

# Tables of simulation results

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## Simple random sampling

Type I errors ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	2	0.096	0.051	0.008
WaldV2,MM3	1000	1000	2	0.036	0.014	0.001
WaldV3	1000	1000	2	0.096	0.050	0.008
Pearson	1000	1000	2	0.084	0.041	0.008
PearsonV2,MM3	1000	1000	2	0.084	0.040	0.008
RSS,MM3	1000	1000	2	0.081	0.039	0.009
Multn,MM3	1000	1000	2	0.082	0.045	0.006
<b>1F 8V</b>						
Wald	1000	1000	2	0.104	0.047	0.012
WaldV2,MM3	1000	1000	2	0.039	0.014	0.003
WaldV3	1000	1000	2	0.104	0.047	0.011
Pearson	1000	1000	2	0.098	0.052	0.010
PearsonV2,MM3	1000	1000	2	0.098	0.051	0.008
RSS,MM3	1000	1000	2	0.105	0.046	0.010
Multn,MM3	1000	1000	2	0.100	0.043	0.011
<b>1F 15V</b>						
Wald	1000	1000	10	0.118	0.055	0.009
WaldV2,MM3	1000	1000	10	0.050	0.018	0.005
WaldV3	1000	1000	10	0.117	0.053	0.009
Pearson	1000	1000	10	0.100	0.055	0.013
PearsonV2,MM3	1000	1000	10	0.100	0.053	0.012
RSS,MM3	1000	1000	10	0.104	0.052	0.009
Multn,MM3	1000	1000	10	0.115	0.053	0.009
<b>2F 10V</b>						
Wald	1000	1000	16	0.112	0.065	0.013
WaldV2,MM3	1000	1000	16	0.038	0.016	0.002
WaldV3	1000	1000	16	0.105	0.061	0.013
Pearson	1000	1000	16	0.099	0.043	0.013
PearsonV2,MM3	1000	1000	16	0.099	0.037	0.012
RSS,MM3	1000	1000	16	0.094	0.044	0.011
Multn,MM3	1000	1000	16	0.095	0.053	0.011
<b>3F 15V</b>						
Wald	1000	1000	28	0.107	0.061	0.011
WaldV2,MM3	1000	1000	28	0.032	0.013	0.002
WaldV3	1000	1000	28	0.094	0.050	0.011
Pearson	1000	1000	28	0.098	0.052	0.010
PearsonV2,MM3	1000	1000	28	0.096	0.051	0.008
RSS,MM3	1000	1000	28	0.099	0.040	0.008
Multn,MM3	1000	1000	28	0.087	0.042	0.010

**Type I errors ( $n = 1000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.079	0.040	0.005
WaldV2,MM3	1000	1000	1	0.048	0.019	0.003
WaldV3	1000	1000	1	0.077	0.040	0.005
Pearson	1000	1000	1	0.076	0.032	0.005
PearsonV2,MM3	1000	1000	1	0.078	0.030	0.005
RSS,MM3	1000	1000	1	0.074	0.033	0.004
Multn,MM3	1000	1000	1	0.071	0.038	0.005
<b>1F 8V</b>						
Wald	1000	1000	4	0.095	0.051	0.007
WaldV2,MM3	1000	1000	4	0.064	0.030	0.002
WaldV3	1000	1000	4	0.094	0.050	0.007
Pearson	1000	1000	4	0.088	0.046	0.009
PearsonV2,MM3	1000	1000	4	0.088	0.043	0.008
RSS,MM3	1000	1000	4	0.093	0.038	0.007
Multn,MM3	1000	1000	4	0.092	0.048	0.007
<b>1F 15V</b>						
Wald	1000	1000	12	0.118	0.054	0.016
WaldV2,MM3	1000	1000	12	0.085	0.039	0.006
WaldV3	1000	1000	12	0.115	0.052	0.016
Pearson	1000	1000	12	0.111	0.058	0.016
PearsonV2,MM3	1000	1000	12	0.110	0.053	0.015
RSS,MM3	1000	1000	12	0.113	0.057	0.018
Multn,MM3	1000	1000	12	0.115	0.052	0.016
<b>2F 10V</b>						
Wald	1000	1000	8	0.105	0.049	0.011
WaldV2,MM3	1000	1000	8	0.052	0.021	0.003
WaldV3	1000	1000	8	0.097	0.046	0.011
Pearson	1000	1000	8	0.085	0.049	0.011
PearsonV2,MM3	1000	1000	8	0.083	0.045	0.010
RSS,MM3	1000	1000	8	0.090	0.047	0.011
Multn,MM3	1000	1000	8	0.092	0.045	0.010
<b>3F 15V</b>						
Wald	1000	1000	28	0.096	0.056	0.015
WaldV2,MM3	1000	1000	28	0.058	0.026	0.000
WaldV3	1000	1000	28	0.085	0.054	0.013
Pearson	1000	1000	28	0.089	0.048	0.007
PearsonV2,MM3	1000	1000	28	0.089	0.047	0.004
RSS,MM3	1000	1000	28	0.085	0.046	0.007
Multn,MM3	1000	1000	28	0.084	0.051	0.011

**Type I errors** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	2	0.086	0.042	0.006
WaldV2,MM3	1000	1000	2	0.068	0.031	0.007
WaldV3	1000	1000	2	0.084	0.042	0.006
Pearson	1000	1000	2	0.080	0.041	0.013
PearsonV2,MM3	1000	1000	2	0.080	0.041	0.011
RSS,MM3	1000	1000	2	0.082	0.039	0.011
Multn,MM3	1000	1000	2	0.084	0.041	0.005
<b>1F 8V</b>						
Wald	1000	1000	1	0.103	0.052	0.016
WaldV2,MM3	1000	1000	1	0.083	0.035	0.007
WaldV3	1000	1000	1	0.103	0.050	0.016
Pearson	1000	1000	1	0.112	0.057	0.011
PearsonV2,MM3	1000	1000	1	0.110	0.052	0.009
RSS,MM3	1000	1000	1	0.104	0.057	0.009
Multn,MM3	1000	1000	1	0.103	0.049	0.016
<b>1F 15V</b>						
Wald	1000	1000	16	0.115	0.065	0.015
WaldV2,MM3	1000	1000	16	0.093	0.049	0.008
WaldV3	1000	1000	16	0.115	0.063	0.015
Pearson	1000	1000	16	0.107	0.062	0.016
PearsonV2,MM3	1000	1000	16	0.106	0.062	0.015
RSS,MM3	1000	1000	16	0.108	0.057	0.013
Multn,MM3	1000	1000	16	0.115	0.063	0.015
<b>2F 10V</b>						
Wald	1000	1000	14	0.105	0.050	0.008
WaldV2,MM3	1000	1000	14	0.067	0.032	0.004
WaldV3	1000	1000	14	0.099	0.045	0.008
Pearson	1000	1000	14	0.093	0.040	0.013
PearsonV2,MM3	1000	1000	14	0.093	0.036	0.010
RSS,MM3	1000	1000	14	0.093	0.036	0.008
Multn,MM3	1000	1000	14	0.097	0.045	0.008
<b>3F 15V</b>						
Wald	1000	1000	38	0.124	0.060	0.011
WaldV2,MM3	1000	1000	38	0.082	0.031	0.005
WaldV3	1000	1000	38	0.113	0.056	0.010
Pearson	1000	1000	38	0.096	0.059	0.015
PearsonV2,MM3	1000	1000	38	0.096	0.056	0.014
RSS,MM3	1000	1000	38	0.096	0.058	0.015
Multn,MM3	1000	1000	38	0.107	0.053	0.009

**Type I errors ( $n = 3000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	2	0.099	0.048	0.007
WaldV2,MM3	1000	1000	2	0.086	0.036	0.006
WaldV3	1000	1000	2	0.099	0.048	0.007
Pearson	1000	1000	2	0.095	0.043	0.008
PearsonV2,MM3	1000	1000	2	0.095	0.041	0.007
RSS,MM3	1000	1000	2	0.094	0.047	0.007
Multn,MM3	1000	1000	2	0.099	0.047	0.007
<b>1F 8V</b>						
Wald	1000	1000	1	0.111	0.052	0.018
WaldV2,MM3	1000	1000	1	0.094	0.047	0.010
WaldV3	1000	1000	1	0.108	0.052	0.016
Pearson	1000	1000	1	0.105	0.053	0.019
PearsonV2,MM3	1000	1000	1	0.102	0.046	0.016
RSS,MM3	1000	1000	1	0.106	0.052	0.017
Multn,MM3	1000	1000	1	0.107	0.052	0.016
<b>1F 15V</b>						
Wald	1000	1000	20	0.109	0.050	0.003
WaldV2,MM3	1000	1000	20	0.088	0.039	0.007
WaldV3	1000	1000	20	0.108	0.048	0.003
Pearson	1000	1000	20	0.093	0.047	0.013
PearsonV2,MM3	1000	1000	20	0.092	0.044	0.011
RSS,MM3	1000	1000	20	0.099	0.043	0.010
Multn,MM3	1000	1000	20	0.108	0.048	0.003
<b>2F 10V</b>						
Wald	1000	1000	15	0.111	0.051	0.012
WaldV2,MM3	1000	1000	15	0.082	0.037	0.005
WaldV3	1000	1000	15	0.108	0.046	0.012
Pearson	1000	1000	15	0.094	0.050	0.016
PearsonV2,MM3	1000	1000	15	0.094	0.046	0.011
RSS,MM3	1000	1000	15	0.092	0.051	0.010
Multn,MM3	1000	1000	15	0.109	0.045	0.012
<b>3F 15V</b>						
Wald	1000	1000	57	0.104	0.051	0.009
WaldV2,MM3	1000	1000	57	0.074	0.037	0.008
WaldV3	1000	1000	57	0.095	0.047	0.009
Pearson	1000	1000	57	0.094	0.045	0.011
PearsonV2,MM3	1000	1000	57	0.093	0.042	0.009
RSS,MM3	1000	1000	57	0.087	0.044	0.007
Multn,MM3	1000	1000	57	0.094	0.046	0.009

**Power** ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.299	0.200	0.069
WaldV2,MM3	1000	1000	1	0.117	0.053	0.005
WaldV3	1000	1000	1	0.297	0.199	0.069
Pearson	1000	1000	1	0.307	0.204	0.086
PearsonV2,MM3	1000	1000	1	0.307	0.201	0.078
RSS,MM3	1000	1000	1	0.320	0.216	0.084
Multn,MM3	1000	1000	1	0.277	0.172	0.053
<b>1F 8V</b>						
Wald	1000	1000	1	0.828	0.744	0.555
WaldV2,MM3	1000	1000	1	0.679	0.560	0.307
WaldV3	1000	1000	1	0.827	0.741	0.553
Pearson	1000	1000	1	0.681	0.573	0.349
PearsonV2,MM3	1000	1000	1	0.679	0.565	0.332
RSS,MM3	1000	1000	1	0.734	0.628	0.390
Multn,MM3	1000	1000	1	0.818	0.733	0.543
<b>1F 15V</b>						
Wald	1000	1000	4	0.967	0.944	0.866
WaldV2,MM3	1000	1000	4	0.937	0.891	0.762
WaldV3	1000	1000	4	0.967	0.938	0.864
Pearson	1000	1000	4	0.926	0.873	0.747
PearsonV2,MM3	1000	1000	4	0.926	0.871	0.737
RSS,MM3	1000	1000	4	0.943	0.911	0.801
Multn,MM3	1000	1000	4	0.965	0.937	0.860
<b>2F 10V</b>						
Wald	1000	998	7	0.227	0.146	0.049
WaldV2,MM3	1000	998	7	0.118	0.053	0.016
WaldV3	1000	998	7	0.216	0.133	0.045
Pearson	1000	998	7	0.236	0.161	0.060
PearsonV2,MM3	1000	998	7	0.235	0.151	0.044
RSS,MM3	1000	998	7	0.243	0.161	0.056
Multn,MM3	1000	998	7	0.193	0.119	0.032
<b>3F 15V</b>						
Wald	1000	1000	27	0.247	0.154	0.055
WaldV2,MM3	1000	1000	27	0.133	0.084	0.024
WaldV3	1000	1000	27	0.225	0.142	0.048
Pearson	1000	1000	27	0.287	0.197	0.085
PearsonV2,MM3	1000	1000	27	0.283	0.190	0.077
RSS,MM3	1000	1000	27	0.300	0.191	0.080
Multn,MM3	1000	1000	27	0.204	0.133	0.045

**Power** ( $n = 1000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	2	0.518	0.393	0.198
WaldV2,MM3	1000	1000	2	0.344	0.229	0.063
WaldV3	1000	1000	2	0.518	0.392	0.197
Pearson	1000	1000	2	0.559	0.426	0.227
PearsonV2,MM3	1000	1000	2	0.561	0.419	0.212
RSS,MM3	1000	1000	2	0.569	0.449	0.232
Multn,MM3	1000	1000	2	0.507	0.385	0.187
<b>1F 8V</b>						
Wald	1000	1000	3	0.984	0.972	0.917
WaldV2,MM3	1000	1000	3	0.962	0.926	0.816
WaldV3	1000	1000	3	0.984	0.972	0.915
Pearson	1000	1000	3	0.934	0.883	0.756
PearsonV2,MM3	1000	1000	3	0.934	0.877	0.738
RSS,MM3	1000	1000	3	0.959	0.915	0.829
Multn,MM3	1000	1000	3	0.984	0.971	0.914
<b>1F 15V</b>						
Wald	1000	1000	11	0.999	0.999	0.997
WaldV2,MM3	1000	1000	11	0.998	0.997	0.991
WaldV3	1000	1000	11	0.999	0.999	0.997
Pearson	1000	1000	11	0.999	0.997	0.984
PearsonV2,MM3	1000	1000	11	0.999	0.997	0.980
RSS,MM3	1000	1000	11	0.999	0.999	0.995
Multn,MM3	1000	1000	11	0.999	0.999	0.997
<b>2F 10V</b>						
Wald	1000	1000	5	0.323	0.230	0.101
WaldV2,MM3	1000	1000	5	0.283	0.179	0.059
WaldV3	1000	1000	5	0.309	0.216	0.085
Pearson	1000	1000	5	0.384	0.279	0.146
PearsonV2,MM3	1000	1000	5	0.383	0.269	0.139
RSS,MM3	1000	1000	5	0.405	0.294	0.151
Multn,MM3	1000	1000	5	0.305	0.215	0.080
<b>3F 15V</b>						
Wald	1000	1000	23	0.392	0.280	0.124
WaldV2,MM3	1000	1000	23	0.369	0.246	0.103
WaldV3	1000	1000	23	0.367	0.266	0.119
Pearson	1000	1000	23	0.480	0.381	0.226
PearsonV2,MM3	1000	1000	23	0.477	0.373	0.211
RSS,MM3	1000	1000	23	0.502	0.403	0.226
Multn,MM3	1000	1000	23	0.364	0.262	0.116



**Power** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	2	0.788	0.696	0.499
WaldV2,MM3	1000	1000	2	0.640	0.528	0.272
WaldV3	1000	1000	2	0.788	0.696	0.498
Pearson	1000	1000	2	0.801	0.732	0.546
PearsonV2,MM3	1000	1000	2	0.802	0.730	0.533
RSS,MM3	1000	1000	2	0.822	0.739	0.567
Multn,MM3	1000	1000	2	0.784	0.692	0.492
<b>1F 8V</b>						
Wald	1000	1000	5	1.000	1.000	0.997
WaldV2,MM3	1000	1000	5	1.000	0.999	0.992
WaldV3	1000	1000	5	1.000	1.000	0.997
Pearson	1000	1000	5	0.996	0.992	0.984
PearsonV2,MM3	1000	1000	5	0.996	0.991	0.982
RSS,MM3	1000	1000	5	0.997	0.995	0.988
Multn,MM3	1000	1000	5	1.000	1.000	0.997
<b>1F 15V</b>						
Wald	1000	1000	15	1.000	1.000	1.000
WaldV2,MM3	1000	1000	15	1.000	1.000	1.000
WaldV3	1000	1000	15	1.000	1.000	1.000
Pearson	1000	1000	15	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	15	1.000	1.000	1.000
RSS,MM3	1000	1000	15	1.000	1.000	1.000
Multn,MM3	1000	1000	15	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	12	0.515	0.413	0.242
WaldV2,MM3	1000	1000	12	0.500	0.401	0.224
WaldV3	1000	1000	12	0.496	0.397	0.225
Pearson	1000	1000	12	0.579	0.503	0.346
PearsonV2,MM3	1000	1000	12	0.577	0.494	0.319
RSS,MM3	1000	1000	12	0.604	0.525	0.367
Multn,MM3	1000	1000	12	0.500	0.400	0.231
<b>3F 15V</b>						
Wald	1000	1000	30	0.666	0.562	0.386
WaldV2,MM3	1000	1000	30	0.699	0.587	0.409
WaldV3	1000	1000	30	0.639	0.549	0.371
Pearson	1000	1000	30	0.745	0.665	0.518
PearsonV2,MM3	1000	1000	30	0.745	0.659	0.500
RSS,MM3	1000	1000	30	0.779	0.695	0.546
Multn,MM3	1000	1000	30	0.641	0.549	0.372

**Power** ( $n = 3000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.927	0.876	0.753
WaldV2,MM3	1000	1000	1	0.867	0.778	0.543
WaldV3	1000	1000	1	0.927	0.875	0.751
Pearson	1000	1000	1	0.933	0.886	0.781
PearsonV2,MM3	1000	1000	1	0.934	0.884	0.769
RSS,MM3	1000	1000	1	0.939	0.898	0.788
Multn,MM3	1000	1000	1	0.927	0.874	0.744
<b>1F 8V</b>						
Wald	1000	1000	5	1.000	1.000	1.000
WaldV2,MM3	1000	1000	5	1.000	1.000	1.000
WaldV3	1000	1000	5	1.000	1.000	1.000
Pearson	1000	1000	5	1.000	1.000	0.999
PearsonV2,MM3	1000	1000	5	1.000	1.000	0.998
RSS,MM3	1000	1000	5	1.000	1.000	1.000
Multn,MM3	1000	1000	5	1.000	1.000	1.000
<b>1F 15V</b>						
Wald	1000	1000	13	1.000	1.000	1.000
WaldV2,MM3	1000	1000	13	1.000	1.000	1.000
WaldV3	1000	1000	13	1.000	1.000	1.000
Pearson	1000	1000	13	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	13	1.000	1.000	1.000
RSS,MM3	1000	1000	13	1.000	1.000	1.000
Multn,MM3	1000	1000	13	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	11	0.678	0.568	0.409
WaldV2,MM3	1000	1000	11	0.682	0.588	0.406
WaldV3	1000	1000	11	0.664	0.557	0.391
Pearson	1000	1000	11	0.732	0.664	0.526
PearsonV2,MM3	1000	1000	11	0.732	0.659	0.503
RSS,MM3	1000	1000	11	0.756	0.694	0.543
Multn,MM3	1000	1000	11	0.672	0.560	0.397
<b>3F 15V</b>						
Wald	1000	1000	37	0.799	0.713	0.558
WaldV2,MM3	1000	1000	37	0.834	0.748	0.592
WaldV3	1000	1000	37	0.787	0.698	0.539
Pearson	1000	1000	37	0.847	0.797	0.688
PearsonV2,MM3	1000	1000	37	0.845	0.792	0.669
RSS,MM3	1000	1000	37	0.876	0.831	0.711
Multn,MM3	1000	1000	37	0.792	0.698	0.542

## Stratified sampling

Type I errors ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.078	0.025
WaldV2,MM3	1000	1000	0	0.042	0.015	0.003
WaldV3	1000	1000	0	0.100	0.054	0.016
Pearson	1000	1000	0	0.086	0.037	0.007
PearsonV2,MM3	1000	1000	0	0.087	0.034	0.007
RSS,MM3	1000	1000	0	0.080	0.034	0.008
Multn,MM3	1000	1000	0	0.114	0.059	0.017
<b>1F 8V</b>						
Wald	1000	1000	3	0.332	0.222	0.098
WaldV2,MM3	1000	1000	3	0.049	0.026	0.007
WaldV3	1000	1000	3	0.161	0.096	0.040
Pearson	1000	1000	3	0.083	0.040	0.010
PearsonV2,MM3	1000	1000	3	0.083	0.038	0.007
RSS,MM3	1000	1000	3	0.084	0.037	0.007
Multn,MM3	1000	1000	3	0.259	0.163	0.074
<b>1F 15V</b>						
Wald	1000	1000	14	0.988	0.972	0.937
WaldV2,MM3	1000	1000	14	0.046	0.013	0.002
WaldV3	1000	1000	14	0.861	0.803	0.639
Pearson	1000	1000	14	0.078	0.039	0.005
PearsonV2,MM3	1000	1000	14	0.076	0.038	0.002
RSS,MM3	1000	1000	14	0.068	0.031	0.002
Multn,MM3	1000	1000	14	0.971	0.952	0.879
<b>2F 10V</b>						
Wald	1000	1000	22	0.450	0.336	0.157
WaldV2,MM3	1000	1000	22	0.033	0.013	0.000
WaldV3	1000	1000	22	0.257	0.151	0.050
Pearson	1000	1000	22	0.065	0.034	0.007
PearsonV2,MM3	1000	1000	22	0.064	0.032	0.004
RSS,MM3	1000	1000	22	0.061	0.031	0.001
Multn,MM3	1000	1000	22	0.412	0.311	0.158
<b>3F 15V</b>						
Wald	1000	1000	66	0.957	0.922	0.827
WaldV2,MM3	1000	1000	66	0.029	0.013	0.002
WaldV3	1000	1000	66	0.786	0.701	0.502
Pearson	1000	1000	66	0.073	0.033	0.009
PearsonV2,MM3	1000	1000	66	0.072	0.033	0.007
RSS,MM3	1000	1000	66	0.060	0.027	0.007
Multn,MM3	1000	1000	66	0.943	0.904	0.777

**Type I errors ( $n = 1000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.075	0.022
WaldV2,MM3	1000	1000	0	0.082	0.036	0.007
WaldV3	1000	1000	0	0.130	0.061	0.017
Pearson	1000	1000	0	0.098	0.056	0.013
PearsonV2,MM3	1000	1000	0	0.099	0.056	0.012
RSS,MM3	1000	1000	0	0.103	0.054	0.011
Multn,MM3	1000	1000	0	0.134	0.066	0.021
<b>1F 8V</b>						
Wald	1000	1000	2	0.179	0.104	0.034
WaldV2,MM3	1000	1000	2	0.063	0.026	0.001
WaldV3	1000	1000	2	0.114	0.061	0.016
Pearson	1000	1000	2	0.086	0.033	0.008
PearsonV2,MM3	1000	1000	2	0.085	0.030	0.004
RSS,MM3	1000	1000	2	0.077	0.035	0.004
Multn,MM3	1000	1000	2	0.163	0.090	0.028
<b>1F 15V</b>						
Wald	1000	1000	15	0.705	0.599	0.391
WaldV2,MM3	1000	1000	15	0.074	0.030	0.002
WaldV3	1000	1000	15	0.488	0.366	0.167
Pearson	1000	1000	15	0.088	0.042	0.016
PearsonV2,MM3	1000	1000	15	0.087	0.042	0.014
RSS,MM3	1000	1000	15	0.085	0.043	0.007
Multn,MM3	1000	1000	15	0.713	0.608	0.413
<b>2F 10V</b>						
Wald	1000	1000	7	0.238	0.162	0.054
WaldV2,MM3	1000	1000	7	0.058	0.024	0.005
WaldV3	1000	1000	7	0.165	0.110	0.025
Pearson	1000	1000	7	0.099	0.049	0.014
PearsonV2,MM3	1000	1000	7	0.096	0.045	0.010
RSS,MM3	1000	1000	7	0.091	0.048	0.007
Multn,MM3	1000	1000	7	0.252	0.166	0.060
<b>3F 15V</b>						
Wald	1000	1000	41	0.600	0.496	0.269
WaldV2,MM3	1000	1000	41	0.050	0.021	0.001
WaldV3	1000	1000	41	0.428	0.305	0.121
Pearson	1000	1000	41	0.077	0.038	0.004
PearsonV2,MM3	1000	1000	41	0.076	0.034	0.003
RSS,MM3	1000	1000	41	0.075	0.027	0.001
Multn,MM3	1000	1000	41	0.636	0.539	0.343

**Type I errors** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.104	0.040	0.008
WaldV2,MM3	1000	1000	0	0.068	0.025	0.005
WaldV3	1000	1000	0	0.091	0.037	0.006
Pearson	1000	1000	0	0.074	0.036	0.003
PearsonV2,MM3	1000	1000	0	0.075	0.036	0.002
RSS,MM3	1000	1000	0	0.081	0.035	0.001
Multn,MM3	1000	1000	0	0.096	0.038	0.007
<b>1F 8V</b>						
Wald	1000	1000	2	0.173	0.101	0.030
WaldV2,MM3	1000	1000	2	0.106	0.053	0.010
WaldV3	1000	1000	2	0.138	0.077	0.019
Pearson	1000	1000	2	0.112	0.057	0.016
PearsonV2,MM3	1000	1000	2	0.112	0.055	0.012
RSS,MM3	1000	1000	2	0.113	0.057	0.011
Multn,MM3	1000	1000	2	0.162	0.093	0.027
<b>1F 15V</b>						
Wald	1000	1000	13	0.394	0.262	0.104
WaldV2,MM3	1000	1000	13	0.086	0.037	0.005
WaldV3	1000	1000	13	0.276	0.166	0.051
Pearson	1000	1000	13	0.095	0.049	0.012
PearsonV2,MM3	1000	1000	13	0.094	0.048	0.009
RSS,MM3	1000	1000	13	0.098	0.055	0.007
Multn,MM3	1000	1000	13	0.415	0.289	0.117
<b>2F 10V</b>						
Wald	1000	1000	11	0.166	0.104	0.037
WaldV2,MM3	1000	1000	11	0.077	0.035	0.004
WaldV3	1000	1000	11	0.140	0.086	0.022
Pearson	1000	1000	11	0.095	0.040	0.011
PearsonV2,MM3	1000	1000	11	0.094	0.037	0.009
RSS,MM3	1000	1000	11	0.090	0.045	0.011
Multn,MM3	1000	1000	11	0.166	0.105	0.039
<b>3F 15V</b>						
Wald	1000	1000	40	0.343	0.228	0.083
WaldV2,MM3	1000	1000	40	0.076	0.027	0.001
WaldV3	1000	1000	40	0.252	0.167	0.043
Pearson	1000	1000	40	0.090	0.048	0.012
PearsonV2,MM3	1000	1000	40	0.089	0.046	0.011
RSS,MM3	1000	1000	40	0.088	0.041	0.010
Multn,MM3	1000	1000	40	0.379	0.266	0.111

**Type I errors** ( $n = 3000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	4	0.097	0.044	0.006
WaldV2,MM3	1000	1000	4	0.072	0.037	0.006
WaldV3	1000	1000	4	0.090	0.042	0.006
Pearson	1000	1000	4	0.077	0.032	0.006
PearsonV2,MM3	1000	1000	4	0.078	0.030	0.005
RSS,MM3	1000	1000	4	0.082	0.030	0.004
Multn,MM3	1000	1000	4	0.092	0.042	0.006
<b>1F 8V</b>						
Wald	1000	1000	5	0.131	0.073	0.012
WaldV2,MM3	1000	1000	5	0.095	0.040	0.005
WaldV3	1000	1000	5	0.116	0.058	0.007
Pearson	1000	1000	5	0.094	0.059	0.009
PearsonV2,MM3	1000	1000	5	0.093	0.055	0.005
RSS,MM3	1000	1000	5	0.103	0.053	0.007
Multn,MM3	1000	1000	5	0.125	0.073	0.011
<b>1F 15V</b>						
Wald	1000	1000	29	0.279	0.177	0.073
WaldV2,MM3	1000	1000	29	0.100	0.053	0.011
WaldV3	1000	1000	29	0.211	0.129	0.047
Pearson	1000	1000	29	0.113	0.049	0.011
PearsonV2,MM3	1000	1000	29	0.112	0.047	0.010
RSS,MM3	1000	1000	29	0.106	0.052	0.009
Multn,MM3	1000	1000	29	0.290	0.196	0.075
<b>2F 10V</b>						
Wald	1000	1000	19	0.139	0.088	0.024
WaldV2,MM3	1000	1000	19	0.088	0.034	0.010
WaldV3	1000	1000	19	0.118	0.078	0.019
Pearson	1000	1000	19	0.090	0.047	0.009
PearsonV2,MM3	1000	1000	19	0.087	0.046	0.004
RSS,MM3	1000	1000	19	0.094	0.043	0.010
Multn,MM3	1000	1000	19	0.142	0.087	0.023
<b>3F 15V</b>						
Wald	1000	1000	52	0.241	0.155	0.051
WaldV2,MM3	1000	1000	52	0.078	0.040	0.006
WaldV3	1000	1000	52	0.187	0.106	0.035
Pearson	1000	1000	52	0.097	0.046	0.011
PearsonV2,MM3	1000	1000	52	0.096	0.044	0.011
RSS,MM3	1000	1000	52	0.093	0.045	0.010
Multn,MM3	1000	1000	52	0.259	0.166	0.054

**Power** ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	5	0.347	0.252	0.118
WaldV2,MM3	1000	1000	5	0.119	0.055	0.003
WaldV3	1000	1000	5	0.297	0.193	0.066
Pearson	1000	1000	5	0.258	0.166	0.062
PearsonV2,MM3	1000	1000	5	0.258	0.164	0.052
RSS,MM3	1000	1000	5	0.266	0.166	0.057
Multn,MM3	1000	1000	5	0.282	0.171	0.056
<b>1F 8V</b>						
Wald	1000	1000	10	0.825	0.757	0.595
WaldV2,MM3	1000	1000	10	0.547	0.372	0.148
WaldV3	1000	1000	10	0.624	0.495	0.267
Pearson	1000	1000	10	0.441	0.307	0.131
PearsonV2,MM3	1000	1000	10	0.440	0.297	0.113
RSS,MM3	1000	1000	10	0.482	0.339	0.141
Multn,MM3	1000	1000	10	0.764	0.667	0.456
<b>1F 15V</b>						
Wald	1000	1000	27	1.000	1.000	1.000
WaldV2,MM3	1000	1000	27	0.850	0.755	0.459
WaldV3	1000	1000	27	0.991	0.977	0.918
Pearson	1000	1000	27	0.741	0.612	0.350
PearsonV2,MM3	1000	1000	27	0.736	0.601	0.318
RSS,MM3	1000	1000	27	0.792	0.664	0.381
Multn,MM3	1000	1000	27	1.000	1.000	0.990
<b>2F 10V</b>						
Wald	1000	1000	27	0.754	0.654	0.460
WaldV2,MM3	1000	1000	27	0.215	0.102	0.015
WaldV3	1000	1000	27	0.521	0.401	0.184
Pearson	1000	1000	27	0.421	0.289	0.121
PearsonV2,MM3	1000	1000	27	0.417	0.272	0.101
RSS,MM3	1000	1000	27	0.410	0.263	0.098
Multn,MM3	1000	1000	27	0.658	0.523	0.320
<b>3F 15V</b>						
Wald	1000	1000	64	0.990	0.980	0.944
WaldV2,MM3	1000	1000	64	0.202	0.110	0.018
WaldV3	1000	1000	64	0.916	0.855	0.695
Pearson	1000	1000	64	0.362	0.255	0.094
PearsonV2,MM3	1000	1000	64	0.360	0.239	0.083
RSS,MM3	1000	1000	64	0.373	0.235	0.077
Multn,MM3	1000	1000	64	0.977	0.960	0.869

**Power** ( $n = 1000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.465	0.326	0.181
WaldV2,MM3	1000	1000	1	0.328	0.208	0.062
WaldV3	1000	1000	1	0.430	0.302	0.145
Pearson	1000	1000	1	0.475	0.348	0.159
PearsonV2,MM3	1000	1000	1	0.475	0.346	0.146
RSS,MM3	1000	1000	1	0.475	0.350	0.157
Multn,MM3	1000	1000	1	0.431	0.301	0.141
<b>1F 8V</b>						
Wald	1000	1000	2	0.953	0.916	0.792
WaldV2,MM3	1000	1000	2	0.902	0.817	0.611
WaldV3	1000	1000	2	0.901	0.833	0.626
Pearson	1000	1000	2	0.747	0.635	0.412
PearsonV2,MM3	1000	1000	2	0.744	0.629	0.380
RSS,MM3	1000	1000	2	0.814	0.700	0.465
Multn,MM3	1000	1000	2	0.940	0.893	0.747
<b>1F 15V</b>						
Wald	1000	1000	19	1.000	0.999	0.995
WaldV2,MM3	1000	1000	19	0.999	0.996	0.976
WaldV3	1000	1000	19	0.991	0.982	0.944
Pearson	1000	1000	19	0.983	0.957	0.884
PearsonV2,MM3	1000	1000	19	0.982	0.954	0.864
RSS,MM3	1000	1000	19	0.993	0.977	0.916
Multn,MM3	1000	1000	19	1.000	1.000	0.995
<b>2F 10V</b>						
Wald	1000	1000	12	0.756	0.665	0.439
WaldV2,MM3	1000	1000	12	0.601	0.448	0.195
WaldV3	1000	1000	12	0.651	0.507	0.282
Pearson	1000	1000	12	0.770	0.655	0.447
PearsonV2,MM3	1000	1000	12	0.768	0.641	0.406
RSS,MM3	1000	1000	12	0.775	0.659	0.434
Multn,MM3	1000	1000	12	0.732	0.635	0.392
<b>3F 15V</b>						
Wald	1000	1000	27	0.939	0.917	0.791
WaldV2,MM3	1000	1000	27	0.679	0.532	0.259
WaldV3	1000	1000	27	0.872	0.791	0.604
Pearson	1000	1000	27	0.801	0.697	0.488
PearsonV2,MM3	1000	1000	27	0.799	0.684	0.455
RSS,MM3	1000	1000	27	0.832	0.726	0.480
Multn,MM3	1000	1000	27	0.956	0.923	0.808



**Power** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.758	0.630	0.393
WaldV2,MM3	1000	1000	1	0.649	0.516	0.248
WaldV3	1000	1000	1	0.746	0.615	0.372
Pearson	1000	1000	1	0.786	0.689	0.459
PearsonV2,MM3	1000	1000	1	0.789	0.688	0.442
RSS,MM3	1000	1000	1	0.791	0.695	0.460
Multn,MM3	1000	1000	1	0.745	0.616	0.372
<b>1F 8V</b>						
Wald	1000	1000	2	0.999	0.997	0.994
WaldV2,MM3	1000	1000	2	0.999	0.997	0.983
WaldV3	1000	1000	2	0.999	0.997	0.977
Pearson	1000	1000	2	0.989	0.972	0.893
PearsonV2,MM3	1000	1000	2	0.989	0.970	0.877
RSS,MM3	1000	1000	2	0.995	0.985	0.937
Multn,MM3	1000	1000	2	0.999	0.997	0.988
<b>1F 15V</b>						
Wald	1000	1000	17	1.000	1.000	1.000
WaldV2,MM3	1000	1000	17	1.000	1.000	1.000
WaldV3	1000	1000	17	1.000	1.000	0.999
Pearson	1000	1000	17	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	17	1.000	1.000	1.000
RSS,MM3	1000	1000	17	1.000	1.000	1.000
Multn,MM3	1000	1000	17	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	6	0.958	0.925	0.792
WaldV2,MM3	1000	1000	6	0.967	0.933	0.771
WaldV3	1000	1000	6	0.941	0.882	0.704
Pearson	1000	1000	6	0.986	0.973	0.912
PearsonV2,MM3	1000	1000	6	0.985	0.970	0.893
RSS,MM3	1000	1000	6	0.989	0.976	0.917
Multn,MM3	1000	1000	6	0.956	0.923	0.775
<b>3F 15V</b>						
Wald	1000	1000	37	0.991	0.978	0.925
WaldV2,MM3	1000	1000	37	0.987	0.960	0.868
WaldV3	1000	1000	37	0.981	0.963	0.856
Pearson	1000	1000	37	0.993	0.986	0.948
PearsonV2,MM3	1000	1000	37	0.993	0.983	0.941
RSS,MM3	1000	1000	37	0.996	0.988	0.964
Multn,MM3	1000	1000	37	0.995	0.987	0.942

**Power ( $n = 3000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.884	0.802	0.612
WaldV2,MM3	1000	1000	0	0.839	0.730	0.479
WaldV3	1000	1000	0	0.877	0.795	0.594
Pearson	1000	1000	0	0.895	0.831	0.664
PearsonV2,MM3	1000	1000	0	0.897	0.830	0.650
RSS,MM3	1000	1000	0	0.897	0.841	0.670
Multn,MM3	1000	1000	0	0.875	0.796	0.594
<b>1F 8V</b>						
Wald	1000	1000	4	1.000	1.000	1.000
WaldV2,MM3	1000	1000	4	1.000	1.000	1.000
WaldV3	1000	1000	4	1.000	1.000	1.000
Pearson	1000	1000	4	1.000	1.000	0.993
PearsonV2,MM3	1000	1000	4	1.000	1.000	0.991
RSS,MM3	1000	1000	4	1.000	1.000	1.000
Multn,MM3	1000	1000	4	1.000	1.000	1.000
<b>1F 15V</b>						
Wald	1000	1000	10	1.000	1.000	1.000
WaldV2,MM3	1000	1000	10	1.000	1.000	1.000
WaldV3	1000	1000	10	1.000	1.000	1.000
Pearson	1000	1000	10	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	10	1.000	1.000	1.000
RSS,MM3	1000	1000	10	1.000	1.000	1.000
Multn,MM3	1000	1000	10	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	10	0.998	0.992	0.963
WaldV2,MM3	1000	1000	10	0.999	0.994	0.974
WaldV3	1000	1000	10	0.998	0.988	0.944
Pearson	1000	1000	10	1.000	0.998	0.992
PearsonV2,MM3	1000	1000	10	1.000	0.998	0.989
RSS,MM3	1000	1000	10	1.000	0.998	0.994
Multn,MM3	1000	1000	10	0.998	0.990	0.965
<b>3F 15V</b>						
Wald	1000	1000	52	0.998	0.996	0.988
WaldV2,MM3	1000	1000	52	0.999	0.997	0.994
WaldV3	1000	1000	52	0.997	0.996	0.980
Pearson	1000	1000	52	1.000	0.999	0.996
PearsonV2,MM3	1000	1000	52	1.000	0.999	0.996
RSS,MM3	1000	1000	52	1.000	1.000	0.997
Multn,MM3	1000	1000	52	0.999	0.997	0.993

## Cluster sampling

Type I errors ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.078	0.025
WaldV2,MM3	1000	1000	0	0.042	0.015	0.003
WaldV3	1000	1000	0	0.100	0.054	0.016
Pearson	1000	1000	0	0.086	0.037	0.007
PearsonV2,MM3	1000	1000	0	0.087	0.034	0.007
RSS,MM3	1000	1000	0	0.080	0.034	0.008
Multn,MM3	1000	1000	0	0.114	0.059	0.017
<b>1F 8V</b>						
Wald	1000	1000	3	0.332	0.222	0.098
WaldV2,MM3	1000	1000	3	0.049	0.026	0.007
WaldV3	1000	1000	3	0.161	0.096	0.040
Pearson	1000	1000	3	0.083	0.040	0.010
PearsonV2,MM3	1000	1000	3	0.083	0.038	0.007
RSS,MM3	1000	1000	3	0.084	0.037	0.007
Multn,MM3	1000	1000	3	0.259	0.163	0.074
<b>1F 15V</b>						
Wald	1000	1000	14	0.988	0.972	0.937
WaldV2,MM3	1000	1000	14	0.046	0.013	0.002
WaldV3	1000	1000	14	0.861	0.803	0.639
Pearson	1000	1000	14	0.078	0.039	0.005
PearsonV2,MM3	1000	1000	14	0.076	0.038	0.002
RSS,MM3	1000	1000	14	0.068	0.031	0.002
Multn,MM3	1000	1000	14	0.971	0.952	0.879
<b>2F 10V</b>						
Wald	1000	1000	22	0.450	0.336	0.157
WaldV2,MM3	1000	1000	22	0.033	0.013	0.000
WaldV3	1000	1000	22	0.257	0.151	0.050
Pearson	1000	1000	22	0.065	0.034	0.007
PearsonV2,MM3	1000	1000	22	0.064	0.032	0.004
RSS,MM3	1000	1000	22	0.061	0.031	0.001
Multn,MM3	1000	1000	22	0.412	0.311	0.158
<b>3F 15V</b>						
Wald	1000	1000	66	0.957	0.922	0.827
WaldV2,MM3	1000	1000	66	0.029	0.013	0.002
WaldV3	1000	1000	66	0.786	0.701	0.502
Pearson	1000	1000	66	0.073	0.033	0.009
PearsonV2,MM3	1000	1000	66	0.072	0.033	0.007
RSS,MM3	1000	1000	66	0.060	0.027	0.007
Multn,MM3	1000	1000	66	0.943	0.904	0.777

**Type I errors ( $n = 1000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.075	0.022
WaldV2,MM3	1000	1000	0	0.082	0.036	0.007
WaldV3	1000	1000	0	0.130	0.061	0.017
Pearson	1000	1000	0	0.098	0.056	0.013
PearsonV2,MM3	1000	1000	0	0.099	0.056	0.012
RSS,MM3	1000	1000	0	0.103	0.054	0.011
Multn,MM3	1000	1000	0	0.134	0.066	0.021
<b>1F 8V</b>						
Wald	1000	1000	2	0.179	0.104	0.034
WaldV2,MM3	1000	1000	2	0.063	0.026	0.001
WaldV3	1000	1000	2	0.114	0.061	0.016
Pearson	1000	1000	2	0.086	0.033	0.008
PearsonV2,MM3	1000	1000	2	0.085	0.030	0.004
RSS,MM3	1000	1000	2	0.077	0.035	0.004
Multn,MM3	1000	1000	2	0.163	0.090	0.028
<b>1F 15V</b>						
Wald	1000	1000	15	0.705	0.599	0.391
WaldV2,MM3	1000	1000	15	0.074	0.030	0.002
WaldV3	1000	1000	15	0.488	0.366	0.167
Pearson	1000	1000	15	0.088	0.042	0.016
PearsonV2,MM3	1000	1000	15	0.087	0.042	0.014
RSS,MM3	1000	1000	15	0.085	0.043	0.007
Multn,MM3	1000	1000	15	0.713	0.608	0.413
<b>2F 10V</b>						
Wald	1000	1000	7	0.238	0.162	0.054
WaldV2,MM3	1000	1000	7	0.058	0.024	0.005
WaldV3	1000	1000	7	0.165	0.110	0.025
Pearson	1000	1000	7	0.099	0.049	0.014
PearsonV2,MM3	1000	1000	7	0.096	0.045	0.010
RSS,MM3	1000	1000	7	0.091	0.048	0.007
Multn,MM3	1000	1000	7	0.252	0.166	0.060
<b>3F 15V</b>						
Wald	1000	1000	41	0.600	0.496	0.269
WaldV2,MM3	1000	1000	41	0.050	0.021	0.001
WaldV3	1000	1000	41	0.428	0.305	0.121
Pearson	1000	1000	41	0.077	0.038	0.004
PearsonV2,MM3	1000	1000	41	0.076	0.034	0.003
RSS,MM3	1000	1000	41	0.075	0.027	0.001
Multn,MM3	1000	1000	41	0.636	0.539	0.343

**Type I errors** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.104	0.040	0.008
WaldV2,MM3	1000	1000	0	0.068	0.025	0.005
WaldV3	1000	1000	0	0.091	0.037	0.006
Pearson	1000	1000	0	0.074	0.036	0.003
PearsonV2,MM3	1000	1000	0	0.075	0.036	0.002
RSS,MM3	1000	1000	0	0.081	0.035	0.001
Multn,MM3	1000	1000	0	0.096	0.038	0.007
<b>1F 8V</b>						
Wald	1000	1000	2	0.173	0.101	0.030
WaldV2,MM3	1000	1000	2	0.106	0.053	0.010
WaldV3	1000	1000	2	0.138	0.077	0.019
Pearson	1000	1000	2	0.112	0.057	0.016
PearsonV2,MM3	1000	1000	2	0.112	0.055	0.012
RSS,MM3	1000	1000	2	0.113	0.057	0.011
Multn,MM3	1000	1000	2	0.162	0.093	0.027
<b>1F 15V</b>						
Wald	1000	1000	13	0.394	0.262	0.104
WaldV2,MM3	1000	1000	13	0.086	0.037	0.005
WaldV3	1000	1000	13	0.276	0.166	0.051
Pearson	1000	1000	13	0.095	0.049	0.012
PearsonV2,MM3	1000	1000	13	0.094	0.048	0.009
RSS,MM3	1000	1000	13	0.098	0.055	0.007
Multn,MM3	1000	1000	13	0.415	0.289	0.117
<b>2F 10V</b>						
Wald	1000	1000	11	0.166	0.104	0.037
WaldV2,MM3	1000	1000	11	0.077	0.035	0.004
WaldV3	1000	1000	11	0.140	0.086	0.022
Pearson	1000	1000	11	0.095	0.040	0.011
PearsonV2,MM3	1000	1000	11	0.094	0.037	0.009
RSS,MM3	1000	1000	11	0.090	0.045	0.011
Multn,MM3	1000	1000	11	0.166	0.105	0.039
<b>3F 15V</b>						
Wald	1000	1000	40	0.343	0.228	0.083
WaldV2,MM3	1000	1000	40	0.076	0.027	0.001
WaldV3	1000	1000	40	0.252	0.167	0.043
Pearson	1000	1000	40	0.090	0.048	0.012
PearsonV2,MM3	1000	1000	40	0.089	0.046	0.011
RSS,MM3	1000	1000	40	0.088	0.041	0.010
Multn,MM3	1000	1000	40	0.379	0.266	0.111

**Type I errors ( $n = 3000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	4	0.097	0.044	0.006
WaldV2,MM3	1000	1000	4	0.072	0.037	0.006
WaldV3	1000	1000	4	0.090	0.042	0.006
Pearson	1000	1000	4	0.077	0.032	0.006
PearsonV2,MM3	1000	1000	4	0.078	0.030	0.005
RSS,MM3	1000	1000	4	0.082	0.030	0.004
Multn,MM3	1000	1000	4	0.092	0.042	0.006
<b>1F 8V</b>						
Wald	1000	1000	5	0.131	0.073	0.012
WaldV2,MM3	1000	1000	5	0.095	0.040	0.005
WaldV3	1000	1000	5	0.116	0.058	0.007
Pearson	1000	1000	5	0.094	0.059	0.009
PearsonV2,MM3	1000	1000	5	0.093	0.055	0.005
RSS,MM3	1000	1000	5	0.103	0.053	0.007
Multn,MM3	1000	1000	5	0.125	0.073	0.011
<b>1F 15V</b>						
Wald	1000	1000	29	0.279	0.177	0.073
WaldV2,MM3	1000	1000	29	0.100	0.053	0.011
WaldV3	1000	1000	29	0.211	0.129	0.047
Pearson	1000	1000	29	0.113	0.049	0.011
PearsonV2,MM3	1000	1000	29	0.112	0.047	0.010
RSS,MM3	1000	1000	29	0.106	0.052	0.009
Multn,MM3	1000	1000	29	0.290	0.196	0.075
<b>2F 10V</b>						
Wald	1000	1000	19	0.139	0.088	0.024
WaldV2,MM3	1000	1000	19	0.088	0.034	0.010
WaldV3	1000	1000	19	0.118	0.078	0.019
Pearson	1000	1000	19	0.090	0.047	0.009
PearsonV2,MM3	1000	1000	19	0.087	0.046	0.004
RSS,MM3	1000	1000	19	0.094	0.043	0.010
Multn,MM3	1000	1000	19	0.142	0.087	0.023
<b>3F 15V</b>						
Wald	1000	1000	52	0.241	0.155	0.051
WaldV2,MM3	1000	1000	52	0.078	0.040	0.006
WaldV3	1000	1000	52	0.187	0.106	0.035
Pearson	1000	1000	52	0.097	0.046	0.011
PearsonV2,MM3	1000	1000	52	0.096	0.044	0.011
RSS,MM3	1000	1000	52	0.093	0.045	0.010
Multn,MM3	1000	1000	52	0.259	0.166	0.054

**Power ( $n = 500$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	5	0.347	0.252	0.118
WaldV2,MM3	1000	1000	5	0.119	0.055	0.003
WaldV3	1000	1000	5	0.297	0.193	0.066
Pearson	1000	1000	5	0.258	0.166	0.062
PearsonV2,MM3	1000	1000	5	0.258	0.164	0.052
RSS,MM3	1000	1000	5	0.266	0.166	0.057
Multn,MM3	1000	1000	5	0.282	0.171	0.056
<b>1F 8V</b>						
Wald	1000	1000	10	0.825	0.757	0.595
WaldV2,MM3	1000	1000	10	0.547	0.372	0.148
WaldV3	1000	1000	10	0.624	0.495	0.267
Pearson	1000	1000	10	0.441	0.307	0.131
PearsonV2,MM3	1000	1000	10	0.440	0.297	0.113
RSS,MM3	1000	1000	10	0.482	0.339	0.141
Multn,MM3	1000	1000	10	0.764	0.667	0.456
<b>1F 15V</b>						
Wald	1000	1000	27	1.000	1.000	1.000
WaldV2,MM3	1000	1000	27	0.850	0.755	0.459
WaldV3	1000	1000	27	0.991	0.977	0.918
Pearson	1000	1000	27	0.741	0.612	0.350
PearsonV2,MM3	1000	1000	27	0.736	0.601	0.318
RSS,MM3	1000	1000	27	0.792	0.664	0.381
Multn,MM3	1000	1000	27	1.000	1.000	0.990
<b>2F 10V</b>						
Wald	1000	1000	27	0.754	0.654	0.460
WaldV2,MM3	1000	1000	27	0.215	0.102	0.015
WaldV3	1000	1000	27	0.521	0.401	0.184
Pearson	1000	1000	27	0.421	0.289	0.121
PearsonV2,MM3	1000	1000	27	0.417	0.272	0.101
RSS,MM3	1000	1000	27	0.410	0.263	0.098
Multn,MM3	1000	1000	27	0.658	0.523	0.320
<b>3F 15V</b>						
Wald	1000	1000	64	0.990	0.980	0.944
WaldV2,MM3	1000	1000	64	0.202	0.110	0.018
WaldV3	1000	1000	64	0.916	0.855	0.695
Pearson	1000	1000	64	0.362	0.255	0.094
PearsonV2,MM3	1000	1000	64	0.360	0.239	0.083
RSS,MM3	1000	1000	64	0.373	0.235	0.077
Multn,MM3	1000	1000	64	0.977	0.960	0.869

**Power** ( $n = 1000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.465	0.326	0.181
WaldV2,MM3	1000	1000	1	0.328	0.208	0.062
WaldV3	1000	1000	1	0.430	0.302	0.145
Pearson	1000	1000	1	0.475	0.348	0.159
PearsonV2,MM3	1000	1000	1	0.475	0.346	0.146
RSS,MM3	1000	1000	1	0.475	0.350	0.157
Multn,MM3	1000	1000	1	0.431	0.301	0.141
<b>1F 8V</b>						
Wald	1000	1000	2	0.953	0.916	0.792
WaldV2,MM3	1000	1000	2	0.902	0.817	0.611
WaldV3	1000	1000	2	0.901	0.833	0.626
Pearson	1000	1000	2	0.747	0.635	0.412
PearsonV2,MM3	1000	1000	2	0.744	0.629	0.380
RSS,MM3	1000	1000	2	0.814	0.700	0.465
Multn,MM3	1000	1000	2	0.940	0.893	0.747
<b>1F 15V</b>						
Wald	1000	1000	19	1.000	0.999	0.995
WaldV2,MM3	1000	1000	19	0.999	0.996	0.976
WaldV3	1000	1000	19	0.991	0.982	0.944
Pearson	1000	1000	19	0.983	0.957	0.884
PearsonV2,MM3	1000	1000	19	0.982	0.954	0.864
RSS,MM3	1000	1000	19	0.993	0.977	0.916
Multn,MM3	1000	1000	19	1.000	1.000	0.995
<b>2F 10V</b>						
Wald	1000	1000	12	0.756	0.665	0.439
WaldV2,MM3	1000	1000	12	0.601	0.448	0.195
WaldV3	1000	1000	12	0.651	0.507	0.282
Pearson	1000	1000	12	0.770	0.655	0.447
PearsonV2,MM3	1000	1000	12	0.768	0.641	0.406
RSS,MM3	1000	1000	12	0.775	0.659	0.434
Multn,MM3	1000	1000	12	0.732	0.635	0.392
<b>3F 15V</b>						
Wald	1000	1000	27	0.939	0.917	0.791
WaldV2,MM3	1000	1000	27	0.679	0.532	0.259
WaldV3	1000	1000	27	0.872	0.791	0.604
Pearson	1000	1000	27	0.801	0.697	0.488
PearsonV2,MM3	1000	1000	27	0.799	0.684	0.455
RSS,MM3	1000	1000	27	0.832	0.726	0.480
Multn,MM3	1000	1000	27	0.956	0.923	0.808



**Power** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.758	0.630	0.393
WaldV2,MM3	1000	1000	1	0.649	0.516	0.248
WaldV3	1000	1000	1	0.746	0.615	0.372
Pearson	1000	1000	1	0.786	0.689	0.459
PearsonV2,MM3	1000	1000	1	0.789	0.688	0.442
RSS,MM3	1000	1000	1	0.791	0.695	0.460
Multn,MM3	1000	1000	1	0.745	0.616	0.372
<b>1F 8V</b>						
Wald	1000	1000	2	0.999	0.997	0.994
WaldV2,MM3	1000	1000	2	0.999	0.997	0.983
WaldV3	1000	1000	2	0.999	0.997	0.977
Pearson	1000	1000	2	0.989	0.972	0.893
PearsonV2,MM3	1000	1000	2	0.989	0.970	0.877
RSS,MM3	1000	1000	2	0.995	0.985	0.937
Multn,MM3	1000	1000	2	0.999	0.997	0.988
<b>1F 15V</b>						
Wald	1000	1000	17	1.000	1.000	1.000
WaldV2,MM3	1000	1000	17	1.000	1.000	1.000
WaldV3	1000	1000	17	1.000	1.000	0.999
Pearson	1000	1000	17	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	17	1.000	1.000	1.000
RSS,MM3	1000	1000	17	1.000	1.000	1.000
Multn,MM3	1000	1000	17	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	6	0.958	0.925	0.792
WaldV2,MM3	1000	1000	6	0.967	0.933	0.771
WaldV3	1000	1000	6	0.941	0.882	0.704
Pearson	1000	1000	6	0.986	0.973	0.912
PearsonV2,MM3	1000	1000	6	0.985	0.970	0.893
RSS,MM3	1000	1000	6	0.989	0.976	0.917
Multn,MM3	1000	1000	6	0.956	0.923	0.775
<b>3F 15V</b>						
Wald	1000	1000	37	0.991	0.978	0.925
WaldV2,MM3	1000	1000	37	0.987	0.960	0.868
WaldV3	1000	1000	37	0.981	0.963	0.856
Pearson	1000	1000	37	0.993	0.986	0.948
PearsonV2,MM3	1000	1000	37	0.993	0.983	0.941
RSS,MM3	1000	1000	37	0.996	0.988	0.964
Multn,MM3	1000	1000	37	0.995	0.987	0.942

**Power** ( $n = 3000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.884	0.802	0.612
WaldV2,MM3	1000	1000	0	0.839	0.730	0.479
WaldV3	1000	1000	0	0.877	0.795	0.594
Pearson	1000	1000	0	0.895	0.831	0.664
PearsonV2,MM3	1000	1000	0	0.897	0.830	0.650
RSS,MM3	1000	1000	0	0.897	0.841	0.670
Multn,MM3	1000	1000	0	0.875	0.796	0.594
<b>1F 8V</b>						
Wald	1000	1000	4	1.000	1.000	1.000
WaldV2,MM3	1000	1000	4	1.000	1.000	1.000
WaldV3	1000	1000	4	1.000	1.000	1.000
Pearson	1000	1000	4	1.000	1.000	0.993
PearsonV2,MM3	1000	1000	4	1.000	1.000	0.991
RSS,MM3	1000	1000	4	1.000	1.000	1.000
Multn,MM3	1000	1000	4	1.000	1.000	1.000
<b>1F 15V</b>						
Wald	1000	1000	10	1.000	1.000	1.000
WaldV2,MM3	1000	1000	10	1.000	1.000	1.000
WaldV3	1000	1000	10	1.000	1.000	1.000
Pearson	1000	1000	10	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	10	1.000	1.000	1.000
RSS,MM3	1000	1000	10	1.000	1.000	1.000
Multn,MM3	1000	1000	10	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	10	0.998	0.992	0.963
WaldV2,MM3	1000	1000	10	0.999	0.994	0.974
WaldV3	1000	1000	10	0.998	0.988	0.944
Pearson	1000	1000	10	1.000	0.998	0.992
PearsonV2,MM3	1000	1000	10	1.000	0.998	0.989
RSS,MM3	1000	1000	10	1.000	0.998	0.994
Multn,MM3	1000	1000	10	0.998	0.990	0.965
<b>3F 15V</b>						
Wald	1000	1000	52	0.998	0.996	0.988
WaldV2,MM3	1000	1000	52	0.999	0.997	0.994
WaldV3	1000	1000	52	0.997	0.996	0.980
Pearson	1000	1000	52	1.000	0.999	0.996
PearsonV2,MM3	1000	1000	52	1.000	0.999	0.996
RSS,MM3	1000	1000	52	1.000	1.000	0.997
Multn,MM3	1000	1000	52	0.999	0.997	0.993

## Strat-clust sampling

Type I errors ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.078	0.025
WaldV2,MM3	1000	1000	0	0.042	0.015	0.003
WaldV3	1000	1000	0	0.100	0.054	0.016
Pearson	1000	1000	0	0.086	0.037	0.007
PearsonV2,MM3	1000	1000	0	0.087	0.034	0.007
RSS,MM3	1000	1000	0	0.080	0.034	0.008
Multn,MM3	1000	1000	0	0.114	0.059	0.017
<b>1F 8V</b>						
Wald	1000	1000	3	0.332	0.222	0.098
WaldV2,MM3	1000	1000	3	0.049	0.026	0.007
WaldV3	1000	1000	3	0.161	0.096	0.040
Pearson	1000	1000	3	0.083	0.040	0.010
PearsonV2,MM3	1000	1000	3	0.083	0.038	0.007
RSS,MM3	1000	1000	3	0.084	0.037	0.007
Multn,MM3	1000	1000	3	0.259	0.163	0.074
<b>1F 15V</b>						
Wald	1000	1000	14	0.988	0.972	0.937
WaldV2,MM3	1000	1000	14	0.046	0.013	0.002
WaldV3	1000	1000	14	0.861	0.803	0.639
Pearson	1000	1000	14	0.078	0.039	0.005
PearsonV2,MM3	1000	1000	14	0.076	0.038	0.002
RSS,MM3	1000	1000	14	0.068	0.031	0.002
Multn,MM3	1000	1000	14	0.971	0.952	0.879
<b>2F 10V</b>						
Wald	1000	1000	22	0.450	0.336	0.157
WaldV2,MM3	1000	1000	22	0.033	0.013	0.000
WaldV3	1000	1000	22	0.257	0.151	0.050
Pearson	1000	1000	22	0.065	0.034	0.007
PearsonV2,MM3	1000	1000	22	0.064	0.032	0.004
RSS,MM3	1000	1000	22	0.061	0.031	0.001
Multn,MM3	1000	1000	22	0.412	0.311	0.158
<b>3F 15V</b>						
Wald	1000	1000	66	0.957	0.922	0.827
WaldV2,MM3	1000	1000	66	0.029	0.013	0.002
WaldV3	1000	1000	66	0.786	0.701	0.502
Pearson	1000	1000	66	0.073	0.033	0.009
PearsonV2,MM3	1000	1000	66	0.072	0.033	0.007
RSS,MM3	1000	1000	66	0.060	0.027	0.007
Multn,MM3	1000	1000	66	0.943	0.904	0.777

**Type I errors ( $n = 1000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.144	0.075	0.022
WaldV2,MM3	1000	1000	0	0.082	0.036	0.007
WaldV3	1000	1000	0	0.130	0.061	0.017
Pearson	1000	1000	0	0.098	0.056	0.013
PearsonV2,MM3	1000	1000	0	0.099	0.056	0.012
RSS,MM3	1000	1000	0	0.103	0.054	0.011
Multn,MM3	1000	1000	0	0.134	0.066	0.021
<b>1F 8V</b>						
Wald	1000	1000	2	0.179	0.104	0.034
WaldV2,MM3	1000	1000	2	0.063	0.026	0.001
WaldV3	1000	1000	2	0.114	0.061	0.016
Pearson	1000	1000	2	0.086	0.033	0.008
PearsonV2,MM3	1000	1000	2	0.085	0.030	0.004
RSS,MM3	1000	1000	2	0.077	0.035	0.004
Multn,MM3	1000	1000	2	0.163	0.090	0.028
<b>1F 15V</b>						
Wald	1000	1000	15	0.705	0.599	0.391
WaldV2,MM3	1000	1000	15	0.074	0.030	0.002
WaldV3	1000	1000	15	0.488	0.366	0.167
Pearson	1000	1000	15	0.088	0.042	0.016
PearsonV2,MM3	1000	1000	15	0.087	0.042	0.014
RSS,MM3	1000	1000	15	0.085	0.043	0.007
Multn,MM3	1000	1000	15	0.713	0.608	0.413
<b>2F 10V</b>						
Wald	1000	1000	7	0.238	0.162	0.054
WaldV2,MM3	1000	1000	7	0.058	0.024	0.005
WaldV3	1000	1000	7	0.165	0.110	0.025
Pearson	1000	1000	7	0.099	0.049	0.014
PearsonV2,MM3	1000	1000	7	0.096	0.045	0.010
RSS,MM3	1000	1000	7	0.091	0.048	0.007
Multn,MM3	1000	1000	7	0.252	0.166	0.060
<b>3F 15V</b>						
Wald	1000	1000	41	0.600	0.496	0.269
WaldV2,MM3	1000	1000	41	0.050	0.021	0.001
WaldV3	1000	1000	41	0.428	0.305	0.121
Pearson	1000	1000	41	0.077	0.038	0.004
PearsonV2,MM3	1000	1000	41	0.076	0.034	0.003
RSS,MM3	1000	1000	41	0.075	0.027	0.001
Multn,MM3	1000	1000	41	0.636	0.539	0.343

**Type I errors** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.104	0.040	0.008
WaldV2,MM3	1000	1000	0	0.068	0.025	0.005
WaldV3	1000	1000	0	0.091	0.037	0.006
Pearson	1000	1000	0	0.074	0.036	0.003
PearsonV2,MM3	1000	1000	0	0.075	0.036	0.002
RSS,MM3	1000	1000	0	0.081	0.035	0.001
Multn,MM3	1000	1000	0	0.096	0.038	0.007
<b>1F 8V</b>						
Wald	1000	1000	2	0.173	0.101	0.030
WaldV2,MM3	1000	1000	2	0.106	0.053	0.010
WaldV3	1000	1000	2	0.138	0.077	0.019
Pearson	1000	1000	2	0.112	0.057	0.016
PearsonV2,MM3	1000	1000	2	0.112	0.055	0.012
RSS,MM3	1000	1000	2	0.113	0.057	0.011
Multn,MM3	1000	1000	2	0.162	0.093	0.027
<b>1F 15V</b>						
Wald	1000	1000	13	0.394	0.262	0.104
WaldV2,MM3	1000	1000	13	0.086	0.037	0.005
WaldV3	1000	1000	13	0.276	0.166	0.051
Pearson	1000	1000	13	0.095	0.049	0.012
PearsonV2,MM3	1000	1000	13	0.094	0.048	0.009
RSS,MM3	1000	1000	13	0.098	0.055	0.007
Multn,MM3	1000	1000	13	0.415	0.289	0.117
<b>2F 10V</b>						
Wald	1000	1000	11	0.166	0.104	0.037
WaldV2,MM3	1000	1000	11	0.077	0.035	0.004
WaldV3	1000	1000	11	0.140	0.086	0.022
Pearson	1000	1000	11	0.095	0.040	0.011
PearsonV2,MM3	1000	1000	11	0.094	0.037	0.009
RSS,MM3	1000	1000	11	0.090	0.045	0.011
Multn,MM3	1000	1000	11	0.166	0.105	0.039
<b>3F 15V</b>						
Wald	1000	1000	40	0.343	0.228	0.083
WaldV2,MM3	1000	1000	40	0.076	0.027	0.001
WaldV3	1000	1000	40	0.252	0.167	0.043
Pearson	1000	1000	40	0.090	0.048	0.012
PearsonV2,MM3	1000	1000	40	0.089	0.046	0.011
RSS,MM3	1000	1000	40	0.088	0.041	0.010
Multn,MM3	1000	1000	40	0.379	0.266	0.111

**Type I errors ( $n = 3000$ )**

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	4	0.097	0.044	0.006
WaldV2,MM3	1000	1000	4	0.072	0.037	0.006
WaldV3	1000	1000	4	0.090	0.042	0.006
Pearson	1000	1000	4	0.077	0.032	0.006
PearsonV2,MM3	1000	1000	4	0.078	0.030	0.005
RSS,MM3	1000	1000	4	0.082	0.030	0.004
Multn,MM3	1000	1000	4	0.092	0.042	0.006
<b>1F 8V</b>						
Wald	1000	1000	5	0.131	0.073	0.012
WaldV2,MM3	1000	1000	5	0.095	0.040	0.005
WaldV3	1000	1000	5	0.116	0.058	0.007
Pearson	1000	1000	5	0.094	0.059	0.009
PearsonV2,MM3	1000	1000	5	0.093	0.055	0.005
RSS,MM3	1000	1000	5	0.103	0.053	0.007
Multn,MM3	1000	1000	5	0.125	0.073	0.011
<b>1F 15V</b>						
Wald	1000	1000	29	0.279	0.177	0.073
WaldV2,MM3	1000	1000	29	0.100	0.053	0.011
WaldV3	1000	1000	29	0.211	0.129	0.047
Pearson	1000	1000	29	0.113	0.049	0.011
PearsonV2,MM3	1000	1000	29	0.112	0.047	0.010
RSS,MM3	1000	1000	29	0.106	0.052	0.009
Multn,MM3	1000	1000	29	0.290	0.196	0.075
<b>2F 10V</b>						
Wald	1000	1000	19	0.139	0.088	0.024
WaldV2,MM3	1000	1000	19	0.088	0.034	0.010
WaldV3	1000	1000	19	0.118	0.078	0.019
Pearson	1000	1000	19	0.090	0.047	0.009
PearsonV2,MM3	1000	1000	19	0.087	0.046	0.004
RSS,MM3	1000	1000	19	0.094	0.043	0.010
Multn,MM3	1000	1000	19	0.142	0.087	0.023
<b>3F 15V</b>						
Wald	1000	1000	52	0.241	0.155	0.051
WaldV2,MM3	1000	1000	52	0.078	0.040	0.006
WaldV3	1000	1000	52	0.187	0.106	0.035
Pearson	1000	1000	52	0.097	0.046	0.011
PearsonV2,MM3	1000	1000	52	0.096	0.044	0.011
RSS,MM3	1000	1000	52	0.093	0.045	0.010
Multn,MM3	1000	1000	52	0.259	0.166	0.054

**Power** ( $n = 500$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	5	0.347	0.252	0.118
WaldV2,MM3	1000	1000	5	0.119	0.055	0.003
WaldV3	1000	1000	5	0.297	0.193	0.066
Pearson	1000	1000	5	0.258	0.166	0.062
PearsonV2,MM3	1000	1000	5	0.258	0.164	0.052
RSS,MM3	1000	1000	5	0.266	0.166	0.057
Multn,MM3	1000	1000	5	0.282	0.171	0.056
<b>1F 8V</b>						
Wald	1000	1000	10	0.825	0.757	0.595
WaldV2,MM3	1000	1000	10	0.547	0.372	0.148
WaldV3	1000	1000	10	0.624	0.495	0.267
Pearson	1000	1000	10	0.441	0.307	0.131
PearsonV2,MM3	1000	1000	10	0.440	0.297	0.113
RSS,MM3	1000	1000	10	0.482	0.339	0.141
Multn,MM3	1000	1000	10	0.764	0.667	0.456
<b>1F 15V</b>						
Wald	1000	1000	27	1.000	1.000	1.000
WaldV2,MM3	1000	1000	27	0.850	0.755	0.459
WaldV3	1000	1000	27	0.991	0.977	0.918
Pearson	1000	1000	27	0.741	0.612	0.350
PearsonV2,MM3	1000	1000	27	0.736	0.601	0.318
RSS,MM3	1000	1000	27	0.792	0.664	0.381
Multn,MM3	1000	1000	27	1.000	1.000	0.990
<b>2F 10V</b>						
Wald	1000	1000	27	0.754	0.654	0.460
WaldV2,MM3	1000	1000	27	0.215	0.102	0.015
WaldV3	1000	1000	27	0.521	0.401	0.184
Pearson	1000	1000	27	0.421	0.289	0.121
PearsonV2,MM3	1000	1000	27	0.417	0.272	0.101
RSS,MM3	1000	1000	27	0.410	0.263	0.098
Multn,MM3	1000	1000	27	0.658	0.523	0.320
<b>3F 15V</b>						
Wald	1000	1000	64	0.990	0.980	0.944
WaldV2,MM3	1000	1000	64	0.202	0.110	0.018
WaldV3	1000	1000	64	0.916	0.855	0.695
Pearson	1000	1000	64	0.362	0.255	0.094
PearsonV2,MM3	1000	1000	64	0.360	0.239	0.083
RSS,MM3	1000	1000	64	0.373	0.235	0.077
Multn,MM3	1000	1000	64	0.977	0.960	0.869

**Power** ( $n = 1000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.465	0.326	0.181
WaldV2,MM3	1000	1000	1	0.328	0.208	0.062
WaldV3	1000	1000	1	0.430	0.302	0.145
Pearson	1000	1000	1	0.475	0.348	0.159
PearsonV2,MM3	1000	1000	1	0.475	0.346	0.146
RSS,MM3	1000	1000	1	0.475	0.350	0.157
Multn,MM3	1000	1000	1	0.431	0.301	0.141
<b>1F 8V</b>						
Wald	1000	1000	2	0.953	0.916	0.792
WaldV2,MM3	1000	1000	2	0.902	0.817	0.611
WaldV3	1000	1000	2	0.901	0.833	0.626
Pearson	1000	1000	2	0.747	0.635	0.412
PearsonV2,MM3	1000	1000	2	0.744	0.629	0.380
RSS,MM3	1000	1000	2	0.814	0.700	0.465
Multn,MM3	1000	1000	2	0.940	0.893	0.747
<b>1F 15V</b>						
Wald	1000	1000	19	1.000	0.999	0.995
WaldV2,MM3	1000	1000	19	0.999	0.996	0.976
WaldV3	1000	1000	19	0.991	0.982	0.944
Pearson	1000	1000	19	0.983	0.957	0.884
PearsonV2,MM3	1000	1000	19	0.982	0.954	0.864
RSS,MM3	1000	1000	19	0.993	0.977	0.916
Multn,MM3	1000	1000	19	1.000	1.000	0.995
<b>2F 10V</b>						
Wald	1000	1000	12	0.756	0.665	0.439
WaldV2,MM3	1000	1000	12	0.601	0.448	0.195
WaldV3	1000	1000	12	0.651	0.507	0.282
Pearson	1000	1000	12	0.770	0.655	0.447
PearsonV2,MM3	1000	1000	12	0.768	0.641	0.406
RSS,MM3	1000	1000	12	0.775	0.659	0.434
Multn,MM3	1000	1000	12	0.732	0.635	0.392
<b>3F 15V</b>						
Wald	1000	1000	27	0.939	0.917	0.791
WaldV2,MM3	1000	1000	27	0.679	0.532	0.259
WaldV3	1000	1000	27	0.872	0.791	0.604
Pearson	1000	1000	27	0.801	0.697	0.488
PearsonV2,MM3	1000	1000	27	0.799	0.684	0.455
RSS,MM3	1000	1000	27	0.832	0.726	0.480
Multn,MM3	1000	1000	27	0.956	0.923	0.808



**Power** ( $n = 2000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	1	0.758	0.630	0.393
WaldV2,MM3	1000	1000	1	0.649	0.516	0.248
WaldV3	1000	1000	1	0.746	0.615	0.372
Pearson	1000	1000	1	0.786	0.689	0.459
PearsonV2,MM3	1000	1000	1	0.789	0.688	0.442
RSS,MM3	1000	1000	1	0.791	0.695	0.460
Multn,MM3	1000	1000	1	0.745	0.616	0.372
<b>1F 8V</b>						
Wald	1000	1000	2	0.999	0.997	0.994
WaldV2,MM3	1000	1000	2	0.999	0.997	0.983
WaldV3	1000	1000	2	0.999	0.997	0.977
Pearson	1000	1000	2	0.989	0.972	0.893
PearsonV2,MM3	1000	1000	2	0.989	0.970	0.877
RSS,MM3	1000	1000	2	0.995	0.985	0.937
Multn,MM3	1000	1000	2	0.999	0.997	0.988
<b>1F 15V</b>						
Wald	1000	1000	17	1.000	1.000	1.000
WaldV2,MM3	1000	1000	17	1.000	1.000	1.000
WaldV3	1000	1000	17	1.000	1.000	0.999
Pearson	1000	1000	17	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	17	1.000	1.000	1.000
RSS,MM3	1000	1000	17	1.000	1.000	1.000
Multn,MM3	1000	1000	17	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	6	0.958	0.925	0.792
WaldV2,MM3	1000	1000	6	0.967	0.933	0.771
WaldV3	1000	1000	6	0.941	0.882	0.704
Pearson	1000	1000	6	0.986	0.973	0.912
PearsonV2,MM3	1000	1000	6	0.985	0.970	0.893
RSS,MM3	1000	1000	6	0.989	0.976	0.917
Multn,MM3	1000	1000	6	0.956	0.923	0.775
<b>3F 15V</b>						
Wald	1000	1000	37	0.991	0.978	0.925
WaldV2,MM3	1000	1000	37	0.987	0.960	0.868
WaldV3	1000	1000	37	0.981	0.963	0.856
Pearson	1000	1000	37	0.993	0.986	0.948
PearsonV2,MM3	1000	1000	37	0.993	0.983	0.941
RSS,MM3	1000	1000	37	0.996	0.988	0.964
Multn,MM3	1000	1000	37	0.995	0.987	0.942

**Power** ( $n = 3000$ )

name	n_sims	n_converged	n_rank_def	rej_rate10	rej_rate5	rej_rate1
<b>1F 5V</b>						
Wald	1000	1000	0	0.884	0.802	0.612
WaldV2,MM3	1000	1000	0	0.839	0.730	0.479
WaldV3	1000	1000	0	0.877	0.795	0.594
Pearson	1000	1000	0	0.895	0.831	0.664
PearsonV2,MM3	1000	1000	0	0.897	0.830	0.650
RSS,MM3	1000	1000	0	0.897	0.841	0.670
Multn,MM3	1000	1000	0	0.875	0.796	0.594
<b>1F 8V</b>						
Wald	1000	1000	4	1.000	1.000	1.000
WaldV2,MM3	1000	1000	4	1.000	1.000	1.000
WaldV3	1000	1000	4	1.000	1.000	1.000
Pearson	1000	1000	4	1.000	1.000	0.993
PearsonV2,MM3	1000	1000	4	1.000	1.000	0.991
RSS,MM3	1000	1000	4	1.000	1.000	1.000
Multn,MM3	1000	1000	4	1.000	1.000	1.000
<b>1F 15V</b>						
Wald	1000	1000	10	1.000	1.000	1.000
WaldV2,MM3	1000	1000	10	1.000	1.000	1.000
WaldV3	1000	1000	10	1.000	1.000	1.000
Pearson	1000	1000	10	1.000	1.000	1.000
PearsonV2,MM3	1000	1000	10	1.000	1.000	1.000
RSS,MM3	1000	1000	10	1.000	1.000	1.000
Multn,MM3	1000	1000	10	1.000	1.000	1.000
<b>2F 10V</b>						
Wald	1000	1000	10	0.998	0.992	0.963
WaldV2,MM3	1000	1000	10	0.999	0.994	0.974
WaldV3	1000	1000	10	0.998	0.988	0.944
Pearson	1000	1000	10	1.000	0.998	0.992
PearsonV2,MM3	1000	1000	10	1.000	0.998	0.989
RSS,MM3	1000	1000	10	1.000	0.998	0.994
Multn,MM3	1000	1000	10	0.998	0.990	0.965
<b>3F 15V</b>						
Wald	1000	1000	52	0.998	0.996	0.988
WaldV2,MM3	1000	1000	52	0.999	0.997	0.994
WaldV3	1000	1000	52	0.997	0.996	0.980
Pearson	1000	1000	52	1.000	0.999	0.996
PearsonV2,MM3	1000	1000	52	1.000	0.999	0.996
RSS,MM3	1000	1000	52	1.000	1.000	0.997
Multn,MM3	1000	1000	52	0.999	0.997	0.993