$$\left\{ 100 \left(\frac{P_i - \overline{P_{ik}}}{\overline{P_{ik}}} \right) \right\} = \sum_{j=0}^{J-1} \beta_j \left[f_j(i,k) - \overline{f_j}(i,k) \right]$$

$$\left(\frac{P_i - \overline{P_{ik}}}{\overline{P_{ik}}} \right) = \sum_{j=0}^{J-1} \beta_j \left(\frac{1}{100} \left[f_j(i,k) - \overline{f_j}(i,k) \right] \right)$$