Variables

Variable description

File: `var/variables.csv`

id Integer identifier of the variable (corresponds to the column number in the limesurvey output).

code Unique alphanumeric code for each variable.

name Full name of the variable (as provided in limesurvey output).

main Name of the main question (substring of `name`).

sub Name of the subquestion (substring of `name`). Empty if there are no subquestions.

type Type of the variable. Either `categorical`, `continuous`, or `qualitative`.

cat.scale If the `type` is `categorical`, `cat.scale` indicates the scale of possible answers (i.e. the levels) that correspond to the variable. More information on the scales is provided in the file `cat.levels.csv`.

cat.ref If the `type` is `categorical`, `cat.ref` indicates the reference level of the variable. If, a priori, there was no natural choice for the reference level (as in the case of gender), it was chosen based on response frequency.

cat.ord If the `type` is `categorical`, `cat.ord` indicates (`TRUE` or `FALSE`) whether the categories of the variable are ordered.

cont.mean If the `type` is `continuous`, `cont.mean` indicates the mean of the responses over the sample.

cont.sd If the `type` is `continuous`, `cont.sd` indicates the standard deviation of the responses over the sample.

category.* Indicates whether the variable belongs, respectively, to the group of variables related to *personal stakes*, *threat appraisal*, *coping appraisal*, *control*, or *adaptation*. The groups *personal stakes*, *threat appraisal*, and *coping appraisal* are not mutually exclusive (one variable can belong to several groups). However, if a variable belongs to either either the group `control` or `adaptation`, it cannot be part of another group. The `control` variables correspond to demographic control variables, and the `adaptation` variables correspond to adaptive behaviours.

question.main String of the main question, as formulated in the English language survey.

question.sub String of the subquestion, as formulated in the English language survey.

Levels for categorical variables

File: `var/cat.levels.csv`

cat.scale Identifies the scale (lower-case letter).

level.id Identifies the position of the level within the corresponding scale (integer).

level String of the level, as formulated in the English language survey.

Results

Random forest: Variable importance

File: `rf/varimp.csv`

resp Identity of the binary version of the adaptation variable (used as a response variable), corresponding to the codes in the variable table. `Count` represents the sum of all ten binary adaption variables.

expl Identity of the explanatory variable, corresponding to the codes in `var/variables.csv`.

category Group that the explanatory variable belongs to (either `personal_stakes`, `threat_appraisal`, `coping_appraisal`, `control`). If an explanatory variable belongs to several groups, it will appear several times for the same adaptations variable.

importance Importance score of the variable given in `expl` on the outcome given in `resp`. Importance scores as based on permutations and scaled by standard error, as in Breiman (2001).

pvalue p value for the importance score, expressing the probability to obtain the observed importance score under the null hypothesis that the explanatory variable is not important. The approach of Altmann et al. (2010) is used to calculate p values based on permutations.

Random forest: Importance by category

File: `rf/catimp.csv`

This table accompanies the plots of variable importance values by adaptation and category (`plots/rf/catimp.pdf`). Only variables for the p-value of the importance is < 0.05 have been used to calculate the category summaries.

resp Identity of the binary version of the adaptation variable (used as a response variable), corresponding to the codes in the variable table. `Count` represents the sum of all ten binary adaption variables.

category Group of explanatory variables (either `personal_stakes`, `threat_appraisal`, `coping_appraisal`, `control`).

importance.min Importance score of the least important variable belonging to `category` on the outcome given in `resp`.

importance.median Median importance score of all variables belonging to `category` on the outcome given in `resp`.

importance.mean Average importance score of all variables belonging to `category` on the outcome given in `resp`.

importance.max Importance score of the most important variable belonging to `category` on the outcome given in `resp`.

cat.n Number of variables in the given `category` that are deemed important (based on permutation tests).

IRT: Marginal effects at the mean

File: `irt/predictions.csv`

This table accompanies the plots of the marginal effect estimates in `plots/irt/response.pdf` and `plots/irt/link.pdf`.

var.code Identity of the explanatory variable for which the marginal effect is calculated. Corresponds to the codes in `var/variables.csv`.

adapt.code Identity of the adaptation variable for which the marginal effect is calculated. Corresponds to the codes in `var/variables.csv`.

var.level Level of the explanatory variable for which the marginal effect is calculated.

linpred.median, linpred.q5, linpred.q25, linpred.q75, linpred.q95
Linear predictor (i.e. log odds of the willingness to adapt) for the adaptation variable if the explanatory variable is set to `var.level`. Provided are the median, as well as the 5th, 25th, 75th, and 95th percentiles. The 50% equal-tailed Bayesian credible interval is situated between the 25th and 75th percentiles. The 90% interval is situated between the 5th and 95th percentiles. These values are presented graphically in `plots/irt/linpred.pdf`.

prob.median, prob.q5, prob.q25, prob.q75, prob.q95 Predicted response (i.e. probability of the willingness to adapt) for the adaptation variable if the explanatory variable is set to `var.level`. Provided are the median, as well as the 5th, 25th, 75th, and 95th percentiles. The 50% equal-tailed Bayesian credible interval is situated between the 25th and 75th percentiles. The 90% interval is situated between the 5th and 95th percentiles. These values are presented graphically in `plots/irt/prob.pdf`.

n Number of responses for the given level of the explanatory variable.

IRT: Comparisons

File: `irt/comparisons.csv`

This table accompanies the plots of the comparison matrices in `plots/irt/response.pdf` and `plots/irt/link.pdf`.

var.code Identity of the explanatory variable for which marginal effects are compared. Corresponds to the codes in `var/variables.csv`.

adapt.code Identity of the adaptation variable for which the marginal effects are compared. Corresponds to the codes in `var/variables.csv`.

var.level1 The first of two levels of the explanatory variable that are compared against each other.

var.level2 The second of two levels of the explanatory variable that are compared against each other.

prob.diff.median Median difference of willingness to adapt, calculated between `var.level1` and `var.level1`. The difference is expressed in percentage points.

prob.diff.ci.u Lower limit of the 90% credibility interval for the difference in willingness to adapt, between `var.level1` and `var.level1`. The difference is expressed in percentage points.

prob.diff.ci.u Upper limit of the 90% credibility interval for the difference in willingness to adapt, between `var.level1` and `var.level1`. The difference is expressed in percentage points.

linpred.diff.median Median difference in willingness to adapt, calculated between `var.level1` and `var.level1`. Expressed as a difference in log odds.

linpred.diff.ci.l Lower limit of the 90% credibility interval for the difference

in willingness to adapt, between `var.level1` and `var.level1`. Expressed as a difference in log odds.

linpred.diff.ci.u Upper limit of the 90% credibility interval for the difference in willingness to adapt, between `var.level1` and `var.level1`. Expressed as a difference in log odds.

cert.diff.pos Certainty that `var.level1` *increases* the willingness to adapt, compared to `var.level2`.

cert.diff.neg Certainty that `var.level1` *decreases* the willingness to adapt, compared to `var.level2`.