Valuation

Teesta Riverine Ecosystem

Table of Contents

library(DCchoice)

## Warning: package 'DCchoice' was built under R version 4.0.5

library(tidyverse)

## Registered S3 methods overwritten by 'tibble':  
## method from   
## format.tbl pillar  
## print.tbl pillar

## -- Attaching packages --------------------------------------- tidyverse 1.3.0 --

## v ggplot2 3.3.2 v purrr 0.3.4  
## v tibble 3.0.3 v dplyr 1.0.6  
## v tidyr 1.1.2 v stringr 1.4.0  
## v readr 1.3.1 v forcats 0.5.0

## Warning: package 'dplyr' was built under R version 4.0.5

## -- Conflicts ------------------------------------------ tidyverse\_conflicts() --  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag() masks stats::lag()

library(censReg)

## Warning: package 'censReg' was built under R version 4.0.5

## Loading required package: maxLik

## Warning: package 'maxLik' was built under R version 4.0.5

## Loading required package: miscTools

## Warning: package 'miscTools' was built under R version 4.0.5

##   
## Please cite the 'maxLik' package as:  
## Henningsen, Arne and Toomet, Ott (2011). maxLik: A package for maximum likelihood estimation in R. Computational Statistics 26(3), 443-458. DOI 10.1007/s00180-010-0217-1.  
##   
## If you have questions, suggestions, or comments regarding the 'maxLik' package, please use a forum or 'tracker' at maxLik's R-Forge site:  
## https://r-forge.r-project.org/projects/maxlik/

##   
## Please cite the 'censReg' package as:  
## Henningsen, Arne (2017). censReg: Censored Regression (Tobit) Models. R package version 0.5. http://CRAN.R-Project.org/package=censReg.  
##   
## If you have questions, suggestions, or comments regarding the 'censReg' package, please use a forum or 'tracker' at the R-Forge site of the 'sampleSelection' project:  
## https://r-forge.r-project.org/projects/sampleselection/

library(MASS)

## Warning: package 'MASS' was built under R version 4.0.5

##   
## Attaching package: 'MASS'

## The following object is masked from 'package:dplyr':  
##   
## select

library(effects)

## Warning: package 'effects' was built under R version 4.0.5

## Loading required package: carData

## Warning: package 'carData' was built under R version 4.0.3

## lattice theme set by effectsTheme()  
## See ?effectsTheme for details.

library(stargazer)

## Warning: package 'stargazer' was built under R version 4.0.3

##   
## Please cite as:

## Hlavac, Marek (2018). stargazer: Well-Formatted Regression and Summary Statistics Tables.

## R package version 5.2.2. https://CRAN.R-project.org/package=stargazer

library(summarytools)

## Warning: package 'summarytools' was built under R version 4.0.5

## Registered S3 method overwritten by 'pryr':  
## method from  
## print.bytes Rcpp

## For best results, restart R session and update pander using devtools:: or remotes::install\_github('rapporter/pander')

##   
## Attaching package: 'summarytools'

## The following object is masked from 'package:tibble':  
##   
## view

l <- read.csv("ll.csv")  
l <- l %>%   
 mutate(Rating = as.factor(  
 if\_else(rating == 0 | rating == 1, "Low",  
 if\_else(rating == 2 | rating == 3, "Medium", "High"))),  
 age = replace(age, age > 100, 55)) %>%   
 mutate(Rating = factor(Rating , levels = c("Low", "Medium", "High")),   
 Species\_afffect\_how = as.factor(replace\_na(species\_affect\_how, "No"))) %>%   
 mutate(Species = if\_else(Species\_afffect\_how == "No", "No", "Yes")) %>%   
 mutate(married = as.factor(married),  
 HEP\_affect1 = as.factor(HEP\_affect1),  
 traffic = as.factor(traffic),  
 water\_shortage = as.factor(water\_shortage),  
 Species = as.factor(Species))

# descriptuive stats of the variables  
  
  
summary(na.omit(l[, c("Rating", "married", 'HEP\_affect1', 'migrant', 'traffic', 'satisfied', 'water\_shortage', 'Species')]))

## Rating married HEP\_affect1 migrant traffic   
## Low :157 Divorced/Separated: 11 No :350 Length:814 No : 87   
## Medium:518 Married :651 Yes:464 Class :character Yes:727   
## High :139 Single :125 Mode :character   
## Widowed : 27   
## satisfied water\_shortage Species   
## Length:814 No :258 No :186   
## Class :character Yes:556 Yes:628   
## Mode :character   
##

view(dfSummary(na.omit(l[, c("Rating", "married", 'HEP\_affect1', 'migrant', 'traffic', 'satisfied', 'water\_shortage', 'Species')])))

## Warning in if (grepl(re1, str, perl = TRUE)) {: the condition has length > 1 and  
## only the first element will be used

## Warning in if (grepl(re2, str, perl = TRUE)) {: the condition has length > 1 and  
## only the first element will be used

## Warning in if (grepl(re3, str, perl = TRUE)) {: the condition has length > 1 and  
## only the first element will be used

## Error in pryr::where(obj\_name) : length(name) == 1 is not TRUE

## Switching method to 'browser'

## Output file written: C:\Users\Pravesh\AppData\Local\Temp\Rtmp6vcWrt\file26c81c9551.html

polr\_model <- polr(Rating ~ married + HEP\_affect1 + migrant + traffic + satisfied + water\_shortage + Species   
 , data = l, Hess = TRUE)   
summary\_table <- coef(summary(polr\_model))  
pval <- pnorm(abs(summary\_table[,"t value"]), lower.tail = FALSE) \* 2  
  
confint(polr\_model)[,1] %>% class()

## Waiting for profiling to be done...

## [1] "numeric"

(summary\_table\_pval <- data.frame(round(summary\_table, 3),   
 c1 = round(c(confint(polr\_model)[,1],0,0), 3),  
 c2 = round(c(confint(polr\_model)[,2],0,0), 3),  
 pvalue = round(pval, 2)) %>%   
 mutate(sig = if\_else(pvalue < 0.05, "\*\*",  
 if\_else(pvalue < 0.01, "\*\*\*",  
 if\_else(pvalue < 0.1, "\*", "")))))

## Waiting for profiling to be done...

## Waiting for profiling to be done...

## Value Std..Error t.value c1 c2 pvalue sig  
## marriedMarried -1.303 0.623 -2.092 -2.547 -0.068 0.04 \*\*  
## marriedSingle -0.958 0.643 -1.491 -2.240 0.315 0.14   
## marriedWidowed -0.424 0.722 -0.587 -1.856 1.001 0.56   
## HEP\_affect1Yes -0.066 0.146 -0.449 -0.352 0.220 0.65   
## migrantYes 0.318 0.168 1.891 -0.011 0.649 0.06 \*  
## trafficYes 0.097 0.233 0.417 -0.360 0.553 0.68   
## satisfiedSatisfied 0.558 0.171 3.265 0.224 0.894 0.00 \*\*  
## water\_shortageYes 0.092 0.155 0.595 -0.212 0.396 0.55   
## SpeciesYes -0.657 0.173 -3.790 -0.998 -0.318 0.00 \*\*  
## Low|Medium -2.882 0.689 -4.180 0.000 0.000 0.00 \*\*  
## Medium|High 0.270 0.681 0.397 0.000 0.000 0.69

summary\_table\_pval %>%   
kableExtra::kable() %>%   
 kableExtra::kable\_styling(bootstrap\_options = c('striped'))

Value

Std..Error

t.value

c1

c2

pvalue

sig

marriedMarried

-1.303

0.623

-2.092

-2.547

-0.068

0.04

\*\*

marriedSingle

-0.958

0.643

-1.491

-2.240

0.315

0.14

marriedWidowed

-0.424

0.722

-0.587

-1.856

1.001

0.56

HEP\_affect1Yes

-0.066

0.146

-0.449

-0.352

0.220

0.65

migrantYes

0.318

0.168

1.891

-0.011

0.649

0.06

* trafficYes
* 0.097
* 0.233
* 0.417
* -0.360
* 0.553
* 0.68
* satisfiedSatisfied
* 0.558
* 0.171
* 3.265
* 0.224
* 0.894
* 0.00
* \*\*
* water\_shortageYes
* 0.092
* 0.155
* 0.595
* -0.212
* 0.396
* 0.55
* SpeciesYes
* -0.657
* 0.173
* -3.790
* -0.998
* -0.318
* 0.00
* \*\*
* Low|Medium
* -2.882
* 0.689
* -4.180
* 0.000
* 0.000
* 0.00
* \*\*
* Medium|High
* 0.270
* 0.681
* 0.397
* 0.000
* 0.000
* 0.69