$$\gamma(a - a_{\max}) = \frac{\gamma_0}{\sigma}\left(\tanh\left(\frac{a - a_{\max}}{\sigma}\right) + 1\right). \tag{4}$$

$$\Gamma(\epsilon, r, z, U) = -24\ln\left(1 - 0.01p_0(e^{K_U\epsilon} - e^{10K_U})\right)\frac{\lambda_U}{\lambda_U + U}. \tag{5}$$