(R)
Statistics/Data analysis

StataNow 19.5
SE—Standard Edition

Statistics and Data Science

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Notes:
1. Unicode is supported; see help unicode_advice.
2. Maximum number of variables is set to 32,767; see help set_maxvar.
3. New update available; type -update all-

```
 1 . doedit "C:\Users\14258\Dropbox\Projects\Rural Economic Ideology\Analysis\3 Out-of-Sample Replications.do"

 2 . do "C:\Users\14258\AppData\Local\Temp\STD4b3c_000000.tmp"

 3 .
 4 . * Set Working Directory
 5 . cd "C:\Users\14258\Dropbox\Projects\Rural Economic Ideology\Analysis\Replication Data"
   C:\Users\14258\Dropbox\Projects\Rural Economic Ideology\Analysis\Replication Data

 6 .
   end of do-file

 7 . do "C:\Users\14258\AppData\Local\Temp\STD4b3c_000001.tmp"

 8 .
 9 . ***** 2018 DATA *****
10 . use 2018_Survey.dta, clear

11 .
12 . * Sample Identifier
13 . gen year = 2018

14 .
15 . * Drop Non-Rural
16 . drop if rc == .
   (1,216 observations deleted)

17 .
18 . * Fix Variables Defined by Labels
19 . encode gender, gen(sex)

20 .
21 . * Engagement Scale
```

```
22 . alpha polint polknow, gen(engagement)

   Test scale = mean(unstandardized items)

   Average interitem covariance:     .0196593
   Number of items in the scale:            2
   Scale reliability coefficient:      0.3982

23 .
24 . * Left-Right Partisan-Ideological Scale
25 . factor trumpvote pid ideo [aweight=weight], pcf
   (sum of wgt is 841.3760045170784)
   (obs=856)

   Factor analysis/correlation                    Number of obs    =        856
       Method: principal-component factors        Retained factors =          1
       Rotation: (unrotated)                      Number of params =          3

   ------------------------------------------------------------------------------
        Factor |  Eigenvalue   Difference        Proportion   Cumulative
   ------------+-----------------------------------------------------------------
       Factor1 |      2.12052      1.60228            0.7068       0.7068
       Factor2 |      0.51824      0.15701            0.1727       0.8796
       Factor3 |      0.36123            .            0.1204       1.0000
   ------------------------------------------------------------------------------
       LR test: independent vs. saturated:  chi2(3)  =  789.14 Prob>chi2 = 0.0000

   Factor loadings (pattern matrix) and unique variances

   ---------------------------------------
       Variable |   Factor1  |  Uniqueness
   -------------+------------+------------
      trumpvote |     0.8344 |      0.3037
            pid |     0.8759 |      0.2328
           ideo |     0.8106 |      0.3429
   ---------------------------------------

26 . alpha trumpvote pid ideo, gen(leftright_scale)

   Test scale = mean(unstandardized items)

   Average interitem covariance:     .0791028
   Number of items in the scale:            3
   Scale reliability coefficient:      0.7738

27 .
28 . save 2018_Survey_Coded.dta, replace
   file 2018_Survey_Coded.dta saved

29 .
30 . ****** 2019 DATA ******
31 . use 2019_Survey.dta, clear

32 .
33 . * Sample Identifier
```

```
34 . gen year = 2019

35 .
36 . * Drop Non-Rural
37 . drop if rc == .
   (1 observation deleted)

38 .
39 . * Engagement Scale
40 . alpha polint polknow, gen(engagement)

   Test scale = mean(unstandardized items)

   Average interitem covariance:     .0260633
   Number of items in the scale:            2
   Scale reliability coefficient:      0.4644

41 .
42 . * Rename Variables
43 . gen income = inc
   (64 missing values generated)

44 . gen sex = gender

45 . gen education = edu

46 . gen trumpvote = votetrump

47 .
48 . * Left-Right Partisan-Ideological Scale
49 . factor trumpvote pid ideo [aweight=weight], pcf
   (sum of wgt is 755.2713506221771)
   (obs=777)

   Factor analysis/correlation                      Number of obs    =        777
       Method: principal-component factors          Retained factors =          1
       Rotation: (unrotated)                        Number of params =          3
```

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.09046	1.52059	0.6968	0.6968
Factor2	0.56988	0.23022	0.1900	0.8868
Factor3	0.33966	.	0.1132	1.0000

LR test: independent vs. saturated: chi2(3) = 701.34 Prob>chi2 = 0.0000

Factor loadings (pattern matrix) and unique variances

Variable	Factor1	Uniqueness
trumpvote	0.8211	0.3257
pid	0.8869	0.2135
ideo	0.7935	0.3704

```
50 . alpha trumpvote pid ideo, gen(leftright_scale)

   Test scale = mean(unstandardized items)

   Average interitem covariance:     .0808144
   Number of items in the scale:            3
   Scale reliability coefficient:      0.7735

51 .
52 . save 2019_Survey_Coded.dta, replace
   file 2019_Survey_Coded.dta saved

53 .
54 . ***** MERGE DATASETS *****
55 . append using 2018_Survey_Coded.dta, force
   (note: variable rr was str23 in the using data, but will be float now)
   (note: variable gender was str6 in the using data, but will be byte now)
   (note: variable rasocid was str16 in the using data, but will be float now)
   (variable sex was float, now double to accommodate using data's values)

56 .
57 . egen standardized_ruralconsc = std(rc)

58 . sum standardized_ruralconsc, det

                    Standardized values of rc
-------------------------------------------------------------
      Percentiles      Smallest
 1%    -2.569746      -3.779683
 5%    -1.452882      -3.407395
10%    -1.080594      -3.221251       Obs               1,691
25%    -.7083058      -3.221251       Sum of wgt.       1,691

50%    -.1498739                      Mean           6.87e-10
                      Largest        Std. dev.             1
75%     .5947022       2.921503
90%     1.339278       3.014575       Variance              1
95%     1.804639       3.014575       Skewness       .1930309
99%     2.456143       3.014575       Kurtosis       3.520731

59 .
60 . replace leftright_scale = 1-leftright_scale
   (1,624 real changes made)

61 .
62 .
63 . * Multiple Imputation
64 . set seed 1996

65 . mi set wide

66 . mi register imputed income sex white black hisp educ age

67 . mi impute chained (logit) sex white black hisp (reg) income educ age, add(25)
   note: variables sex white black hisp education age contain no soft missing (.) values; imputing nothing
   note: missing-value pattern is monotone; no iteration performed.

   Conditional models (monotone):
               income: regress income age education i.hisp i.black i.white i.sex

   Performing chained iterations ...

   Multivariate imputation                     Imputations =       25
   Chained equations                                 added =       25
   Imputed: m=1 through m=25                       updated =        0
```

Initialization: **monotone** Iterations = **0**
burn-in = **0**

sex: logistic regression
white: logistic regression
black: logistic regression
hisp: logistic regression
income: linear regression
education: linear regression
age: linear regression

	Observations per *m*			
Variable	Complete	Incomplete	Imputed	Total
sex	**1691**	**0**	**0**	**1691**
white	**1691**	**0**	**0**	**1691**
black	**1691**	**0**	**0**	**1691**
hisp	**1691**	**0**	**0**	**1691**
income	**1627**	**64**	**64**	**1691**
education	**1691**	**0**	**0**	**1691**
age	**1691**	**0**	**0**	**1691**

(Complete + Incomplete = Total; Imputed is the minimum across *m* of the number of filled-in observations.)

```
68 .
69 . mi svyset [pweight = weight]
```

Sampling weights: **weight**
VCE: **linearized**
Single unit: **missing**
Strata 1: <one>
Sampling unit 1: <observations>
FPC 1: <zero>

```
70 .
71 . sum standardized_ruralconsc, det
```

Standardized values of rc

Percentiles		Smallest		
1%	**-2.569746**	**-3.779683**		
5%	**-1.452882**	**-3.407395**		
10%	**-1.080594**	**-3.221251**	Obs	**1,691**
25%	**-.7083058**	**-3.221251**	Sum of wgt.	**1,691**
50%	**-.1498739**		Mean	**6.87e-10**
		Largest	Std. dev.	**1**
75%	**.5947022**	**2.921503**		
90%	**1.339278**	**3.014575**	Variance	**1**
95%	**1.804639**	**3.014575**	Skewness	**.1930309**
99%	**2.456143**	**3.014575**	Kurtosis	**3.520731**

```
72 .
73 . * Figure 6
74 . quietly mi estimate: svy: regress leftright_scale c.standardized_ruralconsc##c.engagement i.sex##c.engagement i.white#
   > t i.hisp##c.engagement c.age##c.engagement c.educ##c.engagement c.income##c.engagement i.year

75 .     quietly mimrgns, at(standardized_ruralconsc=(-1.452882 1.804639) engagement=(0(.25)1)) coeflegend post

76 .     lincom _b[6._at]-_b[1._at]

    ( 1)  - 1bn._at + 6._at = 0
```

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
(1)	**.1466963**	**.0773714**	**1.90**	**0.058**	**-.0050576**	**.2984501**

```
77 .     lincom _b[7._at]-_b[2._at]

    ( 1)  - 2._at + 7._at = 0
```

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
(1)	**.03836**	**.0512022**	**0.75**	**0.454**	**-.0620664**	**.1387864**

```
78 .     lincom _b[8._at]-_b[3._at]

    ( 1)  - 3._at + 8._at = 0
```

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
(1)	**-.0699763**	**.0311773**	**-2.24**	**0.025**	**-.1311265**	**-.008826**

```
79 .     lincom _b[9._at]-_b[4._at]

    ( 1)  - 4._at + 9._at = 0
```

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
(1)	**-.1783125**	**.0322089**	**-5.54**	**0.000**	**-.241486**	**-.1151391**

```
80 .     lincom _b[10._at]-_b[5._at]

    ( 1)  - 5._at + 10._at = 0
```

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
(1)	**-.2866488**	**.0530832**	**-5.40**	**0.000**	**-.3907645**	**-.1825331**

```
81 .
82 . * Appendix 5
83 . mean polint

Mean estimation                           Number of obs = 1,691

------------------------------------------------------------------------------
             |       Mean   Std. err.     [95% conf. interval]
-------------+----------------------------------------------------------------
      polint |  .6691307    .007046      .6553109    .6829505
------------------------------------------------------------------------------

84 . mean polknow

Mean estimation                           Number of obs = 1,691

------------------------------------------------------------------------------
             |       Mean   Std. err.     [95% conf. interval]
-------------+----------------------------------------------------------------
     polknow |  .6491721    .0069341     .6355717    .6627725
------------------------------------------------------------------------------

85 . mean engagement

Mean estimation                           Number of obs = 1,691

------------------------------------------------------------------------------
             |       Mean   Std. err.     [95% conf. interval]
-------------+----------------------------------------------------------------
  engagement |  .6591514    .0055861     .6481951    .6701077
------------------------------------------------------------------------------

86 .
end of do-file

87 .
```