

Swiss value of time study: Data and variable description

Basil Schmid
Thomas Schatzmann
Caroline Winkler
Kay W. Axhausen

Travel Survey Metadata Series 88

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Basil Schmid Thomas Schatzmann

IVT

ETH Zurich ETH Zurich

basil.schmid@ivt.baug.ethz.ch

Caroline Winkler Kay W. Axhausen

IVT

ETH Zurich ETH Zurich

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Abstract

The value of travel time (VTT), usually estimated from travel choice models, has been and still is - a key measure for evaluating new transportation infrastructure investments, typically accounting for the largest share in traveler's benefits in cost-benefit analyses (CBA). Switzerland's CBA norm was last updated more than ten years ago (VSS Norm, 2009). The current study builds on sophisticated survey techniques to obtain the revealed preference (RP) reference values for the subsequent behavioral choice experiments, where respondents are conducting not only the typical short-term (i.e. mode and route choice), but also long-term (i.e. residential and workplace location choice) stated preference (SP) experiments.

The main goals of the study are to update the VTT for motorized individual vehicles (car driver and motorbike; MIV) and public transportation (PT), where direct comparisons between individuals' short- and long-term value will shed new light on the time vs. money trade-offs and valuation patterns for different experimental settings and time horizons. Furthermore, we also collect information on respondents' mode consideration for their RP reference trips, which allows to account for choice set composition in the RP and SP mode choice domains to get more reliable VTT estimates.

Keywords

Codebook, list of variables, stated choice data, revealed preference data

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av_12: Availability of route 1 (SP route choice PT)	1
av_13: Availability of route 2 (SP route choice PT)	1
av_14: Availability of route 3 (SP route choice PT)	1
av_15: Availability of location 1 (SP residential location choice)	1
av_16: Availability of location 2 (SP residential location choice)	1
av_17: Availability of workplace 1 (SP workplace location choice)	2
av_18: Availability of workplace 2 (SP workplace location choice)	2
choice: Choice	3
shop_trip: Trip purpose shopping	4
leis_trip: Trip purpose leisure	4
dist_fac: Generalized trip distance (km): Average total trip distance (start to	
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tt_b : Travel time bike (SP mode choice / min.)	7
tt_c: Travel time car/motorbike (SP mode choice / min.)	8
tc_c: Travel cost car/motorbike (SP mode choice / CHF)	9
acc_c: Access time car/motorbike (SP mode choice / min.)	0
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tt_pt: Travel time PT (SP mode choice / min.)	2
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place location choice)
Arbeitsweg_OEV: PT considered for work trip (SP residential/workplace location
choice)
Arbeitsweg_BIKE: Bike/e-bike considered for work trip (SP residential/work-
place location choice)
av_c_ls: Availability of car/motorbike for shopping trip (SP residential location
choice)
av_b_ls: Availability of bike/e-bike for shopping trip (SP residential location
choice)
${\tt Einkaufsweg_MIV: Car/motorbike\ considered\ for\ shopping\ trip\ (SP\ residential\ }$
location choice)
${\tt Einkaufsweg_OEV: \ PT\ considered\ for\ shopping\ trip\ (SP\ residential\ location\ choice)}$
Einkaufsweg_BIKE: Bike/e-bike considered for shopping trip (SP residential
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choice)
av_b_11: Availability of bike/e-bike for leisure trip (SP residential location choice)
${\tt Freizeitweg_MIV: Car/motorbike\ considered\ for\ leisure\ trip\ (SP\ residential\ }$
location choice)
${\tt Freizeitweg_OEV:}\ {\tt PT}\ {\tt considered}\ {\tt for}\ {\tt leisure}\ {\tt trip}\ ({\tt SP}\ {\tt residential}\ {\tt location}\ {\tt choice})$
Freizeitweg_BIKE: Bike/e-bike considered for leisure trip (SP residential loca-
tion choice)
no_mode_cons: No mode considered at all (SP residential/workplace location
choice)
tt_work_car1: Travel time car/motorbike for work trip location 1 (SP residen-
$tial/workplace\ location\ choice\ /\ min.)\ .\ .\ .\ .\ .\ .\ .\ .\ .\ .\ .\ .$
$\verb tt_shop_car1 : Travel time car/motorbike for shopping trip location 1 (SP) $
residential/workplace location choice / min.)
$\verb tt_leis_car1 : Travel time car/motorbike for leisure trip location 1 (SP residue) $
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Study description

Title

Swiss value of time study: Updating the norms for cost-benefit analyses (2022)

Creator

B. Schmid

Subject

Codebook, list of variables, stated choice data, revealed preference data, mode choice, route choice, residential location choice, workplace location choice

Description

The value of travel time (VTT), usually estimated from travel choice models, has been and still is - a key measure for evaluating new transportation infrastructure investments, typically accounting for the largest share in traveler's benefits in cost-benefit analyses (CBA). Switzerland's CBA norm was last updated more than ten years ago (VSS Norm, 2009). The current study builds on sophisticated survey techniques to obtain the revealed preference (RP) reference values for the subsequent behavioral choice experiments, where respondents are conducting not only the typical short-term (i.e. mode and route choice), but also long-term (i.e. residential and workplace location choice) stated preference (SP) experiments.

The main goals of the study are to update the VTT for motorized individual vehicles (car driver and motorbike; MIV) and public transportation (PT), where direct comparisons between individuals' short- and long-term value will shed new light on the time vs. money trade-offs and valuation patterns for different experimental settings and time horizons. Furthermore, we also collect information on respondents' mode consideration for their RP reference trips, which allows to account for choice set composition in the RP and SP mode choice domains to get more reliable VTT estimates.

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- T. Schatzmann
- C. Winkler
- K. W. Axhausen

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2022 - 01 - 20

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Portable document format (pdf), R data (.Rda), comma-separated (.csv)

Source

https://www.ivt.ethz.ch/

Language

English

Relation

https://www.ivt.ethz.ch/

Coverage

German speaking part of Switzerland, 2021. Only working respondents with a work trip of at least 10 minutes by car/motorbike, public transport (PT) or bike

Rights

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Other identifications, funding and acknowledgements

The project was financed by the Swiss Federal Road Office (ASTRA).

Unit of analysis

Working respondents from the German speaking part of Switzerland

Document responsibility

Basil Schmid

Email: basil.schmid at ivt.baug.ethz.ch

Swiss value of time study (2022): File description

Title: CH_VoT_2022_FINAL.Rda, CH_VoT_2022_FINAL.csv

Contents: Pooled RP mode choice, SP mode choice, SP route choice (car/motorbike and PT), SP residential location choice, SP workplace location choice, socioeconomic characteristics

Data collection: Online survey, respondents recruited by mail, 20 CHF incentive for completion of the survey

Unit of analysis: Individual (panel) data. Note: Each individual exhibits 27 observations (3 x RP mode choice, 6 x SP mode choice, 6 x SP route choice MIV or PT, 6 x SP residential location choice, 6 x SP workplace location choice). Important: Erroneous entries were excluded, such that some individuals exhibit less than 27 observations (see also variable "count").

File Structure: Hierarchical

Number of cases: 48272. Variables per record: 231. 1797 individuals

Details: A representative sample of Swiss German speaking, working respondents with a minimum of one work, shopping and leisure trip in a regular week, is invited by mail, including a link to the Qualtrics online survey tool with a personalized ID to complete the first part of the study. It consists of a socioeconomic (e.g. vehicle ownership and type, season ticket availability, monthly income, travel expenditures, job type, etc.) and household questionnaire (e.g. monthly housing expenditures, household type, etc.), including geo-information related to the residential and workplace location. This is obtained by using a google maps interface embedded in the survey tool, directly processing the geo-coordinates into the database. For their most frequent/regular home-based work, shopping and leisure trip, respondents are asked to provide the geo-information of the destination, for which we ask their chosen and considered mode(s).

After routing the reference trips to obtain the attributes of the chosen and unchosen alternatives, the variable travel costs are calculated based on trip distance and vehicle type, PT ticket prices as well as type of the season ticket. Together with the other level-of-service attributes, the RP dataset is generated, which then is used to create the personalized SP experiments for one peudo-randomly (i.e. using a weighting function to

favor trips where at least two modes are available and one mode with costs greater than zero - MIV (car or motorbike) or PT (public transportation) - is included) selected trip. The respondents receive the link to the second part of the study by email.

The mode choice experiments account for technical availabilities (e.g. car-less individuals only face a PT, (e)-bike and walk alternative; walk and bike travel times of 120 minutes or more exclude the corresponding alternative), while the route choice experiments are pivoted around the chosen mode of the reference trip. The residential and workplace location choice experiments are kept as general and simple as possible, assuming that the choice to change the residence/workplace has already happened, and that the new locations are identical in terms of all other attributes not included in the experiment (note that previous studies have shown that there is very little deviation from the status quo, if the type of residence would change as well). While the residential location choice experiment includes the mode-specific travel times of the most frequent work, leisure and shopping trip and the monthly housing costs plus the travel expenditures, the workplace location choice experiment just focuses on the work trip, but includes monthly income minus travel expenditures as a monetary attribute. Since a respondent may consider different travel modes for different trip purposes, after each choice situation an additional question is asking which mode(s) was/were taken into account. D-efficient designs with up to 36 choice situations blocked in six parts and using weak parameter priors are generated using Ngene, assigning six choice situations of each SP experiment (4 x 6 = 24 choice situations in total) to each respondent. Note that the order of the cost attribute is varied across (see also variable "cbot"), and alternatives are varied within respondents to account for potential order effects.

The experiments are carefully introduced to frame the choice sets and place the respondents in a coherent choice situation. Regarding the current COVID-19 measures such as homeoffice recommendations and other restrictions, respondents are told that they should consider behaving as if there were no restrictions anymore (also note that in Switzerland the COVID-19 restriction - except in the complete lock-down in Spring 2020 - always have been relatively relaxed).

The pre-test and two main survey waves have been successfully completed by 1797 respondents (approx. 13% net response rate; 20 CHF = approx. 20US\$ incentive payment for a total response time of about 40 minutes).

File format: R data format (.Rda), comma-separated (.csv)

Swiss Value of Time study (2022): Variables

ID: Respondent ID

Format = labelled, character.

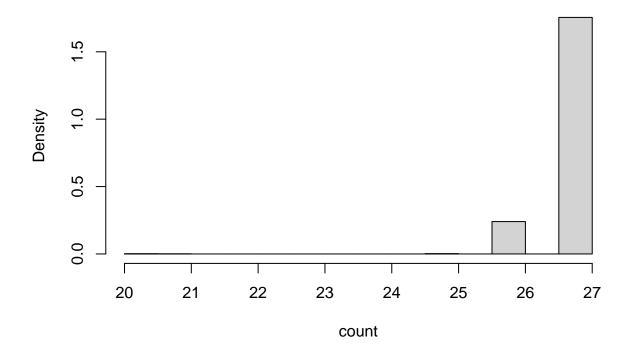
Length Class1		Class2	Mode
48272 labelled		character	character

count: Number of valid observations per ID (after data cleaning)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
20	27	27	26.87	27	27

Histogram of count



type: Data/experiment type

Format = labelled, integer, numeric. Labels: 1 = SP mode choice, 2 = RP mode choice, 3 = SP route choice, 4 = SP residential location choice, 5 = SP workplace choice.

	SP mode choice RP mode choice		SP route choice	
Count	10764	5162	10782	
	SP residential	location choice	SP workplace choice	
Count		10782	10782	

wave: Survey wave

Format = labelled, integer, numeric. Labels: 0 = Pre-test, 1 = Mainsurvey 1, 2 = Mainsurvey 2.

	Pre-test	Mainsurvey 1	Mainsurvey 2
Count	2937	21403	23932

cbot: Monetary attribute in SP experiments displayed at the bottom

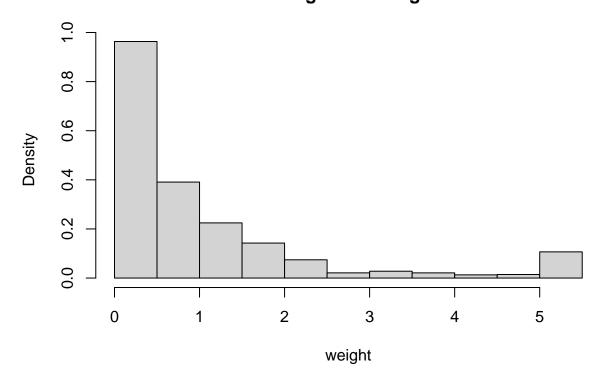
	No	Yes
Count	22214	26058

weight: Weights based on the representative Swiss Microzensus for Mobility and Transport 2015 using household income and size, gender, age, education and mobility tool ownership (see https://www.bfs.admin.ch/).

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0.001001	0.1199	0.5563	1	1.282	5.005

Histogram of weight

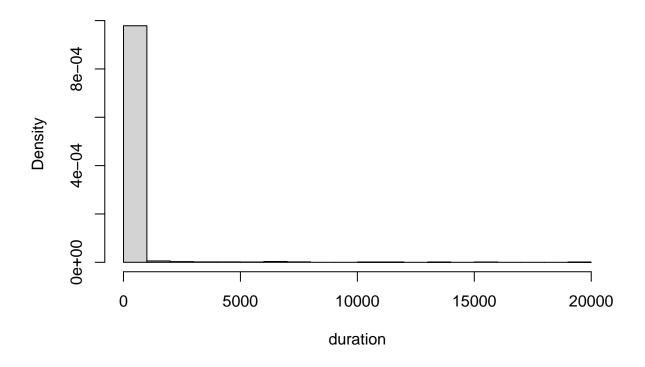


duration: Total respose time for SP experiments (min.)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
2.95	12.3	17.07	145.1	24.9	19647

Histogram of duration



av_1: Availability of walk (SP mode choice)

	No	Yes
Count	44792	3480

av_2: Availability of bike/e-bike (SP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	41180	7092

av_3: Availability of car/motorbike (SP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	39806	8466

av_4: Availability of PT (SP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	37508	10764

av_5: Availability of walk (RP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	45793	2479

av_6: Availability of bike/e-bike (RP mode choice)

	No	Yes
Count	44573	3699

av_7: Availability of car/motorbike (RP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	44814	3458

av_8: Availability of PT (RP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	44080	4192

av_9: Availability of route 1 (SP route choice car/motorbike)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	40892	7380

av_10: Availability of route 2 (SP route choice car/motorbike)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	40892	7380

av_11: Availability of route 3 (SP route choice car/motorbike)

	No	Yes
Count	40892	7380

av_12: Availability of route 1 (SP route choice PT)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	44870	3402

av_13: Availability of route 2 (SP route choice PT)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	44870	3402

av_14: Availability of route 3 (SP route choice PT)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	44870	3402

av_15: Availability of location 1 (SP residential location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	37490	10782

av_16: Availability of location 2 (SP residential location choice)

	No	Yes
Count	37490	10782

av_17: Availability of workplace 1 (SP workplace location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	37490	10782

av_18: Availability of workplace 2 (SP workplace location choice)

	No	Yes
Count	37490	10782

choice: Choice

Format = labelled, integer, numeric. Labels: 1 = Walk SP MC, 2 = Bike/e-bike SP MC, 3 = Car/motorbike SP MC, 4 = PT SP MC, 5 = Walk RP MC, 6 = Bike/e-bike RP MC, 7 = Car/motorbike RP MC, 8 = PT RP MC, 9 = Route 1 SP RC car/motorbike, 10 = Route 2 SP RC car/motorbike, 11 = Route 3 SP RC car/motorbike, 12 = Route 1 SP RC PT, 13 = Route 2 SP RC PT, 14 = Route 3 SP RC PT, 15 = Location 1 SP RLC, 16 = Location 2 SP RLC, 17 = Location 1 SP WPC, 18 = Location 2 SP WPC.

`
•
C PT SP MC
2280
PT RP
C MC
928
car/motorbike
2967
e 2 SP RC PT
1192
on 2 SP RLC
5298
PC
05
1

shop_trip: Trip purpose shopping

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	18477	8231	21564

leis_trip: Trip purpose leisure

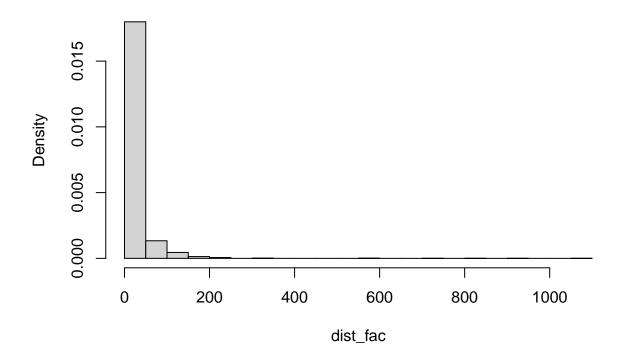
	No	Yes	NA's
Count	17219	9489	21564

dist_fac: Generalized trip distance (km): Average total trip distance (start to end location) for all available transport modes

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.05	3.777	9.51	21.11	26.11	1093	21564

Histogram of dist_fac

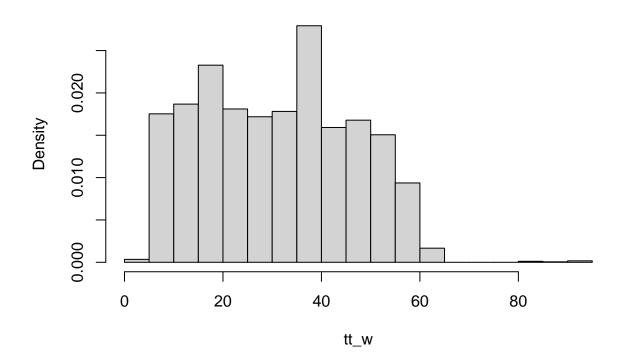


tt_w: Travel time walk (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	18	32	31.74	43	91	44792

Histogram of tt_w

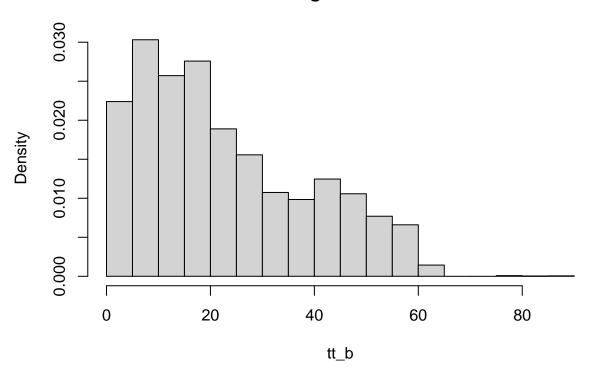


tt_b: Travel time bike (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	10	19	23.53	35	87	41180

Histogram of tt_b

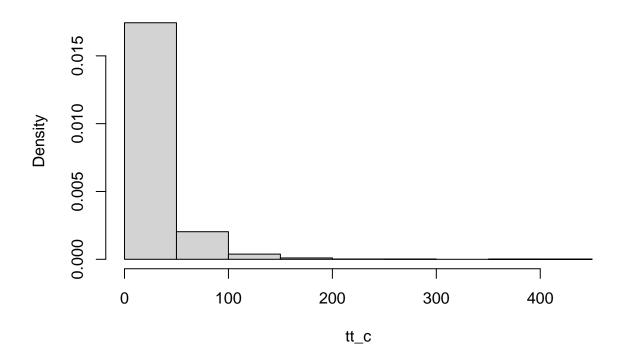


tt_c: Travel time car/motorbike (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	10	20	27.47	35	439	39806

Histogram of tt_c

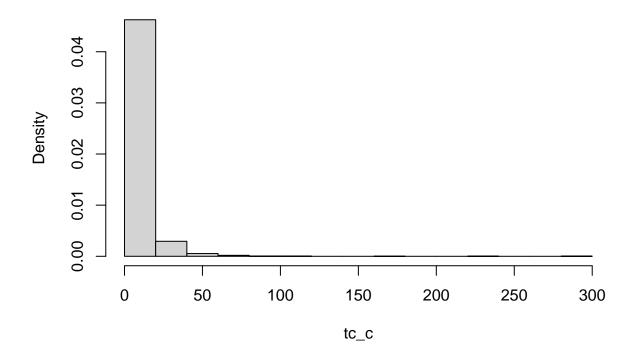


tc_c: Travel cost car/motorbike (SP mode choice / CHF)

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.8	3.6	7.222	8.4	290.5	39806

Histogram of tc_c

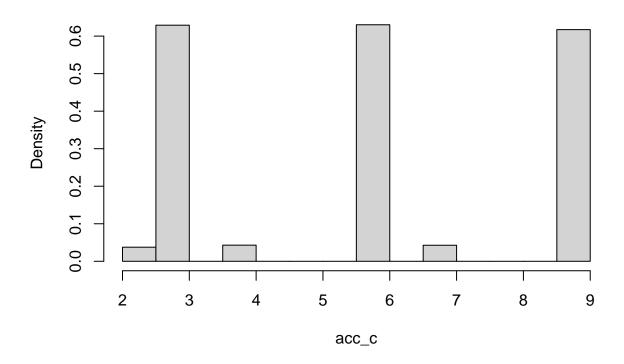


acc_c: Access time car/motorbike (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	6	5.886	9	9	39806

Histogram of acc_c

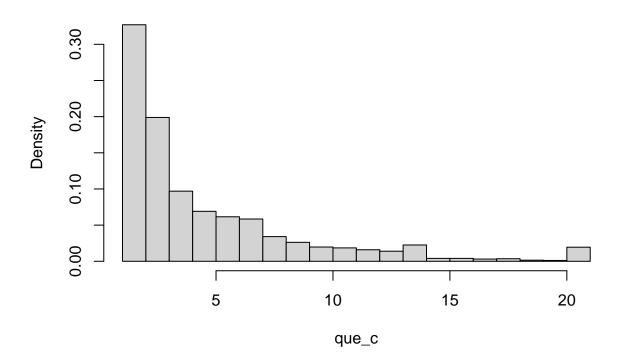


que_c: Congestion time car/motorbike (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	2	3	4.926	6	21	39806

Histogram of que_c

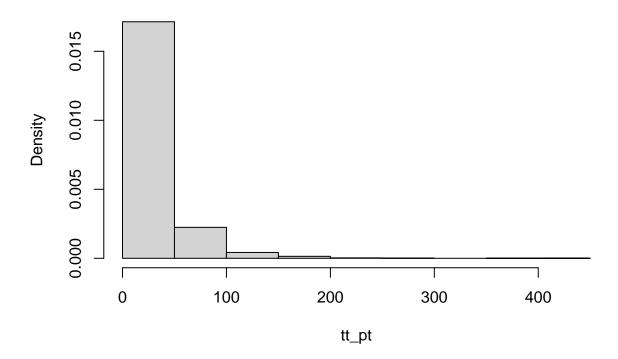


tt_pt: Travel time PT (SP mode choice / min.)

Format = labelled, integer, numeric.

_	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
	2	9	19	27.96	36	425	37508

Histogram of tt_pt

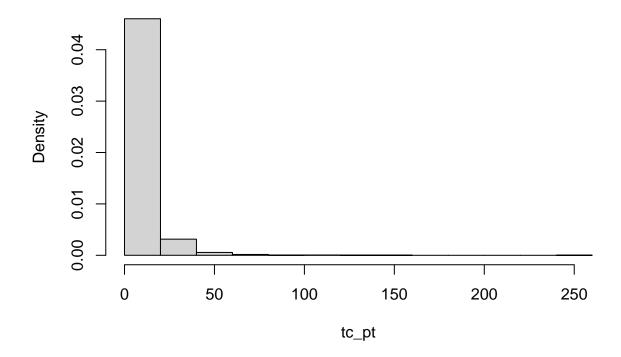


tc_pt: Travel cost PT (SP mode choice / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	2.3	4	7.536	8.6	253.9	37508

Histogram of tc_pt

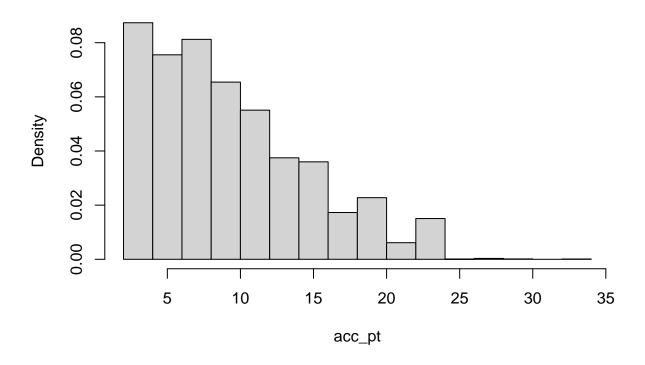


acc_pt: Access time PT (SP mode choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	9	9.793	13	34	37508

Histogram of acc_pt

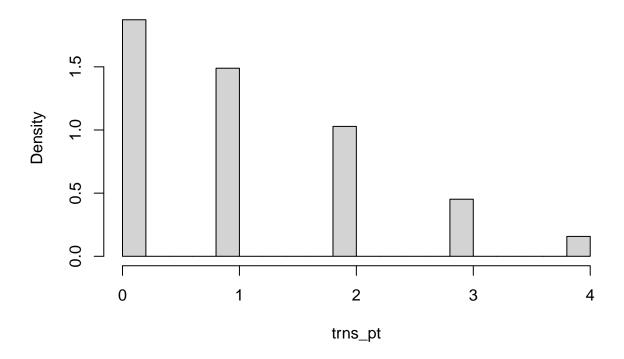


trns_pt: Number of transfers PT (SP mode choice / #)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	1.106	2	4	37508

Histogram of trns_pt

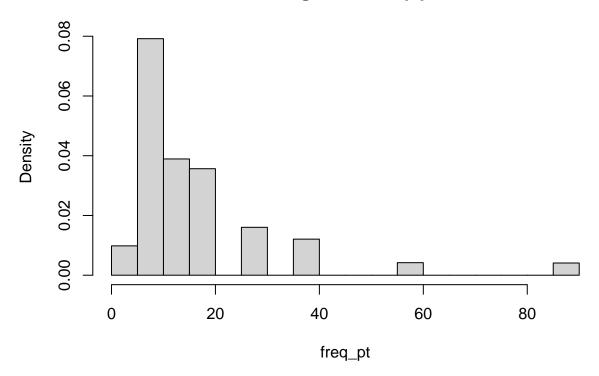


freq_pt: Freqency of service PT (SP mode choice / service every ... min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	10	15	18.09	20	90	37508

Histogram of freq_pt

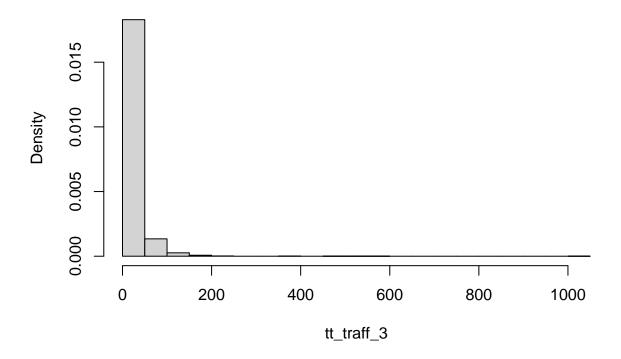


tt_traff_3 : Travel time car/motorbike with traffic (RP mode choice / min.)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	7.5	14.8	22.28	28.05	1040	21564

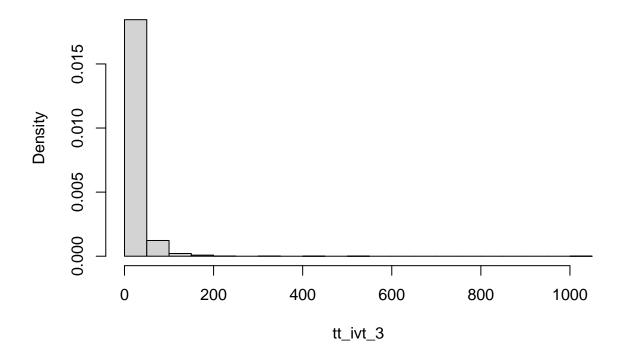
Histogram of tt_traff_3



tt_ivt_3: Travel time car/motorbike freeflow (RP mode choice / min.)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	7.333	14.25	21.1	26.18	1014	21564

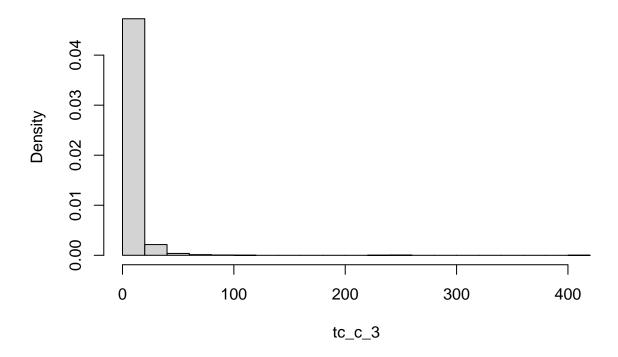


 tc_c_3 : Travel cost car/motorbike (RP mode choice / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0.8	2.2	5.506	6.3	420	21564

Histogram of tc_c_3

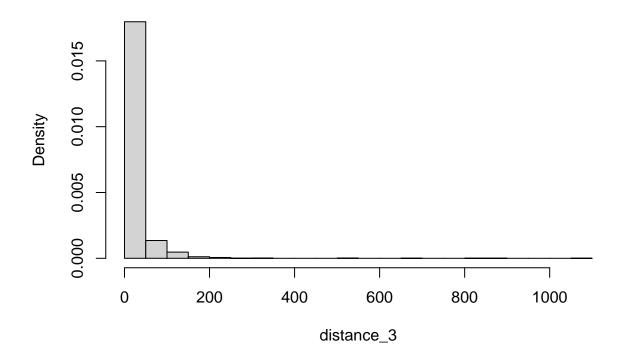


distance_3: Trip distance car/motorbike (km)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.05	3.928	9.437	21.22	25.67	1096	21564

Histogram of distance_3

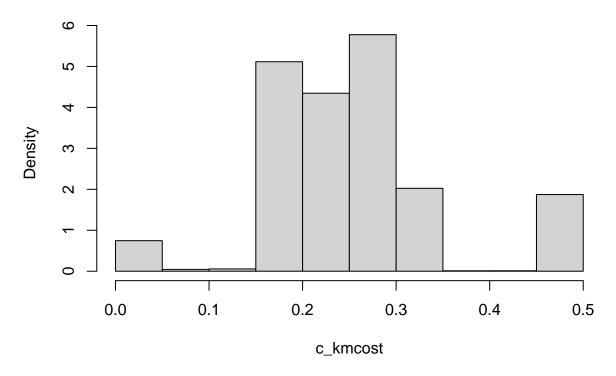


<code>c_kmcost:</code> Travel cost per kilometer (RP mode choice / $\mathrm{CHF/km}$)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0.2	0.24	0.2601	0.275	0.47	21564

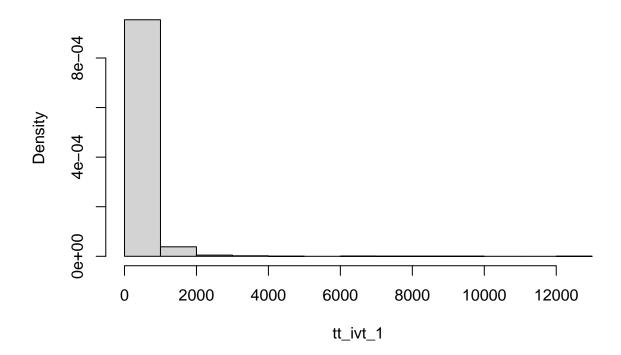
Histogram of c_kmcost



tt_ivt_1: Travel time walk (RP mode choice / min.)

Format = labelled, numeric.

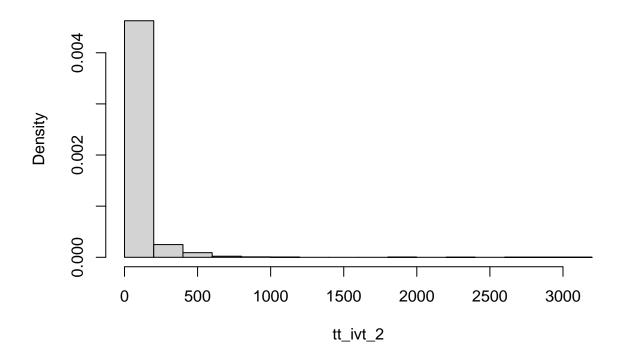
_	Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
	1	41.75	103.8	237.9	283	12222	21622



tt_ivt_2: Travel time bike (RP mode choice / min.)

Format = labelled, numeric.

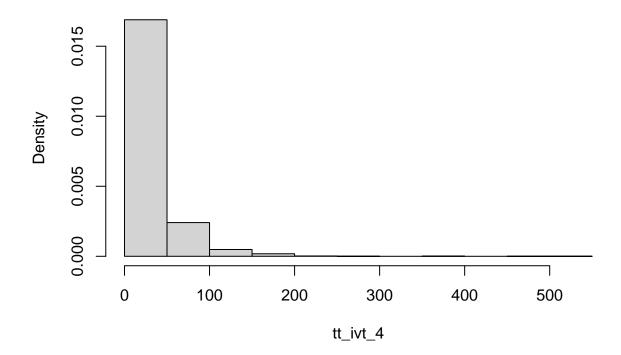
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	12.38	30.88	69.94	84.58	3143	21564



tt_ivt_4: Travel time PT (RP mode choice / min.)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	9	20.7	29.17	38	531	23382

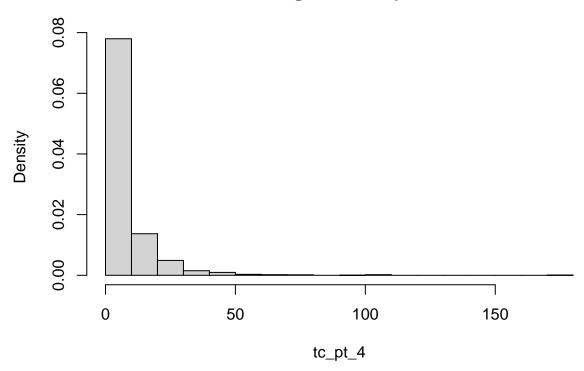


tc_pt_4: Travel cost PT (RP mode choice / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.1	2.8	4.4	7.877	9.1	176.6	23382

Histogram of tc_pt_4

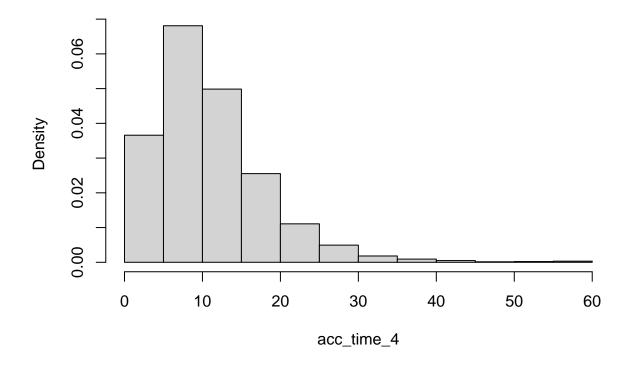


acc_time_4: Walk access time PT (RP mode choice / min.)

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.5	6.033	9.667	11.06	14.52	58.92	23382

Histogram of acc_time_4

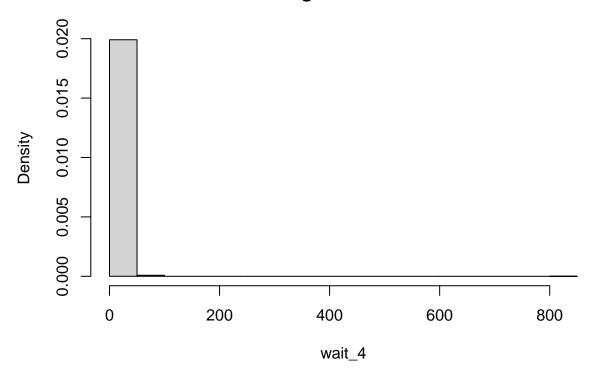


wait_4: Waiting time at PT stop (RP mode choice / min.)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0.01667	3.183	6.676	10.2	811	23382

Histogram of wait_4

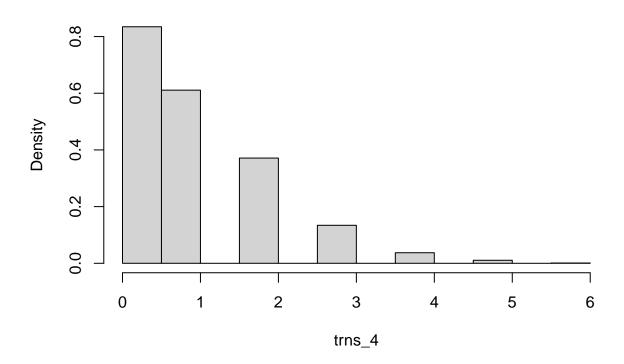


trns_4: Number of transfers PT (RP mode choice / #)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	0.9824	2	6	23382

Histogram of trns_4



hastrain_4: Heavy rail part of PT connection (RP mode choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

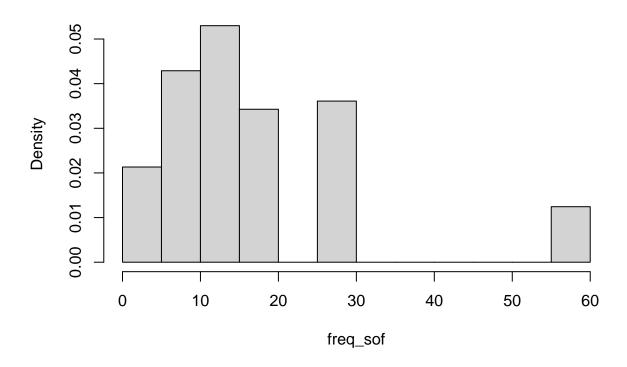
	No	Yes	NA's
Count	10911	13979	23382

freq_sof: Freqency of service PT (RP mode choice / service every ... min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	9	15	18.46	20	60	21674

Histogram of freq_sof

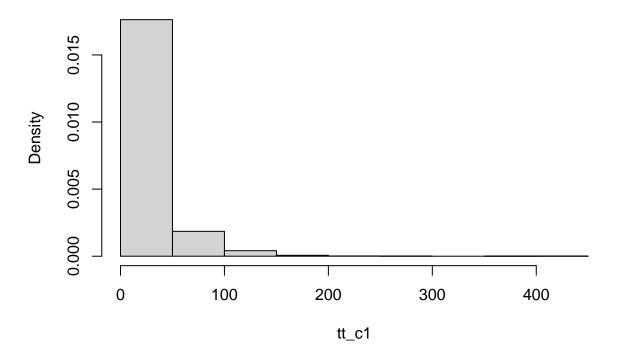


tt_c1: Travel time route 1 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	10	19	26.59	33	439	40892

Histogram of tt_c1

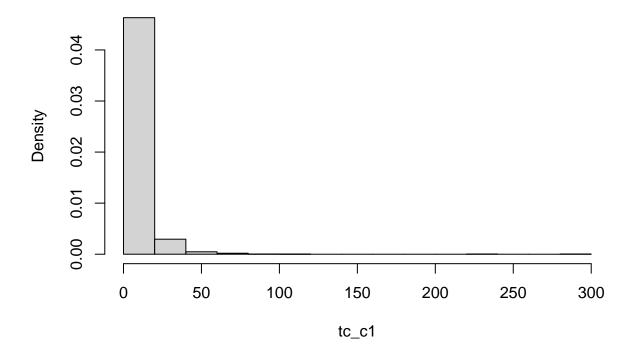


tc_c1: Travel cost route 1 (SP route choice car/motorbike / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.8	3.5	7.141	8.425	290.5	40892

Histogram of tc_c1

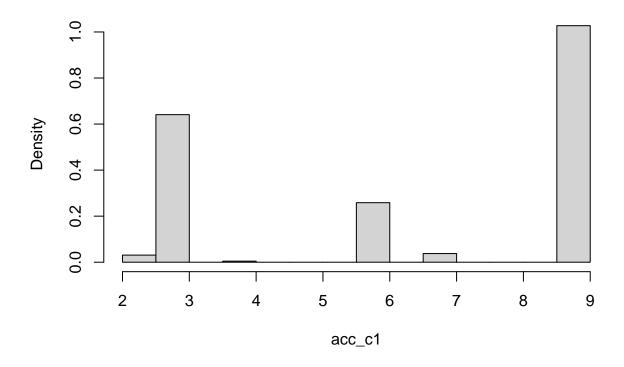


acc_c1: Access time route 1 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	9	6.532	9	9	40892

Histogram of acc_c1

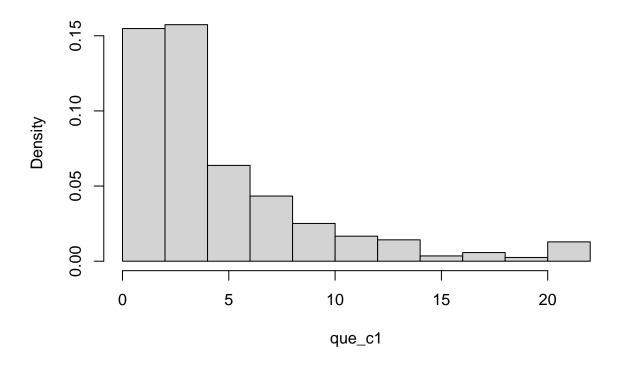


que_c1: Congestion time route 1 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	2	3	5.006	6	21	40892

Histogram of que_c1

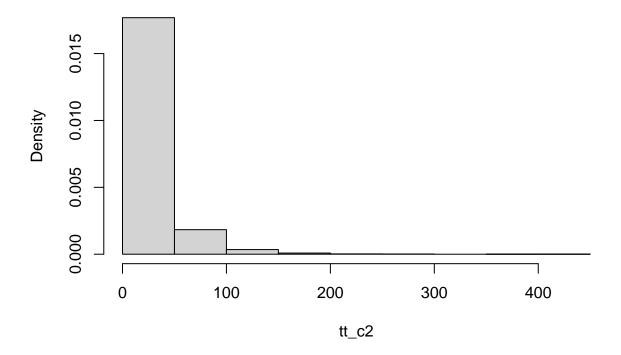


tt_c2: Travel time route 2 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	10	19	26.33	33	439	40892

Histogram of tt_c2

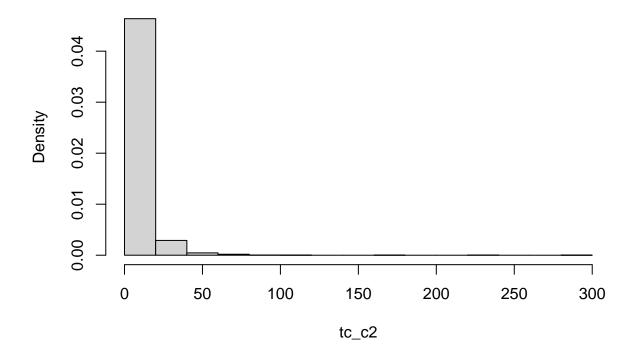


tc_c2: Travel cost route 2 (SP route choice car/motorbike / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.8	3.5	7.058	8.5	290.5	40892

Histogram of tc_c2

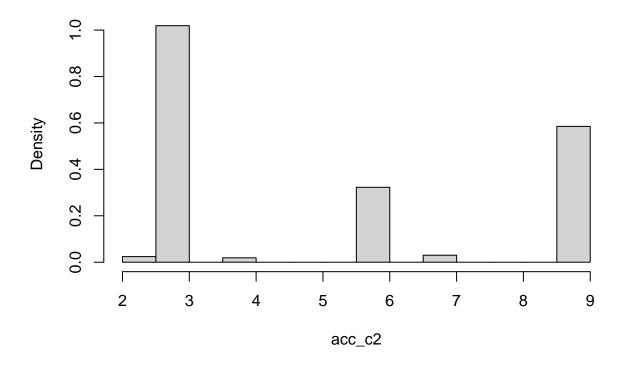


acc_c2: Access time route 2 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	3	5.297	9	9	40892

Histogram of acc_c2

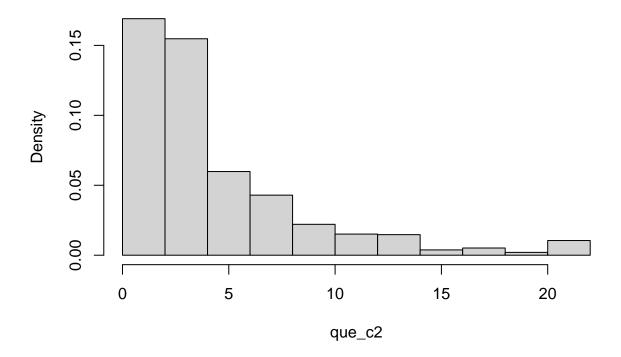


que_c2: Congestion time route 2 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	2	3	4.781	6	21	40892

Histogram of que_c2

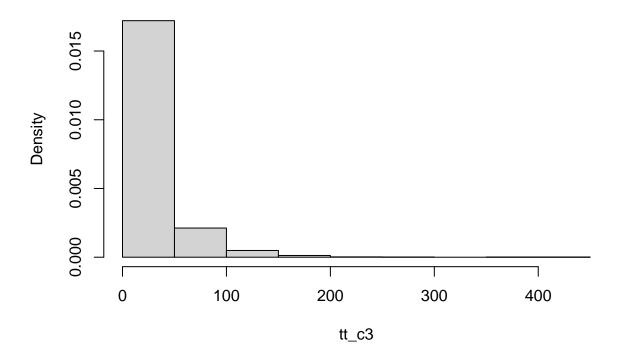


tt_c3: Travel time route 3 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	11	20	28.98	37	439	40892

Histogram of tt_c3

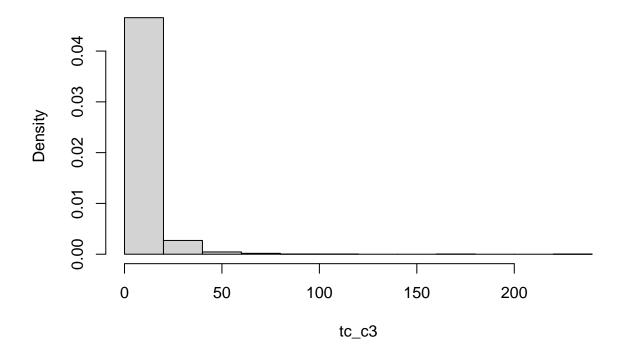


tc_c3: Travel cost route 3 (SP route choice car/motorbike / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.7	3.4	6.852	8.1	232.4	40892

Histogram of tc_c3

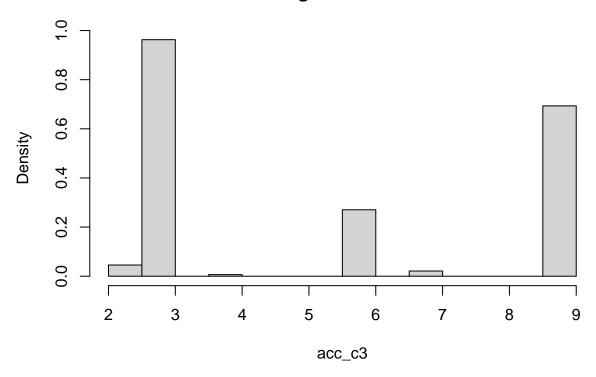


acc_c3: Access time route 3 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	3	5.509	9	9	40892

Histogram of acc_c3

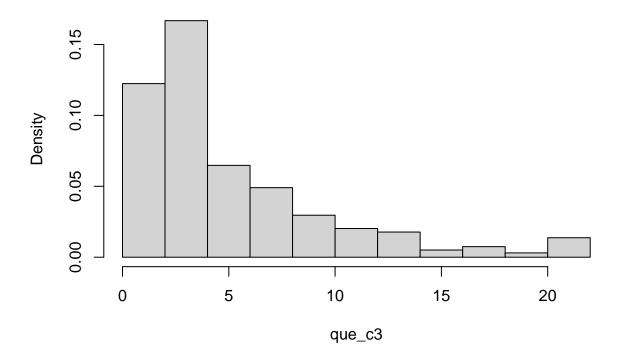


que_c3: Congestion time route 3 (SP route choice car/motorbike / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	3	4	5.511	7	21	40892

Histogram of que_c3

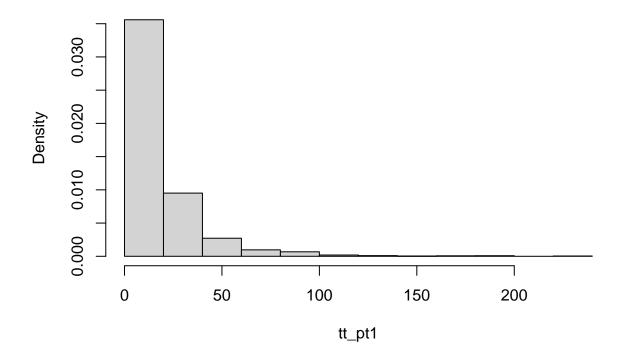


tt_pt1: Travel time route 1 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	11	18.39	23	230	44870

Histogram of tt_pt1

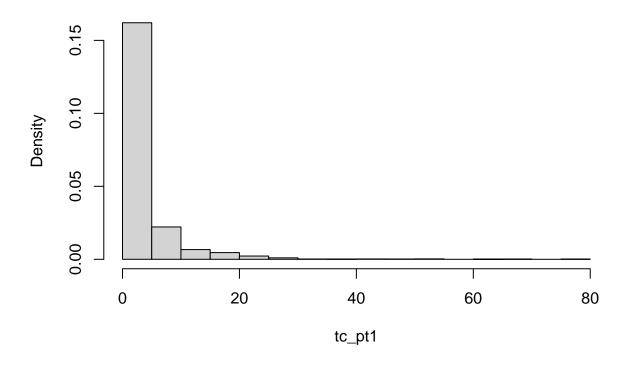


tc_pt1: Travel cost route 1 (SP route choice PT / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.2	2.5	4.074	4	76.8	44870

Histogram of tc_pt1

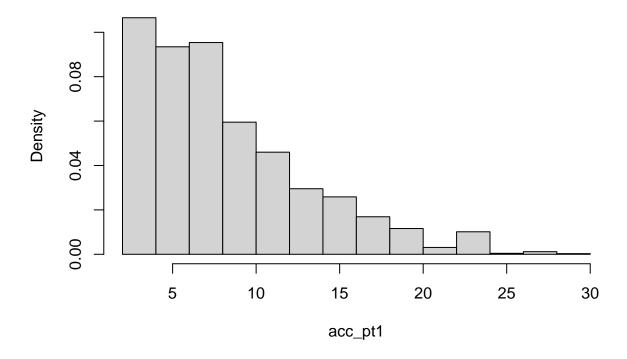


acc_pt1: Access time route 1 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	5	8	8.732	11	29	44870

Histogram of acc_pt1

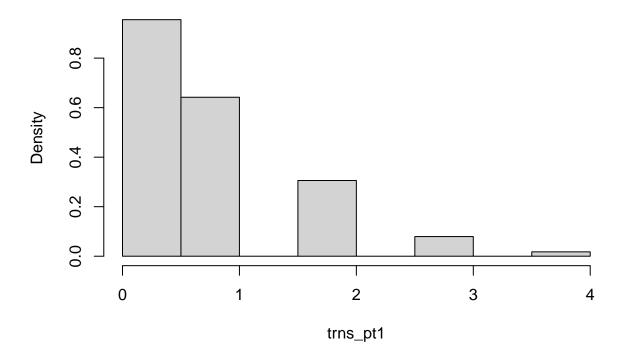


trns_pt1: Number of transfers route 1 (SP route choice PT / #)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	0.781	1	4	44870

Histogram of trns_pt1

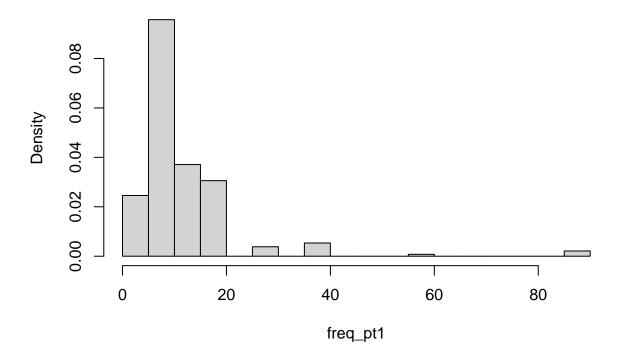


freq_pt1: Frequency of service route 1 (SP route choice PT / service every . . . min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	7	10	13.36	15	90	44870

Histogram of freq_pt1

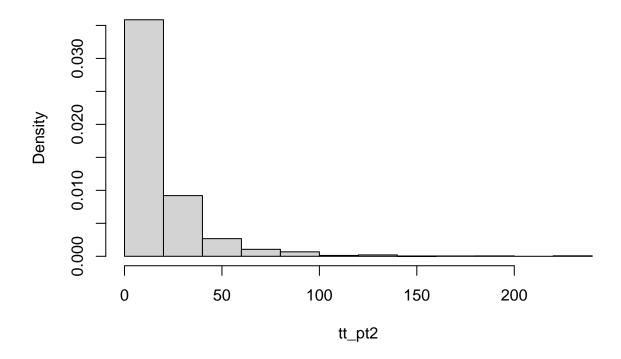


tt_pt2: Travel time route 2 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	11	18.3	22	230	44870

Histogram of tt_pt2

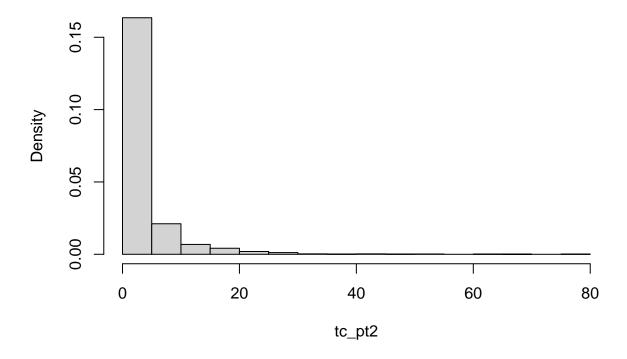


tc_pt2: Travel cost route 2 (SP route choice PT / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.2	2.4	3.938	3.9	76.8	44870

Histogram of tc_pt2

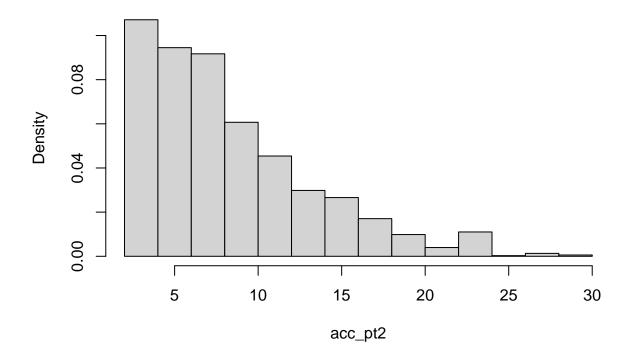


acc_pt2: Access time route 2 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	5	8	8.772	11	29	44870

Histogram of acc_pt2

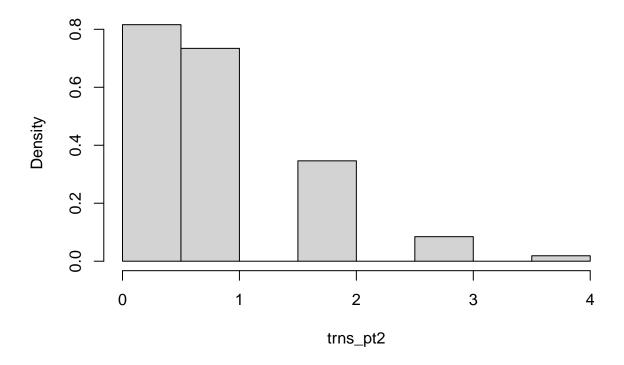


trns_pt2: Number of transfers route 2 (SP route choice PT / #)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	0.878	1	4	44870

Histogram of trns_pt2

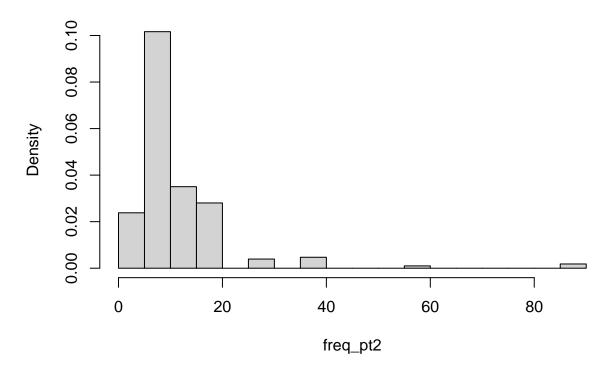


freq_pt2: Frequency of service route 2 (SP route choice PT / service every ... min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	7	10	12.99	15	90	44870

Histogram of freq_pt2

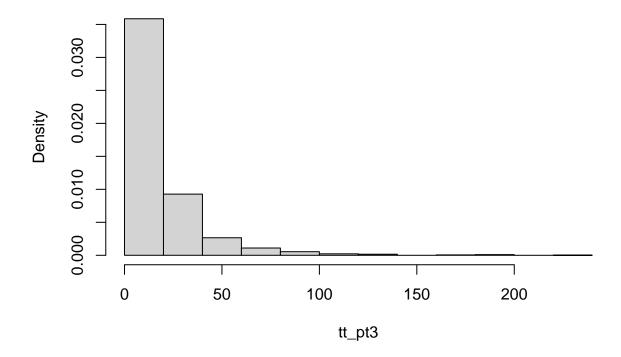


tt_pt3: Travel time route 3 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	11	18.09	22	230	44870

Histogram of tt_pt3

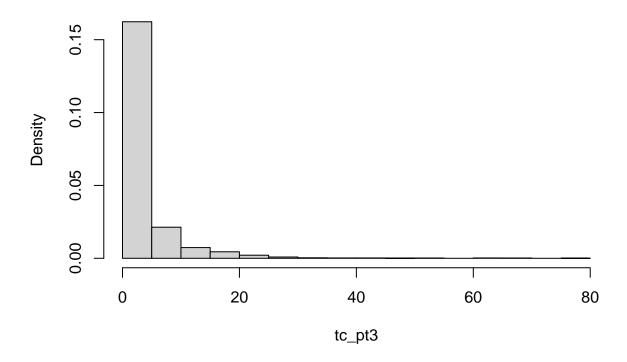


tc_pt3: Travel cost route 3 (SP route choice PT / CHF)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0.8	1.2	2.5	4.095	4	76.8	44870

Histogram of tc_pt3

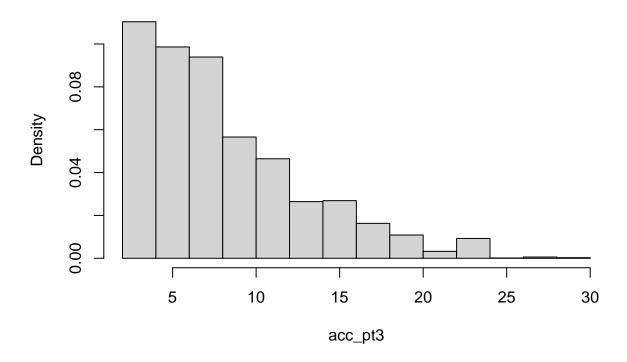


acc_pt3 : Access time route 3 (SP route choice PT / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	5	7	8.546	11	29	44870

Histogram of acc_pt3

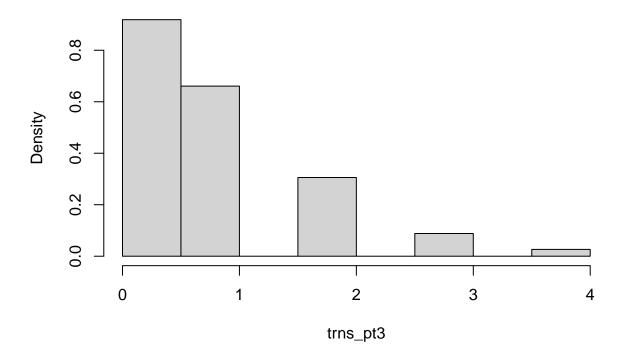


trns_pt3: Number of transfers route 3 (SP route choice PT / #)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	0.8213	1	4	44870

Histogram of trns_pt3

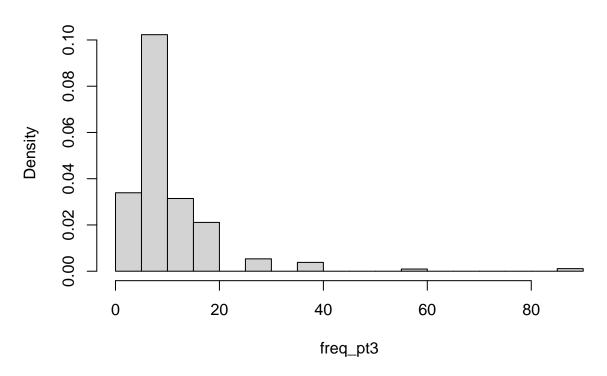


freq_pt3: Frequency of service route 3 (SP route choice PT / service every ... min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
3	7	10	11.77	15	90	44870

Histogram of freq_pt3



av_c_lw: Availability of car/motorbike for work trip (SP residential/workplace location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	4500	17064	26708

av_b_lw: Availability of bike/e-bike for work trip (SP residential/workplace location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	7490	14074	26708

Arbeitsweg_MIV: Car/motorbike considered for work trip (SP residential/workplace location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	5712	15852	26708

Arbeitsweg_OEV: PT considered for work trip (SP residential/workplace location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	6295	15269	26708

Arbeitsweg_BIKE: Bike/e-bike considered for work trip (SP residential/workplace location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	12516	9048	26708

av_c_ls: Availability of car/motorbike for shopping trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	2250	8532	37490

av_b_ls: Availability of bike/e-bike for shopping trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	898	9884	37490

Einkaufsweg_MIV: Car/motorbike considered for shopping trip (SP residential location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	13256	8308	26708

Einkaufsweg_OEV: PT considered for shopping trip (SP residential location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	15354	6210	26708

Einkaufsweg_BIKE: Bike/e-bike considered for shopping trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	14974	6590	26708

av_c_ll: Availability of car/motorbike for leisure trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	2250	8532	37490

av_b_11: Availability of bike/e-bike for leisure trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	2564	8218	37490

Freizeitweg_MIV: Car/motorbike considered for leisure trip (SP residential location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	13633	7931	26708

Freizeitweg_OEV: PT considered for leisure trip (SP residential location choice)

Format = labelled, integer, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	14563	7001	26708

Freizeitweg_BIKE: Bike/e-bike considered for leisure trip (SP residential location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	15922	5642	26708

no_mode_cons: No mode considered at all (SP residential/workplace location choice)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

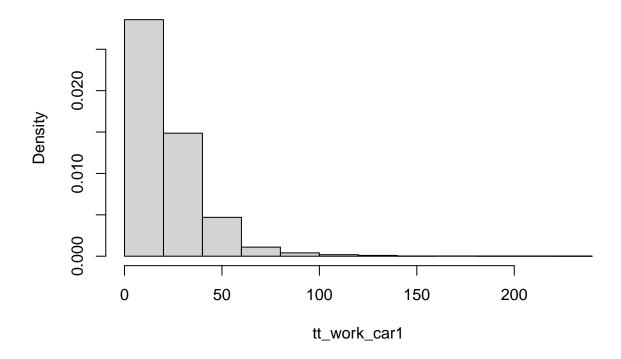
	No	Yes	NA's
Count	21249	315	26708

tt_work_car1: Travel time car/motorbike for work trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	9	18	22.28	30	236	31208

Histogram of tt_work_car1

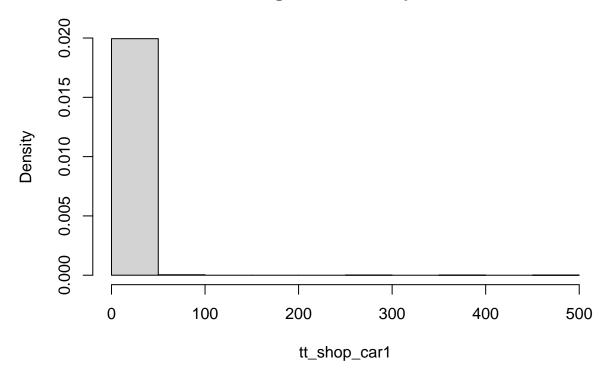


tt_shop_car1: Travel time car/motorbike for shopping trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	5	7.526	9	476	39740

Histogram of tt_shop_car1

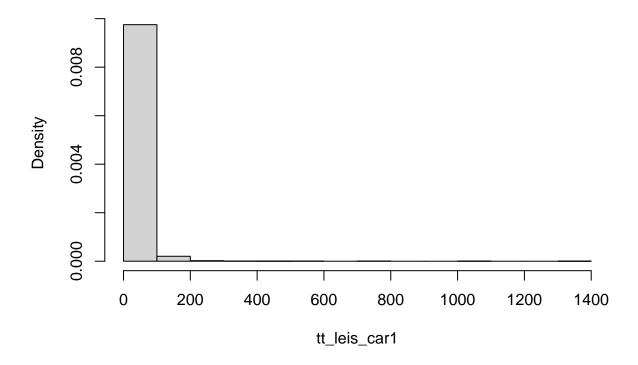


tt_leis_car1: Travel time car/motorbike for leisure trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	12	22.24	25	1352	39740

Histogram of tt_leis_car1

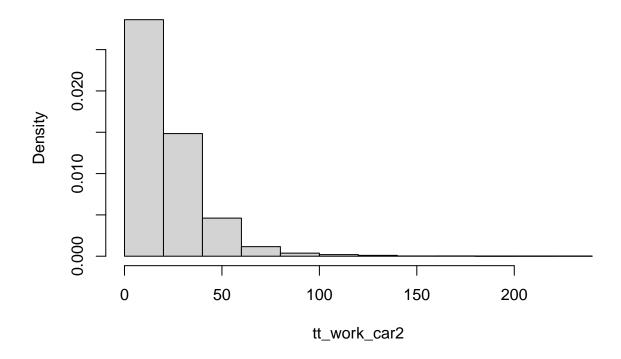


tt_work_car2: Travel time car/motorbike for work trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	9	18	22.29	30	236	31208

Histogram of tt_work_car2

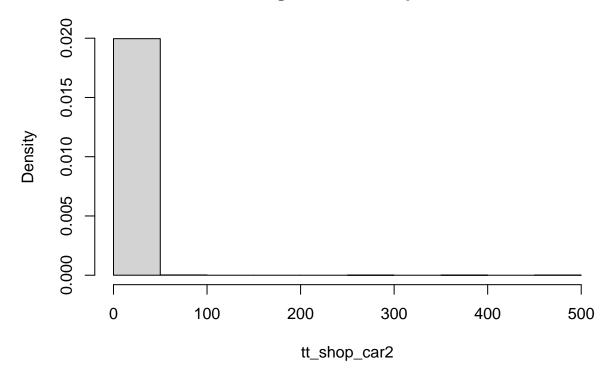


tt_shop_car2: Travel time car/motorbike for shopping trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	3	5	7.534	9	476	39740

Histogram of tt_shop_car2

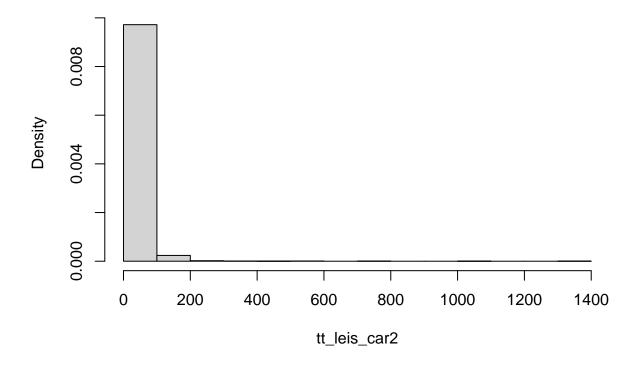


tt_leis_car2: Travel time car/motorbike for leisure trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
2	6	12	22.31	24	1352	39740

Histogram of tt_leis_car2

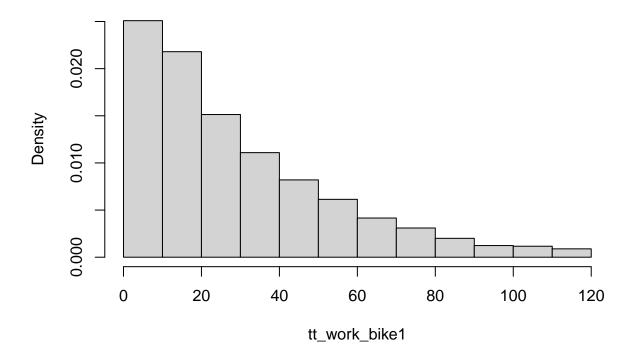


tt_work_bike1: Travel time bike for work trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	10	22	30.02	42	120	34198

Histogram of tt_work_bike1

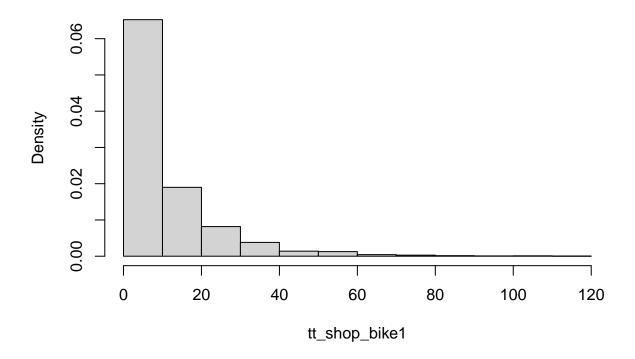


tt_shop_bike1: Travel time bike for shopping trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	6	8	12.5	15	113	38388

Histogram of tt_shop_bike1

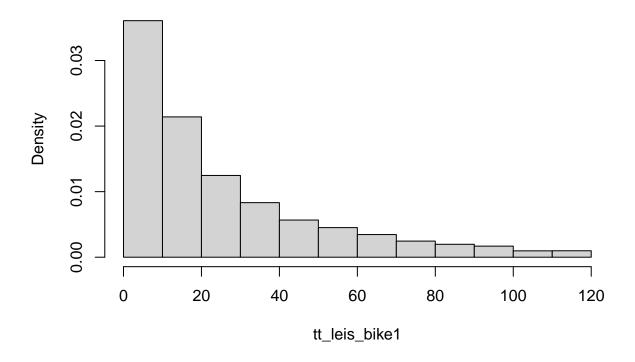


tt_leis_bike1: Travel time bike for leisure trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	8	16	26.29	36	120	40054

Histogram of tt_leis_bike1

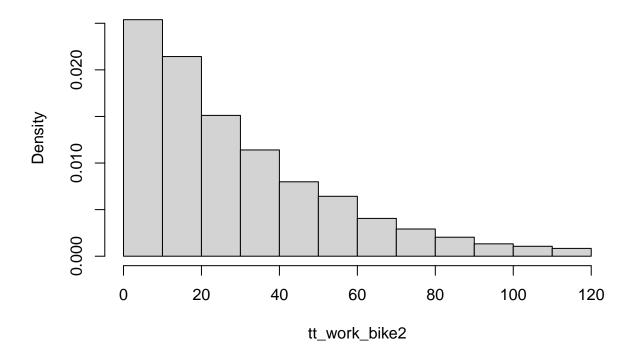


tt_work_bike2: Travel time bike for work trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	10	22	29.88	42	120	34198

Histogram of tt_work_bike2

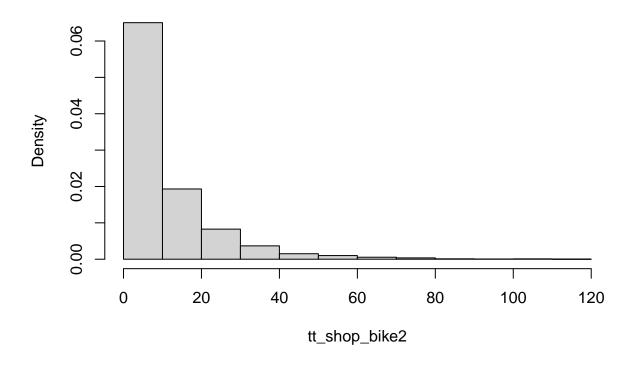


tt_shop_bike2: Travel time bike for shopping trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	6	8	12.44	15	113	38388

Histogram of tt_shop_bike2

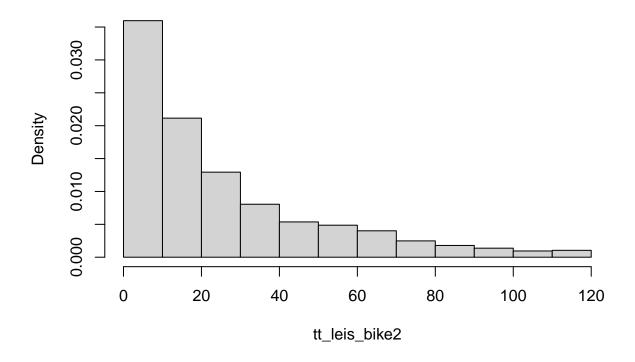


tt_leis_bike2: Travel time bike for leisure trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	8	16	26.27	36	120	40054

Histogram of tt_leis_bike2

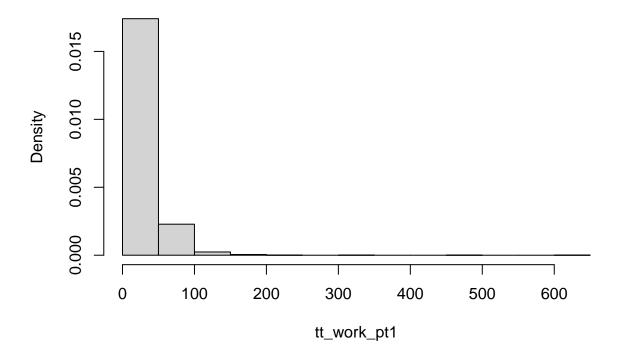


tt_work_pt1: Travel time PT for work trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	11	21	27.72	36	637	26708

Histogram of tt_work_pt1

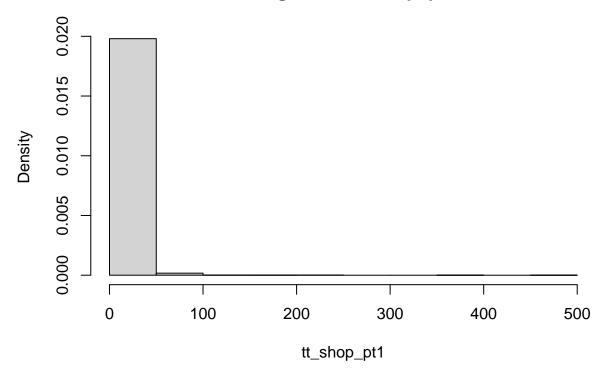


tt_shop_pt1: Travel time PT for shopping trip location 1 (SP residential/workplace location choice / min.)

 $\label{eq:Format} Format = labelled, integer, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	6	9	11.46	13	460	37490

Histogram of tt_shop_pt1

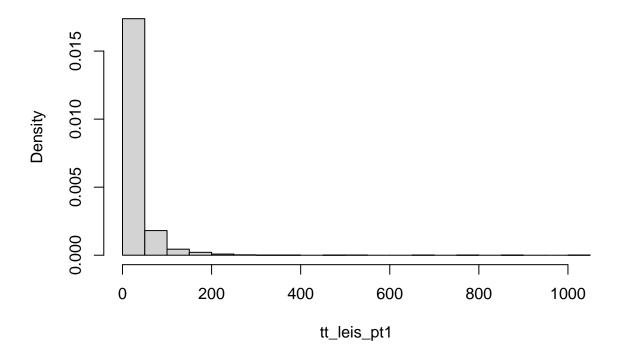


tt_leis_pt1: Travel time PT for leisure trip location 1 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	9	15	27.82	31	1011	37490

Histogram of tt_leis_pt1

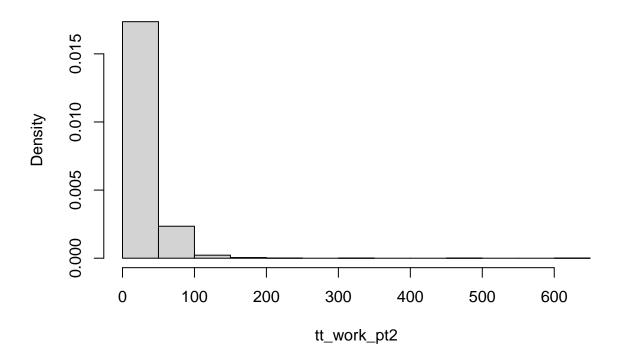


tt_work_pt2: Travel time PT for work trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	11	21	27.73	36	637	26708

Histogram of tt_work_pt2

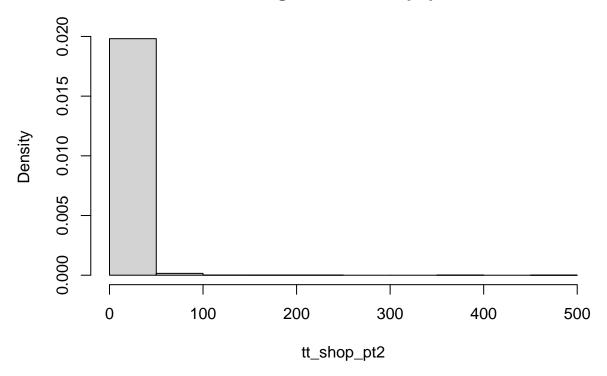


tt_shop_pt2: Travel time PT for shopping trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	6	9	11.46	13	460	37490

Histogram of tt_shop_pt2

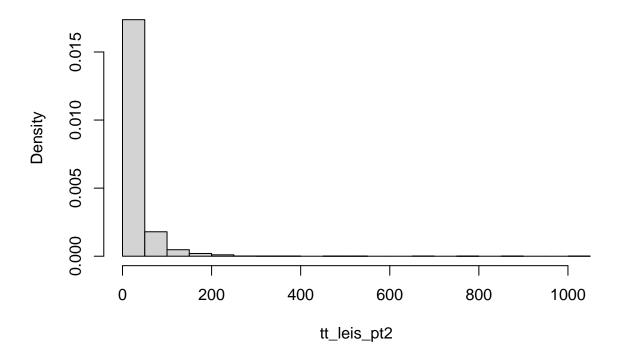


tt_leis_pt2: Travel time PT for leisure trip location 2 (SP residential/workplace location choice / min.)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
4	9	15	27.81	31	1011	37490

Histogram of tt_leis_pt2

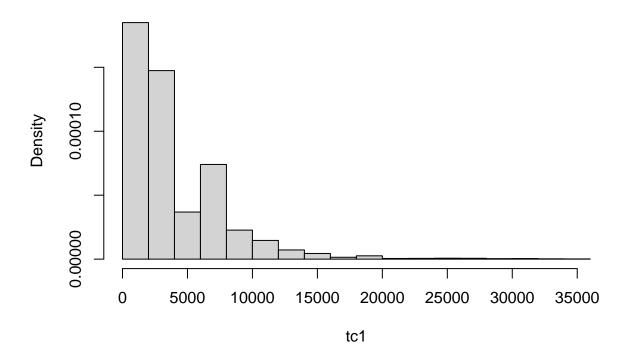


tc1: Monthly housing plus travel cost/income minus travel cost location 1 (SP residential/workplace location choice / CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
108	1653	2569	4124	6159	34435	26708

Histogram of tc1

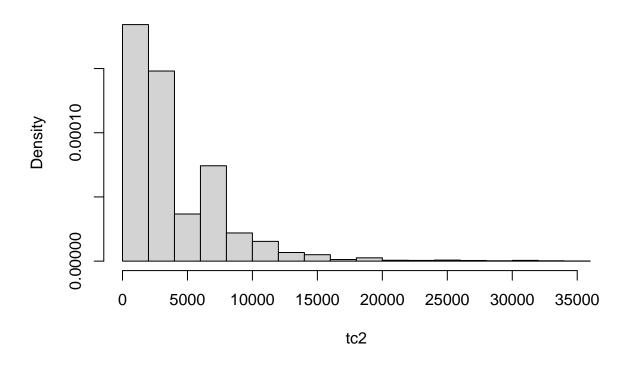


tc2: Monthly housing plus travel cost/income minus travel cost location 1 (SP residential/workplace location choice / CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
108	1655	2566	4122	6171	34178	26708

Histogram of tc2

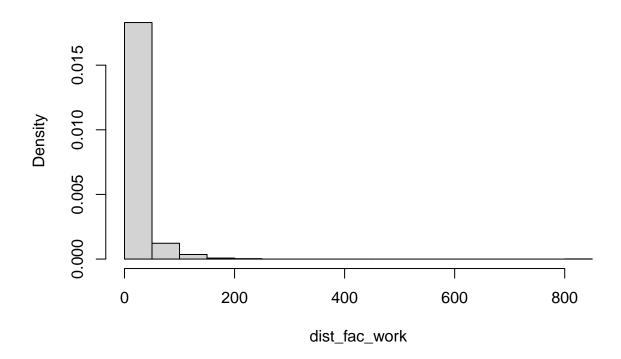


dist_fac_work: Generalized distance work trip (km): Average total work trip distance (start to end location) for all (available) transport modes

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0.05	4.857	12.23	21.07	27.43	845.8

Histogram of dist_fac_work

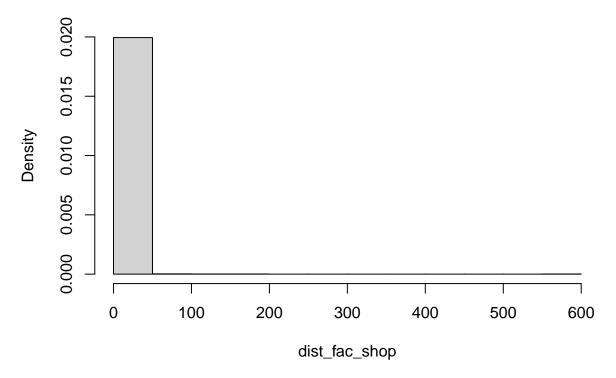


dist_fac_shop: Generalized distance shopping trip (km): Average total shopping trip distance (start to end location) for all (available) transport modes

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0.05	1	2.035	4.435	5.082	560.3

Histogram of dist_fac_shop

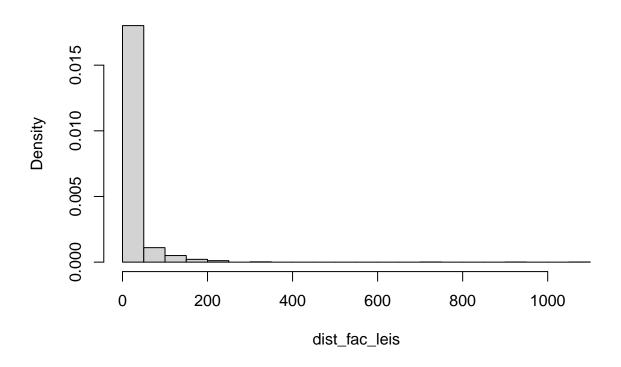


dist_fac_leis: Generalized distance leisure trip (km): Average total leisure trip distance (start to end location) for all (available) transport modes

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0.05	2.626	7.075	21.02	19.91	1093

Histogram of dist_fac_leis



Q9.1_1: Everybody who shows efforts can do career.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	671	3729	5125	27282	11465

Q9.1_2: Working at the same place the whole life is a horrible scenario.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	6203	13033	12770	10146	6120

Q9.1_3: It's pleasure to meet people that are different to myself.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	563	4328	8484	19375	15522

Q9.1_4: I want to keep the options open to give my life a whole new direction every few years.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	3174	14375	11274	14044	5405

Q9.1_5: Cleanliness, order and thrift are very important to me.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	296	3438	8032	22390	14116

Q9.1_6: I prefer physical distance between myself and my neighbors.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	883	6313	10383	19802	10891

Q9.1_7: Women in our society should have the same job opportunities as men.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	1425	2851	6308	12233	25455

Q9.1_8: Obedience and respect for authority are the most important virtues children should learn.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	5396	9899	12431	13971	6575

Q9.1_9: I shape my life according to my wishes and needs.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	187	1501	6528	26767	13289

Q9.1_10: I live entirely for my family.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	1373	5646	13054	18343	9856

Q9.2_1: Reliability in travel times is more important to me than speed.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	888	7577	9456	22651	7700

Q9.2_2: My privacy when travelling is more important to me than the travel expenses.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	5572	15505	9548	11869	5778

Q9.2_3: It is important to be able to use the travel time to work, listen to music, read or relax.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	5316	12017	8063	13704	9172

Q9.2_4: I try to avoid crowds and traffic jams as much as possible.

Format = labelled, integer, numeric. Labels: 1 = Completely disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Completely agree.

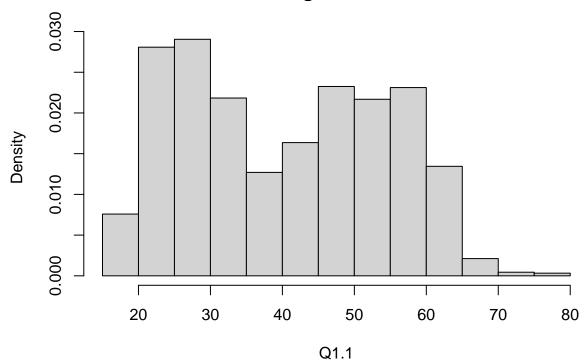
	Completely disagree	Disagree	Neutral	Agree	Completely agree
Count	481	3311	5348	23962	15170

Q1.1: Age (years)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
18	28	41	40.73	53	78

Histogram of Q1.1



Q1.2: Gender

Format = labelled, integer, numeric. Labels: 1 = Other, 2 = Male, 3 = Female.

	Other	Male	Female
Count	54	24146	24072

Q1.3: Highest education degree

Format = labelled, integer, numeric. Labels: 1 = Vocational school/college, 2 = Business school/college, 3 = Higher professional school, 4 = Polytechnic institute, 5 = Apprenticeship, 6 = Maturity/high school/teacher training college, 7 = Master certificate/Swiss federal diploma, 8 = Obligatory school, 9 = Obligatory school not completed, 10 = Technical school/college, 11 = University degree.

	Vocational sch	nool/college	Busin	ess school/co	llege
Count		3035			1019
	Higher profe	essional school	Polyt	technic institu	ute
Count		7495		(696
		Maturi	ty/high so	chool/teacher	
	Apprenticeship Count 13337		training college 4899		
Count					
	Master certificat	te/Swiss federal			
		diploma	Oblig	atory school	
Count		3623		1157	
Ob	oligatory school not				
	completed	Technical school	/college	University	deg
$\overline{ ext{unt}}$	27		1211		117

Q1.4: Marital status

Format = labelled, integer, numeric. Labels: 1 = Civil union, 2 = Cancelled civil union, 3 = Divorced, 4 = Single, 5 = Married, 6 = Married, separated, 7 = Widowed.

	Civil union	Cancelled civil union	Divorced	Single	Married
Count	565	54	3649	23196	19792

	Married, separated	Widowed
Count	588	428

swiss: Swiss citizenship

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	2288	45984

second_citizenship: Second citizenship (if Swiss)

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes
Count	42286	5986

Q1.6: Driving license (car)

Format = labelled, integer, numeric. Labels: 1 = Yes, 2 = No.

	Yes	No
Count	45375	2897

Q1.7: Car availability for private use

Format = labelled, integer, numeric. Labels: 1 = No driving license, 2 = Often, 3 = Always, 4 = Never, 5 = Rarely.

	No driving license	Often	Always	Never	Rarely
Count	2897	5404	33221	1440	5310

Q1.16.1: Company car ownership

Format = labelled, integer, numeric. Labels: 1 = Not applicable, 2 = Yes, 3 = No, 4 = Perhaps (question not asked in pre-test).

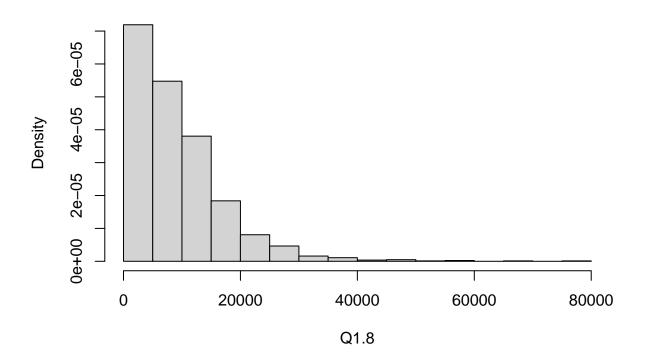
				Perhaps (question not asked in
	Not applicable	Yes	No	pre-test)
Count	7416	3171	34748	2937

Q1.8: Yearly mileage with private car (km/year)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	3000	10000	10076	15000	80000	4337

Histogram of Q1.8



Q1.10: Motorbike license

Format = labelled, integer, numeric. Labels: 1 = Yes, 2 = No.

	Yes	No
Count	18176	30096

Q1.11: Motorbike availability

Format = labelled, integer, numeric. Labels: 1 = No driving license, 2 = Often, 3 = Always, 4 = Never, 5 = Rarely.

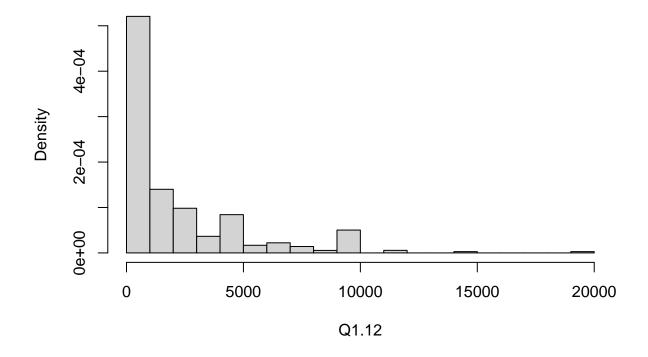
	No driving license	Often	Always	Never	Rarely
Count	30096	671	6762	8593	2150

Q1.12: Yearly mileage with motorbike (km/year)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	500	1000	2493	3000	20000	38689

Histogram of Q1.12



Q1.13_1: Season ticket PT: Half-fare card

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	22890	25382

Q1.13_2: Season ticket PT: Regional season ticket 1st class

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes	NA's
Count	37833	243	10196

Q1.13_3: Season ticket PT: Regional season ticket 2nd class

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	43133	5139

Q1.13_4: Season ticket PT: National season ticket 1st class

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes	NA's
Count	46154	1286	832

Q1.13_5: Season ticket PT: National season ticket 2nd class

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	42123	6149

$Q1.13_6:$ Season ticket PT: Free ride after 7PM

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes	NA's
Count	31857	270	16145

Q1.13_7: Season ticket PT: Specific PT route pass

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	45932	2340

Q1.13_8: Season ticket PT: Other

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	47006	1266

Q1.13_9: No PT season ticket(s) in possession

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	35347	12925

Q1.14: Car sharing member

Format = labelled, integer, numeric. Labels: 1 = Yes, 2 = No.

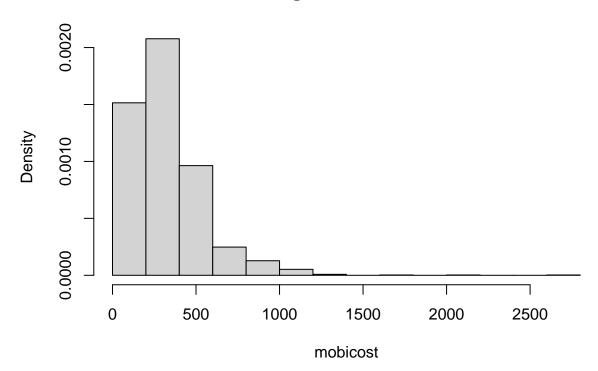
	Yes	No
Count	3275	44997

mobicost: Total monthly mobility expenditures (CHF/month)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
20	175	286.7	326.1	420	2777

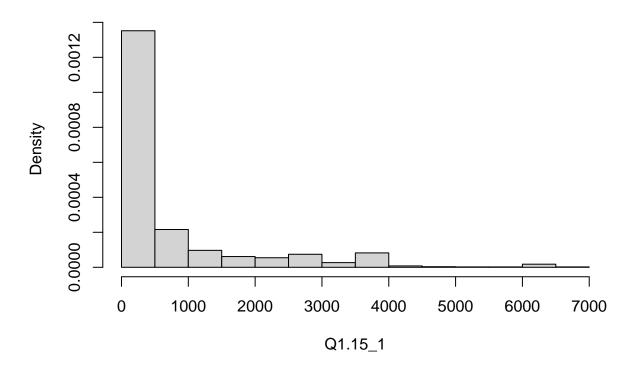
Histogram of mobicost



Q1.15_1: Yearly expenditures for PT season tickets (CHF/year)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	200	768.7	1000	6900

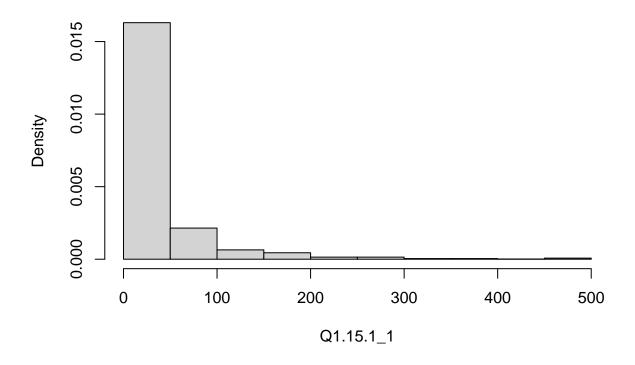


Q1.15.1_1: Monthly expenditures for PT trip tickets (variable costs / CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	20	36.46	50	500

Histogram of Q1.15.1_1

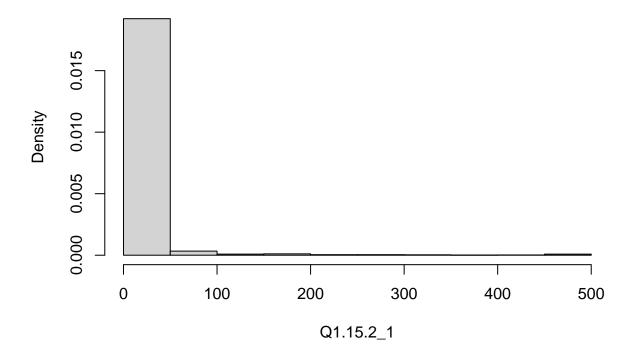


Q1.15.2_1: Monthly expenditures for vehicle rentals (CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	9.762	0	500

Histogram of Q1.15.2_1

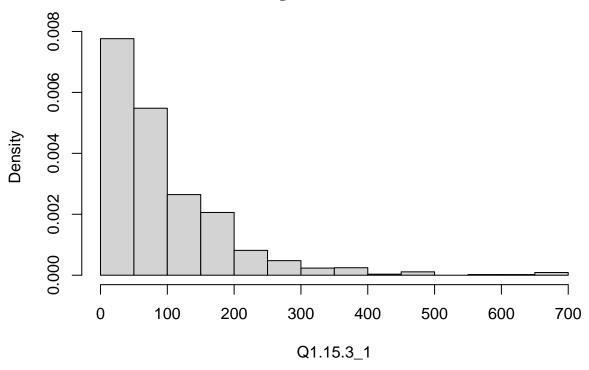


Q1.15.3_1: Monthly expenditures for private vehicles (variable costs / $\mathrm{CHF/month}$)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	30	80	101.1	150	700



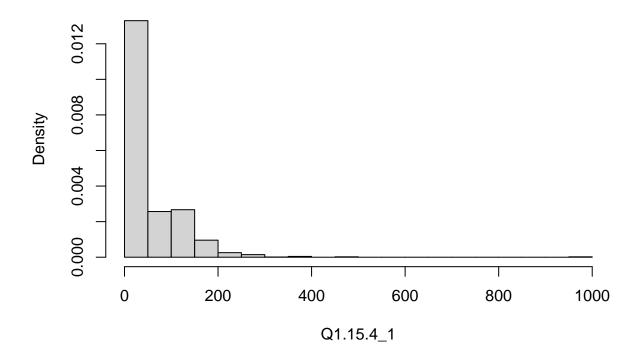


Q1.15.4_1: Monthly expenditures for parking space(s) (CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	45.7	100	1000

Histogram of Q1.15.4_1

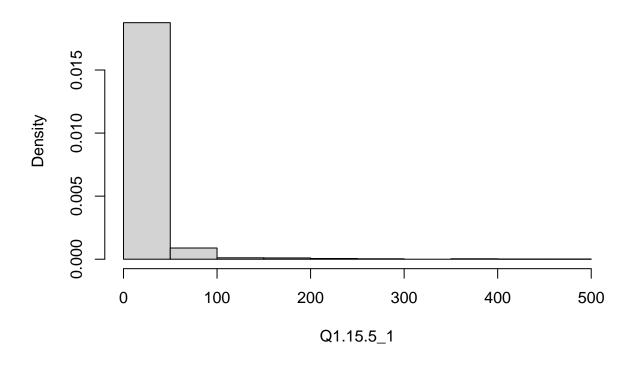


Q1.15.5_1: Monthly expenditures for parking (variable costs / CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	10	18.38	20	500

Histogram of Q1.15.5_1



Q2.2: Residential location area

Format = labelled, integer, numeric. Labels: 1 = Rural, 2 = City, 3 = City center, 4 = Agglomeration.

	Rural	City	City center	Agglomeration
Count	23636	8050	2880	13706

guete: PT accessibility measure of home location according to definition from ARE (see https://www.are.admin.ch/)

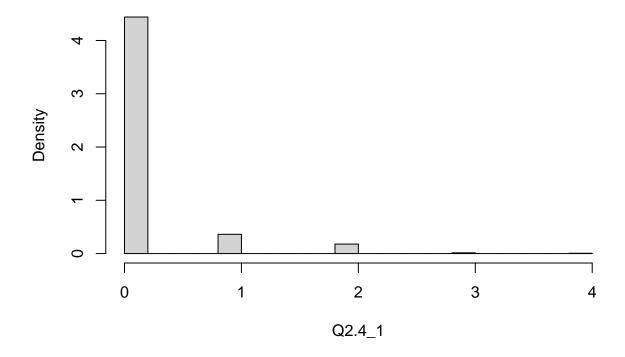
Format = labelled, numeric. Labels: 1 = Very good, 2 = Good, 3 = Acceptable, 4 = Bad, 5 = Very bad.

	Very good	Good	Acceptable	Bad	Very bad
Count	9388	9072	11143	12610	6059

$Q2.4_1$: Number of kids in household < 6 years

Format = labelled, integer, numeric.

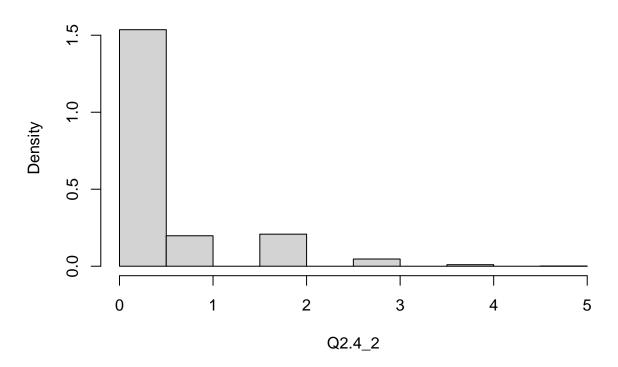
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	0.1563	0	4



$Q2.4_2$: Number of kids in household 6 - 18 years

Format = labelled, integer, numeric.

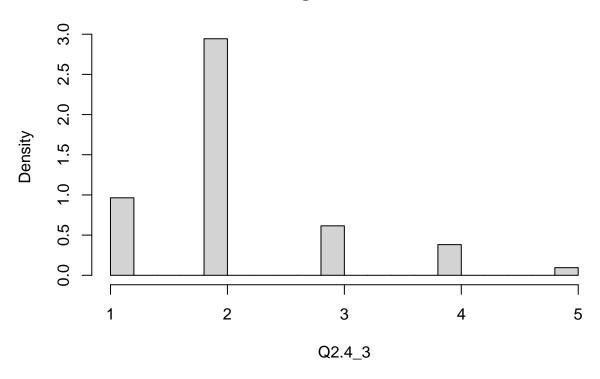
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	0.4001	0	5



$Q2.4_3$: Number of adults in household (including respondent)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	2	2	2.14	2	5



hh_income_cat: Household income category

Format = labelled, numeric. Labels: 1 = < 2000 CHF/month, 2 = 2'000 CHF/month - 3'999 CHF/month, 3 = 4'000 CHF/month - 5'999 CHF/month, 4 = 6'000 CHF/month - 7'999 CHF/month, 5 = 8'000 CHF/month - 9'999 CHF/month, 6 = 10'000 CHF/month - 11'999 CHF/month, 7 = 12'000 CHF/month - 13'999 CHF/month, 8 = 14'000 CHF/month - 15'999 CHF/month, 9 = > 16'000 CHF/month.

2'000 CHF/month - 3'999		
CHF/month	< 2000 CHF/month	
1706	586	Count
6'000 CHF/month - 7'999	4'000 CHF/month - 5'999	
CHF/month	CHF/month	
7981	5553	Count
10'000 CHF/month - 11'999	8'000 CHF/month - 9'999	
CHF/month	CHF/month	
6968	7988	Count
14'000 CHF/month - 15'99	12'000 CHF/month - 13'999	
,	CHF/month	
CHF/mont		

	>= 16'000 CHF/month	NA's
Count	5589	2980

hh_income_cat_imp: Household income category (imputed)

Format = labelled, numeric. Labels: 1 = < 2000 CHF/month, 2 = 2'000 CHF/month - 3'999 CHF/month, 3 = 4'000 CHF/month - 5'999 CHF/month, 4 = 6'000 CHF/month - 7'999 CHF/month, 5 = 8'000 CHF/month - 9'999 CHF/month, 6 = 10'000 CHF/month - 11'999 CHF/month, 7 = 12'000 CHF/month - 13'999 CHF/month, 8 = 14'000 CHF/month - 15'999 CHF/month, 9 = > 16'000 CHF/month.

		2'000 CHF/month - 3'999
	< 2000 CHF/month	CHF/month
Count	586	1706
	4'000 CHF/month - 5'999	6'000 CHF/month - 7'999
	CHF/month	CHF/month
Count	5705	8472
	8'000 CHF/month - 9'999	10'000 CHF/month - 11'999
	CHF/month	CHF/month
Count	8862	7571
	12'000 CHF/month - 13'999	14'000 CHF/month - 15'999
	CHF/month	CHF/month
Count	6132	362.
	>= 16'000	CHF/month

5616

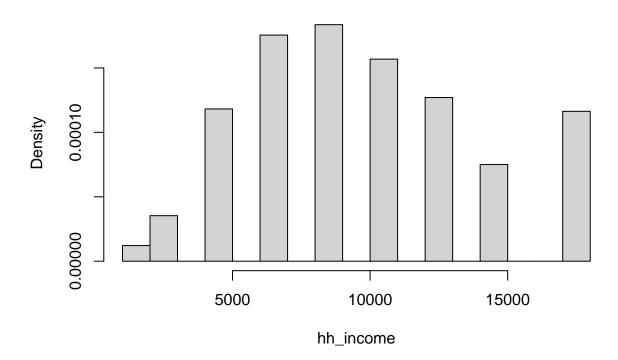
Count

hh_income: Household income numeric (imputed / CHF/month)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1000	7000	9000	10186	13000	18000

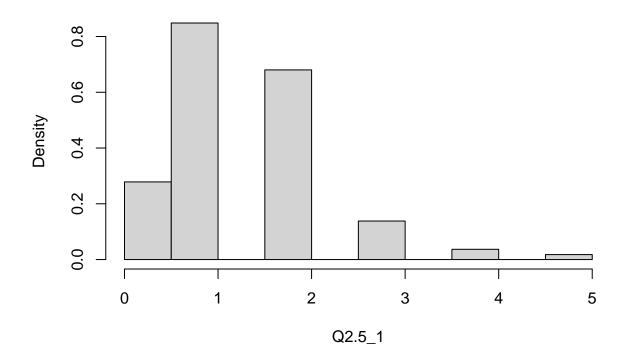
Histogram of hh_income



$Q2.5_1$: Number of cars in household

Format = labelled, integer, numeric.

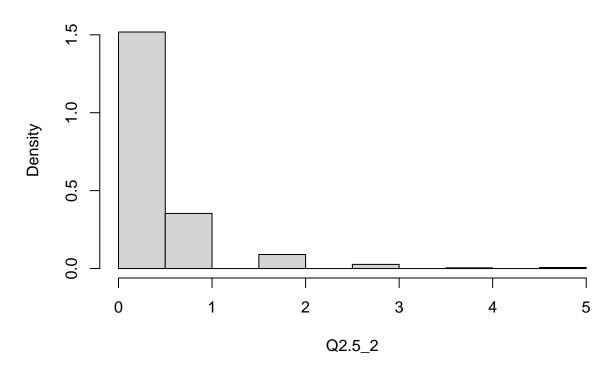
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	1	1	1.43	2	5



$Q2.5_2$: Number of motorbikes in household

Format = labelled, integer, numeric.

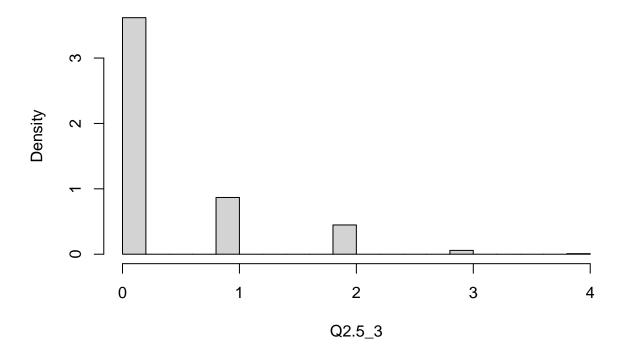
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	0.3329	0	5



$\tt Q2.5_3:$ Number of e-bikes in household with max. speed 25 km/h

Format = labelled, integer, numeric.

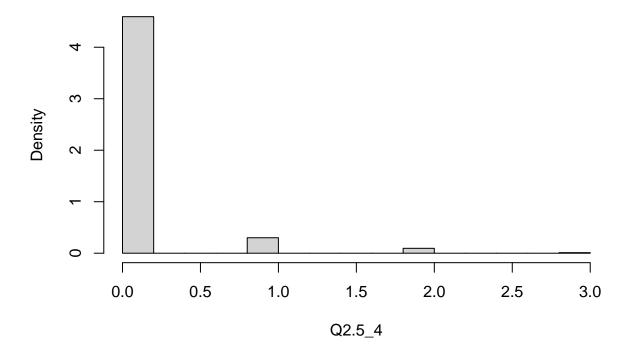
Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	0.3944	1	4



$\tt Q2.5_4:$ Number of e-bikes in household with max. speed 45 km/h

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	0	0.1047	0	3

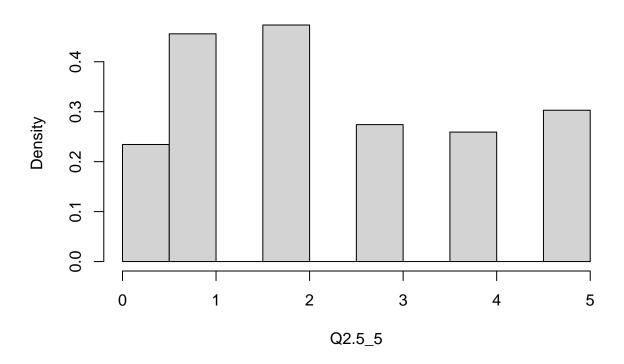


$Q2.5_5$: Number of normal bikes in household

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	1	2	2.388	4	5

Histogram of Q2.5_5



Q2.6_1: Car parking spot on private area

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	10224	38048

Q2.6_2: Car parking spot on public area

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	44911	3361

Q2.7: Housing type: Owned or rented house/appartment

Format = labelled, integer, numeric. Labels: 1 = Work appartment, 2 = Owned, 3 = Rented.

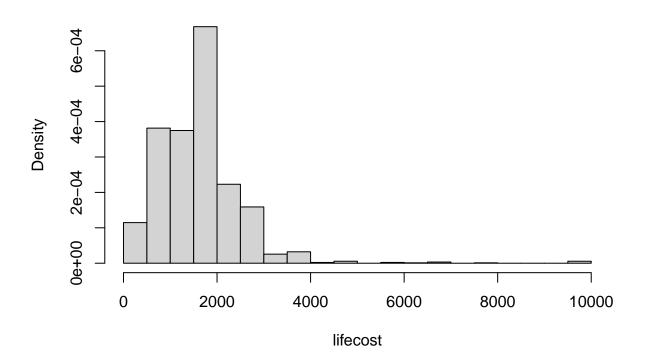
	Work appartment	Owned	Rented
Count	54	23744	24474

lifecost: Monthly housing expenditures for owned or rented house/appartment (CHF/month)

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
100	1200	1600	1678	2000	10000

Histogram of lifecost



$Q2.10_2$: Housing type: External space = garden

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	22006	26266

$Q2.10_3$: Housing type: External space = balcony

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	21602	26670

$Q2.10_4$: Housing type: External space = terrasse

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

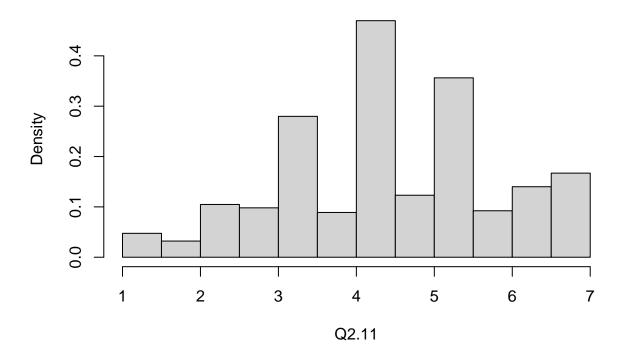
	No	Yes
Count	29411	18861

Q2.11: Housing type: Number of rooms

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	3.5	4.5	4.671	5.5	7

Histogram of Q2.11



Q2.12: Housing type: Type of building

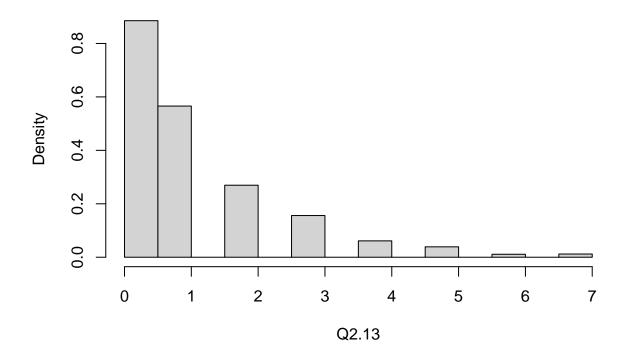
Format = labelled, integer, numeric. Labels: 1 = Single-family house, 2 = High rise, 3 = Multi-family house.

	Single-family house	High rise	Multi-family house
Count	18352	2899	27021

$\ \ \, \mathbb{Q}2.13$: Number of times moved in the last $10~\mathrm{years}$

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	1	1.082	2	7

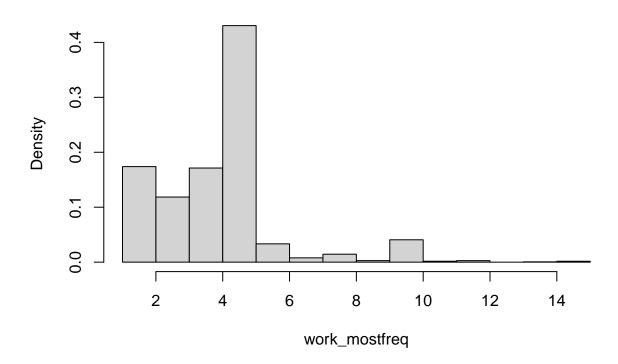


work_mostfreq: Number of specific RP reference work trips in a regular week

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	3	5	4.358	5	15

Histogram of work_mostfreq



Q3.1.3_1: Work trip usually conducted during peak time $(7\text{-}9\mathrm{AM}\ \mathrm{or}\ 16.30\text{-}18.30\mathrm{PM})$

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	13267	35005

Q3.2_1: Car parking spot on private area at workplace

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes	NA's
Count	18352	2899	27021

Q3.2_2: Car parking spot on public area at workplace

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

	No	Yes
Count	42894	5378

Q3.3: Location type of workplace

Format = labelled, integer, numeric. Labels: 1 = Rural, 2 = City, 3 = City center, 4 = Agglomeration.

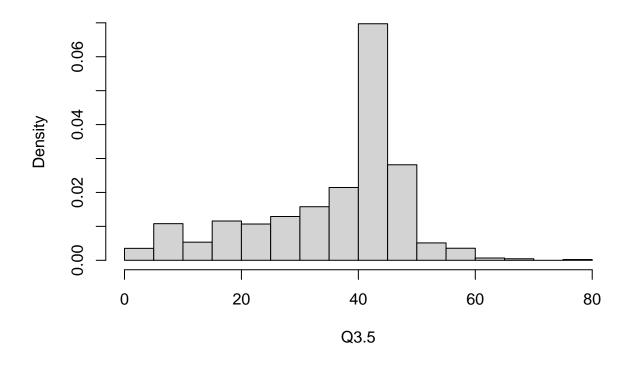
	Rural	City	City center	Agglomeration
Count	12879	12501	10323	12569

Q3.5: Average weekly workload (h/week)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	30	42	36.66	45	80

Histogram of Q3.5

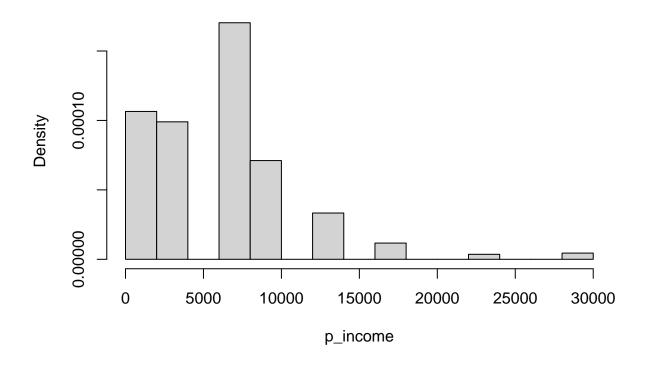


p_income: Personal gross labor income (CHF/month)

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
750	4000	7000	6580	7000	30000

Histogram of p_income



Q3.7: Job type

Format = labelled, integer, numeric. Labels: 1 = Employed in executing position, 2 = Employed in management/leading position, 3 = Selfemployed.

		Employed in management/leading
	Employed in executing position	position
Count	34199	10807

	Selfemployed
Count	3266

Q3.8: Possibility for home-office

Format = labelled, integer, numeric. Labels: 1 = Yes, 2 = No.

	Yes	No
Count	22389	25883

Q3.9: Possibility for flexible work schedule

Format = labelled, integer, numeric. Labels: 1 = Yes, 2 = No.

	Yes	No
Count	27189	21083

Q3.10: Firm size

Format = labelled, integer, numeric. Labels: 1 = 250 employees, 2 = 1-9 employees, 3 = 10-49 employees, 4 = 50-249 employees.

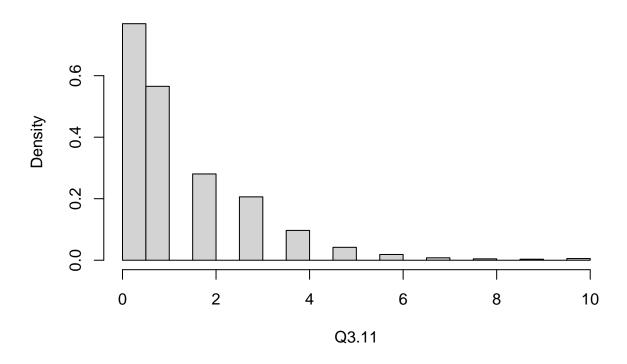
	> 250 employees	1-9 employees	10-49 employees	50-249 employees
Count	19130	7111	10335	11696

Q3.11: Number of times changed workplace in the last 10 years

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	1	1.315	2	10

Histogram of Q3.11

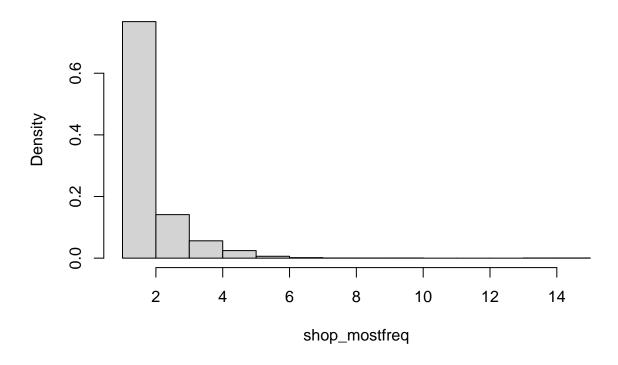


shop_mostfreq: Number of specific (most frequent) RP reference shopping trips in a regular week

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	1	2	1.935	2	15

Histogram of shop_mostfreq



$\mathtt{Q4.1.4_1:}$ Shopping trip usually conducted during peak time (7-9AM or 16.30-18.30PM)

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

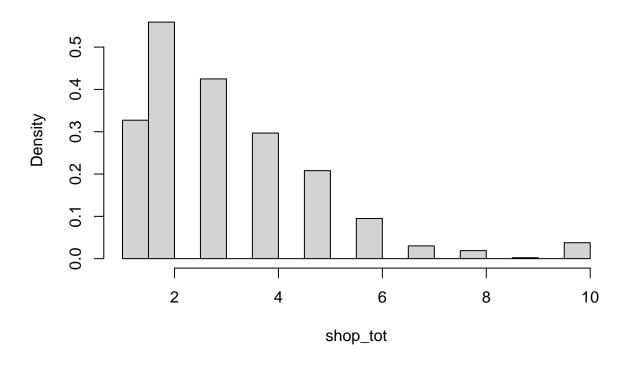
	No	Yes
Count	36015	12257

shop_tot: Total number of shopping trips in a regular week

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	2	3	3.138	4	10	21564

Histogram of shop_tot

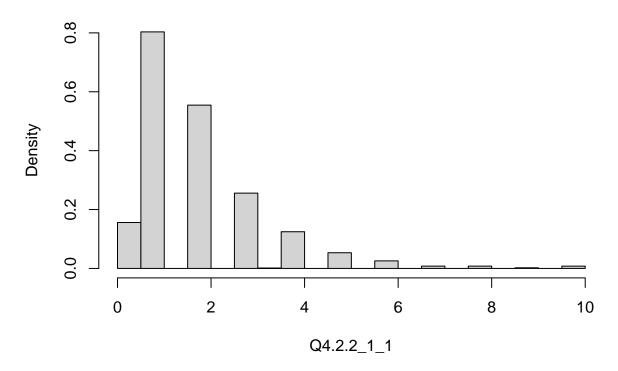


$\tt Q4.2.2_1_1:$ Number of shopping trips in a regular week starting from home

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	1	2	1.909	2	10	26

Histogram of Q4.2.2_1_1

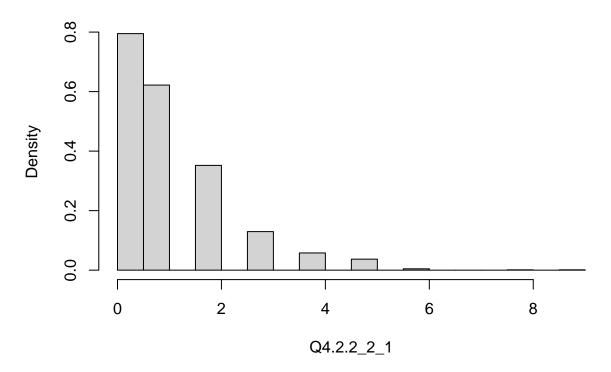


${\tt Q4.2.2_2_1:}$ Number of shopping trips in a regular week starting from workplace

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	1.089	2	9	162

Histogram of Q4.2.2_2_1

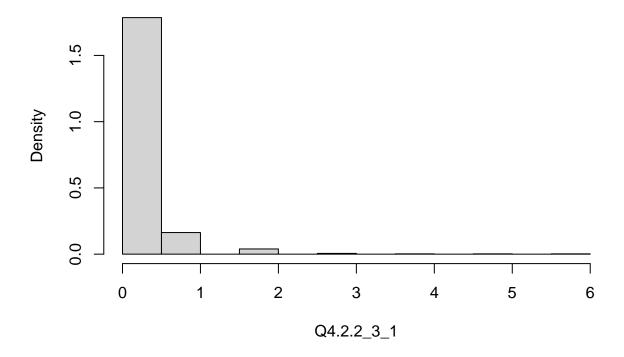


$\tt Q4.2.2_3_1:$ Number of shopping trips in a regular week starting from other place

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.146	0	6	188

Histogram of Q4.2.2_3_1

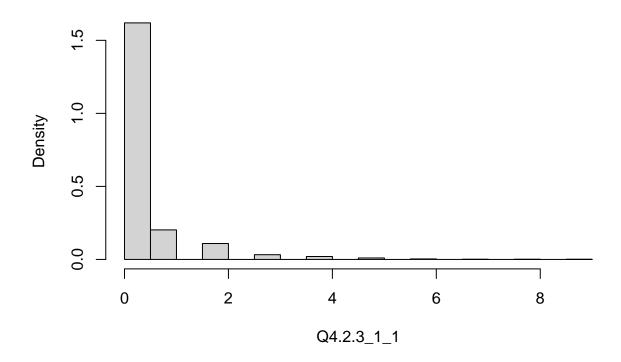


$Q4.2.3_1_1:$ Number of shopping trips in a regular week using PT

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.3481	0	9	108

Histogram of Q4.2.3_1_1

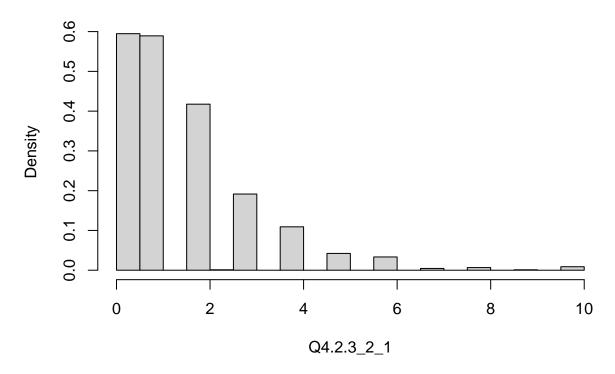


$\tt Q4.2.3_2_1:$ Number of shopping trips in a regular week using <code>car/motorbike</code>

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	0	1	1.517	2	10

Histogram of Q4.2.3_2_1

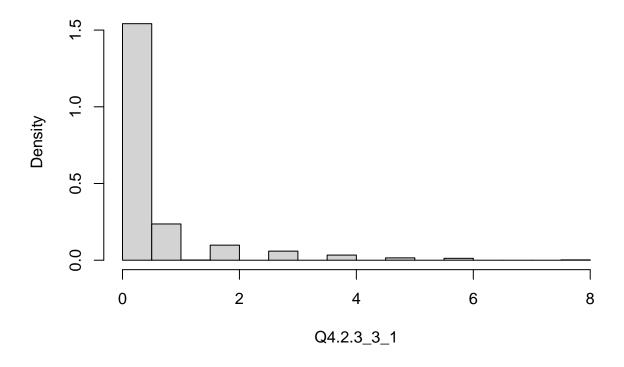


$\tt Q4.2.3_3_1:$ Number of shopping trips in a regular week using bike/e-bike

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.4579	0	8	81

Histogram of Q4.2.3_3_1

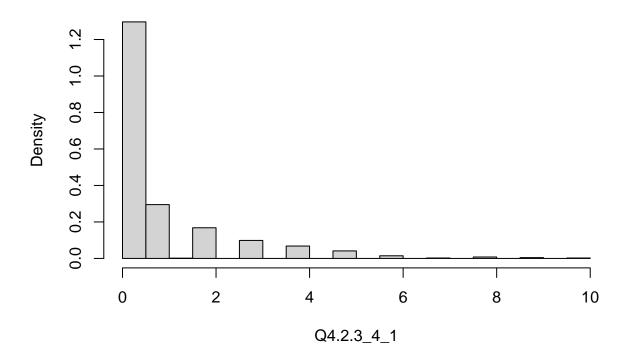


$\tt Q4.2.3_4_1:$ Number of shopping trips in a regular week using other mode

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.8184	1	10	27

Histogram of Q4.2.3_4_1

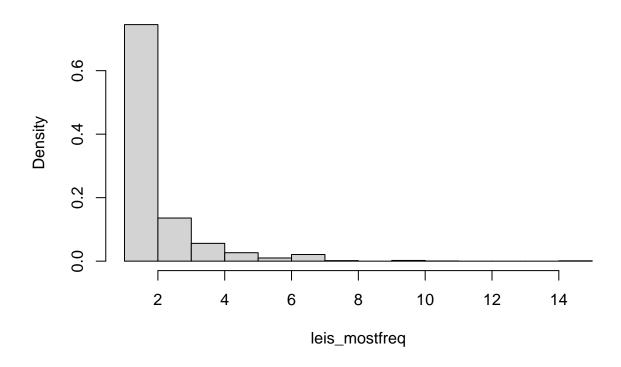


leis_mostfreq: Number of specific (most frequent) RP reference leisure trips in a regular week

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
1	1	2	2.045	3	15

Histogram of leis_mostfreq



$\tt Q5.1.4_1:$ Leisure trip usually conducted during peak time (7-9AM or 16.30-18.30PM)

Format = labelled, integer, numeric. Labels: 1 = No, 2 = Yes.

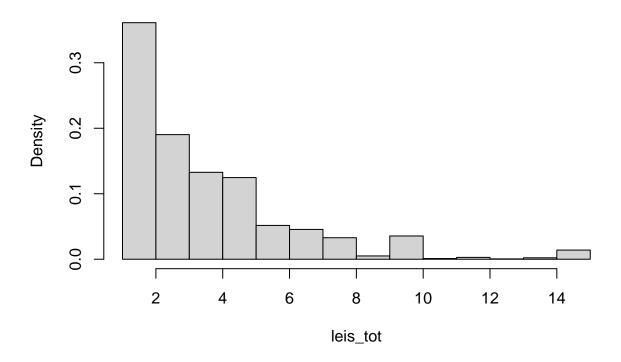
	No	Yes
Count	39512	8760

leis_tot: Total number of leisure trips in a regular week

Format = labelled, integer, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
1	2	3	3.873	5	15	21564

Histogram of leis_tot

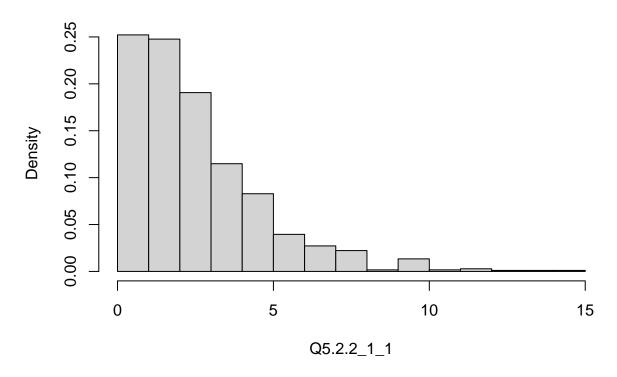


$\tt Q5.2.2_1_1:$ Number of leisure trips in a regular week starting from home

 $Format = labelled, \, numeric.$

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.
0	1	2.7	3.019	4	15

Histogram of Q5.2.2_1_1

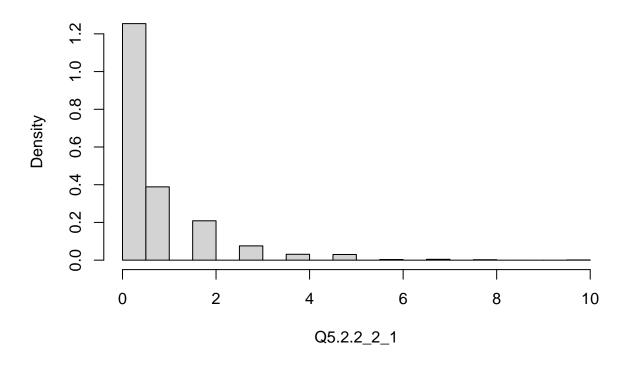


$\tt Q5.2.2_2_1:$ Number of leisure trips in a regular week starting from workplace

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.6952	1	10	108

Histogram of Q5.2.2_2_1

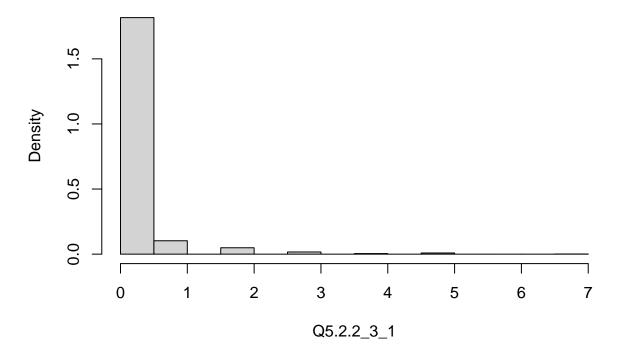


$\tt Q5.2.2_3_1:$ Number of leisure trips in a regular week starting from other place

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.161	0	7	108

Histogram of Q5.2.2_3_1

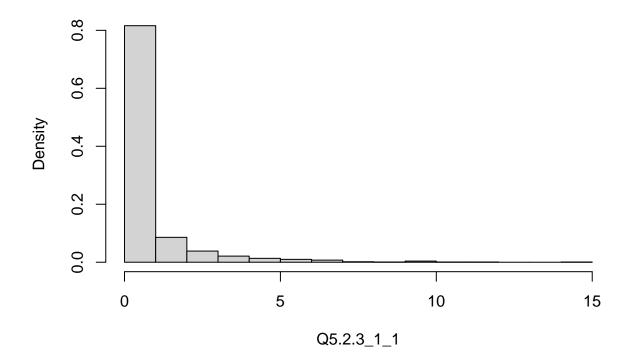


 $\tt Q5.2.3_1_1:$ Number of leisure trips in a regular week using PT

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.7823	1	15	162

Histogram of Q5.2.3_1_1

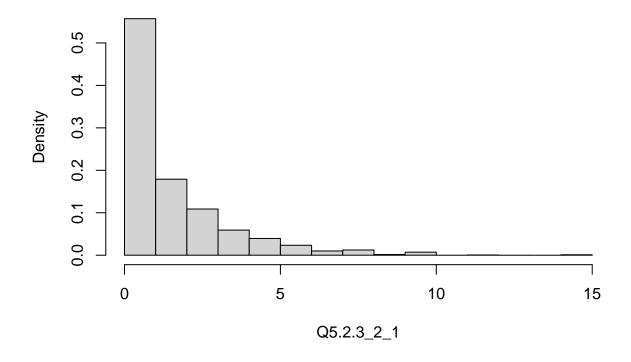


$\tt Q5.2.3_2_1:$ Number of leisure trips in a regular week using <code>car/motorbike</code>

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	1	1.782	3	15	27

Histogram of Q5.2.3_2_1

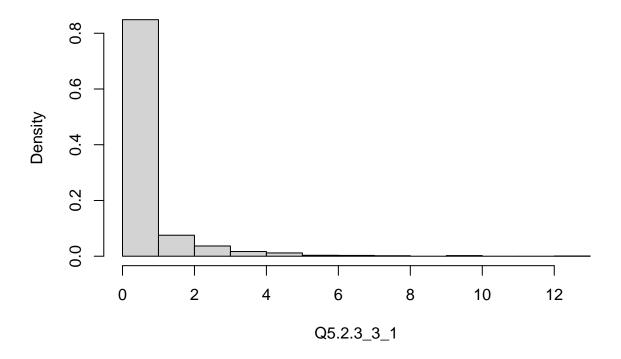


$\tt Q5.2.3_3_1:$ Number of leisure trips in a regular week using bike/e-bike

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.6022	1	13	108

Histogram of Q5.2.3_3_1

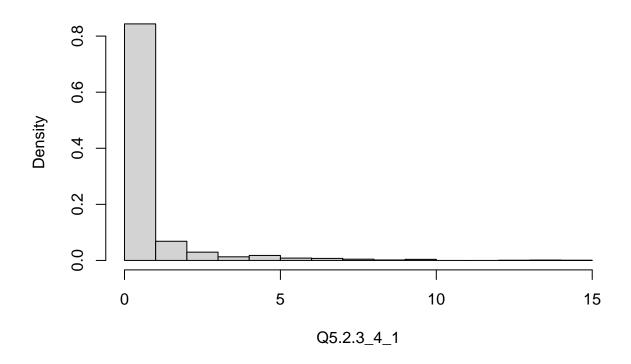


$Q5.2.3_4_1$: Number of leisure trips in a regular week using other mode

Format = labelled, numeric.

Min.	1st Qu.	Median	Mean	3rd Qu.	Max.	NA's
0	0	0	0.7149	1	15	188

Histogram of Q5.2.3_4_1



work_w_cons: Walk considered for RP/SP mode choice work trip

	No	Yes	NA's
Count	13801	2125	32346

${\tt work_b_cons} :$ Bike/e-bike considered for RP/SP mode choice work trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	12977	2949	32346

work_pt_cons: PT considered for RP/SP mode choice work trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	6882	9044	32346

work_car_cons: Car/motorbike considered for RP/SP mode choice work trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	5341	10585	32346

$shop_w_cons$: Walk considered for RP/SP mode choice shopping trip

	No	Yes	NA's
Count	9479	6447	32346

shop_b_cons: Bike/e-bike considered for RP/SP mode choice shopping trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	9564	6362	32346

shop_pt_cons: PT considered for RP/SP mode choice shopping trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	12770	3156	32346

shop_car_cons: Car/motorbike considered for RP/SP mode choice shopping trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	4508	11418	32346

leis_w_cons: Walk considered for RP/SP mode choice leisure trip

	No	Yes	NA's
Count	11921	4005	32346

leis_b_cons: Bike/e-bike considered for RP/SP mode choice leisure trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	10083	5843	32346

leis_pt_cons: PT considered for RP/SP mode choice leisure trip

Format = labelled, numeric. Labels: 0 = No, 1 = Yes.

	No	Yes	NA's
Count	10045	5881	32346

$\label{leis_car_cons} \mbox{ Car/motorbike considered for RP/SP mode choice leisure trip}$

	No	Yes	NA's
Count	5405	10521	32346