Effect of weights on cod-end retention

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Take a two net case

$$\boldsymbol{\eta} = \boldsymbol{X}\boldsymbol{\beta} + \boldsymbol{W}\boldsymbol{\gamma} \tag{1}$$

$$\begin{pmatrix} \eta_0 & \eta_1 \end{pmatrix} = (1) \begin{pmatrix} 0 & \beta_0 \end{pmatrix} + \begin{pmatrix} w_0 & w_1 \end{pmatrix} \begin{pmatrix} \gamma_0 & 0 \\ 0 & \gamma_1 \end{pmatrix} \tag{2}$$

$$\begin{pmatrix} \eta_0 & \eta_1 \end{pmatrix} = \begin{pmatrix} 0 & \beta_0 \end{pmatrix} + \begin{pmatrix} w_0\gamma_0 & w_1\gamma_1 \end{pmatrix} \tag{3}$$

$$\begin{pmatrix} \eta_0 & \eta_1 \end{pmatrix} = \begin{pmatrix} w_0\gamma_0 & \beta_0 + w_1\gamma_1 \end{pmatrix} \tag{4}$$

So that

$$p_0 = \frac{e^{w_0\gamma_0}}{e^{w_0\gamma_0} + e^{\beta_0 + w_1\gamma_1}} \tag{5}$$

$$p_1 = \frac{e^{\beta_0 + w_1\gamma_1}}{e^{w_0\gamma_0} + e^{\beta_0 + w_1\gamma_1}} \tag{6}$$