Interview Mode Homogeneity

Jeremy Senn

Purpose

Examine whether the NCSS 2 dataset exhibits statistical heterogeneity based on the interview mode (ITWMETHOD variable).

Procedure

The dataset was filtered to include only observations from the second wave, which is the sole wave incorporating both CAWI and CATI interview methods. Each numeric and categorical variable was subjected to regression analysis, using ITWMETHOD as the independent variable. Detailed specifications and outcomes of these regression models are stored in the mode_homogeneity.RDS file within this repository.

Results

A total of 154 variables were analyzed. In this analysis, ITWMETHOD emerged as a statistically significant predictor for 19 variables. Ordered by ascending p-values associated with the ITWMETHOD predictor, these variables are:

OTHLANG REFWOR SERMTIME CATHWOR EVANWOR BOARDNUM MBRCOHBT UPFUSION GRNGRP MBRALCMD GRNRG GRNAWR CLS13_14W2 STRGPLAN MUSLMWOR BOARDGEN PIANO NEWMEMS GRNWSHP

Comprehensive outputs of the regression models (also sorted by the ITWMETHOD's p-value) are presented towards the end of this report.

Conclusion

Given the significant influence of the measurement mode on the aforementioned variables, it is advisable to account for the mode effect in subsequent data analyses.

Models output

```
library(tidyverse)
read_rds("mode_homogeneity.RDS")
```

\$OTHLANG

A tibble: 2 x 5

\$REFWOR

A tibble: 2 x 5

\$SERMTIME

A tibble: 2 x 5

estimate std.error statistic term p.value <chr> <dbl> <dbl> <dbl> <dbl> 22.9 0.664 34.4 6.53e-185 1 (Intercept) 2 ITWMETHODCAWI 4.03 1.30 3.10 2.00e- 3

\$CATHWOR

A tibble: 2 x 5

\$EVANWOR

A tibble: 2 x 5

\$BOARDNUM

A tibble: 2 x 5

\$MBRCOHBT

A tibble: 2 x 5

\$UPFUSION

A tibble: 2 x 5

\$GRNGRP

A tibble: 2 x 5

\$MBRALCMD

A tibble: 2 x 5

\$GRNRG

A tibble: 2 x 5

\$GRNAWR

A tibble: 2 x 5

	term	${\tt estimate}$	std.error	statistic	p.value
	<chr></chr>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>
1	(Intercept)	-0.384	0.0640	-6.00	0.0000000199
2	ITWMETHODCAWI	-0.292	0.130	-2.26	0.0241

\$CLS13_14W2

A tibble: 2 x 5

\$STRGPLAN

A tibble: 2 x 5

\$MUSLMWOR

A tibble: 2 x 5

\$BOARDGEN

A tibble: 2 x 5

\$PIANO

A tibble: 2 x 5

\$NEWMEMS

A tibble: 2 x 5

term estimate std.error statistic p.value

	<chr></chr>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>
1	(Intercept)	-0.808	0.0673	-12.0	3.13e-33
2	ITWMETHODCAWI	-0.290	0.142	-2.04	4.13e- 2

\$GRNWSHP

A tibble: 2 x 5

\$LOCSERV

A tibble: 2 x 5

\$NUMATTND

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 2.43 26.0 1.95e-121 1 (Intercept) 63.1 1.93 5.44e- 2 2 ITWMETHODCAWI 9.27 4.82

\$CLERGRAD

A tibble: 2 x 5

\$RECRCONF

A tibble: 2 x 5

\$JEWWOR

A tibble: 2 x 5

1	(Intercept)	-3.83	0.215	-17.8 9.25e-71
2	ITWMETHODCAWI	-1.35	0.741	-1.82 6.92e- 2

\$WEBSITE

A tibble: 2 x 5

estimate std.error statistic term p.value <chr> <dbl> <dbl> <dbl> <dbl> 21.2 4.49e-100 1 (Intercept) 2.20 0.104 2 ITWMETHODCAWI 0.425 0.235 1.81 7.09e- 2

\$LT35PCT

A tibble: 2 x 5

\$KIDCLASS

A tibble: 2 x 5

\$GT60PCT

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 0.802 61.1 1 (Intercept) 49.0 0 2 ITWMETHODCAWI 2.82 1.62 1.74 0.0829

\$SERMON

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 21.3 6.04e-101 1 (Intercept) 2.47 0.116 2 ITWMETHODCAWI 1.72 8.53e- 2 0.461 0.268

\$ROBE

A tibble: 2 x 5

2 ITWMETHODCAWI 0.210 0.123 1.71 0.0880

\$STAFFWMPCT

A tibble: 2 x 5

\$HAVEDEN

A tibble: 2 x 5

\$WOMGRP

A tibble: 2 x 5

\$CVDBFINCOM

A tibble: 2 x 5

\$BUDWOR

A tibble: 2 x 5

\$BAPCT

A tibble: 2 x 5

\$XOTHWOR

A tibble: 2 x 5

\$FEMPCT

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 61.4 0.441 1 (Intercept) 139. 2 ITWMETHODCAWI -1.330.892 -1.490.137

\$NUMTOTAL

A tibble: 2 x 5

\$CLERGYOU

A tibble: 2 x 5

\$SOCNETACT

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) -0.0564 0.0624 -0.904 0.366 2 ITWMETHODCAWI -0.169 0.124 -1.37 0.171

\$RELOBJECTS

A tibble: 2 x 5

\$MBRGAY

A tibble: 2 x 5

\$GENDERSEP

A tibble: 2 x 5

\$ORGAN

A tibble: 2 x 5

\$EURNOCHPCT

A tibble: 2 x 5

\$OTHTRAD

A tibble: 2 x 5

\$POLITICS

A tibble: 2 x 5

\$RICHFAITH

A tibble: 2 x 5

\$FOUNDED

A tibble: 2 x 5

\$SWISSPCT

A tibble: 2 x 5

\$OUTUPWMSTF

A tibble: 2 x 5

\$NGRNWSHP

A tibble: 2 x 5

\$VLTRS

A tibble: 2 x 5

\$CATCHWOR

A tibble: 2 x 5

\$POLSENSIB

A tibble: 2 x 5

\$LDRCOHBT

A tibble: 2 x 5

\$GRNSTRIKE

A tibble: 2 x 5

\$STAND

A tibble: 2 x 5

\$WMVLTRS

A tibble: 2 x 5

\$NUMADLTS

A tibble: 2 x 5

term estimate std.error statistic p.value

	<chr></chr>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>
1	(Intercept)	99.5	4.81	20.7	1.70e-82
2	ITWMETHODCAWI	11.5	9.77	1.17	2.41e- 1

\$CVCONTACT

A tibble: 2 x 5

\$MERGE

A tibble: 2 x 5

\$TONGUES

A tibble: 2 x 5

\$CATHMVT

A tibble: 2 x 5

\$RECRVISIT

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) -0.328 0.0633 -5.19 0.000000213 2 ITWMETHODCAWI -0.147 0.128 -1.140.253

\$GRNAWR.BG

A tibble: 2 x 5

1 (Intercept) 2015. 0.545 3701. 0 2 ITWMETHODCAWI -1.26 1.14 -1.10 0.271

\$MENGRP

A tibble: 2 x 5

\$YTHGRP

A tibble: 2 x 5

\$OTHGRPS

A tibble: 2 x 5

\$CHORUS

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) -0.0853 0.0623 -1.370.171 2 ITWMETHODCAWI 0.132 0.125 1.06 0.290

\$IMPNUMREGLR

A tibble: 2 x 5

\$TRADWOR

A tibble: 2 x 5

2 ITWMETHODCAWI 0.131 0.125 1.05 0.296

\$OUTUPSTF

A tibble: 2 x 5

\$BLDGTYPE

A tibble: 2 x 5

\$PLNTCONG

A tibble: 2 x 5

\$NUMSERV1

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 20.2 5.72e-80 1 (Intercept) 3.17 0.157 0.957 3.39e- 1 2 ITWMETHODCAWI 0.295 0.309

\$HINDWOR

A tibble: 2 x 5

\$WMNBRD

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 21.2 4.19e-100 1 (Intercept) 2.41 0.113 2 ITWMETHODCAWI 0.221 0.244 0.907 3.64e- 1

\$RTENURE

A tibble: 2 x 5

\$WMNTCH

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 2.69 0.128 21.0 1.67e-97 1 (Intercept) 2 ITWMETHODCAWI 0.252 0.280 0.900 3.68e- 1

\$APPLAUSE

A tibble: 2 x 5

\$0FS6

A tibble: 2 x 5

term estimate std.error statistic p.value <chr>> <dbl> <dbl> <dbl> <dbl> 3958. 42.7 1.08e-255 1 (Intercept) 169140. 2 ITWMETHODCAWI 7823. -0.894 3.71e- 1 -6996.

\$0FS4

A tibble: 2 x 5

\$OUTUPFTSTF

A tibble: 2 x 5

\$DISCRIM

A tibble: 2 x 5

\$UPNUMBER

A tibble: 2 x 5

\$WMNLEAD

A tibble: 2 x 5

\$POORPCT

A tibble: 2 x 5

\$YTHMNSTR

A tibble: 2 x 5

\$RITGEST

A tibble: 2 x 5

\$COMNGO

A tibble: 2 x 5

\$FTSTAFF

A tibble: 2 x 5

\$RECYCLE

A tibble: 2 x 5

\$LDRALCMD

A tibble: 2 x 5

\$ORTHWOR

A tibble: 2 x 5

\$LRNLANG

A tibble: 2 x 5

\$MEDITATE

A tibble: 2 x 5

\$NUMREGLR

A tibble: 2 x 5

\$GRNREL

A tibble: 2 x 5

\$LENGTH

A tibble: 2 x 5

\$CLERBUDG

A tibble: 2 x 5

\$ADVERT

A tibble: 2 x 5

\$INSTMENT

A tibble: 2 x 5

term estimate std.error statistic p.value

<chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) 1.04 0.0707 14.7 4.65e-49 2 ITWMETHODCAWI 0.0810 0.142 0.569 5.69e- 1

\$OVERHEAD

A tibble: 2 x 5

estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) -0.291 0.0627 -4.64 0.00000349 2 ITWMETHODCAWI 0.0704 0.124 0.569 0.570

\$CLERGAGE

A tibble: 2 x 5

term estimate std.error statistic p.value <dbl> <chr> <dbl> <dbl> <dbl> 1 (Intercept) 53.6 0.350 153. 2 ITWMETHODCAWI -0.378 0.697 -0.543 0.587

\$CVDWSHP

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) 0.819 0.0677 12.1 1.27e-33 2 ITWMETHODCAWI 0.0703 0.135 0.522 6.02e- 1

\$DRUMS

A tibble: 2 x 5

estimate std.error statistic p.value term <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) -1.940.0938 -20.7 1.95e-95 2 ITWMETHODCAWI -0.0985 0.191 -0.516 6.06e- 1

\$TRAD6

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> -1.64 0.0841 -19.5 1.72e-84 1 (Intercept) 2 ITWMETHODCAWI -0.0873 0.170 -0.514 6.07e- 1

\$WMNVI.TR.

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl>

1	(Intercept)	2.25	0.106	21.2	9.79e-100
2	ITWMETHODCAWI	0.108	0.221	0.489	6.25e- 1

\$OFFMBRLIST

A tibble: 2 x 5

estimate std.error statistic p.value term <chr> <dbl> <dbl> <dbl> <dbl> 18.9 6.81e-80 1 (Intercept) 1.55 0.0818 2 ITWMETHODCAWI 0.0705 0.164 0.429 6.68e- 1

\$PARISHW2

A tibble: 2 x 5

\$CLERFORM

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) 0.231 1.80 0.0721 0.416 2 ITWMETHODCAWI -0.1930.451 -0.428 0.669

\$EMAIL

A tibble: 2 x 5

term estimate std.error statistic p.value <chr>> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) 1.86 0.0909 20.4 9.80e-93 2 ITWMETHODCAWI 0.0768 0.184 0.419 6.76e- 1

\$GRNELEC

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> -0.0693 1 (Intercept) -0.00480 0.0693 0.945 2 ITWMETHODCAWI -0.0597 0.145 -0.4130.680

\$RICHPCT

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <chr> <dbl> <dbl> <dbl> <dbl> <dbl> 21.2 9.36e-78

2 ITWMETHODCAWI 0.874 2.12 0.412 6.81e- 1

\$NUMOFFMBR

A tibble: 2 x 5

\$JUMP

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <dbl> <dbl> <dbl> <dbl> -2.58 0.121 -21.3 2.24e-100 1 (Intercept) 2 ITWMETHODCAWI 0.0906 0.234 0.387 6.99e- 1

\$TEENRGLR

A tibble: 2 x 5

\$FTSTAFFWM

A tibble: 2 x 5

\$GONG

A tibble: 2 x 5

\$BELLS

A tibble: 2 x 5

\$CLERGONE

A tibble: 2 x 5

\$WMNPRCH

A tibble: 2 x 5

\$MUSICMIN

A tibble: 2 x 5

\$GRNPUB

A tibble: 2 x 5

\$BRDGENPCT

A tibble: 2 x 5

\$SIGNTURE

A tibble: 2 x 5

\$SIZECOM

A tibble: 2 x 5

\$STAFFGEN

A tibble: 2 x 5

\$STFTWMPCT

A tibble: 2 x 5

\$CLERSLRY

A tibble: 2 x 5

\$LAUGH

A tibble: 2 x 5

\$LDRGAY

A tibble: 2 x 5

\$RECRUIT

A tibble: 2 x 5

\$SPONPRAY

A tibble: 2 x 5

\$STAFFNUM

A tibble: 2 x 5

\$WSHPWEB

A tibble: 2 x 5

term estimate std.error statistic p.value <chr> <chr> <dbl> <dbl> <dbl> <dbl> 1 (Intercept) 0.103 0.0657 1.57 0.116 0.104 0.128 -0.148 0.882

\$GUITAR

A tibble: 2 x 5

\$UPNUMBERcorr

A tibble: 2 x 5

\$SOCLSERV

A tibble: 2 x 5

\$INVITE

A tibble: 2 x 5

\$GRNSERMON

A tibble: 2 x 5

\$CVSUPPRT

A tibble: 2 x 5

\$INCOME

A tibble: 2 x 5

\$GRNORGXCHNG

A tibble: 2 x 5

\$CLERWKPCT

A tibble: 2 x 5

term estimate std.error statistic p.value

	<chr></chr>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>	<dbl></dbl>
1	(Intercept)	71.2	1.06	67.0	0
2	ITWMETHODCAWI	-0.188	2.16	-0.0872	0.931

\$SINGING

A tibble: 2 x 5

\$JOINTWOR

A tibble: 2 x 5

\$EVNGLCAL

A tibble: 2 x 5

\$TRAD3

A tibble: 2 x 5

\$CONGREAD

A tibble: 2 x 5