R version 3.3.1 (2016-06-21) -- "Bug in Your Hair"

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Platform: x86\_64-w64-mingw32/x64 (64-bit)

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[Workspace loaded from ~/.RData]

> #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/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv

+ mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv

Error: unexpected symbol in:

"mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv

mydata = read.csv("C"

> mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv

+

+ mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv

Error: unexpected symbol in:

"

mydata = read.csv("C"

> mydata = read.csv("C:/Users/Elklark/Desktop/Econometrics/Steam\_Data\_Collection\_For\_R\_Project\_v2.csv")

> > pfull <- (mydata$pfull)

Error: unexpected '>' in ">"

> 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

> rm(arce1)

> rm(arce2)

> rm(aelas)

> deltqdenom <- deltq/107

> deltpnumer <- deltp/107

> qq <- deltq/deltqdenom

> pp <- deltpnumer/deltp

> arcel <- qq\*pp

> mean(arcel, na.rm=TRUE)

[1] 1

> rm(deltqdenom)

> rm(deltpnumer)

>

> rm(qq)

> rm(pp)

> rm(arcel)

> demandb1 <- lm(pfull~ownbe)

> demanda1 <- lm(pdisc~ownaf, na.action=na.exclude)

> demandb2 <- lm(pfull~ownbe+genre)

> demanda2 <- lm(pdisc~ownaf+genre, na.action=na.exclude)

> rm(demandb1)

> rm(demandb2)

> rm(demanda1)

> rm(demanda2)

> 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)

> demandb2 <- lm(pfull~ownbe1+genre+month)

> demanda2 <- lm(pdisc~ownaf1+genre+month, 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)

> 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

> > plot(pdisc ~ ownaf1, xlab = "quantity", ylab = "price")

Error: unexpected '>' in ">"

> plot(pdisc ~ ownaf1, xlab = "quantity", ylab = "price")

> abline(demanda1)

> title(main="demanda1", col.main="black", font.main=2)

> title(main="demand curve a1", col.main="black", font.main=1)

> 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)

>

>

> 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)

>

> 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

> outlierTest(fit)

Error: could not find function "outlierTest"

> library(car)

Error in library(car) : there is no package called ‘car’

> install.packages("car", lib="https://cran.r-project.org/web/packages/car/")

Warning in install.packages :

'lib = "https://cran.r-project.org/web/packages/car/"' is not writable

Error in install.packages : unable to install packages

> > library("car", lib.loc=""C:/Users/Elklark/Desktop/Econometrics/R Packages/")

Error: unexpected '>' in ">"

> library("car", lib.loc=""C:/Users/Elklark/Desktop/Econometrics/R Packages/")

Error: unexpected symbol in "library("car", lib.loc=""C"

> library("car", lib.loc="C:/Users/Elklark/Desktop/Econometrics/R Packages/")

Error in library("car", lib.loc = "C:/Users/Elklark/Desktop/Econometrics/R Packages/") :

there is no package called ‘car’

> library("car\_2.1-3.tar-1", lib.loc=""C:/Users/Elklark/Desktop/Econometrics/R Packages/")

Error: unexpected symbol in "library("car\_2.1-3.tar-1", lib.loc=""C"

> library("car\_2.1-3.tar-1", lib.loc="C:/Users/Elklark/Desktop/Econometrics/R Packages/")

Error in library("car\_2.1-3.tar-1", lib.loc = "C:/Users/Elklark/Desktop/Econometrics/R Packages/") :

there is no package called ‘car\_2.1-3.tar-1’

> install.packages('car')

Installing package into ‘C:/Users/Elklark/Documents/R/win-library/3.3’

(as ‘lib’ is unspecified)

also installing the dependencies ‘minqa’, ‘nloptr’, ‘Rcpp’, ‘RcppEigen’, ‘lme4’, ‘SparseM’, ‘MatrixModels’, ‘pbkrtest’, ‘quantreg’

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/minqa\_1.2.4.zip'

Content type 'application/zip' length 620029 bytes (605 KB)

downloaded 605 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/nloptr\_1.0.4.zip'

Content type 'application/zip' length 1171895 bytes (1.1 MB)

downloaded 1.1 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/Rcpp\_0.12.8.zip'

Content type 'application/zip' length 3281361 bytes (3.1 MB)

downloaded 3.1 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/RcppEigen\_0.3.2.9.0.zip'

Content type 'application/zip' length 2105468 bytes (2.0 MB)

downloaded 2.0 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/lme4\_1.1-12.zip'

Content type 'application/zip' length 4745639 bytes (4.5 MB)

downloaded 4.5 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/SparseM\_1.74.zip'

Content type 'application/zip' length 931806 bytes (909 KB)

downloaded 909 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/MatrixModels\_0.4-1.zip'

Content type 'application/zip' length 195854 bytes (191 KB)

downloaded 191 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/pbkrtest\_0.4-6.zip'

Content type 'application/zip' length 213103 bytes (208 KB)

downloaded 208 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/quantreg\_5.29.zip'

Content type 'application/zip' length 2202722 bytes (2.1 MB)

downloaded 2.1 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/car\_2.1-3.zip'

Content type 'application/zip' length 1447785 bytes (1.4 MB)

downloaded 1.4 MB

package ‘minqa’ successfully unpacked and MD5 sums checked

package ‘nloptr’ successfully unpacked and MD5 sums checked

package ‘Rcpp’ successfully unpacked and MD5 sums checked

package ‘RcppEigen’ successfully unpacked and MD5 sums checked

package ‘lme4’ successfully unpacked and MD5 sums checked

package ‘SparseM’ successfully unpacked and MD5 sums checked

package ‘MatrixModels’ successfully unpacked and MD5 sums checked

package ‘pbkrtest’ successfully unpacked and MD5 sums checked

package ‘quantreg’ successfully unpacked and MD5 sums checked

package ‘car’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\Elklark\AppData\Local\Temp\Rtmpa83ooa\downloaded\_packages

> library("car", lib.loc="~/R/win-library/3.3")

Warning message:

package ‘car’ was built under R version 3.3.2

> outlierTest(fit)

Error in outlierTest(fit) : object 'fit' not found

> outlierTest(demanda1)

rstudent unadjusted p-value Bonferonni p

26 6.163453 1.4711e-08 1.5299e-06

47 4.516304 1.7096e-05 1.7780e-03

> outlier.test(demandb1)

rstudent unadjusted p-value Bonferonni p

26 4.477535 1.9408e-05 0.0020767

47 4.239727 4.8599e-05 0.0052001

58 4.138889 7.1057e-05 0.0076031

Warning message:

'outlier.test' is deprecated.

Use 'outlierTest' instead.

See help("Deprecated") and help("car-deprecated").

> outlierTest(demandb1)

rstudent unadjusted p-value Bonferonni p

26 4.477535 1.9408e-05 0.0020767

47 4.239727 4.8599e-05 0.0052001

58 4.138889 7.1057e-05 0.0076031

> crPlots(demandb3)

> crPlots(demandb2)

> crplots(demanda1)

Error: could not find function "crplots"

> crPlots(demanda3)

> crPlots(demandb3)

> crPlots(demandb1)

> title(main="demand curve a1 Diagnostic", col.main="black", font.main=1)

> crPlots(demandb1)

> title(main="demand curve b1 Diagnostic", col.main="black", font.main=1)

> crPlots(demandb1)

> 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(demandb3)

> crPlots(demanda2)

> title(main="demand curve a2 Diagnostic", col.main="black", font.main=1)

> crPlots(demandb3)

> title(main="demand curve b2 Diagnostic", col.main="black", font.main=1)

> crPlots(demandb3)

> title(main="demand curve b3 Diagnostic", col.main="black", font.main=1)

> crPlots(demanda3)

> > title(main="demand curve a3 Diagnostic", col.main="black", font.main=1)

Error: unexpected '>' in ">"

> title(main="demand curve a3 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)

Error: could not find function "crplots"

> crPlots(demanda5)

> > title(main="demand curve a5 Diagnostic", col.main="black", font.main=1)

Error: unexpected '>' in ">"

> title(main="demand curve a5 Diagnostic", col.main="black", font.main=1)

> >demandb3alt1 <- lm(pfull~ownbe1/2+genre+month)

Error: unexpected '>' in ">"

> demandb3alt1 <- lm(pfull~ownbe1/2+genre+month)

Error in terms.formula(formula, data = data) :

invalid model formula in ExtractVars

> demandb3alt1 <- lm(pfull~(ownbe1)/2+genre+month)

Error in terms.formula(formula, data = data) :

invalid model formula in ExtractVars

> 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)

Error: could not find function "crplots"

> 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(demandb3alt2)

Error: could not find function "crplots"

> crPlots(demandb3alt1)

> title(main="demand curve b3alt2 Diagnostic", col.main="black", font.main=1)

> demandb3alt2 <- lm(pfull~(ownbe1)/2+genre+month)

Error in terms.formula(formula, data = data) :

invalid model formula in ExtractVars

> crPlots(demandb3alt1)

> crPlots(demandb3alt2)

> rm(demandb3alt2)

> 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(demandb3alt2)

> rm(demandb3alt2)

> demandb3alt2 <- nls(pfull~(1/ownbe1)+genre+month)

Error in getInitial.default(func, data, mCall = as.list(match.call(func, :

no 'getInitial' method found for "function" objects

> ?nls

> 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

> crPlots(demandb3alt2)

> rm(demandb3alt2)

> ownbe1alt2 <-ownbe1/2

> demandb3alt2 <- lm(pfull~ownbe1alt2+genre+month)

> crPlots(demandb3alt2)

> demandc <-lm(pfull~ownbe1+ownaf1+genre+month)

> summary(demandc)

Call:

lm(formula = pfull ~ ownbe1 + ownaf1 + genre + month)

Residuals:

Min 1Q Median 3Q Max

-16.336 -5.261 -0.944 3.991 37.186

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 54.93328 27.41612 2.004 0.0478 \*

ownbe1 -19.80723 22.58609 -0.877 0.3826

ownaf1 17.80585 22.69976 0.784 0.4347

genreMisc -2.40847 2.90996 -0.828 0.4099

genreRpg 6.31903 3.18093 1.987 0.0497 \*

genreShoot 4.91484 2.71906 1.808 0.0737 .

genreStrat 5.48199 3.33436 1.644 0.1033

month -0.11915 0.02198 -5.420 4.2e-07 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 9.215 on 99 degrees of freedom

Multiple R-squared: 0.3181, Adjusted R-squared: 0.2699

F-statistic: 6.597 on 7 and 99 DF, p-value: 2.113e-06

> demandd <- (pfull~ownbe1+ownaf1+pdisc+genre+month)

> summary(demandd)

Length Class Mode

3 formula call

> rm(demandd)

> 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)

> rm(demandd)

> demandd <-lm(pfull~ownaf1+ownbe1+genre+month, na.action=na.exclude)

> crPlot(demandd)

Error in crPlot.lm(demandd) :

argument "variable" is missing, with no default

> rm(demandd)

> demandd <- lm(pfull~ownbe1+ownaf1+pdisc+genre+month)

> 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

> crPlot(demande)

Error in crPlot.lm(demande) :

argument "variable" is missing, with no default

> crPlots(demande)

> title(main="demand curve e Diagnostic", col.main="black", font.main=1)

> library(ggplot2)

Error in library(ggplot2) : there is no package called ‘ggplot2’

> install.packages("ggplot2")

Installing package into ‘C:/Users/Elklark/Documents/R/win-library/3.3’

(as ‘lib’ is unspecified)

also installing the dependencies ‘colorspace’, ‘RColorBrewer’, ‘dichromat’, ‘munsell’, ‘labeling’, ‘assertthat’, ‘gtable’, ‘plyr’, ‘reshape2’, ‘scales’, ‘tibble’, ‘lazyeval’

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/colorspace\_1.3-1.zip'

Content type 'application/zip' length 441188 bytes (430 KB)

downloaded 430 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/RColorBrewer\_1.1-2.zip'

Content type 'application/zip' length 26706 bytes (26 KB)

downloaded 26 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/dichromat\_2.0-0.zip'

Content type 'application/zip' length 147728 bytes (144 KB)

downloaded 144 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/munsell\_0.4.3.zip'

Content type 'application/zip' length 134043 bytes (130 KB)

downloaded 130 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/labeling\_0.3.zip'

Content type 'application/zip' length 40914 bytes (39 KB)

downloaded 39 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/assertthat\_0.1.zip'

Content type 'application/zip' length 44797 bytes (43 KB)

downloaded 43 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/gtable\_0.2.0.zip'

Content type 'application/zip' length 57687 bytes (56 KB)

downloaded 56 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/plyr\_1.8.4.zip'

Content type 'application/zip' length 1184391 bytes (1.1 MB)

downloaded 1.1 MB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/reshape2\_1.4.2.zip'

Content type 'application/zip' length 566563 bytes (553 KB)

downloaded 553 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/scales\_0.4.1.zip'

Content type 'application/zip' length 672137 bytes (656 KB)

downloaded 656 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/tibble\_1.2.zip'

Content type 'application/zip' length 614525 bytes (600 KB)

downloaded 600 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/lazyeval\_0.2.0.zip'

Content type 'application/zip' length 137877 bytes (134 KB)

downloaded 134 KB

trying URL 'https://cran.rstudio.com/bin/windows/contrib/3.3/ggplot2\_2.2.0.zip'

Content type 'application/zip' length 2759541 bytes (2.6 MB)

downloaded 2.6 MB

package ‘colorspace’ successfully unpacked and MD5 sums checked

package ‘RColorBrewer’ successfully unpacked and MD5 sums checked

package ‘dichromat’ successfully unpacked and MD5 sums checked

package ‘munsell’ successfully unpacked and MD5 sums checked

package ‘labeling’ successfully unpacked and MD5 sums checked

package ‘assertthat’ successfully unpacked and MD5 sums checked

package ‘gtable’ successfully unpacked and MD5 sums checked

package ‘plyr’ successfully unpacked and MD5 sums checked

package ‘reshape2’ successfully unpacked and MD5 sums checked

package ‘scales’ successfully unpacked and MD5 sums checked

package ‘tibble’ successfully unpacked and MD5 sums checked

package ‘lazyeval’ successfully unpacked and MD5 sums checked

package ‘ggplot2’ successfully unpacked and MD5 sums checked

The downloaded binary packages are in

C:\Users\Elklark\AppData\Local\Temp\Rtmpa83ooa\downloaded\_packages

> qplot(ownaf1, data=mydata, geom="density", alpha=I(.5), main="Distribution of games owned", xlab="owned games", ylab="residuals")

Error: could not find function "qplot"

> se(demande)

Error: could not find function "se"

> confint(demande, 'ownaf1', level=0.95)

2.5 % 97.5 %

ownaf1 NA NA

> confint(demande, 'pfull', level=0.95)

2.5 % 97.5 %

pfull -0.002232187 0.0005408801

> sd (ownaf1)

[1] 0.5529385

> sd(demande)

Error in is.data.frame(x) :

(list) object cannot be coerced to type 'double'

> se <-sd(ownaf1)/sqrt(length(ownaf1))

> se

[1] 0.05345458

> demande.stdres = rstandard(demande.lm)

Error in rstandard(demande.lm) : object 'demande.lm' not found

> demande.stdres = rstandard(demande)

> qqnorm(demande.stdres,)

> qqnorm(demande.stdres, + ylab="standardized residuals", xlab="normal scores", main="NormalQQ plot")

Error: unexpected '=' in "qqnorm(demande.stdres, + ylab="

> qqnorm(demande.stdres, + ylab ="standardized residuals", xlab = "normal scores", main = "NormalQQ plot")

Error: unexpected '=' in "qqnorm(demande.stdres, + ylab ="

> qqnorm(demande.stdres, + ylab="standardized residuals", + xlab="normal scores", + main="NormalQQ plot")

Error: unexpected '=' in "qqnorm(demande.stdres, + ylab="

> qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="NormalQQ plot")

> 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

> #...amazingly, there's no multicolliniarity implied here at all, as per http://minato.sip21c.org/msb/man/VIF.html

> #...how the fuck is this working?

> #...well, actually, there might be a small amount, but it's not that terrible.

> 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

> 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

> crPlots(derp)

> 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)

> crPlots(derp)

> title(main="figure2", col.main="black", font.main=1)

> crPlots(demande)

> title(main="figure3", col.main="black", font.main=1)

> > qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="figure 4")

Error: unexpected '>' in ">"

> qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="NormalQQ plot for demande")

> qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="figure 4")

> abline(demande)

Warning message:

In abline(demande) : only using the first two of 9 regression coefficients

> abline(pfull~pdisc)

> qqnorm(demande.stdres, ylab="standardized residuals", xlab="normal scores", main="figure 4")

> abline(pfull~pdisc)

> abline(ownaf1~pfull)

> abline(demande)

Warning message:

In abline(demande) : only using the first two of 9 regression coefficients

> 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)

> outlierTest(demande)

rstudent unadjusted p-value Bonferonni p

40 14.08758 6.7327e-25 7.002e-23

> qqPlot(demande, main="QQ Plot")

> leveragePlots(demande)

> av.Plots(demande)

Error: could not find function "av.Plots"

> avPlots(demande)

> mean(demande)

[1] NA

Warning message:

In mean.default(demande) : argument is not numeric or logical: returning NA

> mean(demande, na.action=na.exclude)

[1] NA

Warning message:

In mean.default(demande, na.action = na.exclude) :

argument is not numeric or logical: returning NA

> mean(demande, na.rm=TRUE)

[1] NA

Warning message:

In mean.default(demande, na.rm = TRUE) :

argument is not numeric or logical: returning NA

> mean(ownaf1)

[1] 15.07137

> merp

Error: object 'merp' not found

> merp <-deltq/deltp

> 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