$$\ln\left(\frac{p_{ik}}{\widetilde{p}_{ik}}-1\right) = \ln\left(\tau_i \times \tau_s - 1\right) + \epsilon_{ik}^{nl^I} \quad (1)$$

$$\ln\left(\frac{p_{ik}}{\widetilde{p}_{ik}}-1\right) = \ln\left(\frac{t_i + t_s}{\widetilde{p}_{ik}}\right) + \epsilon_{ikz}^{A} \quad (2)$$

$$\ln\left(\frac{p_{ik}}{\widetilde{p}_{ik}}-1\right) = \ln\left(\tau_i \times \tau_s - 1 + \frac{t_i + t_s}{\widetilde{p}_{ik}}\right) + \epsilon_{ik} \quad (3)$$

$$(4)$$