

Description

`matrix rowjoinbyname` and `matrix coljoinbyname` join matrices along one dimension while matching names in the other dimension.

Syntax

Join matrix rows while matching on matrix column names

```
matrix rowjoinbyname A = matrix_list [ , options ]
```

Join matrix columns while matching on matrix row names

```
matrix coljoinbyname A = matrix_list [ , options ]
```

matrix_list is a list of Stata matrices, including matrices from `e()` and `r()`.

options

Description

missing(#)

missing-value code for unmatched elements; default is `missing(.)`

noconsolidate

do not consolidate equations and terms

Options

`missing(#)` specifies that elements not matched across all matrices in *matrix_list* be set to #. The default is `missing(.)`.

`noconsolidate` prevents consolidating of equations and terms along the matching dimension. By default, the elements along the matching dimension are reordered so that equations, factor-variable terms, and time-series-operated variables appear together.

Remarks and examples

▷ Example 1

Suppose we want to stack coefficients from a regression model run against different samples. For example, let's fit a regression of mpg on the levels of rep78 for domestic cars and put the coefficients in a matrix named bdom.

```
. sysuse auto
(1978 automobile data)
. regress mpg i.rep78 if foreign == 0
```

| Source | SS | df | MS | Number of obs | = | 48 |
|----------|------------|----|------------|---------------|---|--------|
| Model | 334.819444 | 4 | 83.7048611 | F(4, 43) | = | 4.95 |
| Residual | 727.097222 | 43 | 16.9092377 | Prob > F | = | 0.0023 |
| | | | | R-squared | = | 0.3153 |
| | | | | Adj R-squared | = | 0.2516 |
| Total | 1061.91667 | 47 | 22.5939716 | Root MSE | = | 4.1121 |

| mpg | Coefficient | Std. err. | t | P> t | [95% conf. interval] | |
|-------|-------------|-----------|-------|-------|----------------------|----------|
| rep78 | | | | | | |
| 2 | -1.875 | 3.250888 | -0.58 | 0.567 | -8.431041 | 4.681041 |
| 3 | -2 | 3.013451 | -0.66 | 0.510 | -8.077203 | 4.077203 |
| 4 | -2.555556 | 3.214564 | -0.79 | 0.431 | -9.038342 | 3.927231 |
| 5 | 11 | 4.112084 | 2.68 | 0.011 | 2.707192 | 19.29281 |
| _cons | 21 | 2.907683 | 7.22 | 0.000 | 15.1361 | 26.8639 |

```
. matrix bdom = e(b)
```

Next fit the same model on foreign cars and put the coefficients in a matrix named bfor.

```
. regress mpg i.rep78 if foreign == 1
```

| Source | SS | df | MS | Number of obs | = | 21 |
|----------|------------|----|------------|---------------|---|---------|
| Model | 22.7301587 | 2 | 11.3650794 | F(2, 18) | = | 0.26 |
| Residual | 773.555556 | 18 | 42.9753086 | Prob > F | = | 0.7706 |
| | | | | R-squared | = | 0.0285 |
| | | | | Adj R-squared | = | -0.0794 |
| Total | 796.285714 | 20 | 39.8142857 | Root MSE | = | 6.5556 |

| mpg | Coefficient | Std. err. | t | P> t | [95% conf. interval] | |
|-------|-------------|-----------|------|-------|----------------------|----------|
| rep78 | | | | | | |
| 4 | 1.555556 | 4.37037 | 0.36 | 0.726 | -7.626252 | 10.73736 |
| 5 | 3 | 4.37037 | 0.69 | 0.501 | -6.181807 | 12.18181 |
| _cons | 23.33333 | 3.784852 | 6.16 | 0.000 | 15.38165 | 31.28501 |

```
. matrix bfor = e(b)
```

Based on the output from regress, we know that these two row vectors, bdom and bfor, do not have the same number of columns. If you try to join the rows using the \ operator, you will get a conformability error.

```
. matrix b = bdom \ bfor
conformability error
r(503);
```

Use `matrix rowjoinbyname` to join these two row vectors, and their column names will get matched automatically.

```
. matrix rowjoin b = bdom bfor
. matrix list b
b[2,6]
      1.      2.      3.      4.      5.
      rep78      rep78      rep78      rep78      rep78      _cons
y1      0      -1.875      -2      -2.5555556      11      21
y1      .      .      0      1.5555556      3      23.333333
```

◀

Also see

[P] [macro](#) — Macro definition and manipulation

[P] [matrix](#) — Introduction to matrix commands

[P] [matrix define](#) — Matrix definition, operators, and functions

[U] [14 Matrix expressions](#)

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