

Supplementary Materials 2 to “Linear hypothesis testing with functional data”

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Simulation results

Figures 1–16 and Tables 1–44 depict the results of simulations described and discussed in Sections 2 and 3 of the paper. The list of them is given below. The simulation results for testing (separate) hypotheses specified by the coefficient matrices $\mathbf{C}_i, i = 1, \dots, 6$ look quite similar. Thus some of them are omitted. However, they are available from the authors.

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References

- [1] Imhof, J. P. (1961). Computing the distribution of quadratic forms in normal variables. *Biometrika*, **48**, 419–426.

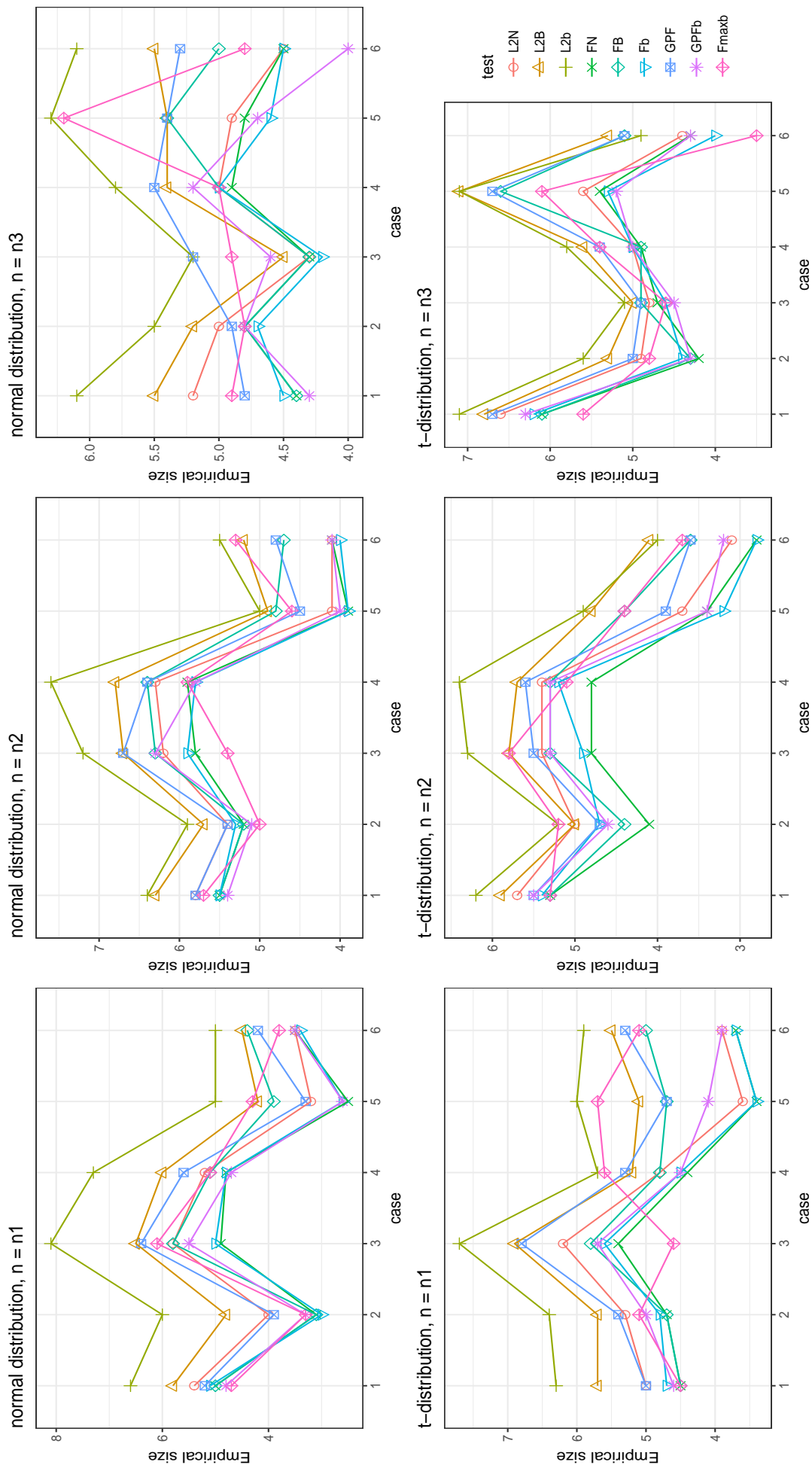
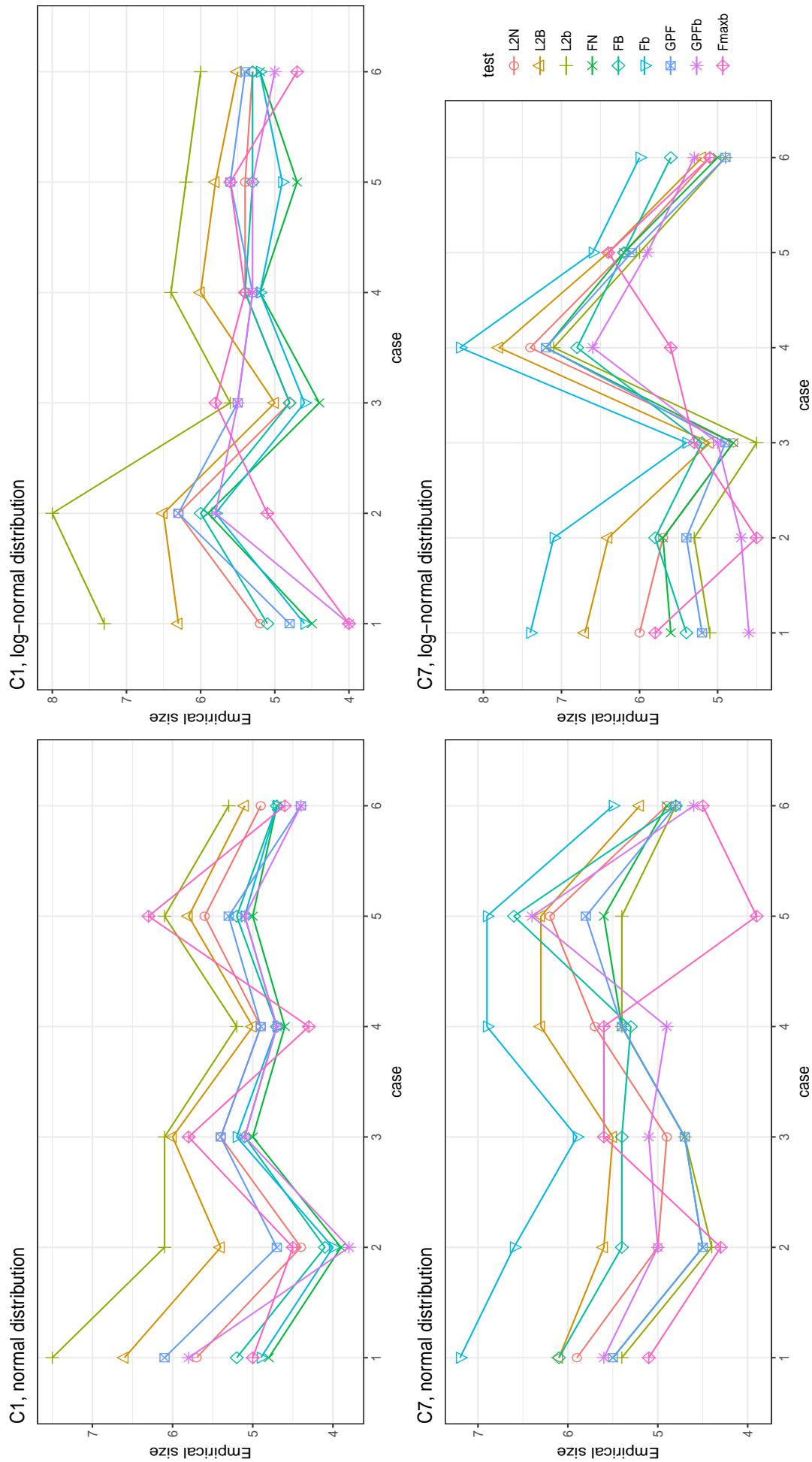


Figure 1: Empirical sizes (as percentages) of the tests obtained for C_1 under Model 1 for cases of (ρ, M) : 1. $(0.1, 80)$, 2. $(0.1, 150)$, 3. $(0.5, 80)$, 4. $(0.5, 150)$, 5. $(0.9, 80)$, 6. $(0.9, 150)$ ($\delta = 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $n_r = 1000$, $n_{boot} = 10,000$, $\alpha = 5\%$). See also Table 3.



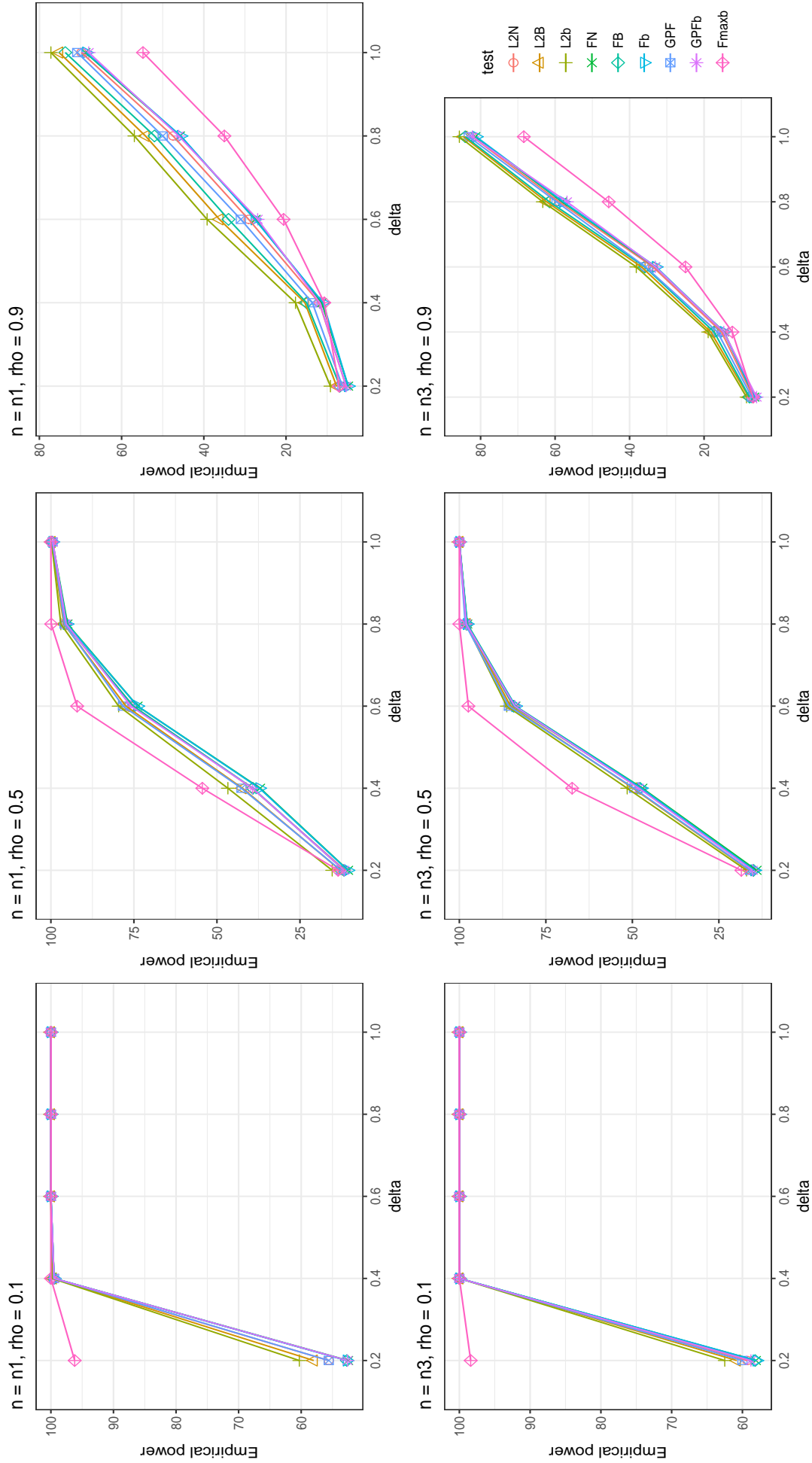


Figure 3: Empirical powers (as percentages) of the tests obtained for C_2 under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $n_{boot} = 10,000$, $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Tables 6 and 7.

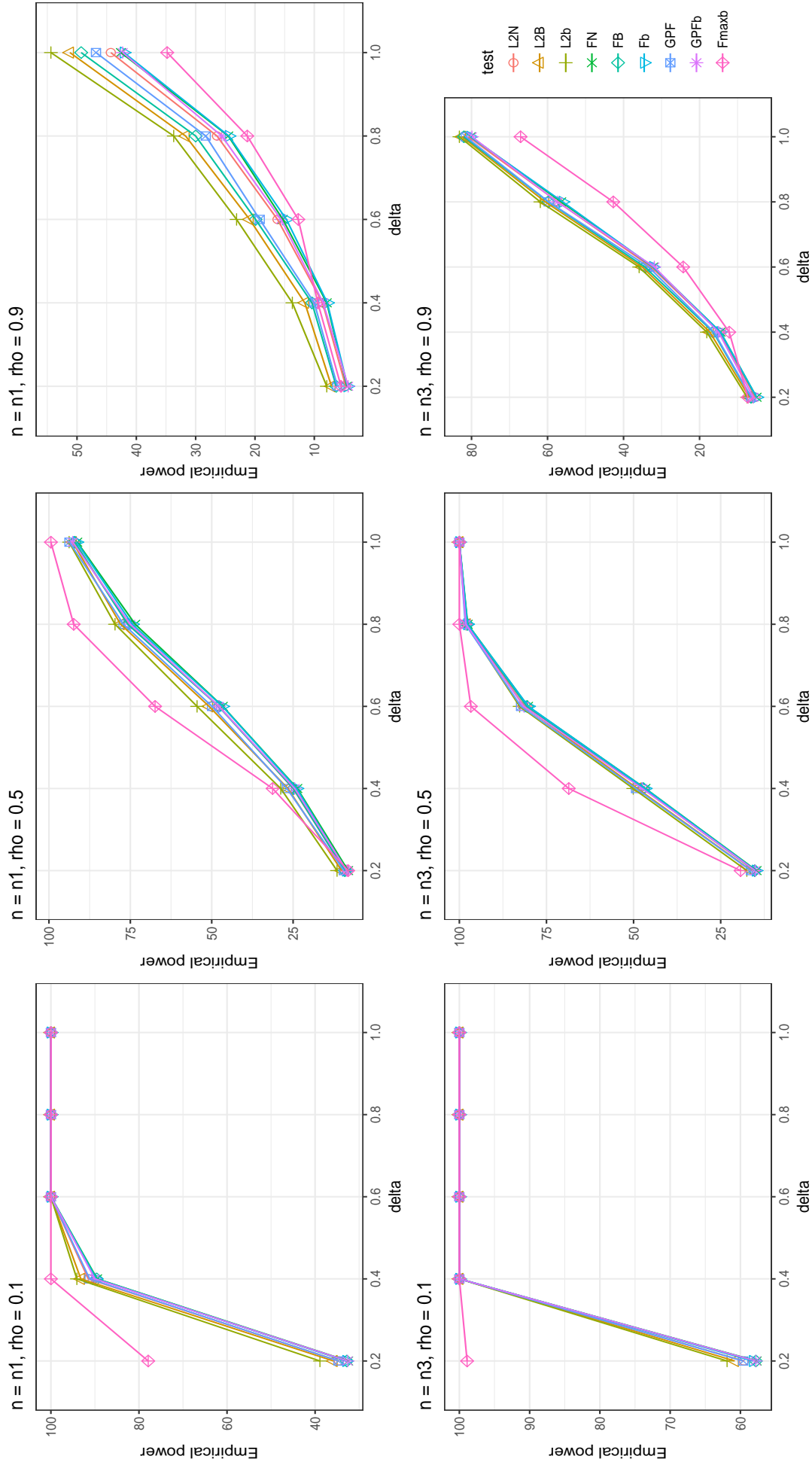
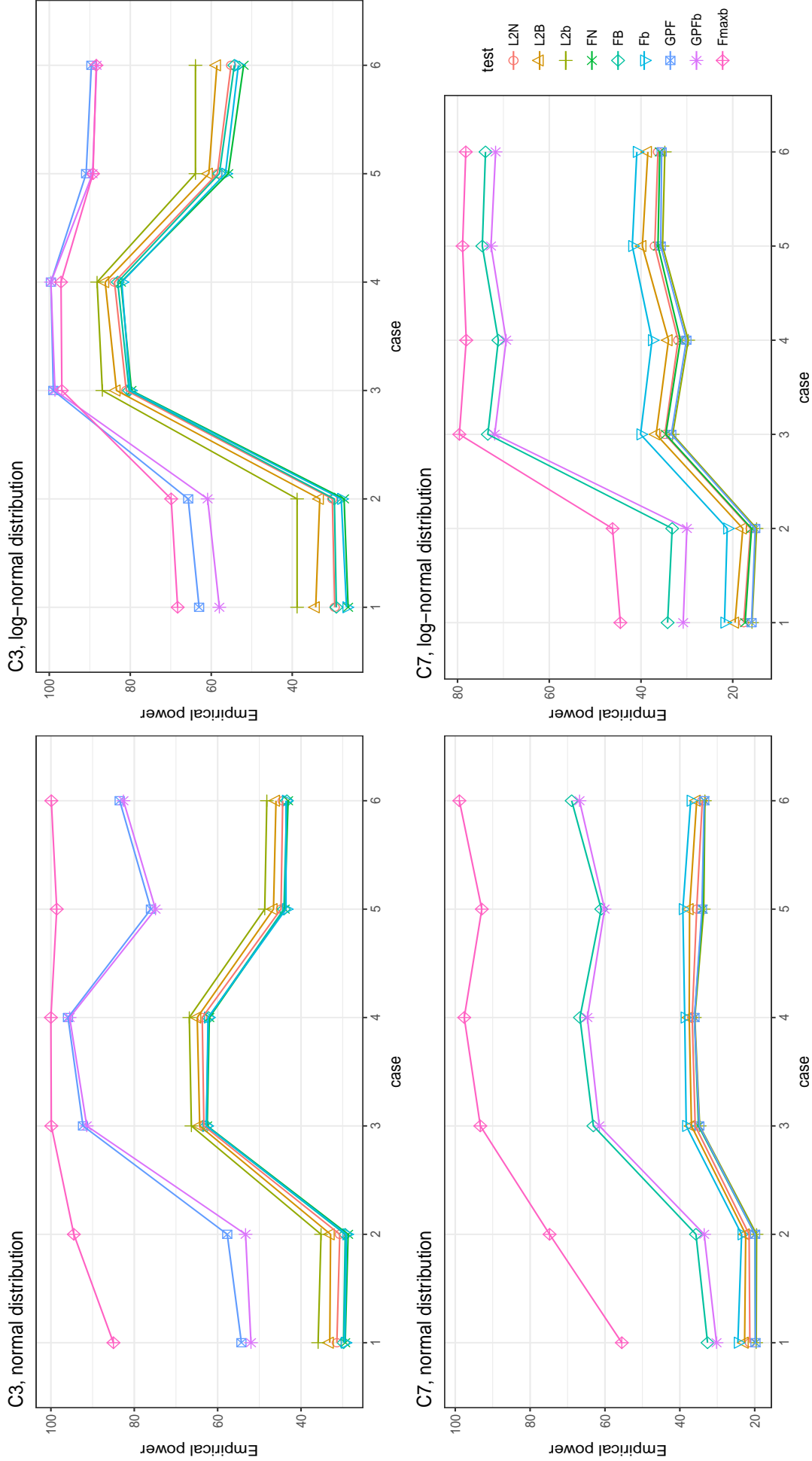


Figure 4: Empirical powers (as percentages) of the tests obtained for C_7 under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Tables 8 and 9.



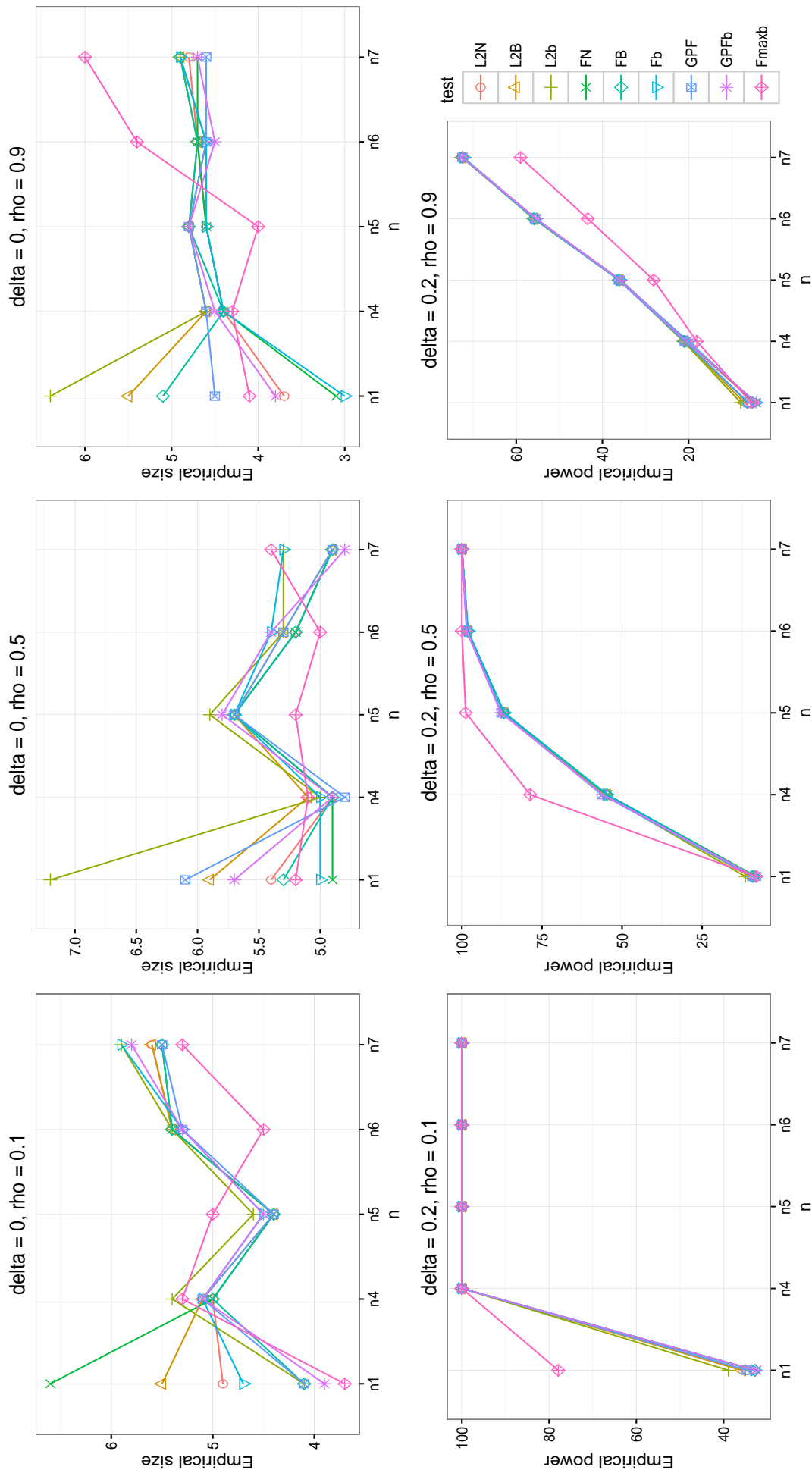


Figure 6: Empirical sizes and powers (as percentages) of the tests obtained for C_7 under Model 1 and standard normal distribution, when the number of observations is larger ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_4 = (100, 100, 100, 100)$, $\mathbf{n}_5 = (200, 200, 200, 200)$, $\mathbf{n}_6 = (300, 300, 300, 300)$, $\mathbf{n}_7 = (400, 400, 400, 400)$, $n_r = 1000$, $n_{boot} = 10,000$, $\alpha = 5\%$).

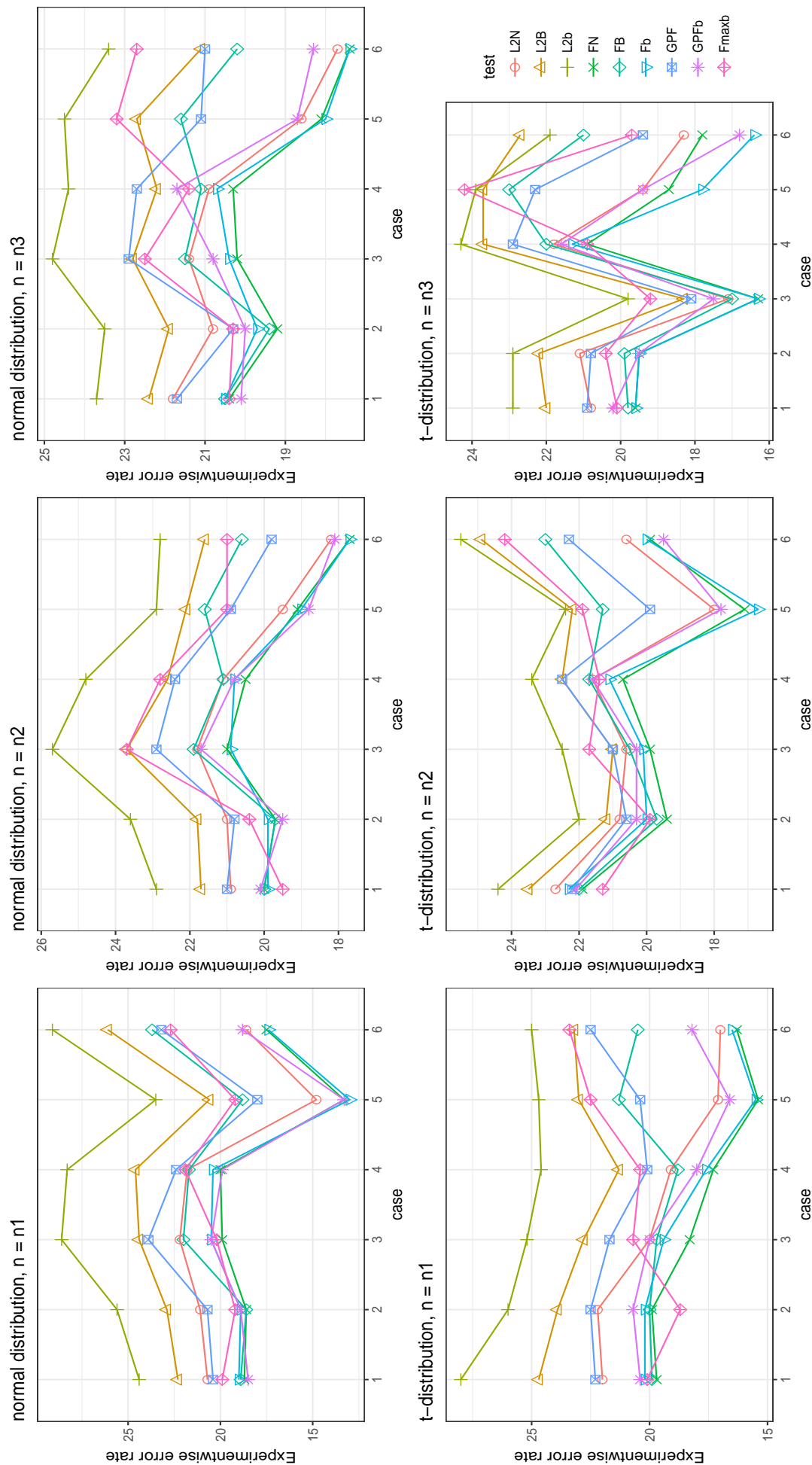


Figure 7: Experimentwise error rates (as percentages) of the tests obtained under Model 1 when all group mean functions are equal, i.e., $\delta = 0$, for cases of (ρ, M) : 1. $(0.1, 80)$, 2. $(0.1, 150)$, 3. $(0.5, 80)$, 4. $(0.5, 150)$, 5. $(0.9, 80)$, 6. $(0.9, 150)$ ($\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). See also Table 15.

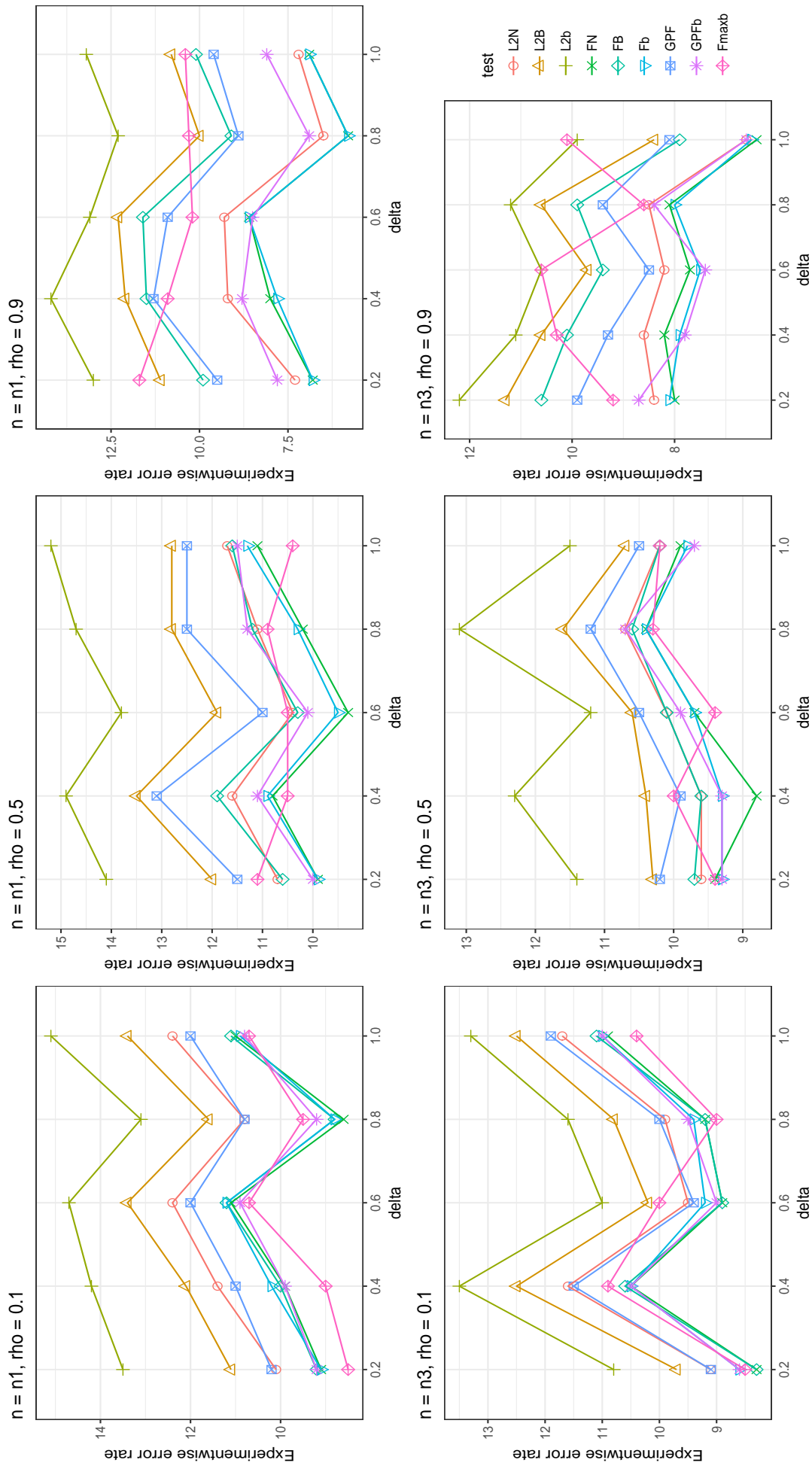


Figure 8: Experimentwise error rates (as percentages) of the tests obtained under Model 1 and standard normal distribution when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Tables 16 and 17.

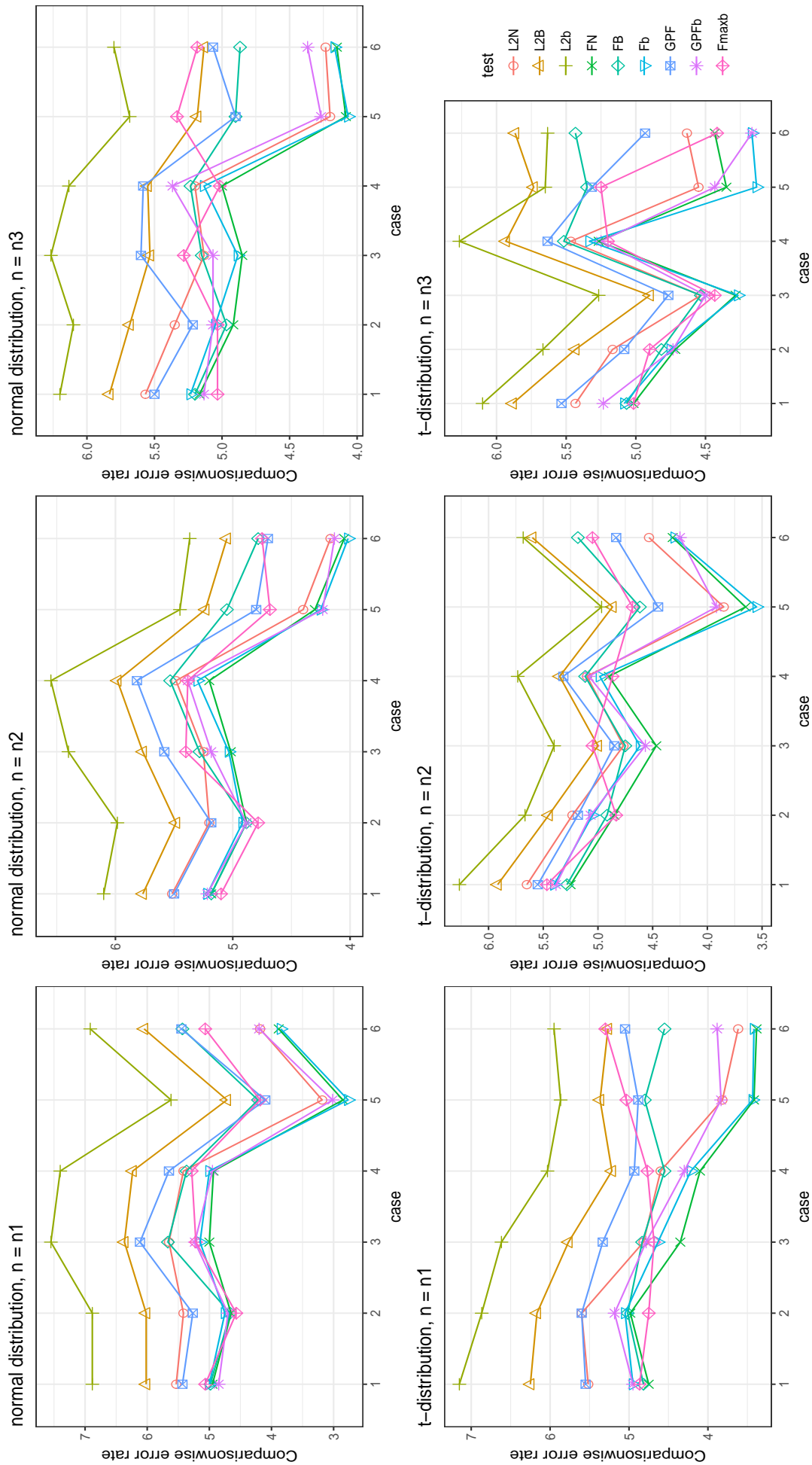


Figure 9: Comparisonwise error rates (as percentages) of the tests obtained under Model 1 when all group mean functions are equal, i.e., $\delta = 0$, for cases of (ρ, M) : 1. (0.1, 80), 2. (0.1, 150), 3. (0.5, 80), 4. (0.5, 150), 5. (0.9, 80), 6. (0.9, 150) ($\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $n_r = 1000$, $n_{boot} = 10,000$, $\alpha = 5\%$). See also Table 18.

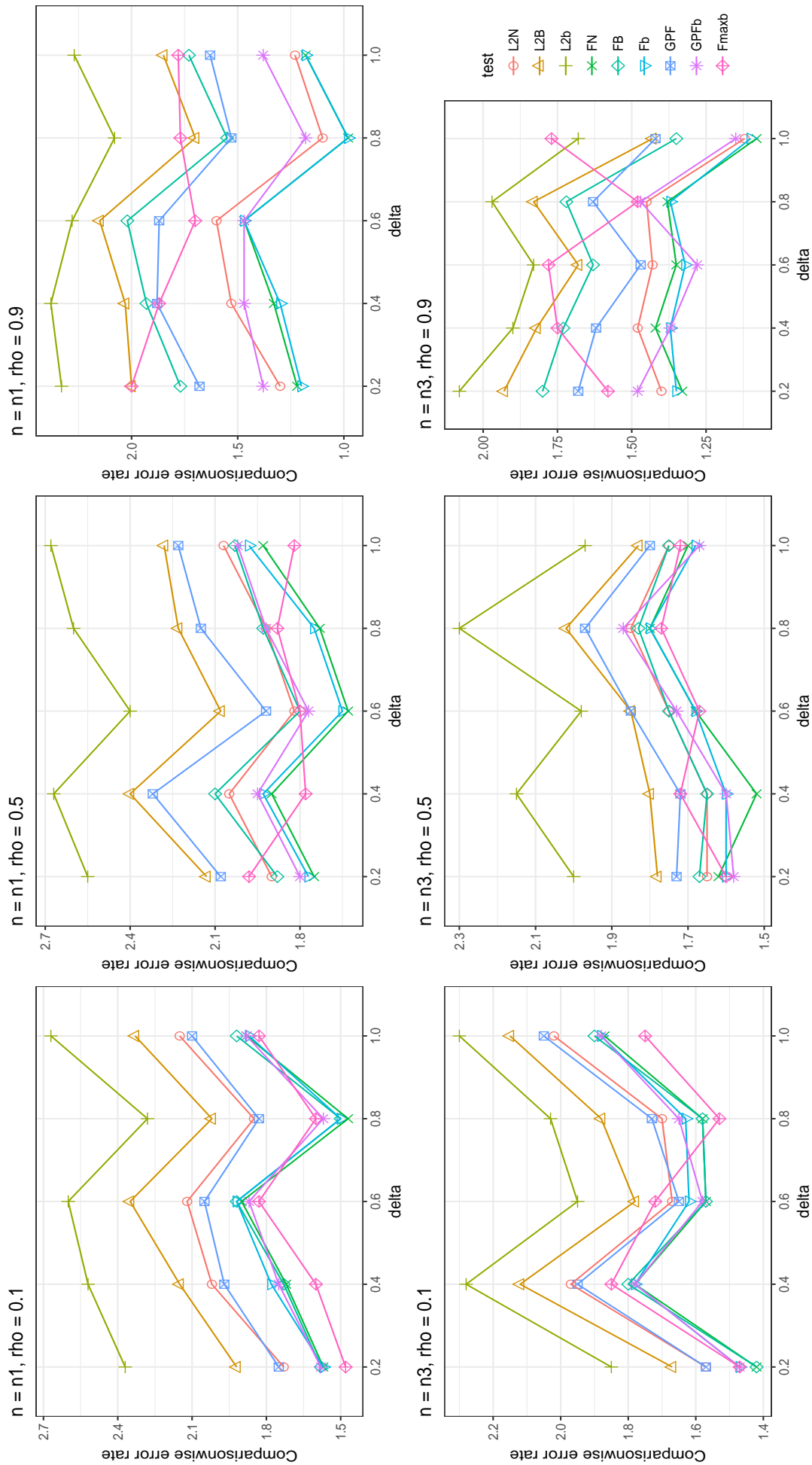
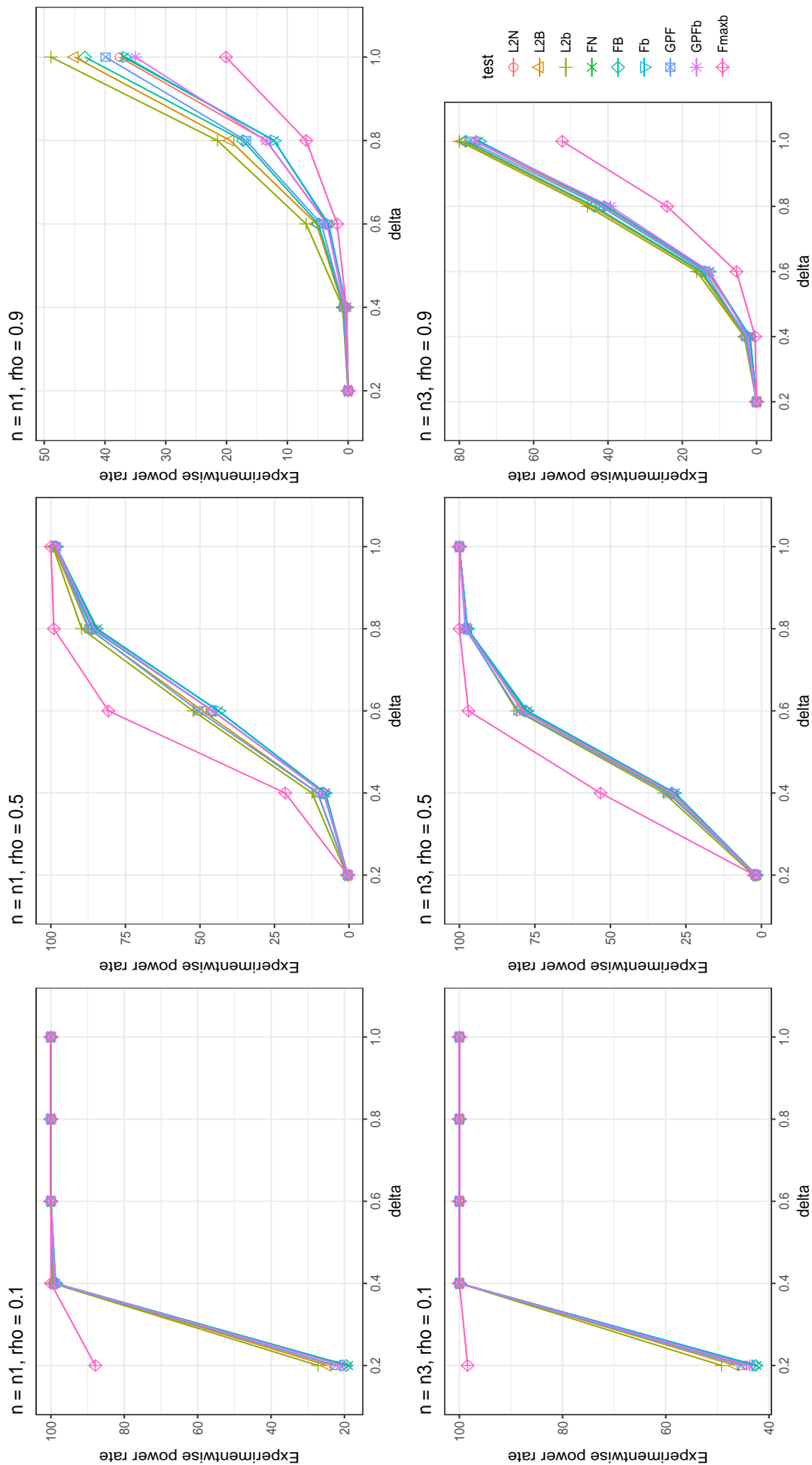


Figure 10: Comparisonwise error rates (as percentages) of the tests obtained under Model 1 and standard normal distribution when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Tables 19 and 20.



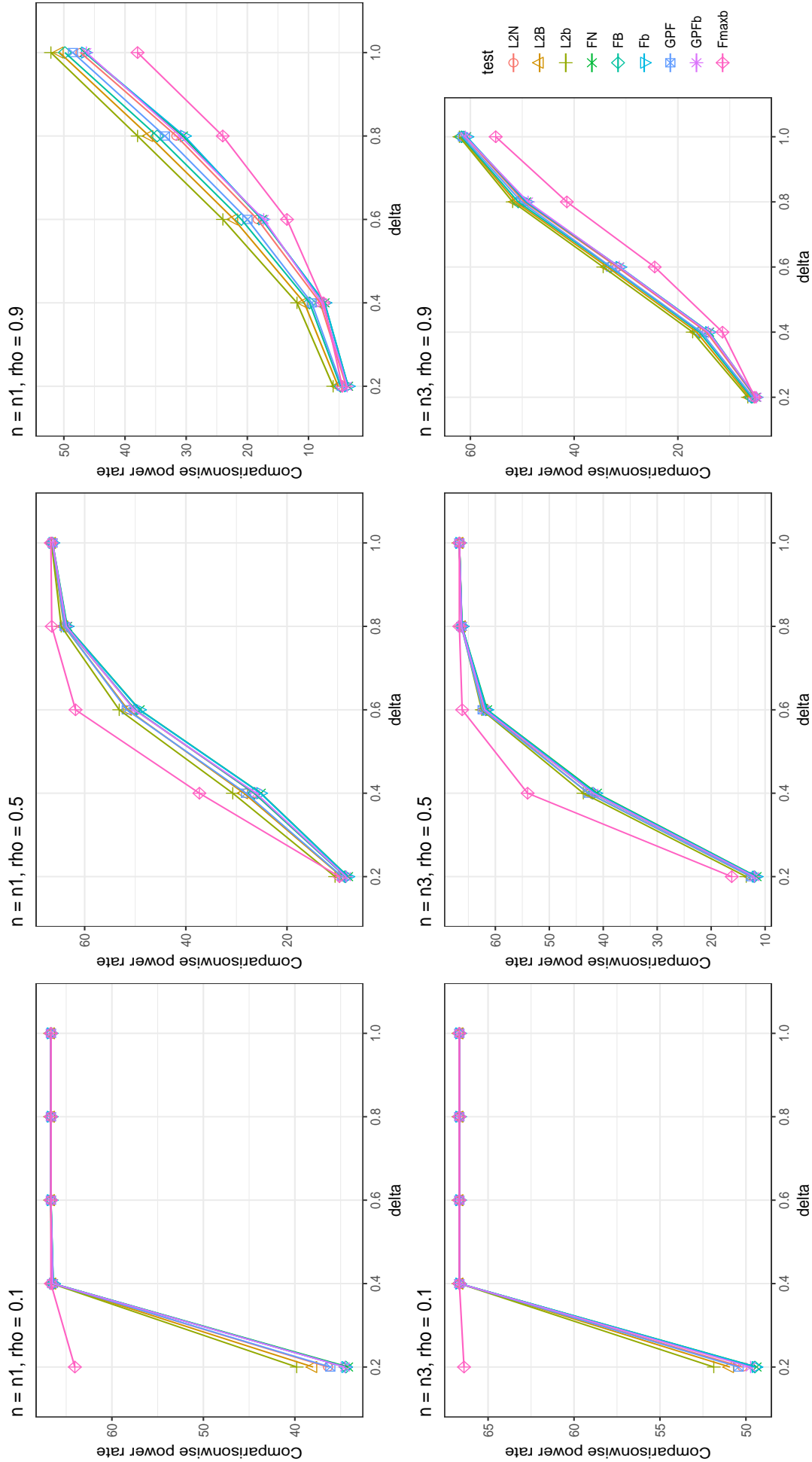
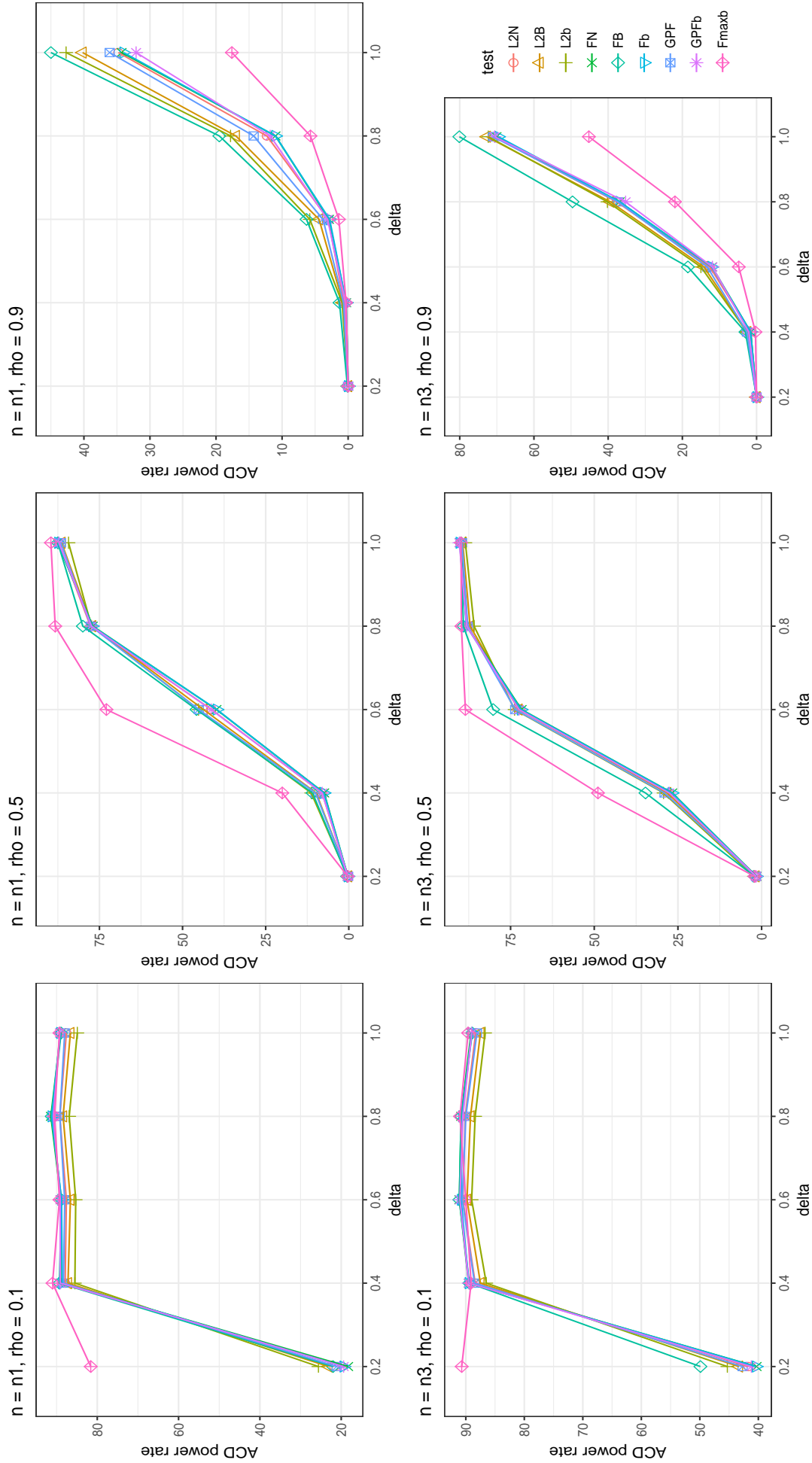


Figure 12: Comparisonwise power rates (as percentages) of the tests obtained under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Tables 23 and 24.



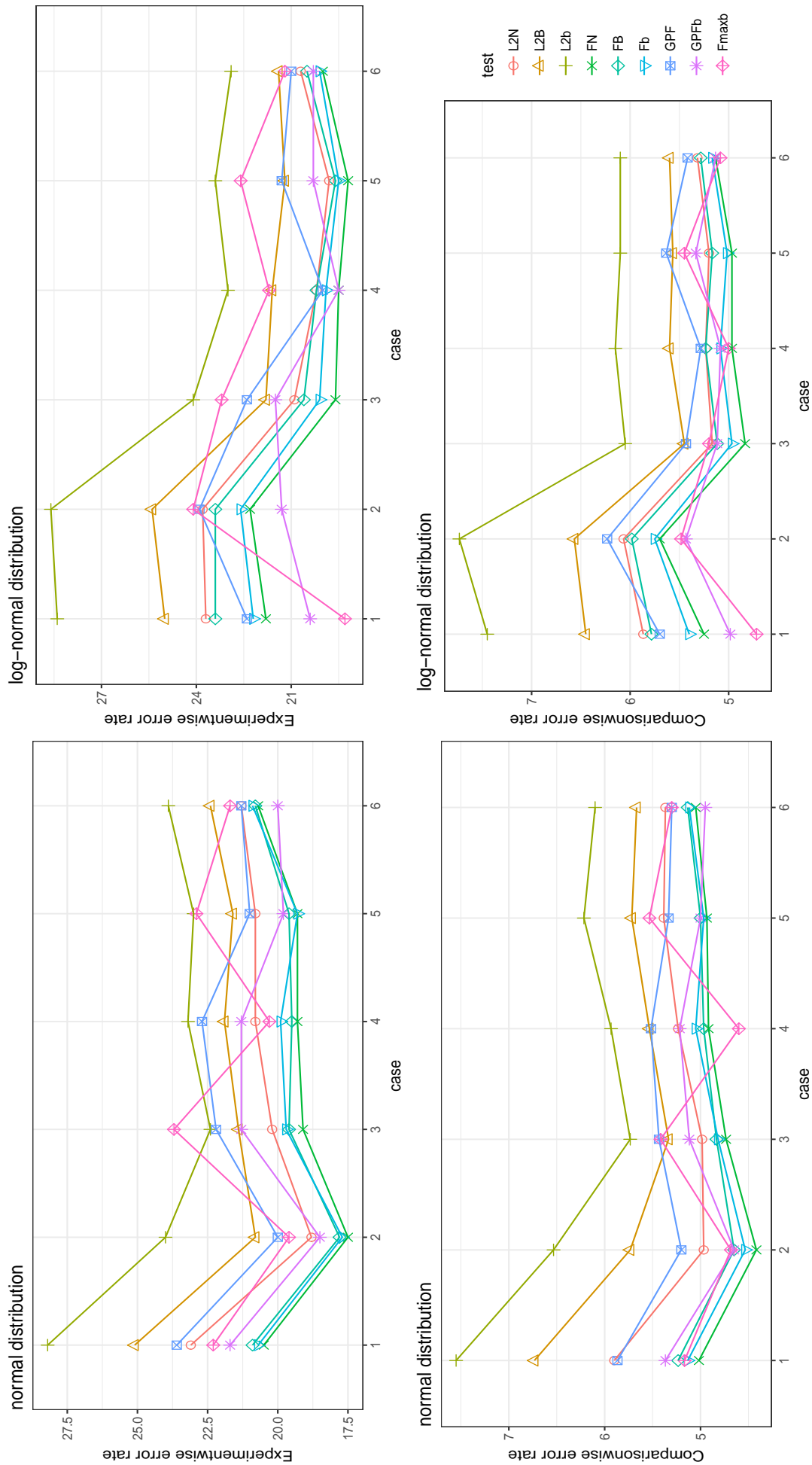


Figure 14: Experimentwise and comparisonwise error rates (as percentages) of the tests obtained under Model 2 and equal group mean functions for cases of (\mathbf{n}, M) : 1. $(\mathbf{n}_1, 40)$, 2. $(\mathbf{n}_1, 80)$, 3. $(\mathbf{n}_2, 40)$, 4. $(\mathbf{n}_2, 80)$, 5. $(\mathbf{n}_3, 40)$, 6. $(\mathbf{n}_3, 80)$, where $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$ ($nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). See also Table 27.

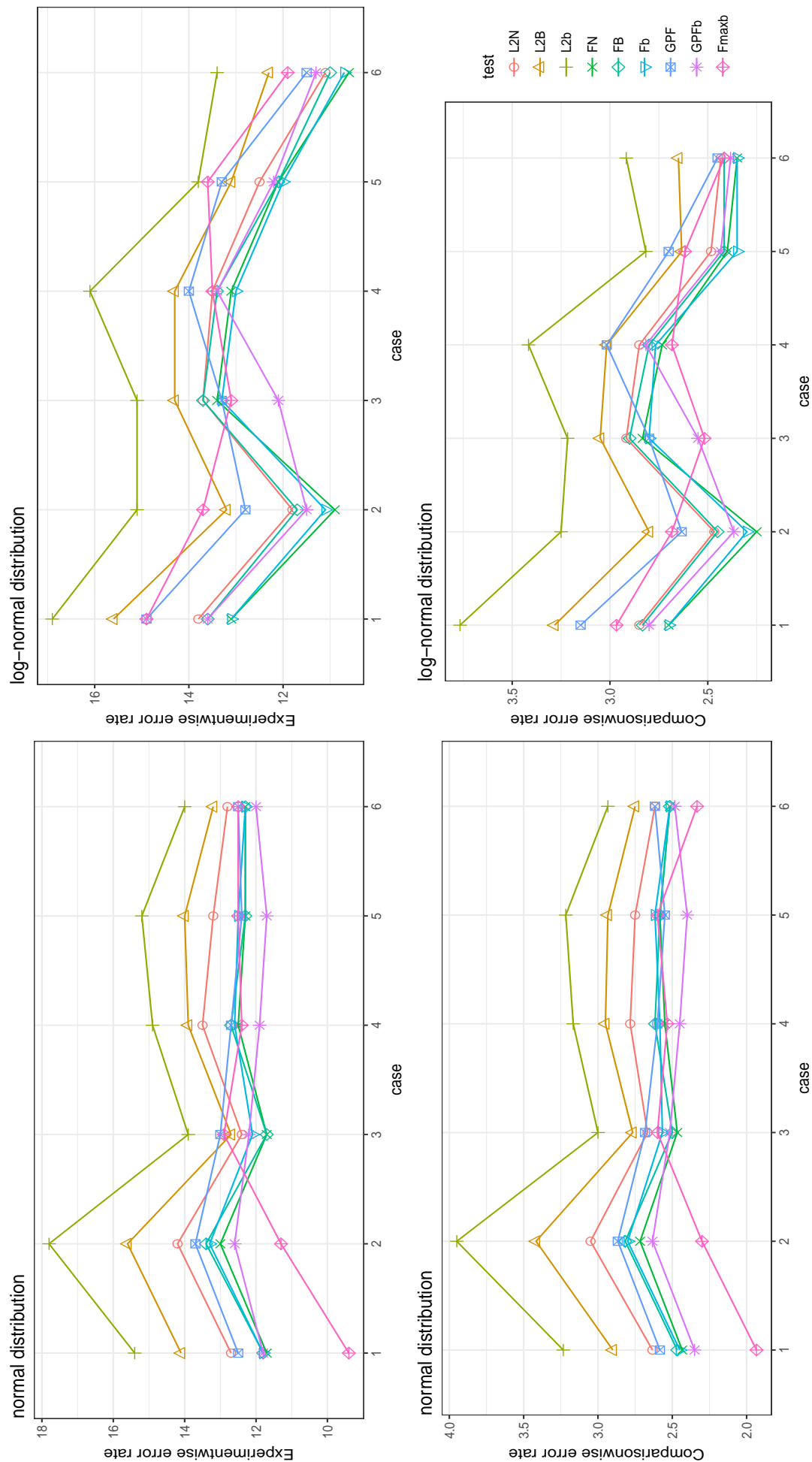


Figure 15: Experimentwise and comparisonwise error rates (as percentages) of the tests obtained under Model 2 and unequal group mean functions for cases of (\mathbf{n}, M) : 1. $(\mathbf{n}_1, 40)$, 2. $(\mathbf{n}_1, 80)$, 3. $(\mathbf{n}_2, 40)$, 4. $(\mathbf{n}_2, 80)$, 5. $(\mathbf{n}_3, 40)$, 6. $(\mathbf{n}_3, 80)$, where $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$ ($nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). See also Table 27.

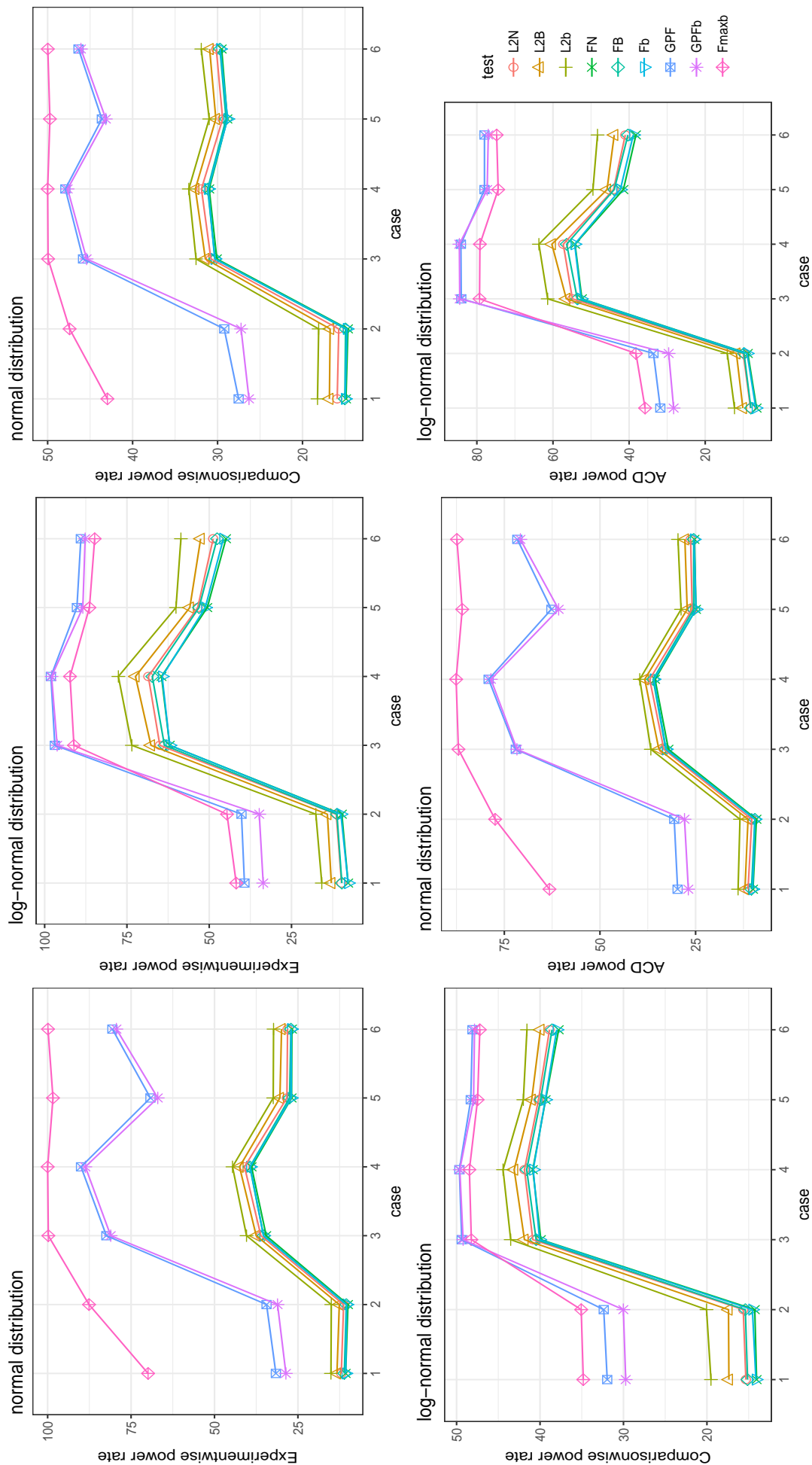


Figure 16: Experimentwise, comparisonwise and ACD power rates (as percentages) of the tests obtained under Model 2 for cases of (\mathbf{n}, M) : 1. $(\mathbf{n}_1, 40)$, 2. $(\mathbf{n}_1, 80)$, 3. $(\mathbf{n}_2, 40)$, 4. $(\mathbf{n}_2, 80)$, 5. $(\mathbf{n}_3, 40)$, 6. $(\mathbf{n}_3, 80)$, where $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$ ($nr = 1000$, $nboot = 10,000$, $\alpha = 5\%$). See also Table 28.

Table 1: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the GPF test obtained for \mathbf{C}_7 under Model 3, when the asymptotic null distribution of the test statistic GPF_n is approximated by the Welch-Satterthwaite χ^2 -approximation (WS) and by the Imhof's (1961) method (I) ($\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$ and $\alpha = 5\%$).

Distr.			δ											
			0		0.2		0.4		0.6		0.8		1	
			WS	I	WS	I	WS	I	WS	I	WS	I	WS	I
$N(0, 1)$	\mathbf{n}_1	0.1	80	6.9	7.0	34.4	35.2	91.1	91.3	99.9	99.9	100	100	100
			150	7.1	7.3	31.0	31.4	91.6	92.1	100	100	100	100	100
		0.5	80	6.3	6.8	11.6	12.0	28.6	29.6	52.0	52.4	77.4	78.5	93.6
			150	5.9	6.8	11.5	12.0	25.0	26.0	50.8	52.1	77.3	78.9	93.8
	\mathbf{n}_3	0.9	80	5.3	6.0	7.3	7.9	11.1	12.5	19.3	20.7	30.6	32.4	47.1
			150	4.9	5.9	6.9	7.5	10.6	12.0	18.6	19.9	31.6	32.6	45.1
		0.1	80	6.8	6.8	59.2	59.5	100	100	100	100	100	100	100
			150	6.5	6.6	59.8	59.9	100	100	100	100	100	100	100
	\mathbf{n}_3	0.5	80	5.9	5.9	14.7	15.3	45.6	46.4	83.9	84.6	98.1	98.5	100
			150	6.1	6.4	14.7	15.0	47.5	48.2	83.8	84.4	98.5	98.6	100
	\mathbf{n}_3	0.9	80	5.2	5.6	7.5	7.9	16.1	17.0	34.5	35.2	58.6	59.4	80.8
			150	5.1	5.4	8.4	8.6	16.6	17.5	34.3	35.6	61.3	62.7	81.6
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	6.3	6.5	34.2	34.7	92.0	92.3	100	100	100	100	100
			150	6.1	6.3	36.0	36.6	90.4	90.6	98.9	98.9	99.8	99.8	99.9
		0.5	80	5.7	5.7	11.1	11.4	25.8	26.5	53.7	54.5	81.1	81.2	93.8
			150	6.1	6.6	10.9	11.4	26.5	27.1	53.5	54.6	77.8	78.1	92.8
	\mathbf{n}_3	0.9	80	4.0	4.7	6.1	7.0	10.2	10.6	16.4	18.2	27.9	29.4	45.1
			150	4.6	5.2	6.4	7.1	10.5	11.8	17.1	18.0	26.7	28.9	45.8
		0.1	80	3.8	3.8	61.4	61.5	99.3	99.3	99.9	99.9	99.9	99.9	99.9
			150	4.1	4.1	64.9	65.0	99.7	99.7	100	100	100	100	100
	\mathbf{n}_3	0.5	80	4.4	4.4	14.4	14.5	48.0	48.3	83.5	83.5	97.7	97.7	99.8
			150	4.8	5.0	15.9	16.0	50.5	50.6	85.0	85.2	98.0	98.0	99.8
	\mathbf{n}_3	0.9	80	4.8	4.9	6.9	7.2	14.4	14.9	32.2	32.9	57.0	57.8	80.5
			150	4.2	4.4	6.6	6.9	18.1	18.2	36.6	37.4	59.5	60.3	80.5

Table 2: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the GPF and Fmax tests obtained for C_7 under Model 3, when the asymptotic null distribution of the test statistic GPF_n (resp. $Fmax_n$) is approximated by the Welch-Satterthwaite χ^2 -approximation (WS) and by the parametric bootstrap method (GPB) (resp. by the parametric bootstrap method (FPB)) ($\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

Distr.	\mathbf{n}	ρ	M	δ											
				0				0.2				0.4			
				WS	GPB	FPB		WS	GPB			WS	GPB		
$N(0, 1)$	\mathbf{n}_1	0.1	80	6.5	6.4	10.1	32.2	32.2	32.7	92.0	92.4	100	100	100	100
			150	5.7	5.9	10.6	31.9	32.9		92.3	92.6	100	100	100	100
		0.5	80	6.8	6.9	9.6	9.5	9.9		26.1	26.9	50.9	51.6	78.2	78.6
			150	5.6	5.8	9.4	10.8	11.3		24.0	25.0	52.0	53.0	78.6	79.3
	\mathbf{n}_3	0.9	80	4.5	4.8	10.0	6.4	7.3		10.7	11.9	16.0	17.7	28.6	30.3
			150	4.4	4.8	11.1	6.5	7.5		9.8	11.2	17.6	18.8	28.4	30.1
		0.1	80	5.2	5.2	6.9	62.1	62.1		100	100	100	100	100	100
			150	6.0	6.1	7.8	61.4	61.2		100	100	100	100	100	100
		0.5	80	4.5	4.6	7.3	16.4	16.6		47.6	48.0	82.3	82.3	98.3	98.3
			150	5.3	5.1	8.0	13.7	13.8		50.2	50.2	86.0	86.2	97.9	98.1
	$t_4/\sqrt{2}$	0.9	80	4.4	4.5	6.8	7.4	8.0		16.4	16.8	35.3	36.3	61.8	62.2
			150	4.4	4.7	6.9	7.6	7.7		17.8	18.3	36.4	37.5	59.3	60.3
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	5.4	5.4	8.4	33.6	34.5		89.8	90.5	99.7	99.7	100	100
			150	6.2	6.3	10.9	37.6	39.0		91.3	91.7	98.9	99.0	99.9	100
		0.5	80	5.7	6.0	11.1	10.9	11.4		27.7	28.4	53.9	54.7	78.2	79.0
			150	5.1	5.2	10.5	11.2	11.5		25.8	26.5	52.7	54.2	78.9	79.5
	\mathbf{n}_3	0.9	80	4.0	4.3	10.6	4.8	5.5		10.6	11.1	15.8	16.9	25.8	28.2
			150	4.8	5.2	11.2	5.5	6.6		7.8	8.5	17.6	19.1	27.5	28.5
		0.1	80	4.2	4.1	5.7	60.4	60.5		99.8	99.8	100	100	100	100
			150	5.7	5.8	7.6	63.4	63.1		99.6	99.7	99.9	99.9	100	100
		0.5	80	4.4	4.6	7.0	16.7	16.7		52.4	52.2	82.7	82.9	96.8	96.8
			150	5.5	5.6	8.5	13.6	13.6		49.7	50.0	84.8	84.9	98.6	98.6
		0.9	80	5.1	5.3	7.5	8.2	8.5		13.8	14.0	30.2	31.8	58.3	58.8
			150	4.4	4.2	6.6	7.7	7.8		16.0	16.5	36.0	36.8	59.8	60.3

Table 3: Empirical sizes (as percentages) of the tests obtained for \mathbf{C}_1 under Model 1 ($\delta = 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). See also Figure 1.

Distr.	\mathbf{n}	ρ	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
$N(0, 1)$	\mathbf{n}_1	0.1	80	5.4	5.8	6.6	5.0	5.0	5.1	5.2	4.8	4.7
			150	4.0	4.8	6.0	3.1	3.1	3.0	3.9	3.3	3.3
		0.5	80	5.8	6.5	8.1	4.9	5.8	5.0	6.4	5.5	6.1
			150	5.2	6.0	7.3	4.8	5.1	4.8	5.6	4.7	5.1
		0.9	80	3.2	4.2	5.0	2.5	3.9	2.6	3.3	2.6	4.3
			150	3.5	4.5	5.0	3.5	4.4	3.4	4.2	3.5	3.8
	\mathbf{n}_2	0.1	80	5.8	6.3	6.4	5.5	5.5	5.5	5.8	5.4	5.7
			150	5.4	5.7	5.9	5.2	5.2	5.3	5.4	5.1	5.0
		0.5	80	6.2	6.7	7.2	5.8	6.3	5.9	6.7	6.3	5.4
			150	6.3	6.8	7.6	5.9	6.4	5.8	6.4	5.8	5.9
		0.9	80	4.1	4.9	5.0	3.9	4.8	3.9	4.5	4.0	4.6
			150	4.1	5.2	5.5	4.1	4.7	4.0	4.8	4.1	5.3
	\mathbf{n}_3	0.1	80	5.2	5.5	6.1	4.4	4.4	4.5	4.8	4.3	4.9
			150	5.0	5.2	5.5	4.8	4.8	4.7	4.9	4.8	4.8
		0.5	80	4.3	4.5	5.2	4.3	4.3	4.2	5.2	4.6	4.9
			150	5.0	5.4	5.8	4.9	5.0	5.0	5.5	5.2	5.0
		0.9	80	4.9	5.4	6.3	4.8	5.4	4.6	5.4	4.7	6.2
			150	4.5	5.5	6.1	4.5	5.0	4.5	5.3	4.0	4.8
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	5.0	5.7	6.3	4.5	4.5	4.7	5.0	4.6	4.5
			150	5.3	5.7	6.4	4.7	4.7	4.8	5.4	5.0	5.1
		0.5	80	6.2	6.9	7.7	5.4	5.8	5.6	6.8	5.7	4.6
			150	4.8	5.2	5.7	4.4	4.8	4.5	5.3	4.5	5.6
		0.9	80	3.6	5.1	6.0	3.4	4.7	3.4	4.7	4.1	5.7
			150	3.9	5.5	5.9	3.7	5.0	3.7	5.3	3.9	5.1
	\mathbf{n}_2	0.1	80	5.7	5.9	6.2	5.3	5.3	5.4	5.5	5.5	5.3
			150	5.0	5.0	5.2	4.1	4.4	4.7	4.7	4.6	5.2
		0.5	80	5.4	5.8	6.3	4.8	5.3	4.9	5.5	5.3	5.8
			150	5.4	5.7	6.4	4.8	5.3	5.2	5.6	5.3	5.1
		0.9	80	3.7	4.8	4.9	3.4	4.4	3.2	3.9	3.4	4.4
			150	3.1	4.1	4.0	2.8	3.6	2.8	3.6	3.2	3.7
	\mathbf{n}_3	0.1	80	6.6	6.8	7.1	6.1	6.1	6.2	6.7	6.3	5.6
			150	4.9	5.3	5.6	4.2	4.3	4.4	5.0	4.3	4.8
		0.5	80	4.8	5.0	5.1	4.7	4.9	4.6	4.9	4.5	4.6
			150	5.0	5.6	5.8	4.9	4.9	5.0	5.4	5.0	5.4
		0.9	80	5.6	7.1	7.1	5.4	6.6	5.3	6.7	5.2	6.1
			150	4.4	5.3	4.9	4.3	5.1	4.0	5.1	4.3	3.5

Table 4: Empirical sizes (as percentages) of the tests obtained for \mathbf{C}_7 under Model 1 ($\delta = 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

Distr.	\mathbf{n}	ρ	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
$N(0, 1)$	\mathbf{n}_1	0.1	80	4.9	5.5	6.6	4.1	4.1	4.1	4.7	3.9	3.7
			150	4.6	5.1	6.0	4.2	4.2	4.2	4.7	4.3	4.4
		0.5	80	5.4	5.9	7.2	4.9	5.3	5.0	6.1	5.7	5.2
			150	4.5	5.2	6.8	4.2	4.7	4.3	5.1	4.6	4.5
		0.9	80	3.7	5.5	6.4	3.1	5.1	3.0	4.5	3.8	4.1
			150	2.8	4.8	6.0	2.7	4.3	2.6	3.8	3.2	4.3
	\mathbf{n}_2	0.1	80	4.5	4.7	5.1	4.4	4.5	4.5	4.5	4.4	4.3
			150	5.1	5.1	5.6	4.9	4.9	4.9	5.0	5.0	4.6
		0.5	80	4.2	4.4	5.0	4.0	4.2	4.0	4.4	3.9	4.6
			150	5.8	6.0	6.1	5.6	5.8	5.7	5.7	5.5	5.2
		0.9	80	3.6	5.1	5.3	3.5	4.7	3.2	4.0	3.3	4.3
			150	3.9	4.7	5.1	3.8	4.4	3.7	4.4	4.1	3.5
	\mathbf{n}_3	0.1	80	4.7	4.8	5.1	4.6	4.6	4.7	4.8	4.7	4.9
			150	6.1	6.4	6.6	5.3	5.5	5.4	6.2	5.6	5.9
		0.5	80	4.4	4.7	5.1	4.4	4.4	4.4	4.7	4.5	4.6
			150	6.3	7.0	7.6	5.9	6.3	5.9	6.3	5.9	4.6
		0.9	80	4.5	6.1	6.9	4.5	6.1	4.5	5.5	4.7	4.6
			150	5.0	5.8	6.2	4.8	5.5	4.8	5.5	4.9	4.9
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	5.5	6.1	6.6	4.8	4.8	5.0	5.3	4.9	4.5
			150	5.8	6.0	6.3	5.1	5.1	5.0	5.8	5.1	4.9
		0.5	80	5.7	6.3	7.4	5.4	5.7	5.3	6.4	5.1	4.9
			150	4.0	4.8	6.4	3.6	4.0	3.9	5.0	4.4	4.7
		0.9	80	4.2	5.8	6.5	3.9	5.4	4.0	5.4	4.0	5.4
			150	3.6	6.5	6.7	3.5	5.7	3.7	5.4	4.3	5.0
	\mathbf{n}_2	0.1	80	5.9	6.3	6.9	5.7	5.7	5.7	5.9	5.5	5.4
			150	5.3	5.5	6.2	5.0	5.1	5.1	5.2	5.0	5.5
		0.5	80	4.4	4.6	5.0	4.1	4.4	4.0	4.7	4.2	5.2
			150	4.8	5.0	5.5	4.6	4.8	4.7	5.0	4.7	5.2
		0.9	80	4.1	4.9	5.1	3.9	4.6	4.0	4.7	4.3	5.1
			150	4.1	5.0	5.3	3.9	5.0	3.9	4.7	4.2	4.7
	\mathbf{n}_3	0.1	80	4.4	4.7	5.2	4.2	4.2	4.2	4.4	4.3	4.1
			150	6.1	6.2	6.4	5.6	5.6	5.6	5.8	5.6	5.8
		0.5	80	5.1	5.7	6.3	4.7	5.1	4.9	5.5	5.2	4.6
			150	5.1	5.5	6.0	4.9	5.1	5.0	5.1	5.1	4.4
		0.9	80	3.7	4.5	4.8	3.5	4.4	3.5	4.2	3.7	4.2
			150	4.1	5.2	5.4	4.0	4.8	4.2	5.5	4.5	5.3

Table 5: Empirical sizes (as percentages) of the tests obtained under Model 2 versus different coefficient matrices \mathbf{C} ($\mathbf{C}_1, \mathbf{C}_7$). In the column Case, “N” and “LN” refer to the normal and log-normal case, respectively. Moreover $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$. See also Figure 2.

\mathbf{C}	Case	\mathbf{n}	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{C}_1	N	\mathbf{n}_1	40	5.7	6.6	7.5	4.8	5.2	4.9	6.1	5.8	5.0
			80	4.4	5.4	6.1	3.9	4.1	4.0	4.7	3.8	4.5
		\mathbf{n}_2	40	5.4	6.0	6.1	5.0	5.1	5.2	5.4	5.1	5.8
			80	4.9	5.0	5.2	4.6	4.7	4.7	4.9	4.7	4.3
		\mathbf{n}_3	40	5.6	5.8	6.1	5.0	5.2	5.1	5.3	5.1	6.3
			80	4.9	5.1	5.3	4.7	4.7	4.7	4.4	4.4	4.6
	LN	\mathbf{n}_1	40	5.2	6.3	7.3	4.5	5.1	4.6	4.8	4.0	4.0
			80	6.3	6.5	8.0	5.9	6.0	5.8	6.3	5.8	5.1
		\mathbf{n}_2	40	4.8	5.0	5.6	4.4	4.8	4.6	5.5	5.5	5.8
			80	5.4	6.0	6.4	5.2	5.4	5.2	5.3	5.3	5.4
		\mathbf{n}_3	40	5.4	5.8	6.2	4.7	5.3	4.9	5.6	5.3	5.6
			80	5.3	5.5	6.0	5.2	5.3	5.2	5.4	5.0	4.7
\mathbf{C}_7	N	\mathbf{n}_1	40	5.9	6.1	7.2	5.4	5.5	5.5	6.1	5.6	5.1
			80	5.0	5.6	6.6	4.4	4.5	4.5	5.4	5.0	4.3
		\mathbf{n}_2	40	4.9	5.5	5.9	4.7	4.7	4.7	5.4	5.1	5.6
			80	5.7	6.3	6.9	5.4	5.4	5.4	5.3	4.9	5.6
		\mathbf{n}_3	40	6.2	6.3	6.9	5.4	5.6	5.8	6.6	6.4	3.9
			80	4.9	5.2	5.5	4.8	4.9	4.8	4.8	4.6	4.5
	LN	\mathbf{n}_1	40	6.0	6.7	7.4	5.1	5.6	5.2	5.4	4.6	5.8
			80	5.7	6.4	7.1	5.3	5.7	5.4	5.8	4.7	4.5
		\mathbf{n}_2	40	4.8	5.1	5.4	4.5	4.8	4.9	5.2	5.0	5.3
			80	7.4	7.8	8.3	7.1	7.2	7.2	6.8	6.6	5.6
		\mathbf{n}_3	40	6.2	6.4	6.6	6.0	6.2	6.1	6.2	5.9	6.4
			80	5.1	5.2	6.0	4.9	5.0	4.9	5.6	5.3	5.1

Table 6: Empirical powers (as percentages) of the tests obtained for \mathbf{C}_2 under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 3.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	55.6	58.0	60.3	52.5	52.7	52.7	55.6	52.6	96.2
		0.4	99.7	99.7	99.8	99.5	99.5	99.5	99.5	99.5	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	11.4	12.8	15.3	10.5	11.7	10.6	12.7	11.7	13.5
		0.4	39.4	42.3	46.7	37.0	39.2	37.2	42.6	39.3	54.4
		0.6	75.2	77.4	79.6	73.9	75.2	73.9	78.3	75.9	92.1
		0.8	95.6	96.1	97.0	95.0	95.6	95.2	95.9	95.4	99.9
		1.0	99.6	99.8	99.8	99.5	99.6	99.5	99.5	99.4	100
	0.9	0.2	5.4	7.7	9.2	4.9	6.9	4.9	6.3	5.4	7.1
		0.4	11.9	15.4	17.7	11.3	15.0	11.0	13.6	11.8	10.7
		0.6	29.1	36.2	39.2	27.4	34.0	27.6	31.0	26.9	20.6
		0.8	47.5	54.2	56.9	45.8	52.0	45.6	50.0	46.1	35.0
		1.0	69.8	75.2	77.2	68.8	73.7	68.6	70.8	68.0	54.8
\mathbf{n}_3	0.1	0.2	59.3	60.8	62.5	58.1	58.2	58.0	60.0	58.8	98.4
		0.4	100	100	100	100	100	100	100	100	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	15.1	16.2	17.0	14.1	15.0	14.7	16.0	15.2	18.5
		0.4	47.8	49.8	51.5	47.1	47.8	47.4	49.5	48.1	67.4
		0.6	84.4	85.2	86.3	83.8	84.3	83.8	85.7	84.0	97.4
		0.8	97.8	97.9	98.1	97.7	97.8	97.8	98.3	98.0	100
		1.0	100	100	100	100	100	100	100	100	100
	0.9	0.2	6.8	8.0	8.6	6.5	7.8	6.4	7.2	5.9	6.8
		0.4	15.3	18.2	18.9	14.6	17.3	14.7	16.4	14.7	12.4
		0.6	33.7	36.8	38.2	33.1	35.9	32.9	35.7	33.1	25.0
		0.8	58.9	62.3	63.3	58.1	61.5	57.8	59.6	56.8	45.6
		1.0	82.2	84.6	85.7	81.4	84.1	81.2	83.2	82.2	68.4

Table 7: Empirical powers (as percentages) of the tests obtained for \mathbf{C}_2 under Model 1 and t -distribution $t_4/\sqrt{2}$ ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 3.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	57.7	59.3	61.5	54.3	54.7	55.7	57.9	55.9	93.8
		0.4	99.1	99.1	99.2	98.9	98.9	98.9	98.9	98.8	100
		0.6	99.7	99.8	99.7	99.7	99.7	99.7	99.7	99.7	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	12.7	13.7	15.0	11.5	12.8	11.9	12.9	11.7	15.9
		0.4	41.7	44.4	47.5	39.8	41.5	40.7	44.0	41.7	55.9
		0.6	76.1	77.4	79.5	75.1	75.9	75.7	78.1	76.6	92.1
		0.8	93.3	93.9	94.2	92.5	92.9	93.0	94.2	93.9	99.4
		1.0	98.5	98.5	98.8	98.2	98.4	98.5	98.7	98.7	100
	0.9	0.2	4.4	6.1	7.0	3.7	5.4	3.7	4.9	3.7	5.0
		0.4	13.4	17.0	18.0	12.5	15.6	12.6	15.4	13.5	12.7
		0.6	25.8	32.3	33.9	24.9	30.9	24.8	28.7	25.9	22.6
		0.8	46.4	52.7	54.8	45.7	50.9	45.7	50.7	46.3	39.2
		1.0	68.0	72.8	73.6	67.0	70.9	66.7	70.9	67.8	57.6
n ₃	0.1	0.2	63.6	64.2	65.1	62.1	62.3	62.4	63.1	62.3	97.9
		0.4	99.5	99.6	99.6	99.5	99.5	99.5	99.5	99.5	99.9
		0.6	99.9	100	99.9	99.9	99.9	99.9	99.9	99.9	100
		0.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	15.6	16.8	16.7	15.2	15.5	15.0	16.1	14.8	18.0
		0.4	49.4	50.6	51.4	48.7	49.5	48.8	50.9	49.0	68.0
		0.6	84.1	84.9	85.6	83.1	83.9	82.8	85.6	84.6	97.7
		0.8	97.8	97.9	97.8	97.6	97.6	97.6	97.8	97.6	99.9
		1.0	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100
	0.9	0.2	7.3	8.3	8.1	7.2	8.1	6.7	7.4	6.6	6.3
		0.4	15.8	17.4	17.5	15.3	17.1	14.6	16.7	14.9	13.6
		0.6	33.0	36.2	35.7	32.7	35.6	31.5	34.6	31.6	25.9
		0.8	56.8	60.3	59.8	56.0	58.8	54.8	59.1	55.7	47.9
		1.0	81.8	83.6	83.6	81.0	83.3	79.9	81.8	80.0	69.2

Table 8: Empirical powers (as percentages) of the tests obtained for \mathbf{C}_7 under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 4.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	34.6	35.8	38.9	32.5	32.8	32.9	34.7	32.6	77.9
		0.4	91.5	93.2	94.1	89.5	89.6	89.8	91.2	90.0	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	9.1	10.1	11.5	8.1	9.1	8.7	9.4	8.5	8.1
		0.4	25.0	26.6	28.8	23.7	24.9	23.9	26.9	24.5	31.3
		0.6	47.7	50.8	54.5	46.6	47.9	46.7	49.9	47.8	67.4
		0.8	75.7	78.0	79.7	73.5	75.8	74.4	77.1	75.0	92.4
		1.0	92.1	92.7	93.8	91.3	92.1	91.5	93.7	92.7	99.4
	0.9	0.2	4.7	7.1	7.9	4.5	6.3	4.4	6.1	4.3	5.5
		0.4	8.6	11.6	13.7	7.9	10.4	7.8	10.0	8.5	9.4
		0.6	16.2	20.9	23.1	15.3	19.9	14.7	19.2	15.6	12.7
		0.8	26.4	31.7	33.7	24.5	30.0	24.4	28.3	25.6	21.3
		1.0	44.3	51.2	54.4	42.6	49.3	42.1	46.8	42.3	34.8
n ₃	0.1	0.2	59.5	60.8	61.9	57.7	57.8	58.2	59.6	57.8	98.9
		0.4	100	100	100	100	100	100	100	100	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	15.3	16.2	17.5	14.7	15.2	14.9	16.3	15.1	19.3
		0.4	47.2	48.9	50.1	46.6	47.2	46.7	49.3	47.5	68.6
		0.6	80.7	81.4	82.7	80.3	80.6	80.2	82.3	81.5	96.7
		0.8	97.8	97.9	98.1	97.6	97.7	97.7	98.3	98.1	100
		1.0	100	100	100	100	100	100	100	100	100
	0.9	0.2	5.3	6.9	7.5	5.0	6.5	5.0	6.4	5.9	7.3
		0.4	14.8	17.3	18.1	14.5	16.4	14.5	16.2	15.0	12.2
		0.6	32.7	35.1	35.9	32.2	34.4	32.2	33.4	31.9	24.3
		0.8	57.3	60.6	61.9	56.4	59.8	56.0	59.7	57.4	42.7
		1.0	80.8	82.5	83.2	80.2	82.0	80.3	81.5	79.9	67.1

Table 9: Empirical powers (as percentages) of the tests obtained for \mathbf{C}_7 under Model 1 and t -distribution $t_4/\sqrt{2}$ ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 4.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	37.4	39.3	41.4	34.4	35.1	35.3	37.2	35.7	79.4
		0.4	90.6	91.4	92.6	89.6	89.6	89.9	90.4	90.1	99.6
		0.6	99.5	99.5	99.5	99.3	99.3	99.4	99.5	99.5	100
		0.8	99.7	99.7	99.7	99.7	99.7	99.7	99.7	99.7	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	10.1	11.4	12.8	9.0	10.0	9.5	11.5	10.2	11.8
		0.4	25.3	27.3	30.1	23.5	25.5	23.8	26.5	24.4	33.6
		0.6	50.0	52.1	54.8	48.4	49.9	48.7	51.6	49.5	71.4
		0.8	76.6	78.1	79.9	75.1	76.1	76.2	78.6	76.8	92.5
		1.0	90.8	92.1	93.3	90.5	90.7	90.9	92.6	91.6	98.3
	0.9	0.2	4.9	7.1	7.6	4.6	6.6	4.6	6.5	5.3	5.1
		0.4	8.1	11.3	13.0	7.4	10.7	7.5	10.8	8.7	8.8
		0.6	13.9	18.2	19.2	13.0	16.6	12.9	16.9	13.5	12.7
		0.8	26.9	33.1	35.4	25.7	30.6	25.5	30.9	27.0	21.4
		1.0	40.4	47.4	48.9	38.5	45.5	38.1	44.2	40.8	33.6
\mathbf{n}_3	0.1	0.2	60.4	61.5	62.8	59.0	59.3	59.6	60.8	60.0	97.8
		0.4	99.3	99.4	99.5	99.2	99.2	99.4	99.4	99.4	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	16.3	17.1	17.7	15.4	16.2	15.7	17.7	17.2	21.4
		0.4	48.1	48.9	50.2	46.8	48.2	47.5	49.9	48.9	66.2
		0.6	82.1	82.9	83.6	81.1	81.9	81.9	83.6	82.9	95.9
		0.8	98.1	98.3	98.3	98.1	98.1	98.1	98.4	98.4	99.9
		1.0	99.2	99.3	99.3	99.2	99.2	99.2	99.4	99.4	99.9
	0.9	0.2	8.0	9.1	9.1	7.8	8.6	7.7	8.5	7.8	6.4
		0.4	14.8	17.3	17.4	14.6	16.6	14.4	16.1	14.4	14.1
		0.6	30.8	34.9	35.4	30.3	33.8	30.0	33.1	31.2	25.4
		0.8	57.2	60.2	60.6	56.7	59.4	56.9	58.5	56.7	47.8
		1.0	81.4	83.1	83.4	80.7	82.7	81.0	82.4	81.6	68.4

Table 10: Empirical powers (as percentages) of the tests obtained under Model 2 versus different coefficient matrices \mathbf{C} ($\mathbf{C}_3, \mathbf{C}_7$). In the column Case, “N” and “LN” refer to the normal and log-normal case, respectively. Moreover $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$. See also Figure 5.

\mathbf{C}	Case	\mathbf{n}	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{C}_3	N	\mathbf{n}_1	40	31.4	33.1	35.9	29.4	29.8	29.5	54.3	52.0	85.0
			80	30.7	32.9	35.2	28.7	29.4	29.1	57.7	53.3	94.5
		\mathbf{n}_2	40	63.3	64.3	66.3	62.5	62.7	62.7	92.3	91.4	99.9
			80	63.7	64.9	66.8	62.0	62.2	62.3	95.9	95.5	100
		\mathbf{n}_3	40	44.8	46.6	48.7	43.9	44.1	43.6	76.0	74.9	98.6
			80	44.4	46.0	48.2	43.1	43.4	43.6	83.5	82.6	99.9
	LN	\mathbf{n}_1	40	29.5	34.2	38.8	26.2	29.1	26.6	63.0	58.0	68.3
			80	30.1	33.2	38.8	27.2	29.6	27.9	65.7	60.9	69.9
		\mathbf{n}_2	40	81.0	83.4	86.9	79.7	80.3	80.0	99.0	98.6	96.9
			80	83.9	86.2	88.2	82.3	83.1	82.1	99.6	99.6	97.1
		\mathbf{n}_3	40	58.5	60.6	63.9	55.8	58.0	56.5	90.9	89.3	89.2
			80	55.1	58.6	63.9	52.0	54.3	53.3	89.6	88.3	88.4
\mathbf{C}_7	N	\mathbf{n}_1	40	21.3	22.7	24.5	19.6	19.8	19.8	32.6	30.2	55.5
			80	21.5	22.4	23.5	19.5	19.9	19.9	35.7	33.5	74.8
		\mathbf{n}_2	40	35.9	36.9	38.3	34.7	35.0	34.8	63.1	61.5	93.3
			80	36.7	37.5	38.7	36.0	36.1	36.1	66.7	64.7	97.6
		\mathbf{n}_3	40	35.5	37.4	39.2	33.6	33.9	34.1	61.0	60.1	92.9
			80	34.0	35.5	37.1	33.3	33.4	33.5	68.9	66.8	98.9
	LN	\mathbf{n}_1	40	17.6	19.5	21.8	15.8	17.3	15.9	34.2	30.8	44.5
			80	16.1	17.8	21.2	14.8	15.9	15.1	33.2	30.0	46.2
		\mathbf{n}_2	40	34.8	36.7	40.1	33.1	34.6	33.4	73.4	71.9	79.6
			80	31.9	34.0	37.6	29.7	31.4	30.1	71.1	69.4	78.1
		\mathbf{n}_3	40	37.0	39.7	41.9	35.3	36.3	35.7	74.6	72.7	78.9
			80	36.3	38.5	40.9	34.8	35.9	35.5	73.9	71.7	78.2

Table 11: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the tests obtained for \mathbf{C}_2 under Model 3 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n₁	0.1	0.0	6.4	7.1	7.6	5.7	6.2	5.9	6.5	5.8	4.8
		0.2	55.8	58.1	60.3	53.4	55.7	54.1	58.3	54.6	79.4
		0.4	97.7	97.9	98.0	97.5	97.5	97.7	97.7	97.7	99.8
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
		0.5	0.0	5.9	6.7	7.4	5.7	6.3	5.9	6.3	5.8
	0.5	0.2	13.1	15.7	17.1	12.3	14.3	12.2	14.8	13.1	13.4
		0.4	40.2	44.1	46.4	38.8	42.3	39.3	44.2	41.1	47.2
		0.6	76.3	78.2	79.2	75.1	77.1	75.2	78.2	76.2	85.3
		0.8	92.8	93.7	94.7	92.3	92.9	92.6	93.2	92.7	96.9
		1.0	98.4	98.5	98.7	98.4	98.4	98.4	98.5	98.4	99.7
	0.9	0.0	5.2	6.9	7.3	4.9	6.6	4.9	6.2	5.1	5.3
		0.2	5.7	8.4	8.9	5.2	7.5	5.1	7.4	5.6	7.0
		0.4	11.5	14.8	16.1	10.5	13.9	10.4	13.8	10.9	11.8
		0.6	24.5	29.8	31.2	23.5	28.3	23.2	27.6	24.5	20.9
		0.8	46.0	53.2	54.0	44.5	51.3	44.2	50.4	45.6	36.8
		1.0	68.3	73.1	73.9	67.8	72.1	67.6	71.6	68.3	57.3
n₃	0.1	0.0	6.5	6.6	6.7	6.4	6.5	6.4	6.7	6.1	5.3
		0.2	65.8	67.5	68.1	64.7	65.3	64.9	66.6	65.8	89.5
		0.4	99.3	99.4	99.3	99.3	99.3	99.3	99.4	99.4	99.8
		0.6	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.0	6.3	6.7	7.0	6.2	6.5	6.1	6.9	5.9	5.9
		0.2	14.1	14.7	15.0	13.7	14.3	13.3	14.7	13.4	15.3
		0.4	49.3	51.2	51.1	48.5	50.0	47.5	50.4	48.9	57.5
		0.6	85.6	86.5	86.4	85.2	85.8	85.2	86.6	85.3	92.3
		0.8	97.5	97.6	97.6	97.5	97.6	97.4	97.8	97.5	99.3
		1.0	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.5	99.9
	0.9	0.0	5.7	7.6	7.3	5.5	7.0	5.4	6.9	5.7	5.9
		0.2	7.9	9.5	9.4	7.5	9.2	7.2	9.1	7.0	6.5
		0.4	16.1	18.4	18.2	15.8	18.2	15.2	16.6	15.1	13.5
		0.6	33.1	36.5	36.1	32.2	35.8	30.8	34.4	31.7	26.3
		0.8	56.2	60.6	59.7	55.5	59.9	54.3	59.1	55.6	45.3
		1.0	81.9	84.1	83.3	80.9	83.5	79.8	82.4	80.5	69.0

Table 12: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the tests obtained for \mathbf{C}_2 under Model 4 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.0	6.6	7.4	7.9	5.8	5.8	5.9	6.6	5.6	5.7
		0.2	55.6	58.0	61.0	52.6	53.0	53.2	55.1	53.2	89.3
		0.4	97.3	97.7	97.6	97.1	97.1	97.1	97.6	97.1	100
		0.6	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		0.8	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		1.0	99.9	100	100	99.9	99.9	100	100	100	100
		0.5	0.0	6.0	6.5	7.4	5.8	6.0	5.8	6.5	5.6
	0.5	0.2	13.2	15.4	17.0	12.2	13.1	12.3	15.1	13.4	14.8
		0.4	40.4	43.9	46.8	38.6	40.6	39.7	43.6	40.3	53.5
		0.6	76.5	78.1	78.9	75.3	76.6	75.8	77.7	76.2	88.2
		0.8	92.6	93.6	94.4	92.1	92.5	92.4	93.0	92.4	97.6
		1.0	98.2	98.3	98.3	98.0	98.1	98.2	98.4	98.3	99.8
		0.9	0.0	5.5	6.5	6.9	5.2	6.3	5.2	6.2	5.1
		0.2	5.7	8.1	8.7	5.4	7.4	5.4	7.6	5.9	6.2
		0.4	12.0	15.3	16.6	11.2	13.8	11.1	14.3	11.7	11.1
		0.6	25.6	30.5	31.9	24.3	28.6	23.9	29.0	25.8	21.3
		0.8	46.9	53.3	55.0	45.1	51.7	45.7	50.9	47.4	37.9
		1.0	69.7	73.7	75.0	68.1	72.2	68.2	72.7	69.4	59.1
\mathbf{n}_3	0.1	0.0	5.0	5.3	5.7	4.5	4.6	4.6	5.1	4.7	4.8
		0.2	59.7	60.8	62.6	58.2	58.4	58.4	59.6	58.7	96.9
		0.4	99.8	99.8	99.8	99.8	99.8	99.8	100	100	100
		0.6	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		0.8	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
		0.5	0.0	4.8	5.2	5.5	4.6	4.8	4.8	4.9	5.4
	0.5	0.2	13.6	14.4	15.6	13.1	13.5	13.2	14.2	13.3	15.9
		0.4	44.5	46.6	48.0	43.8	44.5	44.1	46.8	45.2	60.0
		0.6	83.2	83.9	84.8	82.9	83.2	83.0	84.4	83.0	94.5
		0.8	98.5	98.5	98.6	98.5	98.5	98.5	98.6	98.5	99.7
		1.0	99.7	99.7	99.8	99.7	99.7	99.7	99.9	99.9	100
		0.9	0.0	5.9	6.9	7.2	5.4	6.3	5.4	6.1	5.7
		0.2	8.3	9.9	10.1	8.0	9.6	8.0	9.1	8.0	7.2
		0.4	15.9	18.0	18.7	15.8	17.2	15.9	17.2	15.9	13.5
		0.6	33.4	37.2	38.4	33.1	36.0	33.1	35.6	33.8	26.3
		0.8	60.6	63.2	64.7	59.7	62.5	59.4	61.9	59.5	46.5
		1.0	81.9	83.5	84.5	81.7	83.4	81.4	82.9	81.7	67.3

Table 13: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the tests obtained for \mathbf{C}_2 under Model 5 and standard normal distribution ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.0	4.8	5.6	6.3	4.0	4.0	3.9	4.8	4.3	4.4
		0.2	43.6	45.9	48.9	41.2	41.4	41.3	42.4	40.5	68.7
		0.4	98.8	99.0	99.5	98.5	98.5	98.5	98.0	97.7	99.9
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.0	5.8	6.6	7.4	5.0	5.4	4.9	5.7	5.2	4.6
		0.2	12.0	13.0	14.3	10.8	11.4	10.9	12.2	10.8	8.6
		0.4	31.9	34.2	36.8	30.6	31.7	31.1	32.2	30.7	30.2
		0.6	63.9	65.7	68.3	61.7	62.8	62.0	62.2	60.2	62.7
		0.8	87.6	88.7	91.1	86.8	86.9	86.9	86.8	85.1	87.7
		1.0	98.0	98.3	98.6	97.6	97.7	97.7	97.2	96.8	97.8
	0.9	0.0	4.9	5.5	6.6	4.4	4.8	4.6	4.5	3.7	3.7
		0.2	7.8	8.4	9.5	6.6	7.3	6.9	7.4	5.5	4.6
		0.4	11.3	13.0	14.3	10.7	11.2	11.0	12.3	11.3	10.3
		0.6	20.9	22.1	24.9	19.7	20.3	20.0	21.0	19.2	18.3
		0.8	33.3	34.7	37.4	31.8	32.3	31.8	32.9	30.0	29.7
		1.0	49.4	50.9	54.5	47.4	48.3	48.0	50.2	46.8	44.9
\mathbf{n}_3	0.1	0.0	5.2	5.5	6.1	4.7	4.7	4.8	5.0	4.8	4.4
		0.2	53.5	54.8	56.0	52.8	52.9	52.5	52.8	51.7	79.7
		0.4	99.7	99.7	99.9	99.5	99.6	99.6	99.3	99.2	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.0	5.2	5.4	5.9	4.8	5.2	4.9	5.1	4.9	4.0
		0.2	13.2	14.1	14.9	12.8	13.0	12.8	13.9	12.7	11.5
		0.4	39.6	40.8	43.0	39.0	39.3	39.2	40.1	39.2	41.0
		0.6	71.9	72.6	73.4	70.9	71.3	70.8	70.4	69.6	71.4
		0.8	92.6	92.7	93.5	92.1	92.3	92.2	91.4	90.6	93.5
		1.0	99.3	99.3	99.4	99.3	99.3	99.3	98.8	98.6	99.2
	0.9	0.0	4.4	5.1	5.4	4.0	4.4	4.1	4.4	3.9	3.8
		0.2	6.5	7.2	8.0	6.2	6.4	6.5	6.9	6.0	6.4
		0.4	12.5	13.2	13.8	11.9	12.5	12.0	13.0	11.6	10.5
		0.6	24.2	25.2	26.8	23.3	24.0	23.4	24.6	23.2	20.4
		0.8	40.8	42.3	43.7	39.5	40.5	39.4	39.6	38.9	34.9
		1.0	58.2	59.5	61.2	57.4	58.0	57.0	58.5	57.2	52.1

Table 14: Empirical sizes ($\delta = 0$) and powers ($\delta \neq 0$), as percentages, of the tests obtained for \mathbf{C}_2 under Model 6 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.0	5.5	5.9	6.6	4.4	4.4	4.3	5.4	4.2	5.1
		0.2	38.4	40.2	42.1	35.3	35.5	35.4	36.2	34.2	46.5
		0.4	95.1	95.5	95.9	94.2	94.3	94.3	93.2	92.3	98.0
		0.6	99.9	99.9	99.9	99.8	99.8	99.8	99.8	99.7	99.9
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
		0.5	4.4	5.2	6.1	3.9	4.1	4.1	4.8	4.1	3.6
	0.5	0.2	11.3	12.0	13.6	11.0	11.1	11.0	12.3	11.0	10.2
		0.4	30.6	32.0	34.2	28.4	29.2	28.7	31.0	28.4	28.2
		0.6	58.6	60.2	63.3	56.6	57.2	56.8	56.7	54.6	57.4
		0.8	85.4	86.2	87.9	84.0	84.4	84.3	82.0	80.2	83.0
		1.0	96.0	96.3	97.1	95.9	95.9	95.9	95.1	94.5	95.8
		0.9	4.9	5.7	7.0	4.4	4.6	4.7	5.6	4.5	4.3
		0.2	7.1	7.4	9.2	6.1	6.7	6.5	7.9	7.4	6.3
		0.4	11.8	12.6	13.9	11.1	11.6	11.5	12.7	11.6	10.7
		0.6	21.1	22.2	24.7	19.4	20.1	19.8	21.6	20.0	18.4
		0.8	32.4	34.6	37.1	30.5	31.4	31.1	33.5	31.2	29.0
		1.0	47.9	49.7	52.6	46.2	47.4	46.5	47.7	45.2	44.3
\mathbf{n}_3	0.1	0.0	4.9	5.4	6.2	4.5	4.5	4.7	5.0	4.7	4.7
		0.2	45.8	46.7	48.0	45.0	45.0	44.4	44.0	42.9	56.9
		0.4	97.5	97.5	97.7	97.1	97.1	97.3	95.7	95.5	99.6
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
		0.5	5.4	5.5	5.9	5.2	5.4	5.1	5.4	5.3	6.0
	0.5	0.2	12.3	12.9	14.0	11.5	11.7	11.5	12.5	11.7	12.5
		0.4	35.3	36.0	37.2	34.4	34.9	34.5	34.9	33.9	34.2
		0.6	66.8	67.0	68.5	66.3	66.7	66.6	65.1	64.4	67.9
		0.8	89.9	90.5	91.3	89.4	89.4	89.3	88.4	87.4	89.2
		1.0	98.4	98.4	98.5	98.3	98.3	98.3	97.4	97.3	98.6
		0.9	5.7	6.1	6.7	5.4	5.7	5.6	6.2	5.4	6.2
		0.2	7.6	8.2	8.9	7.0	7.6	7.2	8.1	7.5	7.5
		0.4	13.0	13.5	14.9	12.4	12.6	12.5	13.6	12.8	12.3
		0.6	23.0	24.2	25.5	22.7	23.0	22.8	22.7	22.1	22.2
		0.8	37.8	39.5	41.7	37.2	37.9	37.1	38.7	37.8	34.9
		1.0	56.9	57.7	59.0	56.1	56.8	55.9	56.1	54.4	51.9

Table 15: Experimentwise error rates (as percentages) of the tests obtained under Model 1 when all group mean functions are equal, i.e., $\delta = 0$ ($\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). See also Figure 7.

Distr.	\mathbf{n}	ρ	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
$N(0, 1)$	\mathbf{n}_1	0.1	80	20.7	22.3	24.4	18.7	18.9	19.0	20.4	18.5	19.9
			150	21.1	22.9	25.6	18.6	18.6	18.9	20.7	18.9	19.2
		0.5	80	22.2	24.4	28.6	19.9	22.0	20.5	23.9	20.5	20.2
			150	21.8	24.6	28.3	20.0	21.7	20.4	22.4	19.9	21.9
		0.9	80	14.8	20.6	23.5	13.3	18.8	13.0	18.0	13.3	19.2
			150	18.6	26.1	29.1	17.5	23.7	17.4	23.2	18.8	22.7
	\mathbf{n}_2	0.1	80	20.9	21.7	22.9	20.0	20.0	19.9	21.0	20.1	19.5
			150	21.0	21.8	23.6	19.7	19.7	19.9	20.8	19.5	20.4
		0.5	80	21.8	23.7	25.7	21.0	21.9	20.9	22.9	21.7	23.7
			150	21.1	22.6	24.8	20.5	21.1	20.8	22.4	20.8	22.8
		0.9	80	19.5	22.1	22.9	19.1	21.6	19.0	20.9	18.8	21.0
			150	18.2	21.6	22.8	17.7	20.6	17.7	19.8	18.1	21.0
	\mathbf{n}_3	0.1	80	21.8	22.4	23.7	20.4	20.5	20.5	21.7	20.1	20.4
			150	20.8	21.9	23.5	19.2	19.4	19.7	20.3	20.0	20.3
		0.5	80	21.4	22.8	24.8	20.2	21.5	20.4	22.9	20.8	22.5
			150	20.9	22.2	24.4	20.3	21.1	20.7	22.7	21.7	21.4
		0.9	80	18.6	22.7	24.5	18.1	21.6	18.0	21.1	18.7	23.2
			150	17.7	21.1	23.4	17.4	20.2	17.4	21.0	18.3	22.7
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	22.0	24.7	28.0	19.7	19.9	20.2	22.3	20.4	20.1
			150	22.2	23.9	26.0	19.9	20.0	20.2	22.5	20.7	18.7
		0.5	80	20.0	22.8	25.2	18.3	19.7	19.4	21.7	20.0	20.7
			150	19.1	21.3	24.6	17.3	18.8	17.6	20.1	18.0	20.4
		0.9	80	17.1	23.0	24.7	15.4	21.3	15.5	20.4	16.6	22.5
			150	17.0	23.2	25.0	16.3	20.5	16.5	22.5	18.2	23.4
	\mathbf{n}_2	0.1	80	22.7	23.5	24.4	21.9	22.0	22.3	22.2	22.1	21.3
			150	20.8	21.2	22.0	19.4	19.7	20.0	20.6	20.3	19.9
		0.5	80	20.6	21.0	22.5	19.9	20.5	20.1	21.0	20.3	21.7
			150	21.6	22.5	23.4	20.7	21.7	21.1	22.5	21.6	21.4
		0.9	80	18.0	22.2	22.4	17.1	21.3	16.7	19.9	17.8	21.9
			150	20.6	24.9	25.5	19.9	23.0	20.0	22.3	19.5	24.2
	\mathbf{n}_3	0.1	80	20.8	22.0	22.9	19.6	19.8	19.6	20.9	20.2	20.1
			150	21.1	22.2	22.9	19.5	19.9	19.5	20.8	19.5	20.4
		0.5	80	17.1	18.3	19.8	16.3	17.0	16.3	18.1	17.5	19.2
			150	21.8	23.7	24.3	20.9	22.0	21.3	22.9	21.6	20.9
		0.9	80	19.4	23.7	23.9	18.7	23.0	17.8	22.3	19.4	24.2
			150	18.3	22.7	21.9	17.8	21.0	16.4	19.4	16.8	19.7

Table 16: Experimentwise error rates (as percentages) of the tests obtained under Model 1 and standard normal distribution when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 8.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	10.1	11.1	13.5	9.1	9.2	9.1	10.2	9.2	8.5
		0.4	11.4	12.1	14.2	9.9	10.0	10.2	11.0	9.9	9.0
		0.6	12.4	13.4	14.7	11.1	11.2	11.2	12.0	10.9	10.7
		0.8	10.8	11.6	13.1	8.6	8.8	8.8	10.8	9.2	9.5
		1.0	12.4	13.4	15.1	11.0	11.1	10.9	12.0	10.8	10.7
	0.5	0.2	10.7	12.0	14.1	9.9	10.6	9.9	11.5	10.0	11.1
		0.4	11.6	13.5	14.9	10.8	11.9	10.9	13.1	11.1	10.5
		0.6	10.4	11.9	13.8	9.3	10.3	9.5	11.0	10.1	10.5
		0.8	11.1	12.8	14.7	10.2	11.2	10.3	12.5	11.3	10.9
		1.0	11.7	12.8	15.2	11.1	11.6	11.3	12.5	11.5	10.4
	0.9	0.2	7.3	11.1	13.0	6.8	9.9	6.8	9.5	7.8	11.7
		0.4	9.2	12.1	14.2	8.0	11.5	7.8	11.3	8.8	10.9
		0.6	9.3	12.3	13.1	8.6	11.6	8.6	10.9	8.5	10.2
		0.8	6.5	10.0	12.3	5.8	9.1	5.8	8.9	6.9	10.3
		1.0	7.2	10.8	13.2	6.9	10.1	6.9	9.6	8.1	10.4
n ₃	0.1	0.2	9.1	9.7	10.8	8.3	8.3	8.6	9.1	8.6	8.5
		0.4	11.6	12.5	13.5	10.5	10.6	10.5	11.5	10.5	10.9
		0.6	9.5	10.2	11.0	8.9	8.9	9.2	9.4	9.0	10.0
		0.8	9.9	10.8	11.6	9.2	9.2	9.4	10.0	9.5	9.0
		1.0	11.7	12.5	13.3	10.9	11.1	11.0	11.9	11.0	10.4
	0.5	0.2	9.6	10.3	11.4	9.4	9.7	9.3	10.2	9.3	9.4
		0.4	9.6	10.4	12.3	8.8	9.6	9.3	9.9	9.3	10.0
		0.6	10.1	10.6	11.2	9.7	10.1	9.7	10.5	9.9	9.4
		0.8	10.7	11.6	13.1	10.4	10.6	10.4	11.2	10.7	10.3
		1.0	10.2	10.7	11.5	9.9	10.2	9.8	10.5	9.7	10.2
	0.9	0.2	8.4	11.3	12.2	8.0	10.6	8.1	9.9	8.7	9.2
		0.4	8.6	10.6	11.1	8.2	10.1	7.9	9.3	7.8	10.3
		0.6	8.2	9.7	10.6	7.7	9.4	7.5	8.5	7.4	10.6
		0.8	8.5	10.6	11.2	8.1	9.9	8.0	9.4	8.4	8.6
		1.0	6.6	8.4	9.9	6.4	7.9	6.5	8.1	6.6	10.1

Table 17: Experimentwise error rates (as percentages) of the tests obtained under Model 1 and t -distribution $t_4/\sqrt{2}$ when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 8.

n	ρ	δ	Test									
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb	
n ₁	0.1	0.2	10.2	11.8	12.9	9.5	9.5	9.7	10.2	9.8	9.8	
		0.4	10.8	11.8	12.7	9.8	9.8	10.4	10.8	10.2	9.8	
		0.6	11.8	12.5	13.9	10.7	10.7	10.9	11.5	10.7	10.5	
		0.8	11.4	12.7	14.1	10.0	10.1	10.5	11.3	10.2	9.8	
		1.0	11.2	12.5	14.1	10.4	10.6	10.1	11.6	10.4	10.5	
	0.5	0.2	9.3	10.6	12.6	8.8	9.2	9.1	10.1	8.6	8.7	
		0.4	11.8	13.7	15.4	11.0	11.9	11.1	13.1	11.5	11.8	
		0.6	10.9	12.4	13.5	9.8	11.0	10.6	11.1	9.9	8.9	
		0.8	9.2	10.8	12.2	8.4	9.3	8.4	11.5	10.0	9.7	
		1.0	9.6	10.9	13.1	8.4	9.3	8.8	10.5	8.6	9.5	
	0.9	0.2	6.8	9.3	10.3	6.6	8.5	6.4	8.1	6.9	7.7	
		0.4	6.9	10.7	11.9	6.2	9.3	6.5	9.4	6.7	9.7	
		0.6	6.8	10.6	11.4	5.9	9.3	5.7	8.8	6.2	10.0	
		0.8	7.2	10.5	11.3	6.9	9.5	6.8	9.5	7.8	9.6	
		1.0	6.6	9.4	11.1	6.4	8.5	6.3	8.5	6.9	9.5	
	n ₃	0.1	0.2	9.7	10.3	10.7	9.3	9.3	9.2	9.6	9.3	9.0
			0.4	9.6	10.1	10.7	9.0	9.0	9.3	9.7	9.3	9.5
			0.6	8.7	9.3	9.7	8.5	8.5	8.2	8.8	8.3	8.4
			0.8	12.1	12.7	13.7	11.2	11.5	11.2	11.9	11.0	11.9
			1.0	10.7	11.4	11.8	9.9	10.0	10.1	10.6	10.2	10.2
0.5		0.2	7.9	8.9	9.7	7.5	8.2	7.5	8.8	8.2	8.1	
		0.4	10.4	11.2	11.7	9.9	10.3	10.2	11.1	9.9	8.8	
		0.6	10.0	10.9	11.6	9.7	10.0	9.5	11.0	9.8	8.9	
		0.8	10.5	11.2	12.4	10.2	10.5	10.2	11.0	10.5	10.2	
		1.0	10.2	11.1	11.6	9.7	10.3	9.6	10.7	10.0	9.4	
0.9		0.2	8.8	10.4	10.6	8.3	9.8	7.8	10.1	8.3	10.4	
		0.4	8.0	9.7	9.4	7.7	9.3	7.6	8.7	7.8	8.3	
		0.6	8.1	9.3	9.5	7.8	9.2	7.8	9.4	8.0	9.2	
		0.8	7.3	9.3	9.4	6.9	8.9	6.4	8.7	7.0	9.3	
		1.0	7.1	9.5	9.7	7.0	9.2	6.9	8.6	7.0	10.0	

Table 18: Comparisonwise error rates (as percentages) of the tests obtained under Model 1 when all group mean functions are equal, i.e., $\delta = 0$ ($\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). See also Figure 9.

Distr.	\mathbf{n}	ρ	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
$N(0, 1)$	\mathbf{n}_1	0.1	80	5.53	6.02	6.88	4.95	4.98	5.00	5.43	4.85	5.07
			150	5.42	6.07	6.88	4.65	4.67	4.75	5.27	4.70	4.57
		0.5	80	5.65	6.37	7.55	5.00	5.67	5.15	6.12	5.23	5.22
			150	5.42	6.23	7.40	4.93	5.37	5.00	5.65	4.95	5.28
		0.9	80	3.18	4.72	5.62	2.85	4.22	2.77	4.10	3.02	4.18
			150	4.18	6.05	6.92	3.88	5.43	3.85	5.45	4.20	5.07
	\mathbf{n}_2	0.1	80	5.52	5.77	6.10	5.18	5.18	5.22	5.50	5.22	5.10
			150	5.20	5.48	5.98	4.88	4.88	4.92	5.18	4.88	4.78
		0.5	80	5.25	5.77	6.40	5.02	5.28	5.03	5.58	5.18	5.40
			150	5.48	5.98	6.55	5.20	5.53	5.30	5.82	5.38	5.38
		0.9	80	4.40	5.23	5.45	4.30	5.05	4.25	4.80	4.23	4.68
			150	4.17	5.05	5.37	4.05	4.78	4.02	4.70	4.13	4.75
	\mathbf{n}_3	0.1	80	5.57	5.83	6.20	5.17	5.20	5.23	5.50	5.13	5.03
			150	5.35	5.68	6.10	4.92	4.97	5.05	5.22	5.07	5.03
		0.5	80	5.13	5.53	6.27	4.85	5.15	4.88	5.60	5.07	5.28
			150	5.20	5.55	6.13	5.00	5.23	5.13	5.58	5.37	5.02
		0.9	80	4.20	5.18	5.68	4.08	4.90	4.07	4.90	4.27	5.33
			150	4.23	5.13	5.80	4.15	4.87	4.17	5.07	4.37	5.18
$t_4/\sqrt{2}$	\mathbf{n}_1	0.1	80	5.52	6.25	7.15	4.75	4.82	4.95	5.55	4.95	4.87
			150	5.60	6.17	6.87	4.98	5.02	5.05	5.60	5.18	4.75
		0.5	80	4.82	5.77	6.62	4.35	4.83	4.63	5.33	4.78	4.68
			150	4.60	5.22	6.03	4.10	4.55	4.22	4.93	4.30	4.77
		0.9	80	3.82	5.37	5.87	3.42	4.80	3.43	4.88	3.83	5.03
			150	3.62	5.27	5.95	3.38	4.55	3.42	5.05	3.88	5.30
	\mathbf{n}_2	0.1	80	5.65	5.92	6.27	5.25	5.28	5.40	5.55	5.38	5.47
			150	5.23	5.45	5.67	4.85	4.92	5.05	5.18	5.07	4.83
		0.5	80	4.77	5.00	5.40	4.47	4.75	4.62	4.85	4.57	5.05
			150	5.10	5.35	5.73	4.90	5.12	4.98	5.32	5.08	4.87
		0.9	80	3.85	4.87	4.97	3.65	4.62	3.55	4.45	3.92	4.68
			150	4.53	5.60	5.68	4.32	5.18	4.30	4.83	4.25	5.05
	\mathbf{n}_3	0.1	80	5.43	5.88	6.10	5.02	5.07	5.08	5.53	5.23	5.02
			150	5.17	5.43	5.67	4.72	4.82	4.75	5.08	4.73	4.90
		0.5	80	4.53	4.90	5.27	4.28	4.53	4.27	4.77	4.50	4.43
			150	5.47	5.93	6.27	5.27	5.52	5.33	5.63	5.25	5.20
		0.9	80	4.55	5.73	5.65	4.35	5.35	4.13	5.32	4.43	5.25
			150	4.63	5.87	5.63	4.43	5.43	4.17	4.93	4.17	4.42

Table 19: Comparisonwise error rates (as percentages) of the tests obtained under Model 1 and standard normal distribution when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 10.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	1.73	1.92	2.37	1.57	1.58	1.57	1.75	1.58	1.48
		0.4	2.02	2.15	2.52	1.72	1.73	1.78	1.97	1.75	1.60
		0.6	2.12	2.35	2.60	1.90	1.92	1.92	2.05	1.87	1.83
		0.8	1.85	2.02	2.28	1.47	1.50	1.50	1.83	1.57	1.60
		1.0	2.15	2.33	2.67	1.88	1.92	1.87	2.10	1.88	1.83
	0.5	0.2	1.90	2.13	2.55	1.75	1.88	1.77	2.08	1.80	1.98
		0.4	2.05	2.4	2.67	1.90	2.10	1.93	2.32	1.95	1.78
		0.6	1.82	2.08	2.40	1.63	1.80	1.65	1.92	1.77	1.80
		0.8	1.92	2.23	2.60	1.73	1.93	1.75	2.15	1.92	1.88
		1.0	2.07	2.28	2.68	1.93	2.03	1.98	2.23	2.02	1.82
	0.9	0.2	1.30	2.00	2.33	1.22	1.77	1.20	1.68	1.38	2.00
		0.4	1.53	2.03	2.38	1.33	1.93	1.30	1.88	1.47	1.87
		0.6	1.60	2.15	2.28	1.47	2.02	1.47	1.87	1.47	1.70
		0.8	1.10	1.70	2.08	0.98	1.55	0.98	1.53	1.18	1.77
		1.0	1.23	1.85	2.27	1.18	1.73	1.18	1.63	1.38	1.78
n ₃	0.1	0.2	1.57	1.67	1.85	1.42	1.42	1.47	1.57	1.47	1.47
		0.4	1.97	2.12	2.28	1.78	1.80	1.78	1.95	1.78	1.85
		0.6	1.67	1.78	1.95	1.57	1.57	1.62	1.65	1.58	1.72
		0.8	1.70	1.88	2.03	1.58	1.58	1.63	1.73	1.65	1.53
		1.0	2.02	2.15	2.30	1.87	1.90	1.88	2.05	1.88	1.75
	0.5	0.2	1.65	1.78	2.00	1.62	1.67	1.60	1.73	1.58	1.60
		0.4	1.65	1.80	2.15	1.52	1.65	1.60	1.72	1.60	1.72
		0.6	1.75	1.85	1.98	1.68	1.75	1.68	1.85	1.73	1.67
		0.8	1.85	2.02	2.30	1.80	1.83	1.8	1.97	1.87	1.77
		1.0	1.75	1.83	1.97	1.70	1.75	1.68	1.80	1.67	1.72
	0.9	0.2	1.40	1.93	2.08	1.33	1.80	1.35	1.68	1.48	1.58
		0.4	1.48	1.82	1.90	1.42	1.73	1.37	1.62	1.37	1.75
		0.6	1.43	1.68	1.83	1.35	1.63	1.32	1.47	1.28	1.78
		0.8	1.45	1.83	1.97	1.38	1.72	1.37	1.63	1.47	1.48
		1.0	1.12	1.43	1.68	1.08	1.35	1.10	1.42	1.15	1.77

Table 20: Comparisonwise error rates (as percentages) of the tests obtained under Model 1 and t -distribution $t_4/\sqrt{2}$ when the group mean functions are not equal, i.e., $\delta \neq 0$ ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 10.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	1.80	2.07	2.25	1.67	1.67	1.70	1.80	1.72	1.75
		0.4	1.85	2.05	2.20	1.67	1.67	1.77	1.83	1.73	1.68
		0.6	2.03	2.17	2.40	1.83	1.83	1.87	1.98	1.83	1.80
		0.8	1.98	2.22	2.48	1.72	1.73	1.82	1.95	1.75	1.65
		1.0	1.92	2.13	2.42	1.77	1.80	1.73	1.97	1.77	1.80
	0.5	0.2	1.57	1.78	2.12	1.48	1.55	1.53	1.70	1.45	1.47
		0.4	2.00	2.32	2.63	1.87	2.02	1.88	2.22	1.95	2.00
		0.6	1.83	2.08	2.32	1.65	1.85	1.78	1.87	1.67	1.52
		0.8	1.57	1.85	2.12	1.43	1.58	1.43	1.97	1.70	1.63
		1.0	1.63	1.87	2.27	1.42	1.60	1.48	1.78	1.47	1.63
	0.9	0.2	1.13	1.57	1.77	1.10	1.43	1.07	1.35	1.15	1.37
		0.4	1.18	1.87	2.08	1.05	1.62	1.10	1.62	1.13	1.63
		0.6	1.17	1.82	1.95	1.00	1.60	0.97	1.50	1.05	1.72
		0.8	1.22	1.78	1.95	1.17	1.62	1.15	1.65	1.33	1.63
		1.0	1.18	1.67	1.95	1.12	1.50	1.08	1.47	1.20	1.65
n ₃	0.1	0.2	1.62	1.72	1.78	1.55	1.55	1.53	1.60	1.55	1.50
		0.4	1.65	1.73	1.83	1.55	1.55	1.60	1.67	1.60	1.63
		0.6	1.50	1.60	1.67	1.47	1.47	1.42	1.52	1.43	1.43
		0.8	2.08	2.18	2.37	1.92	1.97	1.92	2.05	1.88	2.00
		1.0	1.82	1.93	2.00	1.67	1.68	1.72	1.80	1.73	1.72
	0.5	0.2	1.35	1.52	1.67	1.28	1.40	1.28	1.52	1.38	1.38
		0.4	1.78	1.92	2.00	1.70	1.77	1.75	1.95	1.73	1.52
		0.6	1.70	1.85	1.97	1.65	1.70	1.62	1.87	1.67	1.52
		0.8	1.82	1.93	2.17	1.77	1.82	1.77	1.93	1.83	1.75
		1.0	1.75	1.92	2.00	1.67	1.77	1.65	1.83	1.72	1.58
	0.9	0.2	1.50	1.77	1.80	1.42	1.67	1.33	1.72	1.42	1.77
		0.4	1.35	1.65	1.60	1.30	1.58	1.28	1.48	1.33	1.42
		0.6	1.38	1.60	1.63	1.33	1.57	1.32	1.62	1.37	1.58
		0.8	1.23	1.57	1.58	1.17	1.50	1.08	1.47	1.18	1.60
		1.0	1.23	1.65	1.67	1.22	1.58	1.18	1.52	1.23	1.73

Table 21: Experimentwise power rates (as percentages) of the tests obtained under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 11.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	22.9	24.6	27.2	19.0	19.5	20.2	22.3	20.4	87.9
		0.4	99.2	99.2	99.6	98.8	98.8	98.7	99.2	98.9	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	0.4	0.5	0.7	0.4	0.4	0.4	0.4	0.3	0.4
		0.4	8.5	10.5	12.4	7.9	8.5	8.0	10.5	8.4	21.4
		0.6	45.7	49.1	52.3	43.9	45.8	43.7	50.5	45.7	80.7
		0.8	86.1	87.4	89.7	84.5	86.2	84.9	87.1	85.6	99.0
		1.0	98.5	99.0	99.3	98.2	98.5	98.2	98.4	98.2	100
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.4	0.6	0.8	0.9	0.3	0.7	0.3	0.7	0.4	0.3
		0.6	3.4	5.2	6.9	3.3	4.9	3.2	4.4	3.5	1.8
		0.8	13.5	19.4	21.5	12.2	17.3	12.2	16.8	13.5	6.9
		1.0	37.6	45.0	48.9	36.9	43.3	36.6	39.9	35.0	20.1
\mathbf{n}_3	0.1	0.2	44.4	46.5	49.2	42.4	42.6	42.6	45.3	43.7	98.4
		0.4	100	100	100	100	100	100	100	100	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	1.7	2.0	2.6	1.6	1.7	1.7	1.9	1.7	2.3
		0.4	29.6	30.6	32.3	28.6	29.6	28.8	31.1	29.4	53.3
		0.6	78.2	79.2	81.0	77.5	78.0	77.6	80.5	78.9	97.0
		0.8	97.4	97.5	97.7	97.3	97.4	97.4	98.0	97.7	100
		1.0	100	100	100	100	100	100	100	100	100
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.4	1.8	3.1	3.3	1.8	2.6	1.8	2.9	2.4	0.4
		0.6	13.4	15.2	16.1	12.8	14.8	12.9	14.0	12.6	5.4
		0.8	41.4	44.4	45.5	40.5	43.6	40.3	41.9	39.3	24.1
		1.0	75.8	79.1	80.0	74.9	78.3	74.6	77.3	75.6	52.3

Table 22: Experimentwise power rates (as percentages) of the tests obtained under Model 1 and t -distribution $t_4/\sqrt{2}$ ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 11.

n	ρ	δ	Test									
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb	
n ₁	0.1	0.2	27.8	29.0	31.4	25.3	25.8	25.9	27.7	26.4	84.3	
		0.4	96.9	97.5	97.9	95.8	95.8	96.2	96.8	96.3	100	
		0.6	99.4	99.5	99.5	99.4	99.4	99.4	99.4	99.4	100	
		0.8	100	100	100	100	100	100	100	100	100	
		1.0	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100	
	0.5	0.2	0.7	1.1	1.4	0.6	0.7	0.7	0.8	0.6	0.8	
		0.4	11.6	12.9	14	10.5	11.7	10.8	13.3	11.2	24.5	
		0.6	52.3	55.2	58.4	50.4	52.2	51.3	54.8	52.4	80.1	
		0.8	84.9	86.9	88.3	84.0	84.8	84.6	87.9	85.9	98.0	
		1.0	96.8	96.9	97.4	96.6	96.7	96.6	97.3	97.2	99.7	
	0.9	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	
		0.4	0.5	0.7	0.8	0.5	0.6	0.4	0.8	0.6	0.3	
		0.6	3.5	5.4	6.3	3.3	4.9	3.3	4.6	3.1	1.4	
		0.8	13.5	18.8	20.5	12.4	16.6	12.4	16.9	13.4	8.4	
		1.0	35.5	42.1	44.2	34.1	39.8	34.2	38.6	34.1	22.5	
	n ₃	0.1	0.2	52.3	53.3	54.5	51.1	51.3	51.1	52.6	51.4	97.1
			0.4	99.5	99.6	99.5	99.5	99.5	99.4	99.5	99.4	99.9
			0.6	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100
			0.8	99.9	99.9	99.9	99.9	99.9	99.9	99.9	99.9	100
			1.0	100	100	100	100	100	100	100	100	100
0.5		0.2	3.0	3.4	3.5	2.9	3.0	2.7	3.4	3.2	4.3	
		0.4	28.9	30.2	31.1	27.8	29.0	28.2	30.9	29.2	56.3	
		0.6	78.9	79.9	80.3	78.0	78.8	77.6	81.1	79.5	97.0	
		0.8	97.1	97.3	97.2	96.9	97.0	97.0	97.3	97.1	99.9	
		1.0	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100	
0.9		0.2	0.3	0.6	0.6	0.3	0.6	0.3	0.4	0.3	0.2	
		0.4	1.7	2.1	2.1	1.6	2.0	1.6	1.8	1.6	0.9	
		0.6	11.1	13.7	13.8	10.8	13.1	10.2	12.7	11.2	5.4	
		0.8	41.6	44.7	44.4	40.5	43.8	39.8	43.5	40.2	25.9	
		1.0	75.3	77.3	76.9	74.1	76.8	73.4	75.4	73.0	57.6	

Table 23: Comparisonwise power rates (as percentages) of the tests obtained under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 12.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	36.37	38.00	39.80	34.18	34.43	34.47	36.13	34.52	64.05
		0.4	66.50	66.53	66.60	66.43	66.43	66.42	66.53	66.47	66.67
		0.6	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	8.38	9.20	10.50	7.92	8.45	8.00	9.07	8.32	9.63
		0.4	26.50	28.50	30.72	25.18	26.45	25.25	28.1	26.12	37.32
		0.6	50.07	51.45	53.17	49.12	50.02	49.20	51.67	50.20	61.80
		0.8	63.75	64.05	64.63	63.45	63.75	63.52	63.98	63.63	66.50
		1.0	66.38	66.47	66.55	66.33	66.38	66.33	66.37	66.33	66.67
	0.9	0.2	3.82	5.15	5.97	3.52	4.75	3.53	4.55	3.68	4.48
		0.4	8.08	10.68	11.88	7.37	9.82	7.35	9.47	7.77	7.53
		0.6	18.32	22.17	24.00	17.60	20.97	17.55	19.98	17.33	13.52
		0.8	31.60	36.05	37.95	30.52	34.75	30.30	33.47	30.97	24.02
		1.0	47.28	50.70	52.12	46.60	49.83	46.53	48.52	46.32	37.95
\mathbf{n}_3	0.1	0.2	50.20	50.93	51.87	49.38	49.48	49.43	50.43	49.73	66.40
		0.4	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.6	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	12.03	12.62	13.50	11.58	12.00	11.70	12.60	11.98	16.18
		0.4	41.85	42.75	43.70	41.17	41.87	41.42	42.73	41.82	54.02
		0.6	61.80	62.10	62.53	61.52	61.77	61.63	62.35	61.95	66.15
		0.8	66.20	66.22	66.25	66.18	66.20	66.20	66.30	66.25	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.9	0.2	5.12	6.15	6.52	5.00	5.82	4.97	5.53	4.83	5.15
		0.4	14.47	16.38	17.15	13.97	15.83	13.98	15.47	14.13	11.40
		0.6	31.70	33.58	34.40	31.32	33.03	31.23	32.85	31.32	24.47
		0.8	49.63	51.28	51.85	49.25	50.78	49.20	50.15	48.88	41.40
		1.0	61.00	61.85	62.12	60.80	61.70	60.70	61.43	60.95	55.12

Table 24: Comparisonwise power rates (as percentages) of the tests obtained under Model 1 and t -distribution $t_4/\sqrt{2}$ ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 12.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	38.23	39.30	40.80	36.57	36.77	37.07	38.35	37.22	62.63
		0.4	65.78	65.92	66.03	65.57	65.58	65.67	65.77	65.63	66.67
		0.6	66.50	66.53	66.52	66.47	66.47	66.50	66.48	66.48	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.63	66.63	66.63	66.63	66.63	66.63	66.63	66.63	66.67
	0.5	0.2	8.80	9.68	10.75	8.03	8.82	8.33	9.43	8.67	10.38
		0.4	26.85	28.62	30.43	25.50	26.73	25.90	28.65	26.83	37.98
		0.6	50.97	52.08	53.38	50.25	50.85	50.60	52.05	51.07	61.13
		0.8	62.63	63.25	63.68	62.35	62.53	62.55	63.42	63.00	66.25
		1.0	65.88	65.90	66.02	65.73	65.8	65.83	65.98	65.97	66.62
	0.9	0.2	3.22	4.53	5.00	2.88	4.02	2.87	4.02	3.32	3.75
		0.4	7.73	10.15	11.07	7.35	9.35	7.30	9.45	7.97	7.85
		0.6	16.63	20.23	21.33	15.90	19.12	15.82	18.78	16.55	14.73
		0.8	30.92	35.03	36.23	30.10	33.62	29.98	33.62	30.60	26.03
		1.0	44.95	48.42	49.28	43.92	47.13	43.95	46.85	44.53	38.53
\mathbf{n}_3	0.1	0.2	51.57	52.00	52.47	51.00	51.10	51.22	51.53	51.18	65.95
		0.4	66.52	66.53	66.52	66.52	66.52	66.50	66.52	66.5	66.65
		0.6	66.63	66.65	66.63	66.63	66.63	66.63	66.63	66.63	66.67
		0.8	66.62	66.63	66.62	66.62	66.62	66.62	66.62	66.62	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	13.25	13.82	14.28	12.98	13.22	12.93	13.85	13.18	17.18
		0.4	42.20	42.92	43.47	41.65	42.20	41.82	43.27	42.47	55.18
		0.6	61.52	61.78	61.93	61.25	61.47	61.23	62.12	61.72	66.05
		0.8	65.95	66.02	65.97	65.88	65.90	65.93	66.00	65.97	66.60
		1.0	66.62	66.62	66.62	66.62	66.62	66.62	66.62	66.62	66.67
	0.9	0.2	5.90	6.97	7.07	5.58	6.78	5.47	6.48	5.67	5.52
		0.4	13.78	15.25	15.32	13.43	14.82	13.23	14.68	13.58	11.25
		0.6	30.58	32.70	32.82	30.25	32.23	29.83	31.92	30.13	25.23
		0.8	48.68	50.28	50.23	48.33	49.82	47.98	49.67	48.27	42.65
		1.0	60.60	61.13	61.03	60.32	61.00	60.18	60.82	60.20	56.20

Table 25: The ACD power rates (as percentages) of the tests obtained under Model 1 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 13.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	21.7	23.1	25.6	18.3	22.0	19.4	21.1	19.4	81.6
		0.4	87.9	87.2	85.5	89.0	89.3	88.6	88.3	89.1	91.0
		0.6	87.6	86.6	85.3	88.9	88.8	88.8	88.0	89.1	89.3
		0.8	89.2	88.4	86.9	91.4	91.2	91.2	89.2	90.8	90.5
		1.0	87.6	86.6	84.9	89.0	88.9	89.1	88.0	89.2	89.3
	0.5	0.2	0.2	0.2	0.4	0.3	0.5	0.3	0.2	0.3	0.3
		0.4	8.0	9.8	11.3	7.4	10.9	7.5	10.0	8.0	20.0
		0.6	41.3	43.7	45.2	39.8	45.8	39.7	45.1	41.4	72.9
		0.8	77.7	77.2	77.4	77.0	80.0	77.2	77.6	77.4	88.3
		1.0	87.2	86.4	84.3	87.6	87.5	87.4	86.6	87.2	89.6
	0.9	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
		0.4	0.6	0.8	0.9	0.3	1.3	0.3	0.7	0.4	0.3
		0.6	3.0	4.4	5.8	2.9	6.3	2.8	3.8	3.1	1.4
		0.8	12.3	17.0	17.8	11.0	19.5	11.0	14.3	11.8	5.7
		1.0	34.8	40.2	42.7	34.3	45.0	34.0	36.1	32.1	17.6
\mathbf{n}_3	0.1	0.2	41.7	43.3	45.3	40.3	49.9	40.4	42.7	41.2	90.7
		0.4	88.4	87.5	86.5	89.5	89.4	89.5	88.5	89.5	89.1
		0.6	90.5	89.8	89.0	91.1	91.1	90.8	90.6	91.0	90.0
		0.8	90.1	89.2	88.4	90.8	90.8	90.6	90.0	90.5	91.0
		1.0	88.3	87.5	86.7	89.1	88.9	89.0	88.1	89.0	89.6
	0.5	0.2	1.6	1.8	2.3	1.5	2.1	1.6	1.7	1.6	2.1
		0.4	27.7	28.2	29.3	26.7	34.7	26.8	29.0	27.6	48.9
		0.6	72.1	72.6	73.8	71.7	80.2	71.9	73.6	72.5	88.5
		0.8	87.9	87.1	85.9	88.1	89.1	88.2	87.8	88.1	89.7
		1.0	89.8	89.3	88.5	90.1	89.8	90.2	89.5	90.3	89.8
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.4	1.6	2.5	2.6	1.6	3.0	1.6	2.6	2.1	0.3
		0.6	12.6	14.2	15.0	12.0	18.5	12.1	13.3	11.9	4.8
		0.8	37.7	39.4	40.2	36.9	49.6	36.9	37.4	35.3	22.0
		1.0	70.8	72.7	72.3	70.1	80.1	69.6	71.0	70.6	45.2

Table 26: The ACD power rates (as percentages) of the tests obtained under Model 1 and t -distribution $t_4/\sqrt{2}$ ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted. See also Figure 13.

n	ρ	δ	Test									
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb	
n ₁	0.1	0.2	26.7	27.6	29.8	24.4	28.3	24.8	26.6	25.5	77.0	
		0.4	86.4	85.9	85.4	86.6	87.0	86.3	86.4	86.5	90.2	
		0.6	87.6	87.0	85.6	88.7	88.7	88.5	87.9	88.7	89.5	
		0.8	88.6	87.3	85.9	90.0	89.9	89.5	88.7	89.8	90.2	
		1.0	88.7	87.4	85.8	89.5	89.3	89.8	88.3	89.5	89.5	
	0.5	0.2	0.7	1.1	1.4	0.6	1.1	0.7	0.8	0.6	0.7	
		0.4	11.1	12.0	12.9	10.1	12.9	10.3	12.2	10.6	22.9	
		0.6	47.9	49.9	52.2	46.6	52.0	47.2	50.5	48.7	74.0	
		0.8	77.8	78.2	78.3	77.9	79.4	78.5	78.3	77.8	88.7	
		1.0	87.5	86.3	84.4	88.4	88.3	88.0	86.9	88.7	90.2	
	0.9	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.1	
		0.4	0.5	0.7	0.7	0.5	0.7	0.4	0.8	0.6	0.3	
		0.6	3.2	4.6	5.2	3.0	5.8	3.0	4.0	2.9	1.1	
		0.8	12.2	16.2	17.5	11.1	20.1	11.2	15.1	12.2	7.6	
		1.0	32.6	37.4	38.2	31.4	41.6	31.5	34.8	31.0	20.2	
	n ₃	0.1	0.2	48.5	49.3	50.1	47.6	56.3	47.6	48.7	47.9	89.0
			0.4	89.9	89.6	89.0	90.5	90.7	90.2	89.8	90.2	90.4
			0.6	91.2	90.6	90.2	91.4	91.4	91.7	91.1	91.6	91.6
			0.8	87.8	87.2	86.2	88.7	88.4	88.7	88.0	88.9	88.1
			1.0	89.3	88.6	88.2	90.1	90.0	89.9	89.4	89.8	89.8
0.5		0.2	2.7	3.0	3.1	2.6	3.8	2.4	3.0	2.8	3.9	
		0.4	26.8	28.0	28.6	25.8	33.6	26.2	28.8	27.5	52.0	
		0.6	71.6	72.1	71.9	71.0	78.7	70.8	73.2	72.6	88.6	
		0.8	87.6	87.0	85.8	87.7	88.3	87.9	87.2	87.5	89.7	
		1.0	89.7	88.8	88.3	90.2	89.7	90.3	89.2	89.9	90.6	
0.9		0.2	0.2	0.4	0.4	0.2	0.4	0.2	0.3	0.3	0.1	
		0.4	1.4	1.7	1.7	1.4	2.3	1.4	1.4	1.4	0.6	
		0.6	9.4	11.1	11.3	9.3	15.6	8.8	10.2	9.2	4.5	
		0.8	37.8	39.8	39.2	37.0	50.9	36.5	39.1	37.1	22.5	
		1.0	69.7	69.7	69.0	68.7	77.1	68.1	68.6	67.8	50.6	

Table 27: Experimentwise (E) and comparisonwise (C) error rates (as percentages) of the tests obtained under Model 2. The column H refers to the situations of equal group mean functions (E) and unequal ones (U). In the column Case, “N” and “LN” refer to the normal and log-normal case, respectively. Moreover $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$. See also Figures 14 and 15.

H	Error rate	Case	\mathbf{n}	M	Test								
					L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	E	N	\mathbf{n}_1	40	23.1	25.1	28.2	20.5	20.9	20.7	23.6	21.7	22.3
				80	18.8	20.8	24.0	17.5	17.8	17.7	20.0	18.5	19.6
			\mathbf{n}_2	40	20.2	21.4	22.4	19.1	19.6	19.7	22.2	21.3	23.7
				80	20.8	21.9	23.2	19.3	19.5	19.9	22.7	21.3	20.3
			\mathbf{n}_3	40	20.8	21.6	23.0	19.3	19.6	19.3	21.0	19.8	22.9
				80	21.3	22.4	23.9	20.7	20.8	20.9	21.3	20.0	21.7
		LN	\mathbf{n}_1	40	23.7	25.0	28.4	21.8	23.4	22.2	22.4	20.4	19.3
				80	23.8	25.4	28.6	22.3	23.4	22.6	23.9	21.3	24.1
			\mathbf{n}_2	40	20.9	21.8	24.1	19.6	20.6	20.1	22.4	21.5	23.2
				80	20.2	21.6	23.0	19.5	20.2	19.9	20.0	19.5	21.7
			\mathbf{n}_3	40	19.8	21.2	23.4	19.2	19.6	19.5	21.3	20.3	22.6
				80	20.7	21.4	22.9	20.0	20.5	20.1	21.0	20.3	21.2
	C	N	\mathbf{n}_1	40	5.90	6.73	7.55	5.02	5.23	5.13	5.87	5.37	5.17
				80	4.97	5.73	6.53	4.42	4.65	4.53	5.20	4.65	4.68
			\mathbf{n}_2	40	4.98	5.33	5.73	4.73	4.83	4.82	5.43	5.12	5.42
				80	5.23	5.53	5.93	4.92	4.97	5.05	5.52	5.22	4.60
			\mathbf{n}_3	40	5.38	5.72	6.22	4.93	5.00	4.97	5.33	5.00	5.53
				80	5.37	5.67	6.10	5.05	5.13	5.12	5.30	4.95	5.30
		LN	\mathbf{n}_1	40	5.87	6.45	7.45	5.25	5.78	5.40	5.70	4.98	4.72
				80	6.07	6.57	7.73	5.70	5.98	5.75	6.23	5.43	5.48
			\mathbf{n}_2	40	5.17	5.45	6.05	4.83	5.12	4.97	5.43	5.12	5.20
				80	5.23	5.60	6.15	4.97	5.23	5.08	5.28	5.08	5.00
			\mathbf{n}_3	40	5.20	5.57	6.10	4.97	5.17	5.02	5.63	5.33	5.45
				80	5.32	5.60	6.10	5.13	5.28	5.17	5.42	5.13	5.08
U	E	N	\mathbf{n}_1	40	12.7	14.1	15.4	11.7	11.8	11.8	12.5	11.8	9.4
				80	14.2	15.6	17.8	13.0	13.4	13.3	13.7	12.6	11.3
			\mathbf{n}_2	40	12.4	12.7	13.9	11.7	11.7	12.1	13.0	12.2	12.9
				80	13.5	13.9	14.9	12.5	12.7	12.6	12.7	11.9	12.4
			\mathbf{n}_3	40	13.2	14.0	15.2	12.3	12.3	12.5	12.4	11.7	12.5
				80	12.8	13.2	14.0	12.3	12.3	12.3	12.5	12.0	12.5
		LN	\mathbf{n}_1	40	13.8	15.6	16.9	13.1	13.6	13.1	14.9	13.6	14.9
				80	11.8	13.2	15.1	10.9	11.7	11.1	12.8	11.5	13.7
			\mathbf{n}_2	40	13.7	14.3	15.1	13.4	13.7	13.3	13.3	12.1	13.1
				80	13.5	14.3	16.1	13.1	13.4	13.0	14.0	13.4	13.5
			\mathbf{n}_3	40	12.5	13.1	13.8	12.1	12.1	12.0	13.3	12.2	13.6
				80	11.1	12.3	13.4	10.6	11.0	10.7	11.5	11.3	11.9
	C	N	\mathbf{n}_1	40	2.63	2.90	3.23	2.43	2.47	2.45	2.58	2.35	1.93
				80	3.05	3.42	3.95	2.72	2.82	2.80	2.87	2.63	2.30
			\mathbf{n}_2	40	2.67	2.77	3.00	2.47	2.50	2.57	2.68	2.52	2.60
				80	2.78	2.95	3.17	2.55	2.62	2.58	2.60	2.45	2.53
			\mathbf{n}_3	40	2.75	2.93	3.22	2.58	2.58	2.62	2.55	2.40	2.60
				80	2.62	2.75	2.93	2.52	2.52	2.52	2.62	2.48	2.33
		LN	\mathbf{n}_1	40	2.85	3.28	3.77	2.70	2.83	2.70	3.15	2.80	2.97
				80	2.47	2.80	3.25	2.25	2.45	2.30	2.63	2.37	2.68
			\mathbf{n}_2	40	2.92	3.05	3.22	2.83	2.90	2.80	2.80	2.55	2.52
				80	2.85	3.02	3.42	2.73	2.80	2.77	3.02	2.82	2.68
			\mathbf{n}_3	40	2.48	2.63	2.82	2.40	2.42	2.35	2.70	2.43	2.62
				80	2.43	2.65	2.92	2.35	2.42	2.35	2.45	2.38	2.42

Table 28: Experimentwise (E), comparisonwise (C) and ACD power rates (as percentages) of the tests obtained under Model 2. In the column Case, “N” and “LN” refer to the normal and log-normal case, respectively. Moreover $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_2 = (20, 20, 20, 20)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$. See also Figure 16.

Power rate	Case	\mathbf{n}	M	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	N	\mathbf{n}_1	40	12.0	13.3	15.1	10.7	11.1	10.7	31.6	28.6	69.9
			80	11.3	12.6	15.0	10.0	10.5	10.4	34.4	31.1	87.6
		\mathbf{n}_2	40	36.1	37.5	40.4	34.5	35.3	35.3	82.4	81.1	99.8
			80	41.0	42.5	44.6	38.9	39.4	39.3	90.0	88.7	100
		\mathbf{n}_3	40	28.3	30.4	32.4	26.9	27.5	27.0	69.2	67.0	98.4
			80	28.1	29.9	32.3	26.8	27.1	27.0	80.6	79.4	99.9
	LN	\mathbf{n}_1	40	9.8	12.9	15.8	7.8	9.7	7.8	39.3	33.6	41.8
			80	11.4	14.1	17.6	9.7	11.2	10.0	40.2	34.8	44.6
		\mathbf{n}_2	40	65.0	67.7	73.5	62.0	63.6	62.0	96.9	96.2	91.1
			80	68.5	72.4	77.6	64.5	67.3	64.3	98.1	97.9	92.3
		\mathbf{n}_3	40	53.5	55.9	60.1	50.6	53.1	51.2	90.2	88.4	86.4
			80	48.8	52.6	58.6	44.9	47.6	45.7	89.0	87.7	84.8
C	N	\mathbf{n}_1	40	15.9	16.8	18.2	14.9	15.0	15.0	27.5	26.3	43.0
			80	15.7	16.8	18.1	14.7	14.9	14.8	29.2	27.2	47.4
		\mathbf{n}_2	40	30.8	31.4	32.5	30.1	30.3	30.3	45.8	45.4	50.0
			80	31.9	32.6	33.4	31.0	31.2	31.1	47.9	47.6	50.0
		\mathbf{n}_3	40	29.4	30.2	31.0	28.8	29.0	28.8	43.6	43.1	49.7
			80	30.1	30.9	31.9	29.5	29.7	29.7	46.4	46.1	50.0
	LN	\mathbf{n}_1	40	15.3	17.4	19.5	14.1	15.1	14.1	31.9	29.7	34.8
			80	15.7	17.4	20.1	14.3	15.4	14.6	32.4	30.0	35.1
		\mathbf{n}_2	40	40.9	41.9	43.5	39.9	40.5	40.0	49.4	49.2	48.2
			80	41.9	43.1	44.4	40.9	41.6	40.8	49.7	49.6	48.5
		\mathbf{n}_3	40	40.2	41.0	42.0	39.3	39.9	39.4	48.3	48.0	47.5
			80	38.9	40.0	41.6	37.8	38.6	38.0	48.1	47.9	47.2
ACD	N	\mathbf{n}_1	40	11.3	12.1	13.9	10.0	10.4	10.1	29.7	26.9	63.2
			80	10.3	11.3	13.4	9.1	9.5	9.5	30.6	27.9	77.4
		\mathbf{n}_2	40	33.3	34.6	36.7	32.1	32.8	32.7	72.0	71.7	87.0
			80	37.0	38.3	39.6	35.6	36.1	35.9	79.1	78.5	87.6
		\mathbf{n}_3	40	25.9	27.2	28.8	24.9	25.5	24.9	62.7	60.8	86.0
			80	26.3	27.8	29.6	25.3	25.5	25.4	71.6	70.8	87.4
	LN	\mathbf{n}_1	40	8.1	10.1	12.3	6.5	8.0	6.7	31.8	28.3	35.8
			80	10.0	11.8	14.2	8.8	9.8	9.0	33.6	29.6	38.2
		\mathbf{n}_2	40	54.9	56.5	61.4	52.4	53.6	52.6	84.1	84.5	79.3
			80	57.3	60.3	63.7	54.2	56.4	54.3	84.2	84.6	79.2
		\mathbf{n}_3	40	44.1	45.8	49.5	41.5	43.9	42.3	78.0	77.3	74.4
			80	41.0	43.9	48.3	38.2	40.3	38.9	78.0	77.0	74.8

Table 29: Experimentwise (E) and comparisonwise (C) error rates (as percentages) of the tests obtained under Model 3 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$ and $\delta = 0.4, 0.6, 0.8, 1$, the results were very similar, and, therefore, they are omitted.

Error rate	\mathbf{n}	ρ	δ	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	\mathbf{n}_1	0.1	0.0	23.5	25.5	27.3	21.9	22.9	22.3	24.2	22.1	21.3
			0.2	11.5	12.7	13.8	10.8	11.5	10.8	11.8	10.9	11.0
		0.5	0.0	21.6	24.6	27.4	20.4	22.8	20.5	24.5	20.8	23.5
			0.2	10.8	12.6	13.7	9.9	11.5	9.5	12.5	10.7	11.8
		0.9	0.0	16.9	23.3	25.1	15.7	21.8	15.6	21.7	17.8	22.3
			0.2	7.4	11.2	12.1	6.9	10.0	6.8	9.5	7.5	11.0
	\mathbf{n}_3	0.1	0.0	22.5	23.0	24.0	21.1	22.2	21.6	22.8	21.6	20.4
			0.2	11.8	12.3	12.5	11.4	11.7	11.2	12.1	11.2	10.6
		0.5	0.0	22.8	24.3	24.9	22.3	23.3	21.7	23.3	21.3	22.8
			0.2	12.0	12.8	13.0	11.4	12.6	10.9	12.0	10.9	10.4
		0.9	0.0	21.2	25.3	25.0	20.6	24.6	20.0	23.2	20.5	22.7
			0.2	9.5	11.4	11.6	9.3	11.2	9.0	11.4	9.1	9.6
C	\mathbf{n}_1	0.1	0.0	5.87	6.68	7.35	5.40	5.80	5.48	6.18	5.50	5.15
			0.2	1.93	2.15	2.33	1.80	1.93	1.80	1.98	1.82	1.87
		0.5	0.0	5.37	6.27	7.00	4.95	5.70	4.95	6.08	5.10	5.50
			0.2	1.82	2.13	2.32	1.67	1.95	1.60	2.13	1.80	2.00
		0.9	0.0	4.00	5.72	6.22	3.75	5.32	3.67	5.12	3.97	5.20
			0.2	1.25	1.90	2.05	1.17	1.70	1.15	1.62	1.27	1.88
	\mathbf{n}_3	0.1	0.0	5.98	6.18	6.48	5.72	5.95	5.78	6.15	5.77	5.22
			0.2	2.02	2.10	2.13	1.95	2.00	1.92	2.07	1.92	1.83
		0.5	0.0	5.97	6.50	6.72	5.82	6.23	5.72	6.30	5.65	5.37
			0.2	2.08	2.23	2.27	1.97	2.20	1.88	2.10	1.90	1.87
		0.9	0.0	5.20	6.55	6.45	5.05	6.28	4.87	6.03	5.25	5.47
			0.2	1.65	2.02	2.05	1.60	1.98	1.55	1.97	1.57	1.63

Table 30: Experimentwise power rates (as percentages) of the tests obtained under Model 3 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	25.4	27.0	29.5	22.7	25.3	23.6	27.2	24.5	54.2
		0.4	94.7	95.1	95.7	94.2	94.4	94.4	94.9	94.6	99.4
		0.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	0.4	0.5	0.5	0.3	0.4	0.3	0.6	0.3	0.3
		0.4	10.7	13.0	14.0	10.1	12.0	10.1	12.8	11.0	14.9
		0.6	47.1	51.7	53.6	45.2	48.4	45.4	50.6	47.2	62.0
		0.8	82.0	83.9	85.9	81.0	82.5	81.0	84.0	83.0	92.9
		1.0	95.8	96.2	96.8	95.2	95.8	95.6	95.9	95.6	99.1
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		0.4	0.1	0.3	0.3	0.1	0.3	0.1	0.3	0.3	0.0
		0.6	2.2	5.0	5.3	1.6	4.1	1.7	3.7	2.0	1.5
		0.8	12.9	17.1	18.1	12.0	15.9	11.8	15.7	13.3	6.4
		1.0	33.9	41.2	42.5	32.5	39.2	31.8	38.6	33.6	20.5
\mathbf{n}_3	0.1	0.2	51.4	53.0	53.8	49.4	51.0	50.2	52.1	50.2	85.4
		0.4	99.3	99.4	99.3	99.3	99.3	99.3	99.4	99.3	99.7
		0.6	99.8	99.8	99.8	99.8	99.8	99.8	99.8	99.8	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	1.9	2.0	2.1	1.8	2.0	1.6	1.7	1.5	1.3
		0.4	26.2	28.5	28.9	25.1	27.4	23.9	28.3	26.2	36.6
		0.6	79.1	80.7	81.0	78.7	79.5	78.2	81.1	79.4	90.3
		0.8	97.1	97.2	97.2	97.1	97.2	97	97.4	97.1	99.2
		1.0	99.5	99.5	99.5	99.5	99.5	99.4	99.4	99.4	99.9
	0.9	0.2	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.2	0.0
		0.4	1.8	2.2	2.2	1.7	2.1	1.5	1.6	1.1	0.6
		0.6	11.6	13.8	13.7	11.3	13.4	10.7	12.6	10.5	6.3
		0.8	38.7	42.8	42.3	37.6	41.9	36.9	40.7	37.4	21.1
		1.0	74.5	77.3	76.1	73.2	76.3	71.7	75.1	72.3	53.5

Table 31: Comparisonwise power rates (as percentages) of the tests obtained under Model 3 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	37.25	38.63	40.15	35.77	37.00	36.12	38.05	36.45	52.78
		0.4	65.22	65.33	65.47	65.07	65.13	65.2	65.23	65.18	66.48
		0.6	66.53	66.53	66.53	66.53	66.53	66.53	66.53	66.57	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	8.22	9.78	10.62	7.70	8.83	7.70	9.15	8.05	8.40
		0.4	26.22	28.32	29.57	25.27	27.1	25.37	28.22	26.38	31.08
		0.6	49.75	51.60	52.55	48.87	50.37	49.10	51.57	50.12	56.32
		0.8	61.98	62.58	63.02	61.60	62.12	61.82	62.53	62.20	65.02
		1.0	65.60	65.72	65.85	65.48	65.60	65.58	65.70	65.65	66.45
	0.9	0.2	3.08	4.87	5.20	2.92	4.33	2.85	4.05	3.18	4.18
		0.4	7.12	9.52	10.15	6.58	8.98	6.58	8.47	7.08	7.37
		0.6	15.93	19.77	20.67	14.92	18.48	14.82	18.18	15.73	13.82
		0.8	29.10	33.67	34.35	28.23	32.33	28.15	31.88	29.10	23.98
		1.0	44.92	48.23	48.78	44.07	47.33	43.92	47.28	44.53	37.72
\mathbf{n}_3	0.1	0.2	52.62	53.28	53.72	52.00	52.45	52.17	52.92	52.37	63.27
		0.4	66.45	66.48	66.45	66.45	66.45	66.45	66.47	66.45	66.62
		0.6	66.63	66.63	66.62	66.63	66.63	66.63	66.63	66.63	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	13.43	14.20	14.50	13.00	13.80	12.83	14.03	13.27	14.32
		0.4	42.12	43.15	43.40	41.65	42.58	41.37	43.35	42.37	48.42
		0.6	61.82	62.25	62.30	61.70	61.93	61.68	62.38	61.97	64.67
		0.8	66.03	66.05	66.05	66.02	66.05	66.00	66.10	66.05	66.48
		1.0	66.47	66.48	66.45	66.47	66.47	66.45	66.48	66.48	66.65
	0.9	0.2	6.23	7.20	7.20	6.03	7.03	5.73	6.77	5.80	5.68
		0.4	14.60	16.37	16.23	14.27	15.83	13.92	15.33	13.98	12.43
		0.6	31.55	34.00	33.68	31.15	33.32	30.45	32.77	31.05	25.37
		0.8	49.10	50.90	50.60	48.73	50.48	48.20	50.13	48.68	41.20
		1.0	60.87	61.53	61.28	60.60	61.33	60.17	61.10	60.33	55.45

Table 32: The ACD power rates (as percentages) of the tests obtained under Model 3 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	24.2	25.6	27.8	21.7	28.1	22.7	25.9	23.5	50.2
		0.4	84.2	83.4	82.9	84.5	84.6	84.6	84.1	84.8	88.6
		0.6	88.2	87.0	85.9	88.9	88.2	88.9	87.9	88.8	89.0
		0.8	88.5	87.3	86.2	89.2	88.5	89.2	88.2	89.1	89.0
		1.0	88.5	87.3	86.2	89.2	88.5	89.2	88.2	89.1	89.0
	0.5	0.2	0.4	0.5	0.5	0.3	0.9	0.3	0.6	0.3	0.3
		0.4	9.9	11.8	12.6	9.3	13.6	9.3	11.6	10.4	13.5
		0.6	44.0	47.6	48.7	42.2	47.3	42.6	46.5	44.1	54.9
		0.8	74.6	75.0	75.9	74.3	77.0	74.7	75.1	75.7	82.2
		1.0	85.7	84.4	83.7	86.0	85.8	86.8	84.2	85.8	87.5
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		0.4	0.1	0.3	0.3	0.1	0.8	0.1	0.2	0.2	0.0
		0.6	1.8	4.2	4.3	1.4	5.0	1.5	3.2	1.9	1.1
		0.8	11.8	14.9	15.7	10.9	17.7	10.7	13.8	12.3	5.4
		1.0	31.1	36.0	36.9	30.0	40.0	29.3	34.5	30.8	17.6
\mathbf{n}_3	0.1	0.2	47.8	49.0	49.2	46.0	56.8	46.8	48.2	46.6	77.8
		0.4	87.7	87.3	87.0	88.1	88.0	88.3	87.4	88.3	89.2
		0.6	88.0	87.5	87.3	88.4	88.2	88.6	87.7	88.6	89.4
		0.8	88.2	87.7	87.5	88.6	88.3	88.8	87.9	88.8	89.4
		1.0	88.2	87.7	87.5	88.6	88.3	88.8	87.9	88.8	89.4
	0.5	0.2	1.7	1.7	1.8	1.6	2.3	1.5	1.6	1.4	1.2
		0.4	23.1	24.9	25.3	22.1	31.9	21.6	25.4	23.8	32.8
		0.6	71.2	71.8	71.8	71.0	77.7	70.9	73.0	72.3	81.1
		0.8	86.0	85.2	85.0	86.6	86.7	87.1	86.2	87.1	89.1
		1.0	87.6	86.8	86.6	88.2	87.0	88.7	87.6	88.7	89.5
	0.9	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.0
		0.4	1.5	1.9	1.9	1.4	2.2	1.2	1.3	0.8	0.6
		0.6	10.0	11.7	11.6	9.8	16.4	9.3	10.7	9.1	5.5
		0.8	34.4	37.0	36.3	33.5	48.3	33.0	35.2	33.2	18.5
		1.0	67.2	68.2	67.0	66.2	76.3	64.9	66.4	65.5	48.3

Table 33: Experimentwise (E) and comparisonwise (C) error rates (as percentages) of the tests obtained under Model 4 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$ and $\delta = 0.4, 0.6, 0.8, 1$, the results were very similar, and, therefore, they are omitted.

Error rate	\mathbf{n}	ρ	δ	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	\mathbf{n}_1	0.1	0.0	23.4	25.4	27.6	21.2	21.8	21.8	23.8	21.5	21.3
			0.2	11.4	12.1	13.5	10.6	10.7	10.5	11.6	10.9	10.5
		0.5	0.0	21.5	24.6	27.0	20.1	21.4	20.4	23.6	21.1	22.3
			0.2	10.8	12.4	13.3	9.4	10.6	9.7	11.7	10.6	11.7
		0.9	0.0	17.7	22.7	24.5	16.1	21.0	16.3	22.0	18.7	23.2
			0.2	7.6	10.9	12.4	6.5	9.9	6.8	9.7	7.7	11.5
	\mathbf{n}_3	0.1	0.0	18.6	19.6	21.8	17.5	17.7	17.7	18.7	17.7	18.9
			0.2	8.9	9.5	10.4	8.3	8.3	8.4	8.8	8.3	9.7
		0.5	0.0	19.6	20.4	22.0	19.4	19.6	19.7	20.3	19.2	20.9
			0.2	9.5	10.1	11.3	9.2	9.5	9.2	10.3	9.5	9.3
		0.9	0.0	19.3	22.8	24.3	18.6	22.2	18.1	21.9	18.7	24.4
			0.2	8.3	10.3	10.8	7.8	10.1	7.8	9.2	8.0	10.7
C	\mathbf{n}_1	0.1	0.0	5.93	6.58	7.38	5.22	5.35	5.38	6.02	5.35	5.28
			0.2	1.90	2.03	2.28	1.77	1.78	1.75	1.95	1.82	1.78
		0.5	0.0	5.40	6.15	6.92	4.93	5.35	5.02	5.87	5.32	5.32
			0.2	1.82	2.10	2.25	1.58	1.78	1.63	2.00	1.80	1.98
		0.9	0.0	4.18	5.55	6.25	3.82	5.13	3.88	5.13	4.08	5.33
			0.2	1.28	1.85	2.10	1.10	1.68	1.15	1.65	1.30	1.95
	\mathbf{n}_3	0.1	0.0	4.78	5.05	5.58	4.45	4.52	4.52	4.82	4.52	4.85
			0.2	1.52	1.62	1.77	1.42	1.42	1.43	1.50	1.42	1.65
		0.5	0.0	5.12	5.38	5.92	4.97	5.10	5.05	5.27	4.92	5.15
			0.2	1.63	1.73	1.93	1.57	1.63	1.58	1.77	1.62	1.58
		0.9	0.0	4.50	5.50	5.87	4.25	5.22	4.20	5.07	4.35	5.28
			0.2	1.38	1.75	1.87	1.30	1.68	1.30	1.57	1.33	1.82

Table 34: Experimentwise power rates (as percentages) of the tests obtained under Model 4 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	24.8	27.4	29.8	22.7	23.0	23.0	24.7	23.4	74.1
		0.4	94.6	95.0	95.2	93.8	94.0	94.0	94.9	93.9	99.7
		0.6	99.5	99.5	99.5	99.5	99.5	99.5	99.6	99.6	100
		0.8	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		1.0	99.9	100	100	99.9	99.9	100	100	100	100
	0.5	0.2	0.4	0.5	0.6	0.3	0.4	0.3	0.6	0.4	0.7
		0.4	10.9	12.3	14.7	10.2	11.0	10.6	12.5	10.9	20.1
		0.6	47.9	50.9	53.5	45.8	47.8	46.3	49.6	46.9	69.7
		0.8	82.1	84.1	86.4	80.9	82.0	81.0	83.3	82.1	94.5
		1.0	95.4	95.9	96.5	95.1	95.3	95.5	95.6	95.5	99.5
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.4	0.1	0.2	0.3	0.1	0.2	0.1	0.3	0.3	0.0
		0.6	2.7	4.8	5.5	2.0	4.5	2.0	4.0	3.1	1.6
		0.8	13.6	17.9	19.0	12.9	16.7	12.8	15.9	13.3	7.1
		1.0	35.5	42.0	43.9	33.4	40.0	33.0	39.5	34.6	22.1
\mathbf{n}_3	0.1	0.2	44.8	46.3	48.1	42.9	43.1	43.3	44.2	43.2	95.8
		0.4	99.8	99.8	99.8	99.8	99.8	99.8	100	100	100
		0.6	99.8	99.8	99.8	99.8	99.8	99.8	100	100	100
		0.8	99.9	99.9	99.9	99.9	99.9	99.9	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	1.4	1.6	1.7	1.4	1.5	1.4	1.9	1.7	2.2
		0.4	23.3	24.9	27.0	22.5	23.4	22.7	24.4	23.1	44.1
		0.6	77.0	78.0	79.0	76.6	77.0	76.6	78.6	77.3	92.8
		0.8	98.3	98.4	98.5	98.3	98.3	98.3	98.3	98.2	99.7
		1.0	99.7	99.7	99.8	99.7	99.7	99.7	99.9	99.9	100
	0.9	0.2	0.2	0.4	0.4	0.1	0.3	0.1	0.2	0.0	0.1
		0.4	1.2	1.9	2.1	1.2	1.6	1.2	1.5	1.5	0.5
		0.6	11.7	14.1	15.3	11.6	13.0	11.4	13.4	11.5	5.7
		0.8	41.5	45.3	47.2	40.8	44.4	40.7	43.4	39.8	21.6
		1.0	76.1	78.4	79.1	75.8	78.2	75.5	77.1	75.7	50.5

Table 35: Comparisonwise power rates (as percentages) of the tests obtained under Model 4 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	37.07	38.58	40.10	35.40	35.63	35.73	36.82	35.63	59.73
		0.4	65.10	65.25	65.32	64.88	64.92	64.95	65.18	65.00	66.58
		0.6	66.50	66.50	66.50	66.50	66.50	66.50	66.53	66.53	66.67
		0.8	66.63	66.63	66.63	66.63	66.63	66.63	66.67	66.67	66.67
		1.0	66.65	66.67	66.67	66.63	66.63	66.67	66.67	66.67	66.67
	0.5	0.2	8.20	9.42	10.62	7.53	8.22	7.78	9.12	8.15	9.37
		0.4	26.37	28.15	29.88	25.17	26.40	25.57	28.05	26.23	34.95
		0.6	49.90	51.23	52.38	48.92	49.80	49.25	51.03	49.75	58.58
		0.8	61.92	62.48	62.98	61.42	61.82	61.67	62.28	62.02	65.43
		1.0	65.47	65.60	65.75	65.38	65.43	65.53	65.63	65.62	66.55
	0.9	0.2	3.13	4.68	5.17	2.93	4.18	2.90	4.20	3.35	4.28
		0.4	7.42	9.53	10.33	6.95	8.65	6.98	8.65	7.47	7.37
		0.6	16.53	19.83	21.00	15.67	18.78	15.62	18.60	16.45	13.87
		0.8	29.92	33.98	35.02	28.70	32.67	28.90	32.27	29.72	24.35
		1.0	45.55	48.52	49.33	44.62	47.53	44.62	47.65	45.37	38.10
n ₃	0.1	0.2	50.43	51.05	51.93	49.68	49.78	49.80	50.30	49.72	65.83
		0.4	66.55	66.55	66.55	66.55	66.55	66.55	66.67	66.67	66.67
		0.6	66.60	66.60	66.60	66.60	66.60	66.60	66.67	66.67	66.67
		0.8	66.65	66.65	66.63	66.65	66.65	66.63	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	11.80	12.48	13.37	11.37	11.80	11.52	12.48	11.92	15.10
		0.4	40.18	41.17	42.07	39.68	40.18	39.83	41.08	40.25	50.57
		0.6	61.48	61.78	62.10	61.35	61.47	61.38	61.97	61.60	65.23
		0.8	66.25	66.27	66.30	66.25	66.25	66.25	66.32	66.30	66.62
		1.0	66.53	66.53	66.55	66.53	66.53	66.55	66.65	66.65	66.67
	0.9	0.2	5.30	6.30	6.68	5.12	5.97	5.05	5.88	5.10	5.15
		0.4	14.10	15.87	16.63	13.87	15.35	13.80	15.12	14.02	11.62
		0.6	32.23	34.47	35.38	31.63	33.62	31.60	33.22	31.73	24.73
		0.8	50.30	51.95	52.60	49.90	51.55	49.80	50.98	49.67	41.07
		1.0	61.15	61.75	61.98	61.03	61.67	60.97	61.55	61.12	54.57

Table 36: The ACD power rates (as percentages) of the tests obtained under Model 4 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $M = 150$, the results were very similar, and, therefore, they are omitted.

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	23.7	26.1	28.1	21.8	26.7	22.1	23.4	22.2	67.8
		0.4	84.2	84.0	83.0	84.4	85.0	84.6	84.3	84.2	89.3
		0.6	88.2	87.5	86.1	89.1	88.9	89.1	88.1	88.8	89.5
		0.8	88.5	87.8	86.4	89.4	89.2	89.4	88.4	89.1	89.5
		1.0	88.5	87.9	86.5	89.4	89.2	89.5	88.3	89.1	89.4
	0.5	0.2	0.4	0.5	0.6	0.3	0.7	0.3	0.6	0.4	0.7
		0.4	9.9	11.1	13.2	9.4	12.9	9.8	11.5	10.2	18.4
		0.6	44.4	46.6	48.7	43.0	46.8	43.5	45.8	43.9	63.2
		0.8	74.7	75.4	76.5	74.8	77.0	74.7	75.1	74.9	84.3
		1.0	85.4	84.3	83.7	86.4	86.2	86.5	84.8	85.9	87.9
	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		0.4	0.1	0.2	0.3	0.1	0.6	0.1	0.2	0.2	0.0
		0.6	2.2	3.9	4.4	1.9	5.6	1.9	3.3	2.6	1.2
		0.8	12.4	15.7	16.2	11.9	18.0	11.8	14.1	12.1	5.8
		1.0	32.1	36.5	37.9	30.8	40.0	30.4	35.5	31.9	18.9
\mathbf{n}_3	0.1	0.2	42.2	43.5	45.2	40.6	51.1	41.0	41.9	41.0	87.0
		0.4	90.9	90.3	89.5	91.6	91.5	91.4	91.2	91.7	90.5
		0.6	90.9	90.3	89.5	91.7	91.5	91.4	91.2	91.7	90.5
		0.8	91.0	90.4	89.6	91.8	91.7	91.5	91.2	91.7	90.5
		1.0	91.1	90.5	89.7	91.9	91.7	91.6	91.2	91.7	90.5
	0.5	0.2	1.3	1.5	1.6	1.3	1.9	1.3	1.7	1.5	1.9
		0.4	21.5	22.9	24.9	21.0	30.1	21.3	22.8	21.8	40.8
		0.6	70.8	71.3	71.3	70.8	79.6	70.7	71.7	71.4	84.6
		0.8	89.6	89.1	88.1	89.9	90.1	89.9	88.9	89.6	90.6
		1.0	90.3	89.7	88.5	90.6	90.3	90.6	89.7	90.5	90.8
	0.9	0.2	0.1	0.3	0.3	0.0	0.2	0.0	0.1	0.0	0.1
		0.4	0.9	1.2	1.4	0.9	1.8	0.9	1.0	1.0	0.4
		0.6	10.9	12.6	13.4	10.8	16.6	10.6	12.0	10.2	5.1
		0.8	38.1	40.5	41.9	38.1	51.0	38.0	39.6	36.7	19.4
		1.0	69.9	70.5	70.7	70.1	79.5	70.0	70.4	70.2	45.5

Table 37: Experimentwise (E) and comparisonwise (C) error rates (as percentages) of the tests obtained under Model 5 and standard normal distribution ($M = 80$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $\delta = 0.4, 0.6, 0.8, 1$, the results were very similar, and, therefore, they are omitted.

Error rate	\mathbf{n}	ρ	δ	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	\mathbf{n}_1	0.1	0.0	19.6	20.8	24.3	17.1	17.3	17.2	19.1	17.2	17.1
			0.2	10.5	11.3	11.8	9.2	9.3	9.4	10.6	9.7	8.8
		0.5	0.0	21.1	23.4	27.5	19.4	20.7	19.5	22.6	20.0	21.4
			0.2	11.2	11.9	13.4	9.8	10.6	9.8	10.6	9.6	10.0
		0.9	0.0	20.2	22.5	26.4	18.0	19.3	18.3	21.2	18.9	21.0
			0.2	9.8	11.1	13.6	8.8	9.2	8.9	11.1	9.2	10.4
	\mathbf{n}_3	0.1	0.0	22.5	23.4	25.1	20.8	20.9	21.2	22.3	21.1	20.0
			0.2	11.3	12.3	13.3	10.5	10.6	10.4	11.4	10.5	11.0
		0.5	0.0	21.9	22.6	24.4	20.7	21.4	21.1	21.7	20.2	20.9
			0.2	9.8	10.9	11.8	9.5	9.6	9.7	10.1	9.6	9.3
		0.9	0.0	20.2	21.7	23.6	19.0	20.1	19.3	22.1	20.0	20.2
			0.2	8.5	9.6	10.0	8.1	8.4	8.1	9.6	8.5	8.4
C	\mathbf{n}_1	0.1	0.0	5.05	5.60	6.52	4.38	4.45	4.45	5.00	4.50	4.35
			0.2	1.78	1.95	2.05	1.57	1.58	1.60	1.80	1.65	1.52
		0.5	0.0	5.38	6.02	7.28	4.80	5.15	4.85	5.75	5.00	5.03
			0.2	1.98	2.12	2.38	1.75	1.88	1.75	1.88	1.67	1.83
		0.9	0.0	4.87	5.60	6.82	4.27	4.63	4.35	5.23	4.55	5.13
			0.2	1.70	1.93	2.35	1.50	1.58	1.53	1.92	1.58	1.80
	\mathbf{n}_3	0.1	0.0	5.67	6.00	6.50	5.15	5.22	5.25	5.62	5.23	5.10
			0.2	1.95	2.12	2.28	1.82	1.83	1.80	1.97	1.82	1.88
		0.5	0.0	5.38	5.68	6.18	5.05	5.27	5.18	5.35	4.95	4.80
			0.2	1.68	1.88	2.03	1.63	1.65	1.68	1.73	1.65	1.60
		0.9	0.0	4.70	5.13	5.68	4.35	4.70	4.43	5.23	4.67	4.57
			0.2	1.45	1.63	1.70	1.38	1.43	1.38	1.62	1.43	1.40

Table 38: Experimentwise power rates (as percentages) of the tests obtained under Model 5 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	14.2	15.5	17.5	12.4	12.4	12.5	13.2	11.5	37.0
		0.4	94.8	95.4	96.4	93.6	93.9	93.8	91.6	90.2	99.4
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	99.9	100	100	99.9	99.9	99.9	100	100	100
	0.5	0.2	0.2	0.2	0.6	0.2	0.2	0.2	0.2	0.2	0.0
		0.4	5.5	6.3	7.6	5.1	5.4	5.1	5.5	5.0	4.2
		0.6	30.1	32.5	35.9	28.7	29.6	28.8	28.6	27.0	27.8
		0.8	67.1	69.3	73.8	65.4	66.1	65.5	64.7	62.5	66.7
		1.0	92.2	93.3	94.2	91.1	91.7	91.3	89.0	87.7	91.6
	0.9	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.3	0.2	0.1
		0.4	0.8	1.0	1.1	0.7	0.7	0.7	0.7	0.7	0.5
		0.6	2.8	3.1	3.9	2.6	2.8	2.7	2.1	2.0	1.6
		0.8	7.5	8.2	8.8	7.2	7.3	6.9	6.9	6.4	5.2
		1.0	18.2	19.9	22.5	16.2	17.3	16.7	17.4	15.2	13.2
\mathbf{n}_3	0.1	0.2	34.5	35.4	37.2	33.3	33.6	33.4	32.7	31.9	69.8
		0.4	99.6	99.6	99.8	99.4	99.5	99.5	99.1	98.9	100
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	1.6	1.8	1.8	1.5	1.5	1.6	1.6	1.6	0.6
		0.4	17.5	18.1	20.0	17.0	17.3	16.8	16.7	16.2	18.3
		0.6	58.9	60.3	61.3	57.6	58.4	58.1	56.7	55.4	60.2
		0.8	88.9	89.2	90.1	88.1	88.4	88.2	87.7	86.9	91.0
		1.0	99.1	99.1	99.2	99.1	99.1	99.1	98.6	98.2	98.9
	0.9	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.4	0.3	0.1
		0.4	0.9	1.0	1.0	0.9	0.9	0.9	1.0	1.0	0.8
		0.6	5.5	5.8	6.7	5.1	5.3	5.1	5.1	4.9	3.5
		0.8	19.5	20.5	22.3	18.4	19.2	18.3	18.4	17.7	13.0
		1.0	40.7	42.3	44.0	39.9	40.6	39.8	40.5	39.5	33.2

Table 39: Comparisonwise power rates (as percentages) of the tests obtained under Model 5 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	30.28	31.58	33.45	28.4	28.55	28.45	28.95	27.57	45.30
		0.4	65.70	65.82	66.00	65.38	65.47	65.43	64.98	64.70	66.57
		0.6	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.65	66.67	66.67	66.65	66.65	66.65	66.67	66.67	66.67
	0.5	0.2	7.68	8.30	9.55	7.18	7.43	7.22	8.00	7.10	6.83
		0.4	21.53	23.08	24.88	20.35	20.98	20.67	21.67	20.55	20.62
		0.6	42.20	43.47	45.42	40.85	41.5	41.07	41.15	39.82	41.07
		0.8	58.37	59.02	60.40	57.77	58.05	57.88	57.4	56.43	57.95
		1.0	65.08	65.33	65.53	64.8	64.93	64.85	64.35	64.00	64.83
	0.9	0.2	4.65	5.20	6.20	4.10	4.50	4.28	4.92	4.27	4.10
		0.4	7.93	9.00	10.08	7.32	7.72	7.40	8.43	7.63	7.48
		0.6	13.78	15.02	16.47	12.83	13.35	13.08	13.87	12.78	12.57
		0.8	21.98	23.38	25.08	20.82	21.22	20.85	22.13	20.50	20.25
		1.0	33.08	34.58	36.73	31.47	32.32	31.77	33.37	31.42	29.53
\mathbf{n}_3	0.1	0.2	45.25	45.93	46.57	44.52	44.62	44.62	44.32	43.83	59.50
		0.4	66.60	66.60	66.63	66.57	66.58	66.58	66.52	66.48	66.67
		0.6	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	11.05	11.52	12.38	10.58	10.87	10.73	11.55	10.95	10.35
		0.4	34.00	34.58	36.00	33.35	33.7	33.58	33.93	33.33	35.10
		0.6	55.60	55.97	56.30	55.12	55.35	55.25	54.85	54.43	56.30
		0.8	64.45	64.52	64.70	64.25	64.35	64.27	64.12	63.90	64.80
		1.0	66.50	66.50	66.52	66.50	66.50	66.50	66.42	66.35	66.45
	0.9	0.2	5.07	5.43	5.92	4.93	5.10	4.97	5.35	5.02	4.98
		0.4	10.85	11.28	12.05	10.40	10.83	10.53	11.10	10.42	9.42
		0.6	21.27	22.08	23.00	20.72	21.20	20.75	21.70	20.85	19.22
		0.8	34.95	35.87	36.98	34.18	34.82	34.35	35.03	34.33	31.77
		1.0	47.85	48.53	49.38	47.37	47.78	47.40	47.97	47.28	44.83

Table 40: The ACD power rates (as percentages) of the tests obtained under Model 5 and standard normal distribution ($M = 80$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	14.0	15.2	17.2	12.3	15.2	12.3	13.0	11.3	35.9
		0.4	85.9	85.7	85.1	86.4	87.2	86.7	83.3	83.1	90.5
		0.6	90.0	89.0	87.1	91.4	91.3	91.3	89.8	91.0	91.3
		0.8	90.0	89.0	87.7	91.2	90.9	91.1	90.0	91.2	90.9
		1.0	89.7	89.1	87.8	90.5	90.5	90.5	89.9	90.5	91.3
	0.5	0.2	0.2	0.2	0.6	0.2	0.6	0.2	0.2	0.2	0.0
		0.4	5.5	6.2	7.4	5.1	7.9	5.1	5.5	5.0	4.2
		0.6	28.5	30.3	33.3	27.1	31.4	27.2	26.5	25.2	26.2
		0.8	62.2	63.5	66.9	61.6	66.1	61.2	59.6	58.1	61.9
		1.0	84.1	84.2	83.0	84.1	85.2	84.4	80.3	80.4	83.3
	0.9	0.2	0.1	0.2	0.3	0.1	0.1	0.1	0.3	0.2	0.1
		0.4	0.8	1.0	1.1	0.7	1.0	0.7	0.7	0.7	0.5
		0.6	2.7	3.0	3.6	2.5	3.7	2.6	2.1	2.0	1.6
		0.8	7.0	7.6	8.1	6.8	9.6	6.6	6.5	6.0	4.9
		1.0	17.2	18.7	20.5	15.3	20.2	15.8	15.6	14.2	12.3
\mathbf{n}_3	0.1	0.2	32.7	33.4	35.1	31.8	40.0	32.0	31.1	30.6	65.0
		0.4	89.2	88.0	87.0	89.3	89.4	89.5	88.1	89.0	89.1
		0.6	88.5	87.8	86.8	88.6	88.6	89.2	88.4	88.8	88.8
		0.8	88.0	87.9	87.0	88.6	88.6	88.5	88.7	88.8	88.9
		1.0	88.3	88.0	87.7	88.7	88.7	88.7	88.8	89.1	89.3
	0.5	0.2	1.6	1.8	1.8	1.5	1.7	1.6	1.5	1.5	0.6
		0.4	16.7	17.3	19.1	16.4	21.8	16.2	15.9	15.4	17.4
		0.6	54.7	55.7	56.2	53.7	62.5	54.1	52.6	51.6	56.2
		0.8	80.2	80.1	80.5	80.0	84.8	79.9	79.1	78.7	83.4
		1.0	89.0	88.4	87.9	89.4	89.7	89.0	88.1	88.3	90.1
	0.9	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.4	0.3	0.1
		0.4	0.9	1.0	1.0	0.9	1.2	0.9	1.0	1.0	0.7
		0.6	5.2	5.5	6.3	4.9	7.0	4.9	4.9	4.7	3.1
		0.8	18.4	19.4	21.0	17.4	23.0	17.3	17.1	16.3	11.7
		1.0	37.9	39.4	40.7	37.3	45.6	37.2	38.1	37.2	30.4

Table 41: Experimentwise (E) and comparisonwise (C) error rates (as percentages) of the tests obtained under Model 6 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$). For $\delta = 0.4, 0.6, 0.8, 1$, the results were very similar, and, therefore, they are omitted.

Error rate	\mathbf{n}	ρ	δ	Test								
				L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
E	\mathbf{n}_1	0.1	0.0	22.4	23.5	25.1	19.6	19.6	19.8	21.6	19.5	19.9
			0.2	12.5	13.4	14.4	11.1	11.1	11.4	12.6	11.3	10.4
		0.5	0.0	19.5	21.8	25.7	17.8	18.6	18.0	20.8	19.2	18.3
			0.2	11.7	13.4	15.0	10.1	11.1	10.9	12.1	10.6	10.1
		0.9	0.0	22.3	24.7	27.5	19.9	21.4	20.9	22.7	19.7	20.3
			0.2	9.8	11.4	13.1	8.7	9.4	9.1	9.9	8.8	8.7
	\mathbf{n}_3	0.1	0.0	19.2	19.8	20.9	18.0	18.0	18.1	19.0	17.9	18.1
			0.2	9.1	9.8	11.0	8.5	8.8	8.5	9.2	8.7	8.7
		0.5	0.0	17.5	18.8	20.8	16.7	17.1	16.7	18.4	18.0	21.6
			0.2	8.7	9.3	10.2	8.1	8.4	8.3	9.0	8.1	9.7
		0.9	0.0	21.3	22.2	22.9	19.7	20.8	20.5	22.0	19.9	23.3
			0.2	9.5	10.0	11.0	9.2	9.5	9.2	11.4	10.7	11.5
C	\mathbf{n}_1	0.1	0.0	5.85	6.23	6.95	4.98	5.00	5.03	5.65	4.93	5.07
			0.2	2.13	2.30	2.50	1.90	1.90	1.95	2.17	1.93	1.78
		0.5	0.0	4.68	5.47	6.62	4.18	4.45	4.27	5.07	4.53	4.47
			0.2	1.98	2.30	2.60	1.72	1.88	1.85	2.08	1.82	1.73
		0.9	0.0	5.35	6.07	7.08	4.60	4.95	4.85	5.52	4.75	4.85
			0.2	1.65	1.92	2.20	1.47	1.58	1.53	1.68	1.50	1.50
	\mathbf{n}_3	0.1	0.0	5.02	5.28	5.57	4.65	4.65	4.72	4.97	4.65	4.58
			0.2	1.53	1.65	1.87	1.43	1.48	1.43	1.55	1.47	1.47
		0.5	0.0	4.72	5.07	5.57	4.50	4.60	4.47	4.93	4.77	5.23
			0.2	1.48	1.58	1.73	1.38	1.43	1.42	1.53	1.38	1.67
		0.9	0.0	5.05	5.43	5.90	4.72	4.98	4.82	5.43	4.93	5.65
			0.2	1.60	1.70	1.87	1.55	1.60	1.55	1.92	1.78	1.93

Table 42: Experimentwise power rates (as percentages) of the tests obtained under Model 6 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

n	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
n ₁	0.1	0.2	9.6	11.3	12.6	8.2	8.2	8.2	8.5	7.5	16.0
		0.4	83.8	84.9	86.6	82.0	82.4	82.4	78.1	76.9	93.2
		0.6	99.9	99.9	99.9	99.8	99.8	99.8	99.5	99.4	99.9
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	0.5	0.5	0.7	0.4	0.4	0.4	0.6	0.4	0.1
		0.4	5.3	5.7	6.8	4.5	5.0	4.6	5.2	4.5	4.0
		0.6	24.1	26.6	29.1	21.9	22.6	22.1	22.1	20.0	20.8
		0.8	61.5	63.7	67.5	59.0	60.2	59.8	57.1	54.4	57.0
		1.0	87.1	88.5	90.3	86.2	86.8	86.3	83.2	81.8	85.3
	0.9	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.0
		0.4	0.6	0.7	0.7	0.5	0.5	0.5	0.6	0.6	0.2
		0.6	1.7	2.0	2.9	1.5	1.7	1.5	1.8	1.5	1.2
		0.8	6.6	7.5	9.3	5.6	5.9	5.7	6.4	5.7	4.8
		1.0	15.7	17.0	19.4	14.6	15.1	14.6	15.2	13.8	11.5
n ₃	0.1	0.2	24.6	25.2	26.4	24.0	24.0	24.0	22.7	21.8	37.2
		0.4	97.1	97.1	97.2	96.5	96.5	96.9	94.7	94.5	99.6
		0.6	100	100	100	100	100	100	100	100	100
		0.8	100	100	100	100	100	100	100	100	100
		1.0	100	100	100	100	100	100	100	100	100
	0.5	0.2	1.5	1.5	1.7	1.5	1.5	1.4	1.3	1.3	1.1
		0.4	13.2	13.8	15.5	12.5	12.8	12.7	12.1	11.8	11.7
		0.6	51.0	51.9	54.8	49.6	50.4	50.2	49.0	47.5	52.8
		0.8	87.0	87.6	88.6	86.3	86.4	86.4	84.6	83.5	86.5
		1.0	97.9	98.0	98.2	97.8	97.8	97.9	96.6	96.5	98.1
	0.9	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
		0.4	1.2	1.3	1.5	1.1	1.1	1.2	1.1	1.1	1.0
		0.6	5.7	6.6	7.0	5.3	5.6	5.3	5.0	4.6	4.0
		0.8	16.8	17.7	19.0	16.2	16.4	16.4	16.3	15.6	12.7
		1.0	37.0	38.2	39.9	35.8	36.6	36.1	35.2	33.5	30.2

Table 43: Comparisonwise power rates (as percentages) of the tests obtained under Model 6 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

\mathbf{n}	ρ	δ	Test								
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb
\mathbf{n}_1	0.1	0.2	25.85	26.93	28.50	24.25	24.33	24.35	24.75	23.40	31.20
		0.4	63.12	63.47	63.82	62.53	62.62	62.62	61.42	61.05	65.27
		0.6	66.65	66.65	66.65	66.63	66.63	66.63	66.58	66.55	66.65
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	7.27	7.93	8.80	6.68	6.95	6.75	7.73	6.87	6.67
		0.4	20.05	21.00	22.82	18.55	19.23	18.80	19.73	18.28	18.57
		0.6	39.38	40.62	42.52	38.02	38.57	38.33	38.25	36.80	37.87
		0.8	56.20	56.88	58.17	55.22	55.63	55.42	54.60	53.45	54.90
		1.0	63.90	64.27	64.65	63.55	63.68	63.57	62.75	62.37	63.35
	0.9	0.2	4.73	5.25	6.02	4.15	4.53	4.25	5.05	4.63	4.47
		0.4	7.62	8.30	9.32	7.08	7.37	7.22	8.32	7.47	7.20
		0.6	13.47	14.50	16.17	12.57	13.10	12.75	14.10	13.05	12.10
		0.8	22.02	23.37	25.15	20.63	21.30	20.88	22.22	20.60	19.47
		1.0	32.35	33.78	35.50	31.02	31.78	31.25	32.32	30.57	28.70
\mathbf{n}_3	0.1	0.2	38.95	39.42	40.33	38.22	38.28	38.17	37.77	37.15	47.23
		0.4	66.07	66.07	66.12	65.93	65.93	66.00	65.62	65.55	66.60
		0.6	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		0.8	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
		1.0	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67	66.67
	0.5	0.2	9.95	10.33	11.10	9.47	9.75	9.60	10.08	9.63	10.02
		0.4	30.75	31.43	32.52	30.15	30.48	30.40	30.18	29.60	30.85
		0.6	52.63	53.07	54.00	52.27	52.45	52.43	51.98	51.50	53.72
		0.8	63.72	63.93	64.18	63.52	63.57	63.58	63.12	62.83	63.78
		1.0	66.27	66.28	66.32	66.25	66.25	66.27	66.02	66.00	66.32
	0.9	0.2	5.00	5.40	5.92	4.73	4.92	4.77	5.30	5.07	4.92
		0.4	10.62	11.10	11.85	10.27	10.47	10.32	10.70	10.27	9.83
		0.6	20.47	21.33	22.42	20.02	20.40	20.12	20.63	19.83	19.13
		0.8	33.15	34.07	35.23	32.67	33.07	32.78	33.40	32.70	30.82
		1.0	46.32	46.90	47.83	45.88	46.25	45.92	45.82	45.08	43.22

Table 44: The ACD power rates (as percentages) of the tests obtained under Model 6 and standard normal distribution ($M = 80$, $\sigma^2 = 1.5\rho/2$, $\delta \neq 0$, $\mathbf{n}_1 = (10, 10, 10, 10)$, $\mathbf{n}_3 = (10, 20, 15, 30)$, $nr = 1000$, $nboot = 10,000$ and $\alpha = 5\%$).

n	ρ	δ	Test									
			L ² N	L ² B	L ² b	FN	FB	Fb	GPF	GPFb	Fmaxb	
n ₁	0.1	0.2	9.4	11.0	12.3	8.1	11.1	8.1	8.3	7.3	15.4	
		0.4	75.8	76.0	76.5	75.4	77.9	75.7	71.3	70.8	84.1	
		0.6	88.3	87.2	86.0	89.5	89.6	89.4	88.3	88.8	88.6	
		0.8	88.0	86.9	85.1	89.4	89.0	89.2	88.4	89.1	88.7	
		1.0	87.8	87.0	85.1	89.0	88.7	88.8	88.5	89.1	88.8	
	0.5	0.2	0.5	0.5	0.7	0.4	0.5	0.4	0.6	0.4	0.1	
		0.4	5.1	5.5	6.2	4.3	6.8	4.4	4.9	4.3	3.5	
		0.6	22.7	24.6	26.6	20.9	26.6	21.1	20.5	18.8	19.7	
		0.8	57.0	58.1	60.2	54.9	60.0	55.7	52.5	50.5	52.2	
		1.0	78.1	78.4	78.3	78.1	79.9	77.9	74.6	75.0	78.4	
	0.9	0.2	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.1	0.0	
		0.4	0.6	0.7	0.6	0.5	0.6	0.5	0.6	0.6	0.2	
		0.6	1.7	2.0	2.9	1.5	2.7	1.5	1.7	1.4	1.1	
		0.8	6.3	7.2	8.7	5.4	7.6	5.5	6.2	5.5	4.7	
		1.0	14.7	15.8	17.5	14.1	17.6	14.1	14.1	13.0	10.6	
	n ₃	0.1	0.2	23.5	24.0	25.1	22.9	28.4	22.9	21.7	20.8	35.6
			0.4	88.7	88.3	88.0	89.1	90.3	89.1	87.3	87.5	91.1
			0.6	90.2	89.7	89.2	90.9	90.7	90.5	90.6	90.8	91.1
			0.8	91.2	90.6	90.1	91.5	91.4	91.3	91.0	91.1	91.3
			1.0	91.4	90.8	90.3	91.8	91.8	91.8	91.2	91.8	91.4
0.5		0.2	1.4	1.4	1.6	1.4	1.5	1.4	1.3	1.3	1.0	
		0.4	12.6	13.1	14.8	11.9	15.8	12.1	11.6	11.3	11.0	
		0.6	48.5	49.3	51.6	47.2	55.9	47.9	46.5	45.2	49.3	
		0.8	80.7	81.0	81.2	80.4	86.1	80.7	78.5	77.6	79.3	
		1.0	89.9	89.5	88.8	90.3	91.0	90.3	89.3	89.6	89.3	
0.9		0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.0	
		0.4	1.1	1.2	1.4	1.0	1.2	1.1	1.0	1.0	1.0	
		0.6	5.2	6.1	6.2	4.9	6.4	4.9	4.5	4.2	3.8	
		0.8	15.9	16.7	17.9	15.4	19.8	15.7	15.2	14.7	11.8	
		1.0	34.4	35.5	36.7	33.7	41.1	33.9	32.7	31.2	27.4	