

```
. clear

. /*
>   Back to Fan's Stata4Econ or other repositories:
>   - http://fanwangecon.github.io
>   - http://fanwangecon.github.io/Stata4Econ
>   - http://fanwangecon.github.io/R4Econ
>   - http://fanwangecon.github.io/M4Econ
>   - http://fanwangecon.github.io/CodeDynaAsset/
>   - http://fanwangecon.github.io/Math4Econ/
>   - http://fanwangecon.github.io/Stat4Econ/
>   - http://fanwangecon.github.io/Tex4Econ
>
>   1. drop a random subset of values
>
> */
.
. ///--- Start log
> set more off

. capture log close

. cd "${root_log}"
C:\Program Files (x86)\Stata14

. global st_link "/rand/basic/fs_droprand"

. global curlogfile "~/Stata4Econ/${st_link}"

. log using "${curlogfile}" , replace
(note: file C:\Users\fan\Stata4Econ//rand/basic/fs_droprand.smcl not found)

name: <unnamed>
log: C:\Users\fan\Stata4Econ//rand/basic/fs_droprand.smcl
log type: smcl
opened on: 6 Oct 2019, 18:17:31

. log on
(log already on)

.
. ///-- Site Link: Fan's Project Reusable Stata Codes Table of Content
> di "https://fanwangecon.github.io/"
https://fanwangecon.github.io/

. di "https://fanwangecon.github.io/Stata4Econ/"
https://fanwangecon.github.io/Stata4Econ/

.
. ///-- File Title
> global filetitle "Stata Drop a Random Subset of Observations"

.
. ///--- Load Data
> set more off

. sysuse auto, clear
(1978 Automobile Data)

.
. ///--- Generating Index for Dropping
> set seed 987

. scalar it_drop_frac = 3

. gen row_idx_it = round((_n/_N)*it_drop_frac)
```

. //--- drop when row_idx_it == row_idx_rand, if it_drop_frac set at 3
 . list make price mpg row_idx_it row_idx_rand, ab(20)

| | make | price | mpg | row_idx_it | row_idx_rand |
|-----|-------------------|--------|-----|------------|--------------|
| 1. | AMC Concord | 4,099 | 22 | 0 | 0 |
| 2. | AMC Pacer | 4,749 | 17 | 0 | 2 |
| 3. | AMC Spirit | 3,799 | 22 | 0 | 1 |
| 4. | Buick Century | 4,816 | 20 | 0 | 3 |
| 5. | Buick Electra | 7,827 | 15 | 0 | 1 |
| 6. | Buick LeSabre | 5,788 | 18 | 0 | 1 |
| 7. | Buick Opel | 4,453 | 26 | 0 | 2 |
| 8. | Buick Regal | 5,189 | 20 | 0 | 2 |
| 9. | Buick Riviera | 10,372 | 16 | 0 | 1 |
| 10. | Buick Skylark | 4,082 | 19 | 0 | 2 |
| 11. | Cad. Deville | 11,385 | 14 | 0 | 1 |
| 12. | Cad. Eldorado | 14,500 | 14 | 0 | 2 |
| 13. | Cad. Seville | 15,906 | 21 | 1 | 1 |
| 14. | Chev. Chevette | 3,299 | 29 | 1 | 2 |
| 15. | Chev. Impala | 5,705 | 16 | 1 | 1 |
| 16. | Chev. Malibu | 4,504 | 22 | 1 | 2 |
| 17. | Chev. Monte Carlo | 5,104 | 22 | 1 | 2 |
| 18. | Chev. Monza | 3,667 | 24 | 1 | 2 |
| 19. | Chev. Nova | 3,955 | 19 | 1 | 3 |
| 20. | Dodge Colt | 3,984 | 30 | 1 | 1 |
| 21. | Dodge Diplomat | 4,010 | 18 | 1 | 2 |
| 22. | Dodge Magnum | 5,886 | 16 | 1 | 2 |
| 23. | Dodge St. Regis | 6,342 | 17 | 1 | 1 |
| 24. | Ford Fiesta | 4,389 | 28 | 1 | 0 |
| 25. | Ford Mustang | 4,187 | 21 | 1 | 1 |
| 26. | Linc. Continental | 11,497 | 12 | 1 | 3 |
| 27. | Linc. Mark V | 13,594 | 12 | 1 | 2 |
| 28. | Linc. Versailles | 13,466 | 14 | 1 | 2 |
| 29. | Merc. Bobcat | 3,829 | 22 | 1 | 3 |
| 30. | Merc. Cougar | 5,379 | 14 | 1 | 2 |
| 31. | Merc. Marquis | 6,165 | 15 | 1 | 1 |
| 32. | Merc. Monarch | 4,516 | 18 | 1 | 3 |
| 33. | Merc. XR-7 | 6,303 | 14 | 1 | 2 |
| 34. | Merc. Zephyr | 3,291 | 20 | 1 | 1 |
| 35. | Olds 98 | 8,814 | 21 | 1 | 1 |
| 36. | Olds Cutl Supr | 5,172 | 19 | 1 | 1 |
| 37. | Olds Cutlass | 4,733 | 19 | 2 | 1 |
| 38. | Olds Delta 88 | 4,890 | 18 | 2 | 1 |
| 39. | Olds Omega | 4,181 | 19 | 2 | 1 |
| 40. | Olds Starfire | 4,195 | 24 | 2 | 1 |
| 41. | Olds Toronado | 10,371 | 16 | 2 | 3 |
| 42. | Plym. Arrow | 4,647 | 28 | 2 | 1 |
| 43. | Plym. Champ | 4,425 | 34 | 2 | 0 |
| 44. | Plym. Horizon | 4,482 | 25 | 2 | 1 |
| 45. | Plym. Sapporo | 6,486 | 26 | 2 | 2 |
| 46. | Plym. Volare | 4,060 | 18 | 2 | 1 |
| 47. | Pont. Catalina | 5,798 | 18 | 2 | 2 |
| 48. | Pont. Firebird | 4,934 | 18 | 2 | 1 |
| 49. | Pont. Grand Prix | 5,222 | 19 | 2 | 1 |
| 50. | Pont. Le Mans | 4,723 | 19 | 2 | 2 |
| 51. | Pont. Phoenix | 4,424 | 19 | 2 | 1 |
| 52. | Pont. Sunbird | 4,172 | 24 | 2 | 2 |
| 53. | Audi 5000 | 9,690 | 17 | 2 | 3 |
| 54. | Audi Fox | 6,295 | 23 | 2 | 2 |
| 55. | BMW 320i | 9,735 | 25 | 2 | 2 |
| 56. | Datsun 200 | 6,229 | 23 | 2 | 1 |
| 57. | Datsun 210 | 4,589 | 35 | 2 | 3 |
| 58. | Datsun 510 | 5,079 | 24 | 2 | 2 |
| 59. | Datsun 810 | 8,129 | 21 | 2 | 3 |
| 60. | Fiat Strada | 4,296 | 21 | 2 | 0 |

| | | | | | |
|-----|----------------|--------|----|---|---|
| 61. | Honda Accord | 5,799 | 25 | 2 | 3 |
| 62. | Honda Civic | 4,499 | 28 | 3 | 2 |
| 63. | Mazda GLC | 3,995 | 30 | 3 | 1 |
| 64. | Peugeot 604 | 12,990 | 14 | 3 | 2 |
| 65. | Renault Le Car | 3,895 | 26 | 3 | 3 |
| 66. | Subaru | 3,798 | 35 | 3 | 1 |
| 67. | Toyota Celica | 5,899 | 18 | 3 | 3 |
| 68. | Toyota Corolla | 3,748 | 31 | 3 | 1 |
| 69. | Toyota Corona | 5,719 | 18 | 3 | 0 |
| 70. | VW Dasher | 7,140 | 23 | 3 | 1 |
| 71. | VW Diesel | 5,397 | 41 | 3 | 0 |
| 72. | VW Rabbit | 4,697 | 25 | 3 | 3 |
| 73. | VW Scirocco | 6,850 | 25 | 3 | 3 |
| 74. | Volvo 260 | 11,995 | 17 | 3 | 2 |

```
.
. ///--- Drop approximately 1/2 of make randomly
> set seed 987

. scalar it_drop_frac = 2

. clonevar make_wth_mimssing = make

. replace make_wth_mimssing = "" if round((_n/_N)*it_drop_frac) == round(it_drop_frac*uniform())
(33 real changes made)

.
. ///--- Drop approximately 1/3 of mpg randomly
> set seed 987

. scalar it_drop_frac = 3

. clonevar mpg_wth_mimssing = mpg

. replace mpg_wth_mimssing = . if round((_n/_N)*it_drop_frac) == round(it_drop_frac*uniform())
(21 real changes made, 21 to missing)

.
. ///--- Drop approximately 1/5 of mpg randomly
> set seed 987

. scalar it_drop_frac = 5

. clonevar price_wth_mimssing = price

. replace price_wth_mimssing = . if round((_n/_N)*it_drop_frac) == round(it_drop_frac*uniform())
(16 real changes made, 16 to missing)

.
. ///--- Summarize
> codebook make*
```

make

```

      type:  string (str18), but longest is str17
unique values:  74                               missing "":  0/74

examples:  "Cad. Deville"
           "Dodge Magnum"
           "Merc. XR-7"
           "Pont. Catalina"

warning:  variable has embedded blanks
```

make_wth_mimssing

```

      type:  string (str18), but longest is str17
unique values:  41                               missing "":  33/74
```

examples:

```
""
"Cad. Deville"
"Mazda GLC"
```

warning: variable has embedded blanks

```
. summ mpg* price*
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|--------------|-----|----------|-----------|------|-------|
| mpg | 74 | 21.2973 | 5.785503 | 12 | 41 |
| mpg_wth_mi~g | 53 | 21.15094 | 6.41931 | 12 | 41 |
| price | 74 | 6165.257 | 2949.496 | 3291 | 15906 |
| price_wth_~g | 58 | 6254.069 | 3219.379 | 3291 | 15906 |

```
. list make* mpg* price*
```

| | make | make_wth_mimssing | mpg | mpg_wt~g | price | price_~g |
|-----|-------------------|-------------------|-----|----------|--------|----------|
| 1. | AMC Concord | | 22 | . | 4,099 | . |
| 2. | AMC Pacer | AMC Pacer | 17 | 17 | 4,749 | 4,749 |
| 3. | AMC Spirit | AMC Spirit | 22 | 22 | 3,799 | 3,799 |
| 4. | Buick Century | Buick Century | 20 | 20 | 4,816 | 4,816 |
| 5. | Buick Electra | Buick Electra | 15 | 15 | 7,827 | 7,827 |
| 6. | Buick LeSabre | Buick LeSabre | 18 | 18 | 5,788 | 5,788 |
| 7. | Buick Opel | Buick Opel | 26 | 26 | 4,453 | 4,453 |
| 8. | Buick Regal | Buick Regal | 20 | 20 | 5,189 | 5,189 |
| 9. | Buick Riviera | Buick Riviera | 16 | 16 | 10,372 | . |
| 10. | Buick Skylark | Buick Skylark | 19 | 19 | 4,082 | 4,082 |
| 11. | Cad. Deville | Cad. Deville | 14 | 14 | 11,385 | 11,385 |
| 12. | Cad. Eldorado | Cad. Eldorado | 14 | 14 | 14,500 | 14,500 |
| 13. | Cad. Seville | Cad. Seville | 21 | . | 15,906 | 15,906 |
| 14. | Chev. Chevette | Chev. Chevette | 29 | 29 | 3,299 | 3,299 |
| 15. | Chev. Impala | Chev. Impala | 16 | . | 5,705 | 5,705 |
| 16. | Chev. Malibu | Chev. Malibu | 22 | 22 | 4,504 | 4,504 |
| 17. | Chev. Monte Carlo | Chev. Monte Carlo | 22 | 22 | 5,104 | 5,104 |
| 18. | Chev. Monza | Chev. Monza | 24 | 24 | 3,667 | 3,667 |
| 19. | Chev. Nova | Chev. Nova | 19 | 19 | 3,955 | 3,955 |
| 20. | Dodge Colt | | 30 | . | 3,984 | 3,984 |
| 21. | Dodge Diplomat | | 18 | 18 | 4,010 | 4,010 |
| 22. | Dodge Magnum | | 16 | 16 | 5,886 | 5,886 |
| 23. | Dodge St. Regis | | 17 | . | 6,342 | . |
| 24. | Ford Fiesta | Ford Fiesta | 28 | 28 | 4,389 | 4,389 |
| 25. | Ford Mustang | Ford Mustang | 21 | . | 4,187 | 4,187 |
| 26. | Linc. Continental | Linc. Continental | 12 | 12 | 11,497 | 11,497 |
| 27. | Linc. Mark V | | 12 | 12 | 13,594 | 13,594 |
| 28. | Linc. Versailles | | 14 | 14 | 13,466 | 13,466 |
| 29. | Merc. Bobcat | Merc. Bobcat | 22 | 22 | 3,829 | 3,829 |
| 30. | Merc. Cougar | | 14 | 14 | 5,379 | 5,379 |
| 31. | Merc. Marquis | | 15 | . | 6,165 | . |
| 32. | Merc. Monarch | Merc. Monarch | 18 | 18 | 4,516 | 4,516 |
| 33. | Merc. XR-7 | | 14 | 14 | 6,303 | 6,303 |
| 34. | Merc. Zephyr | Merc. Zephyr | 20 | . | 3,291 | 3,291 |
| 35. | Olds 98 | Olds 98 | 21 | . | 8,814 | 8,814 |
| 36. | Olds Cutl Supr | | 19 | . | 5,172 | . |
| 37. | Olds Cutlass | Olds Cutlass | 19 | 19 | 4,733 | 4,733 |
| 38. | Olds Delta 88 | | 18 | 18 | 4,890 | 4,890 |
| 39. | Olds Omega | | 19 | 19 | 4,181 | 4,181 |
| 40. | Olds Starfire | | 24 | 24 | 4,195 | 4,195 |
| 41. | Olds Toronado | Olds Toronado | 16 | 16 | 10,371 | 10,371 |
| 42. | Plym. Arrow | Plym. Arrow | 28 | 28 | 4,647 | 4,647 |
| 43. | Plym. Champ | Plym. Champ | 34 | 34 | 4,425 | 4,425 |
| 44. | Plym. Horizon | | 25 | 25 | 4,482 | 4,482 |
| 45. | Plym. Sapporo | | 26 | . | 6,486 | . |
| 46. | Plym. Volare | | 18 | 18 | 4,060 | 4,060 |
| 47. | Pont. Catalina | | 18 | . | 5,798 | . |
| 48. | Pont. Firebird | | 18 | 18 | 4,934 | 4,934 |
| 49. | Pont. Grand Prix | | 19 | 19 | 5,222 | 5,222 |
| 50. | Pont. Le Mans | | 19 | . | 4,723 | . |

| | | | | | | |
|-----|----------------|----------------|----|----|--------|--------|
| 51. | Pont. Phoenix | Pont. Phoenix | 19 | 19 | 4,424 | 4,424 |
| 52. | Pont. Sunbird | | 24 | . | 4,172 | . |
| 53. | Audi 5000 | Audi 5000 | 17 | 17 | 9,690 | 9,690 |
| 54. | Audi Fox | | 23 | . | 6,295 | . |
| 55. | BMW 320i | | 25 | . | 9,735 | 9,735 |
| 56. | Datsun 200 | Datsun 200 | 23 | 23 | 6,229 | 6,229 |
| 57. | Datsun 210 | | 35 | 35 | 4,589 | 4,589 |
| 58. | Datsun 510 | Datsun 510 | 24 | . | 5,079 | 5,079 |
| 59. | Datsun 810 | | 21 | 21 | 8,129 | . |
| 60. | Fiat Strada | Fiat Strada | 21 | 21 | 4,296 | 4,296 |
| 61. | Honda Accord | | 25 | 25 | 5,799 | . |
| 62. | Honda Civic | | 28 | 28 | 4,499 | . |
| 63. | Mazda GLC | Mazda GLC | 30 | 30 | 3,995 | 3,995 |
| 64. | Peugeot 604 | Peugeot 604 | 14 | 14 | 12,990 | 12,990 |
| 65. | Renault Le Car | | 26 | . | 3,895 | . |
| 66. | Subaru | Subaru | 35 | 35 | 3,798 | 3,798 |
| 67. | Toyota Celica | | 18 | . | 5,899 | 5,899 |
| 68. | Toyota Corolla | Toyota Corolla | 31 | 31 | 3,748 | 3,748 |
| 69. | Toyota Corona | Toyota Corona | 18 | 18 | 5,719 | 5,719 |
| 70. | VW Dasher | VW Dasher | 23 | 23 | 7,140 | 7,140 |
| 71. | VW Diesel | VW Diesel | 41 | 41 | 5,397 | 5,397 |
| 72. | VW Rabbit | | 25 | . | 4,697 | . |
| 73. | VW Scirocco | | 25 | . | 6,850 | . |
| 74. | Volvo 260 | | 17 | 17 | 11,995 | 11,995 |

```
.
. ///--- End Log and to HTML
> log close
   name: <unnamed>
   log: C:\Users\fan\Stata4Econ//rand/basic/fs_droprand.smcl
   log type: smcl
closed on: 6 Oct 2019, 18:17:31
```

```
. capture noisily {
.   log2html "${curlogfile}", replace title($filetitle (<a href="https://github.com/FanWangEcon/S
> nk).do">DO</a>, more see: <a href="https://fanwangecon.github.io/">Fan</a> and <a href="https://
> 4Econ">Stata4Econ</a>))
```

```
HTML log file ~/Stata4Econ//rand/basic/fs_droprand.html created
. }
```

```
.
. ///--- to PDF
> capture noisily {
.   translator set Results2pdf logo off
.   translator set Results2pdf fontsize 10
.   translator set Results2pdf pagesize custom
.   translator set Results2pdf pagewidth 8.27
.   translator set Results2pdf pageheight 11.69
.   translator set Results2pdf lmargin 0.2
.   translator set Results2pdf rmargin 0.2
.   translator set Results2pdf tmargin 0.2
.   translator set Results2pdf bmargin 0.2
.   translate @Results "${curlogfile}.pdf", replace translator(Results2pdf)
```