Table 1: Statistical tests results for EUR case study

CN	AVMc vs. AVM		AVM vs. RS		AVMc vs. RS	
	p-value	OR/A	p-value	OR/A	p-value	OR/A
1	2E-51	519.13	4.2E-50	39.8387	2.7E-164	20681.47
2	**0.37**	**0.4812**	1.4E-6	9.2357	1.8E-09	65.302
3	0.00089	23.8739	1.9E-6	4.483	9.5E-15	107.0274
4	6.2E-73	762.021	1.1E-77	841.972	1.1E-239	641601
5	**4.4E-5**	**0.4201**	2.1E-6	11.2793	2E-8	56.6796
6	**0.196**	**0.4743**	5.7E-7	12.1957	4.6E-09	61.2846
7	2.4E-91	1105.237	5.5E-57	115.5222	8.6E-235	127679.4
8	3E-29	226.8432	7.8E-15	3.2928	5.3E-72	746.9566
9	2E-26	11.1987	**1E-9**	**0.3754**	8.2E-31	12.9782
10	7.5E-124	1604.2	3.6E-68	624.611	7.4E-300	1002001
11	0.000013	36.2306	3.9E-19	7.5478	2.1E-35	273.4625
12	0.0038	19.3479	5.7E-11	7.1057	2.6E-19	137.4813
13	0	67717.97	6.9E-6	37.8511	0	2563201
14	1.8E-45	340.5609	4.9E-46	4.8683	1.3E-153	1657.961
15	3.3E-106	1094.075	1.5E-119	1318.375	0	1442401
16	3.9E-20	141.8856	2.9E-247	398.5118	0	56543.08
17	1.1E-121	1242.610	2.8E-135	224.6878	0	279199.3
18	2E-18	127.5619	1.1E-184	46.6876	9.2E-263	5955.562
19	1.4E-142	23.0115	2.4E-47	363.7817	1.2E-290	8371.149
20	1.1E-31	4.3543	8.9E-111	24.2797	1E-232	105.7199
21	0	10.6608	2.2E-15	2.1624	0	23.053
22	2.3E-46	2.076	5.1E-19	1.5555	3.2E-118	3.2292
23	2.7E-184	15.7691	1.1E-78	611.8857	0	9648.883
24	1.8E-28	2.9279	2.1E-139	12.4816	3.6E-270	36.5452
25	**0.7123**	519.13	1.1E-21	39.8387	1.6E-20	20681.47
26	**1**	**0.5**	**1**	**0.5**	**1**	**0.5**
27	3E-59	475.0287	4E-9	1.979086	1.9E-100	940.1228
28	1.4E-7	2.169960	4.2E-36	33.13843	1E-66	71.90909
29	**1**	**0.5**	**1**	**0.5**	**1**	**0.5**
30	**5.2E-95**	**0.181274**	1.6E-285	1669.450	1.6E-285	1669.450
31	3.4E-49	10.35063	2.8E-33	5.638340	3.4E-145	58.36038
32	1.8E-28	2.92791	1.7E-63	4.508542	1.9E-164	13.20064
33	0.00033	2.267345	3.5E-299	474.6199	0	1076.127
34	**1**	**0.5**	0	1413609	0	1943187

* Bold text values indicate the results obtained based on the iterations count and when a statistically significant difference is not observed.

Table 2: Statistical tests results for SM case study

CN	AVMc vs. AVM		AVM vs. RS		AVMc vs. RS	
	p-value	OR/A	p-value	OR/A	p-value	OR/A
1	**0.0394**	**0.4596**	**0.1162**	**0.5305**	**0.0772**	**0.4655**
2	**3.4E-79**	**0.119**	1.1E-239	641601	1.1E-239	641601
3	**0.000012**	**0.5752**	**0.2191**	**0.5204**	**4.1E-11**	**0.6131**
4	**0.000011**	**0.4245**	7.4E-300	1002001	7.4E-300	1002001
5	**4.7E-130**	**0.0064**	1.1E-239	641601	1.1E-239	641601
6	**1.7E-16**	**0.6378**	**0.281**	**0.5116**	**5.4E-19**	**0.6456**
7	**5.3E-25**	**0.3117**	1.1E-239	641601	1.1E-239	641601
8	**2.5E-133**	**0**	1.1E-239	641601	1.1E-239	641601
9	**1.6E-102**	**0.0626**	1.1E-239	641601	1.1E-239	641601
10	**2E-98**	**0.9253**	1.1E-239	641601	1.6E-227	577521

* Bold text values indicate the results obtained based on the iterations count and when a statistically significant difference is not observed.

Table 3: Statistical tests results for RnL case study

CN	AVMc vs. AVM		AVM vs. RS		AVMc vs. RS	
	p-value	OR/A	p-value	OR/A	p-value	OR/A
1	**5.1E-7**	**0.6105**	**4.5E-29**	**0.2537**	**6.4E-14**	**0.3264**
2	**1.4E-10**	**0.65**	7.5E-35	301.2494	7.5E-35	301.2494
3	**2.1E-19**	**0.7109**	1.9E-34	296.7717	1.9E-34	296.7717
4	**1.3E-34**	**0.7418**	1.7E-211	3110.154	8.1E-208	3964.432
5	**0.7631**	**0.4929**	1.5E-179	361201	1.5E-179	361201
6	**1.8E-32**	**0.6932**	1.5E-179	361201	1.5E-179	361201
7	**1.6E-29**	**0.7296**	2.2E-132	2395.03	2.2E-132	2395.03
8	**8.2E-32**	**0.7387**	1.1E-239	641601	1.1E-239	641601
9	**0.8186**	**0.4946**	1.5E-179	361201	1.5E-179	361201
10	**6.8E-23**	**0.7305**	1.5E-179	361201	1.5E-179	361201

* Bold text values indicate the results obtained based on the iterations count and when a statistically significant difference is not observed.

Table 4: Time analysis results for GCS case study

CN	AVMc vs. AVMo	
	p-value	A12
1	0.242095165656469	0.517805555555556
2	2.04407660542855e-05	0.642044444444445
3	0.207962787662303	0.545727777777778
4	0.0269798530399067	0.516405555555556
5	0.000226505115941915	0.4757
6	2.20817643480401e-05	0.402783333333333
7	4.65396798161641e-34	0.249668
8	4.30994691508143e-06	0.407761111111111
9	1.90061040918768e-14	0.2826
10	4.44927396310504e-14	0.351961111111111
11	0.506086639131583	0.461303125
12	1.54675611449862e-19	0.590061111111111
13	0.453179218345633	0.472883333333333
14	7.57805567790709e-55	0.182188
15	1.22614767038829e-30	0.250615625
16	3.67406555487535e-50	0.182626
17	2.70242230607853e-40	0.751354
18	0.767350328493715	0.394475
19	1.2761687162404e-83	0.91397
20	2.5801134441283e-32	0.6134125
21	2.33920599296375e-94	0.0775138888888889
22	3.38376161331536e-05	0.423777777777778
23	3.84746923710645e-06	0.679344444444444
24	4.5443449640494e-07	0.598827777777778
25	8.53304338876996e-15	0.724916666666667
26	2.18915090136179e-08	0.639761111111111
27	3.60418273280431e-47	0.17873125
28	3.850380020366e-33	0.283275
29	2.15517083440303e-20	0.396041666666667
30	2.01110380440486e-20	0.316698

Table 5: Time analysis results for EUR case study

CN	AVMc vs. AVMo	
	p-value	A12
1	0.0211639776797247	0.538094444444444
2	4.1026497866781e-31	0.781366666666667
3	6.48176941894066e-17	0.686711111111111
4	0.647665352429637	0.500740625
5	8.74202081331382e-29	0.72604375
6	6.80938712165824e-39	0.7893375
7	0.315397770121235	0.409859375
8	6.26880776188357e-05	0.56513125
9	0.035798647213272	0.486609375
10	0.163130718568261	0.404742
11	9.56545518877792e-44	0.775986
12	5.50948236706432e-39	0.743552
13	5.64900806015247e-37	0.13759921875
14	2.93793030931245e-20	0.60478046875
15	0.000308834294831892	0.443615277777778
16	1.37637869258542e-13	0.647351388888889
17	9.48069871899825e-07	0.421483673469388
18	1.64074833582333e-31	0.68679387755102
19	5.91944980690168e-23	0.246613265306122
20	0.958927949088525	0.504222448979592
21	0.000296702630664139	0.589180945821855
22	2.22468328140096e-44	0.618003122130395
23	5.9006571746279e-49	0.26307520661157
24	0.000156812376891785	0.507763636363636
25	6.08444058639736e-12	0.633830612244898
26	8.5099655225299e-51	0.131333333333333
27	0.931807581023853	0.462858163265306
28	3.09834581961454e-18	0.76701875
29	6.50537207458085e-44	0.277007142857143
30	1.76428355364497e-12	0.703748979591837
31	1.3093050087817e-47	0.790906
32	0.000156812376891785	0.507763636363636
33	1.25936240947292e-24	0.680074489795918
34	3.44922882267569e-79	0.096362040186445

Table 6: Time analysis results for RnL case study

CN	AVMc vs. AVMo	
	p-value	A12
1	1.39264268867485e-18	0.67575
2	0.949891575971729	0.491983333333333
3	0.000293899625819954	0.399877777777778
4	0.00546614388130036	0.559471875
5	2.00921045122681e-20	0.758294444444444
6	7.07728865583596e-08	0.693633333333333
7	0.51246597541752	0.3604875
8	0.00044281468490699	0.423121875
9	0.000440501950623558	0.620444444444444
10	8.92135277617721e-07	0.3799

Table 7: Time analysis results for SM case study

CN	AVMc vs. AVMo	
	p-value	A12
1	0.0558479539551689	0.381488888888889
2	1.0416308798266e-53	0.847175
3	2.23386130082787e-05	0.58185
4	1.66575946562658e-07	0.419806
5	2.90895258804192e-64	0.946384375
6	3.03165385049612e-06	0.451772222222222
7	0.861556081458092	0.497021875
8	0.0631635912917018	0.502028125
9	1.2085114096779e-62	0.88803125
10	1.58735719138689e-47	0.105208333333333

Table 8: Total time taken (in milliseconds) by AVMo and AVMc for GCS case study

CN	AVMo	AVMc (inc. seed time)	Seed time for AVMc
1	46.603	57.307	3.05
2	157.883	134.616	6.41
3	80.254	93.527	3.19
4	41.067	53.142	1.98
5	29.525	59.252	1.65
6	203.067	282.839	8.49
7	751.76	639.418	17.31
8	201.519	295.446	2.98
9	247.74	244.54	3.49
10	85.94	105.721	2.66
11	1214.15	1116.161	14.35
12	5751.348	3197.374	2.18
13	409.532	414.909	7.18
14	4693.912	4302.487	49.15
15	2110.662	2002.306	22.54
16	2077.279	2653.039	20.47
17	40681.867	17219.057	45.61
18	42276.26	16210.637	52.66
19	6259.721	948.294	27.97
20	25756.38	13645.966	16.38
21	2905.383	2986.41	8.47
22	356.264	491.449	5.47
23	251.24	257.827	26.83
24	994.12	976.712	22.7
25	726.198	684.624	16.5
26	399.925	499.93	11.22
27	760.645	948.453	7.34
28	267.791	803.013	27.86
29	3993.808	3608.066	31.69
30	1760.544	2752.641	24.48

Table 9: Total time taken (in milliseconds) by AVMo and AVMc for EUR case study

CN	AVMo	AVMc (inc. seed time)	Seed time for AVMc
1	622.96	26.546	5.78
2	108.969	28.003	2.77
3	2198.556	257.868	8.70
4	770.98	43.744	3.94
5	115.952	44.008	4.19
6	1717.617	366.94	11.27
7	2688.443	98.461	6.10
8	1748.609	43.863	2.91
9	18378.365	3245.554	1.58
10	6586.966	299.23	6.69
11	1623.918	121.259	14.76
12	10716.56	1940.276	17.13
13	8990.694	952.113	9.92
14	5015.167	253.041	4.03
15	10567.098	292.665	3.95
16	2979.524	127.89	2.81
17	11298.865	290.961	9.94
18	2843.337	128.559	3.48
19	1463.78	1316.461	2.95
20	3405.946	3217.385	16.68
21	1263.72	1362.921	11.97
22	8501.279	1609.72	16.43
23	15734.201	8512.05	18.63
24	22382.064	1142.153	6.75
25	8022.745	4038.881	24.02
26	214.089	143.234	4.66
27	42549.385	41055.987	27..98
28	100838.249	79968.736	28.13
29	3202.302	15437.926	19.35
30	122467.941	120040.499	38.12
31	204609.013	83336.75	32.99
32	22382.064	1142.153	6.23
33	79268.666	32672.927	25.57
34	755.719	1187.952	15.46

Table 10: Total time taken (in milliseconds) by AVMo and AVMc for RnL case study

CN	AVMo	AVMc (inc. seed time)	Seed time for AVMc
1	1259.242	322.613	3.42
2	452.444	434.811	4.37
3	173.173	132.044	1.35
4	8705.456	7094.592	9.65
5	607.999	250.69	3.02
6	268.78	198.783	2.14
7	9388.842	8573.249	20.02
8	861.53	835.903	11.17
9	361.688	306.798	2.04
10	236.736	230.686	1.89

Table 11: Total time taken (in milliseconds) by AVMo and AVMc for SM case study

CN	AVMo	AVMc (inc. seed time)	Seed time for AVMc
1	1579.76	1054.326	11.54
2	106831.818	24367.141	34.88
3	16857.24	13459.406	23.16
4	3539.63	2145.803	15.54
5	22176.187	3115.784	15.06
6	1365.426	890.887	9.98
7	3979.318	3297.637	13.73
8	4191.864	4037.774	18.37
9	8422.947	2453.477	12.51
10	767.544	361.106	2.38