

Table 1: MCMC Inefficiency factors per block

<i>Parameter</i>	<i>Block 1</i>	<i>Block 2</i>
$\sigma_{\eta^a}$	145.077	292.067
$\sigma_{\eta^b}$	251.607	384.250
$\sigma_{\eta^g}$	222.326	176.628
$\sigma_{\eta^i}$	160.054	222.904
$\sigma_{\eta^m}$	412.617	405.508
$\sigma_{\eta^p}$	320.318	237.663
$\sigma_{\eta^w}$	359.410	329.173
$\sigma_{\eta^{\sigma_w}}$	267.139	492.322
$\sigma_{\eta^{\pi^*}}$	456.848	689.241
$\alpha$	172.657	138.267
$\psi$	200.717	252.682
$\Phi$	151.087	299.140
$\iota_w$	180.465	305.997
$\xi_w$	253.542	403.762
$\iota_p$	78.893	174.900
$\xi_p$	228.488	372.659
$\sigma_c$	212.396	266.137
$\sigma_l$	151.211	372.462
$\lambda$	204.107	167.180
$\varphi$	265.523	307.088
$r_\pi$	251.931	436.095
$r_y$	271.516	338.330
$r_{\Delta y}$	232.996	301.945
$\rho$	277.573	429.748
$n_*$	245.437	366.962
$\gamma$	290.536	218.507
$\zeta_{sp}$	113.812	164.121
$\bar{\pi}$	273.111	271.050
$\rho_{ga}$	300.297	304.563
$\rho_a$	288.431	279.211
$\rho_b$	310.421	433.144
$\rho_g$	130.288	145.531
$\rho_i$	186.290	195.312
$\rho_r$	375.745	336.579
$\rho_p$	112.945	158.109
$\rho_w$	308.111	257.429
$\rho_{\sigma_w}$	227.496	548.401
$\rho_{\pi^*}$	646.212	449.442
$\mu_p$	196.964	230.333
$\mu_w$	499.038	306.129

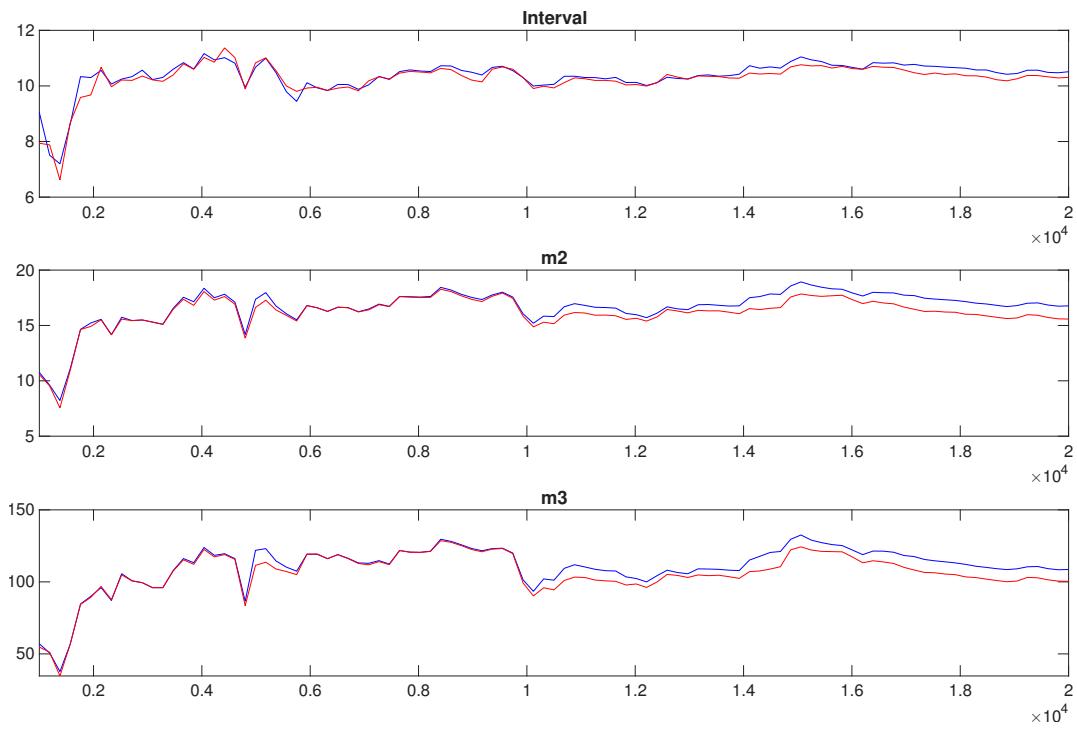


Figure 1: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
$\alpha$	norm	0.300	0.0500	0.384	0.0242	0.3462	0.4264
$\psi$	beta	0.500	0.1500	0.597	0.0491	0.5248	0.6819
$\Phi$	norm	1.250	0.1250	1.175	0.0504	1.0954	1.2517
$\iota_w$	beta	0.500	0.1500	0.228	0.0822	0.1012	0.3717
$\xi_w$	beta	0.500	0.1000	0.906	0.0174	0.8757	0.9338
$\iota_p$	beta	0.500	0.1500	0.167	0.0569	0.0786	0.2607
$\xi_p$	beta	0.500	0.1000	0.871	0.0358	0.8149	0.9284
$\sigma_c$	norm	1.500	0.3750	1.507	0.0846	1.3733	1.6344
$\sigma_l$	norm	2.000	0.7500	0.419	0.4539	-0.2650	1.1638
$\lambda$	beta	0.700	0.1000	0.307	0.0599	0.2091	0.4045
$\varphi$	norm	4.000	1.5000	0.081	0.0160	0.0558	0.1074
$r_\pi$	norm	1.500	0.2500	1.753	0.2183	1.3816	2.0799
$r_y$	norm	0.125	0.0500	0.092	0.0353	0.0372	0.1488
$r_{\Delta y}$	norm	0.125	0.0500	0.296	0.0240	0.2552	0.3345
$\rho$	beta	0.750	0.1000	0.949	0.0149	0.9267	0.9734
$n_*$	norm	0.000	2.0000	3.152	0.7833	1.8559	4.3151
$\gamma$	norm	0.400	0.1000	0.561	0.0781	0.4393	0.6865
$\zeta_{sp}$	beta	0.050	0.0050	0.043	0.0038	0.0370	0.0496
$\bar{\pi}$	gamm	0.625	0.2000	0.370	0.0507	0.2916	0.4586
$\rho_{ga}$	beta	0.500	0.2000	0.616	0.1750	0.3212	0.8841
$\rho_a$	beta	0.500	0.2000	0.970	0.0095	0.9551	0.9854
$\rho_b$	beta	0.500	0.2000	0.851	0.0306	0.8003	0.9000
$\rho_g$	beta	0.500	0.2000	0.980	0.0061	0.9705	0.9904
$\rho_i$	beta	0.500	0.2000	0.995	0.0022	0.9922	0.9985
$\rho_r$	beta	0.500	0.2000	0.081	0.0331	0.0239	0.1319
$\rho_p$	beta	0.500	0.2000	0.957	0.0249	0.9213	0.9943
$\rho_w$	beta	0.500	0.2000	0.285	0.1345	0.0631	0.4775
$\rho_{\sigma_w}$	beta	0.750	0.1500	0.986	0.0098	0.9713	0.9997
$\rho_{\pi_*}$	beta	0.750	0.1500	0.990	0.0066	0.9823	0.9994
$\mu_p$	beta	0.500	0.2000	0.801	0.0568	0.7173	0.8930
$\mu_w$	beta	0.500	0.2000	0.447	0.1141	0.2586	0.6288

Table 3: Results from Metropolis-Hastings (standard deviation of structural shocks)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
$\eta^a$	invg	0.100	2.0000	0.582	0.0291	0.5340	0.6283
$\eta^b$	invg	0.100	2.0000	0.132	0.0121	0.1108	0.1508
$\eta^g$	invg	0.100	2.0000	2.546	0.1289	2.3363	2.7557
$\eta^i$	invg	0.100	2.0000	1.908	0.2146	1.5486	2.2488
$\eta^m$	invg	0.100	2.0000	0.344	0.0255	0.3067	0.3903
$\eta^p$	invg	0.100	2.0000	0.184	0.0129	0.1626	0.2066
$\eta^w$	invg	0.100	2.0000	0.498	0.0314	0.4519	0.5494
$\eta^{\sigma_w}$	invg	0.100	2.0000	0.075	0.0113	0.0574	0.0946
$\eta^{\pi_*}$	invg	0.100	2.0000	0.094	0.0508	0.0305	0.1788

Table 4: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
$\alpha$	norm	0.300	0.0500	0.2652	0.0352
$\psi$	beta	0.500	0.1500	0.4425	0.0647
$\Phi$	norm	1.250	0.1250	1.4276	0.0617
$\iota_w$	beta	0.500	0.1500	0.2766	0.0947
$\xi_w$	beta	0.500	0.1000	0.9046	0.0159
$\iota_p$	beta	0.500	0.1500	0.2625	0.0812
$\xi_p$	beta	0.500	0.1000	0.6859	0.0379
$\sigma_c$	norm	1.500	0.3750	1.5127	0.1009
$\sigma_l$	norm	2.000	0.7500	1.8145	0.4797
$\lambda$	beta	0.700	0.1000	0.5319	0.0773
$\varphi$	norm	4.000	1.5000	0.0850	0.0202
$r_\pi$	norm	1.500	0.2500	2.0297	0.1779
$r_y$	norm	0.125	0.0500	0.1584	0.0343
$r_{\Delta y}$	norm	0.125	0.0500	0.2888	0.0256
$\rho$	beta	0.750	0.1000	0.8554	0.0237
$n_*$	norm	0.000	2.0000	2.5347	0.8199
$\gamma$	norm	0.400	0.1000	0.5072	0.0846
$\zeta_{sp}$	beta	0.050	0.0050	0.0459	0.0047
$\bar{\pi}$	gamm	0.625	0.2000	0.3016	0.0464
$\rho_{ga}$	beta	0.500	0.2000	0.7849	0.1553
$\rho_a$	beta	0.500	0.2000	0.9668	0.0118
$\rho_b$	beta	0.500	0.2000	0.8686	0.0218
$\rho_g$	beta	0.500	0.2000	0.9815	0.0084
$\rho_i$	beta	0.500	0.2000	0.9954	0.0026
$\rho_r$	beta	0.500	0.2000	0.0293	0.0221
$\rho_p$	beta	0.500	0.2000	0.8947	0.0410
$\rho_w$	beta	0.500	0.2000	0.6020	0.1553
$\rho_{\sigma_w}$	beta	0.750	0.1500	0.9945	0.0055
$\rho_{\pi_*}$	beta	0.750	0.1500	0.9967	0.0026
$\mu_p$	beta	0.500	0.2000	0.7300	0.0736
$\mu_w$	beta	0.500	0.2000	0.8117	0.0880

Table 5: Results from posterior maximization (standard deviation of structural shocks)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
$\eta^a$	invg	0.100	2.0000	0.4681	0.0298
$\eta^b$	invg	0.100	2.0000	0.0906	0.0113
$\eta^g$	invg	0.100	2.0000	2.7908	0.1603
$\eta^i$	invg	0.100	2.0000	1.8478	0.2825
$\eta^m$	invg	0.100	2.0000	0.2365	0.0170
$\eta^p$	invg	0.100	2.0000	0.1661	0.0129
$\eta^w$	invg	0.100	2.0000	0.3207	0.0232
$\eta^{\sigma_w}$	invg	0.100	2.0000	0.0714	0.0094
$\eta^{\pi_*}$	invg	0.100	2.0000	0.0360	0.0099

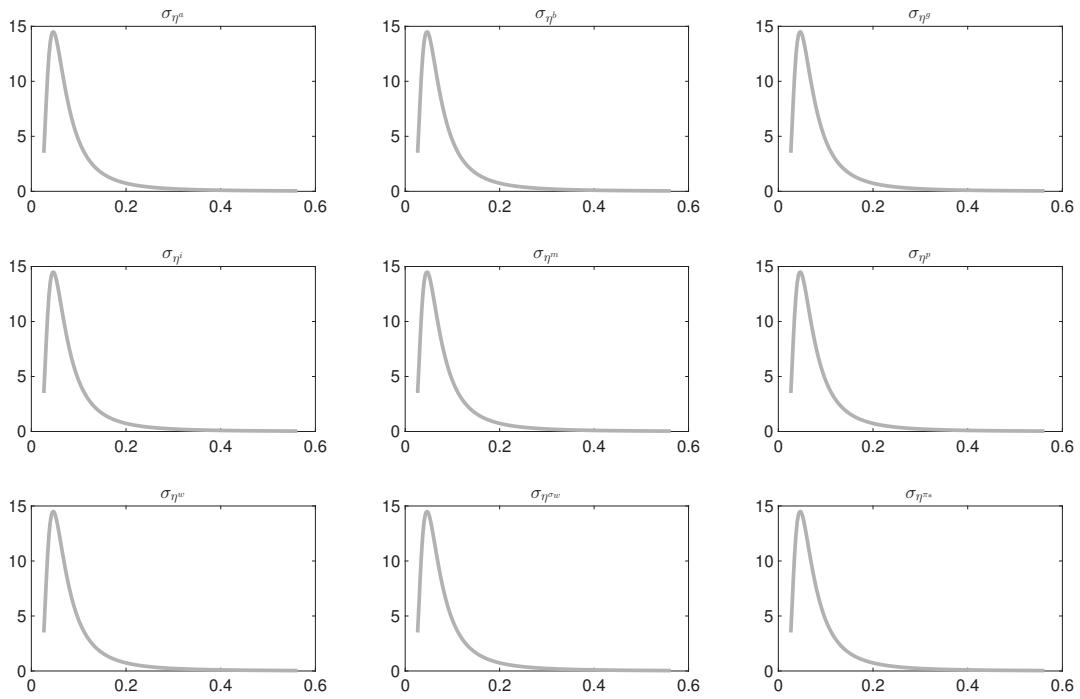


Figure 2: Priors.

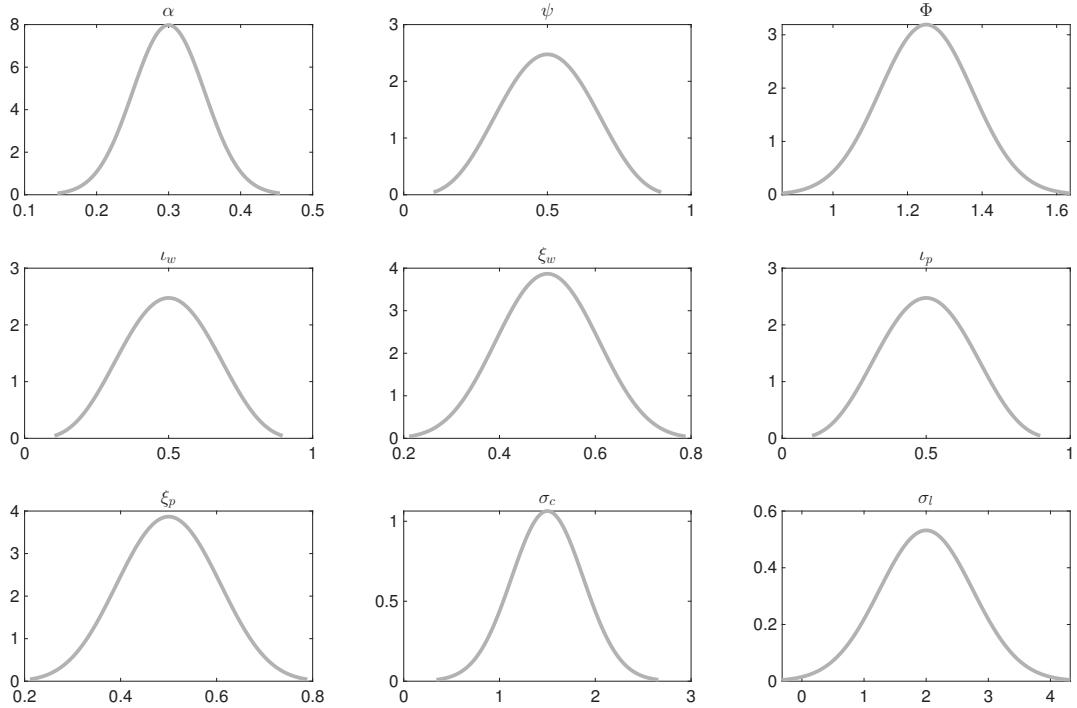


Figure 3: Priors.

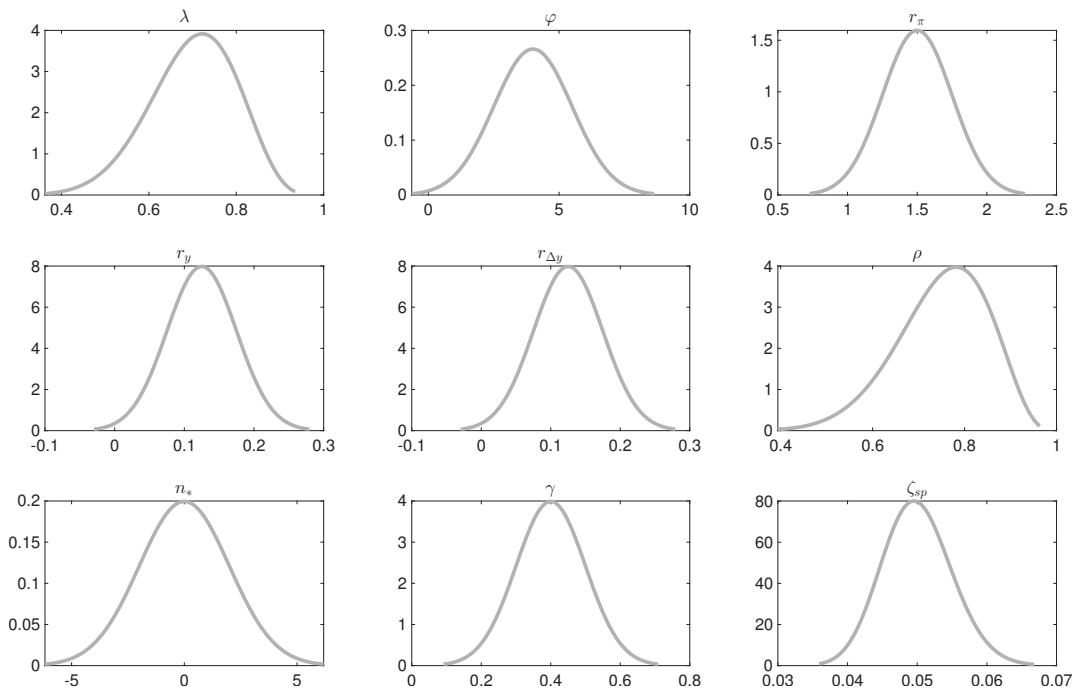


Figure 4: Priors.

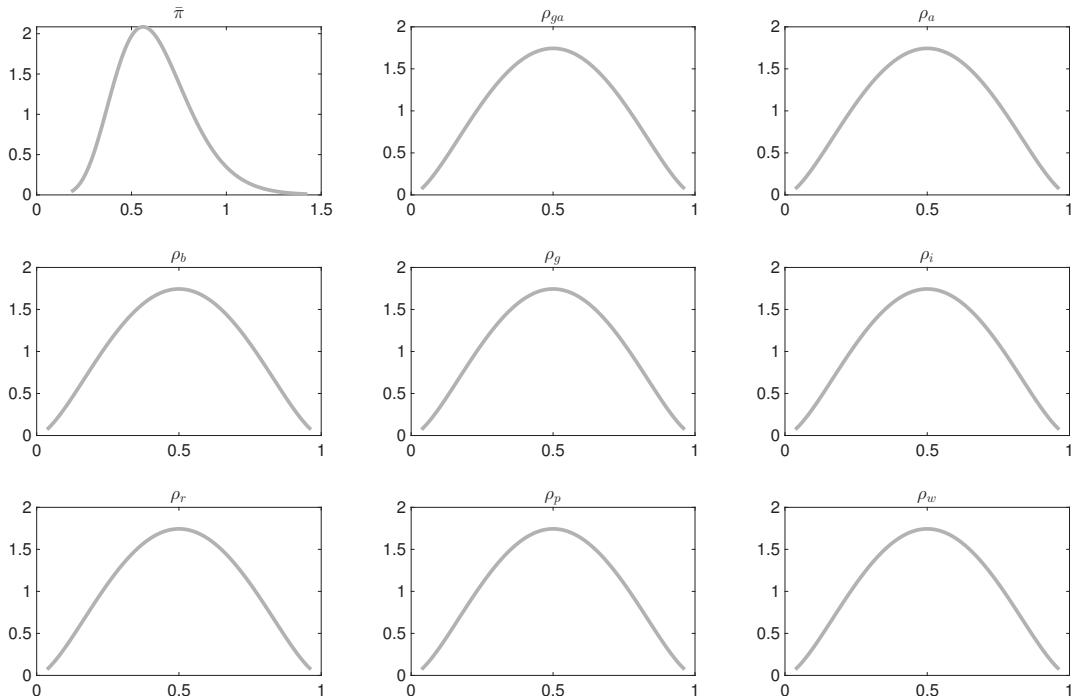


Figure 5: Priors.

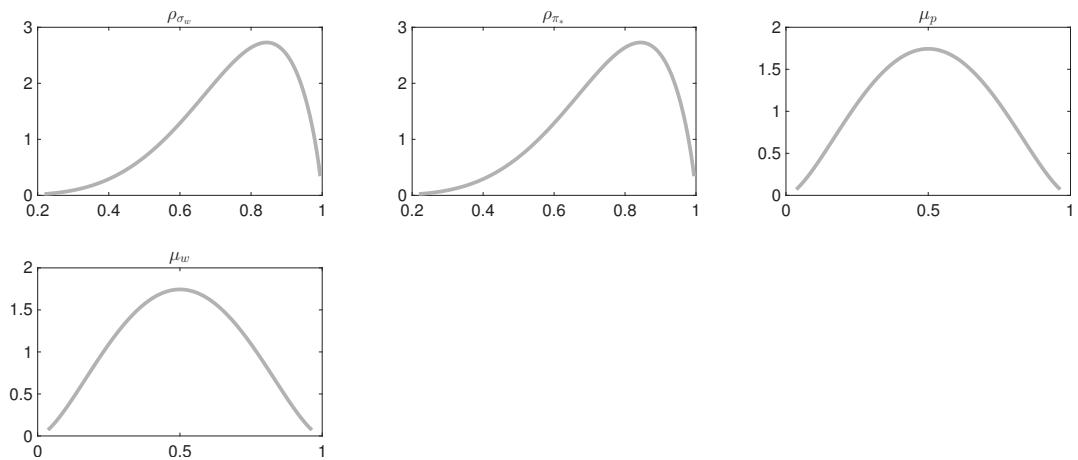


Figure 6: Priors.

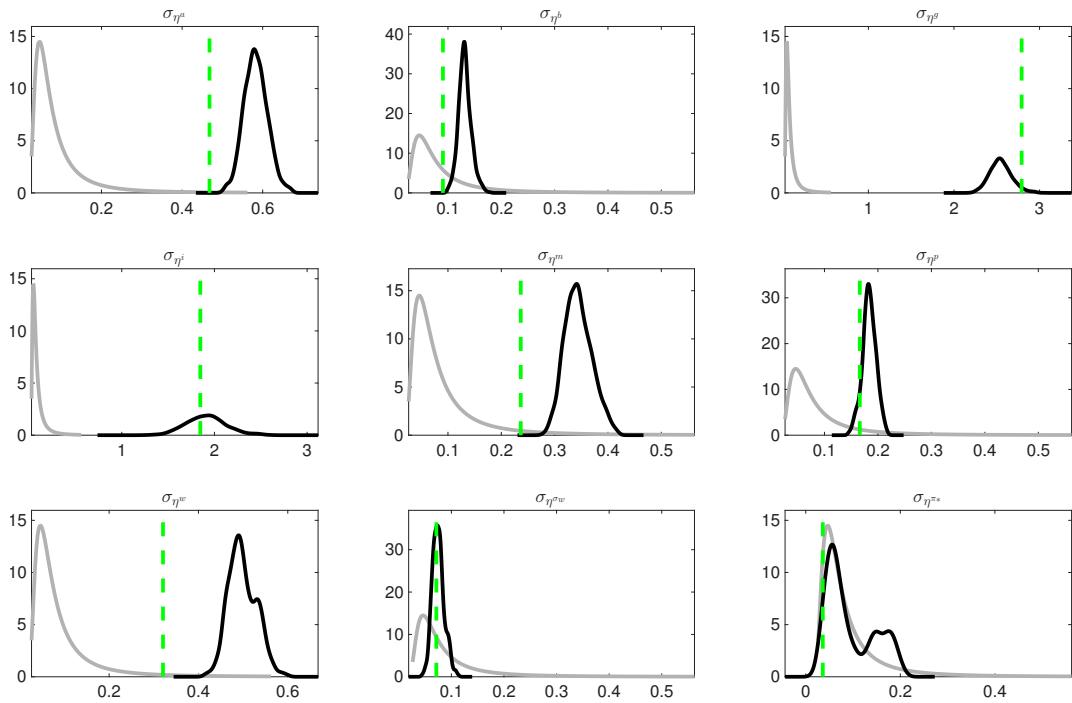


Figure 7: Priors and posteriors.

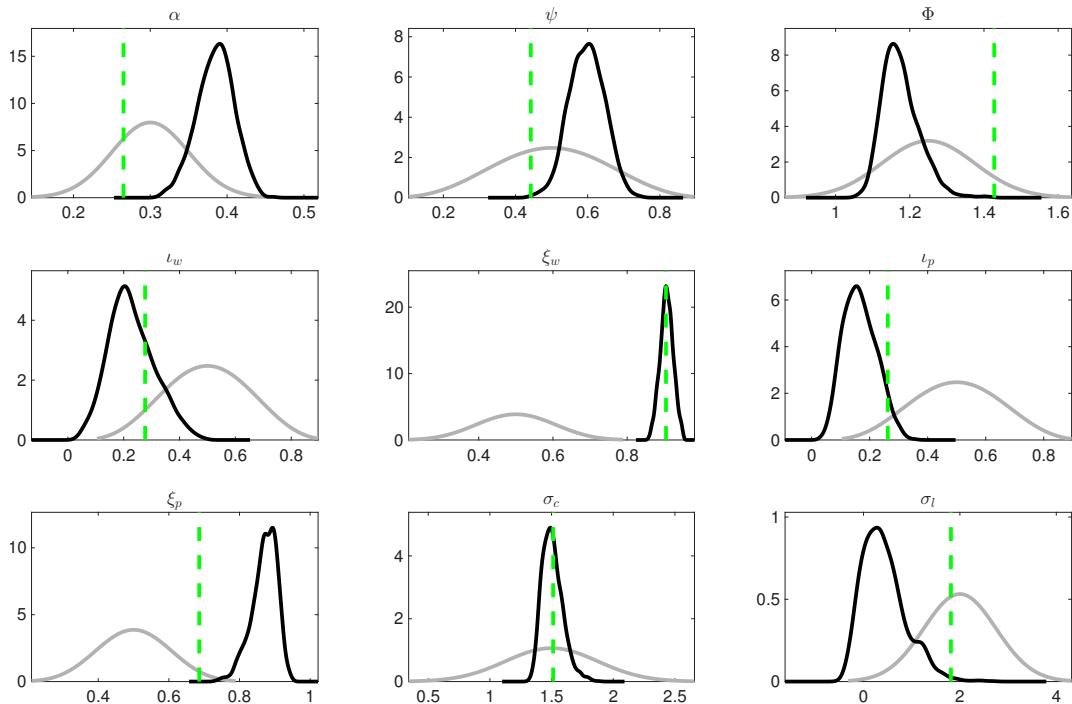


Figure 8: Priors and posteriors.

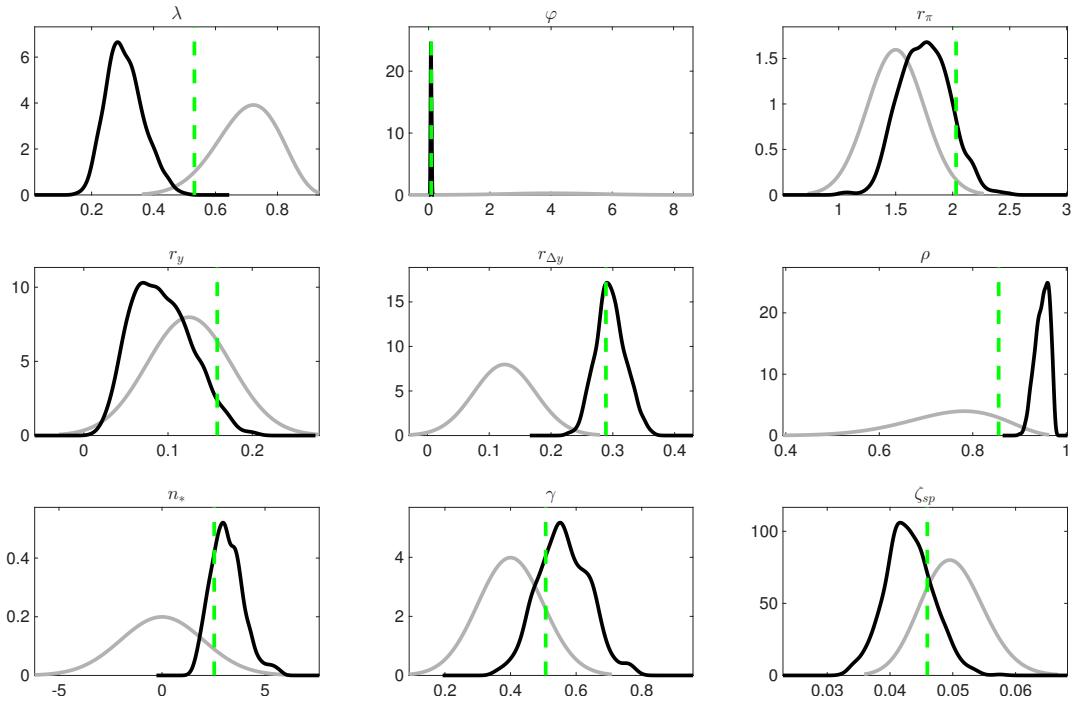


Figure 9: Priors and posteriors.

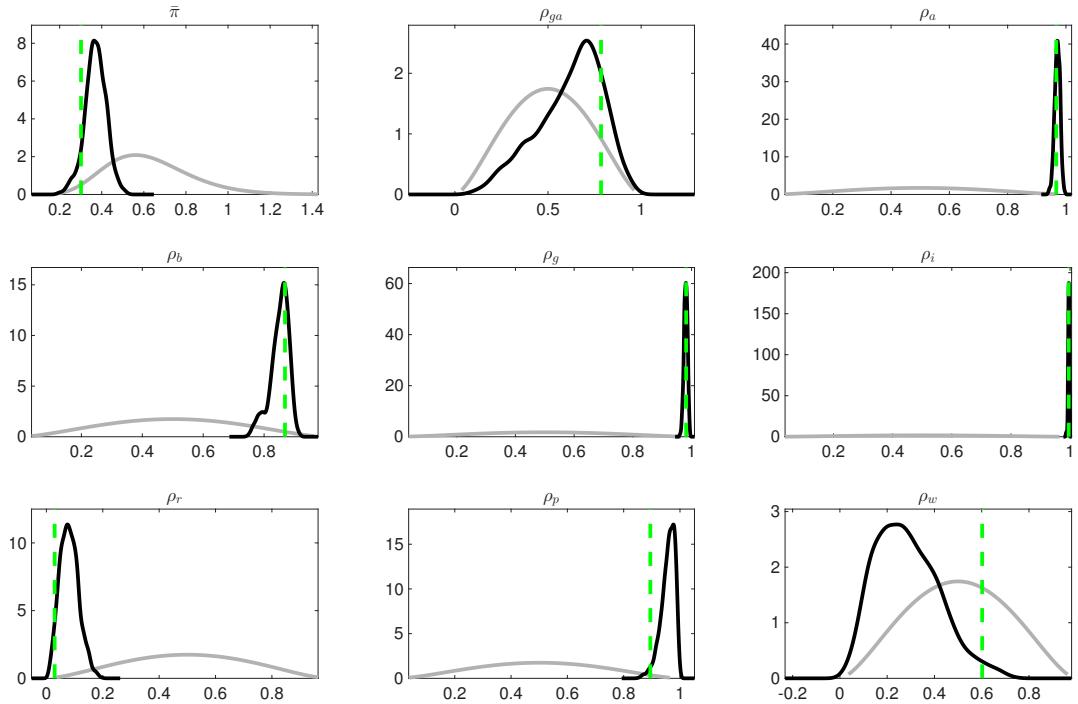


Figure 10: Priors and posteriors.

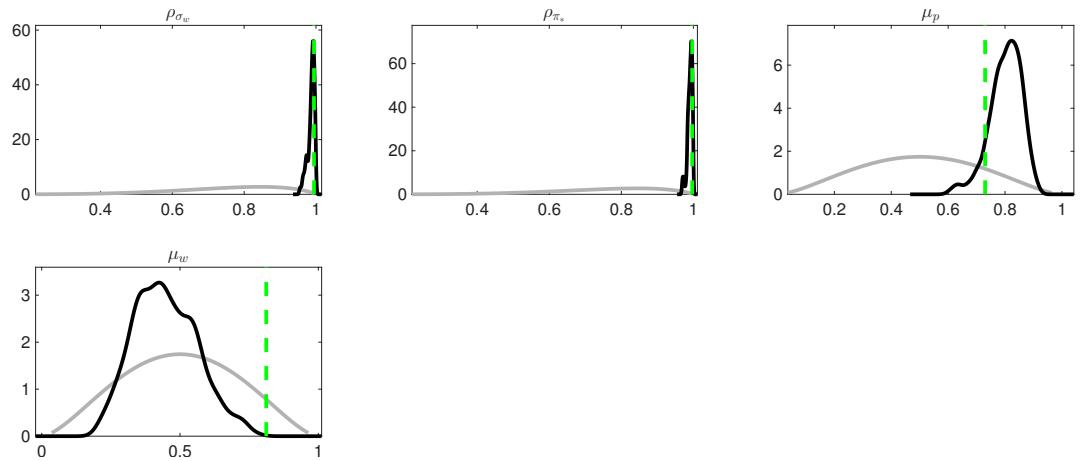


Figure 11: Priors and posteriors.

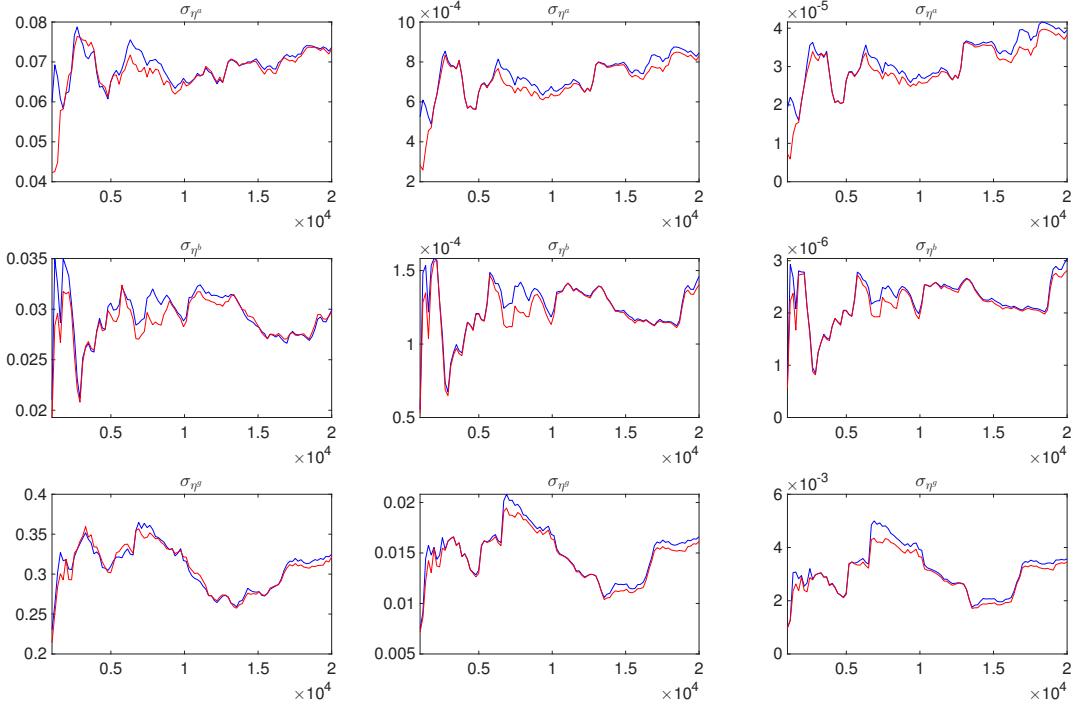


Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

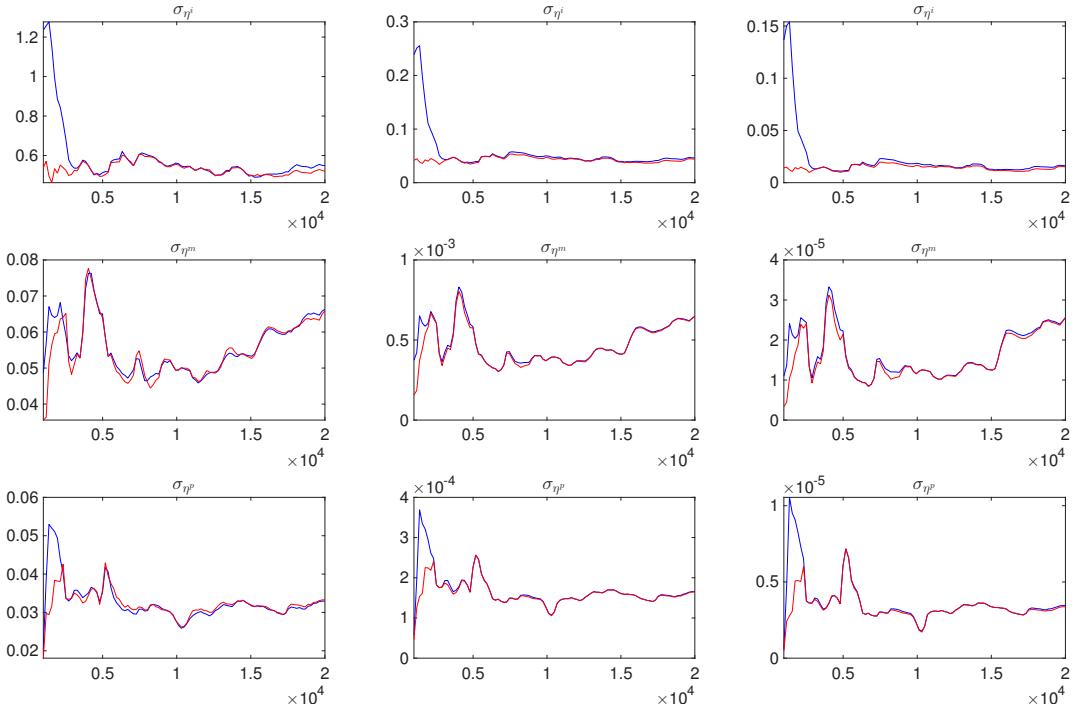


Figure 13: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

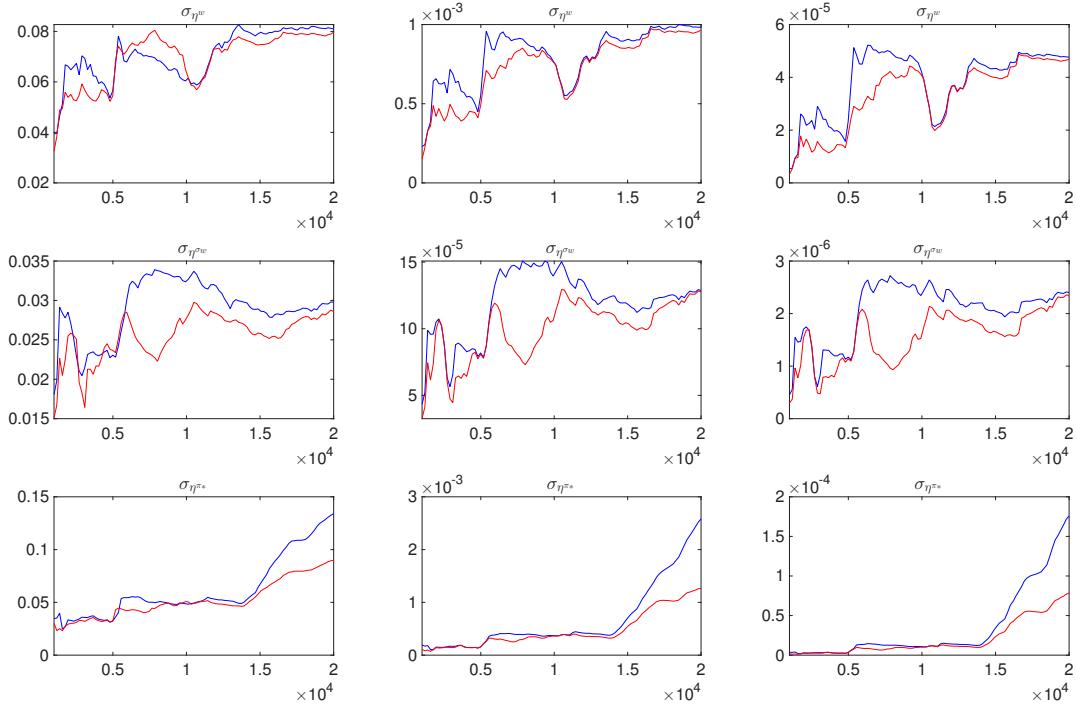


Figure 14: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

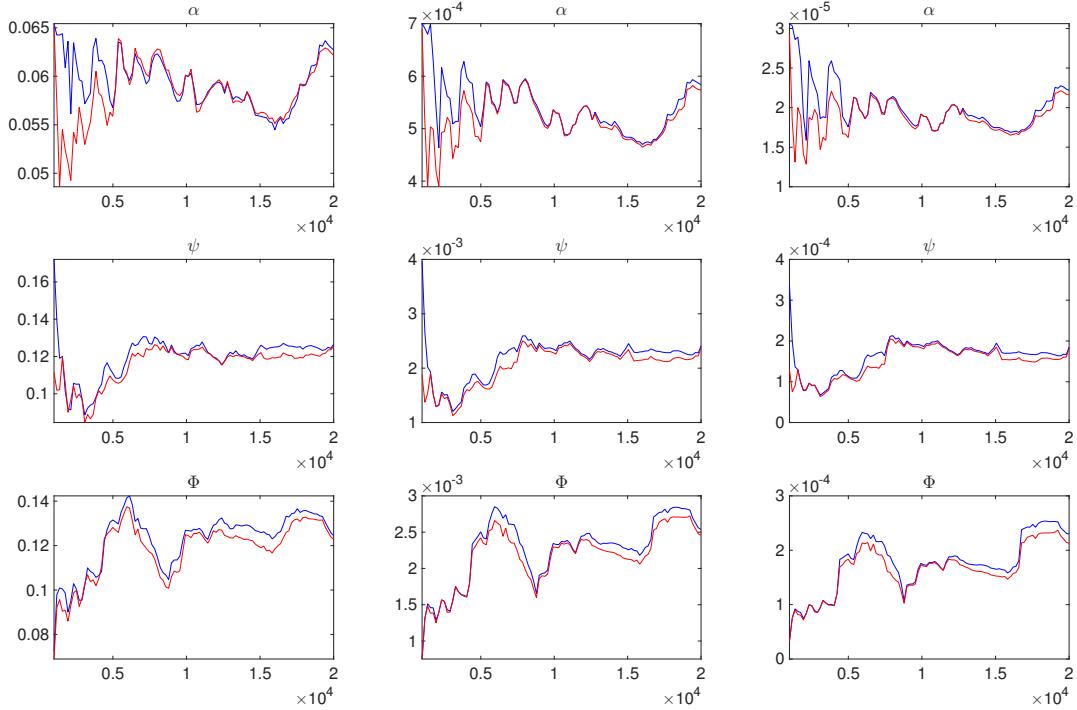


Figure 15: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

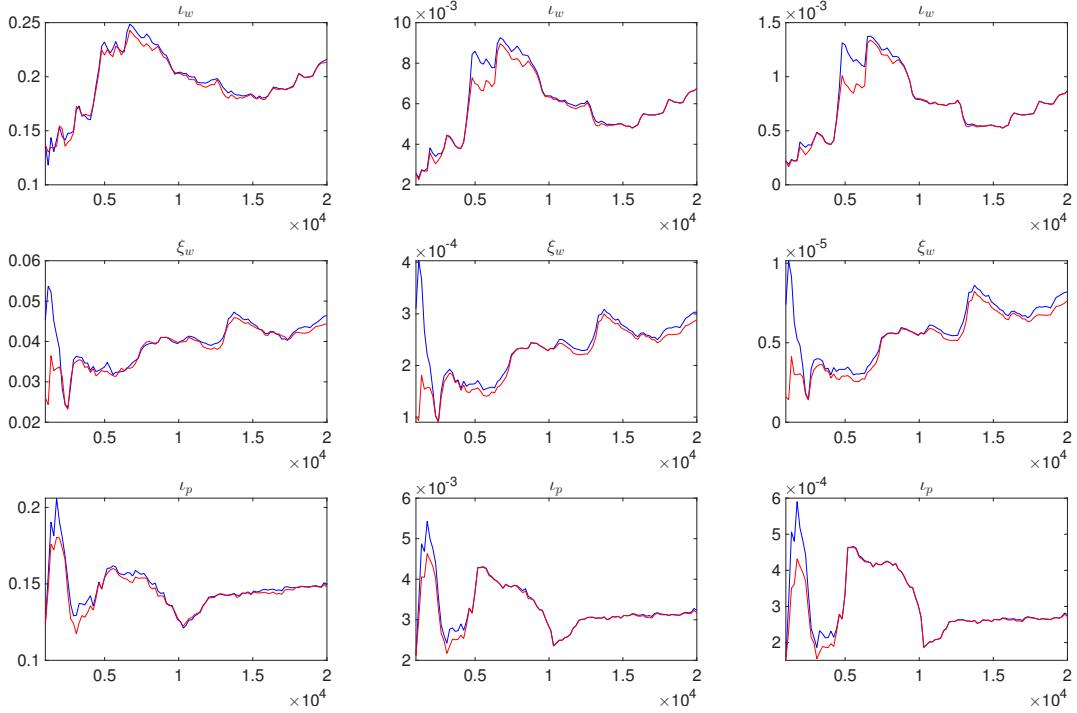


Figure 16: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

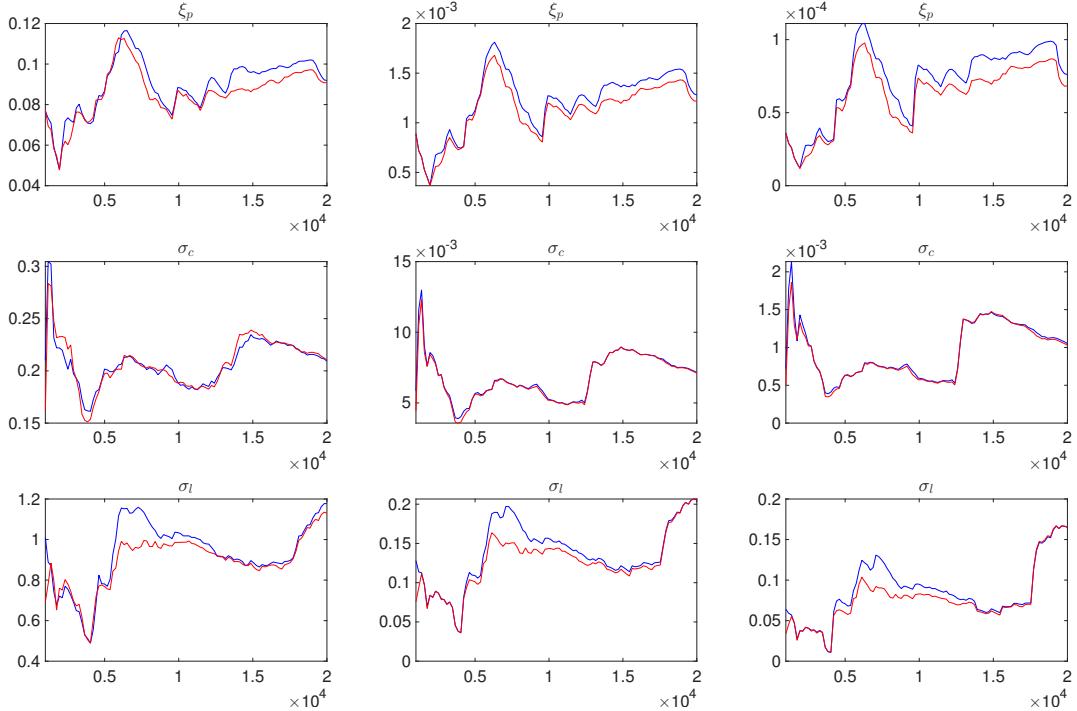


Figure 17: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

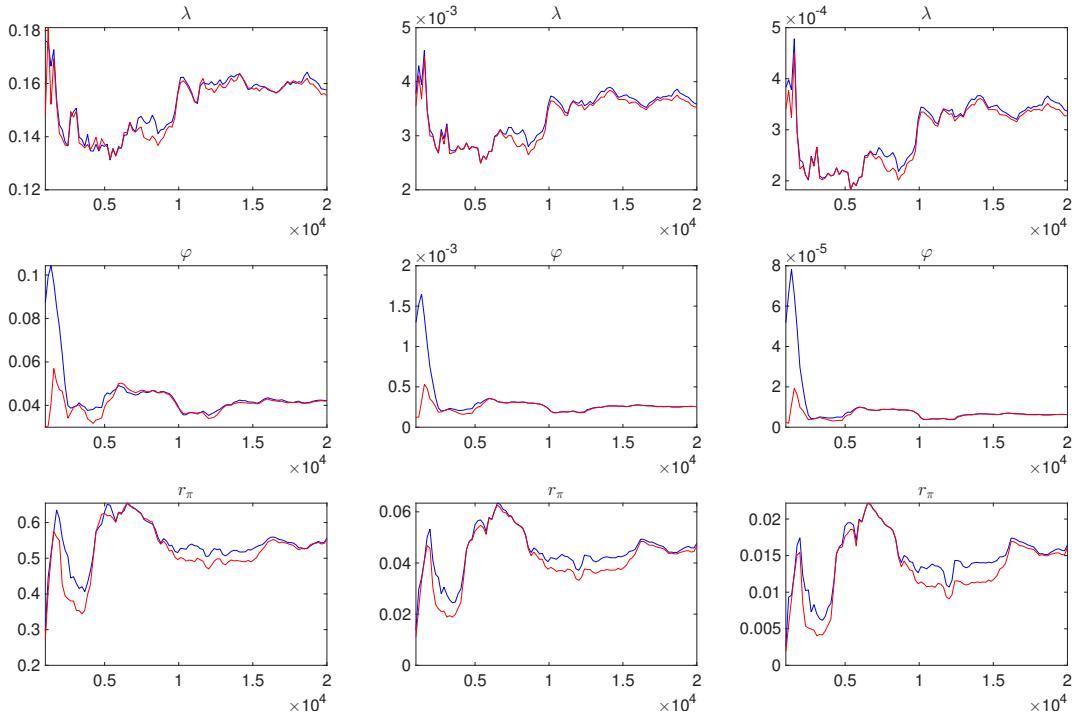


Figure 18: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

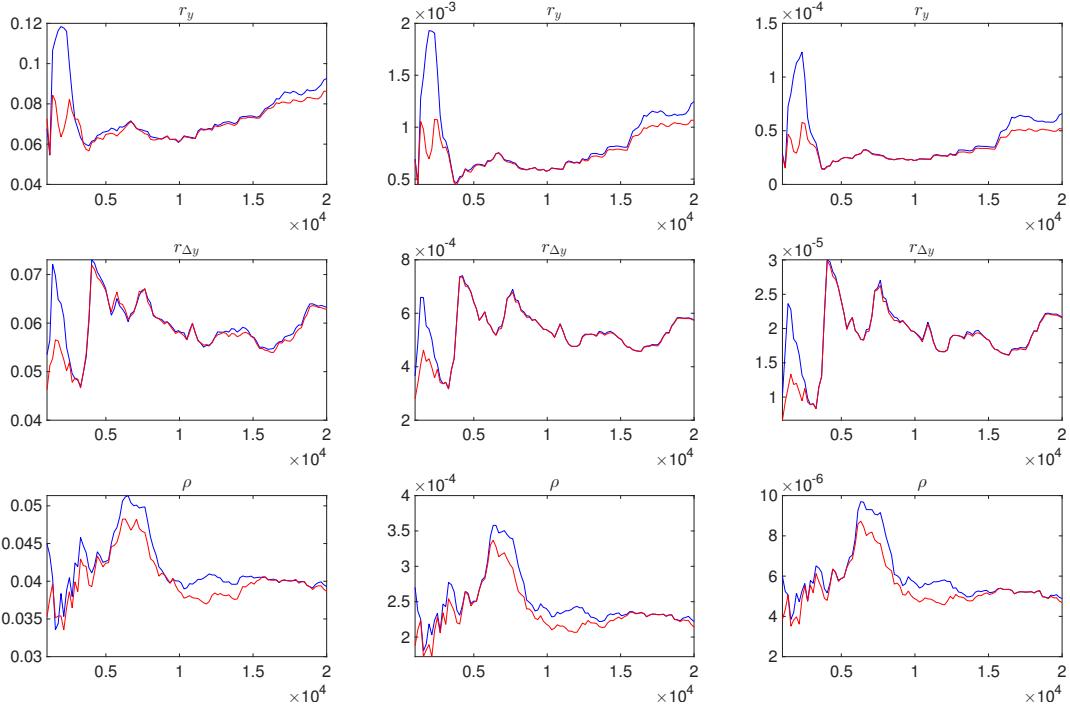


Figure 19: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

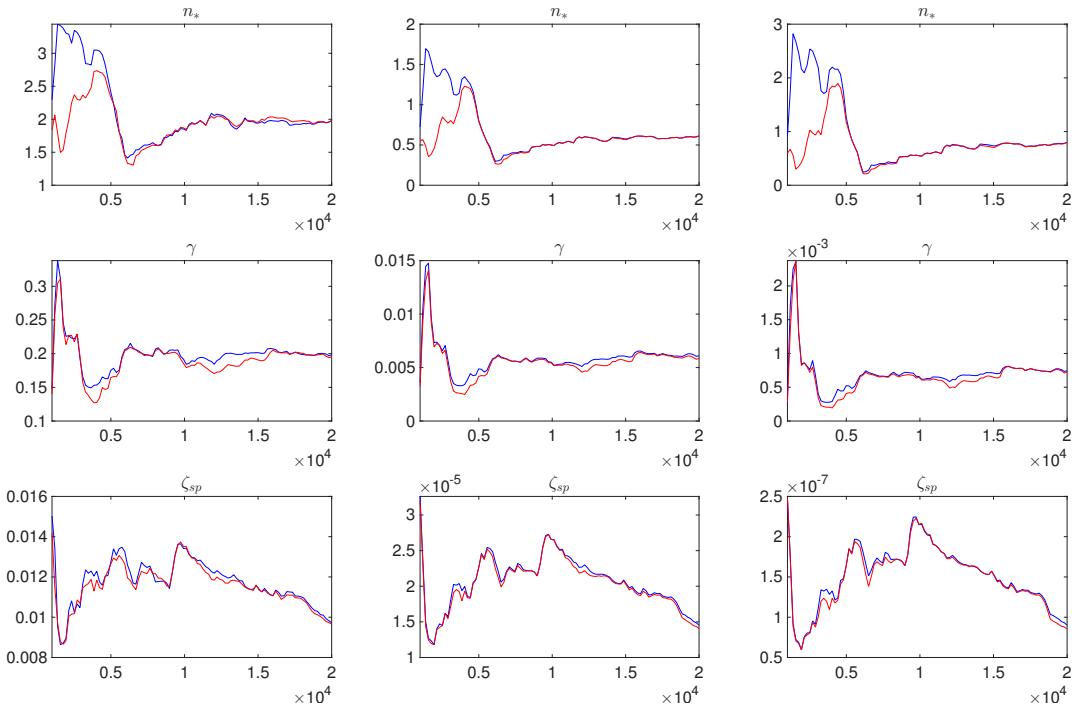


Figure 20: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

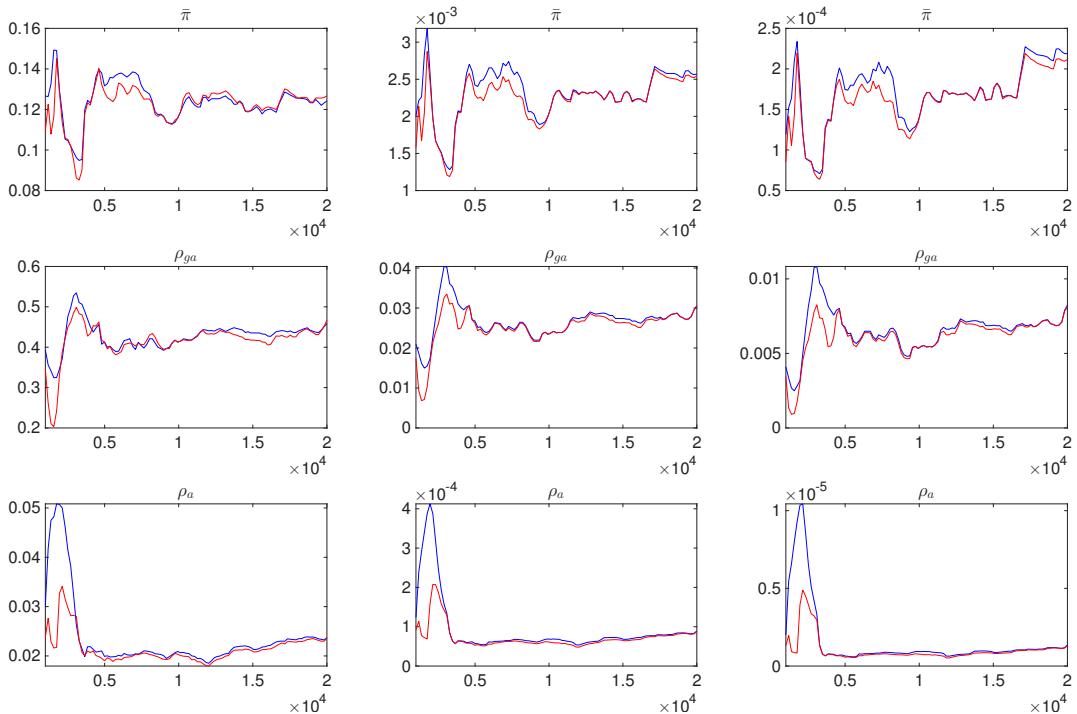


Figure 21: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

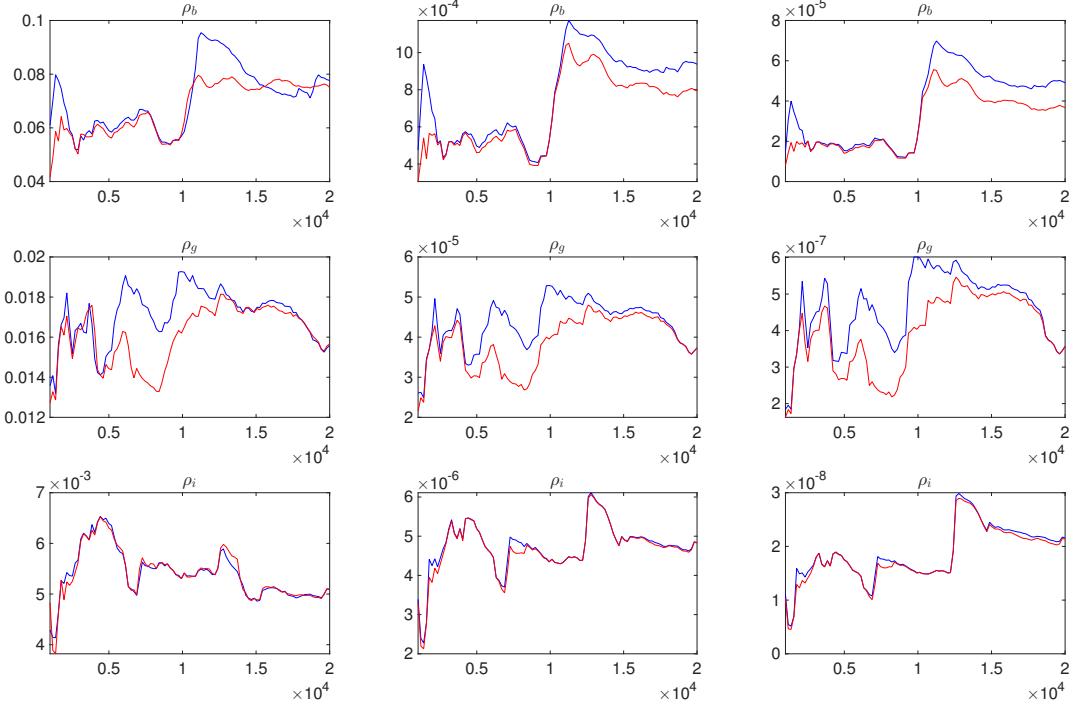


Figure 22: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

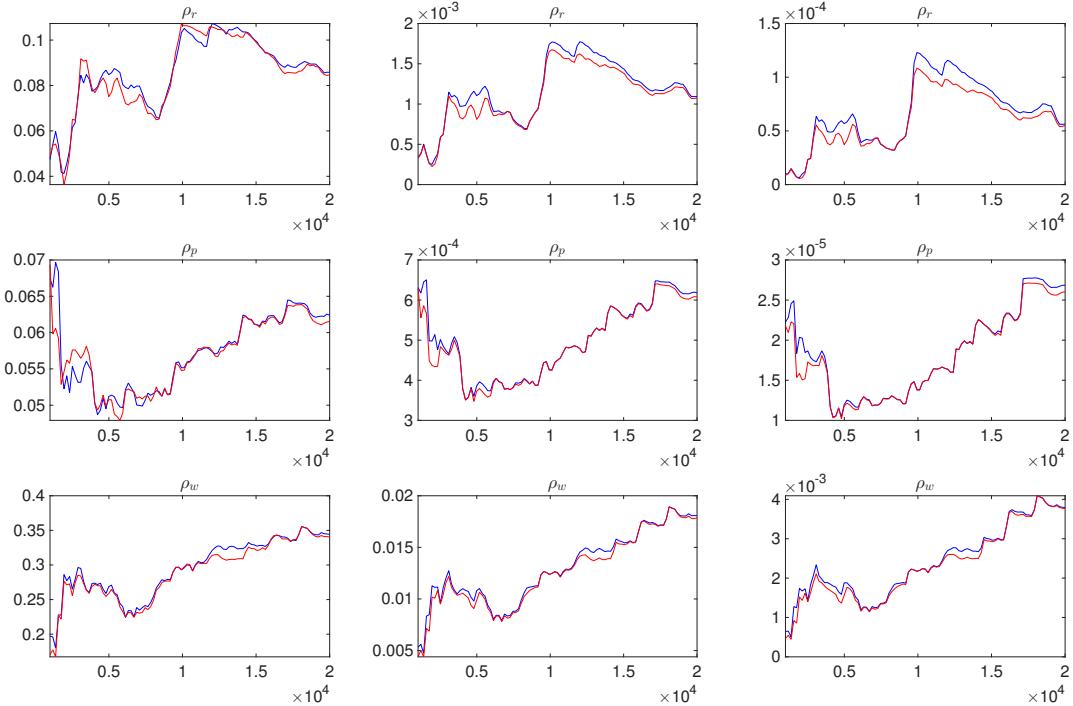


Figure 23: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

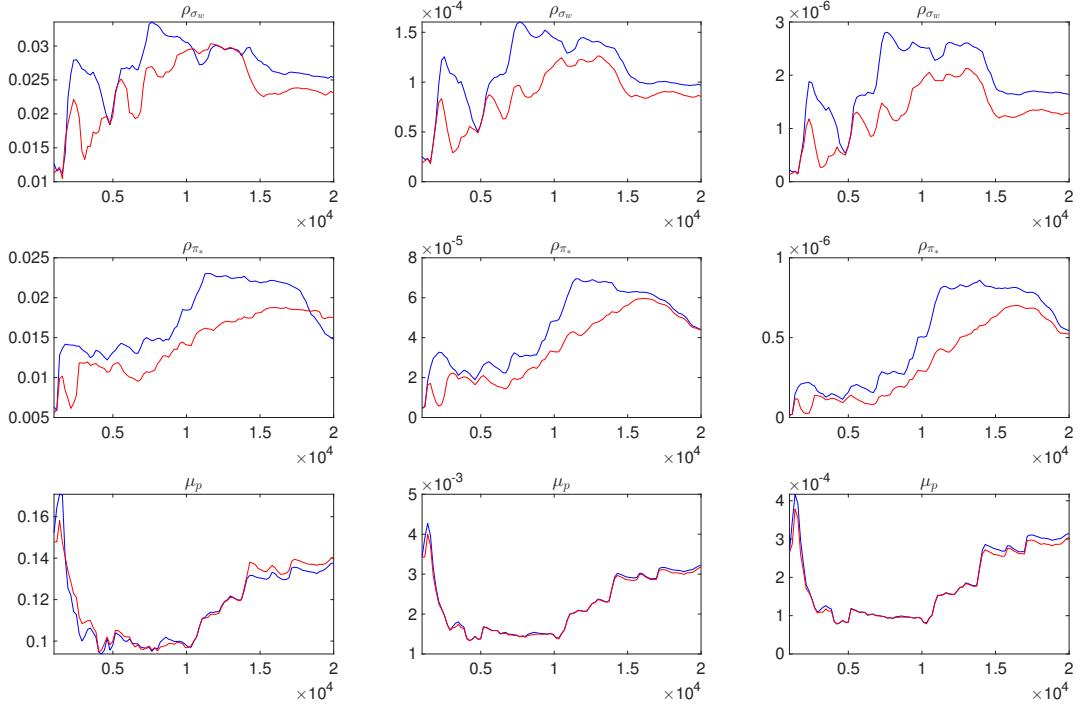


Figure 24: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

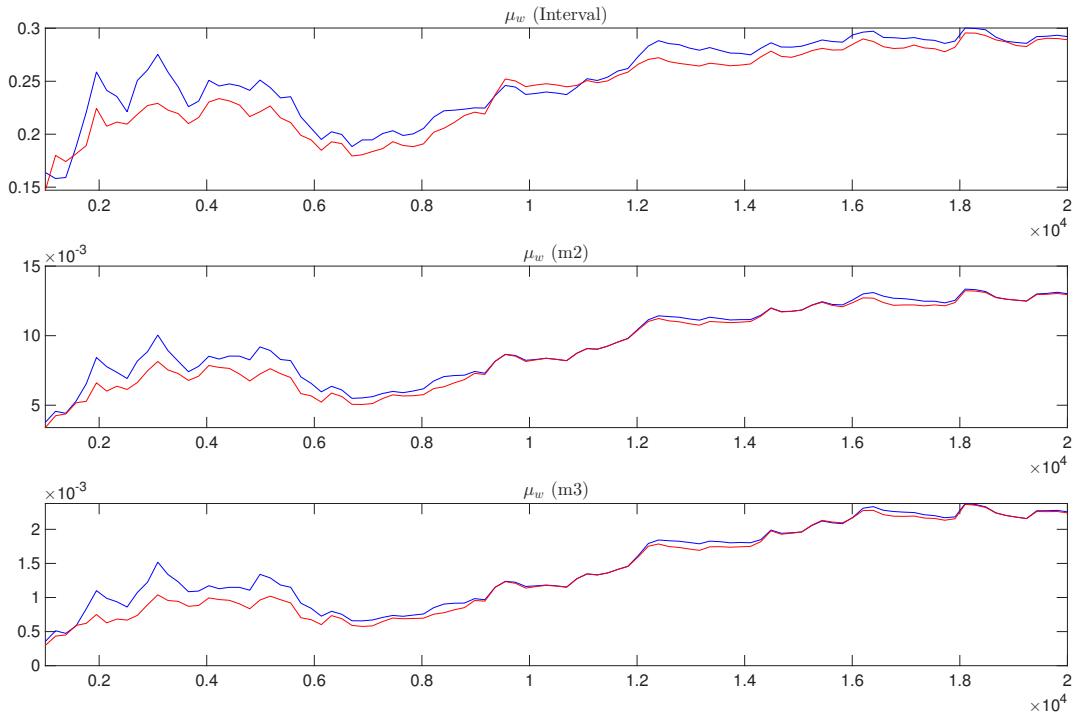


Figure 25: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.

Table 6: MATRIX OF COVARIANCE OF EXOGENOUS SHOCKS

	<i>Variables</i>	$\eta^a$	$\eta^b$	$\eta^g$	$\eta^i$	$\eta^m$	$\eta^p$	$\eta^w$	$\eta^{\sigma_w}$	$\eta^{\pi^*}$	$\eta^{z_p}$
$\eta^a$	0.339241	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^b$	0.000000	0.017301	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^g$	0.000000	0.000000	6.482289	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^i$	0.000000	0.000000	0.000000	3.640308	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^m$	0.000000	0.000000	0.000000	0.000000	0.118550	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^p$	0.000000	0.000000	0.000000	0.000000	0.000000	0.033765	0.000000	0.000000	0.000000	0.000000	0.000000
$\eta^w$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.248156	0.000000	0.000000	0.000000	0.000000
$\eta^{\sigma_w}$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.005604	0.000000	0.000000
$\eta^{\pi^*}$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00877
$\eta^{z_p}$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 7: Geweke (1992) Convergence Tests, based on means of draws 10000 to 12000 vs 15000 to 20000 for chain 1. p-values are for  $\chi^2$ -test for equality of means.

Parameter	Posterior		p-values			
	Mean	Std	No Taper	4% Taper	8% Taper	15% Taper
$\sigma_{\eta^a}$	0.5821	0.0276	0.0000	0.1023	0.1482	0.1498
$\sigma_{\eta^b}$	0.1284	0.0115	0.0000	0.4134	0.5010	0.5464
$\sigma_{\eta^g}$	2.5478	0.1342	0.0000	0.0637	0.1079	0.1224
$\sigma_{\eta^i}$	1.9531	0.2460	0.0000	0.0010	0.0042	0.0072
$\sigma_{\eta^m}$	0.3379	0.0264	0.0000	0.0001	0.0023	0.0118
$\sigma_{\eta^p}$	0.1854	0.0146	0.0000	0.0216	0.0716	0.1280
$\sigma_{\eta^w}$	0.4952	0.0343	0.0000	0.0383	0.1165	0.1984
$\sigma_{\eta^{\sigma_w}}$	0.0768	0.0100	0.0000	0.6220	0.6854	0.7241
$\sigma_{\eta^{\pi_*}}$	0.0598	0.0165	0.0000	0.0010	0.0102	0.0340
$\alpha$	0.3897	0.0240	0.0000	0.4236	0.4987	0.5407
$\psi$	0.5922	0.0446	0.0275	0.7957	0.8289	0.8431
$\Phi$	1.1773	0.0504	0.2095	0.8908	0.9051	0.9067
$\iota_w$	0.2084	0.0807	0.0000	0.0025	0.0087	0.0163
$\xi_w$	0.9039	0.0146	0.0000	0.5671	0.6228	0.6352
$\iota_p$	0.1694	0.0570	0.0000	0.4752	0.5499	0.5602
$\xi_p$	0.8667	0.0360	0.0000	0.4644	0.5615	0.6073
$\sigma_c$	1.4914	0.0834	0.0000	0.0933	0.1318	0.1379
$\sigma_l$	0.3813	0.4170	0.0000	0.5918	0.6482	0.6494
$\lambda$	0.3071	0.0651	0.0000	0.1527	0.2324	0.2747
$\varphi$	0.0803	0.0167	0.0000	0.0000	0.0003	0.0008
$r_\pi$	1.7504	0.2005	0.0000	0.0016	0.0075	0.0097
$r_y$	0.0695	0.0305	0.0000	0.3401	0.4555	0.5230
$r_{\Delta y}$	0.2936	0.0231	0.0000	0.0013	0.0097	0.0197
$\rho$	0.9389	0.0184	0.0000	0.0019	0.0136	0.0321
$n_*$	3.3772	0.8940	0.0000	0.4872	0.5901	0.6508
$\gamma$	0.5501	0.0789	0.0000	0.0039	0.0188	0.0336
$\zeta_{sp}$	0.0429	0.0044	0.0000	0.0509	0.0672	0.0545
$\bar{\pi}$	0.3681	0.0513	0.0315	0.8212	0.8524	0.8641
$\rho_{ga}$	0.5841	0.1688	0.0000	0.0189	0.0601	0.0793
$\rho_a$	0.9725	0.0088	0.0000	0.0036	0.0167	0.0425
$\rho_b$	0.8578	0.0239	0.0000	0.1244	0.2163	0.3026
$\rho_g$	0.9790	0.0070	0.0000	0.2201	0.2939	0.3241
$\rho_i$	0.9951	0.0023	0.8974	0.9873	0.9886	0.9878
$\rho_r$	0.0768	0.0343	0.1605	0.8933	0.9175	0.9310
$\rho_p$	0.9581	0.0234	0.0211	0.7599	0.7814	0.7986
$\rho_w$	0.2919	0.1254	0.0000	0.2620	0.3705	0.4590
$\rho_{\sigma_w}$	0.9870	0.0082	0.3191	0.9205	0.9352	0.9409
$\rho_{\pi_*}$	0.9883	0.0078	0.0000	0.0000	0.0000	0.0001

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Table 7: (continued)

Parameter	Posterior		p-values			
	Mean	Std	No Taper	4% Taper	8% Taper	15% Taper
$\mu_p$	0.8124	0.0499	0.0000	0.5081	0.6023	0.6516
$\mu_w$	0.4594	0.1150	0.0000	0.4021	0.5276	0.6168

Table 8: Geweke (1992) Convergence Tests, based on means of draws 10000 to 12000 vs 15000 to 20000 for chain 2. p-values are for  $\chi^2$ -test for equality of means.

Parameter	Posterior		p-values			
	Mean	Std	No Taper	4% Taper	8% Taper	15% Taper
$\sigma_{\eta^a}$	0.5800	0.0325	0.0000	0.1190	0.2143	0.2917
$\sigma_{\eta^b}$	0.1290	0.0135	0.0000	0.5540	0.6507	0.7090
$\sigma_{\eta^g}$	2.5570	0.1201	0.0000	0.0007	0.0025	0.0039
$\sigma_{\eta^i}$	1.8360	0.2236	0.0000	0.0538	0.0946	0.0998
$\sigma_{\eta^m}$	0.3357	0.0284	0.0000	0.0278	0.0908	0.1567
$\sigma_{\eta^p}$	0.1860	0.0125	0.0000	0.0619	0.1277	0.1533
$\sigma_{\eta^w}$	0.4947	0.0338	0.0000	0.0498	0.1337	0.2176
$\sigma_{\eta^{\sigma_w}}$	0.0812	0.0135	0.0000	0.0001	0.0046	0.0257
$\sigma_{\eta^{\pi_*}}$	0.0941	0.0507	0.0000	0.0000	0.0000	0.0000
$\alpha$	0.3843	0.0247	0.0000	0.1091	0.1696	0.1974
$\psi$	0.6067	0.0539	0.0000	0.0774	0.1553	0.2146
$\Phi$	1.1911	0.0552	0.0000	0.0184	0.0655	0.1093
$\iota_w$	0.2286	0.0831	0.0000	0.0001	0.0018	0.0076
$\xi_w$	0.9061	0.0182	0.0000	0.6023	0.6904	0.7479
$\iota_p$	0.1801	0.0600	0.0000	0.2377	0.3309	0.3720
$\xi_p$	0.8510	0.0417	0.0000	0.0000	0.0010	0.0061
$\sigma_c$	1.4944	0.0894	0.0000	0.0389	0.0905	0.1158
$\sigma_l$	0.3092	0.4873	0.0000	0.0000	0.0002	0.0014
$\lambda$	0.3194	0.0651	0.0000	0.4483	0.5328	0.5821
$\varphi$	0.0834	0.0207	0.0000	0.2450	0.3365	0.3825
$r_\pi$	1.8141	0.2374	0.0000	0.0005	0.0093	0.0348
$r_y$	0.0894	0.0396	0.0000	0.0000	0.0000	0.0000
$r_{\Delta y}$	0.2888	0.0284	0.5293	0.9465	0.9568	0.9608
$\rho$	0.9397	0.0202	0.0000	0.0000	0.0000	0.0000
$n_*$	3.2234	0.8213	0.0000	0.0000	0.0008	0.0065
$\gamma$	0.5730	0.0814	0.3334	0.9122	0.9270	0.9324
$\zeta_{sp}$	0.0440	0.0047	0.0022	0.7205	0.7454	0.7480
$\bar{\pi}$	0.3710	0.0516	0.5036	0.9423	0.9557	0.9633
$\rho_{ga}$	0.6144	0.1720	0.0000	0.0000	0.0002	0.0016
$\rho_a$	0.9677	0.0113	0.0000	0.0003	0.0037	0.0085
$\rho_b$	0.8488	0.0321	0.0000	0.0000	0.0003	0.0026
$\rho_g$	0.9824	0.0064	0.0002	0.6439	0.7070	0.7448
$\rho_i$	0.9951	0.0021	0.0000	0.1206	0.2019	0.2200
$\rho_r$	0.0812	0.0363	0.0000	0.0003	0.0068	0.0296
$\rho_p$	0.9563	0.0276	0.0003	0.6707	0.7132	0.7384
$\rho_w$	0.2656	0.1291	0.0000	0.0010	0.0083	0.0192
$\rho_{\sigma_w}$	0.9821	0.0121	0.0000	0.0000	0.0002	0.0036
$\rho_{\pi_*}$	0.9918	0.0042	0.0000	0.0179	0.0743	0.1434

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Table 8: (continued)

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Parameter	Posterior		p-values			
	Mean	Std	No Taper	4% Taper	8% Taper	15% Taper
$\mu_p$	0.8043	0.0584	0.0000	0.6273	0.6904	0.7182
$\mu_w$	0.4409	0.1018	0.0000	0.0049	0.0270	0.0552

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Table 9: Endogenous

Variable	LATEX	Description
c	$c$	Consumption
inve	$i$	Investment
y	$y$	Output
lab	$l$	hours worked
pinf	$\pi$	Inflation
w	$w$	real wage
r	$r$	nominal interest rate
rk	$r^k$	rental rate of capital
k	$k^s$	Capital services
mc	$\mu_p$	gross price markup
spinf	$\varepsilon^p$	Price markup shock process
sw	$\varepsilon^w$	Wage markup shock process
g	$\varepsilon^g$	Exogenous spending
b	$c_2 * \varepsilon_t^b$	Scaled risk premium shock
rkf	$r^{k,flex}$	rental rate of capital flex price economy
kf	$k^{s,flex}$	Capital services flex price economy
cf	$c^{flex}$	Consumption flex price economy
invef	$i^{flex}$	Investment flex price economy
yf	$y^{flex}$	Output flex price economy
labf	$l^{flex}$	hours worked flex price economy
wf	$w^{flex}$	real wage flex price economy
sobs	Spread	BBB-AAA Rate Spread
labobs	<i>tHOURS</i>	log hours worked
robs	<i>FEDFUNDS</i>	Federal funds rate
pinfoobs	$dlP$	Inflation
dy	$dlGDP$	Output growth rate
dc	$dlCONS$	Consumption growth rate
dinve	$dlINV$	Investment growth rate
dw	$dlWAG$	Wage growth rate
wh	$w^h$	Marginal rate of substitution
rkttil	$r^{kttil}$	Return to capital
ztil	$z^{til}$	Stationary Technology shock
sigw	$\sigma_w$	Financial shock
pist	$\pi_*$	Inflation Target
og	$OG$	OutputGap
zp	$z_p$	Permanent Technology shock
n	$n$	Entrepreneurial Net Worth
z	$w$	Trend growth rate
u	$u$	Capital utilization rate
mu	$\varepsilon^i$	Investment-specific technology
rm	$\varepsilon^r$	Monetary policy shock process
kbar	$k$	Capital stock
qk	$q$	real value of existing capital stock
rf	$r^{flex}$	real interest rate flex price economy

Table 9 – Continued

Variable	<b>LATEX</b>	Description
kbarf	$k^{flex}$	Capital stock flex price economy
uf	$z^{flex}$	Capital utilization rate flex price economy
qkf	$q^{flex}$	real value of existing capital stock flex price economy
AUX_EXO_LAG_52_0	<i>AUX_EXO_LAG_52_0</i>	AUX_EXO_LAG_52_0
AUX_EXO_LAG_53_0	<i>AUX_EXO_LAG_53_0</i>	AUX_EXO_LAG_53_0

Table 10: Exogenous

Variable	<b>LATEX</b>	Description
ea	$\eta^a$	TFP shock
eb	$\eta^b$	Risk Premium shock
eg	$\eta^g$	Spending shock
eqs	$\eta^i$	Investment-specific technology shock
em	$\eta^m$	Monetary policy shock
epinf	$\eta^p$	Price markup shock
ew	$\eta^w$	Wage markup shock
esigw	$\eta^{\sigma_w}$	Financial shock
epist	$\eta^{\pi^*}$	Inflation Target shock
ezp	$\eta^{z_p}$	Permanent technology shock

Table 11: Parameters

Variable	<b>LATEX</b>	Description
cbeta	$\beta$	discount rate
cepssp	$\varepsilon_w$	Curvature Kimball aggregator wages
cepsw	$\varepsilon_p$	Curvature Kimball aggregator prices
calfa	$\alpha$	capital share
czcap	$\psi$	capacity utilization cost
csadjcost	$\varphi$	investment adjustment cost
ctou	$\delta$	depreciation rate
csigma	$\sigma_c$	risk aversion
chabb	$\lambda$	external habit degree
cfc	$\Phi$	fixed cost share
cindw	$\iota_w$	Indexation to past wages
cprobw	$\xi_w$	Calvo parameter wages
cindp	$\iota_p$	Indexation to past prices
cprobp	$\xi_p$	Calvo parameter prices
csigl	$\sigma_l$	Frisch elasticity
crpi	$r_\pi$	Taylor rule inflation feedback
crdy	$r_{\Delta y}$	Taylor rule output growth feedback

Table 11 – Continued

Variable	\LaTeX	Description
cry	$r_y$	Taylor rule output level feedback
crr	$\rho$	interest rate persistence
czeta_spb	$\zeta_{sp}$	Spread elasticity
cgammstar	$\gamma^*$	Wealth parameter
cvstar	$v^*$	Wealth parameter
cnstar	$n_*$	SS Entrepreneurial wealth
czeta_nRk	$\zeta_{nRk}$	Net Worth parameter
czeta_nR	$\zeta_{nR}$	Net Worth parameter
czeta_nsigw	$\zeta_{n\sigma_w}$	Net Worth parameter
czeta_spsigw	$\zeta_{s\sigma_w}$	Net Worth parameter
czeta_nqk	$\zeta_{nqk}$	Net Worth parameter
czeta_nn	$\zeta_{nn}$	Net Worth parameter
cgy	$\rho_{ga}$	Feedback technology on exogenous spending
cmaw	$\mu_w$	coefficient on MA term wage markup
cmap	$\mu_p$	coefficient on MA term price markup
crhosigw	$\rho_{\sigma_w}$	persistence Financial shock
crhopist	$\rho_{\pi_*}$	persistence Inflation Target shock
crhozp	$\rho_{zp}$	persistence permanent technology shock
csigma_spinf	$\sigma_{map}$	price markup MA scaling
csigma_sw	$\sigma_{maw}$	wage markup MA scaling
crhoa	$\rho_a$	persistence productivity shock
crhob	$\rho_b$	persistence risk premium shock
crhog	$\rho_g$	persistence spending shock
crhoqs	$\rho_i$	persistence risk premium shock
crhoms	$\rho_r$	persistence monetary policy shock
crhopinf	$\rho_p$	persistence price markup shock
crhow	$\rho_w$	persistence wage markup shock
cgamma	$\gamma$	Adjusted trend
crkstar	$r\bar{k}$	SS return on capital
ckstar	$k^*$	Capital-Output ratio
ckbarstar	$\bar{k}^*$	SS Capital-Output ratio
cinvestar	$\frac{\dot{i}}{\dot{y}}$	Private investment share in aggregate output
cystar	$\frac{y_p}{\dot{y}}$	Private output share in aggregate output
ccstar	$\frac{c}{\dot{y}}$	Private consumption share in aggregate output
cwl_c	$wl_c$	Consumption wage parameter
conster	$\bar{r}$	steady state interest rate
constelab	$\bar{l}$	steady state hours
constepinf	$\bar{\pi}$	steady state inflation rate
ctrend	$\bar{\gamma}$	net growth rate in percent
cg	$\frac{\dot{g}}{\dot{y}}$	steady state exogenous spending share

Table 12: Parameter Values

Parameter	Value	Description
$\beta$	0.999	discount rate
$\varepsilon_w$	10.000	Curvature Kimball aggregator wages
$\varepsilon_p$	10.000	Curvature Kimball aggregator prices
$\alpha$	0.384	capital share
$\psi$	0.597	capacity utilization cost
$\varphi$	0.081	investment adjustment cost
$\delta$	0.025	depreciation rate
$\sigma_c$	1.507	risk aversion
$\lambda$	0.307	external habit degree
$\Phi$	1.175	fixed cost share
$\iota_w$	0.228	Indexation to past wages
$\xi_w$	0.906	Calvo parameter wages
$\iota_p$	0.167	Indexation to past prices
$\xi_p$	0.871	Calvo parameter prices
$\sigma_l$	0.419	Frisch elasticity
$r_\pi$	1.753	Taylor rule inflation feedback
$r_{\Delta y}$	0.296	Taylor rule output growth feedback
$r_y$	0.092	Taylor rule output level feedback
$\rho$	0.949	interest rate persistence
$\zeta_{sp}$	0.043	Spread elasticity
$\gamma^*$	0.990	Wealth parameter
$v^*$	2.471	Wealth parameter
$n_*$	3.152	SS Entrepreneurial wealth
$\zeta_{nRk}$	1.694	Net Worth parameter
$\zeta_{nR}$	0.693	Net Worth parameter
$\zeta_{n\sigma_w}$	0.004	Net Worth parameter
$\zeta_{sp\sigma_w}$	0.028	Net Worth parameter
$\zeta_{nqk}$	0.002	Net Worth parameter
$\zeta_{nn}$	0.999	Net Worth parameter
$\rho_{ga}$	0.616	Feedback technology on exogenous spending
$\mu_w$	0.447	coefficient on MA term wage markup
$\mu_p$	0.801	coefficient on MA term price markup
$\rho_{\sigma_w}$	0.986	persistence Financial shock
$\rho_{\pi_*}$	0.990	persistence Inflation Target shock
$\rho_{zp}$	0.950	persistence permanent technology shock
$\sigma_{map}$	1.000	price markup MA scaling
$\sigma_{maw}$	1.000	wage markup MA scaling
$\rho_a$	0.970	persistence productivity shock
$\rho_b$	0.851	persistence risk premium shock
$\rho_g$	0.980	persistence spending shock
$\rho_i$	0.995	persistence risk premium shock
$\rho_r$	0.081	persistence monetary policy shock
$\rho_p$	0.957	persistence price markup shock

Table 12 – Continued

Parameter	Value	Description
$\rho_w$	0.285	persistence wage markup shock
$\gamma$	0.561	Adjusted trend
$rk$	0.036	SS return on capital
$k^*$	4.149	Capital-Output ratio
$\bar{k}^*$	4.165	SS Capital-Output ratio
$\frac{\dot{i}}{\bar{y}}$	0.120	Private investment share in aggregate output
$\frac{\dot{y}_p}{\bar{y}}$	0.845	Private output share in aggregate output
$\frac{\dot{c}}{\bar{y}}$	0.573	Private consumption share in aggregate output
$wl_c$	0.808	Consumption wage parameter
$\bar{r}$	0.700	steady state interest rate
$\bar{l}$	0.000	steady state hours
$\bar{\pi}$	0.370	steady state inflation rate
$\bar{\gamma}$	0.400	net growth rate in percent
$\bar{g}$	0.180	steady state exogenous spending share

Table 13: Prior information (parameters)

Distribution		Mean	Mode	Std.dev.	Bounds*		90% HPDI	
					Lower	Upper	Lower	Upper
$\sigma_{\eta^a}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^b}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^g}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^i}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^m}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^p}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^w}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^{\sigma_w}}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\sigma_{\eta^{\pi^*}}$	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
$\alpha$	Gaussian	0.3000	0.3000	0.0500	-0.0181	0.6181	0.2178	0.3822
$\psi$	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
$\Phi$	Gaussian	1.2500	1.2500	0.1250	0.4548	2.0452	1.0444	1.4556
$\iota_w$	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
$\xi_w$	Beta	0.5000	0.5000	0.1000	0.0471	0.9529	0.3351	0.6649
$\iota_p$	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
$\xi_p$	Beta	0.5000	0.5000	0.1000	0.0471	0.9529	0.3351	0.6649
$\sigma_c$	Gaussian	1.5000	1.5000	0.3750	-0.8855	3.8855	0.8832	2.1168
$\sigma_l$	Gaussian	2.0000	2.0000	0.7500	-2.7710	6.7710	0.7664	3.2336
$\lambda$	Beta	0.7000	0.7222	0.1000	0.1025	0.9960	0.5242	0.8525
$\varphi$	Gaussian	4.0000	4.0000	1.5000	-5.5420	13.5420	1.5327	6.4673
$r_\pi$	Gaussian	1.5000	1.5000	0.2500	-0.0903	3.0903	1.0888	1.9112
$r_y$	Gaussian	0.1250	0.1250	0.0500	-0.1931	0.4431	0.0428	0.2072
$r_{\Delta y}$	Gaussian	0.1250	0.1250	0.0500	-0.1931	0.4431	0.0428	0.2072
$\rho$	Beta	0.7500	0.7817	0.1000	0.1073	0.9991	0.5701	0.8971
$n_*$	Gaussian	0.0000	0.0000	2.0000	-12.7227	12.7227	-3.2897	3.2897
$\gamma$	Gaussian	0.4000	0.4000	0.1000	-0.2361	1.0361	0.2355	0.5645
$\zeta_{sp}$	Beta	0.0500	0.0495	0.0050	0.0243	0.0881	0.0421	0.0585
$\bar{\pi}$	Gamma	0.6250	0.5610	0.2000	0.0280	2.8267	0.3362	0.9862
$\rho_{ga}$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_a$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_b$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_g$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_i$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_r$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_p$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_w$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\rho_{\sigma_w}$	Beta	0.7500	0.8438	0.1500	0.0114	1.0000	0.4671	0.9519

\*Displayed bounds are after applying a prior truncation of options'.trunc=0.000

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Table 13: (continued)

	Distribution	Mean	Mode	Std.dev.	Bounds*		90% HPDI	
					Lower	Upper	Lower	Upper
$\rho_{\pi_*}$	Beta	0.7500	0.8438	0.1500	0.0114	1.0000	0.4671	0.9519
$\mu_p$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
$\mu_w$	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282

Note: Displayed bounds are after applying a prior truncation of options--prior\_trunc=1.00e-10

Table 14: COEFFICIENTS OF AUTOCORRELATION

	<i>Order</i>	1	2	3	4	5
<i>y</i>	0.9943	0.9863	0.9776	0.9687	0.9599	
<i>c</i>	0.9957	0.9900	0.9841	0.9781	0.9720	
<i>i</i>	0.9911	0.9740	0.9532	0.9311	0.9091	
$\pi$	0.9162	0.8834	0.8586	0.8350	0.8115	
<i>r</i>	0.9568	0.9023	0.8484	0.7980	0.7517	
<i>w</i>	0.9956	0.9899	0.9828	0.9743	0.9646	
<i>k<sup>s</sup></i>	0.9978	0.9951	0.9919	0.9883	0.9843	
<i>l</i>	0.9921	0.9805	0.9677	0.9546	0.9416	
<i>q</i>	0.9937	0.9882	0.9830	0.9781	0.9732	
<i>n</i>	0.9958	0.9914	0.9866	0.9815	0.9761	
<i>r<sup>ktil</sup></i>	0.3277	0.3421	0.3429	0.3372	0.3285	
<i>OG</i>	0.9939	0.9846	0.9745	0.9641	0.9537	

Table 15: MATRIX OF CORRELATIONS

	<i>Variables</i>	<i>y</i>	<i>c</i>	<i>i</i>	$\pi$	<i>r</i>	<i>w</i>	$k^s$	<i>l</i>	<i>q</i>	<i>n</i>	$r^{ktil}$	<i>OG</i>
<i>y</i>	1.0000	0.9667	0.8860	0.2485	0.2543	0.3004	0.7430	0.7424	-0.3536	0.4521	0.4521	0.4521	0.4521
<i>c</i>	0.9667	1.0000	0.8385	0.2183	0.1944	0.2885	0.7494	0.6902	-0.3909	0.4618	0.4618	0.4618	0.4618
<i>i</i>	0.8860	0.8385	1.0000	0.3339	0.3382	0.4840	0.8204	0.4895	-0.4541	0.5613	0.5613	0.5613	0.5613
$\pi$	0.2485	0.2183	0.3339	1.0000	0.7818	0.6875	0.4943	-0.1217	-0.0113	0.4955	0.4955	0.4955	0.4955
<i>r</i>	0.2543	0.1944	0.3382	0.7818	1.0000	0.5784	0.3944	-0.0080	-0.0398	0.3058	0.3058	0.3058	0.3058
<i>w</i>	0.3004	0.2885	0.4840	0.6875	0.5784	1.0000	0.7898	-0.3402	-0.3020	0.7293	0.7293	0.7293	0.7293
$k^s$	0.7430	0.7494	0.8204	0.4943	0.3944	0.7898	1.0000	0.1065	-0.5739	0.7998	0.7998	0.7998	0.7998
<i>l</i>	0.7424	0.6902	0.4895	-0.1217	-0.0080	-0.3402	0.1065	1.0000	0.0499	-0.1236	0.0499	-0.1236	0.0499
<i>q</i>	-0.3536	-0.3909	-0.4541	-0.0113	-0.0398	-0.3020	-0.5739	0.0499	1.0000	-0.2618	-0.2618	-0.2618	-0.2618
<i>n</i>	0.4521	0.4618	0.5613	0.4955	0.3058	0.7293	0.7998	-0.1236	-0.2618	1.0000	1.0000	1.0000	1.0000
$r^{ktil}$	0.2158	0.1847	0.2432	0.6316	0.4930	0.4053	0.2992	0.0241	-0.0129	0.2764	0.2764	0.2764	0.2764
<i>OG</i>	0.9164	0.8867	0.7693	0.3213	0.3307	0.2450	0.5727	0.7958	-0.0113	0.3538	0.3538	0.3538	0.3538

Table 16: THEORETICAL MOMENTS

<i>VARIABLE</i>	<i>MEAN</i>	<i>STD.DEV.</i>	<i>VARIANCE</i>
$y$	0.0000	12.3902	153.5171
$c$	0.0000	14.7313	217.0106
$i$	0.0000	20.0008	400.0317
$\pi$	0.0000	0.7673	0.5888
$r$	0.0000	0.8696	0.7561
$w$	0.0000	14.6932	215.8914
$k^s$	0.0000	18.5002	342.2564
$l$	0.0000	11.4346	130.7511
$q$	0.0000	8.4101	70.7303
$n$	0.0000	19.4327	377.6306
$r^{ktil}$	0.0000	1.2239	1.4979
$OG$	0.0000	11.3796	129.4943

Table 17: VARIANCE DECOMPOSITION (in percent)

	$\eta^a$	$\eta^b$	$\eta^g$	$\eta^i$	$\eta^m$	$\eta^p$	$\eta^w$	$\eta^{\sigma_w}$	$\eta^{\pi^*}$	$\eta^{z_p}$
$y$	0.80	1.93	1.66	13.67	24.95	1.39	0.06	0.28	48.20	7.06
$c$	0.58	2.16	0.70	16.89	21.98	0.59	0.06	0.31	49.54	7.19
$i$	1.39	2.35	0.02	23.34	26.79	4.43	0.38	8.53	29.10	3.67
$\pi$	1.27	0.41	0.03	0.02	2.56	24.20	0.87	0.17	9.47	61.01
$r$	1.62	26.19	0.45	1.01	1.79	5.41	0.66	1.82	10.10	50.94
$w$	3.01	0.04	0.07	11.66	3.26	9.47	0.95	0.23	8.10	63.21
$k^s$	2.13	0.31	0.13	39.76	12.90	3.02	0.12	1.06	27.48	13.09
$l$	0.92	2.59	2.47	2.68	19.80	0.41	0.20	0.25	30.19	40.49
$q$	0.02	0.07	0.00	99.72	0.10	0.02	0.00	0.06	0.01	0.01
$n$	2.11	3.53	0.18	28.90	9.42	2.09	0.11	7.82	23.86	21.97
$r^{ktil}$	0.90	4.34	0.11	43.97	6.25	11.41	0.75	2.80	5.46	24.02
$OG$	0.37	2.28	0.12	0.24	29.58	1.65	0.07	0.33	57.14	8.20

$$cbetabar=\beta\,\exp\left(\left(1-\sigma_c\right)\,\gamma\right)$$

$$cpie=1+\frac{\bar{\pi}}{100}$$

$$crss = \frac{cpie}{cbetabar}$$

$$clandap=\Phi$$

$$c1=\frac{\lambda\,\exp\left((- \gamma)\right)}{1+\lambda\,\exp\left((- \gamma)\right)}$$

$$c2=\frac{1-\lambda\,\exp\left((- \gamma)\right)}{\sigma_c\,\left(1+\lambda\,\exp\left((- \gamma)\right)\right)}$$

$$c3=\frac{1}{1+\lambda\,\exp\left((- \gamma)\right)}$$

$$c4=\frac{1}{1-\alpha}\,\left(\rho_a-1\right)$$

$$c5=\frac{\left(\sigma_c-1\right)\,wl_c}{\sigma_c\,\left(1+\lambda\,\exp\left((- \gamma)\right)\right)}$$

$$i1=\frac{1}{1+cbetabar}$$

$$i2=\frac{cbetabar}{1+cbetabar}$$

$$i3=\left(1+cbetabar\right)\varphi\,\exp\left(2\,\gamma\right)$$

$$k1=1-\frac{\frac{\bar{i}}{\bar{y}}}{\bar{k}^*}$$

$$k2=\frac{\frac{\bar{i}}{\bar{y}}}{\bar{k}^*}$$

$$k3=\frac{\left(1+cbetabar\right)\,\exp\left(2\,\gamma\right)\,\varphi\,\frac{\bar{i}}{\bar{y}}}{\bar{k}^*}$$

$$\phantom{0}36$$

$$u1=\frac{1-\psi}{\psi}$$

$$pi1 = \frac{\left(1 - cbetabar\,\xi_p\right)\,(1 - \xi_p)}{\xi_p\,\left(1 + (\Phi - 1)\,\varepsilon_w\right)}$$

$$pi2 = \frac{1}{1 + cbetabar\,\iota_p}$$

$$pi3 = \frac{\iota_p}{1 + cbetabar\,\iota_p}$$

$$pi4 = \frac{cbetabar}{1 + cbetabar\,\iota_p}$$

$$w1 = \frac{\left(1 - cbetabar\,\xi_w\right)\,(1 - \xi_w)}{\xi_w\,\left(1 + 0.5\,\varepsilon_p\right)}$$

$$w2 = \frac{1}{1 + cbetabar}$$

$$w3 = \frac{1 + cbetabar\,\iota_w}{1 + cbetabar}$$

$$w4 = \frac{cbetabar}{1 + cbetabar}$$

$$y1 = \frac{\frac{\bar{c}}{\bar{y}}}{\frac{\underline{y}p}{\bar{y}}}$$

$$y2 = \frac{\frac{\bar{i}}{\bar{y}}}{\frac{\underline{y}p}{\bar{y}}}$$

$$y3 = r\bar{k}\,\frac{k^*}{\frac{\bar{y}p}{\bar{y}}}$$

$$ff1 = \frac{r\bar{k}}{1 + r\bar{k} - \delta}$$

$$ff2 = \frac{1 - \delta}{1 + r\bar{k} - \delta}$$

$$\phantom{0}37$$

$$ff3 = \frac{\sigma_c \left(1 + \lambda \exp\left((- \gamma)\right)\right)}{1 - \lambda \exp\left((- \gamma)\right)}$$

$$ff4 = \frac{\gamma^* v^*}{n_*}$$

$$mrs1 = \frac{1}{1 - \lambda \exp\left((- \gamma)\right)}$$

$$c_t = (-c2) (r_t - \pi_{t+1}) + c_2 * \varepsilon_{tt}^b + c1 (c_{t-1} - w_t) + c3 (c_{t+1} + c4 z^{til}_t) + c5 (l_t - l_{t+1}) \quad (1)$$

$$q_t = i3 (i_t - i1 (i_{t-1} - w_t) - i2 i_{t+1} - z^{til}_t c4 i2 - \varepsilon_t^i) \quad (2)$$

$$k_t = k1 (k_{t-1} - w_t) + i_t k2 + \varepsilon_t^i k3 \quad (3)$$

$$k^s_t = k_{t-1} + u_t - w_t \quad (4)$$

$$u_t = u1 r^k_t \quad (5)$$

$$\mu_{p_t} = w_t + \alpha l_t - \alpha k^s_t \quad (6)$$

$$k^s_t = l_t + w_t - r^k_t \quad (7)$$

$$y_t = k^s_t \Phi \alpha + l_t \Phi (1 - \alpha) + z^{til}_t \frac{\Phi - 1}{1 - \alpha} \quad (8)$$

$$y_t = \frac{\bar{g}}{\bar{y}} \varepsilon^g_t + c_t y1 + i_t y2 + u_t y3 - z^{til}_t c4 \frac{\bar{g}}{\bar{y}} \quad (9)$$

$$\pi_t = \mu_{p_t} pi1 pi2 + pi3 \pi_{t-1} + \pi_{t+1} pi4 + \varepsilon_t^p \quad (10)$$

$$w_t = w1 w2 (w^h_t - w_t) - \pi_t w3 + w2 (w_{t-1} - w_t + \iota_w \pi_{t-1}) + w4 (\pi_{t+1} + c4 z^{til}_t + w_{t+1}) + \varepsilon_t^w \quad (11)$$

$$w^h_t = mrs1 (c_t - \lambda \exp\left((- \gamma)\right) c_{t-1} + \lambda \exp\left((- \gamma)\right) w_t) + l_t \sigma_l \quad (12)$$

$$r_t = \rho r_{t-1} + (1 - \rho) r_\pi (\pi_t - \pi_{*t}) + (1 - \rho) r_y (y_t - y^{flex}_t) + r_{\Delta y} (y_t - y^{flex}_t - (y_{t-1} - y^{flex}_{t-1})) + \varepsilon_t^r \quad (13)$$

$$r^{ktl}_t = \pi_t + r^k_t ff1 + q_t ff2 - q_{t-1} \quad (14)$$

$$r^{ktil}_{t+1} = r_t - c_2 * \varepsilon_{tt}^b f f 3 + \zeta_{sp} (q_t + k_t - n_t) + \sigma_{wt} \quad (15)$$

$$n_t = \zeta_{nRk} (r^{ktil}_t - \pi_t) - \zeta_{nR} (r_{t-1} - \pi_t) + \zeta_{nqk} (k_{t-1} + q_{t-1}) + \zeta_{nn} n_{t-1} - \frac{\zeta_{n\sigma_w}}{\zeta_{sp\sigma_w}} \sigma_{wt-1} - w_t f f 4 \quad (16)$$

$$c^{flex}_t = c_2 * \varepsilon_{tt}^b + (-c2) r^{flex}_t + c1 (c^{flex}_{t-1} - w_t) + c3 (c4 z^{til}_t + c^{flex}_{t+1}) + c5 (l^{flex}_t - l^{flex}_{t+1}) \quad (17)$$

$$q^{flex}_t = i3 (i^{flex}_t - i1 (i^{flex}_{t-1} - w_t) - i2 i^{flex}_{t+1} - z^{til}_t c4 i2 - \varepsilon_t^i) \quad (18)$$

$$k^{flex}_t = \varepsilon_t^i k3 + k1 (k^{flex}_{t-1} - w_t) + k2 i^{flex}_t \quad (19)$$

$$k^{s,flex}_t = k^{flex}_{t-1} + z^{flex}_t - w_t \quad (20)$$

$$z^{flex}_t = u1 r^{k,flex}_t \quad (21)$$

$$w^{flex}_t = l^{flex}_t (-\alpha) + \alpha k^{s,flex}_t \quad (22)$$

$$k^{s,flex}_t = l^{flex}_t + w^{flex}_t - r^{k,flex}_t \quad (23)$$

$$y^{flex}_t = z^{til}_t \frac{\Phi - 1}{1 - \alpha} + \Phi \alpha k^{s,flex}_t + \Phi (1 - \alpha) l^{flex}_t \quad (24)$$

$$y^{flex}_t = \bar{g} \varepsilon_t^g + y1 c^{flex}_t + y2 i^{flex}_t + y3 z^{flex}_t - z^{til}_t c4 \frac{\bar{g}}{y} \quad (25)$$

$$w^{flex}_t = mrs1 (\lambda \exp ((-\gamma)) w_t + c^{flex}_t - \lambda \exp ((-\gamma)) c^{flex}_{t-1}) + \sigma_l l^{flex}_t \quad (26)$$

$$q^{flex}_t = c_2 * \varepsilon_{tt}^b f f 3 + f f 1 r^{k,flex}_{t+1} + f f 2 q^{flex}_{t+1} - r^{flex}_t \quad (27)$$

$$OG_t = y_t - y^{flex}_t \quad (28)$$

$$w_t = c4 z^{til}_{t-1} + \frac{1}{1 - \alpha} \eta^a_t + z_{pt} \quad (29)$$

$$z^{til}_t = \eta^a_t + \rho_a z^{til}_{t-1} \quad (30)$$

$$\varepsilon_t^g = \rho_g \varepsilon_{t-1}^g + \eta^g_t + \eta^a_t \rho_{ga} \quad (31)$$

$$c_2 * \varepsilon_{tt}^b = \rho_b c_2 * \varepsilon_{tt-1}^b + \eta^b_t \quad (32)$$

$$\varepsilon^i_t = \rho_i \varepsilon^i_{t-1} + \eta^i_t \quad (33)$$

$$\varepsilon^p_t = \rho_p \varepsilon^p_{t-1} + \eta^p_t - \mu_p \sigma_{map} \eta^p_{t-1} \quad (34)$$

$$\varepsilon^w_t = \rho_w \varepsilon^w_{t-1} + \eta^w_t - \mu_w \sigma_{maw} \eta^w_{t-1} \quad (35)$$

$$\varepsilon^r_t = \rho_r \varepsilon^r_{t-1} + \eta^m_t \quad (36)$$

$$\sigma_{wt} = \sigma_{wt-1} \rho_{\sigma_w} + \eta^{\sigma_w}_t \quad (37)$$

$$\pi_{*t} = \rho_{\pi_*} \pi_{*t-1} + \eta^{\pi_*}_t \quad (38)$$

$$z_{pt} = \rho_{zp} z_{pt-1} + \eta^{z_p}_t \quad (39)$$

$$dlGDP_t = w_t + y_t - y_{t-1} + \bar{\gamma} \quad (40)$$

$$dlCONS_t = w_t + \bar{\gamma} + c_t - c_{t-1} \quad (41)$$

$$dlINV_t = w_t + \bar{\gamma} + i_t - i_{t-1} \quad (42)$$

$$dlWAG_t = w_t + \bar{\gamma} + w_t - w_{t-1} \quad (43)$$

$$lHOURS_t = l_t + \bar{l} \quad (44)$$

$$FEDFUNDS_t = r_t + \bar{r} \quad (45)$$

$$dlP_t = \bar{\pi} + \pi_t \quad (46)$$

$$Spread_t = 100 \left( r^{ktil}_t - r_t \right) + 0.02 \quad (47)$$

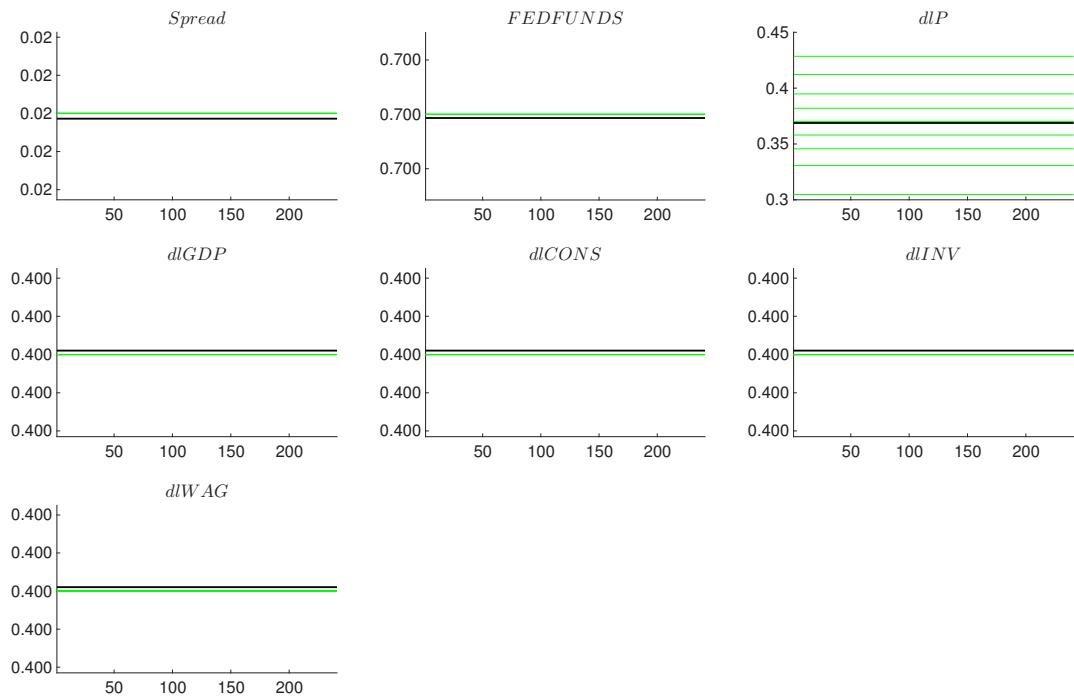


Figure 26: Smoothed constant

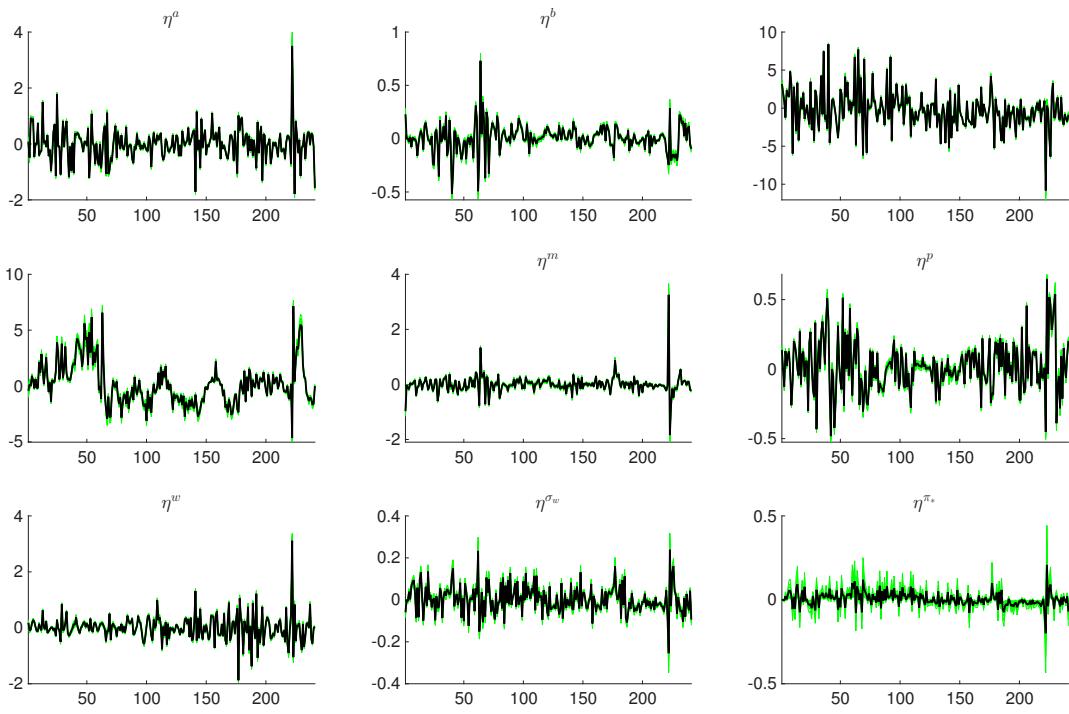


Figure 27: Smoothed shocks

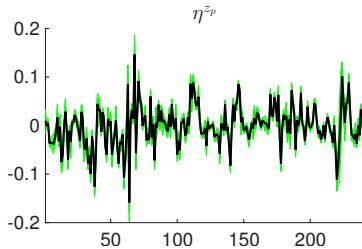


Figure 28: Smoothed shocks

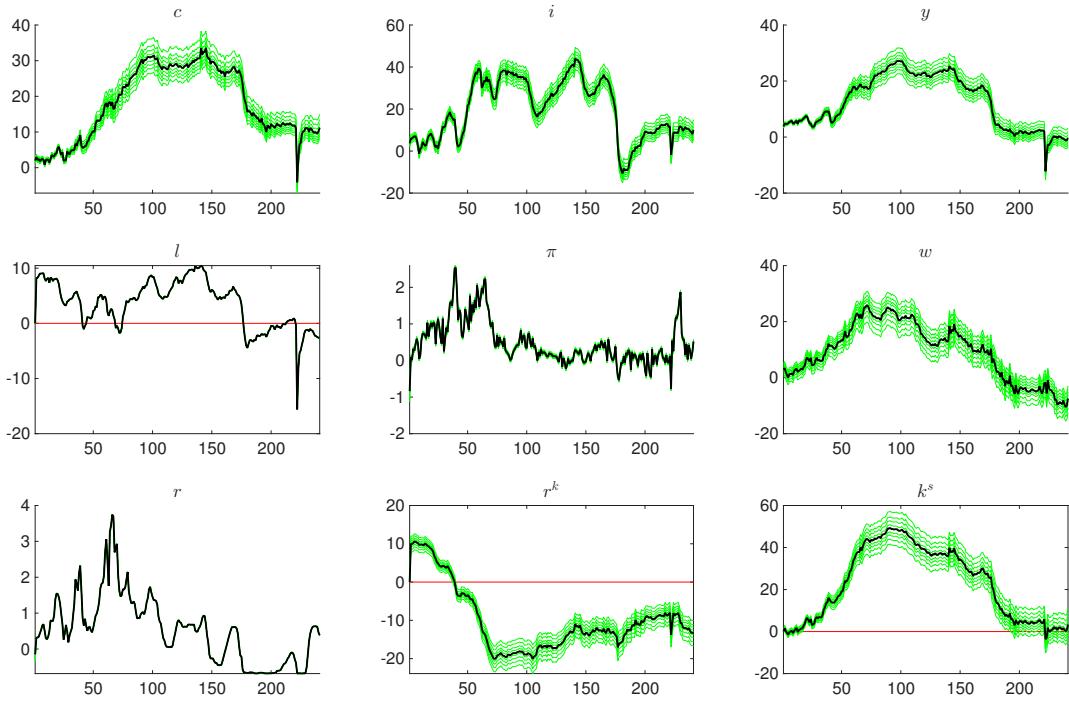


Figure 29: Smoothed variables

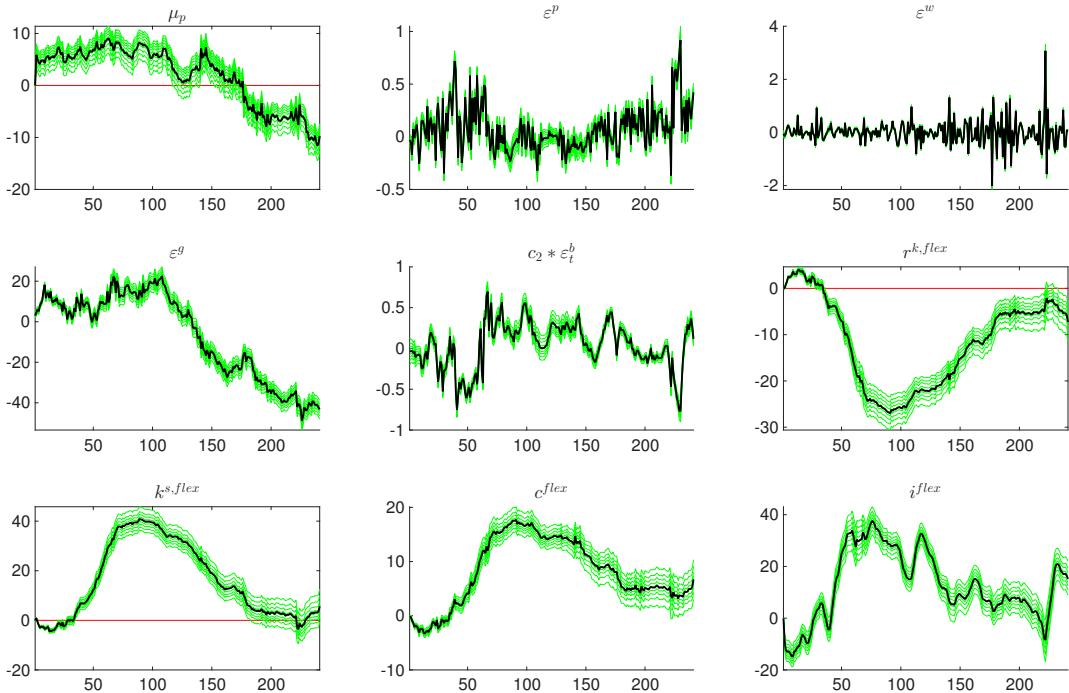


Figure 30: Smoothed variables

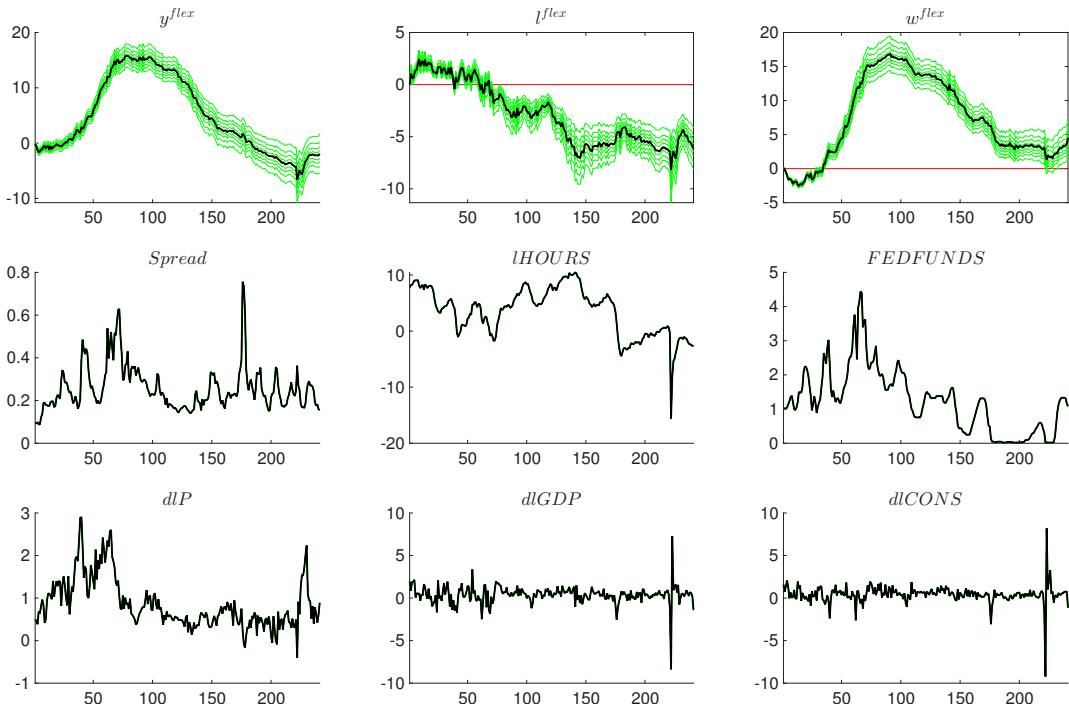


Figure 31: Smoothed variables

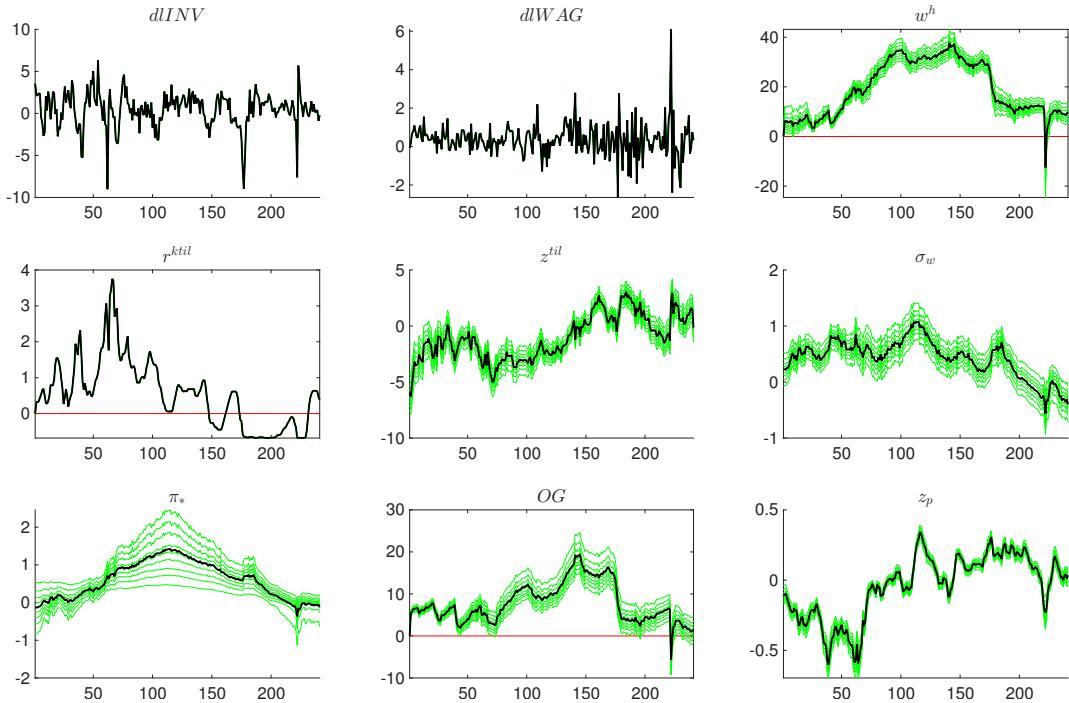


Figure 32: Smoothed variables

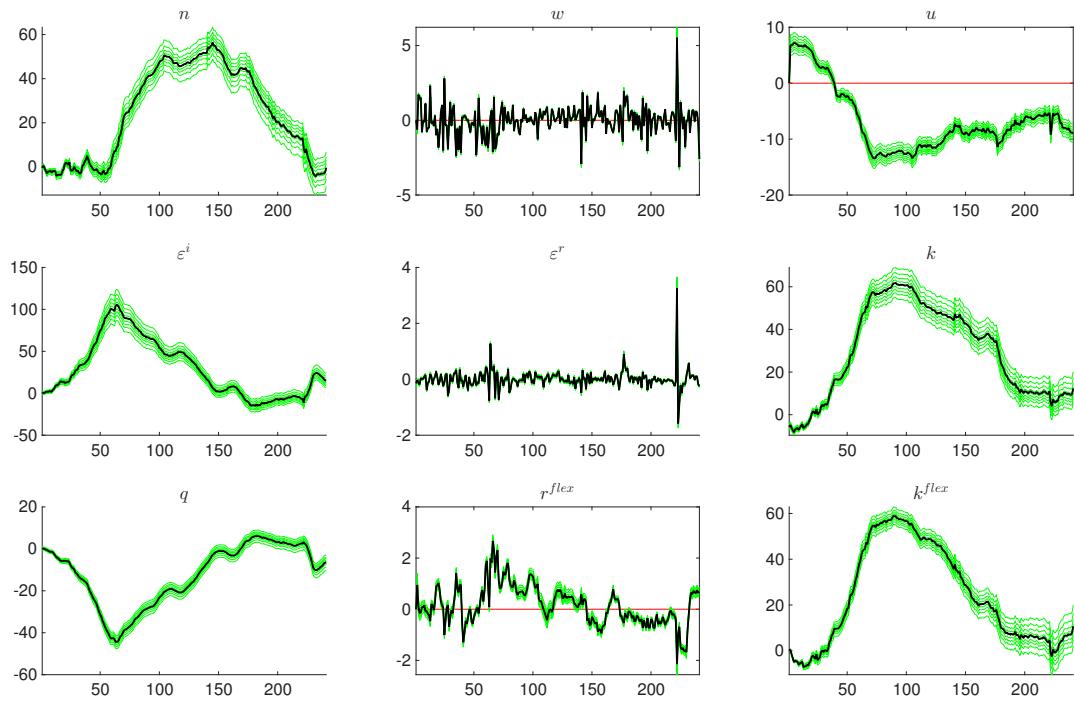


Figure 33: Smoothed variables

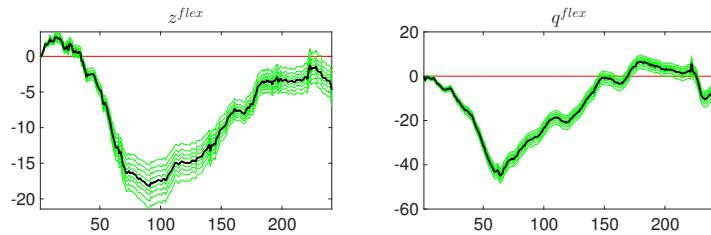


Figure 34: Smoothed variables

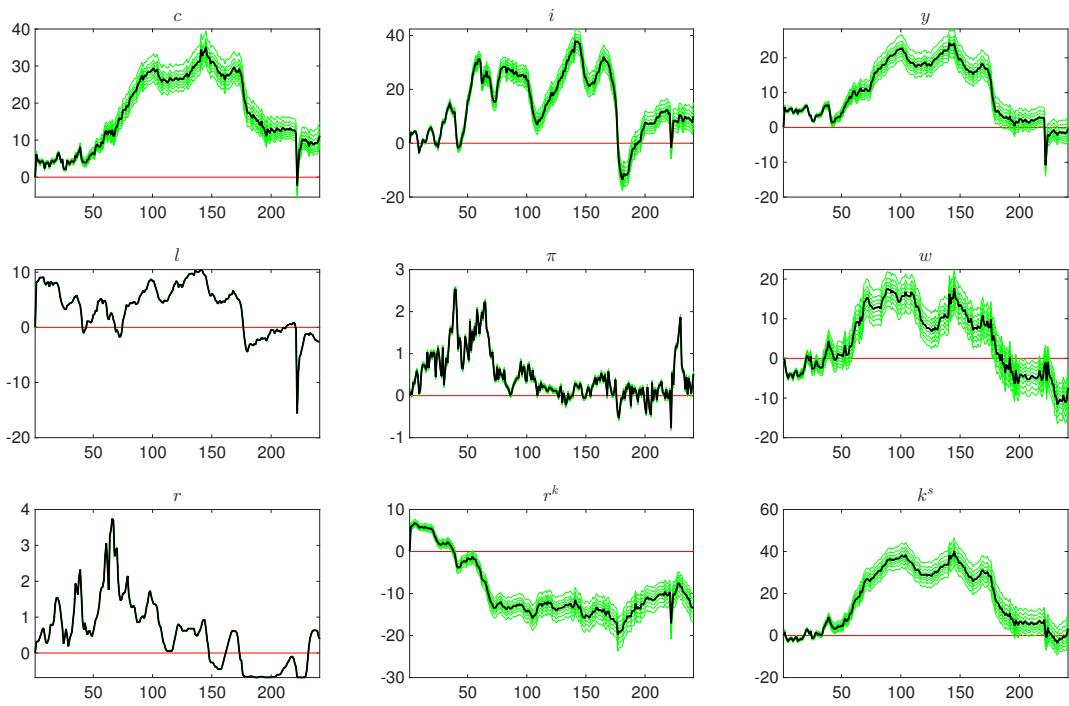


Figure 35: Updated Variables

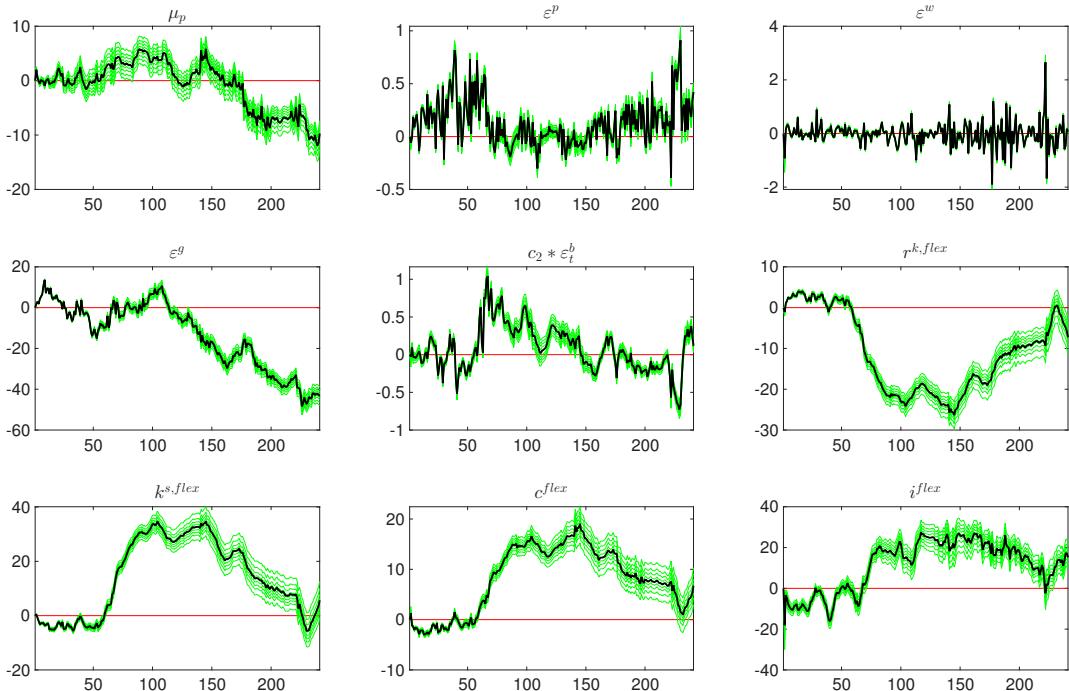


Figure 36: Updated Variables

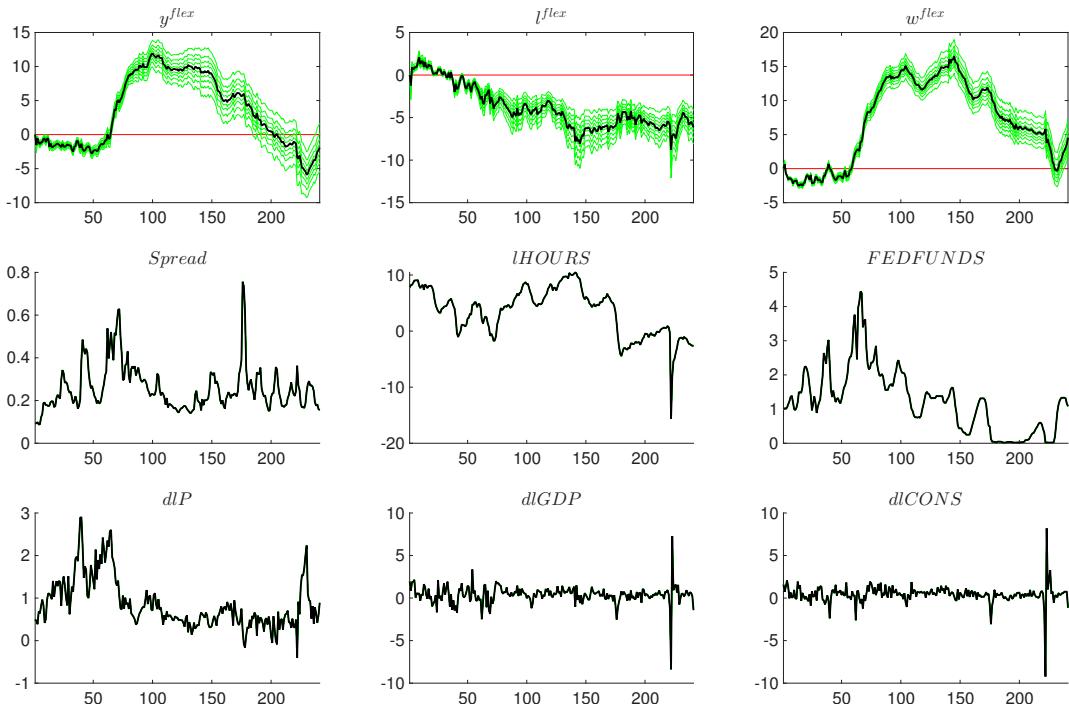


Figure 37: Updated Variables

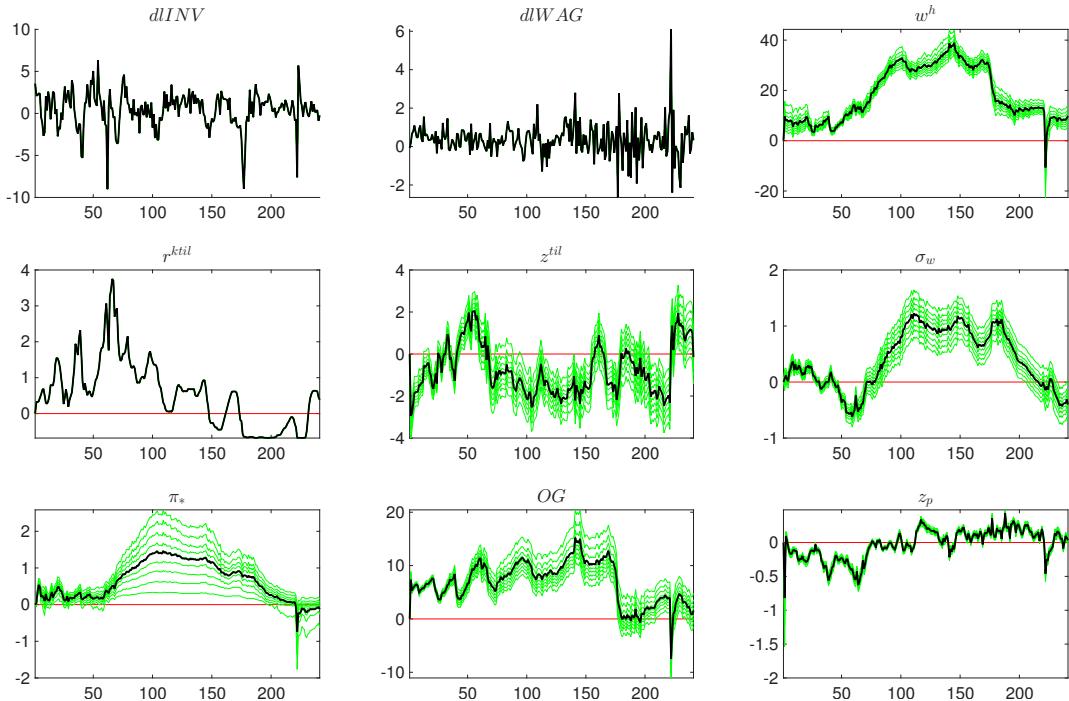


Figure 38: Updated Variables

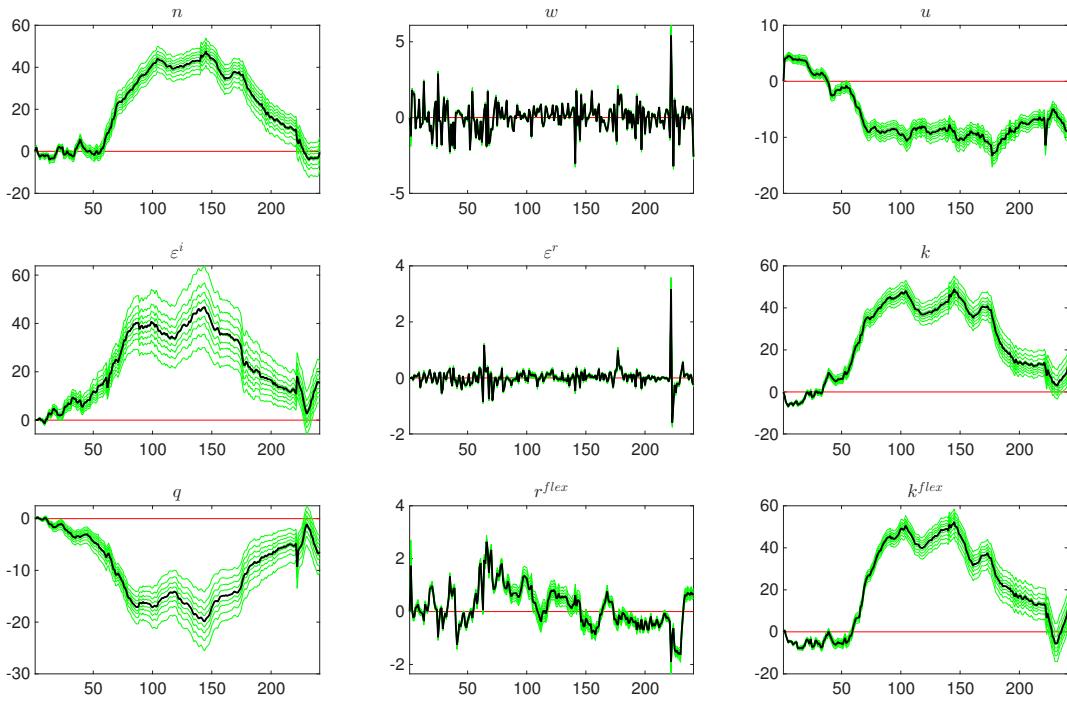


Figure 39: Updated Variables

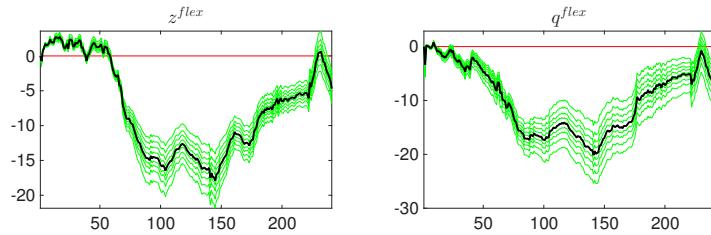


Figure 40: Updated Variables

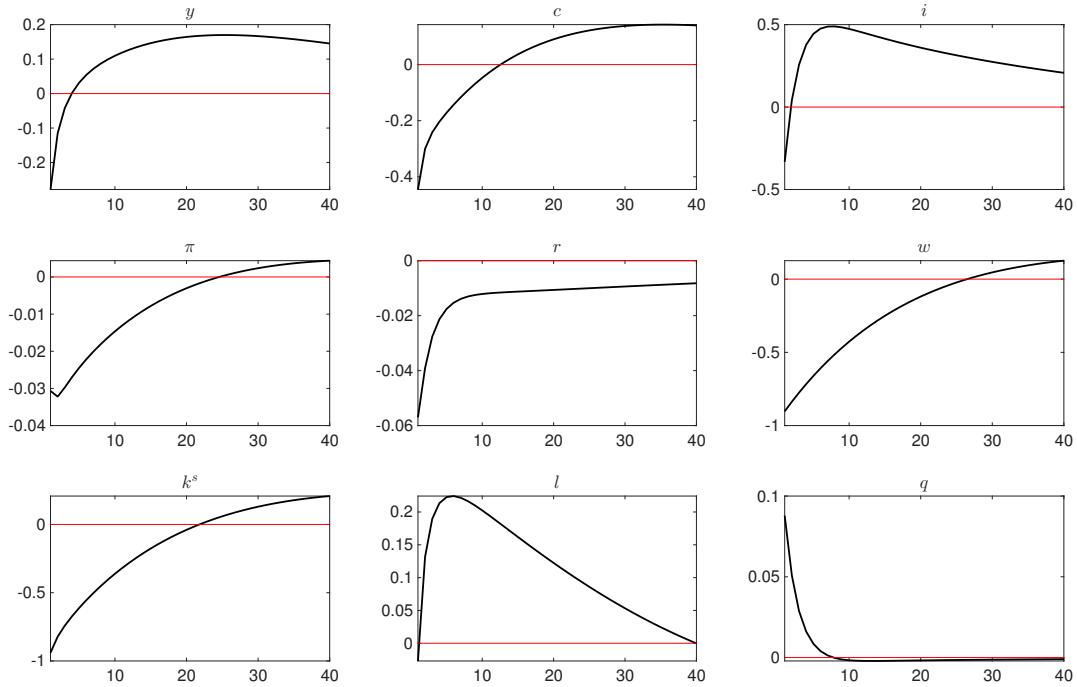


Figure 41: Impulse response functions (orthogonalized shock to  $\eta^a$ ).

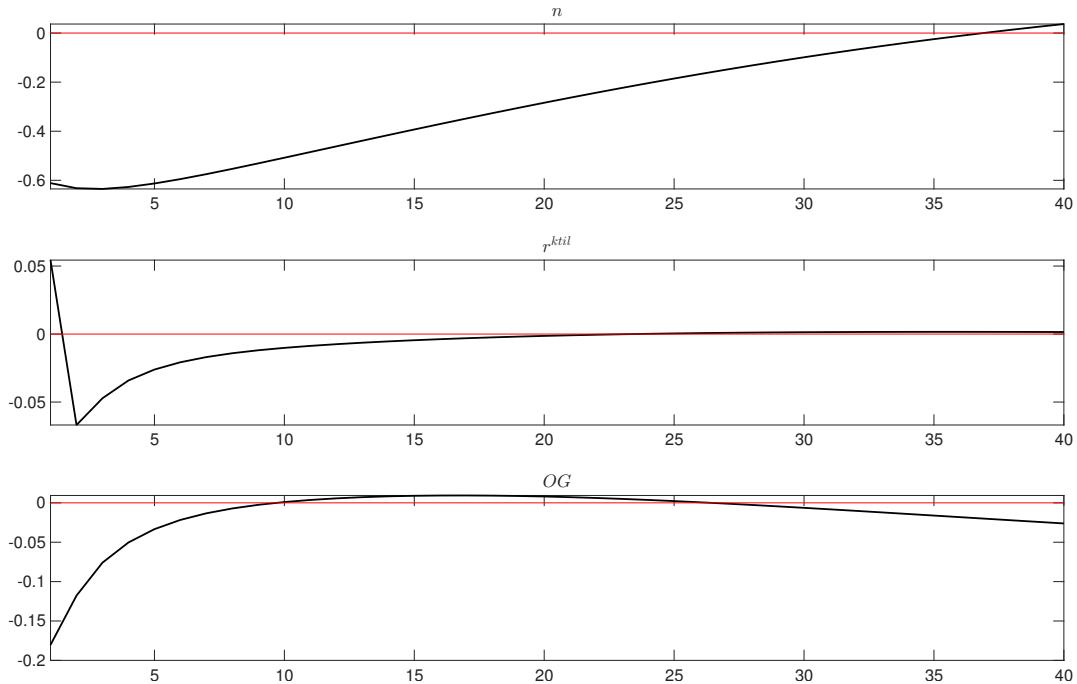


Figure 42: Impulse response functions (orthogonalized shock to  $\eta^a$ ).

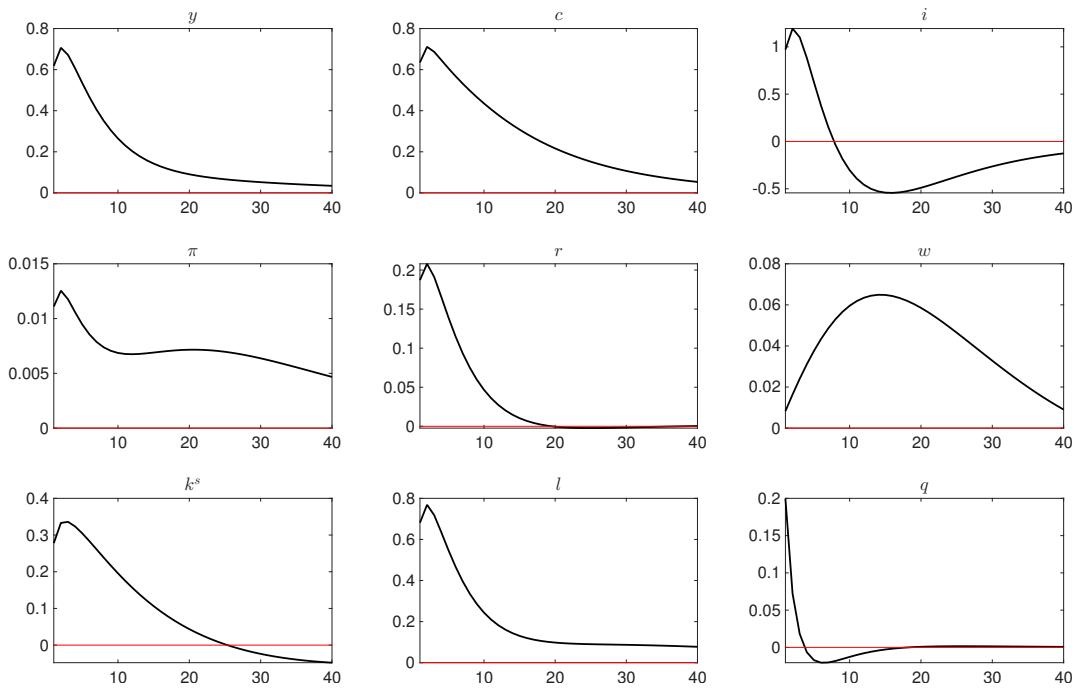


Figure 43: Impulse response functions (orthogonalized shock to  $\eta^b$ ).

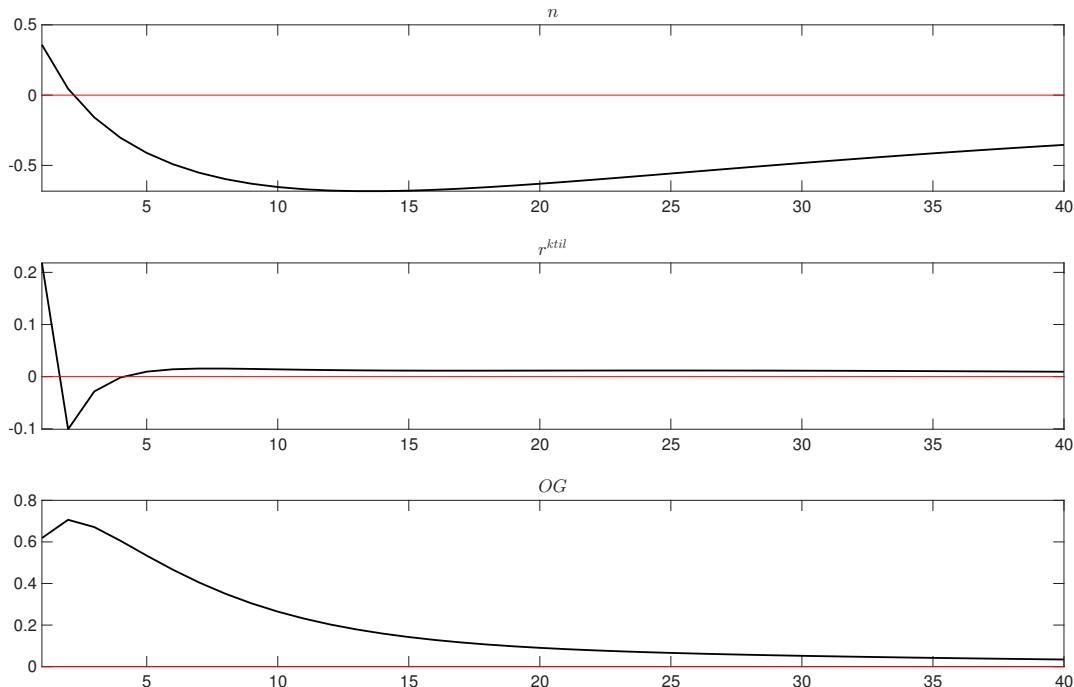


Figure 44: Impulse response functions (orthogonalized shock to  $\eta^b$ ).

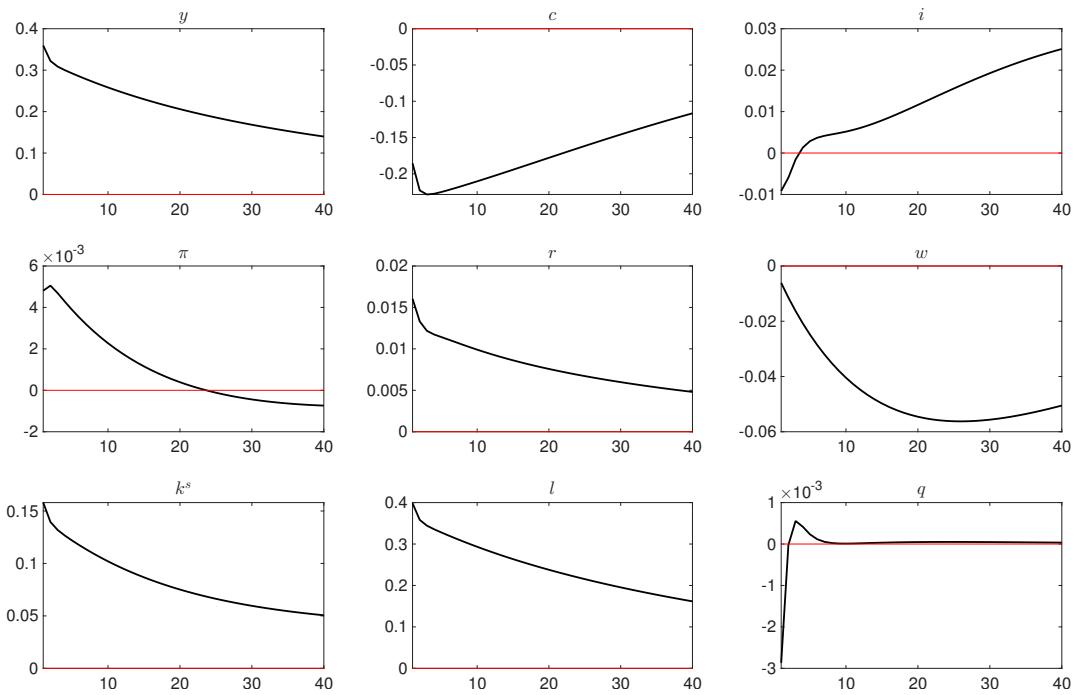


Figure 45: Impulse response functions (orthogonalized shock to  $\eta^g$ ).

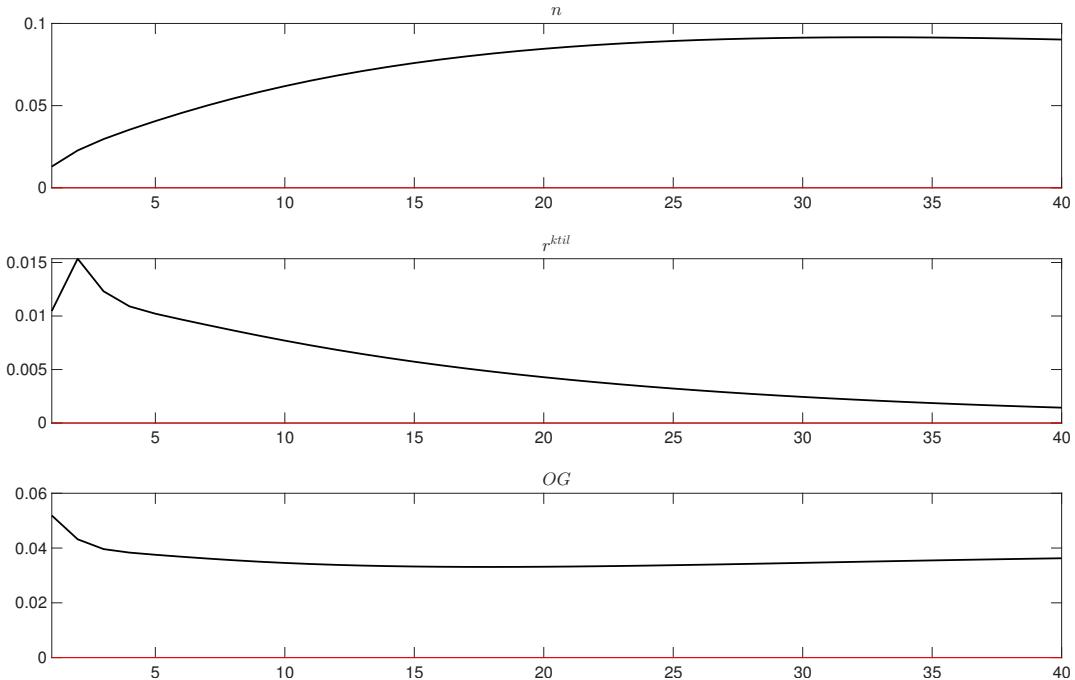


Figure 46: Impulse response functions (orthogonalized shock to  $\eta^g$ ).

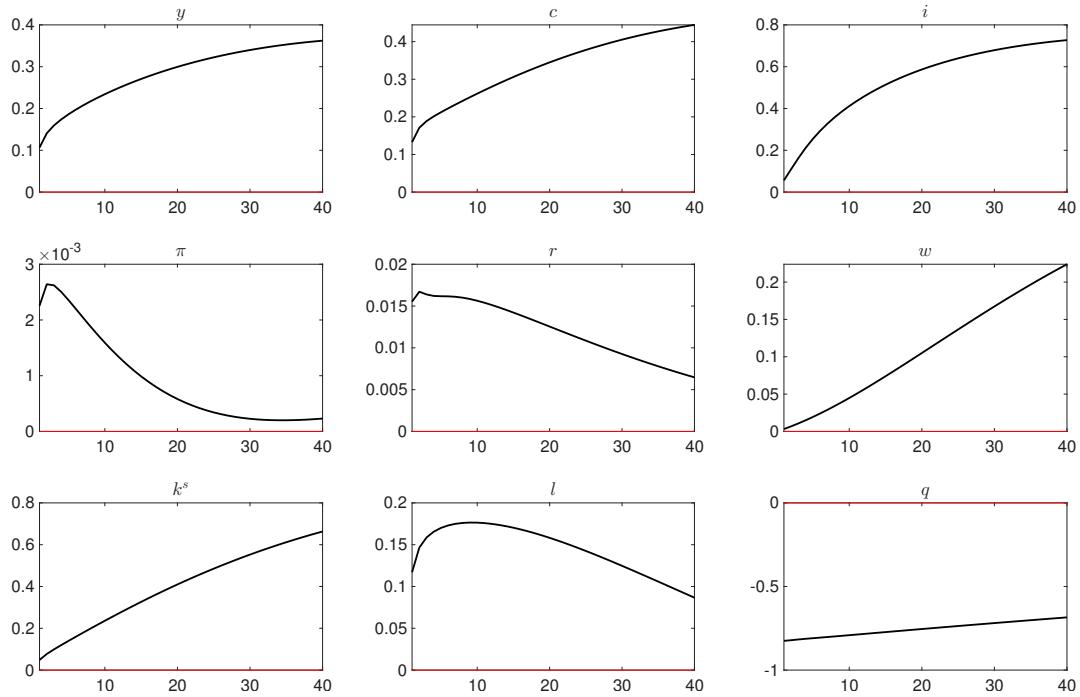


Figure 47: Impulse response functions (orthogonalized shock to  $\eta^i$ ).

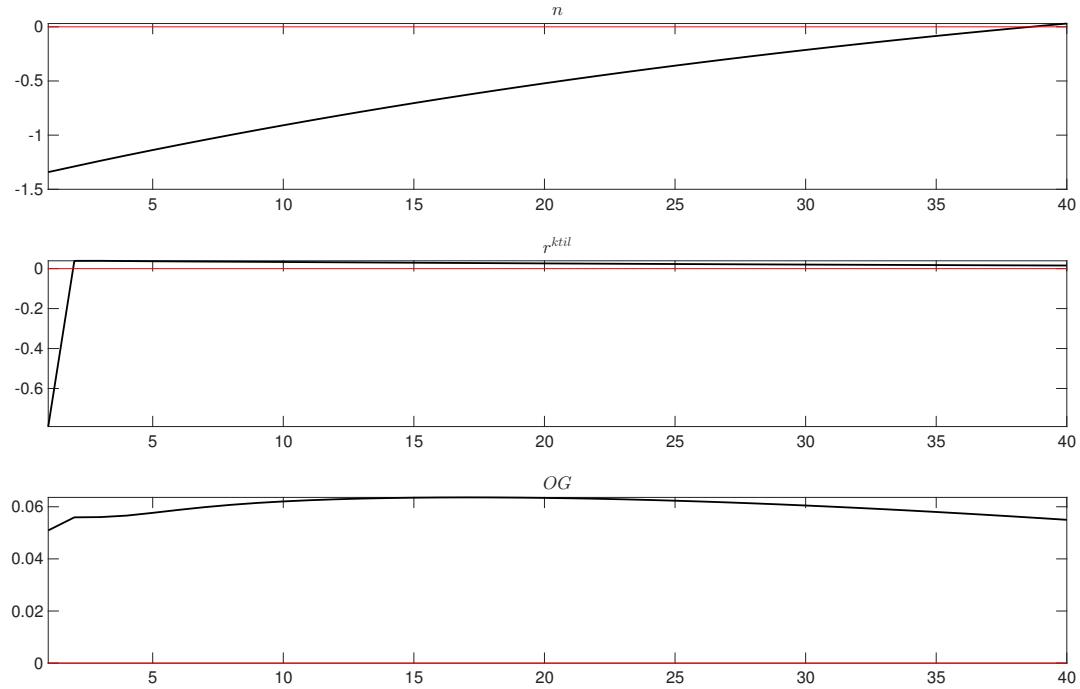


Figure 48: Impulse response functions (orthogonalized shock to  $\eta^i$ ).

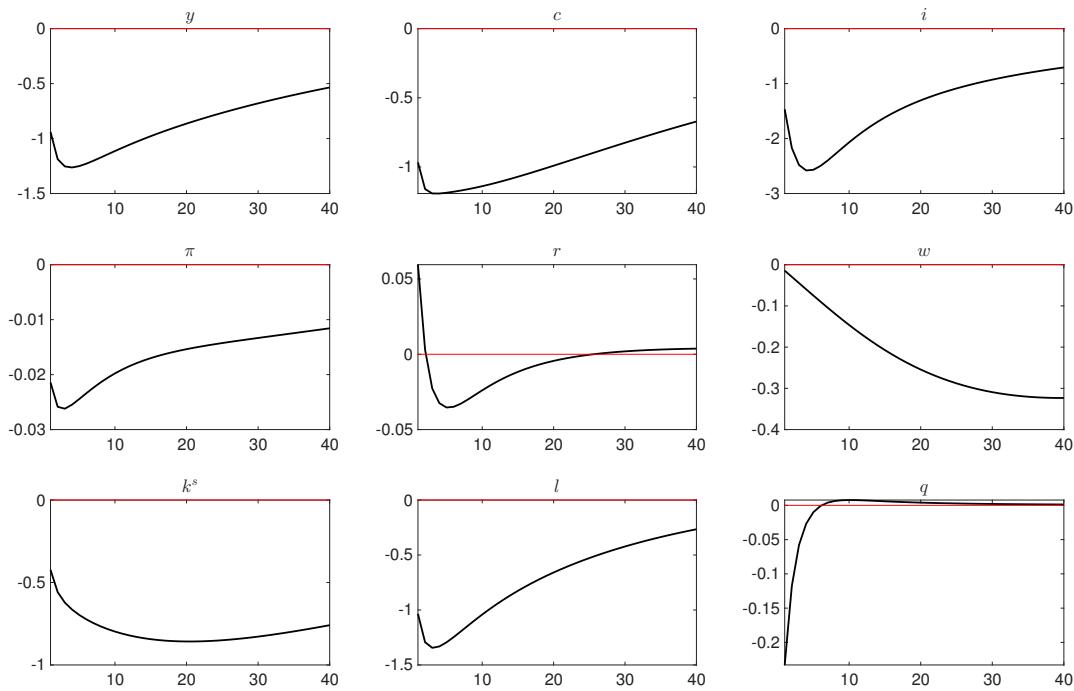


Figure 49: Impulse response functions (orthogonalized shock to  $\eta^m$ ).

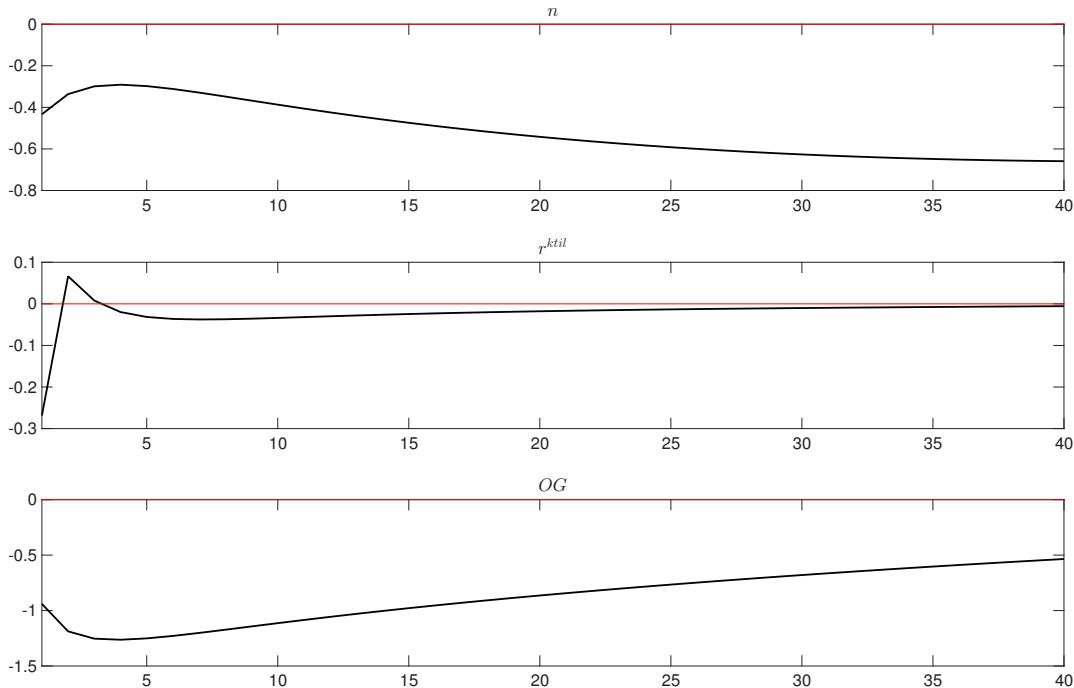


Figure 50: Impulse response functions (orthogonalized shock to  $\eta^m$ ).

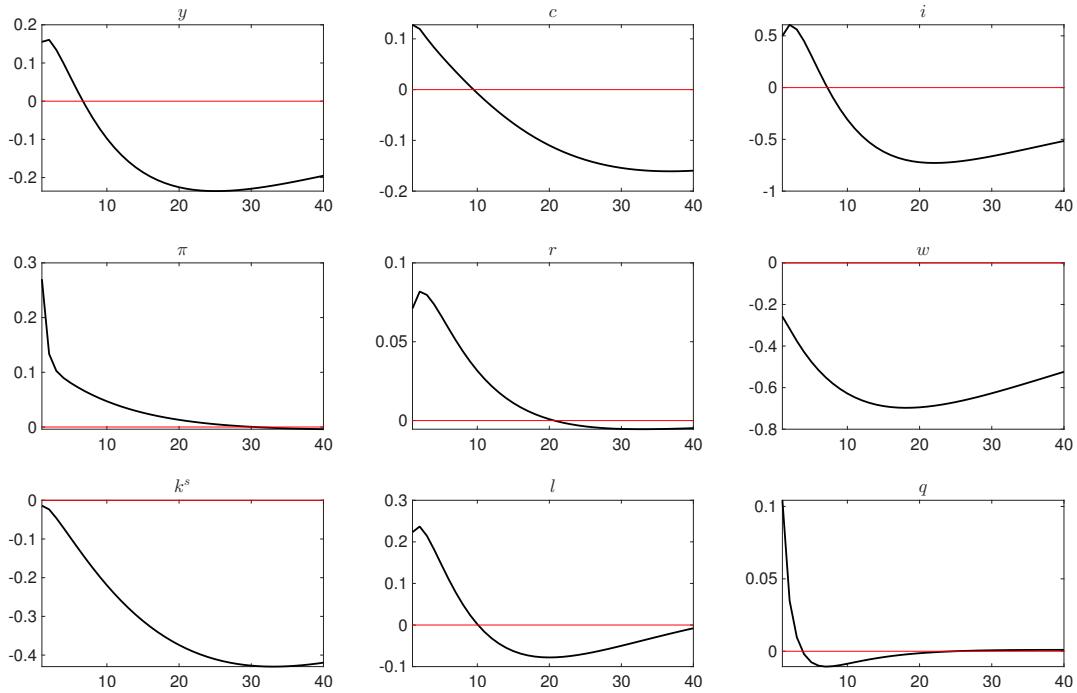


Figure 51: Impulse response functions (orthogonalized shock to  $\eta^p$ ).

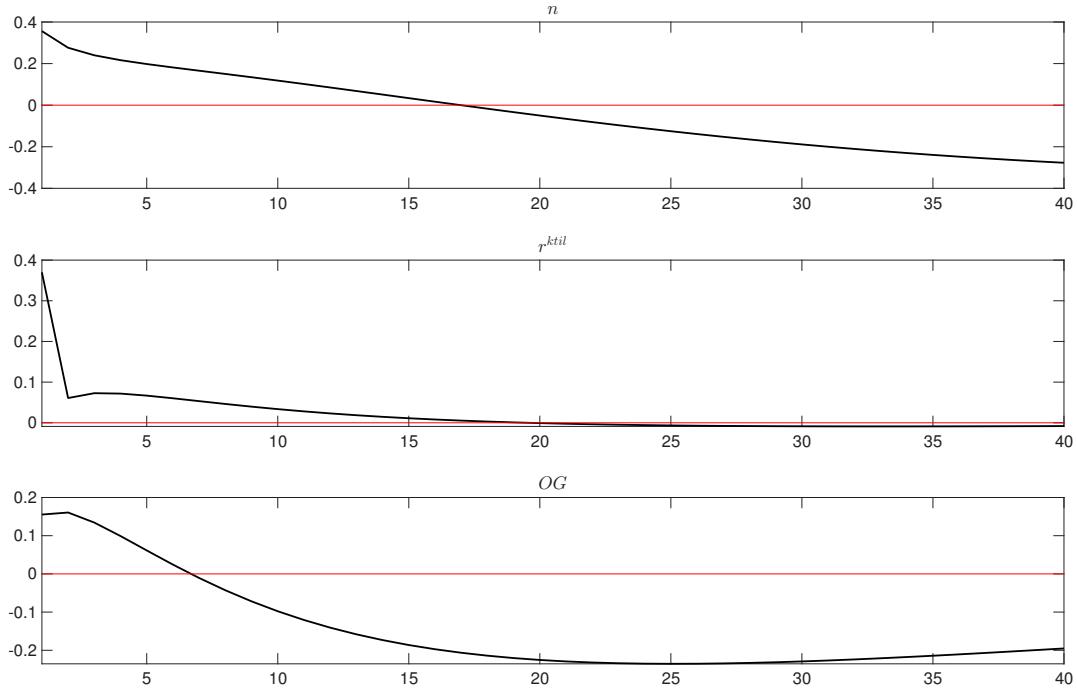


Figure 52: Impulse response functions (orthogonalized shock to  $\eta^p$ ).

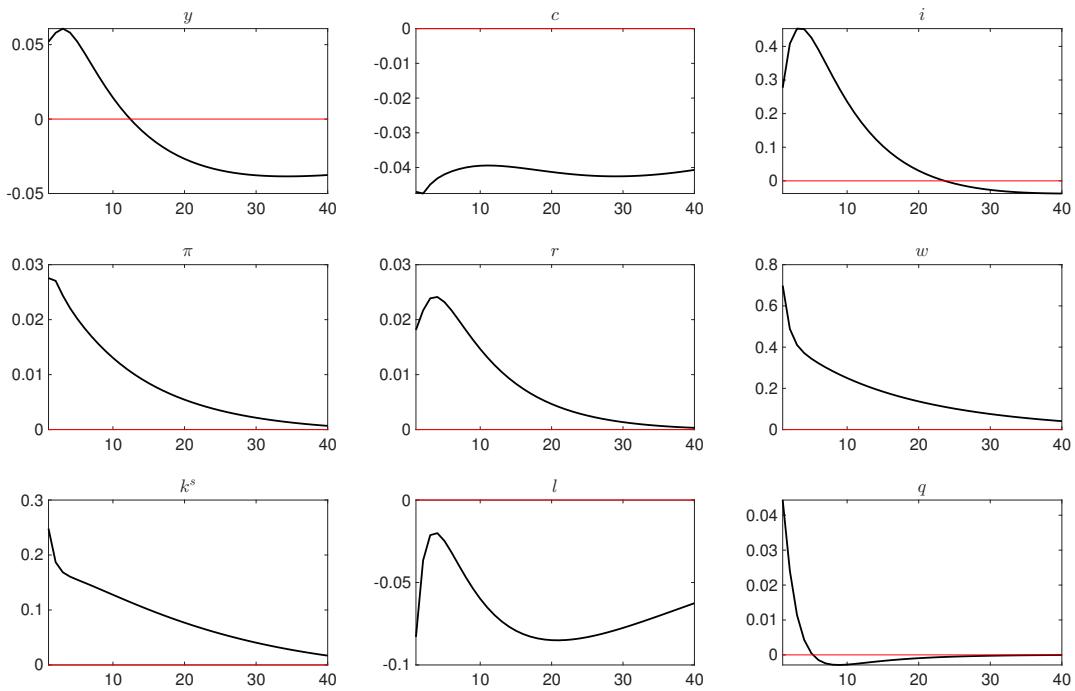


Figure 53: Impulse response functions (orthogonalized shock to  $\eta^w$ ).

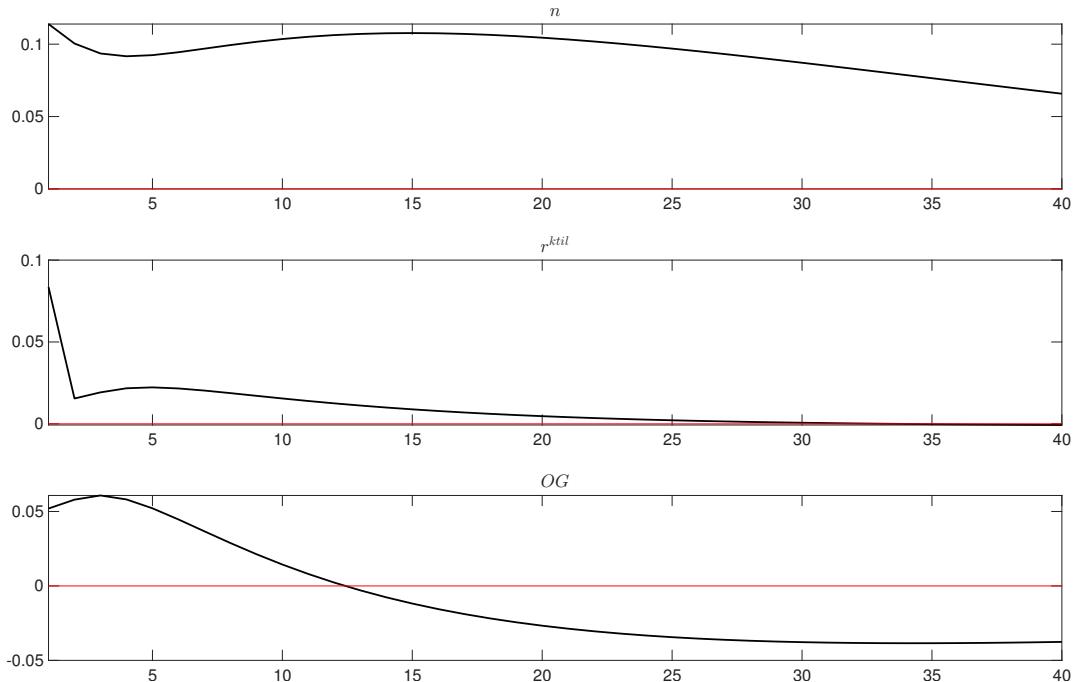


Figure 54: Impulse response functions (orthogonalized shock to  $\eta^w$ ).

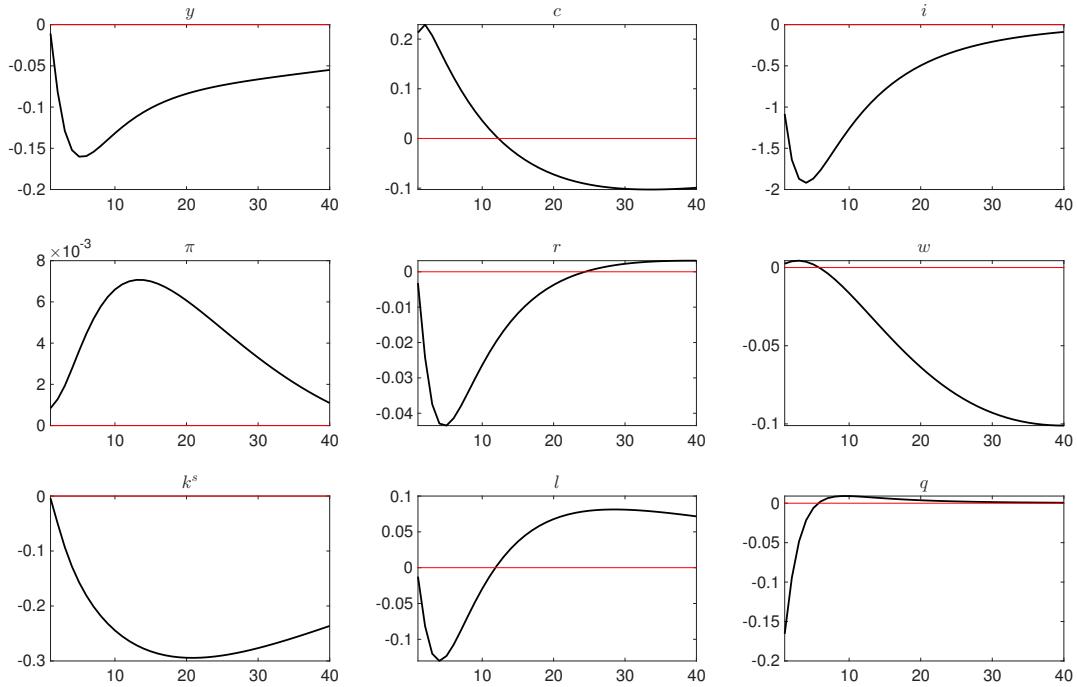


Figure 55: Impulse response functions (orthogonalized shock to  $\eta^{\sigma_w}$ ).

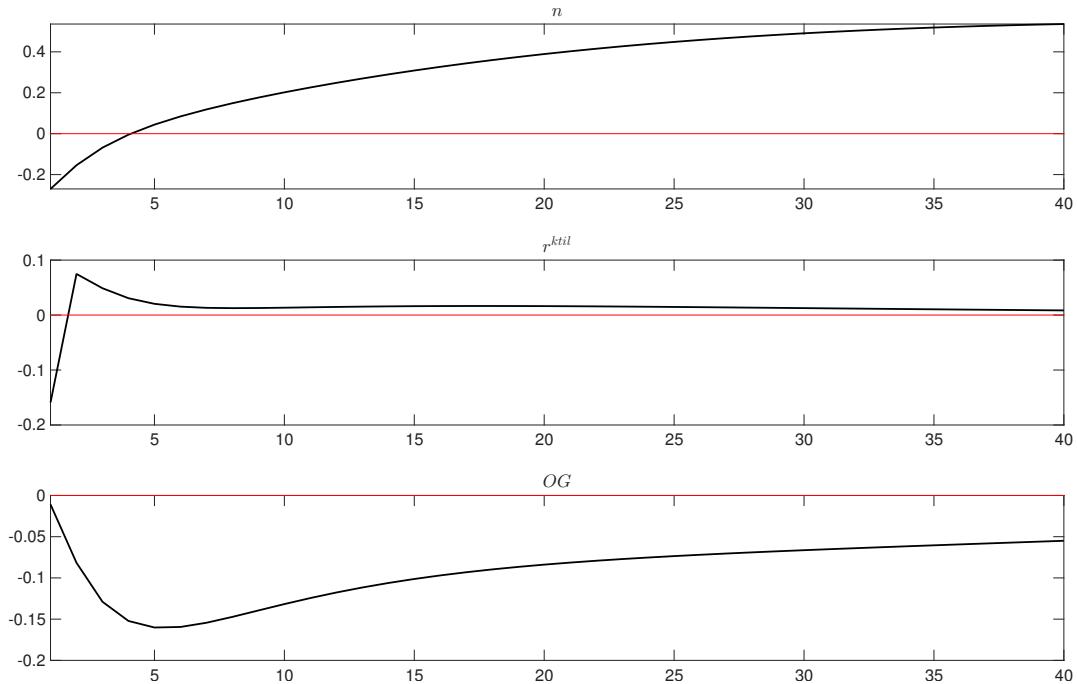


Figure 56: Impulse response functions (orthogonalized shock to  $\eta^{\sigma_w}$ ).

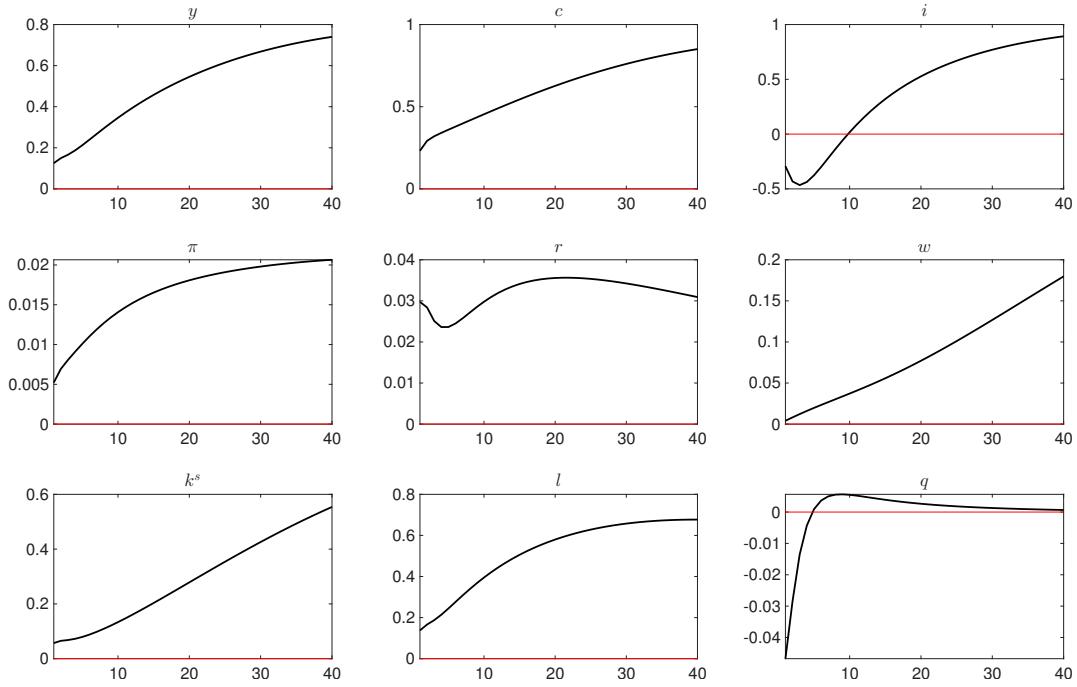


Figure 57: Impulse response functions (orthogonalized shock to  $\eta^{\pi*}$ ).

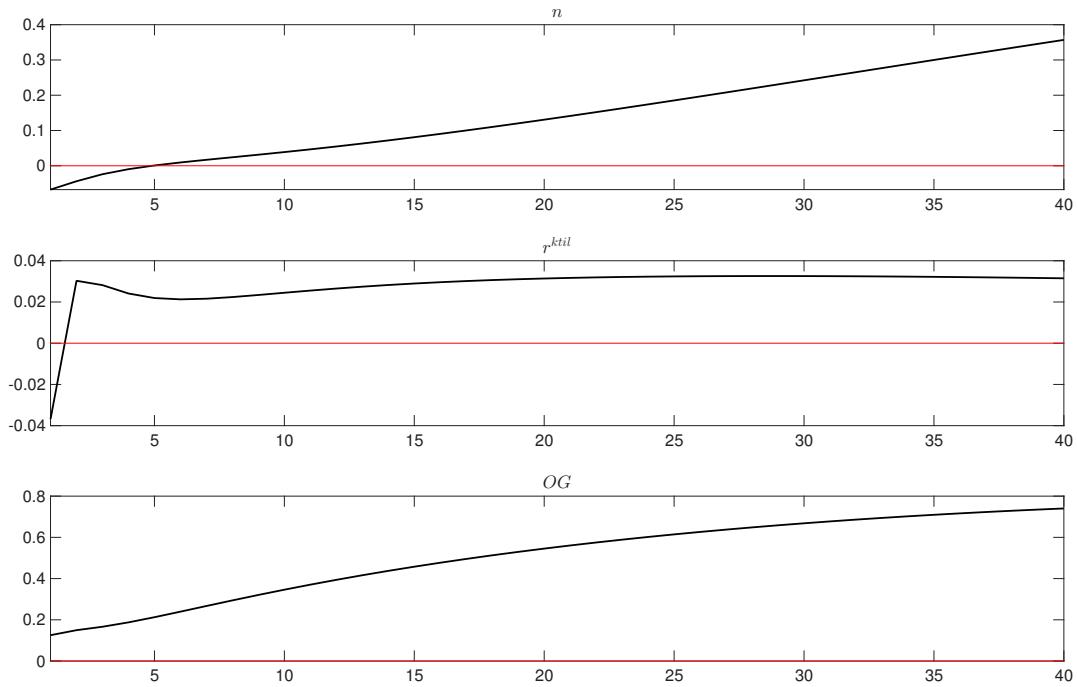


Figure 58: Impulse response functions (orthogonalized shock to  $\eta^{\pi*}$ ).

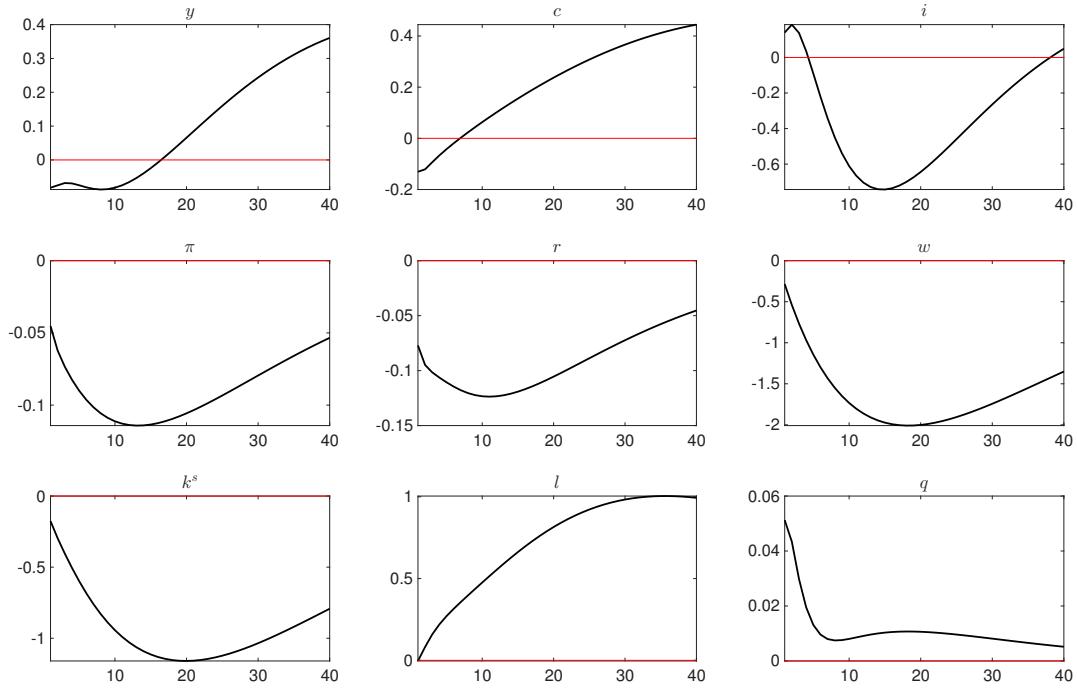


Figure 59: Impulse response functions (orthogonalized shock to  $\eta^{z_p}$ ).

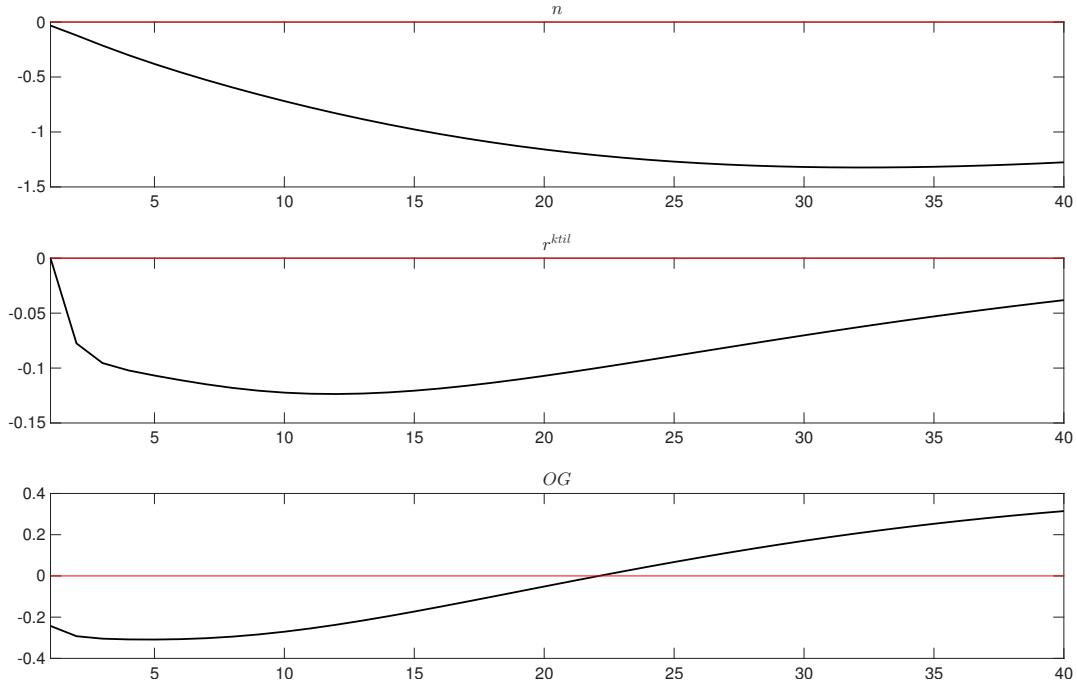


Figure 60: Impulse response functions (orthogonalized shock to  $\eta^{z_p}$ ).

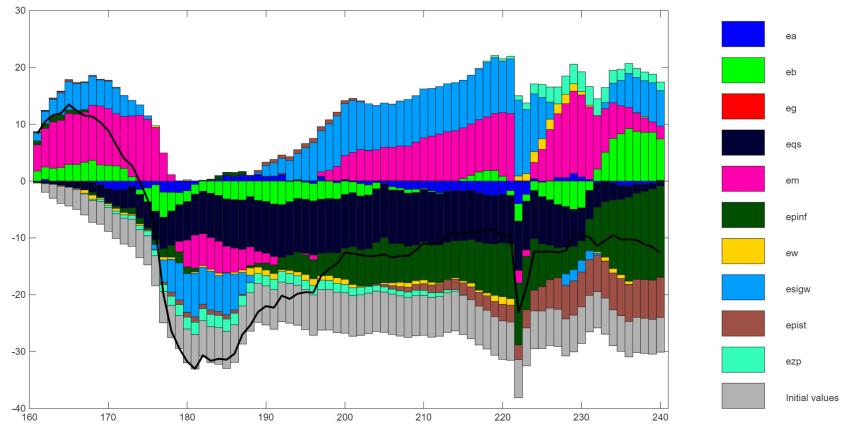


Figure 61: Historical shock decomposition:  $i$ .