

Comparison of alternative kriging models

	Matern 5/2	Matern 3/2	Gaussian	exponent.	power exp.
Q2 constant trend	0.8334	0.8142	0.8590	0.6042	0.8235
Q2 1st order poly. trend	0.8216	0.7965	0.8559	0.5808	0.3518

Q2: cross validation Q2 (higher is better)

RMSE/MAE/RMA: external validation RMSE/MAE/RMA (lower is better)

Kriging meta-model estimation (standardized)

trend(intercept)	−0.118	Trend specification	constant
trend(inclination)	NA	Correlation function	Gaussian
theta(n)	1.457	Cross-sample Q2	0.859
theta(omega1)	1.273	External RMSE	NA
theta(omega2)	1.907	External MAE	NA
theta(zeta1)	1.032	External RMA	NA
theta(zeta2)	0.036	DoE samples	65
theta(varPhi1)	0.313	External samples	NA
theta(varPhi2)	1.400		
theta(upsilon)	0.940		
theta(chi)	0.487		
theta(xi)	0.294		
theta(gammau)	0.707		

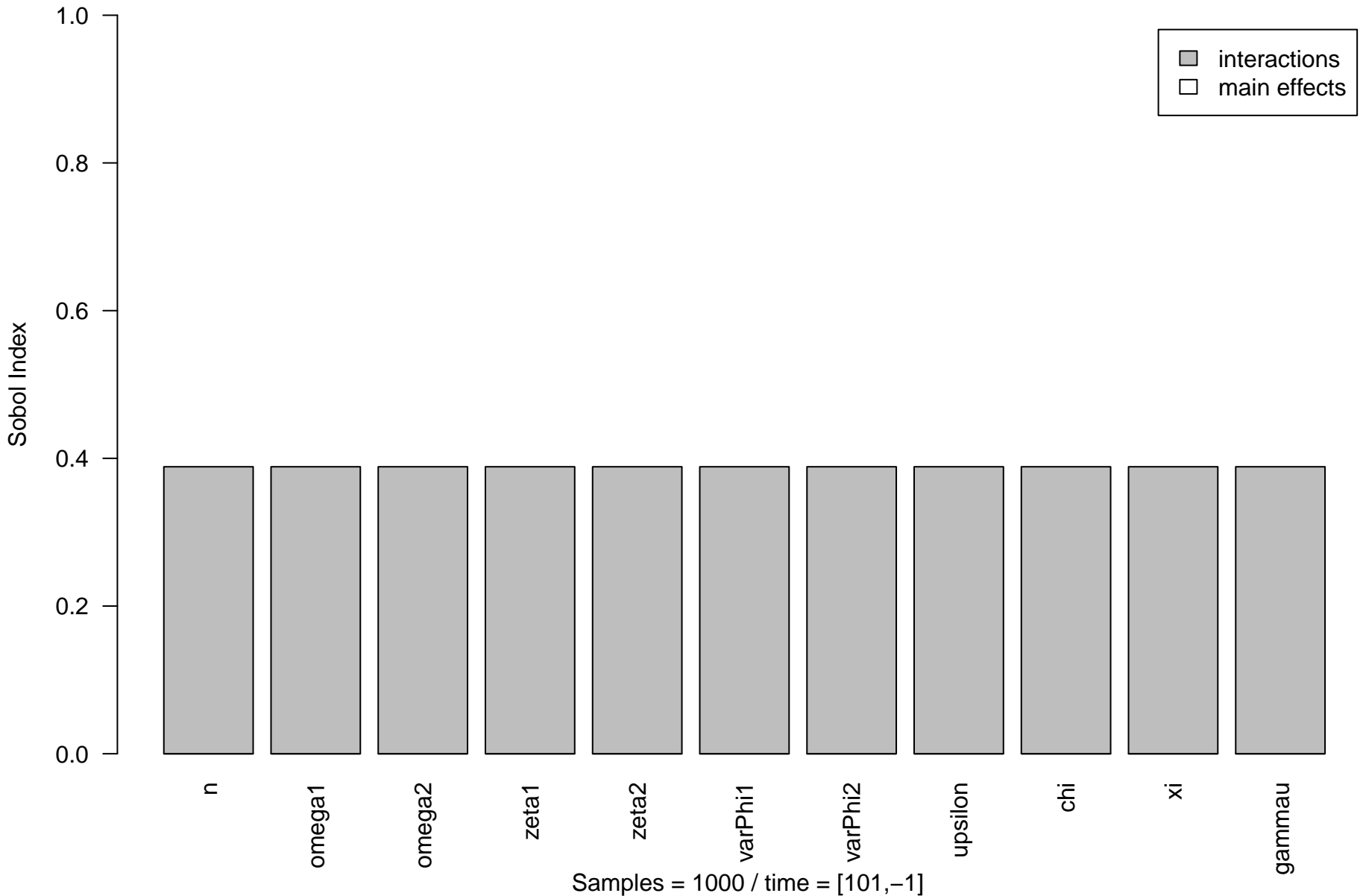
Variables rescaled to [0,1] / Average 95% CI = +/- 0.06

Predicted output at defaults: regCoef = −0.12, 95% CI = [−0.18,−0.06], time = [101,−1]

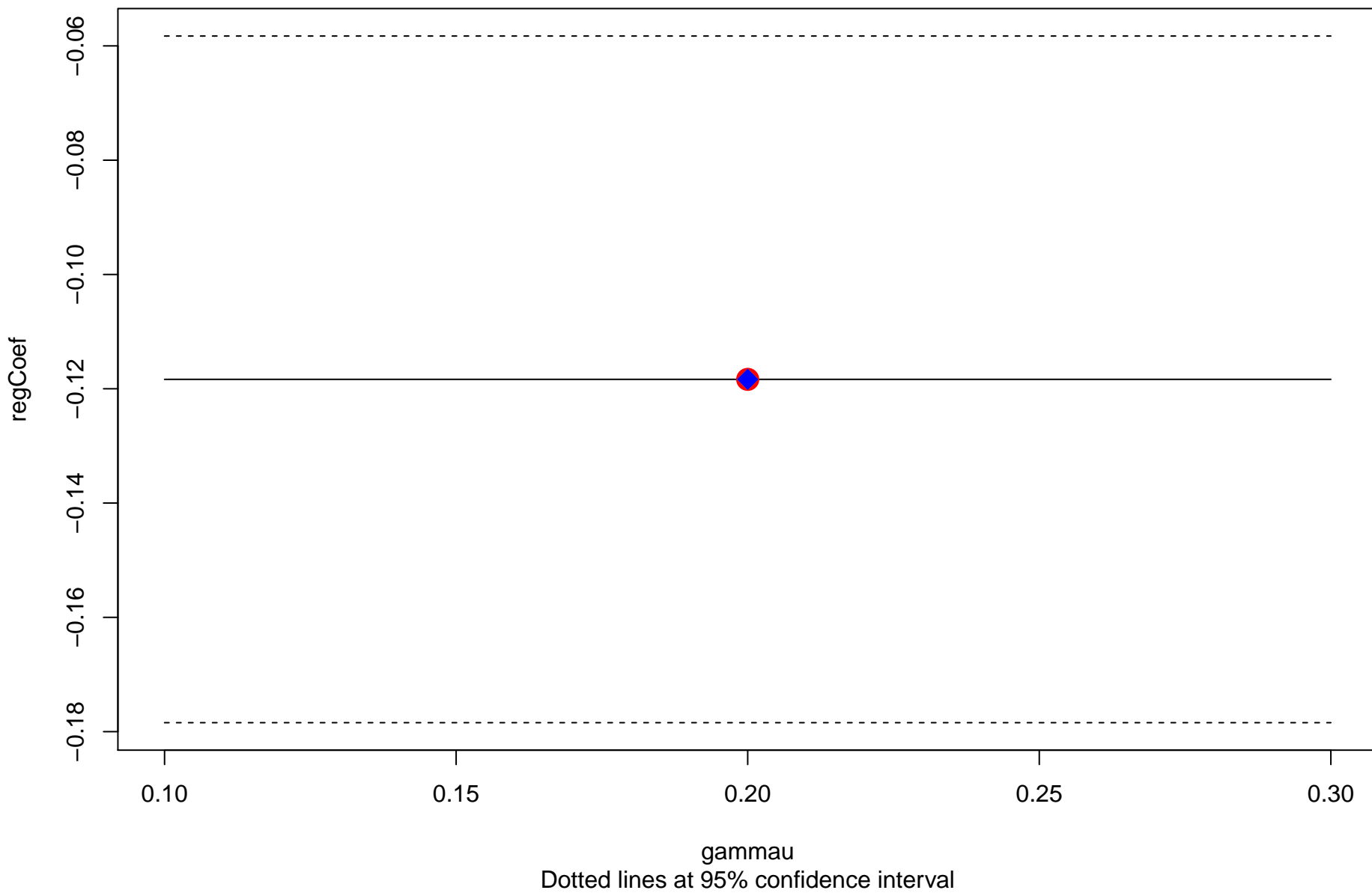
Sobol decomposition indexes (regCoef)

	Direct effects	Interactions
n	0.000	0.389
omega1	0.000	0.389
omega2	0.000	0.389
zeta1	0.000	0.389
zeta2	0.000	0.389
varPhi1	0.000	0.389
varPhi2	0.000	0.389
upsilon	0.000	0.389
chi	0.000	0.389
xi	0.000	0.389
gammau	0.000	0.389

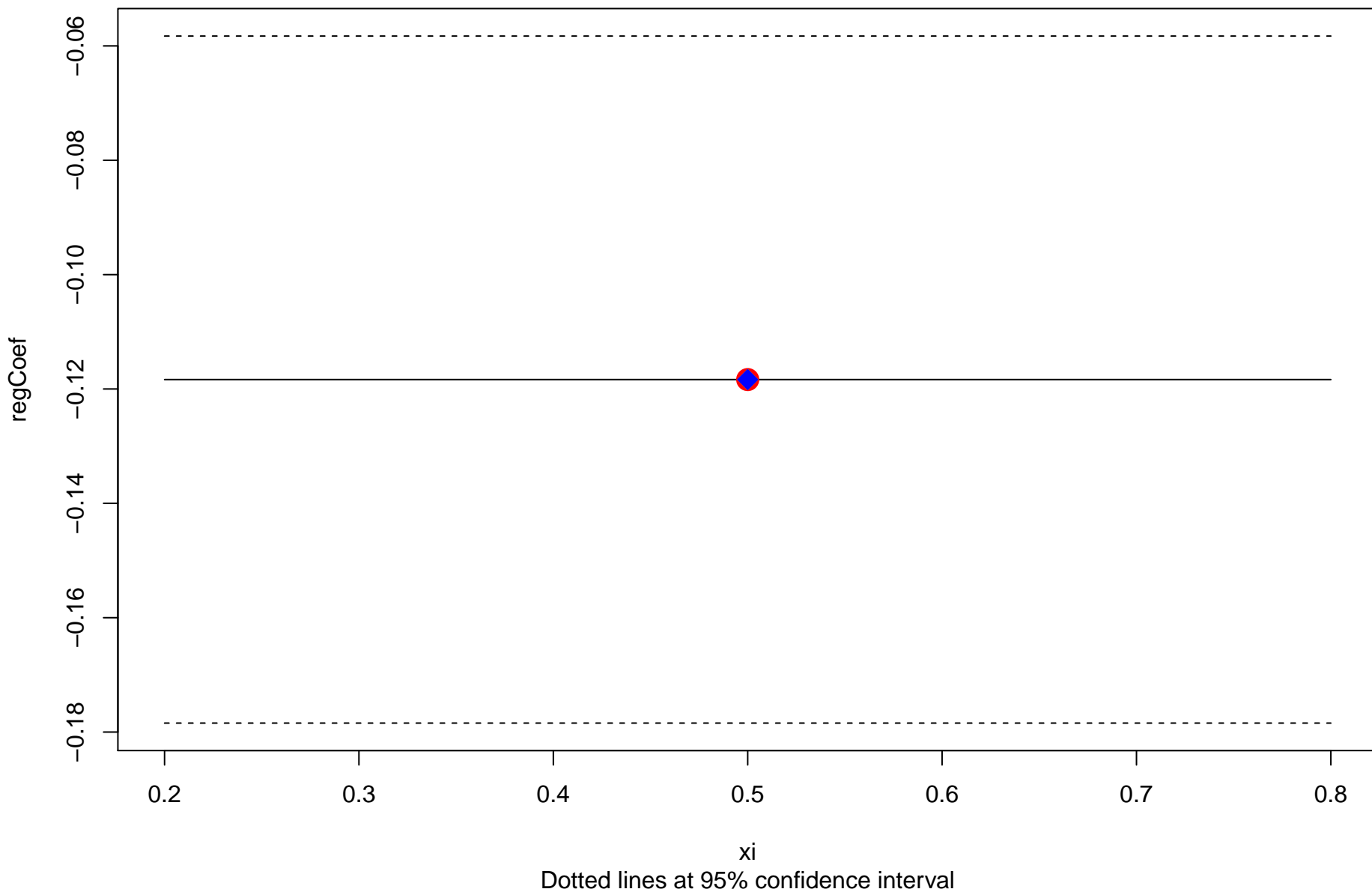
Sobol decomposition indexes (regCoef)



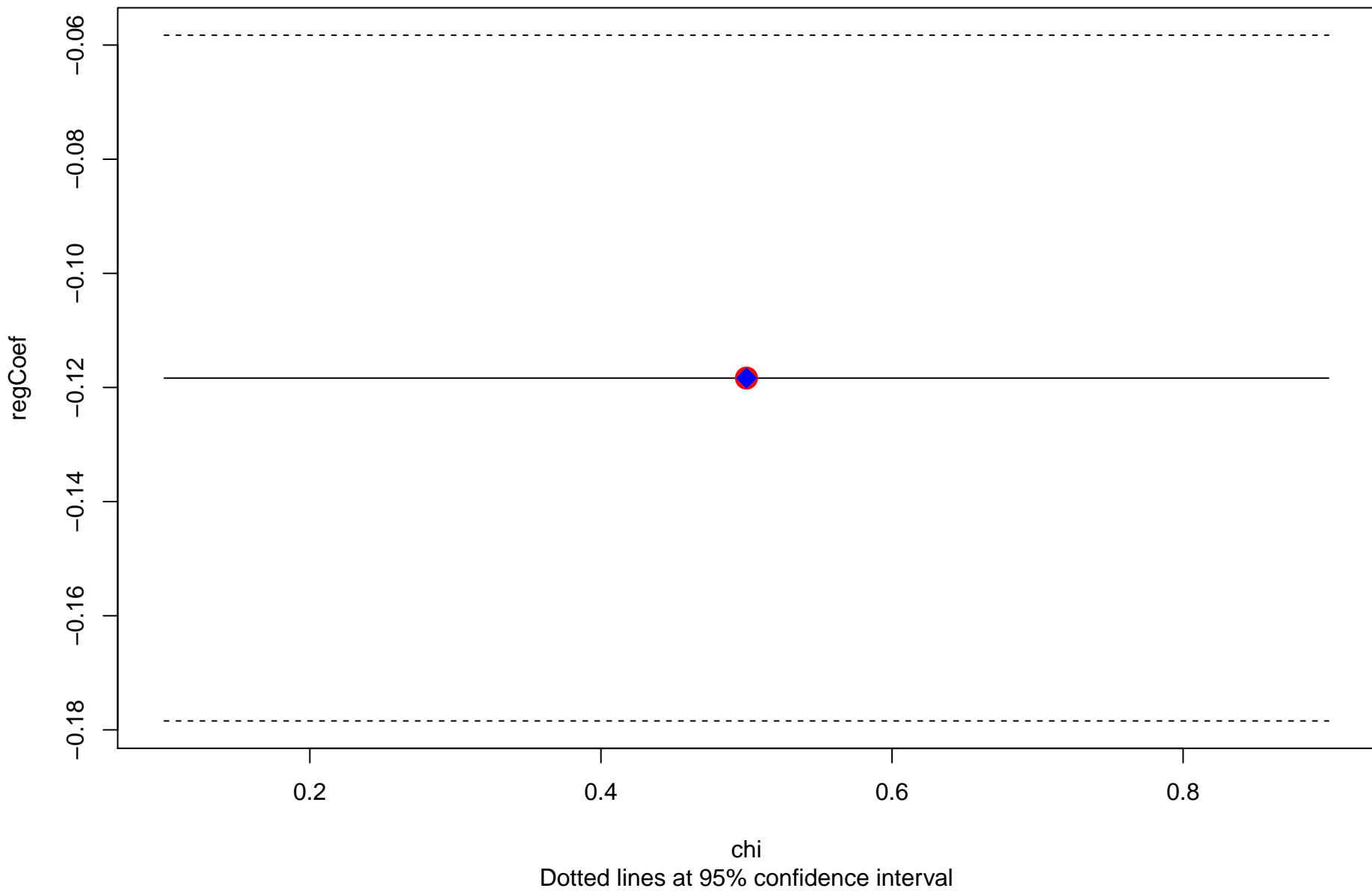
Meta-model response for parameter 'gammau'



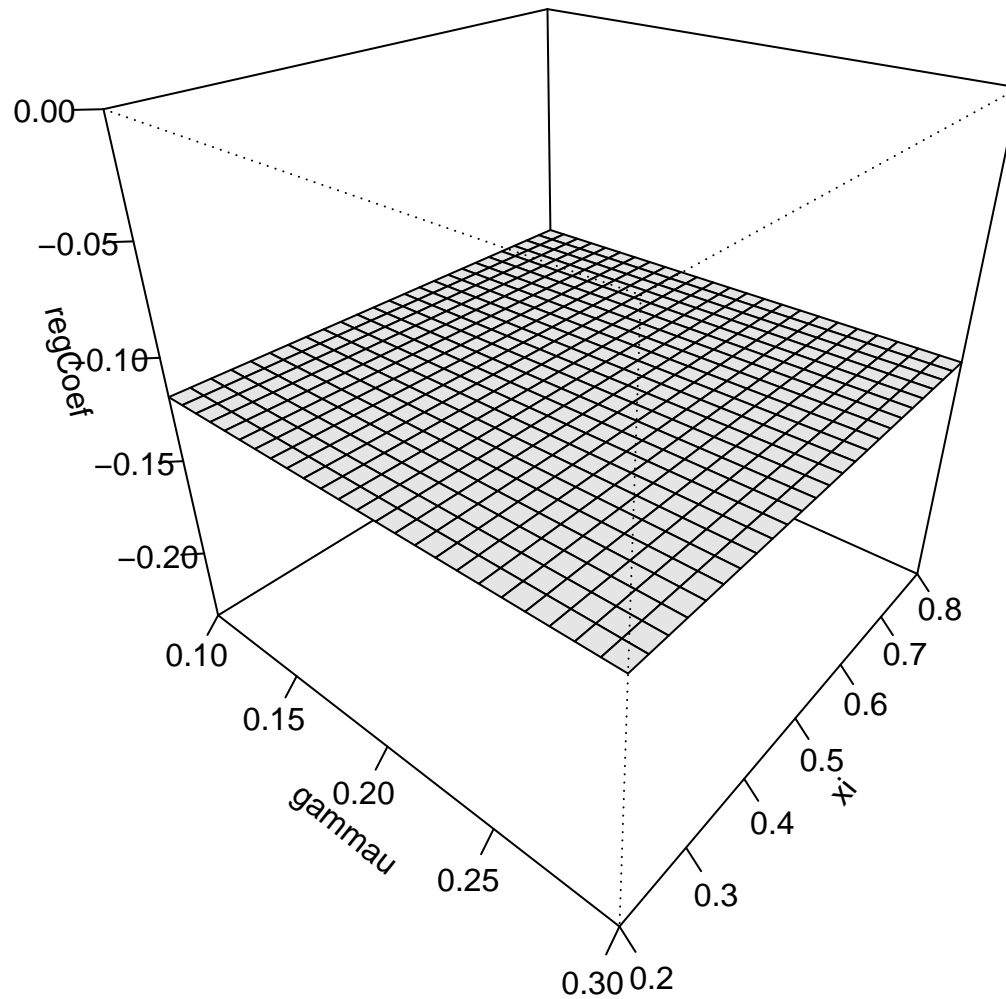
Meta-model response for parameter 'xi'



Meta-model response for parameter 'chi'

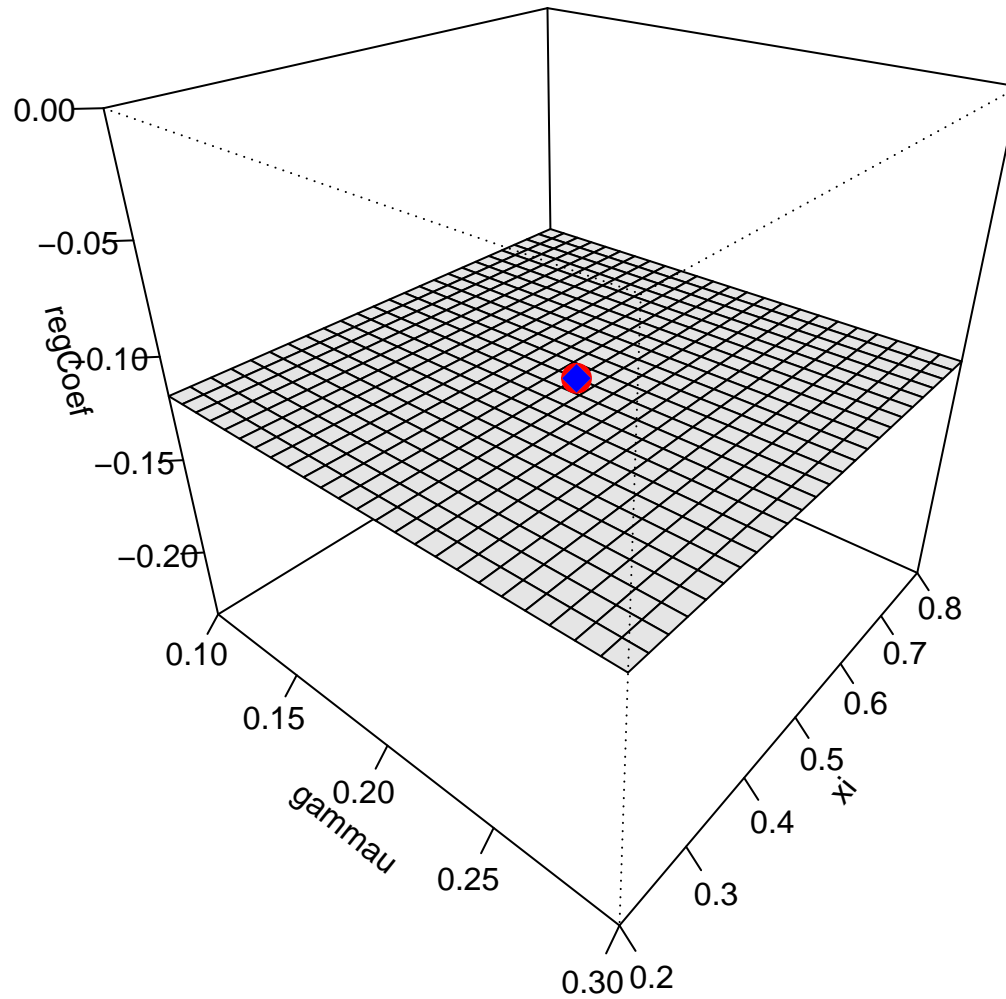


Meta-model response surface ($\chi = 0.1$)



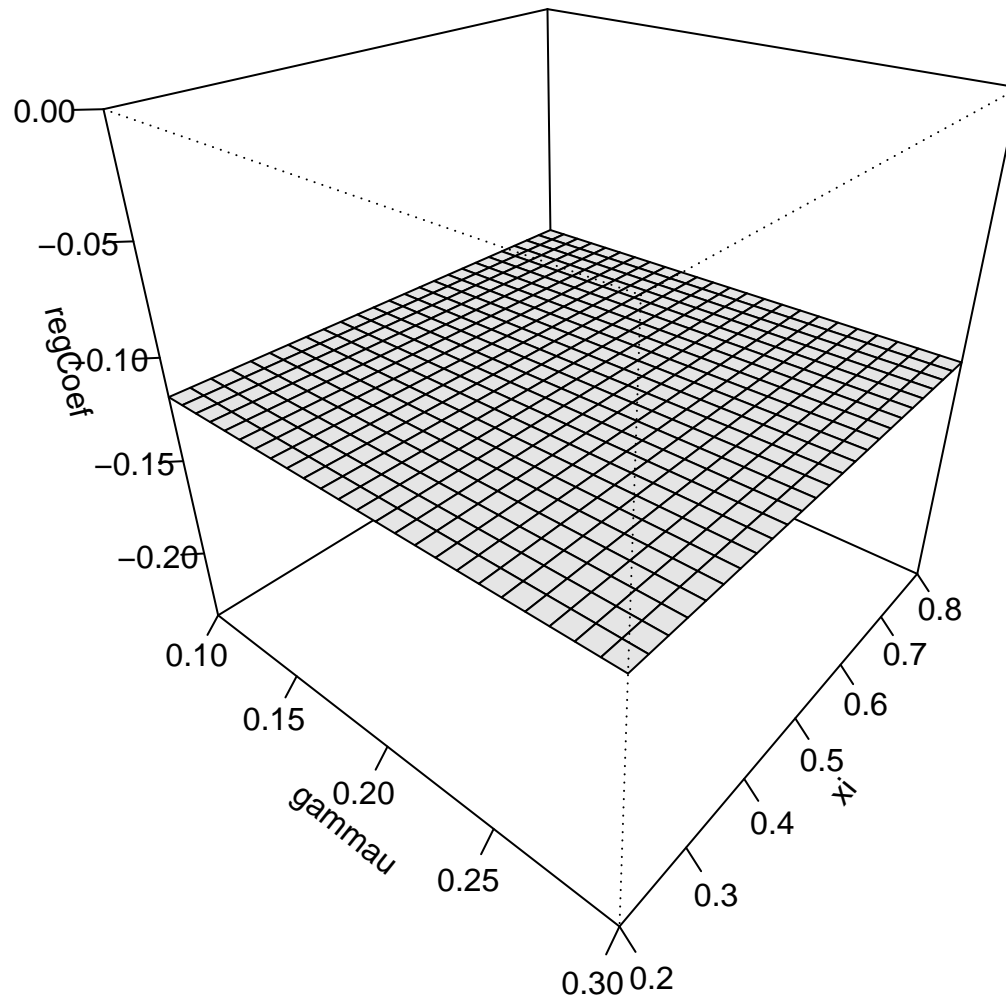
All other parameters are at default settings

Meta-model response surface ($\chi = 0.5$)



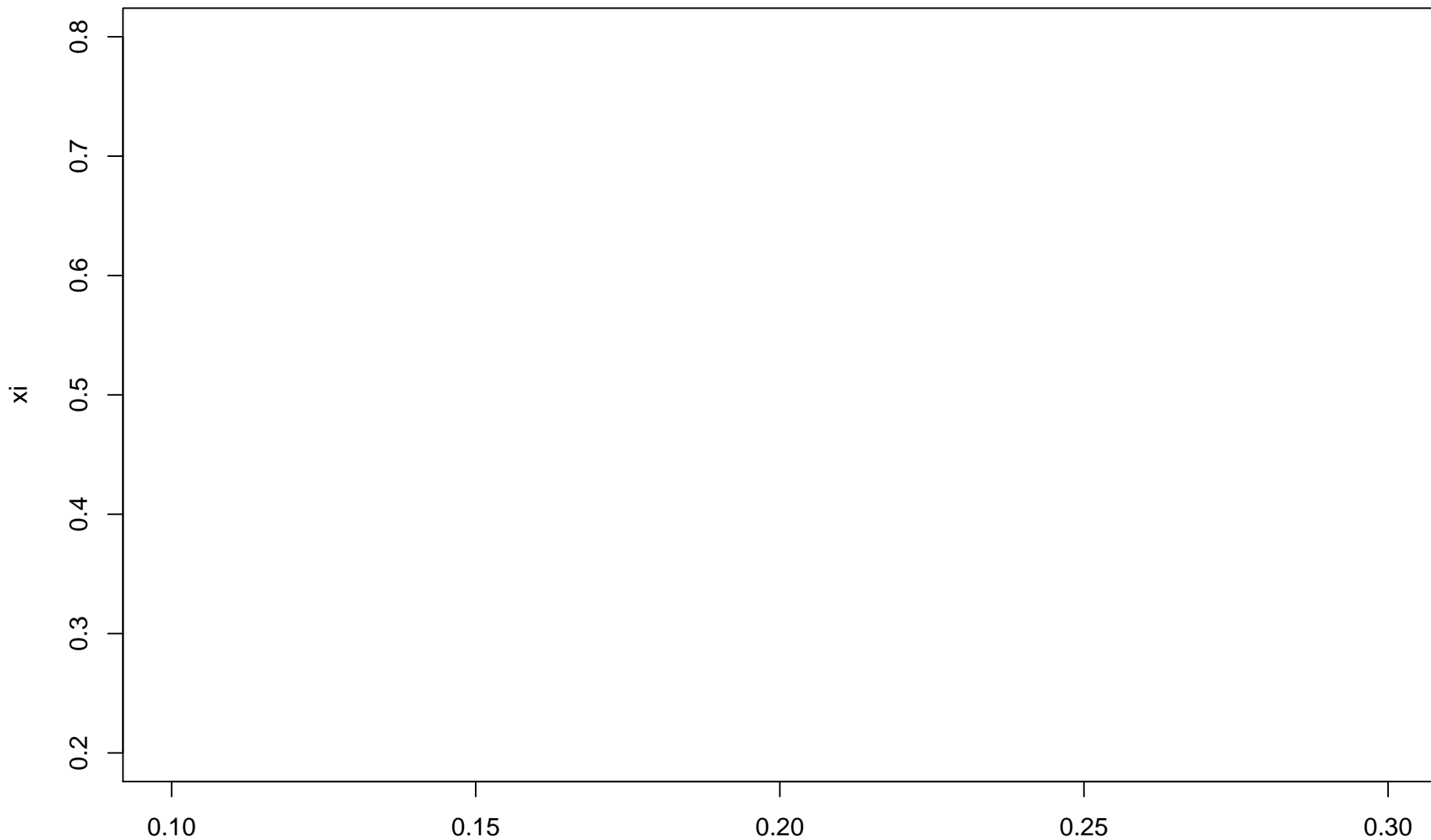
95% confidence interval: $\text{regCoef} = [-0.18, -0.06]$ at defaults (red dot)

Meta-model response surface ($\chi = 0.9$)



All other parameters are at default settings

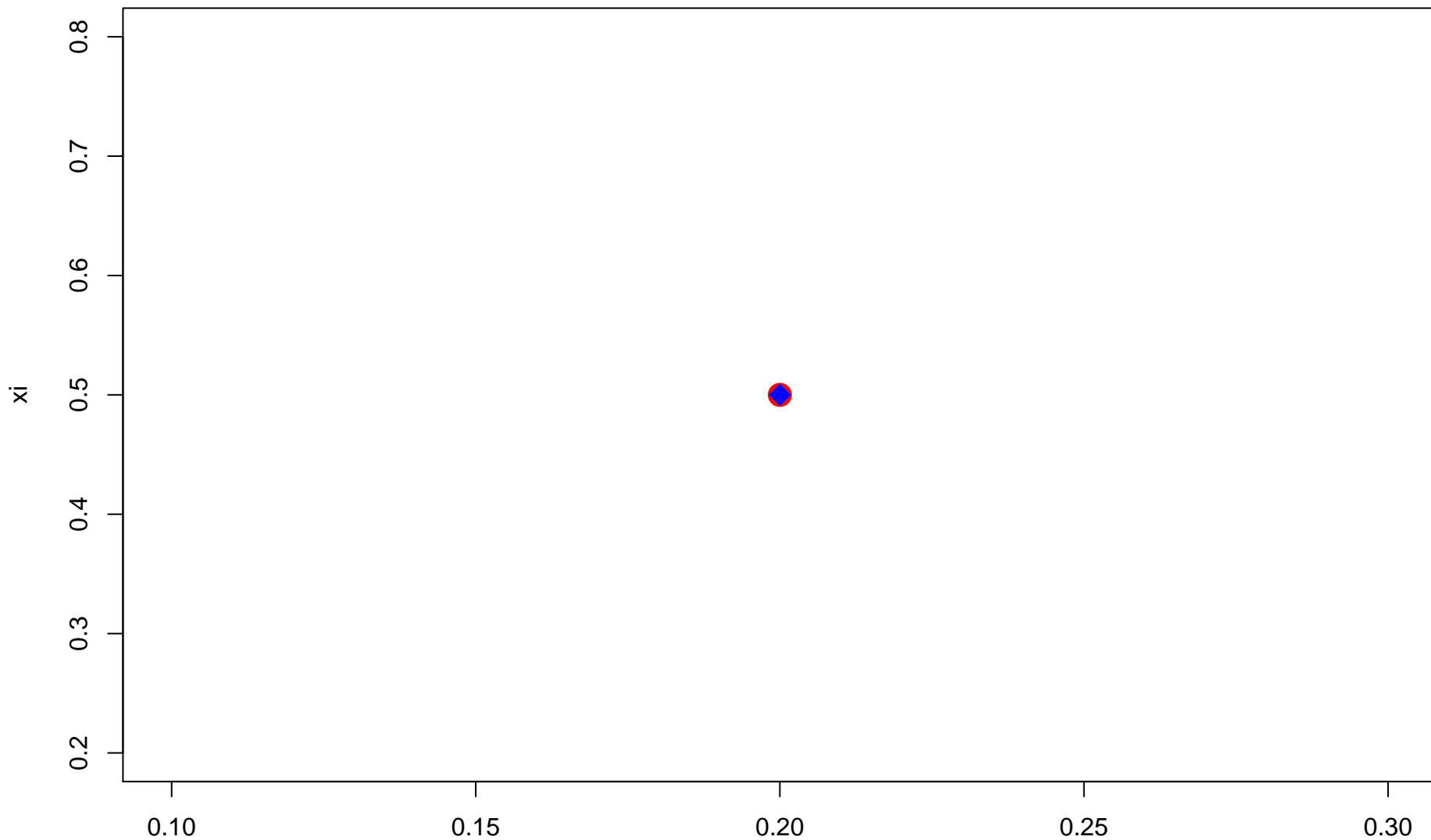
Meta-model response surface ($\chi = 0.1$)



gammau

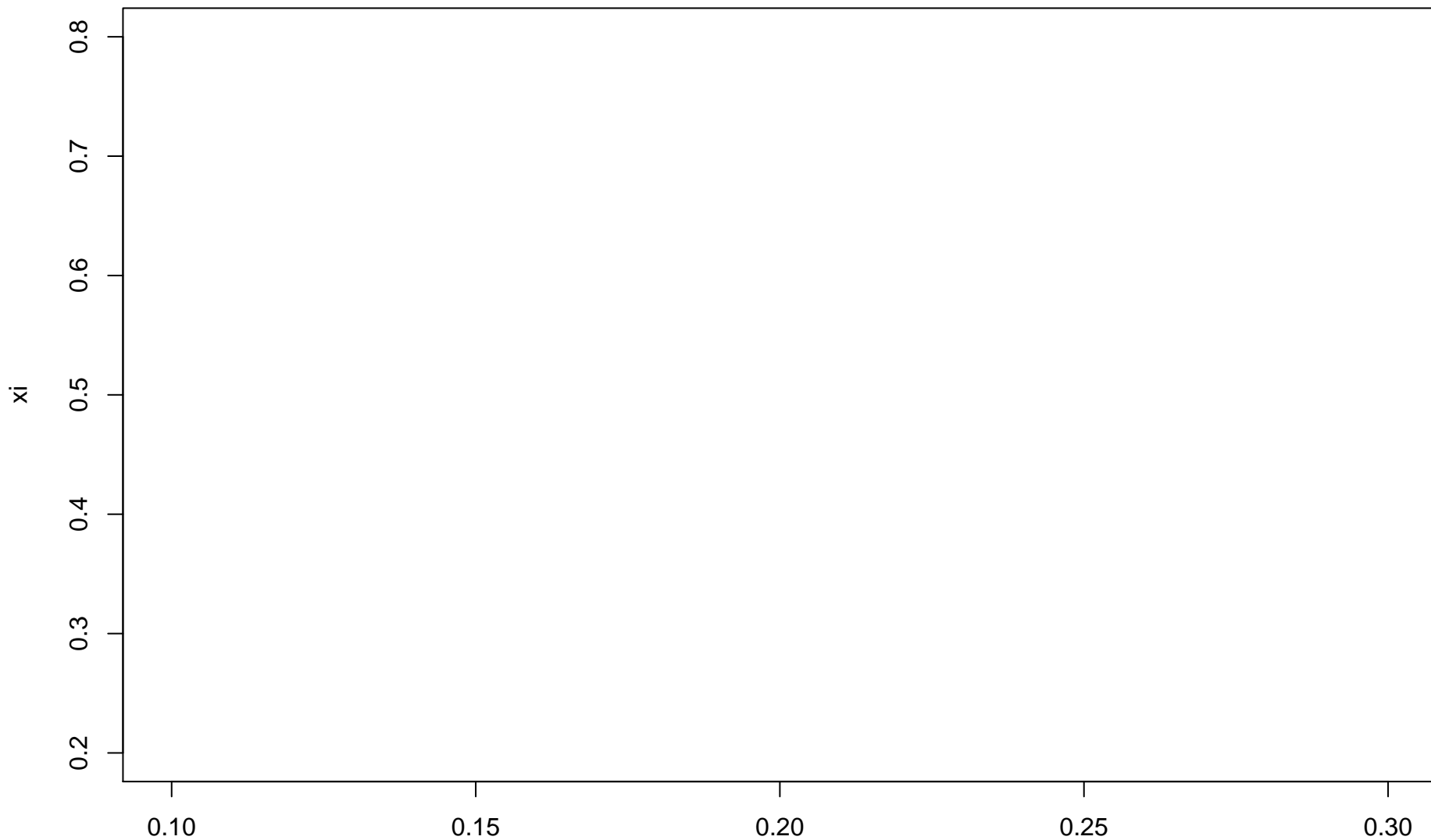
All other parameters are at default settings

Meta-model response surface ($\chi = 0.5$)



95% confidence interval: regCoef = $[-0.18, -0.06]$ at defaults (red dot)

Meta-model response surface ($\chi = 0.9$)



gammau

All other parameters are at default settings