

$$\begin{aligned}
 N_{u_i, c_j \rightarrow k} [\mathbb{E} [\omega, L, Q, P]] &:= \text{With} \left[\{q = e^{-\gamma} \beta u_k + \gamma c_k\}, \text{CF} \left[\right. \right. \\
 &\mathbb{E} \left[\omega, \gamma c_k + (L / . c_j \rightarrow \theta), \omega e^{-\gamma} \beta u_k + (Q / . u_i \rightarrow \theta), \right. \\
 &\left. \left. e^{-q} \text{DP}_{c_j \rightarrow D_\gamma, u_i \rightarrow D_\beta} [P] [e^q] \right] / . \left\{ \gamma \rightarrow \partial_{c_j} L, \beta \rightarrow \omega^{-1} \partial_{u_i} Q \right\} \right];
 \end{aligned}$$

$$\begin{aligned}
 N_{w_i, c_j \rightarrow k} [\mathbb{E} [\omega, L, Q, P]] &:= \text{With} \left[\{q = e^{\gamma} \alpha w_k + \gamma c_k\}, \text{CF} \left[\right. \right. \\
 &\mathbb{E} \left[\omega, \gamma c_k + (L / . c_j \rightarrow \theta), \omega e^{\gamma} \alpha w_k + (Q / . w_i \rightarrow \theta), \right. \\
 &\left. \left. e^{-q} \text{DP}_{c_j \rightarrow D_\gamma, w_i \rightarrow D_\alpha} [P] [e^q] \right] / . \left\{ \gamma \rightarrow \partial_{c_j} L, \alpha \rightarrow \omega^{-1} \partial_{w_i} Q \right\} \right];
 \end{aligned}$$