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$$\Delta Y_{!} = \left(\mu_{\#} + \theta_{\#} z_{!"\#} + \sum_{\$\&\#}^{\%"\#} \Phi_{\#(\$} \Delta Y_{!"\$}\right) 1(d_{!} \leq \gamma) + \left(\mu_{j} + \theta_{j} z_{!"\#} + \sum_{\$\&\#}^{\%"\#} \Phi_{j(\$} \Delta Y_{!"\$}\right) 1(d_{!} > \gamma) + u_{!}$$

$$(2)$$

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$$i_{!} = \alpha + \beta (E_{!"} \# \pi_{!*} - \bar{\pi}) + \gamma (E_{!"} \# y_{!*}) + u_{!}$$
(3)!

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