

Data of exploration over parameters in the ABM model (2nd part)

Hector Castillo

Table of contents

Firms Y	2
Firms R	3
Firms K	4
Firms A	5
Firms L	6
Firms PROFITS	7
Firms I	8
Firms GAMMA	9
Firms U	10
Firms DK	11
Firms OL	12
Firms GAP_OF_L	13
Firms DL	14
Firms FAIL	15
Bank L	16
Bank A	17
Bank D	18
Bank PROFITS	19
Bank BD	20

Firms Y

Table 1: Output of firms (logarithm)

β η	0.02	0.03	0.04	0.05
0.0001	102.979	104.02	94.104	95.3331
0.1	68.3978	64.1478	60.7958	57.6331
0.3	19.5709	18.4247	18.2815	17.6971
0.5	6.49638	6.46678	6.45202	6.43295
0.8	5.45062	5.44975	5.44928	5.44863

Table 2: Standard deviation of output of firms (logarithm)

β η	0.02	0.03	0.04	0.05
0.0001	40.9544	43.7462	33.5558	38.6107
0.1	24.1054	20.8398	20.2247	18.3748
0.3	5.21814	4.64948	4.75282	4.09135
0.5	0.139143	0.14235	0.144649	0.149652
0.8	0.0602912	0.0650957	0.0662822	0.0706615

Firms R

Table 3: Interest rate of firms

β η	0.02	0.03	0.04	0.05
0.0001	-5.21883	-4.80965	-4.51048	-4.27472
0.1	-5.09945	-4.68049	-4.3791	-4.1188
0.3	-4.35707	-3.91621	-3.585	-3.3287
0.5	-4.10455	-3.66703	-3.3488	-3.09417
0.8	-3.76451	-3.29736	-2.96173	-2.68173

Table 4: Standard deviation of interest rate

β η	0.02	0.03	0.04	0.05
0.0001	0.675279	0.658838	0.666287	0.660868
0.1	0.673893	0.694355	0.689999	0.7107
0.3	0.623153	0.601589	0.613529	0.598305
0.5	0.588218	0.594192	0.573822	0.584482
0.8	0.5329	0.537767	0.508042	0.537576

Firms K

β η	0.02	0.03	0.04	0.05
0.0001	102.797	103.838	93.9217	95.1507
0.1	68.2155	63.9655	60.6134	57.4507
0.3	19.3886	18.2424	18.0992	17.5147
0.5	6.31406	6.28446	6.2697	6.25063
0.8	5.2683	5.26743	5.26696	5.26631

generate_markdown('FirmsK_std')

Firms A

β η	0.02	0.03	0.04	0.05
0.0001	3.73355e+97	1.13606e+97	4.09199e+73	1.53105e+95
0.1	1.35598e+57	1.07054e+49	1.33744e+52	1.00872e+43
0.3	4.00592e+14	2.59019e+14	3.75754e+16	1.43442e+11
0.5	466.08	450.231	441.531	431.474
0.8	120.284	116.242	111.343	106.854

β η	0.02	0.03	0.04	0.05
0.0001	1.44606e+99	3.91244e+98	1.39625e+75	4.30512e+96
0.1	5.8962e+58	3.78384e+50	3.71239e+53	2.08086e+44
0.3	7.51877e+15	5.71139e+15	8.72817e+17	3.19764e+12
0.5	78.1982	77.7228	76.5566	82.6577
0.8	15.4561	16.0891	16.2567	17.132

Firms L

β η	0.02	0.03	0.04	0.05
0.0001	75.2931	74.3099	69.2314	67.9323
0.1	49.6521	48.2232	45.0375	42.8239
0.3	14.0457	13.2842	13.1286	12.7933
0.5	4.48892	4.48883	4.49818	4.5042
0.8	4.28282	4.33631	4.39815	4.45034

β η	0.02	0.03	0.04	0.05
0.0001	33.1814	34.7368	28.9505	29.9849
0.1	20.4215	18.9354	17.5294	16.3626
0.3	4.8244	4.26394	4.35673	4.05536
0.5	0.235271	0.227271	0.229434	0.225229
0.8	0.206604	0.197315	0.187809	0.187348

Firms PROFITS

η	β	0.02	0.03	0.04	0.05
0.0001		1.04837e+97	-1.34352e+94	8.32502e+72	-2.3712e+93
0.1		-9.1759e+55	-8.49381e+46	-4.24825e+50	-9.86548e+40
0.3		-1.94112e+12	-3.67803e+12	7.06267e+14	-1.76012e+09
0.5		-12.8197	-13.9877	-15.8766	-21.4759
0.8		-25.7492	-30.3074	-32.0016	-35.583

η	β	0.02	0.03	0.04	0.05
0.0001		8.52323e+98	1.98198e+98	5.80244e+74	3.56023e+96
0.1		3.63918e+58	1.70527e+50	2.46037e+53	1.0423e+44
0.3		4.23891e+15	2.96067e+15	4.29694e+17	1.82433e+12
0.5		45.8718	38.9783	62.9509	408.068
0.8		18.7087	147.435	59.2091	81.8638

Firms I

η	β	0.02	0.03	0.04	0.05
0.0001		-8.58854e+96	-5.10575e+96	-1.37565e+73	-5.60916e+94
0.1		-5.39092e+56	-3.71813e+48	-5.89884e+51	-3.94598e+42
0.3		-1.97127e+14	-9.01837e+13	-1.3193e+16	-7.58433e+10
0.5		-242.593	-240.501	-241.378	-241.371
0.8		-143.081	-148.106	-154.089	-159.672

η	β	0.02	0.03	0.04	0.05
0.0001		2.8956e+98	1.63911e+98	5.33548e+74	1.54577e+96
0.1		2.32769e+58	1.33209e+50	1.46301e+53	7.88699e+43
0.3		4.03823e+15	2.11389e+15	3.19732e+17	1.72044e+12
0.5		32.4912	31.8477	32.0774	34.2717
0.8		22.5012	22.5839	22.824	23.3714

Firms GAMMA

β η	0.02	0.03	0.04	0.05
0.0001	0.709517	0.713959	0.716969	0.722634
0.1	0.709669	0.724523	0.719094	0.726648
0.3	0.721365	0.725348	0.737371	0.757787
0.5	0.721371	0.730593	0.741409	0.775463
0.8	0.728707	0.755675	0.756751	0.777335

β η	0.02	0.03	0.04	0.05
0.0001	0.0646458	0.0894462	0.0904501	0.158787
0.1	0.0434401	0.848912	0.0920972	0.169429
0.3	0.180063	0.0991243	0.176336	1.51265
0.5	0.132903	0.145929	0.262034	2.02316
0.8	0.221078	1.24191	0.575324	0.912458

Firms U

β η	0.02	0.03	0.04	0.05
0.0001	0.999388	1.00051	1	0.99993
0.1	1.00021	1.00128	1.00047	0.999481
0.3	1.00034	1.0006	0.99931	1.00062
0.5	1.00036	0.999415	1.00016	1.00048
0.8	0.999307	1.00068	1.00005	1.00032

β η	0.02	0.03	0.04	0.05
0.0001	0.0578837	0.0581447	0.0579162	0.0586589
0.1	0.0583819	0.0580735	0.0568634	0.0571837
0.3	0.0583422	0.0578328	0.0578476	0.0579447
0.5	0.0583177	0.0576623	0.0578605	0.058113
0.8	0.0583122	0.0582915	0.0571095	0.057581

Firms DK

β η	0.02	0.03	0.04	0.05
0.0001	1.91561e+97	8.05991e+96	2.28748e+73	1.07694e+95
0.1	9.67787e+56	7.61962e+48	9.38855e+51	7.15273e+42
0.3	2.82811e+14	1.8419e+14	2.61315e+16	9.98899e+10
0.5	332.492	320.821	314.315	306.736
0.8	91.6034	90.0481	88.2635	86.7328

β η	0.02	0.03	0.04	0.05
0.0001	7.11595e+98	2.78431e+98	7.88913e+74	3.03737e+96
0.1	4.2111e+58	2.69733e+50	2.63325e+53	1.48261e+44
0.3	5.31787e+15	4.0591e+15	6.16511e+17	2.24883e+12
0.5	55.3542	54.5645	53.7019	57.7708
0.8	6.8419	6.86205	6.70776	6.8196

Firms OL

η	β	0.02	0.03	0.04	0.05
0.0001		9.6643e+96	1.71561e+98	4.0726e+73	2.74772e+95
0.1		1.30613e+58	2.84287e+50	1.41433e+53	2.46072e+44
0.3		9.74321e+15	6.73134e+15	2.36045e+16	3.94362e+12
0.5		12242.7	11923.7	11961.2	11803.9
0.8		3574.97	3660.86	3448.93	3380.65

η	β	0.02	0.03	0.04	0.05
0.0001		2.73733e+98	1.06578e+99	3.67163e+74	4.76428e+96
0.1		1.0685e+59	1.22848e+51	1.106e+54	8.35274e+44
0.3		4.05632e+16	2.83098e+16	4.69709e+17	1.40376e+13
0.5		7159.8	6966.9	6935.43	6924.19
0.8		2073.73	2277.57	2029.1	2002.56

Firms GAP_OF_L

β η	0.02	0.03	0.04	0.05
0.0001	1.42362e+23	1.69158e+22	3.9556e+17	3.306e+28
0.1	3.59788e+14	5.26395e+12	3.29033e+22	4.28532e+11
0.3	0.00164323	0.00283157	0.0181951	0.117091
0.5	0	5.41536e-05	0	8.89559e-05
0.8	0	9.66139e-05	0.000171434	0.000370614

β η	0.02	0.03	0.04	0.05
0.0001	1.41493e+25	1.69158e+24	3.9556e+19	3.306e+30
0.1	3.59787e+16	5.26395e+14	3.29033e+24	3.53303e+13
0.3	0.138405	0.194222	1.70583	11.6297
0.5	0	0.00462037	0	0.00593276
0.8	0	0.00814973	0.00908796	0.015228

Firms DL

η	β	0.02	0.03	0.04	0.05
0.0001		-1.09382e+95	-3.52428e+94	-1.66226e+71	-5.83758e+92
0.1		-4.29561e+54	-3.93789e+46	-4.29955e+49	-3.35693e+40
0.3		-1.19918e+12	-8.39871e+11	-1.34167e+14	-4.48383e+08
0.5		-1.49915	-1.46905	-1.46284	-1.4475
0.8		-0.530049	-0.529609	-0.527979	-0.5271

η	β	0.02	0.03	0.04	0.05
0.0001		6.09083e+96	2.50553e+96	8.11129e+72	3.95469e+94
0.1		4.19929e+56	2.00042e+48	2.88996e+51	1.27805e+42
0.3		5.31721e+13	3.49425e+13	5.26791e+15	2.29615e+10
0.5		0.458098	0.439805	0.434849	0.466253
0.8		0.0872577	0.0866551	0.0854169	0.0847718

Firms FAIL

β η	0.02	0.03	0.04	0.05
0.0001	1.4765	1.5374	1.5763	1.6531
0.1	1.7919	1.8615	1.9437	2.0292
0.3	4.3263	4.555	4.8678	5.0905
0.5	6.2082	6.6016	7.0591	7.4617
0.8	12.9507	13.9649	15.2491	16.4174

β η	0.02	0.03	0.04	0.05
0.0001	1.21934	1.23659	1.25001	1.26883
0.1	1.32203	1.36415	1.39797	1.40753
0.3	2.21719	2.29118	2.30049	2.30388
0.5	2.66382	2.72518	2.8051	2.8553
0.8	4.20172	4.31186	4.41905	4.61731

Bank L

β η	0.02	0.03	0.04	0.05
0.0001	1.12799e+99	1.72244e+100	4.33291e+75	2.8544e+97
0.1	1.31517e+60	2.84847e+52	1.42337e+55	2.4666e+46
0.3	9.76745e+17	6.74408e+17	2.55571e+18	3.95284e+14
0.5	1.22683e+06	1.19487e+06	1.19861e+06	1.18292e+06
0.8	358235	366845	345611	338755

β η	0.02	0.03	0.04	0.05
0.0001	3.17806e+100	1.06786e+101	4.46188e+76	4.88068e+98
0.1	1.07218e+61	1.22963e+53	1.10957e+56	8.35963e+46
0.3	4.06154e+18	2.83352e+18	5.08587e+19	1.40524e+15
0.5	716030	696737	693563	692630
0.8	207376	227789	202923	200244

Bank A

β η	0.02	0.03	0.04	0.05
0.0001	122.721	125.878	113.204	114.957
0.1	86.3606	80.4542	79.3813	74.1509
0.3	29.1119	26.5681	25.6595	26.2879
0.5	11.1827	11.158	11.162	11.1507
0.8	9.96406	9.96689	9.92073	9.89868

β η	0.02	0.03	0.04	0.05
0.0001	50.7046	55.4454	42.6572	47.643
0.1	32.5727	27.5772	27.3449	24.2789
0.3	7.85576	6.64432	5.82103	5.46841
0.5	0.996042	0.992708	0.994343	0.985841
0.8	0.956753	0.980128	0.966625	0.972428

Bank D

β η	0.02	0.03	0.04	0.05
0.0001	1.03775e+99	1.58465e+100	3.98627e+75	2.62605e+97
0.1	1.20995e+60	2.6206e+52	1.3095e+55	2.26927e+46
0.3	8.98605e+17	6.20456e+17	2.35125e+18	3.63661e+14
0.5	1.12868e+06	1.09928e+06	1.10272e+06	1.08829e+06
0.8	329576	337498	317962	311655

β η	0.02	0.03	0.04	0.05
0.0001	2.92381e+100	9.82428e+100	4.10493e+76	4.49023e+98
0.1	9.86405e+60	1.13126e+53	1.02081e+56	7.69086e+46
0.3	3.73662e+18	2.60684e+18	4.679e+19	1.29282e+15
0.5	658747	640998	638078	637220
0.8	190786	209565	186689	184225

Bank PROFITS

β η	0.02	0.03	0.04	0.05
0.0001	-2.67593e+95	-1.14945e+95	-3.14369e+71	-1.47737e+93
0.1	-1.56457e+55	-9.50136e+46	-1.38296e+50	-8.29798e+40
0.3	-3.35713e+12	-6.34251e+12	-3.9206e+14	-2.77867e+08
0.5	-4.57613	-5.67309	-5.43466	-8.59999
0.8	-1.40745	-1.10663	-1.72453	-3.87328

β η	0.02	0.03	0.04	0.05
0.0001	1.19903e+97	4.69709e+96	1.85234e+73	7.6319e+94
0.1	7.24217e+56	3.86991e+48	9.30067e+51	3.35996e+42
0.3	1.56417e+14	3.58556e+14	1.5544e+16	1.32391e+11
0.5	44.507	87.4938	64.0533	95.9979
0.8	46.8447	63.8927	24.333	139.815

Bank BD

β η	0.02	0.03	0.04	0.05
0.0001	-inf	-inf	-inf	-inf
0.1	-inf	-inf	-inf	-inf
0.3	-inf	-inf	-inf	-inf
0.5	-inf	-inf	-inf	-inf
0.8	2.43785	2.55743	2.68238	2.79151

β η	0.02	0.03	0.04	0.05
0.0001	nan	nan	nan	nan
0.1	nan	nan	nan	nan
0.3	nan	nan	nan	nan
0.5	nan	nan	nan	nan
0.8	0.410906	0.392234	0.375772	0.369417