```mathematica
N_{u_{i_} c_{j_} →k_}[𝔼[ω_, L_, Q_, P_]] := With[{q = ℯ^{-γ} β u_k + γ c_k}, CF[
    𝔼[ω, γ c_k + (L /. c_j → 0), ω ℯ^{-γ} β u_k + (Q /. u_i → 0),
        ℯ^{-q} DP_{c_j→D_γ, u_i→D_β}[P][ℯ^q]] /. {γ → ∂_{c_j} L, β → ω^{-1} ∂_{u_i} Q}]];
N_{w_{i_} c_{j_} →k_}[𝔼[ω_, L_, Q_, P_]] := With[{q = ℯ^{γ} α w_k + γ c_k}, CF[
    𝔼[ω, γ c_k + (L /. c_j → 0), ω ℯ^{γ} α w_k + (Q /. w_i → 0),
        ℯ^{-q} DP_{c_j→D_γ, w_i→D_α}[P][ℯ^q]] /. {γ → ∂_{c_j} L, α → ω^{-1} ∂_{w_i} Q}]];
```