$$b_2^{\text{MHK}} = \frac{\sum_{i=1}^{n}(p_i - \overline{p})(\omega_i - \overline{\omega})}{\sum_{i=1}^{n}(\omega_i - \overline{\omega})^2} = \frac{\sum_{i=1}^{n}([\beta_1 + \beta_2\omega_i + u_{pi}] - [\beta_1 + \beta_2\overline{\omega} + \overline{u}_p])(\omega_i - \overline{\omega})}{\sum_{i=1}^{n}(\omega_i - \overline{\omega})^2} =$$

$$= \frac{\sum_{i=1}^{n}(\beta_2(\omega_i - \overline{\omega})(\omega_i - \overline{\omega}) + (u_{pi} - \overline{u}_p)(\omega_i - \overline{\omega}))}{\sum_{i=1}^{n}(\omega_i - \overline{\omega})^2} = \beta_2 + \frac{\sum_{i=1}^{n}(u_{pi} - \overline{u}_p)(\omega_i - \overline{\omega})}{\sum_{i=1}^{n}(\omega_i - \overline{\omega})^2}. \qquad (\Upsilon)$$