matrix rowjoinbyname — Join rows while matching on column names

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().

<table>
<thead>
<tr>
<th>options</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>missing(#)</td>
<td>missing-value code for unmatched elements; default is missing(.)</td>
</tr>
<tr>
<td>noconsolidate</td>
<td>do not consolidate equations and terms</td>
</tr>
</tbody>
</table>

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
        |        F(4, 43)  Prob > F    R-squared   Adj R-squared
    Model |  334.819444    4   83.7048611       Prob > F =  0.0023
    Residual |  727.097222   43  16.9092377       R-squared =  0.3153
    Total |  1061.91667   47 22.5939716       Adj R-squared =  0.2516

mpg | Coef.    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 | -2.5556 | 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
        |        F(2, 18)  Prob > F    R-squared   Adj R-squared
    Model |  22.7301587    2  11.3650794       Prob > F =  0.7706
    Residual |  773.555556   18  42.9753086       R-squared =  0.0285
    Total |  796.285714   20 39.8142857       Adj R-squared =  -0.0794

mpg | Coef.    Std. Err.     t   P>|t|    [95% Conf. Interval]
    |        |                  |     |     |                      |                      |
    rep78 |        |                  |     |     |                      |                      |
    4 | 1.55556 | 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.     _cons
   rep78  rep78  rep78  rep78  rep78  _cons
   y1     0  -1.875  -2  -2.5555  11     21
   y1     .     .     0  1.555556  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