



Figure S5: The  $r^2$  value of the regression between  $N_e$  and  $U_{id}$  under the null hypothesis, as a function of the correlation between errors in estimate of  $u_{bs}$  and  $u_{id}$ . The errors are assumed to be log normally distributed (see main text). The horizontal red line is drawn at t value of 0.89, the  $r^2$  of the observed data.