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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| > #Script: Econometrics Paper: Steam Games Data  > #Author: William Elijah Clark  > #Date: 11/28/2016-12/01/2015(expected end date of coding, obviously)  > rm(list =ls())  > mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Project/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv")  > pfull <- (mydata$pfull)  > pdisc <- (mydata$pdisc)  > ownbe <- (mydata$ownbe)  > ownaf <- (mydata$ownaf)  > ownbe1 <-log(ownbe, base = exp(1))  > ownaf1 <-log(ownaf, base = exp(1))  > month <- (mydata$month)  > genre <- (mydata$genre)  > deltp <- pfull-pdisc  > deltq <- ownbe-ownaf  > elast <- deltq/deltp  > mean(elast, na.rm=TRUE)  [1] -Inf   |  | | --- | | > arce1 <- deltq/deltq/107  > arce2 <-deltp/107/deltp  > aelas <- arce1\*arce2  > mean(aelas, na.rm=TRUE)  [1] 8.734387e-05  > mean(ownaf1)  [1] 15.07137 | |  | |  |   > #Genre Classifications: Acad = Action-Adventure, Shoot = Shooter, Strat = Strategy, Rpg = RPG, Misc = Miscellaneous  > levels(genre)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | > View(mydata)  > #Price Means  > mean(pfull[genre=="Acad"])  [1] 18.56143  > mean(pdisc[genre=="Acad"], na.rm = TRUE)  [1] 7.29  > mean(pfull[genre=="Shoot"])  [1] 17.26027  > mean(pdisc[genre=="Shoot"], na.rm = TRUE)  [1] 4.984722  > mean(pfull[genre=="Strat"])  [1] 22.68231  > mean(pdisc[genre=="Strat"], na.rm = TRUE)  [1] 5.49  > mean(pfull[genre=="Rpg"])  [1] 22.65667  > mean(pdisc[genre=="Rpg"], na.rm = TRUE)  [1] 8.204286  > mean(pfull[genre=="Misc"])  [1] 17.96667  > mean(pdisc[genre=="Misc"], na.rm = TRUE)  [1] 6.259048   |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | > #Quantity Means  > mean(ownbe[genre=="Acad"]  [1] 3387642  > mean(ownaf[genre=="Acad"])  [1] 3464439  > mean(ownbe[genre=="Shoot"])  [1] 5630675  > mean(ownaf[genre=="Shoot"])  [1] 5742993  > mean(ownbe[genre=="Strat"])  [1] 2781374  > mean(ownaf[genre=="Strat"])  [1] 2873298  > mean(ownbe[genre=="Rpg"])  [1] 3438608  > mean(ownaf[genre=="Rpg"])  [1] 3538536  > mean(ownbe[genre=="Misc"])  [1] 3424960  > mean(ownaf[genre=="Misc"])  [1] 3584574   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | > #b = before discounting, a = after discounting  > demandb1 <- lm(pfull~ownbe1)  > demanda1 <- lm(pdisc~ownaf1, na.action=na.exclude)  > demandb2 <- lm(pfull~ownbe1+genre)  > demanda2 <- lm(pdisc~ownaf1+genre, na.action=na.exclude)  > demandb3 <- lm(pfull~ownbe1+genre+month)  > demanda3 <- lm(pdisc~ownaf1+genre+month, na.action=na.exclude)  > demandb4 <- lm(ownbe1~pfull+genre)  > demanda4 <- lm(ownaf1~pdisc+genre, na.action=na.exclude)  > demandb5 <- lm(ownbe1~pfull+genre+month)  > demanda5 <- lm(ownaf1~pdisc+genre+month, na.action=na.exclude)  #All Regression Summaries  > summary(demanda1)  Call:  lm(formula = pdisc ~ ownaf1, na.action = na.exclude)  Residuals:  Min 1Q Median 3Q Max  -6.0187 -3.0894 -1.6245 0.4411 30.2470  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 26.764 15.895 1.684 0.0953 .  ownaf1 -1.366 1.054 -1.296 0.1980  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 5.766 on 102 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.01619, Adjusted R-squared: 0.006549  F-statistic: 1.679 on 1 and 102 DF, p-value: 0.198   |  | | --- | | > summary(demanda2)  Call:  lm(formula = pdisc ~ ownaf1 + genre, na.action = na.exclude)  Residuals:  Min 1Q Median 3Q Max  -6.8234 -3.3719 -1.3667 0.6294 29.0999  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 24.1003 17.1906 1.402 0.164  ownaf1 -1.1185 1.1405 -0.981 0.329  genreMisc -1.1578 1.8109 -0.639 0.524  genreRpg 0.8448 2.0158 0.419 0.676  genreShoot -1.9780 1.6465 -1.201 0.233  genreStrat -2.1021 2.0826 -1.009 0.315  Residual standard error: 5.781 on 98 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.04987, Adjusted R-squared: 0.001389  F-statistic: 1.029 on 5 and 98 DF, p-value: 0.4051  > summary(demanda3)  Call:  lm(formula = pdisc ~ ownaf1 + genre + month, na.action = na.exclude)  Residuals:  Min 1Q Median 3Q Max  -6.212 -3.195 -0.784 1.564 25.772  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 3.25957 15.53166 0.210 0.834  ownaf1 0.53790 1.04360 0.515 0.607  genreMisc -1.77788 1.59122 -1.117 0.267  genreRpg 1.88944 1.77693 1.063 0.290  genreShoot 0.41961 1.50689 0.278 0.781  genreStrat -0.64467 1.84429 -0.350 0.727  month -0.06812 0.01232 -5.529 2.72e-07 \*\*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 5.067 on 97 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.2775, Adjusted R-squared: 0.2328  F-statistic: 6.21 on 6 and 97 DF, p-value: 1.52e-05  > summary(demandb1)  Call:  lm(formula = pfull ~ ownbe1)  Residuals:  Min 1Q Median 3Q Max  -13.822 -6.745 -1.412 2.903 42.544  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 101.279 27.140 3.732 0.000309 \*\*\*  ownbe1 -5.466 1.803 -3.031 0.003068 \*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 10.39 on 105 degrees of freedom  Multiple R-squared: 0.08046, Adjusted R-squared: 0.0717  F-statistic: 9.188 on 1 and 105 DF, p-value: 0.003068  > summary(demandb2)  Call:  lm(formula = pfull ~ ownbe1 + genre)  Residuals:  Min 1Q Median 3Q Max  -13.862 -6.348 -2.274 4.108 43.264  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 96.6250 29.8297 3.239 0.00162 \*\*  ownbe1 -5.2092 1.9847 -2.625 0.01002 \*  genreMisc -1.2120 3.2377 -0.374 0.70894  genreRpg 3.7148 3.5403 1.049 0.29655  genreShoot 0.5123 2.9411 0.174 0.86207  genreStrat 2.7685 3.7285 0.743 0.45949  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 10.46 on 101 degrees of freedom  Multiple R-squared: 0.1029, Adjusted R-squared: 0.05854  F-statistic: 2.318 on 5 and 101 DF, p-value: 0.04881  > summary(demandb3)  Call:  lm(formula = pfull ~ ownbe1 + genre + month)  Residuals:  Min 1Q Median 3Q Max  -16.706 -5.158 -1.260 3.757 37.648  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 57.64568 27.14481 2.124 0.0362 \*  ownbe1 -2.14900 1.82969 -1.175 0.2430  genreMisc -1.96490 2.84899 -0.690 0.4920  genreRpg 6.59800 3.15490 2.091 0.0390 \*  genreShoot 5.02505 2.71020 1.854 0.0667 .  genreStrat 5.67584 3.31879 1.710 0.0903 .  month -0.12096 0.02182 -5.544 2.41e-07 \*\*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 9.197 on 100 degrees of freedom  Multiple R-squared: 0.3139, Adjusted R-squared: 0.2727  F-statistic: 7.624 on 6 and 100 DF, p-value: 9.42e-07  > summary(demandb4)  Call:  lm(formula = ownbe1 ~ pfull + genre)  Residuals:  Min 1Q Median 3Q Max  -0.99665 -0.32717 -0.07218 0.21389 1.55734  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 15.21313 0.14065 108.164 <2e-16 \*\*\*  pfull -0.01226 0.00467 -2.625 0.0100 \*  genreMisc -0.12578 0.15666 -0.803 0.4239  genreRpg -0.02283 0.17265 -0.132 0.8951  genreShoot 0.33217 0.13881 2.393 0.0186 \*  genreStrat -0.20911 0.18016 -1.161 0.2485  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.5076 on 101 degrees of freedom  Multiple R-squared: 0.2163, Adjusted R-squared: 0.1775  F-statistic: 5.576 on 5 and 101 DF, p-value: 0.000141  > summary(demandb5)  Call:  lm(formula = ownbe1 ~ pfull + genre + month)  Residuals:  Min 1Q Median 3Q Max  -0.9510 -0.3116 -0.0840 0.1814 1.7151  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 14.944886 0.188308 79.364 <2e-16 \*\*\*  pfull -0.006332 0.005391 -1.175 0.2430  genreMisc -0.096596 0.154712 -0.624 0.5338  genreRpg -0.108279 0.174621 -0.620 0.5366  genreShoot 0.211573 0.148116 1.428 0.1563  genreStrat -0.282126 0.180572 -1.562 0.1214  month 0.002782 0.001325 2.100 0.0383 \*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.4992 on 100 degrees of freedom  Multiple R-squared: 0.2494, Adjusted R-squared: 0.2044  F-statistic: 5.538 on 6 and 100 DF, p-value: 5.469e-05  > summary(demanda4)  Call:  lm(formula = ownaf1 ~ pdisc + genre, na.action = na.exclude)  Residuals:  Min 1Q Median 3Q Max  -0.95497 -0.32385 -0.08682 0.21732 1.64579  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 15.092967 0.130971 115.239 <2e-16 \*\*\*  pdisc -0.008688 0.008860 -0.981 0.3292  genreMisc -0.122333 0.159465 -0.767 0.4448  genreRpg -0.054226 0.177744 -0.305 0.7610  genreShoot 0.272592 0.143566 1.899 0.0605 .  genreStrat -0.285721 0.182231 -1.568 0.1201  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.5095 on 98 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.1494, Adjusted R-squared: 0.106  F-statistic: 3.442 on 5 and 98 DF, p-value: 0.006588  > summary(demanda5)  Call:  lm(formula = ownaf1 ~ pdisc + genre + month, na.action = na.exclude)  Residuals:  Min 1Q Median 3Q Max  -0.87653 -0.33491 -0.08813 0.18724 1.80020  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 14.770861 0.170379 86.694 < 2e-16 \*\*\*  pdisc 0.005078 0.009852 0.515 0.60742  genreMisc -0.063949 0.155460 -0.411 0.68172  genreRpg -0.118322 0.173234 -0.683 0.49622  genreShoot 0.146671 0.145710 1.007 0.31663  genreStrat -0.316189 0.176406 -1.792 0.07619 .  month 0.003726 0.001320 2.823 0.00577 \*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.4923 on 97 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.214, Adjusted R-squared: 0.1653  F-statistic: 4.401 on 6 and 97 DF, p-value: 0.0005633  > #Plotting and Graphs  > plot(pdisc ~ ownaf1, xlab = "quantity", ylab = "price")  > abline(demanda1)  > title(main="demand curve a1", col.main="black", font.main=1)    > plot(pfull ~ ownbe1, xlab = "quantity", ylab = "price")  > abline(demandb1)  > title(main="demand curve b1", col.main="black", font.main=1) | |  | | |  | | --- | |  | |     > #Diagnostics  > library(car)  > crPlots(demandb1)  > title(main="demand curve b1 Diagnostic", col.main="black", font.main=1)  > crPlots(demanda1)  > title(main="demand curve a1 Diagnostic", col.main="black", font.main=1)  > crPlots(demandb2)  > title(main="demand curve b2 Diagnostic", col.main="black", font.main=1)  > crPlots(demanda2)  > title(main="demand curve a2 Diagnostic", col.main="black", font.main=1)  > crPlots(demandb3)  > title(main="demand curve b3 Diagnostic", col.main="black", font.main=1)  > crPlots(demandb4)  > title(main="demand curve b4 Diagnostic", col.main="black", font.main=1)  > crPlots(demanda4)  > title(main="demand curve a4 Diagnostic", col.main="black", font.main=1)  > crPlots(demandb5)  > title(main="demand curve b5 Diagnostic", col.main="black", font.main=1)  > crPlots(demanda5)  > title(main="demand curve a5 Diagnostic", col.main="black", font.main=1)   |  | | --- | |  | |  | | |  | | --- | | > #Altered Demand Curves + Diagnostics  > demandb3alt1 <- lm(pfull~sqrt(ownbe1)+genre+month)  > summary(demandb3alt1)  Call:  lm(formula = pfull ~ sqrt(ownbe1) + genre + month)  Residuals:  Min 1Q Median 3Q Max  -16.700 -5.192 -1.257 3.751 37.661  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 90.83530 55.16698 1.647 0.1028  sqrt(ownbe1) -16.89473 14.33628 -1.178 0.2414  genreMisc -1.97539 2.84933 -0.693 0.4897  genreRpg 6.58860 3.15538 2.088 0.0393 \*  genreShoot 5.01862 2.70927 1.852 0.0669 .  genreStrat 5.66058 3.32061 1.705 0.0914 .  month -0.12088 0.02183 -5.537 2.48e-07 \*\*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 9.197 on 100 degrees of freedom  Multiple R-squared: 0.3139, Adjusted R-squared: 0.2728  F-statistic: 7.626 on 6 and 100 DF, p-value: 9.38e-07  > crPlots(demandb3alt1)  > title(main="demand curve b3alt1 Diagnostic", col.main="black", font.main=1) | | | > demandb3alt2 <- lm(pfull~1/(ownbe1)+genre+month)  > summary(demandb3alt2)  Call:  lm(formula = pfull ~ 1/(ownbe1) + genre + month)  Residuals:  Min 1Q Median 3Q Max  -16.136 -5.402 -1.248 4.364 36.600  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 25.88123 2.33410 11.088 < 2e-16 \*\*\*  genreMisc -1.78155 2.85005 -0.625 0.5333  genreRpg 6.92492 3.14849 2.199 0.0301 \*  genreShoot 4.63342 2.69466 1.719 0.0886 .  genreStrat 6.36879 3.27205 1.946 0.0544 .  month -0.12869 0.02084 -6.175 1.39e-08 \*\*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 9.214 on 101 degrees of freedom  Multiple R-squared: 0.3044, Adjusted R-squared: 0.27  F-statistic: 8.839 on 5 and 101 DF, p-value: 5.501e-07  > crPlots(demandb3alt1)  > title(main="demand curve b3alt2 Diagnostic", col.main="black", font.main=1)  > ownbe1alt <- 1/ownbe1  > rm(demandb3alt2)  Warning message:  In rm(demandb3alt2) : object 'demandb3alt2' not found  > demandb3alt2 <- lm(pfull~ownbe1alt+genre+month)  > summary(demandb3alt2)  Call:  lm(formula = pfull ~ ownbe1alt + genre + month)  Residuals:  Min 1Q Median 3Q Max  -16.684 -5.294 -1.226 3.731 37.700  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) -8.72140 29.16884 -0.299 0.7656  ownbe1alt 511.48549 429.78802 1.190 0.2368  genreMisc -2.00735 2.85052 -0.704 0.4829  genreRpg 6.56026 3.15693 2.078 0.0403 \*  genreShoot 4.99845 2.70655 1.847 0.0677 .  genreStrat 5.61492 3.32621 1.688 0.0945 .  month -0.12066 0.02187 -5.518 2.7e-07 \*\*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 9.195 on 100 degrees of freedom  Multiple R-squared: 0.3141, Adjusted R-squared: 0.2729  F-statistic: 7.632 on 6 and 100 DF, p-value: 9.264e-07  > demandd <- lm(pfull~ownbe1+ownaf1+pdisc+genre+month)  > summary(demandd)  Call:  lm(formula = pfull ~ ownbe1 + ownaf1 + pdisc + genre + month)  Residuals:  Min 1Q Median 3Q Max  -13.3697 -3.0900 -0.3357 3.3632 20.0393  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 62.98506 18.07516 3.485 0.000747 \*\*\*  ownbe1 14.47190 14.74919 0.981 0.328987  ownaf1 -17.97165 14.84262 -1.211 0.228970  pdisc 1.42228 0.12012 11.841 < 2e-16 \*\*\*  genreMisc 0.33679 1.90312 0.177 0.859909  genreRpg 3.91395 2.08730 1.875 0.063846 .  genreShoot 3.91240 1.75267 2.232 0.027948 \*  genreStrat 6.12459 2.15273 2.845 0.005439 \*\*  month -0.02818 0.01642 -1.716 0.089394 .  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 5.889 on 95 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.7305, Adjusted R-squared: 0.7078  F-statistic: 32.19 on 8 and 95 DF, p-value: < 2.2e-16  > crPlots(demandd)  > title(main="demand curve d Diagnostic", col.main="black", font.main=1) | | |  | |  |   > demande <- lm(ownaf1~pfull+pdisc+ownbe1+genre+month)  > summary(demande)  Call:  lm(formula = ownaf1 ~ pfull + pdisc + ownbe1 + genre + month)  Residuals:  Min 1Q Median 3Q Max  -0.055758 -0.016497 -0.007878 0.006997 0.305893  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 2.069e-01 1.300e-01 1.592 0.1147  pfull -8.456e-04 6.984e-04 -1.211 0.2290  pdisc 2.720e-03 1.266e-03 2.148 0.0343 \*  ownbe1 9.876e-01 8.599e-03 114.850 <2e-16 \*\*\*  genreMisc 2.613e-02 1.278e-02 2.045 0.0436 \*  genreRpg 1.611e-02 1.449e-02 1.112 0.2689  genreShoot 7.402e-03 1.231e-02 0.601 0.5491  genreStrat 1.531e-02 1.530e-02 1.000 0.3197  month -1.612e-05 1.144e-04 -0.141 0.8882  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.0404 on 95 degrees of freedom  (3 observations deleted due to missingness)  Multiple R-squared: 0.9948, Adjusted R-squared: 0.9944  F-statistic: 2279 on 8 and 95 DF, p-value: < 2.2e-16  > crPlots(demande)  > title(main="demand curve e Diagnostic", col.main="black", font.main=1) | | > install.packages("ggplot2") | | |  | | --- | |  | | |   > demande.stdres = rstandard(demande)  > qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="NormalQQ plot for demande")    vif(demande)  GVIF Df GVIF^(1/(2\*Df))  pfull 3.654226 1 1.911603  pdisc 3.386242 1 1.840174  ownbe1 1.389795 1 1.178896  genre 1.635442 4 1.063419  month 1.849916 1 1.360116  > sqrt(vif(demande))  GVIF Df GVIF^(1/(2\*Df))  pfull 1.911603 1 1.382607  pdisc 1.840174 1 1.356530  ownbe1 1.178896 1 1.085770  genre 1.278844 2 1.031222  month 1.360116 1 1.166240  > #...amazingly, there's no multicolliniarity implied here at all, as per  http://minato.sip21c.org/msb/man/VIF.html  >#...well, actually, there might be some in pfull and pdisc, but it's not  that terrible.  > #...how the fuck is this working?  ># Also, that’s one significant outlier there, but I don’t think that  overrides the rest of this.  > durbinWatsonTest(demande)  lag Autocorrelation D-W Statistic p-value  1 0.02923532 1.912688 0.498    Alternative hypothesis: rho != 0   |  | | --- | | > derp <-lm(ownbe1~pfull)  > summary(derP)  Error in summary(derP) : object 'derP' not found  > summary(derp)  Call:  lm(formula = ownbe1 ~ pfull)  Residuals:  Min 1Q Median 3Q Max  -0.7253 -0.4191 -0.1649 0.2428 1.8179  Coefficients:  Estimate Std. Error t value Pr(>|t|)  (Intercept) 15.321687 0.106278 144.166 < 2e-16 \*\*\*  pfull -0.014721 0.004857 -3.031 0.00307 \*\*  ---  Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1  Residual standard error: 0.5392 on 105 degrees of freedom  Multiple R-squared: 0.08046, Adjusted R-squared: 0.0717  F-statistic: 9.188 on 1 and 105 DF, p-value: 0.003068 | |  | | |  | | --- | | > #I’m using this version for the paper. Yes, it’s similar with r-squares, but has the proper independent and dependent variable placement. | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | > plot(ownbe1 ~ pdisc, xlab = "quantity", ylab = "price")  > plot(ownbe1 ~ pdisc, xlab = "price", ylab = "quantity")  > abline(derp)  > title(main="Univariate Demand Regression", col.main="black", font.main=1)  > crPlots(derp)  > plot(ownbe1 ~ pdisc, xlab = "quantity", ylab = "price")  > plot(ownbe1 ~ pdisc, xlab = "price", ylab = "quantity")  > abline(derp)  > title(main="figure1", col.main="black", font.main=1) | |  | | |  | | --- | | > | | | | |  | | --- | |  | |  | |  |  | | --- | | , | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | #Testing for Non-Normality of Residuals  > library(MASS)  > qqPlot(demande, main="QQ Plot")  > sresit <-stures(demande)  Error: could not find function "stures"  > sresit <-studres(demande)  > hist(sresid, freq=FALSE,  + main="Distribution of Studentized Residuals")  Error in hist(sresid, freq = FALSE, main = "Distribution of Studentized Residuals") :  object 'sresid' not found  > hist(sresit, freq=FALSE,  + main="Distribution of Studentized Residuals")  > xfit<-seq(min(sresid),max(sresid),length=40)  Error in seq(min(sresid), max(sresid), length = 40) :  object 'sresid' not found  > xfit<-seq(min(sresit),max(sresit),length=40)  > yfit<-dnorm(xfit)  > lines(xfit, yfit)   |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | | > a <- 0.02069  > mean(pfull)  [1] 19.06953  > mean(ownbe)  [1] 4104080  > mean(ownbe1)  [1] 15.04096  > mean(ownaf1)  [1] 15.07137  > mean(pdisc)  [1] NA  > mean(pdisc, na.rm=TRUE)  [1] 6.181923  > 19.06953\*15.04096  [1] 286.824  > 19.06953/15.04096  [1] 1.26784  > a\*1.26784  [1] 0.02623161  > 6.181923/15.07137  [1] 0.4101766  > a\*0.4101766  [1] 0.008486554  > exp(0.02623161)  [1] 1.026579  > exp(0.008486554)  [1] 1.008523 | |  | | |  | | --- | |  | | | |  | | |  | | --- | | > hist(pfull)  >hist(ownbe)  >hist(ownbe1)  Etc etc. | | | |  | | |  | | --- | |  | | |
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