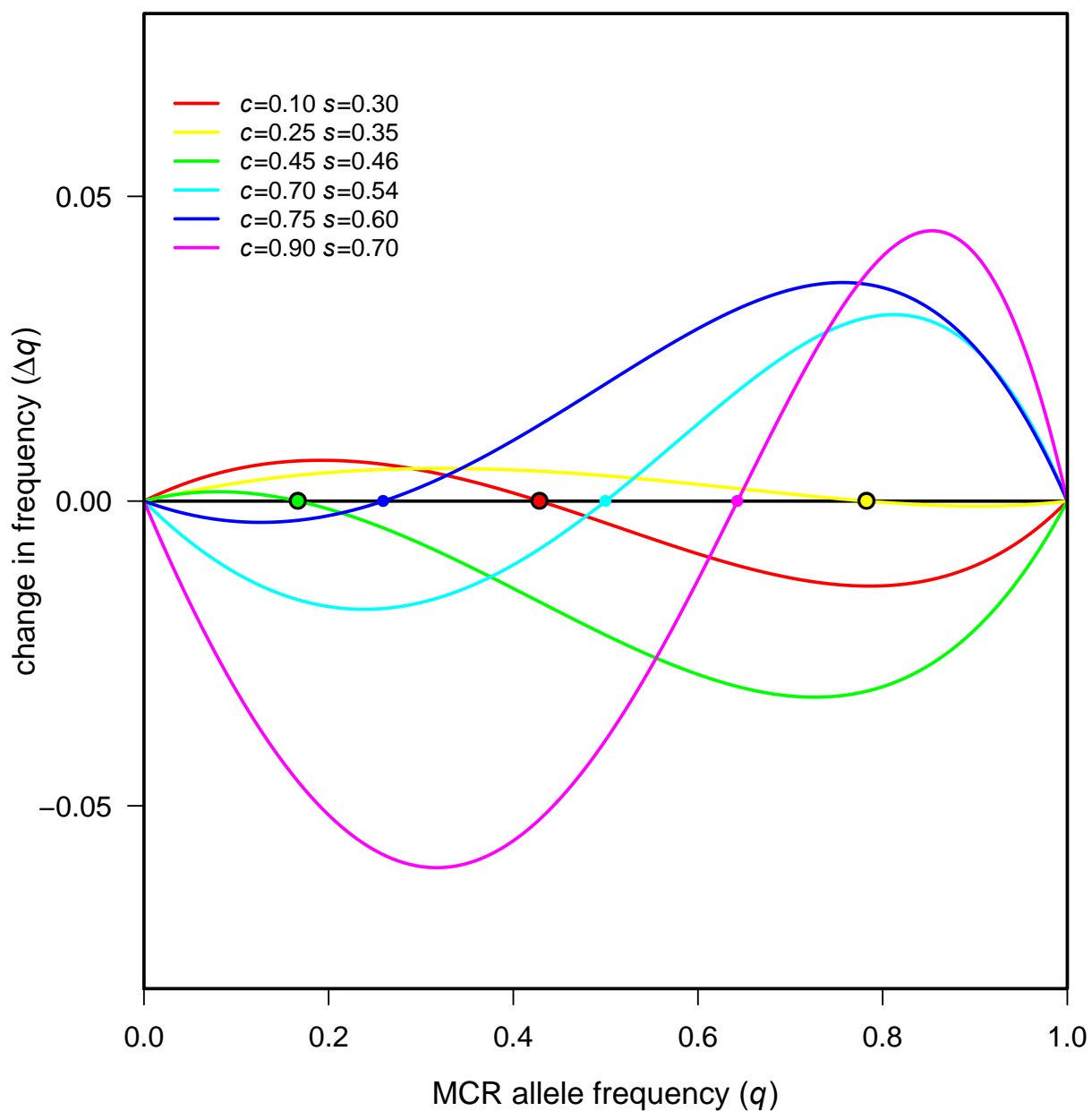
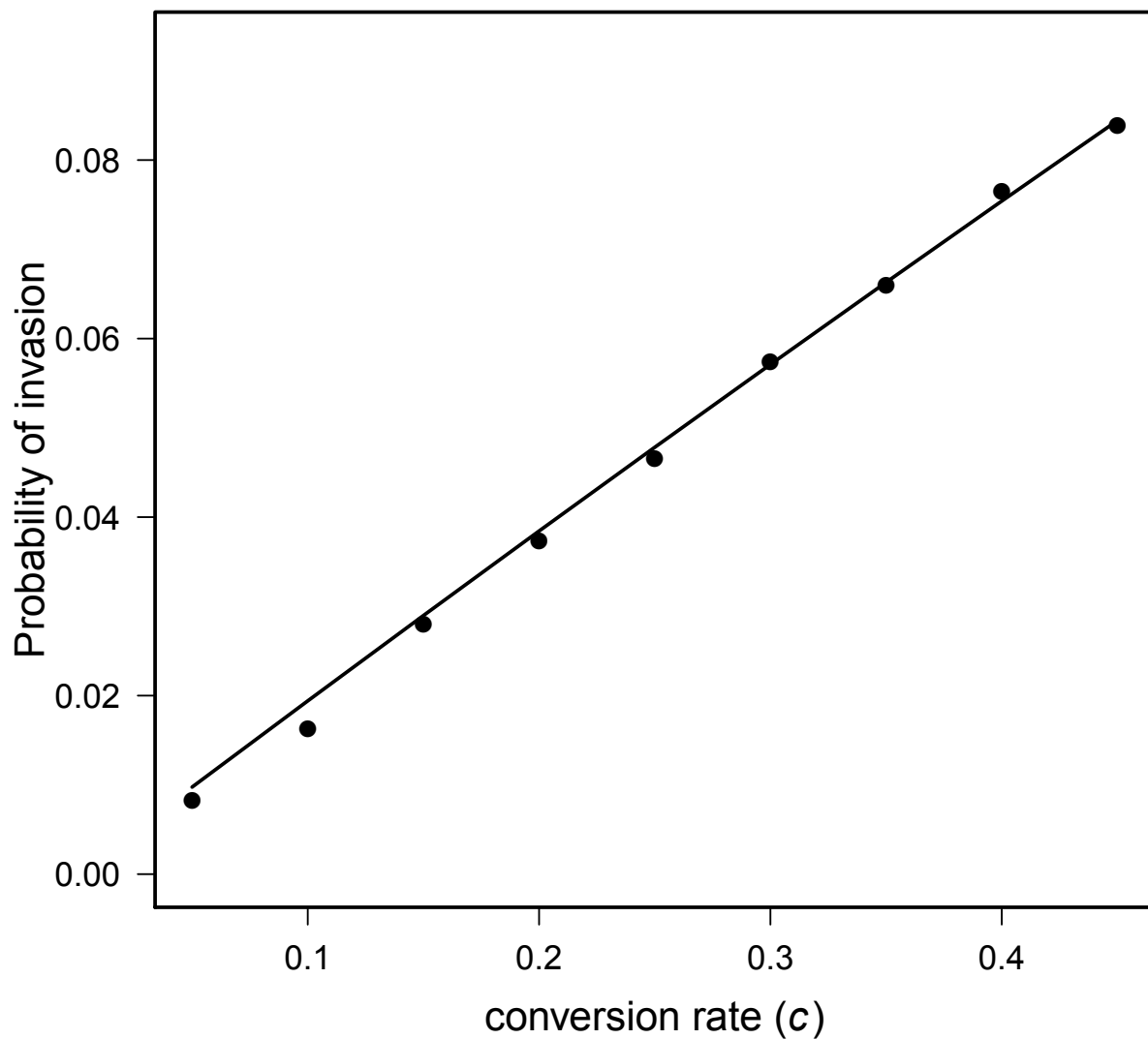


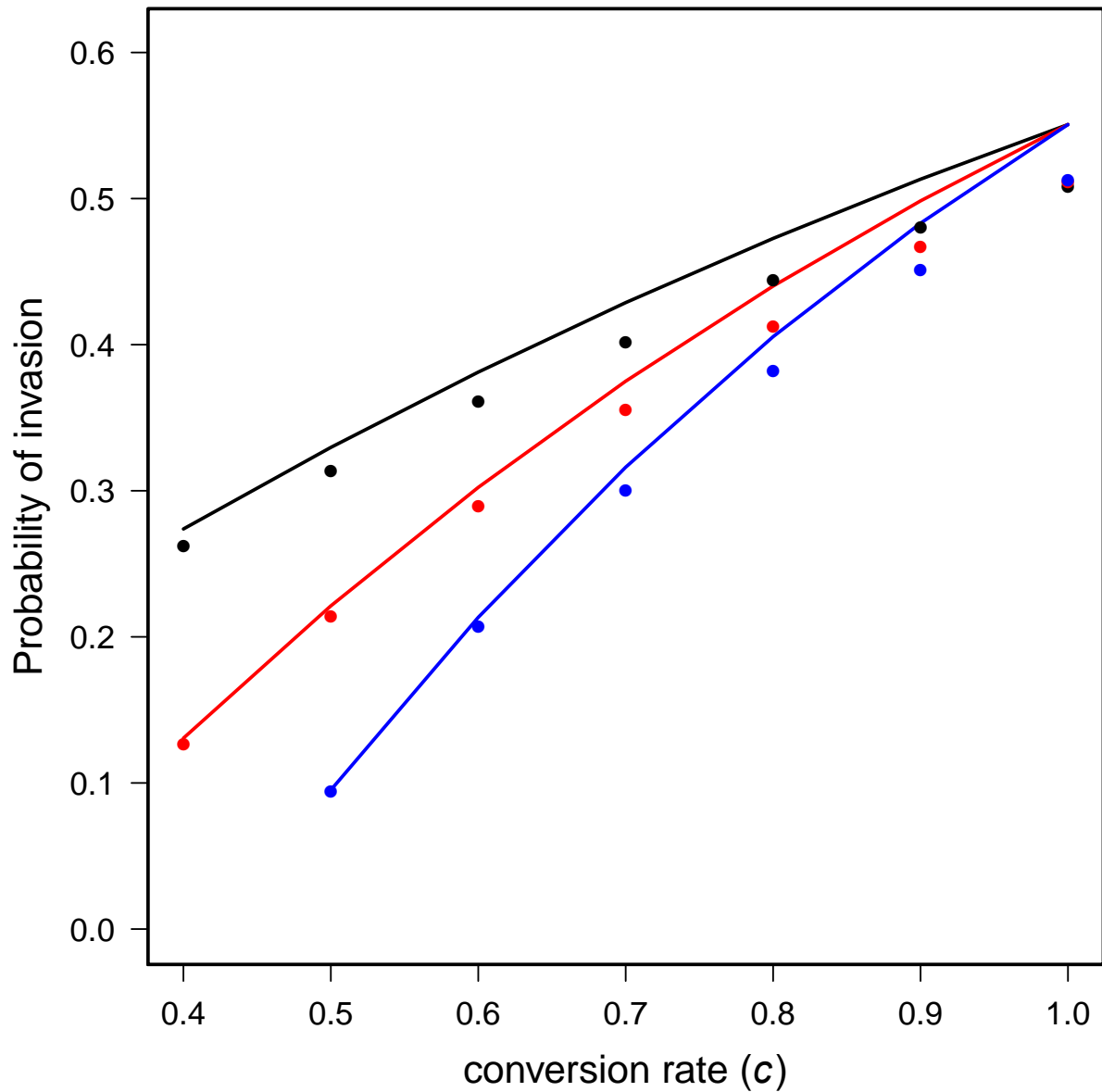
## Supplemental figures



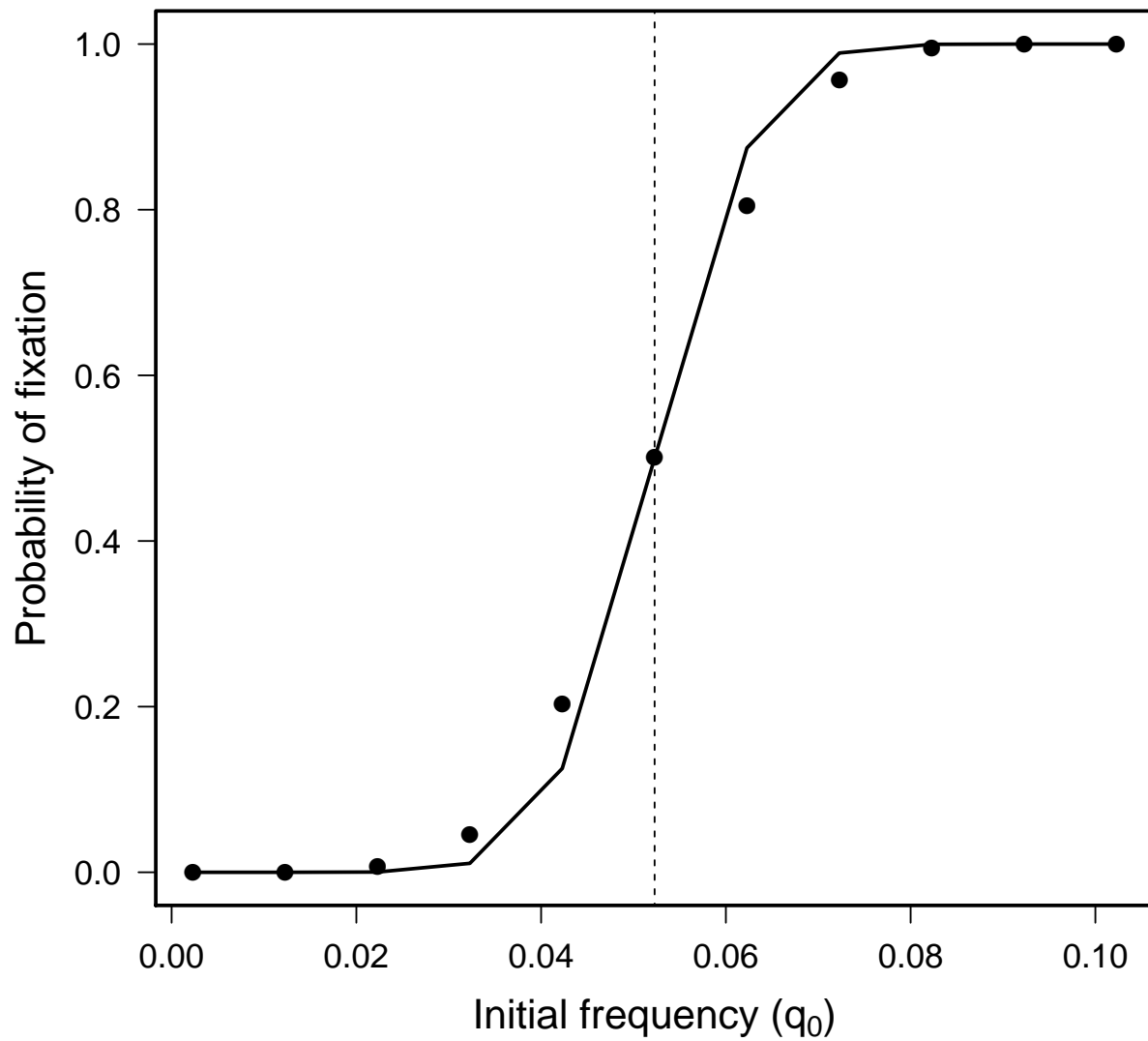
**Figure S1** The change in MCR allele frequency ( $\Delta q$ ) near equilibrium reveals the local stability of the equilibrium. Positive slopes are associated with unstable equilibria and negative slopes are associated with stable equilibria (black borders on circles). Fitness costs are recessive ( $h = 0$ ).



**Figure S2** The probability that an MCR allele escapes stochastic loss when rare, when parameters allow for a stable internal equilibrium. Dark line represents empirical approximation (equation 4) and points represent the proportion of 100,000 simulation realizations resulting in invasion. The starting frequency of the MCR allele in each realization is  $q_0 = \frac{1}{2N_e}$ , the population size is  $N_e = 10,000$ , the fitness cost is  $s = 0.451$  and fitness costs are recessive ( $h = 0$ ).



**Figure S3** The probability that an MCR allele escapes stochastic loss when rare and becomes fixed when parameters allow for fixation without internal equilibrium. Lines represent the empirical approximation (equation 4) and points represent the proportion of 100,000 simulation realizations resulting in invasion. The starting frequency of the MCR allele in each realization is  $q_0 = \frac{1}{2N_e}$ , the population size is  $N_e = 10,000$ , the fitness cost is  $s = 0.4$  and blue represents dominant ( $h = 1$ ) fitness costs, red represents additive ( $h = 0.5$ ) fitness costs and black represents recessive ( $h = 0$ ) fitness costs.



**Figure S4** The probability that an MCR allele escapes stochastic loss when introduced near its equilibrium and becomes fixed when parameters allow for an unstable internal equilibrium. Line represents the empirical approximation (equation A2.5) and points represent the proportion of 100,000 simulation realizations resulting in invasion. The conversion efficiency is  $c = 0.8$ , the population size is  $N_e = 10,000$ , the fitness cost is  $s = 0.51$  and fitness effects are recessive ( $h = 0$ ). Dashed line represents the unstable equilibrium frequency.