

RP dataset: Decisions, mode choice	Estimation subset	Holdout subset
	Individuals = 432	Individuals = 108
	Observations = 10,120	Observations = 2,404
Variable	Description	Values (for estimation subset)
ID	ID of participant in the survey	1 to 432
purpose	Stated trip purpose (activity performed at the destination)	Primary Workplace, Home, Exercise, etc.
n_car	Number of cars in the household	Min: 0, mean: 0.949, max: 4
n_bicycle	Number of bicycles in the household	Min: 0, mean: 0.882, max: 6
n_motorcycle	Number of motorcycles in the household	Min: 0, mean: 0.037, max: 6
avail_car	Availability of car for the current trip	1 for yes, 0 otherwise
avail_taxi	Availability of taxi for the current trip	1 for yes, 0 otherwise
avail_bus	Availability of bus for the current trip	1 for yes, 0 otherwise
avail_rail	Availability of rail for the current trip	1 for yes, 0 otherwise
avail_cycling	Availability of cycling for the current trip	1 for yes, 0 otherwise
avail_walking	Availability of walking for the current trip	1 for yes, 0 otherwise
total_car_cost	Total cost for a car trip including fuel and operating costs (£)	Min: 0.00, mean: 1.49, max: 26.29
bus_cost_total_per_leg	Cost for a bus trip including a distance-based price of a ticket and a discount for season ticket holders (£)	Min: 0.00, mean: 2.63, max: 16.60
rail_cost_total_per_leg	Cost for a rail trip including a distance-based price of a ticket and a discount for season ticket holders (£)	Min: 0.00, mean: 6.60, max: 56.70
taxi_cost	Cost of a taxi trip based on average cost rates from Local Authorities across the region of Yorkshire and the Humber (£)	Min: 2.71, mean: 8.18, max: 57.07
day_of_the_week_start	Day of the week when the trip started	Monday - Sunday
city.leeds	The participant resides in the city of Leeds	1 for yes, 0 otherwise
city.westyorkshire	The participant resides in West Yorkshire, but not in Leeds	1 for yes, 0 otherwise
city.elsewhereuk	The participant resides outside of West Yorkshire	1 for yes, 0 otherwise
city.na	The participant has not indicated the place of residence	1 for yes, 0 otherwise
female	Dummy variable indicating whether the gender of the participant	1 for female, 0 for male
age	Ordinal variable indicating the age of the participant	1: under 18, 2: 18-24, 3: 25-29, 4: 30-39, 5: 40-49, 6: 50-59, 7: 60-65, 8: 66-75, 9: 76+
british_origin	Dummy variable indicating whether the participant was born in the UK	1 for yes, 0 otherwise
o_level	Dummy variable indicating whether the participant has an o-level qualification	1 for yes, 0 otherwise
a_level	Dummy variable indicating whether the participant has an a-level qualification	1 for yes, 0 otherwise
voc_qual	Dummy variable indicating whether the participant has a vocational qualification	1 for yes, 0 otherwise

ug_degrees	Dummy variable indicating whether the participant has an undergraduate degree	1 for yes, 0 otherwise
masters	Dummy variable indicating whether the participant has a masters degree	1 for yes, 0 otherwise
phd	Dummy variable indicating whether the participant has a phd	1 for yes, 0 otherwise
nb_hh_employed	Number of employed people in the household, excluding the participant	Min: 0, mean: 1.03, max: 7
mar	Categorical variable indicating the marital status of the participant	1: single, 2: married, 3: cohabiting, 4: divorced, 5: widowed
hh_size	Number of people living in the household, excluding the participant	Min: 0, mean: 1.88, max: 8
income_perso	Ordinal variable indicating the personal annual income of the participant	1 : Below £10,000, 2 : £10,000 – £20,000, 3 : 20,000 – 30,000, 4 : £30,000 - £40,000, 5 : £40,000 – £50,000, 6 : £50,000 - £75,000, 7 : £75,000 - £100,000, 8 : £100,000 - £125,000, 9 : £125,000 - £150,000, 10 : Over £150,000, 11 : Don't know, 12 : Prefer not to say
income_hh	Ordinal variable indicating the total annual income of the participant's household	1 : Below £10,000, 2 : £10,000 – £20,000, 3 : 20,000 – 30,000, 4 : £30,000 - £40,000, 5 : £40,000 – £50,000, 6 : £50,000 - £75,000, 7 : £75,000 - £100,000, 8 : £100,000 - £125,000, 9 : £125,000 - £150,000, 10 : Over £150,000, 11 : Don't know, 12 : Prefer not to say
car_distance_km	API car distance (km)	Min: 0.01, mean: 8.19, max: 93.84
bus_distance_km	API bus distance (km)	Min: 0.00, mean: 8.34, max: 120.24
rail_distance_km	Rail distance (km)	Min: 0.00, mean: 9.00, max: 150.44
taxi_distance_km	Taxi distance (km)	Min: 0.01, mean: 8.19, max: 93.84
cycling_distance_km	Cycling distance (km)	Min: 0.00, mean: 7.79, max: 97.91
walking_distance_km	Walking distance (km)	Min: 0.00, mean: 6.92, max: 84.56
car_travel_time_min	Car travel time (min)	Min: 0.00, mean: 14.51, max: 93.40
bus_travel_time_min	Bus total travel time (min)	Min: 0.00, mean: 34.26, max: 779.20
rail_travel_time_min	Rail total travel time (min)	Min: 0.00, mean: 27.50, max: 764.50
taxi_travel_time_min	Taxi travel time (min)	Min: 0.00, mean: 14.51, max: 93.40
cycling_travel_time_min	Cycling travel time (min)	Min: 0.00, mean: 27.58, max: 311.43

walking_travel_time_min	Walking travel time (min)	Min: 0.02, mean: 86.80, max: 1040.13
bus_IVT_time_min	Bus in-vehicle travel time (min)	Min: 0.00, mean: 22.51, max: 214.43
bus_access_egress_time_min	Bus access-egress travel time (min)	Min: 0.00, mean: 10.29, max: 56.67
rail_IVT_time_min	Rail in-vehicle travel time (min)	Min: 0.30, mean: 19.24, max: 164.95
rail_access_egress_time_min	Rail access-egress travel time (min)	Min: 0.00, mean: 18.62, max: 77.80
choice	Variable indicating the chosen mode for the trip	1: car, 2: bus, 3: rail, 4: taxi, 5: cycling, 6: walking.
bus_transfers	Number of required transfers in a bus trip	Min: 0, mean: 0.34, max: 4
rail_transfers	Number of required transfers in a rail trip	Min: 0, mean: 1.027, max: 5
occ	Categorical variable indicating the occupation of the participant	1: Healthcare practitioners and technical occupations. 2: Farming, fishing and forestry occupations. 3: Sales and related occupations. 4: Architecture, IT, engineering and other mathematical occupations. 5: Installation, maintenance and repair occupations. 6: Food and serving related occupations. 7: Community and social occupations. 8: Management, business and financial occupations. 9: Legal occupations. 10: Art, design, entertainment, sports and media occupations. 11: Education, training and library occupations. 12: Academics and other research occupations. 13: Student. 14: Unemployed. 15: Retired. 16: Other.
occ_full_time	Dummy variable indicating whether the individual is involved in a full-time occupation	1 for yes, 0 otherwise
bus_season_ticket	Dummy variable indicating whether the participant had a bus season ticket	1 for yes, 0 otherwise
rail_season_ticket	Dummy variable indicating whether the participant had a rail season ticket	1 for yes, 0 otherwise