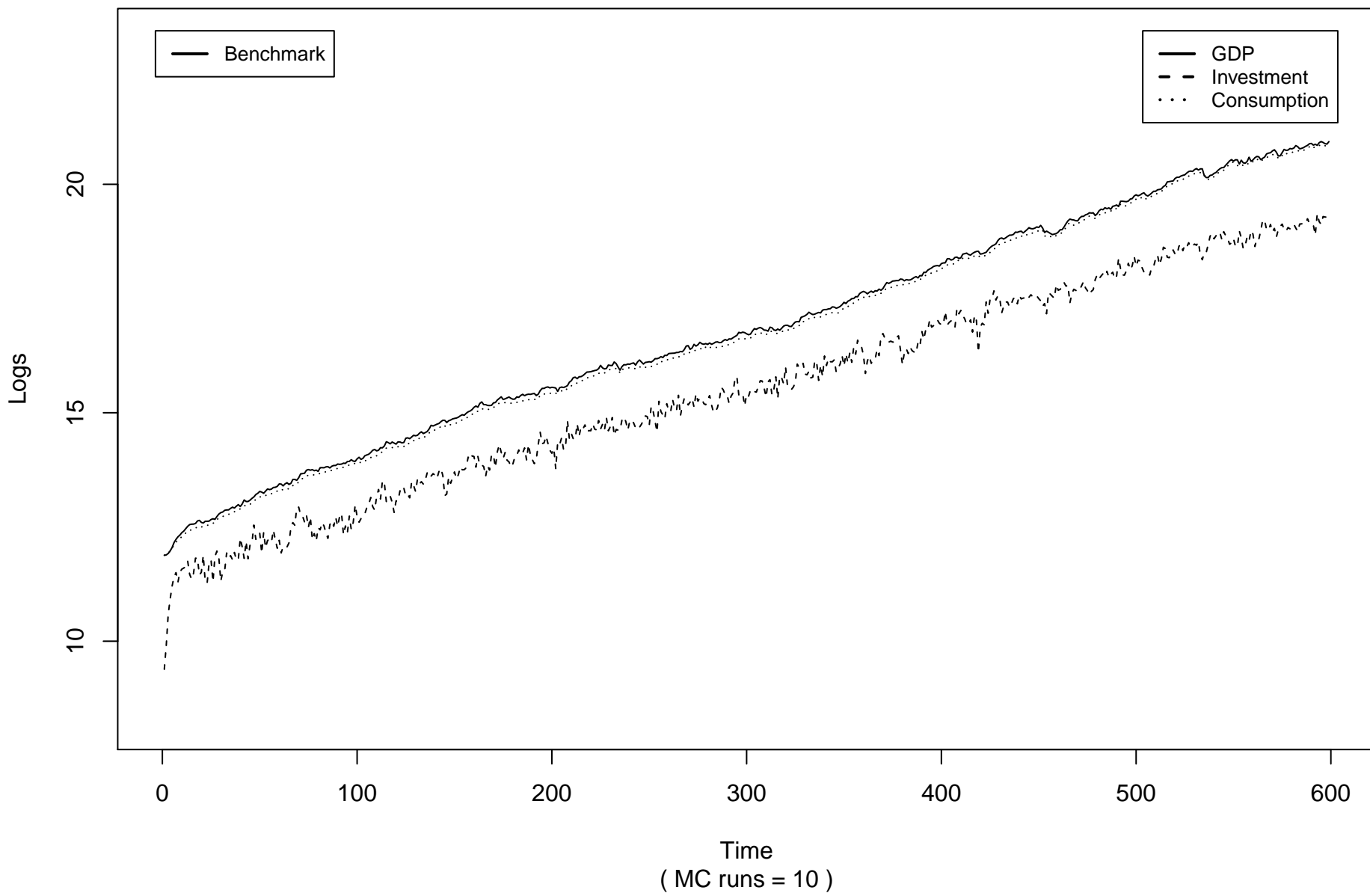
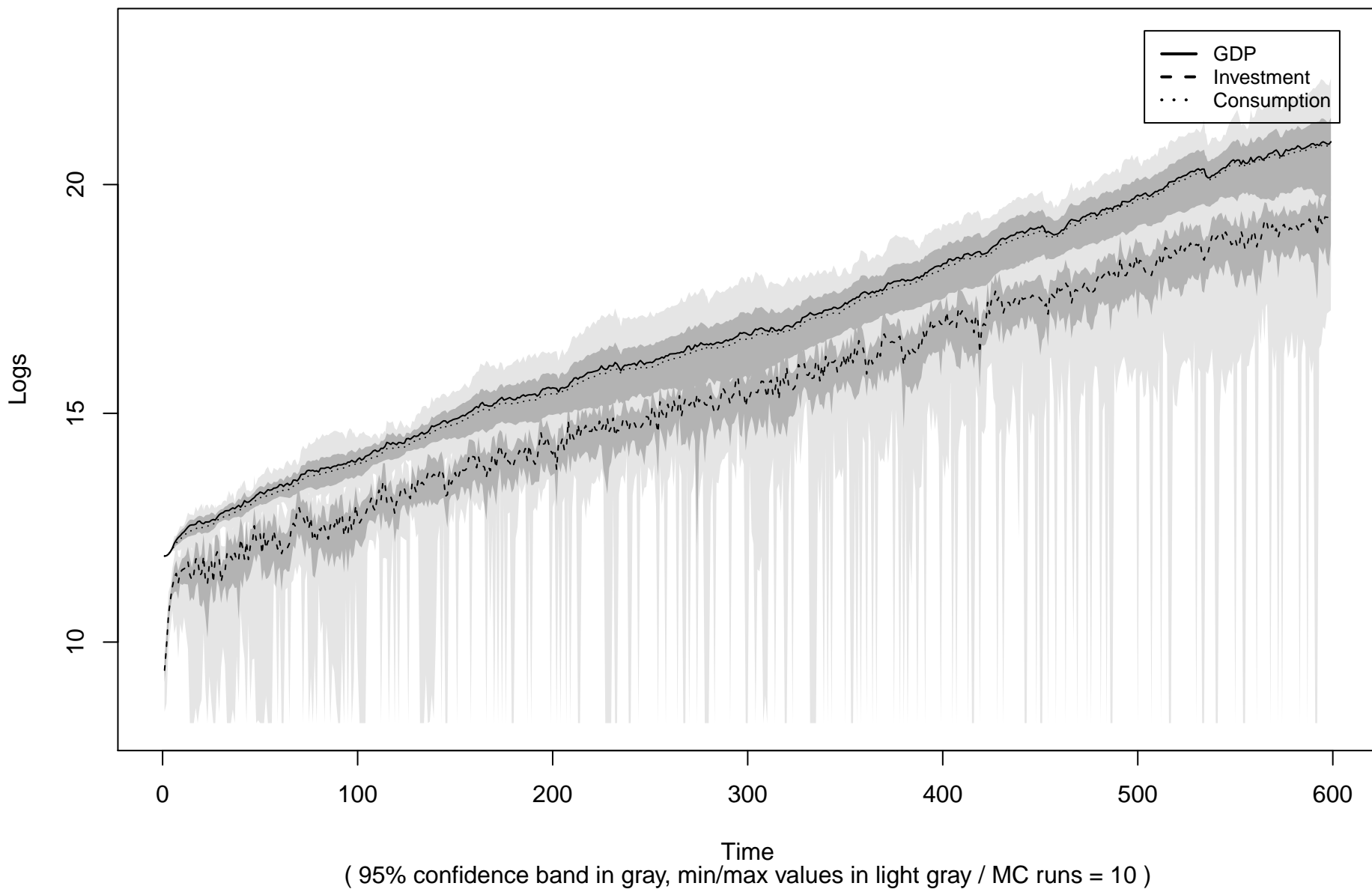


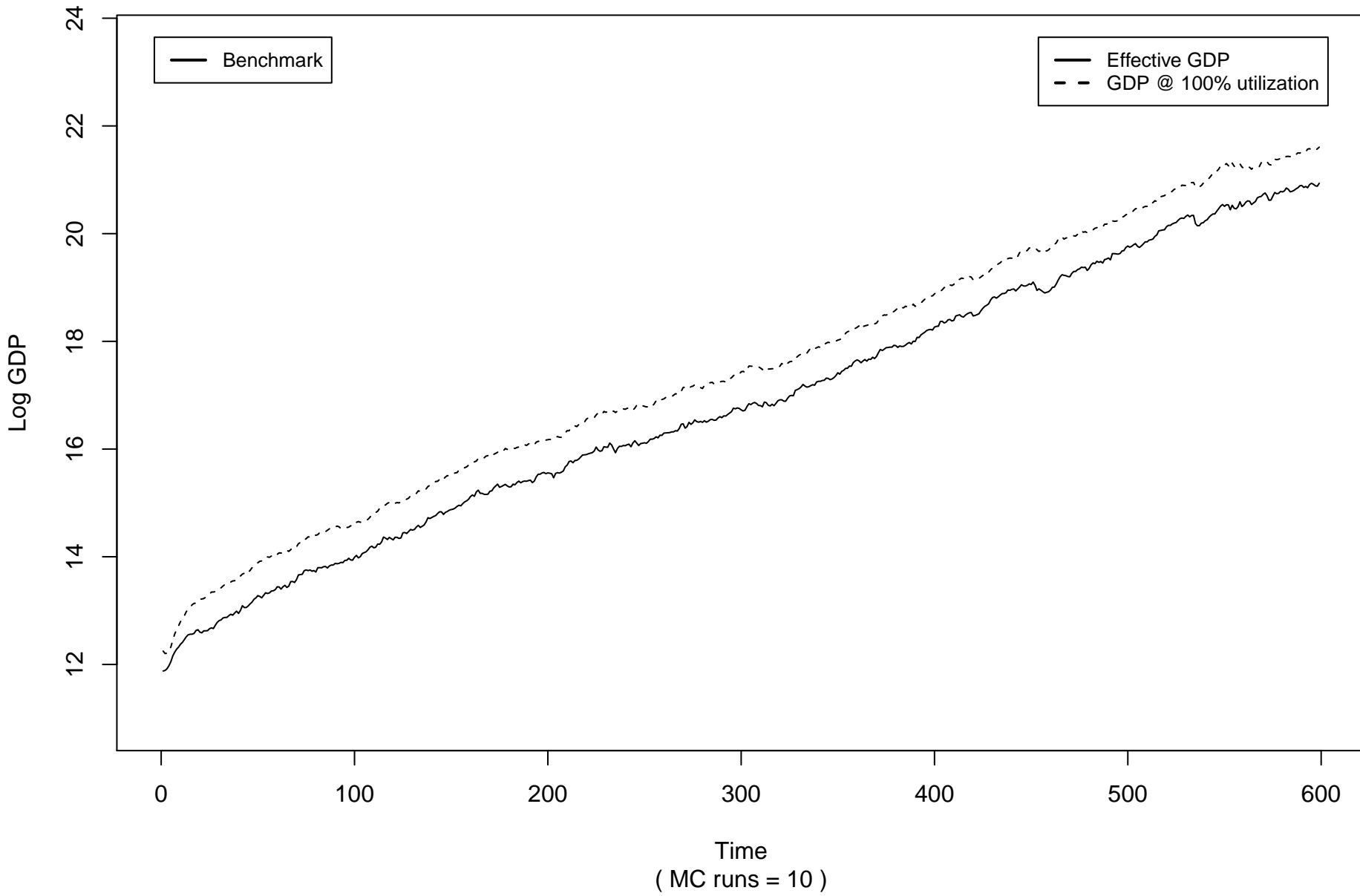
GDP, investment and consumption (all experiments)



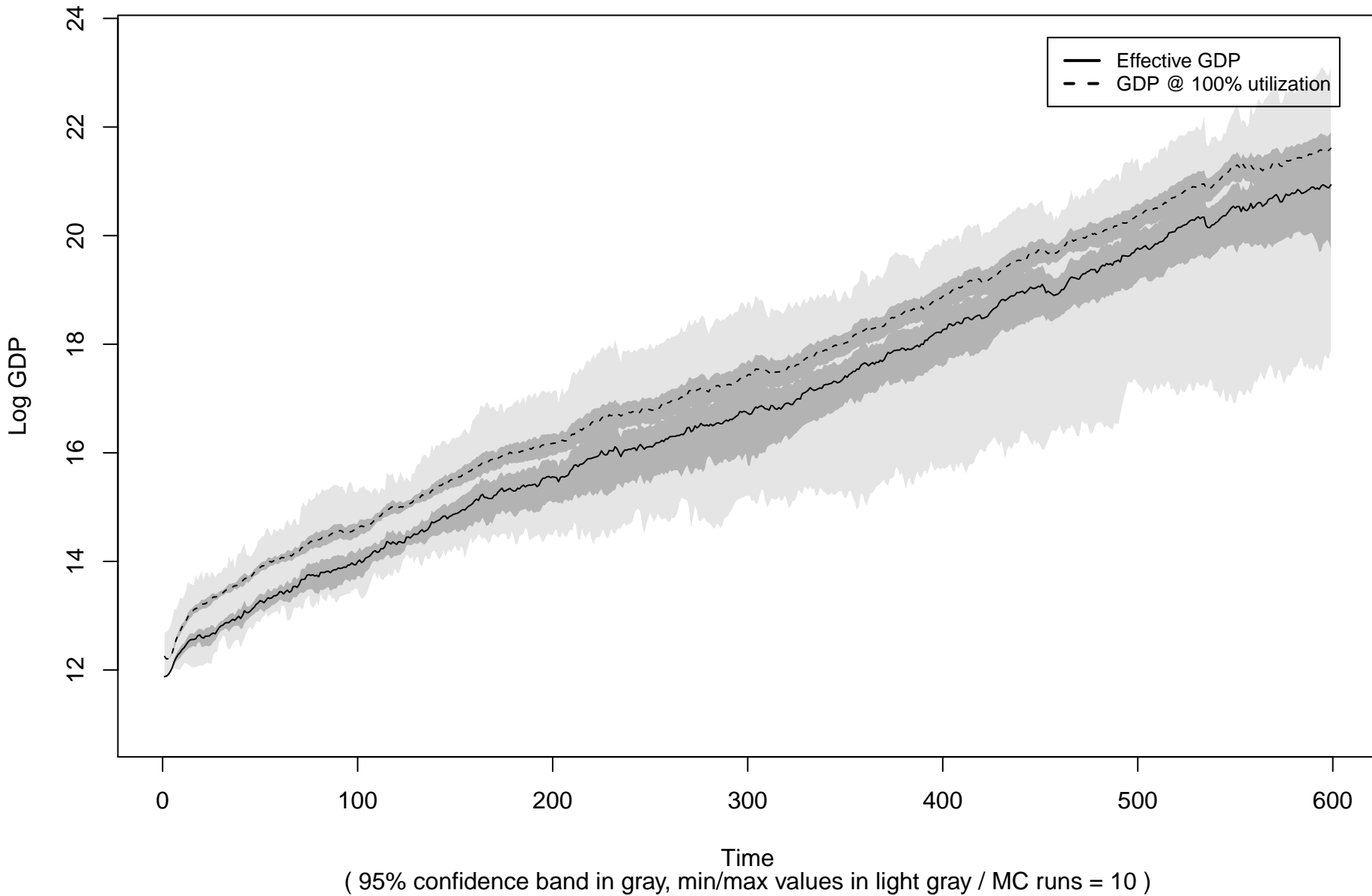
GDP, investment and consumption (Benchmark)



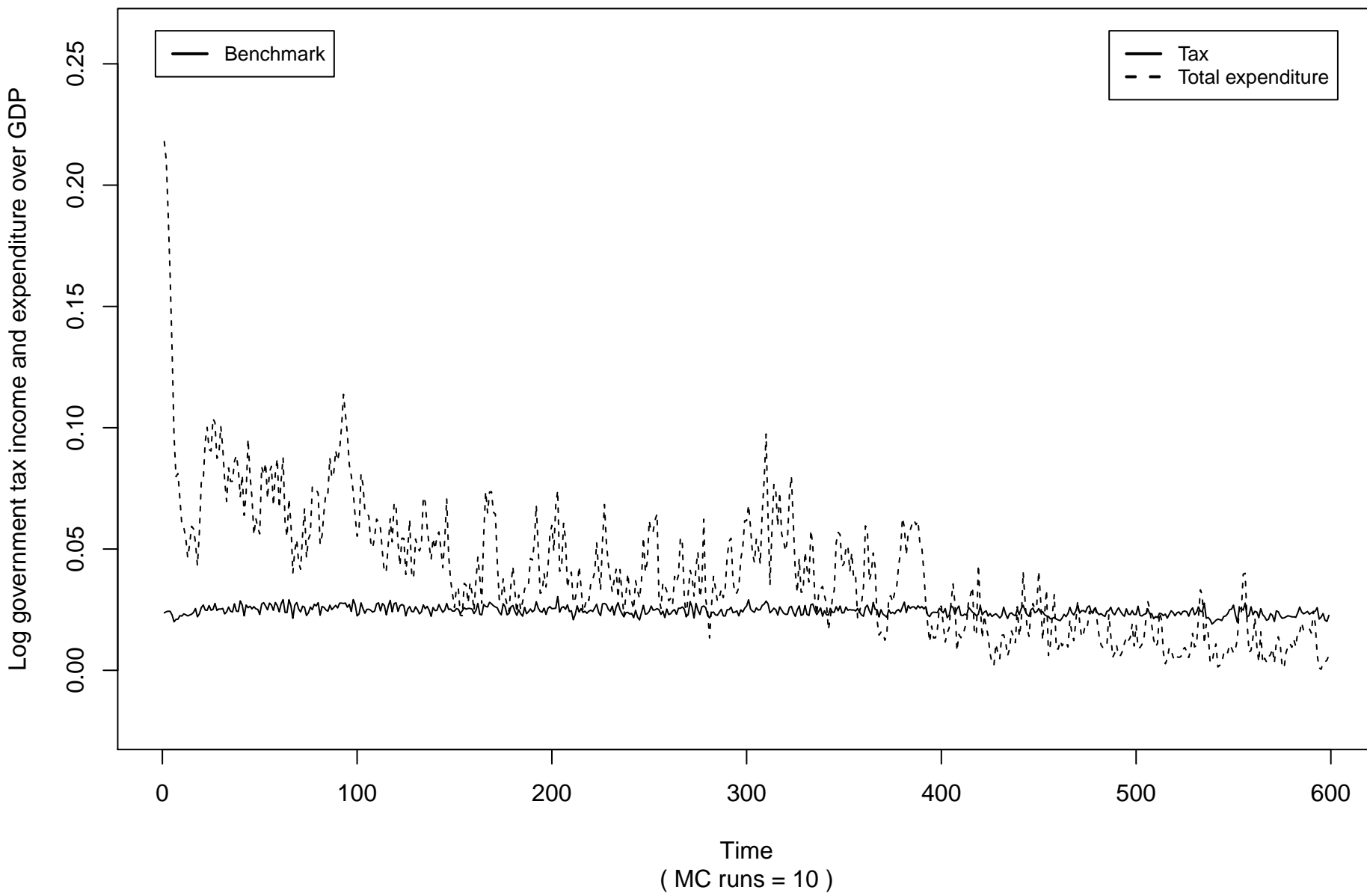
GDP (all experiments)



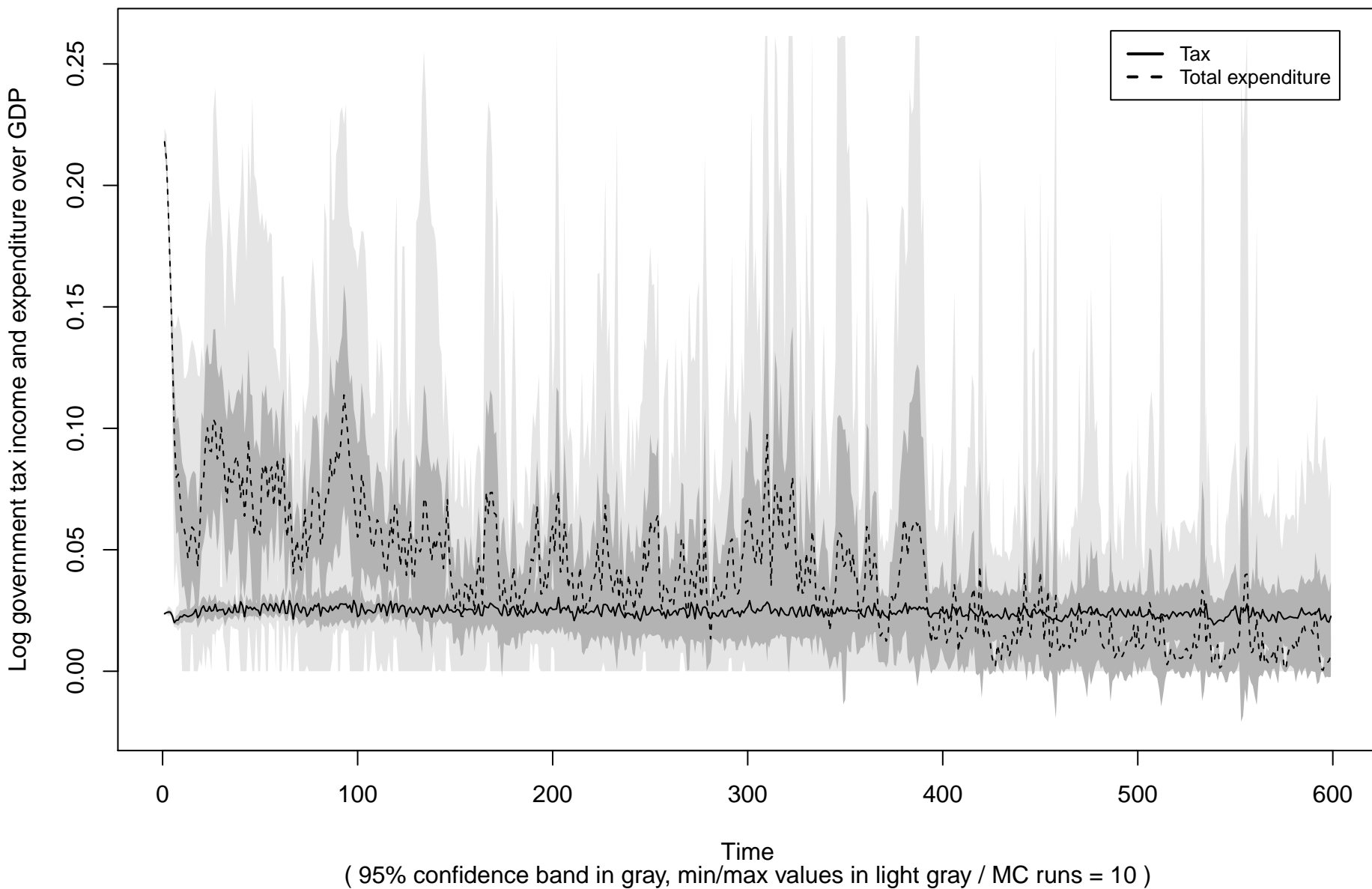
GDP (Benchmark)



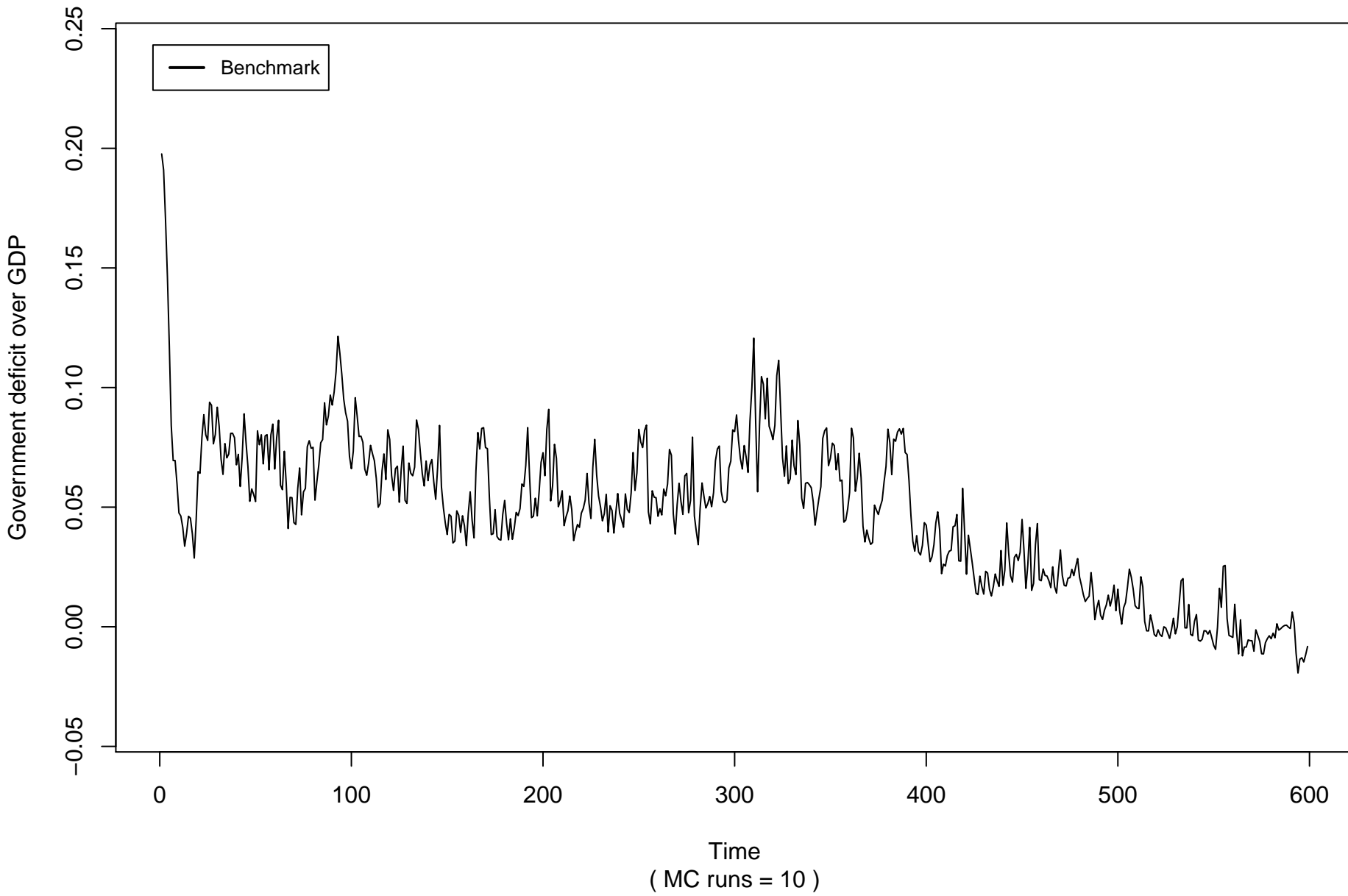
Government income and expenditure on GDP (all experiments)



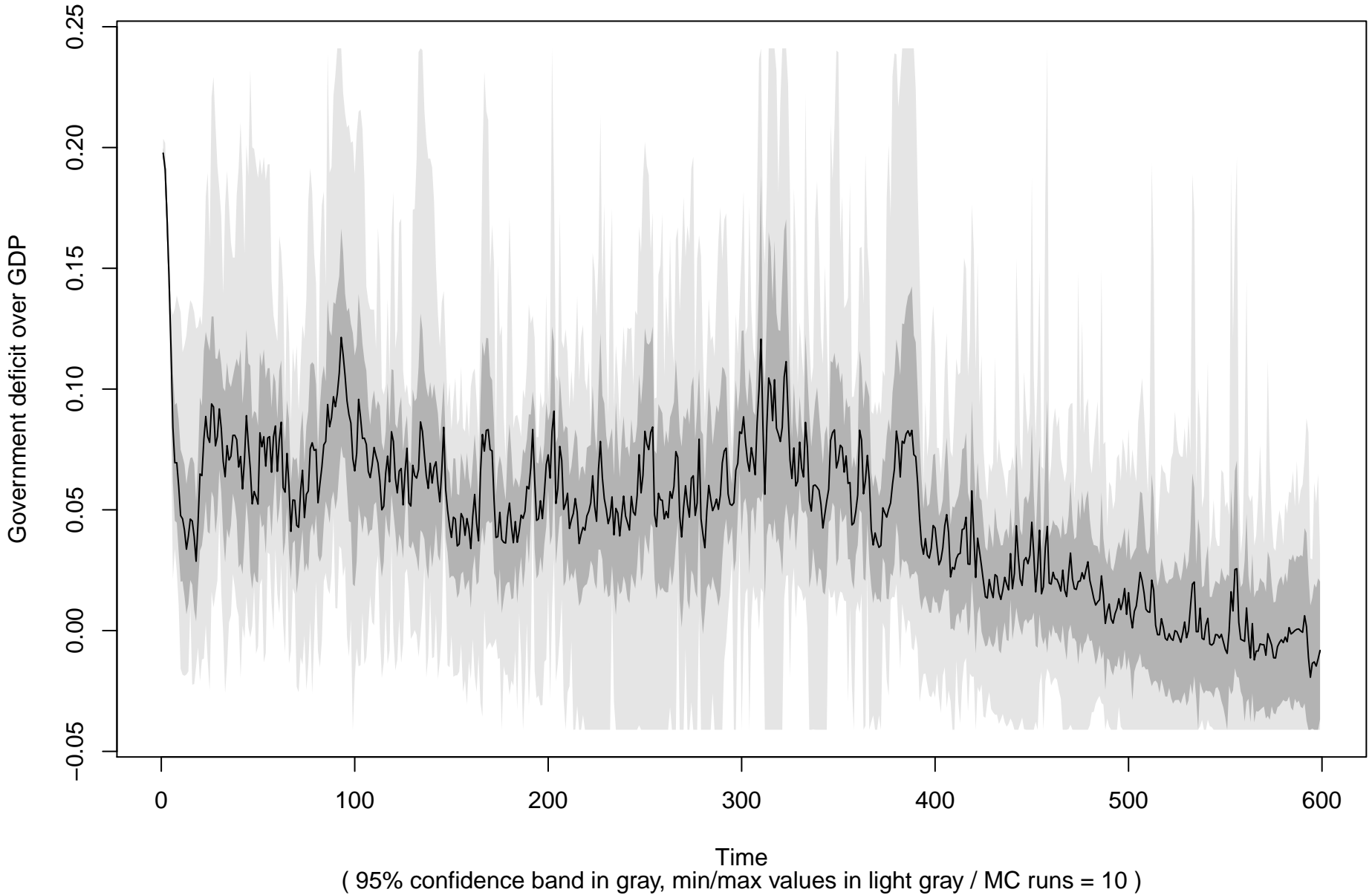
Government income and expenditure on GDP (Benchmark)



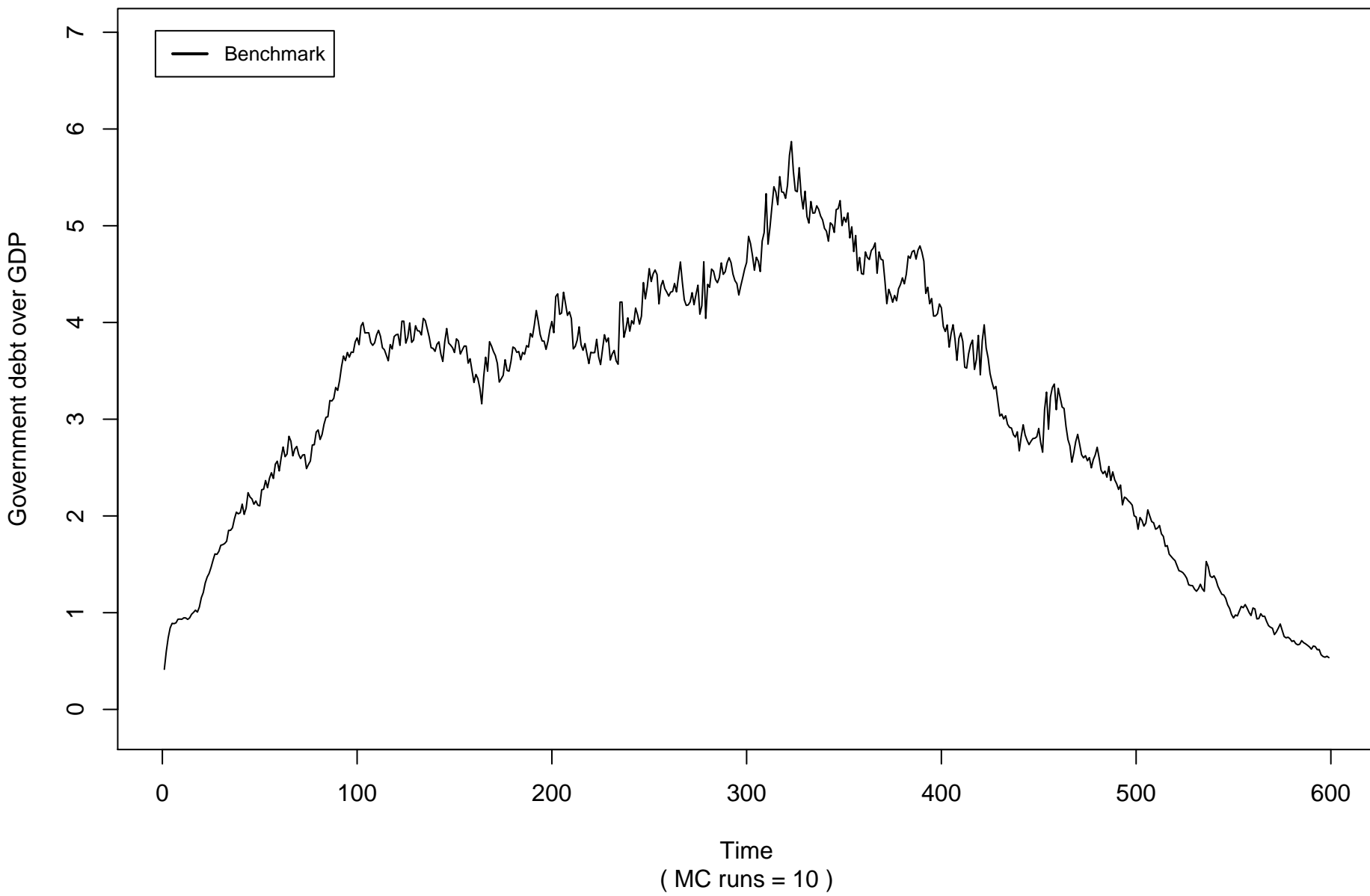
Government deficit on GDP (all experiments)



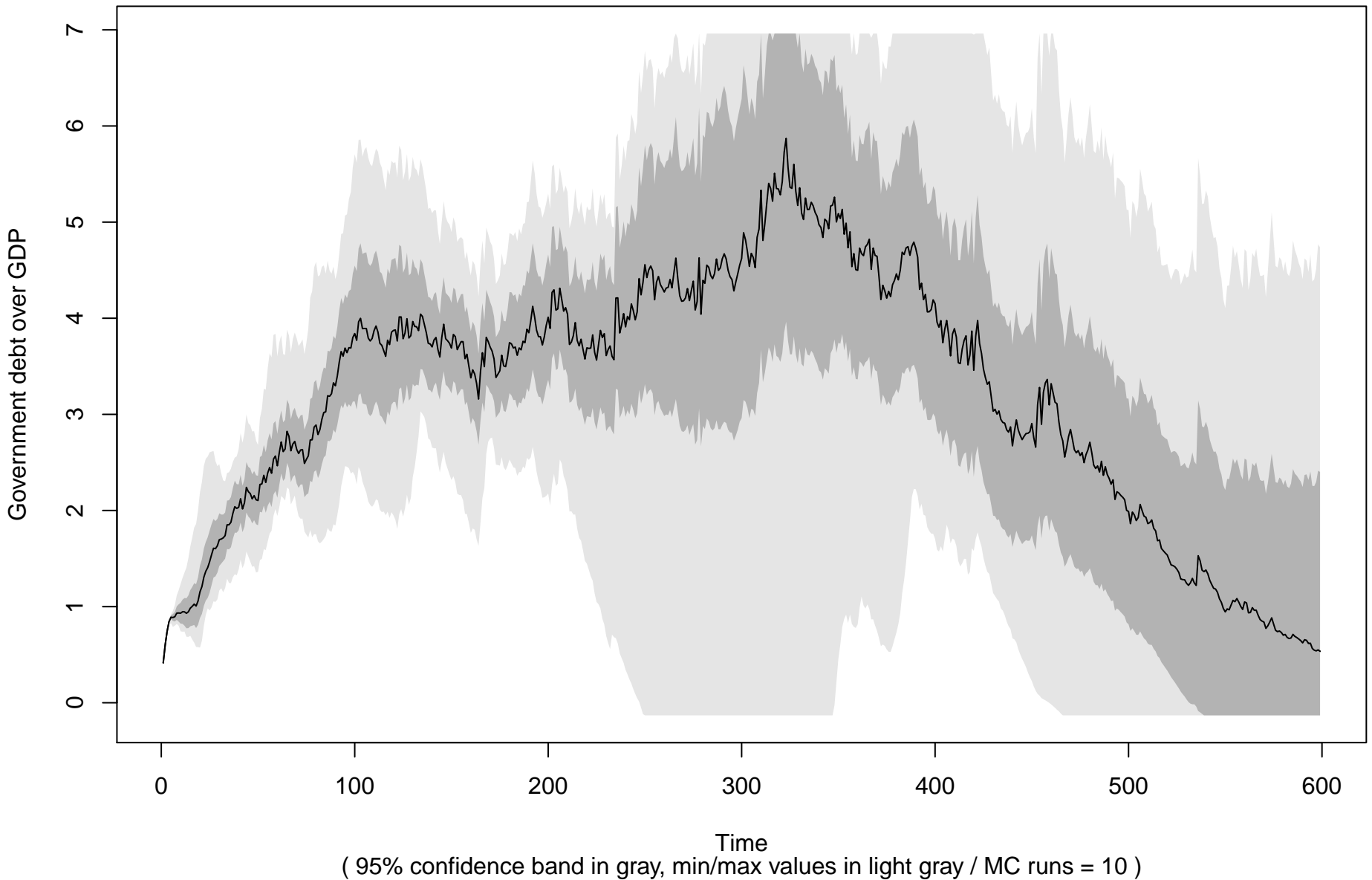
Government deficit on GDP (Benchmark)



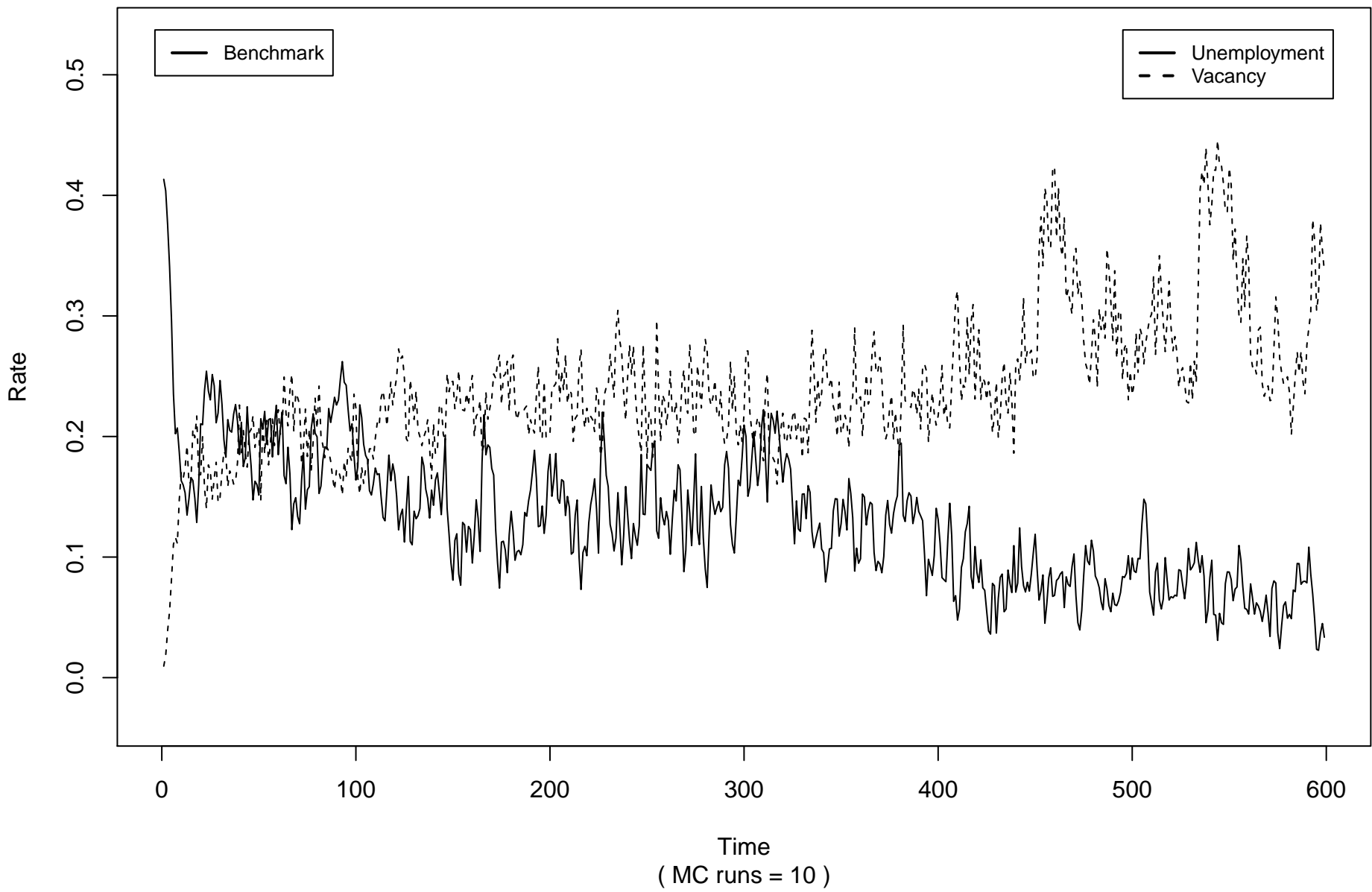
Government debt on GDP (all experiments)



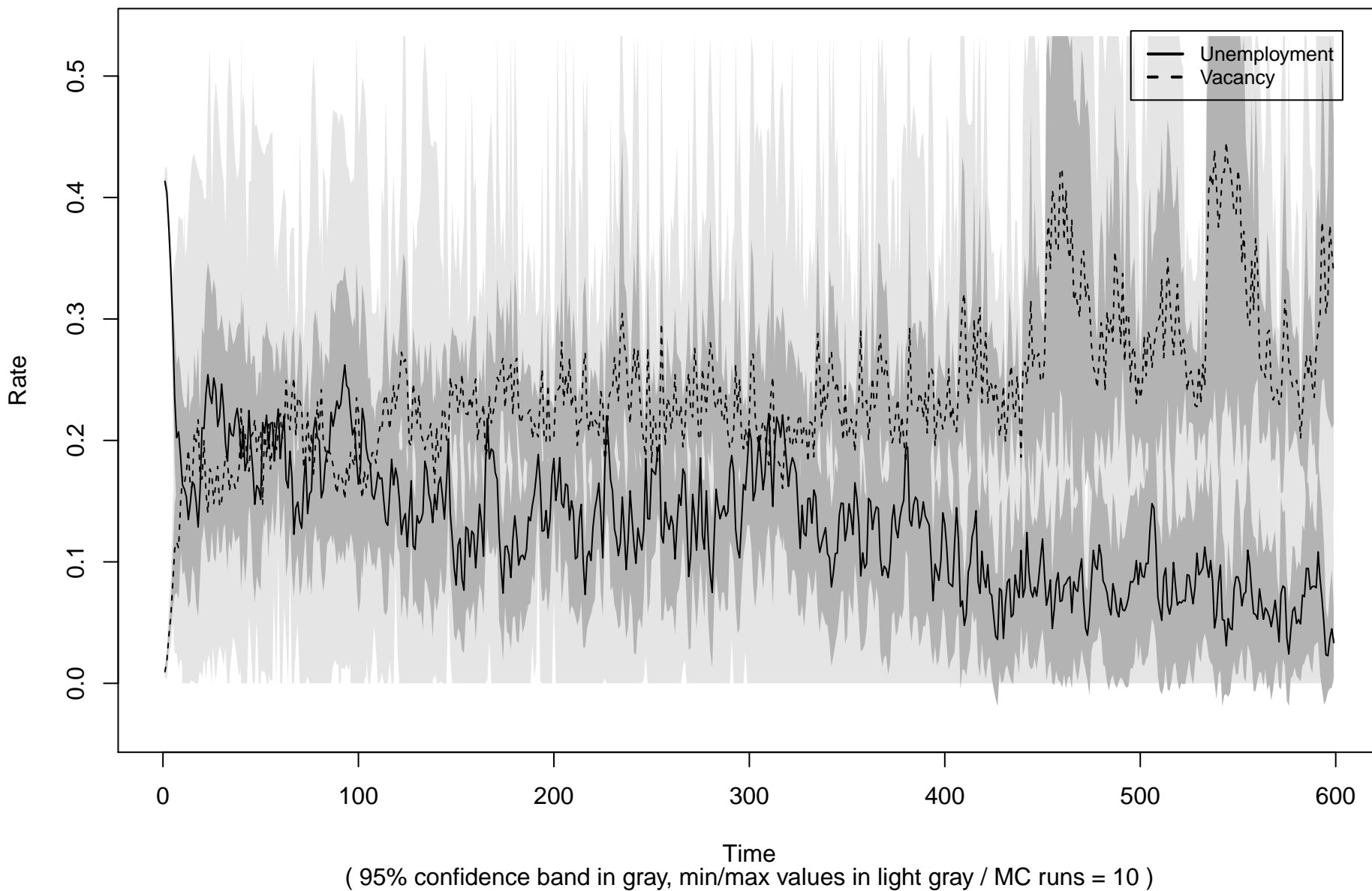
Government debt on GDP (Benchmark)



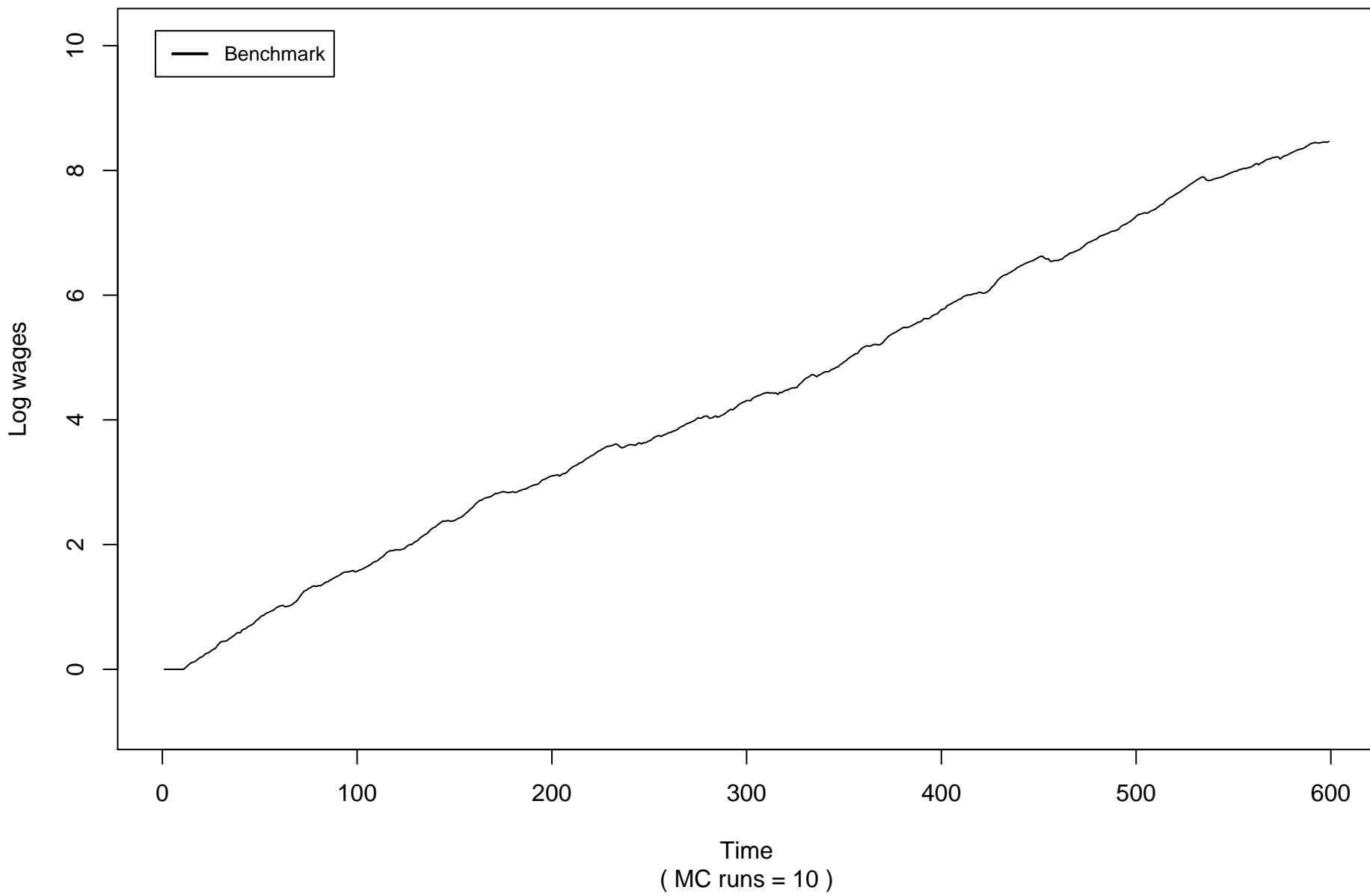
Unemployment and vacancy rates (all experiments)



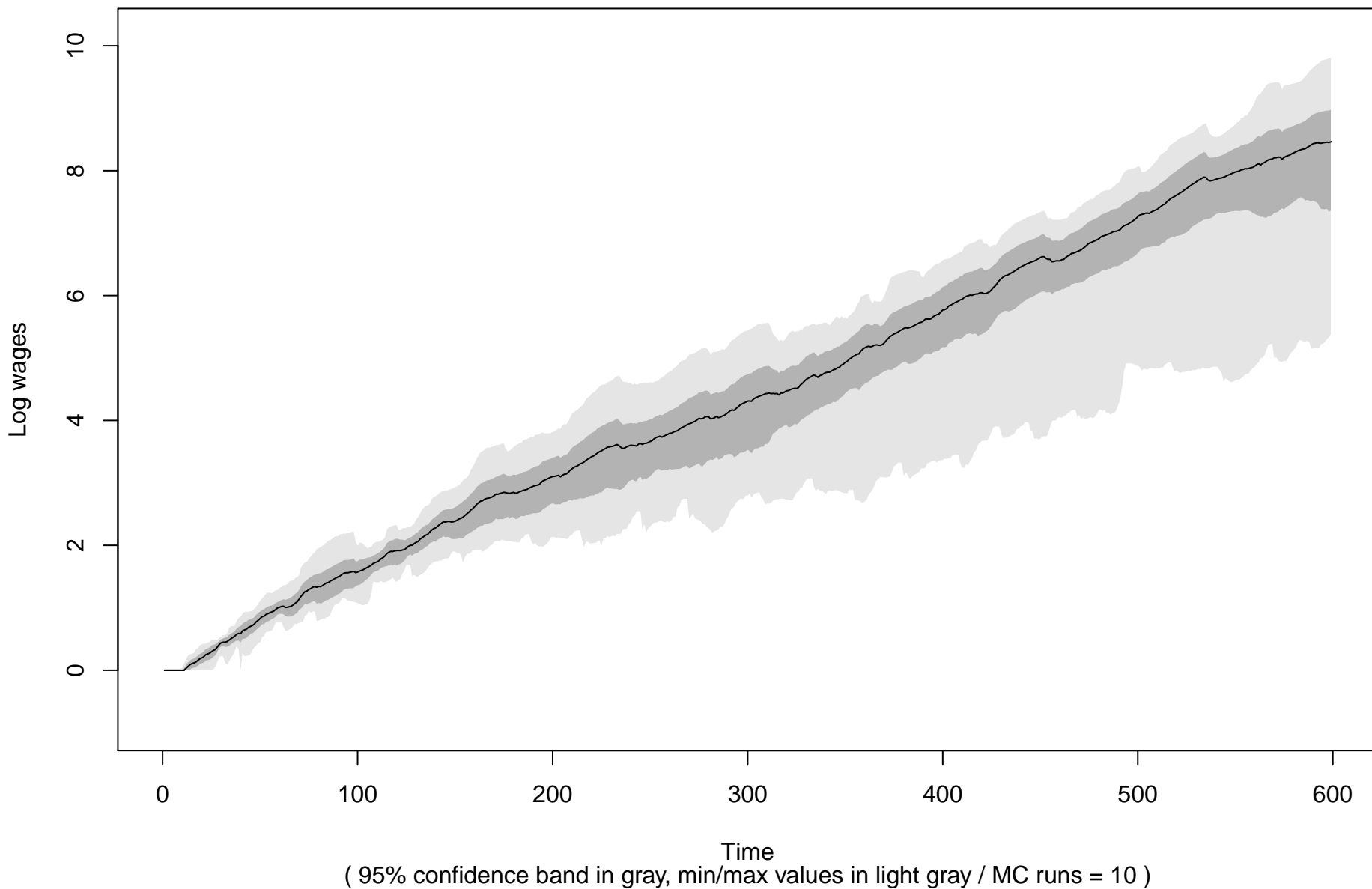
Unemployment and vacancy rates (Benchmark)



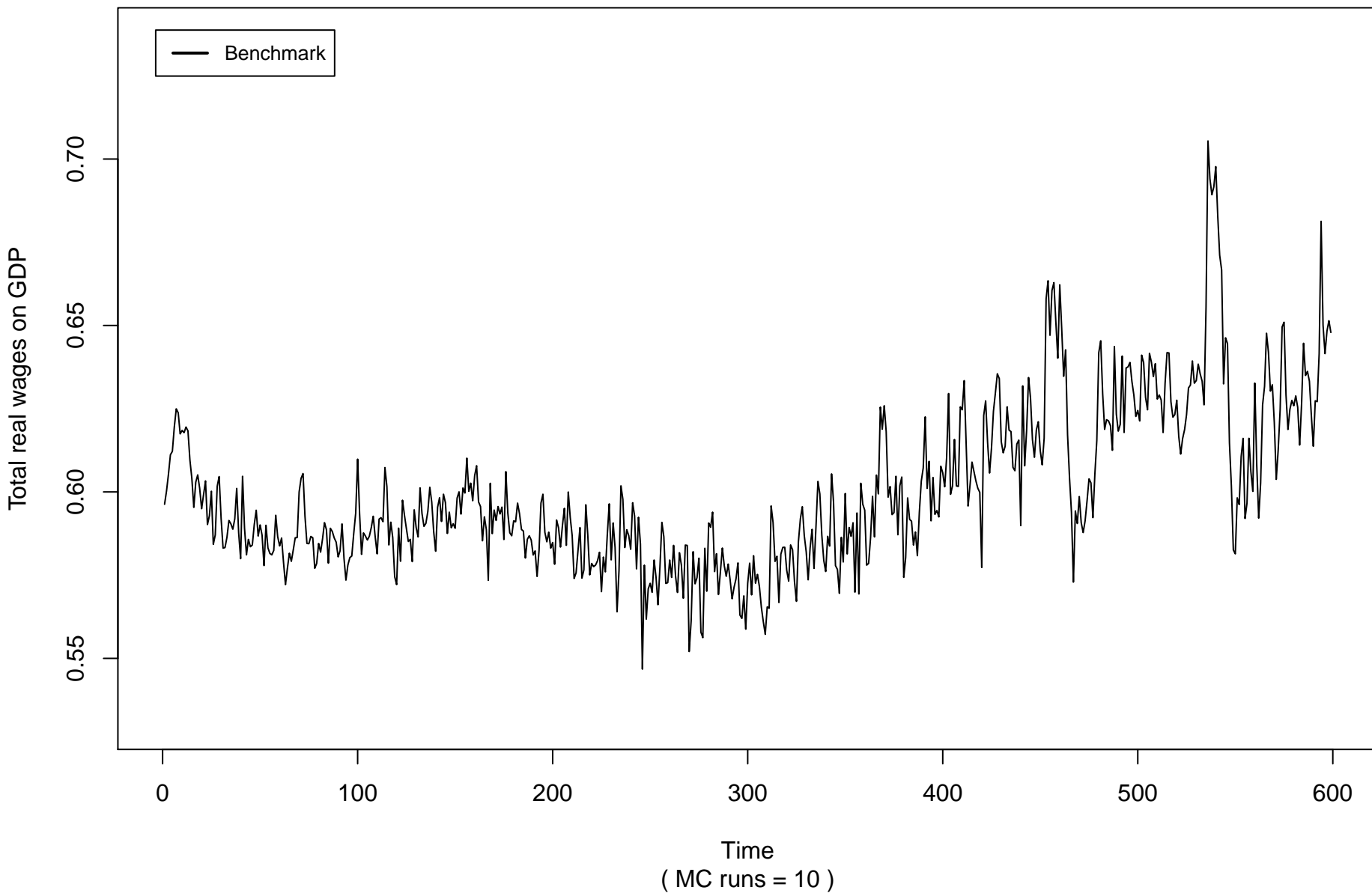
Real wages average (all experiments)



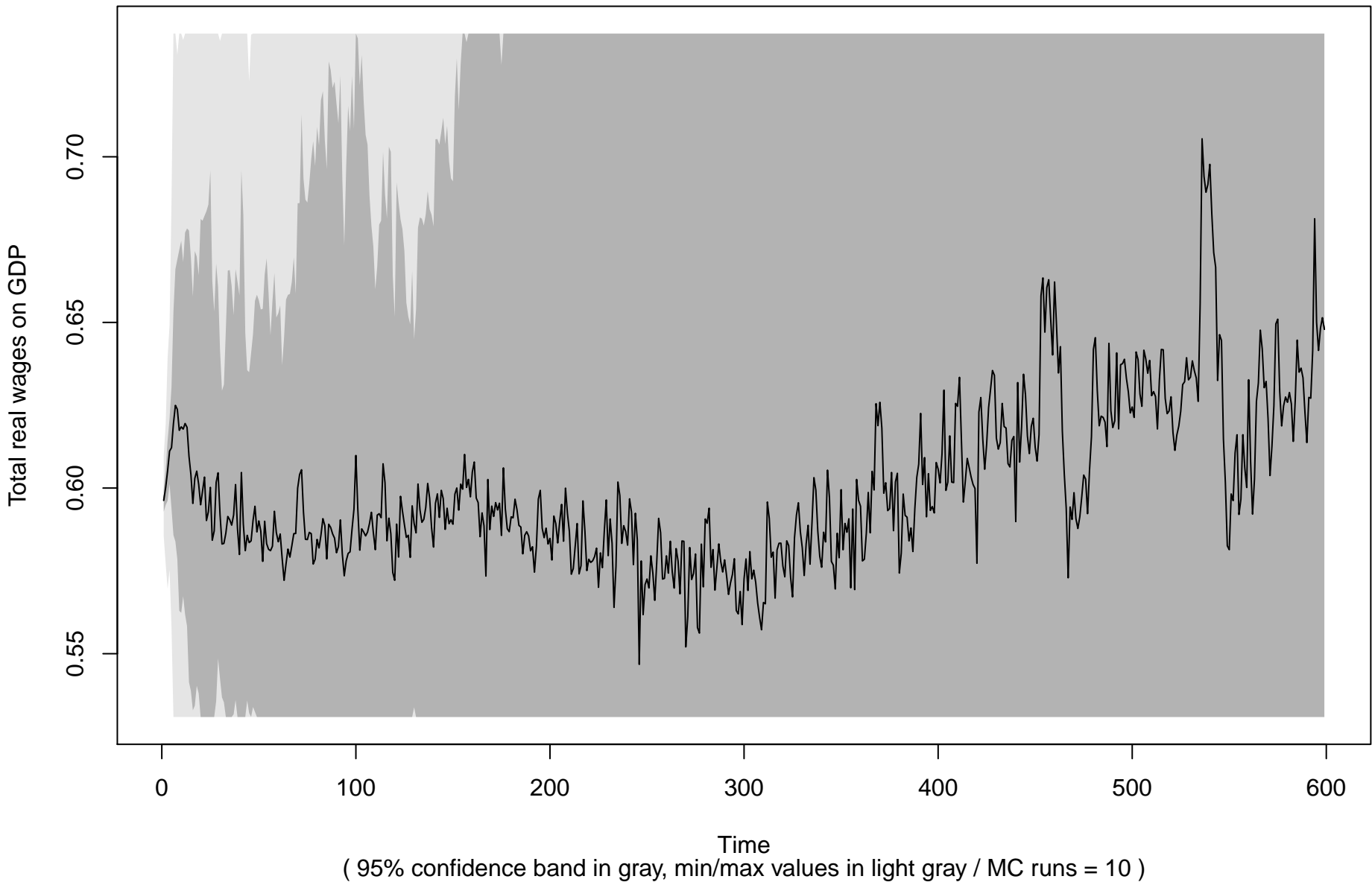
Real wages average (Benchmark)



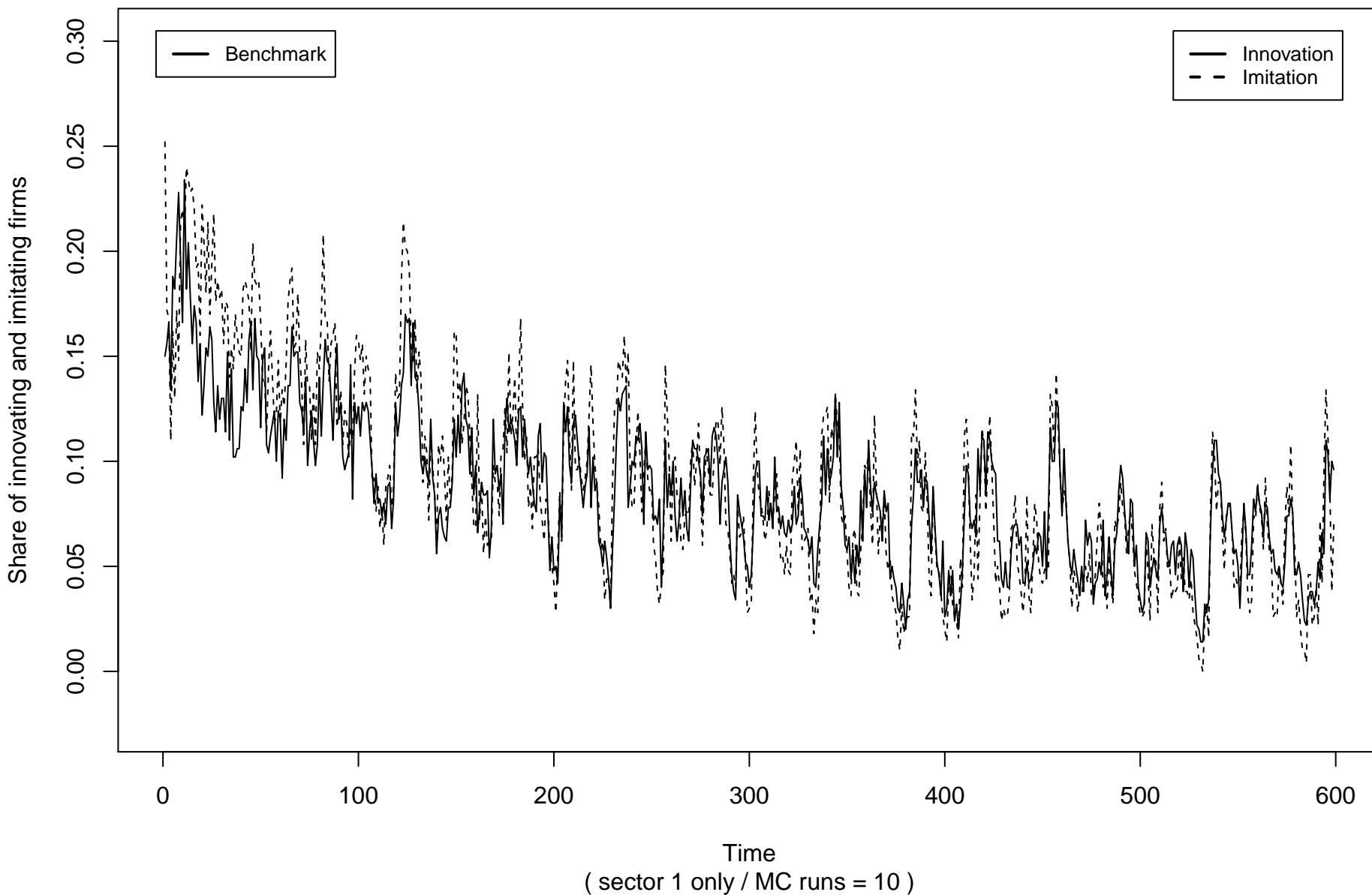
Wage share (all experiments)



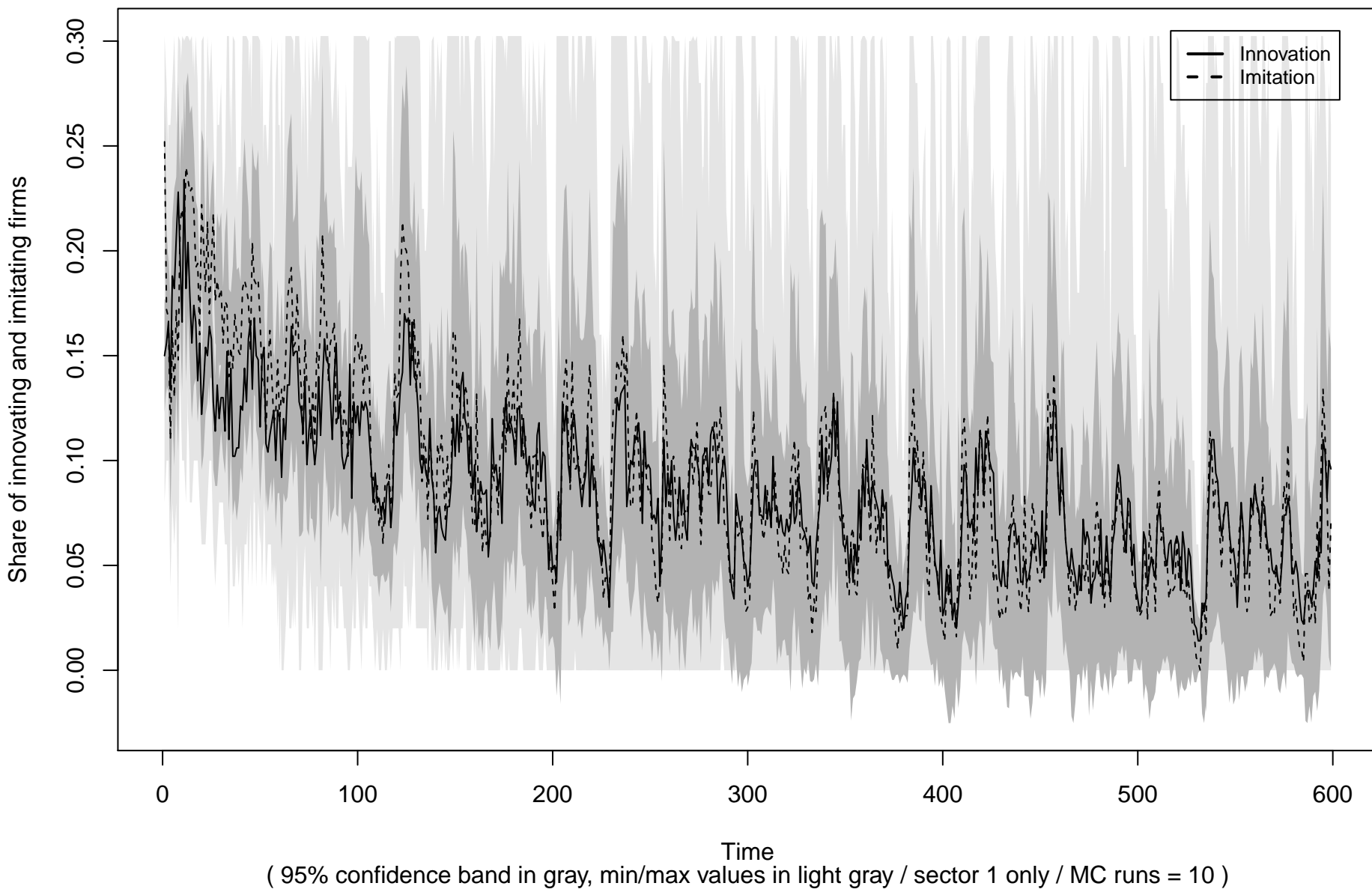
Wage share (Benchmark)



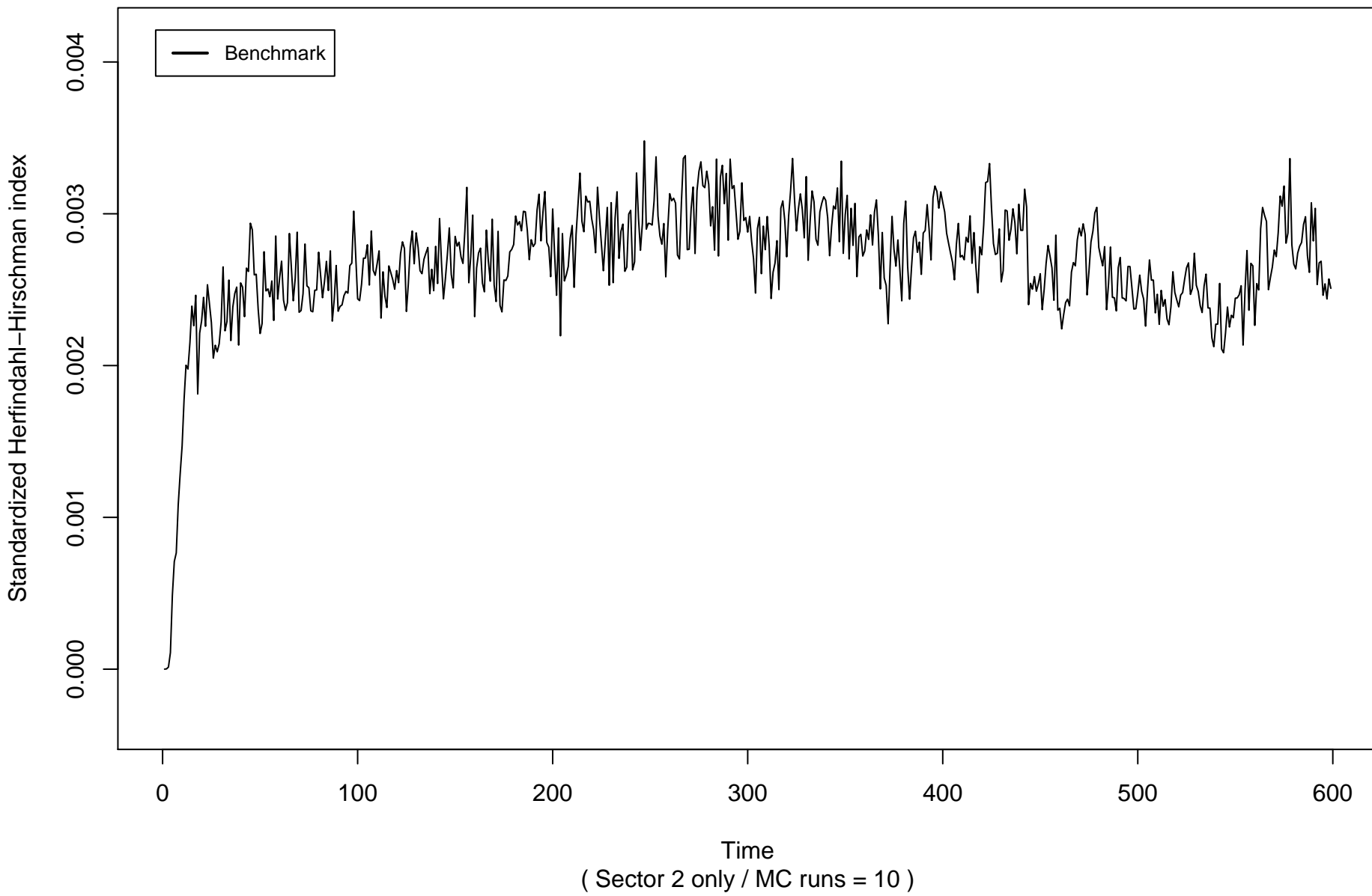
Innovation and imitation (all experiments)



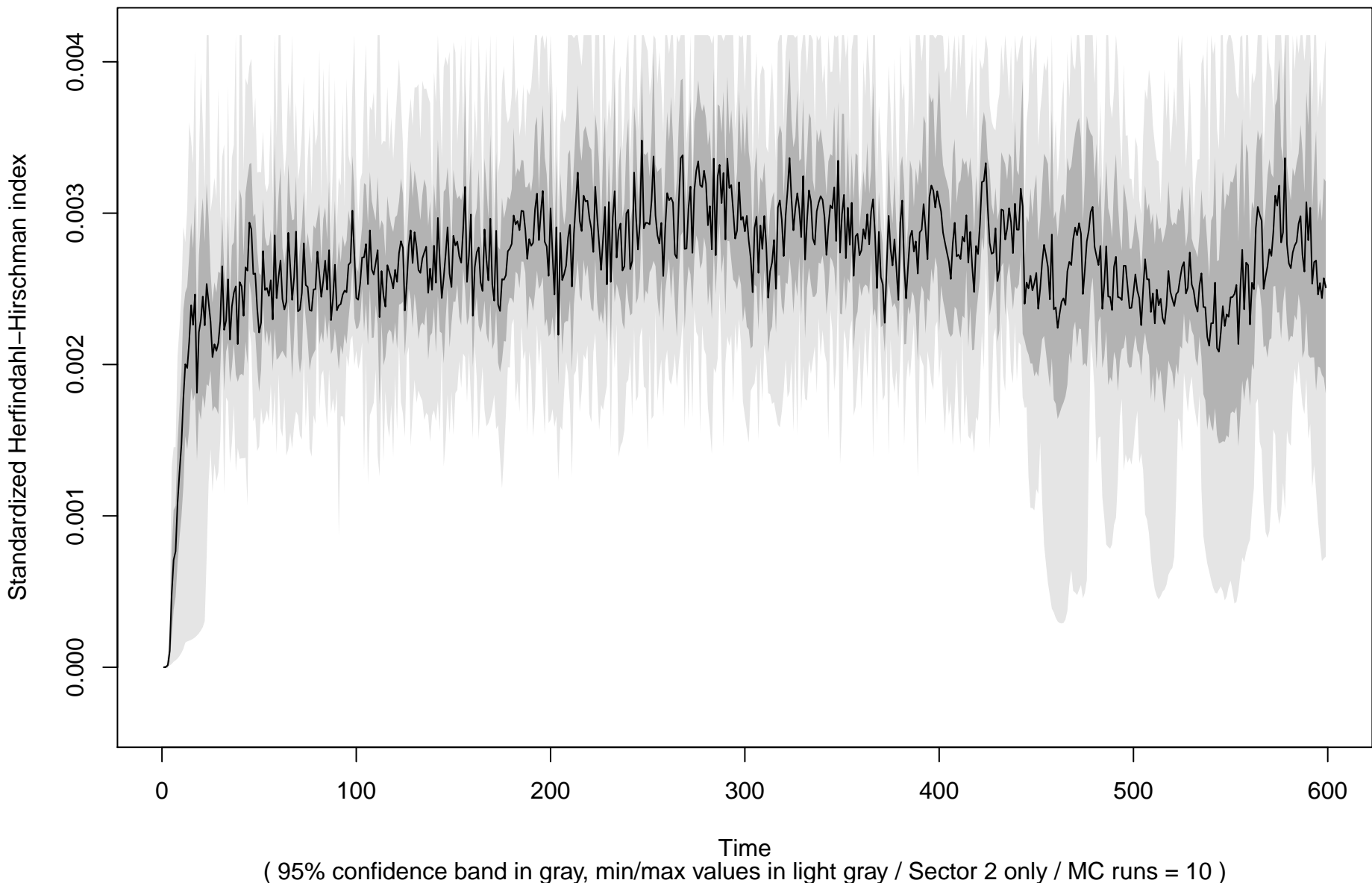
Innovation and imitation (Benchmark)



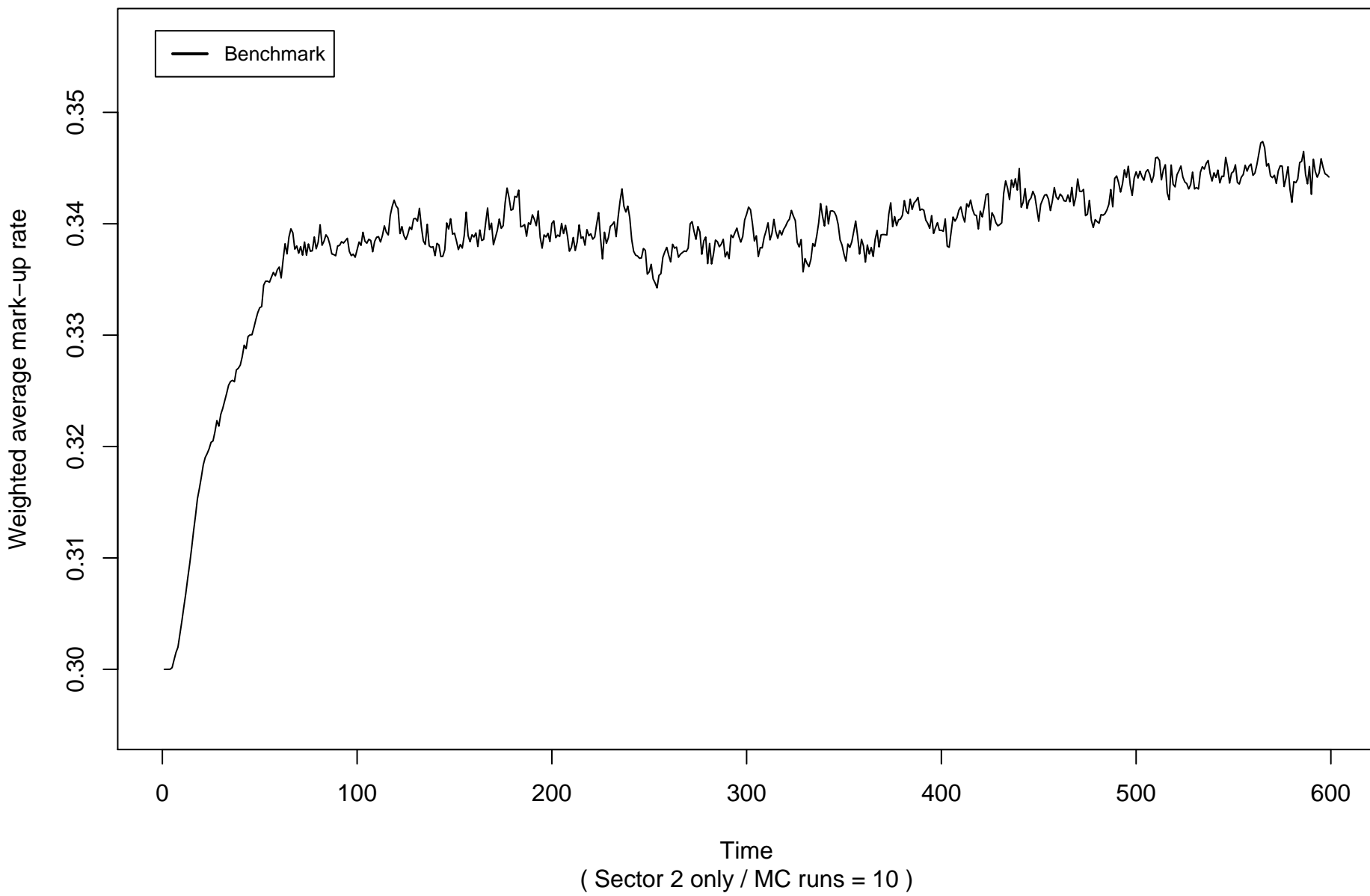
Market concentration (all experiments)



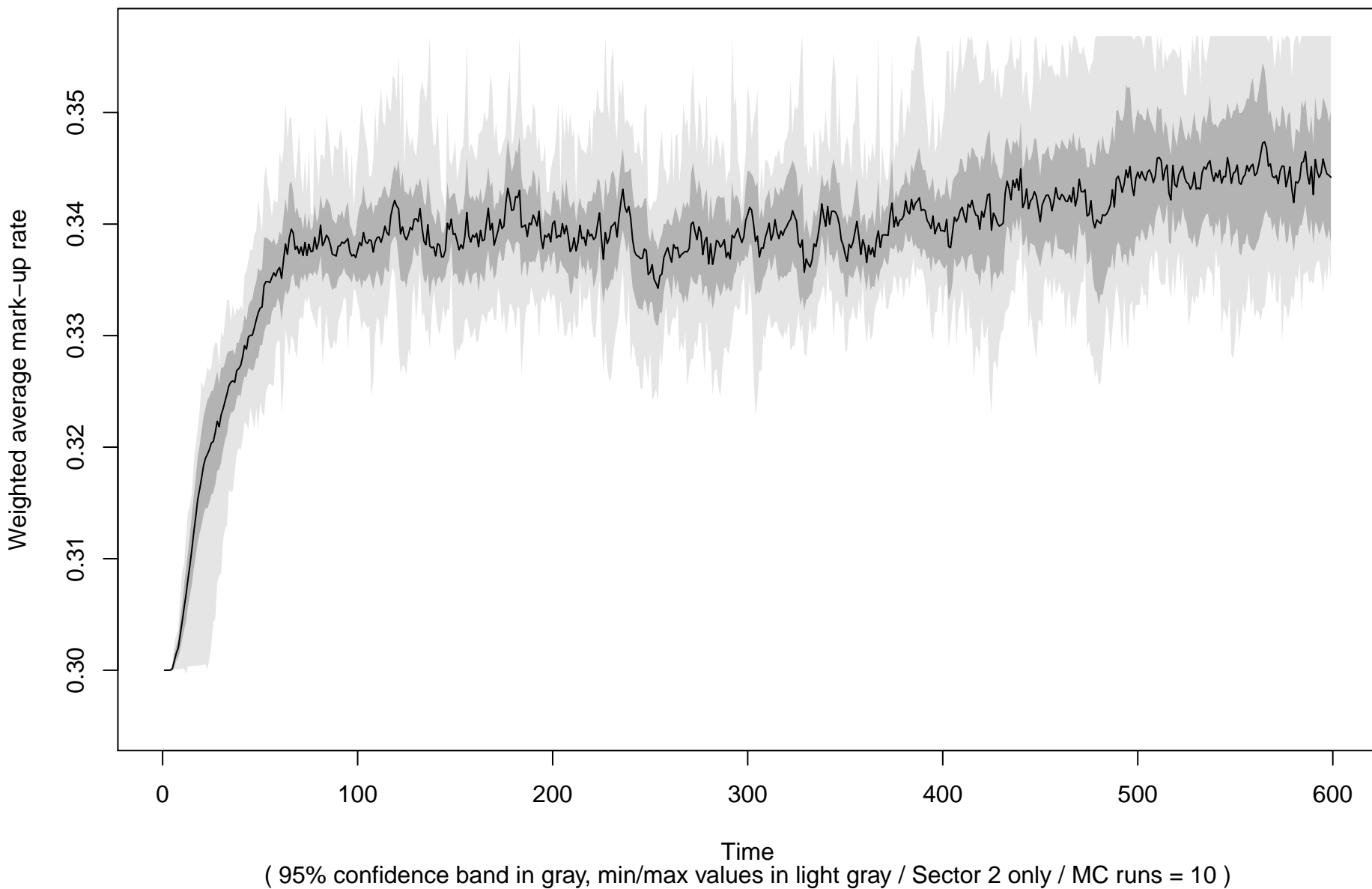
Market concentration (Benchmark)



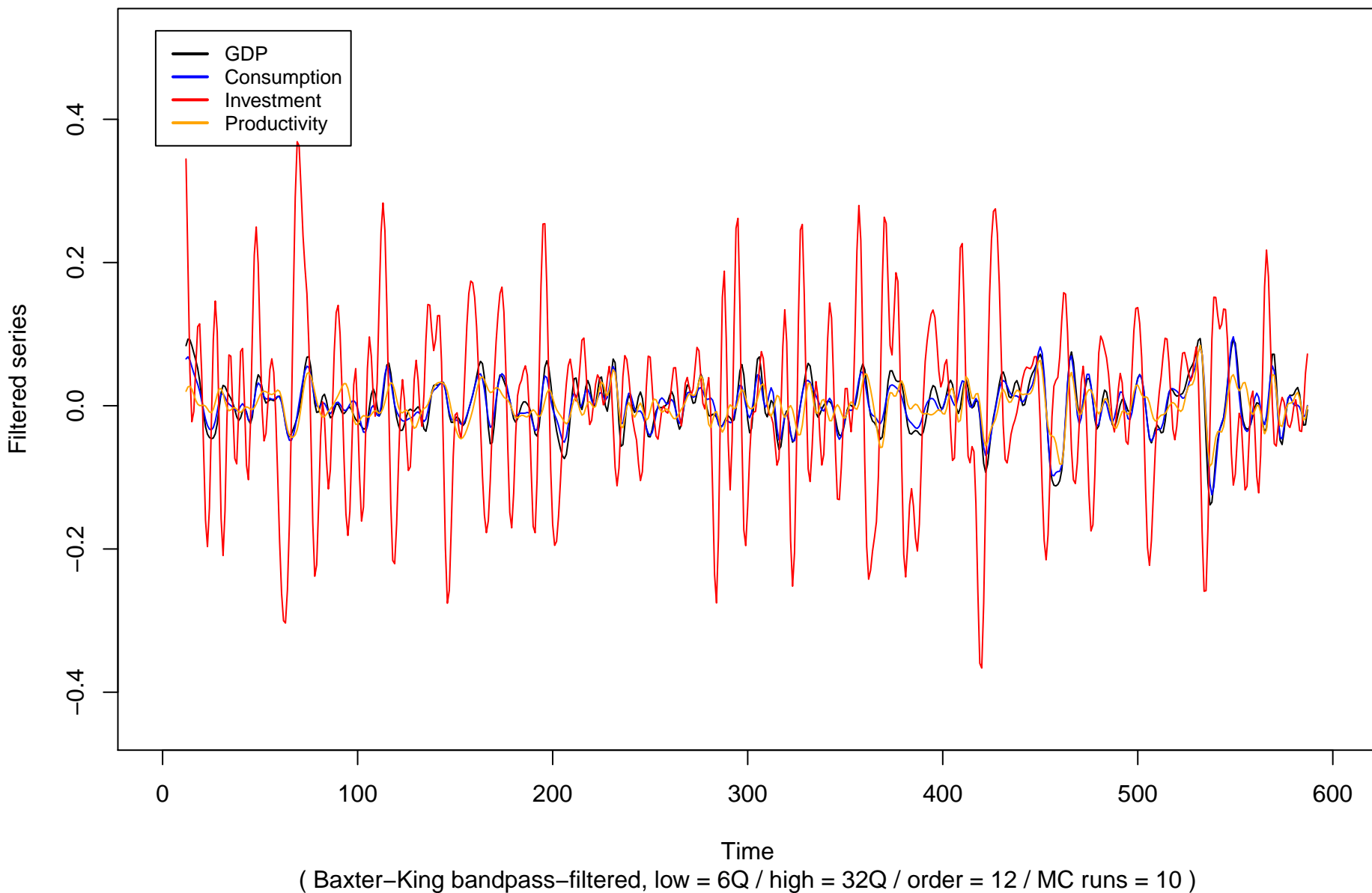
Mark-up average (all experiments)



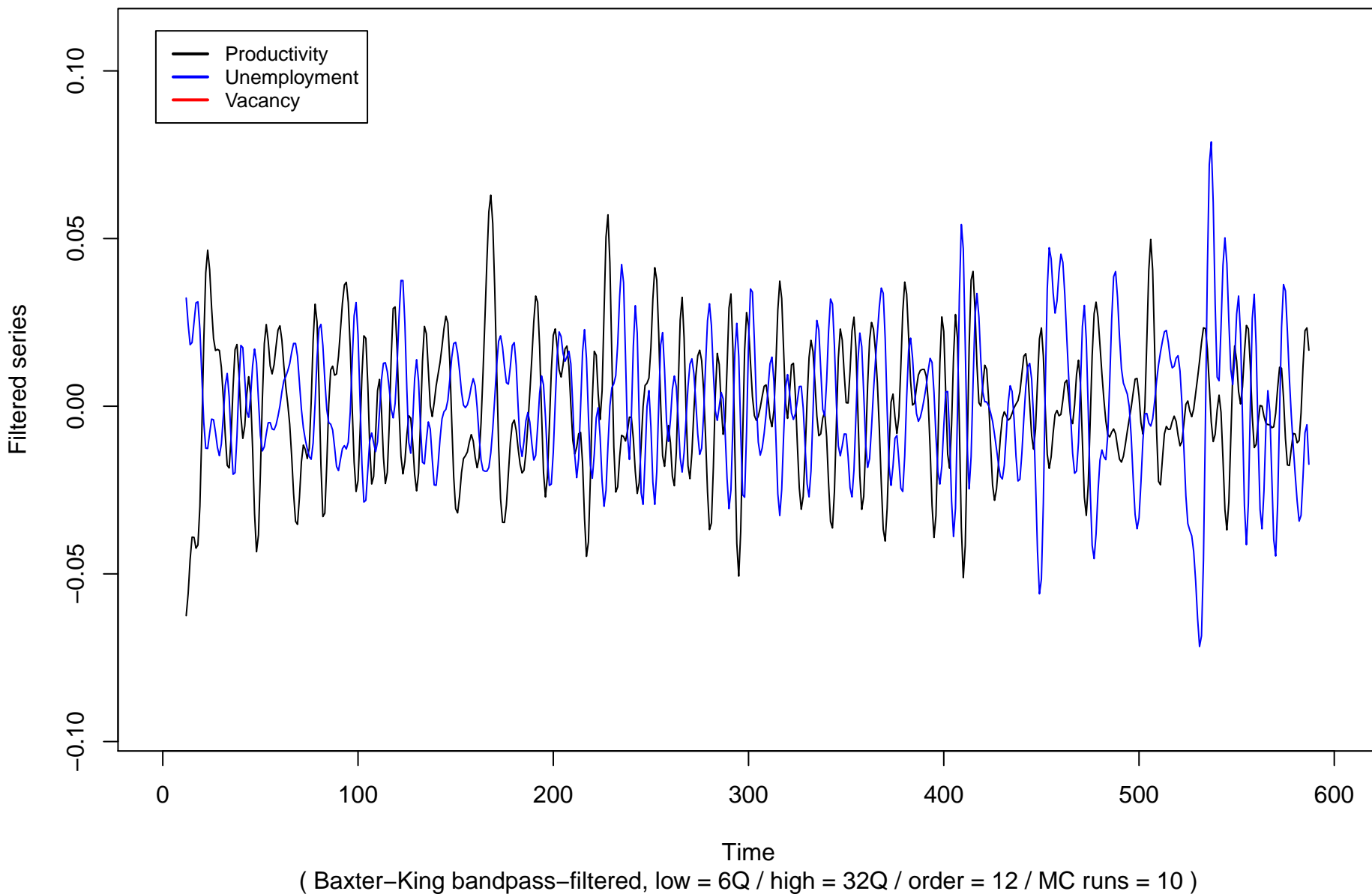
Mark-up average (Benchmark)



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	0.01418	0.01405	0.0162	0.01355	0.0132
(s.e.)	0.0006737	0.0006986	0.0005926	0.0006376	0.0006816
ADF test (logs)	-2.884	-2.534	-8.211	-2.723	-2.536
(s.e.)	0.1394	0.1368	0.2124	0.1673	0.1806
(p-val.)	0.2235	0.3541	0.01	0.2889	0.3575
(s.e.)	0.05096	0.05688	0	0.06404	0.07398
ADF test (bpf)	-10.17	-9.449	-11.15	-9.287	-8.69
(s.e.)	0.2377	0.1911	0.1586	0.1732	0.2109
(p-val.)	0.01	0.01	0.01	0.01	0.01
(s.e.)	0	0	0	0	0
s.d. (bpf)	0.09362	0.07584	1.37	0.06134	0.06843
(s.e.)	0.002829	0.002849	0.0499	0.001802	0.002949
relative s.d. (GDP)	1	0.8101	14.64	0.6552	0.731

(bpf: Baxter–King bandpass–filtered series, low = 6Q / high = 32Q / order = 12 / MC runs = 10 / 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)	0.014	0.2893	0.6185	0.8922	1	0.8922	0.6185	0.2893	0.014
(s.e.)	0.02261	0.01884	0.01114	0.003365	1.17e-17	0.003365	0.01114	0.01884	0.02261
(p-val.)	0.9453	7.398e-07	1.744e-12	9.155e-19	NA	9.155e-19	1.744e-12	7.398e-07	0.9453
Consumption	0.1083	0.3389	0.6066	0.8361	0.9424	0.8748	0.6549	0.3586	0.07622
(s.e.)	0.01804	0.01687	0.01322	0.008502	0.004522	0.004099	0.009968	0.01653	0.02058
(p-val.)	0.07592	4.621e-08	9.837e-12	7.285e-15	7.611e-18	6.564e-18	3.564e-13	2.044e-08	0.4674
Investment	-0.3167	-0.3734	-0.3347	-0.1771	0.05931	0.2854	0.4168	0.4205	0.3297
(s.e.)	0.01885	0.02458	0.03585	0.0433	0.04386	0.03953	0.03219	0.02389	0.01794
(p-val.)	2.613e-07	4.023e-07	2.824e-05	0.01196	0.04751	0.0002832	1.228e-06	8.786e-08	1.08e-07
Net investment	-0.2152	-0.2377	-0.187	-0.05138	0.1322	0.2905	0.3627	0.3323	0.235
(s.e.)	0.02292	0.0343	0.04955	0.05789	0.05615	0.04725	0.03564	0.02615	0.02312
(p-val.)	0.0001148	0.0006474	0.02954	0.07046	0.01201	0.0007957	1.183e-05	2.409e-06	4.406e-05
Change in inventories	-0.1668	-0.0922	0.04796	0.189	0.2574	0.2206	0.1124	0.003736	-0.04793
(s.e.)	0.02358	0.02585	0.02364	0.0213	0.02084	0.02043	0.01879	0.0159	0.0133
(p-val.)	0.002534	0.08517	0.8045	0.0003157	6.731e-06	3.616e-05	0.05828	0.9995	0.9836
Unemployment rate	0.3102	0.2699	0.1155	-0.1125	-0.3247	-0.4308	-0.3981	-0.2626	-0.1024
(s.e.)	0.02942	0.03478	0.04065	0.04005	0.03584	0.0344	0.03633	0.03689	0.03438
(p-val.)	1.32e-05	0.0001999	0.05531	0.09745	3.839e-05	1.521e-06	5.338e-06	0.000397	0.02586
Productivity	0.2739	0.4582	0.6339	0.7455	0.7457	0.622	0.4121	0.1796	-0.0174
(s.e.)	0.02594	0.01974	0.01823	0.02086	0.02572	0.0339	0.04274	0.04638	0.04148
(p-val.)	1.898e-05	6.627e-09	1.11e-10	7.169e-11	4.628e-10	3.239e-08	1.397e-05	0.0302	0.2347
Mark-up (sector 2)	0.2584	0.1883	0.0764	-0.04805	-0.1495	-0.2026	-0.2059	-0.1757	-0.1339
(s.e.)	0.04343	0.03263	0.02429	0.02292	0.02605	0.02939	0.03135	0.03237	0.03302
(p-val.)	0.001135	0.004481	0.465	0.8041	0.01285	0.001202	0.001518	0.006925	0.007498
Total firm debt	0.2011	0.119	0.0379	-0.03343	-0.09349	-0.1426	-0.1869	-0.2228	-0.242
(s.e.)	0.03207	0.0345	0.0374	0.03921	0.03896	0.03689	0.03443	0.03236	0.03029
(p-val.)	0.002189	0.02887	0.2234	0.1365	0.2095	0.06195	0.006305	0.0008426	0.0002318
Liquidity-to-sales ratio	0.02333	-0.1844	-0.417	-0.6208	-0.736	-0.7215	-0.5915	-0.3932	-0.1872
(s.e.)	0.02646	0.0273	0.02559	0.02103	0.01679	0.01563	0.01692	0.01943	0.02276
(p-val.)	0.726	0.002036	1.739e-07	4.902e-10	1.174e-11	7.56e-12	1.162e-10	3.013e-08	0.0005521
Bankruptcy rate	0.348	0.3525	0.2732	0.1447	0.02549	-0.04181	-0.05341	-0.04469	-0.05416
(s.e.)	0.02284	0.02444	0.03322	0.0418	0.04662	0.04809	0.04703	0.04218	0.03508
(p-val.)	4.658e-07	7.2e-07	0.0001271	0.0005716	0.09883	0.07806	0.06086	0.1472	0.3412

(non-rate/ratio series are Baxter–King bandpass-filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 10 / 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)	0.014	0.2893	0.6185	0.8922	1	0.8922	0.6185	0.2893	0.014
(s.e.)	0.02261	0.01884	0.01114	0.003365	1.17e-17	0.003365	0.01114	0.01884	0.02261
(p-val.)	0.9453	7.398e-07	1.744e-12	9.155e-19	NA	9.155e-19	1.744e-12	7.398e-07	0.9453
Consumption	0.1083	0.3389	0.6066	0.8361	0.9424	0.8748	0.6549	0.3586	0.07622
(s.e.)	0.01804	0.01687	0.01322	0.008502	0.004522	0.004099	0.009968	0.01653	0.02058
(p-val.)	0.07592	4.621e-08	9.837e-12	7.285e-15	7.611e-18	6.564e-18	3.564e-13	2.044e-08	0.4674
Investment	-0.3167	-0.3734	-0.3347	-0.1771	0.05931	0.2854	0.4168	0.4205	0.3297
(s.e.)	0.01885	0.02458	0.03585	0.0433	0.04386	0.03953	0.03219	0.02389	0.01794
(p-val.)	2.613e-07	4.023e-07	2.824e-05	0.01196	0.04751	0.0002832	1.228e-06	8.786e-08	1.08e-07
Productivity	0.2739	0.4582	0.6339	0.7455	0.7457	0.622	0.4121	0.1796	-0.0174
(s.e.)	0.02594	0.01974	0.01823	0.02086	0.02572	0.0339	0.04274	0.04638	0.04148
(p-val.)	1.898e-05	6.627e-09	1.11e-10	7.169e-11	4.628e-10	3.239e-08	1.397e-05	0.0302	0.2347
Entry	-0.05113	0.1263	0.3041	0.4331	0.4805	0.4444	0.3546	0.2496	0.1573
(s.e.)	0.04251	0.03827	0.03268	0.02641	0.01896	0.01584	0.02223	0.02902	0.03064
(p-val.)	0.07311	0.03273	3.706e-05	1.529e-07	2.799e-09	1.314e-09	3.009e-07	0.0001228	0.01632
Wage	0.3365	0.5176	0.6612	0.7242	0.6834	0.5478	0.3566	0.1582	-0.01084
(s.e.)	0.02529	0.01612	0.01541	0.0206	0.0248	0.02743	0.02884	0.02793	0.02403
(p-val.)	1.59e-06	3.026e-10	1.607e-11	8.573e-11	8.028e-10	1.842e-08	2.53e-06	0.01039	0.9103
Unemployment rate	0.3102	0.2699	0.1155	-0.1125	-0.3247	-0.4308	-0.3981	-0.2626	-0.1024
(s.e.)	0.02942	0.03478	0.04065	0.04005	0.03584	0.0344	0.03633	0.03689	0.03438
(p-val.)	1.32e-05	0.0001999	0.05531	0.09745	3.839e-05	1.521e-06	5.338e-06	0.000397	0.02586
Vacancy rate	0.1136	-0.05993	-0.2308	-0.3248	-0.3059	-0.1994	-0.07413	0.003893	0.01136
(s.e.)	0.043	0.03092	0.03138	0.04126	0.04617	0.04132	0.03123	0.02788	0.03435
(p-val.)	0.04129	0.367	0.0004843	0.0001101	0.0004279	0.008973	0.2264	0.6973	0.2759

(non-rate/ratio series are Baxter–King bandpass-filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 10 / period = 2 – 600)
(test H0: lag coefficient is not significant at 5% level)

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

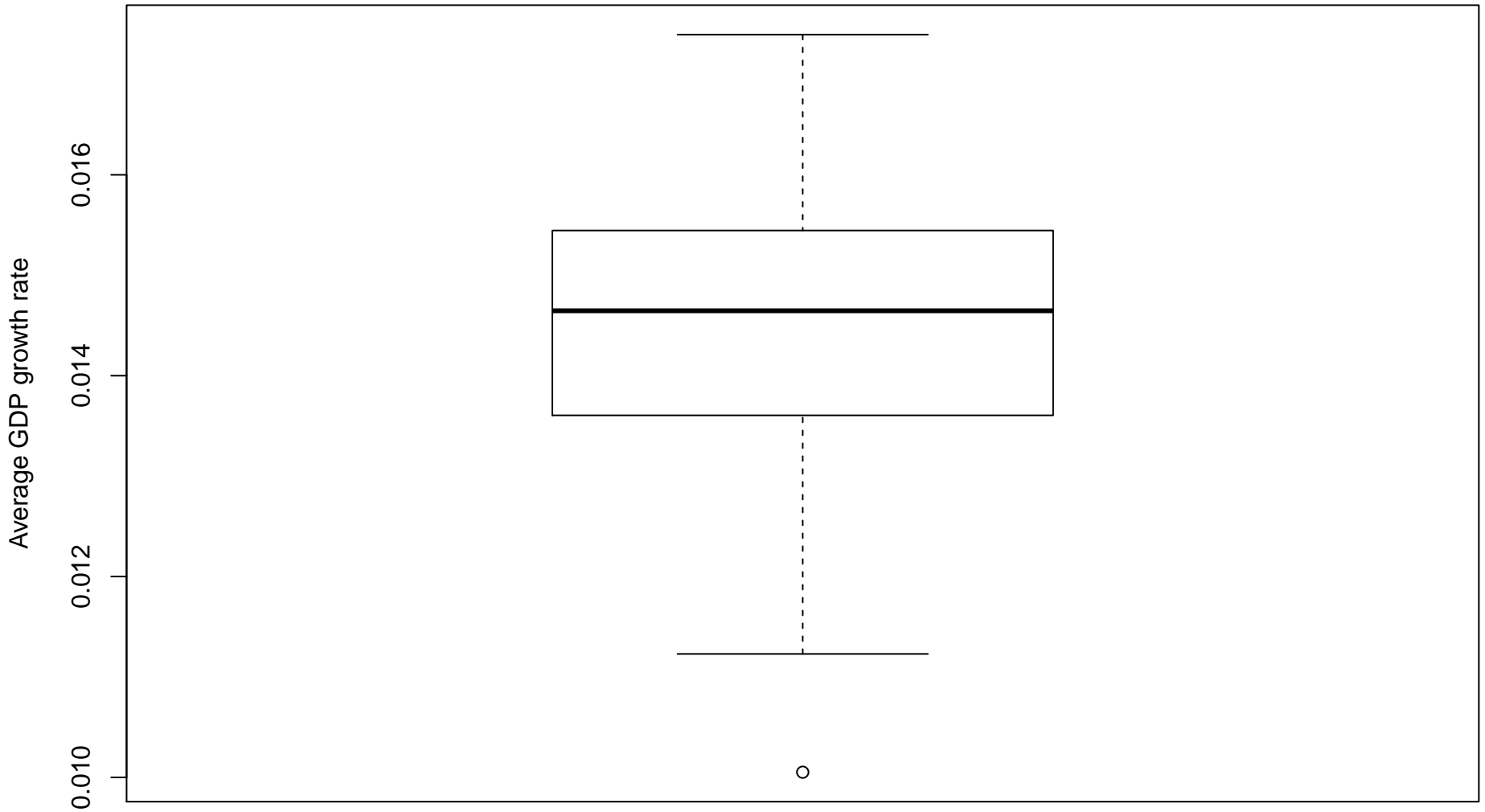
	avg.ADF	rej.ADF	avg.PP	rej.PP	avg.KPSS	rej.KPSS	avg.BDS	rej.BDS	avg.KS	rej.KS	AD	V
dGDP	0.01	1.00	0.01	1.00	0.10	0.00	0.09	0.50	0.48	0.02	0.36	C
dA	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.20	0.47	0.00	C
dw	0.01	1.00	0.01	1.00	0.10	0.00	0.01	0.90	0.20	0.47	0.00	C
V	0.01	1.00	0.01	1.00	0.02	0.90	0.00	1.00	0.07	0.76	0.00	C
U	0.01	1.00	0.01	1.00	0.02	0.90	0.00	1.00	0.05	0.87	0.00	C
mu2avg	0.01	1.00	0.01	1.00	0.01	1.00	0.00	1.00	0.07	0.78	0.00	C
HH1	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.21	0.47	0.00	C
HH2	0.01	1.00	0.01	1.00	0.01	1.00	0.00	1.00	0.09	0.78	0.00	C

(average p-values for testing H0 and rate of rejection of H0 / MC runs = 10 / period = 2 – 600)

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

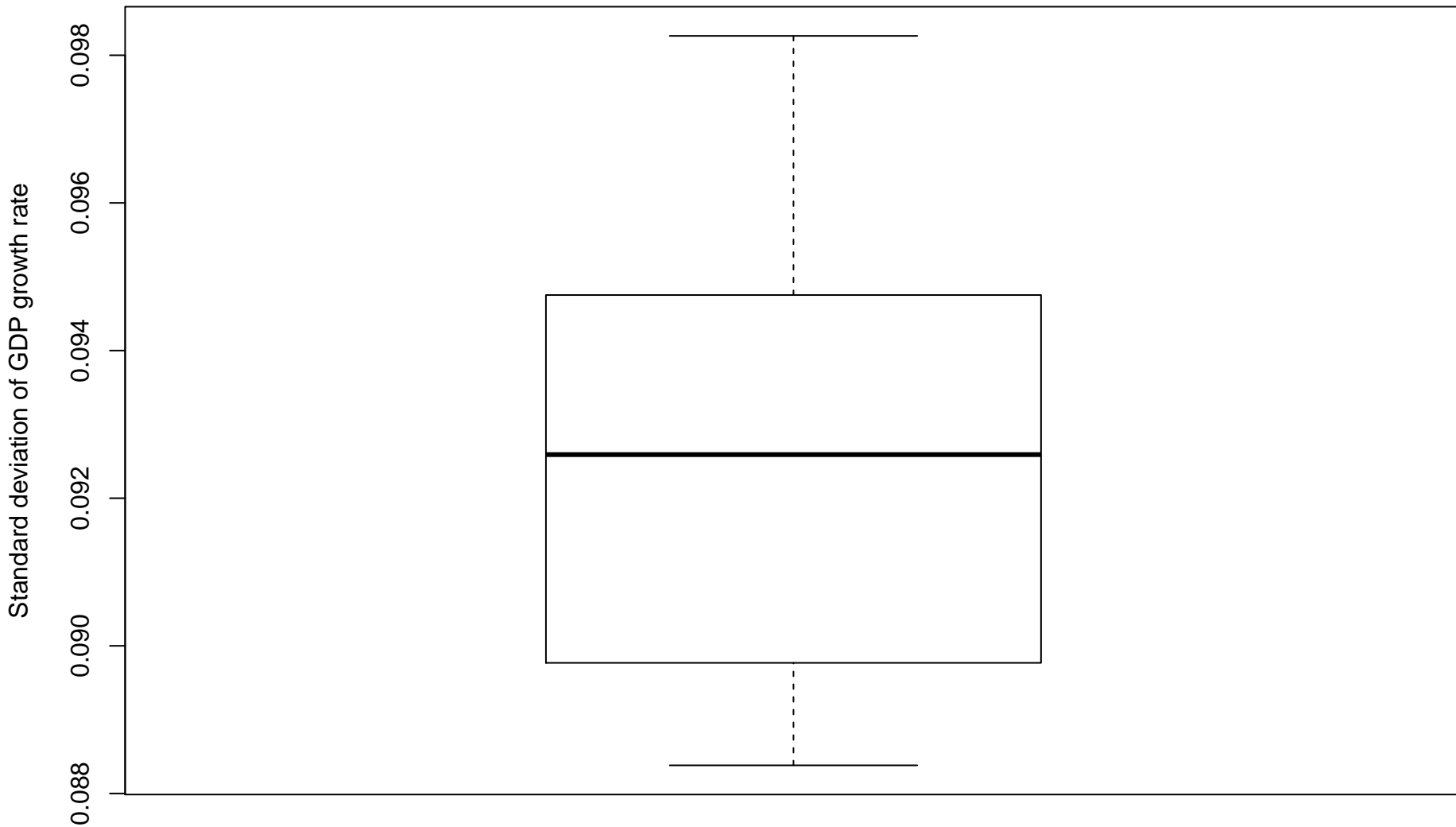
(significance = 0.05)

GDP growth



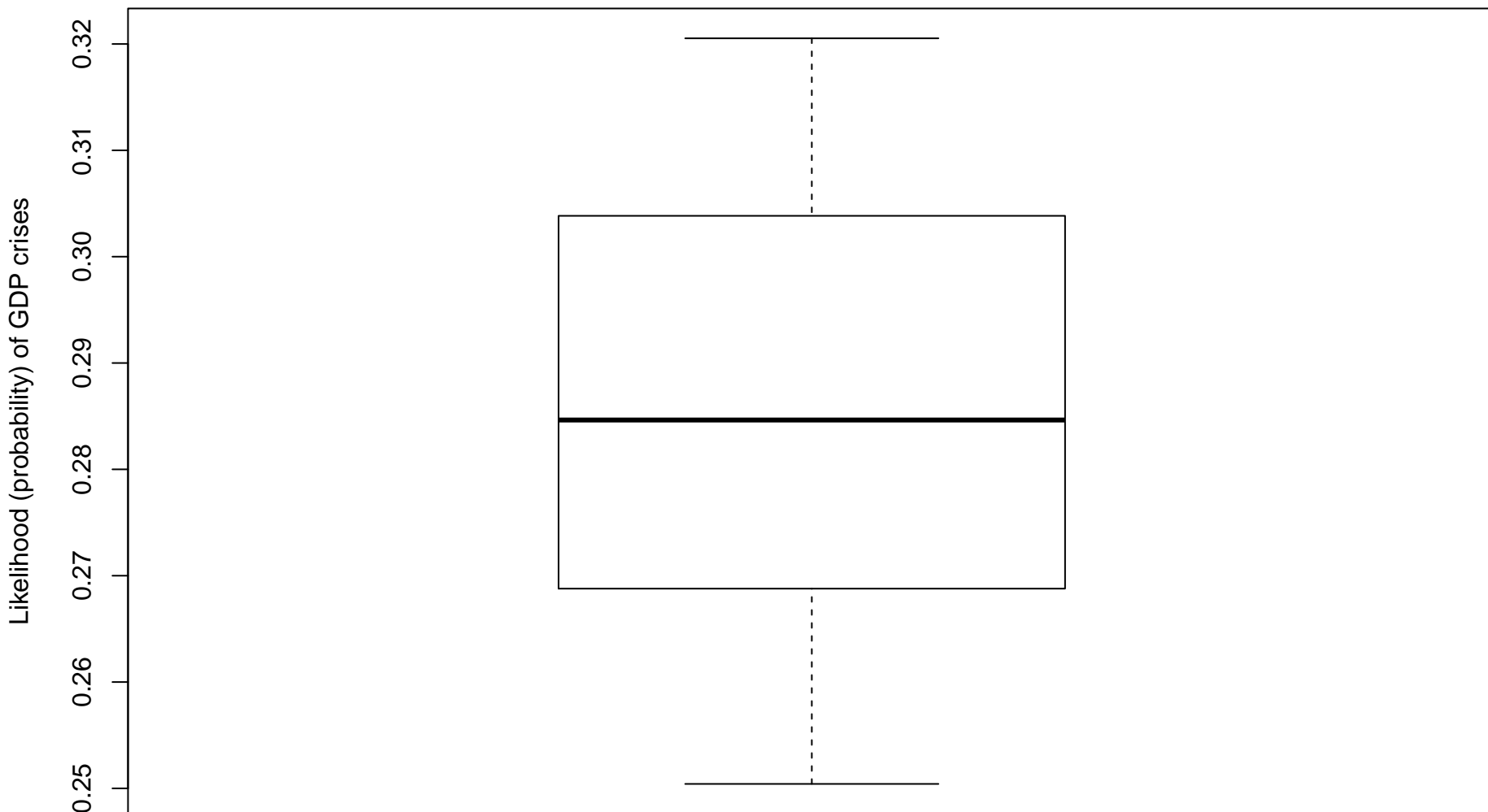
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Volatility of GDP growth



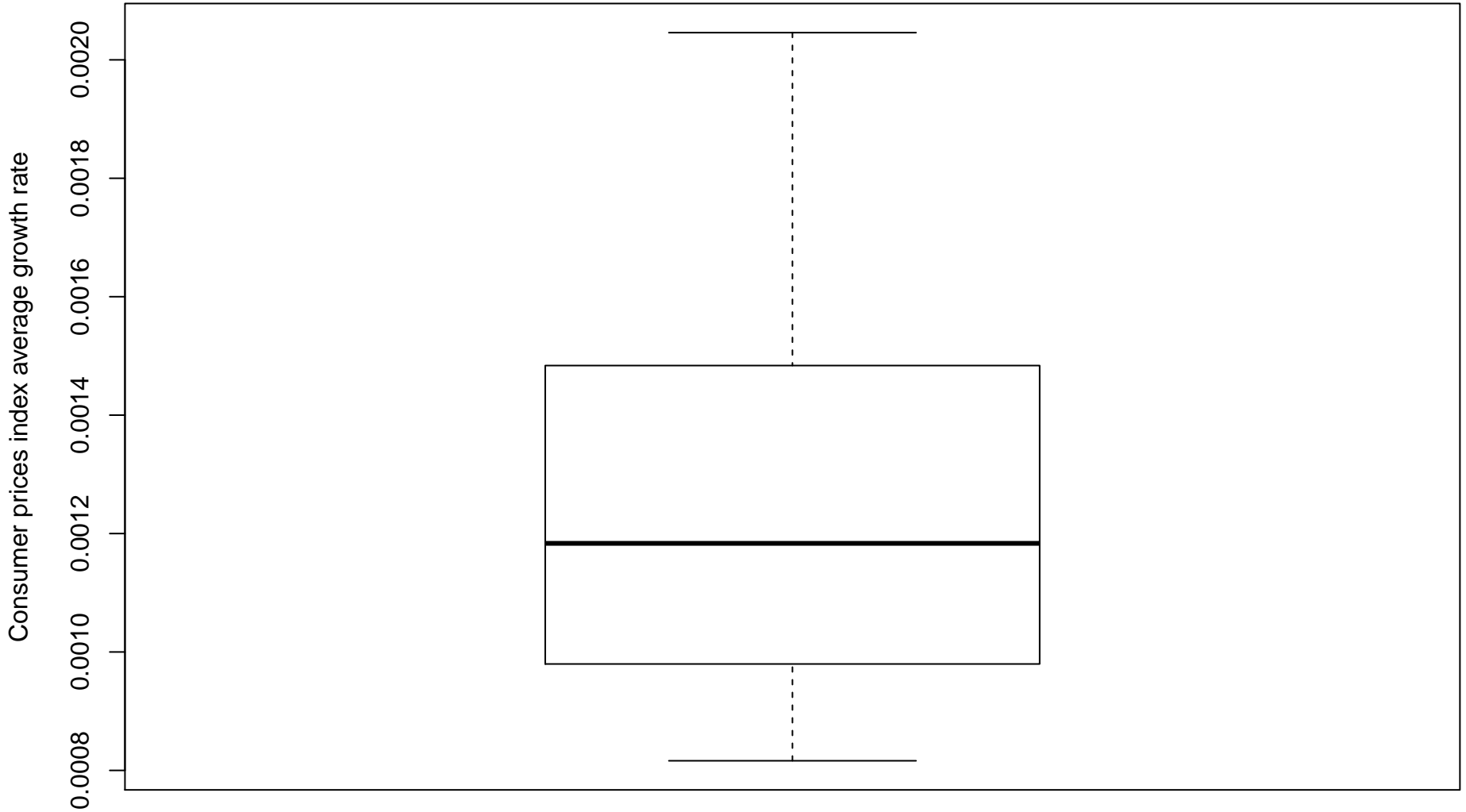
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Likelihood of GDP crises



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

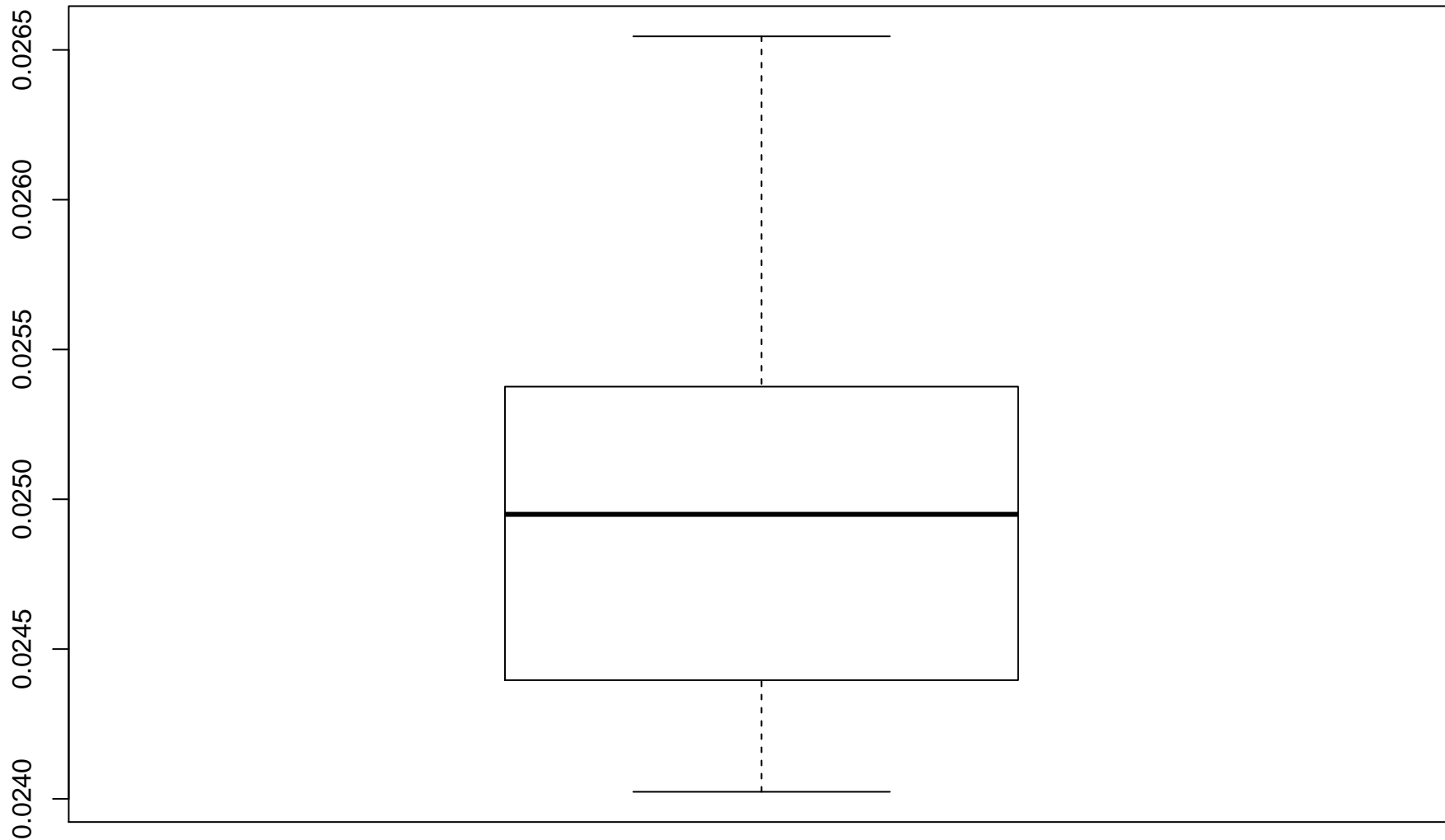
Inflation



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

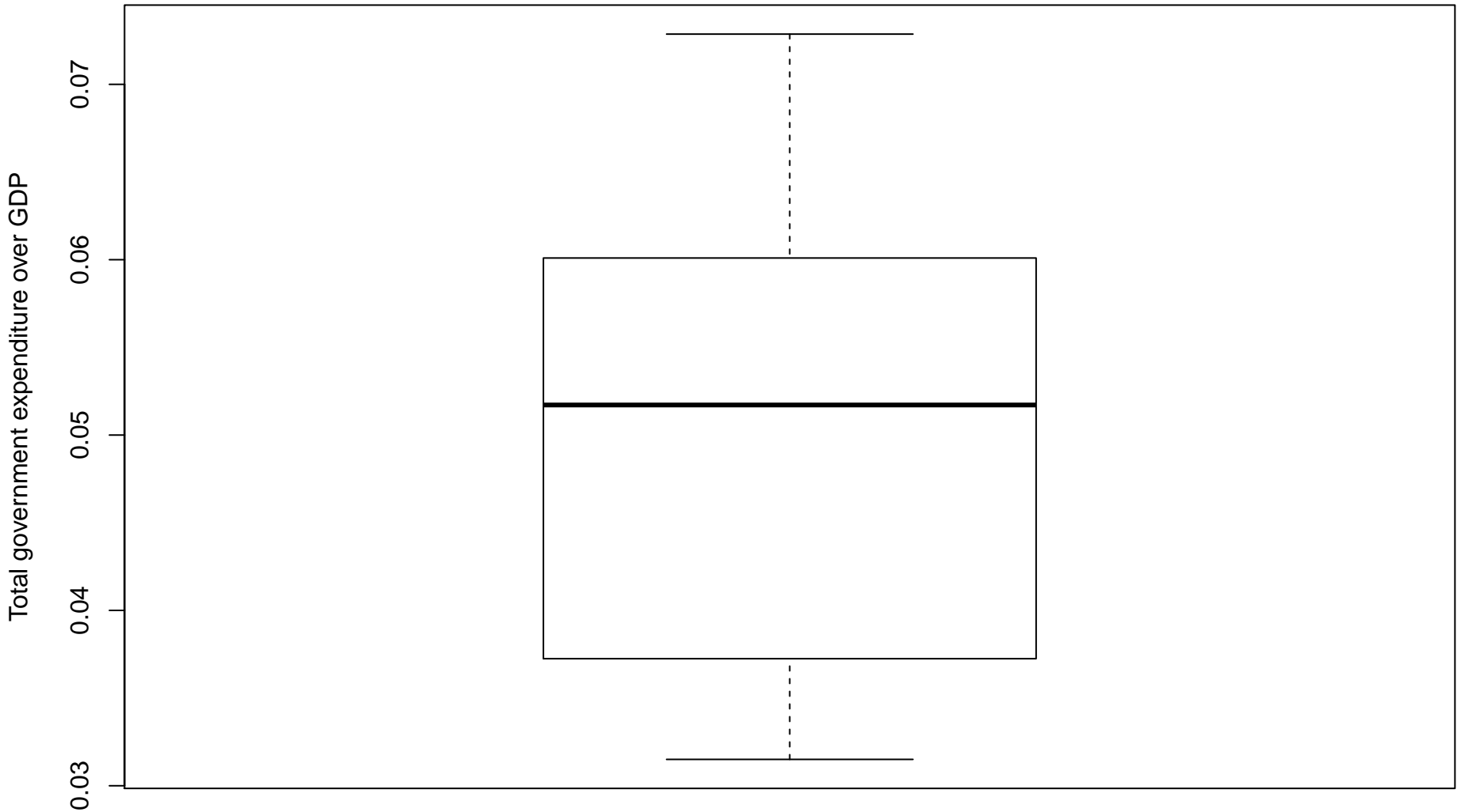
Government tax income over GDP

Tax



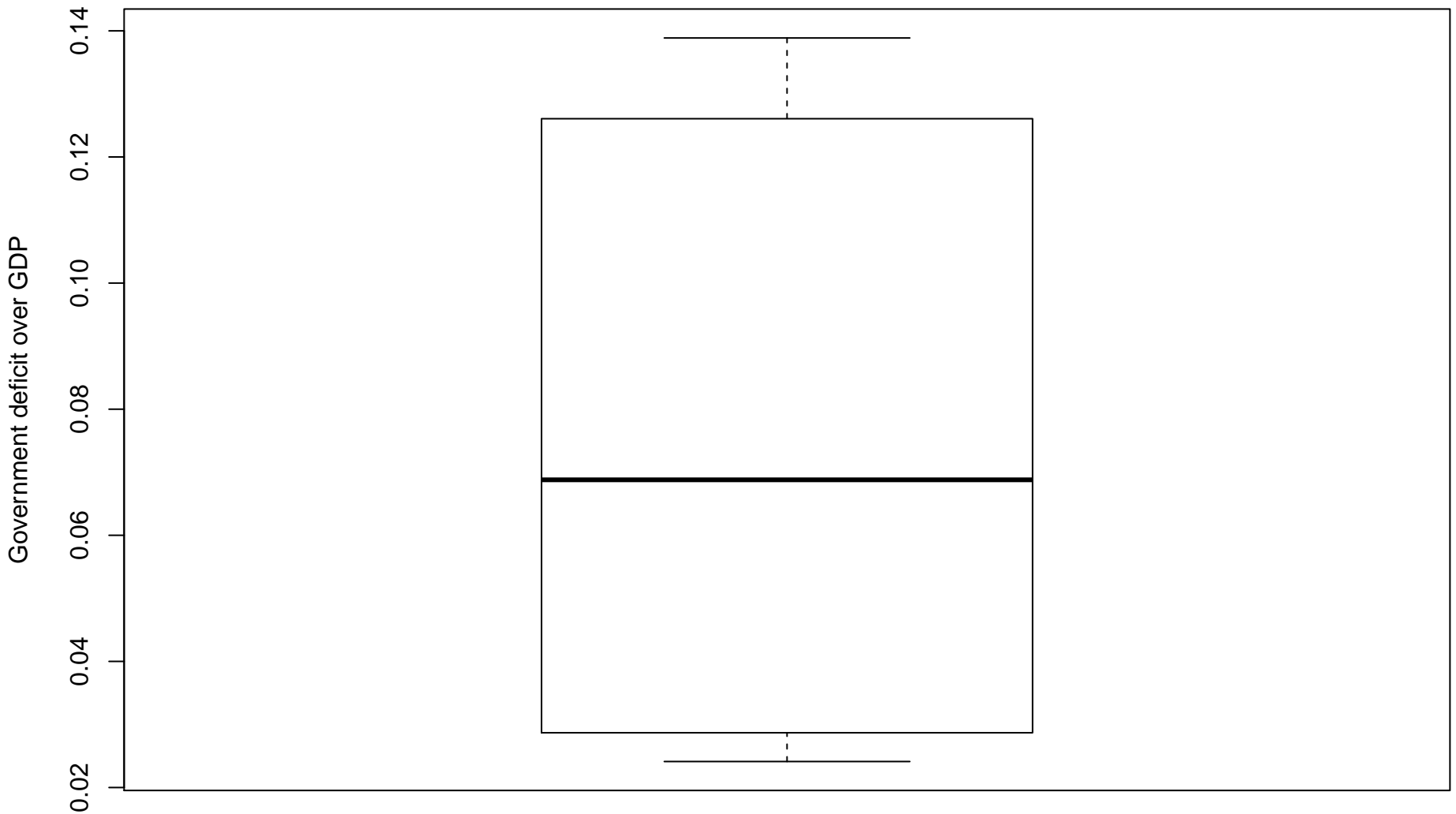
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Government total expenditure



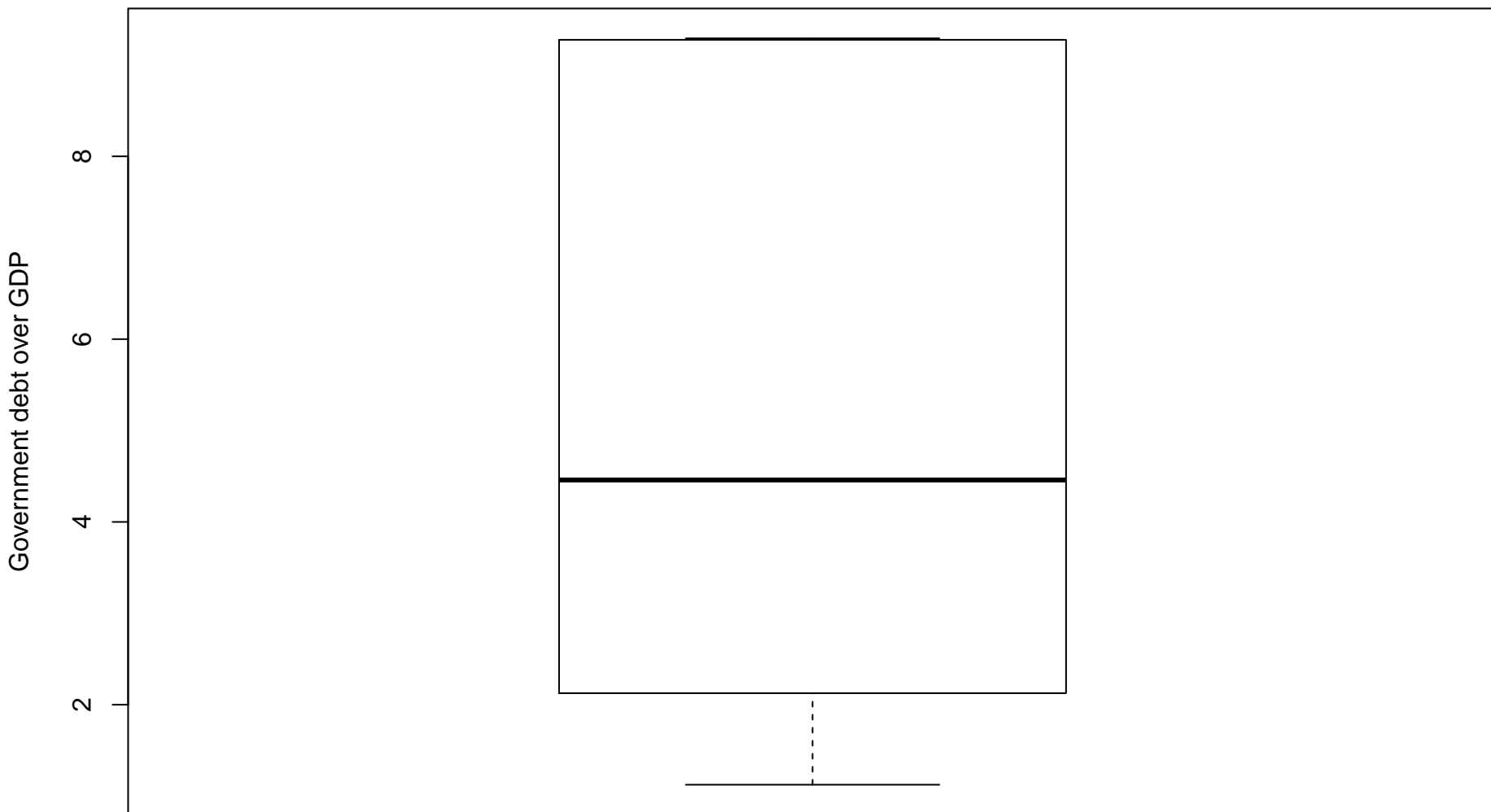
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Government deficit



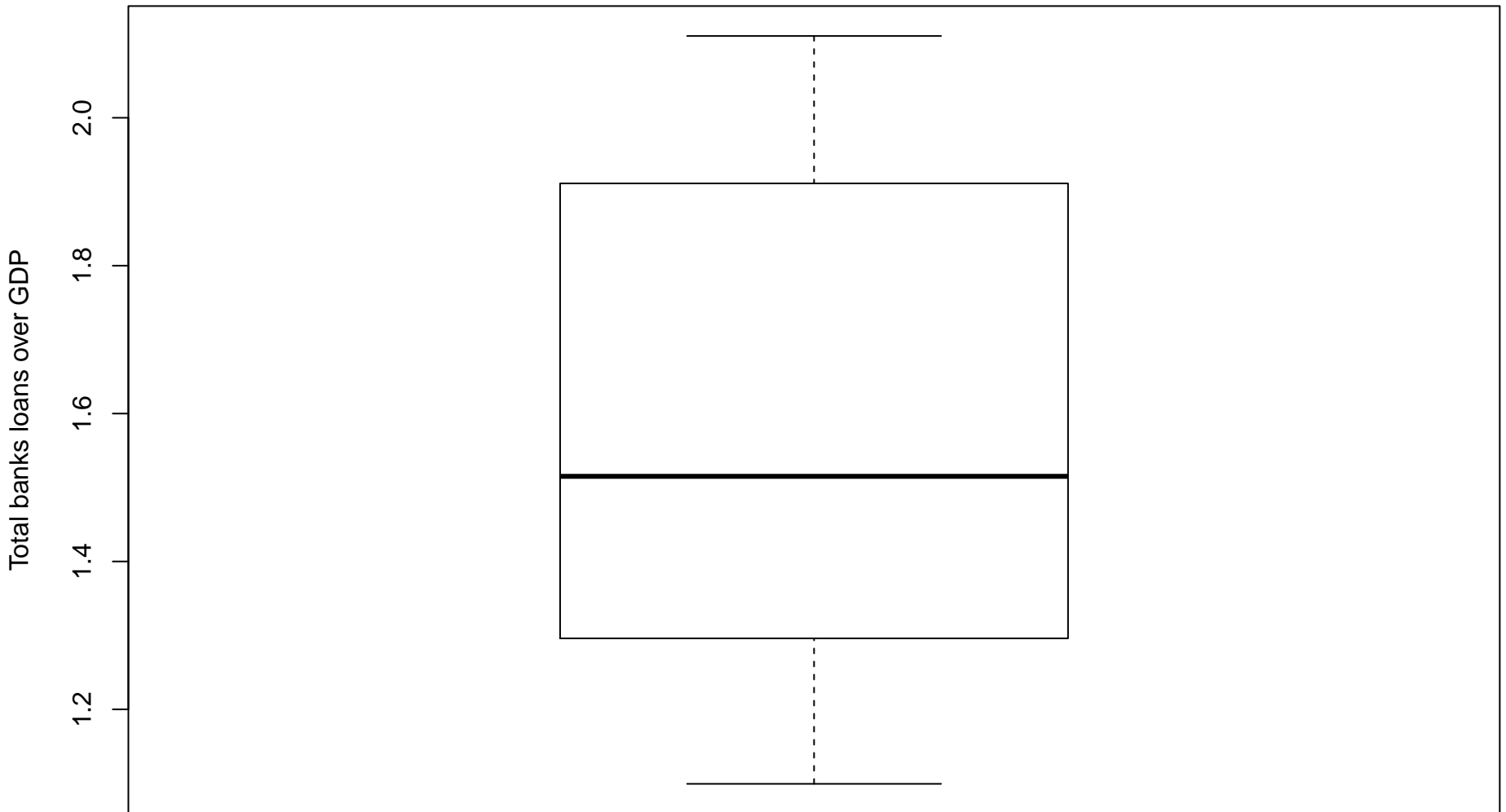
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Government debt



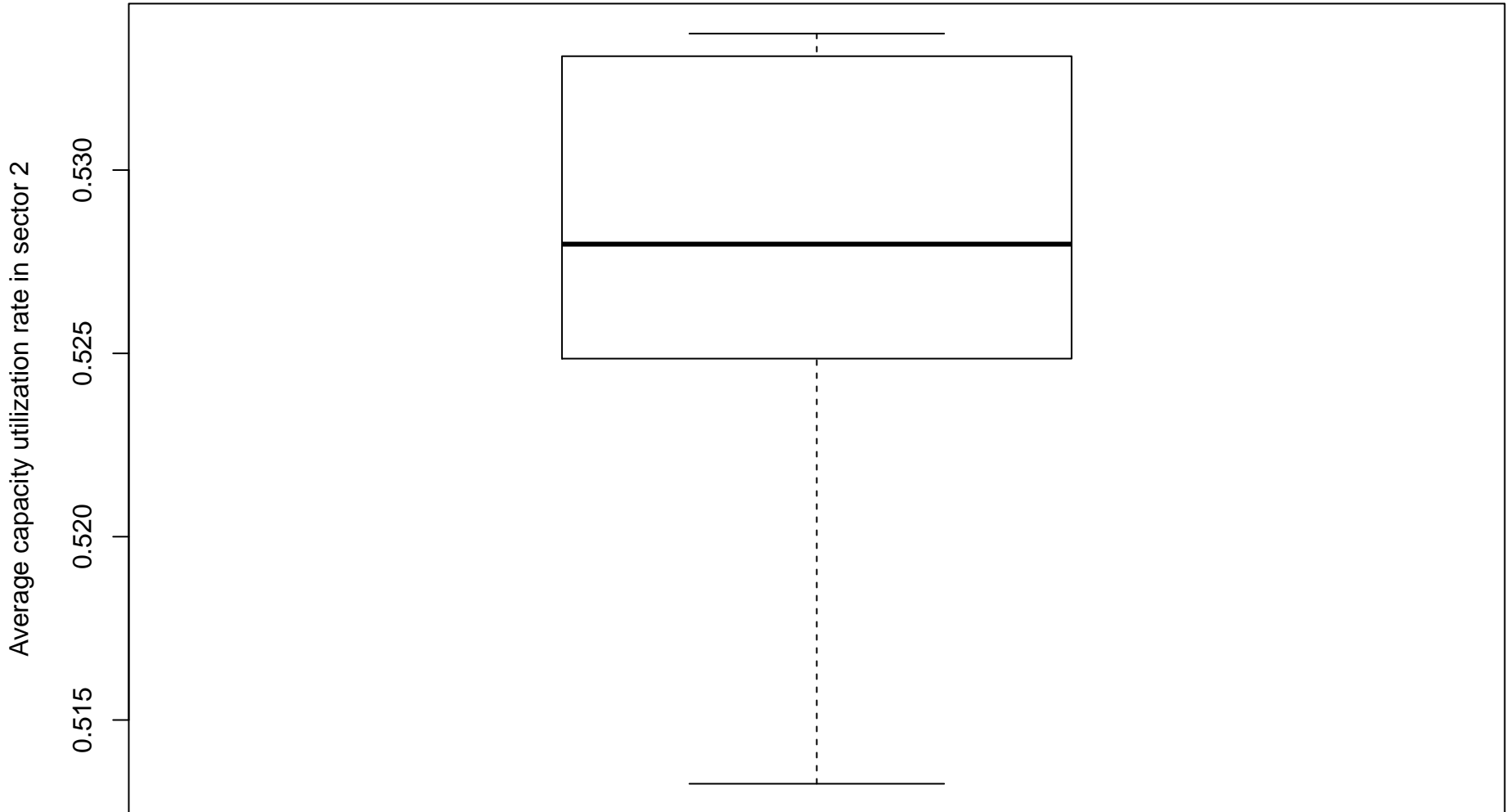
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Loans



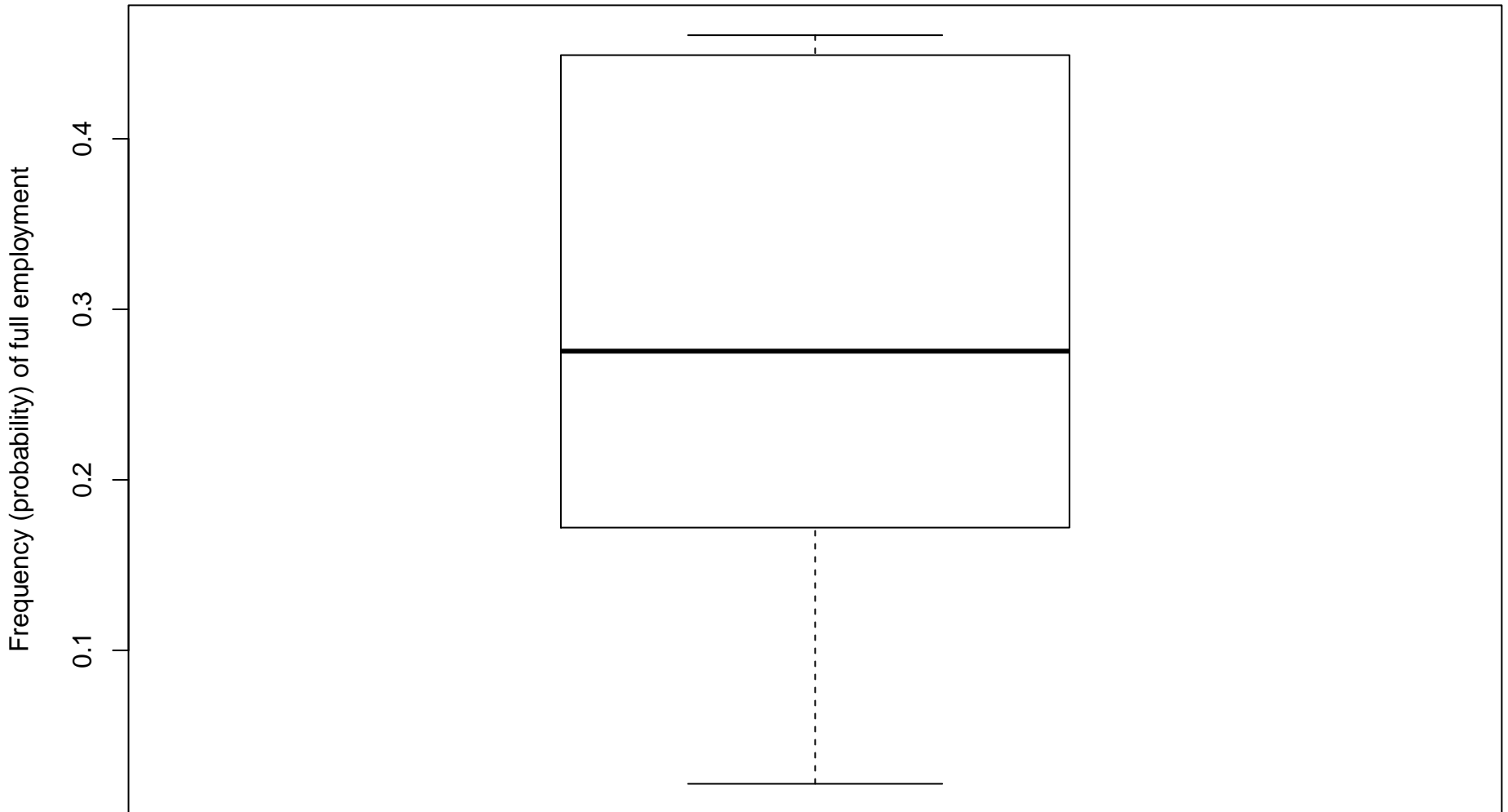
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Capacity utilization



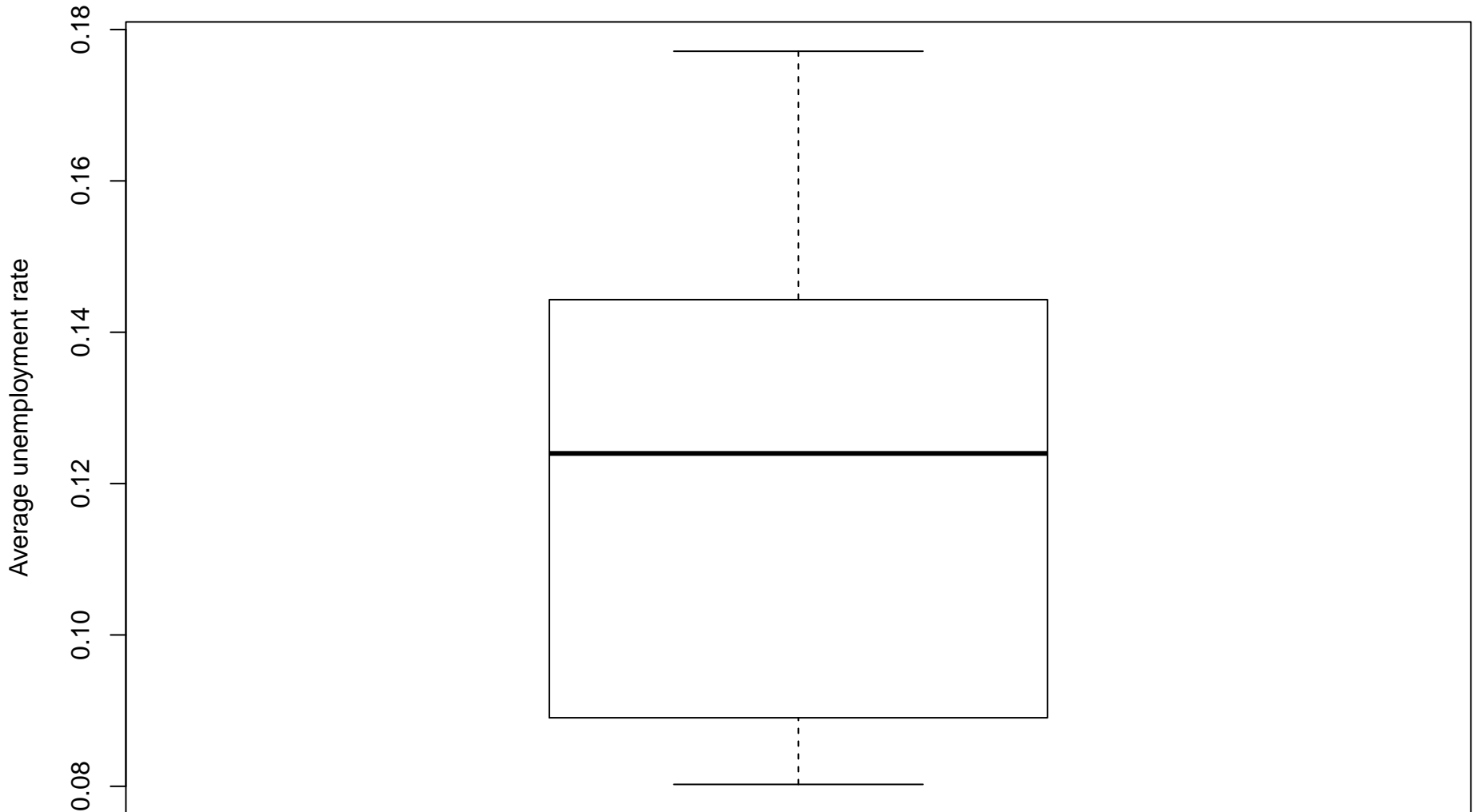
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Full employment frequency



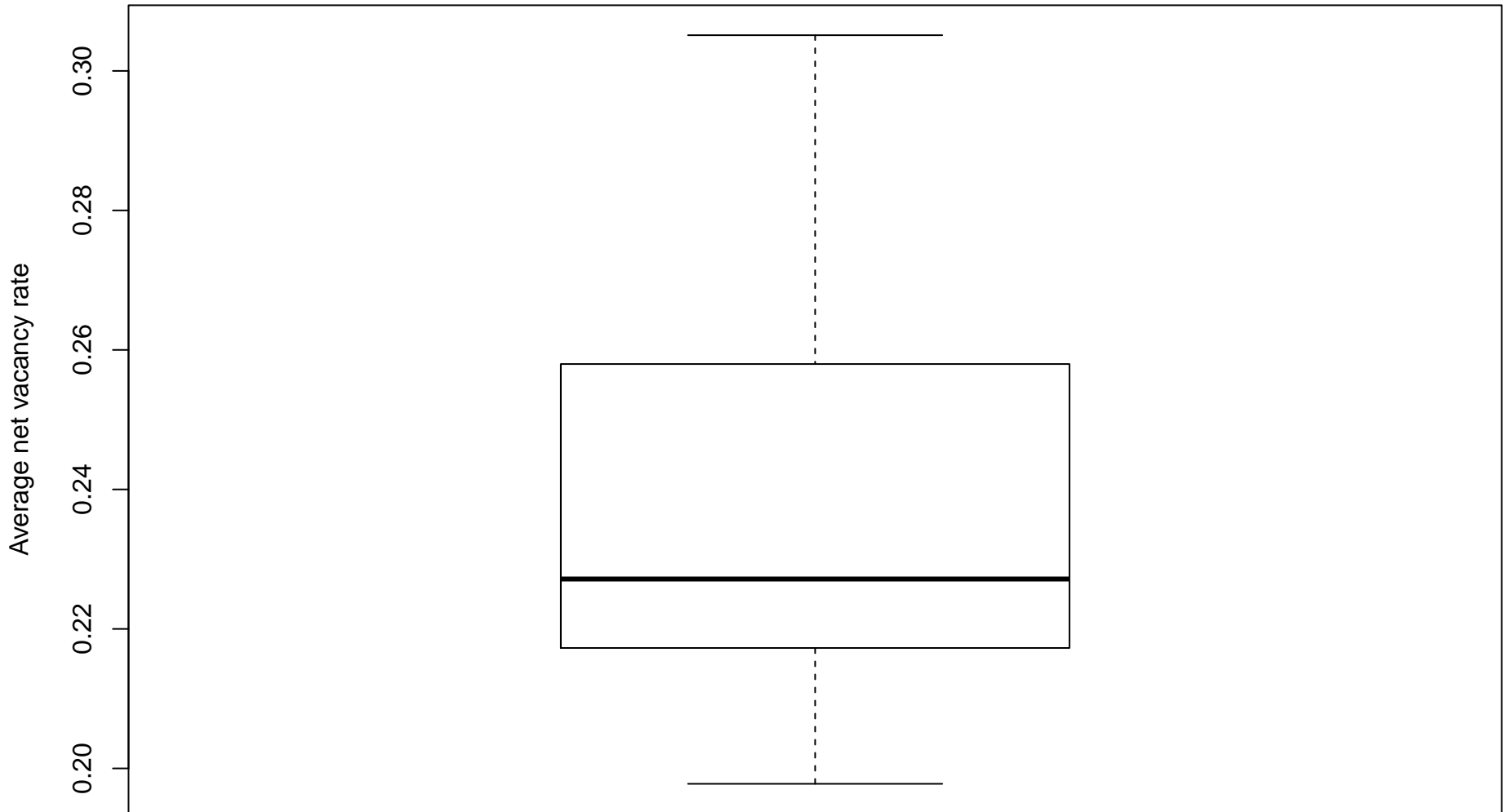
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Unemployment



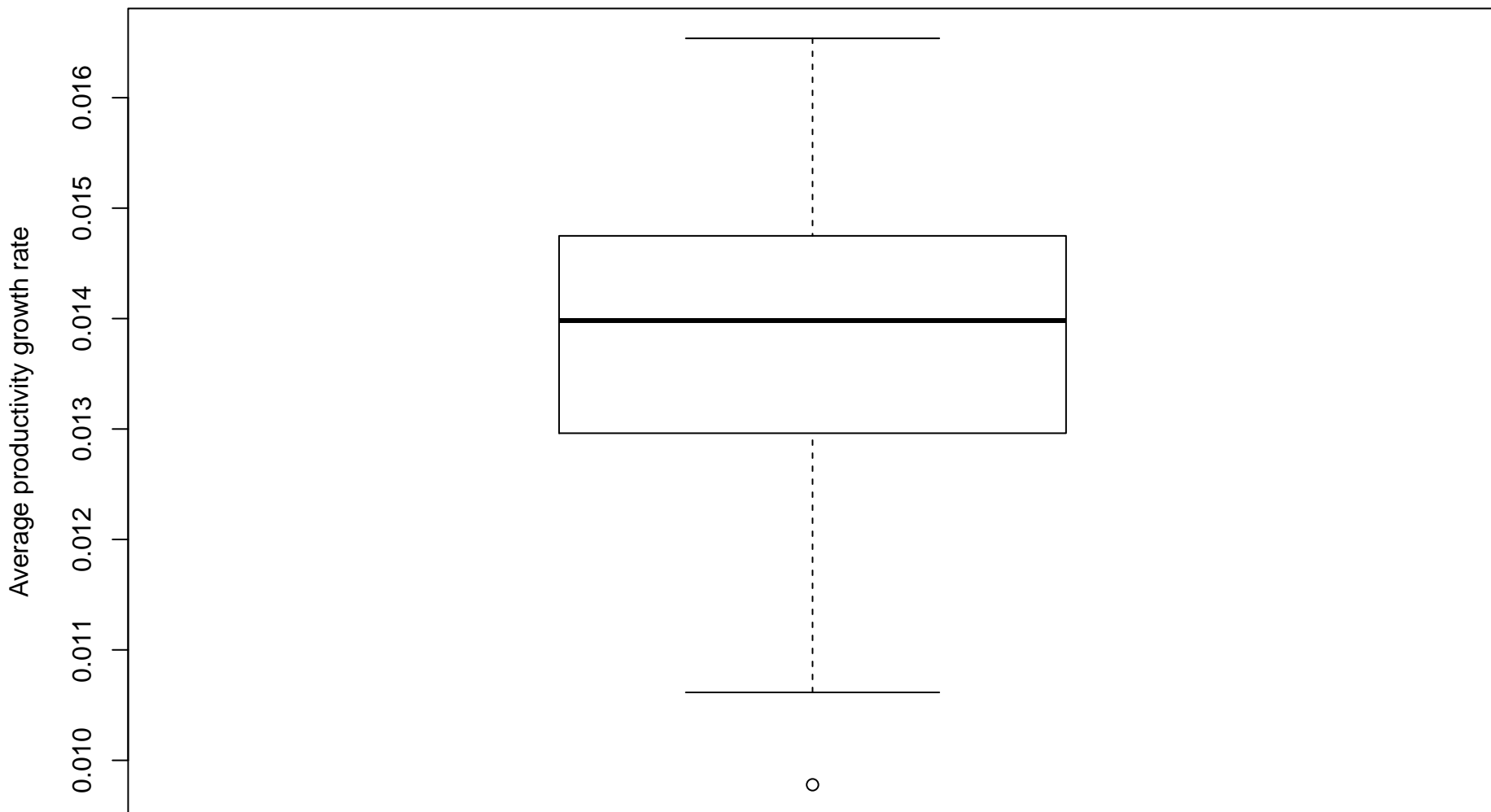
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Vacancy



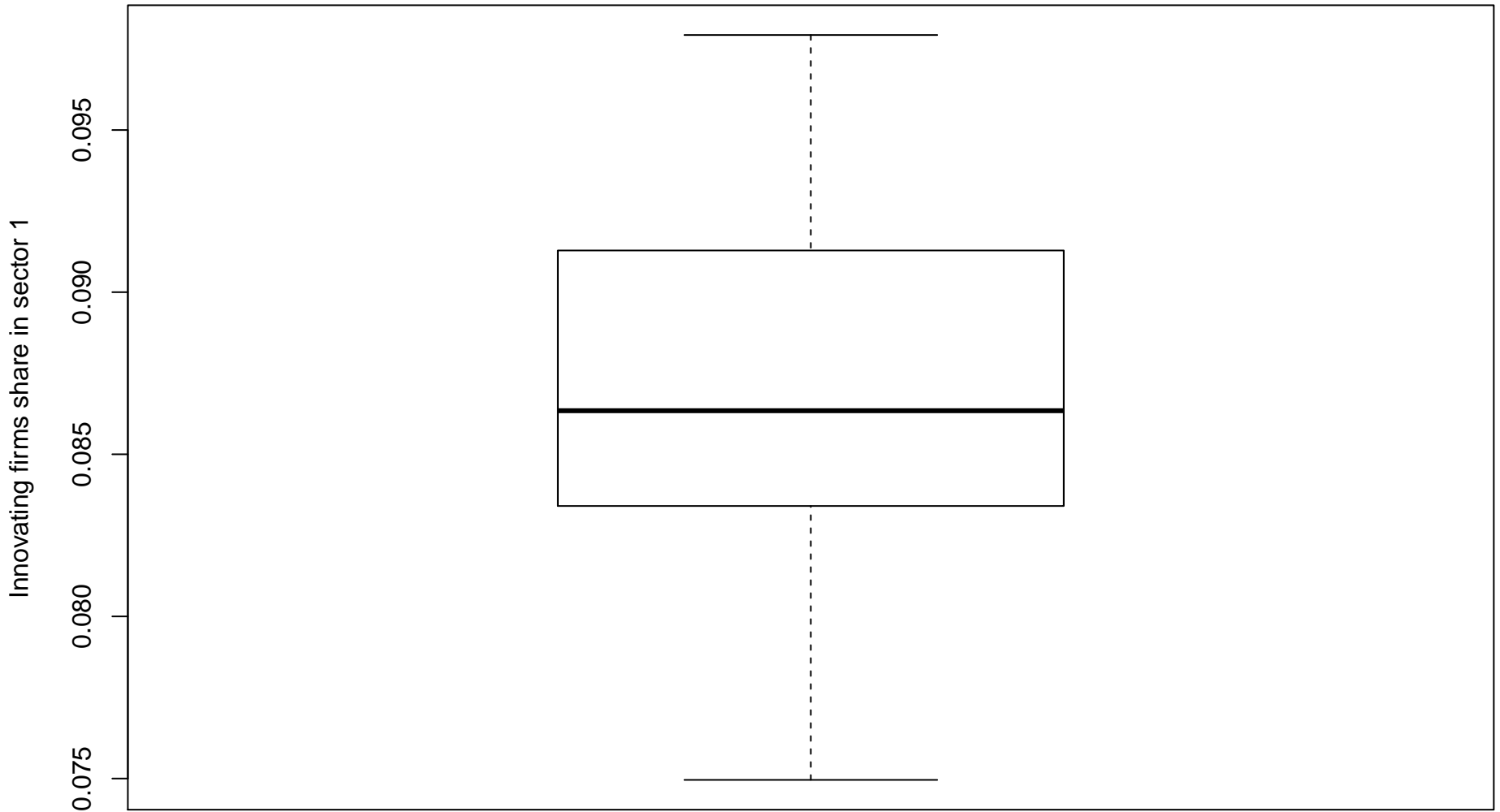
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Productivity growth



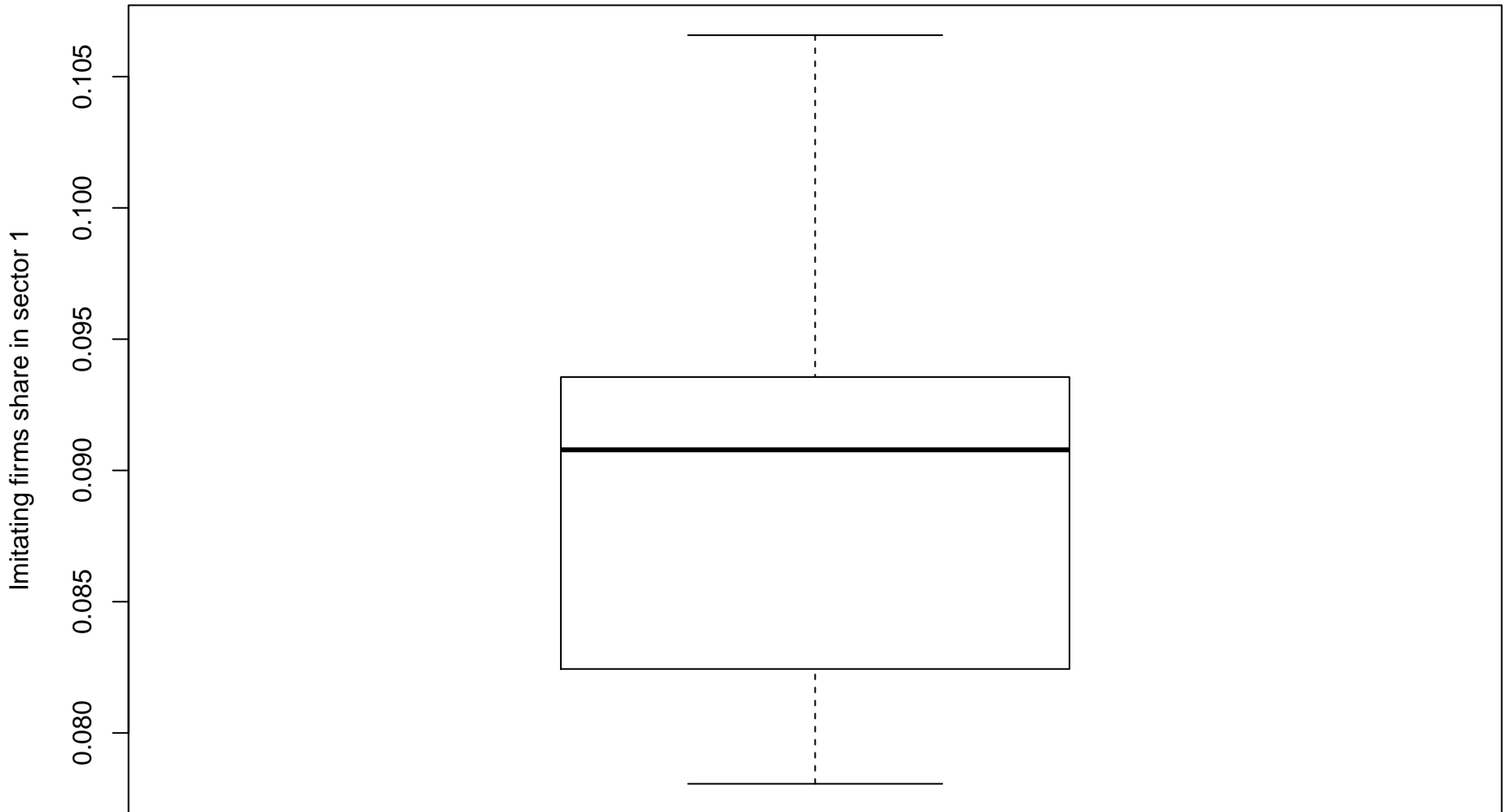
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Innovation



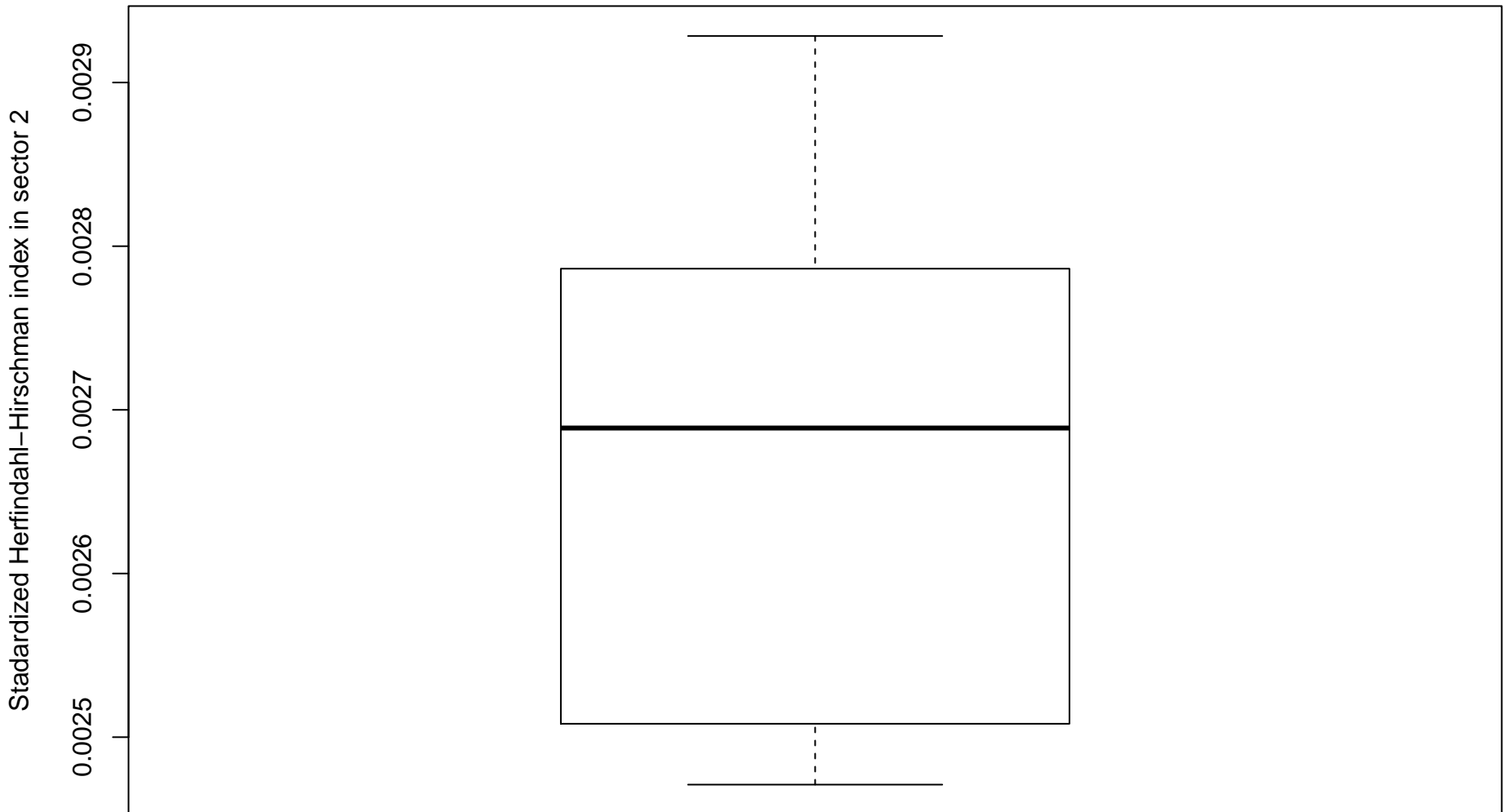
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Imitation



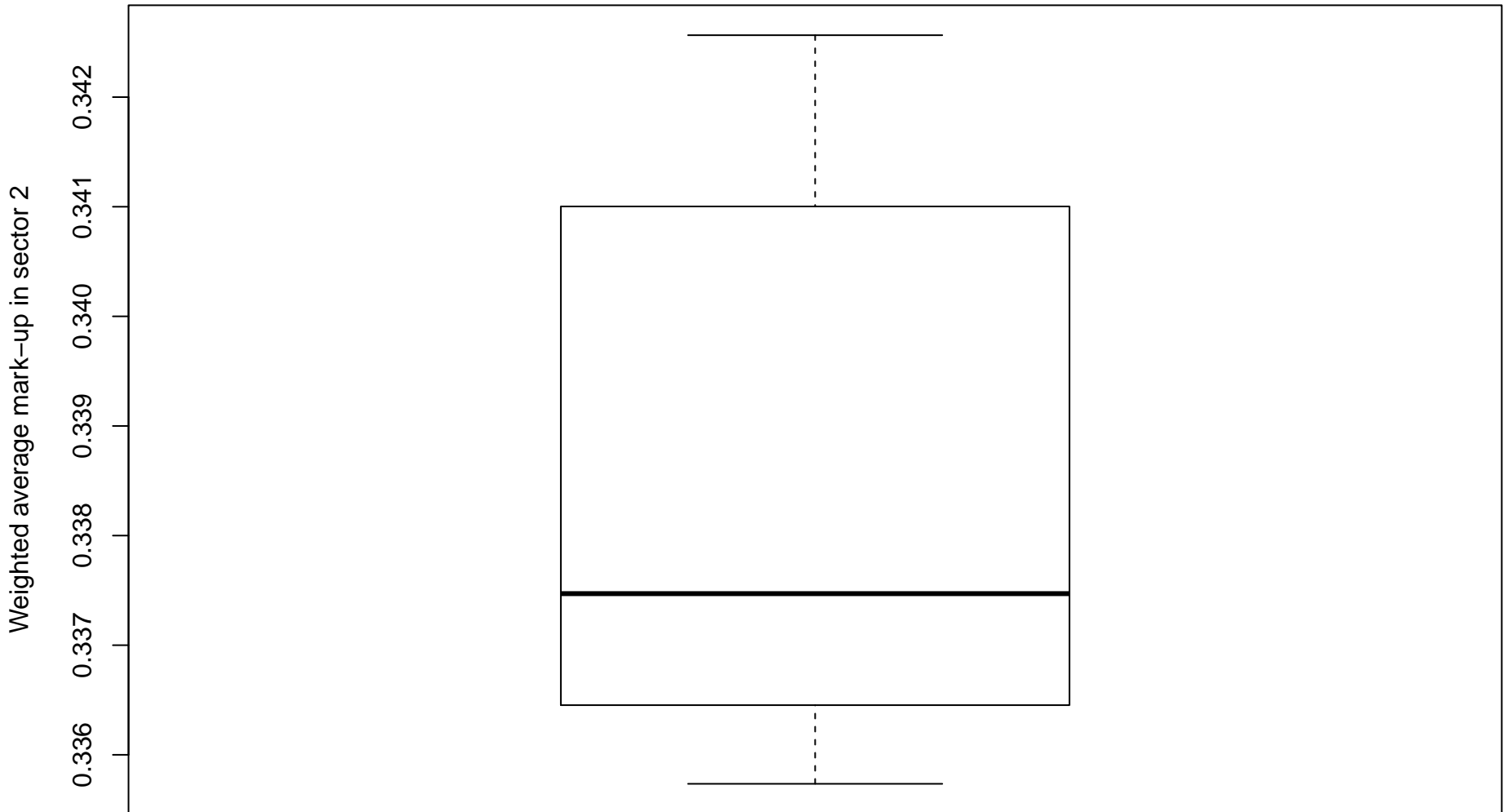
(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Market concentration



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Mark-ups



(bar: median / box: 2nd–3rd quartile / whiskers: max–min / points: outliers / MC runs = 10 / period = 2 – 600)

Monte Carlo descriptive statistics (all experiments)

	Avg[1]	SD[1]	Min[1]	Max[1]
GDP growth	0.01416	0.002125	0.01005	0.0174
Volatility of GDP growth	0.0928	0.00313	0.08838	0.09826
Likelihood of GDP crises	0.2841	0.02316	0.2504	0.3205
Inflation	0.001267	0.000367	0.0008163	0.002046
Tax	0.02499	0.0008128	0.02402	0.02655
Government total expenditure	0.05382	0.01986	0.0315	0.09616
Government deficit	0.09685	0.0914	0.02412	0.3294
Government debt	6.865	7.43	1.125	26.28
Loans	1.549	0.3388	1.099	2.111
Capacity utilization	0.5267	0.007104	0.5133	0.5337
Full employment frequency	0.2756	0.1565	0.0217	0.4608
Unemployment	0.13	0.04632	0.08025	0.2273
Vacancy	0.2403	0.03404	0.1978	0.3051
Productivity growth	0.01356	0.002014	0.009779	0.01654
Innovation	0.08657	0.006751	0.07496	0.09793
Imitation	0.09014	0.008264	0.07806	0.1066
Market concentration	0.002681	0.0001534	0.002471	0.002928
Mark-ups	0.3385	0.002604	0.3357	0.3426

Experiments: [1] Benchmark

(numbers in brackets indicate the experiment number / MC runs = 10 / period = 2 – 600)