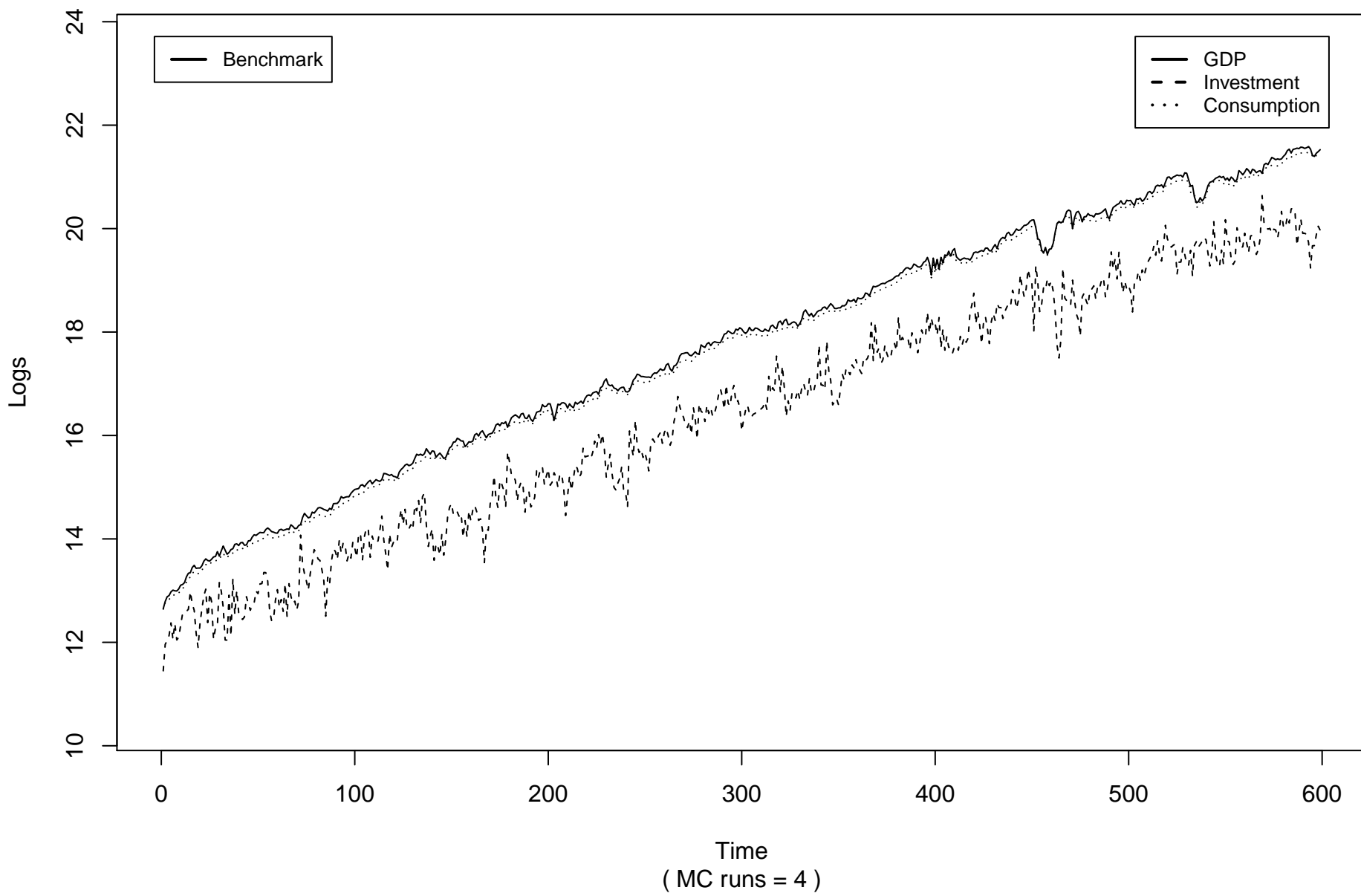
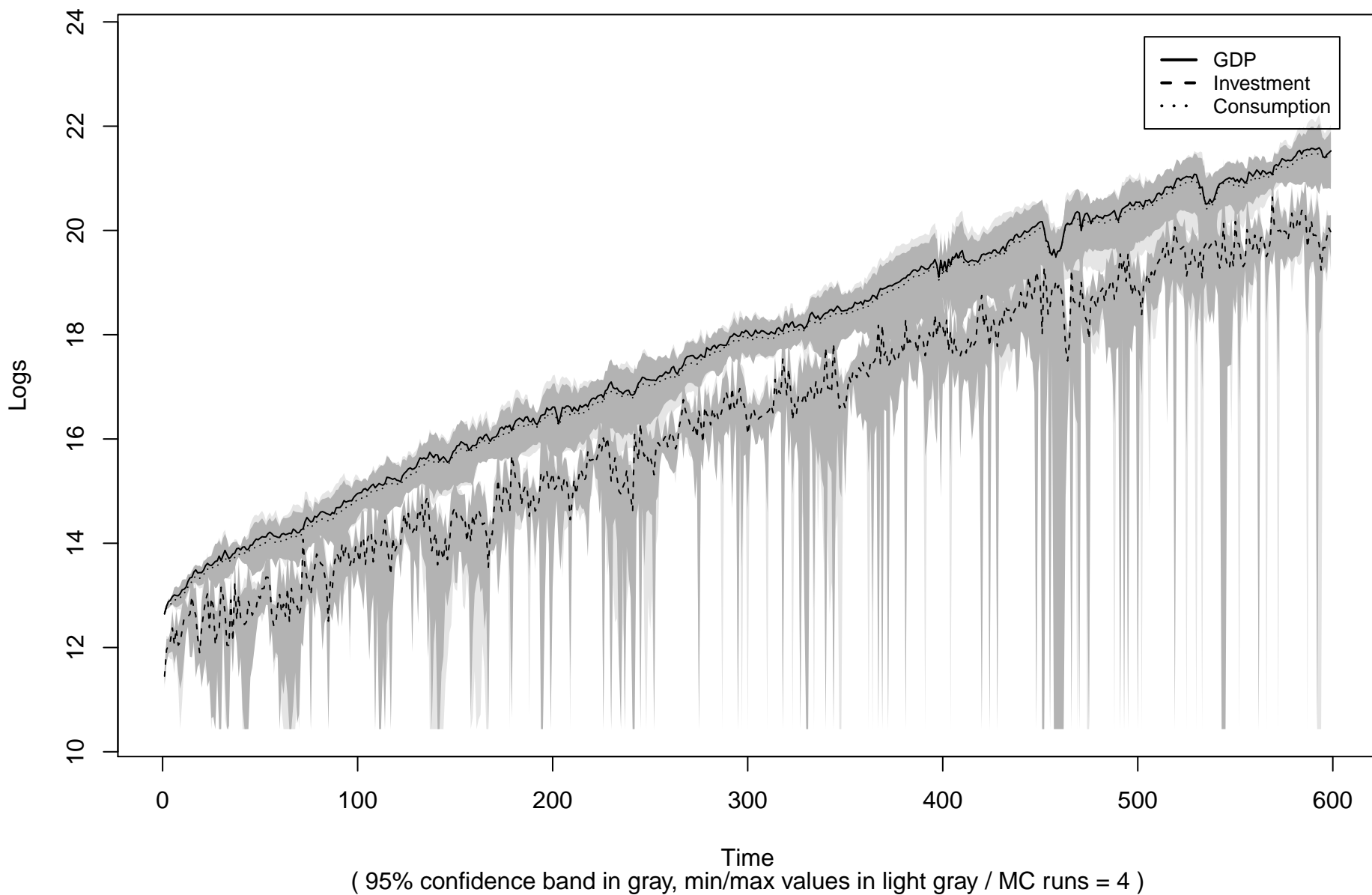


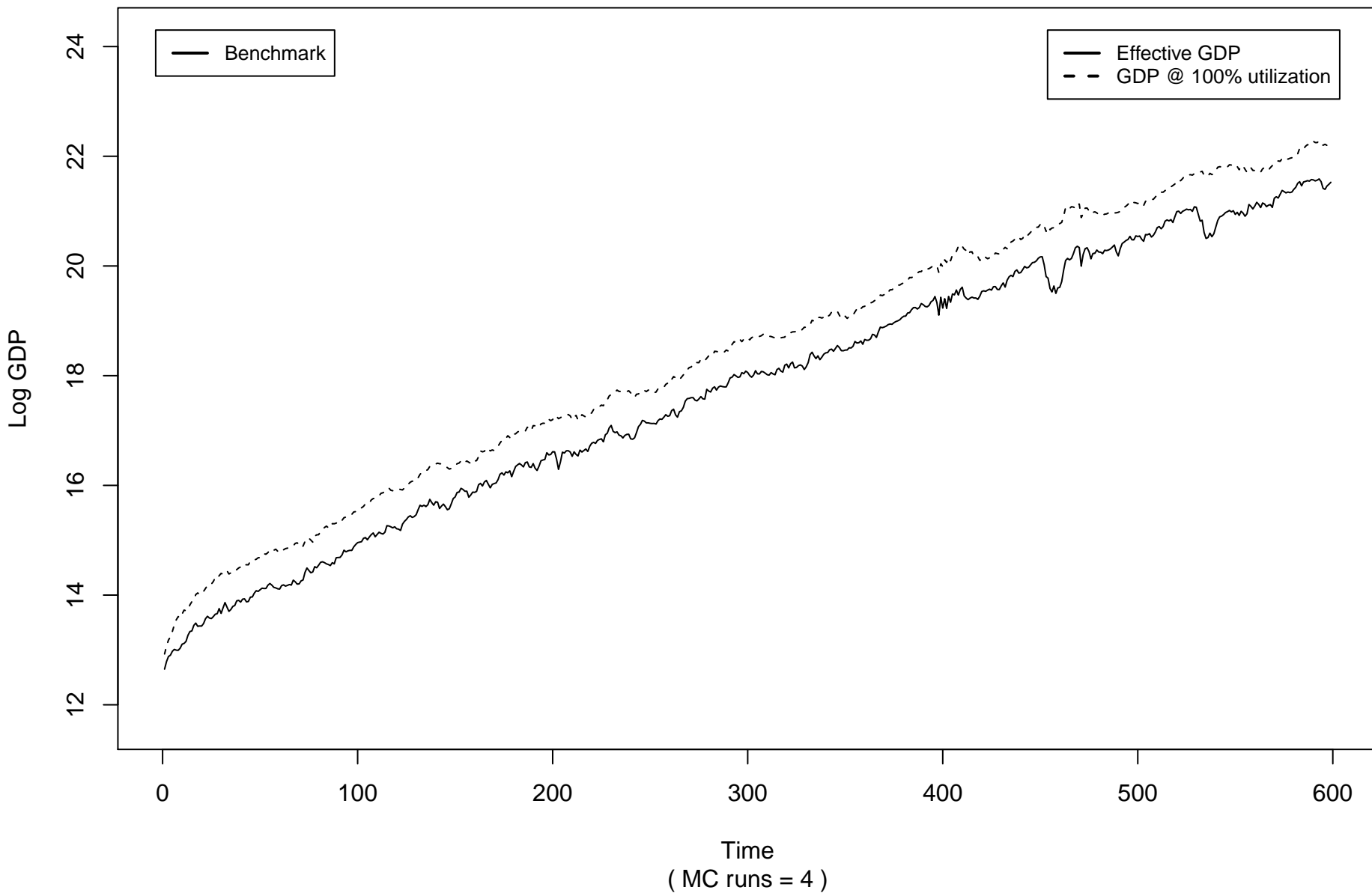
GDP, investment and consumption (all experiments)



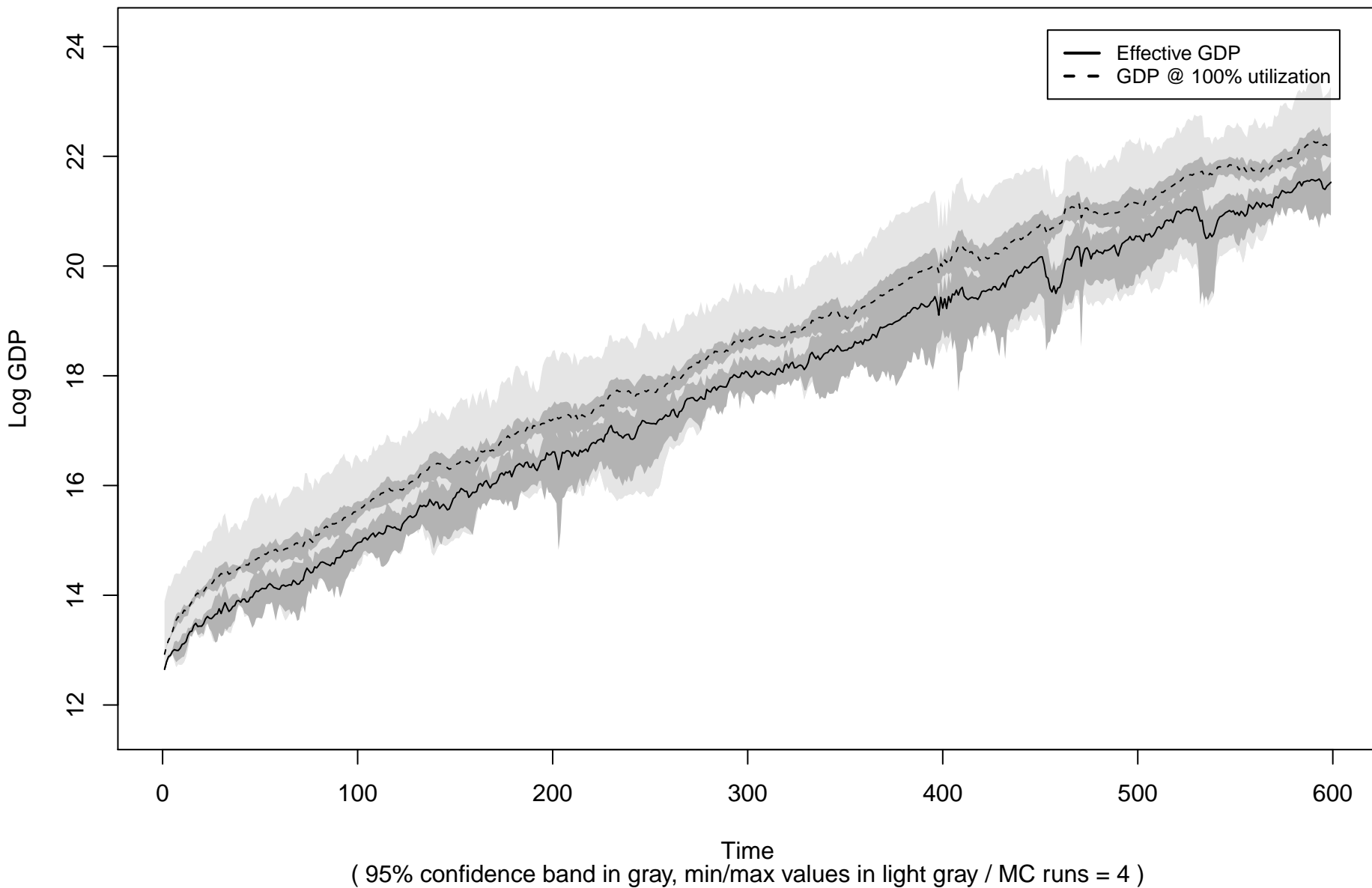
GDP, investment and consumption (Benchmark)



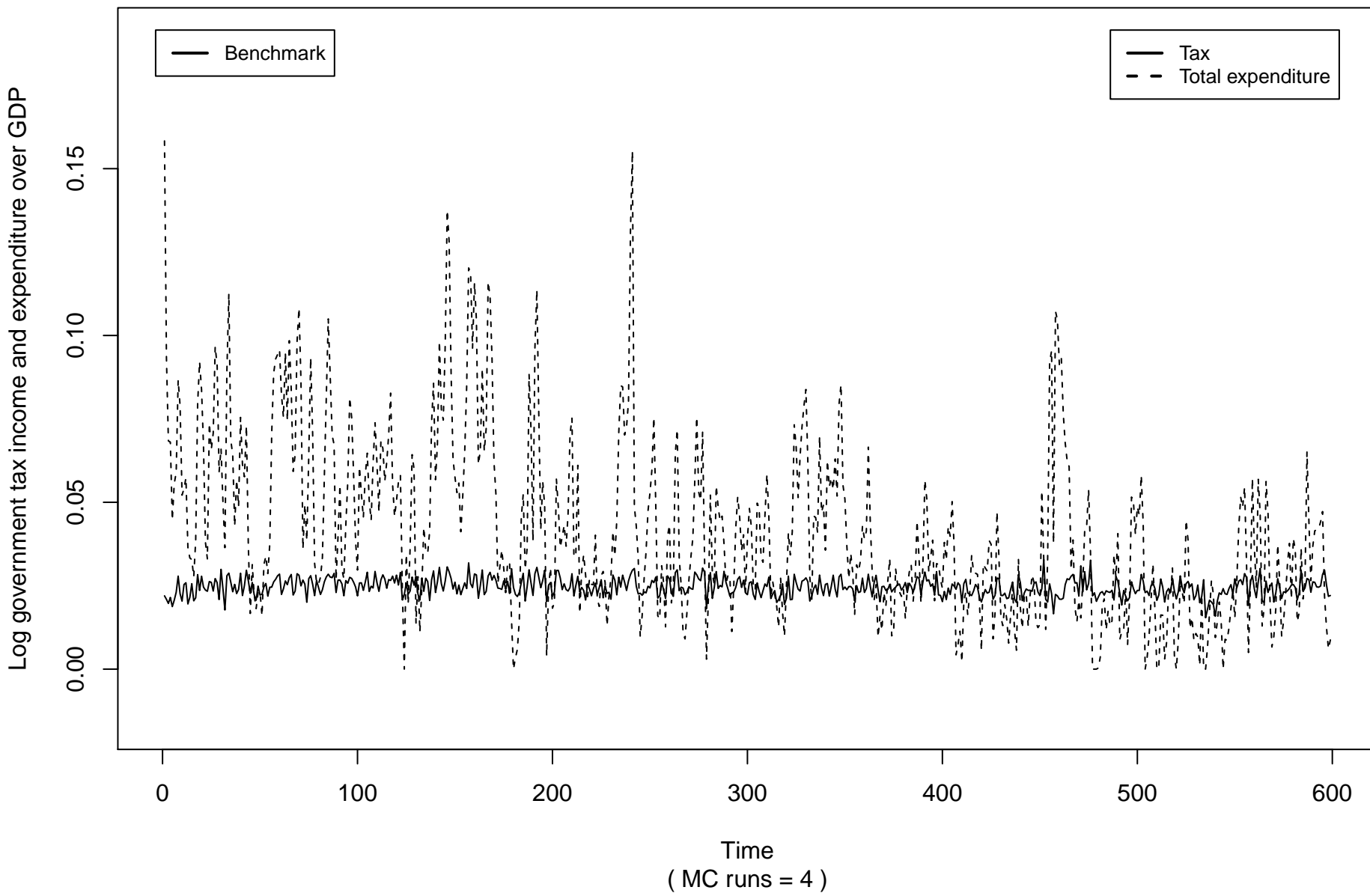
GDP (all experiments)



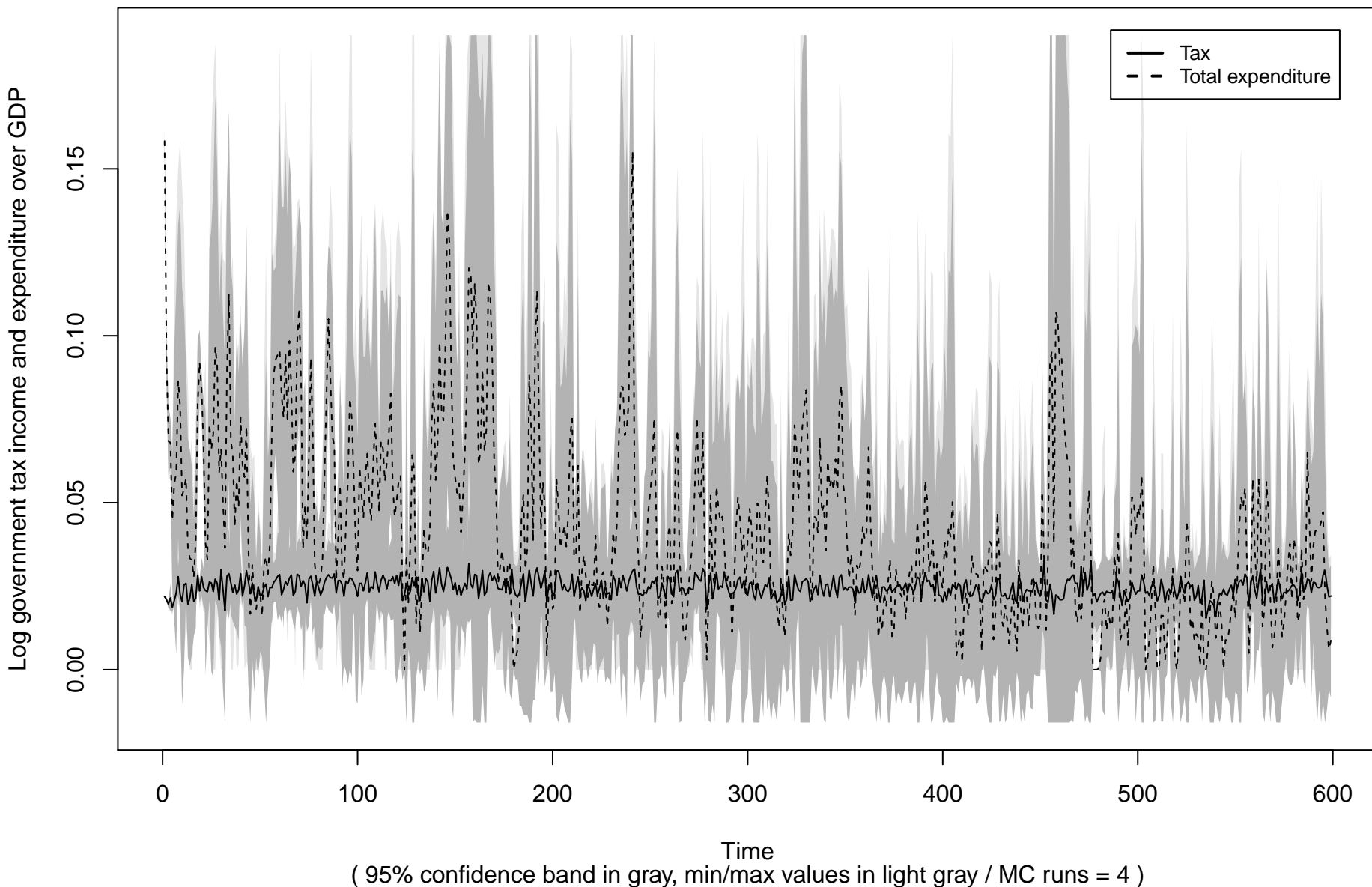
GDP (Benchmark)



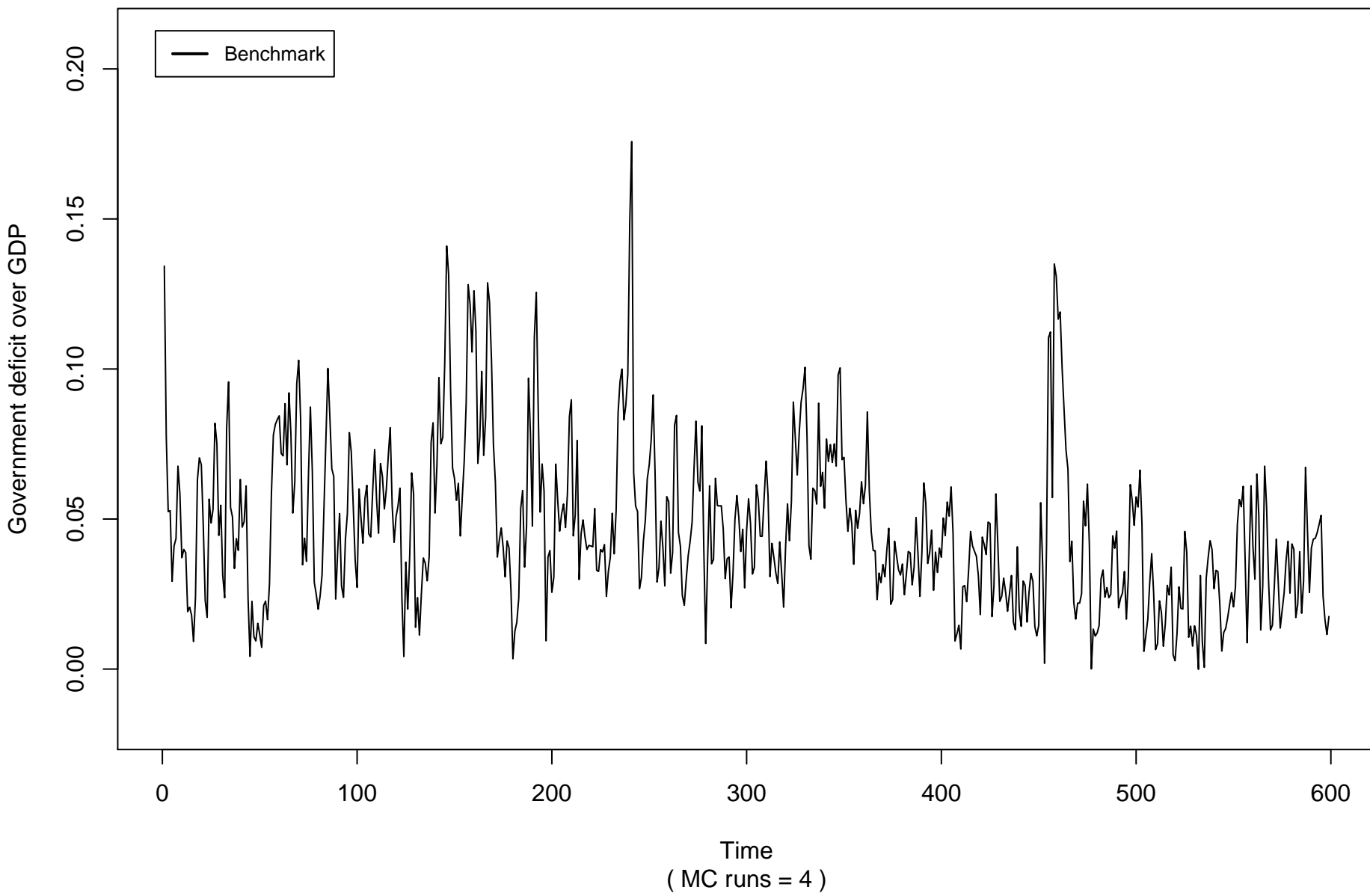
Government income and expenditure on GDP (all experiments)



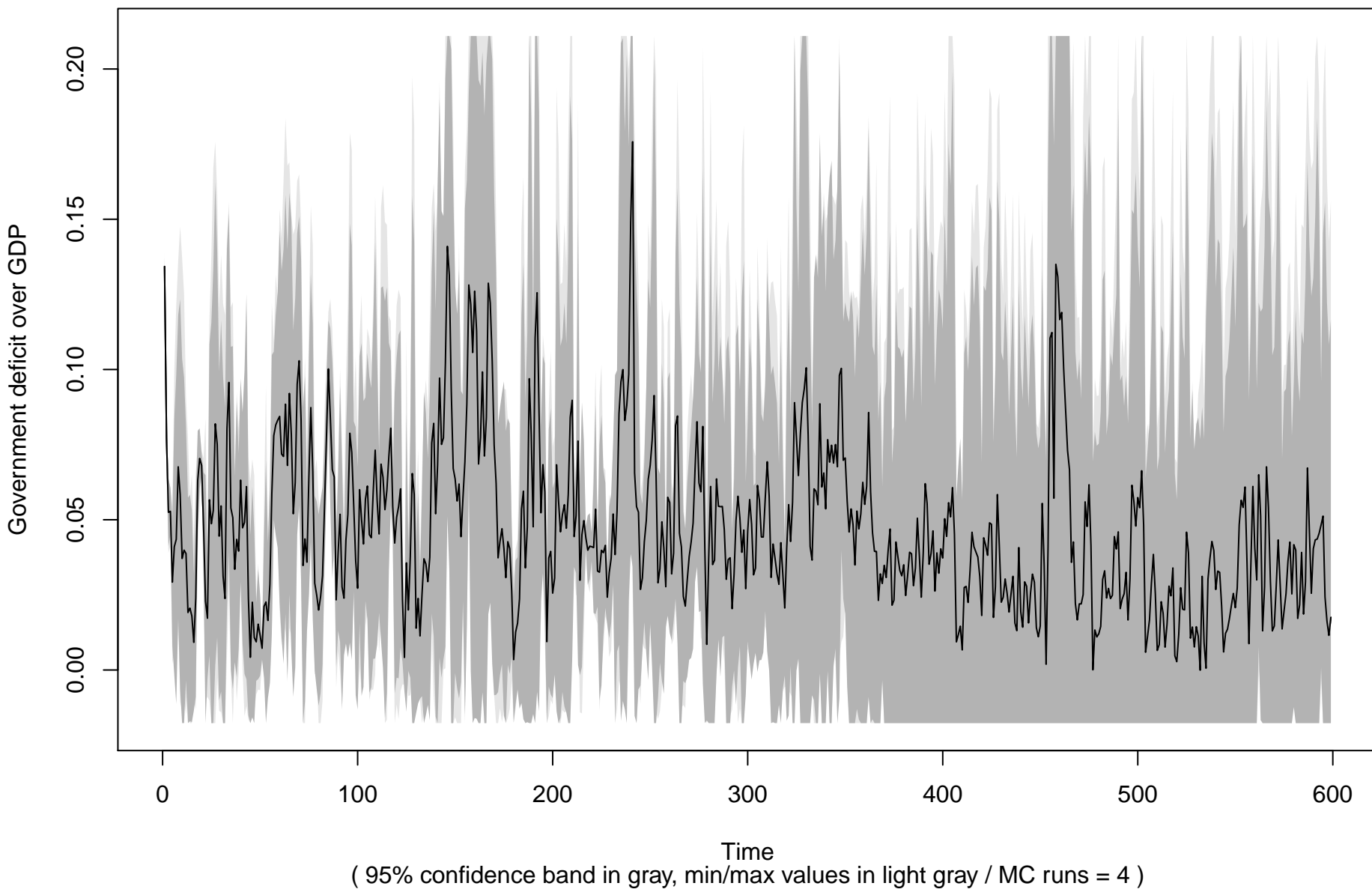
Government income and expenditure on GDP (Benchmark)



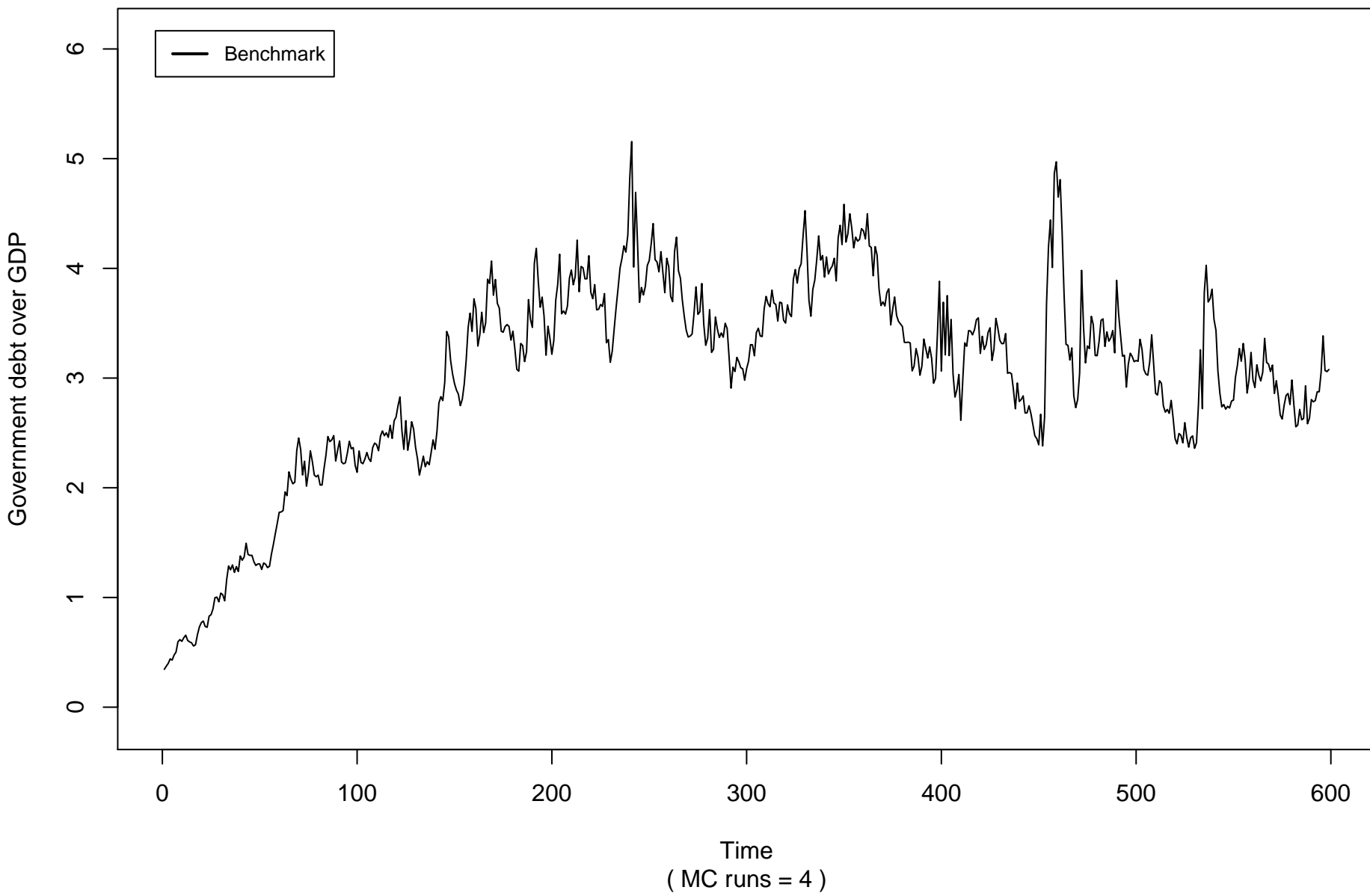
Government deficit on GDP (all experiments)



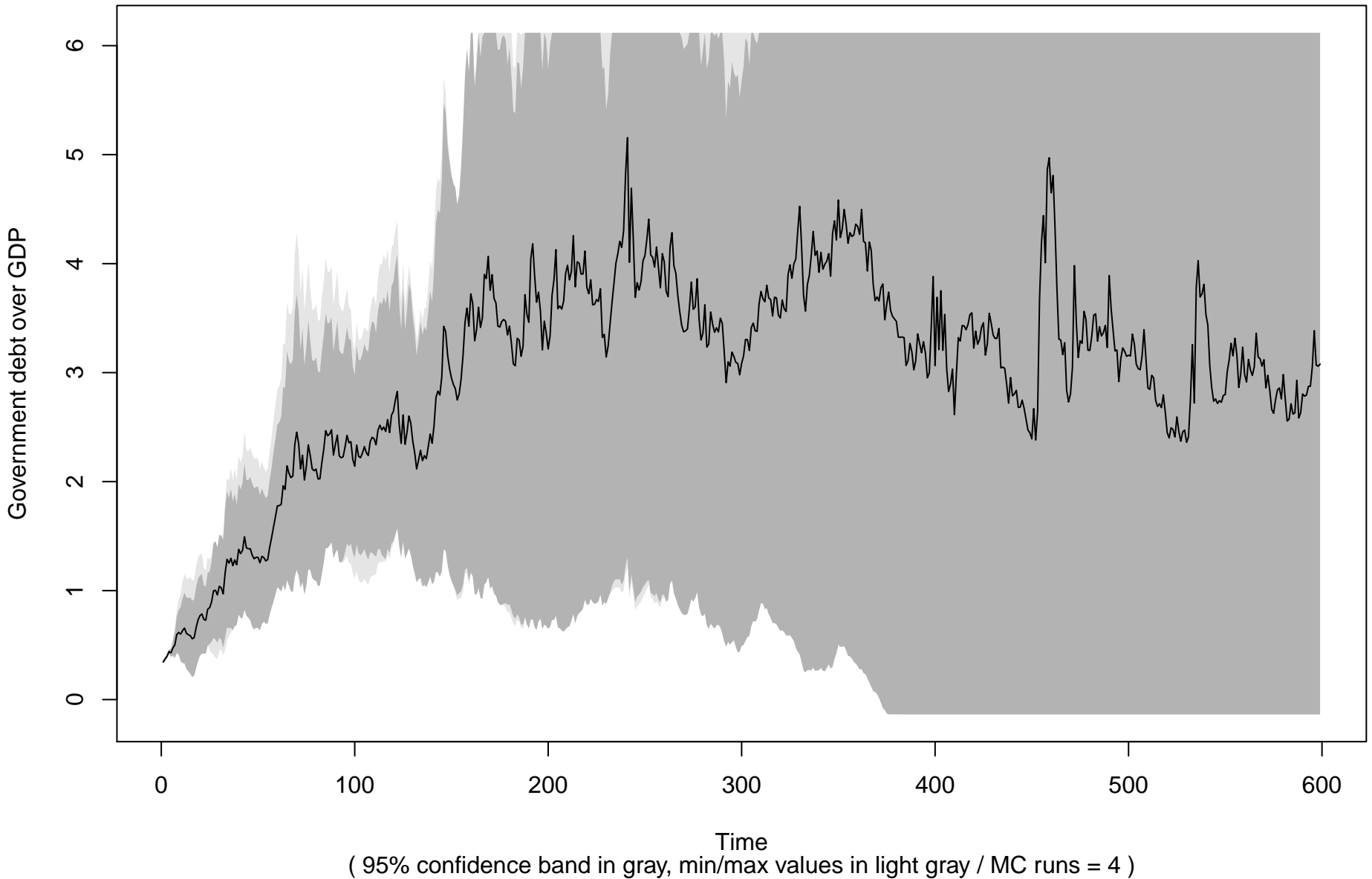
Government deficit on GDP (Benchmark)



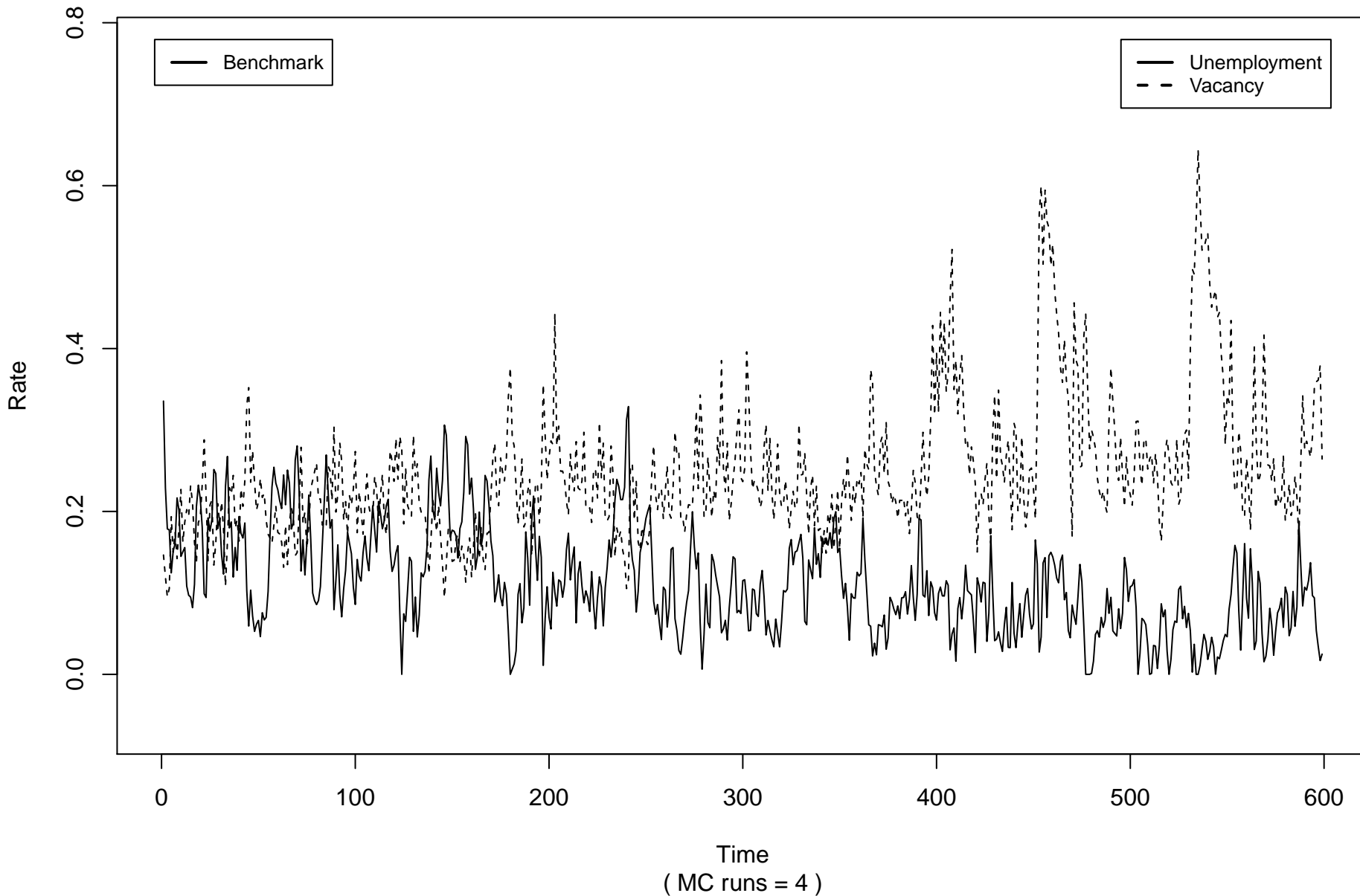
Government debt on GDP (all experiments)



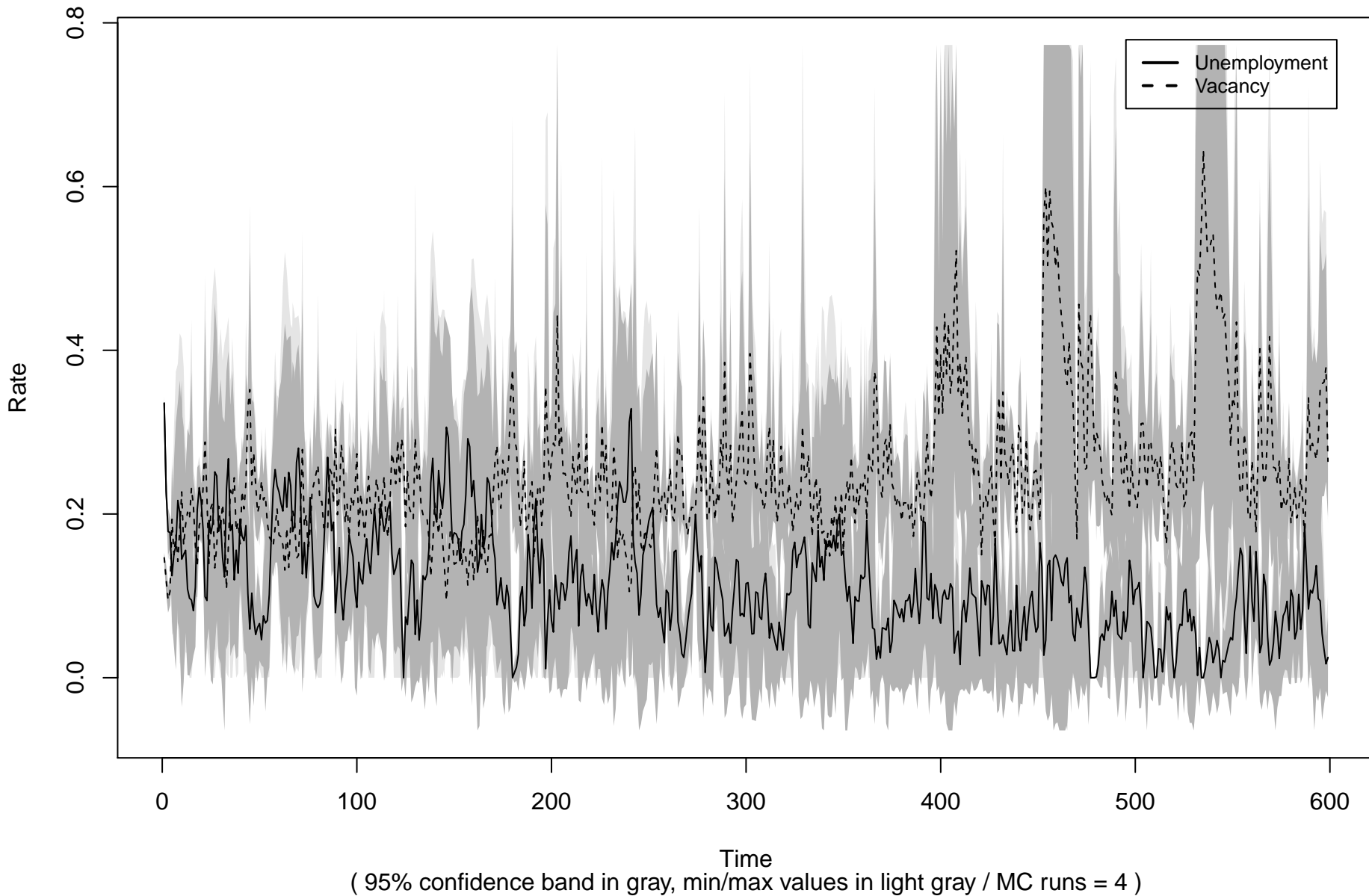
Government debt on GDP (Benchmark)



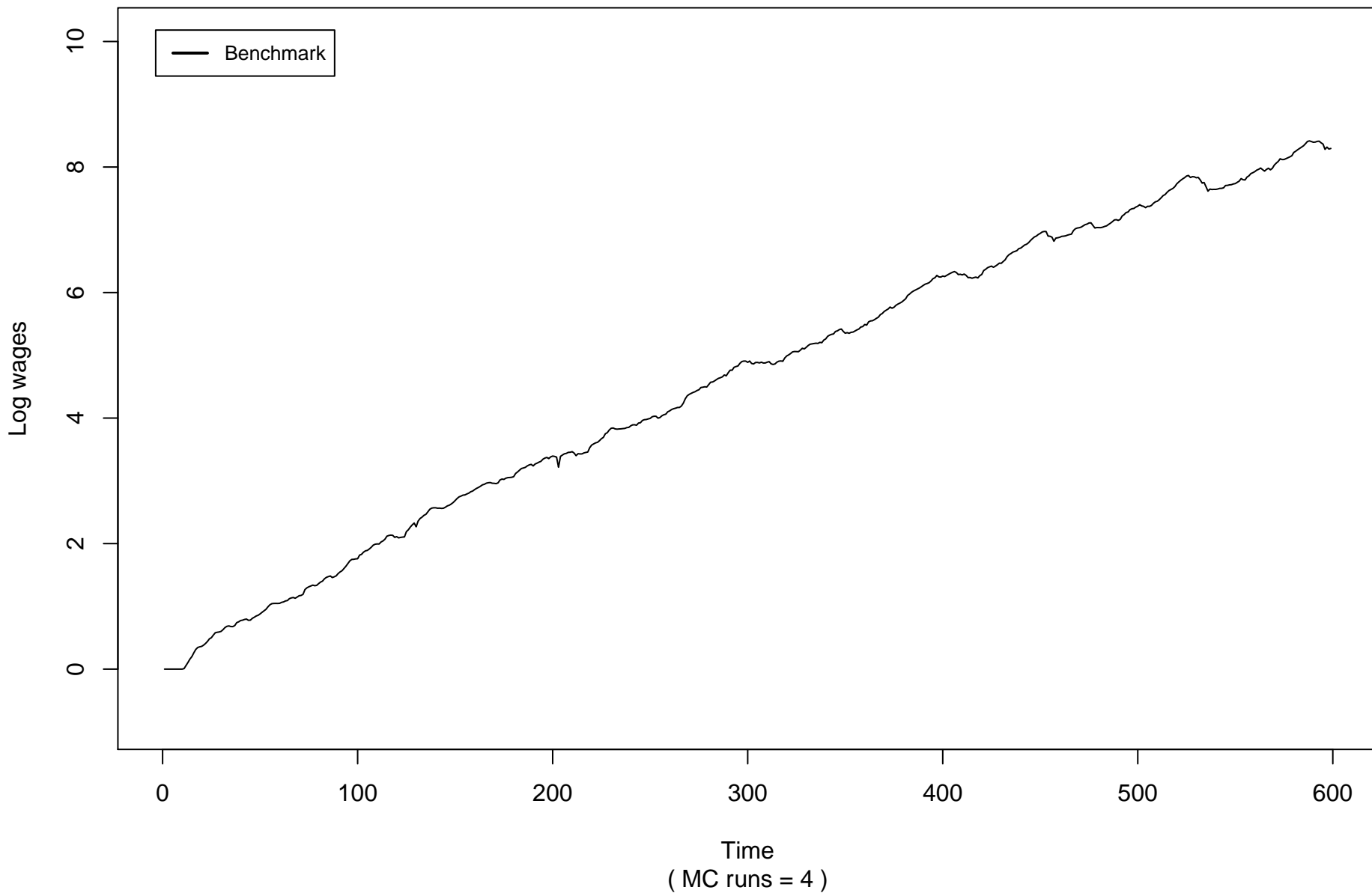
Unemployment and vacancy rates (all experiments)



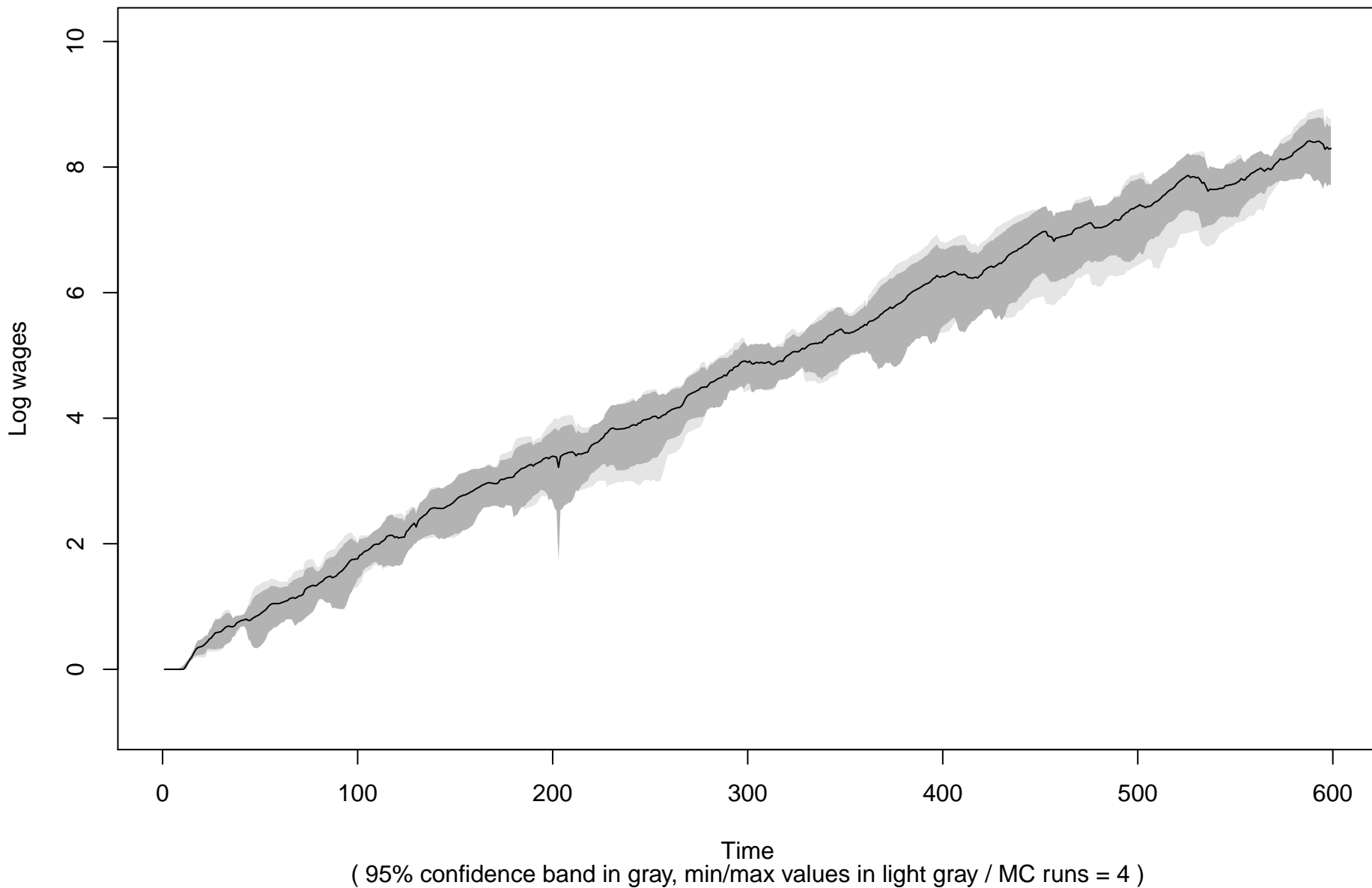
Unemployment and vacancy rates (Benchmark)



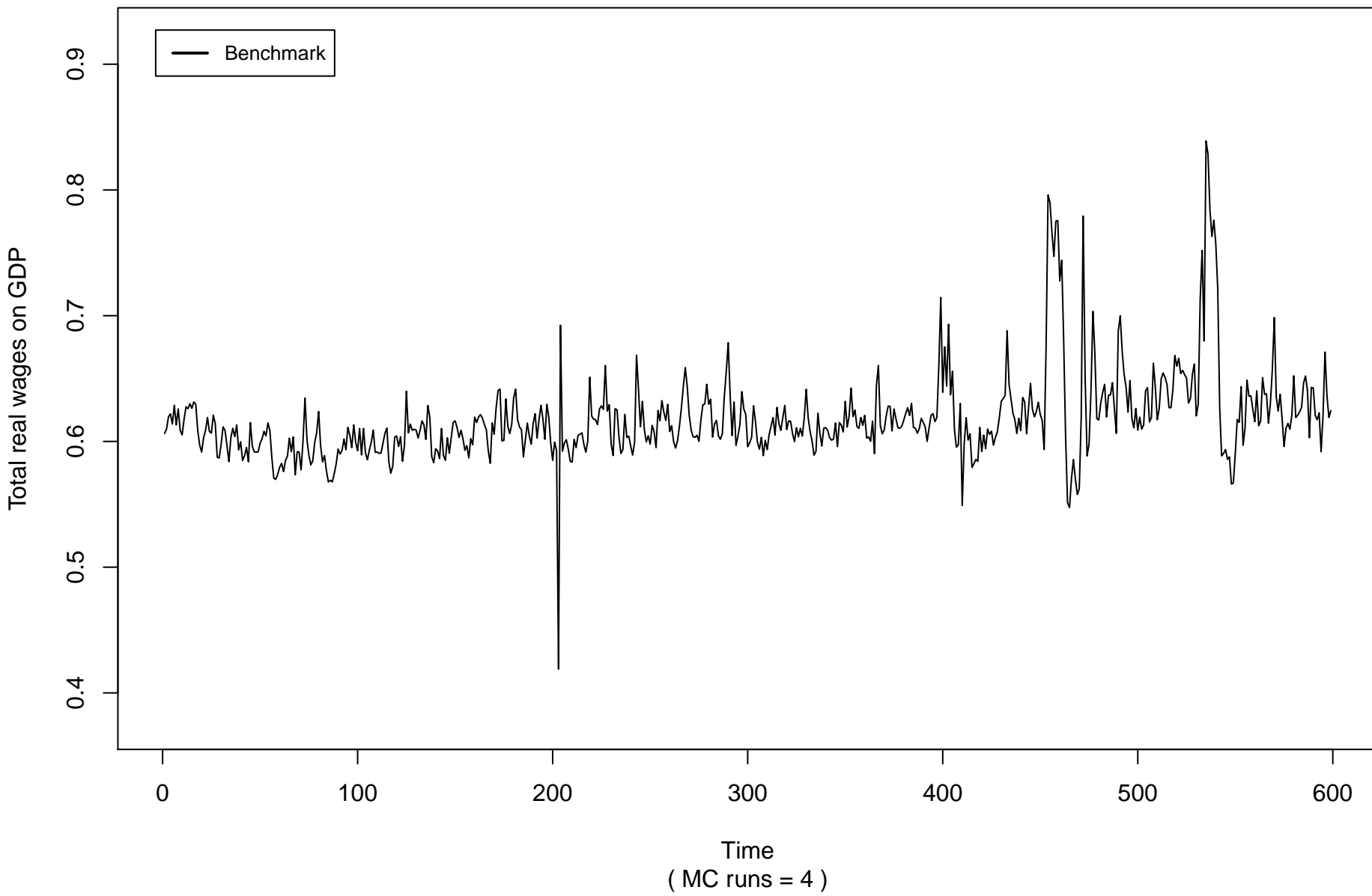
Real wages average (all experiments)



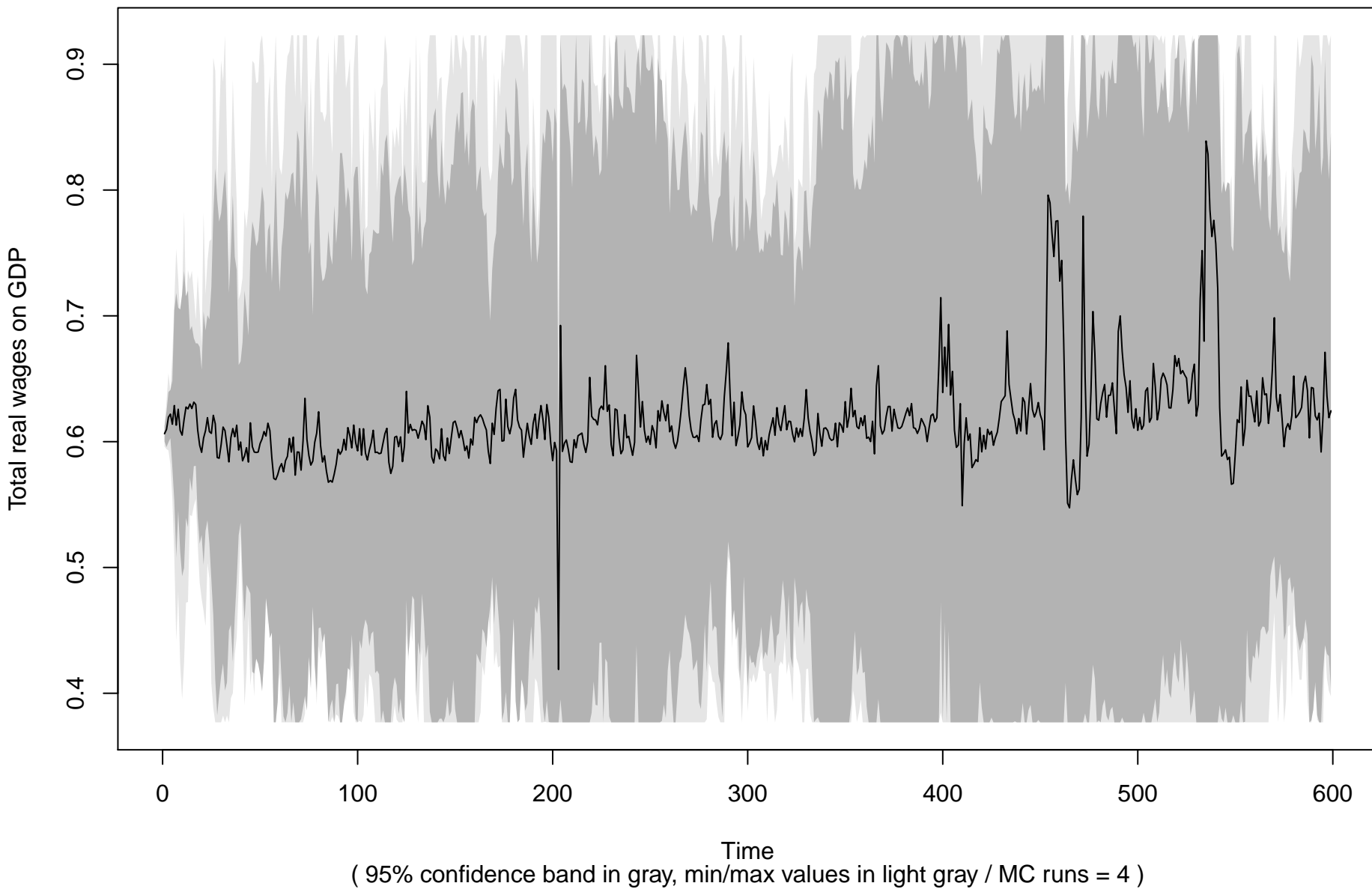
Real wages average (Benchmark)



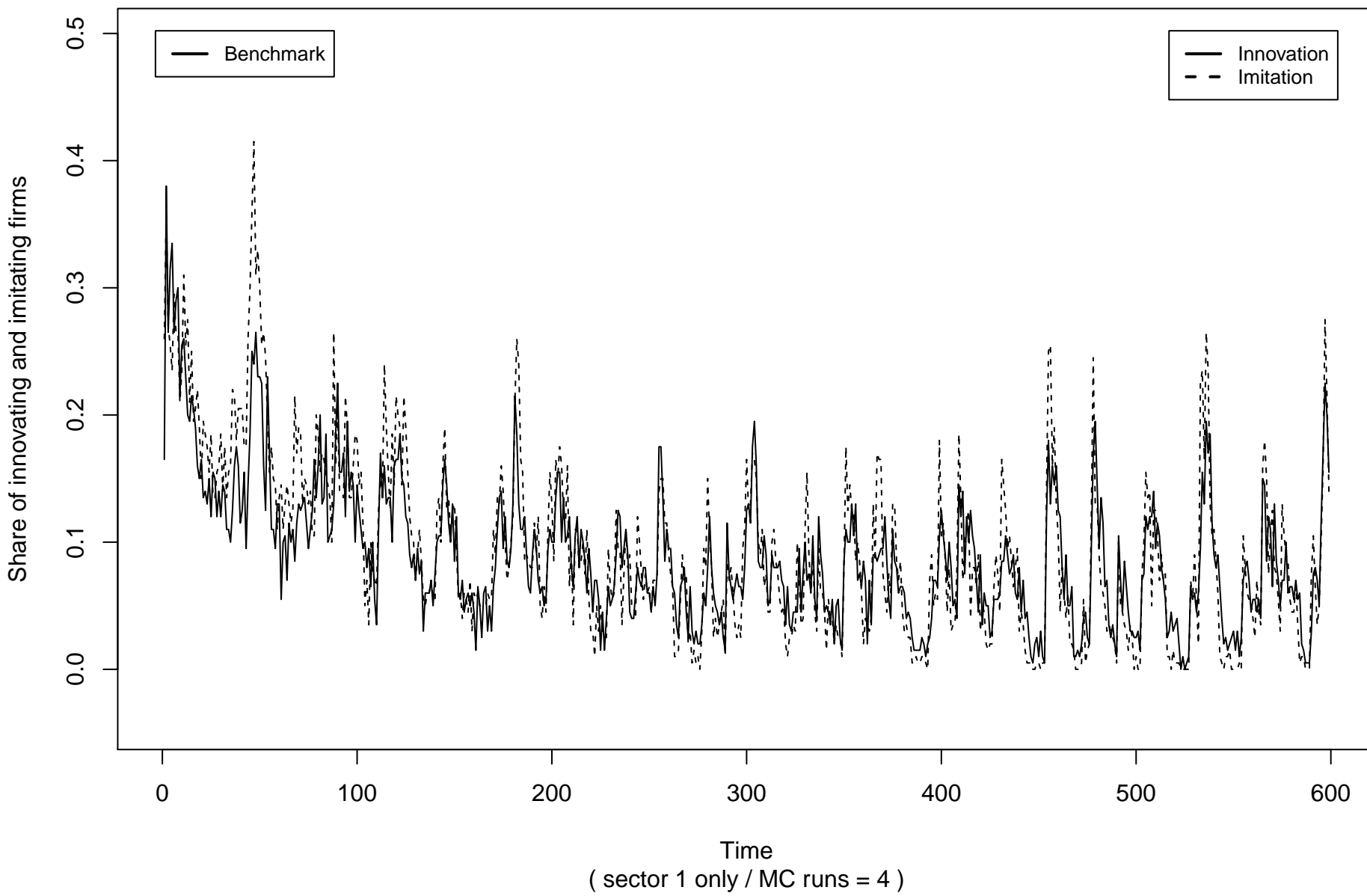
Wage share (all experiments)



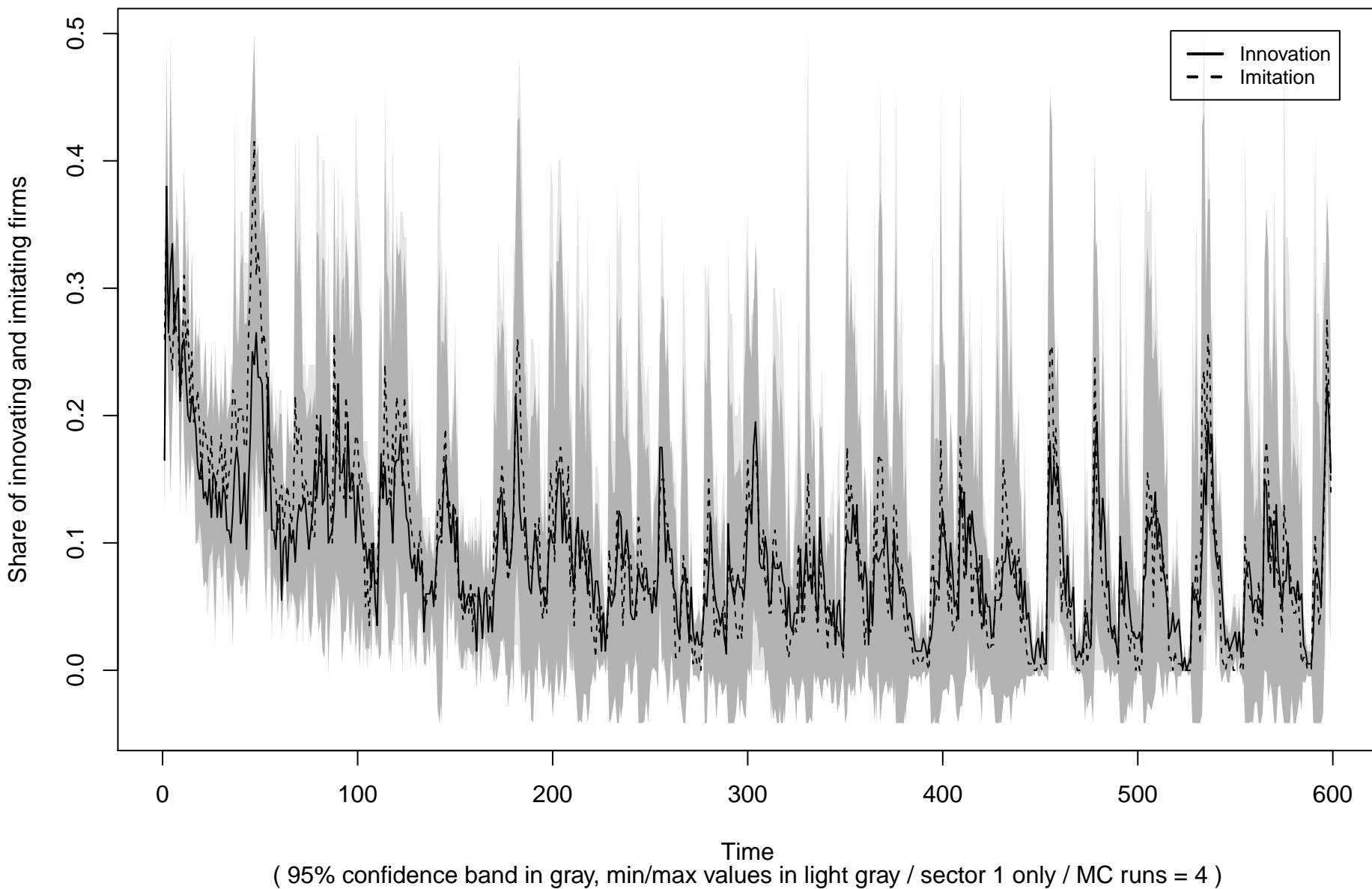
Wage share (Benchmark)



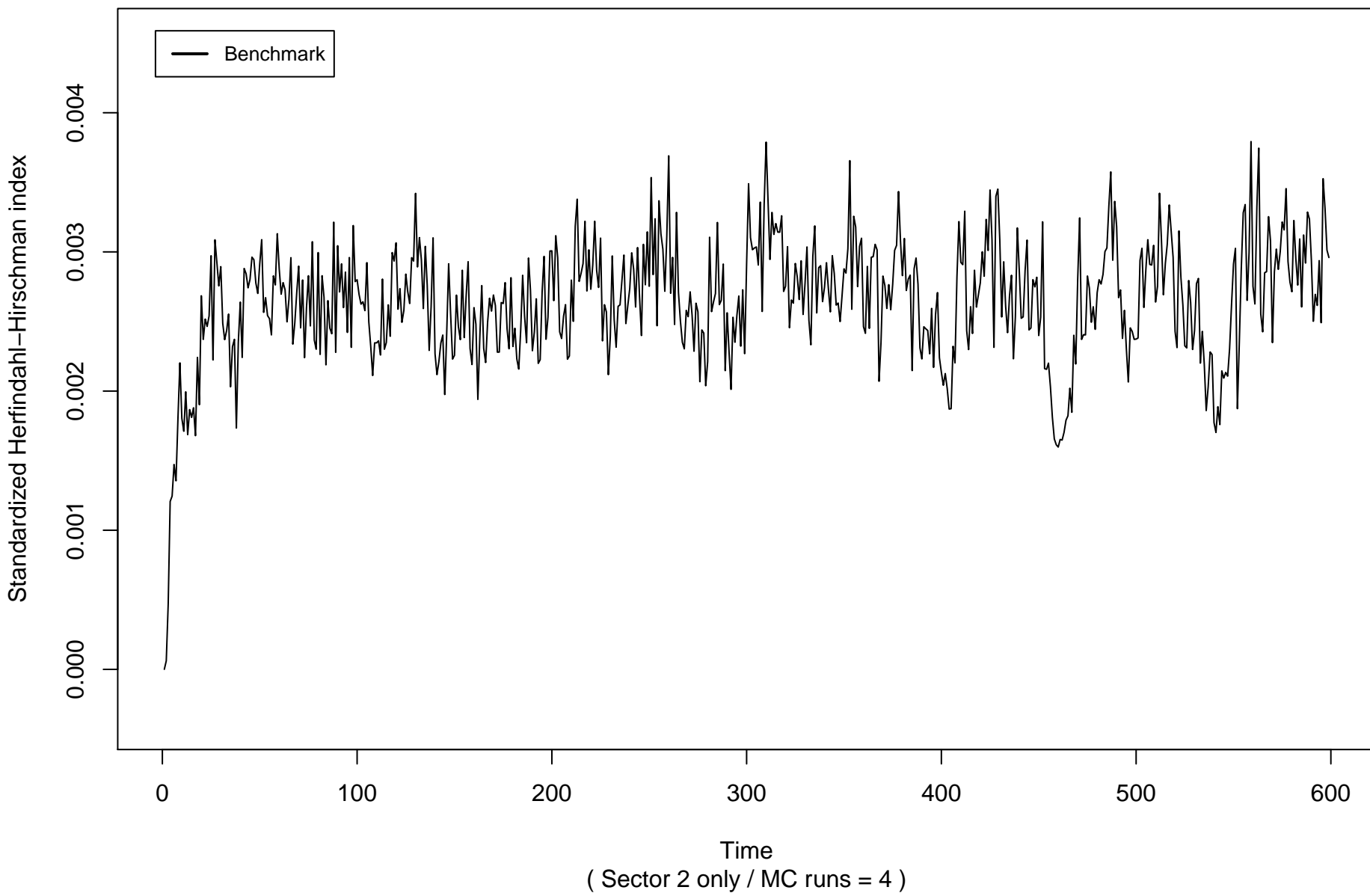
Innovation and imitation (all experiments)



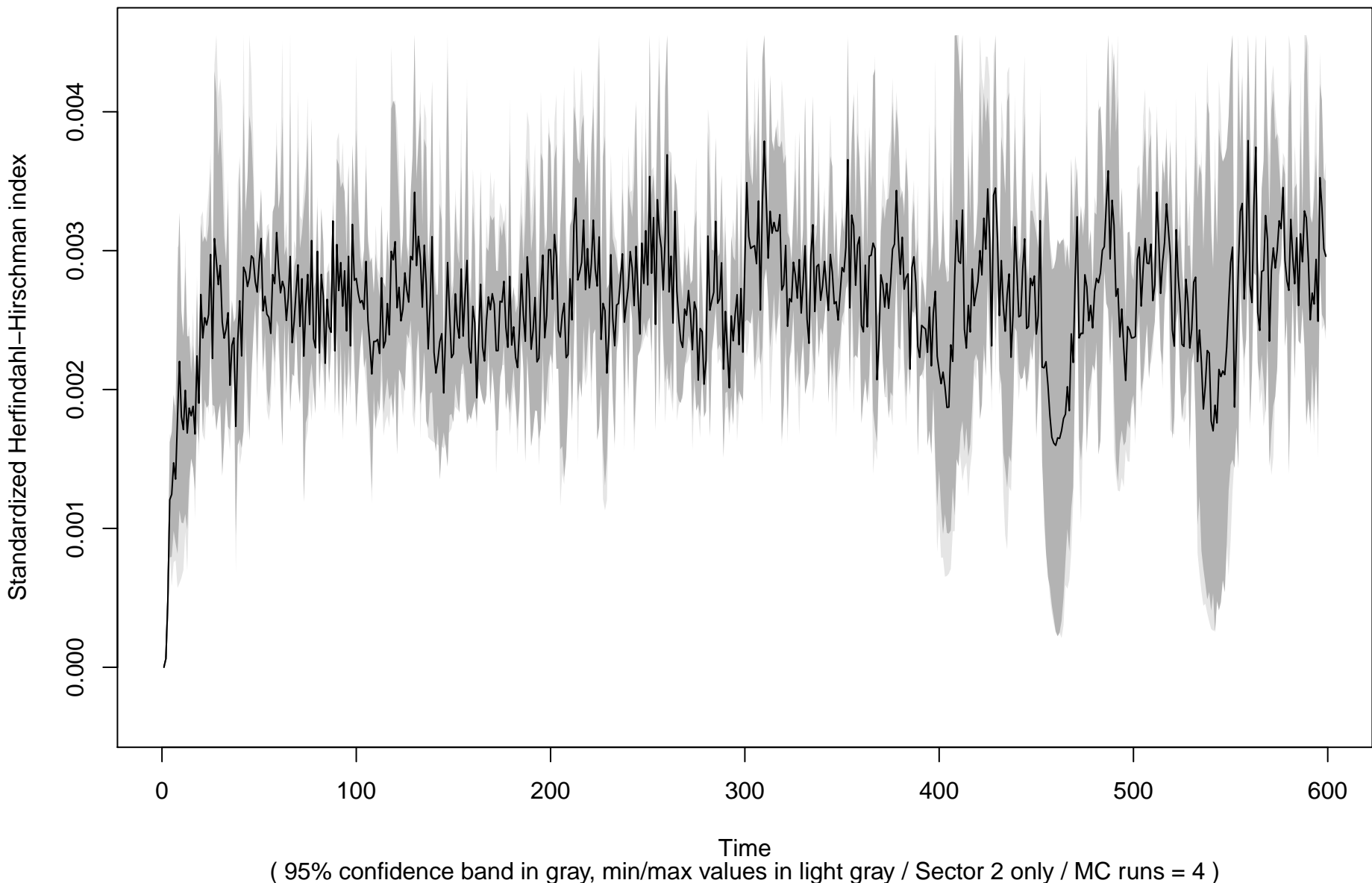
Innovation and imitation (Benchmark)



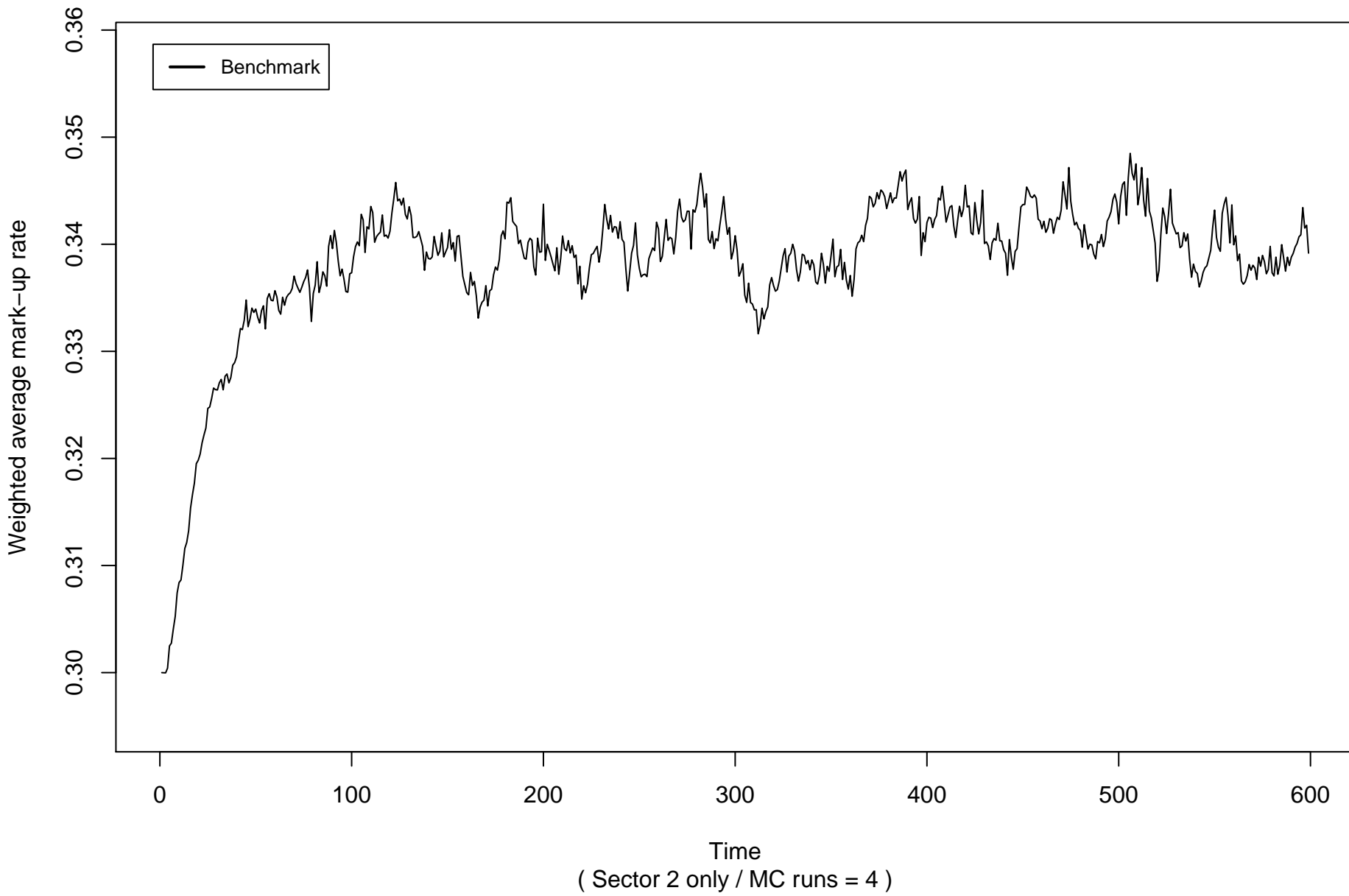
Market concentration (all experiments)



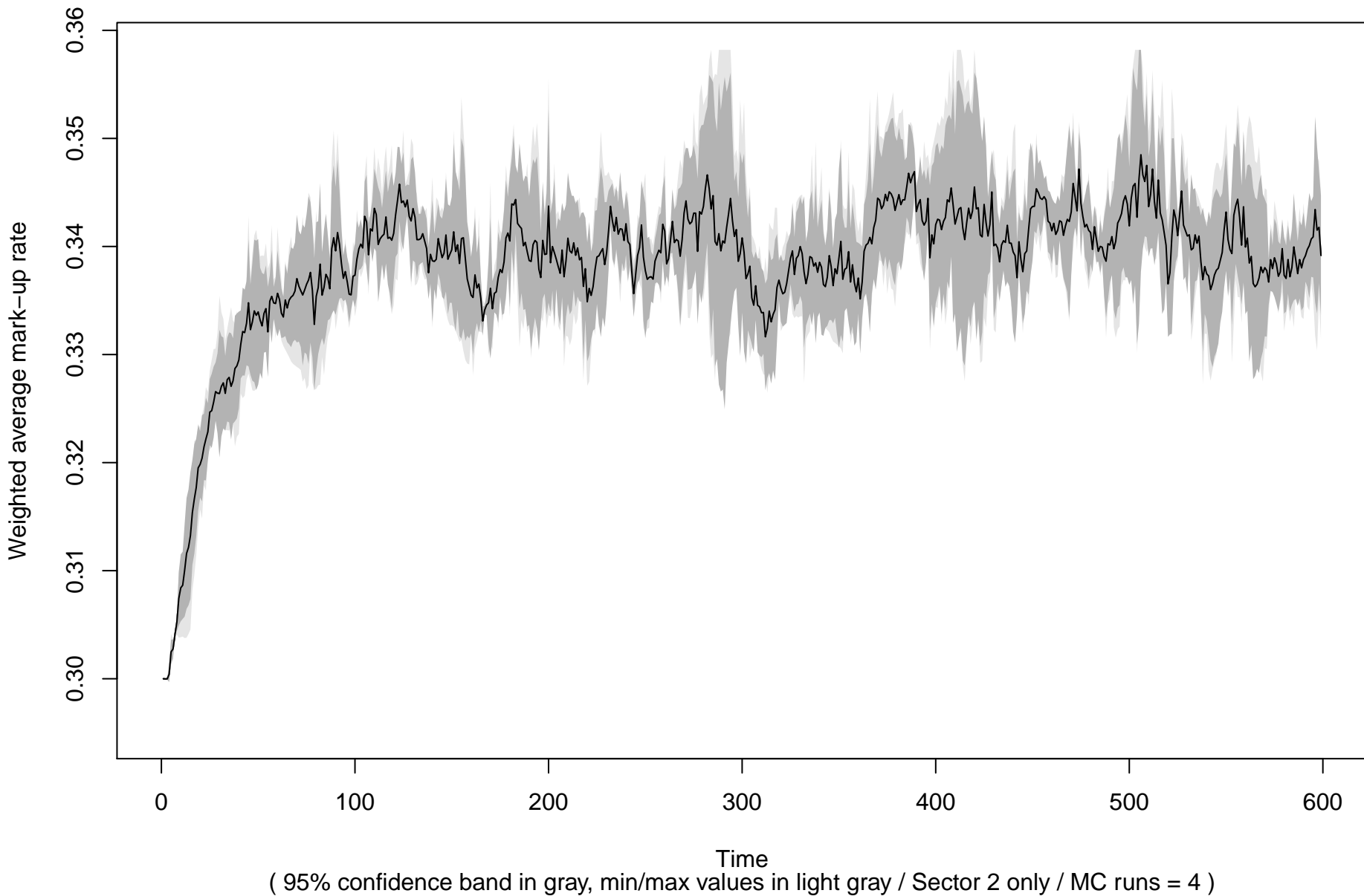
Market concentration (Benchmark)



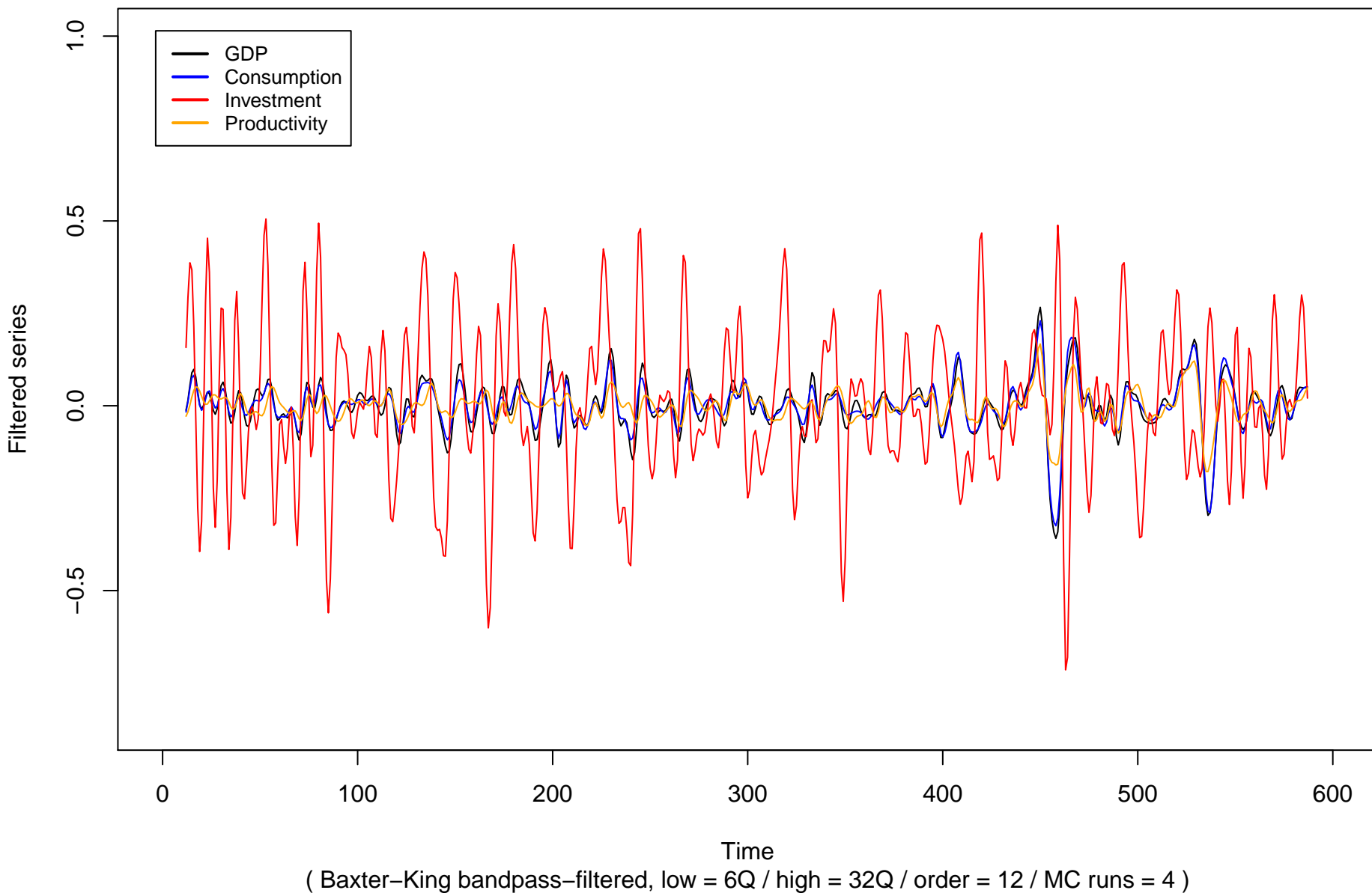
Mark-up average (all experiments)



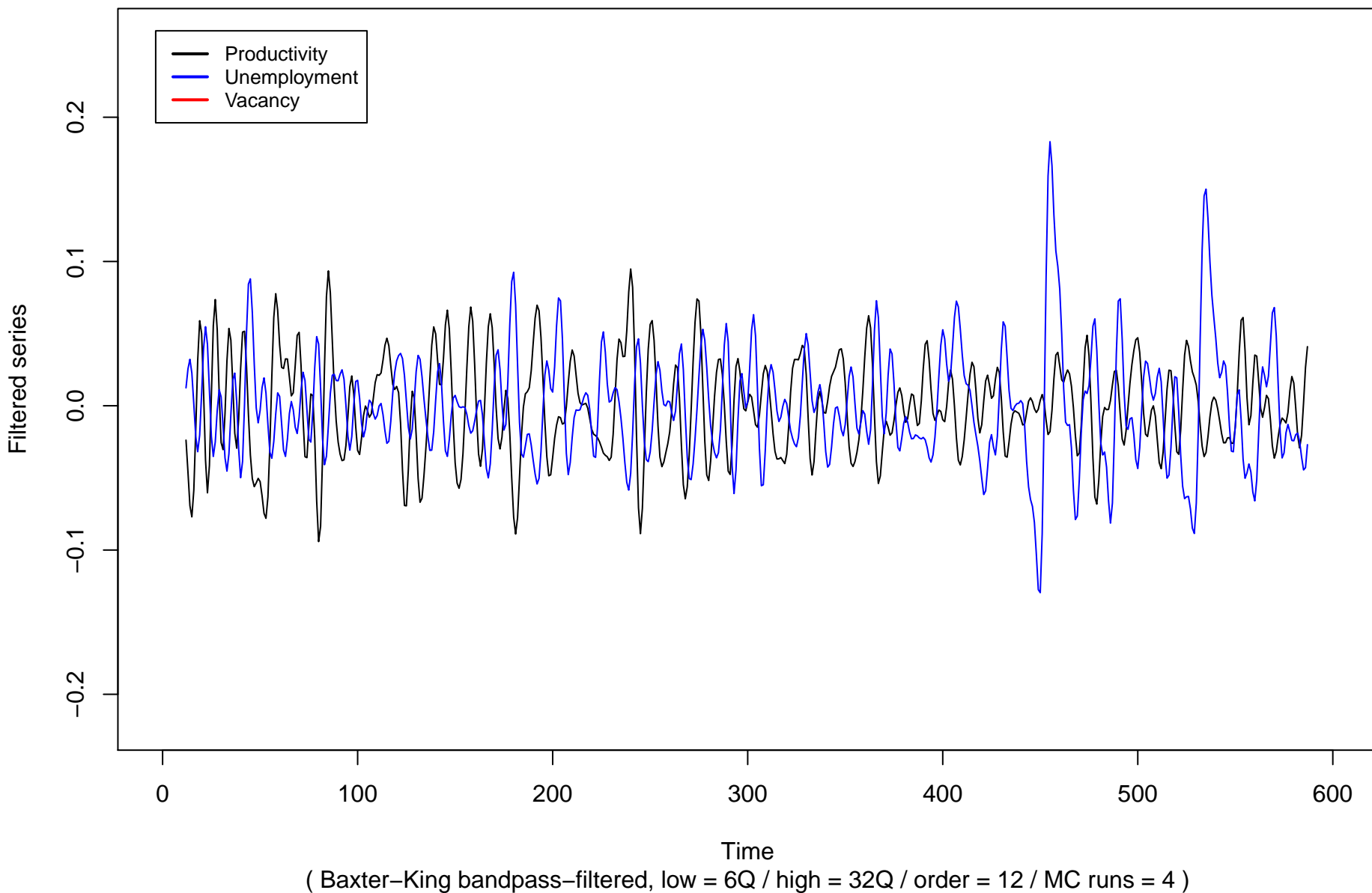
Mark-up average (Benchmark)



GDP cycles (Benchmark)



Shimer puzzle (Benchmark)



Key statistics and unit roots tests for cycles (Benchmark)

	GDP (output)	Consumption	Investment	Product.	Real wage
avg. growth rate	0.01469	0.0145	0.01411	0.01419	0.01373
(s.e.)	0.0003685	0.0003659	0.000451	0.0003575	0.0003655
ADF test (logs)	-3.61	-3.273	-7.951	-3.147	-2.537
(s.e.)	0.3446	0.303	0.437	0.2231	0.1736
(p-val.)	0.09227	0.1313	0.01	0.1384	0.3509
(s.e.)	0.0806	0.09526	0	0.06511	0.07346
ADF test (bpf)	-10.5	-9.789	-10.88	-9.75	-9.022
(s.e.)	0.4349	0.1919	0.3512	0.4991	0.7104
(p-val.)	0.01	0.01	0.01	0.01	0.01
(s.e.)	0	0	0	0	0
s.d. (bpf)	0.1313	0.1134	1.443	0.07917	0.0669
(s.e.)	0.01535	0.01948	0.1203	0.01242	0.001919
relative s.d. (GDP)	1	0.8636	10.98	0.6028	0.5094

(bpf: Baxter–King bandpass–filtered series, low = 6Q / high = 32Q / order = 12 / MC runs = 4 / period = 2 – 600)

(ADF test H0: there are unit roots / non–stationary at 5% level)

Correlation structure for GDP (Benchmark)

	-4	-3	-2	-1	0	1	2	3	4
GDP (output)	0.05628	0.3365	0.6501	0.9026	1	0.9026	0.6501	0.3365	0.05628
(s.e.)	0.02157	0.01966	0.01324	0.004235	3.205e-17	0.004235	0.01324	0.01966	0.02157
(p-val.)	0.8242	0.0004863	1.379e-05	1.504e-07	NA	1.504e-07	1.379e-05	0.0004863	0.8242
Consumption	0.1026	0.3503	0.6272	0.8593	0.9649	0.8996	0.6833	0.3878	0.09779
(s.e.)	0.01182	0.0196	0.02265	0.01596	0.005839	0.003076	0.01049	0.01695	0.02323
(p-val.)	0.07614	0.0004123	7.772e-05	9.465e-06	3.168e-07	5.831e-08	5.79e-06	0.0001821	0.2499
Investment	-0.3028	-0.3265	-0.279	-0.1469	0.0414	0.2226	0.3336	0.3485	0.291
(s.e.)	0.05721	0.07289	0.09631	0.1069	0.0975	0.07276	0.04535	0.02989	0.03103
(p-val.)	0.01502	0.02152	0.06536	0.08653	0.05677	0.07243	0.005647	0.001456	0.003255
Net investment	-0.2	-0.2209	-0.1826	-0.07131	0.08728	0.2343	0.3117	0.298	0.2205
(s.e.)	0.06617	0.0903	0.1224	0.1399	0.1306	0.09657	0.05168	0.01665	0.02598
(p-val.)	0.08369	0.07899	0.08868	0.02834	0.04165	0.1042	0.01035	0.0004808	0.006198
Change in inventories	-0.1741	-0.1195	0.0001763	0.1352	0.2202	0.217	0.1431	0.05517	0.005343
(s.e.)	0.01622	0.02359	0.03368	0.03272	0.02252	0.0099	0.003021	0.00435	0.005694
(p-val.)	0.005102	0.0964	0.9294	0.09513	0.004178	0.0004086	0.0001202	0.9947	0.9998
Unemployment rate	0.2565	0.1992	0.0498	-0.1565	-0.3456	-0.4433	-0.4189	-0.3002	-0.1531
(s.e.)	0.03722	0.043	0.07187	0.1017	0.1184	0.116	0.09708	0.07142	0.04865
(p-val.)	0.008891	0.0347	0.3281	0.1214	0.05536	0.02598	0.01988	0.02701	0.1149
Productivity	0.2495	0.4648	0.6652	0.7897	0.7898	0.6581	0.4362	0.1902	-0.02372
(s.e.)	0.06102	0.03281	0.007678	0.03934	0.06911	0.08521	0.08411	0.06866	0.0461
(p-val.)	0.03455	0.000666	2.49e-06	0.0001858	0.0009841	0.003273	0.01205	0.1034	0.538
Mark-up (sector 2)	0.2419	0.2313	0.1763	0.08475	-0.02016	-0.1107	-0.1678	-0.1878	-0.1794
(s.e.)	0.06113	0.04731	0.03056	0.02729	0.03596	0.04242	0.04619	0.05096	0.05629
(p-val.)	0.03855	0.02472	0.02561	0.4366	0.8521	0.2609	0.07673	0.06242	0.08785
Total firm debt	0.1516	0.06403	-0.03116	-0.1158	-0.1746	-0.2027	-0.2069	-0.2	-0.1906
(s.e.)	0.1239	0.1188	0.1103	0.09593	0.0698	0.03722	0.04965	0.09239	0.1215
(p-val.)	0.1133	0.0247	0.01871	0.2067	0.1342	0.02293	0.04173	0.1425	0.1263
Liquidity-to-sales ratio	-0.06357	-0.2987	-0.5414	-0.7349	-0.8228	-0.7783	-0.619	-0.3959	-0.1666
(s.e.)	0.03597	0.03046	0.03107	0.02712	0.01601	0.008505	0.01608	0.02277	0.02945
(p-val.)	0.4107	0.002785	0.0003312	7.782e-05	1.103e-05	1.991e-06	2.915e-05	0.0004052	0.03028
Bankruptcy rate	0.335	0.4047	0.3906	0.2946	0.1601	0.04347	-0.02412	-0.05215	-0.07315
(s.e.)	0.03825	0.04607	0.03652	0.02223	0.05585	0.08704	0.09045	0.06747	0.04063
(p-val.)	0.003442	0.002935	0.001708	0.001179	0.1235	0.08369	0.04062	0.2052	0.2759

(non-rate/ratio series are Baxter–King bandpass-filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 4 / period = 2 – 600)

(test H0: lag coefficient is not significant at 5% level)

Correlation structure for GDP (Benchmark)

	-4	-3	-2	-1	0	1	2	3	4
GDP (output)	0.05628	0.3365	0.6501	0.9026	1	0.9026	0.6501	0.3365	0.05628
(s.e.)	0.02157	0.01966	0.01324	0.004235	3.205e-17	0.004235	0.01324	0.01966	0.02157
(p-val.)	0.8242	0.0004863	1.379e-05	1.504e-07	NA	1.504e-07	1.379e-05	0.0004863	0.8242
Consumption	0.1026	0.3503	0.6272	0.8593	0.9649	0.8996	0.6833	0.3878	0.09779
(s.e.)	0.01182	0.0196	0.02265	0.01596	0.005839	0.003076	0.01049	0.01695	0.02323
(p-val.)	0.07614	0.0004123	7.772e-05	9.465e-06	3.168e-07	5.831e-08	5.79e-06	0.0001821	0.2499
Investment	-0.3028	-0.3265	-0.279	-0.1469	0.0414	0.2226	0.3336	0.3485	0.291
(s.e.)	0.05721	0.07289	0.09631	0.1069	0.0975	0.07276	0.04535	0.02989	0.03103
(p-val.)	0.01502	0.02152	0.06536	0.08653	0.05677	0.07243	0.005647	0.001456	0.003255
Productivity	0.2495	0.4648	0.6652	0.7897	0.7898	0.6581	0.4362	0.1902	-0.02372
(s.e.)	0.06102	0.03281	0.007678	0.03934	0.06911	0.08521	0.08411	0.06866	0.0461
(p-val.)	0.03455	0.000666	2.49e-06	0.0001858	0.0009841	0.003273	0.01205	0.1034	0.538
Entry	0.01285	0.1825	0.3382	0.4403	0.4668	0.4236	0.3382	0.2418	0.1534
(s.e.)	0.06122	0.05621	0.0407	0.01774	0.00562	0.02172	0.0304	0.03502	0.03834
(p-val.)	0.4576	0.08293	0.00396	0.0001306	3.381e-06	0.0002746	0.001714	0.009539	0.07573
Wage	0.2787	0.4345	0.5671	0.6348	0.6091	0.4912	0.3139	0.1231	-0.04306
(s.e.)	0.04644	0.04728	0.0473	0.04779	0.0464	0.0396	0.02828	0.01798	0.01617
(p-val.)	0.01172	0.002459	0.0009761	0.0006864	0.0007236	0.0009531	0.001852	0.04816	0.9468
Unemployment rate	0.2565	0.1992	0.0498	-0.1565	-0.3456	-0.4433	-0.4189	-0.3002	-0.1531
(s.e.)	0.03722	0.043	0.07187	0.1017	0.1184	0.116	0.09708	0.07142	0.04865
(p-val.)	0.008891	0.0347	0.3281	0.1214	0.05536	0.02598	0.01988	0.02701	0.1149
Vacancy rate	0.05046	-0.09782	-0.2444	-0.3184	-0.2845	-0.1682	-0.039	0.03802	0.04329
(s.e.)	0.05839	0.07656	0.1066	0.1372	0.1528	0.1414	0.1019	0.04717	0.02159
(p-val.)	0.2875	0.1908	0.1052	0.08223	0.06696	0.07695	0.0368	0.506	0.9367

(non-rate/ratio series are Baxter–King bandpass-filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 4 / period = 2 – 600)

(test H0: lag coefficient is not significant at 5% level)

Stationarity, i.i.d. and ergodicity tests (Benchmark)

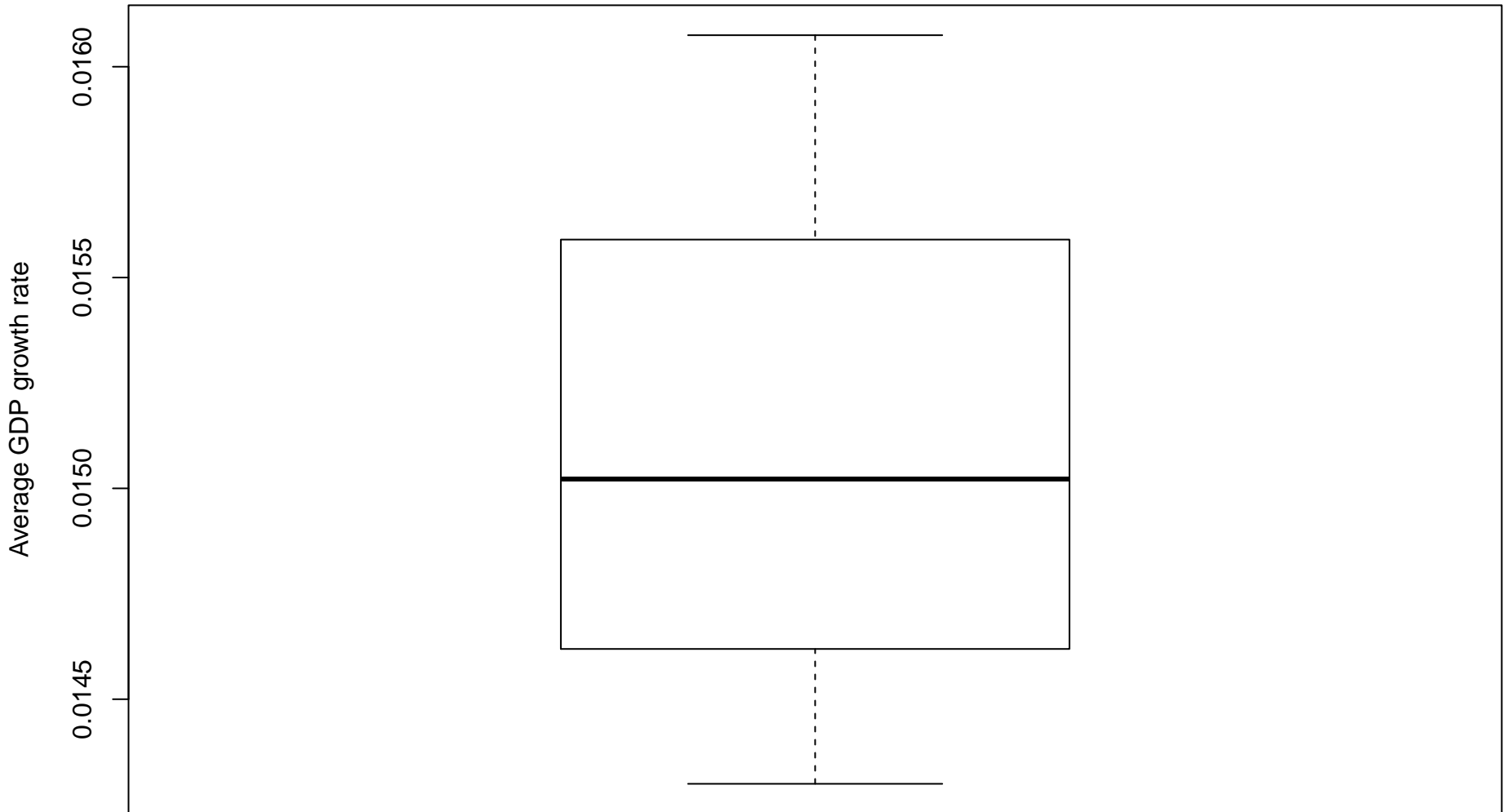
	avg.ADF	rej.ADF	avg.PP	rej.PP	avg.KPSS	rej.KPSS	avg.BDS	rej.BDS	avg.KS	rej.KS	AD	V
dGDP	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.26	0.00	0.06	C
dA	0.01	1.00	0.01	1.00	0.08	0.25	0.00	1.00	0.19	0.50	0.00	C
dw	0.01	1.00	0.01	1.00	0.08	0.25	0.00	1.00	0.19	0.50	0.00	C
V	0.01	1.00	0.01	1.00	0.03	0.75	0.00	1.00	0.09	0.67	0.00	C
U	0.01	1.00	0.01	1.00	0.03	0.75	0.00	1.00	0.00	1.00	0.00	C
mu2avg	0.01	1.00	0.01	1.00	0.01	1.00	0.00	1.00	0.00	1.00	0.00	C
HH1	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.24	0.50	0.07	C
HH2	0.01	1.00	0.01	1.00	0.06	0.50	0.00	1.00	0.04	0.67	0.00	C

(average p–values for testing H0 and rate of rejection of H0 / MC runs = 4 / period = 2 – 600)

(ADF/PP H0: non–stationary, KPSS H0: stationary, BDS H0: i.i.d., KS/AD/WW H0: ergodic)

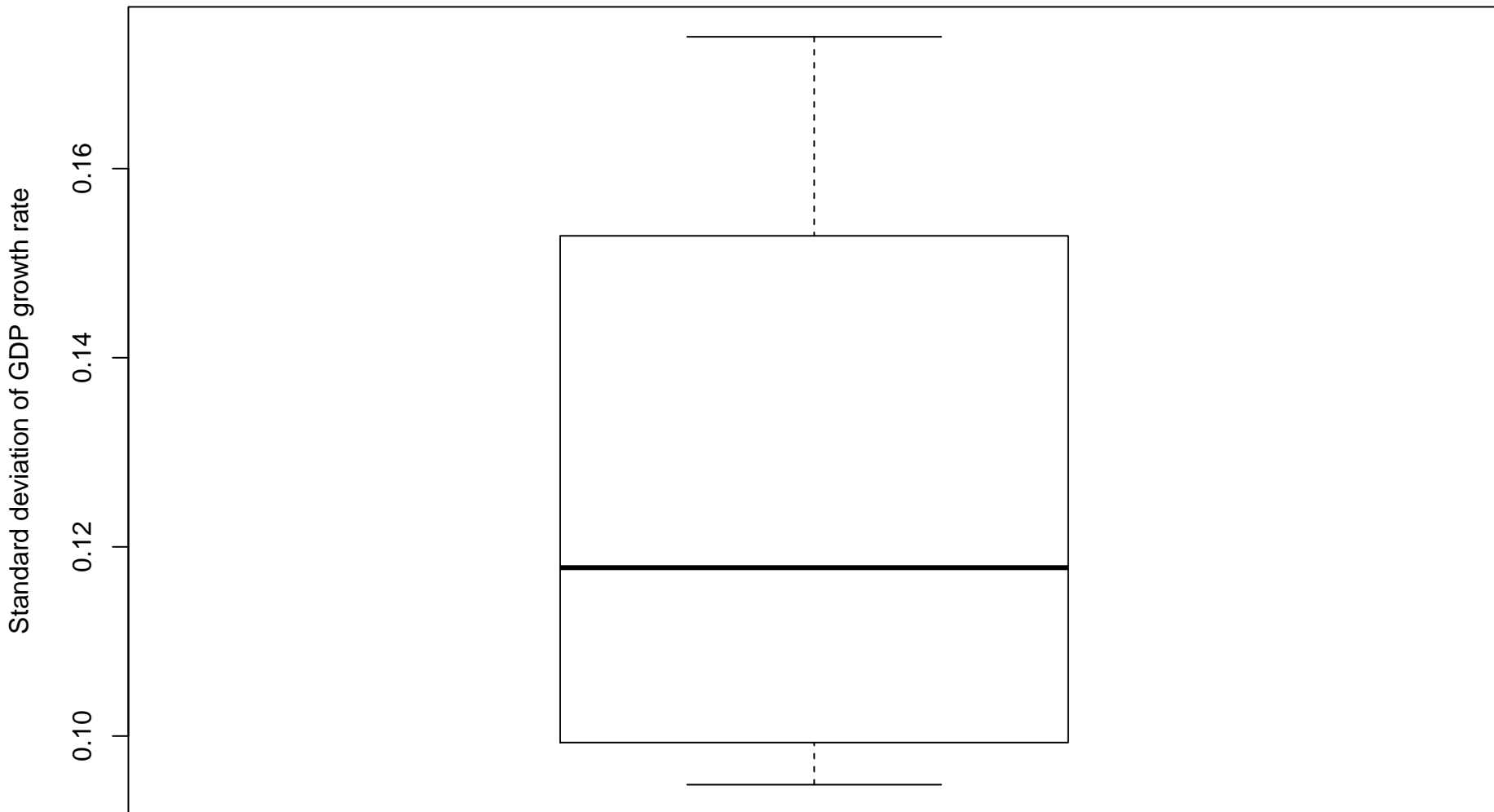
(significance = 0.05)

GDP growth



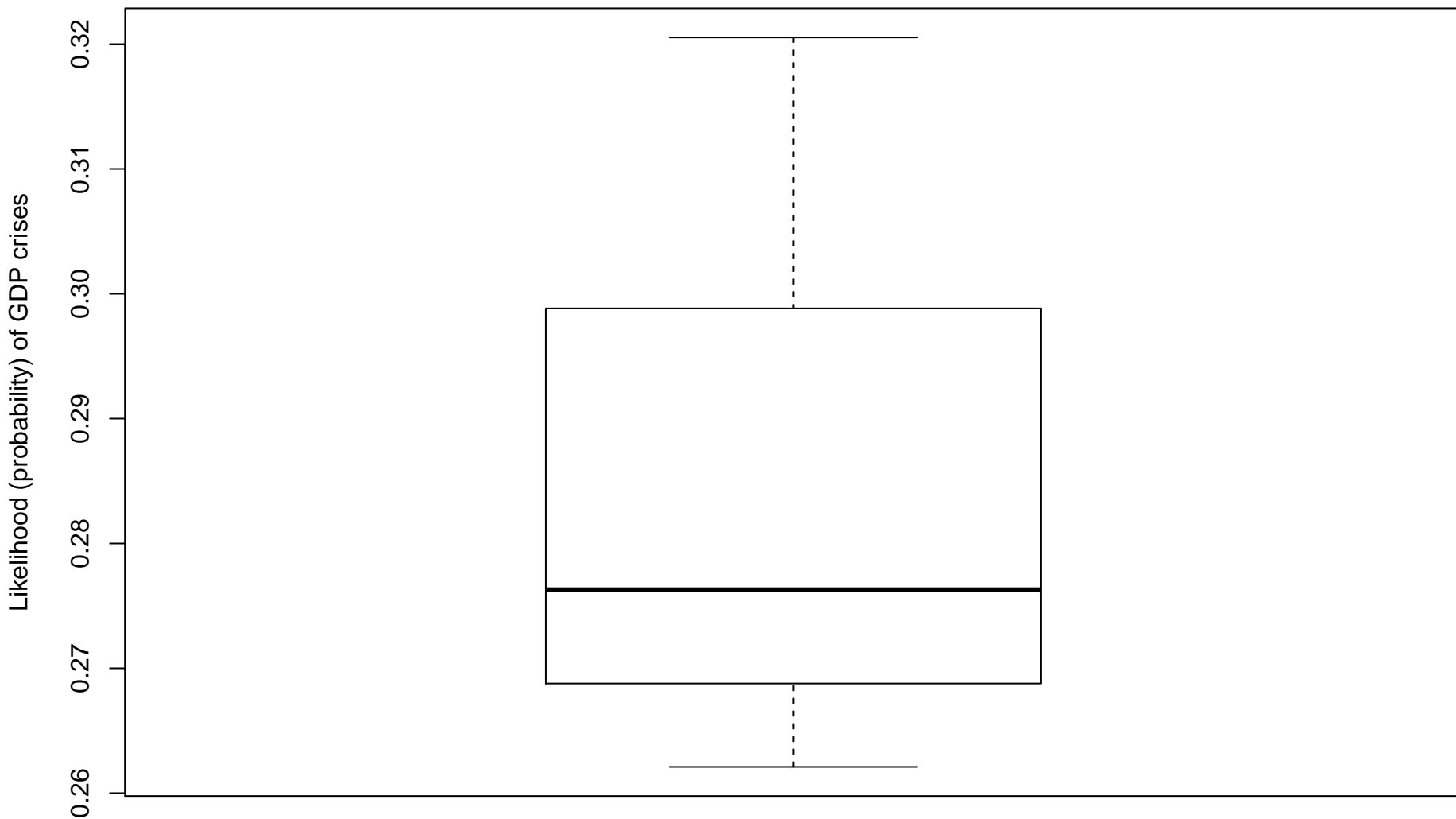
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Volatility of GDP growth



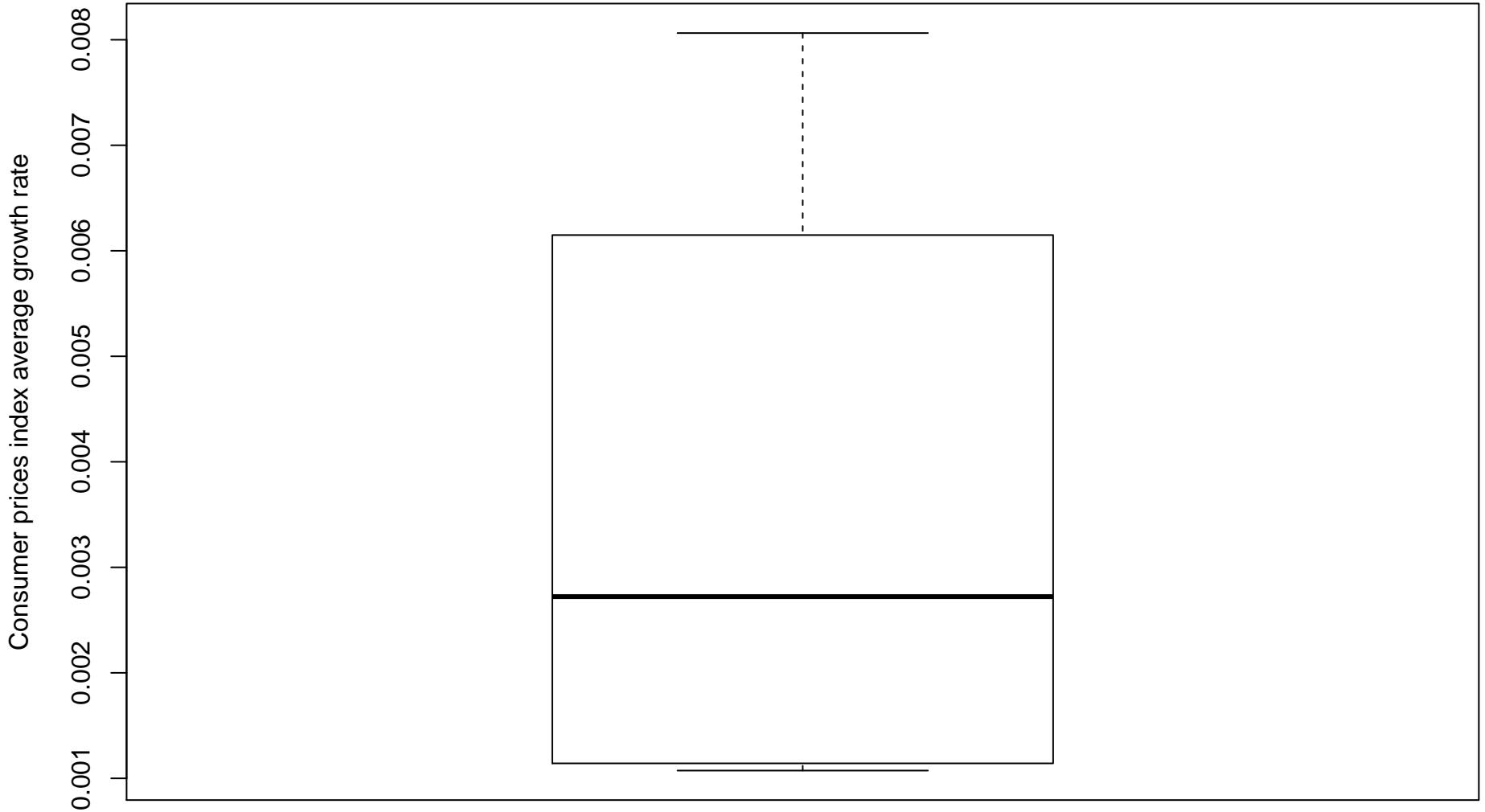
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Likelihood of GDP crises



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

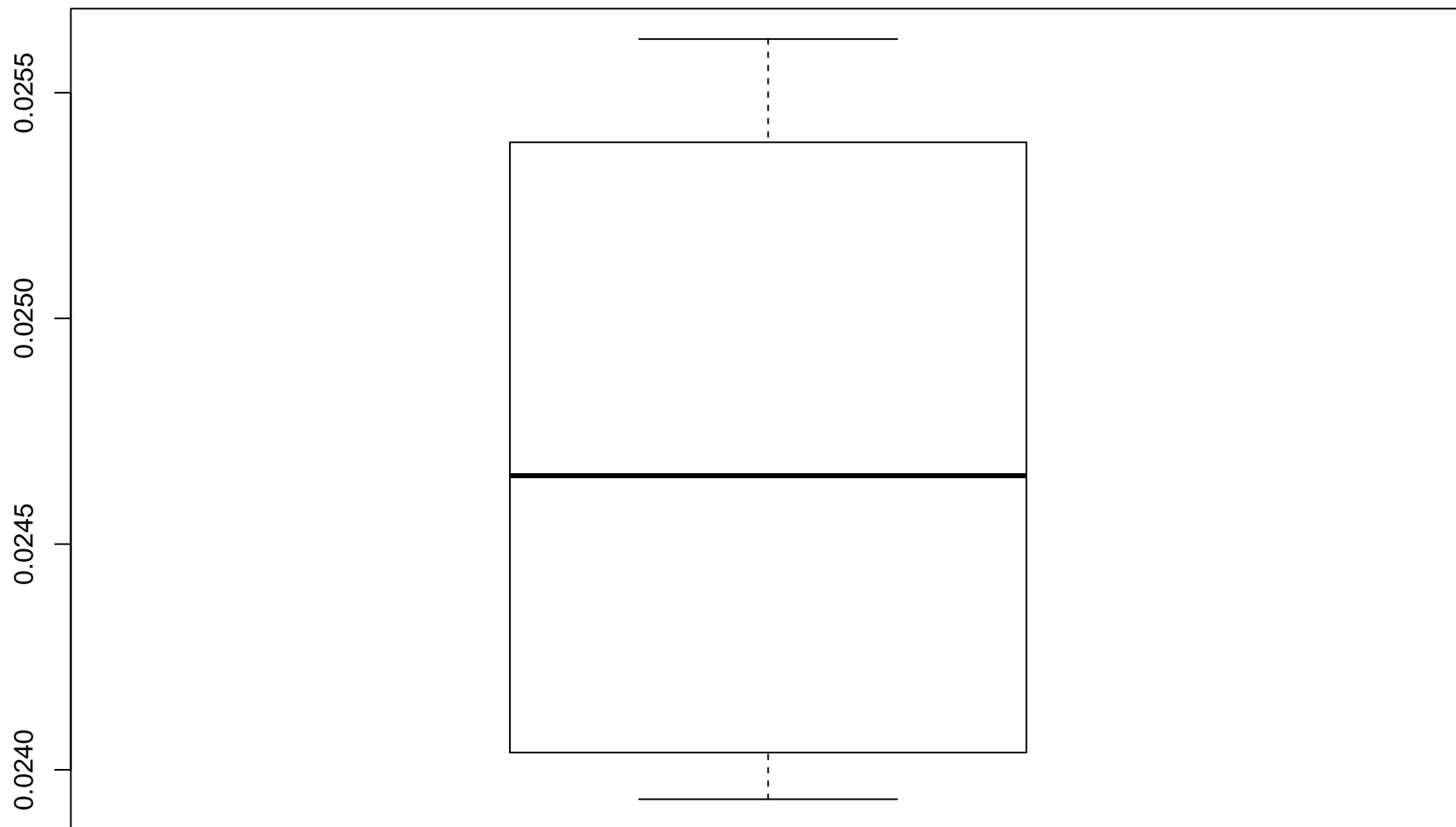
Inflation



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

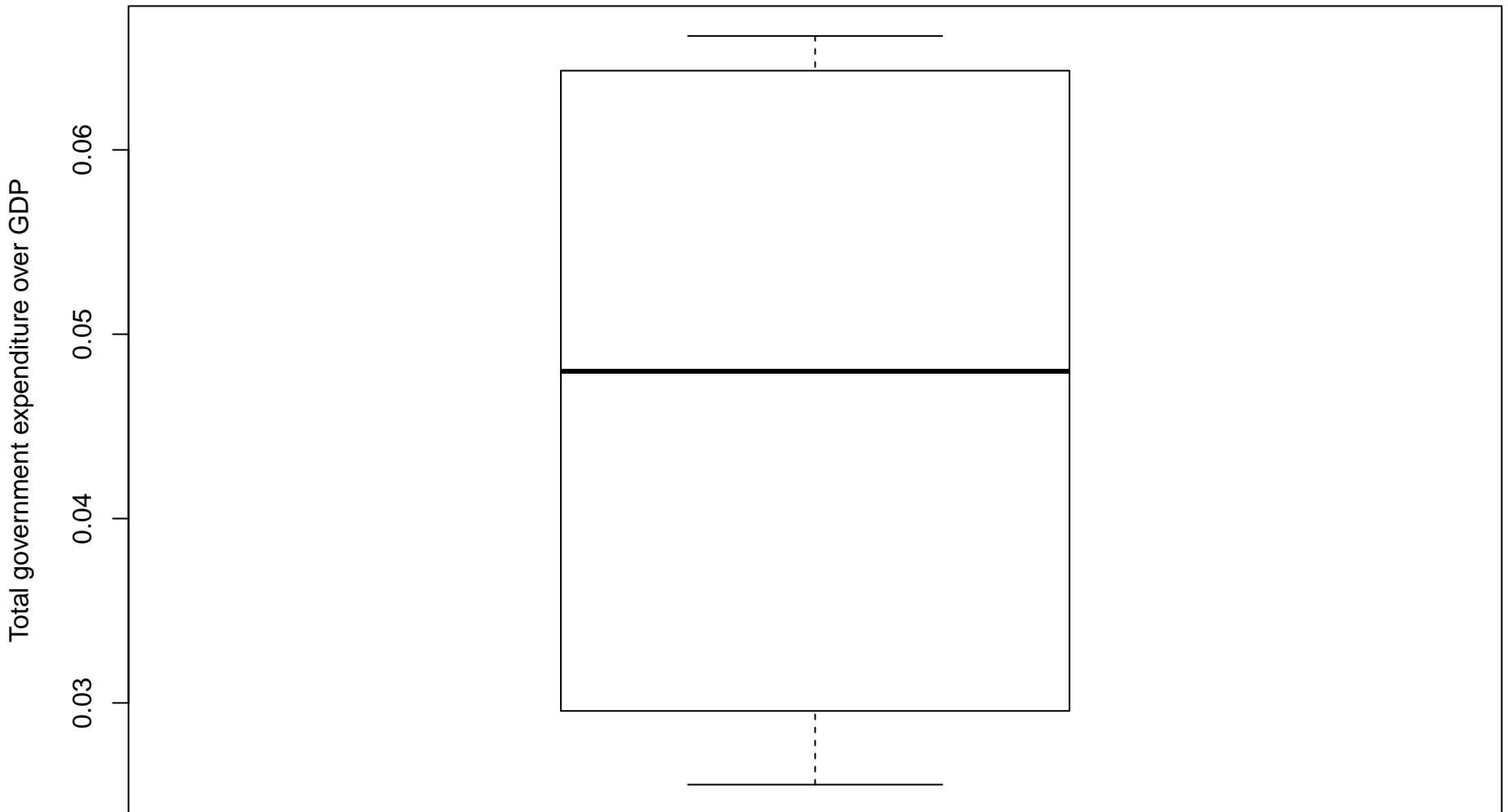
Government tax income over GDP

Tax



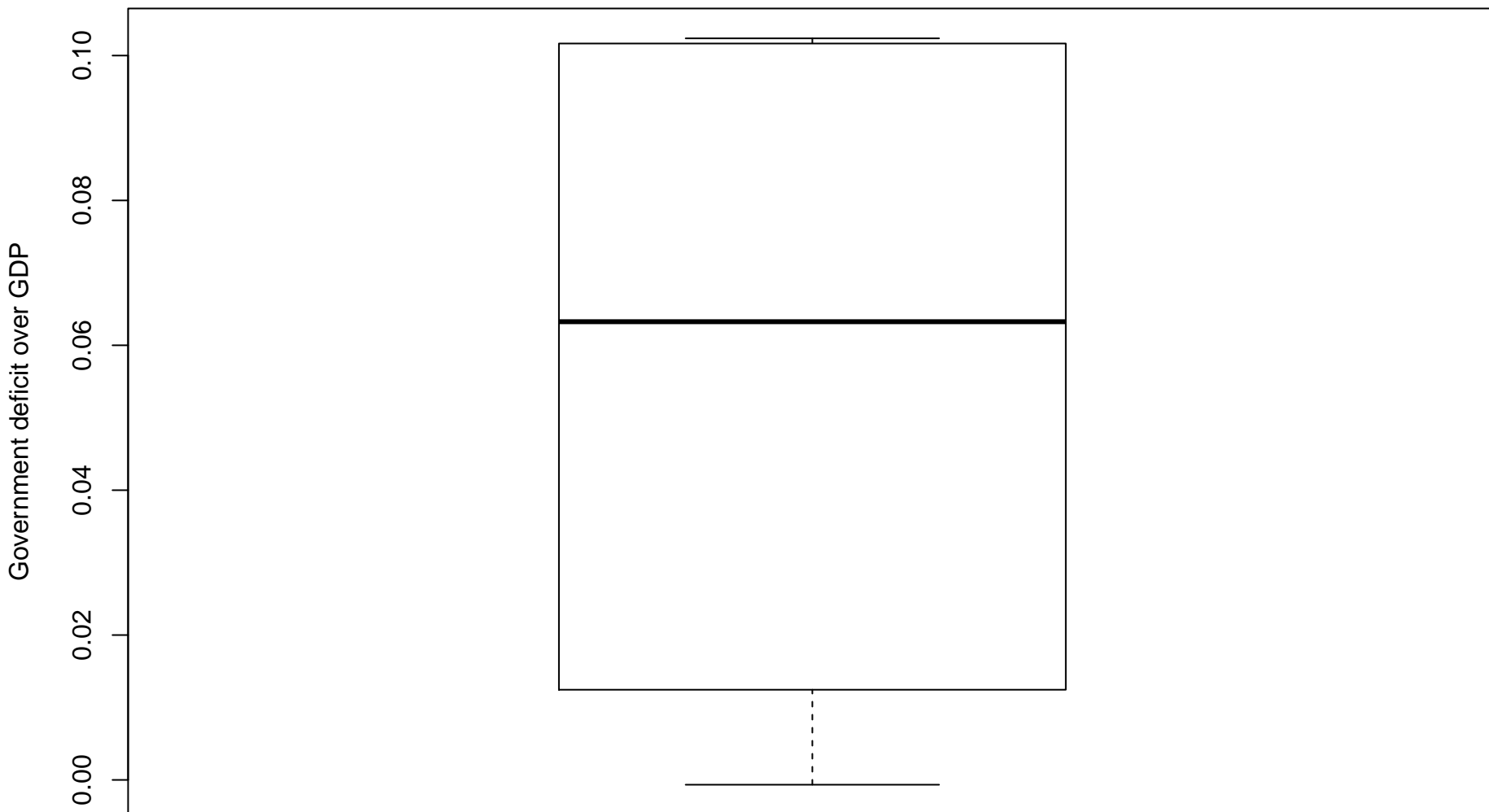
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Government total expenditure



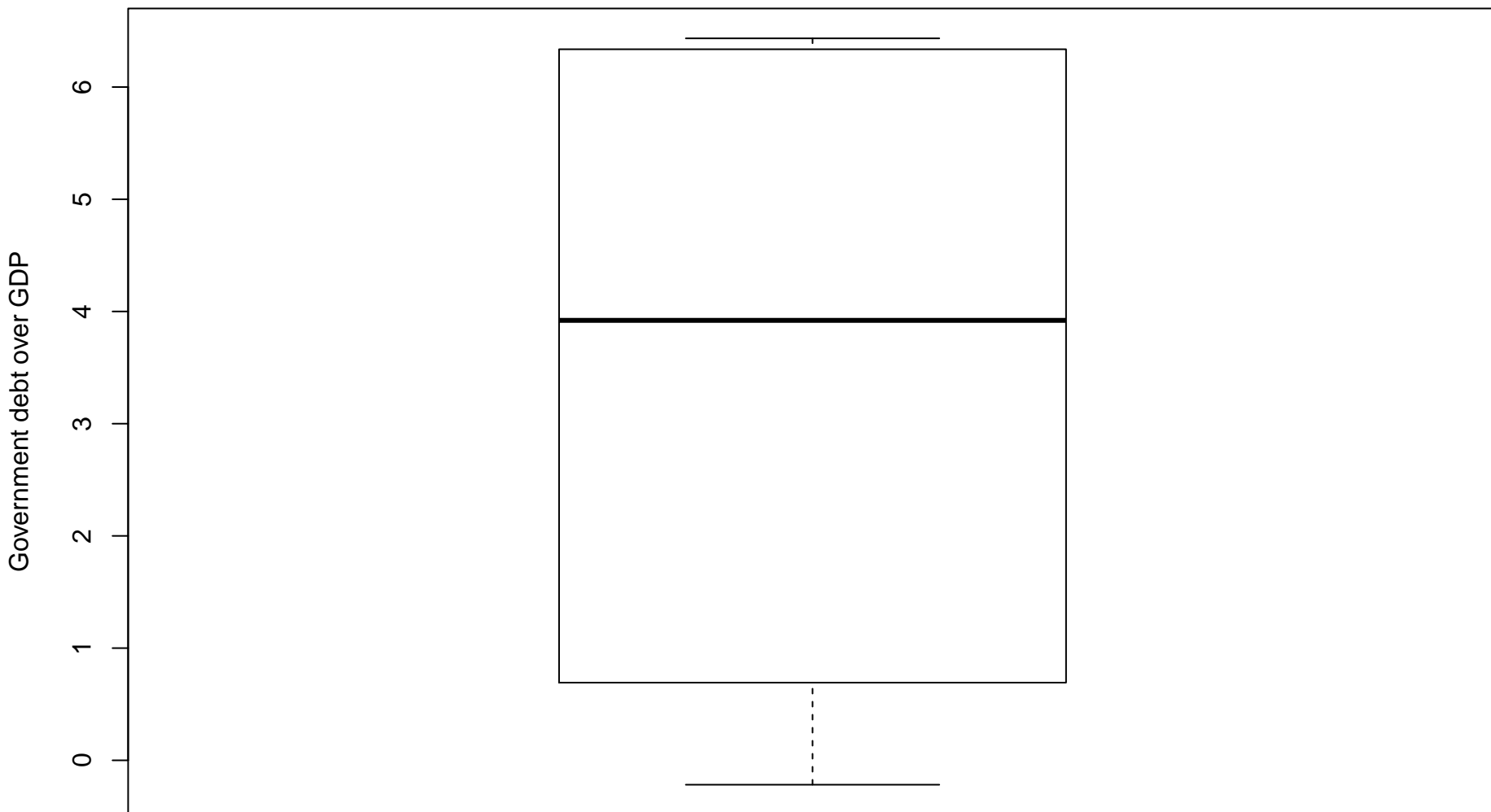
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Government deficit



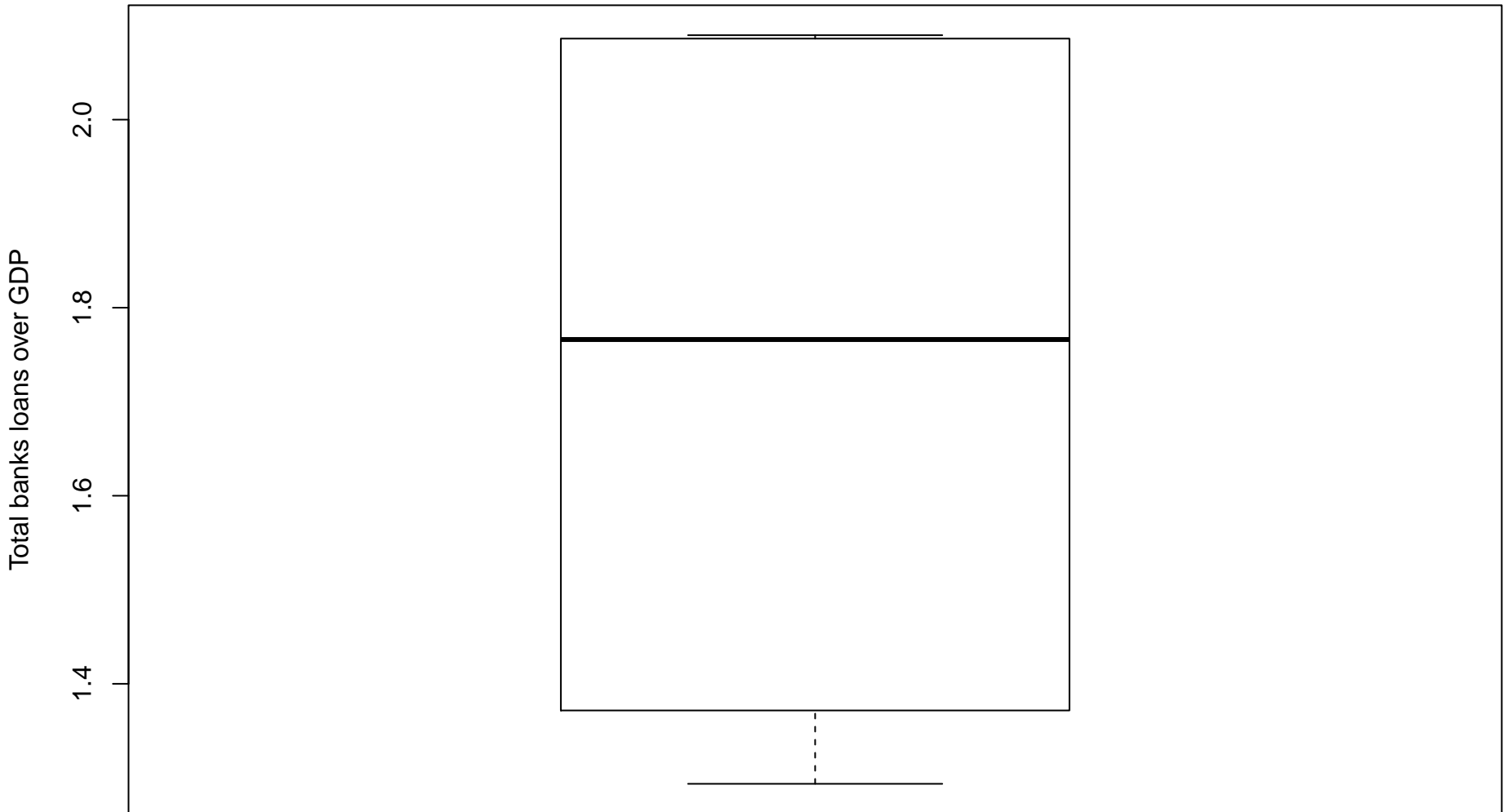
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Government debt



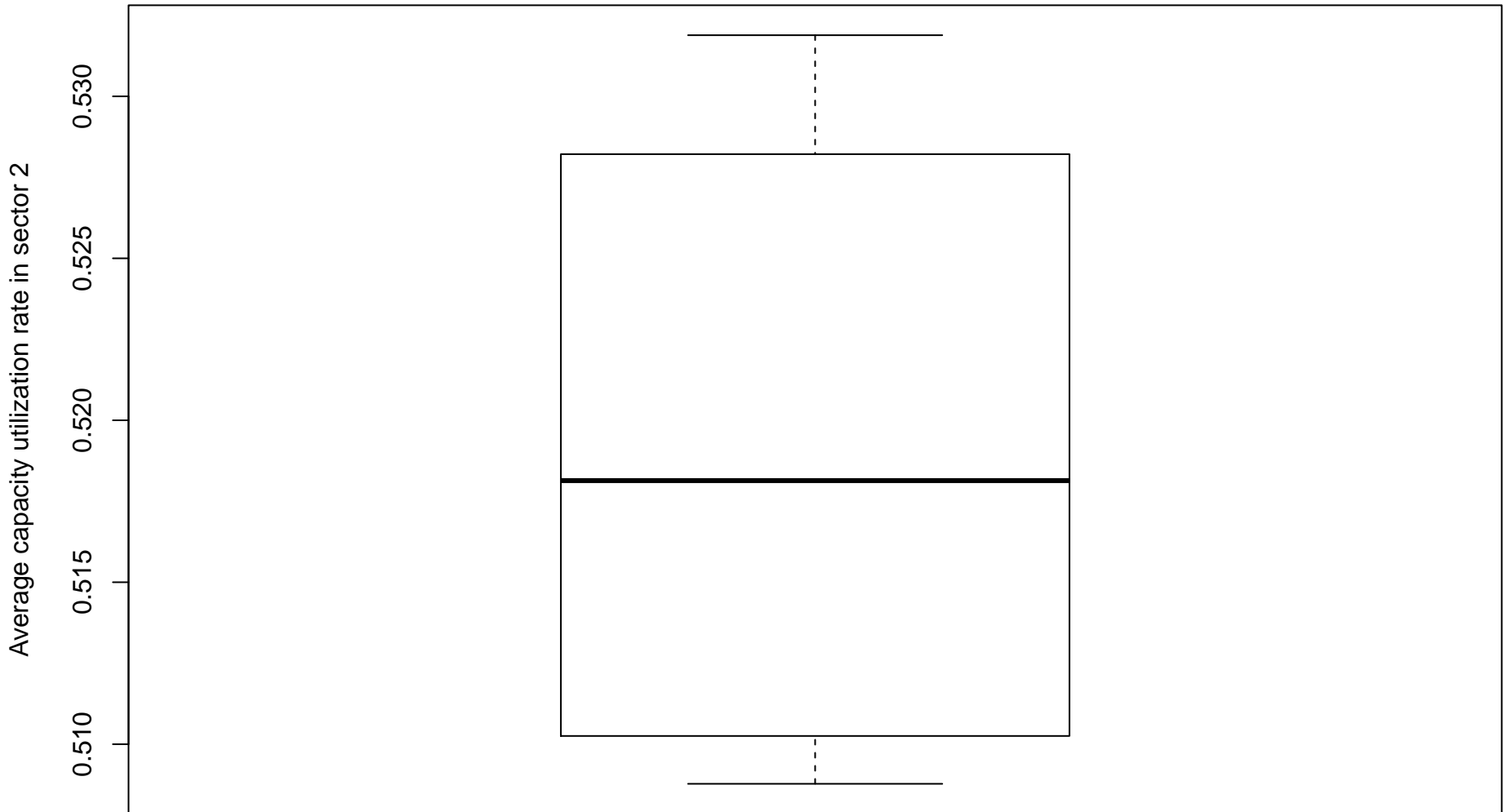
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Loans



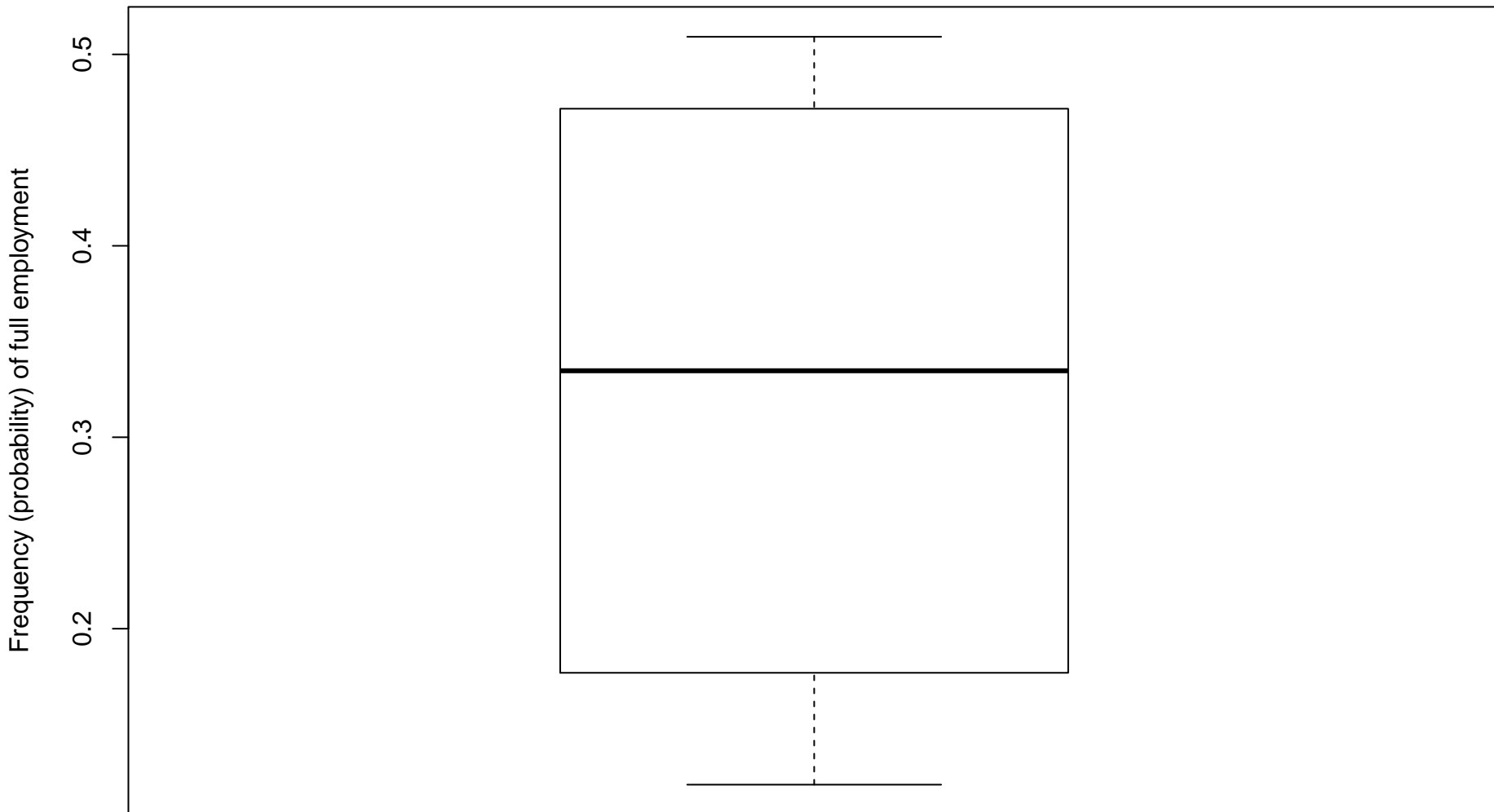
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Capacity utilization



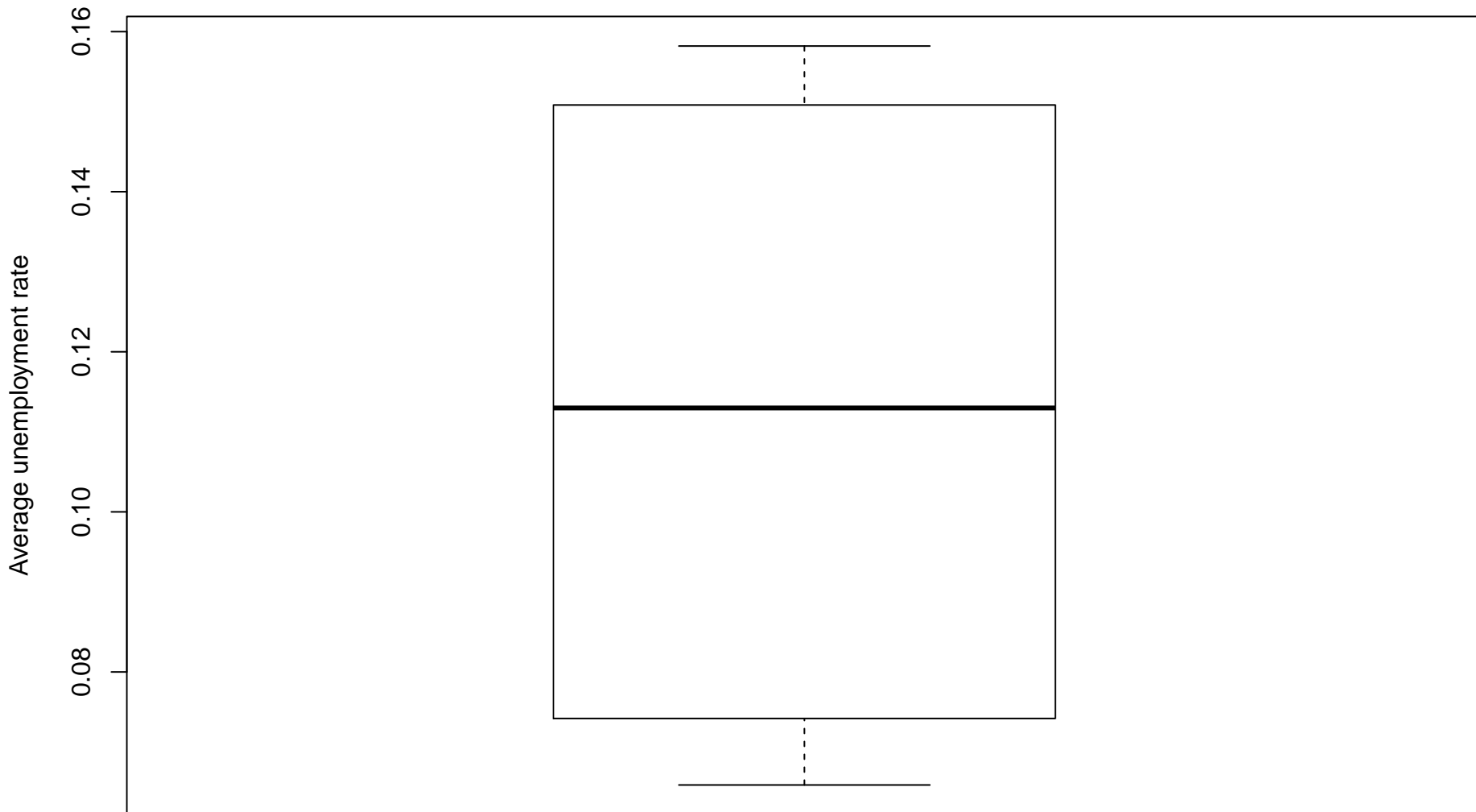
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Full employment frequency



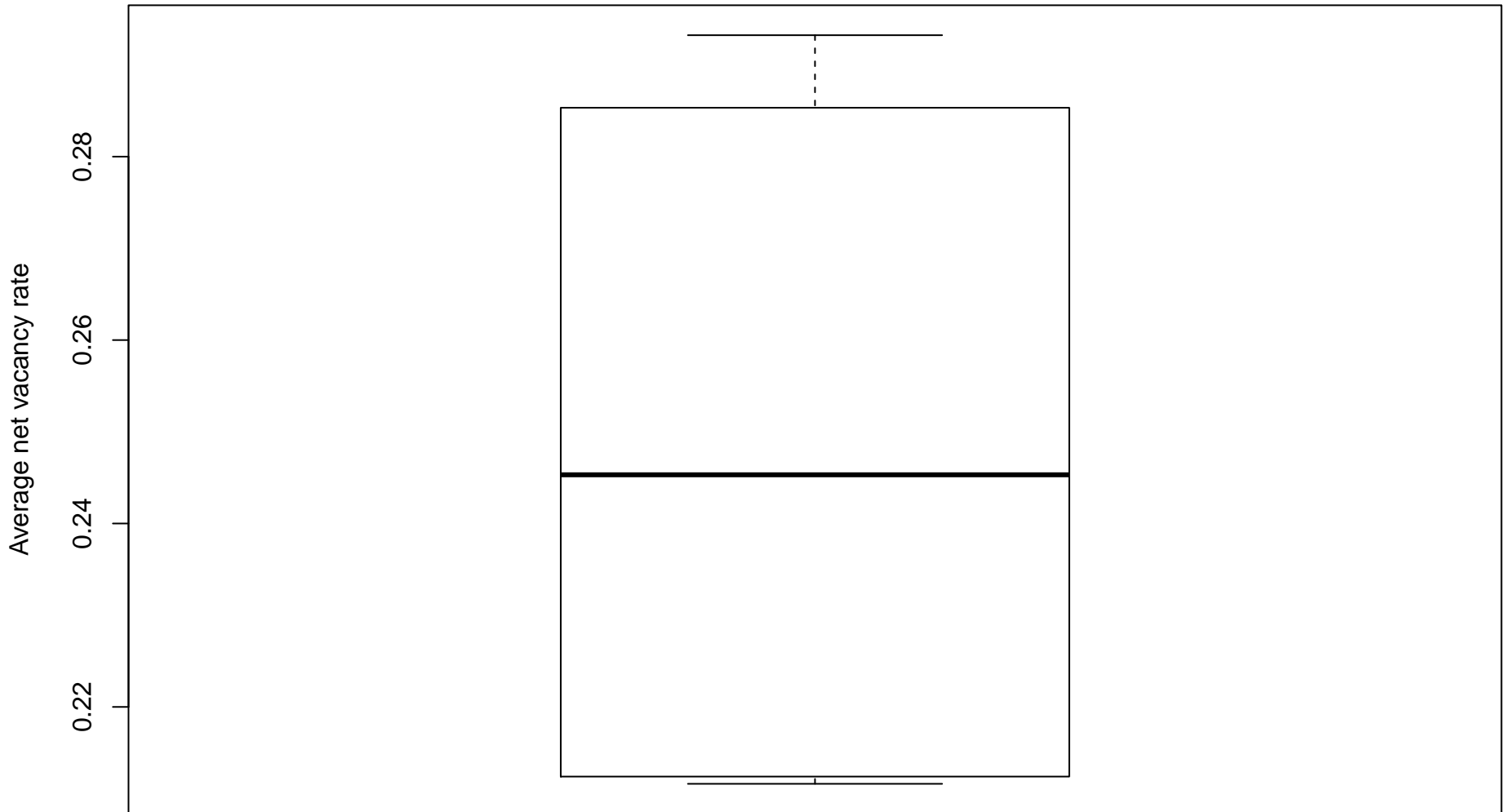
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Unemployment



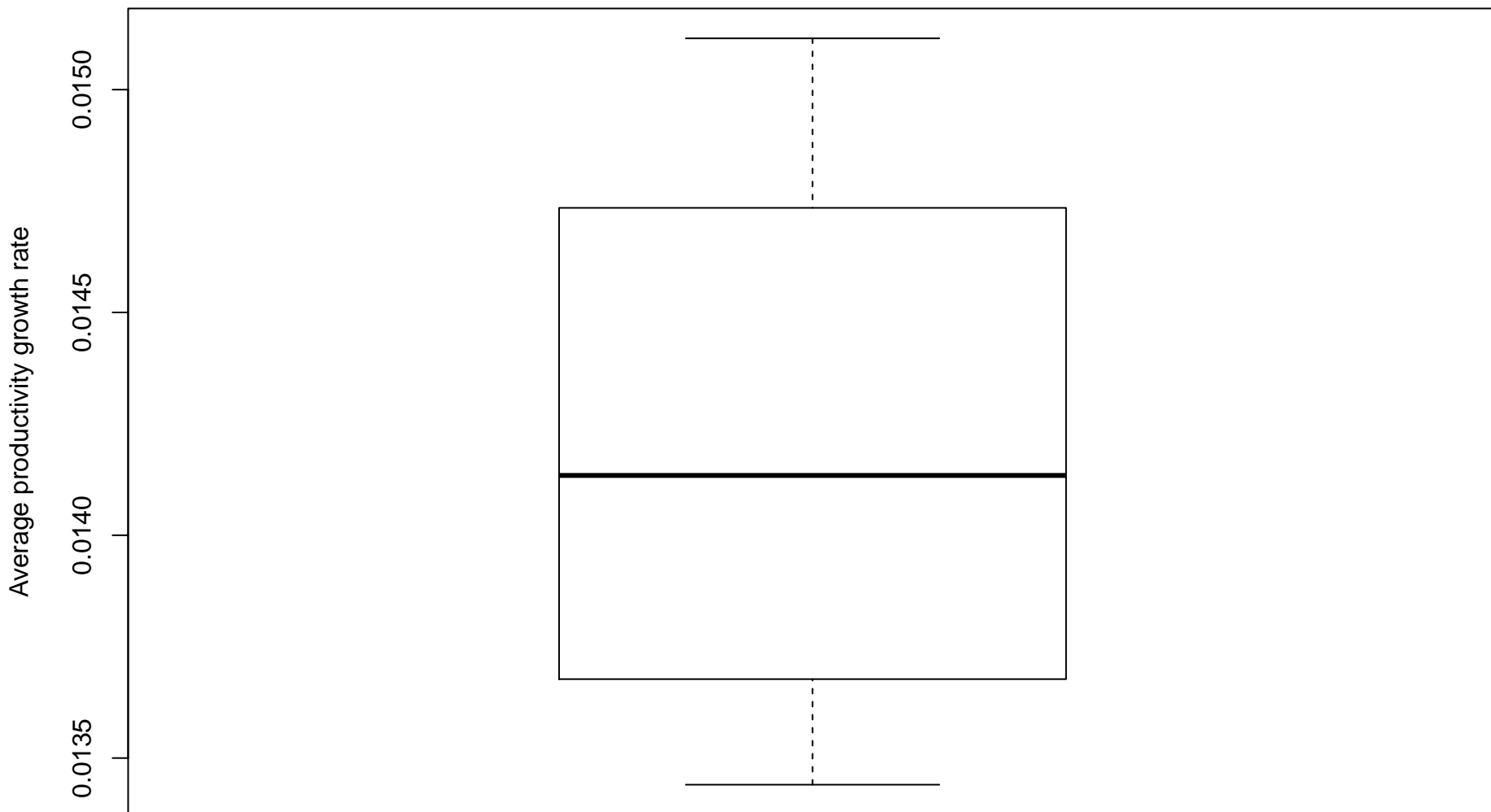
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Vacancy



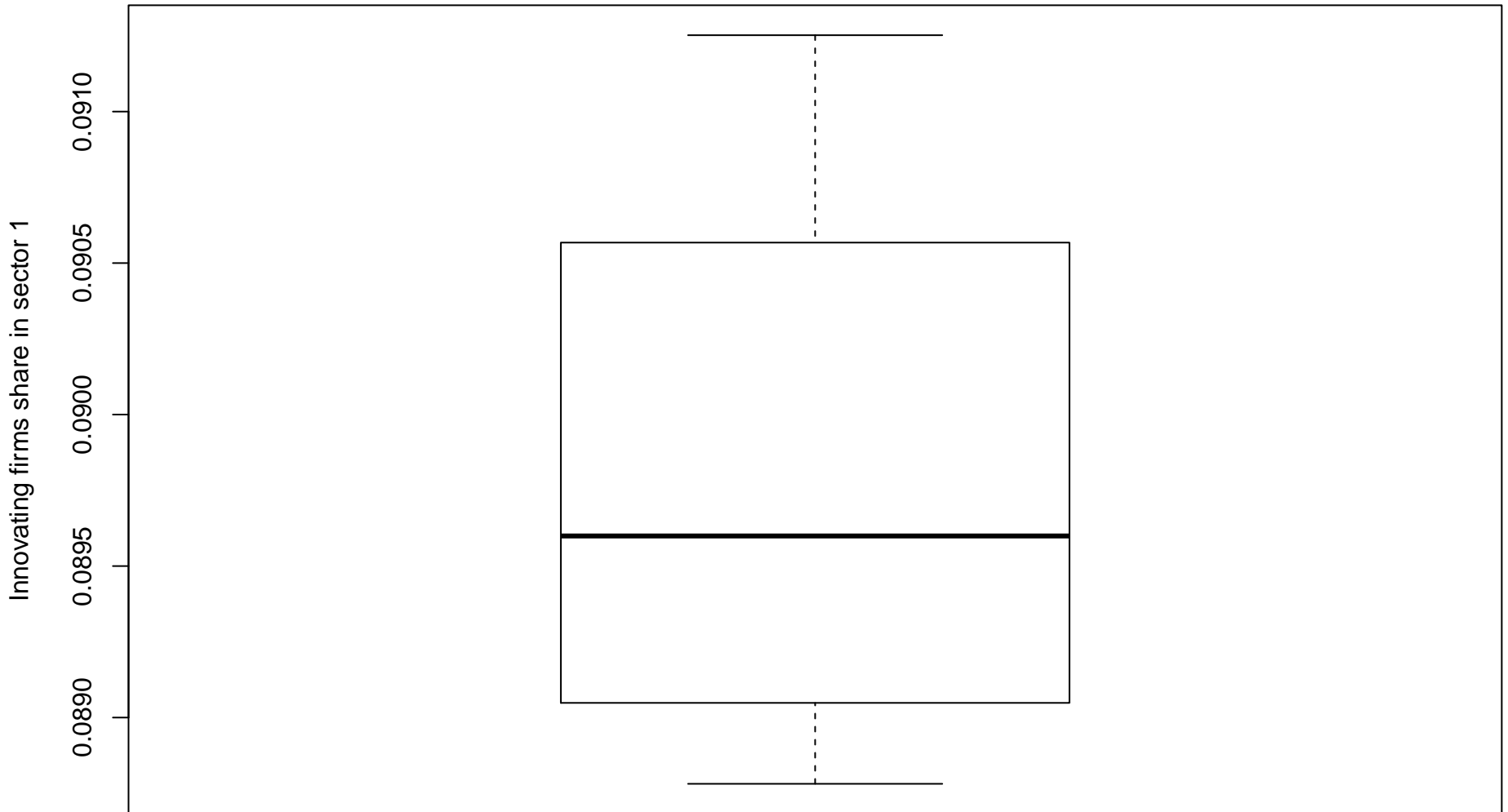
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Productivity growth



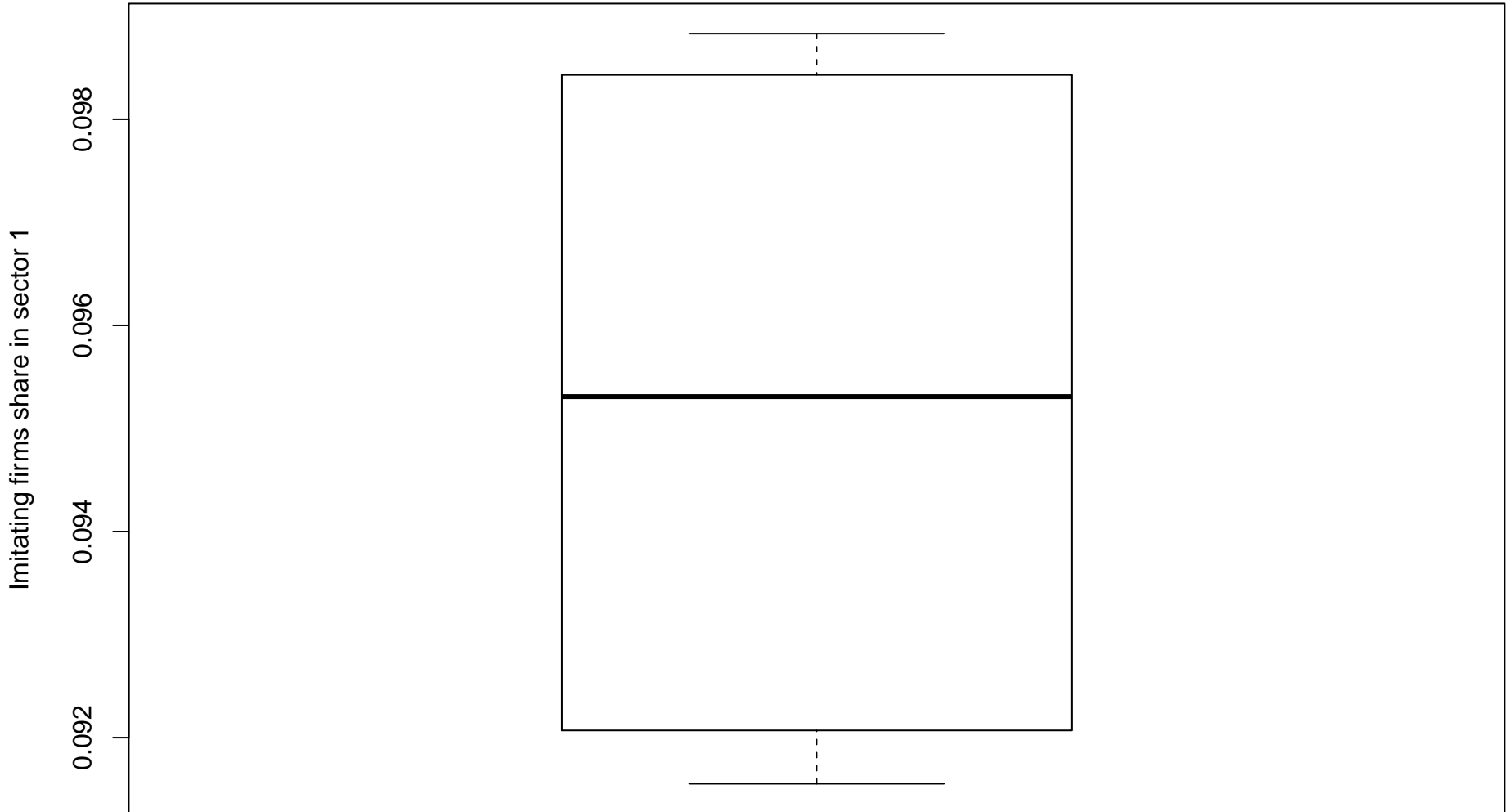
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Innovation



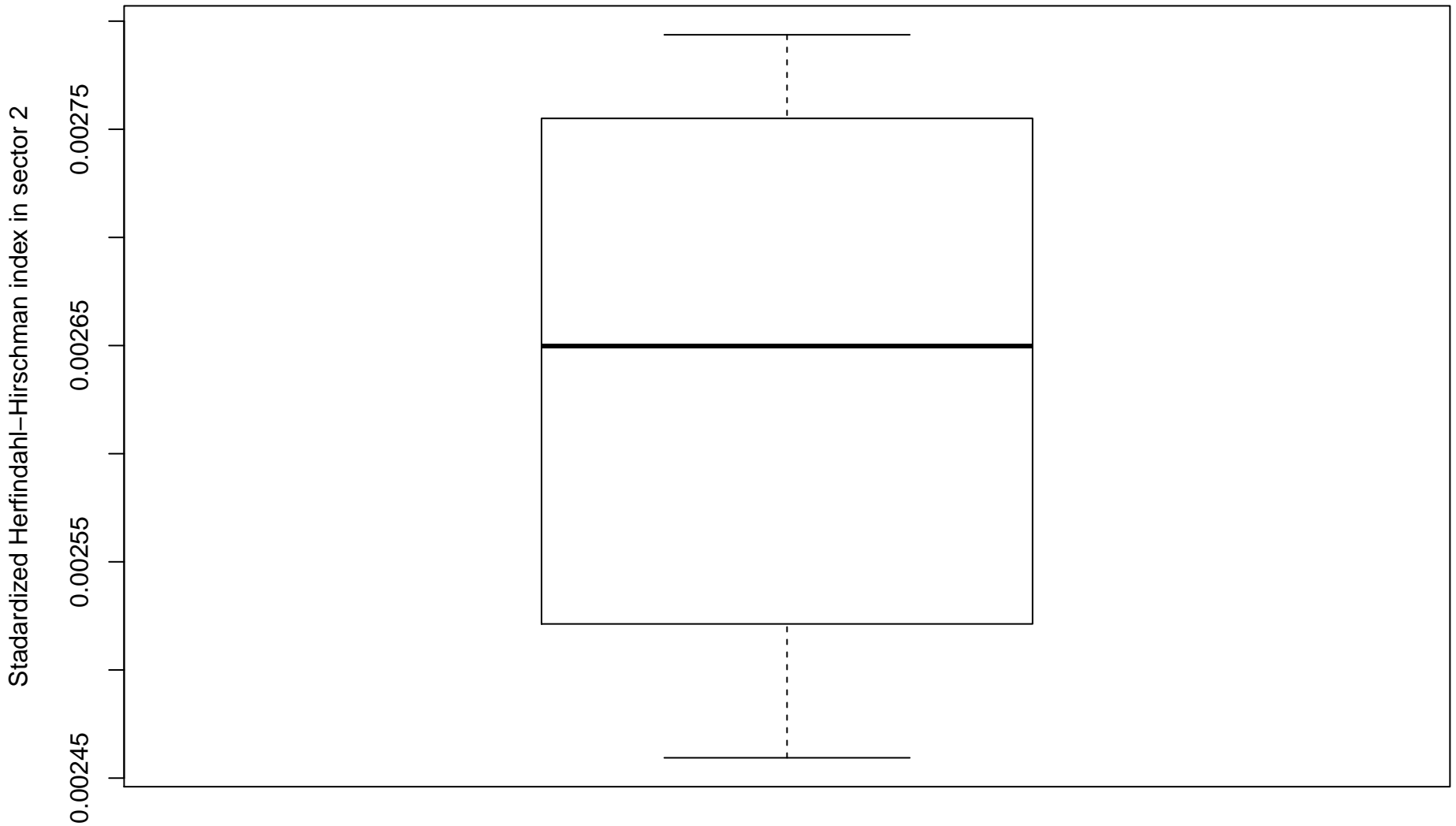
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Imitation



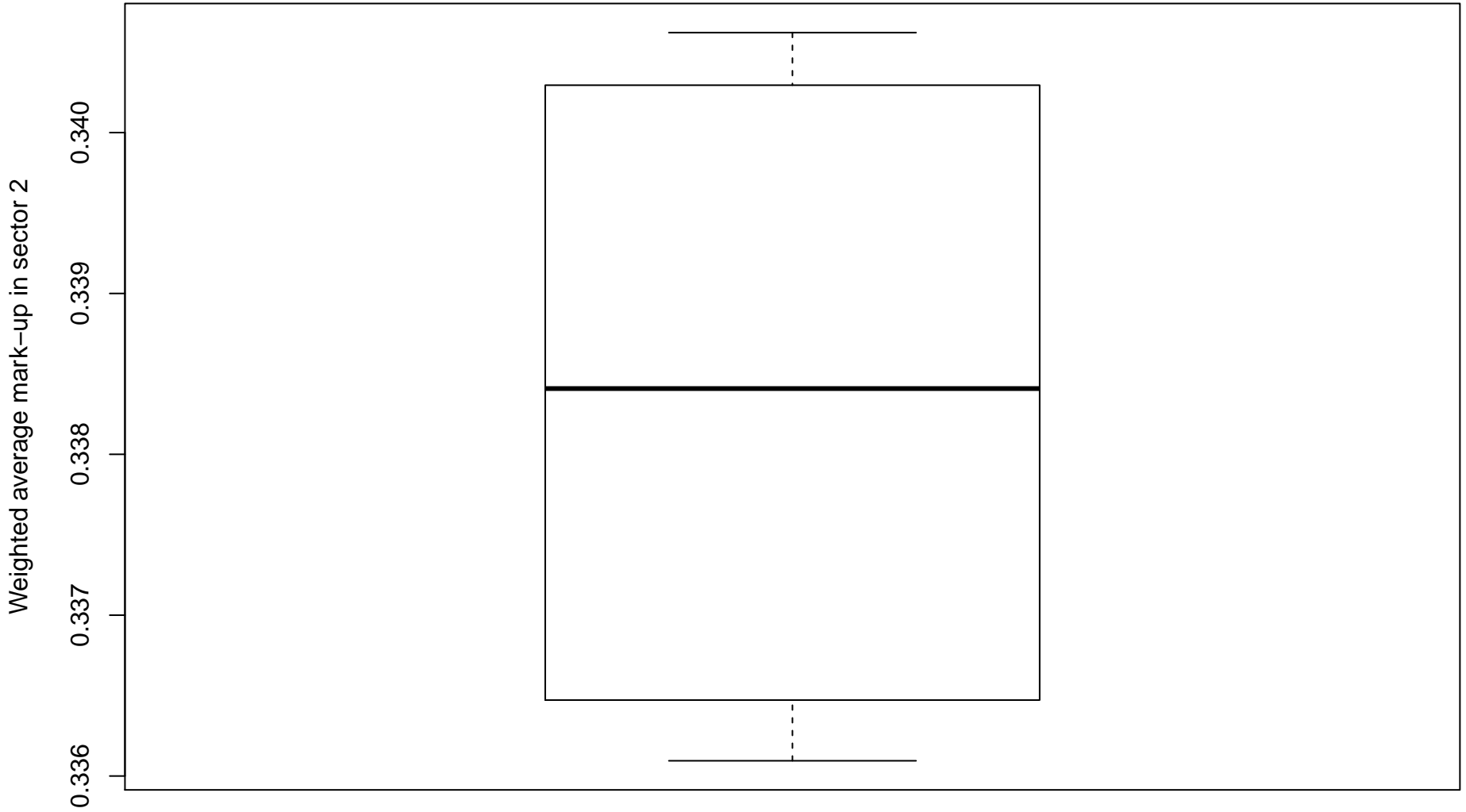
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Market concentration



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Mark-ups



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 4 / period = 2 – 600)

Monte Carlo descriptive statistics (all experiments)

	Avg[1]	SD[1]	Min[1]	Max[1]
GDP growth	0.0151	0.0007342	0.0143	0.01607
Volatility of GDP growth	0.1261	0.03557	0.09486	0.1739
Likelihood of GDP crises	0.2838	0.02539	0.2621	0.3205
Inflation	0.003645	0.003287	0.001074	0.008063
Tax	0.02471	0.000807	0.02393	0.02562
Government total expenditure	0.04693	0.02037	0.02557	0.06618
Government deficit	0.05706	0.05261	-0.0006607	0.1024
Government debt	3.514	3.343	-0.2173	6.434
Loans	1.729	0.4175	1.294	2.09
Capacity utilization	0.5192	0.01086	0.5088	0.5319
Full employment frequency	0.3243	0.1793	0.1185	0.5092
Unemployment	0.1125	0.04517	0.06588	0.1582
Vacancy	0.2489	0.0426	0.2116	0.2932
Productivity growth	0.01421	0.0007119	0.01344	0.01512
Innovation	0.08981	0.001063	0.08878	0.09125
Imitation	0.09525	0.003711	0.09155	0.09883
Market concentration	0.002638	0.0001475	0.002459	0.002794
Mark-ups	0.3384	0.002244	0.3361	0.3406

Experiments: [1] Benchmark

(numbers in brackets indicate the experiment number / MC runs = 4 / period = 2 – 600)