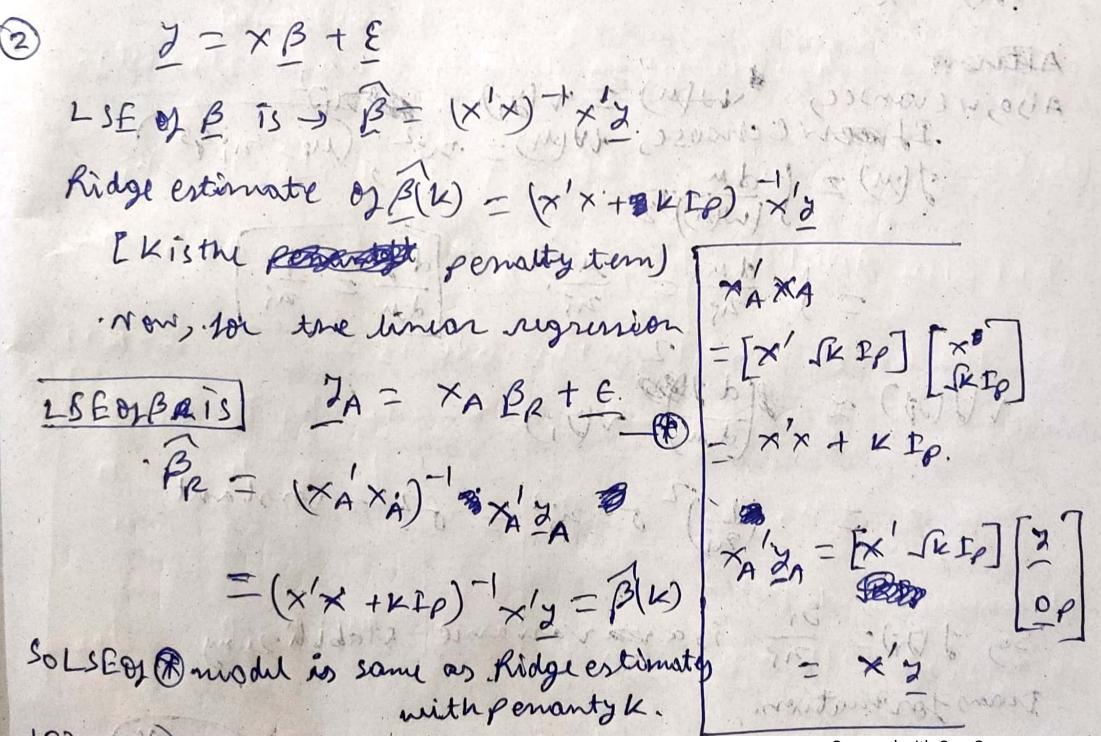
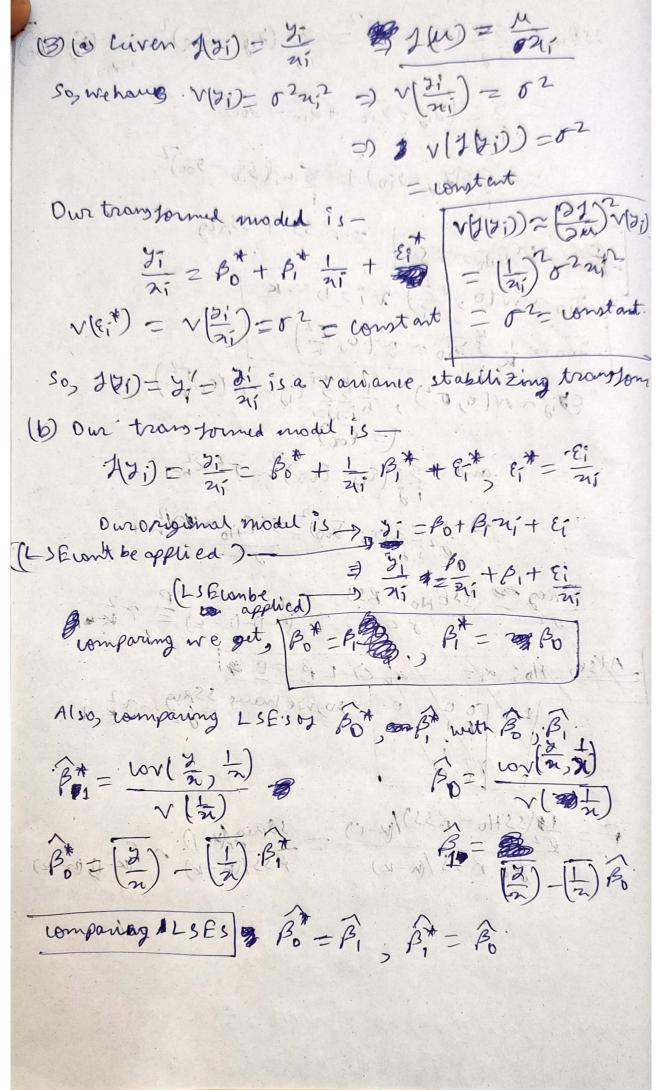
P33 How 2 My Men William of work of O Riady denotes adjusted R atter removing an un Hoi B, 20, NS His , 70. Rijang = 1-(1-Ri) 1-P4) Rady is adjusted R fortherme model 1- FSSI × n-P+I
Then, 1-Rady = PRSS x n-P
TSS x n-P+I = (1- R2) - [R=1- KS] $f = \frac{RSS_1 - RSS}{RSS} = \frac{N - R}{1} = \frac{RSS_1}{TSS} = \frac{RSS_1}{TSS} = \frac{RSS_2}{TSS} = \frac{(n - R)}{TSS}$ (1-Ri2)-(1-R) (2-R) $= \frac{1-R^2}{1-R^2} - 1 (n-P) = \left(\frac{1-R^2}{1-R^2} \cdot \frac{n-R^2}{n-P^2} - 1\right)(n-P)$ Now, Filt $(1-R_1^2)$ (n-1) (n-1)D 1-R,2 n-1 7, 1+ 11 = n-P+1 1-P. (1) 1-R12 7, n-P+1 (1-R13) (n-P+1) 7, 1-Rny () 1-R1, adj 7, 1-Radj () Radj 1 R1, adj





(c) Now, we will use WLS with $w_i = \frac{1}{2\sqrt{2}}$ Let 1 (1) be the transformation corresponding to the weights $w_i = \frac{1}{2\sqrt{2}}$ $V(2/3)) = w_i V(3) = \frac{1}{2\sqrt{2}} \sigma^2 n_i^2 = \sigma^2$ $V(2/3)) = V(w_i 3_i) = V(\frac{3_i}{2\sqrt{2}}) = \sigma^2 = \text{constant}$ So, $2(3_i) = \frac{3_i}{2\sqrt{2}}$ Some as part (a)

Also, WLS model is — $W_i 3_i = \sqrt{W_i} \beta_0 + \sqrt{W_i} \beta_1 + \sqrt{W_i} \beta_1$

 $\frac{3}{3} = \frac{3}{3} + \frac{1}{3} + \frac{2}{3} + \frac{1}{3}$ $\frac{3}{3} = \frac{1}{3} + \frac{1}{3} + \frac{1}{3}$

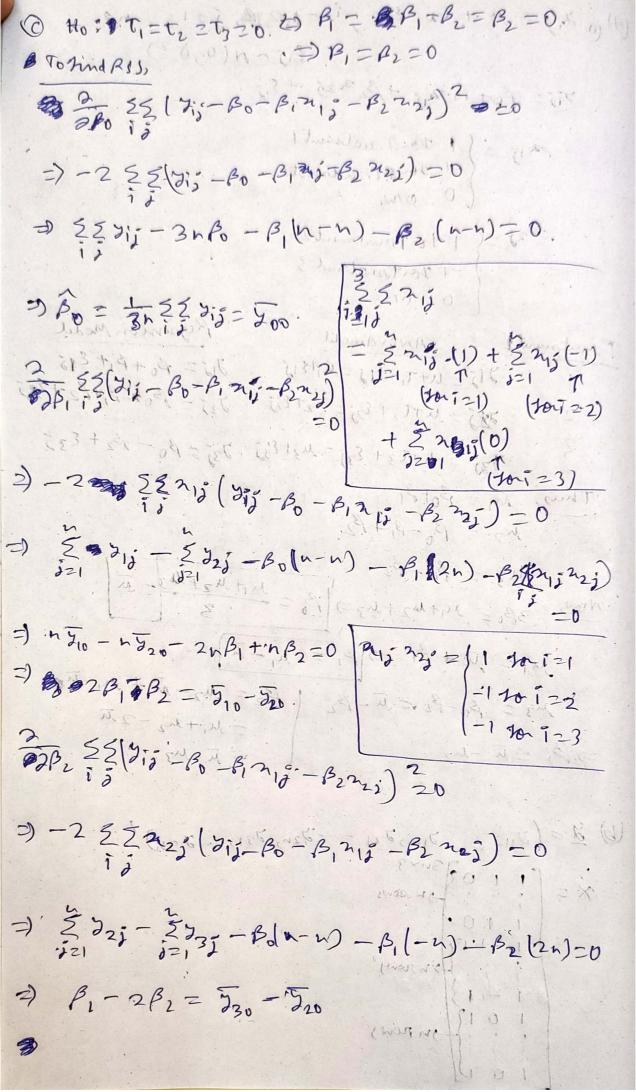
 $V_{i} = \sqrt{w_{i}} = \frac{y_{i}}{y_{i}}$ $U_{i} = \sqrt{w_{i}} = \frac{y_{i}}{y_{i}}$ $B_{i}^{*} = B_{i} = \frac{y_{i}}{y_{i}}$ $B_{0}^{*} = \sqrt{w_{i}} B_{0} = \frac{B_{0}}{y_{i}}$ $2i = \sqrt{w_{i}} E_{i} = \frac{E_{i}}{y_{i}}$

which are same as the as transformed model.

(4) (a) x1; = 1+ Tites , = 1,330, 521 2 - 10 (215~N(0,02) 71; = Po+ Bing; + B2225 + 8ij 215 = { 1 to Treatment 1 -1 to #Treatment 2 0 0/W. -1 20 Frustment 3

0 01m. Trustmut! ANOVAMORI Regission Model

1 $71j = 11+T_1+E_1j = 11/E_1j$ $71j = B_0+B_1+E_2j$ 2 $72j = 11/E_2+E_2j = 11/E_2+E_2j$ $72j = B_0+B_1+B_2+E_2j$ 3 73j = M+T3+ E3j = M3+ E3j 73j = B0 - B2 + E35 12 = B0-B1+B2 Thus, M = Bot B1 Mons. 3Bo = MI+M2+M3 = Bo = MHM2+M3-M 川川は一大十分の月ニールール $M_3 = \beta_0 - \beta_2 = \overline{M} - \beta_2$ $\beta_2 = \overline{M} - M_3$ $\beta_2 = \overline{M} - M_3$ $\beta_3 = \overline{M} - M_3$ JB, = Th - Mg



3)
$$\hat{F}_{2} = -2 \, \vec{J}_{30} + 2 \, \vec{J}_{20} + 5_{10} + 5_{20}$$

2) $\hat{F}_{2} = \frac{1}{3} \left(\vec{J}_{10} + \vec{J}_{20} - 25_{20} \right)$

2) $\hat{F}_{1} = 5_{70} - 5_{20} + \frac{2}{3} \, \vec{J}_{10} + \frac{2}{3} \, \vec{J}_{20} - \frac{9}{3} \, \vec{J}_{20}$

2) $\hat{F}_{1} = \frac{1}{3} \left(25_{100} + 5_{20} - 5_{20} \right)$

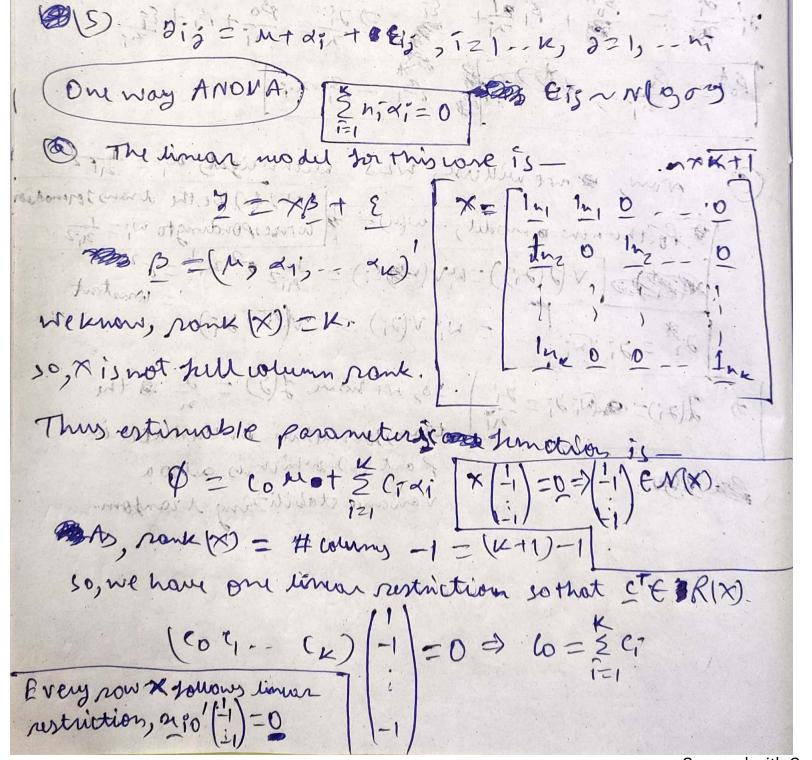
2) $\hat{F}_{1} = \frac{1}{3} \left(25_{100} + 5_{20} - \frac{9}{3} \, \vec{J}_{10} + \frac{1}{3} \, 5_{20} + \frac{1}{3} \, 5_{70} \right)^{2}$

2) $\hat{F}_{1} = \frac{1}{3} \left(25_{100} + \frac{1}{3} \, 5_{10} + \frac{1}{3} \, 5_{20} + \frac{1}{3} \, 5_{70} \right)^{2}$

2) $\hat{F}_{1} = \frac{1}{3} \left(25_{10} + \frac{1}{3} \, 5_{10} + \frac{1}{3} \, 5_{20} + \frac{1}{3} \, 5_{70} \right)^{2}$

2) $\hat{F}_{1} = \frac{1}{3} \left(37_{10} - \frac{1}{3} \, 5_{10} + \frac{1}{3} \, 5_{20} - \frac{2}{3} \, 5_{30} \right)^{2}$

2) $\hat{F}_{1} = \frac{1}{3} \left(37_{10} - \frac{1}{3} \, 5_{10} + \frac{1}{3} \, 5_{20} + \frac{1}{3} \, \frac{1}{3} \, \frac{1}{3} \, \frac{1}{3} \, \frac{1}{3} \, \frac{1} \, \frac{1}{3} \, \frac{1}{3} \, \frac{1}$



Also, any Ecodi is estimable it Ecodes To tind risidual win of squares (RSS) =. 3 22 Elj = 0 [N. B. - [13--3]-1 かるないととして、一人で、)でこのヨー2 をまくりらールーかり=0 するとうは一いれーをいるにこのコルニカをとかはころのか 2 27 21 = 0 1 1 1 1 () 3 () コラス・ラブ (アジールース) =0コー2 ミズ (スジールース) =0 mun, 7/0 = hi 5/2/2 min 5/5/2 min 5/ Mydi 22 Eliz = min 55 (2) - 1-4:) 3 カ おららニ をき(からールーで)2- 22(から-500 ーラ10+500) = RSJ = = = = [7:5-5:0]? (b) we nove, RSS = 23/7i3 - 7i0)2 = 多く(のルナイン+ とう- からんれていまり) 三至至(是一大至是江)至至至(四一年) we have, Ejnnoog & Fronklo, no) 5 (Eig- Eig) ~ x2 of - Indepty

