moduleoneanalysis

```
suppressPackageStartupMessages(library(tidyverse))
suppressPackageStartupMessages(library(readxl))
suppressPackageStartupMessages(library(dplyr))
suppressPackageStartupMessages(library(psych))
```

```
## Warning: There were 3 warnings in `mutate()`.
## The first warning was:
## i In argument: `Ilenght = .Primitive("as.double")(Ilenght)`.
## Caused by warning:
## ! NAs introduced by coercion
## i Run `dplyr::last_dplyr_warnings()` to see the 2 remaining warnings.
```

The total n for this survey is 1062. However, the sample is divided by the type of work people do as below:

```
##                                Livelihood_Income   n
## 1 (a) own farming/fishing/animal rearing/business 245
## 2                   (b) employed for wages/salary 358
## 3                                    (c) student 145
## 4                        (d) currently unemployed  35
## 5                                  (e) homemaker 253
## 6                                    (f) retired  12
## 7                              (g) unable to work  14
```

The Problem of large NAs

```
##             Language          Survey_Date                State
##                    0                    0                    0
##          Risky_Hydro          Risky_Solar           Risky_Wind
##                  163                   61                  240
##        Risky_Nuclear           Risky_Coal            Risky_Gas
##                  347                  154                   97
##            Risky_Oil       Risky_INDHydro       Risky_INDSolar
##                  140                  197                   84
##        Risky_INDWind      Risky_INDBiogas      Risky_INDDiesel
##                  259                  165                   17
##    Risky_INDKerosene Risky_INDFirewoodetc         Risky_INDLPG
##                   27                   22                    9
##            Ben_Hydro            Ben_Solar             Ben_Wind
##                   67                   25                  115
##          Ben_Nuclear             Ben_Coal              Ben_Gas
##                  243                  136                   96
##              Ben_Oil         Ben_INDHydro         Ben_INDSolar
##                  113                  108                   69
##          Ben_INDWind        Ben_INDDiesel        Ben_INDBiogas
##                  168                   71                  117
##   Ben_INDFirewoodetc           Ben_INDLPG      Ben_INDKerosene
##                   11                   52                   21
##             N_accept  N_reluctantlyaccept             N_reject
##                  345                  298                  277
##    Livelihood_Income          Lconfidence             LIlenght
##                    0                  817                    0
##        LIassociation            Lassoname            Lfarmland
##                    0                 1059                  832
##           Lfarmbigha                Lboat              JISlose
##                  857                 1039                  666
##             JISRkeep            JISfuture        JISlosefuture
##                  664                  640                  647
##            Iproperty           Ipropvalue          totalincome
##                  631                  973                   46
##          otherincome           govtscheme           schemename
##                  174                    0                 1002
##            education        workknowledge          subsidyknow
##                    0                    0                  354
##        drinkingwater    drinkingwatertext         cookingwater
##                    0                 1062                   24
##     cookingwatertext             farwater         farwatermins
```

```
##                1042                 216                  32
##           wateravail              toilet          toilettext
##                    0                   0                1062
##               house           housetext             houseown
##                  53                1010                   0
##       cookstovetext         polposition     polpositiontext
##                1062                   0                1051
##            polparty        polpartytext       foodsourcetext
##                    0                1038                1047
##        foodadequacy         foodtrouble           healthdist
##                    0                   0                   1
##             illness       severeillness                 age
##                    0                   0                   0
##         urban_rural              gender               caste
##                    0                   3                   0
##            religion        religiontext               stove
##                    0                1061                   9
##             vehicle                food             animals
##                  57                  15                 819
```

```
##   Risky_Solar       State gender                        caste religion
## 1           1   Rajasthan Female Other Backward Classes (OBC) Hinduism
## 2           2 West Bengal   Male         Scheduled caste (SC) Hinduism
## 3           3 Maharashtra Female Other Backward Classes (OBC) Hinduism
## 4           2 Maharashtra   Male                     Brahmin Hinduism
## 5           2 Maharashtra   Male Other Backward Classes (OBC) Hinduism
## 6           2   Rajasthan   Male         Scheduled tribe (ST) Hinduism
##   urban_rural             age Livelihood_Income education workknowledge
## 1       Rural 35-44 years old              LSI 0.0000000          0.75
## 2       Rural 55-64 years old              ISI 0.0000000          0.75
## 3       Urban 18-24 years old            other 0.3333333          0.75
## 4       Urban 25-34 years old              ISI 0.6666667          0.50
## 5       Urban 18-24 years old            other 0.6666667          0.50
## 6       Rural 25-34 years old              ISI 0.2222222          0.25
##     LIlenght subsidyknow drinkingwater cookingwater farwatermins wateravail
## 1 0.20000000   0.6666667     0.8888889        1.000   0.50000000          1
## 2 0.18181818   0.3333333     0.3333333        0.375   0.01666667          1
## 3         NA   0.3333333     0.3333333        0.375   0.08333333          1
## 4 0.05454545   0.6666667     0.1111111        0.125   0.00000000          1
## 5 0.00000000   0.3333333     0.3333333        0.375   0.16666667          1
## 6 0.09090909   0.0000000     0.1111111        0.125   0.03333333          1
##   toilet     house      stove    vehicle houseown polposition LIassociation
## 1    0.0 0.3333333 0.47619048 0.25000000        1           0             0
## 2    0.2 0.0000000 0.00000000 0.08333333        1           0             0
## 3    0.9 0.3333333 0.23809524 0.25000000        1           0             0
## 4    1.0 0.3333333 0.23809524 0.25000000        1           0             0
## 5    0.9 0.3333333 0.23809524 0.25000000        1           0             0
## 6    0.9 0.3333333 0.04761905 0.25000000        1           0             0
##   polparty govtscheme totalincome Lfarmbigha Ipropvalue Lboat    animals
## 1        0          0         0.2 0.05199655         NA    NA 0.02727273
## 2        0          0         0.0         NA         NA    NA         NA
## 3        0          0          NA         NA         NA    NA         NA
## 4        0          0          NA         NA         NA    NA         NA
## 5        0          0         0.0         NA         NA    NA         NA
```

```
## 6        0          0         0.2         NA         NA    NA         NA
##   foodadequacy foodtrouble      food healthdist illness severeillness
## 1    1.0000000         1.0 1.0000000 0.41666667       1             1
## 2    0.0000000         0.0 0.6666667 0.50000000       1             1
## 3    0.6666667         0.6 0.2222222 0.16666667       1             1
## 4    0.8333333         1.0 0.4444444 0.08333333       1             1
## 5    0.5000000         0.6 0.2222222 0.16666667       1             1
## 6    0.8333333         1.0 0.7777778 1.00000000       1             1
```

Linear Regression Models with asset groups

```
##
## Please cite as:
##  Hlavac, Marek (2022). stargazer: Well-Formatted Regression and Summary Statistics Tables.
##  R package version 5.2.3. https://CRAN.R-project.org/package=stargazer
```

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Wed, Sep 20, 2023 - 11:17:15

Table 1: Assets

	Dependent variable:		
	Risky_Nuclear	Risky_Solar	Risky_Coal
	(1)	(2)	(3)
casteGeneral	0.690***	0.098	0.376**
	(0.204)	(0.151)	(0.174)
casteOther Backward Classes (OBC)	0.230	0.005	0.220
	(0.203)	(0.148)	(0.172)
casteRather not say/Don't know	0.124	0.542***	0.237
	(0.270)	(0.210)	(0.242)
casteScheduled caste (SC)	0.535**	0.160	0.424**
	(0.215)	(0.156)	(0.180)
casteScheduled tribe (ST)	0.483*	0.196	0.244
	(0.256)	(0.188)	(0.218)
genderFemale	−0.193**	0.018	−0.157**
	(0.092)	(0.065)	(0.076)
urban_ruralUrban	−0.028	0.678***	0.224***
	(0.093)	(0.072)	(0.083)
human_asset	−0.178	1.283***	0.687*
	(0.405)	(0.299)	(0.353)
physical_asset	1.699***	−0.523	1.361***
	(0.472)	(0.325)	(0.387)
social_asset	0.719**	−0.050	−0.077
	(0.356)	(0.242)	(0.272)
financial_asset	−0.499*	−0.521***	−0.826***
	(0.259)	(0.200)	(0.227)
food_security	−0.730**	−0.258	−0.555**
	(0.332)	(0.225)	(0.268)
health_status	−1.005***	−0.417**	−0.901***
	(0.284)	(0.199)	(0.227)
Constant	3.592***	1.757***	2.906***
	(0.440)	(0.305)	(0.356)
Observations	681	956	867
R^2	0.099	0.176	0.075
Adjusted R^2	0.082	0.164	0.061
Residual Std. Error	1.110 (df = 667)	0.930 (df = 942)	1.038 (df = 853)
F Statistic	5.654*** (df = 13; 667)	15.424*** (df = 13; 942)	5.305*** (df = 13; 853)
Note:			*p<0.1; **p<0.05; ***p<0.01

Linear Regression Models with livelihood security and income security indeces

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Wed, Sep 20, 2023 - 11:17:15

Table 2: Livelihood and Income Security

	Dependent variable:		
	Risky_Nuclear	Risky_Solar	Risky_Coal
	(1)	(2)	(3)
casteGeneral	0.705***	0.021	0.361**
	(0.199)	(0.149)	(0.171)
casteOther Backward Classes (OBC)	0.229	−0.081	0.201
	(0.198)	(0.146)	(0.168)
casteRather not say/Don't know	0.240	0.522**	0.216
	(0.259)	(0.203)	(0.236)
casteScheduled caste (SC)	0.498**	0.033	0.381**
	(0.207)	(0.152)	(0.176)
casteScheduled tribe (ST)	0.508**	0.131	0.242
	(0.251)	(0.185)	(0.215)
genderFemale	−0.207**	−0.013	−0.199***
	(0.089)	(0.061)	(0.072)
urban_ruralUrban	−0.092	0.746***	0.217***
	(0.087)	(0.067)	(0.077)
LIscore	−0.266	−0.921**	−0.950*
	(0.644)	(0.441)	(0.518)
Constant	3.218***	1.909***	3.146***
	(0.363)	(0.258)	(0.301)
Observations	714	998	906
R^2	0.048	0.152	0.032
Adjusted R^2	0.037	0.145	0.023
Residual Std. Error	1.131 (df = 705)	0.948 (df = 989)	1.058 (df = 897)
F Statistic	4.404*** (df = 8; 705)	22.114*** (df = 8; 989)	3.685*** (df = 8; 897)
Note:			*p<0.1; **p<0.05; ***p<0.01

```
## This is lavaan 0.6-15
## lavaan is FREE software! Please report any bugs.

##
## Attaching package: 'lavaan'

## The following object is masked from 'package:psych':
##
##     cor2cov

## lavaan 0.6.15 ended normally after 16 iterations
##
##   Estimator                                         ML
##   Optimization method                           NLMINB
##   Number of model parameters                         8
##
##   Number of observations                           379
```

```
##
## Model Test User Model:
##
##   Test statistic                                10.287
##   Degrees of freedom                                 2
##   P-value (Chi-square)                           0.006
##
## Model Test Baseline Model:
##
##   Test statistic                               338.020
##   Degrees of freedom                                 6
##   P-value                                        0.000
##
## User Model versus Baseline Model:
##
##   Comparative Fit Index (CFI)                    0.975
##   Tucker-Lewis Index (TLI)                       0.925
##
## Loglikelihood and Information Criteria:
##
##   Loglikelihood user model (H0)              -2256.582
##   Loglikelihood unrestricted model (H1)      -2251.438
##
##   Akaike (AIC)                                4529.163
##   Bayesian (BIC)                              4560.664
##   Sample-size adjusted Bayesian (SABIC)       4535.281
##
## Root Mean Square Error of Approximation:
##
##   RMSEA                                          0.105
##   90 Percent confidence interval - lower         0.048
##   90 Percent confidence interval - upper         0.172
##   P-value H_0: RMSEA <= 0.050                    0.056
##   P-value H_0: RMSEA >= 0.080                    0.792
##
## Standardized Root Mean Square Residual:
##
##   SRMR                                           0.035
##
## Parameter Estimates:
##
##   Standard errors                             Standard
##   Information                                 Expected
##   Information saturated (h1) model          Structured
##
## Latent Variables:
##                    Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
##   JISs =~
##     JISRkeep          0.322    0.066    4.895    0.000    0.322    0.269
##     JISlosefuture     1.101    0.066   16.725    0.000    1.101    0.904
##     JISlose           0.770    0.061   12.560    0.000    0.770    0.666
##     JISfuture         0.716    0.064   11.241    0.000    0.716    0.594
##
## Variances:
```

```
##                    Estimate  Std.Err  z-value  P(>|z|)   Std.lv  Std.all
##    .JISRkeep          1.332    0.098   13.567    0.000    1.332    0.928
##    .JISlosefuture     0.272    0.101    2.700    0.007    0.272    0.183
##    .JISlose           0.744    0.073   10.201    0.000    0.744    0.557
##    .JISfuture         0.940    0.081   11.646    0.000    0.940    0.647
##     JISs              1.000                              1.000    1.000
```

```
##
## Call:
## lm(formula = Risky_Nuclear ~ caste + gender + urban_rural + JIS_scores,
##     data = JIS_Jscores)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -2.78144 -0.85591  0.03457  0.84522  2.36876
##
## Coefficients:
##                                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)                        3.22436    0.29787  10.825  < 2e-16 ***
## casteGeneral                       0.74840    0.30295   2.470   0.0140 *
## casteOther Backward Classes (OBC)  0.02591    0.30327   0.085   0.9320
## casteRather not say/Don't know     0.45943    0.39373   1.167   0.2442
## casteScheduled caste (SC)          0.41548    0.31052   1.338   0.1819
## casteScheduled tribe (ST)          0.49777    0.37444   1.329   0.1847
## genderFemale                      -0.09856    0.14400  -0.684   0.4942
## urban_ruralUrban                  -0.20414    0.12315  -1.658   0.0984 .
## JIS_scores                         0.29805    0.06904   4.317 2.12e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.083 on 313 degrees of freedom
##   (57 observations deleted due to missingness)
## Multiple R-squared:  0.151,  Adjusted R-squared:  0.1293
## F-statistic: 6.957 on 8 and 313 DF,  p-value: 1.917e-08
```

```
##
## Call:
## lm(formula = Risky_Nuclear ~ caste + gender + urban_rural + Lconfidence,
##     data = LSI2)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -2.6371 -0.5479  0.0000  0.8277  1.8545
##
## Coefficients:
##                                   Estimate Std. Error t value Pr(>|t|)
## (Intercept)                        1.99759    0.73896   2.703 0.008070 **
## casteGeneral                       1.13813    0.38784   2.935 0.004144 **
## casteOther Backward Classes (OBC)  0.59768    0.36785   1.625 0.107351
## casteRather not say/Don't know     0.86722    0.63673   1.362 0.176260
## casteScheduled caste (SC)          1.62439    0.41116   3.951 0.000145 ***
## casteScheduled tribe (ST)          0.45214    0.67902   0.666 0.507026
## genderFemale                       0.06118    0.29575   0.207 0.836532
## urban_ruralUrban                   0.74148    0.39222   1.890 0.061590 .
## Lconfidence                        0.11005    0.13718   0.802 0.424302
```

```
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.029 on 100 degrees of freedom
##   (136 observations deleted due to missingness)
## Multiple R-squared:  0.2001, Adjusted R-squared:  0.1362
## F-statistic: 3.128 on 8 and 100 DF,  p-value: 0.003385
```

Linear Regression Models with perceived livelihood and income security

% Table created by stargazer v.5.2.3 by Marek Hlavac, Social Policy Institute. E-mail: marek.hlavac at gmail.com % Date and time: Wed, Sep 20, 2023 - 11:17:16

Table 3: Perceived livelihood or job security

	Dependent variable:	
	Risky_Nuclear	
	(1)	(2)
casteGeneral	0.748**	1.138***
	(0.303)	(0.388)
casteOther Backward Classes (OBC)	0.026	0.598
	(0.303)	(0.368)
casteRather not say/Don't know	0.459	0.867
	(0.394)	(0.637)
casteScheduled caste (SC)	0.415	1.624***
	(0.311)	(0.411)
casteScheduled tribe (ST)	0.498	0.452
	(0.374)	(0.679)
genderFemale	−0.099	0.061
	(0.144)	(0.296)
urban_ruralUrban	−0.204*	0.741*
	(0.123)	(0.392)
JIS_scores	0.298***	
	(0.069)	
Lconfidence		0.110
		(0.137)
Constant	3.224***	1.998***
	(0.298)	(0.739)
Observations	322	109
R^2	0.151	0.200
Adjusted R^2	0.129	0.136
Residual Std. Error	1.083 (df = 313)	1.029 (df = 100)
F Statistic	6.957*** (df = 8; 313)	3.128*** (df = 8; 100)
Note:		*p<0.1; **p<0.05; ***p<0.01

#Extra

Livelihood/Income Security scale adapted from Kamaruddin and Samsudin(2014)

Human Asset

education - What is the highest level of education you have received? If currently enrolled, highest degree received.

workknowledge - How would you rate your level of knowledge about your work ?

LIlenght- How long have you been in your current line of work?

subsidyknow - How would you rate your knowledge concerning how to obtain information about subsidies or aid from the government or any other agencies ?

Physical Asset

drinkingwater What is the main source of drinking water for the members of your household? cookingwater What is the main source of water used by your household for other purposes such as cooking and handwashing? farwatermins How long does it take to go there, get water, and come back? toilet What kind of toilet facility do members of your nhousehold usually use? house stove vehicle houseown

Social Asset

polposition LIassociation polparty

Financial Asset

Income

Natural Asset

Lfarmland Lfarmbigha Iproperty Ipropvalue Lboat animals

Livelihood Outcomes

Foodsecurity

foodadequacy foodtrouble

Health Status

healthdist illness severeillness