

A Supplementary File

Table A. Rejection rates of the L-test under the null hypotheses $H_{03} : \beta_3(u, v) = \beta_3$ and $H_{04} : \beta_4(u, v) = \beta_4$ with sample size $n = 441$.

α	Collinearity	Error distribution					
		$N(0, 1)$		$U(-\sqrt{(3)}, \sqrt{(3)})$		$\frac{1}{2}\chi^2(2) - 1$	
		H_{03}	H_{04}	H_{03}	H_{04}	H_{03}	H_{04}
0.01	Independent	0.024	0.036	0.012	0.028	0.020	0.038
	$\rho_{X_1, X_2} = 0.5$	0.038	0.058	0.024	0.038	0.032	0.062
	$\rho_{X_1, X_2} = 0.8$	0.060	0.082	0.030	0.056	0.052	0.090
	$\rho_{X_2, X_3} = 0.5$	0.026	0.042	0.018	0.030	0.022	0.054
	$\rho_{X_2, X_3} = 0.8$	0.024	0.050	0.020	0.034	0.012	0.066
	$\rho_{X_3, X_4} = 0.5$	0.020	0.034	0.012	0.024	0.024	0.038
	$\rho_{X_3, X_4} = 0.8$	0.024	0.026	0.018	0.024	0.032	0.042
0.05	Independent	0.080	0.118	0.062	0.098	0.080	0.130
	$\rho_{X_1, X_2} = 0.5$	0.120	0.150	0.010	0.146	0.118	0.176
	$\rho_{X_1, X_2} = 0.8$	0.164	0.210	0.156	0.190	0.172	0.220
	$\rho_{X_2, X_3} = 0.5$	0.094	0.140	0.070	0.114	0.084	0.158
	$\rho_{X_2, X_3} = 0.8$	0.090	0.148	0.068	0.140	0.076	0.174
	$\rho_{X_3, X_4} = 0.5$	0.092	0.120	0.070	0.108	0.098	0.142
	$\rho_{X_3, X_4} = 0.8$	0.102	0.108	0.084	0.112	0.108	0.140
0.10	Independent	0.136	0.184	0.142	0.200	0.138	0.214
	$\rho_{X_1, X_2} = 0.5$	0.198	0.264	0.190	0.270	0.192	0.278
	$\rho_{X_1, X_2} = 0.8$	0.272	0.358	0.260	0.342	0.278	0.360
	$\rho_{X_2, X_3} = 0.5$	0.154	0.218	0.126	0.228	0.148	0.234
	$\rho_{X_2, X_3} = 0.8$	0.162	0.254	0.118	0.258	0.150	0.274
	$\rho_{X_3, X_4} = 0.5$	0.178	0.196	0.150	0.198	0.150	0.236
	$\rho_{X_3, X_4} = 0.8$	0.198	0.220	0.156	0.198	0.172	0.206

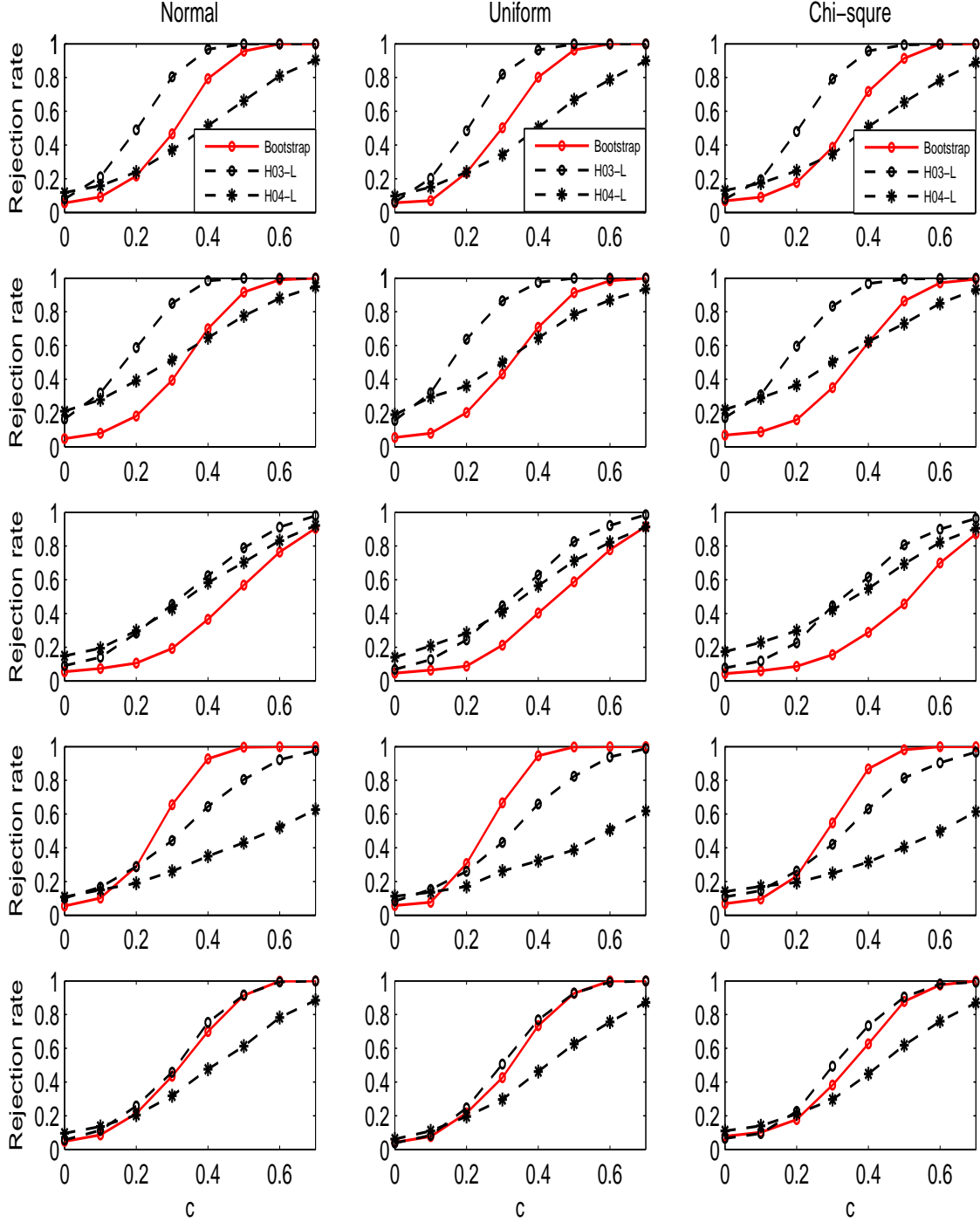


Figure A. Power functions of the bootstrap test for the null hypothesis $H_0 : \beta_3(u, v) = \beta_3$ and $\beta_4(u, v) = \beta_4$ and the L-test for the null hypotheses $H_{03} : \beta_3(u, v) = \beta_3$ (“H03-L” in the legend) and $H_{04} : \beta_4(u, v) = \beta_4$ (“H04-L” in the legend) with the significance level $\alpha = 0.05$ and the sample size $n = 441$. The first to the fifth rows are respectively for (i) mutually independent variables; (ii) $\rho_{X_1, X_2} = 0.8$; (iii) $\rho_{X_2, X_3} = 0.8$; (iv) $\rho_{X_3, X_4} = 0.8$; and (v) $\rho_{X_2, X_3} = -0.8$.