

*Program Name:* **mwtie\_xy**

*Language:* SAS

*Objective:* Generalized Mann-Whitney test for equivalence allowing for arbitrary patterns of ties, computation of the test statistic and its critical upper bound from arbitrary sets of quantitative data

*Input:*

|       |  |
|-------|--|
| ALPHA | significance level   |
| M     | sample size in Group 1   |
| N     | " " " " " 2  |
| EPS1_ | distance from 1/2 of the left-hand endpoint of the equivalence range<br>for $\pi_+/(1-\pi_o) \equiv P[X_i > Y_j]/P[X_i \neq Y_j]$  |
| EPS2_ | distance from 1/2 of the right-hand endpoint of the equivalence range<br>for $\pi_+/(1-\pi_o) \equiv P[X_i > Y_j]/P[X_i \neq Y_j]$ |
| PATH  | full pathname of the file containing the set of raw data   |

*Output:*

|         |  |
|---------|--|
| ALPHA   | value read from input file   |
| M       | " " " " " " "  |
| N       | " " " " " " "  |
| EPS1_   | " " " " " " "  |
| EPS2_   | " " " " " " "  |
| WXY_TIE | estimate of $\pi_+/(1-\pi_o) \equiv P[X_i > Y_j]/P[X_i \neq Y_j]$  |
| SIGMAH  | estimated standard error of WXY_TIE  |
| CRIT    | critical upper bound to the absolute value of the centred, standardized test statistic   |
| REJ     | indicator of the decision to be taken [REJ=1 $\Leftrightarrow$ rejection of the null hypothesis of inequivalence; REJ=0 $\Leftrightarrow$ acceptance of H] |