[STATA logo]
Statistics/Data Analysis

```
 ___  ____  ____  ____  ____ (R)
/__    /   ____/   /   ____/   15.1
___/   /   /___/   /   /___/
  Statistics/Data Analysis

    MP - Parallel Edition
```

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Notes:
      1.   Unicode is supported; see help unicode_advice.
      2.   More than 2 billion observations are allowed; see help obs_advice.
      3.   Maximum number of variables is set to 5000; see help set_maxvar.

```
1 . insheet using https://raw.githubusercontent.com/sdegiorgi
  > s/Quant2/master/Quant2FinalPaper2.csv, clear
  (16 vars, 282 obs)

2 . d

  Contains data
    obs:           282
    vars:           16
    size:        29,046
  ───────────────────────────────────────────────────────────────
              storage   display    value
  variable name   type    format     label      variable labe
  > l
  ───────────────────────────────────────────────────────────────
  county          str10   %10s                  County
  id2             double  %10.0g                Id2
  geography       str51   %51s                  Geography
  estimatemedia~v float   %9.0g                 Estimate;
                                                Median year
                                                householder moved
                                                into unit -- -
                                                Total:
  v5              int     %8.0g                 Estimate;
                                                Median year
                                                householder moved
                                                into unit -- - Owner
                                                occupied
  v6              int     %8.0g                 Estimate;
                                                Median year
                                                householder moved
                                                into unit -- -
                                                Renter occupied
  percentyearho~u float   %9.0g                 Percent; YEAR
                                                HOUSEHOLDER MOVED
                                                INTO UNIT - Occupied
                                                housing units -
                                                Moved in 20
  v8              float   %9.0g                 Percent; YEAR
                                                HOUSEHOLDER MOVED
                                                INTO UNIT - Occupied
                                                housing units -
                                                Moved in 19
  estimateselec~t int     %8.0g                 Estimate;
                                                SELECTED MONTHLY
                                                OWNER COSTS (SMOC) -
                                                Housing units with a
                                                mortgage
  v10             int     %8.0g                 Estimate;
                                                SELECTED MONTHLY
                                                OWNER COSTS (SMOC) -
```

				Housing units with a mortgage -
v11	int	%8.0g		**Estimate; SELECTED MONTHLY OWNER COSTS (SMOC) - Housing units without a mortgage**
v12	int	%8.0g		**Estimate; SELECTED MONTHLY OWNER COSTS (SMOC) - Housing units without a mortgage**
smocforhousin~u	int	%8.0g		**SMOC for housing units with and without a mortgage**
estimategross~a	int	%8.0g		**Estimate; GROSS RENT - Occupied units paying rent**
v15	int	%8.0g		**Estimate; GROSS RENT - Occupied units paying rent - Median (dollars)**
estimatei~2017i	long	%12.0g		**Estimate; INCOME AND BENEFITS (IN 2017 INFLATION-ADJUSTED DOLLARS) - Total house**

Sorted by:
    Note: Dataset has changed since last saved.

3 . d v15

variable name	storage type	display format	value label	variable labe > l
v15	int	%8.0g		**Estimate; GROSS RENT - Occupied units paying rent - Median (dollars)**

4 . inspect

county: County
> bservations   Number of O

			Total	Int
> egers	Nonintegers			
| -	-	Negative	-	
> | -	-	Zero	-	
> | -	-	Positive	-	
> |			_____	_____
| -	-	Total	-	
> |		Missing	**282**	

```
5 .              -9.0e+307                        282
      (0 unique value)
```

```
  id2:  Id2                                Number of O
  > bservations
  ──────────                              ────────────────────
        ──────────────────────
                                          Total      Int
  > egers    Nonintegers
  |    #                    Negative        -
  >    -              -
  |    #                    Zero            -
  >    -              -
  |    #                    Positive      282
  >    -            282
  |    #                                 ──────────  ──────
        ──────    ──────────
  |    #                    Total         282
  >    -            282
  |    #  .  .  .    #      Missing         -
  ├───────────────────────               ──────────
  3.40e+10        3.40e+10                          282
      (12 unique values)
```

```
  geography:  Geography                   Number of O
  > bservations
  ──────────────────────                  ────────────────────
        ──────────────────────
                                          Total      Int
  > egers    Nonintegers
  |                        Negative        -
  >    -              -
  |                        Zero            -
  >    -              -
  |                        Positive        -
  >    -              -
  |                                       ──────────  ──────
        ──────    ──────────
  |                        Total           -
  >    -              -
  |                        Missing       282
  ├───────────────────────               ──────────
6 .              -9.0e+307                        282
      (0 unique value)
```

```
  estimatemedianyearhouseholdermov:  Estim     Number of O
  > bservations
  ──────────────────────────────────────────────────
        ──────────────────────
                                          Total      Int
  > egers    Nonintegers
  |          #              Negative        -
  >    -              -
  |          #              Zero            -
  >    -              -
  |          #  #           Positive      282
  >  280              2
  |          #  #                         ──────────  ──────
        ──────    ──────────
  |    #    #  #            Total         282
  >  280              2
  |  .  #  #  #  #          Missing         -
  ├───────────────────────               ──────────
  1993              2013                          282
      (23 unique values)
```

v5: Estimate; Median year householder m   Number of O
> bservations
_____
  _____
                                              Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   -
>   -   -
| #   #   Positive   282
>   282   -
| #   #   _____   _____
  _____   _____
| #   #   Total   282
>   282   -
| .   .   #   #   #   Missing   -
  ┼_____   _____
1983   2006   282
   (21 unique values)

v6: Estimate; Median year householder m   Number of O
> bservations
_____
  _____
                                              Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   -
>   -   -
| #   Positive   282
>   282   -
| #   _____   _____
  _____   _____
| #   #   Total   282
>   282   -
| .   .   #   #   .   Missing   -
  ┼_____   _____
2004   2017   282
   (13 unique values)

percentyearhouseholdermovedintou: Perce   Number of O
> bservations
_____
  _____
                                              Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   #   Zero   1
>   1   -
| #   #   Positive   281
>   27   254
| #   #   _____   _____
  _____   _____
| #   #   Total   282
>   28   254
| #   #   #   .   .   Missing   -
  ┼_____   _____
0   28.5   282
  (More than 99 unique values)

v8:   Percent; YEAR HOUSEHOLDER MOVED INT   Number of O
> bservations
_____

_____
```
                                              Total      Int
> egers   Nonintegers
|      #                      Negative          -
>    -          -
|      #                      Zero              3
>    3          -
|  #  #   #                   Positive        279
>   31           248
|  #  #   #   #                          _____  _____

|  #  #   #   #               Total           282
>   34           248
|  #  #   #   #   .           Missing           -
|_____                 _____
0               28.2                          282
```
(More than 99 unique values)

estimateselectedmonthlyownercost: Estim   Number of O
> bservations
_____

_____
```
                                              Total      Int
> egers   Nonintegers
|      #                      Negative          -
>    -          -
|      #                      Zero              2
>    2          -
|      #                      Positive        280
>  280           -
|  #  #                                   _____  _____

|  #  #                       Total           282
>  282           -
|  #  #   #   .   .           Missing           -
|_____                 _____
0               2605                          282
```
(More than 99 unique values)

v10:   Estimate; SELECTED MONTHLY OWNER C   Number of O
> bservations
_____

_____
```
                                              Total      Int
> egers   Nonintegers
|          #                  Negative          -
>    -          -
|          #                  Zero              3
>    3          -
|          #                  Positive        279
>  279           -
|          #                             _____  _____

|          #                  Total           282
>  282           -
|  .   #   #   #   .           Missing           -
|_____                 _____
0               4000                          282
```
(More than 99 unique values)

v11: Estimate; SELECTED MONTHLY OWNER C   Number of O
> bservations
_____

_____
                                                Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   2
>   2   -
| #   #   Positive   280
>   280   -
| #   #   _____   _____
  _____   _____
| #   #   Total   282
>   282   -
| #   #   #   .   .   Missing   -
_____   _____
0   1142   282
(More than 99 unique values)

v12: Estimate; SELECTED MONTHLY OWNER C   Number of O
> bservations
_____

_____
                                                Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   5
>   5   -
| #   Positive   277
>   277   -
| #   #   _____   _____
  _____   _____
| #   #   Total   282
>   282   -
| .   .   #   #   .   Missing   -
_____   _____
0   1500   282
(More than 99 unique values)

smocforhousingunitswithandwithou: SMOC   Number of O
> bservations
_____

_____
                                                Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   3
>   3   -
| #   Positive   279
>   279   -
| #   _____   _____
  _____   _____
| #   Total   282
>   282   -
| .   #   #   #   .   Missing   -
_____   _____
0   3207   282
(More than 99 unique values)

estimategrossrentoccupiedunitspa: Estim   Number of O
> bservations
_____

_____
                                            Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   -
>   -   -
| #   Positive   282
>   282   -
| #   _____   _____

| #   #   Total   282
>   282   -
| #   #   .   .   .   Missing   -
|_____   _____
19   2410   282
(More than 99 unique values)

v15: Estimate; GROSS RENT - Occupied un   Number of O
> bservations
_____

_____
                                            Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   -
>   -   -
| #   Positive   282
>   282   -
| #   _____   _____

| #   Total   282
>   282   -
| .   #   #   .   .   Missing   -
|_____   _____
271   3093   282
(More than 99 unique values)

estimateincomeandbenefitsin2017i: Estim   Number of O
> bservations
_____

_____
                                            Total   Int
> egers   Nonintegers
| #   Negative   -
>   -   -
| #   Zero   -
>   -   -
| #   Positive   282
>   282   -
| #   _____   _____

| #   #   Total   282
>   282   -
| #   #   #   .   .   Missing   -
|_____   _____
12629   196989   282
(More than 99 unique values)

```
7 . reg v5 smocforhousingunitswithandwithou estimateincomeand
  > benefitsin2017i

        Source |       SS          df       MS          Number o
  > f obs   =       282
  ─────────────┼──────────────────────────────────        F(2, 279
  > )       =        8.73
        Model |  214.647306        2  107.323653      Prob > F
  >         =       0.0002
     Residual |  3431.05482       279  12.2976875      R-square
  > d       =       0.0589
  ─────────────┼──────────────────────────────────        Adj R-sq
  > uared   =       0.0521
        Total |  3645.70213       281  12.9740289      Root MSE
  >         =       3.5068


  ─────────────┬──────────────
           v5 |     Coef.    Std. Err.      t     P>|t|      [
  > 95% Con
  >      f. Interval]
  ─────────────┼──────────────
  smocforhou~u |   .0010829    .0008182     1.32   0.187     -.
  > 0005276
  >              .0026935
  estima~2017i |   .0000161    .0000128     1.26   0.209     -9
  > .10e-06
  >              .0000414
        _cons |   1996.64     .7930017  2517.83   0.000      1
  > 995.079
  >             1998.201
  ─────────────┴──────────────

  ─────────────────────────
```

```
8 . estimates store model1

9 . reg v6 v15 estimateincomeandbenefitsin2017i

        Source |       SS          df       MS          Number o
  > f obs   =       282
  ─────────────┼──────────────────────────────────        F(2, 279
  > )       =       10.26
        Model |  58.5527757        2  29.2763879      Prob > F
  >         =       0.0001
     Residual |  796.230912       279  2.85387424      R-square
  > d       =       0.0685
  ─────────────┼──────────────────────────────────        Adj R-sq
  > uared   =       0.0618
        Total |  854.783688       281  3.04193483      Root MSE
  >         =       1.6893


  ─────────────┬──────────────
           v6 |     Coef.    Std. Err.      t     P>|t|      [
  > 95% Con
  >      f. Interval]
  ─────────────┼──────────────
          v15 |   .0012798    .0002974     4.30   0.000      .
  > 0006945
  >              .0018651
  estima~2017i |  -.0000124    4.00e-06    -3.09   0.002     -.
  > 0000202
  >             -4.49e-06
        _cons |   2010.924    .3757995  5351.06   0.000      2
  > 010.184
  >             2011.664
  ─────────────┴──────────────

  ─────────────────────────
```

10. estimates store model2

11. esttab model1, order(_cons) b(a3) t(a3) sfmt(a3) nobase label mtitles varwid
  > th(40) stats(N r2 F)

	(1) model1
Constant	1996.6*** (2517.8)
SMOC for housing units with and without	0.00108 (1.324)
Estimate; INCOME AND BENEFITS (IN 2017 I	0.0000161 (1.259)
N	282
r2	0.0589
F	8.727

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

12. esttab model*, order(_cons) b(a3) t(a3) sfmt(a3) nobase label mtitles varwid
  > th(40) stats(N r2 F)

	(1) model1	(2) model2
Constant	1996.6*** (2517.8)	2010.9*** (5351.1)
SMOC for housing units with and without	0.00108 (1.324)	
Estimate; INCOME AND BENEFITS (IN 2017 I	0.0000161 (1.259)	-0.0000124** (-3.091)
Estimate; GROSS RENT - Occupied units pa		0.00128*** (4.304)
N	282	282
r2	0.0589	0.0685
F	8.727	10.26

t statistics in parentheses
* p<0.05, ** p<0.01, *** p<0.001

13. translate @Results /home/ru/svd30/Desktop/Quant2FinalPaper2.pdf.pdf