The cost of fairness: A dynamic model of Developmental Stage, Competition and Relation in British and Chinese Preschoolers’ Resource Allocations

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## 1 Study Information

#### 1.1 Title

The cost of fairness: A dynamic model of Developmental Stage, Competition and Relation in British and Chinese Preschoolers’ Resource Allocations.

#### 1.2 Authorship

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#### 1.3 Description

Several factors influence children’s resource distribution with a peer. This study compared 104 3-5-year-olds with 100 6-7-year-olds’ allocations of rewards within repeated trials in which three structural factors (age, gender and culture: the UK vs China) and three contextual manipulations (whether a trial involved competition, was with a friend or an unknown peer, or whether equal allocation incurred a cost) were examined together. Bayesian multinomial modelling revealed a complexity of interactions between the factors, with the cost of losing part of the reward central to these. A dynamic cost model is proposed to account for developmental processes in which children’s growing sense of fairness consists is balanced against influences which persuade the child to make selfish or selfless allocations.

#### 1.4 License

Not applicable.

#### 1.5 Tags

* Fairness Development
* Resource Allocation
* Economic Games
* Cultural Comparison
* Prosocial Behaviour
* Bayesian Multinomial Modelling
* R package ‘brms’

#### 1.6 Summary

This project was registered after the study had been completed. We want to include a full picture of the complex modelling employed in the study.

This registration involves the dataset description and the analysis process. In the dataset section, we provided detailed definitions of all variables with their specific levels. A descriptive summary of the dataset can also be found. The analysis process includes the R package we used for modelling, prior and baseline information, model construction and selection. Output summaries of all the models that we run were also included. Finally, we visualized the key interactions.

## 2 Dataset Description

Our independent variables involoved three within subject variables: - **cost**(cost vs cost-free) - **competition**(competition vs free play) - **relation** (friend vs unknown peer)

We also collected three between subject variables: - **country**(China vs UK) - **age group**(Older vs Younger) - **gender**(Female vs Male)

These are all binary and the former level in each bracket was used as the baseline in following models.

The dependent variable is **allocation** and has three levels: fair (equal split), unfair but advantageous (the distributor gets more) and unfair but disadvantageous (the distributor gets less).

summary(Subject)

## child age age\_group country gender   
## Length:204 Min. :38.00 Older : 96 CN:104 Female: 87   
## Class :character 1st Qu.:53.00 Younger:108 UK:100 Male :117   
## Mode :character Median :62.00   
## Mean :61.64   
## 3rd Qu.:72.00   
## Max. :82.00

summary(Response)

## fairness allocation justification  
## Fair :1052 Fair :1052 Desire :457   
## Unfair: 580 UFad : 425 Norm :932   
## UFdis: 155 Affiliation:135   
## Conduct : 52   
## Uncodable : 56

## 3 Statistical Analysis

#### 3.1 Modelling Process

We used [**brm()**](https://cran.r-project.org/web/packages/brms/brms.pdf), which is a Bayesian Regression Modelling approach using the platform *‘Stan’* to explore the predictive effects of all six factors and their possible interactions on children’s allocations.

The *default priors* were used for two reasons: first, model diagnosis indicated that the default priors were vague enough to avoid any substantial effects on the model and allowed the dataset to be converted well; secondly, to the best of our knowledge, there were no solid grounds from previous research on this topic available for us to consider more beneficial priors.

In addition, the response baseline used in the modelling, also known as the referential information to posterior distribution, was the ‘fair’ response from the allocation measurement (i.e. the child and recipeint both get the same amount). The ‘fair’ response was predominant (64.46%), compared to an ‘advantage-self’ response of 26.04% and a ‘disadvantage-self’ response of 9.5%. Taking the majority response as the baseline can favour the stability and accuracy of these models.

######### reparameterize baseline #########  
R2long$age\_group=relevel(R2long$age\_group, ref='Older')  
R2long$country=relevel(R2long$country, ref='CN')  
R2long$gender=relevel(R2long$gender, ref='Female')  
R2long$cost=relevel(R2long$cost, ref='Cost')  
R2long$competition=relevel(R2long$competition, ref='Competition')  
R2long$relation=relevel(R2long$relation, ref='Friend')  
R2long$allocation<-factor(R2long$allocation,  
 levels=c("Fair","UFad","UFdis"))

Six models were computed using the bottom-up approach: starting with the simplest (Model 1) with only the main effect of each variable, then the following models added interactions from 2-way (Model 2) up to 6-way (Model 6). All the models included a random intercept of subject to minimize any participant differences and were fitted using four chains, each with 2,000 iterations (1,000 warm up) under the family setting “categorical’.

##################### just 6 main effects  
brm2.1 <- brm(allocation~age\_group+gender+country+competition+relation+cost  
 +(1|id),data=R2long,family=categorical,save\_all\_pars=T)  
  
##################### add all 6 effects with 2way interactions  
brm2.2 <- brm(allocation~(age\_group+gender+country+competition+relation+cost)^2  
 +(1|id),data=R2long,family=categorical,save\_all\_pars=T)  
  
##################### add all 6 effects with 3way interactions  
brm2.3 <- brm(allocation~(age\_group+gender+country+competition+relation+cost)^3  
 +(1|id),data=R2long,family=categorical,save\_all\_pars=T)  
  
##################### add all 6 effects with 4way interactions  
brm2.4 <- brm(allocation~(age\_group+gender+country+competition+relation+cost)^4  
 +(1|id),data=R2long,family=categorical,save\_all\_pars=T)  
  
##################### add all 6 effects with 5way interactions  
brm2.5 <- brm(allocation~(age\_group+gender+country+competition+relation+cost)^5  
 +(1|id),data=R2long,family=categorical)  
  
##################### add all 6 effects with 6way interactions  
brm2.6 <- brm(allocation~(age\_group+gender+country+competition+relation+cost)^6  
 +(1|id),data=R2long,family=categorical,save\_all\_pars=T)

#### 3.2 Model outputs

As the Models involving five and six-way interactions *brm2.5* and *brm2.6* didnt converged, they were excluded from any further anylysis. 1: in model **brm2.1**, we add all 6 effects and their 2-way interactions.

summary(brm2.1)

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ age\_group + gender + country + competition + relation + cost + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.18 0.12 0.96 1.44 1.00 1550  
## sd(muUFdis\_Intercept) 0.89 0.17 0.56 1.22 1.00 1004  
## Tail\_ESS  
## sd(muUFad\_Intercept) 2606  
## sd(muUFdis\_Intercept) 1599  
##   
## Population-Level Effects:   
## Estimate Est.Error l-95% CI u-95% CI Rhat  
## muUFad\_Intercept -0.47 0.26 -0.97 0.03 1.00  
## muUFdis\_Intercept -2.22 0.30 -2.82 -1.66 1.00  
## muUFad\_age\_groupYounger -0.03 0.22 -0.46 0.39 1.00  
## muUFad\_genderMale 0.19 0.22 -0.25 0.61 1.00  
## muUFad\_countryUK 0.48 0.22 0.05 0.91 1.00  
## muUFad\_competitionNOcompetition -0.24 0.13 -0.50 0.01 1.00  
## muUFad\_relationUnknownMpeer -0.29 0.14 -0.55 -0.02 1.00  
## muUFad\_costNOcost -1.85 0.15 -2.14 -1.56 1.00  
## muUFdis\_age\_groupYounger 0.59 0.23 0.14 1.05 1.00  
## muUFdis\_genderMale 0.21 0.24 -0.24 0.68 1.00  
## muUFdis\_countryUK -0.49 0.23 -0.95 -0.04 1.00  
## muUFdis\_competitionNOcompetition -0.01 0.18 -0.36 0.35 1.00  
## muUFdis\_relationUnknownMpeer -0.15 0.18 -0.50 0.20 1.00  
## muUFdis\_costNOcost -0.33 0.18 -0.68 0.02 1.00  
## Bulk\_ESS Tail\_ESS  
## muUFad\_Intercept 2429 2823  
## muUFdis\_Intercept 3755 3089  
## muUFad\_age\_groupYounger 2257 2638  
## muUFad\_genderMale 1969 2539  
## muUFad\_countryUK 1975 2905  
## muUFad\_competitionNOcompetition 7213 3035  
## muUFad\_relationUnknownMpeer 6345 3075  
## muUFad\_costNOcost 4832 2844  
## muUFdis\_age\_groupYounger 3155 3059  
## muUFdis\_genderMale 3375 3164  
## muUFdis\_countryUK 3957 3235  
## muUFdis\_competitionNOcompetition 6542 2951  
## muUFdis\_relationUnknownMpeer 7003 2905  
## muUFdis\_costNOcost 7091 3051  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

2: in model **brm2.2**, we add all 6 effects and their 2-way interactions.

summary(brm2.2)

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ (age\_group + gender + country + competition + relation + cost)^2 + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.24 0.13 1.00 1.52 1.00 1847  
## sd(muUFdis\_Intercept) 0.98 0.18 0.64 1.33 1.00 1162  
## Tail\_ESS  
## sd(muUFad\_Intercept) 2790  
## sd(muUFdis\_Intercept) 2136  
##   
## Population-Level Effects:   
## Estimate Est.Error  
## muUFad\_Intercept -0.36 0.40  
## muUFdis\_Intercept -1.67 0.48  
## muUFad\_age\_groupYounger -0.48 0.49  
## muUFad\_genderMale 0.34 0.47  
## muUFad\_countryUK 1.73 0.48  
## muUFad\_competitionNOcompetition -0.66 0.34  
## muUFad\_relationUnknownMpeer -0.80 0.33  
## muUFad\_costNOcost -2.47 0.39  
## muUFad\_age\_groupYounger:genderMale 0.36 0.48  
## muUFad\_age\_groupYounger:countryUK -0.25 0.46  
## muUFad\_age\_groupYounger:competitionNOcompetition -0.12 0.27  
## muUFad\_age\_groupYounger:relationUnknownMpeer 0.35 0.27  
## muUFad\_age\_groupYounger:costNOcost 0.55 0.29  
## muUFad\_genderMale:countryUK -0.99 0.46  
## muUFad\_genderMale:competitionNOcompetition 0.27 0.30  
## muUFad\_genderMale:relationUnknownMpeer -0.04 0.28  
## muUFad\_genderMale:costNOcost 0.07 0.31  
## muUFad\_countryUK:competitionNOcompetition -0.31 0.27  
## muUFad\_countryUK:relationUnknownMpeer -0.20 0.27  
## muUFad\_countryUK:costNOcost -0.75 0.30  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 0.46 0.28  
## muUFad\_competitionNOcompetition:costNOcost 0.66 0.29  
## muUFad\_relationUnknownMpeer:costNOcost 0.56 0.30  
## muUFdis\_age\_groupYounger -0.37 0.58  
## muUFdis\_genderMale 0.07 0.52  
## muUFdis\_countryUK 0.50 0.57  
## muUFdis\_competitionNOcompetition -0.11 0.45  
## muUFdis\_relationUnknownMpeer -1.02 0.49  
## muUFdis\_costNOcost -1.73 0.51  
## muUFdis\_age\_groupYounger:genderMale 0.65 0.53  
## muUFdis\_age\_groupYounger:countryUK -1.20 0.53  
## muUFdis\_age\_groupYounger:competitionNOcompetition 0.61 0.41  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 0.54 0.41  
## muUFdis\_age\_groupYounger:costNOcost 1.10 0.41  
## muUFdis\_genderMale:countryUK -0.19 0.52  
## muUFdis\_genderMale:competitionNOcompetition -0.76 0.40  
## muUFdis\_genderMale:relationUnknownMpeer 0.04 0.39  
## muUFdis\_genderMale:costNOcost 0.36 0.40  
## muUFdis\_countryUK:competitionNOcompetition -0.63 0.39  
## muUFdis\_countryUK:relationUnknownMpeer -0.08 0.38  
## muUFdis\_countryUK:costNOcost 0.40 0.39  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 0.60 0.40  
## muUFdis\_competitionNOcompetition:costNOcost 0.24 0.38  
## muUFdis\_relationUnknownMpeer:costNOcost 0.44 0.39  
## l-95% CI u-95% CI Rhat  
## muUFad\_Intercept -1.14 0.41 1.00  
## muUFdis\_Intercept -2.66 -0.80 1.00  
## muUFad\_age\_groupYounger -1.42 0.48 1.00  
## muUFad\_genderMale -0.59 1.26 1.00  
## muUFad\_countryUK 0.82 2.66 1.00  
## muUFad\_competitionNOcompetition -1.31 -0.00 1.00  
## muUFad\_relationUnknownMpeer -1.48 -0.14 1.00  
## muUFad\_costNOcost -3.25 -1.73 1.00  
## muUFad\_age\_groupYounger:genderMale -0.59 1.32 1.00  
## muUFad\_age\_groupYounger:countryUK -1.15 0.64 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition -0.65 0.45 1.00  
## muUFad\_age\_groupYounger:relationUnknownMpeer -0.18 0.86 1.00  
## muUFad\_age\_groupYounger:costNOcost -0.01 1.14 1.00  
## muUFad\_genderMale:countryUK -1.90 -0.11 1.00  
## muUFad\_genderMale:competitionNOcompetition -0.30 0.84 1.00  
## muUFad\_genderMale:relationUnknownMpeer -0.62 0.51 1.00  
## muUFad\_genderMale:costNOcost -0.51 0.69 1.00  
## muUFad\_countryUK:competitionNOcompetition -0.83 0.22 1.00  
## muUFad\_countryUK:relationUnknownMpeer -0.73 0.31 1.00  
## muUFad\_countryUK:costNOcost -1.34 -0.16 1.00  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -0.06 1.00 1.00  
## muUFad\_competitionNOcompetition:costNOcost 0.09 1.22 1.00  
## muUFad\_relationUnknownMpeer:costNOcost -0.04 1.15 1.00  
## muUFdis\_age\_groupYounger -1.49 0.77 1.00  
## muUFdis\_genderMale -0.94 1.07 1.00  
## muUFdis\_countryUK -0.62 1.59 1.00  
## muUFdis\_competitionNOcompetition -0.98 0.77 1.00  
## muUFdis\_relationUnknownMpeer -1.98 -0.04 1.00  
## muUFdis\_costNOcost -2.75 -0.74 1.00  
## muUFdis\_age\_groupYounger:genderMale -0.36 1.69 1.00  
## muUFdis\_age\_groupYounger:countryUK -2.26 -0.19 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition -0.18 1.42 1.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer -0.26 1.35 1.00  
## muUFdis\_age\_groupYounger:costNOcost 0.30 1.91 1.00  
## muUFdis\_genderMale:countryUK -1.22 0.84 1.00  
## muUFdis\_genderMale:competitionNOcompetition -1.56 0.02 1.00  
## muUFdis\_genderMale:relationUnknownMpeer -0.73 0.80 1.00  
## muUFdis\_genderMale:costNOcost -0.44 1.13 1.00  
## muUFdis\_countryUK:competitionNOcompetition -1.41 0.13 1.00  
## muUFdis\_countryUK:relationUnknownMpeer -0.83 0.67 1.00  
## muUFdis\_countryUK:costNOcost -0.37 1.17 1.00  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -0.19 1.38 1.00  
## muUFdis\_competitionNOcompetition:costNOcost -0.51 0.98 1.00  
## muUFdis\_relationUnknownMpeer:costNOcost -0.33 1.18 1.00  
## Bulk\_ESS Tail\_ESS  
## muUFad\_Intercept 2247 2664  
## muUFdis\_Intercept 2876 2701  
## muUFad\_age\_groupYounger 2206 2575  
## muUFad\_genderMale 2259 2660  
## muUFad\_countryUK 2010 2820  
## muUFad\_competitionNOcompetition 3580 2843  
## muUFad\_relationUnknownMpeer 3739 3250  
## muUFad\_costNOcost 3560 3024  
## muUFad\_age\_groupYounger:genderMale 2063 2286  
## muUFad\_age\_groupYounger:countryUK 2059 2826  
## muUFad\_age\_groupYounger:competitionNOcompetition 6699 2757  
## muUFad\_age\_groupYounger:relationUnknownMpeer 6834 3352  
## muUFad\_age\_groupYounger:costNOcost 5766 3031  
## muUFad\_genderMale:countryUK 2425 2690  
## muUFad\_genderMale:competitionNOcompetition 5166 2956  
## muUFad\_genderMale:relationUnknownMpeer 5485 3237  
## muUFad\_genderMale:costNOcost 6504 3034  
## muUFad\_countryUK:competitionNOcompetition 5925 2875  
## muUFad\_countryUK:relationUnknownMpeer 6402 3013  
## muUFad\_countryUK:costNOcost 6194 3218  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 5717 3250  
## muUFad\_competitionNOcompetition:costNOcost 6051 2949  
## muUFad\_relationUnknownMpeer:costNOcost 6046 2749  
## muUFdis\_age\_groupYounger 2949 2936  
## muUFdis\_genderMale 2969 2815  
## muUFdis\_countryUK 3066 2920  
## muUFdis\_competitionNOcompetition 3983 3021  
## muUFdis\_relationUnknownMpeer 4157 2727  
## muUFdis\_costNOcost 3611 3190  
## muUFdis\_age\_groupYounger:genderMale 3254 2981  
## muUFdis\_age\_groupYounger:countryUK 2774 3074  
## muUFdis\_age\_groupYounger:competitionNOcompetition 5088 3154  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 6159 2986  
## muUFdis\_age\_groupYounger:costNOcost 5289 3372  
## muUFdis\_genderMale:countryUK 2972 2996  
## muUFdis\_genderMale:competitionNOcompetition 5443 3062  
## muUFdis\_genderMale:relationUnknownMpeer 5016 2957  
## muUFdis\_genderMale:costNOcost 5936 2741  
## muUFdis\_countryUK:competitionNOcompetition 5390 3069  
## muUFdis\_countryUK:relationUnknownMpeer 6341 3333  
## muUFdis\_countryUK:costNOcost 5292 3176  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 5448 2984  
## muUFdis\_competitionNOcompetition:costNOcost 5380 3225  
## muUFdis\_relationUnknownMpeer:costNOcost 6159 3184  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

3: in model **brm2.3**, we add all 6 effects and their 3-way interactions.

summary(brm2.3)

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ (age\_group + gender + country + competition + relation + cost)^3 + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.33 0.14 1.07 1.61 1.00 1556  
## sd(muUFdis\_Intercept) 1.05 0.19 0.71 1.44 1.00 1368  
## Tail\_ESS  
## sd(muUFad\_Intercept) 2339  
## sd(muUFdis\_Intercept) 2251  
##   
## Population-Level Effects:   
## Estimate  
## muUFad\_Intercept 0.11  
## muUFdis\_Intercept -1.54  
## muUFad\_age\_groupYounger -1.13  
## muUFad\_genderMale 0.16  
## muUFad\_countryUK 1.00  
## muUFad\_competitionNOcompetition -1.11  
## muUFad\_relationUnknownMpeer -1.51  
## muUFad\_costNOcost -3.07  
## muUFad\_age\_groupYounger:genderMale 0.17  
## muUFad\_age\_groupYounger:countryUK 0.39  
## muUFad\_age\_groupYounger:competitionNOcompetition 0.41  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.15  
## muUFad\_age\_groupYounger:costNOcost 1.99  
## muUFad\_genderMale:countryUK -0.71  
## muUFad\_genderMale:competitionNOcompetition 0.52  
## muUFad\_genderMale:relationUnknownMpeer 0.60  
## muUFad\_genderMale:costNOcost 0.30  
## muUFad\_countryUK:competitionNOcompetition 0.14  
## muUFad\_countryUK:relationUnknownMpeer 1.11  
## muUFad\_countryUK:costNOcost -0.18  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 0.70  
## muUFad\_competitionNOcompetition:costNOcost 1.09  
## muUFad\_relationUnknownMpeer:costNOcost -0.42  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.15  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition -0.54  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 0.24  
## muUFad\_age\_groupYounger:genderMale:costNOcost -0.90  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition -0.45  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -1.33  
## muUFad\_age\_groupYounger:countryUK:costNOcost -1.35  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -0.15  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 0.15  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost -0.47  
## muUFad\_genderMale:countryUK:competitionNOcompetition 0.04  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -1.85  
## muUFad\_genderMale:countryUK:costNOcost -0.19  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer -0.17  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 0.06  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 0.73  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.05  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -0.95  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 1.51  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost -0.06  
## muUFdis\_age\_groupYounger -1.81  
## muUFdis\_genderMale 0.10  
## muUFdis\_countryUK -0.43  
## muUFdis\_competitionNOcompetition 0.36  
## muUFdis\_relationUnknownMpeer -0.76  
## muUFdis\_costNOcost -2.74  
## muUFdis\_age\_groupYounger:genderMale 1.82  
## muUFdis\_age\_groupYounger:countryUK 0.04  
## muUFdis\_age\_groupYounger:competitionNOcompetition 0.95  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.32  
## muUFdis\_age\_groupYounger:costNOcost 3.67  
## muUFdis\_genderMale:countryUK 0.85  
## muUFdis\_genderMale:competitionNOcompetition -1.63  
## muUFdis\_genderMale:relationUnknownMpeer -1.82  
## muUFdis\_genderMale:costNOcost 1.03  
## muUFdis\_countryUK:competitionNOcompetition -0.99  
## muUFdis\_countryUK:relationUnknownMpeer 0.69  
## muUFdis\_countryUK:costNOcost 1.28  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -0.30  
## muUFdis\_competitionNOcompetition:costNOcost 0.00  
## muUFdis\_relationUnknownMpeer:costNOcost 0.65  
## muUFdis\_age\_groupYounger:genderMale:countryUK -0.66  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -0.13  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.14  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -2.29  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition -0.09  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -1.43  
## muUFdis\_age\_groupYounger:countryUK:costNOcost -0.63  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.46  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost -0.48  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost -1.70  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 0.16  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -0.18  
## muUFdis\_genderMale:countryUK:costNOcost -1.06  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.49  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 0.96  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 1.42  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.66  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -0.01  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 0.01  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 0.02  
## Est.Error  
## muUFad\_Intercept 0.52  
## muUFdis\_Intercept 0.66  
## muUFad\_age\_groupYounger 0.71  
## muUFad\_genderMale 0.65  
## muUFad\_countryUK 0.70  
## muUFad\_competitionNOcompetition 0.57  
## muUFad\_relationUnknownMpeer 0.58  
## muUFad\_costNOcost 0.68  
## muUFad\_age\_groupYounger:genderMale 0.84  
## muUFad\_age\_groupYounger:countryUK 0.87  
## muUFad\_age\_groupYounger:competitionNOcompetition 0.66  
## muUFad\_age\_groupYounger:relationUnknownMpeer 0.67  
## muUFad\_age\_groupYounger:costNOcost 0.73  
## muUFad\_genderMale:countryUK 0.84  
## muUFad\_genderMale:competitionNOcompetition 0.64  
## muUFad\_genderMale:relationUnknownMpeer 0.63  
## muUFad\_genderMale:costNOcost 0.72  
## muUFad\_countryUK:competitionNOcompetition 0.64  
## muUFad\_countryUK:relationUnknownMpeer 0.64  
## muUFad\_countryUK:costNOcost 0.74  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 0.66  
## muUFad\_competitionNOcompetition:costNOcost 0.76  
## muUFad\_relationUnknownMpeer:costNOcost 0.79  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.00  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 0.59  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 0.59  
## muUFad\_age\_groupYounger:genderMale:costNOcost 0.63  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 0.57  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 0.58  
## muUFad\_age\_groupYounger:countryUK:costNOcost 0.64  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.58  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 0.61  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 0.59  
## muUFad\_genderMale:countryUK:competitionNOcompetition 0.59  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 0.58  
## muUFad\_genderMale:countryUK:costNOcost 0.65  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.58  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 0.62  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 0.63  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.57  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 0.62  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 0.61  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 0.61  
## muUFdis\_age\_groupYounger 0.99  
## muUFdis\_genderMale 0.84  
## muUFdis\_countryUK 0.99  
## muUFdis\_competitionNOcompetition 0.74  
## muUFdis\_relationUnknownMpeer 0.81  
## muUFdis\_costNOcost 1.01  
## muUFdis\_age\_groupYounger:genderMale 1.08  
## muUFdis\_age\_groupYounger:countryUK 1.16  
## muUFdis\_age\_groupYounger:competitionNOcompetition 0.97  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 0.99  
## muUFdis\_age\_groupYounger:costNOcost 1.10  
## muUFdis\_genderMale:countryUK 1.12  
## muUFdis\_genderMale:competitionNOcompetition 0.95  
## muUFdis\_genderMale:relationUnknownMpeer 0.99  
## muUFdis\_genderMale:costNOcost 1.02  
## muUFdis\_countryUK:competitionNOcompetition 1.00  
## muUFdis\_countryUK:relationUnknownMpeer 1.00  
## muUFdis\_countryUK:costNOcost 1.08  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 0.95  
## muUFdis\_competitionNOcompetition:costNOcost 1.05  
## muUFdis\_relationUnknownMpeer:costNOcost 1.09  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1.15  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 0.93  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 0.93  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 0.98  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 0.90  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 0.90  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 0.89  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.89  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 0.94  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 0.92  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 0.86  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 0.87  
## muUFdis\_genderMale:countryUK:costNOcost 0.90  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.83  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 0.88  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 0.86  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.84  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 0.86  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 0.84  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 0.82  
## l-95% CI  
## muUFad\_Intercept -0.90  
## muUFdis\_Intercept -2.89  
## muUFad\_age\_groupYounger -2.56  
## muUFad\_genderMale -1.11  
## muUFad\_countryUK -0.39  
## muUFad\_competitionNOcompetition -2.24  
## muUFad\_relationUnknownMpeer -2.65  
## muUFad\_costNOcost -4.41  
## muUFad\_age\_groupYounger:genderMale -1.45  
## muUFad\_age\_groupYounger:countryUK -1.39  
## muUFad\_age\_groupYounger:competitionNOcompetition -0.87  
## muUFad\_age\_groupYounger:relationUnknownMpeer -0.12  
## muUFad\_age\_groupYounger:costNOcost 0.55  
## muUFad\_genderMale:countryUK -2.38  
## muUFad\_genderMale:competitionNOcompetition -0.75  
## muUFad\_genderMale:relationUnknownMpeer -0.65  
## muUFad\_genderMale:costNOcost -1.12  
## muUFad\_countryUK:competitionNOcompetition -1.08  
## muUFad\_countryUK:relationUnknownMpeer -0.12  
## muUFad\_countryUK:costNOcost -1.59  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -0.56  
## muUFad\_competitionNOcompetition:costNOcost -0.36  
## muUFad\_relationUnknownMpeer:costNOcost -2.06  
## muUFad\_age\_groupYounger:genderMale:countryUK -0.76  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition -1.70  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer -0.91  
## muUFad\_age\_groupYounger:genderMale:costNOcost -2.14  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition -1.57  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -2.50  
## muUFad\_age\_groupYounger:countryUK:costNOcost -2.62  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -1.26  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -1.07  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost -1.62  
## muUFad\_genderMale:countryUK:competitionNOcompetition -1.12  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -3.00  
## muUFad\_genderMale:countryUK:costNOcost -1.47  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer -1.30  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -1.18  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost -0.48  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer -1.06  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -2.17  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 0.34  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost -1.23  
## muUFdis\_age\_groupYounger -3.80  
## muUFdis\_genderMale -1.53  
## muUFdis\_countryUK -2.44  
## muUFdis\_competitionNOcompetition -1.11  
## muUFdis\_relationUnknownMpeer -2.38  
## muUFdis\_costNOcost -4.83  
## muUFdis\_age\_groupYounger:genderMale -0.25  
## muUFdis\_age\_groupYounger:countryUK -2.23  
## muUFdis\_age\_groupYounger:competitionNOcompetition -0.96  
## muUFdis\_age\_groupYounger:relationUnknownMpeer -0.60  
## muUFdis\_age\_groupYounger:costNOcost 1.64  
## muUFdis\_genderMale:countryUK -1.31  
## muUFdis\_genderMale:competitionNOcompetition -3.51  
## muUFdis\_genderMale:relationUnknownMpeer -3.78  
## muUFdis\_genderMale:costNOcost -0.94  
## muUFdis\_countryUK:competitionNOcompetition -2.95  
## muUFdis\_countryUK:relationUnknownMpeer -1.24  
## muUFdis\_countryUK:costNOcost -0.83  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -2.15  
## muUFdis\_competitionNOcompetition:costNOcost -2.10  
## muUFdis\_relationUnknownMpeer:costNOcost -1.48  
## muUFdis\_age\_groupYounger:genderMale:countryUK -2.91  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -1.98  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer -0.65  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -4.24  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition -1.81  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -3.20  
## muUFdis\_age\_groupYounger:countryUK:costNOcost -2.42  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -1.27  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost -2.32  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost -3.51  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -1.58  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -1.91  
## muUFdis\_genderMale:countryUK:costNOcost -2.86  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer -1.16  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost -0.73  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost -0.24  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -0.98  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -1.64  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost -1.62  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost -1.61  
## u-95% CI  
## muUFad\_Intercept 1.12  
## muUFdis\_Intercept -0.29  
## muUFad\_age\_groupYounger 0.29  
## muUFad\_genderMale 1.43  
## muUFad\_countryUK 2.41  
## muUFad\_competitionNOcompetition 0.00  
## muUFad\_relationUnknownMpeer -0.38  
## muUFad\_costNOcost -1.76  
## muUFad\_age\_groupYounger:genderMale 1.80  
## muUFad\_age\_groupYounger:countryUK 2.08  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.75  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2.48  
## muUFad\_age\_groupYounger:costNOcost 3.43  
## muUFad\_genderMale:countryUK 0.89  
## muUFad\_genderMale:competitionNOcompetition 1.77  
## muUFad\_genderMale:relationUnknownMpeer 1.88  
## muUFad\_genderMale:costNOcost 1.74  
## muUFad\_countryUK:competitionNOcompetition 1.41  
## muUFad\_countryUK:relationUnknownMpeer 2.38  
## muUFad\_countryUK:costNOcost 1.27  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 2.03  
## muUFad\_competitionNOcompetition:costNOcost 2.62  
## muUFad\_relationUnknownMpeer:costNOcost 1.08  
## muUFad\_age\_groupYounger:genderMale:countryUK 3.11  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 0.60  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.37  
## muUFad\_age\_groupYounger:genderMale:costNOcost 0.32  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 0.67  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -0.19  
## muUFad\_age\_groupYounger:countryUK:costNOcost -0.10  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.99  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1.36  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 0.69  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.21  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -0.72  
## muUFad\_genderMale:countryUK:costNOcost 1.07  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.98  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1.23  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1.97  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.15  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 0.20  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2.71  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.15  
## muUFdis\_age\_groupYounger 0.17  
## muUFdis\_genderMale 1.76  
## muUFdis\_countryUK 1.47  
## muUFdis\_competitionNOcompetition 1.77  
## muUFdis\_relationUnknownMpeer 0.86  
## muUFdis\_costNOcost -0.84  
## muUFdis\_age\_groupYounger:genderMale 3.89  
## muUFdis\_age\_groupYounger:countryUK 2.38  
## muUFdis\_age\_groupYounger:competitionNOcompetition 2.90  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 3.27  
## muUFdis\_age\_groupYounger:costNOcost 5.91  
## muUFdis\_genderMale:countryUK 3.13  
## muUFdis\_genderMale:competitionNOcompetition 0.17  
## muUFdis\_genderMale:relationUnknownMpeer 0.15  
## muUFdis\_genderMale:costNOcost 3.00  
## muUFdis\_countryUK:competitionNOcompetition 0.94  
## muUFdis\_countryUK:relationUnknownMpeer 2.65  
## muUFdis\_countryUK:costNOcost 3.47  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.59  
## muUFdis\_competitionNOcompetition:costNOcost 2.11  
## muUFdis\_relationUnknownMpeer:costNOcost 2.86  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1.61  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.70  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 3.01  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -0.42  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1.67  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 0.32  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1.12  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.20  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.35  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 0.05  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1.85  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 1.52  
## muUFdis\_genderMale:countryUK:costNOcost 0.65  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 2.10  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2.69  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 3.12  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2.31  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1.66  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 1.63  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.60  
## Rhat  
## muUFad\_Intercept 1.00  
## muUFdis\_Intercept 1.00  
## muUFad\_age\_groupYounger 1.00  
## muUFad\_genderMale 1.00  
## muUFad\_countryUK 1.00  
## muUFad\_competitionNOcompetition 1.00  
## muUFad\_relationUnknownMpeer 1.00  
## muUFad\_costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale 1.00  
## muUFad\_age\_groupYounger:countryUK 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:costNOcost 1.00  
## muUFad\_genderMale:countryUK 1.00  
## muUFad\_genderMale:competitionNOcompetition 1.00  
## muUFad\_genderMale:relationUnknownMpeer 1.00  
## muUFad\_genderMale:costNOcost 1.00  
## muUFad\_countryUK:competitionNOcompetition 1.00  
## muUFad\_countryUK:relationUnknownMpeer 1.00  
## muUFad\_countryUK:costNOcost 1.00  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_competitionNOcompetition:costNOcost 1.00  
## muUFad\_relationUnknownMpeer:costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.00  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:genderMale:costNOcost 1.00  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:countryUK:costNOcost 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1.00  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.00  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFad\_genderMale:countryUK:costNOcost 1.00  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger 1.00  
## muUFdis\_genderMale 1.00  
## muUFdis\_countryUK 1.00  
## muUFdis\_competitionNOcompetition 1.00  
## muUFdis\_relationUnknownMpeer 1.00  
## muUFdis\_costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale 1.00  
## muUFdis\_age\_groupYounger:countryUK 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:costNOcost 1.00  
## muUFdis\_genderMale:countryUK 1.00  
## muUFdis\_genderMale:competitionNOcompetition 1.00  
## muUFdis\_genderMale:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:costNOcost 1.00  
## muUFdis\_countryUK:competitionNOcompetition 1.00  
## muUFdis\_countryUK:relationUnknownMpeer 1.00  
## muUFdis\_countryUK:costNOcost 1.00  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_competitionNOcompetition:costNOcost 1.00  
## muUFdis\_relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1.00  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.00  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1.00  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:countryUK:costNOcost 1.00  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## Bulk\_ESS  
## muUFad\_Intercept 962  
## muUFdis\_Intercept 1426  
## muUFad\_age\_groupYounger 930  
## muUFad\_genderMale 1171  
## muUFad\_countryUK 1171  
## muUFad\_competitionNOcompetition 1108  
## muUFad\_relationUnknownMpeer 1314  
## muUFad\_costNOcost 1198  
## muUFad\_age\_groupYounger:genderMale 1155  
## muUFad\_age\_groupYounger:countryUK 1095  
## muUFad\_age\_groupYounger:competitionNOcompetition 1614  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1943  
## muUFad\_age\_groupYounger:costNOcost 1919  
## muUFad\_genderMale:countryUK 1273  
## muUFad\_genderMale:competitionNOcompetition 1863  
## muUFad\_genderMale:relationUnknownMpeer 2051  
## muUFad\_genderMale:costNOcost 1633  
## muUFad\_countryUK:competitionNOcompetition 1860  
## muUFad\_countryUK:relationUnknownMpeer 1746  
## muUFad\_countryUK:costNOcost 1911  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1612  
## muUFad\_competitionNOcompetition:costNOcost 1598  
## muUFad\_relationUnknownMpeer:costNOcost 2196  
## muUFad\_age\_groupYounger:genderMale:countryUK 1101  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 2917  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 3112  
## muUFad\_age\_groupYounger:genderMale:costNOcost 3212  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 3195  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 2794  
## muUFad\_age\_groupYounger:countryUK:costNOcost 2907  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2984  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 3359  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 3754  
## muUFad\_genderMale:countryUK:competitionNOcompetition 3164  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 2488  
## muUFad\_genderMale:countryUK:costNOcost 2703  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2749  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 2318  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 3424  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 2694  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 3201  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 3384  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 3636  
## muUFdis\_age\_groupYounger 1111  
## muUFdis\_genderMale 1468  
## muUFdis\_countryUK 1423  
## muUFdis\_competitionNOcompetition 1740  
## muUFdis\_relationUnknownMpeer 1622  
## muUFdis\_costNOcost 1425  
## muUFdis\_age\_groupYounger:genderMale 1377  
## muUFdis\_age\_groupYounger:countryUK 1587  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1696  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1874  
## muUFdis\_age\_groupYounger:costNOcost 1683  
## muUFdis\_genderMale:countryUK 1466  
## muUFdis\_genderMale:competitionNOcompetition 2317  
## muUFdis\_genderMale:relationUnknownMpeer 2076  
## muUFdis\_genderMale:costNOcost 1652  
## muUFdis\_countryUK:competitionNOcompetition 2474  
## muUFdis\_countryUK:relationUnknownMpeer 2083  
## muUFdis\_countryUK:costNOcost 2116  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1920  
## muUFdis\_competitionNOcompetition:costNOcost 1885  
## muUFdis\_relationUnknownMpeer:costNOcost 2185  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1647  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 2354  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 2485  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2292  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 2805  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2955  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 2722  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2394  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 2509  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 3025  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 3753  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 3130  
## muUFdis\_genderMale:countryUK:costNOcost 2675  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 3100  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2526  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 2989  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 3294  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 2782  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 3781  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 3835  
## Tail\_ESS  
## muUFad\_Intercept 1717  
## muUFdis\_Intercept 2056  
## muUFad\_age\_groupYounger 1782  
## muUFad\_genderMale 2127  
## muUFad\_countryUK 1957  
## muUFad\_competitionNOcompetition 2261  
## muUFad\_relationUnknownMpeer 2133  
## muUFad\_costNOcost 1798  
## muUFad\_age\_groupYounger:genderMale 1979  
## muUFad\_age\_groupYounger:countryUK 1652  
## muUFad\_age\_groupYounger:competitionNOcompetition 2694  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2933  
## muUFad\_age\_groupYounger:costNOcost 2304  
## muUFad\_genderMale:countryUK 1895  
## muUFad\_genderMale:competitionNOcompetition 2310  
## muUFad\_genderMale:relationUnknownMpeer 2476  
## muUFad\_genderMale:costNOcost 2443  
## muUFad\_countryUK:competitionNOcompetition 2675  
## muUFad\_countryUK:relationUnknownMpeer 2311  
## muUFad\_countryUK:costNOcost 2529  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 2533  
## muUFad\_competitionNOcompetition:costNOcost 2101  
## muUFad\_relationUnknownMpeer:costNOcost 2530  
## muUFad\_age\_groupYounger:genderMale:countryUK 1663  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 3033  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 3122  
## muUFad\_age\_groupYounger:genderMale:costNOcost 3217  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 2984  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 3021  
## muUFad\_age\_groupYounger:countryUK:costNOcost 2745  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2941  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 3059  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 3079  
## muUFad\_genderMale:countryUK:competitionNOcompetition 3085  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 2869  
## muUFad\_genderMale:countryUK:costNOcost 2949  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2971  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 2500  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 2685  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 3275  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 2843  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2958  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 3107  
## muUFdis\_age\_groupYounger 2103  
## muUFdis\_genderMale 2176  
## muUFdis\_countryUK 2126  
## muUFdis\_competitionNOcompetition 2530  
## muUFdis\_relationUnknownMpeer 2328  
## muUFdis\_costNOcost 1851  
## muUFdis\_age\_groupYounger:genderMale 2288  
## muUFdis\_age\_groupYounger:countryUK 2657  
## muUFdis\_age\_groupYounger:competitionNOcompetition 2209  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 2668  
## muUFdis\_age\_groupYounger:costNOcost 2294  
## muUFdis\_genderMale:countryUK 1981  
## muUFdis\_genderMale:competitionNOcompetition 2974  
## muUFdis\_genderMale:relationUnknownMpeer 2660  
## muUFdis\_genderMale:costNOcost 1954  
## muUFdis\_countryUK:competitionNOcompetition 2641  
## muUFdis\_countryUK:relationUnknownMpeer 2605  
## muUFdis\_countryUK:costNOcost 2943  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 2573  
## muUFdis\_competitionNOcompetition:costNOcost 2439  
## muUFdis\_relationUnknownMpeer:costNOcost 2186  
## muUFdis\_age\_groupYounger:genderMale:countryUK 2154  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 2852  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 2755  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2749  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 2850  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2887  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 2849  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 3010  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 2852  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 2641  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 3076  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 3139  
## muUFdis\_genderMale:countryUK:costNOcost 2530  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 3208  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2925  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 3315  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2894  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 2584  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 2672  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 3191  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

4: in model **brm2.4**, we add all 6 effects and their 4-way interactions.

summary(brm2.4)

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ (age\_group + gender + country + competition + relation + cost)^4 + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.40 0.14 1.14 1.71 1.00 1483  
## sd(muUFdis\_Intercept) 1.13 0.19 0.78 1.53 1.00 1444  
## Tail\_ESS  
## sd(muUFad\_Intercept) 2586  
## sd(muUFdis\_Intercept) 2469  
##   
## Population-Level Effects:   
## Estimate  
## muUFad\_Intercept 0.10  
## muUFdis\_Intercept -2.29  
## muUFad\_age\_groupYounger -0.74  
## muUFad\_genderMale -0.07  
## muUFad\_countryUK 0.72  
## muUFad\_competitionNOcompetition -1.06  
## muUFad\_relationUnknownMpeer -1.08  
## muUFad\_costNOcost -7.26  
## muUFad\_age\_groupYounger:genderMale -0.21  
## muUFad\_age\_groupYounger:countryUK -0.01  
## muUFad\_age\_groupYounger:competitionNOcompetition -1.14  
## muUFad\_age\_groupYounger:relationUnknownMpeer 0.15  
## muUFad\_age\_groupYounger:costNOcost 6.06  
## muUFad\_genderMale:countryUK 0.35  
## muUFad\_genderMale:competitionNOcompetition 0.48  
## muUFad\_genderMale:relationUnknownMpeer 0.24  
## muUFad\_genderMale:costNOcost 5.48  
## muUFad\_countryUK:competitionNOcompetition 0.43  
## muUFad\_countryUK:relationUnknownMpeer 1.10  
## muUFad\_countryUK:costNOcost 4.83  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 0.19  
## muUFad\_competitionNOcompetition:costNOcost 5.68  
## muUFad\_relationUnknownMpeer:costNOcost -5.81  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.13  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.69  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.31  
## muUFad\_age\_groupYounger:genderMale:costNOcost -5.86  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.52  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -0.64  
## muUFad\_age\_groupYounger:countryUK:costNOcost -5.82  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.14  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -3.30  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 2.84  
## muUFad\_genderMale:countryUK:competitionNOcompetition -0.77  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -2.80  
## muUFad\_genderMale:countryUK:costNOcost -8.00  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.53  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -5.31  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 5.35  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer -0.30  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -6.39  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 6.22  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2.71  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -2.75  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 0.27  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 6.69  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -1.92  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 3.03  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -2.43  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -0.47  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.51  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -2.91  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 0.21  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.21  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 7.18  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -1.92  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -2.37  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -1.69  
## muUFdis\_age\_groupYounger -1.66  
## muUFdis\_genderMale 0.66  
## muUFdis\_countryUK 0.03  
## muUFdis\_competitionNOcompetition 1.08  
## muUFdis\_relationUnknownMpeer 0.29  
## muUFdis\_costNOcost -1.01  
## muUFdis\_age\_groupYounger:genderMale 2.21  
## muUFdis\_age\_groupYounger:countryUK -6.51  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.35  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.32  
## muUFdis\_age\_groupYounger:costNOcost 2.08  
## muUFdis\_genderMale:countryUK 1.00  
## muUFdis\_genderMale:competitionNOcompetition -1.76  
## muUFdis\_genderMale:relationUnknownMpeer -3.48  
## muUFdis\_genderMale:costNOcost -0.30  
## muUFdis\_countryUK:competitionNOcompetition -1.13  
## muUFdis\_countryUK:relationUnknownMpeer 0.83  
## muUFdis\_countryUK:costNOcost -0.28  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -1.51  
## muUFdis\_competitionNOcompetition:costNOcost -1.73  
## muUFdis\_relationUnknownMpeer:costNOcost -5.36  
## muUFdis\_age\_groupYounger:genderMale:countryUK 4.81  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -2.52  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 0.71  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -1.86  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 5.66  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -0.32  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 7.99  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -0.51  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 0.18  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 3.60  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -1.31  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -1.40  
## muUFdis\_genderMale:countryUK:costNOcost -0.69  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 2.67  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost -0.75  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 7.73  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -1.03  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -0.64  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 1.16  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 6.63  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -2.80  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.48  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -6.83  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2.43  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 4.93  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -3.96  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.48  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -6.28  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -3.87  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -4.15  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -2.42  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 5.48  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 0.87  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -6.02  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.17  
## Est.Error  
## muUFad\_Intercept 0.56  
## muUFdis\_Intercept 0.90  
## muUFad\_age\_groupYounger 0.83  
## muUFad\_genderMale 0.78  
## muUFad\_countryUK 0.84  
## muUFad\_competitionNOcompetition 0.72  
## muUFad\_relationUnknownMpeer 0.71  
## muUFad\_costNOcost 1.97  
## muUFad\_age\_groupYounger:genderMale 1.07  
## muUFad\_age\_groupYounger:countryUK 1.15  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.12  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.02  
## muUFad\_age\_groupYounger:costNOcost 1.98  
## muUFad\_genderMale:countryUK 1.13  
## muUFad\_genderMale:competitionNOcompetition 0.94  
## muUFad\_genderMale:relationUnknownMpeer 0.93  
## muUFad\_genderMale:costNOcost 1.98  
## muUFad\_countryUK:competitionNOcompetition 0.98  
## muUFad\_countryUK:relationUnknownMpeer 0.98  
## muUFad\_countryUK:costNOcost 1.99  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.02  
## muUFad\_competitionNOcompetition:costNOcost 1.96  
## muUFad\_relationUnknownMpeer:costNOcost 2.44  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.51  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.24  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.21  
## muUFad\_age\_groupYounger:genderMale:costNOcost 1.96  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.30  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.23  
## muUFad\_age\_groupYounger:countryUK:costNOcost 2.01  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.36  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1.89  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.85  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.24  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.24  
## muUFad\_genderMale:countryUK:costNOcost 2.03  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.21  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1.97  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 2.32  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.25  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 1.99  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2.26  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.82  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.42  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.38  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 1.93  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.30  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.62  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.57  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.25  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.54  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.50  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.34  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.36  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.86  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.81  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.58  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.46  
## muUFdis\_age\_groupYounger 1.83  
## muUFdis\_genderMale 1.16  
## muUFdis\_countryUK 1.43  
## muUFdis\_competitionNOcompetition 1.01  
## muUFdis\_relationUnknownMpeer 1.08  
## muUFdis\_costNOcost 1.21  
## muUFdis\_age\_groupYounger:genderMale 2.01  
## muUFdis\_age\_groupYounger:countryUK 3.32  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.90  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 2.01  
## muUFdis\_age\_groupYounger:costNOcost 2.17  
## muUFdis\_genderMale:countryUK 1.67  
## muUFdis\_genderMale:competitionNOcompetition 1.42  
## muUFdis\_genderMale:relationUnknownMpeer 1.98  
## muUFdis\_genderMale:costNOcost 1.60  
## muUFdis\_countryUK:competitionNOcompetition 1.70  
## muUFdis\_countryUK:relationUnknownMpeer 1.68  
## muUFdis\_countryUK:costNOcost 1.98  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.38  
## muUFdis\_competitionNOcompetition:costNOcost 1.73  
## muUFdis\_relationUnknownMpeer:costNOcost 2.95  
## muUFdis\_age\_groupYounger:genderMale:countryUK 3.20  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 2.21  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 2.50  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2.45  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 3.10  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2.85  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 3.31  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.23  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 2.52  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 3.08  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 2.35  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 2.51  
## muUFdis\_genderMale:countryUK:costNOcost 2.29  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 2.51  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2.68  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 2.95  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2.33  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 2.72  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 2.75  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2.95  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2.85  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2.69  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 3.01  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2.79  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 2.98  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2.88  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2.54  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2.86  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 2.56  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.92  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2.20  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 3.16  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2.41  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.58  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.15  
## l-95% CI  
## muUFad\_Intercept -1.01  
## muUFdis\_Intercept -4.25  
## muUFad\_age\_groupYounger -2.39  
## muUFad\_genderMale -1.57  
## muUFad\_countryUK -0.88  
## muUFad\_competitionNOcompetition -2.51  
## muUFad\_relationUnknownMpeer -2.52  
## muUFad\_costNOcost -11.61  
## muUFad\_age\_groupYounger:genderMale -2.34  
## muUFad\_age\_groupYounger:countryUK -2.23  
## muUFad\_age\_groupYounger:competitionNOcompetition -3.47  
## muUFad\_age\_groupYounger:relationUnknownMpeer -1.81  
## muUFad\_age\_groupYounger:costNOcost 2.49  
## muUFad\_genderMale:countryUK -1.91  
## muUFad\_genderMale:competitionNOcompetition -1.32  
## muUFad\_genderMale:relationUnknownMpeer -1.60  
## muUFad\_genderMale:costNOcost 1.93  
## muUFad\_countryUK:competitionNOcompetition -1.48  
## muUFad\_countryUK:relationUnknownMpeer -0.77  
## muUFad\_countryUK:costNOcost 1.35  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -1.87  
## muUFad\_competitionNOcompetition:costNOcost 2.27  
## muUFad\_relationUnknownMpeer:costNOcost -10.86  
## muUFad\_age\_groupYounger:genderMale:countryUK -1.86  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition -0.62  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer -1.07  
## muUFad\_age\_groupYounger:genderMale:costNOcost -10.02  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition -0.98  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -3.08  
## muUFad\_age\_groupYounger:countryUK:costNOcost -10.12  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -1.57  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -7.21  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost -0.82  
## muUFad\_genderMale:countryUK:competitionNOcompetition -3.19  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -5.24  
## muUFad\_genderMale:countryUK:costNOcost -12.18  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer -1.82  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -9.38  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1.18  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer -2.79  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -10.53  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2.06  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost -0.70  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -5.60  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -2.41  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 3.20  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -4.51  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -0.04  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -5.60  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -2.88  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -1.36  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -5.90  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -2.42  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -1.43  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 3.68  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -5.65  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -5.68  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -4.58  
## muUFdis\_age\_groupYounger -5.80  
## muUFdis\_genderMale -1.50  
## muUFdis\_countryUK -2.83  
## muUFdis\_competitionNOcompetition -0.76  
## muUFdis\_relationUnknownMpeer -1.77  
## muUFdis\_costNOcost -3.52  
## muUFdis\_age\_groupYounger:genderMale -1.29  
## muUFdis\_age\_groupYounger:countryUK -13.74  
## muUFdis\_age\_groupYounger:competitionNOcompetition -1.86  
## muUFdis\_age\_groupYounger:relationUnknownMpeer -2.26  
## muUFdis\_age\_groupYounger:costNOcost -1.84  
## muUFdis\_genderMale:countryUK -2.18  
## muUFdis\_genderMale:competitionNOcompetition -4.58  
## muUFdis\_genderMale:relationUnknownMpeer -7.73  
## muUFdis\_genderMale:costNOcost -3.41  
## muUFdis\_countryUK:competitionNOcompetition -4.44  
## muUFdis\_countryUK:relationUnknownMpeer -2.40  
## muUFdis\_countryUK:costNOcost -4.28  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -4.38  
## muUFdis\_competitionNOcompetition:costNOcost -5.34  
## muUFdis\_relationUnknownMpeer:costNOcost -12.18  
## muUFdis\_age\_groupYounger:genderMale:countryUK -0.74  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -7.34  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer -4.36  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -6.93  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 0.33  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -6.06  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 2.13  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -5.24  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost -5.02  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost -2.17  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -6.32  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -6.40  
## muUFdis\_genderMale:countryUK:costNOcost -5.07  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer -2.38  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost -6.36  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 2.29  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -5.96  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -6.14  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost -4.10  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.56  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -8.87  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -3.70  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -13.41  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -2.77  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -0.39  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -9.78  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -3.39  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -12.41  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -8.86  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -10.02  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -6.91  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost -0.00  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost -3.82  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -11.31  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -1.99  
## u-95% CI  
## muUFad\_Intercept 1.21  
## muUFdis\_Intercept -0.72  
## muUFad\_age\_groupYounger 0.85  
## muUFad\_genderMale 1.46  
## muUFad\_countryUK 2.44  
## muUFad\_competitionNOcompetition 0.35  
## muUFad\_relationUnknownMpeer 0.32  
## muUFad\_costNOcost -3.94  
## muUFad\_age\_groupYounger:genderMale 1.89  
## muUFad\_age\_groupYounger:countryUK 2.25  
## muUFad\_age\_groupYounger:competitionNOcompetition 0.92  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2.16  
## muUFad\_age\_groupYounger:costNOcost 10.37  
## muUFad\_genderMale:countryUK 2.54  
## muUFad\_genderMale:competitionNOcompetition 2.33  
## muUFad\_genderMale:relationUnknownMpeer 2.02  
## muUFad\_genderMale:costNOcost 9.75  
## muUFad\_countryUK:competitionNOcompetition 2.35  
## muUFad\_countryUK:relationUnknownMpeer 3.08  
## muUFad\_countryUK:costNOcost 9.12  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 2.18  
## muUFad\_competitionNOcompetition:costNOcost 9.84  
## muUFad\_relationUnknownMpeer:costNOcost -1.32  
## muUFad\_age\_groupYounger:genderMale:countryUK 4.07  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 4.25  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 3.69  
## muUFad\_age\_groupYounger:genderMale:costNOcost -2.29  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 4.18  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.74  
## muUFad\_age\_groupYounger:countryUK:costNOcost -2.19  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 3.85  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 0.23  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 6.54  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.61  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -0.35  
## muUFad\_genderMale:countryUK:costNOcost -4.25  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2.93  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -1.66  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 10.18  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 2.08  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -2.75  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 10.95  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 6.35  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -0.03  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 3.04  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 10.71  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 0.66  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 6.29  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 0.53  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2.02  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 4.64  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -0.10  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.83  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 3.85  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 11.08  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.42  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 0.57  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.12  
## muUFdis\_age\_groupYounger 1.40  
## muUFdis\_genderMale 3.00  
## muUFdis\_countryUK 2.80  
## muUFdis\_competitionNOcompetition 3.24  
## muUFdis\_relationUnknownMpeer 2.52  
## muUFdis\_costNOcost 1.41  
## muUFdis\_age\_groupYounger:genderMale 6.61  
## muUFdis\_age\_groupYounger:countryUK -0.73  
## muUFdis\_age\_groupYounger:competitionNOcompetition 5.69  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 5.77  
## muUFdis\_age\_groupYounger:costNOcost 6.83  
## muUFdis\_genderMale:countryUK 4.37  
## muUFdis\_genderMale:competitionNOcompetition 0.93  
## muUFdis\_genderMale:relationUnknownMpeer 0.12  
## muUFdis\_genderMale:costNOcost 2.87  
## muUFdis\_countryUK:competitionNOcompetition 2.20  
## muUFdis\_countryUK:relationUnknownMpeer 4.15  
## muUFdis\_countryUK:costNOcost 3.55  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.15  
## muUFdis\_competitionNOcompetition:costNOcost 1.54  
## muUFdis\_relationUnknownMpeer:costNOcost -0.37  
## muUFdis\_age\_groupYounger:genderMale:countryUK 11.71  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.43  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 5.42  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2.83  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 12.53  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 5.14  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 15.23  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 3.48  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 4.88  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 10.23  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 3.13  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 3.51  
## muUFdis\_genderMale:countryUK:costNOcost 3.79  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 7.56  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 4.09  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 14.13  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 3.41  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 4.70  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 6.70  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 13.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2.39  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 7.12  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -1.49  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 8.07  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 11.28  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.43  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 6.63  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -1.03  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.09  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.30  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.72  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 12.53  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 5.60  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -1.09  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 6.33  
## Rhat  
## muUFad\_Intercept 1.00  
## muUFdis\_Intercept 1.00  
## muUFad\_age\_groupYounger 1.00  
## muUFad\_genderMale 1.00  
## muUFad\_countryUK 1.00  
## muUFad\_competitionNOcompetition 1.00  
## muUFad\_relationUnknownMpeer 1.00  
## muUFad\_costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale 1.00  
## muUFad\_age\_groupYounger:countryUK 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:costNOcost 1.00  
## muUFad\_genderMale:countryUK 1.00  
## muUFad\_genderMale:competitionNOcompetition 1.00  
## muUFad\_genderMale:relationUnknownMpeer 1.00  
## muUFad\_genderMale:costNOcost 1.00  
## muUFad\_countryUK:competitionNOcompetition 1.00  
## muUFad\_countryUK:relationUnknownMpeer 1.00  
## muUFad\_countryUK:costNOcost 1.00  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_competitionNOcompetition:costNOcost 1.00  
## muUFad\_relationUnknownMpeer:costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.00  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:genderMale:costNOcost 1.00  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:countryUK:costNOcost 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1.00  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.00  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFad\_genderMale:countryUK:costNOcost 1.00  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.00  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger 1.00  
## muUFdis\_genderMale 1.00  
## muUFdis\_countryUK 1.00  
## muUFdis\_competitionNOcompetition 1.00  
## muUFdis\_relationUnknownMpeer 1.00  
## muUFdis\_costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale 1.00  
## muUFdis\_age\_groupYounger:countryUK 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:costNOcost 1.00  
## muUFdis\_genderMale:countryUK 1.00  
## muUFdis\_genderMale:competitionNOcompetition 1.00  
## muUFdis\_genderMale:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:costNOcost 1.00  
## muUFdis\_countryUK:competitionNOcompetition 1.00  
## muUFdis\_countryUK:relationUnknownMpeer 1.00  
## muUFdis\_countryUK:costNOcost 1.00  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_competitionNOcompetition:costNOcost 1.00  
## muUFdis\_relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1.00  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.00  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1.00  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:countryUK:costNOcost 1.00  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.00  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.00  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.00  
## Bulk\_ESS  
## muUFad\_Intercept 1858  
## muUFdis\_Intercept 1370  
## muUFad\_age\_groupYounger 2005  
## muUFad\_genderMale 1768  
## muUFad\_countryUK 1907  
## muUFad\_competitionNOcompetition 1795  
## muUFad\_relationUnknownMpeer 1668  
## muUFad\_costNOcost 712  
## muUFad\_age\_groupYounger:genderMale 1953  
## muUFad\_age\_groupYounger:countryUK 2045  
## muUFad\_age\_groupYounger:competitionNOcompetition 1955  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2028  
## muUFad\_age\_groupYounger:costNOcost 743  
## muUFad\_genderMale:countryUK 1859  
## muUFad\_genderMale:competitionNOcompetition 1975  
## muUFad\_genderMale:relationUnknownMpeer 1887  
## muUFad\_genderMale:costNOcost 725  
## muUFad\_countryUK:competitionNOcompetition 2130  
## muUFad\_countryUK:relationUnknownMpeer 1836  
## muUFad\_countryUK:costNOcost 739  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1870  
## muUFad\_competitionNOcompetition:costNOcost 857  
## muUFad\_relationUnknownMpeer:costNOcost 1722  
## muUFad\_age\_groupYounger:genderMale:countryUK 1973  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 2022  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 2138  
## muUFad\_age\_groupYounger:genderMale:costNOcost 828  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 2128  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 2117  
## muUFad\_age\_groupYounger:countryUK:costNOcost 882  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2493  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1170  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 2789  
## muUFad\_genderMale:countryUK:competitionNOcompetition 2195  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 2119  
## muUFad\_genderMale:countryUK:costNOcost 964  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2017  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 941  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1765  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 2143  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 965  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2036  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2835  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1753  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2424  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 1249  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2608  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1430  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 3106  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 3177  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2098  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 3786  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 5034  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2439  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 1297  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2392  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 3331  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 4301  
## muUFdis\_age\_groupYounger 981  
## muUFdis\_genderMale 1449  
## muUFdis\_countryUK 1567  
## muUFdis\_competitionNOcompetition 1430  
## muUFdis\_relationUnknownMpeer 1539  
## muUFdis\_costNOcost 1321  
## muUFdis\_age\_groupYounger:genderMale 1024  
## muUFdis\_age\_groupYounger:countryUK 1415  
## muUFdis\_age\_groupYounger:competitionNOcompetition 944  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1095  
## muUFdis\_age\_groupYounger:costNOcost 960  
## muUFdis\_genderMale:countryUK 1597  
## muUFdis\_genderMale:competitionNOcompetition 1639  
## muUFdis\_genderMale:relationUnknownMpeer 2070  
## muUFdis\_genderMale:costNOcost 1487  
## muUFdis\_countryUK:competitionNOcompetition 1680  
## muUFdis\_countryUK:relationUnknownMpeer 1765  
## muUFdis\_countryUK:costNOcost 1644  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1946  
## muUFdis\_competitionNOcompetition:costNOcost 1744  
## muUFdis\_relationUnknownMpeer:costNOcost 1761  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1535  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1169  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1475  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1048  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1511  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2498  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1513  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1292  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1136  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 1598  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1759  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 2243  
## muUFdis\_genderMale:countryUK:costNOcost 1603  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 2205  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1737  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 1948  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2346  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1858  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 2807  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1810  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2028  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2448  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 1654  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1729  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1413  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2002  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2974  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2103  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 2801  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1739  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2855  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 1295  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2728  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2080  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2701  
## Tail\_ESS  
## muUFad\_Intercept 2584  
## muUFdis\_Intercept 1777  
## muUFad\_age\_groupYounger 2879  
## muUFad\_genderMale 2203  
## muUFad\_countryUK 2256  
## muUFad\_competitionNOcompetition 2616  
## muUFad\_relationUnknownMpeer 2365  
## muUFad\_costNOcost 1360  
## muUFad\_age\_groupYounger:genderMale 2636  
## muUFad\_age\_groupYounger:countryUK 2679  
## muUFad\_age\_groupYounger:competitionNOcompetition 2725  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2667  
## muUFad\_age\_groupYounger:costNOcost 1200  
## muUFad\_genderMale:countryUK 2231  
## muUFad\_genderMale:competitionNOcompetition 2472  
## muUFad\_genderMale:relationUnknownMpeer 2658  
## muUFad\_genderMale:costNOcost 1338  
## muUFad\_countryUK:competitionNOcompetition 2922  
## muUFad\_countryUK:relationUnknownMpeer 2450  
## muUFad\_countryUK:costNOcost 1436  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 2594  
## muUFad\_competitionNOcompetition:costNOcost 1627  
## muUFad\_relationUnknownMpeer:costNOcost 1508  
## muUFad\_age\_groupYounger:genderMale:countryUK 2339  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 2794  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 2820  
## muUFad\_age\_groupYounger:genderMale:costNOcost 1417  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 2942  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 2902  
## muUFad\_age\_groupYounger:countryUK:costNOcost 1242  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 3055  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1903  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 2620  
## muUFad\_genderMale:countryUK:competitionNOcompetition 2484  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 2651  
## muUFad\_genderMale:countryUK:costNOcost 1389  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2699  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1789  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 1673  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 2962  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 1911  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 1763  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 3092  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2697  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2828  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 1538  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 3066  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 2055  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2889  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 3064  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2802  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 3036  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 3071  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2547  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 1635  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2072  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2844  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 3287  
## muUFdis\_age\_groupYounger 1217  
## muUFdis\_genderMale 1939  
## muUFdis\_countryUK 2241  
## muUFdis\_competitionNOcompetition 1812  
## muUFdis\_relationUnknownMpeer 2118  
## muUFdis\_costNOcost 2159  
## muUFdis\_age\_groupYounger:genderMale 1418  
## muUFdis\_age\_groupYounger:countryUK 1812  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1461  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1404  
## muUFdis\_age\_groupYounger:costNOcost 1231  
## muUFdis\_genderMale:countryUK 2248  
## muUFdis\_genderMale:competitionNOcompetition 2116  
## muUFdis\_genderMale:relationUnknownMpeer 2336  
## muUFdis\_genderMale:costNOcost 1800  
## muUFdis\_countryUK:competitionNOcompetition 2518  
## muUFdis\_countryUK:relationUnknownMpeer 2366  
## muUFdis\_countryUK:costNOcost 2287  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 2135  
## muUFdis\_competitionNOcompetition:costNOcost 2595  
## muUFdis\_relationUnknownMpeer:costNOcost 1671  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1809  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1470  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1709  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1488  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 2002  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2588  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1865  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1531  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1359  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 1978  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 2373  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 2503  
## muUFdis\_genderMale:countryUK:costNOcost 2247  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 2409  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1958  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 2273  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2980  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 2317  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 2321  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1657  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1755  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2791  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 2184  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2075  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1783  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2541  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2524  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2138  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 3141  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 2175  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2670  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 1654  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2732  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2278  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 3114  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

5: in model **brm2.5**, we add all 6 effects and their 5-way interactions.

summary(brm2.5)

## Warning: Parts of the model have not converged (some Rhats are > 1.05). Be  
## careful when analysing the results! We recommend running more iterations and/or  
## setting stronger priors.

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ (age\_group + gender + country + competition + relation + cost)^5 + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.37 0.14 1.11 1.65 1.02 93  
## sd(muUFdis\_Intercept) 1.13 0.20 0.78 1.57 1.09 41  
## Tail\_ESS  
## sd(muUFad\_Intercept) 170  
## sd(muUFdis\_Intercept) 108  
##   
## Population-Level Effects:   
## Estimate  
## muUFad\_Intercept -0.08  
## muUFdis\_Intercept -2.45  
## muUFad\_age\_groupYounger -0.56  
## muUFad\_genderMale 0.17  
## muUFad\_countryUK 1.07  
## muUFad\_competitionNOcompetition -0.83  
## muUFad\_relationUnknownMpeer -0.76  
## muUFad\_costNOcost -21.12  
## muUFad\_age\_groupYounger:genderMale -0.40  
## muUFad\_age\_groupYounger:countryUK -0.49  
## muUFad\_age\_groupYounger:competitionNOcompetition -1.16  
## muUFad\_age\_groupYounger:relationUnknownMpeer -0.23  
## muUFad\_age\_groupYounger:costNOcost 20.05  
## muUFad\_genderMale:countryUK -0.16  
## muUFad\_genderMale:competitionNOcompetition 0.35  
## muUFad\_genderMale:relationUnknownMpeer -0.16  
## muUFad\_genderMale:costNOcost 19.47  
## muUFad\_countryUK:competitionNOcompetition -0.07  
## muUFad\_countryUK:relationUnknownMpeer 0.49  
## muUFad\_countryUK:costNOcost 18.39  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -0.16  
## muUFad\_competitionNOcompetition:costNOcost 19.70  
## muUFad\_relationUnknownMpeer:costNOcost -217.77  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.86  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.45  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.70  
## muUFad\_age\_groupYounger:genderMale:costNOcost -20.37  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.94  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 0.24  
## muUFad\_age\_groupYounger:countryUK:costNOcost -19.40  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.09  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -18.01  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 61.78  
## muUFad\_genderMale:countryUK:competitionNOcompetition -0.27  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -1.93  
## muUFad\_genderMale:countryUK:costNOcost -21.99  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.75  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -19.94  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 216.89  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.49  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -20.06  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 218.71  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 160.27  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -3.02  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -0.89  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 21.22  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -1.47  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 19.25  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -60.36  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -1.12  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 16.12  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -62.67  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -3.36  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 0.37  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 22.12  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -213.74  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -158.72  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -159.94  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 0.41  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -17.17  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 58.25  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 0.95  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 4.08  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 156.37  
## muUFdis\_age\_groupYounger -0.81  
## muUFdis\_genderMale 1.22  
## muUFdis\_countryUK 0.03  
## muUFdis\_competitionNOcompetition 1.25  
## muUFdis\_relationUnknownMpeer 0.47  
## muUFdis\_costNOcost -0.64  
## muUFdis\_age\_groupYounger:genderMale 0.77  
## muUFdis\_age\_groupYounger:countryUK -165.67  
## muUFdis\_age\_groupYounger:competitionNOcompetition 0.47  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 0.30  
## muUFdis\_age\_groupYounger:costNOcost 0.61  
## muUFdis\_genderMale:countryUK 0.28  
## muUFdis\_genderMale:competitionNOcompetition -2.53  
## muUFdis\_genderMale:relationUnknownMpeer -47.23  
## muUFdis\_genderMale:costNOcost -2.04  
## muUFdis\_countryUK:competitionNOcompetition -0.75  
## muUFdis\_countryUK:relationUnknownMpeer 0.97  
## muUFdis\_countryUK:costNOcost -0.47  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -1.54  
## muUFdis\_competitionNOcompetition:costNOcost -2.33  
## muUFdis\_relationUnknownMpeer:costNOcost -244.71  
## muUFdis\_age\_groupYounger:genderMale:countryUK 165.21  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -0.55  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 45.81  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.45  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 164.18  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -44.01  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 167.90  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.33  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.97  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 244.50  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -0.39  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 42.74  
## muUFdis\_genderMale:countryUK:costNOcost 1.48  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 47.02  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 3.31  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 292.32  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -345.70  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -181.67  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 39.24  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 245.78  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -164.13  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -0.35  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -170.12  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -43.61  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -1.24  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -291.06  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 390.39  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 15.24  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 0.62  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -244.89  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 56.93  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 181.44  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost -83.70  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -528.86  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 490.06  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -101.15  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -13.63  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 44.66  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 526.05  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -531.12  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 38.01  
## Est.Error  
## muUFad\_Intercept 0.58  
## muUFdis\_Intercept 0.80  
## muUFad\_age\_groupYounger 0.90  
## muUFad\_genderMale 0.84  
## muUFad\_countryUK 0.92  
## muUFad\_competitionNOcompetition 0.76  
## muUFad\_relationUnknownMpeer 0.79  
## muUFad\_costNOcost 9.53  
## muUFad\_age\_groupYounger:genderMale 1.24  
## muUFad\_age\_groupYounger:countryUK 1.31  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.27  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.19  
## muUFad\_age\_groupYounger:costNOcost 9.42  
## muUFad\_genderMale:countryUK 1.22  
## muUFad\_genderMale:competitionNOcompetition 1.05  
## muUFad\_genderMale:relationUnknownMpeer 1.06  
## muUFad\_genderMale:costNOcost 9.53  
## muUFad\_countryUK:competitionNOcompetition 1.16  
## muUFad\_countryUK:relationUnknownMpeer 1.14  
## muUFad\_countryUK:costNOcost 9.63  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.18  
## muUFad\_competitionNOcompetition:costNOcost 9.50  
## muUFad\_relationUnknownMpeer:costNOcost 137.56  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.62  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.63  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.54  
## muUFad\_age\_groupYounger:genderMale:costNOcost 9.42  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.53  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.56  
## muUFad\_age\_groupYounger:countryUK:costNOcost 9.61  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.88  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 9.41  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 48.05  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.58  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.60  
## muUFad\_genderMale:countryUK:costNOcost 9.68  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.50  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 9.52  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 137.64  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.67  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 9.68  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 137.62  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 110.64  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2.01  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2.12  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 9.60  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2.30  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 9.44  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 47.98  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2.15  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 9.83  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 48.17  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 4.31  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2.20  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 9.79  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 137.79  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 110.81  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 110.60  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2.78  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 9.87  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 48.06  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 3.85  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 3.32  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 110.92  
## muUFdis\_age\_groupYounger 1.44  
## muUFdis\_genderMale 0.95  
## muUFdis\_countryUK 1.46  
## muUFdis\_competitionNOcompetition 0.91  
## muUFdis\_relationUnknownMpeer 1.01  
## muUFdis\_costNOcost 1.02  
## muUFdis\_age\_groupYounger:genderMale 1.58  
## muUFdis\_age\_groupYounger:countryUK 162.34  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.57  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.73  
## muUFdis\_age\_groupYounger:costNOcost 1.91  
## muUFdis\_genderMale:countryUK 1.66  
## muUFdis\_genderMale:competitionNOcompetition 1.26  
## muUFdis\_genderMale:relationUnknownMpeer 37.46  
## muUFdis\_genderMale:costNOcost 1.58  
## muUFdis\_countryUK:competitionNOcompetition 1.76  
## muUFdis\_countryUK:relationUnknownMpeer 1.74  
## muUFdis\_countryUK:costNOcost 2.03  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.36  
## muUFdis\_competitionNOcompetition:costNOcost 2.11  
## muUFdis\_relationUnknownMpeer:costNOcost 174.06  
## muUFdis\_age\_groupYounger:genderMale:countryUK 162.24  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.88  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 37.83  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2.47  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 162.40  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 165.08  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 162.14  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.13  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 2.99  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 173.91  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 2.37  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 37.39  
## muUFdis\_genderMale:countryUK:costNOcost 2.61  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 37.49  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2.97  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 172.43  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 278.13  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 159.24  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 203.44  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 173.73  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 162.28  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 165.43  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 161.87  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 37.87  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 3.90  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 172.37  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 323.05  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 204.93  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 155.03  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 173.47  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 232.32  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 159.24  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 205.61  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 265.96  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 369.65  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 292.83  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 204.83  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 153.84  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 265.97  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 319.75  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 165.05  
## l-95% CI  
## muUFad\_Intercept -1.26  
## muUFdis\_Intercept -4.25  
## muUFad\_age\_groupYounger -2.59  
## muUFad\_genderMale -1.45  
## muUFad\_countryUK -0.73  
## muUFad\_competitionNOcompetition -2.25  
## muUFad\_relationUnknownMpeer -2.17  
## muUFad\_costNOcost -44.01  
## muUFad\_age\_groupYounger:genderMale -2.89  
## muUFad\_age\_groupYounger:countryUK -3.13  
## muUFad\_age\_groupYounger:competitionNOcompetition -3.67  
## muUFad\_age\_groupYounger:relationUnknownMpeer -2.44  
## muUFad\_age\_groupYounger:costNOcost 5.30  
## muUFad\_genderMale:countryUK -2.65  
## muUFad\_genderMale:competitionNOcompetition -2.00  
## muUFad\_genderMale:relationUnknownMpeer -2.28  
## muUFad\_genderMale:costNOcost 4.63  
## muUFad\_countryUK:competitionNOcompetition -2.34  
## muUFad\_countryUK:relationUnknownMpeer -1.42  
## muUFad\_countryUK:costNOcost 3.36  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -2.44  
## muUFad\_competitionNOcompetition:costNOcost 5.00  
## muUFad\_relationUnknownMpeer:costNOcost -526.58  
## muUFad\_age\_groupYounger:genderMale:countryUK -1.54  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition -1.48  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer -1.68  
## muUFad\_age\_groupYounger:genderMale:costNOcost -43.18  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition -1.05  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -2.90  
## muUFad\_age\_groupYounger:countryUK:costNOcost -43.01  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -2.14  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -40.75  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 7.72  
## muUFad\_genderMale:countryUK:competitionNOcompetition -3.08  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -5.31  
## muUFad\_genderMale:countryUK:costNOcost -45.45  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer -1.95  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -42.91  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 38.97  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer -3.49  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -43.05  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 41.30  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 13.19  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -6.93  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -4.83  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 5.87  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -6.10  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 5.15  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -187.48  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -5.59  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 0.81  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -189.72  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -12.20  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -3.48  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 6.54  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -523.67  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -376.00  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -376.54  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -4.61  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -40.54  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 4.21  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -6.28  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -2.88  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 8.92  
## muUFdis\_age\_groupYounger -3.66  
## muUFdis\_genderMale -0.64  
## muUFdis\_countryUK -3.20  
## muUFdis\_competitionNOcompetition -0.44  
## muUFdis\_relationUnknownMpeer -1.34  
## muUFdis\_costNOcost -2.54  
## muUFdis\_age\_groupYounger:genderMale -2.24  
## muUFdis\_age\_groupYounger:countryUK -719.17  
## muUFdis\_age\_groupYounger:competitionNOcompetition -2.60  
## muUFdis\_age\_groupYounger:relationUnknownMpeer -2.93  
## muUFdis\_age\_groupYounger:costNOcost -3.58  
## muUFdis\_genderMale:countryUK -2.86  
## muUFdis\_genderMale:competitionNOcompetition -5.13  
## muUFdis\_genderMale:relationUnknownMpeer -127.10  
## muUFdis\_genderMale:costNOcost -5.26  
## muUFdis\_countryUK:competitionNOcompetition -4.02  
## muUFdis\_countryUK:relationUnknownMpeer -2.26  
## muUFdis\_countryUK:costNOcost -4.32  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -4.49  
## muUFdis\_competitionNOcompetition:costNOcost -7.49  
## muUFdis\_relationUnknownMpeer:costNOcost -620.35  
## muUFdis\_age\_groupYounger:genderMale:countryUK 8.86  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -4.22  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.45  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -2.72  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 6.62  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -472.89  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 10.62  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -3.97  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost -3.07  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 18.99  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -5.41  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -1.60  
## muUFdis\_genderMale:countryUK:costNOcost -3.67  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 3.07  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost -2.28  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 96.05  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -1063.28  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -544.89  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost -297.87  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 19.91  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -716.80  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -220.97  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -720.93  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -123.42  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -9.69  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -685.02  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -97.85  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -513.76  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -284.27  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -618.85  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -350.31  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 4.35  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost -577.89  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -1106.47  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -105.95  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -662.44  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -433.21  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost -235.02  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 178.71  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -1395.93  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -184.00  
## u-95% CI  
## muUFad\_Intercept 0.97  
## muUFdis\_Intercept -1.06  
## muUFad\_age\_groupYounger 1.11  
## muUFad\_genderMale 1.99  
## muUFad\_countryUK 2.74  
## muUFad\_competitionNOcompetition 0.74  
## muUFad\_relationUnknownMpeer 0.81  
## muUFad\_costNOcost -6.58  
## muUFad\_age\_groupYounger:genderMale 2.32  
## muUFad\_age\_groupYounger:countryUK 1.96  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.12  
## muUFad\_age\_groupYounger:relationUnknownMpeer 2.24  
## muUFad\_age\_groupYounger:costNOcost 42.99  
## muUFad\_genderMale:countryUK 2.07  
## muUFad\_genderMale:competitionNOcompetition 2.27  
## muUFad\_genderMale:relationUnknownMpeer 1.74  
## muUFad\_genderMale:costNOcost 42.53  
## muUFad\_countryUK:competitionNOcompetition 2.19  
## muUFad\_countryUK:relationUnknownMpeer 3.25  
## muUFad\_countryUK:costNOcost 41.58  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.97  
## muUFad\_competitionNOcompetition:costNOcost 42.38  
## muUFad\_relationUnknownMpeer:costNOcost -40.60  
## muUFad\_age\_groupYounger:genderMale:countryUK 5.32  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 4.94  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 4.45  
## muUFad\_age\_groupYounger:genderMale:costNOcost -5.45  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 5.31  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 3.07  
## muUFad\_age\_groupYounger:countryUK:costNOcost -4.19  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 4.94  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -4.05  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 189.14  
## muUFad\_genderMale:countryUK:competitionNOcompetition 2.86  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 0.96  
## muUFad\_genderMale:countryUK:costNOcost -6.82  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 3.61  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -5.44  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 526.07  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 3.63  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -4.90  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 528.06  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 376.81  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 0.83  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 3.50  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 44.44  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2.62  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 42.27  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -6.43  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2.59  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 39.51  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -8.37  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 4.87  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 5.14  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 45.64  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -35.85  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -11.26  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -13.41  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 5.79  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -2.04  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 182.89  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 8.70  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 10.40  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 375.61  
## muUFdis\_age\_groupYounger 1.85  
## muUFdis\_genderMale 3.07  
## muUFdis\_countryUK 2.58  
## muUFdis\_competitionNOcompetition 3.22  
## muUFdis\_relationUnknownMpeer 2.72  
## muUFdis\_costNOcost 1.38  
## muUFdis\_age\_groupYounger:genderMale 3.81  
## muUFdis\_age\_groupYounger:countryUK -9.11  
## muUFdis\_age\_groupYounger:competitionNOcompetition 3.80  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 3.66  
## muUFdis\_age\_groupYounger:costNOcost 3.98  
## muUFdis\_genderMale:countryUK 3.82  
## muUFdis\_genderMale:competitionNOcompetition -0.08  
## muUFdis\_genderMale:relationUnknownMpeer -3.62  
## muUFdis\_genderMale:costNOcost 0.96  
## muUFdis\_countryUK:competitionNOcompetition 2.91  
## muUFdis\_countryUK:relationUnknownMpeer 4.57  
## muUFdis\_countryUK:costNOcost 3.61  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 0.95  
## muUFdis\_competitionNOcompetition:costNOcost 0.89  
## muUFdis\_relationUnknownMpeer:costNOcost -18.38  
## muUFdis\_age\_groupYounger:genderMale:countryUK 718.64  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 2.91  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 125.78  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 6.64  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 716.49  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 178.18  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 720.14  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 4.41  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 8.81  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 619.13  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 3.93  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 122.20  
## muUFdis\_genderMale:countryUK:costNOcost 6.71  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 126.82  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 9.59  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 685.85  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -17.18  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -4.43  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 531.71  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 619.26  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -6.69  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 427.15  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -13.22  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.53  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 5.53  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -94.88  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1094.95  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 433.47  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 272.64  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -19.03  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 631.80  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 547.85  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 263.55  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -180.57  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1456.16  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 400.79  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 511.83  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 338.75  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1104.80  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -122.54  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 469.12  
## Rhat  
## muUFad\_Intercept 1.16  
## muUFdis\_Intercept 1.08  
## muUFad\_age\_groupYounger 1.25  
## muUFad\_genderMale 1.17  
## muUFad\_countryUK 1.18  
## muUFad\_competitionNOcompetition 1.22  
## muUFad\_relationUnknownMpeer 1.21  
## muUFad\_costNOcost 1.65  
## muUFad\_age\_groupYounger:genderMale 1.20  
## muUFad\_age\_groupYounger:countryUK 1.32  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.18  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.20  
## muUFad\_age\_groupYounger:costNOcost 1.66  
## muUFad\_genderMale:countryUK 1.25  
## muUFad\_genderMale:competitionNOcompetition 1.18  
## muUFad\_genderMale:relationUnknownMpeer 1.23  
## muUFad\_genderMale:costNOcost 1.65  
## muUFad\_countryUK:competitionNOcompetition 1.23  
## muUFad\_countryUK:relationUnknownMpeer 1.21  
## muUFad\_countryUK:costNOcost 1.62  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.23  
## muUFad\_competitionNOcompetition:costNOcost 1.64  
## muUFad\_relationUnknownMpeer:costNOcost 2.05  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.30  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.18  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.22  
## muUFad\_age\_groupYounger:genderMale:costNOcost 1.65  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.22  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.22  
## muUFad\_age\_groupYounger:countryUK:costNOcost 1.62  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.15  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 1.68  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.30  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.21  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.24  
## muUFad\_genderMale:countryUK:costNOcost 1.57  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.22  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 1.63  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 2.05  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.24  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 1.58  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 2.04  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2.16  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.24  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.28  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 1.54  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.16  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.64  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.30  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.19  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.59  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.30  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.06  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.25  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.50  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 2.05  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.17  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.16  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.24  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 1.47  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 1.30  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.04  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.04  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.17  
## muUFdis\_age\_groupYounger 1.11  
## muUFdis\_genderMale 1.04  
## muUFdis\_countryUK 1.11  
## muUFdis\_competitionNOcompetition 1.08  
## muUFdis\_relationUnknownMpeer 1.07  
## muUFdis\_costNOcost 1.09  
## muUFdis\_age\_groupYounger:genderMale 1.09  
## muUFdis\_age\_groupYounger:countryUK 1.75  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.08  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.05  
## muUFdis\_age\_groupYounger:costNOcost 1.11  
## muUFdis\_genderMale:countryUK 1.08  
## muUFdis\_genderMale:competitionNOcompetition 1.06  
## muUFdis\_genderMale:relationUnknownMpeer 1.78  
## muUFdis\_genderMale:costNOcost 1.03  
## muUFdis\_countryUK:competitionNOcompetition 1.09  
## muUFdis\_countryUK:relationUnknownMpeer 1.10  
## muUFdis\_countryUK:costNOcost 1.10  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.06  
## muUFdis\_competitionNOcompetition:costNOcost 1.09  
## muUFdis\_relationUnknownMpeer:costNOcost 2.84  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1.74  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.07  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.80  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.10  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1.75  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 1.63  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1.74  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.06  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.14  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 2.84  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1.08  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 1.77  
## muUFdis\_genderMale:countryUK:costNOcost 1.05  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.77  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1.11  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 2.26  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.24  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1.28  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 1.85  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2.82  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.75  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.64  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 1.74  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.80  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.14  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2.25  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.54  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 1.58  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 1.21  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.81  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.19  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.27  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.83  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.70  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.33  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.56  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 1.58  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 1.21  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.70  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.29  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.62  
## Bulk\_ESS  
## muUFad\_Intercept 22  
## muUFdis\_Intercept 57  
## muUFad\_age\_groupYounger 14  
## muUFad\_genderMale 21  
## muUFad\_countryUK 18  
## muUFad\_competitionNOcompetition 15  
## muUFad\_relationUnknownMpeer 18  
## muUFad\_costNOcost 7  
## muUFad\_age\_groupYounger:genderMale 17  
## muUFad\_age\_groupYounger:countryUK 10  
## muUFad\_age\_groupYounger:competitionNOcompetition 16  
## muUFad\_age\_groupYounger:relationUnknownMpeer 16  
## muUFad\_age\_groupYounger:costNOcost 7  
## muUFad\_genderMale:countryUK 13  
## muUFad\_genderMale:competitionNOcompetition 19  
## muUFad\_genderMale:relationUnknownMpeer 13  
## muUFad\_genderMale:costNOcost 7  
## muUFad\_countryUK:competitionNOcompetition 13  
## muUFad\_countryUK:relationUnknownMpeer 14  
## muUFad\_countryUK:costNOcost 7  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 13  
## muUFad\_competitionNOcompetition:costNOcost 7  
## muUFad\_relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK 11  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 16  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 15  
## muUFad\_age\_groupYounger:genderMale:costNOcost 7  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 14  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 13  
## muUFad\_age\_groupYounger:countryUK:costNOcost 7  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 20  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 7  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 11  
## muUFad\_genderMale:countryUK:competitionNOcompetition 14  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 12  
## muUFad\_genderMale:countryUK:costNOcost 7  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 14  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 7  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 5  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 12  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 7  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 12  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 11  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 7  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 19  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 7  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 11  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 15  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 7  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 11  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 62  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 12  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 8  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 12  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 8  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 10  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 68  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 68  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger 31  
## muUFdis\_genderMale 88  
## muUFdis\_countryUK 29  
## muUFdis\_competitionNOcompetition 57  
## muUFdis\_relationUnknownMpeer 64  
## muUFdis\_costNOcost 32  
## muUFdis\_age\_groupYounger:genderMale 36  
## muUFdis\_age\_groupYounger:countryUK 6  
## muUFdis\_age\_groupYounger:competitionNOcompetition 39  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 59  
## muUFdis\_age\_groupYounger:costNOcost 25  
## muUFdis\_genderMale:countryUK 74  
## muUFdis\_genderMale:competitionNOcompetition 86  
## muUFdis\_genderMale:relationUnknownMpeer 6  
## muUFdis\_genderMale:costNOcost 94  
## muUFdis\_countryUK:competitionNOcompetition 41  
## muUFdis\_countryUK:relationUnknownMpeer 38  
## muUFdis\_countryUK:costNOcost 27  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 63  
## muUFdis\_competitionNOcompetition:costNOcost 32  
## muUFdis\_relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK 6  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 67  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 28  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 6  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 7  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 6  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 56  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 21  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 5  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 49  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 6  
## muUFdis\_genderMale:countryUK:costNOcost 65  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 6  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 27  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 5  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 14  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 12  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 6  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 6  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 7  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 6  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 21  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 7  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 7  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 17  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 21  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 12  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 6  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 6  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 10  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 7  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 7  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 17  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 6  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 11  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 7  
## Tail\_ESS  
## muUFad\_Intercept 77  
## muUFdis\_Intercept 112  
## muUFad\_age\_groupYounger 41  
## muUFad\_genderMale 50  
## muUFad\_countryUK 59  
## muUFad\_competitionNOcompetition 68  
## muUFad\_relationUnknownMpeer 72  
## muUFad\_costNOcost 19  
## muUFad\_age\_groupYounger:genderMale 37  
## muUFad\_age\_groupYounger:countryUK 18  
## muUFad\_age\_groupYounger:competitionNOcompetition 46  
## muUFad\_age\_groupYounger:relationUnknownMpeer 38  
## muUFad\_age\_groupYounger:costNOcost 19  
## muUFad\_genderMale:countryUK 22  
## muUFad\_genderMale:competitionNOcompetition 48  
## muUFad\_genderMale:relationUnknownMpeer 76  
## muUFad\_genderMale:costNOcost 21  
## muUFad\_countryUK:competitionNOcompetition 40  
## muUFad\_countryUK:relationUnknownMpeer 25  
## muUFad\_countryUK:costNOcost 22  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 96  
## muUFad\_competitionNOcompetition:costNOcost 20  
## muUFad\_relationUnknownMpeer:costNOcost 19  
## muUFad\_age\_groupYounger:genderMale:countryUK 17  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 102  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 19  
## muUFad\_age\_groupYounger:genderMale:costNOcost 22  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 38  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 63  
## muUFad\_age\_groupYounger:countryUK:costNOcost 20  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 103  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 17  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 22  
## muUFad\_genderMale:countryUK:competitionNOcompetition 76  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 34  
## muUFad\_genderMale:countryUK:costNOcost 25  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 188  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 24  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 19  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 29  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 25  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 19  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 34  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 48  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 25  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 90  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 22  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 20  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 70  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 24  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 25  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 83  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 36  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 27  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 19  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 79  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 30  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 24  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 94  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 140  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFdis\_age\_groupYounger 110  
## muUFdis\_genderMale 188  
## muUFdis\_countryUK 103  
## muUFdis\_competitionNOcompetition 52  
## muUFdis\_relationUnknownMpeer 115  
## muUFdis\_costNOcost 84  
## muUFdis\_age\_groupYounger:genderMale 134  
## muUFdis\_age\_groupYounger:countryUK 12  
## muUFdis\_age\_groupYounger:competitionNOcompetition 118  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 183  
## muUFdis\_age\_groupYounger:costNOcost 130  
## muUFdis\_genderMale:countryUK 131  
## muUFdis\_genderMale:competitionNOcompetition 170  
## muUFdis\_genderMale:relationUnknownMpeer 34  
## muUFdis\_genderMale:costNOcost 203  
## muUFdis\_countryUK:competitionNOcompetition 124  
## muUFdis\_countryUK:relationUnknownMpeer 157  
## muUFdis\_countryUK:costNOcost 194  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 186  
## muUFdis\_competitionNOcompetition:costNOcost 80  
## muUFdis\_relationUnknownMpeer:costNOcost 13  
## muUFdis\_age\_groupYounger:genderMale:countryUK 12  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 157  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 33  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 172  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 12  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 24  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 12  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 196  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 91  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 14  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 175  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 39  
## muUFdis\_genderMale:countryUK:costNOcost 139  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 31  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 82  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 29  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 28  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 31  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 13  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 14  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 12  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 26  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 12  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 33  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 104  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 29  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 28  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 12  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 58  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 14  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 37  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 32  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 14  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 25  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 28  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 12  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 48  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 25  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 26  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

6: in model **brm2.6**, we add all 6 effects and their 6-way interactions.

summary(brm2.6)

## Warning: Parts of the model have not converged (some Rhats are > 1.05). Be  
## careful when analysing the results! We recommend running more iterations and/or  
## setting stronger priors.

## Family: categorical   
## Links: muUFad = logit; muUFdis = logit   
## Formula: allocation ~ (age\_group + gender + country + competition + relation + cost)^6 + (1 | id)   
## Data: R2long (Number of observations: 1632)   
## Samples: 4 chains, each with iter = 2000; warmup = 1000; thin = 1;  
## total post-warmup samples = 4000  
##   
## Group-Level Effects:   
## ~id (Number of levels: 204)   
## Estimate Est.Error l-95% CI u-95% CI Rhat Bulk\_ESS  
## sd(muUFad\_Intercept) 1.42 0.13 1.18 1.67 1.06 57  
## sd(muUFdis\_Intercept) 1.20 0.17 0.88 1.55 1.11 36  
## Tail\_ESS  
## sd(muUFad\_Intercept) 167  
## sd(muUFdis\_Intercept) 85  
##   
## Population-Level Effects:   
## Estimate  
## muUFad\_Intercept -0.00  
## muUFdis\_Intercept -2.13  
## muUFad\_age\_groupYounger -0.55  
## muUFad\_genderMale -0.09  
## muUFad\_countryUK 0.98  
## muUFad\_competitionNOcompetition -1.05  
## muUFad\_relationUnknownMpeer -1.01  
## muUFad\_costNOcost -28.53  
## muUFad\_age\_groupYounger:genderMale -0.25  
## muUFad\_age\_groupYounger:countryUK -0.58  
## muUFad\_age\_groupYounger:competitionNOcompetition -0.92  
## muUFad\_age\_groupYounger:relationUnknownMpeer 0.09  
## muUFad\_age\_groupYounger:costNOcost 27.42  
## muUFad\_genderMale:countryUK 0.05  
## muUFad\_genderMale:competitionNOcompetition 0.83  
## muUFad\_genderMale:relationUnknownMpeer 0.34  
## muUFad\_genderMale:costNOcost 27.07  
## muUFad\_countryUK:competitionNOcompetition 0.08  
## muUFad\_countryUK:relationUnknownMpeer 0.61  
## muUFad\_countryUK:costNOcost 25.68  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 0.21  
## muUFad\_competitionNOcompetition:costNOcost 27.12  
## muUFad\_relationUnknownMpeer:costNOcost -137.45  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.77  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 0.94  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.13  
## muUFad\_age\_groupYounger:genderMale:costNOcost -27.98  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.78  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 0.14  
## muUFad\_age\_groupYounger:countryUK:costNOcost -26.60  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 0.56  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -25.45  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 35.34  
## muUFad\_genderMale:countryUK:competitionNOcompetition -0.67  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -2.27  
## muUFad\_genderMale:countryUK:costNOcost -29.47  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 0.01  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -27.63  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 136.31  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 0.18  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -27.38  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 138.55  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 87.31  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -2.60  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -0.59  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 28.63  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -0.55  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 26.98  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -33.65  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -0.66  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 23.38  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -36.47  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 15.81  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.07  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 29.72  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -133.36  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -85.38  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -87.07  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -0.46  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -24.72  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 31.90  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -18.62  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -14.92  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 83.09  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 19.38  
## muUFdis\_age\_groupYounger -1.40  
## muUFdis\_genderMale 0.56  
## muUFdis\_countryUK -0.08  
## muUFdis\_competitionNOcompetition 0.74  
## muUFdis\_relationUnknownMpeer -0.03  
## muUFdis\_costNOcost -0.71  
## muUFdis\_age\_groupYounger:genderMale 1.72  
## muUFdis\_age\_groupYounger:countryUK -253.79  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.36  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.13  
## muUFdis\_age\_groupYounger:costNOcost 0.52  
## muUFdis\_genderMale:countryUK 0.69  
## muUFdis\_genderMale:competitionNOcompetition -1.58  
## muUFdis\_genderMale:relationUnknownMpeer -34.49  
## muUFdis\_genderMale:costNOcost -1.67  
## muUFdis\_countryUK:competitionNOcompetition -0.55  
## muUFdis\_countryUK:relationUnknownMpeer 1.18  
## muUFdis\_countryUK:costNOcost -0.92  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -0.81  
## muUFdis\_competitionNOcompetition:costNOcost -1.87  
## muUFdis\_relationUnknownMpeer:costNOcost -93.61  
## muUFdis\_age\_groupYounger:genderMale:countryUK 253.05  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -1.88  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 32.72  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.25  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 251.87  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -10.37  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 256.90  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -0.91  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.53  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 93.42  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -1.19  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 30.33  
## muUFdis\_genderMale:countryUK:costNOcost 1.66  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 33.84  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2.41  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 128.97  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -440.71  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -145.97  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost -159.05  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 94.21  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -251.28  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -21.84  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -258.89  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -29.90  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -0.38  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -127.72  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 451.80  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -108.79  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 164.59  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -93.19  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 5.14  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 146.36  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 126.80  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -422.66  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 747.77  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -15.70  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 109.85  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost -131.45  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 419.70  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -754.68  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -15.09  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 18.90  
## Est.Error  
## muUFad\_Intercept 0.61  
## muUFdis\_Intercept 1.03  
## muUFad\_age\_groupYounger 0.84  
## muUFad\_genderMale 0.79  
## muUFad\_countryUK 0.93  
## muUFad\_competitionNOcompetition 0.82  
## muUFad\_relationUnknownMpeer 0.74  
## muUFad\_costNOcost 17.17  
## muUFad\_age\_groupYounger:genderMale 1.20  
## muUFad\_age\_groupYounger:countryUK 1.21  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.53  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.04  
## muUFad\_age\_groupYounger:costNOcost 17.38  
## muUFad\_genderMale:countryUK 1.12  
## muUFad\_genderMale:competitionNOcompetition 0.97  
## muUFad\_genderMale:relationUnknownMpeer 0.97  
## muUFad\_genderMale:costNOcost 17.14  
## muUFad\_countryUK:competitionNOcompetition 1.02  
## muUFad\_countryUK:relationUnknownMpeer 1.02  
## muUFad\_countryUK:costNOcost 17.27  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.08  
## muUFad\_competitionNOcompetition:costNOcost 17.37  
## muUFad\_relationUnknownMpeer:costNOcost 98.90  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.70  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.88  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.39  
## muUFad\_age\_groupYounger:genderMale:costNOcost 17.49  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.76  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.26  
## muUFad\_age\_groupYounger:countryUK:costNOcost 17.57  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.14  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 17.78  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 123.90  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.13  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.33  
## muUFad\_genderMale:countryUK:costNOcost 17.39  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.27  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 17.37  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 98.88  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.33  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 17.61  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 98.78  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 107.82  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2.17  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.77  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 17.88  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 2.52  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 17.97  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 123.82  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 2.30  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 18.18  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 123.67  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 135.42  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.62  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 17.76  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 98.67  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 107.85  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 107.58  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2.87  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 18.60  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 123.33  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 135.41  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 134.99  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 107.51  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 134.70  
## muUFdis\_age\_groupYounger 1.67  
## muUFdis\_genderMale 1.40  
## muUFdis\_countryUK 1.46  
## muUFdis\_competitionNOcompetition 1.11  
## muUFdis\_relationUnknownMpeer 1.18  
## muUFdis\_costNOcost 1.29  
## muUFdis\_age\_groupYounger:genderMale 1.97  
## muUFdis\_age\_groupYounger:countryUK 317.40  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.70  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.93  
## muUFdis\_age\_groupYounger:costNOcost 1.94  
## muUFdis\_genderMale:countryUK 1.79  
## muUFdis\_genderMale:competitionNOcompetition 1.63  
## muUFdis\_genderMale:relationUnknownMpeer 38.82  
## muUFdis\_genderMale:costNOcost 1.93  
## muUFdis\_countryUK:competitionNOcompetition 1.76  
## muUFdis\_countryUK:relationUnknownMpeer 1.68  
## muUFdis\_countryUK:costNOcost 2.10  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.50  
## muUFdis\_competitionNOcompetition:costNOcost 2.00  
## muUFdis\_relationUnknownMpeer:costNOcost 65.23  
## muUFdis\_age\_groupYounger:genderMale:countryUK 317.54  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 2.16  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 38.77  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 2.37  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 317.63  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 357.07  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 317.23  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.25  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 2.29  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 65.50  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 2.37  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 38.75  
## muUFdis\_genderMale:countryUK:costNOcost 2.79  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 39.16  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 2.75  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 65.06  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 398.68  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 102.16  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 272.29  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 64.80  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 317.75  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 348.17  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 317.26  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 39.24  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 2.99  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 65.28  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 402.91  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 310.24  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 298.82  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 64.98  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 611.13  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 102.19  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 265.60  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 274.38  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 623.08  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 612.64  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 310.06  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 279.09  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 274.15  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 505.57  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 778.67  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 701.05  
## l-95% CI  
## muUFad\_Intercept -1.24  
## muUFdis\_Intercept -4.19  
## muUFad\_age\_groupYounger -2.11  
## muUFad\_genderMale -1.52  
## muUFad\_countryUK -0.94  
## muUFad\_competitionNOcompetition -2.40  
## muUFad\_relationUnknownMpeer -2.44  
## muUFad\_costNOcost -57.06  
## muUFad\_age\_groupYounger:genderMale -2.52  
## muUFad\_age\_groupYounger:countryUK -2.67  
## muUFad\_age\_groupYounger:competitionNOcompetition -4.24  
## muUFad\_age\_groupYounger:relationUnknownMpeer -1.86  
## muUFad\_age\_groupYounger:costNOcost 2.69  
## muUFad\_genderMale:countryUK -1.90  
## muUFad\_genderMale:competitionNOcompetition -0.96  
## muUFad\_genderMale:relationUnknownMpeer -1.78  
## muUFad\_genderMale:costNOcost 2.89  
## muUFad\_countryUK:competitionNOcompetition -1.97  
## muUFad\_countryUK:relationUnknownMpeer -1.26  
## muUFad\_countryUK:costNOcost 1.30  
## muUFad\_competitionNOcompetition:relationUnknownMpeer -1.93  
## muUFad\_competitionNOcompetition:costNOcost 2.05  
## muUFad\_relationUnknownMpeer:costNOcost -282.29  
## muUFad\_age\_groupYounger:genderMale:countryUK -1.39  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition -2.34  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer -1.43  
## muUFad\_age\_groupYounger:genderMale:costNOcost -56.51  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition -1.54  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer -2.20  
## muUFad\_age\_groupYounger:countryUK:costNOcost -54.44  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -2.85  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost -54.39  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost -188.36  
## muUFad\_genderMale:countryUK:competitionNOcompetition -2.71  
## muUFad\_genderMale:countryUK:relationUnknownMpeer -4.58  
## muUFad\_genderMale:countryUK:costNOcost -57.34  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer -2.26  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -56.07  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost -18.66  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer -2.48  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -55.97  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost -16.37  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost -106.88  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -6.72  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -4.34  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 3.01  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -6.47  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 0.08  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -208.35  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -5.79  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -4.02  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -210.52  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -179.99  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -1.92  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 3.50  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost -279.07  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -242.99  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -244.35  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -5.42  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -53.49  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost -190.28  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -293.55  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -292.36  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -109.36  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -175.71  
## muUFdis\_age\_groupYounger -4.85  
## muUFdis\_genderMale -2.12  
## muUFdis\_countryUK -2.97  
## muUFdis\_competitionNOcompetition -1.37  
## muUFdis\_relationUnknownMpeer -2.15  
## muUFdis\_costNOcost -3.04  
## muUFdis\_age\_groupYounger:genderMale -1.80  
## muUFdis\_age\_groupYounger:countryUK -1030.29  
## muUFdis\_age\_groupYounger:competitionNOcompetition -1.51  
## muUFdis\_age\_groupYounger:relationUnknownMpeer -2.52  
## muUFdis\_age\_groupYounger:costNOcost -2.93  
## muUFdis\_genderMale:countryUK -2.97  
## muUFdis\_genderMale:competitionNOcompetition -4.21  
## muUFdis\_genderMale:relationUnknownMpeer -146.52  
## muUFdis\_genderMale:costNOcost -5.49  
## muUFdis\_countryUK:competitionNOcompetition -4.03  
## muUFdis\_countryUK:relationUnknownMpeer -1.90  
## muUFdis\_countryUK:costNOcost -4.35  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer -3.38  
## muUFdis\_competitionNOcompetition:costNOcost -5.71  
## muUFdis\_relationUnknownMpeer:costNOcost -293.07  
## muUFdis\_age\_groupYounger:genderMale:countryUK 2.69  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition -6.14  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer -1.27  
## muUFdis\_age\_groupYounger:genderMale:costNOcost -3.29  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1.14  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer -665.89  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 6.95  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer -5.27  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost -3.36  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 13.98  
## muUFdis\_genderMale:countryUK:competitionNOcompetition -6.86  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer -3.04  
## muUFdis\_genderMale:countryUK:costNOcost -3.67  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer -0.43  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost -3.43  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 42.34  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -1255.56  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -345.25  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost -759.94  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 14.75  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -1030.27  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer -718.05  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -1037.03  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer -143.34  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost -6.54  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -298.45  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer -73.61  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost -859.66  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost -287.36  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -293.68  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -2248.31  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 3.26  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost -241.00  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -1135.11  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -120.07  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer -1069.71  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost -230.59  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost -820.20  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 113.84  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -2046.43  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -1060.22  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -2217.69  
## u-95% CI  
## muUFad\_Intercept 1.06  
## muUFdis\_Intercept -0.25  
## muUFad\_age\_groupYounger 1.13  
## muUFad\_genderMale 1.48  
## muUFad\_countryUK 2.61  
## muUFad\_competitionNOcompetition 0.68  
## muUFad\_relationUnknownMpeer 0.45  
## muUFad\_costNOcost -4.32  
## muUFad\_age\_groupYounger:genderMale 2.02  
## muUFad\_age\_groupYounger:countryUK 1.68  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.66  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.98  
## muUFad\_age\_groupYounger:costNOcost 56.12  
## muUFad\_genderMale:countryUK 2.18  
## muUFad\_genderMale:competitionNOcompetition 2.63  
## muUFad\_genderMale:relationUnknownMpeer 1.96  
## muUFad\_genderMale:costNOcost 55.49  
## muUFad\_countryUK:competitionNOcompetition 1.79  
## muUFad\_countryUK:relationUnknownMpeer 2.69  
## muUFad\_countryUK:costNOcost 54.05  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 2.23  
## muUFad\_competitionNOcompetition:costNOcost 55.62  
## muUFad\_relationUnknownMpeer:costNOcost 17.35  
## muUFad\_age\_groupYounger:genderMale:countryUK 4.70  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 4.92  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 4.09  
## muUFad\_age\_groupYounger:genderMale:costNOcost -2.97  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 5.16  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 2.54  
## muUFad\_age\_groupYounger:countryUK:costNOcost -1.57  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 5.52  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 0.76  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 209.84  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.47  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 0.48  
## muUFad\_genderMale:countryUK:costNOcost -4.72  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 2.55  
## muUFad\_genderMale:competitionNOcompetition:costNOcost -2.43  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 280.68  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 2.47  
## muUFad\_countryUK:competitionNOcompetition:costNOcost -2.23  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 283.99  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 245.09  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.47  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2.56  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 56.14  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 3.28  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 56.07  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 188.79  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 3.35  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 52.33  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 186.90  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 291.27  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 4.26  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 57.94  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 22.01  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 107.91  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 106.75  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 5.58  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 3.82  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 206.42  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 175.84  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 180.47  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 239.92  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 293.69  
## muUFdis\_age\_groupYounger 1.44  
## muUFdis\_genderMale 3.30  
## muUFdis\_countryUK 2.41  
## muUFdis\_competitionNOcompetition 2.92  
## muUFdis\_relationUnknownMpeer 2.31  
## muUFdis\_costNOcost 1.83  
## muUFdis\_age\_groupYounger:genderMale 6.36  
## muUFdis\_age\_groupYounger:countryUK -3.23  
## muUFdis\_age\_groupYounger:competitionNOcompetition 5.00  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 4.93  
## muUFdis\_age\_groupYounger:costNOcost 5.01  
## muUFdis\_genderMale:countryUK 4.14  
## muUFdis\_genderMale:competitionNOcompetition 1.65  
## muUFdis\_genderMale:relationUnknownMpeer -1.16  
## muUFdis\_genderMale:costNOcost 1.85  
## muUFdis\_countryUK:competitionNOcompetition 2.55  
## muUFdis\_countryUK:relationUnknownMpeer 4.48  
## muUFdis\_countryUK:costNOcost 3.28  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 2.32  
## muUFdis\_competitionNOcompetition:costNOcost 1.67  
## muUFdis\_relationUnknownMpeer:costNOcost -14.82  
## muUFdis\_age\_groupYounger:genderMale:countryUK 1030.05  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.84  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 145.68  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 5.85  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 1029.89  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 701.76  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 1035.50  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 2.99  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 5.92  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 293.34  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 3.03  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 142.62  
## muUFdis\_genderMale:countryUK:costNOcost 6.67  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 146.72  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 7.53  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 298.80  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer -8.08  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost -2.91  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 229.23  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 294.67  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition -0.43  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 537.39  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost -10.31  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 5.46  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 5.50  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost -41.27  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1569.50  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 231.30  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 943.63  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost -13.43  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 695.64  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 345.94  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 700.96  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost -115.21  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1845.38  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2219.95  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 856.81  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 326.39  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1131.98  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost -126.77  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2260.34  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1327.54  
## Rhat  
## muUFad\_Intercept 1.35  
## muUFdis\_Intercept 1.37  
## muUFad\_age\_groupYounger 1.53  
## muUFad\_genderMale 1.22  
## muUFad\_countryUK 1.41  
## muUFad\_competitionNOcompetition 1.44  
## muUFad\_relationUnknownMpeer 1.42  
## muUFad\_costNOcost 2.20  
## muUFad\_age\_groupYounger:genderMale 1.54  
## muUFad\_age\_groupYounger:countryUK 1.49  
## muUFad\_age\_groupYounger:competitionNOcompetition 1.66  
## muUFad\_age\_groupYounger:relationUnknownMpeer 1.34  
## muUFad\_age\_groupYounger:costNOcost 2.18  
## muUFad\_genderMale:countryUK 1.27  
## muUFad\_genderMale:competitionNOcompetition 1.36  
## muUFad\_genderMale:relationUnknownMpeer 1.19  
## muUFad\_genderMale:costNOcost 2.17  
## muUFad\_countryUK:competitionNOcompetition 1.45  
## muUFad\_countryUK:relationUnknownMpeer 1.22  
## muUFad\_countryUK:costNOcost 2.21  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 1.44  
## muUFad\_competitionNOcompetition:costNOcost 2.19  
## muUFad\_relationUnknownMpeer:costNOcost 3.03  
## muUFad\_age\_groupYounger:genderMale:countryUK 1.44  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 1.63  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 1.27  
## muUFad\_age\_groupYounger:genderMale:costNOcost 2.13  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 1.76  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 1.20  
## muUFad\_age\_groupYounger:countryUK:costNOcost 2.17  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.53  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 2.23  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 2.20  
## muUFad\_genderMale:countryUK:competitionNOcompetition 1.29  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 1.13  
## muUFad\_genderMale:countryUK:costNOcost 2.12  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.29  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 2.14  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 3.03  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 1.25  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 2.18  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 3.03  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 2.56  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 1.63  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 1.18  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 2.05  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.48  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 2.14  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 2.21  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.47  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2.15  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 2.21  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.34  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.12  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 2.10  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 3.03  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.56  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.57  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.40  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 2.03  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 2.21  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.36  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.34  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.56  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.36  
## muUFdis\_age\_groupYounger 1.17  
## muUFdis\_genderMale 1.38  
## muUFdis\_countryUK 1.31  
## muUFdis\_competitionNOcompetition 1.45  
## muUFdis\_relationUnknownMpeer 1.42  
## muUFdis\_costNOcost 1.43  
## muUFdis\_age\_groupYounger:genderMale 1.15  
## muUFdis\_age\_groupYounger:countryUK 2.20  
## muUFdis\_age\_groupYounger:competitionNOcompetition 1.23  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 1.16  
## muUFdis\_age\_groupYounger:costNOcost 1.13  
## muUFdis\_genderMale:countryUK 1.34  
## muUFdis\_genderMale:competitionNOcompetition 1.39  
## muUFdis\_genderMale:relationUnknownMpeer 1.72  
## muUFdis\_genderMale:costNOcost 1.35  
## muUFdis\_countryUK:competitionNOcompetition 1.27  
## muUFdis\_countryUK:relationUnknownMpeer 1.29  
## muUFdis\_countryUK:costNOcost 1.32  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 1.39  
## muUFdis\_competitionNOcompetition:costNOcost 1.42  
## muUFdis\_relationUnknownMpeer:costNOcost 1.50  
## muUFdis\_age\_groupYounger:genderMale:countryUK 2.20  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 1.24  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 1.71  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 1.15  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 2.20  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 2.05  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 2.20  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 1.18  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 1.23  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 1.49  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 1.17  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 1.70  
## muUFdis\_genderMale:countryUK:costNOcost 1.35  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 1.75  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 1.27  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 1.59  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 2.01  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 1.31  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 2.02  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 1.48  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 2.20  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 2.12  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 2.20  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 1.75  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 1.14  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 1.59  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 1.78  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 2.38  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 2.38  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.48  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 2.03  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 1.31  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 1.92  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.47  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.41  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 1.66  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 2.39  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 2.40  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.47  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.49  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 2.30  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 1.96  
## Bulk\_ESS  
## muUFad\_Intercept 10  
## muUFdis\_Intercept 9  
## muUFad\_age\_groupYounger 7  
## muUFad\_genderMale 14  
## muUFad\_countryUK 9  
## muUFad\_competitionNOcompetition 9  
## muUFad\_relationUnknownMpeer 8  
## muUFad\_costNOcost 5  
## muUFad\_age\_groupYounger:genderMale 7  
## muUFad\_age\_groupYounger:countryUK 8  
## muUFad\_age\_groupYounger:competitionNOcompetition 7  
## muUFad\_age\_groupYounger:relationUnknownMpeer 10  
## muUFad\_age\_groupYounger:costNOcost 5  
## muUFad\_genderMale:countryUK 12  
## muUFad\_genderMale:competitionNOcompetition 10  
## muUFad\_genderMale:relationUnknownMpeer 16  
## muUFad\_genderMale:costNOcost 5  
## muUFad\_countryUK:competitionNOcompetition 8  
## muUFad\_countryUK:relationUnknownMpeer 15  
## muUFad\_countryUK:costNOcost 5  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 8  
## muUFad\_competitionNOcompetition:costNOcost 5  
## muUFad\_relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK 8  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 7  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 12  
## muUFad\_age\_groupYounger:genderMale:costNOcost 5  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 6  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 15  
## muUFad\_age\_groupYounger:countryUK:costNOcost 5  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 8  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 5  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 5  
## muUFad\_genderMale:countryUK:competitionNOcompetition 11  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 24  
## muUFad\_genderMale:countryUK:costNOcost 5  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 11  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 5  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 5  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 12  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 5  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 7  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 17  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 8  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 8  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 5  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 23  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 5  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 9  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger 24  
## muUFdis\_genderMale 9  
## muUFdis\_countryUK 11  
## muUFdis\_competitionNOcompetition 8  
## muUFdis\_relationUnknownMpeer 9  
## muUFdis\_costNOcost 8  
## muUFdis\_age\_groupYounger:genderMale 23  
## muUFdis\_age\_groupYounger:countryUK 5  
## muUFdis\_age\_groupYounger:competitionNOcompetition 15  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 24  
## muUFdis\_age\_groupYounger:costNOcost 24  
## muUFdis\_genderMale:countryUK 10  
## muUFdis\_genderMale:competitionNOcompetition 9  
## muUFdis\_genderMale:relationUnknownMpeer 6  
## muUFdis\_genderMale:costNOcost 9  
## muUFdis\_countryUK:competitionNOcompetition 12  
## muUFdis\_countryUK:relationUnknownMpeer 11  
## muUFdis\_countryUK:costNOcost 10  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 9  
## muUFdis\_competitionNOcompetition:costNOcost 8  
## muUFdis\_relationUnknownMpeer:costNOcost 8  
## muUFdis\_age\_groupYounger:genderMale:countryUK 5  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 14  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 18  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 5  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 5  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 5  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 20  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 14  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 8  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 17  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 6  
## muUFdis\_genderMale:countryUK:costNOcost 9  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 6  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 12  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 7  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 5  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 10  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 5  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 8  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 22  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 7  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 6  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 5  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 8  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 5  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 10  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 6  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 8  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 7  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 8  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 5  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 6  
## Tail\_ESS  
## muUFad\_Intercept 24  
## muUFdis\_Intercept 30  
## muUFad\_age\_groupYounger 16  
## muUFad\_genderMale 45  
## muUFad\_countryUK 55  
## muUFad\_competitionNOcompetition 31  
## muUFad\_relationUnknownMpeer 20  
## muUFad\_costNOcost 24  
## muUFad\_age\_groupYounger:genderMale 41  
## muUFad\_age\_groupYounger:countryUK 37  
## muUFad\_age\_groupYounger:competitionNOcompetition 16  
## muUFad\_age\_groupYounger:relationUnknownMpeer 32  
## muUFad\_age\_groupYounger:costNOcost 23  
## muUFad\_genderMale:countryUK 33  
## muUFad\_genderMale:competitionNOcompetition 56  
## muUFad\_genderMale:relationUnknownMpeer 26  
## muUFad\_genderMale:costNOcost 24  
## muUFad\_countryUK:competitionNOcompetition 46  
## muUFad\_countryUK:relationUnknownMpeer 55  
## muUFad\_countryUK:costNOcost 24  
## muUFad\_competitionNOcompetition:relationUnknownMpeer 19  
## muUFad\_competitionNOcompetition:costNOcost 26  
## muUFad\_relationUnknownMpeer:costNOcost 19  
## muUFad\_age\_groupYounger:genderMale:countryUK 18  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition 18  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer 26  
## muUFad\_age\_groupYounger:genderMale:costNOcost 23  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition 18  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer 106  
## muUFad\_age\_groupYounger:countryUK:costNOcost 24  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 13  
## muUFad\_age\_groupYounger:competitionNOcompetition:costNOcost 21  
## muUFad\_age\_groupYounger:relationUnknownMpeer:costNOcost 14  
## muUFad\_genderMale:countryUK:competitionNOcompetition 157  
## muUFad\_genderMale:countryUK:relationUnknownMpeer 59  
## muUFad\_genderMale:countryUK:costNOcost 22  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer 36  
## muUFad\_genderMale:competitionNOcompetition:costNOcost 26  
## muUFad\_genderMale:relationUnknownMpeer:costNOcost 18  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer 59  
## muUFad\_countryUK:competitionNOcompetition:costNOcost 24  
## muUFad\_countryUK:relationUnknownMpeer:costNOcost 18  
## muUFad\_competitionNOcompetition:relationUnknownMpeer:costNOcost 32  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 16  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 83  
## muUFad\_age\_groupYounger:genderMale:countryUK:costNOcost 23  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 13  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 20  
## muUFad\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 14  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 13  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 28  
## muUFad\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 13  
## muUFad\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 11  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 100  
## muUFad\_genderMale:countryUK:competitionNOcompetition:costNOcost 23  
## muUFad\_genderMale:countryUK:relationUnknownMpeer:costNOcost 19  
## muUFad\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 32  
## muUFad\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 33  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 17  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 28  
## muUFad\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 14  
## muUFad\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 12  
## muUFad\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 12  
## muUFad\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 34  
## muUFad\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 12  
## muUFdis\_age\_groupYounger 29  
## muUFdis\_genderMale 31  
## muUFdis\_countryUK 53  
## muUFdis\_competitionNOcompetition 33  
## muUFdis\_relationUnknownMpeer 33  
## muUFdis\_costNOcost 61  
## muUFdis\_age\_groupYounger:genderMale 24  
## muUFdis\_age\_groupYounger:countryUK 11  
## muUFdis\_age\_groupYounger:competitionNOcompetition 61  
## muUFdis\_age\_groupYounger:relationUnknownMpeer 50  
## muUFdis\_age\_groupYounger:costNOcost 58  
## muUFdis\_genderMale:countryUK 28  
## muUFdis\_genderMale:competitionNOcompetition 72  
## muUFdis\_genderMale:relationUnknownMpeer 15  
## muUFdis\_genderMale:costNOcost 50  
## muUFdis\_countryUK:competitionNOcompetition 55  
## muUFdis\_countryUK:relationUnknownMpeer 20  
## muUFdis\_countryUK:costNOcost 46  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer 35  
## muUFdis\_competitionNOcompetition:costNOcost 47  
## muUFdis\_relationUnknownMpeer:costNOcost 16  
## muUFdis\_age\_groupYounger:genderMale:countryUK 11  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition 41  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer 16  
## muUFdis\_age\_groupYounger:genderMale:costNOcost 60  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition 11  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer 13  
## muUFdis\_age\_groupYounger:countryUK:costNOcost 11  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer 67  
## muUFdis\_age\_groupYounger:competitionNOcompetition:costNOcost 51  
## muUFdis\_age\_groupYounger:relationUnknownMpeer:costNOcost 17  
## muUFdis\_genderMale:countryUK:competitionNOcompetition 82  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer 15  
## muUFdis\_genderMale:countryUK:costNOcost 130  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer 15  
## muUFdis\_genderMale:competitionNOcompetition:costNOcost 43  
## muUFdis\_genderMale:relationUnknownMpeer:costNOcost 37  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer 30  
## muUFdis\_countryUK:competitionNOcompetition:costNOcost 31  
## muUFdis\_countryUK:relationUnknownMpeer:costNOcost 16  
## muUFdis\_competitionNOcompetition:relationUnknownMpeer:costNOcost 18  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition 11  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer 13  
## muUFdis\_age\_groupYounger:genderMale:countryUK:costNOcost 11  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer 15  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:costNOcost 36  
## muUFdis\_age\_groupYounger:genderMale:relationUnknownMpeer:costNOcost 35  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer 25  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:costNOcost 13  
## muUFdis\_age\_groupYounger:countryUK:relationUnknownMpeer:costNOcost 16  
## muUFdis\_age\_groupYounger:competitionNOcompetition:relationUnknownMpeer:costNOcost 17  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 11  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:costNOcost 32  
## muUFdis\_genderMale:countryUK:relationUnknownMpeer:costNOcost 20  
## muUFdis\_genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 24  
## muUFdis\_countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 22  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer 11  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:costNOcost 12  
## muUFdis\_age\_groupYounger:genderMale:countryUK:relationUnknownMpeer:costNOcost 15  
## muUFdis\_age\_groupYounger:genderMale:competitionNOcompetition:relationUnknownMpeer:costNOcost 24  
## muUFdis\_age\_groupYounger:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 13  
## muUFdis\_genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 11  
## muUFdis\_age\_groupYounger:genderMale:countryUK:competitionNOcompetition:relationUnknownMpeer:costNOcost 11  
##   
## Samples were drawn using sampling(NUTS). For each parameter, Bulk\_ESS  
## and Tail\_ESS are effective sample size measures, and Rhat is the potential  
## scale reduction factor on split chains (at convergence, Rhat = 1).

#### 3.3 Model Selection

##LOO vaule for model 2.1  
loo(brm2.1)

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1226.5 29.5  
## p\_loo 180.9 5.6  
## looic 2453.1 59.0  
## ------  
## Monte Carlo SE of elpd\_loo is 0.2.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1629 99.8% 1537   
## (0.5, 0.7] (ok) 3 0.2% 2599   
## (0.7, 1] (bad) 0 0.0% <NA>   
## (1, Inf) (very bad) 0 0.0% <NA>   
##   
## All Pareto k estimates are ok (k < 0.7).  
## See help('pareto-k-diagnostic') for details.

##LOO vaule for model 2.2  
loo(brm2.2)

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1228.5 30.8  
## p\_loo 218.5 7.1  
## looic 2457.1 61.5  
## ------  
## Monte Carlo SE of elpd\_loo is 0.3.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1623 99.4% 877   
## (0.5, 0.7] (ok) 9 0.6% 1611   
## (0.7, 1] (bad) 0 0.0% <NA>   
## (1, Inf) (very bad) 0 0.0% <NA>   
##   
## All Pareto k estimates are ok (k < 0.7).  
## See help('pareto-k-diagnostic') for details.

##LOO vaule for model 2.3  
loo(brm2.3)

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1253.7 33.0  
## p\_loo 275.7 9.6  
## looic 2507.4 65.9  
## ------  
## Monte Carlo SE of elpd\_loo is 0.4.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1611 98.7% 296   
## (0.5, 0.7] (ok) 21 1.3% 411   
## (0.7, 1] (bad) 0 0.0% <NA>   
## (1, Inf) (very bad) 0 0.0% <NA>   
##   
## All Pareto k estimates are ok (k < 0.7).  
## See help('pareto-k-diagnostic') for details.

##LOO vaule for model 2.4  
loo(brm2.4)

## Warning: Found 10 observations with a pareto\_k > 0.7 in model 'brm2.4'. It is  
## recommended to set 'moment\_match = TRUE' in order to perform moment matching for  
## problematic observations.

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1275.6 36.5  
## p\_loo 334.3 14.5  
## looic 2551.2 73.0  
## ------  
## Monte Carlo SE of elpd\_loo is NA.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1566 96.0% 506   
## (0.5, 0.7] (ok) 56 3.4% 177   
## (0.7, 1] (bad) 7 0.4% 41   
## (1, Inf) (very bad) 3 0.2% 11   
## See help('pareto-k-diagnostic') for details.

##LOO vaule for model 2.5  
loo(brm2.5)

## Warning: Found 42 observations with a pareto\_k > 0.7 in model 'brm2.5'. It is  
## recommended to set 'moment\_match = TRUE' in order to perform moment matching for  
## problematic observations.

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1273.5 36.1  
## p\_loo 338.5 14.5  
## looic 2547.0 72.2  
## ------  
## Monte Carlo SE of elpd\_loo is NA.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1550 95.0% 9   
## (0.5, 0.7] (ok) 40 2.5% 10   
## (0.7, 1] (bad) 9 0.6% 4   
## (1, Inf) (very bad) 33 2.0% 1   
## See help('pareto-k-diagnostic') for details.

##LOO vaule for model 2.6  
loo(brm2.6)

## Warning: Found 51 observations with a pareto\_k > 0.7 in model 'brm2.6'. It is  
## recommended to set 'moment\_match = TRUE' in order to perform moment matching for  
## problematic observations.

##   
## Computed from 4000 by 1632 log-likelihood matrix  
##   
## Estimate SE  
## elpd\_loo -1268.1 35.9  
## p\_loo 339.2 14.2  
## looic 2536.2 71.7  
## ------  
## Monte Carlo SE of elpd\_loo is NA.  
##   
## Pareto k diagnostic values:  
## Count Pct. Min. n\_eff  
## (-Inf, 0.5] (good) 1540 94.4% 2   
## (0.5, 0.7] (ok) 41 2.5% 2   
## (0.7, 1] (bad) 18 1.1% 2   
## (1, Inf) (very bad) 33 2.0% 1   
## See help('pareto-k-diagnostic') for details.

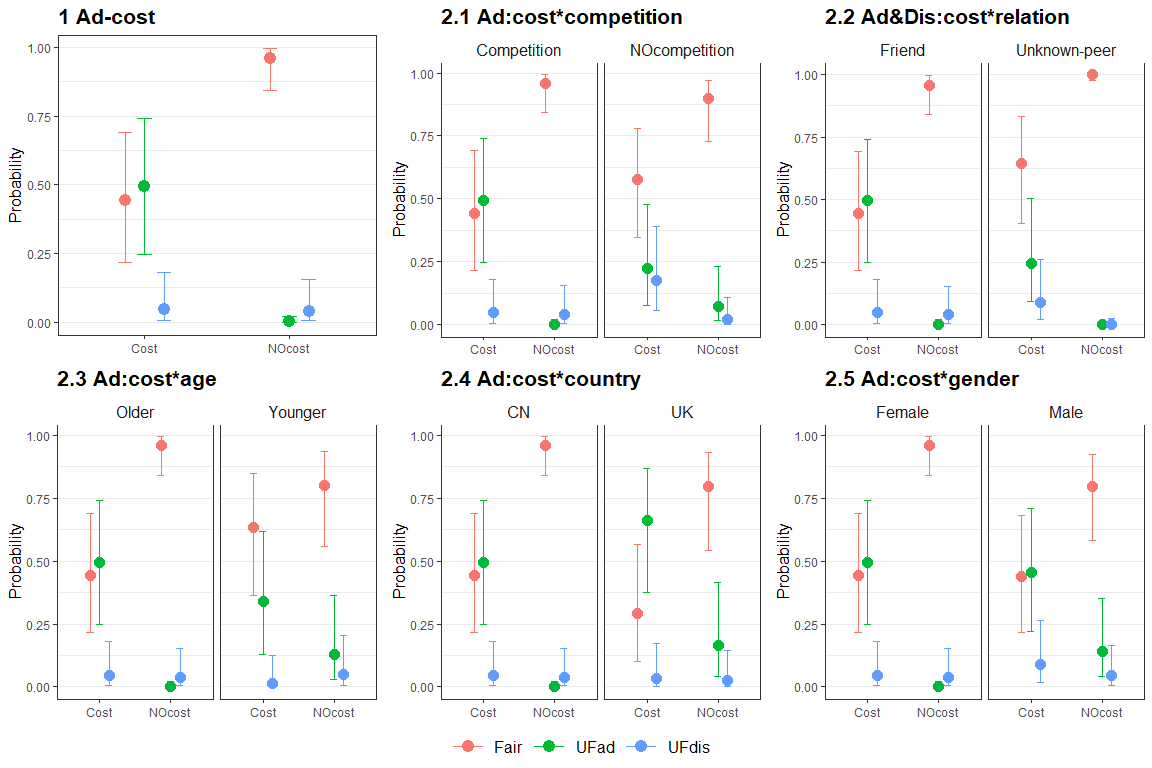
The Bayesian criteria for convergence used ‘Rhat’ information. Rhat is the potential scale reduction factor on split chains and if a value is greater than 1, the model has not sufficiently converged [(Bürkner, 2017)](https://arxiv.org/abs/1705.11123). Models 5 and 6 were excluded from the comparison because of their poor convergence (as indicated by their ‘Rhat’ vaules).

For Model 4 (with 6 main effects and their 2,3, and 4-way interactions), the Rhat equalled 1, indicating good convergence. The estimated effective number of parameters (p\_loo) was used for model selection and identified Model 4 as the best fitting model, having the best model specification (Vehtari, Gelman & Gabry, 2017). [(Vehtari, Gelman & Gabry, 2017)](https://link.springer.com/article/10.1007/s11222-016-9696-4).

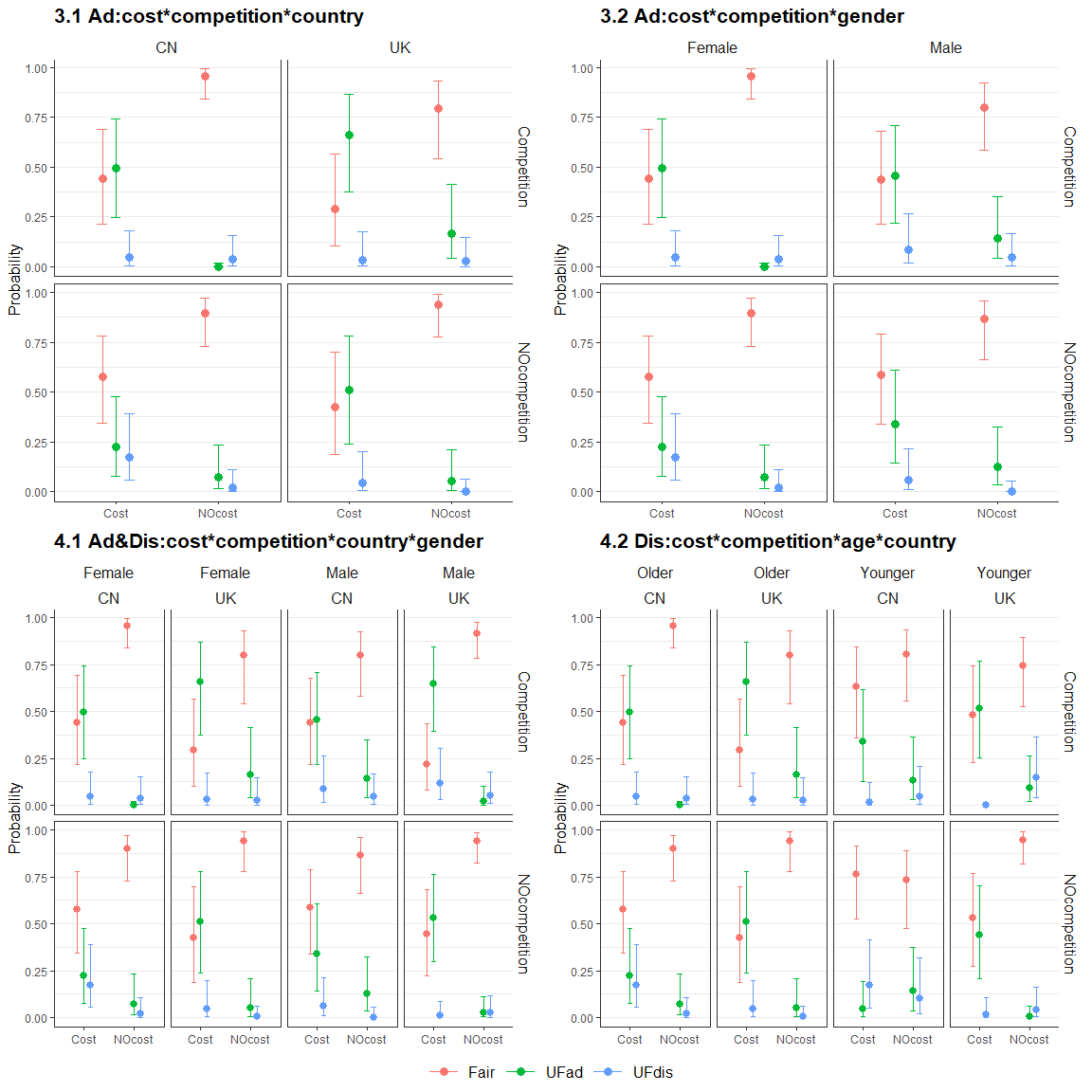
## 4 Output Visualization

Based on the output of Model 4, we plotted the estimated possibility(EP) for effects that are significant. In each plot, the red colour dot (fair) represents the estimated mean for probability of fair allocation (with associated credible intervals), the green means and intervals (ufad) show the proportions of allocations which advantage the self, the details in blue (ufdis) represents allocations in which the child disadvantages her or himself.

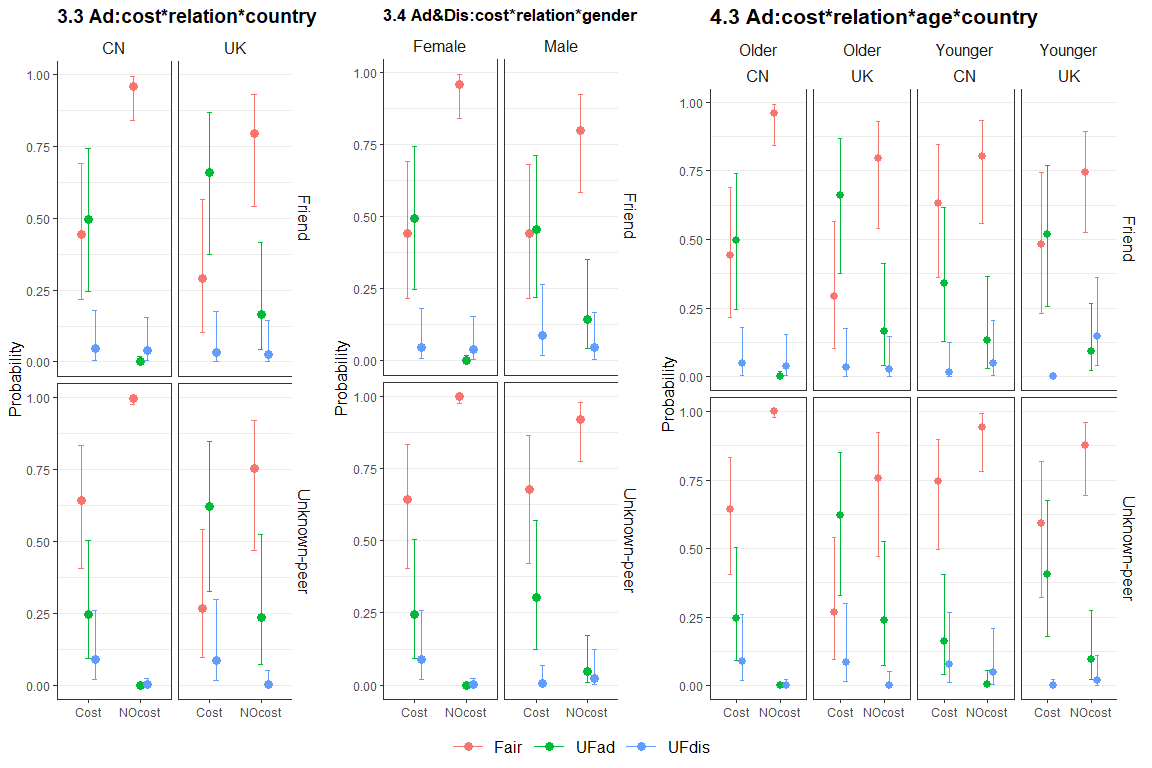
#### 4.1 Two-way interactions led by cost



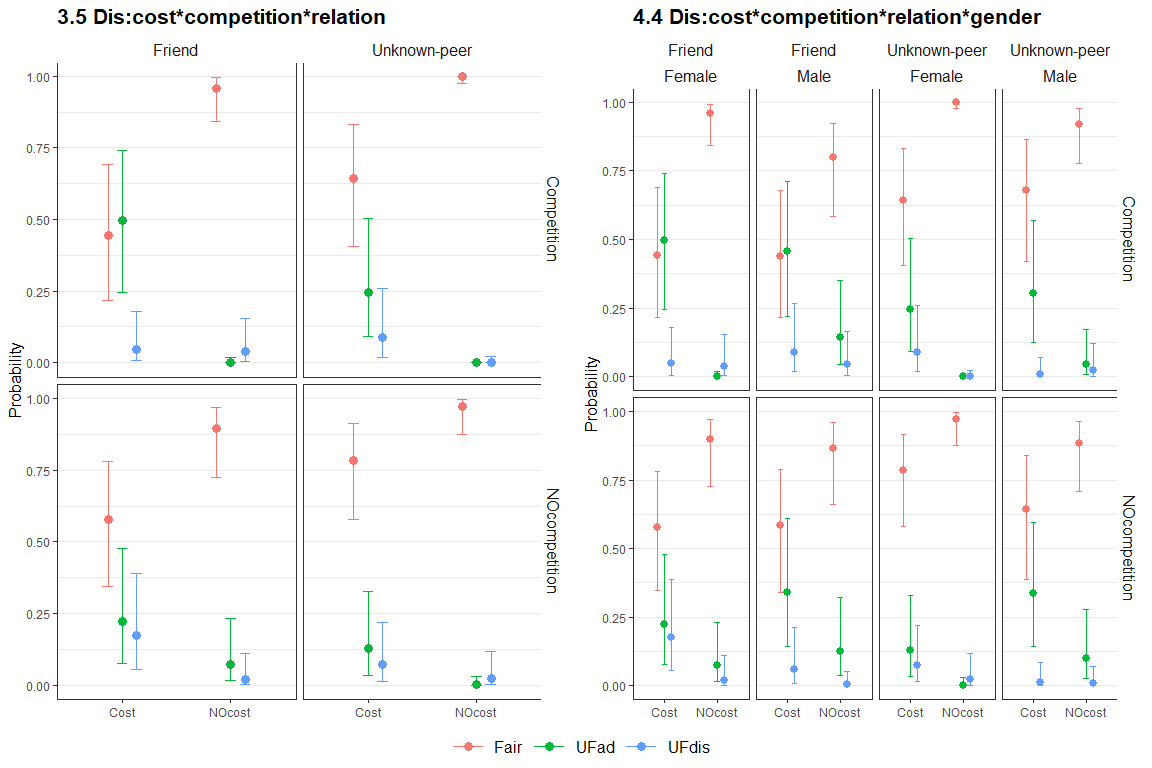
#### 4.2 interactions led by cost\*competition



#### 4.3 interactions led by cost\*relation



#### 4.4 interactions led by cost\*contextural factors



#### 4.5 interactions led by cost\*structural factors

