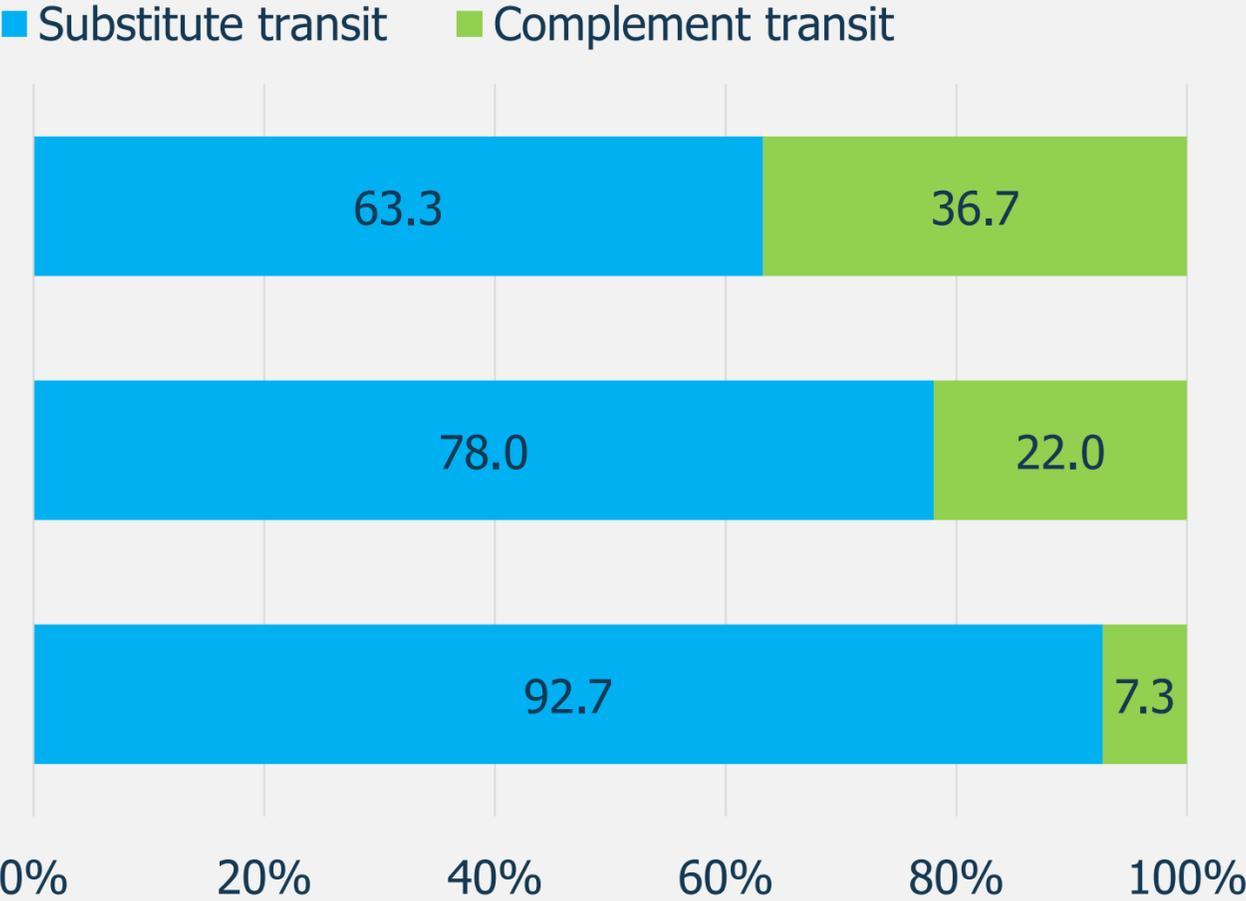


"I am committed to using a less polluting means of transportation (walking/biking/transit) as much as possible."

*Sample is weighted.

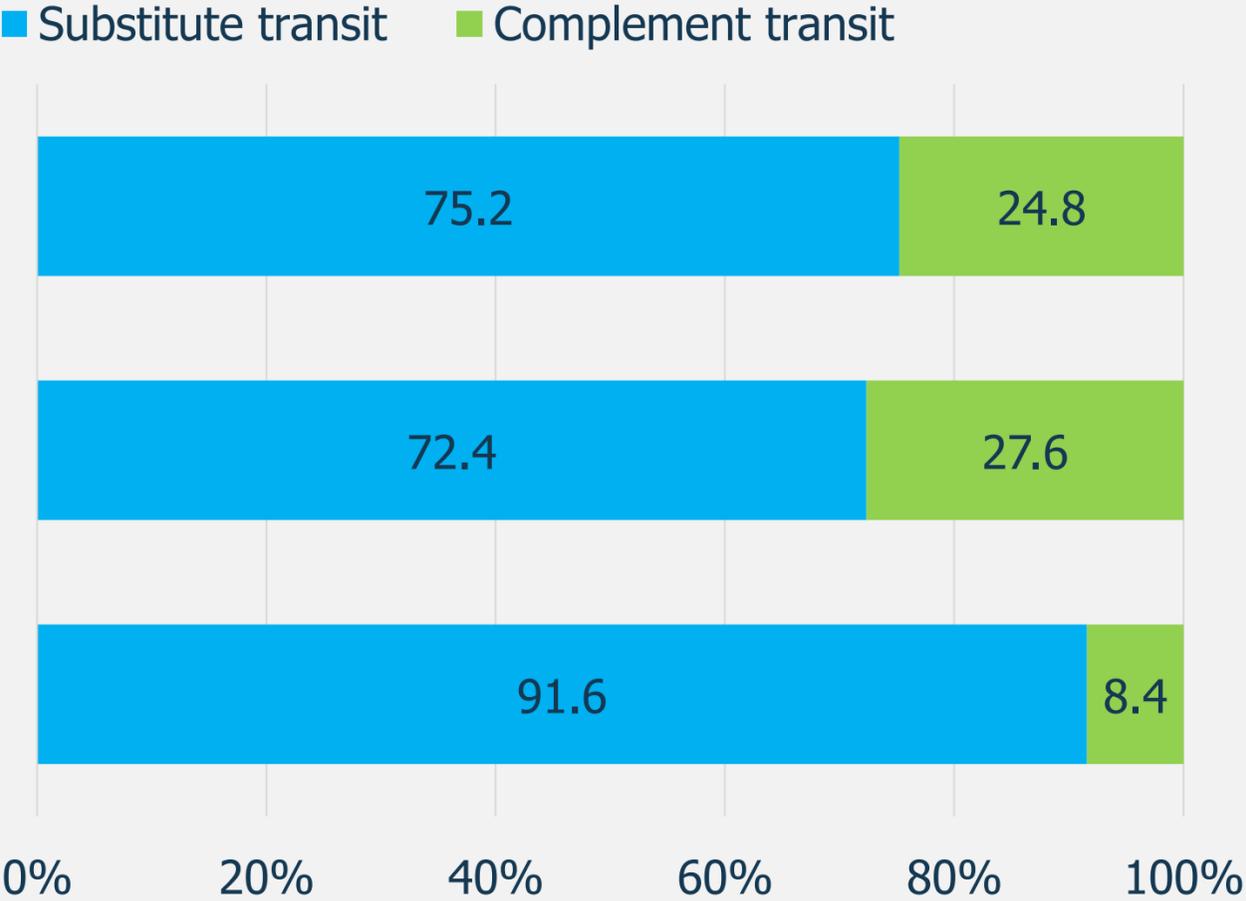
Perceptions of transit service

Transit reliable



“Public transit is a reliable means of transportation for my daily travel needs.”

Pro-transit

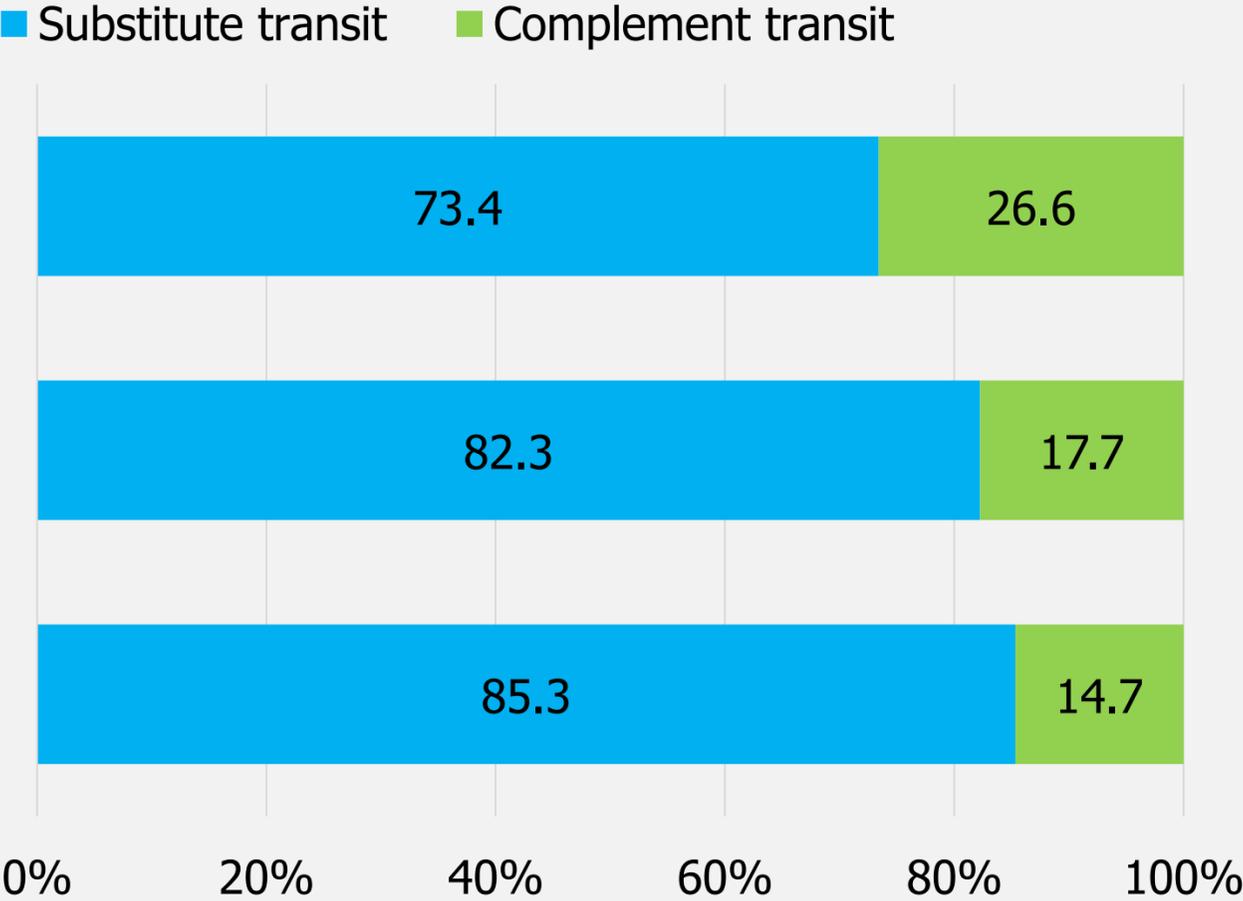


“I prefer to live close to transit, even if it means I'll have a smaller home and live in a more densely populated area.”

*Sample is weighted.

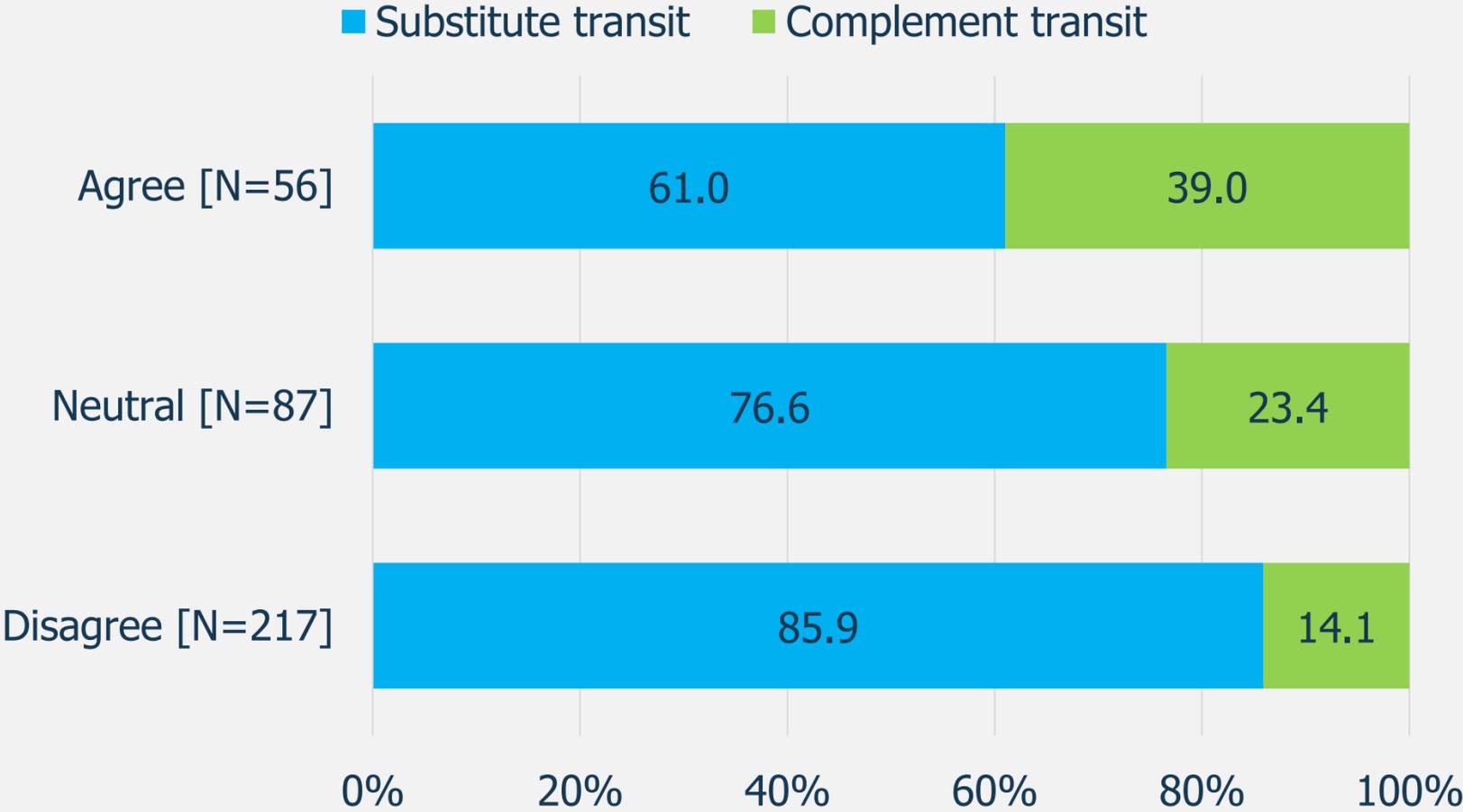
Attitudes towards travel and location choice

Traveling is a useful transition



“The time spent traveling to places provides a useful transition between activities.”

Location choice based on ridehailing



“Ridehailing service availability affects where I choose to live, work, and/or go to school.”

*Sample is weighted.

Concluding remarks

- ~80 percent did **NOT change** their mode usage patterns due to ridehailing services
- About **one-fifth changed** their **transit** use after adopting ridehailing services
 - Of those, **20 percent** used ridehailing to **complement transit**; they are:
 - **Frequent ridehailing** users, **shared** ridehailing users
 - **Younger, low-income, students**
 - **Transit is main commute mode, no driver's license, zero-vehicle households**
 - **Tech-savvy**, committed to **green modes, pro-transit**, and perceive **transit** as **reliable**
- Programs should aim at **influencing and shaping** attitudes and perceptions towards sustainable modes of transportation.
- Policies should aim to **incentivize** use of ridehailing services as a **complementary mode** to transit.



Photo credit: cappex.com

Thank you!

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