

```
-----
name: <unnamed>
log: D:\acs\ACS.log
log type: text
opened on: 24 Sep 2018, 12:08:18
```

```
.
.
. *****
. * Link Household Data with Person Data
. *****
.
. * Household data from the State of Ohio in 2016 ACS
. use "D:\acs\2016\Ohio\2016\psam_h39.dta" , clear

. des
```

```
Contains data from D:\acs\2016\Ohio\2016\psam_h39.dta
obs: 57,237
vars: 230 24 SEP 2018 11:00
size: 21,005,979
```

variable name	storage type	display format	value label	variable label
rt	str1	%1s		Record type
serialno	str9	%9s		Housing unit/GQ person serial number
st	str2	%2s		State Code
division	str1	%1s		Division code
puma	str5	%5s		Puma Code
region	str1	%1s		Region code
adjhsg	str7	%7s		Adjustment factor for housing dollar amounts
adjinc	str7	%7s		Adjustment factor for income and earnings dollar a
wgtp	int	%8.0g		PUMS Housing Unit Weight
.				
.				
wgtp72	int	%8.0g		
wgtp73	int	%8.0g		
wgtp74	int	%8.0g		
wgtp75	int	%8.0g		
wgtp76	int	%8.0g		
wgtp77	int	%8.0g		
wgtp78	int	%8.0g		
wgtp79	int	%8.0g		
wgtp80	int	%8.0g		

```
Sorted by:
```

```
. des serialno
```

variable name	storage type	display format	value label	variable label
serialno	str9	%9s		Housing unit/GQ person serial number

```
. sort serialno
```

```
. save "D:\acs\2016\Ohio\2016\psam_h39_2.dta" , replace
file D:\acs\2016\Ohio\2016\psam_h39_2.dta saved
```

```
.
. * Persondata from the State of Ohio in 2016 ACS
. use "D:\acs\2016\Ohio\2016\psam_p39.dta" , clear

. des
```

```
Contains data from D:\acs\2016\Ohio\2016\psam_p39.dta
obs: 117,426
vars: 284 24 Sep 2018 12:05
size: 55,542,498
```

```
-----
variable name   storage   display   value
                type     format    label      variable label
-----
rt              str1      %1s
serialno        str9      %9s        Housing unit/GQ person serial number
sporder         byte      %8.0g      Person key after swapping
puma            str5      %5s        Puma Code
st              str2      %2s        State Code
adjinc          str7      %7s        Adjustment factor for income and earnings dollar a
pwgtp           int       %8.0g      PUMS person weight
agep            byte      %8.0g      PUMS Age
.
.
.
pwgtp73         int       %8.0g
pwgtp74         int       %8.0g
pwgtp75         int       %8.0g
pwgtp76         int       %8.0g
pwgtp77         int       %8.0g
pwgtp78         int       %8.0g
pwgtp79         int       %8.0g
pwgtp80         int       %8.0g
-----
```

Sorted by: serialno

```
. des serialno
```

```
-----
variable name   storage   display   value
                type     format    label      variable label
-----
serialno        str9      %9s        Housing unit/GQ person serial number
-----
```

```
. sort serialno
```

```
. save, replace
```

```
file D:\acs\2016\Ohio\2016\psam_p39.dta saved
```

```
.
. * Merge these two files
.
. use "D:\acs\2016\Ohio\2016\psam_h39.dta" , clear
. merge 1:m serialno using "D:\acs\2016\Ohio\2016\psam_h39.dta"
```

```
Result          # of obs.
-----
not matched          0
matched             57,237  (_merge==3)
-----
```

```
. drop _merge
```

```
. save "D:\acs\2016\Ohio\2016\ACS_Ohio_2016.dta", replace
file D:\acs\2016\Ohio\2016\ACS_Ohio_2016.dta saved
```

```
.
.
. *****
. * Stack data over the years
. *****
.
. * Persondata from the State of Ohio in 2015 ACS
. use "D:\acs\2016\Ohio\2015\psam_p39.dta" , clear
```

```
. des
```

```
Contains data from D:\acs\2016\Ohio\2015\psam_p39.dta
```

```
obs:      118,123
vars:      284
size:      55,754,056
24 SEP 2018 11:00
```

```
-----
variable name    storage   display   value
                 type     format    label     variable label
-----
rt               str1     %1s
serialno        str9     %9s      Housing unit/GQ person serial number
sporder         byte     %8.0g    Person key after swapping
puma            str5     %5s      Puma Code
st              str2     %2s      State of current residence
adjinc          str7     %7s      Adjustment factor for income and earnings dollar a
pwgtp           int      %8.0g    PUMS person weight
agep            byte     %8.0g    PUMS Age
cit             str1     %1s      Citizenship
citwp           int      %8.0g    PUMS Year of naturalization write-in
cow             str1     %1s      Class of worker
ddrs           str1     %1s      Difficulty dressing
.
.
.
pwgtp76         int      %8.0g
pwgtp77         int      %8.0g
pwgtp78         int      %8.0g
pwgtp79         int      %8.0g
pwgtp80         int      %8.0g
-----
```

Sorted by:

```
. des serialno
```

```
-----
variable name    storage   display   value
                 type     format    label     variable label
-----
serialno        str9     %9s      Housing unit/GQ person serial number
-----
```

```
. sort serialno
```

```
. gen year = 2015
```

```
. save "D:\acs\2016\Ohio\2015\psam_p39_2.dta", replace
file D:\acs\2016\Ohio\2015\psam_p39_2.dta saved
```

```
.
.
. * Persondata from the State of Ohio in 2016 ACS
. use "D:\acs\2016\Ohio\2016\psam_p39.dta" , clear
```

```
. des
```

```
Contains data from D:\acs\2016\Ohio\2016\psam_p39.dta
obs:      117,426
vars:      284
size:     55,542,498
24 Sep 2018 12:08
```

```
-----
variable name    storage   display   value
                 type     format    label     variable label
-----
rt               str1     %1s
serialno        str9     %9s      Housing unit/GQ person serial number
sporder         byte     %8.0g    Person key after swapping
puma            str5     %5s      Puma Code
st              str2     %2s      State Code
adjinc          str7     %7s      Adjustment factor for income and earnings dollar a
pwgtp           int      %8.0g    PUMS person weight
agep            byte     %8.0g    PUMS Age
cit             str1     %1s      Citizenship
citwp           int      %8.0g    PUMS Year of naturalization write-in
cow             str1     %1s      Class of worker
.
.
.
pwgtp55         int      %8.0g
-----
```

```

pwgtp56      int      %8.0g
pwgtp57      int      %8.0g
pwgtp58      int      %8.0g
pwgtp59      int      %8.0g
pwgtp60      int      %8.0g
pwgtp61      int      %8.0g
pwgtp62      int      %8.0g
pwgtp63      int      %8.0g
pwgtp64      int      %8.0g
pwgtp65      int      %8.0g
pwgtp66      int      %8.0g
pwgtp67      int      %8.0g
pwgtp68      int      %8.0g
pwgtp69      int      %8.0g
pwgtp70      int      %8.0g
pwgtp71      int      %8.0g
pwgtp72      int      %8.0g
pwgtp73      int      %8.0g
pwgtp74      int      %8.0g
pwgtp75      int      %8.0g
pwgtp76      int      %8.0g
pwgtp77      int      %8.0g
pwgtp78      int      %8.0g
pwgtp79      int      %8.0g
pwgtp80      int      %8.0g

```

Sorted by: serialno

```
. des serialno
```

variable name	storage type	display format	value label	variable label
serialno	str9	%9s		Housing unit/GQ person serial number

```
. sort serialno
```

```
. gen year = 2016
```

```
. save "D:\acs\2016\Ohio\2016\psam_p39_2.dta", replace
file D:\acs\2016\Ohio\2016\psam_p39_2.dta saved
```

```
.
.
. * append data together
.
. use "D:\acs\2016\Ohio\2015\psam_p39_2.dta", clear

. append using "D:\acs\2016\Ohio\2016\psam_p39_2.dta"
(note: variable lanp was str3, now str4 to accommodate using data's values)
```

```
. save "D:\acs\ACS_Ohio_2015_2016.dta", replace
file D:\acs\ACS_Ohio_2015_2016.dta saved
```

```
.
.
. *****
. * Using Person Weights
. *****
.
. use "D:\acs\2016\Ohio\2016\psam_p39.dta" , clear
```

```
. tab1 agep, mis
```

-> tabulation of agep

PUMS Age	Freq.	Percent	Cum.
0	1,117	0.95	0.95
1	1,165	0.99	1.94

2	1,215	1.03	2.98
3	1,166	0.99	3.97
4	1,217	1.04	5.01
5	1,196	1.02	6.03
6	1,289	1.10	7.12
7	1,289	1.10	8.22
8	1,339	1.14	9.36
9	1,366	1.16	10.52
10	1,334	1.14	11.66
11	1,379	1.17	12.84
12	1,453	1.24	14.07
13	1,401	1.19	15.27
14	1,380	1.18	16.44
15	1,486	1.27	17.71
16	1,499	1.28	18.98
17	1,536	1.31	20.29
18	1,681	1.43	21.72
19	1,661	1.41	23.14
20	1,452	1.24	24.37
21	1,440	1.23	25.60
22	1,281	1.09	26.69
23	1,273	1.08	27.77
24	1,309	1.11	28.89
25	1,321	1.12	30.01
26	1,254	1.07	31.08
27	1,353	1.15	32.23
28	1,286	1.10	33.33
29	1,232	1.05	34.38
30	1,366	1.16	35.54
31	1,378	1.17	36.72
32	1,341	1.14	37.86
33	1,278	1.09	38.95
34	1,322	1.13	40.07
35	1,337	1.14	41.21
36	1,278	1.09	42.30
37	1,274	1.08	43.38
38	1,232	1.05	44.43
39	1,328	1.13	45.56
40	1,229	1.05	46.61
41	1,218	1.04	47.65
42	1,319	1.12	48.77
43	1,231	1.05	49.82
44	1,352	1.15	50.97
45	1,463	1.25	52.22
46	1,461	1.24	53.46
47	1,442	1.23	54.69
48	1,406	1.20	55.89
49	1,563	1.33	57.22
50	1,628	1.39	58.60
51	1,629	1.39	59.99
52	1,721	1.47	61.46
53	1,740	1.48	62.94
54	1,723	1.47	64.41
55	1,796	1.53	65.94
56	1,893	1.61	67.55
57	1,858	1.58	69.13
58	1,956	1.67	70.80
59	1,976	1.68	72.48
60	1,872	1.59	74.07
61	1,877	1.60	75.67
62	1,828	1.56	77.23
63	1,780	1.52	78.74
64	1,664	1.42	80.16
65	1,630	1.39	81.55
66	1,584	1.35	82.90
67	1,584	1.35	84.25
68	1,546	1.32	85.56
69	1,486	1.27	86.83
70	1,154	0.98	87.81
71	1,019	0.87	88.68
72	1,043	0.89	89.57

73	1,116	0.95	90.52
74	1,020	0.87	91.39
75	947	0.81	92.19
76	866	0.74	92.93
77	788	0.67	93.60
78	774	0.66	94.26
79	692	0.59	94.85
80	642	0.55	95.40
81	628	0.53	95.93
82	541	0.46	96.39
83	536	0.46	96.85
84	541	0.46	97.31
85	499	0.42	97.73
86	434	0.37	98.10
87	398	0.34	98.44
88	352	0.30	98.74
89	302	0.26	99.00
90	245	0.21	99.21
94	930	0.79	100.00

Total | 117,426 100.00

```
. egen agegroup = cut(agep), at(0,15, 31,46,61,76,101)
```

```
. label define agegroup 0 "0-14" 15 "15-30" 31 "31-45" 46 "46-60" 61 "61-75" 76 "76-100"
```

```
. label value agegroup agegroup
```

```
.  

.  

. des mar
```

variable name	storage type	display format	value label	variable label
mar	str1	%1s		Marital status

```
. deststring mar, replace  

mar: all characters numeric; replaced as byte
```

```
. label define mar 1 "Married" 2 "Widowed" 3 "Divorced" 4 "Separated" 5 "Never married or under
```

```
. label value mar mar
```

```
. svyset [pweight=pwgtp]
```

```
    pweight: pwgtp  

      VCE: linearized  

Single unit: missing  

  Strata 1: <one>  

    SU 1: <observations>  

    FPC 1: <zero>
```

```
. svy: tab agegroup msp  

(running tabulate on estimation sample)
```

```
Number of strata   =          1          Number of obs       =       98,120  

Number of PSUs    =       98,120      Population size     =   9,473,028  

                                          Design df          =       98,119
```

agegroup	Married -- spouse present/ spouse absent						Total
	1	2	3	4	5	6	
15-30	.0366	.0042	2.2e-04	.0045	.0016	.2142	.2613
31-45	.1223	.0049	.0012	.0278	.0057	.0607	.2225
46-60	.152	.0047	.0074	.0498	.0063	.0332	.2532
61-75	.1141	.003	.0209	.0319	.0024	.0138	.1862
76-100	.0307	.0022	.0329	.0076	4.2e-04	.0029	.0768

Total	.4557	.0191	.0626	.1215	.0164	.3247	1
-------	-------	-------	-------	-------	-------	-------	---

 Key: cell proportion

Pearson:

Uncorrected chi2(20) = 6.03e+04
 Design-based F(19.10, 1.9e+06)= 1796.1629 P = 0.0000

. save "D:\acs\2016\Ohio\2016\psam_p39_3.dta", replace
 file D:\acs\2016\Ohio\2016\psam_p39_3.dta saved

.
 .
 .
 .
 .
 . *****
 . * The distribution of Internet Access by Type of Unit
 . *****
 . use "D:\acs\2016\Ohio\2016\psam_h39.dta", clear

. des type

variable name	storage type	display format	value label	variable label
type	str1	%1s		Type of unit

. destring type, replace
 type: all characters numeric; replaced as byte

. label define type 1 "Housing unit" 2 "Institutional group quarters" 3 "Noninstitutional group

. label value type type

. des access

variable name	storage type	display format	value label	variable label
access	str1	%1s		Access the internet

. destring access, replace
 access: all characters numeric; replaced as byte
 (9034 missing values generated)

. replace access =0 if access ==.
 (9,034 real changes made)

. label define access 0 "NA (GQ)" 1 "Yes, by paying a cell phone company or Internet service pr
 > 2 "Yes, without paying a cell phone company or Internet service provider "
 > 3 "No access to the Internet at this house, apartment, or mobile home"

. label value access access

. tab1 type access, mis

-> tabulation of type

Type of unit	Freq.	Percent	Cum.
Housing unit	51,644	90.23	90.23
Institutional group quarters	2,826	4.94	95.17

Noninstitutional group quarters	2,767	4.83	100.00
Total	57,237	100.00	

-> tabulation of access

Access the internet	Freq.	Percent	Cum.
NA (GQ)	9,034	15.78	15.78
Yes, by paying a cell phone company or	39,270	68.61	84.39
Yes, without paying a cell phone compan	1,099	1.92	86.31
No access to the Internet at this house	7,834	13.69	100.00
Total	57,237	100.00	

```

.
.
. svyset [pweight=wgtp]

    pweight: wgtp
      VCE: linearized
Single unit: missing
  Strata 1: <one>
    SU 1: <observations>
    FPC 1: <zero>

.
. svy: tab type access
(running tabulate on estimation sample)

```

```

Number of strata = 1          Number of obs = 57,237
Number of PSUs = 57,237     Population size = 5,164,400
                          Design df = 57,236

```

Type of unit	Access the internet				Total
	NA (GQ)	Yes, by	Yes, wit	No acces	
Housing	.1045	.7287	.0223	.1445	1
Institut	0	0	0	0	0
Noninsti	0	0	0	0	0
Total	.1045	.7287	.0223	.1445	1

Key: cell proportion

Table contains a zero in the marginals.
Statistics cannot be computed.

```

.
.
. *****
. * Using Replicate weights
. *****
.
. use "D:\acs\2016\Ohio\2016\psam_p39.dta" , clear
.
. deststring mar, replace
mar: all characters numeric; replaced as byte

. svyset[pweight=pwgtp], vce(brr) brrweight(pwgtp1-pwgtp80) fay(.5)mse

    pweight: pwgtp
      VCE: brr
      MSE: on
  brrweight: pwgtp1 pwgtp2 pwgtp3 pwgtp4 pwgtp5 pwgtp6 pwgtp7 pwgtp8 pwgtp9 pwgtp10 pwgtp11 pw
              pwgtp19 pwgtp20 pwgtp21 pwgtp22 pwgtp23 pwgtp24 pwgtp25 pwgtp26 pwgtp27 pwgtp28 p
              pwgtp36 pwgtp37 pwgtp38 pwgtp39 pwgtp40 pwgtp41 pwgtp42 pwgtp43 pwgtp44 pwgtp45 p
              pwgtp53 pwgtp54 pwgtp55 pwgtp56 pwgtp57 pwgtp58 pwgtp59 pwgtp60 pwgtp61 pwgtp62 p
              pwgtp70 pwgtp71 pwgtp72 pwgtp73 pwgtp74 pwgtp75 pwgtp76 pwgtp77 pwgtp78 pwgtp79 p

```



```

fay: .5
Single unit: missing
Strata 1: <one>
SU 1: <observations>
FPC 1: <zero>

```

```

. svy: mlogit mar agep
(running mlogit on estimation sample)

```

```

BRR replications (80)
-----+----- 1 -----+----- 2 -----+----- 3 -----+----- 4 -----+----- 5
.....
.....
.....

```

```

Survey: Multinomial logistic regression      Number of obs      =      117,426
                                              Population size    =    11,614,373
                                              Replications      =           80
                                              Design df        =           79
                                              F( 4, 76)       =      4868.98
                                              Prob > F        =           0.0000

```

		BRR *				[95% Conf. Interval]	
mar		Coef.	Std. Err.	t	P> t		
1	agep	.1130852	.0008798	128.53	0.000	.1113339	.1148365
	_cons	-4.189351	.0311437	-134.52	0.000	-4.251341	-4.127361
2	agep	.2217708	.0018254	121.49	0.000	.2181375	.225404
	_cons	-13.24605	.1141309	-116.06	0.000	-13.47322	-13.01888
3	agep	.1208786	.0011039	109.50	0.000	.1186814	.1230758
	_cons	-5.967466	.0458221	-130.23	0.000	-6.058672	-5.876259
4	agep	.0971299	.0015257	63.66	0.000	.0940931	.1001668
	_cons	-6.755737	.0718389	-94.04	0.000	-6.898729	-6.612745
5	(base outcome)						

```

. log close
name: <unnamed>
log: D:\acs\ACS.log
log type: text
closed on: 24 Sep 2018, 12:09:45

```