Markdown in Stata

1. What is markdown?

Markdown is a markup language that can be written using a plain text editor. It allows plain text content to be formatted with simple markup syntax.

2. Why should we study markdown?

- Markdown's syntax is easy to learn, and its feature is more powerful than plain text.
- It is easy to turn markdown into ppt,pdf and a word document.

3. What can we use markdown to do?

3.1 make a to-do list

- [ ] read a book
- [x] do homework
- [x] watch a movie

3.2 write formula

$$E = mc^2$$

4. How to use markdown?

4.1 title

H1 :# Header 1

H2 :## Header 2

H3 :### Header 3

H4 :#### Header 4

H5 :##### Header 5

H6 :###### Header 6

4.2 Italic and bold

Italic **bold**

5. How to combine markdown and stata?

5.1 Requirements

The command uses an external Markdown processor, John MacFarlane's **pandoc**, which can be downloaded for Linux, Mac or Windows from *pandoc.org/installing*. Generating Word documents requires Pandoc2.0 or higher. It also requires the Stata command **whereis**, available from SSC. This command is used to keep track of ancillary programs and is usually installed together with **markstat**. After downloading pandoc, you save the location of the executable in the whereis database by running the command *whereis pandoc* location.

If you want to generate PDF output you also need LaTeX, specifically **pdflatex**, which comes with MiKTeX on Windows, MacTeX on Macs or Live TeX on Linux. You save the location of the converter by running the command *whereis pdflatex* location. This is also used for Beamer presentations.

5.2 code

whereis pandoc "C:15.exe" whereis pdflatex "C:152.964.exe" markstat using filename [, pdf docx slides beamer mathjax bundle bibliography strict nodo nor keep]

6. example

6.1 Nerlove

```
. clear

. import excel "C:\Users\Sabrina\Desktop\econometrics\nerlove.xls", firstrow cl
> ear

. la data "Nerlove 1963 paper"

. describe

Contains data
  obs:           145                          Nerlove 1963 paper
 vars:             5
 size:         4,060
-------------------------------------------------------------------------------
              storage   display    value
variable name   type    format     label      variable label
-------------------------------------------------------------------------------
TC              double  %10.0g                TC
Q               int     %10.0g                Q
PL              double  %10.0g                PL
PF              double  %10.0g                PF
PK              int     %10.0g                PK
-------------------------------------------------------------------------------
Sorted by:
```

Note: Dataset has changed since last saved.

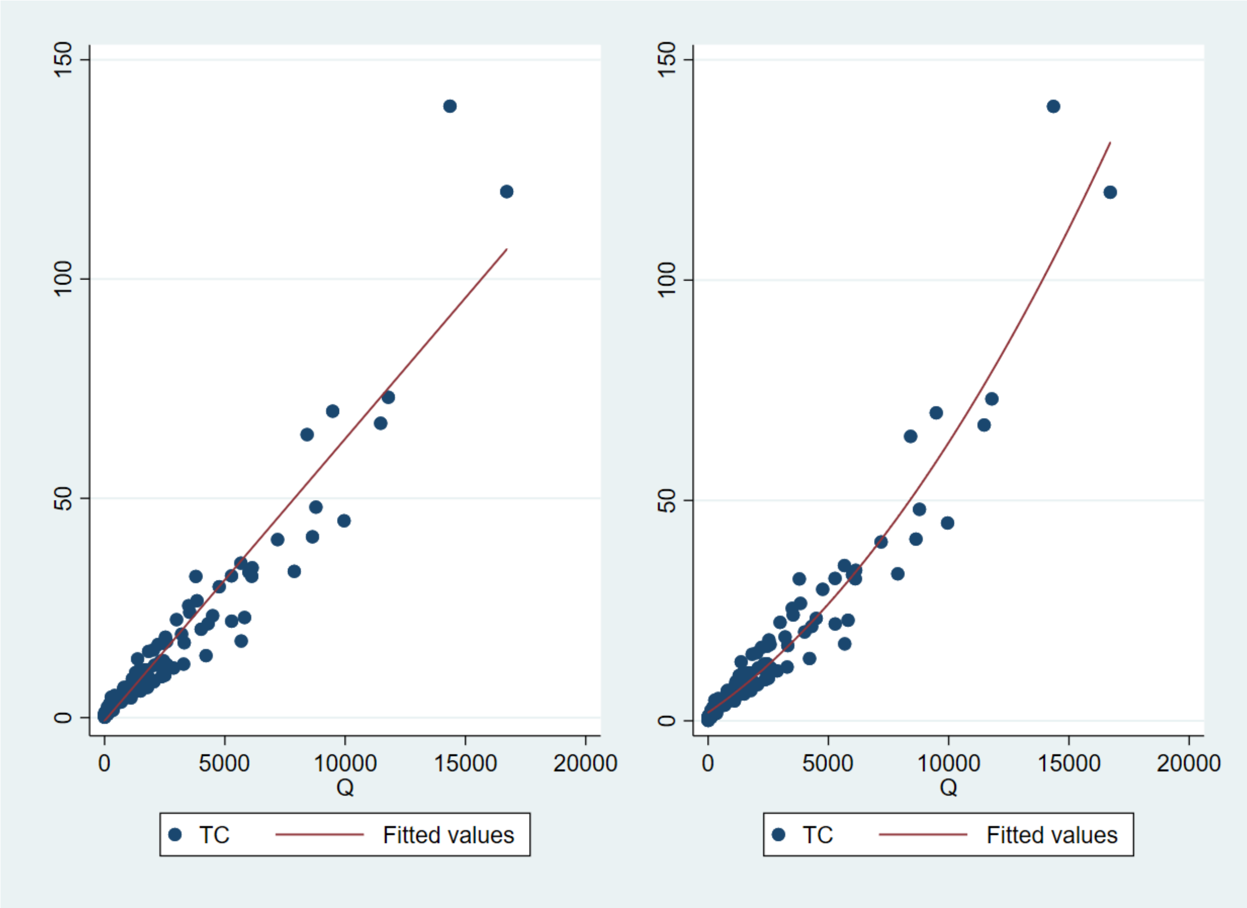
```
. list TC Q
```

	TC	Q
1.	.082	2
2.	.661	3
3.	.99	4
4.	.315	4
5.	.197	5
6.	.098	9
7.	.949	11
8.	.675	13
9.	.525	13
10.	.501	22
11.	1.194	25
12.	.67	25
13.	.349	35
14.	.423	39
15.	.501	43
16.	.55	63
17.	.795	68
18.	.664	81
19.	.705	84
20.	.903	73
21.	1.504	99
22.	1.615	101
23.	1.127	119
24.	.718	120
25.	2.414	122
26.	1.13	130
27.	.992	138
28.	1.554	149
29.	1.225	196
30.	1.565	197
31.	1.936	209
32.	3.154	214
33.	2.599	220
34.	3.298	234
35.	2.441	235
36.	2.031	253
37.	4.666	279
38.	1.834	290

39.	2.072	290
40.	2.039	295
41.	3.398	299
42.	3.083	324
43.	2.344	333
44.	2.382	338
45.	2.657	353
46.	1.705	353
47.	3.23	416
48.	5.049	420
49.	3.814	456
50.	4.58	484
51.	4.358	516
52.	4.714	550
53.	4.357	563
54.	3.919	566
55.	3.442	592
56.	4.898	671
57.	3.584	696
58.	5.535	719
59.	4.406	742
60.	4.289	795
61.	6.731	800
62.	6.895	808
63.	5.112	811
64.	5.141	855
65.	5.72	860
66.	4.691	909
67.	6.832	913
68.	4.813	924
69.	6.754	984
70.	5.127	991
71.	6.388	1000
72.	4.509	1098
73.	7.185	1109
74.	6.8	1118
75.	7.743	1122
76.	7.968	1137
77.	8.858	1156
78.	8.588	1166
79.	6.449	1170
80.	8.488	1215
81.	8.877	1279

82.	10.274	1291
83.	6.024	1290
84.	8.258	1331
85.	13.376	1373
86.	10.69	1420
87.	8.308	1474
88.	6.082	1497
89.	9.284	1545
90.	10.879	1649
91.	8.477	1668
92.	6.877	1782
93.	15.106	1831
94.	8.031	1833
95.	8.082	1838
96.	10.866	1787
97.	8.596	1918
98.	8.673	1930
99.	15.437	2028
100.	8.211	2057
101.	11.982	2084
102.	16.674	2226
103.	12.62	2304
104.	12.905	2341
105.	11.615	2353
106.	9.321	2367
107.	12.962	2451
108.	16.932	2457
109.	9.648	2507
110.	18.35	2530
111.	17.333	2576
112.	12.015	2607
113.	11.32	2870
114.	22.337	2993
115.	19.035	3202
116.	12.205	3286
117.	17.078	3312
118.	25.528	3498
119.	24.021	3538
120.	32.197	3794
121.	26.652	3841
122.	20.164	4014
123.	14.132	4217
124.	21.41	4305
125.	23.244	4494

```
     |                   |
     |-------------------|
126. |   29.845     4764 |
127. |   32.318     5277 |
128. |   21.988     5283 |
129. |   35.229     5668 |
130. |   17.467     5681 |
     |-------------------|
131. |   22.828     5819 |
132. |   33.154     6000 |
133. |   32.228     6119 |
134. |   34.168     6136 |
135. |   40.594     7193 |
     |-------------------|
136. |   33.354     7886 |
137. |   64.542     8419 |
138. |   41.238     8642 |
139. |   47.993     8787 |
140. |   69.878     9484 |
     |-------------------|
141. |   44.894     9956 |
142. |    67.12    11477 |
143. |    73.05    11796 |
144. |  139.422    14359 |
145. |  119.939    16719 |
     +-------------------+

. hist Q, width(1000) frequency
(bin=17, start=2, width=1000)

. kdensity Q

. scatter TC Q

. gen n=_n

. scatter TC Q, mlabel(n) mlabpos(6)

. twoway (scatter TC Q)(lfit TC Q)

. graph save scatter1
(file scatter1.gph saved)

. twoway (scatter TC Q)(qfit TC Q)

. graph save scatter2
(file scatter2.gph saved)

. graph combine scatter1.gph scatter2.gph

. graph export scatter3.png
(file scatter3.png written in PNG format)
```



scatter

6.2 a new one

Let us read the fuel efficiency data that ships with Stata

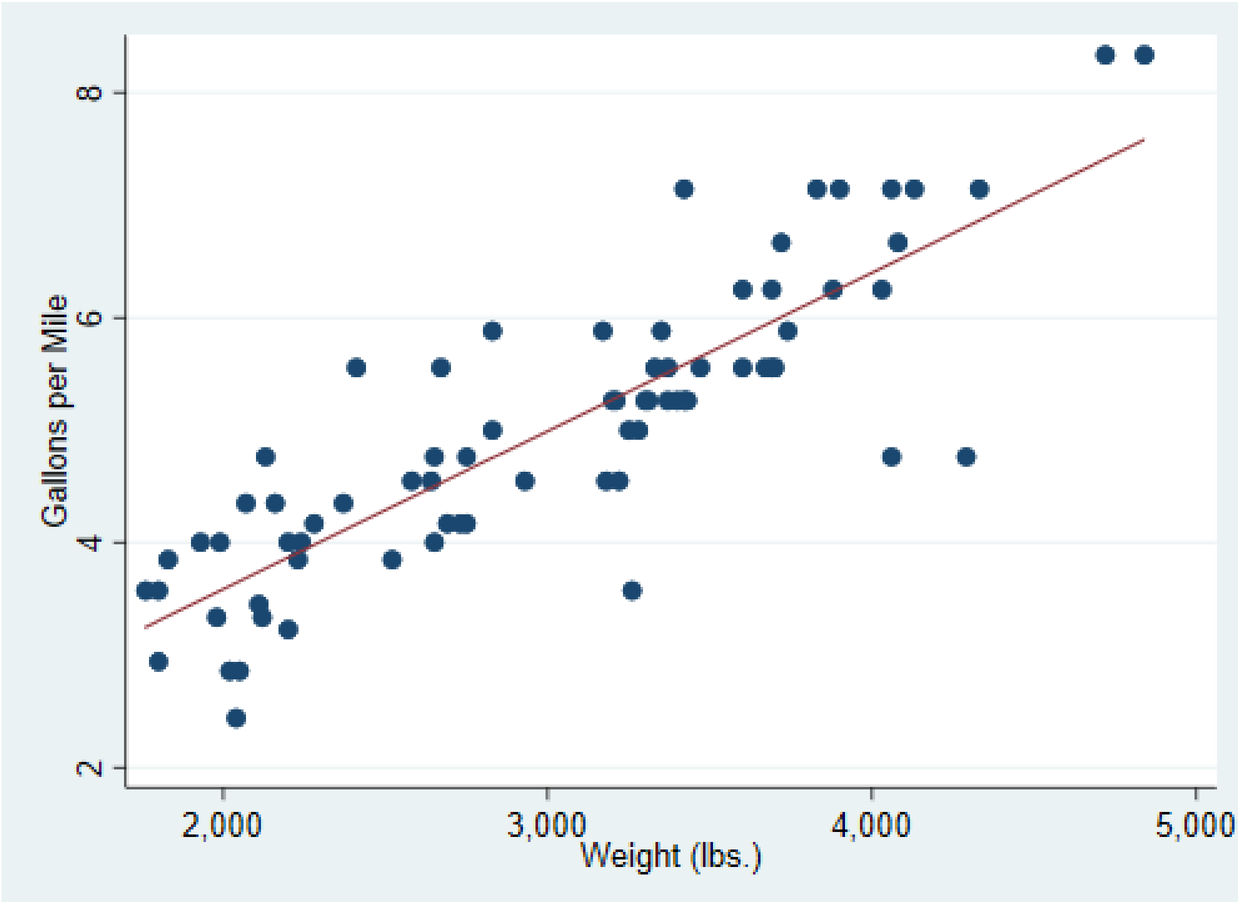
```
. sysuse auto, clear
(1978 Automobile Data)
```

To study how fuel efficiency depends on weight it is useful to transform the dependent variable from "miles per gallon" to "gallons per 100 miles"

```
. gen gphm = 100/mpg
```

We then obtain a fairly linear relationship

```
. twoway scatter gphm weight || lfit gphm weight  ///
>  , ytitle(Gallons per Mile) legend(off)

. graph export auto.png, width(500) replace
(file auto.png written in PNG format)
```



The regression equation estimated by OLS is

```
. regress gphm weight

      Source |       SS           df       MS      Number of obs   =        74
-------------+----------------------------------   F(1, 72)        =    194.71
       Model |  87.2964969         1  87.2964969   Prob > F        =    0.0000
    Residual |  32.2797639        72  .448330054   R-squared       =    0.7300
-------------+----------------------------------   Adj R-squared   =    0.7263
       Total |  119.576261        73  1.63803097   Root MSE        =    .66957

------------------------------------------------------------------------------
        gphm |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      weight |    .001407   .0001008    13.95   0.000      .001206    .0016081
       _cons |   .7707669   .3142571     2.45   0.017     .1443069    1.397227
------------------------------------------------------------------------------
```

Thus, a car that weighs 1,000 pounds more than another requires on average an extra 1.4 gallons to travel 100 miles. That's all for now!