

TABLE S2**Components of the direction vectors for simulation C-1**

| $r = 3$ | $r = 10$ |
|---|---|
| $w_j = 0.577, j = 11, \dots, 13.$ | $w_j = 0.316, j = 11, \dots, 13, 40, \dots, 43, 74, 136, \dots, 137.$ |
| $w_j = 0, j = 1, \dots, 10, 14, \dots, 145$ | $w_j = 0, \text{ everywhere else.}$ |

The final marker-specific regression coefficients are obtained by multiplying the direction vectors with weak ($c = 1$) or strong ($c = 2$) control sizes.