Table S.6: Type I errors ($\delta = 0$) and power ($\delta \neq 0$) given by the investigated test statistics based on bootstrap approach in detecting location shift between two samples generated from the four pairs of $F(x)$ and $G(x)$ with the non-independent variance-covariance matrix and sample sizes $n = m = 50$.

| $G(x)$ | $\delta$ value | $T_1^2$ | $T_2^{\text{max}}$ | $T_3^{\text{max}}$ | $T_4^{\text{max}}$ | $T_1$ | $T_2$ | $T_3$ | $T_4$ | $T_5$ | $T_1^*$ | $T_2^*$ | $T_3^*$ | $T_4^*$ | $T_5^*$ | $U$ |
|--------|----------------|---------|---------------------|---------------------|---------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|-------|
| (i) 0   | 0.036          | 0.025   | 0.045               | 0.038               | 0.036               | 0.053 | 0.040 | 0.042 | 0.032 | 0.055 | 0.044  | 0.055  | 0.044  | 0.045  | 0.056  |
|        | 0.50           | 0.994   | 0.922               | 0.891               | 0.928               | 0.928 | 0.992 | 0.915 | 0.991 | 0.990 | 0.988  | 0.987  | 0.987  | 0.910  |
|        | 1.00           | 1.00    | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
|        | 1.50           | 1.00    | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
|        | 2.00           | 1.00    | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
| (ii) 0  | 0.011          | 0.028   | 0.049               | 0.036               | 0.043               | 0.060 | 0.059 | 0.045 | 0.049 | 0.039 | 0.051  | 0.052  | 0.039  | 0.041  | 0.062  |
|        | 0.50           | 0.059   | 0.616               | 0.549               | 0.477               | 0.702 | 0.611 | 0.617 | 0.555 | 0.552 | 0.684  | 0.613  | 0.612  | 0.560  | 0.569  | 0.102  |
|        | 1.00           | 0.275   | 0.998               | 0.922               | 0.981               | 1.00  | 0.996 | 0.995 | 0.989 | 0.990 | 0.993  | 0.992  | 0.985  | 0.985  | 0.569  |
|        | 1.50           | 0.500   | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 0.915  |
|        | 2.00           | 0.658   | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 0.989  |
| (iii) 0 | 0.037          | 0.023   | 0.059               | 0.053               | 0.032               | 0.068 | 0.062 | 0.063 | 0.027 | 0.061 | 0.063  | 0.057  | 0.057  | 0.054  | 0.053  |
|        | 0.50           | 0.746   | 0.851               | 0.923               | 0.908               | 0.877 | 0.930 | 0.901 | 0.918 | 0.922 | 0.852  | 0.922  | 0.913  | 0.915  | 0.177  |
|        | 1.00           | 0.997   | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 0.947  |
|        | 1.50           | 0.999   | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
|        | 2.00           | 1.00    | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
| (iv) 0 | 0.038          | 0.022   | 0.058               | 0.044               | 0.029               | 0.064 | 0.064 | 0.054 | 0.053 | 0.032 | 0.057  | 0.057  | 0.047  | 0.051  | 0.060  |
|        | 0.50           | 0.369   | 0.250               | 0.366               | 0.297               | 0.592 | 0.593 | 0.409 | 0.415 | 0.289 | 0.566  | 0.580  | 0.388  | 0.416  | 0.337  |
|        | 1.00           | 0.932   | 0.910               | 0.966               | 0.958               | 0.928 | 0.996 | 0.973 | 0.979 | 0.913 | 0.996  | 0.995  | 0.970  | 0.973  | 0.888  |
|        | 1.50           | 0.999   | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |
|        | 2.00           | 1.00    | 1.00                | 1.00                | 1.00                | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00   | 1.00   | 1.00   | 1.00   | 1.00   |