

In the original paper the MDCEV model is defined as

$$P(t_2^*, t_3^*, \dots, t_M^*, 0, 0, \dots, 0) = \left[\prod_{i=1}^M c_i \right] \left[\sum_{i=1}^M \frac{1}{c_i} \right] \left[\frac{\prod_{i=1}^M e^{V_i}}{\left(\sum_{j=1}^K e^{V_j} \right)^M} \right] (M-1)!, \quad (1)$$

where

$$V_j = \beta' x_j + \ln \alpha_j + (\alpha_j - 1) \ln(t_j^* + \gamma_j) \quad (2)$$

and

$$c_i = \left(\frac{1 - \alpha_i}{t_i^* + \gamma_i} \right) \quad (3)$$

In the 2007 paper, it is defined as follows:

$$P(e_1^*, e_2^*, e_3^*, \dots, e_M^*, 0, 0, \dots, 0) = \frac{1}{\sigma^{M-1}} \left[\prod_{i=1}^M c_i \right] \left[\sum_{i=1}^M \frac{1}{c_i} \right] \left[\frac{\prod_{i=1}^M e^{V_i/\sigma}}{\left(\sum_{k=1}^K e^{V_k/\sigma} \right)^M} \right] (M-1)!, \quad (4)$$

where

$$V_k = \beta' z_k + (\alpha_k - 1) \ln \left(\frac{e_k^*}{p_k} + 1 \right) - \ln p_k \quad (5)$$

and

$$c_i = \left(\frac{1 - \alpha_i}{e_i^* + \gamma_i p_i} \right). \quad (6)$$