On-line Appendix

On-line appendix to accompany *It might not make a DIF: Improved Differential Test Functioning statistics that account for sampling variability.* The tables contain simulation results pertaining to Type I error rates ($sDTF$) and cut-off values at the 95% percentile ($uDTF$) when varying sample size (500, 1000, 3000), DIF size (0.5 and 1.0), test size (30, 40, and 50), parameters containing DIF (d, a, d and a), and number of items containing DIF (4, 8, and 12 in the 3PLM design, and 4, 6, and 8 in the GRM design).

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	30	0.5	4	.178	.106	.026	1.000	.969	.665	.341	.142
			8	.419	.306	.132	1.000	.997	.948	.769	.530
			12	.734	.623	.362	1.000	1.000	.996	.975	.907
		1	4	.699	.584	.373	1.000	1.000	.995	.969	.897
			8	.984	.975	.931	1.000	1.000	1.000	1.000	1.000
			12	1.000	1.000	.999	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.145	.081	.019	1.000	.931	.509	.190	.054
			8	.331	.198	.062	1.000	.991	.818	.507	.249
			12	.534	.393	.178	1.000	.999	.964	.836	.605
		1	4	.517	.394	.184	1.000	1.000	.976	.845	.650
			8	.928	.873	.733	1.000	1.000	1.000	1.000	.997
			12	.999	.992	.967	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.096	.047	.010	1.000	.934	.486	.148	.038
			8	.211	.121	.027	1.000	.988	.747	.362	.146
			12	.380	.250	.093	1.000	.997	.919	.683	.398
		1	4	.354	.244	.092	1.000	.998	.916	.700	.403
			8	.840	.758	.529	1.000	1.000	1.000	.999	.984
			12	.986	.965	.893	1.000	1.000	1.000	1.000	1.000
d	30	0.5	4	.124	.066	.008	1.000	.889	.506	.203	.077
			8	.227	.133	.028	1.000	.935	.573	.252	.000
			12	.411	.287	.107	.999	.961	.708	.353	.140
		1	4	.237	.154	.033	1.000	.929	.598	.229	.079
			8	.626	.493	.245	1.000	.992	.824	.530	.252
			12	.922	.851	.629	1.000	1.000	.973	.856	.570
	40	0.5	4	.081	.038	.010	1.000	.863	.420	.148	.034
			8	.136	.084	.022	1.000	.892	.465	.203	.075
			12	.246	.153	.053	1.000	.922	.559	.234	.081
		1	4	.148	.077	.016	1.000	.894	.466	.173	.046
			8	.402	.277	.104	1.000	.949	.673	.328	.104
			12	.727	.591	.348	1.000	.992	.865	.567	.257
	50	0.5	4	.079	.042	.008	1.000	.909	.447	.156	.050
			8	.089	.044	.010	1.000	.927	.486	.166	.052
			12	.165	.088	.024	1.000	.943	.579	.229	.075
		1	4	.103	.052	.012	1.000	.931	.485	.170	.047
			8	.264	.162	.048	1.000	.964	.609	.275	.082
			12	.514	.375	.161	1.000	.984	.780	.442	.172
a	30	0.5	4	.084	.045	.011	1.000	.938	.584	.266	.097
			8	.102	.053	.012	1.000	.995	.875	.657	.411
			12	.127	.065	.016	1.000	1.000	.980	.919	.801
		1	4	.144	.079	.029	1.000	.999	.986	.927	.818
			8	.214	.136	.041	1.000	1.000	1.000	.999	.999
			12	.284	.191	.090	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.072	.037	.008	1.000	.920	.446	.153	.041
			8	.088	.041	.012	1.000	.973	.739	.436	.195
			12	.100	.050	.008	1.000	.996	.915	.736	.495
		1	4	.126	.064	.010	1.000	.998	.935	.768	.531
			8	.190	.107	.032	1.000	1.000	1.000	.999	.999
			12	.164	.091	.032	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.079	.034	.004	1.000	.937	.461	.136	.041
			8	.066	.034	.004	1.000	.970	.624	.294	.101
			12	.081	.036	.005	1.000	.988	.829	.574	.312
		1	4	.084	.037	.006	1.000	.999	.855	.578	.305
			8	.111	.052	.012	1.000	1.000	.998	.984	.946
			12	.125	.068	.021	1.000	1.000	1.000	1.000	.999

Table 1: DTF statistics for the 3PLM when the simulated parameter DIF are unidirectional and $N = 500$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.25	> 2.5	> 2.75	> 3
a & d	30	0.5	4	.355	.260	.112	.695	.480	.306	.163	.071
			8	.718	.621	.425	.988	.952	.882	.771	.640
			12	.922	.889	.756	1.000	1.000	.995	.982	.969
		1	4	.907	.868	.758	1.000	1.000	.999	.990	.971
			8	.996	.994	.987	1.000	1.000	1.000	1.000	1.000
			12	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.257	.167	.059	.486	.264	.112	.039	.012
			8	.551	.448	.243	.911	.767	.592	.413	.246
			12	.820	.739	.545	.997	.978	.936	.867	.736
		1	4	.812	.745	.534	.994	.982	.958	.898	.784
			8	.991	.987	.973	1.000	1.000	1.000	1.000	1.000
			12	1.000	1.000	.999	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.188	.116	.036	.319	.124	.046	.013	.006
			8	.437	.314	.144	.765	.568	.364	.188	.080
			12	.691	.564	.370	.967	.896	.777	.597	.412
		1	4	.682	.582	.351	.976	.920	.813	.665	.480
			8	.989	.974	.930	1.000	1.000	1.000	1.000	.998
			12	.999	.999	.997	1.000	1.000	1.000	1.000	1.000
d	30	0.5	4	.196	.102	.024	.288	.126	.038	.015	.005
			8	.474	.356	.167	.525	.290	.126	.051	.013
			12	.736	.616	.389	.751	.508	.284	.147	.063
		1	4	.474	.348	.145	.531	.291	.139	.053	.022
			8	.918	.862	.683	.919	.767	.544	.347	.171
			12	.999	.998	.974	.999	.994	.960	.852	.703
	40	0.5	4	.145	.083	.023	.208	.082	.024	.007	.002
			8	.332	.240	.095	.346	.159	.063	.025	.007
			12	.499	.389	.183	.438	.239	.096	.031	.003
		1	4	.306	.205	.086	.322	.138	.046	.015	.002
			8	.766	.660	.417	.715	.456	.261	.113	.045
			12	.966	.939	.820	.960	.863	.682	.447	.237
	50	0.5	4	.127	.071	.017	.165	.061	.015	.005	.001
			8	.272	.168	.053	.240	.087	.028	.008	.003
			12	.409	.286	.126	.346	.176	.064	.025	.003
		1	4	.226	.136	.057	.227	.082	.026	.006	.002
			8	.598	.465	.256	.498	.261	.131	.054	.016
			12	.870	.804	.587	.816	.601	.381	.215	.092
a	30	0.5	4	.125	.086	.021	.583	.393	.216	.115	.049
			8	.170	.100	.028	.951	.878	.756	.627	.470
			12	.208	.132	.051	.999	.994	.977	.939	.883
		1	4	.293	.227	.102	.995	.990	.984	.972	.931
			8	.381	.288	.164	1.000	1.000	1.000	1.000	1.000
			12	.421	.326	.217	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.134	.075	.016	.387	.209	.100	.040	.019
			8	.146	.084	.022	.800	.639	.469	.292	.147
			12	.151	.085	.024	.976	.930	.836	.702	.556
		1	4	.231	.151	.051	.986	.956	.907	.810	.676
			8	.306	.224	.112	1.000	.999	.999	.999	.999
			12	.378	.287	.157	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.114	.051	.009	.270	.112	.044	.012	.003
			8	.122	.077	.026	.634	.404	.229	.128	.053
			12	.152	.089	.024	.914	.784	.632	.449	.279
		1	4	.172	.114	.034	.937	.859	.710	.534	.362
			8	.231	.154	.063	1.000	1.000	1.000	1.000	.989
			12	.295	.209	.095	1.000	1.000	1.000	1.000	1.000

Table 2: DTF statistics for the 3PLM when the simulated parameter DIF are unidirectional and $N = 1000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	30	0.5	4	.137	.072	.021	.302	.051	.007	.001	.000
			8	.223	.137	.049	.484	.129	.024	.003	.000
			12	.326	.220	.116	.688	.298	.089	.016	.003
		1	4	.419	.309	.176	.868	.545	.232	.071	.014
			8	.782	.703	.541	.995	.968	.882	.671	.410
			12	.922	.902	.809	1.000	.999	.995	.978	.917
	40	0.5	4	.142	.081	.018	.216	.024	.000	.000	.000
			8	.160	.092	.023	.271	.047	.004	.000	.000
			12	.225	.153	.064	.463	.132	.018	.006	.000
		1	4	.348	.249	.100	.692	.250	.053	.007	.001
			8	.628	.541	.365	.966	.866	.590	.256	.067
			12	.844	.798	.667	.999	.988	.955	.820	.554
	50	0.5	4	.122	.063	.015	.164	.013	.000	.000	.000
			8	.150	.083	.029	.205	.025	.001	.001	.000
			12	.196	.117	.041	.312	.051	.005	.000	.000
		1	4	.223	.151	.053	.506	.123	.015	.000	.000
			8	.544	.441	.267	.937	.685	.304	.065	.005
			12	.755	.680	.518	.998	.961	.798	.476	.161
d	30	0.5	4	.099	.046	.011	.234	.031	.001	.000	.000
			8	.101	.045	.007	.253	.052	.004	.001	.000
			12	.098	.052	.010	.228	.037	.001	.000	.000
		1	4	.108	.053	.013	.269	.046	.006	.000	.000
			8	.093	.046	.011	.287	.055	.011	.001	.000
			12	.085	.044	.008	.379	.100	.015	.004	.001
	40	0.5	4	.112	.048	.010	.179	.017	.001	.000	.000
			8	.102	.050	.010	.172	.025	.002	.000	.000
			12	.095	.042	.006	.162	.018	.003	.000	.000
		1	4	.112	.059	.016	.183	.022	.002	.000	.000
			8	.122	.063	.012	.210	.021	.001	.000	.000
			12	.105	.047	.009	.261	.035	.004	.000	.000
	50	0.5	4	.104	.055	.010	.153	.014	.000	.000	.000
			8	.104	.046	.013	.136	.011	.000	.000	.000
			12	.110	.055	.009	.148	.012	.001	.000	.000
		1	4	.092	.051	.005	.143	.008	.001	.000	.000
			8	.112	.065	.026	.159	.020	.002	.000	.000
			12	.104	.055	.014	.175	.016	.001	.000	.000
a	30	0.5	4	.129	.067	.017	.290	.042	.003	.000	.000
			8	.156	.095	.016	.403	.078	.008	.000	.000
			12	.166	.108	.028	.582	.225	.052	.004	.001
		1	4	.209	.123	.039	.790	.446	.161	.039	.004
			8	.293	.212	.109	.991	.944	.804	.543	.280
			12	.339	.268	.147	.999	.997	.973	.920	.782
	40	0.5	4	.104	.061	.008	.169	.021	.003	.000	.000
			8	.138	.081	.021	.289	.041	.004	.000	.000
			12	.142	.079	.017	.380	.078	.007	.001	.000
		1	4	.143	.091	.027	.596	.202	.039	.002	.001
			8	.225	.142	.049	.947	.741	.400	.138	.023
			12	.268	.185	.086	.997	.967	.859	.636	.349
	50	0.5	4	.129	.074	.017	.159	.014	.002	.000	.000
			8	.119	.066	.021	.186	.018	.000	.000	.000
			12	.141	.070	.018	.272	.044	.006	.000	.000
		1	4	.162	.102	.029	.439	.095	.009	.000	.000
			8	.191	.122	.039	.838	.503	.181	.036	.003
			12	.202	.134	.060	.988	.903	.616	.312	.089

Table 5: DTF statistics for the 3PLM when the simulated parameter DIF are bidirectional and $N = 1000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	30	0.5	4	.639	.553	.381	.115	.007	.000	.000	.000
			8	.959	.940	.877	.918	.549	.153	.022	.001
			12	.993	.989	.979	1.000	.987	.870	.516	.196
		1	4	.985	.983	.964	.999	.988	.919	.675	.341
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
			12	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.548	.436	.258	.015	.000	.000	.000	.000
			8	.895	.856	.741	.564	.123	.010	.001	.000
			12	.983	.972	.935	.982	.753	.292	.044	.002
		1	4	.973	.957	.928	.978	.820	.416	.112	.010
			8	.999	.999	.998	1.000	1.000	1.000	.998	.984
			12	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.416	.311	.170	.003	.000	.000	.000	.000
			8	.818	.751	.574	.180	.009	.000	.000	.000
			12	.965	.944	.883	.816	.270	.022	.001	.000
		1	4	.934	.911	.843	.859	.402	.062	.003	.000
			8	.999	.999	.998	1.000	1.000	.987	.936	.716
			12	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
d	30	0.5	4	.403	.290	.127	.000	.000	.000	.000	.000
			8	.854	.795	.570	.004	.000	.000	.000	.000
			12	.991	.985	.937	.104	.004	.000	.000	.000
		1	4	.855	.772	.577	.011	.001	.000	.000	.000
			8	.999	.998	.995	.497	.059	.001	.000	.000
			12	1.000	1.000	.999	.996	.800	.230	.007	.000
	40	0.5	4	.312	.215	.067	.000	.000	.000	.000	.000
			8	.658	.553	.351	.001	.000	.000	.000	.000
			12	.933	.895	.732	.005	.000	.000	.000	.000
		1	4	.677	.567	.349	.000	.000	.000	.000	.000
			8	.995	.987	.938	.081	.000	.000	.000	.000
			12	1.000	1.000	.999	.747	.126	.000	.000	.000
	50	0.5	4	.235	.150	.049	.000	.000	.000	.000	.000
			8	.538	.450	.219	.000	.000	.000	.000	.000
			12	.805	.713	.519	.003	.000	.000	.000	.000
		1	4	.536	.416	.199	.000	.000	.000	.000	.000
			8	.951	.910	.802	.016	.000	.000	.000	.000
			12	1.000	1.000	.994	.282	.006	.000	.000	.000
a	30	0.5	4	.224	.144	.054	.062	.002	.000	.000	.000
			8	.314	.236	.113	.793	.312	.064	.002	.000
			12	.404	.304	.164	.995	.941	.665	.243	.042
		1	4	.492	.420	.293	.994	.943	.773	.483	.213
			8	.608	.551	.432	1.000	1.000	1.000	1.000	1.000
			12	.666	.599	.493	1.000	1.000	1.000	1.000	1.000
	40	0.5	4	.201	.125	.046	.007	.000	.000	.000	.000
			8	.282	.181	.071	.313	.024	.001	.000	.000
			12	.318	.225	.123	.887	.491	.095	.007	.001
		1	4	.416	.336	.214	.925	.666	.280	.061	.002
			8	.524	.441	.308	1.000	1.000	.997	.973	.888
			12	.591	.525	.407	1.000	1.000	1.000	1.000	1.000
	50	0.5	4	.174	.109	.037	.001	.000	.000	.000	.000
			8	.238	.165	.063	.088	.002	.000	.000	.000
			12	.266	.177	.074	.593	.113	.006	.000	.000
		1	4	.377	.284	.163	.735	.280	.038	.000	.000
			8	.457	.379	.249	1.000	.998	.972	.817	.460
			12	.546	.475	.333	1.000	1.000	1.000	1.000	.994

Table 3: DTF statistics for the 3PLM when the simulated parameter DIF are unidirectional and $N = 3000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	30	0.5	4	.087	.033	.003	.999	.912	.470	.167	.044
			8	.132	.066	.016	1.000	.935	.568	.245	.096
			12	.181	.098	.039	1.000	.961	.680	.323	.138
		1	4	.220	.132	.044	1.000	.984	.779	.467	.212
			8	.519	.390	.185	1.000	1.000	.982	.922	.770
			12	.766	.671	.476	1.000	1.000	1.000	.996	.986
	40	0.5	4	.079	.035	.002	1.000	.855	.377	.129	.034
			8	.091	.044	.006	1.000	.891	.420	.145	.036
			12	.115	.064	.017	1.000	.931	.482	.168	.058
		1	4	.146	.086	.017	1.000	.958	.601	.233	.066
			8	.337	.234	.092	1.000	.999	.922	.708	.442
			12	.589	.482	.262	1.000	1.000	.987	.950	.855
	50	0.5	4	.063	.028	.004	1.000	.915	.437	.151	.038
			8	.078	.036	.003	1.000	.929	.458	.144	.035
			12	.092	.042	.010	1.000	.944	.493	.160	.047
		1	4	.094	.046	.007	1.000	.954	.519	.172	.041
			8	.242	.141	.036	1.000	.997	.832	.513	.255
			12	.422	.285	.099	1.000	1.000	.971	.839	.596
d	30	0.5	4	.047	.025	.003	1.000	.857	.403	.144	.049
			8	.065	.034	.006	.999	.874	.447	.179	.054
			12	.064	.031	.006	1.000	.883	.443	.175	.046
		1	4	.076	.046	.007	1.000	.896	.481	.174	.068
			8	.072	.031	.003	1.000	.922	.504	.192	.061
			12	.072	.033	.004	1.000	.924	.542	.207	.069
	40	0.5	4	.071	.023	.003	1.000	.875	.426	.165	.042
			8	.058	.023	.006	.999	.868	.392	.134	.038
			12	.053	.029	.002	1.000	.870	.405	.138	.042
		1	4	.065	.026	.004	.999	.872	.409	.146	.028
			8	.075	.033	.003	1.000	.898	.423	.145	.042
			12	.084	.045	.007	1.000	.911	.472	.161	.041
	50	0.5	4	.060	.025	.005	1.000	.900	.431	.144	.036
			8	.083	.035	.006	1.000	.910	.470	.157	.051
			12	.057	.024	.001	1.000	.924	.468	.152	.042
		1	4	.060	.024	.005	1.000	.911	.402	.137	.041
			8	.062	.027	.003	1.000	.917	.453	.134	.040
			12	.061	.022	.002	1.000	.936	.457	.146	.045
a	30	0.5	4	.082	.039	.008	1.000	.887	.448	.183	.048
			8	.100	.052	.009	1.000	.909	.473	.172	.065
			12	.096	.053	.012	1.000	.947	.543	.246	.096
		1	4	.115	.064	.011	1.000	.987	.728	.405	.170
			8	.156	.094	.032	1.000	.998	.969	.837	.612
			12	.242	.139	.048	1.000	1.000	.995	.970	.920
	40	0.5	4	.078	.038	.006	1.000	.878	.413	.129	.026
			8	.085	.039	.004	1.000	.894	.408	.141	.041
			12	.078	.038	.004	1.000	.902	.433	.144	.038
		1	4	.093	.041	.009	1.000	.935	.531	.197	.049
			8	.129	.067	.018	1.000	.992	.863	.624	.352
			12	.165	.093	.018	1.000	.998	.979	.887	.719
	50	0.5	4	.047	.018	.004	1.000	.914	.426	.139	.039
			8	.070	.024	.004	1.000	.900	.403	.136	.029
			12	.073	.032	.007	1.000	.943	.456	.138	.033
		1	4	.069	.027	.003	1.000	.944	.477	.152	.045
			8	.086	.029	.010	1.000	.982	.749	.393	.149
			12	.107	.056	.011	1.000	1.000	.939	.742	.476

Table 4: DTF statistics for the 3PLM when the simulated parameter DIF are bidirectional and $N = 500$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.672	.587	.381	.919	.627	.271	.078	.010
			6	.889	.828	.708	.999	.959	.801	.517	.203
			8	.975	.956	.902	1.000	.999	.977	.905	.693
		1	4	.991	.981	.965	1.000	1.000	.999	.996	.987
			6	.999	.999	.998	1.000	1.000	1.000	1.000	1.000
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.551	.446	.243	.800	.386	.106	.013	.003
			6	.781	.694	.519	.978	.804	.471	.159	.033
			8	.936	.895	.780	1.000	.987	.876	.601	.279
		1	4	.985	.977	.938	1.000	1.000	.999	.977	.852
			6	1.000	.999	.995	1.000	1.000	1.000	1.000	1.000
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.421	.321	.135	.616	.242	.042	.004	.002
			6	.710	.612	.364	.932	.635	.258	.058	.007
			8	.844	.791	.608	.993	.910	.649	.271	.080
		1	4	.967	.948	.877	1.000	.998	.966	.844	.590
			6	.998	.996	.986	1.000	1.000	1.000	1.000	.994
			8	1.000	1.000	.999	1.000	1.000	1.000	1.000	1.000
d	20	0.5	4	.396	.252	.079	.063	.005	.000	.000	.000
			6	.743	.616	.345	.178	.010	.000	.000	.000
			8	.935	.877	.673	.368	.024	.000	.000	.000
		1	4	.931	.868	.654	.418	.039	.002	.000	.000
			6	.999	.998	.986	.928	.406	.038	.002	.000
			8	1.000	1.000	1.000	1.000	.915	.420	.064	.003
	25	0.5	4	.269	.165	.036	.048	.003	.000	.000	.000
			6	.526	.393	.159	.080	.003	.000	.000	.000
			8	.805	.671	.360	.152	.009	.000	.000	.000
		1	4	.788	.668	.368	.204	.009	.001	.000	.000
			6	.984	.953	.854	.644	.090	.002	.000	.000
			8	1.000	.998	.988	.955	.518	.056	.003	.000
	30	0.5	4	.194	.108	.022	.031	.000	.000	.000	.000
			6	.404	.273	.084	.052	.001	.000	.000	.000
			8	.626	.484	.234	.118	.004	.000	.000	.000
		1	4	.650	.469	.210	.122	.009	.000	.000	.000
			6	.941	.880	.677	.408	.028	.000	.000	.000
			8	.995	.990	.944	.798	.186	.010	.001	.000
a	20	0.5	4	.161	.101	.025	.873	.568	.239	.064	.014
			6	.192	.126	.041	.991	.895	.688	.386	.148
			8	.240	.153	.051	.998	.993	.958	.803	.533
		1	4	.405	.331	.185	1.000	.999	.996	.986	.958
			6	.457	.373	.250	1.000	1.000	1.000	1.000	1.000
			8	.535	.457	.337	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.106	.055	.007	.717	.335	.072	.008	.000
			6	.161	.094	.030	.959	.759	.413	.119	.035
			8	.199	.130	.048	.997	.936	.754	.459	.184
		1	4	.305	.218	.098	.999	.997	.984	.923	.788
			6	.406	.318	.198	1.000	1.000	1.000	1.000	1.000
			8	.475	.393	.255	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.084	.04	.009	.573	.209	.040	.003	.000
			6	.107	.055	.012	.886	.557	.206	.037	.003
			8	.139	.075	.024	.972	.841	.548	.218	.052
		1	4	.255	.177	.080	.999	.992	.949	.777	.509
			6	.354	.265	.148	1.000	1.000	1.000	.999	.974
			8	.406	.318	.176	1.000	1.000	1.000	1.000	1.000

Table 8: DTF statistics for the GRM when the simulated parameter DIF are unidirectional and $N = 1000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	30	0.5	4	.229	.154	.068	.002	.000	.000	.000	.000
			8	.425	.331	.198	.025	.001	.000	.000	.000
			12	.609	.520	.359	.136	.015	.001	.000	.000
		1	4	.729	.656	.527	.472	.105	.013	.001	.000
			8	.943	.922	.877	.984	.883	.621	.295	.082
			12	.993	.990	.974	1.000	.998	.979	.916	.763
	40	0.5	4	.193	.122	.043	.000	.000	.000	.000	.000
			8	.330	.245	.132	.004	.000	.000	.000	.000
			12	.455	.369	.222	.027	.001	.000	.000	.000
		1	4	.599	.508	.368	.157	.009	.000	.000	.000
			8	.907	.871	.795	.857	.533	.179	.021	.003
			12	.970	.962	.931	.994	.959	.796	.460	.138
	50	0.5	4	.203	.124	.040	.000	.000	.000	.000	.000
			8	.282	.195	.082	.000	.000	.000	.000	.000
			12	.382	.284	.146	.007	.000	.000	.000	.000
		1	4	.527	.446	.262	.024	.000	.000	.000	.000
			8	.842	.801	.677	.627	.146	.012	.002	.000
			12	.944	.927	.875	.973	.785	.370	.083	.008
d	30	0.5	4	.117	.063	.010	.001	.000	.000	.000	.000
			8	.113	.065	.012	.000	.000	.000	.000	.000
			12	.126	.071	.021	.000	.000	.000	.000	.000
		1	4	.104	.063	.018	.001	.000	.000	.000	.000
			8	.127	.069	.017	.000	.000	.000	.000	.000
			12	.149	.087	.025	.010	.001	.000	.000	.000
	40	0.5	4	.123	.074	.013	.000	.000	.000	.000	.000
			8	.124	.069	.015	.000	.000	.000	.000	.000
			12	.136	.073	.021	.000	.000	.000	.000	.000
		1	4	.137	.075	.017	.000	.000	.000	.000	.000
			8	.135	.077	.017	.001	.000	.000	.000	.000
			12	.148	.072	.019	.001	.000	.000	.000	.000
	50	0.5	4	.140	.069	.013	.000	.000	.000	.000	.000
			8	.148	.090	.027	.000	.000	.000	.000	.000
			12	.145	.081	.021	.000	.000	.000	.000	.000
		1	4	.144	.087	.017	.000	.000	.000	.000	.000
			8	.150	.086	.018	.000	.000	.000	.000	.000
			12	.139	.081	.022	.000	.000	.000	.000	.000
a	30	0.5	4	.177	.105	.035	.000	.000	.000	.000	.000
			8	.258	.190	.075	.006	.000	.000	.000	.000
			12	.321	.220	.093	.056	.001	.000	.000	.000
		1	4	.388	.307	.186	.364	.075	.003	.000	.000
			8	.502	.431	.303	.953	.786	.459	.173	.044
			12	.572	.511	.378	.997	.984	.930	.791	.534
	40	0.5	4	.165	.094	.028	.000	.000	.000	.000	.000
			8	.210	.124	.043	.000	.000	.000	.000	.000
			12	.276	.174	.083	.006	.000	.000	.000	.000
		1	4	.312	.232	.109	.087	.001	.000	.000	.000
			8	.434	.345	.206	.763	.380	.104	.014	.000
			12	.461	.386	.255	.991	.910	.630	.304	.088
	50	0.5	4	.161	.093	.025	.000	.000	.000	.000	.000
			8	.194	.136	.048	.000	.000	.000	.000	.000
			12	.224	.151	.047	.001	.000	.000	.000	.000
		1	4	.272	.196	.093	.027	.000	.000	.000	.000
			8	.385	.288	.151	.514	.111	.004	.000	.000
			12	.462	.373	.247	.927	.622	.237	.022	.002

Table 6: DTF statistics for the 3PLM when the simulated parameter DIF are bidirectional and $N = 3000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.367	.259	.087	.997	.936	.749	.483	.257
			6	.661	.564	.324	1.000	.998	.969	.878	.674
			8	.830	.741	.544	1.000	1.000	.998	.986	.921
		1	4	.945	.920	.831	1.000	1.000	1.000	1.000	.999
			6	.997	.993	.978	1.000	1.000	1.000	1.000	1.000
			8	1.000	.999	.996	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.226	.132	.027	.998	.906	.687	.392	.170
			6	.471	.346	.135	1.000	.991	.901	.727	.474
			8	.676	.555	.304	1.000	1.000	.986	.927	.787
		1	4	.884	.816	.644	1.000	1.000	1.000	.999	.988
			6	.988	.977	.931	1.000	1.000	1.000	1.000	1.000
			8	1.000	1.000	.997	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.110	.047	.007	.999	.915	.664	.359	.160
			6	.320	.197	.044	.999	.987	.873	.657	.405
			8	.495	.364	.133	1.000	.999	.979	.900	.696
		1	4	.775	.666	.414	1.000	1.000	.998	.989	.937
			6	.963	.935	.828	1.000	1.000	1.000	1.000	1.000
			8	.993	.992	.971	1.000	1.000	1.000	1.000	1.000
d	20	0.5	4	.151	.074	.010	.864	.343	.075	.014	.004
			6	.359	.210	.046	.954	.466	.096	.017	.003
			8	.616	.452	.167	.965	.618	.168	.016	.004
		1	4	.601	.422	.148	.975	.627	.188	.031	.004
			6	.942	.855	.599	1.000	.908	.503	.133	.019
			8	.997	.985	.927	1.000	.993	.871	.505	.153
	25	0.5	4	.092	.038	.003	.936	.404	.108	.015	.003
			6	.168	.081	.017	.951	.468	.114	.021	.001
			8	.374	.230	.050	.969	.583	.144	.024	.001
		1	4	.345	.218	.054	.979	.588	.156	.029	.005
			6	.751	.595	.293	.997	.842	.356	.077	.007
			8	.955	.896	.670	1.000	.959	.685	.234	.032
	30	0.5	4	.037	.013	.002	.990	.570	.150	.031	.006
			6	.099	.039	.002	.991	.604	.180	.040	.007
			8	.187	.093	.011	.987	.648	.180	.028	.006
		1	4	.191	.088	.009	.993	.702	.204	.052	.005
			6	.507	.307	.072	.999	.829	.349	.078	.013
			8	.801	.657	.293	.999	.948	.569	.173	.035
a	20	0.5	4	.066	.030	.008	.992	.923	.730	.475	.270
			6	.103	.051	.014	1.000	.990	.954	.827	.621
			8	.100	.050	.013	1.000	.997	.993	.955	.876
		1	4	.196	.119	.039	1.000	1.000	.998	.996	.989
			6	.289	.205	.092	1.000	1.000	1.000	1.000	1.000
			8	.339	.259	.137	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.039	.014	.001	.994	.870	.638	.349	.148
			6	.057	.023	.002	.999	.978	.890	.693	.440
			8	.084	.039	.006	1.000	.997	.980	.898	.749
		1	4	.131	.061	.013	1.000	1.000	.998	.986	.952
			6	.179	.106	.031	1.000	1.000	1.000	1.000	.999
			8	.239	.160	.052	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.018	.005	.000	.999	.912	.620	.343	.149
			6	.035	.009	.000	1.000	.981	.879	.676	.392
			8	.044	.016	.000	1.000	.997	.971	.881	.659
		1	4	.079	.031	.004	1.000	1.000	.999	.986	.897
			6	.129	.060	.015	1.000	1.000	1.000	1.000	.999
			8	.139	.071	.021	1.000	1.000	1.000	1.000	1.000

Table 7: DTF statistics for the GRM when the simulated parameter DIF are unidirectional and $N = 500$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.170	.100	.030	.199	.038	.005	.001	.000
			6	.276	.185	.072	.355	.095	.017	.002	.000
			8	.355	.273	.133	.554	.204	.054	.012	.002
		1	4	.675	.603	.446	.941	.764	.479	.175	.043
			6	.851	.816	.722	.998	.965	.860	.662	.400
			8	.927	.904	.839	1.000	.996	.983	.923	.819
	25	0.5	4	.146	.089	.023	.146	.018	.001	.000	.000
			6	.195	.117	.034	.268	.047	.004	.001	.000
			8	.288	.195	.071	.405	.118	.019	.003	.000
		1	4	.559	.474	.315	.863	.533	.211	.032	.002
			6	.777	.708	.567	.979	.907	.678	.347	.108
			8	.901	.878	.793	.999	.990	.930	.750	.464
	30	0.5	4	.099	.049	.003	.108	.012	.000	.000	.000
			6	.152	.074	.021	.179	.028	.000	.000	.000
			8	.218	.138	.033	.283	.064	.005	.001	.001
		1	4	.478	.362	.181	.793	.374	.098	.014	.003
			6	.725	.631	.431	.957	.796	.476	.159	.026
			8	.856	.809	.685	.998	.954	.810	.489	.197
d	20	0.5	4	.048	.019	.003	.041	.003	.000	.000	.000
			6	.051	.023	.002	.040	.001	.000	.000	.000
			8	.055	.020	.002	.058	.003	.000	.000	.000
		1	4	.040	.020	.005	.106	.010	.000	.000	.000
			6	.063	.027	.004	.134	.021	.003	.000	.000
			8	.070	.034	.005	.187	.040	.003	.000	.000
	25	0.5	4	.045	.021	.004	.026	.001	.000	.000	.000
			6	.041	.022	.007	.034	.001	.000	.000	.000
			8	.051	.021	.007	.046	.004	.000	.000	.000
		1	4	.062	.025	.004	.075	.003	.000	.000	.000
			6	.049	.018	.001	.090	.007	.000	.000	.000
			8	.072	.033	.004	.115	.024	.001	.000	.000
	30	0.5	4	.047	.018	.005	.039	.002	.000	.000	.000
			6	.045	.017	.001	.045	.003	.000	.000	.000
			8	.044	.019	.000	.040	.002	.000	.000	.000
		1	4	.034	.016	.003	.056	.004	.000	.000	.000
			6	.052	.020	.000	.074	.006	.000	.000	.000
			8	.030	.017	.001	.110	.011	.002	.000	.000
a	20	0.5	4	.112	.062	.019	.201	.040	.003	.000	.000
			6	.154	.085	.028	.305	.068	.011	.002	.000
			8	.174	.114	.037	.477	.159	.036	.001	.000
		1	4	.325	.239	.116	.920	.719	.421	.141	.042
			6	.410	.307	.186	.981	.922	.776	.570	.327
			8	.436	.368	.229	1.000	.991	.963	.893	.739
	25	0.5	4	.104	.040	.008	.129	.019	.001	.000	.000
			6	.104	.054	.009	.192	.046	.001	.001	.000
			8	.167	.083	.022	.346	.071	.008	.001	.000
		1	4	.256	.162	.062	.822	.478	.181	.043	.003
			6	.317	.23	.107	.972	.852	.574	.287	.090
			8	.352	.267	.148	.995	.976	.892	.685	.421
	30	0.5	4	.089	.037	.002	.094	.009	.000	.000	.000
			6	.105	.050	.010	.168	.017	.001	.000	.000
			8	.103	.061	.021	.267	.046	.005	.000	.000
		1	4	.173	.095	.028	.697	.332	.081	.006	.000
			6	.251	.164	.076	.931	.687	.358	.115	.018
			8	.292	.210	.100	.990	.932	.707	.381	.126

Table 11: DTF statistics for the GRM when the simulated parameter DIF are bidirectional and $N = 1000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.916	.878	.801	.585	.169	.010	.001	.000
			6	.989	.978	.955	.985	.783	.362	.094	.014
			8	.995	.994	.985	1.000	.994	.912	.619	.251
		1	4	.997	.996	.990	1.000	1.000	.999	.989	.940
			6	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.870	.834	.690	.272	.026	.000	.000	.000
			6	.978	.960	.915	.859	.402	.066	.002	.000
			8	.991	.985	.967	.999	.893	.513	.124	.009
		1	4	.997	.997	.994	1.000	.999	.988	.895	.636
			6	1.000	1.000	.999	1.000	1.000	1.000	1.000	.999
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.806	.720	.561	.073	.004	.000	.000	.000
			6	.953	.928	.871	.567	.097	.004	.000	.000
			8	.988	.981	.956	.954	.560	.131	.014	.000
		1	4	.994	.992	.984	1.000	.974	.845	.516	.155
			6	1.000	1.000	.999	1.000	1.000	.999	.995	.962
			8	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
d	20	0.5	4	.874	.782	.546	.000	.000	.000	.000	.000
			6	.995	.991	.937	.000	.000	.000	.000	.000
			8	.999	.999	.999	.010	.000	.000	.000	.000
		1	4	1.000	1.000	1.000	.009	.000	.000	.000	.000
			6	1.000	1.000	1.000	.593	.019	.000	.000	.000
			8	1.000	1.000	1.000	.998	.651	.041	.000	.000
	25	0.5	4	.738	.606	.351	.000	.000	.000	.000	.000
			6	.956	.917	.768	.000	.000	.000	.000	.000
			8	.998	.993	.969	.000	.000	.000	.000	.000
		1	4	.997	.993	.973	.002	.000	.000	.000	.000
			6	1.000	1.000	1.000	.075	.000	.000	.000	.000
			8	1.000	1.000	1.000	.759	.038	.000	.000	.000
	30	0.5	4	.566	.422	.186	.000	.000	.000	.000	.000
			6	.898	.836	.615	.000	.000	.000	.000	.000
			8	.988	.971	.900	.000	.000	.000	.000	.000
		1	4	.978	.959	.881	.000	.000	.000	.000	.000
			6	1.000	1.000	1.000	.005	.000	.000	.000	.000
			8	1.000	1.000	1.000	.243	.002	.000	.000	.000
a	20	0.5	4	.358	.274	.151	.478	.105	.010	.000	.000
			6	.445	.361	.216	.943	.671	.240	.053	.007
			8	.465	.368	.236	.999	.972	.761	.378	.100
		1	4	.655	.594	.475	1.000	1.000	.992	.971	.882
			6	.680	.632	.548	1.000	1.000	1.000	1.000	1.000
			8	.731	.687	.589	1.000	1.000	1.000	1.000	1.000
	25	0.5	4	.287	.212	.096	.174	.011	.000	.000	.000
			6	.345	.259	.150	.716	.233	.017	.000	.000
			8	.411	.317	.208	.988	.771	.315	.048	.002
		1	4	.590	.522	.38	1.000	.995	.938	.752	.449
			6	.649	.580	.468	1.000	1.000	1.000	.999	.981
			8	.697	.642	.534	1.000	1.000	1.000	1.000	1.000
	30	0.5	4	.265	.177	.071	.044	.000	.000	.000	.000
			6	.295	.211	.101	.445	.050	.001	.000	.000
			8	.334	.249	.126	.871	.418	.045	.001	.000
		1	4	.529	.455	.319	.997	.959	.773	.401	.109
			6	.585	.521	.384	1.000	1.000	.999	.989	.911
			8	.639	.565	.461	1.000	1.000	1.000	1.000	1.000

Table 9: DTF statistics for the GRM when the simulated parameter DIF are unidirectional and $N = 3000$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.070	.025	.002	.928	.497	.209	.079	.023
			6	.131	.055	.013	.968	.628	.310	.136	.041
			8	.185	.110	.028	.975	.725	.443	.228	.083
		1	4	.422	.312	.124	.997	.955	.823	.606	.380
			6	.678	.572	.391	1.000	.998	.969	.917	.786
			8	.826	.757	.594	1.000	1.000	.997	.985	.953
	25	0.5	4	.052	.018	.002	.961	.532	.219	.074	.015
			6	.057	.021	.003	.971	.632	.313	.120	.033
			8	.087	.042	.010	.978	.715	.387	.159	.034
		1	4	.258	.146	.051	.999	.939	.770	.494	.232
			6	.512	.389	.203	1.000	.990	.935	.810	.583
			8	.703	.588	.368	1.000	1.000	.990	.960	.854
	30	0.5	4	.030	.014	.003	.994	.661	.245	.065	.015
			6	.023	.007	.000	.993	.721	.333	.102	.029
			8	.047	.022	.001	.997	.798	.436	.181	.060
		1	4	.150	.068	.010	1.000	.947	.724	.427	.185
			6	.331	.217	.065	1.000	.990	.918	.761	.490
			8	.537	.393	.176	1.000	.997	.978	.918	.764
d	20	0.5	4	.027	.004	.001	.845	.313	.082	.017	.002
			6	.021	.009	.000	.861	.333	.104	.016	.004
			8	.025	.008	.000	.858	.341	.083	.021	.006
		1	4	.025	.007	.000	.879	.377	.108	.029	.004
			6	.026	.008	.000	.880	.403	.145	.048	.006
			8	.039	.012	.000	.913	.506	.211	.070	.022
	25	0.5	4	.018	.008	.000	.935	.412	.100	.022	.001
			6	.023	.005	.000	.921	.393	.099	.021	.003
			8	.027	.006	.000	.926	.420	.097	.017	.003
		1	4	.021	.007	.001	.928	.413	.138	.031	.006
			6	.021	.009	.002	.947	.513	.166	.039	.010
			8	.021	.006	.000	.957	.568	.218	.070	.012
	30	0.5	4	.011	.002	.000	.987	.572	.167	.038	.006
			6	.009	.002	.000	.985	.589	.160	.028	.003
			8	.015	.003	.000	.988	.589	.182	.041	.011
		1	4	.010	.004	.000	.993	.617	.190	.051	.007
			6	.009	.002	.000	.991	.646	.241	.066	.015
			8	.013	.003	.000	.991	.653	.246	.072	.017
a	20	0.5	4	.041	.017	.001	.920	.492	.185	.065	.014
			6	.061	.029	.003	.941	.606	.305	.117	.034
			8	.084	.031	.009	.954	.660	.370	.190	.072
		1	4	.152	.089	.025	.993	.928	.763	.552	.296
			6	.182	.118	.046	1.000	.990	.959	.872	.691
			8	.241	.183	.086	1.000	1.000	.992	.971	.912
	25	0.5	4	.028	.008	.001	.958	.484	.168	.048	.014
			6	.038	.011	.001	.971	.635	.271	.088	.020
			8	.049	.021	.001	.981	.673	.329	.128	.038
		1	4	.082	.035	.008	.996	.917	.699	.421	.194
			6	.148	.070	.015	1.000	.989	.925	.765	.546
			8	.155	.089	.026	1.000	.997	.985	.906	.763
	30	0.5	4	.013	.003	.000	.994	.659	.232	.081	.017
			6	.019	.004	.000	.996	.731	.316	.113	.031
			8	.031	.010	.000	.994	.754	.347	.123	.032
		1	4	.047	.017	.002	1.000	.927	.669	.359	.148
			6	.061	.031	.003	1.000	.985	.876	.663	.382
			8	.097	.046	.011	1.000	.998	.979	.878	.688

Table 10: DTF statistics for the GRM when the simulated parameter DIF are bidirectional and $N = 500$.

				$sDTF$			$uDTF_{\%}(\alpha = .95)$				
DIF Parameters	**Test Size**	**DIF Size**	**# DIF Items**	$p < .10$	$p < .05$	$p < .01$	> 2	> 2.5	> 3	> 3.5	> 4
a & d	20	0.5	4	.404	.320	.186	.004	.000	.000	.000	.000
			6	.552	.473	.337	.035	.002	.000	.000	.000
			8	.636	.581	.426	.102	.006	.000	.000	.000
		1	4	.870	.840	.776	.764	.417	.119	.012	.000
			6	.943	.931	.903	.972	.884	.639	.348	.108
			8	.974	.970	.962	.999	.988	.932	.796	.591
	25	0.5	4	.321	.237	.124	.000	.000	.000	.000	.000
			6	.488	.400	.257	.002	.000	.000	.000	.000
			8	.576	.505	.359	.021	.001	.000	.000	.000
		1	4	.842	.797	.700	.495	.113	.008	.000	.000
			6	.918	.896	.844	.892	.618	.255	.056	.003
			8	.960	.943	.925	.996	.932	.749	.403	.135
	30	0.5	4	.275	.182	.086	.000	.000	.000	.000	.000
			6	.367	.298	.159	.002	.000	.000	.000	.000
			8	.497	.408	.258	.000	.000	.000	.000	.000
		1	4	.789	.741	.636	.245	.020	.000	.000	.000
			6	.913	.881	.835	.768	.350	.065	.000	.000
			8	.962	.947	.911	.966	.771	.441	.114	.014
d	20	0.5	4	.076	.031	.007	.000	.000	.000	.000	.000
			6	.075	.037	.009	.000	.000	.000	.000	.000
			8	.088	.033	.008	.000	.000	.000	.000	.000
		1	4	.095	.058	.010	.000	.000	.000	.000	.000
			6	.118	.062	.014	.000	.000	.000	.000	.000
			8	.127	.075	.023	.004	.000	.000	.000	.000
	25	0.5	4	.070	.038	.008	.000	.000	.000	.000	.000
			6	.064	.025	.004	.000	.000	.000	.000	.000
			8	.087	.036	.006	.000	.000	.000	.000	.000
		1	4	.095	.040	.012	.000	.000	.000	.000	.000
			6	.092	.044	.007	.000	.000	.000	.000	.000
			8	.114	.067	.019	.003	.000	.000	.000	.000
	30	0.5	4	.065	.026	.004	.000	.000	.000	.000	.000
			6	.074	.040	.004	.000	.000	.000	.000	.000
			8	.073	.032	.003	.000	.000	.000	.000	.000
		1	4	.096	.056	.010	.000	.000	.000	.000	.000
			6	.083	.038	.008	.000	.000	.000	.000	.000
			8	.105	.040	.006	.000	.000	.000	.000	.000
a	20	0.5	4	.291	.221	.092	.001	.000	.000	.000	.000
			6	.392	.299	.159	.012	.000	.000	.000	.000
			8	.413	.328	.188	.067	.003	.000	.000	.000
		1	4	.576	.507	.382	.674	.339	.099	.017	.001
			6	.628	.570	.457	.952	.822	.576	.251	.074
			8	.670	.610	.497	.993	.968	.878	.706	.446
	25	0.5	4	.226	.152	.060	.000	.000	.000	.000	.000
			6	.286	.201	.096	.003	.000	.000	.000	.000
			8	.357	.261	.132	.013	.000	.000	.000	.000
		1	4	.490	.407	.265	.416	.094	.005	.000	.000
			6	.582	.517	.380	.839	.537	.212	.038	.002
			8	.601	.546	.439	.975	.871	.628	.307	.104
	30	0.5	4	.195	.114	.038	.000	.000	.000	.000	.000
			6	.252	.175	.078	.000	.000	.000	.000	.000
			8	.271	.200	.093	.001	.000	.000	.000	.000
		1	4	.421	.313	.169	.191	.014	.000	.000	.000
			6	.483	.412	.287	.676	.276	.048	.004	.000
			8	.529	.459	.313	.933	.704	.317	.067	.006

Table 12: DTF statistics for the GRM when the simulated parameter DIF are bidirectional and $N = 3000$.