exam 2

Fareha Sameen

11/23/2020

attach(acs2017_ny) use_varb <- (AGE >= 25) & (AGE <= 55) & (FAMSIZE>1) & (LABFORCE == 2) & (UHRSWORK>0 & UHRSWORK<35) & (UHRSWORK >= 35) dat_use <- subset(acs2017_ny,use_varb)

model_temp1 <- lm(UHRSWORK ~ AGE + female + FAMSIZE+ LABFORCE) summary(model_temp1) plot(model_temp1)

Call: lm(formula = UHRSWORK ~ AGE + female + FAMSIZE + LABFORCE)

Residuals: Min 1Q Median 3Q Max -46.042 -6.864 1.680 6.363 94.341

Coefficients: Estimate Std. Error t value Pr(>|t|)
(Intercept) -3.05874 0.10391 -29.44 <2e-16 *AGE -0.20983 0.00136 -154.23 <2e-16* female -3.05422 0.05524 -55.29 <2e-16 *FAMSIZE 0.19987 0.01673 11.95 <2e-16* LABFORCE 24.43017 0.03997 611.22 <2e-16 *** — Signif. codes: 0 '*' 0.001 '*' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 12.21 on 196580 degrees of freedom Multiple R-squared: 0.663, Adjusted R-squared: 0.6629 F-statistic: 9.667e+04 on 4 and 196580 DF, p-value: < 2.2e-16

require(stargazer) stargazer(model_temp1, type = "text")

NNobs <- length(UHRSWORK) set.seed(12345) graph_obs <- (runif(NNobs) < 0.1) dat_graph <-subset(acs2017_ny,use_varb)

plot(UHRSWORK ~ jitter(AGE, factor = 2), pch = 16, col = rgb(0.5, 0.5, 0.5, alpha = 0.2), ylim = c(0,150000), data =)

Call: lm(formula = UHRSWORK ~ AGE + female + FAMSIZE + LABFORCE)

Residuals: Min 1Q Median 3Q Max -46.042 -6.864 1.680 6.363 94.341

Coefficients: Estimate Std. Error t value Pr(>|t|)
(Intercept) -3.05874 0.10391 -29.44 <2e-16 *AGE -0.20983 0.00136 -154.23 <2e-16* female -3.05422 0.05524 -55.29 <2e-16 *FAMSIZE 0.19987 0.01673 11.95 <2e-16* LABFORCE 24.43017 0.03997 611.22 <2e-16 *** — Signif. codes: 0 '*' 0.001 '*' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 12.21 on 196580 degrees of freedom Multiple R-squared: 0.663, Adjusted R-squared: 0.6629 F-statistic: 9.667e+04 on 4 and 196580 DF, p-value: < 2.2e-16

i tried it without females in order to see the difference

model_temp2 <- lm(UHRSWORK ~ AGE + FAMSIZE+ LABFORCE) summary(model_temp2) plot(model_temp2)

Call: lm(formula = UHRSWORK ~ AGE + FAMSIZE + LABFORCE)

Residuals: Min 1Q Median 3Q Max -44.586 -6.620 1.603 6.133 93.005

Coefficients: Estimate Std. Error t value Pr(>|t|)
(Intercept) -4.557531 0.101085 -45.09 <2e-16 ***AGE -0.214384 0.001368 -156.66 <2e-16*** FAMSIZE 0.195780 0.016858 11.61 <2e-16 ***LABFORCE 24.524900 0.040242 609.43 <2e-16*** — Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 12.31 on 196581 degrees of freedom Multiple R-squared: 0.6577, Adjusted R-squared: 0.6577 F-statistic: 1.259e+05 on 3 and 196581 DF, p-value: < 2.2e-16

require(stargazer) stargazer(model_temp1, type = "text")