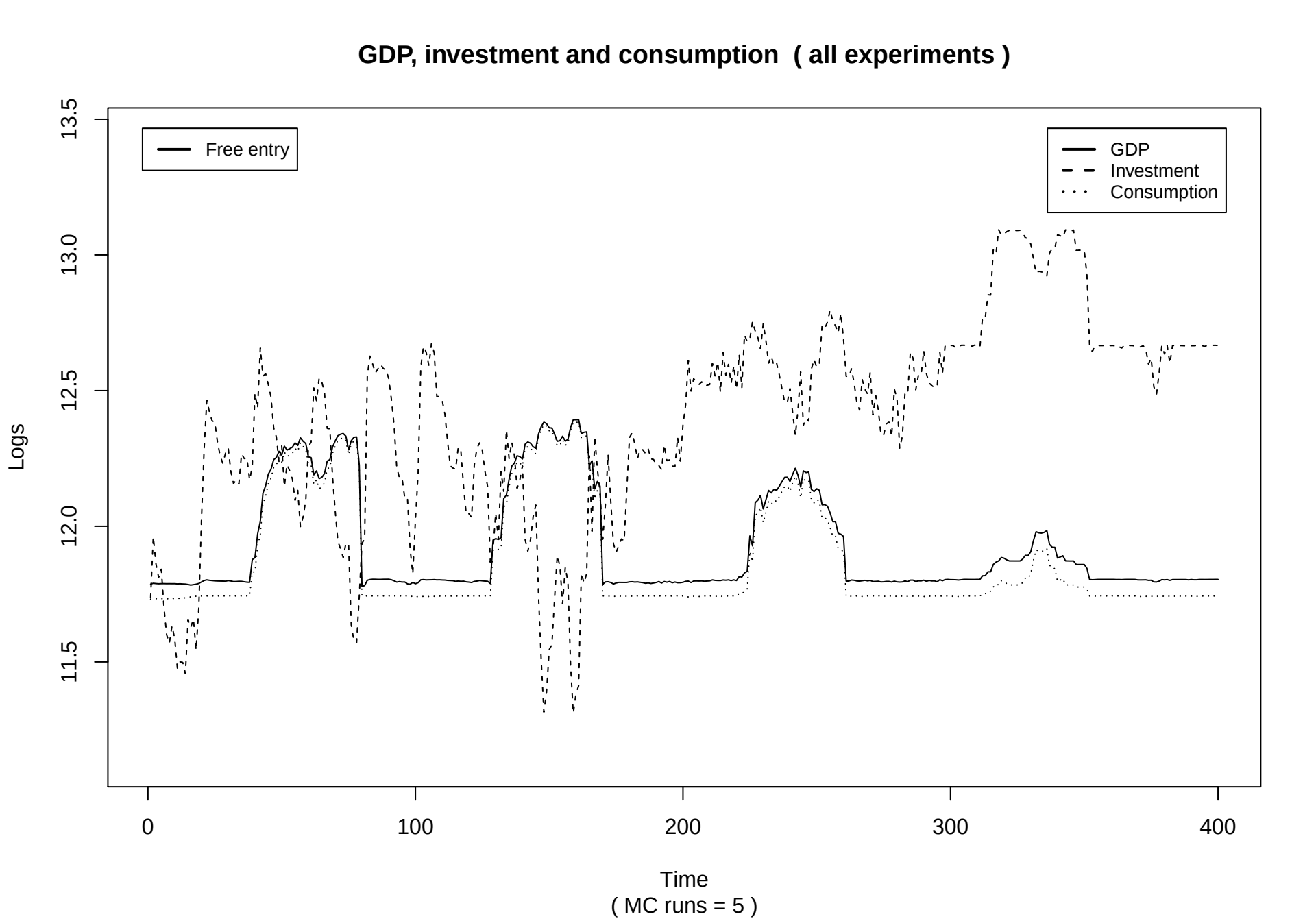
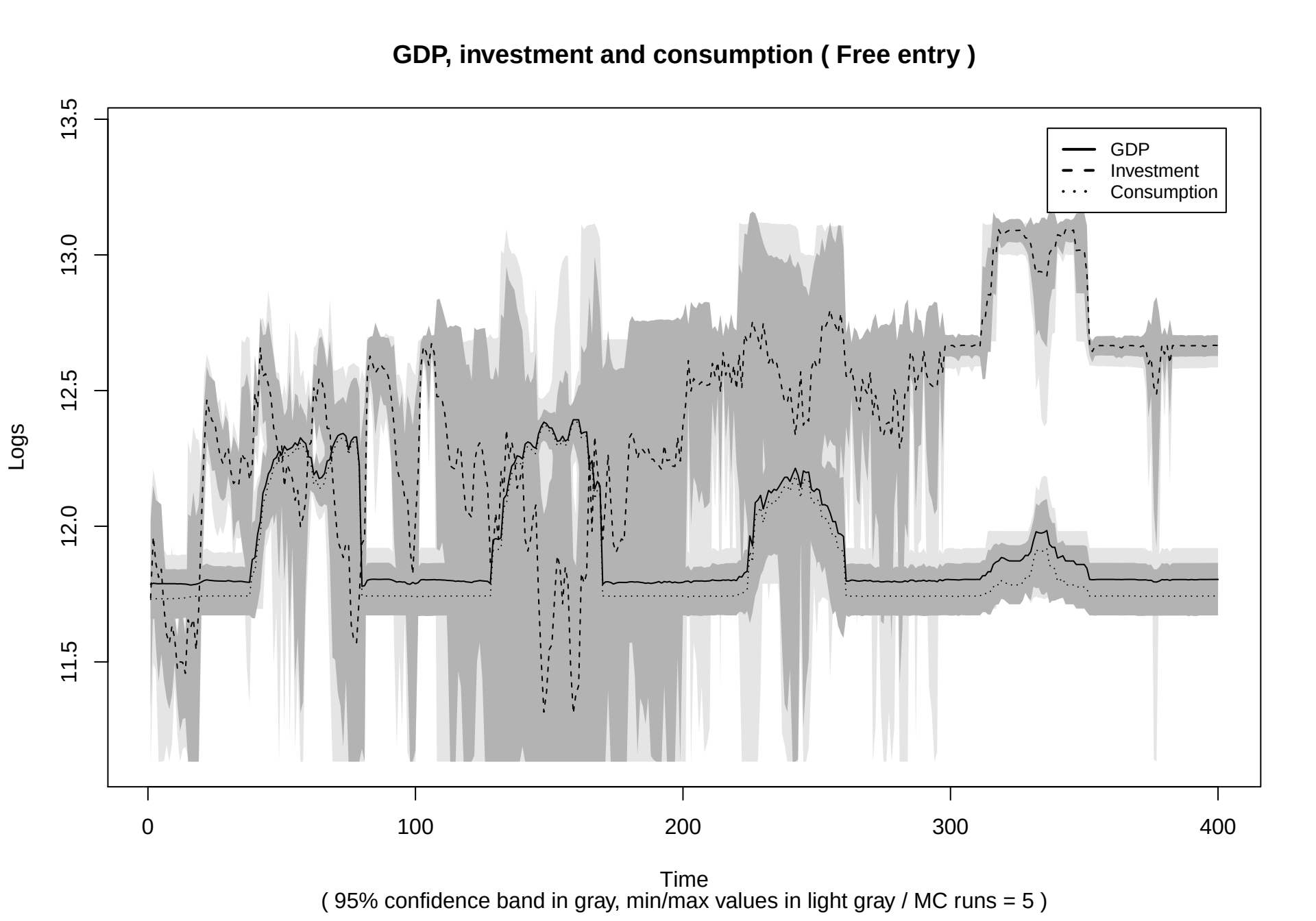
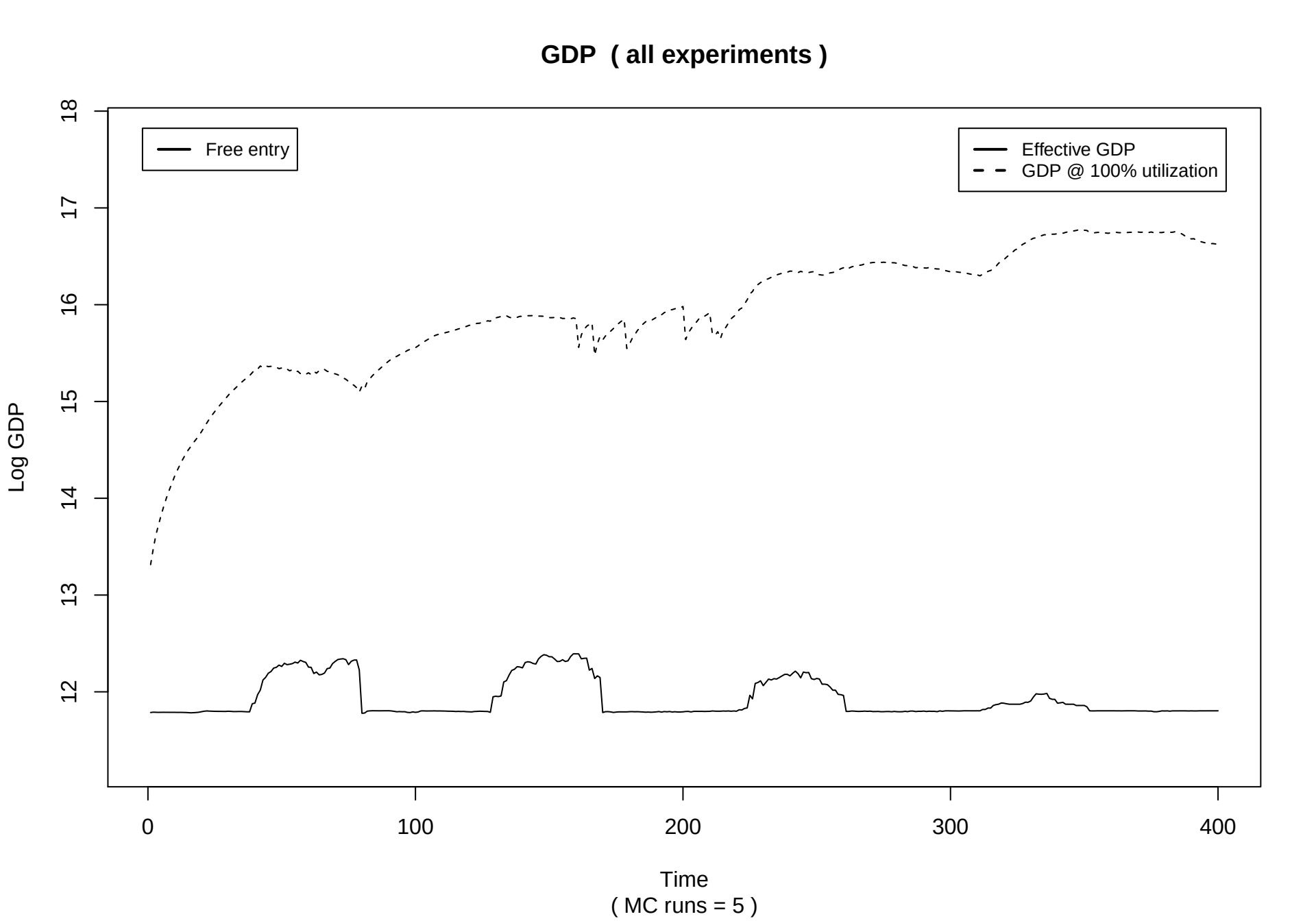
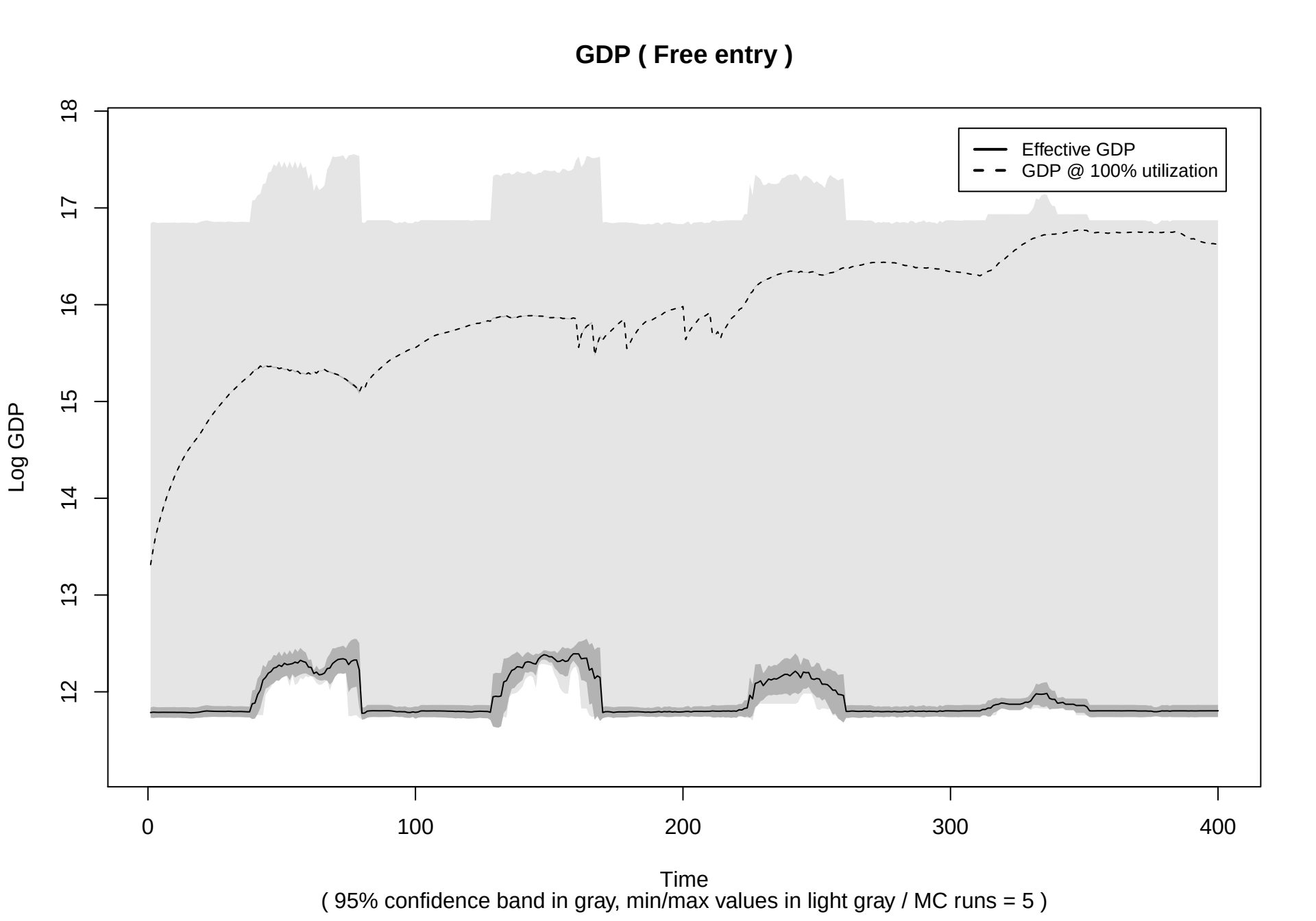
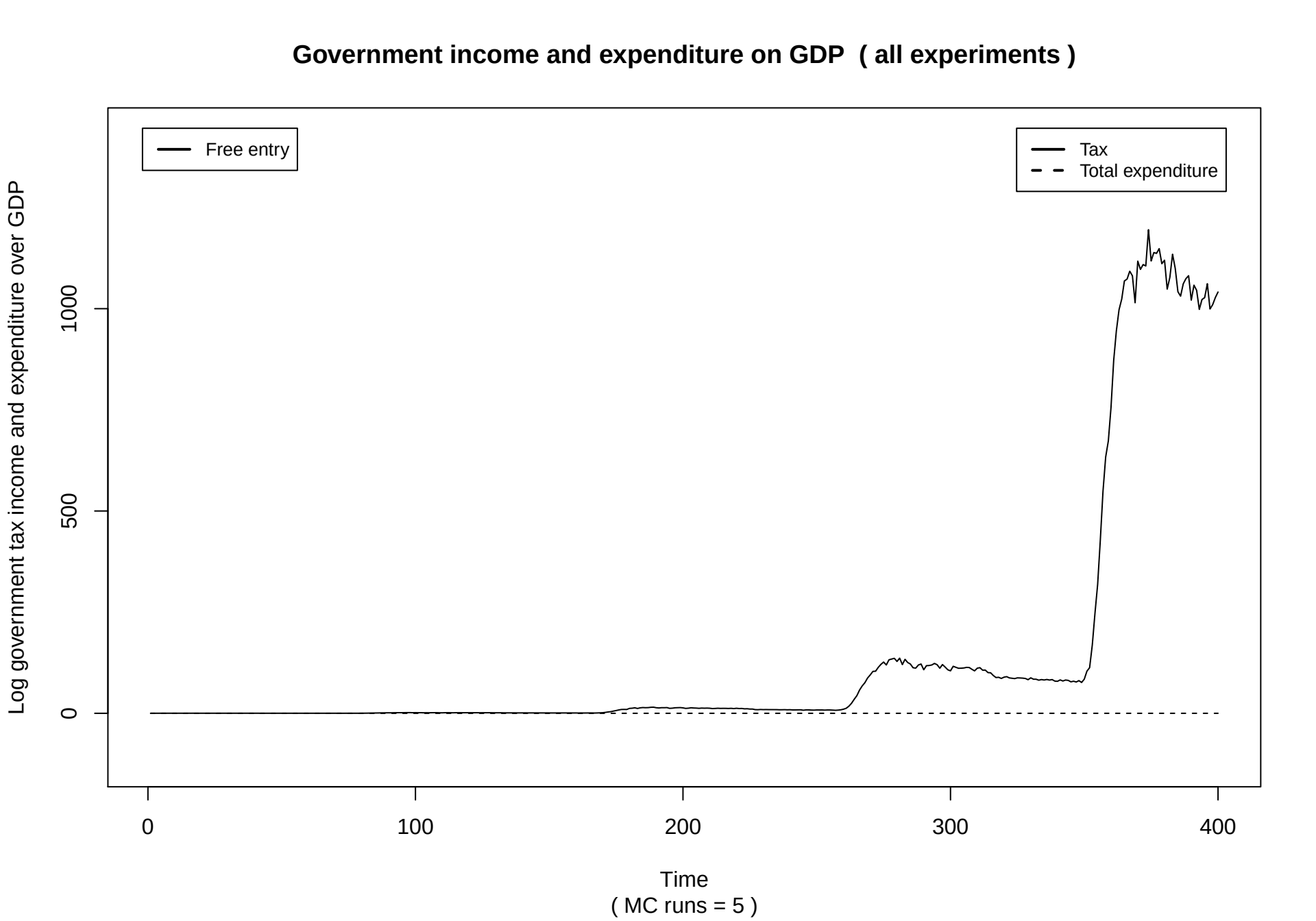
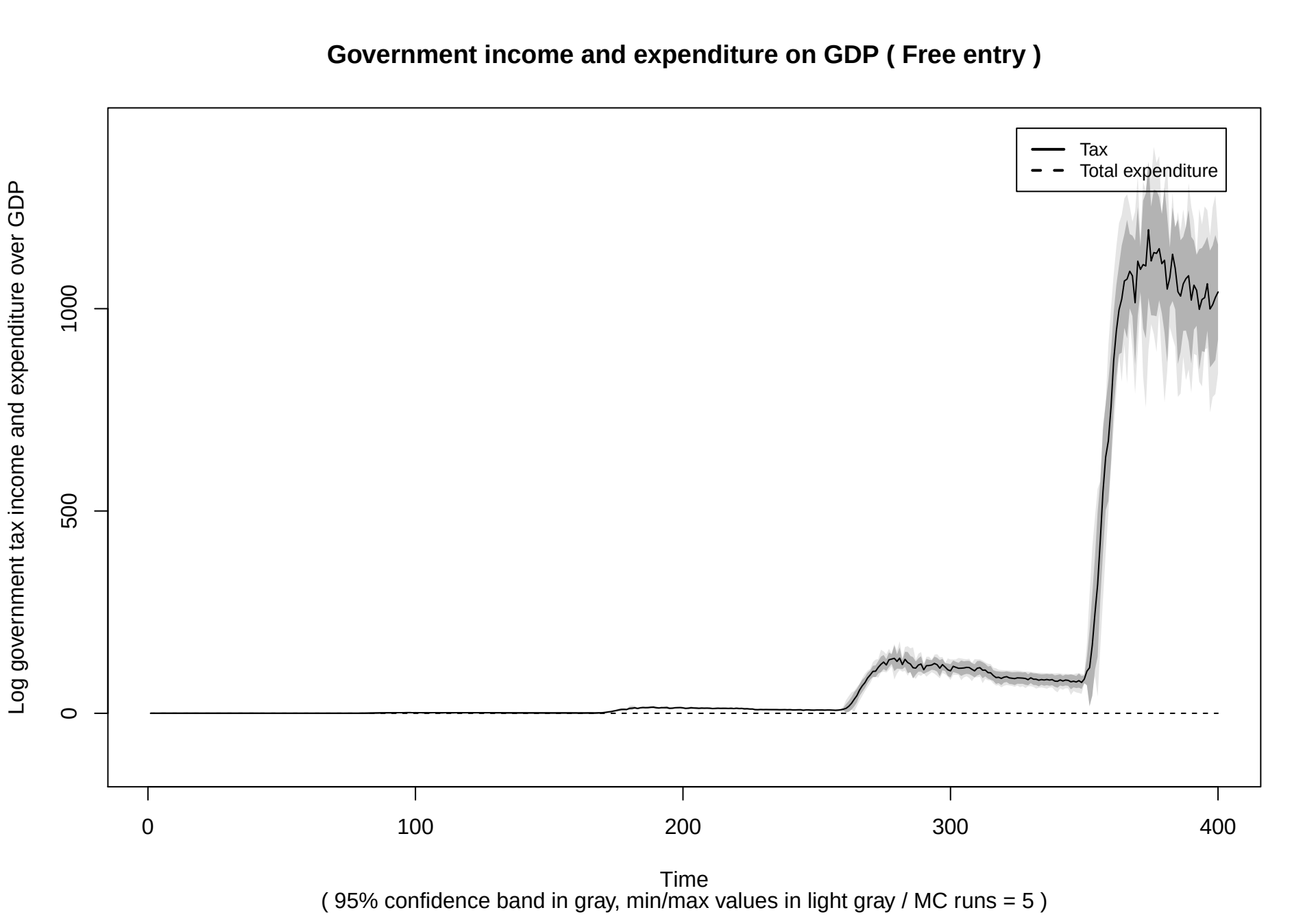

GDP, investment and consumption (all experiments)
Free entry
GDP
Investment
Consumption
Logs
13.5
13.0
12.5
12.0
11.5
0
100
200
300
400
Time
(MC runs = 5)

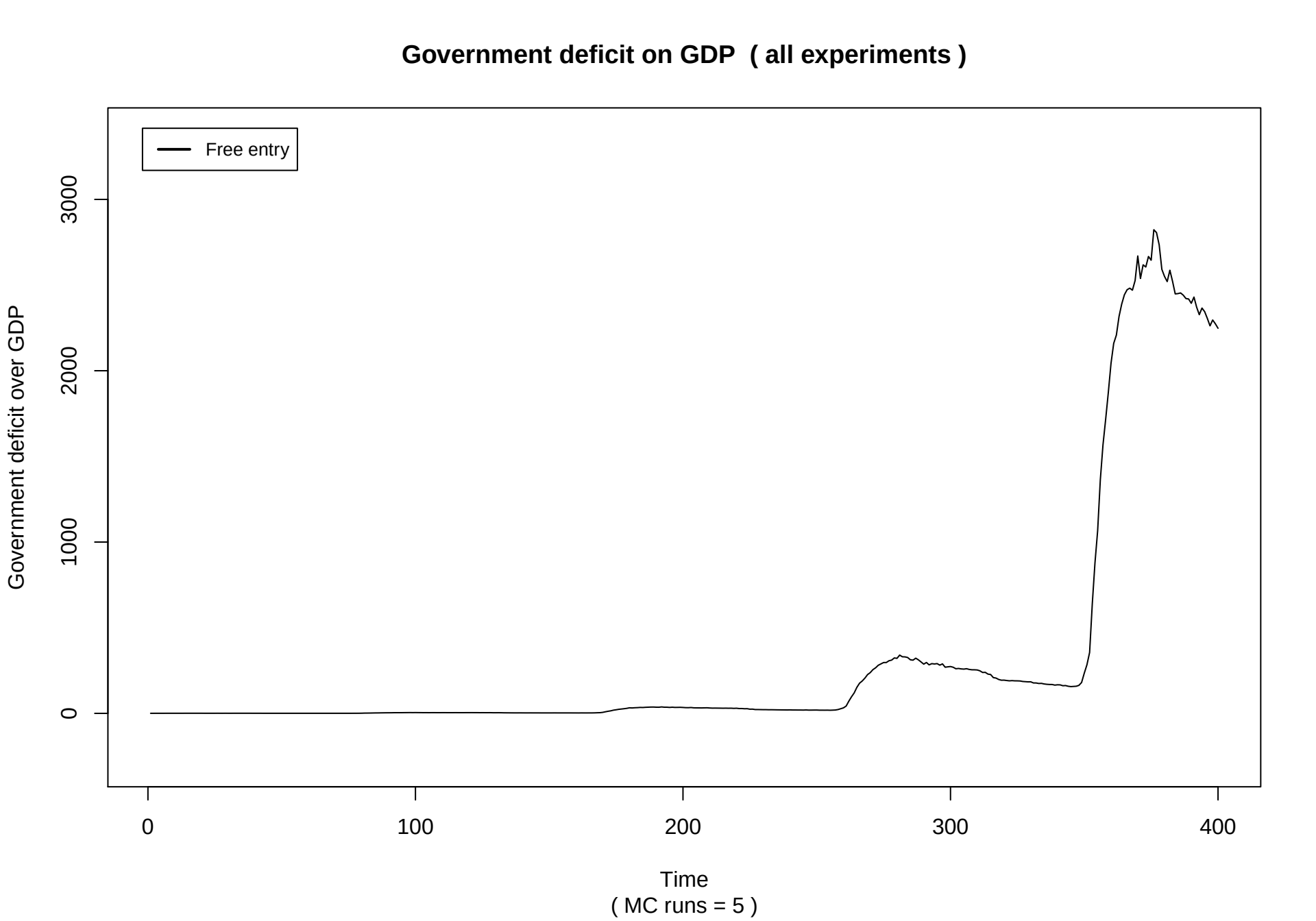

GDP, investment and consumption (Free entry)
GDP
Investment
Consumption
Logs
13.5
13.0
12.5
12.0
11.5
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

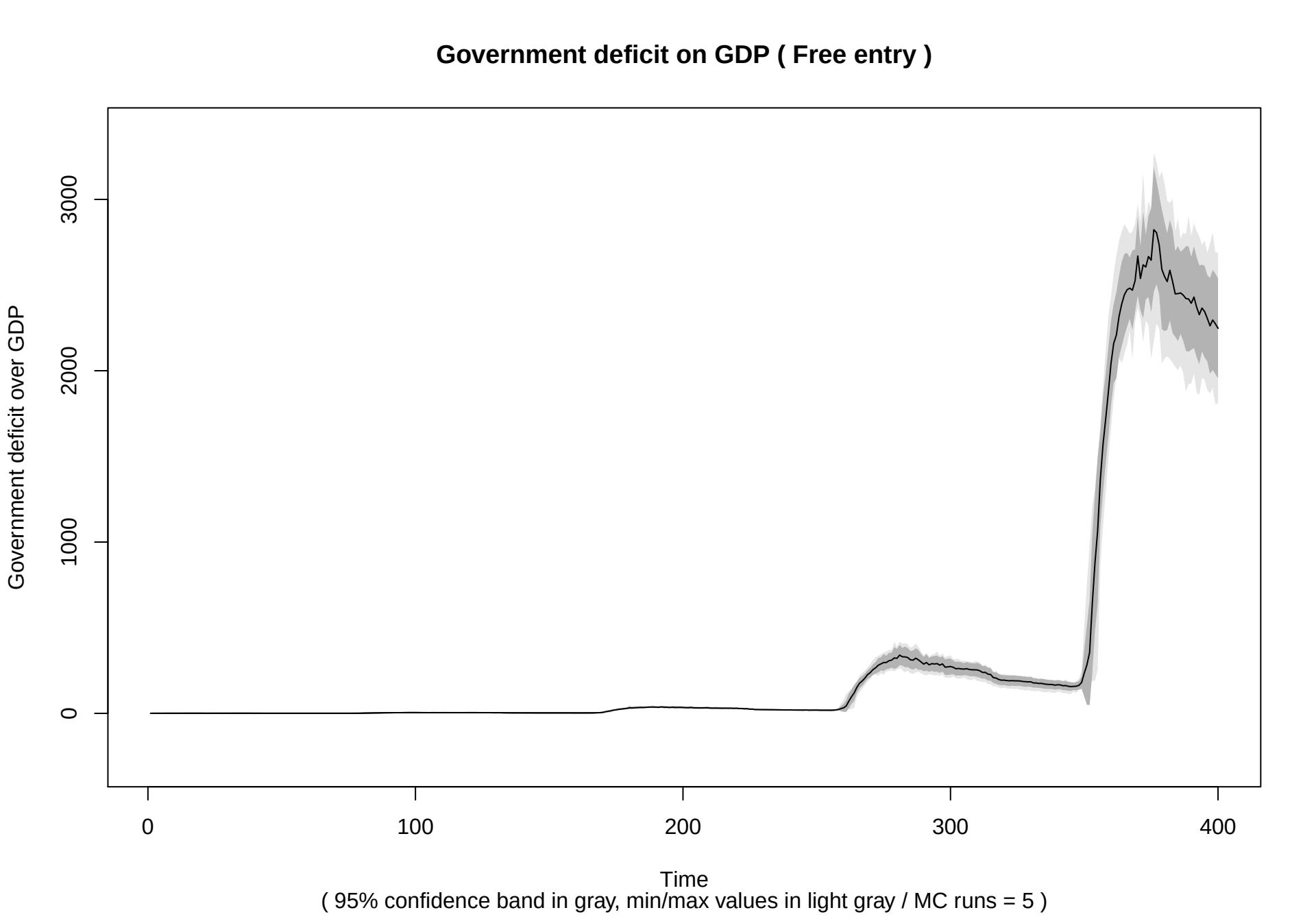

GDP (all experiments)
Free entry
Effective GDP
GDP @ 100% utilization
Log GDP
18
17
16
15
14
13
12
0
100
200
300
400
Time
(MC runs = 5)

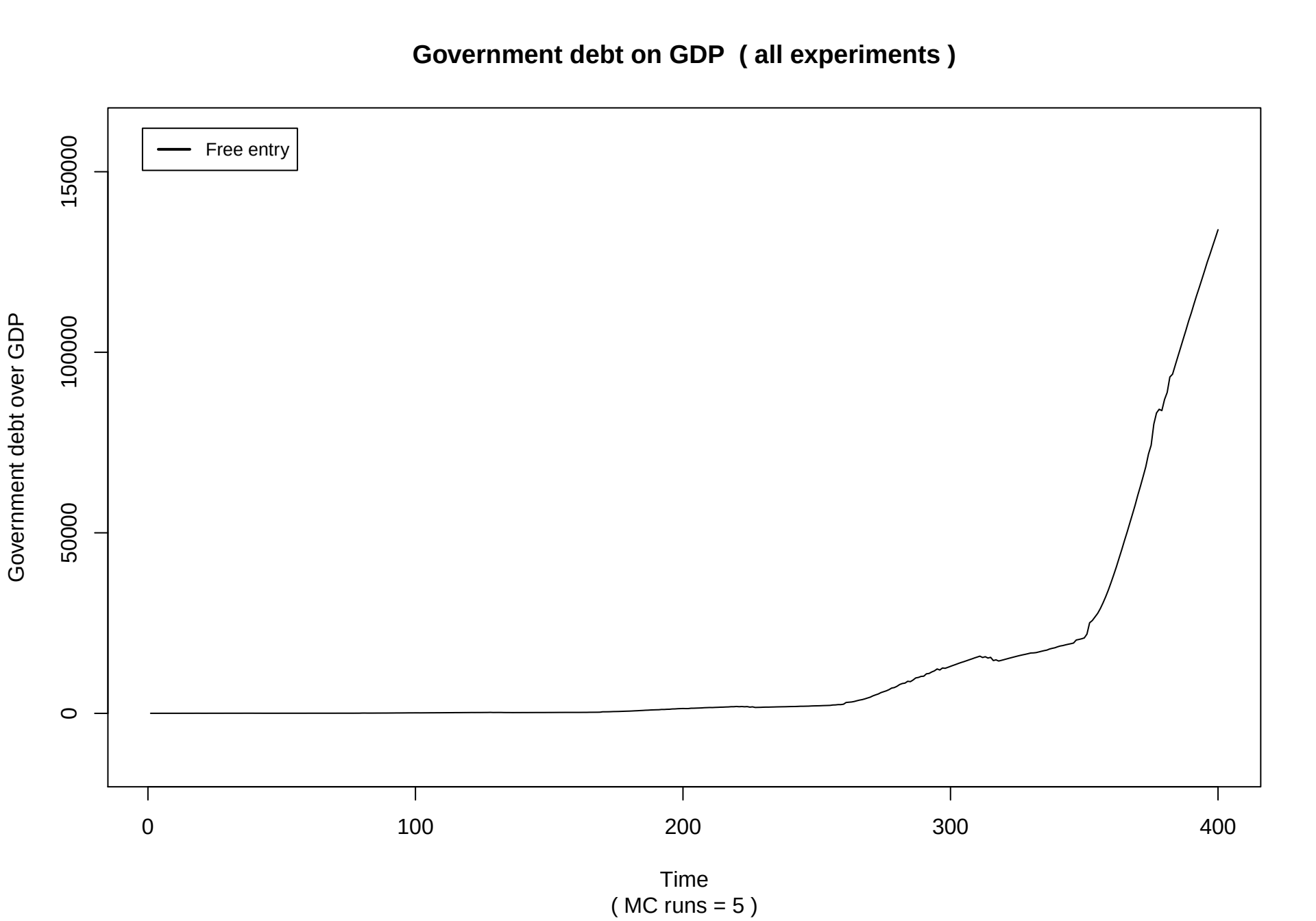

GDP (Free entry)
Effective GDP
GDP @ 100% utilization
Log GDP
18
17
16
15
14
13
12
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

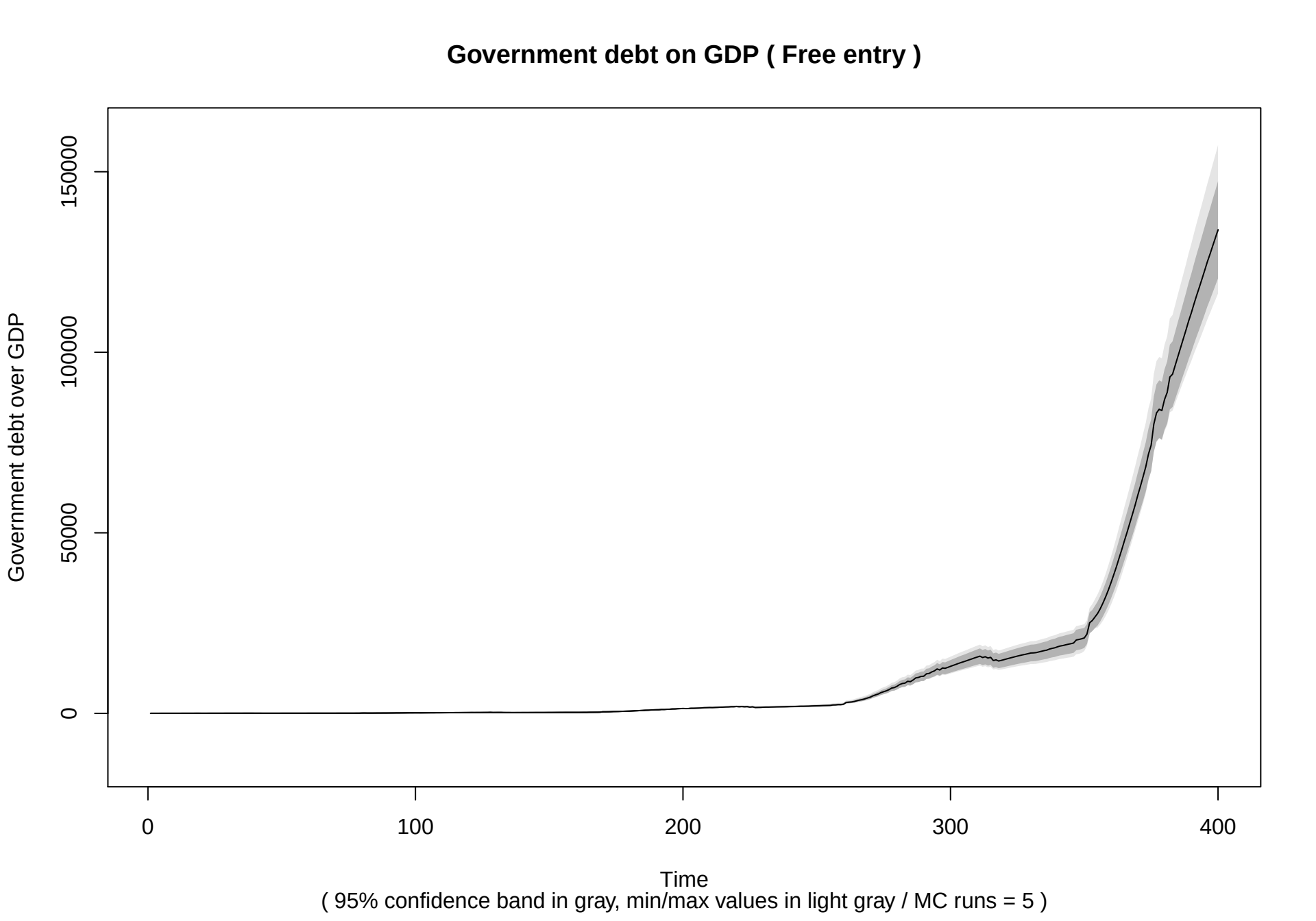

Government income and expenditure on GDP (all experiments)
Free entry
Tax
Total expenditure
Log government tax income and expenditure over GDP
0
500
1000
0
100
200
300
400
Time
(MC runs = 5)

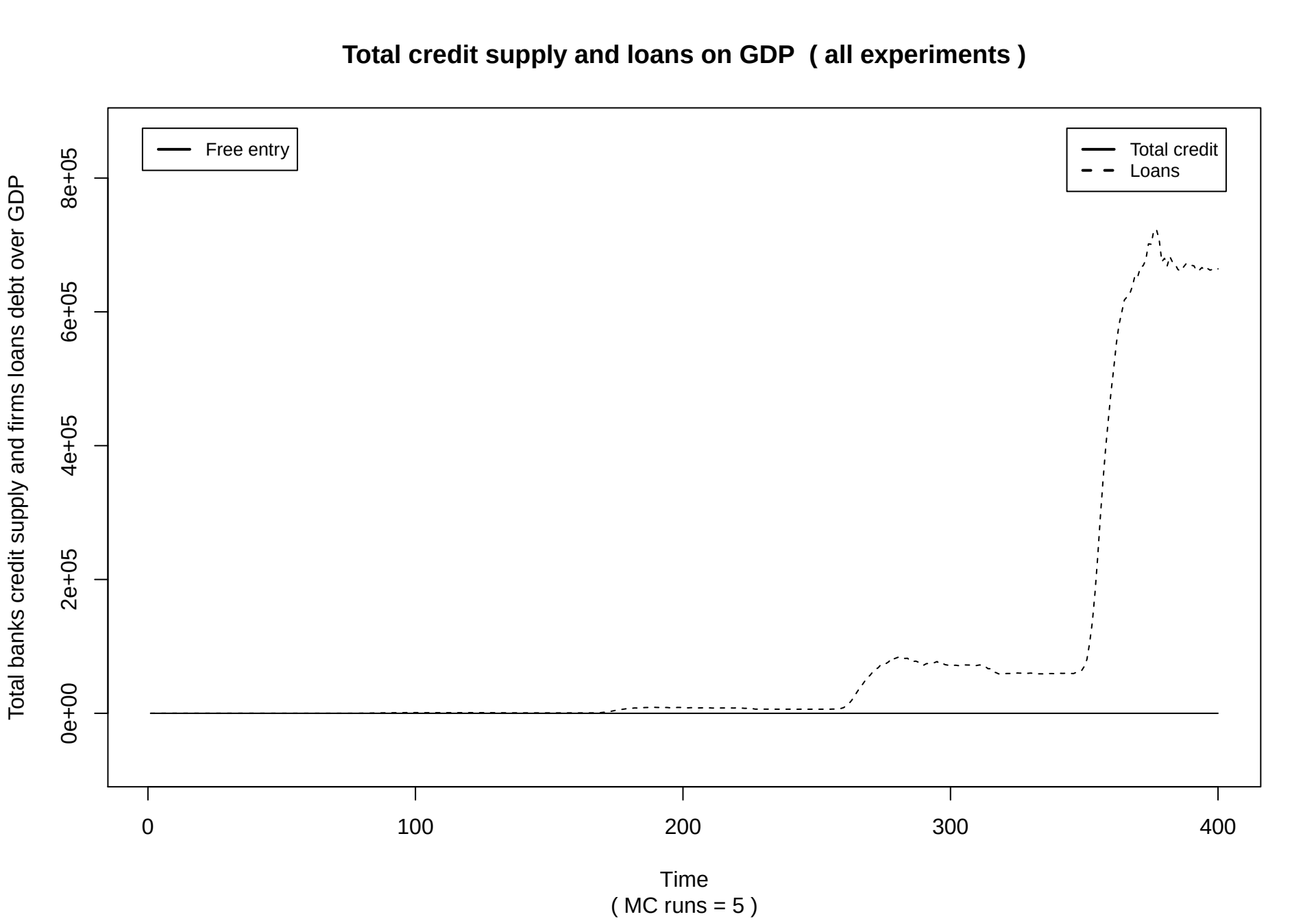

Government income and expenditure on GDP (Free entry)
Tax
Total expenditure
Log government tax income and expenditure over GDP
0
500
1000
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

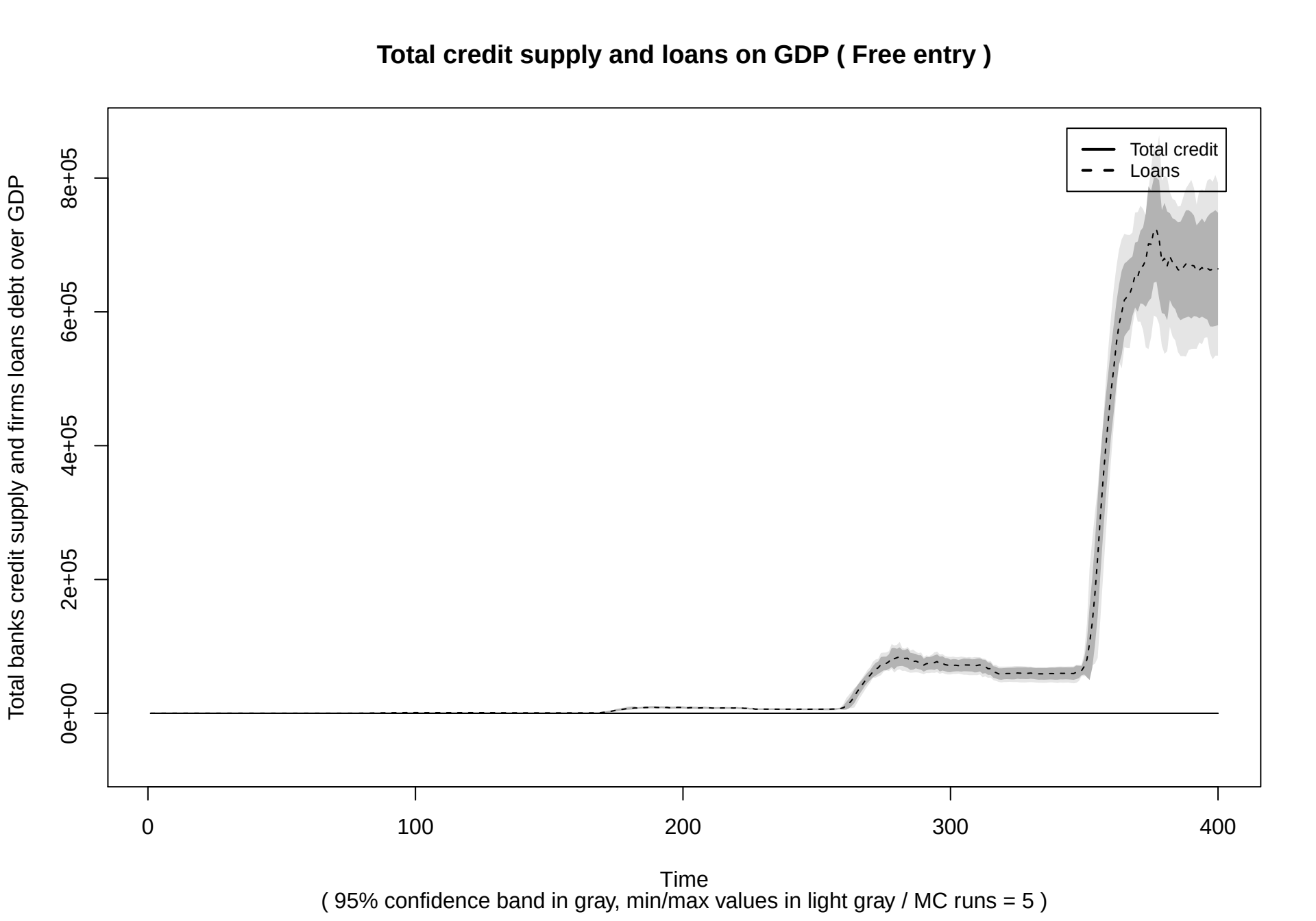

Government deficit on GDP (all experiments)
Free entry
Government deficit over GDP
0
1000
2000
3000
0
100
200
300
400
Time
(MC runs = 5)

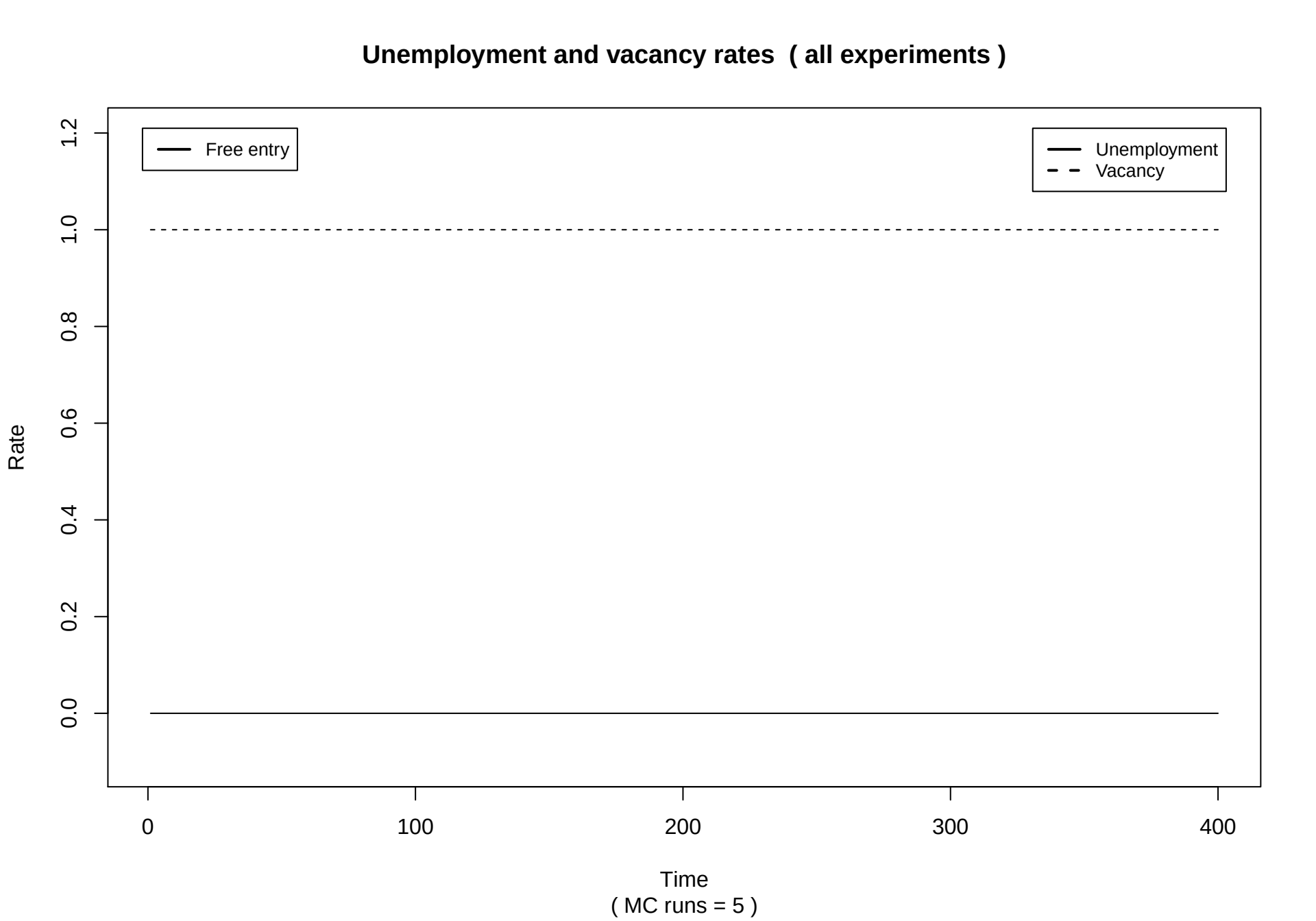

Government deficit on GDP (Free entry)
Government deficit over GDP
0
1000
2000
3000
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

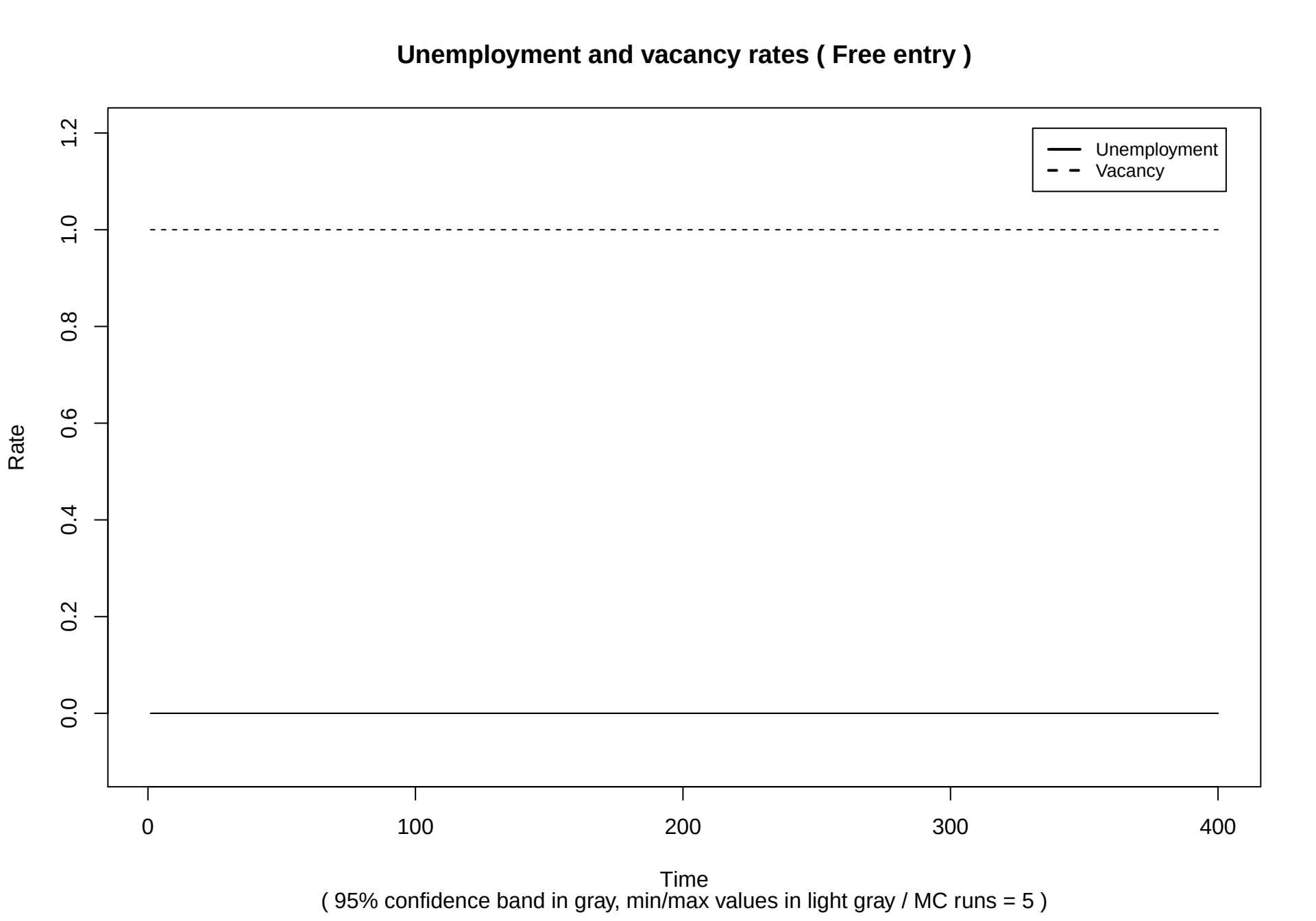

Government debt on GDP (all experiments)
Free entry
Government debt over GDP
0
50000
100000
150000
0
100
200
300
400
Time
(MC runs = 5)

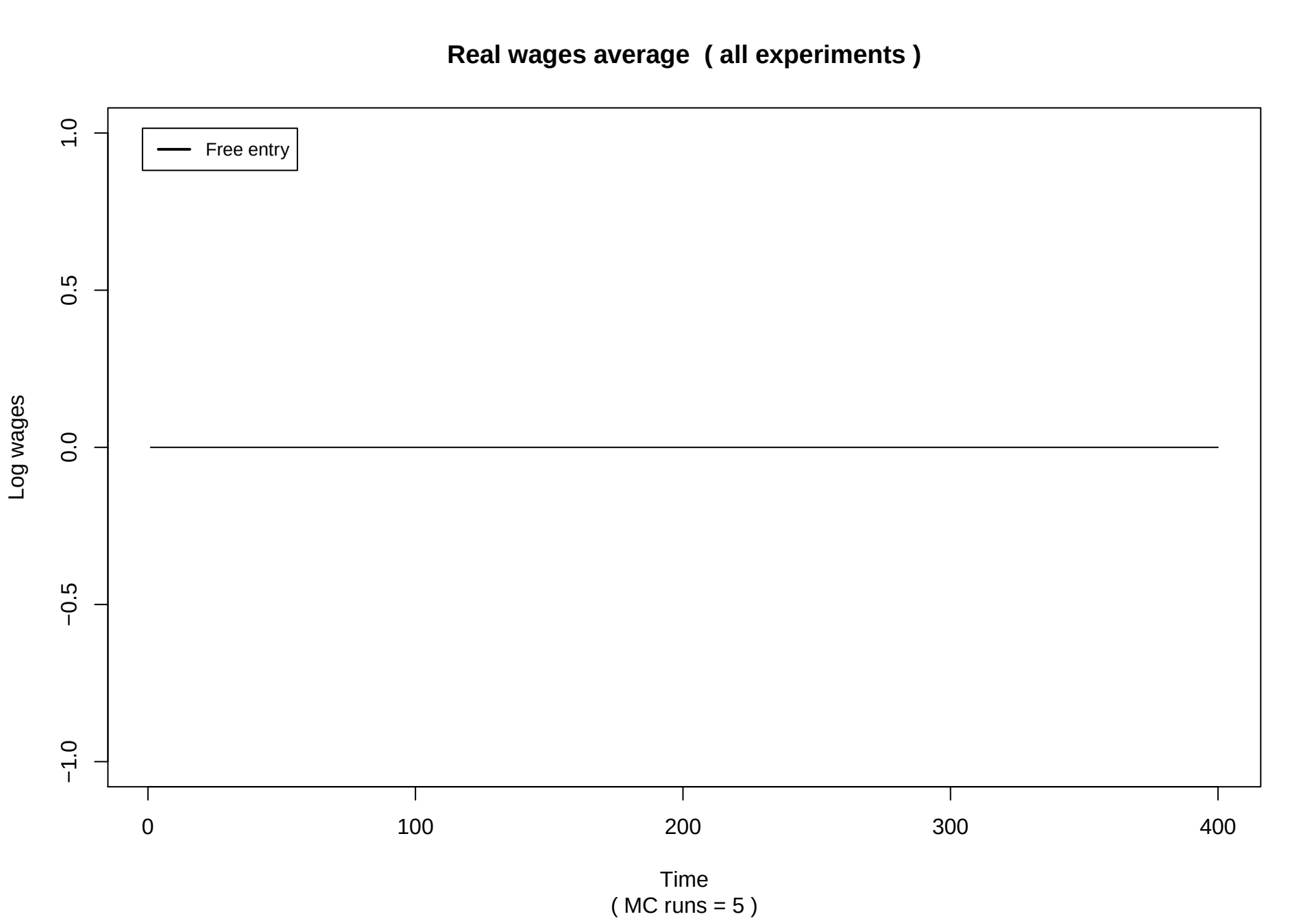

Government debt on GDP (Free entry)
Government debt over GDP
0
50000
100000
150000
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

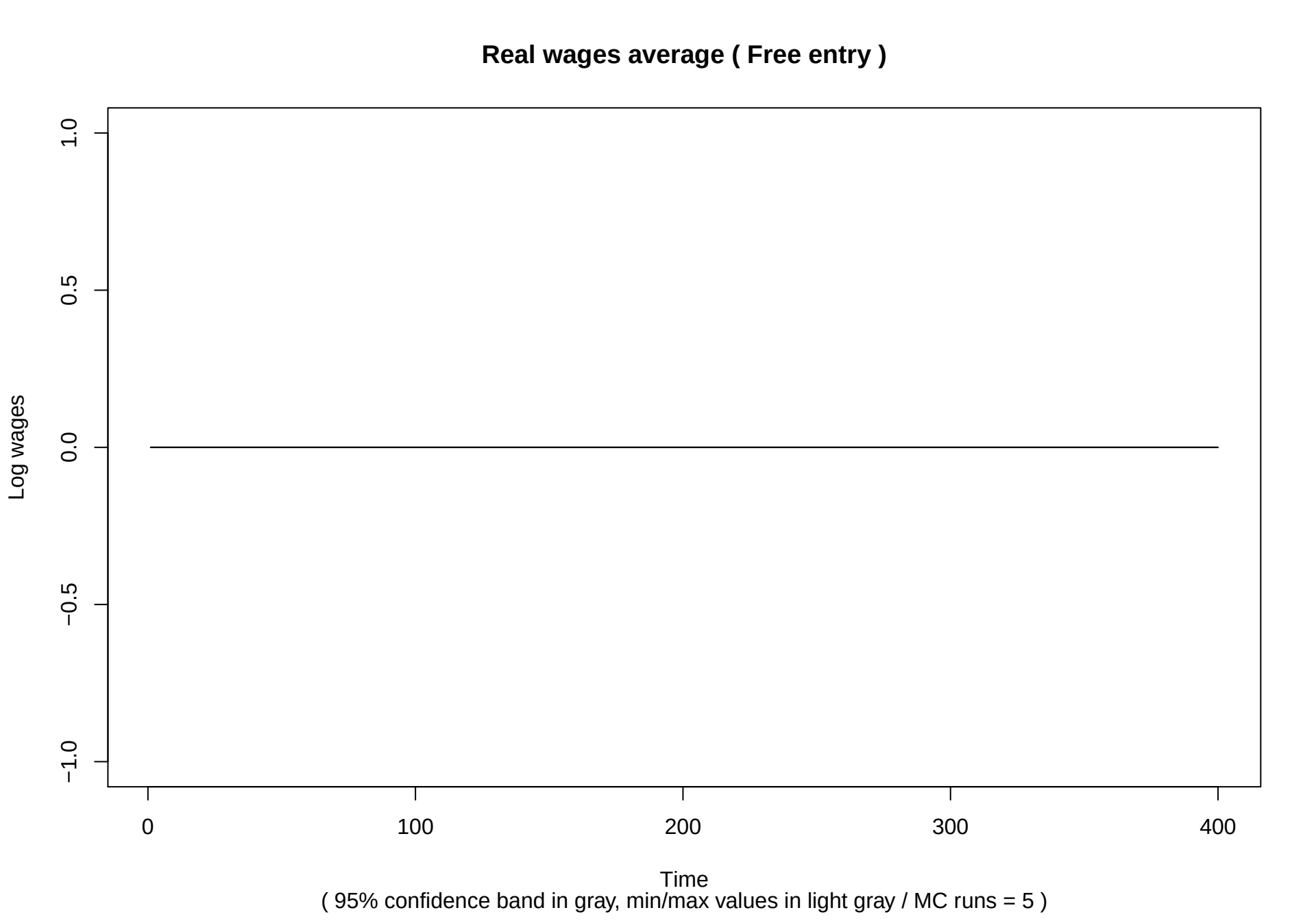

Total credit supply and loans on GDP (all experiments)
Free entry
Total credit
Loans
Total banks credit supply and firms loans debt over GDP
0e+00
2e+05
4e+05
6e+05
8e+05
0
100
200
300
400
Time
(MC runs = 5)

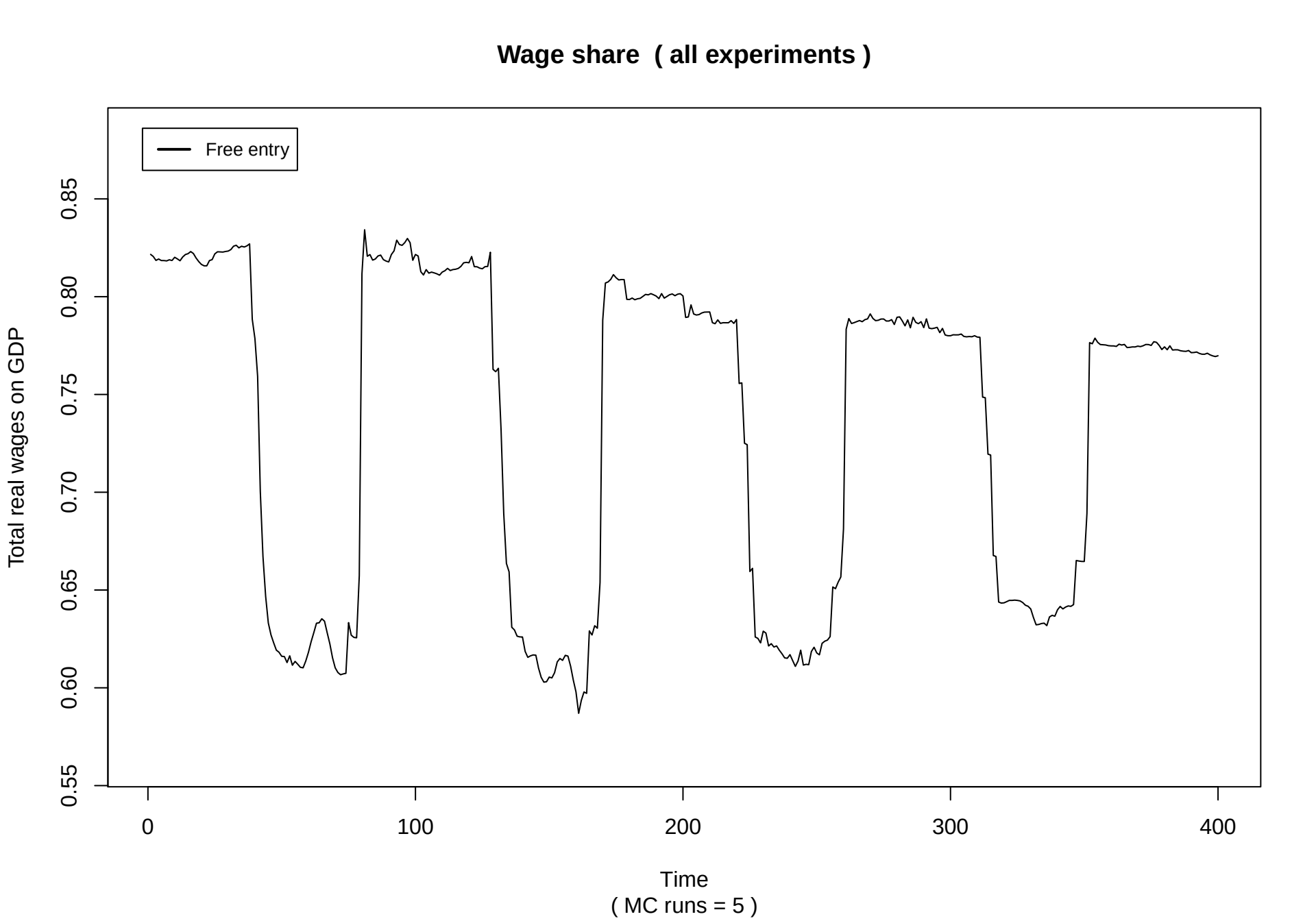

Total credit supply and loans on GDP (Free entry)
Total banks credit supply and firms loans debt over GDP
0e+00
2e+05
4e+05
6e+05
8e+05
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)
Total credit
Loans

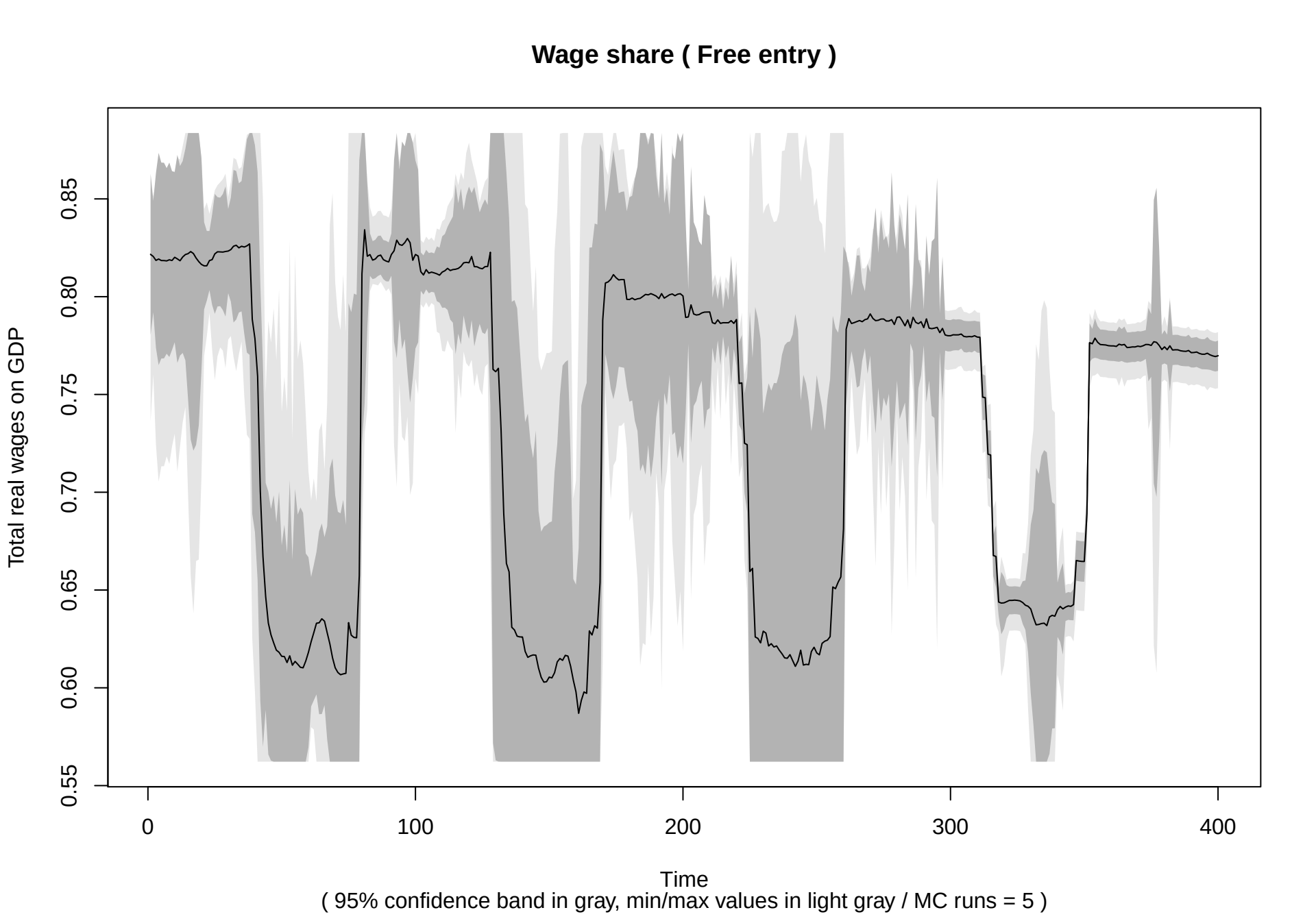

Unemployment and vacancy rates (all experiments)
Free entry
Unemployment
Vacancy
Rate
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
100
200
300
400
Time
(MC runs = 5)

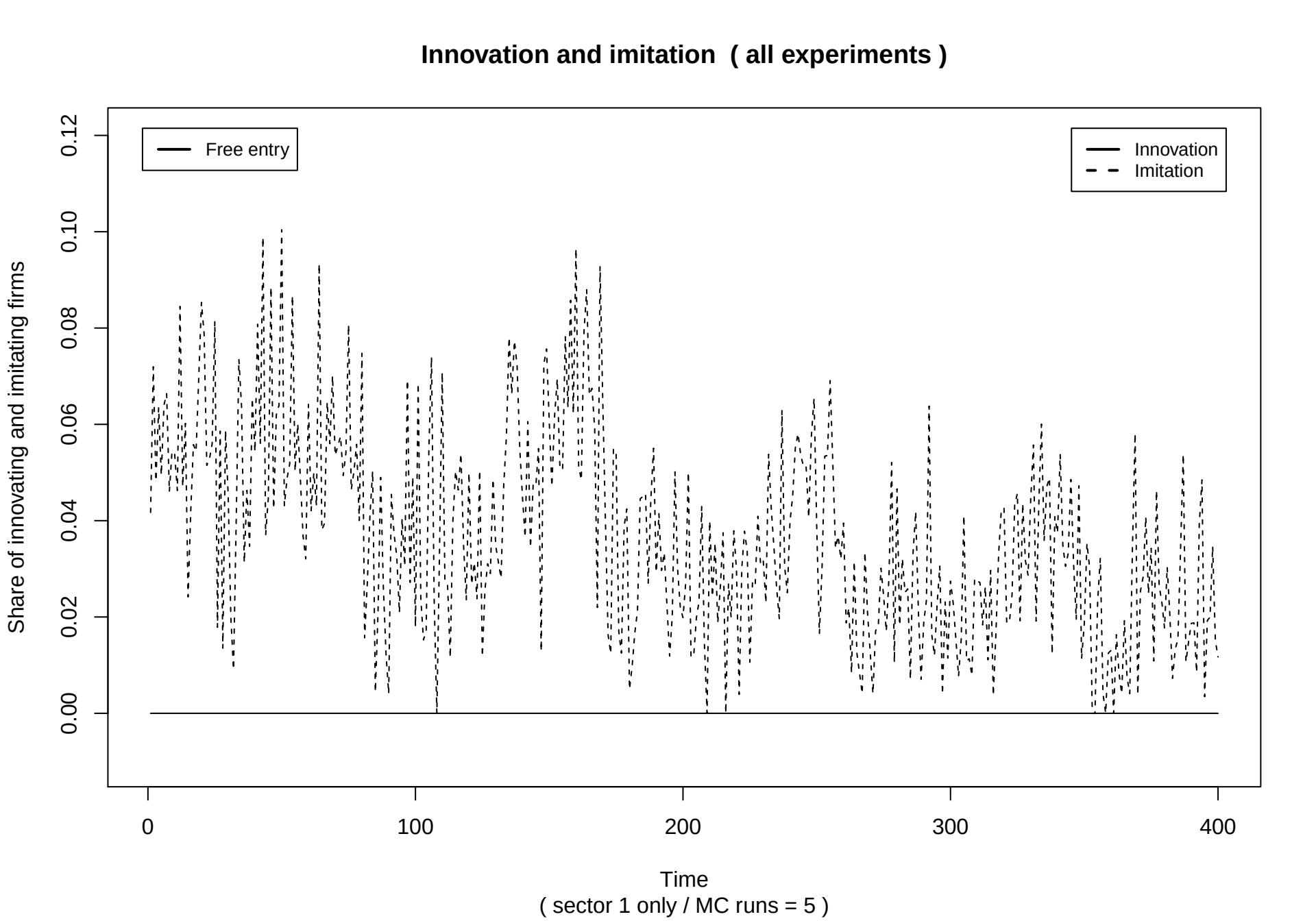

Unemployment and vacancy rates (Free entry)
Unemployment
Vacancy
Rate
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

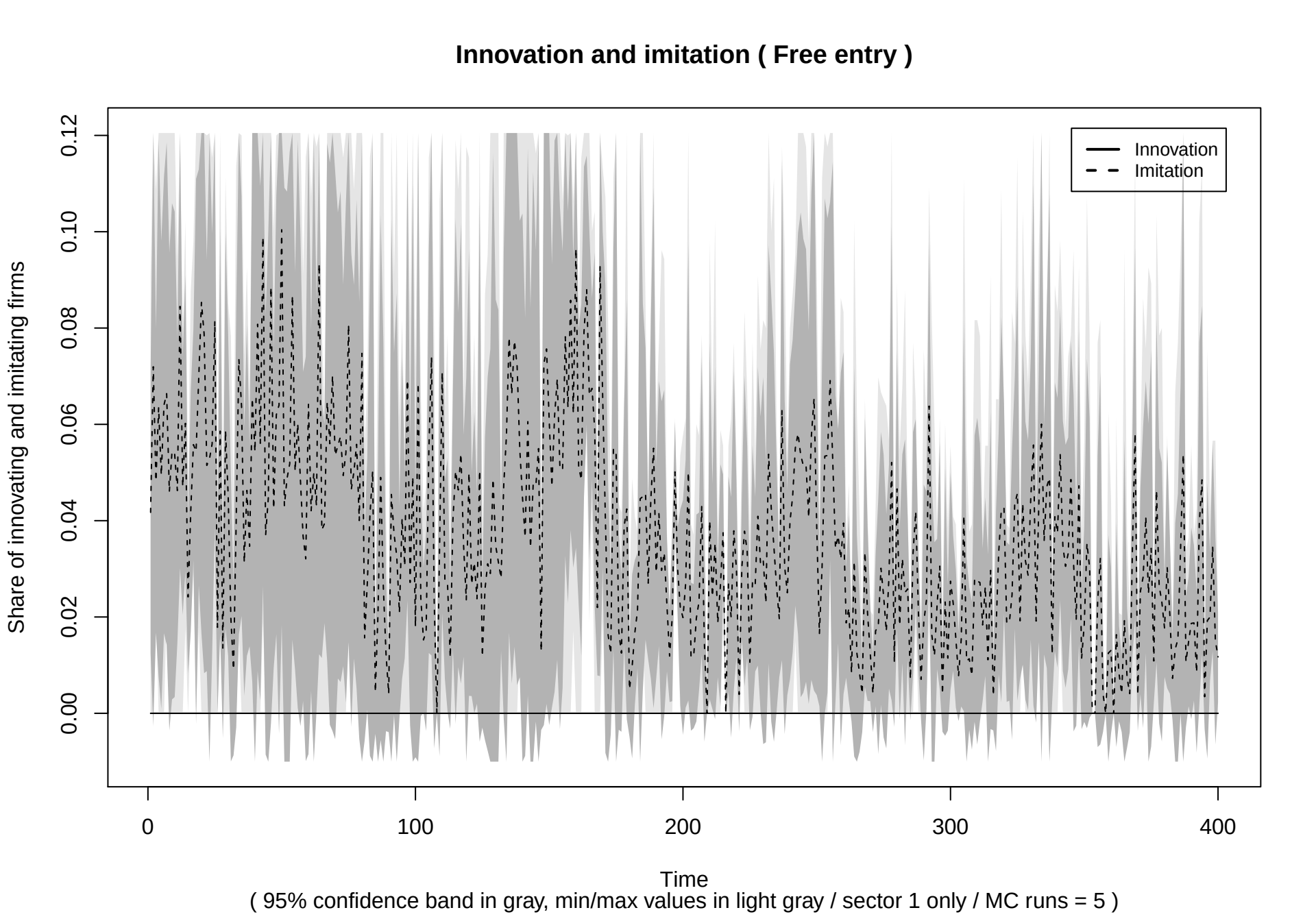

Real wages average (all experiments)
Free entry
Log wages
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400
Time
(MC runs = 5)

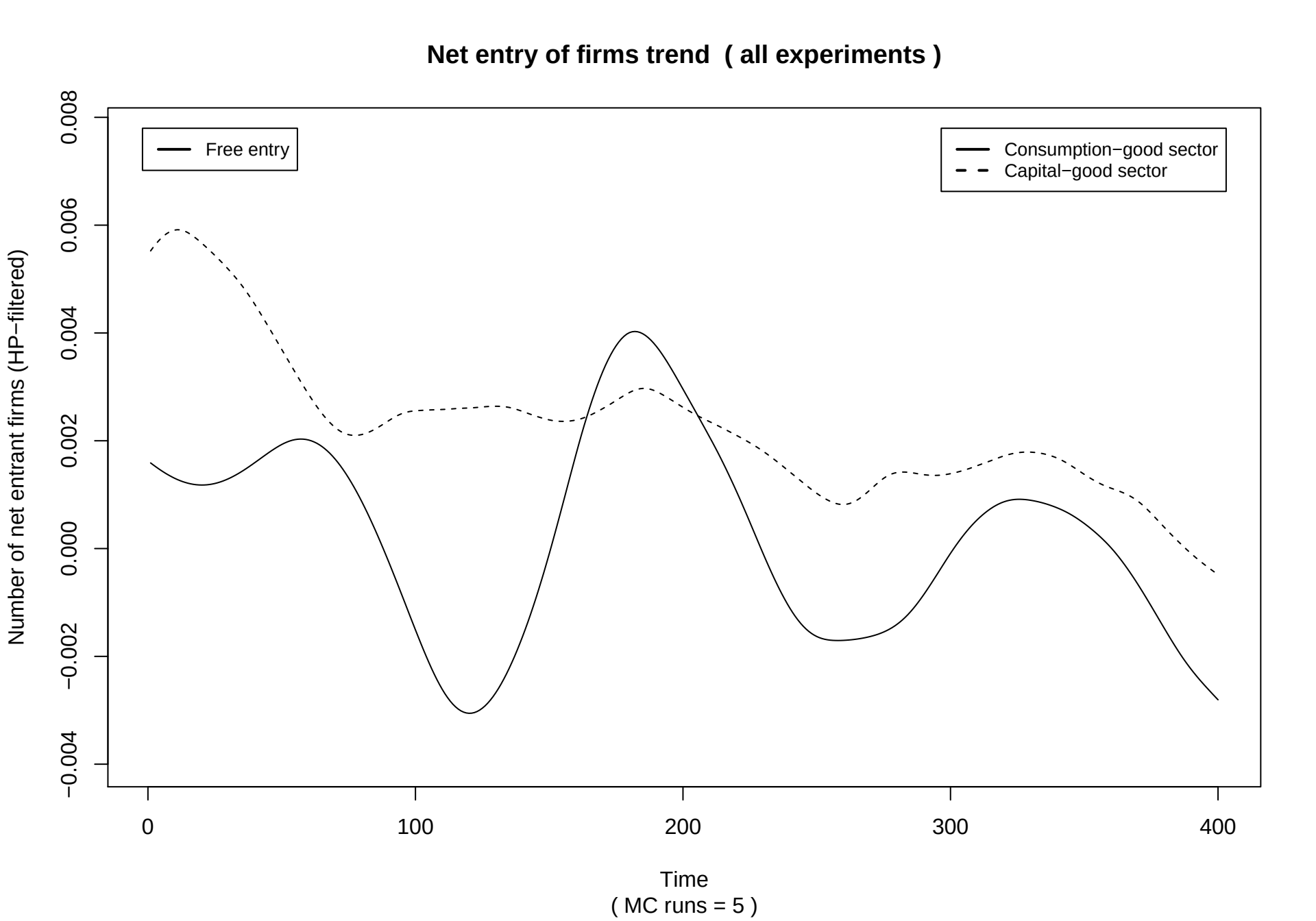

Real wages average (Free entry)
Log wages
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

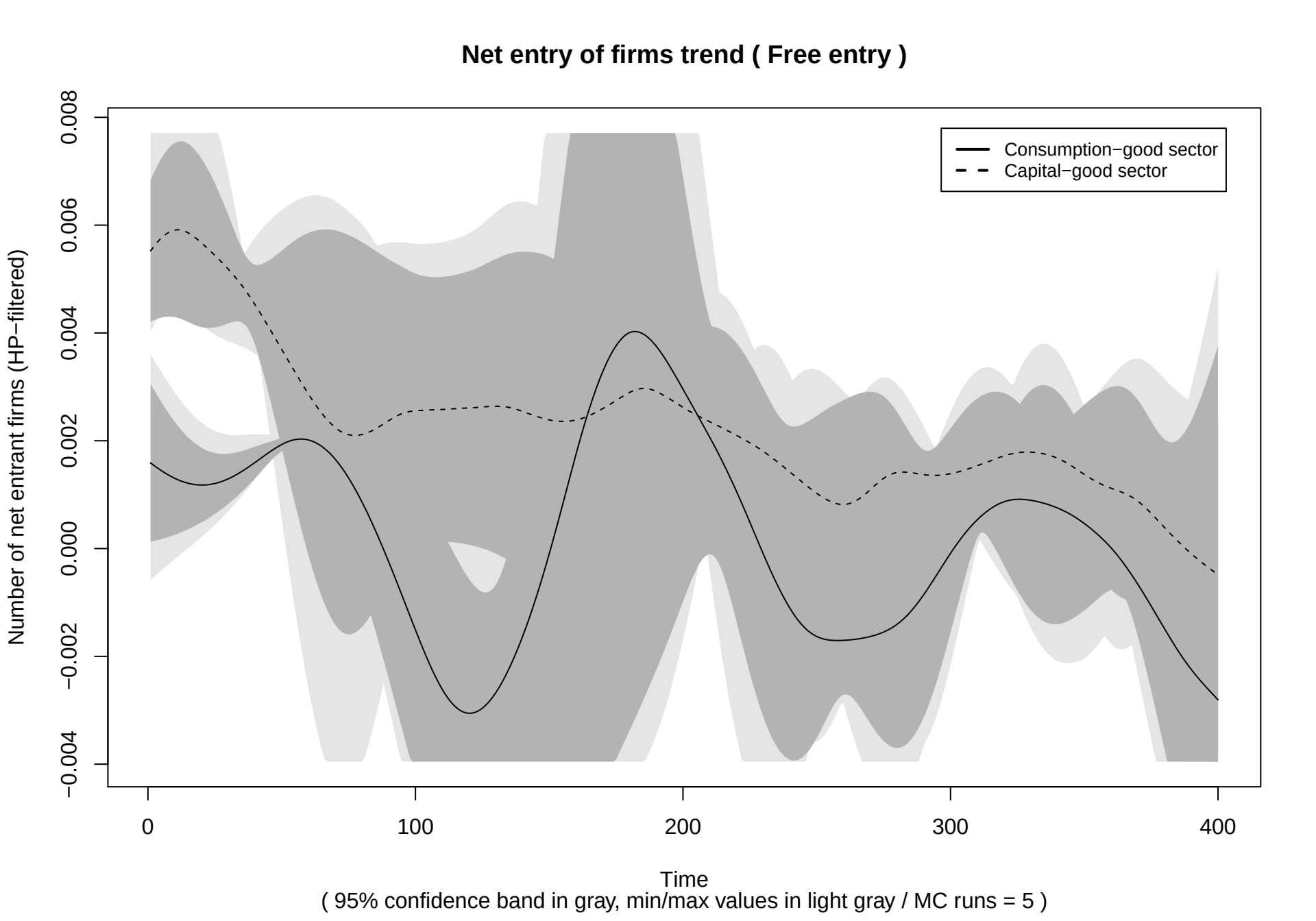

Wage share (all experiments)
Free entry
Total real wages on GDP
0.55
0.60
0.65
0.70
0.75
0.80
0.85
0
100
200
300
400
Time
(MC runs = 5)

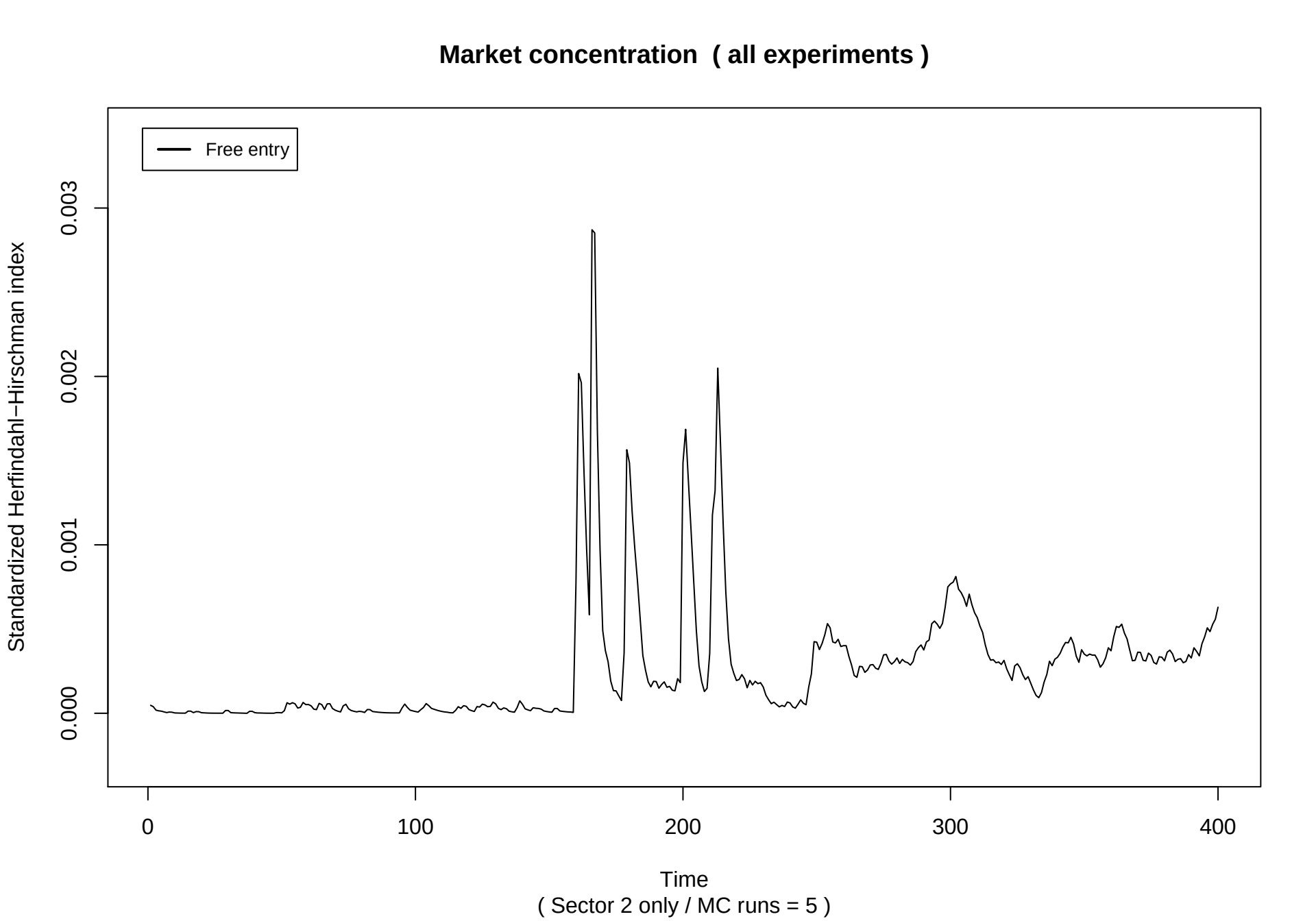

Wage share (Free entry)
Total real wages on GDP
0.55
0.60
0.65
0.70
0.75
0.80
0.85
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

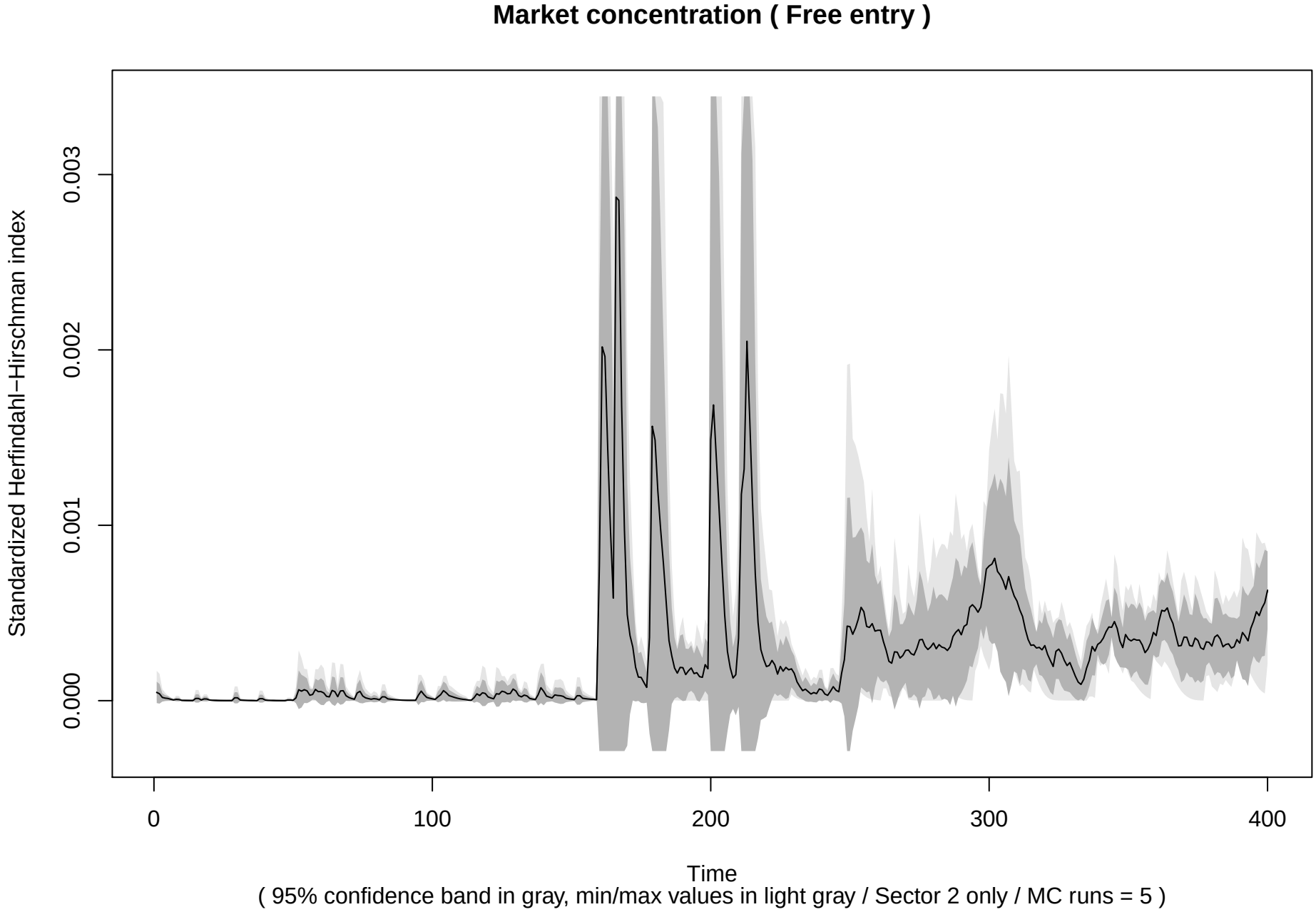

Innovation and imitation (all experiments)
Free entry
Innovation
Imitation
Share of innovating and imitating firms
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0
100
200
300
400
Time
(sector 1 only / MC runs = 5)

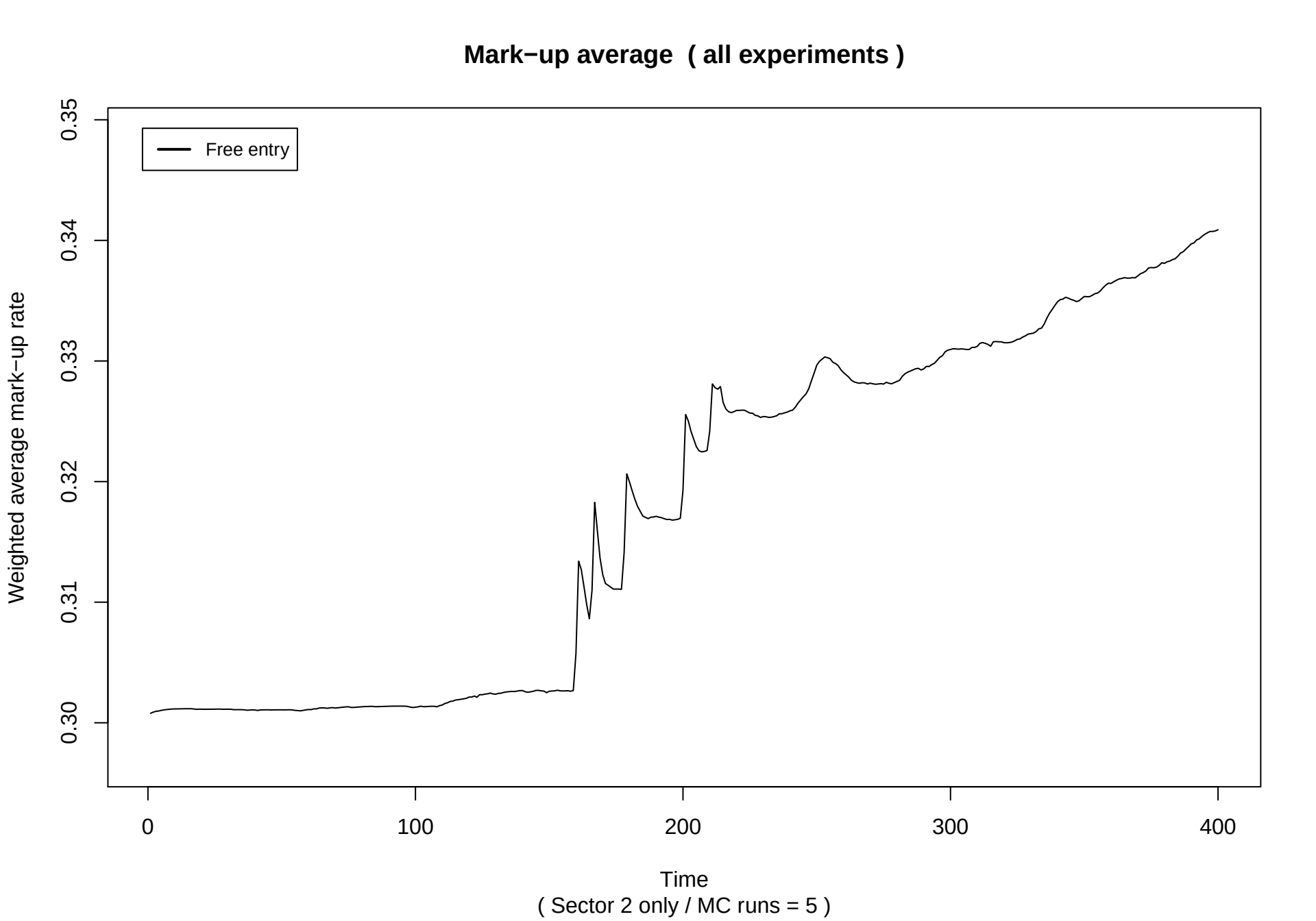

Innovation and imitation (Free entry)
Innovation
Imitation
Share of innovating and imitating firms
0.00
0.02
0.04
0.06
0.08
0.10
0.12
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / sector 1 only / MC runs = 5)

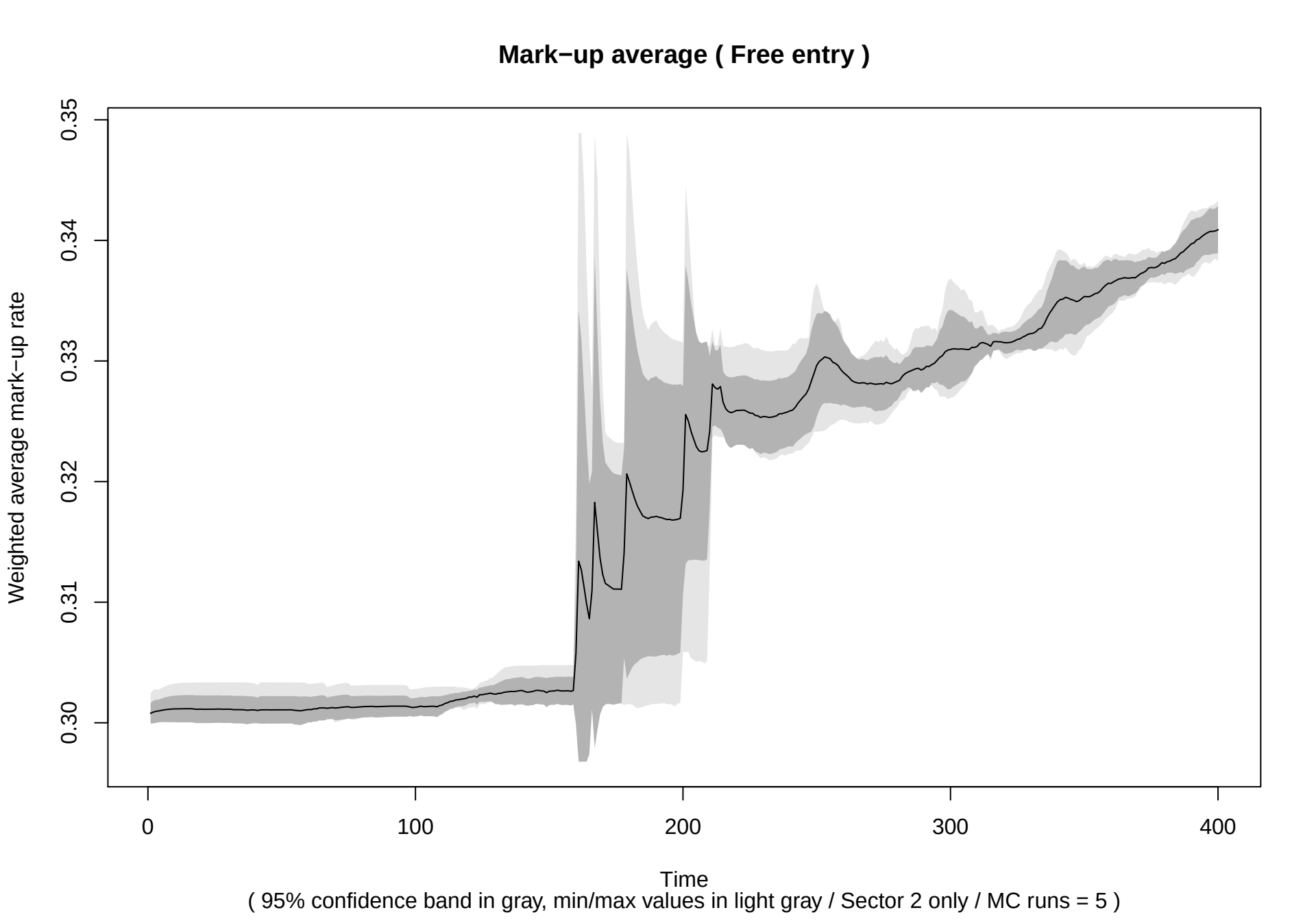

Net entry of firms trend (all experiments)
Free entry
Consumption−good sector
Capital−good sector
Number of net entrant firms (HP−filtered)
0.008
0.006
0.004
0.002
0.000
−0.002
−0.004
0
100
200
300
400
Time
(MC runs = 5)

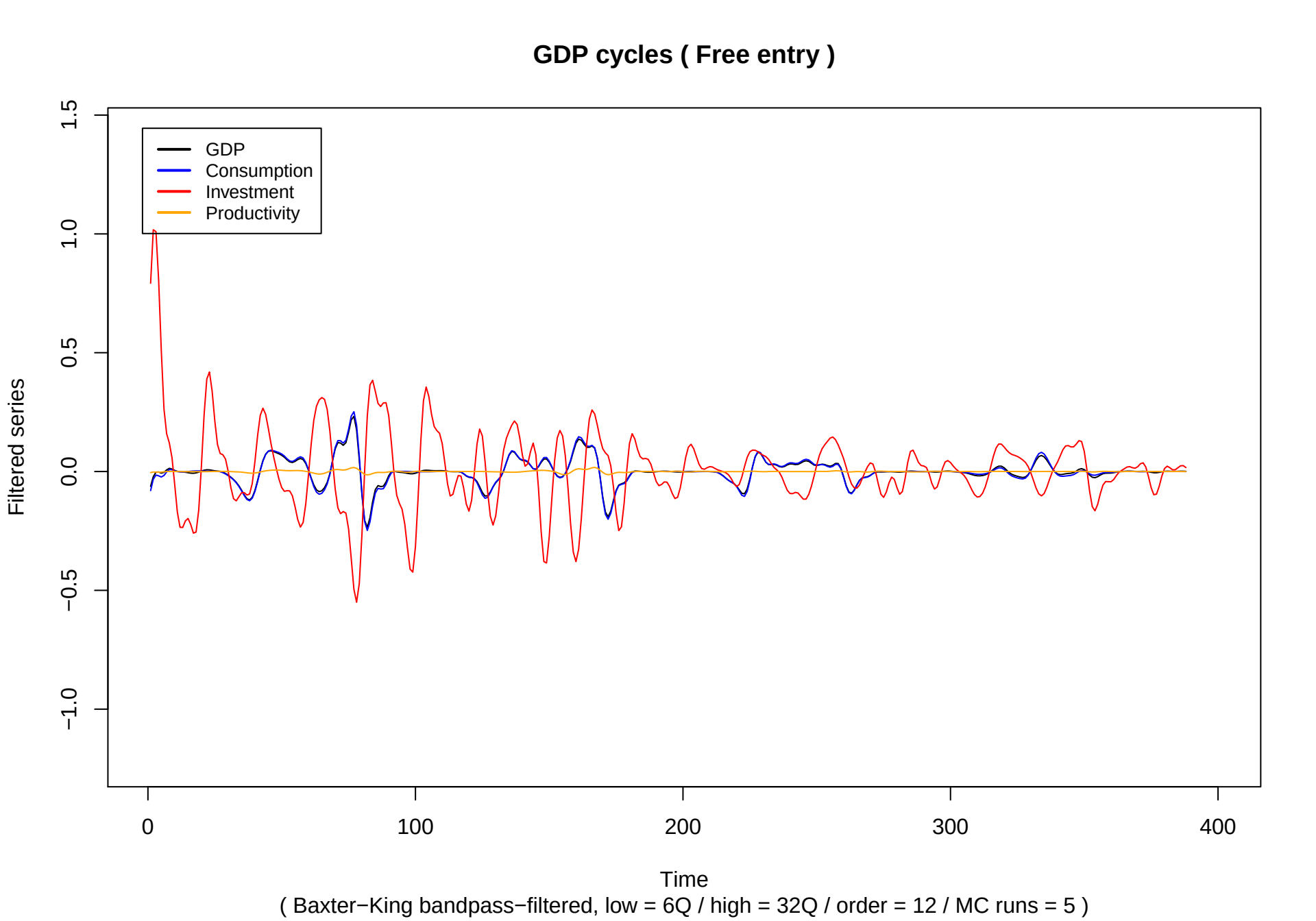

Net entry of firms trend (Free entry)
Consumption−good sector
Capital−good sector
Number of net entrant firms (HP−filtered)
0.008
0.006
0.004
0.002
0.000
−0.002
−0.004
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / MC runs = 5)

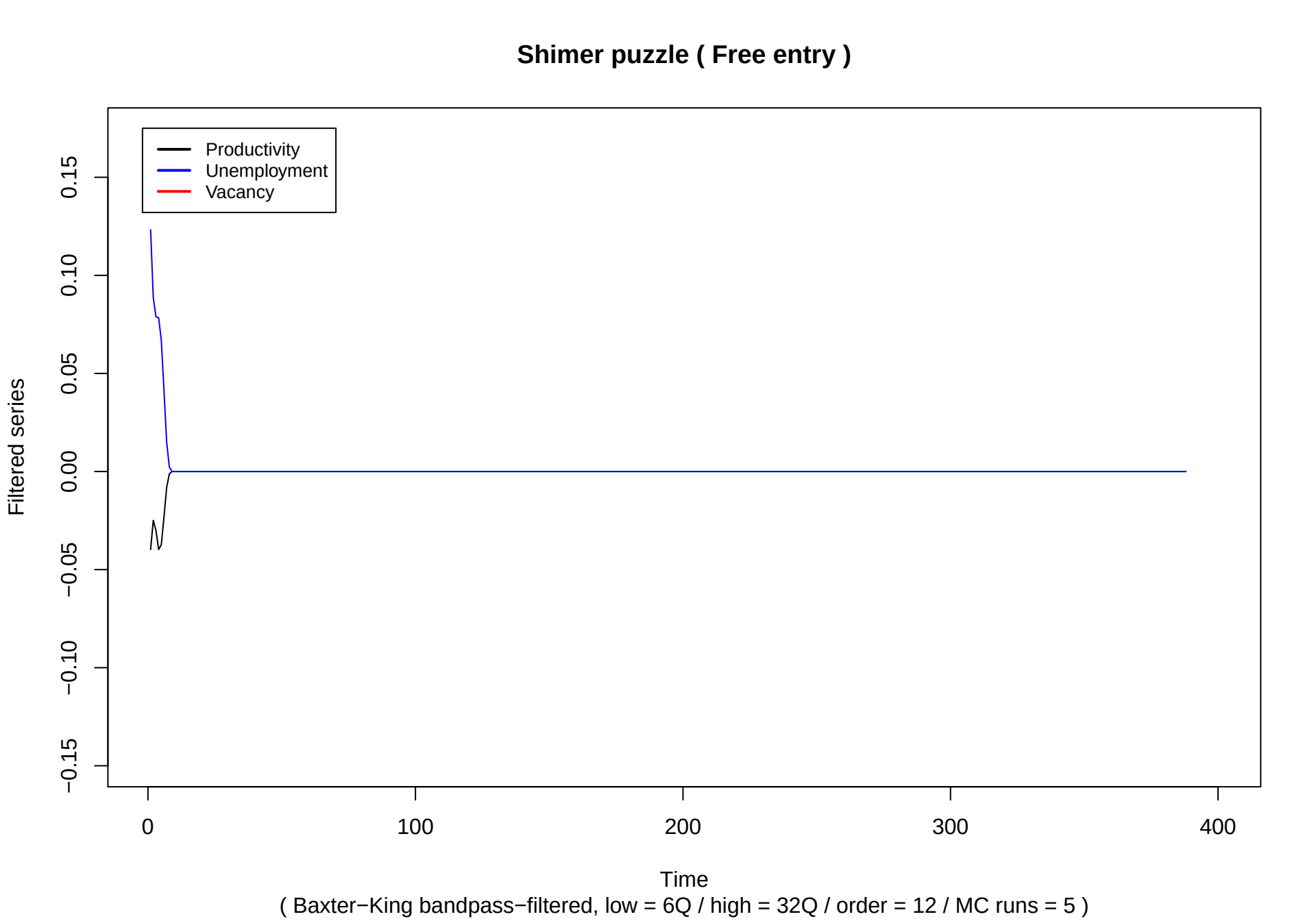

Market concentration (all experiments)
Free entry
Standardized Herfindahl−Hirschman index
0.000
0.001
0.002
0.003
0
100
200
300
400
Time
(Sector 2 only / MC runs = 5)

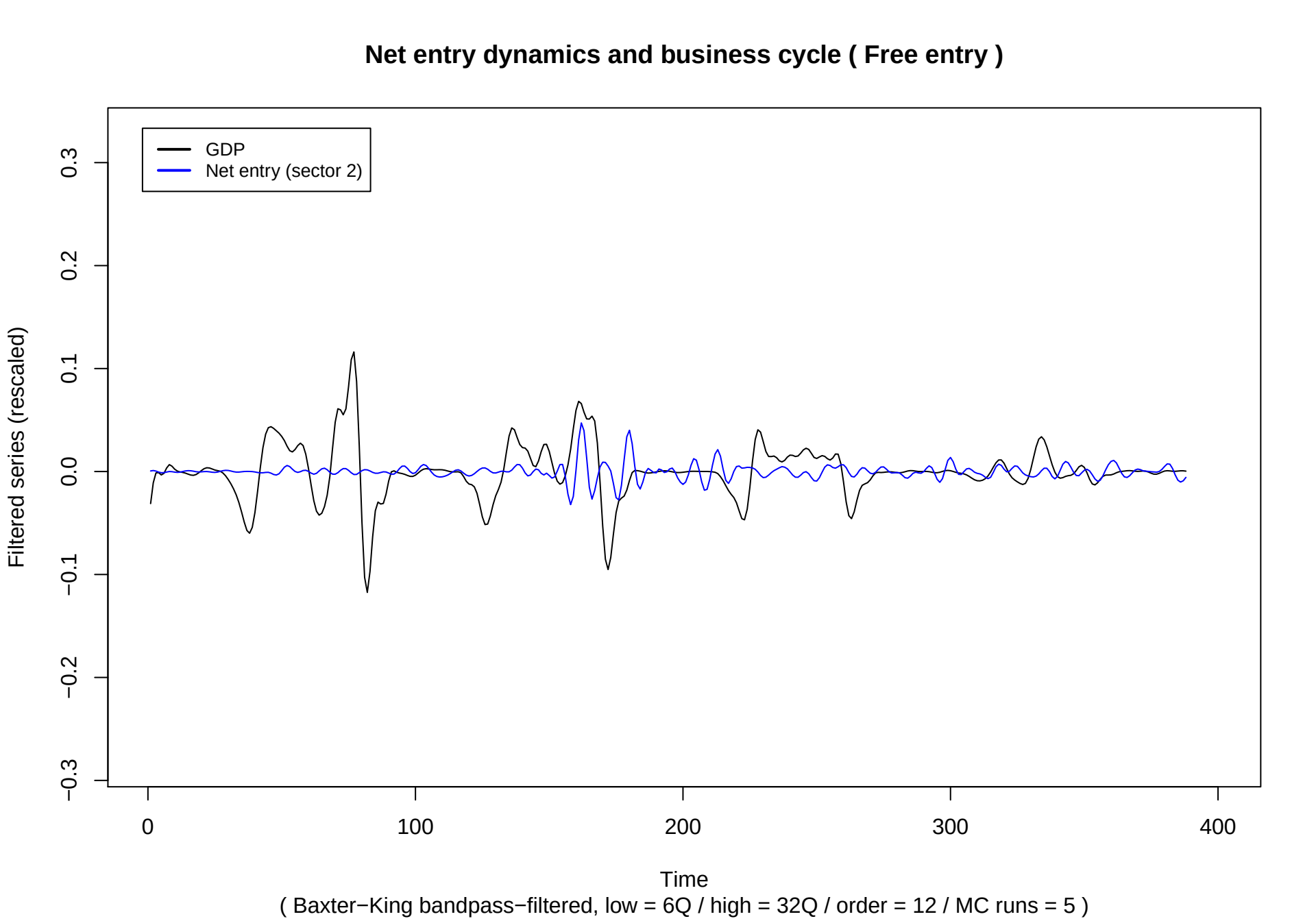

Market concentration (Free entry)
Standardized Herfindahl−Hirschman index
0.000
0.001
0.002
0.003
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / Sector 2 only / MC runs = 5)


Mark−up average (all experiments)
Free entry
Weighted average mark−up rate
0.30
0.31
0.32
0.33
0.34
0.35
0
100
200
300
400
Time
(Sector 2 only / MC runs = 5)


Mark−up average (Free entry)
Weighted average mark−up rate
0.30
0.31
0.32
0.33
0.34
0.35
0
100
200
300
400
Time
(95% confidence band in gray, min/max values in light gray / Sector 2 only / MC runs = 5)


GDP cycles (Free entry)
GDP
Consumption
Investment
Productivity
Filtered series
1.5
1.0
0.5
0.0
−0.5
−1.0
0
100
200
300
400
Time
(Baxter−King bandpass−filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 5)


Shimer puzzle (Free entry)
Productivity
Unemployment
Vacancy
Filtered series
0.15
0.10
0.05
0.00
−0.05
−0.10
−0.15
0
100
200
300
400
Time
(Baxter−King bandpass−filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 5)


Net entry dynamics and business cycle (Free entry)
GDP
Net entry (sector 2)
Filtered series (rescaled)
0.3
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
100
200
300
400
Time
(Baxter−King bandpass−filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 5)

Key statistics and unit roots tests for cycles (Free entry)

	GDP (output)	Consumption	Investment	Product.	Real wage
avg. growth rate	3.22e−05	−3.01e−07	0.00269	1.698e−05	0
(s.e.)	2.451e−05	3.01e−07	0.002519	1.701e−05	0
ADF test (logs)	−2.791	−2.868	−2.704	−4.154	NaN
(s.e.)	0.2197	0.2145	0.3539	0.6292	NA
(p−val.)	0.2666	0.2379	0.3304	0.08041	NaN
(s.e.)	0.07454	0.0696	0.1083	0.04352	NA
ADF test (bpf)	−4.508	−4.582	−5.173	−5.384	NaN
(s.e.)	0.2482	0.2456	0.5371	0.2579	NA
(p−val.)	0.01191	0.01141	0.01	0.01	NaN
(s.e.)	0.001911	0.001405	0	0	NA
s.d. (bpf)	0.05089	0.05487	0.197	0.0009179	0
(s.e.)	0.01005	0.01215	0.02876	0.0005622	0
relative s.d. (GDP)	1	1.078	3.87	0.01804	0

(bpf: Baxter−King bandpass−filtered series, low = 6Q / high = 32Q / order = 12 / MC runs = 5 / period = 301 − 500)
(ADF test H0: there are unit roots / non−stationary at 5% level)

Correlation structure for GDP (Free entry)

	−4	−3	−2	−1	0	1	2	3	4
GDP (output)	0.1228	0.3778	0.6704	0.9081	1	0.9081	0.6704	0.3778	0.1228
(s.e.)	0.06249	0.05518	0.03362	0.01012	2.483e−17	0.01012	0.03362	0.05518	0.06249
(p−val.)	0.2218	0.003131	3.25e−05	6.939e−08	NA	6.939e−08	3.25e−05	0.003131	0.2218
Consumption	0.1282	0.3743	0.6554	0.8855	0.9785	0.897	0.6748	0.3965	0.1498
(s.e.)	0.05708	0.05407	0.03741	0.02034	0.01669	0.02008	0.03556	0.05284	0.05809
(p−val.)	0.1841	0.003042	5.496e−05	1.261e−06	3.689e−07	1.133e−06	3.94e−05	0.002137	0.1559
Investment	−0.01543	−0.03319	−0.07379	−0.1344	−0.2019	−0.2588	−0.2898	−0.288	−0.254
(s.e.)	0.09739	0.1122	0.1366	0.168	0.1868	0.1779	0.1428	0.0987	0.07651
(p−val.)	0.1296	0.02662	5.136e−05	0.01447	0.003738	0.0003248	0.00163	0.02791	0.04766
Net investment	0.0226	0.08558	0.102	0.06149	−0.02277	−0.1243	−0.2148	−0.2736	−0.2877
(s.e.)	0.09993	0.09148	0.08735	0.1033	0.13	0.1445	0.1368	0.1128	0.09456
(p−val.)	0.1508	0.3195	0.08362	0.1091	0.1041	0.05299	0.05332	0.0873	0.05091
Change in inventories	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
(s.e.)	NA	NA	NA	NA	NA	NA	NA	NA	NA
(p−val.)	1	1	1	1	1	1	1	1	1
Unemployment rate	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
(s.e.)	NA	NA	NA	NA	NA	NA	NA	NA	NA
(p−val.)	1	1	1	1	1	1	1	1	1
Productivity	0.06785	0.1264	0.1984	0.2586	0.2793	0.2481	0.1774	0.09516	0.02717
(s.e.)	0.04971	0.07376	0.1054	0.1349	0.1504	0.143	0.1109	0.06196	0.01139
(p−val.)	0.6447	0.2957	0.1616	0.128	0.1307	0.1558	0.2186	0.4368	0.997
Mark−up (sector 2)	0.1331	0.07885	0.009634	−0.06826	−0.1435	−0.2027	−0.2359	−0.2442	−0.2364
(s.e.)	0.1123	0.08689	0.06137	0.05211	0.06491	0.08377	0.1001	0.1109	0.1161
(p−val.)	0.1506	0.2671	0.4693	0.4304	0.2191	0.1207	0.06668	0.0373	0.01595
Total firm debt	−0.3744	−0.3469	−0.2752	−0.1714	−0.0571	0.04519	0.1203	0.1642	0.1815
(s.e.)	0.1212	0.128	0.1289	0.1196	0.09946	0.07342	0.0507	0.03894	0.03607
(p−val.)	0.03858	0.05637	0.1096	0.1889	0.1256	0.2152	0.2352	0.06044	0.02995
Liquidity−to−sales ratio	−0.1251	−0.1288	−0.1242	−0.105	−0.06906	−0.02074	0.02972	0.07094	0.09565
(s.e.)	0.04642	0.06775	0.08807	0.09894	0.09365	0.07169	0.04074	0.01807	0.02539
(p−val.)	0.2324	0.279	0.2548	0.2793	0.3294	0.4108	0.7188	0.7963	0.3843
Bankruptcy rate	0.1232	0.1489	0.1632	0.1498	0.1023	0.02961	−0.04607	−0.1063	−0.1454
(s.e.)	0.06709	0.09536	0.1093	0.1003	0.07226	0.04624	0.0529	0.074	0.08777
(p−val.)	0.2	0.06597	0.03851	0.03238	0.04528	0.6311	0.4989	0.4069	0.2734

(non−rate/ratio series are Baxter−King bandpass−filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 5 / period = 301 − 500)
(test H0: lag coefficient is not significant at 5% level)

Correlation structure for GDP (Free entry)

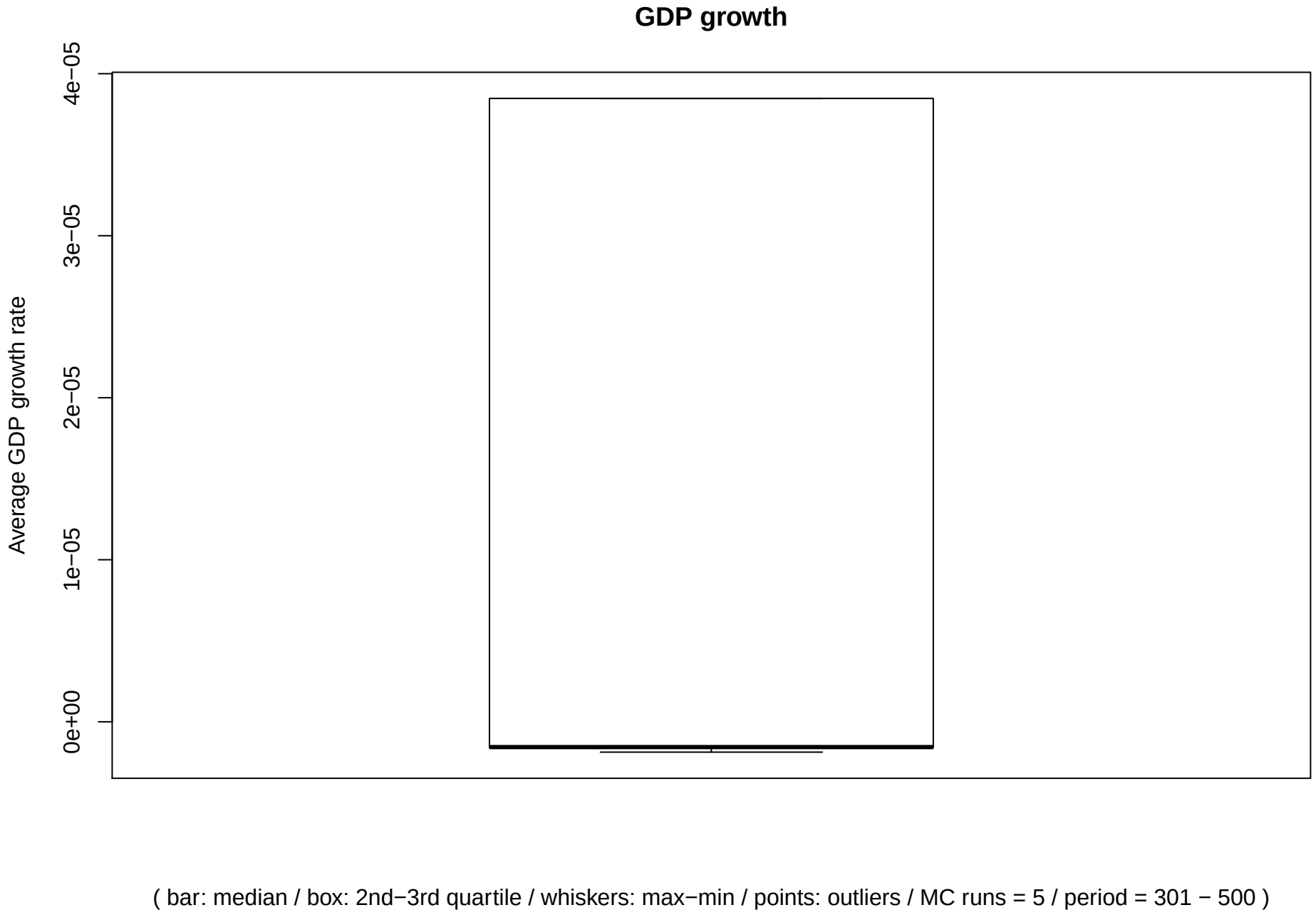
	−4	−3	−2	−1	0	1	2	3	4
GDP (output)	0.1228	0.3778	0.6704	0.9081	1	0.9081	0.6704	0.3778	0.1228
(s.e.)	0.06249	0.05518	0.03362	0.01012	2.483e−17	0.01012	0.03362	0.05518	0.06249
(p−val.)	0.2218	0.003131	3.25e−05	6.939e−08	NA	6.939e−08	3.25e−05	0.003131	0.2218
Consumption	0.1282	0.3743	0.6554	0.8855	0.9785	0.897	0.6748	0.3965	0.1498
(s.e.)	0.05708	0.05407	0.03741	0.02034	0.01669	0.02008	0.03556	0.05284	0.05809
(p−val.)	0.1841	0.003042	5.496e−05	1.261e−06	3.689e−07	1.133e−06	3.94e−05	0.002137	0.1559
Investment	−0.01543	−0.03319	−0.07379	−0.1344	−0.2019	−0.2588	−0.2898	−0.288	−0.254
(s.e.)	0.09739	0.1122	0.1366	0.168	0.1868	0.1779	0.1428	0.0987	0.07651
(p−val.)	0.1296	0.02662	5.136e−05	0.01447	0.003738	0.0003248	0.00163	0.02791	0.04766
Productivity	0.06785	0.1264	0.1984	0.2586	0.2793	0.2481	0.1774	0.09516	0.02717
(s.e.)	0.04971	0.07376	0.1054	0.1349	0.1504	0.143	0.1109	0.06196	0.01139
(p−val.)	0.6447	0.2957	0.1616	0.128	0.1307	0.1558	0.2186	0.4368	0.997
Net entry	−0.03818	−0.02633	−0.01042	−0.008344	−0.02298	−0.04032	−0.04121	−0.01925	0.01526
(s.e.)	0.0438	0.04098	0.04721	0.04027	0.0215	0.01506	0.02744	0.03972	0.04908
(p−val.)	0.6529	0.6995	0.6597	0.7867	0.9928	0.9826	0.9114	0.8274	0.6499
Entry	0.05601	0.07292	0.09183	0.08401	0.03976	−0.0236	−0.07411	−0.09212	−0.0819
(s.e.)	0.03433	0.03052	0.05359	0.0613	0.0452	0.02279	0.02561	0.03854	0.04567
(p−val.)	0.6932	0.6025	0.2065	0.2609	0.5862	0.9772	0.6876	0.4567	0.4624
Wage	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
(s.e.)	NA	NA	NA	NA	NA	NA	NA	NA	NA
(p−val.)	1	1	1	1	1	1	1	1	1
Unemployment rate	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
(s.e.)	NA	NA	NA	NA	NA	NA	NA	NA	NA
(p−val.)	1	1	1	1	1	1	1	1	1
Vacancy rate	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
(s.e.)	NA	NA	NA	NA	NA	NA	NA	NA	NA
(p−val.)	1	1	1	1	1	1	1	1	1

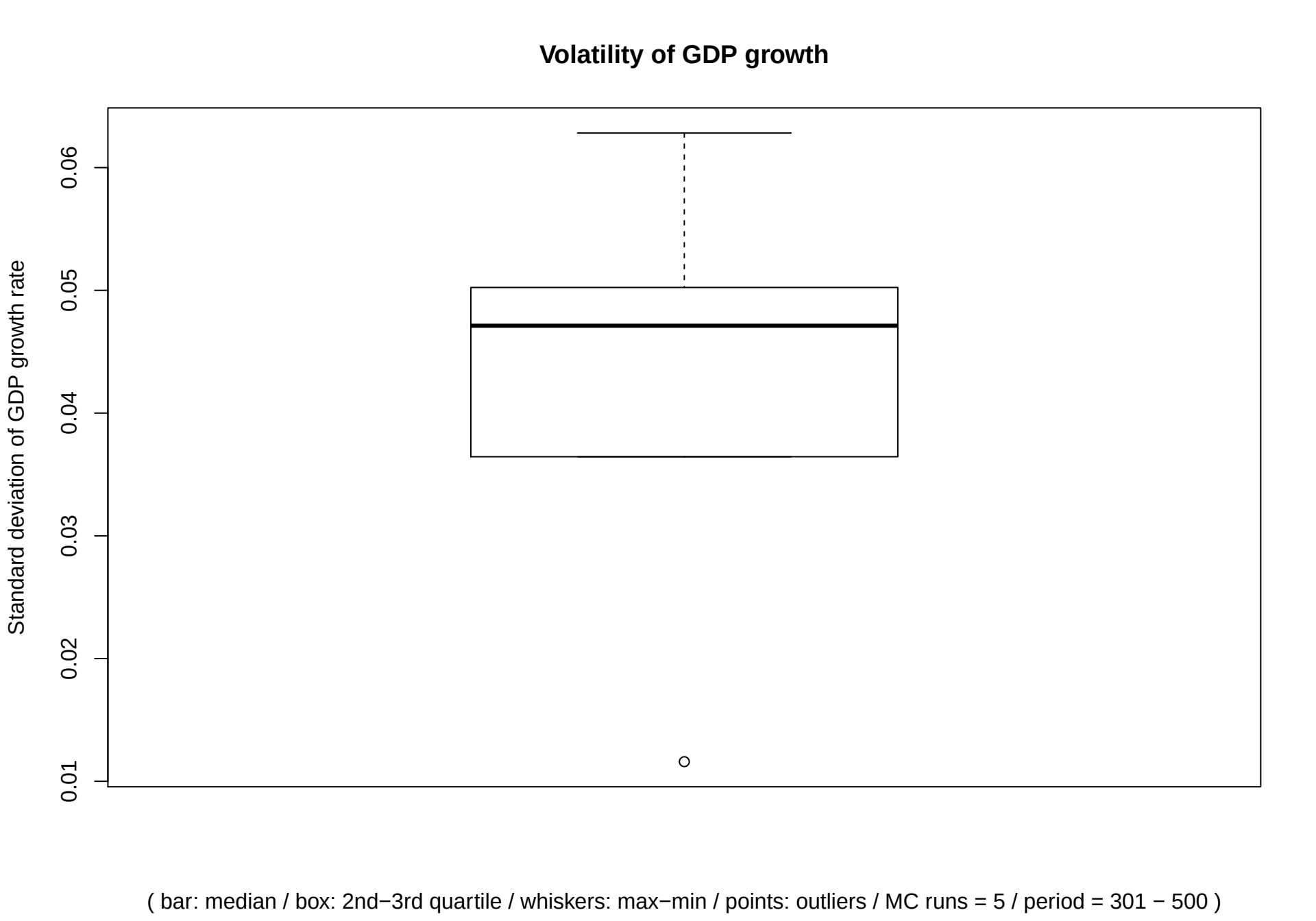
(non−rate/ratio series are Baxter−King bandpass−filtered, low = 6Q / high = 32Q / order = 12 / MC runs = 5 / period = 301 − 500)
(test H0: lag coefficient is not significant at 5% level)

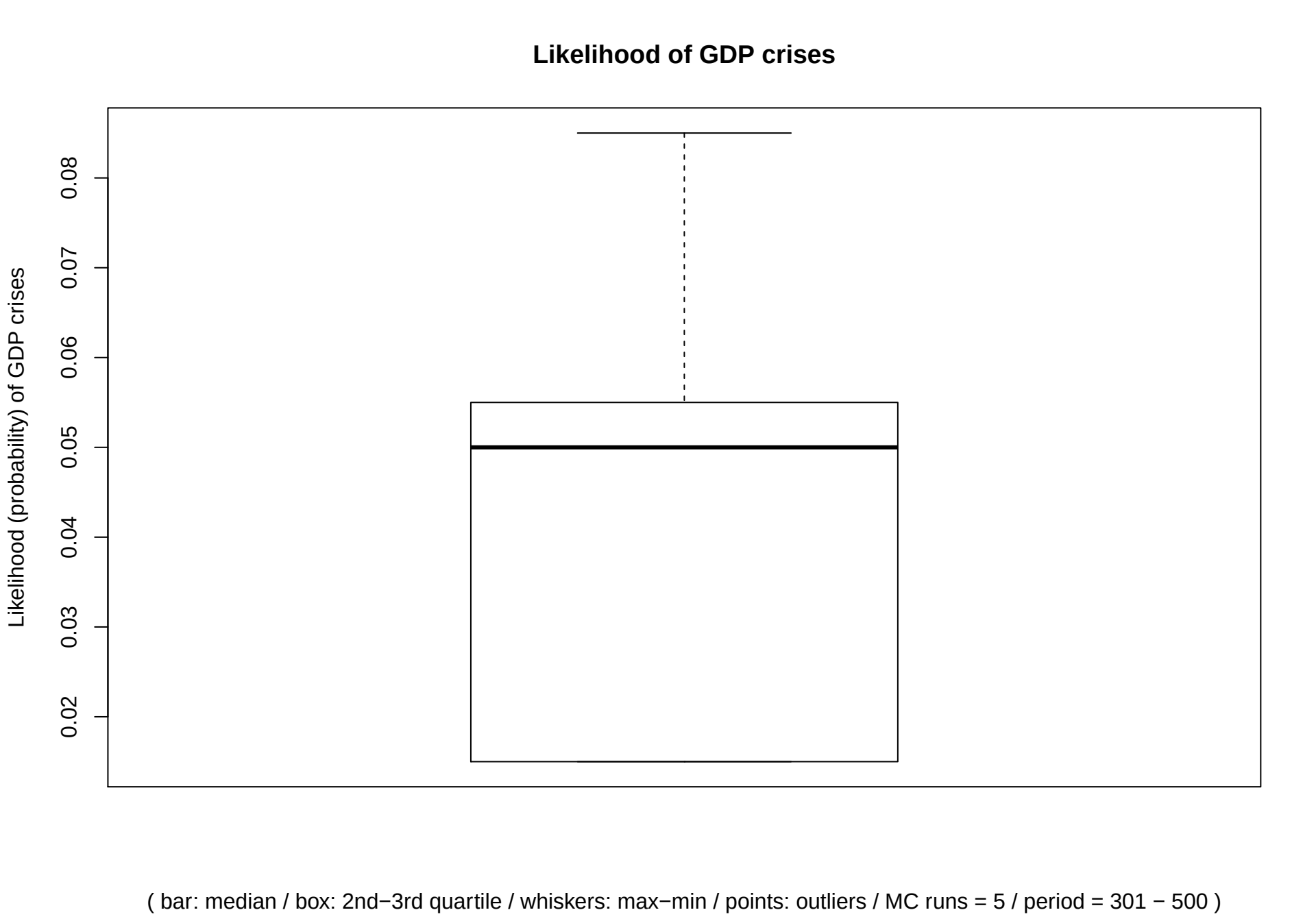
Stationarity, i.i.d. and ergodicity tests (Free entry)

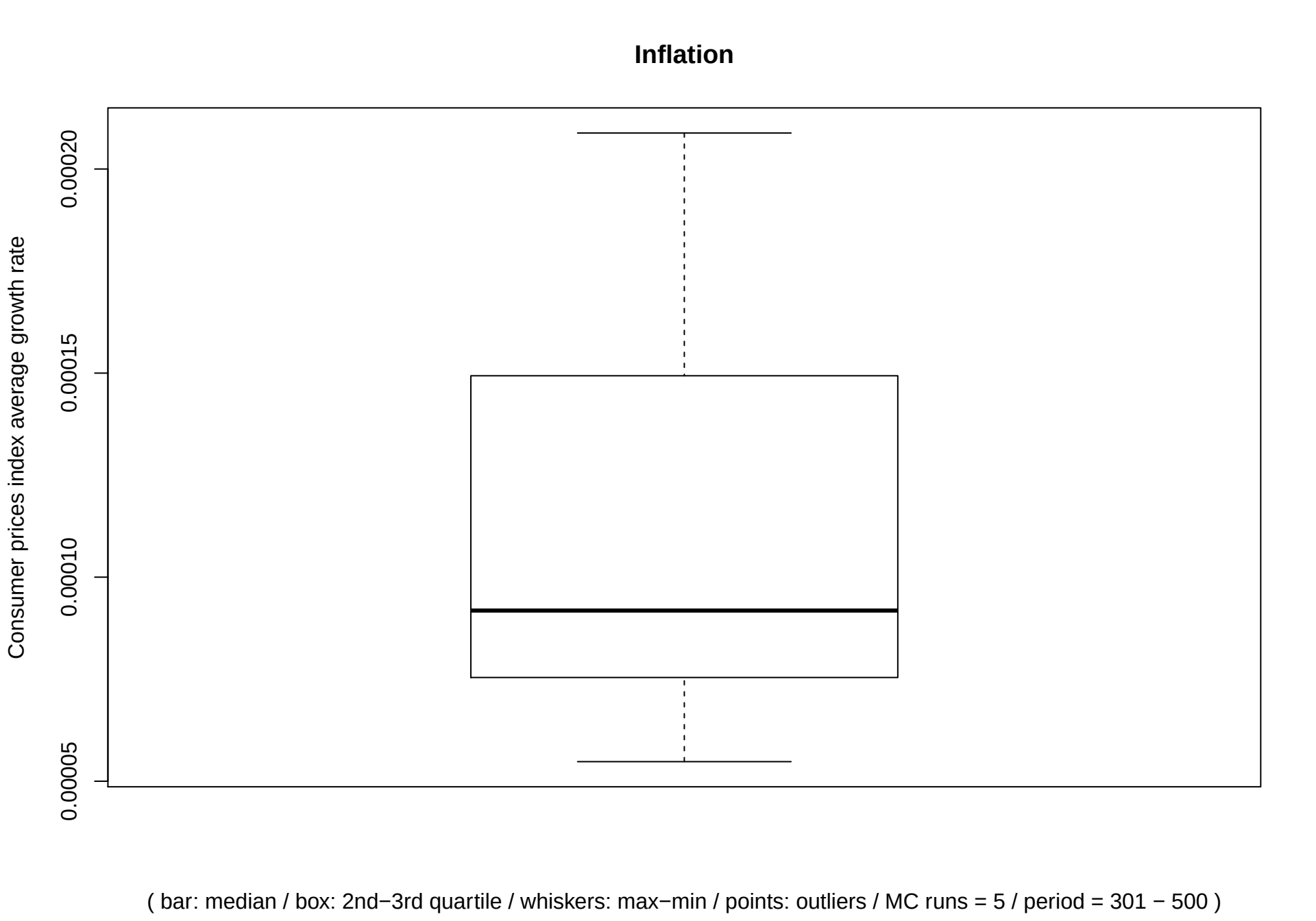
	avg.ADF	rej.ADF	avg.PP	rej.PP	avg.KPSS	rej.KPSS	avg.BDS	rej.BDS	avg.KS	rej.KS	AD	V
dGDP	0.01	1.00	0.01	1.00	0.10	0.00	0.09	0.60	0.23	0.40	0.01	0
dA	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.07	0.60	0.00	0
dw	0.01	1.00	0.01	1.00	0.10	0.00	0.00	1.00	0.05	0.70	0.00	0
V	NA	NA	NA	NA	0.10	0.00	NA	NA	1.00	0.00	NA	0
U	NA	NA	NA	NA	NA	NA	NA	NA	1.00	0.00	NA	0
mu2avg	0.35	0.40	0.33	0.40	0.01	1.00	0.00	1.00	0.00	1.00	0.00	0
HH1	0.25	0.40	0.02	1.00	0.02	1.00	0.00	1.00	0.20	0.40	0.00	0
HH2	0.12	0.80	0.11	0.60	0.06	0.40	0.00	1.00	0.18	0.50	0.00	0

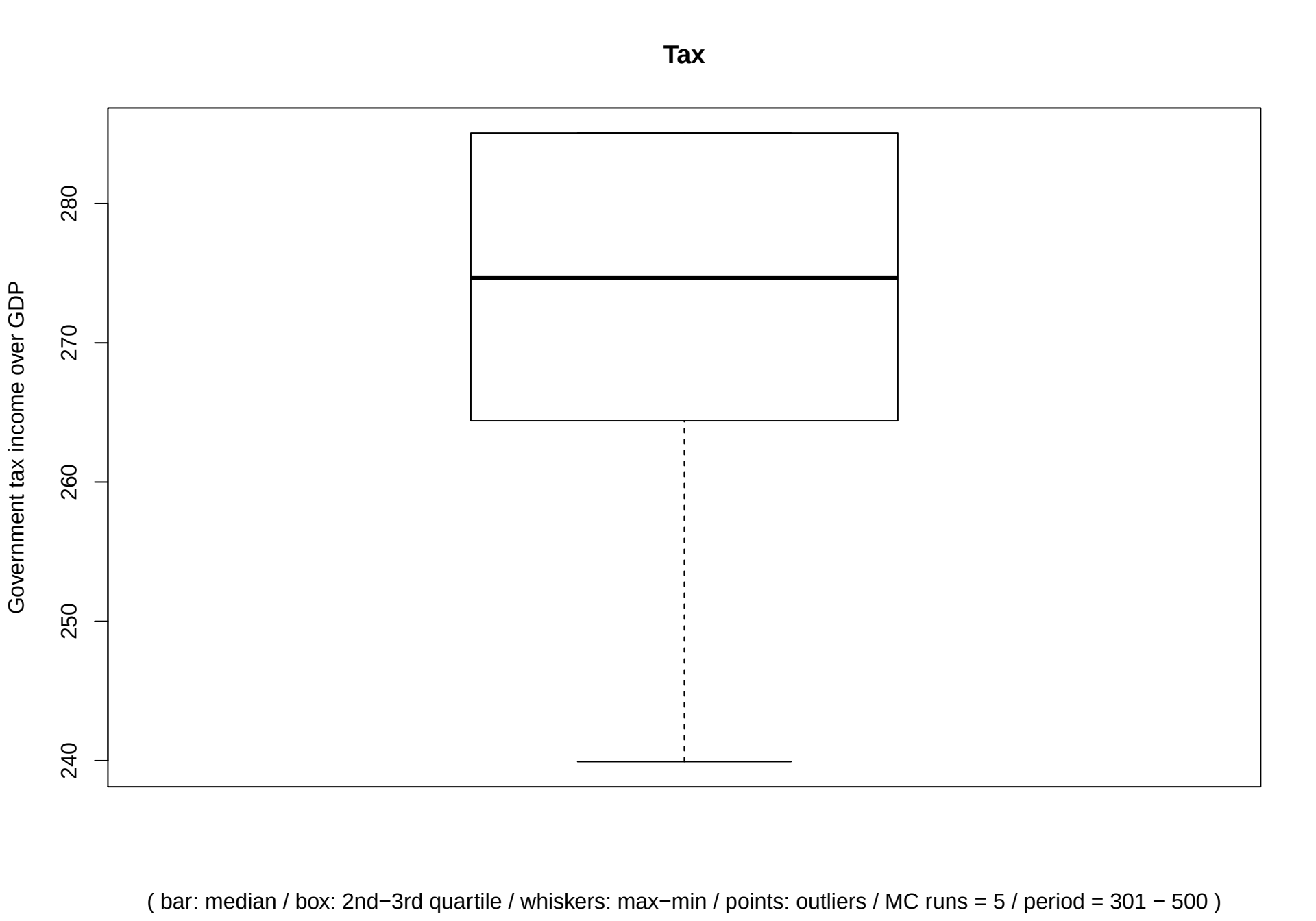
(average p−values for testing H0 and rate of rejection of H0 / MC runs = 5 / period = 301 − 500)
(ADF/PP H0: non−stationary, KPSS H0: stationary, BDS H0: i.i.d., KS/AD/WW H0: ergodic)
(significance = 0.05)

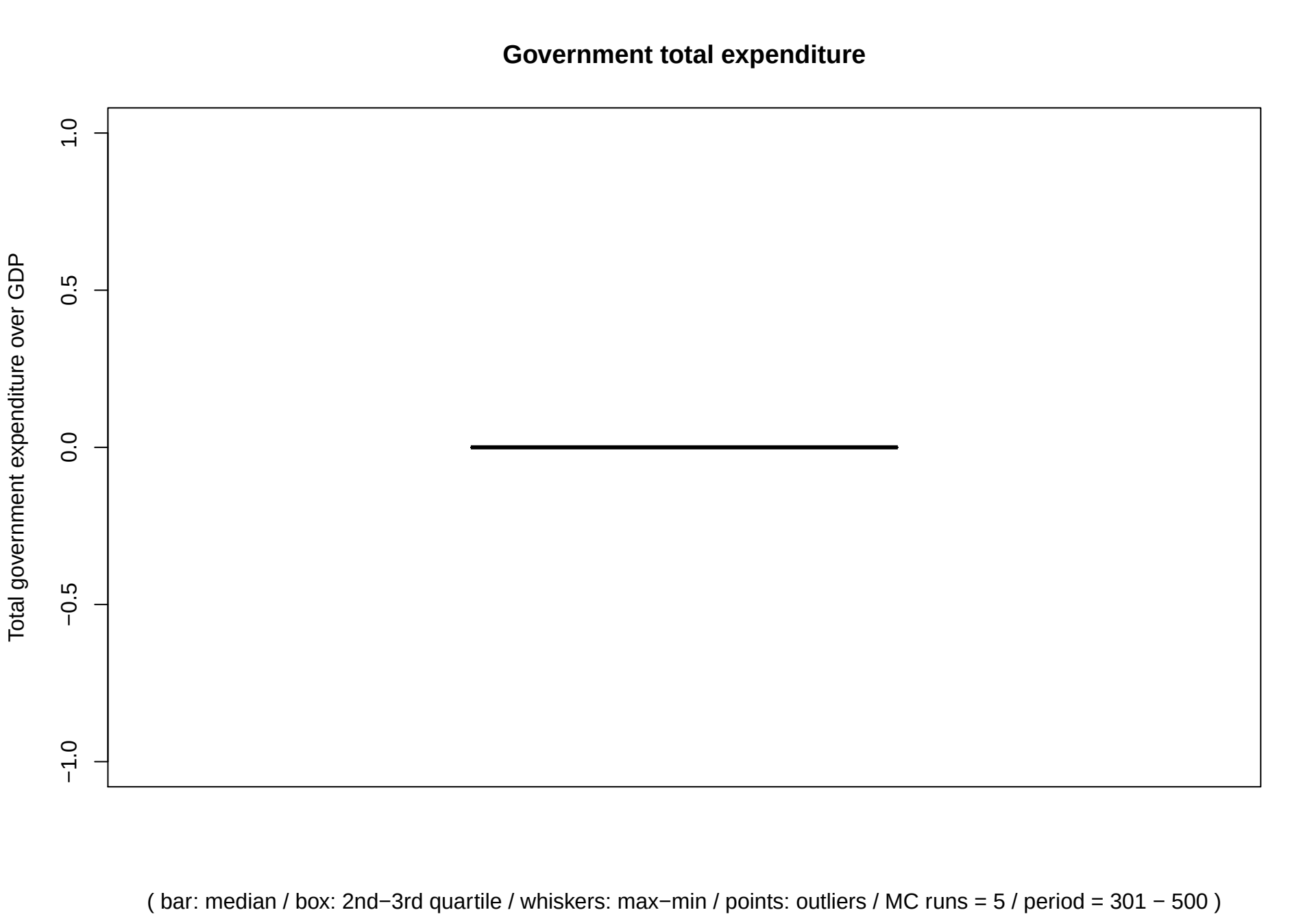

GDP growth
Average GDP growth rate
4e−05
3e−05
2e−05
1e−05
0e+00
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

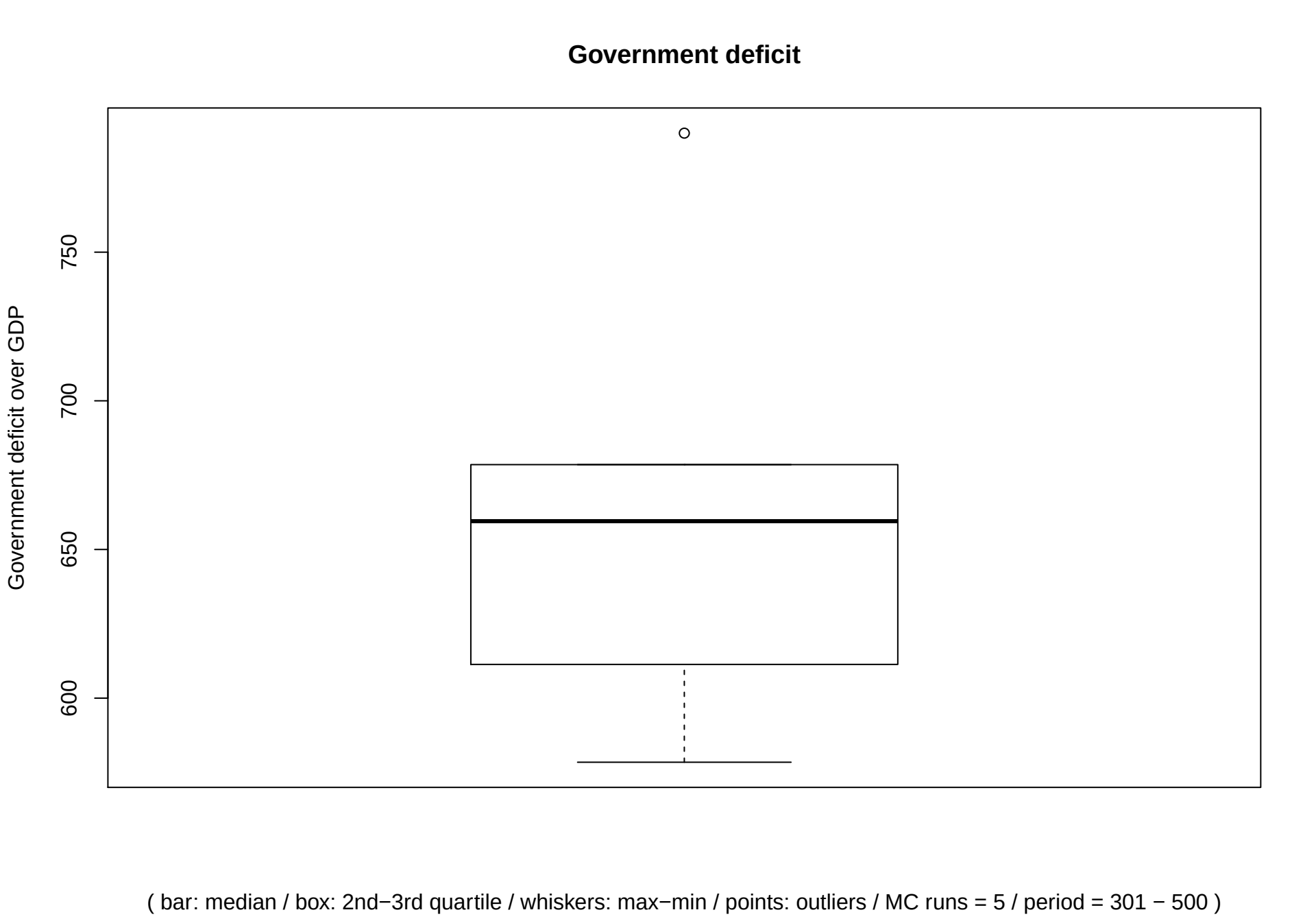

Volatility of GDP growth
Standard deviation of GDP growth rate
0.01
0.02
0.03
0.04
0.05
0.06
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

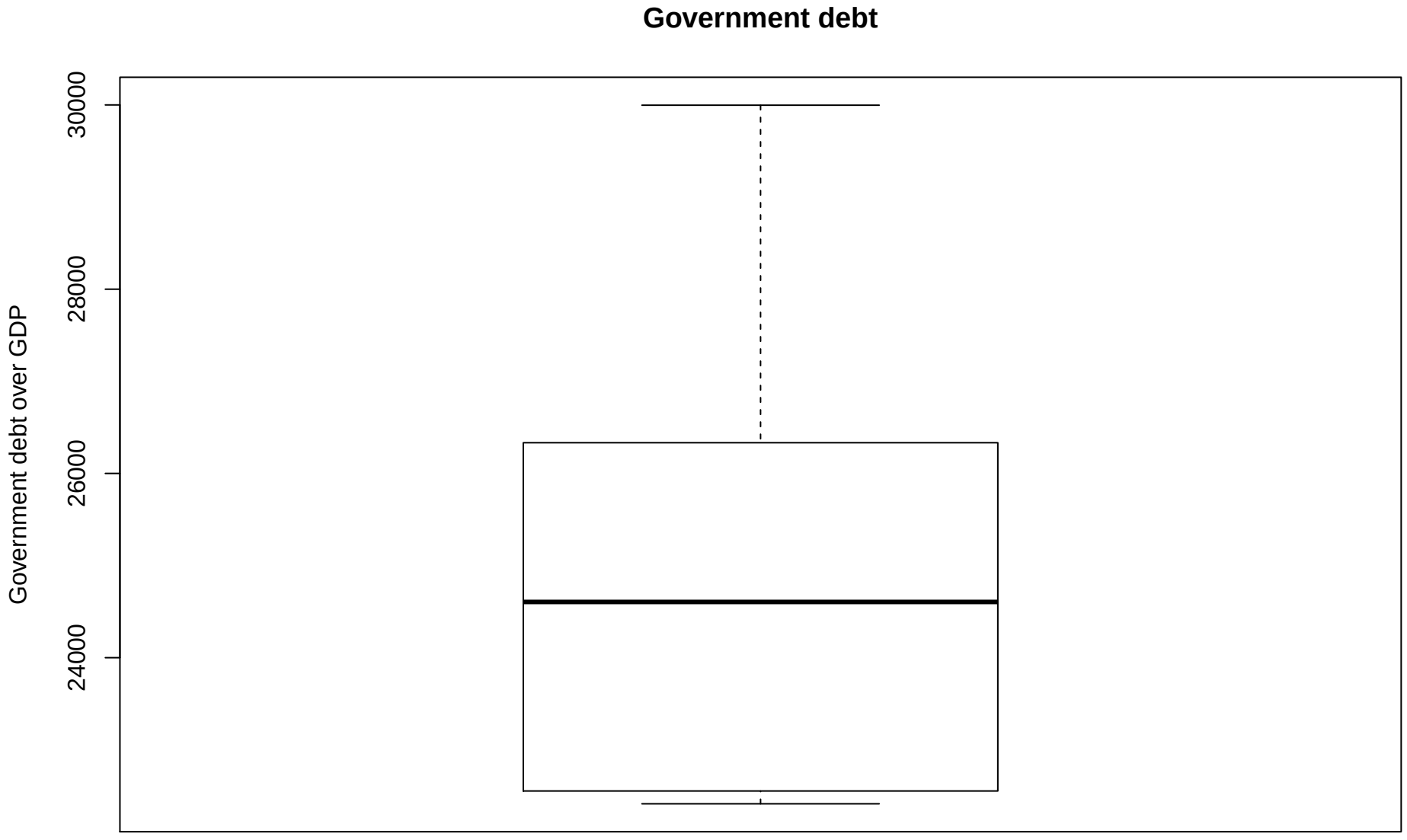

Likelihood of GDP crises
Likelihood (probability) of GDP crises
0.02
0.03
0.04
0.05
0.06
0.07
0.08
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Inflation
Consumer prices index average growth rate
0.00005
0.00010
0.00015
0.00020
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

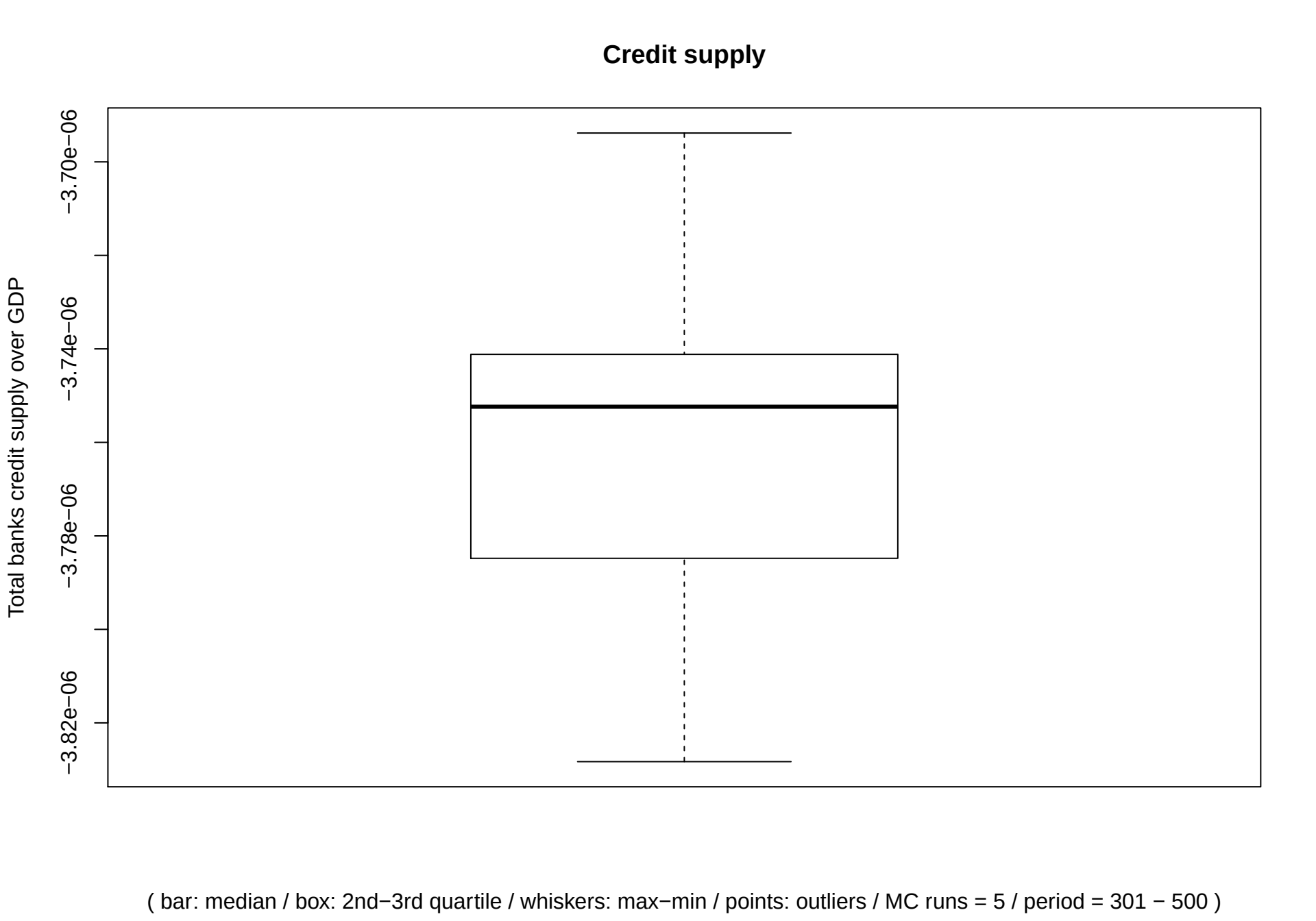

Tax
Government tax income over GDP
240
250
260
270
280
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

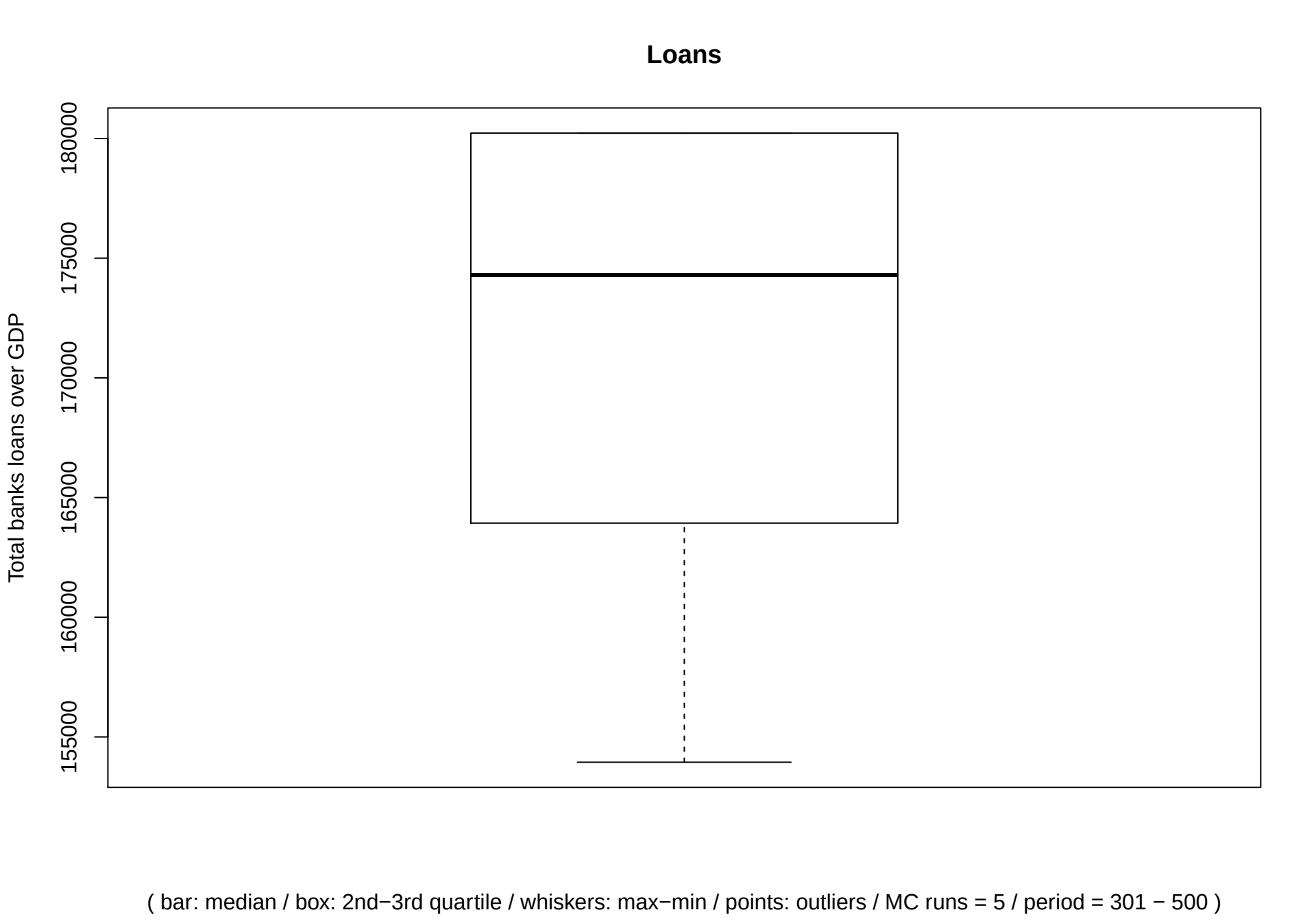

Government total expenditure
Total government expenditure over GDP
1.0
0.5
0.0
−0.5
−1.0
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

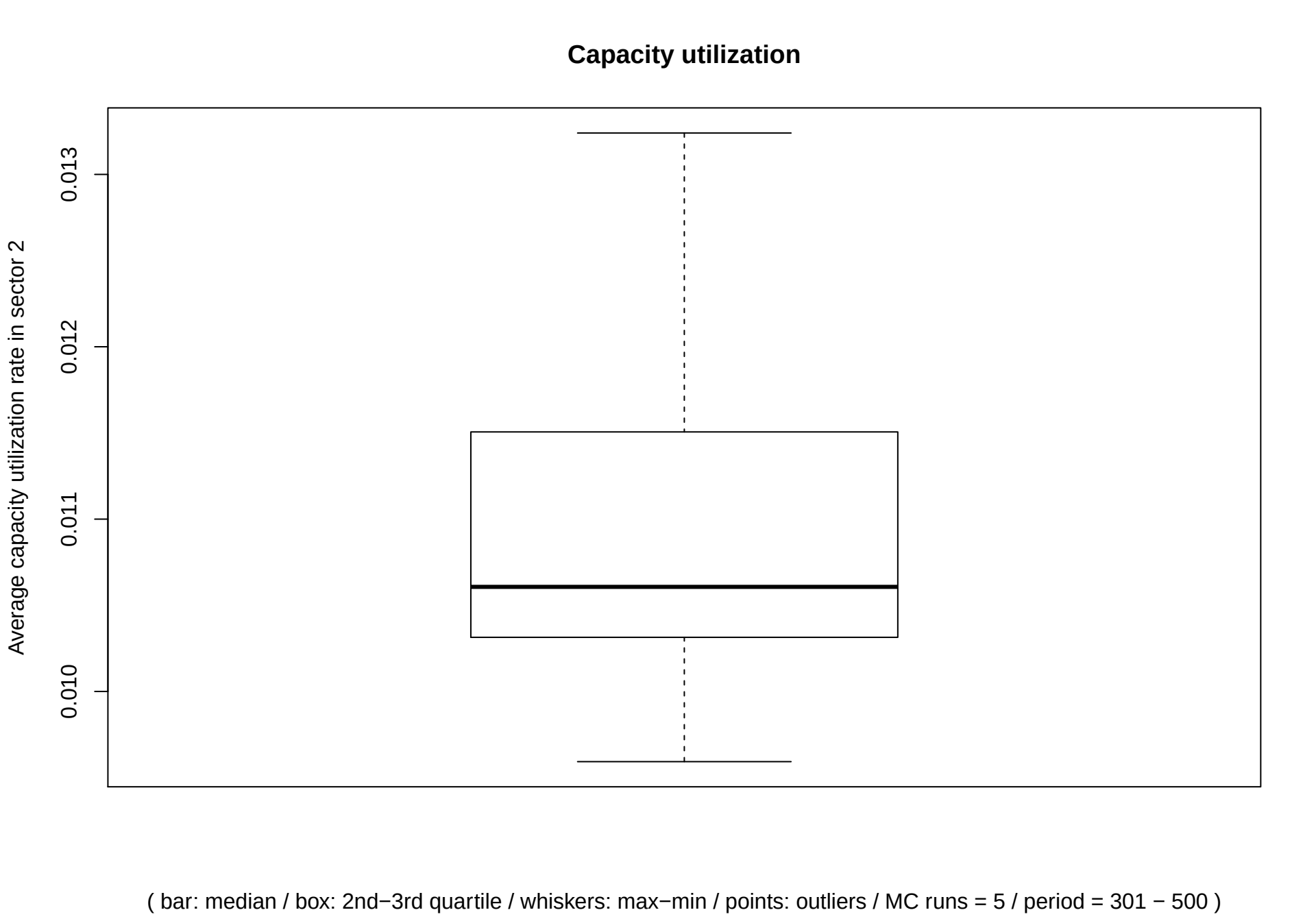

Government deficit
Government deficit over GDP
600
650
700
750
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

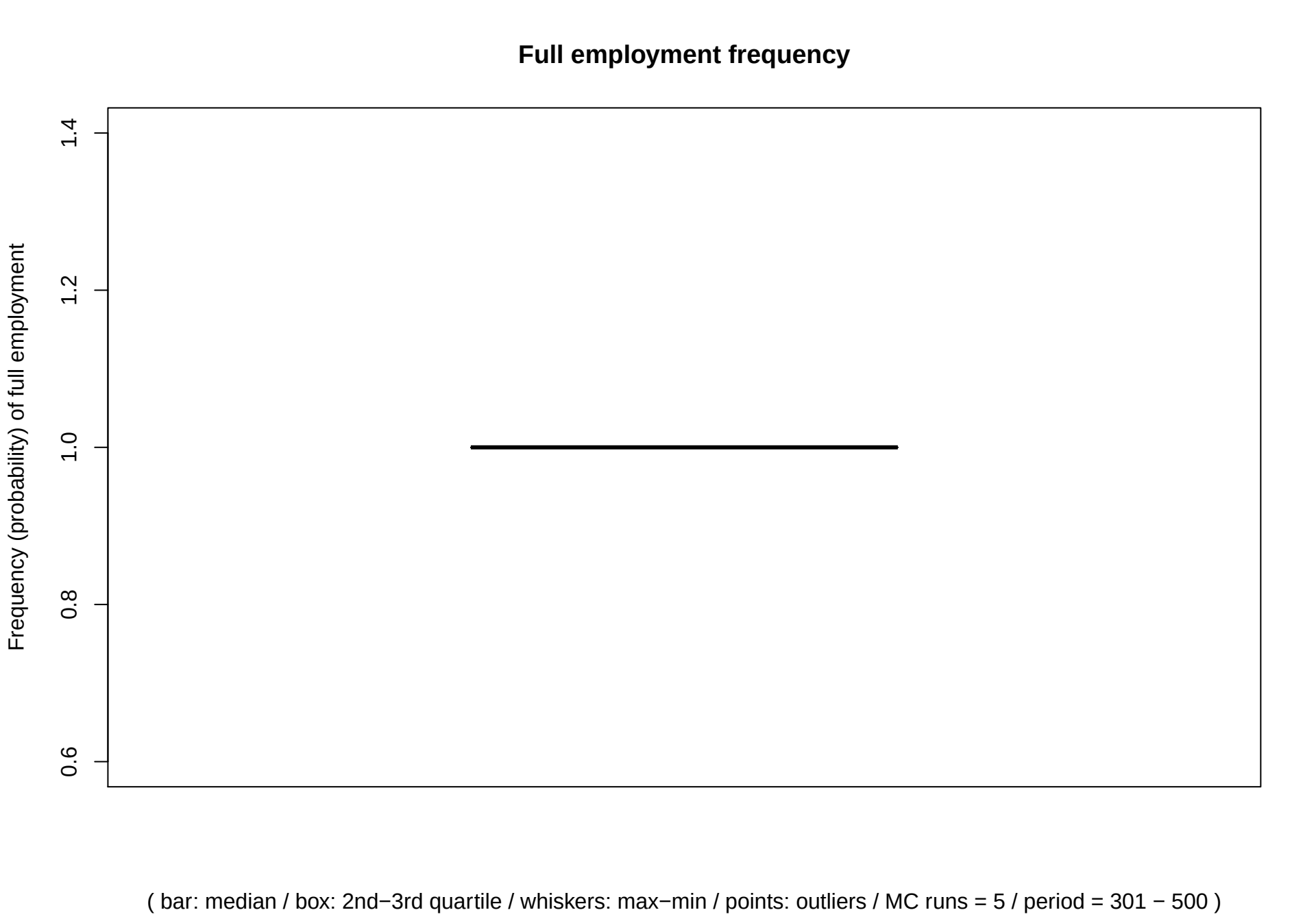


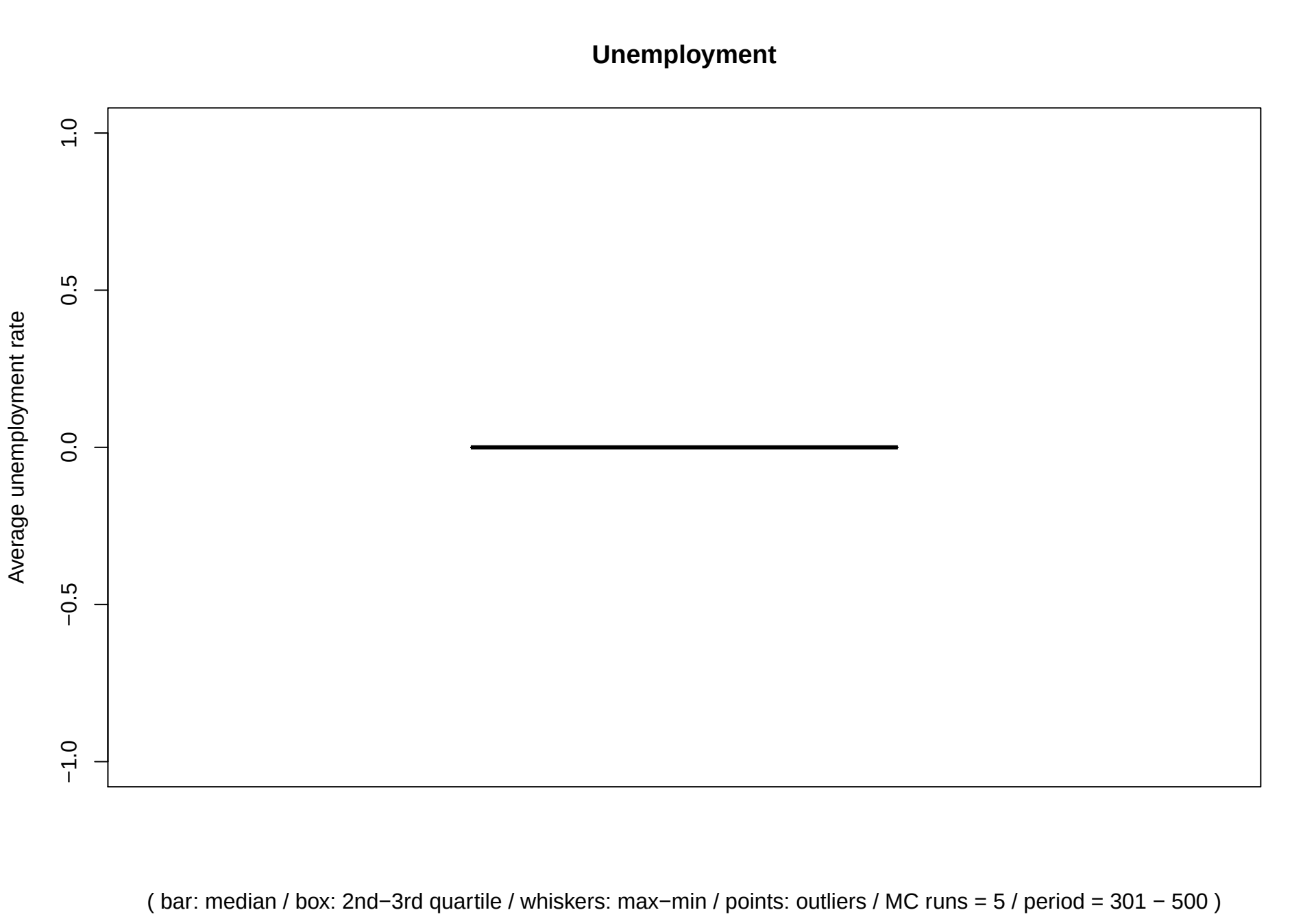
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

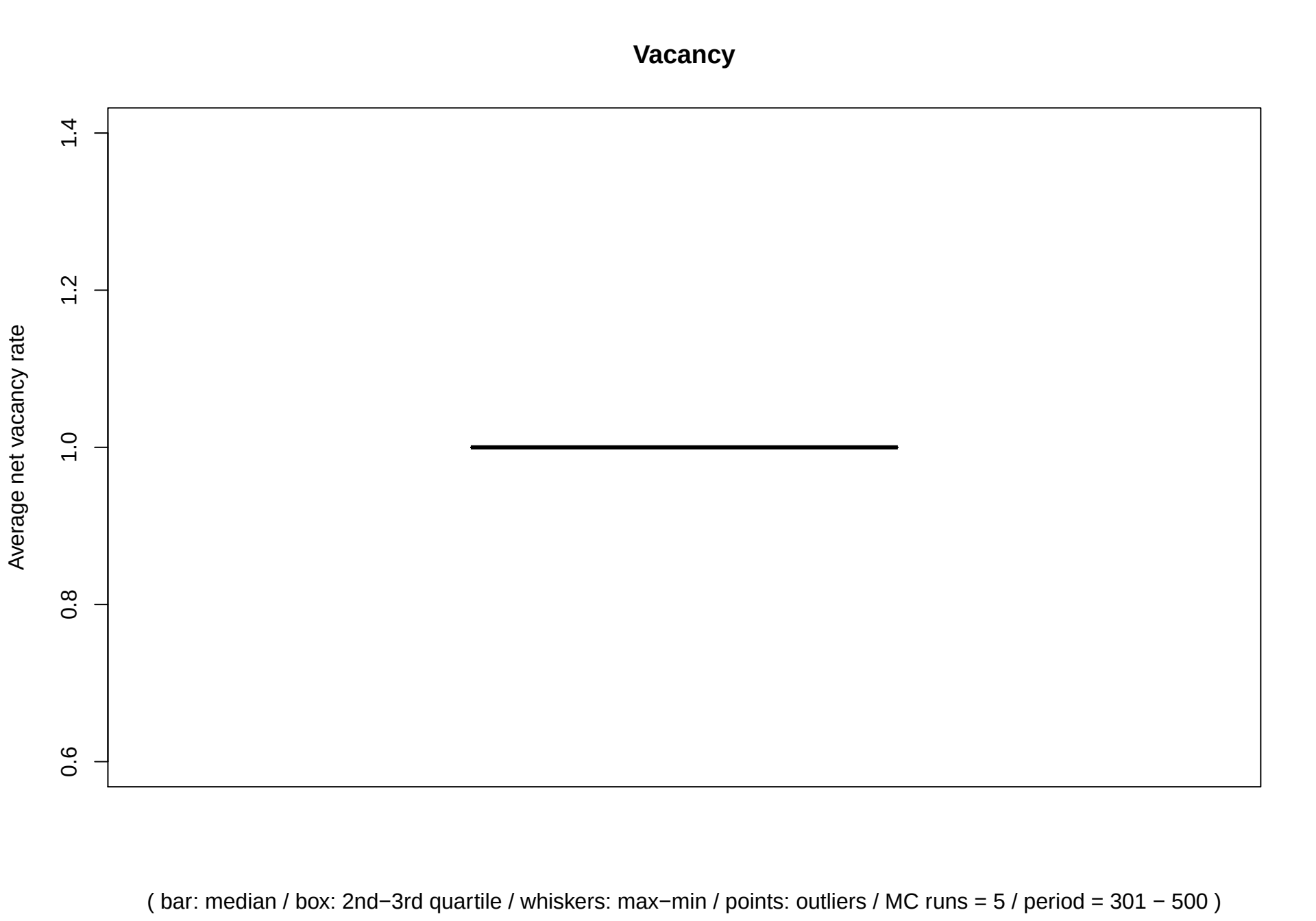

Credit supply
Total banks credit supply over GDP
−3.70e−06
−3.74e−06
−3.78e−06
−3.82e−06
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

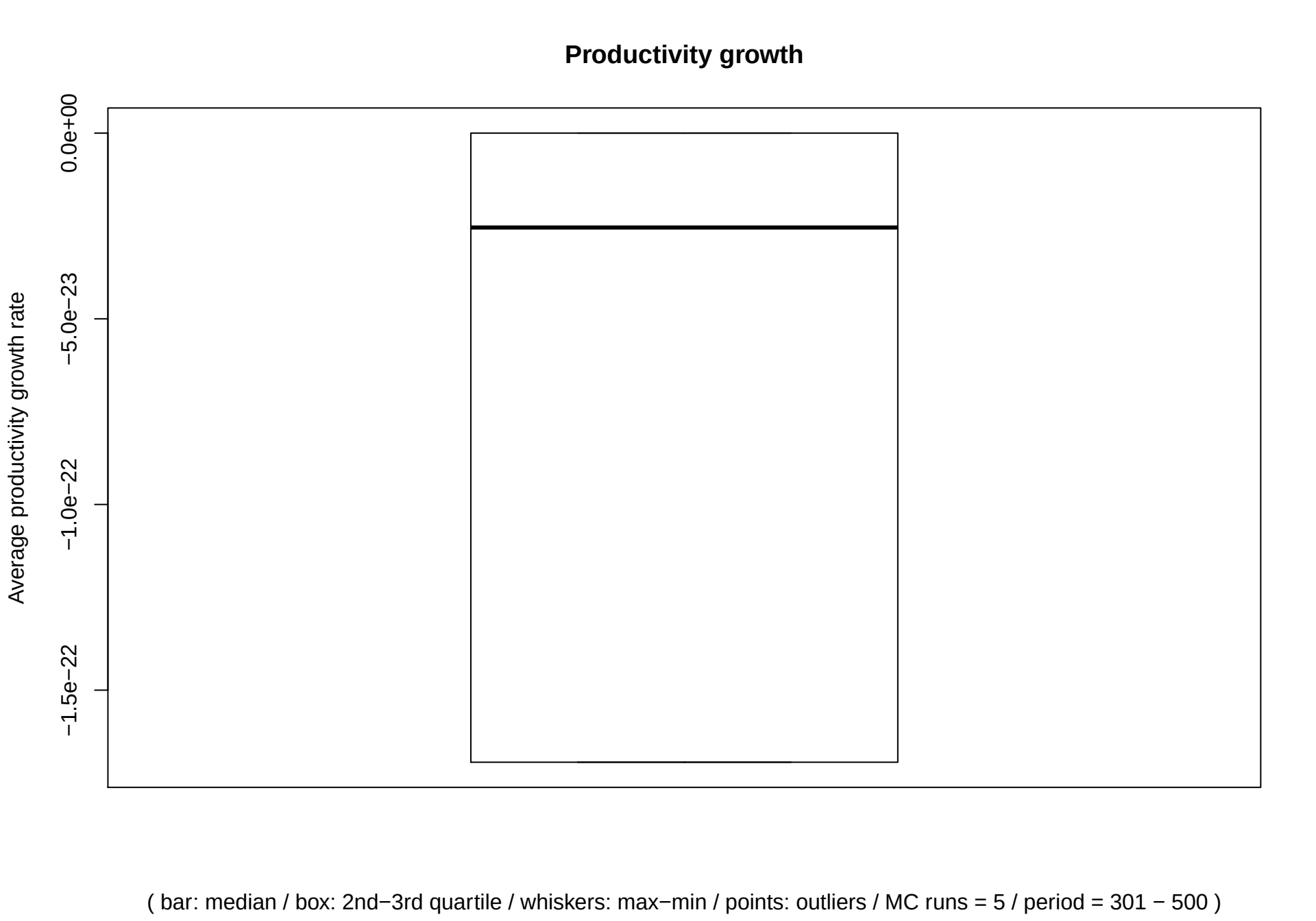

Loans
Total banks loans over GDP
180000
175000
170000
165000
160000
155000
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

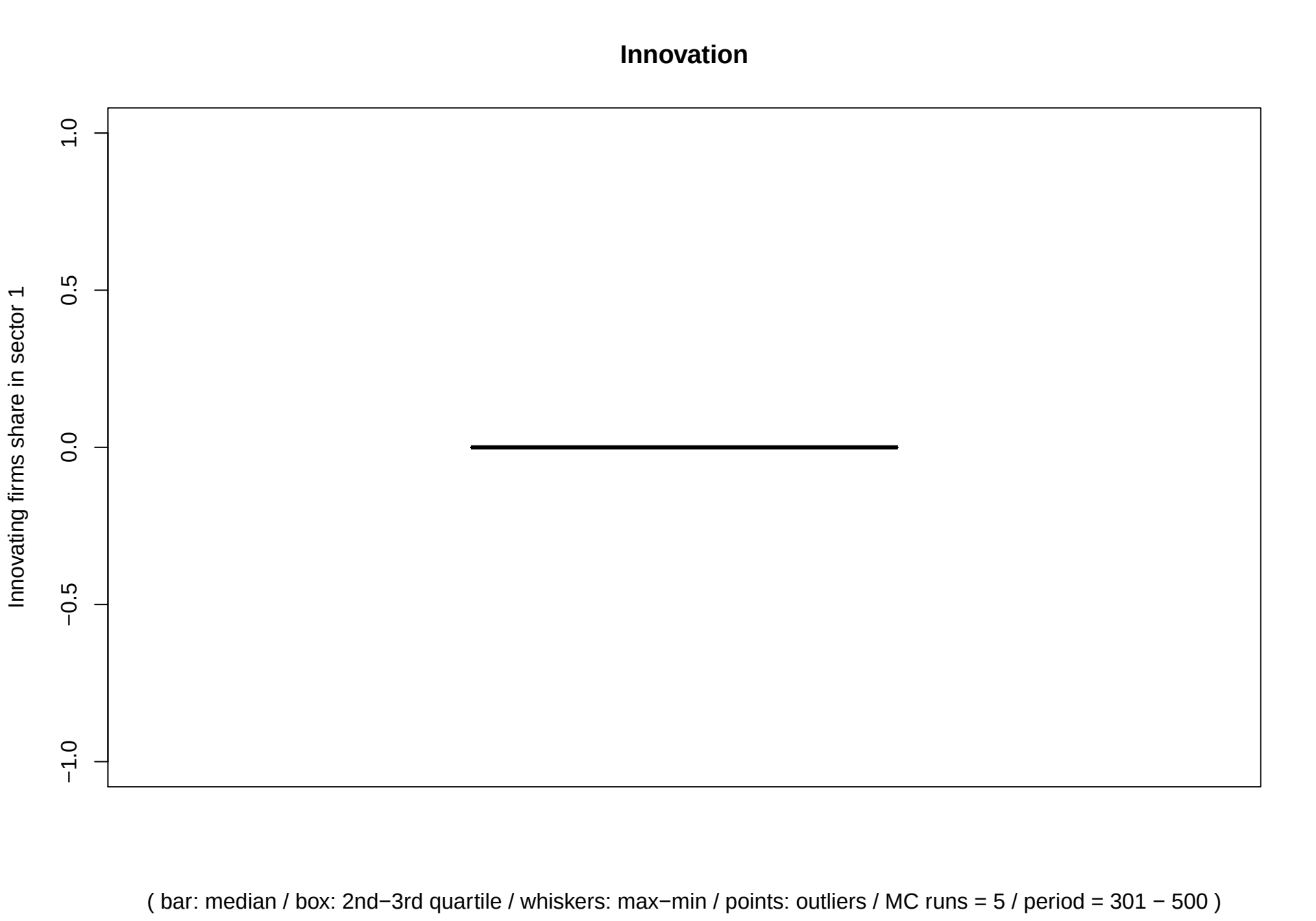

Capacity utilization
Average capacity utilization rate in sector 2
0.010
0.011
0.012
0.013
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

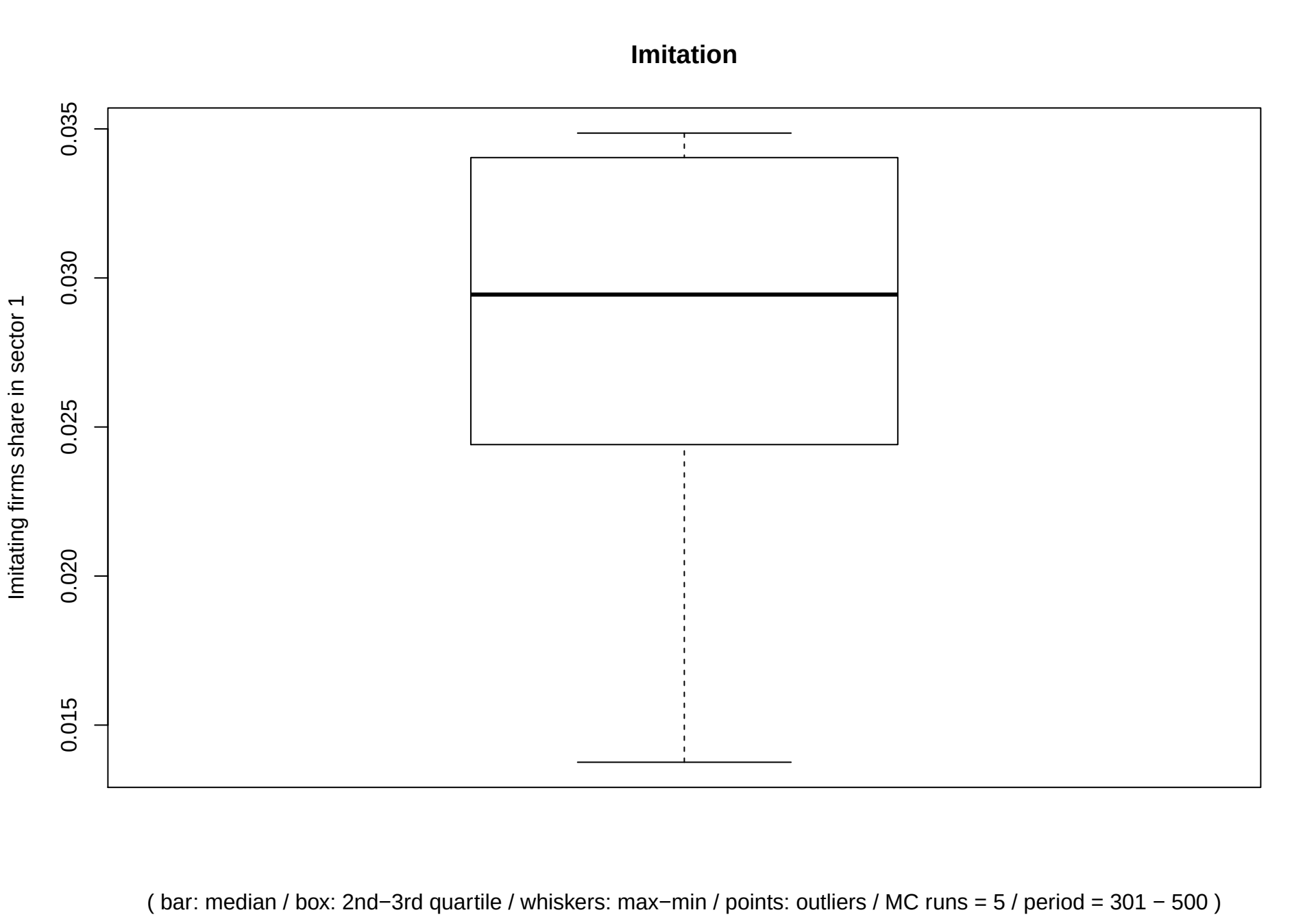

Full employment frequency
Frequency (probability) of full employment
1.4
1.2
1.0
0.8
0.6
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

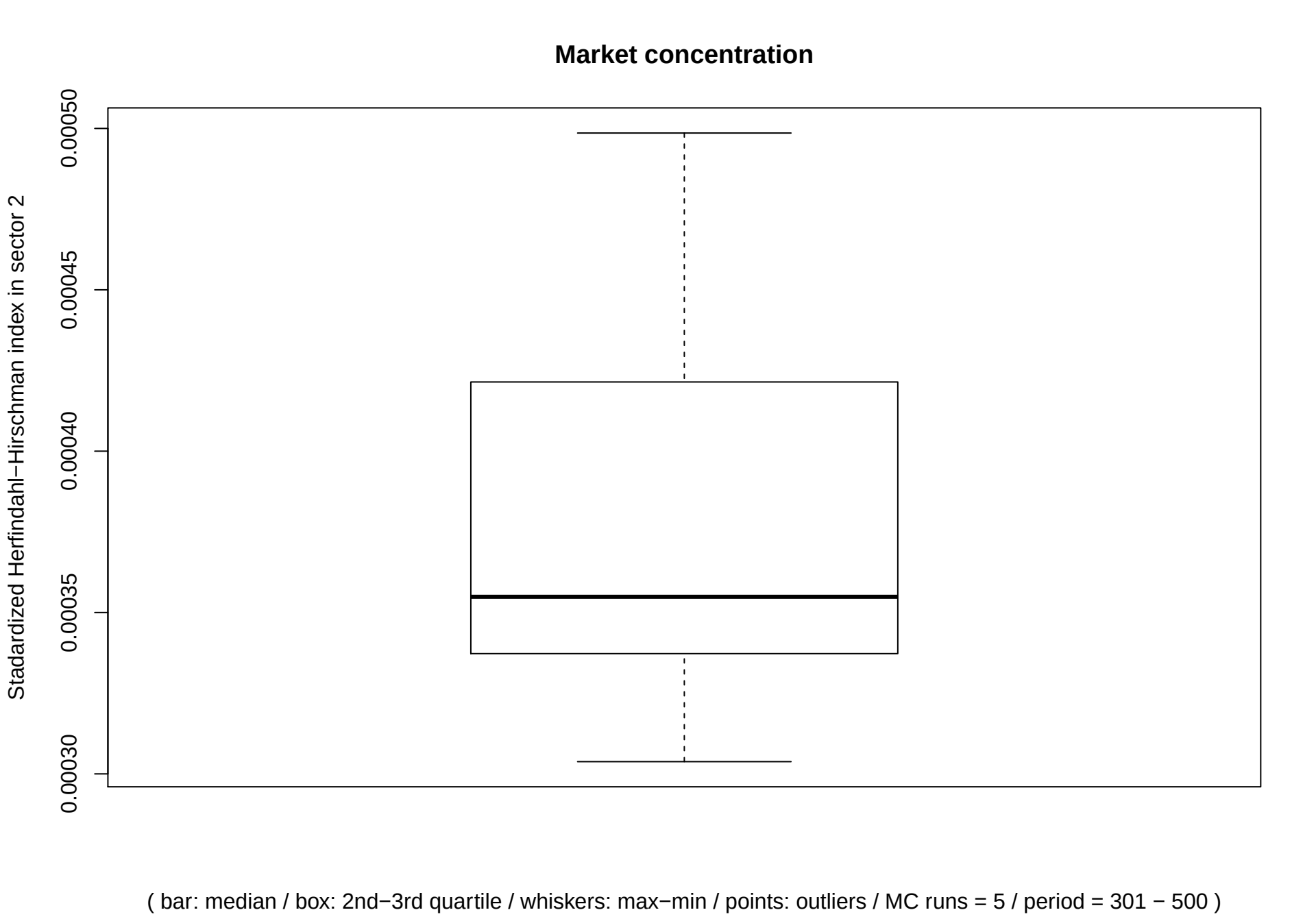

Unemployment
Average unemployment rate
1.0
0.5
0.0
−0.5
−1.0
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

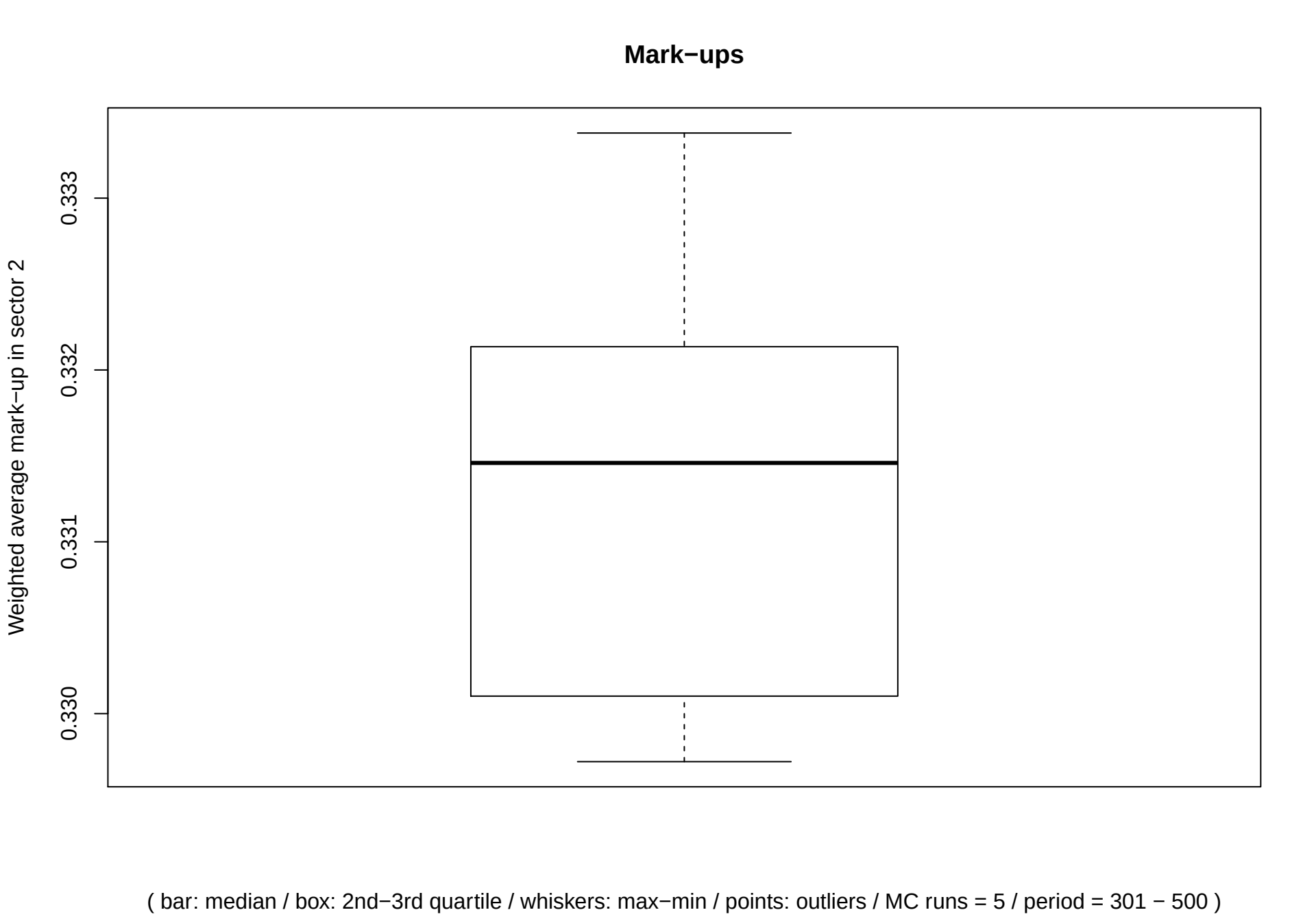

Vacancy
Average net vacancy rate
1.4
1.2
1.0
0.8
0.6
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

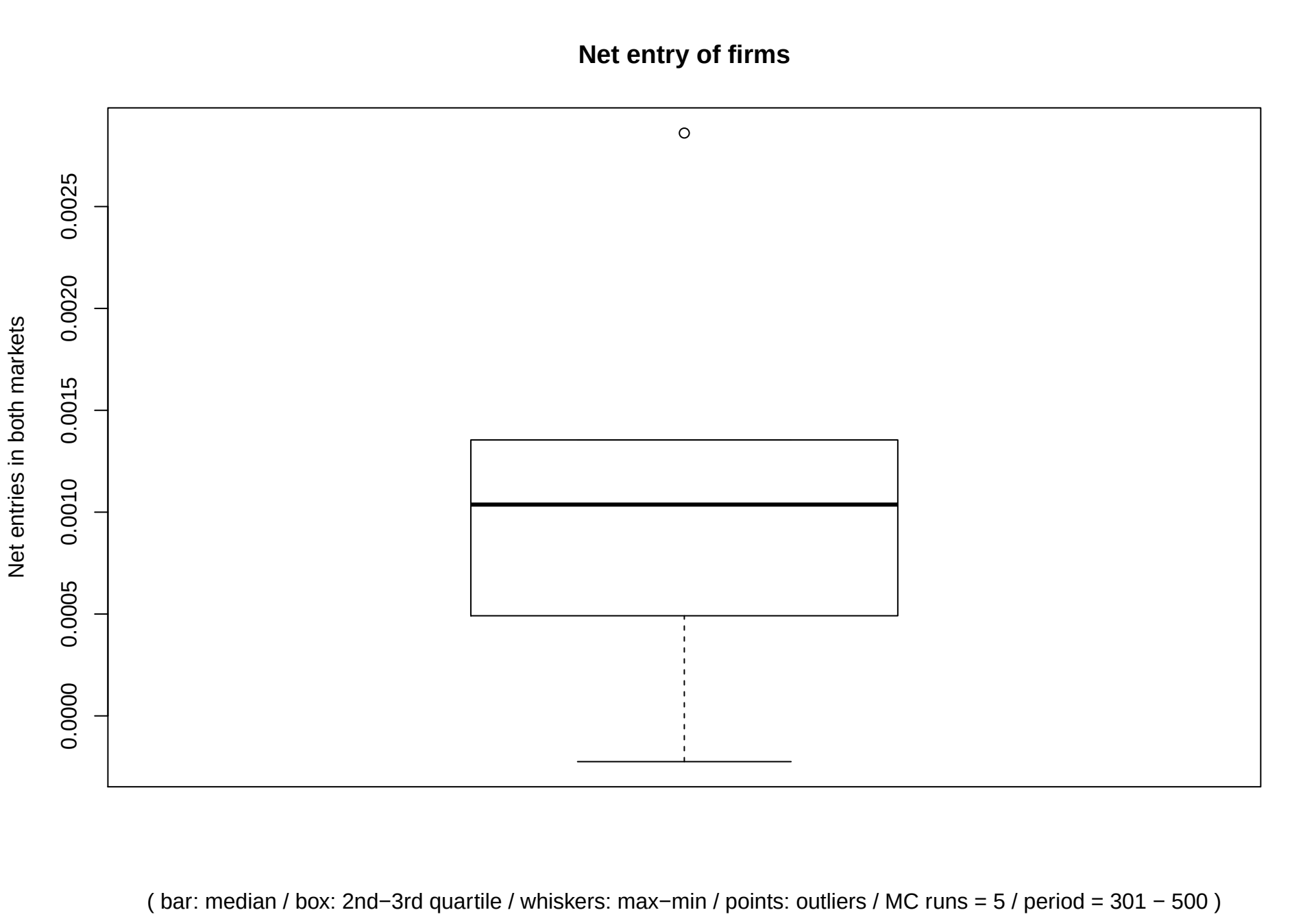

Productivity growth
Average productivity growth rate
0.0e+00
−5.0e−23
−1.0e−22
−1.5e−22
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Innovation
Innovating firms share in sector 1
1.0
0.5
0.0
−0.5
−1.0
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Imitation
Imitating firms share in sector 1
0.035
0.030
0.025
0.020
0.015
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Market concentration
Stadardized Herfindahl−Hirschman index in sector 2
0.00050
0.00045
0.00040
0.00035
0.00030
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Mark−ups
Weighted average mark−up in sector 2
0.330
0.331
0.332
0.333
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)


Net entry of firms
Net entries in both markets
0.0000
0.0005
0.0010
0.0015
0.0020
0.0025
(bar: median / box: 2nd−3rd quartile / whiskers: max−min / points: outliers / MC runs = 5 / period = 301 − 500)

Monte Carlo descriptive statistics (all experiments)

	Avg[1]	SD[1]	Min[1]	Max[1]
GDP growth	4.849e−05	9.14e−05	−1.874e−06	0.000209
Volatility of GDP growth	0.04164	0.01925	0.0116	0.06282
Likelihood of GDP crises	0.044	0.02966	0.015	0.085
Inflation	0.000116	6.266e−05	5.48e−05	0.0002088
Tax	279.6	34.62	239.9	333.8
Government total expenditure	0	0	0	0
Government deficit	663.6	80.94	578.5	790
Government debt	2.518e+04	3139	2.241e+04	3e+04
Credit supply	−3.76e−06	5.017e−08	−3.828e−06	−3.694e−06
Loans	1.764e+05	2.114e+04	1.539e+05	2.097e+05
Capacity utilization	0.01105	0.001402	0.009593	0.01324
Full employment frequency	1	0	1	1
Unemployment	0	0	0	0
Vacancy	1	0	1	1
Productivity growth	−1.334e−07	2.982e−07	−6.668e−07	0
Innovation	0	0	0	0
Imitation	0.0273	0.008645	0.01375	0.03486
Market concentration	0.0003832	7.745e−05	0.0003038	0.0004986
Mark−ups	0.3314	0.001497	0.3297	0.3334
Net entry of firms	0.001104	0.001151	−0.0002246	0.002861

Experiments: [1] Free entry
(numbers in brackets indicate the experiment number / MC runs = 5 / period = 301 − 500)