$$
\begin{aligned}
\max \quad & \sum_{i=1}^{n}\left[1-\prod_{j=1}^{w_i}(1-P_{ij})\right] \\
\text{s.t.} \quad & P_{ij}=\alpha\cdot S_{ij}+\beta \\
& S_{ij}=\frac{C_i}{(d_{ij}+h_i)E_i} \\
& C_i=\left(P_0\cdot\frac{1}{1+a\cdot MD_i}\cdot\frac{1}{1+b\cdot TD_i}+H_i\right)E_i \\
& \sum_{i=1}^{n}C_i\leqslant 57707.5 \\
& a>0 \\
& b>0 \\
& P_0>0
\end{aligned}
$$

$$
\begin{aligned}
\max \quad & \sum_{i=1}^{n'}\left[1-\prod_{j=1}^{w_i'}(1-P_{ij})\right] \\
\text{s.t.} \quad & P_{ij}=\alpha\cdot S_{ij}+\beta \\
& S_{ij}=\frac{C_i'}{\left(\min_{1\leqslant k\leqslant m_i} d_{i_kj}+\sum_{k=1}^{m_i}h_{i_k}+m_i-1\right)E_i} \\
& C_i'=\sum_{k=1}^{m_i}C_{i_k}\cdot\frac{\min_{1\leqslant k\leqslant m_i} d_{i_kj}+\sum_{k=1}^{m_i}h_{i_k}+m_i-1}{\sum_{k=1}^{m_i}(d_{i_kj}+h_{i_k})} \\
& C_{i_k}=\left(P_0\cdot\frac{1}{1+a\cdot MD_{i_k}}\cdot\frac{1}{1+b\cdot TD_{i_k}}+H_{i_k}\right)E_{i_k}, \\
& \quad i\in\{1,\ldots,n'\},\quad k\in\{1,\ldots,m_i\} \\
& \sum_{i=1}^{n'}C_i'\leqslant 57707.5 \\
& a>0,\quad b>0,\quad P_0>0
\end{aligned}
$$