$$\dot{p}_i(a) = p_i(a) \left[\epsilon_i \sum_{k \in \mathscr{A}} \log \left(\frac{p_i(k)}{p_i(a)} \right) p_i(k) + \lambda_i \left(\bar{R}_i(a) - \sum_{k \in \mathscr{A}} \bar{R}_i(k) p_i(k) \right) \right]$$