$$\begin{Bmatrix} \text{Earnings} \\ \text{Estimate} \\ 1992 \end{Bmatrix}_{(500x29)} = \begin{Bmatrix} (\text{Earnings:89})/ \\ (\text{Wages+Salaries}) \\ \text{ratios} \end{Bmatrix}_{(500x29)} * \begin{Bmatrix} \text{ES202} \\ \text{Wage+Salary} \\ 1992 \end{Bmatrix}_{(500x29)} \begin{Bmatrix} \text{REIS} \\ \text{Earnings} \\ 1989 \end{Bmatrix}_{(100x29)} = \begin{Bmatrix} \text{REIS} \\ \text{Wage+Salary} \\ 1989 \end{Bmatrix}_{(100x29)} = \begin{Bmatrix} \text{REIS} \\ \text{Earnings}^* \\ 1989 \end{Bmatrix}_{(800x29)} \rightarrow \text{map SIC into I-O} \rightarrow \begin{Bmatrix} \text{REIS} \\ \text{Earnings}^* \\ 1989 \end{Bmatrix}_{(500x29)}$$

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$$X_i = \rho_{ij} I_j Y + E_{jm} = (1)\{I - \hat{\rho}\} N_{R-r} \hat{Y} + (1) N_{R-r} \hat{Y} \begin{Bmatrix} C^* \\ R^* \\ I^* \\ F^* \end{Bmatrix} = \begin{Bmatrix} (V_{cx}) & 0 & V_{cr} & 0 & V_{cf} & V_{ce} \\ (V_{rx}) & 0 & V_{rr} & 0 & V_{rf} & V_{re}+Y_r \\ (V_{fx}) & 0 & V_{fr} & 0 & V_{ff} & V_{fe}+Y_f \\ (0) & 0 & 0 & 0 & 0 & Y_r \end{Bmatrix} \begin{Bmatrix} 1 \\ 1 \\ 1 \\ 1 \end{Bmatrix} \{b_r''\} = \{B''\}[a_r] b_{cf}'' = (b_{cf}'')[a_f]$$

$$E_{P_i} | R_{PC_i} \text{ if } E_{P_i} < R_{PC_i} G_{PC} = \{ N_{PC} - H_{PC} A_{CC} \} A_{CP} = \{ \hat{\rho}_{CP} \} G_{CP} E_{C_i} | R_{CP_i} \text{ if } E_{C_i} < R_{CP_i} R_{CP} = G_{CP} X_P R_{CP}$$

$$\begin{Bmatrix} \text{Earnings} \\ \text{Estimate} \\ 1992 \end{Bmatrix}_{(500x29)} = \begin{Bmatrix} (\text{Earnings:89})/ \\ (\text{Wages+Salaries}) \\ \text{ratios} \end{Bmatrix}_{(500x29)} * \begin{Bmatrix} \text{ES202} \\ \text{Wage+Salary} \\ 1992 \end{Bmatrix}_{(500x29)} \begin{Bmatrix} \text{REIS} \\ \text{Earnings} \\ 1989 \end{Bmatrix}_{(100x29)} = \begin{Bmatrix} \text{REIS} \\ \text{Wage+Salary} \\ 1989 \end{Bmatrix}_{(100x29)} = \begin{Bmatrix} \text{REIS} \\ \text{Earnings}^* \\ 1989 \end{Bmatrix}_{(800x29)} \rightarrow \text{map SIC into I-O} \rightarrow \begin{Bmatrix} \text{REIS} \\ \text{Earnings}^* \\ 1989 \end{Bmatrix}_{(500x29)}$$

$$[a_r] = [F_{rs}] \frac{1}{F^*} = \alpha_{cr} = \frac{V_{cr}}{R^*} = \alpha_{cf} = \frac{V_{cf}}{F^*} = \alpha_{rr} = \frac{V_{rr}}{R^*} = \alpha_{rf} = \frac{V_{rf}}{F^*} = \alpha_{fr} = \frac{V_{fr}}{R^*} = \alpha_{ff} = \frac{V_{ff}}{F^*} =$$

$$\begin{bmatrix} A_{WF,WF} & A_{WF,TL} & A_{WF,WS} & A_{WF,BR} & A_{WF,CE} & A_{WF,CU} & A_{WF,UB} & A_{WF,SW} & A_{WF,SE} \\ A_{TL,WF} & A_{TL,TL} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ A_{WS,WF} & 0 & A_{WS,WS} & 0 & 0 & 0 & 0 & 0 & 0 \\ A_{BR,WF} & 0 & 0 & A_{BR,BR} & 0 & 0 & 0 & 0 & 0 \\ A_{CE,WF} & 0 & 0 & 0 & A_{CE,CE} & 0 & 0 & 0 & 0 \\ A_{CU,WF} & 0 & 0 & 0 & 0 & A_{CU,CU} & 0 & 0 & \\ A_{UB,WF} & 0 & 0 & 0 & 0 & 0 & A_{UB,UB} & 0 & 0 \\ A_{SW,WF} & 0 & 0 & 0 & 0 & 0 & 0 & A_{SW,SW} & 0 \\ A_{SE,WF} & 0 & 0 & 0 & 0 & 0 & 0 & 0 & A_{SE,SE} \end{bmatrix} \begin{Bmatrix} \{B^{EB}\} & [b_c^{EB}] & [b_r^{EB}] & [b_f^{EB}] & [b_f^{EB}] \\ (b_{cx}^{EB}) & b_{cc}^{EB} & b_{cr}^{EB} & b_{cf}^{EB} & b_{cf}^{EB} \\ (b_{rx}^{EB}) & b_{rc}^{EB} & b_{rr}^{EB} & b_{rf}^{EB} & b_{rf}^{EB} \\ (b_{fx}^{EB}) & b_{fc}^{EB} & b_{fr}^{EB} & b_{ff}^{EB} & b_{ff}^{EB} \\ (0) & 0 & 0 & 0 & 1 \end{Bmatrix} =$$

$$[a_r] = [F_{rs}] \frac{1}{F^*} = \alpha_{cr} = \frac{V_{cr}}{R^*} = \alpha_{cf} = \frac{V_{cf}}{F^*} = \alpha_{rr} = \frac{V_{rr}}{R^*} = \alpha_{rf} = \frac{V_{rf}}{F^*} = \alpha_{fr} = \frac{V_{fr}}{R^*} = \alpha_{ff} = \frac{V_{ff}}{F^*} =$$

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