PSA-R Guide

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# Setup R and RStudio

1. Download the latest version of R: <https://www.r-project.org/>
2. Download the latest version of RStudio Desktop: <https://www.rstudio.com/products/rstudio/download/>
3. Download the two PSA-R zip files under “R Syntax”: <https://ssw.unc.edu/psa/>

# Run the Code

1. To view the code output without running it, extract the “PSA-R\_Output.zip” file and open “index.html”
2. To run an individual section:
   * Extract “PSA-R\_Code\_Data.zip”
   * Open “PSA-R.Rproj”
   * Open the desired section code in the file browser (e.g., “01\_Section4.4.1.Rmd”)
   * Click on “Run All”
3. To knit the entire book into HTML output, click on “Build Book”

# How to Troubleshoot Errors

If a line of code using a certain package is not working, try installing an older version of that package. See the output of my sessionInfo() below for package versions that are known to be compatible with the PSA-R code. As of September, 2021, the latest versions of PSweight and cobalt do not work with the code anymore. Use the following code to install older versions of these packages:

packageVersion("PSweight")  
detach("package:PSweight", unload = T)  
remove.packages("PSweight")  
library(devtools)  
devtools::install\_version("PSweight", version = "1.1.2",   
 repos = "http://cran.us.r-project.org")  
  
packageVersion("cobalt")  
detach("package:cobalt", unload = T)  
remove.packages("cobalt")  
library(devtools)  
devtools::install\_version("cobalt", version = "4.2.4",   
 repos = "http://cran.us.r-project.org")

## PSA-R Session Info

The following output for sessionInfo() lists the package versions that are compatible with the PSA-R code.

> sessionInfo()  
R version 4.1.1 (2021-08-10)  
Platform: x86\_64-w64-mingw32/x64 (64-bit)  
Running under: Windows 10 x64 (build 19043)  
  
Matrix products: default  
  
locale:  
[1] LC\_COLLATE=English\_United States.1252 LC\_CTYPE=English\_United States.1252   
[3] LC\_MONETARY=English\_United States.1252 LC\_NUMERIC=C   
[5] LC\_TIME=English\_United States.1252   
  
attached base packages:  
[1] stats graphics grDevices utils datasets methods base   
  
loaded via a namespace (and not attached):  
 [1] tidyr\_1.1.3 VGAM\_1.1-5 splines\_4.1.1   
 [4] carData\_3.0-4 gtools\_3.9.2 Formula\_1.2-4   
 [7] assertthat\_0.2.1 stats4\_4.1.1 coin\_1.4-1   
[10] cellranger\_1.1.0 yaml\_2.2.1 numDeriv\_2016.8-1.1   
[13] pillar\_1.6.2 backports\_1.2.1 lattice\_0.20-44   
[16] glue\_1.4.2 digest\_0.6.27 colorspace\_2.0-2   
[19] sandwich\_3.0-1 htmltools\_0.5.1.1 Matrix\_1.3-4   
[22] pkgconfig\_2.0.3 broom\_0.7.9 haven\_2.4.3   
[25] gmodels\_2.18.1 bookdown\_0.23 purrr\_0.3.4   
[28] mvtnorm\_1.1-2 scales\_1.1.1 gdata\_2.18.0   
[31] openxlsx\_4.2.4 rio\_0.5.27 tibble\_3.1.4   
[34] generics\_0.1.0 car\_3.0-11 ggplot2\_3.3.5   
[37] sjlabelled\_1.1.8 ellipsis\_0.3.2 cobalt\_4.2.4   
[40] TH.data\_1.0-10 nnet\_7.3-16 maxLik\_1.5-2   
[43] survival\_3.2-11 magrittr\_2.0.1 crayon\_1.4.1   
[46] readxl\_1.3.1 MatchIt\_4.2.0 evaluate\_0.14   
[49] fansi\_0.5.0 MASS\_7.3-54 forcats\_0.5.1   
[52] foreign\_0.8-81 WeightIt\_0.12.0 tools\_4.1.1   
[55] data.table\_1.14.0 hms\_1.1.0 mitools\_2.4   
[58] multcomp\_1.4-17 matrixStats\_0.60.1 lifecycle\_1.0.0   
[61] munsell\_0.5.0 zip\_2.2.0 systemfit\_1.1-24   
[64] compiler\_4.1.1 rlang\_0.4.11 grid\_4.1.1   
[67] Matching\_4.9-9 miscTools\_0.6-26 rbounds\_2.1   
[70] rmarkdown\_2.10 codetools\_0.2-18 gtable\_0.3.0   
[73] abind\_1.4-5 DBI\_1.1.1 curl\_4.3.2   
[76] R6\_2.5.1 zoo\_1.8-9 knitr\_1.33   
[79] dplyr\_1.0.7 utf8\_1.2.2 libcoin\_1.0-8   
[82] insight\_0.14.3 sampleSelection\_1.2-12 modeltools\_0.2-23   
[85] stringi\_1.7.4 parallel\_4.1.1 Rcpp\_1.0.7   
[88] vctrs\_0.3.8 tidyselect\_1.1.1 xfun\_0.25   
[91] PSweight\_1.1.2 lmtest\_0.9-38