

$$S\mathbf{m}_{i_,j_ \rightarrow k_} :=$$

$$\mathbb{E}_{\{i,j\} \rightarrow \{k\}} [\mathbf{b}_k (\beta_i + \beta_j) + \mathbf{t}_k (\tau_i + \tau_j) + \mathbf{a}_k (\alpha_i + \alpha_j) + \mathbf{y}_k (\eta_i + \eta_j) + \mathbf{x}_k (\xi_i + \xi_j)];$$

$$S\Delta_{i_ \rightarrow j_,k_} :=$$

$$\mathbb{E}_{\{i\} \rightarrow \{j,k\}} [\beta_i (\mathbf{b}_j + \mathbf{b}_k) + \tau_i (\mathbf{t}_j + \mathbf{t}_k) + \alpha_i (\mathbf{a}_j + \mathbf{a}_k) + \eta_i (\mathbf{y}_j + \mathbf{y}_k) + \xi_i (\mathbf{x}_j + \mathbf{x}_k)];$$

$$S\mathbf{S}_{i_} := \mathbb{E}_{\{i\} \rightarrow \{i\}} [-\beta_i \mathbf{b}_i - \tau_i \mathbf{t}_i - \alpha_i \mathbf{a}_i - \eta_i \mathbf{y}_i - \xi_i \mathbf{x}_i];$$

$$S\epsilon_{i_} := \mathbb{E}_{\{\} \rightarrow \{i\}} [\mathbf{0}];$$

$$S\eta_{i_} := \mathbb{E}_{\{i\} \rightarrow \{\}} [\mathbf{0}];$$