Sample size: 1993Q2:2016Q1

Observables:Y,R,Π_c,Π_d,C,I_d,N

Prior for $\omega = 0.35$, adjustment costs

2 million draws

Chain 1: 25.9431%
Chain 2: 25.9551%

Log data density: -1089.906880

Tables

Table 1: Structural parameters estimations

	Prior mean	Prior Variance	Posterior Mean	Posterior LB	Posterior UB
sigma	1.00	0.01	1.14	1.00	1.29
phi	2.00	0.01	1.95	1.79	2.12
h	0.40	0.00	0.25	0.20	0.30
omega	0.35	0.00	0.19	0.14	0.24
rhor	0.75	0.00	0.78	0.74	0.82
phip	2.00	0.01	2.06	1.90	2.22
phiy	0.20	0.01	0.22	0.08	0.36
thetac	0.75	0.00	0.66	0.61	0.72
thetad	0.65	0.00	0.54	0.49	0.59
iotac	0.50	0.01	0.31	0.18	0.44
iotad	0.50	0.01	0.35	0.20	0.49
nud	0.83	0.01	1.06	0.91	1.22
rhoac	0.50	0.01	0.51	0.45	0.58
rhoad	0.50	0.01	0.50	0.34	0.67
rhocstar	0.50	0.01	0.92	0.89	0.95
rhomuc	0.50	0.01	0.39	0.28	0.51
rhomud	0.50	0.01	0.95	0.95	0.95
rhogamma	0.50	0.01	0.74	0.63	0.85

Table 2: Shock parameters estimations

	Prior mean	Posterior Mean	Posterior LB	Posterior UB
eac	1.00	2.53	2.22	2.84
ead	1.00	16.22	13.57	18.85
em	1.00	0.24	0.20	0.27
ecstar	1.00	1.46	1.23	1.69
emuc	1.00	1.45	1.14	1.75
emud	1.00	2.83	1.88	3.74
eg	1.00	2.86	2.36	3.34

Table 3: Standard deviations

	Data	Model
y	1.00	6.00
R	0.41	0.66
pic	0.47	0.89
pid	1.94	3.04
c	1.02	3.65
id	8.33	107.52
n	1.49	3.62

Table 4: Correlations

	Data	Model
y,y	1.00	1.00
y,R	-0.39	0.26
y,pic	-0.26	0.13
y,pid	0.03	0.01
y,c	0.50	-0.67
y,id	0.61	0.89
y,n	0.11	0.79
R,y	-0.39	0.26
R,R	1.00	1.00
R,pic	0.31	0.54
R,pid	-0.11	0.29
R,c	-0.22	-0.56
R,id	-0.42	0.25
R,n	-0.23	0.22
pic,y	-0.26	0.13
pic,R	0.31	0.54
pic,pic	1.00	1.00
pic,pid	-0.11	0.28
pic,c	-0.14	-0.25
pic,id	-0.17	0.16
pic,n	0.09	0.26
pid,y	0.03	0.01
pid,R	-0.11	0.29
pid,pic	-0.11	0.28
pid,pid	1.00	1.00
pid,c	0.34	0.02
pid,id	0.33	-0.00
pid,n	0.32	0.16
c,y	0.50	-0.67
c,R	-0.22	-0.56
c,pic	-0.14	-0.25
c,pid	0.34	0.02
c,c	1.00	1.00
c,id	0.50	-0.71
c,n	0.19	-0.52
id,y	0.61	0.89
id,R	-0.42	0.25
id,pic	-0.17	0.16
id,pid	0.33	-0.00
id,c	0.50	-0.71
id,id	1.00	1.00
id,n	0.53	0.86
n,y	0.11	0.79
n,R	-0.23	0.22
n,pic	0.09	0.26
n,pid	0.32	0.16
n,c	0.19	-0.52
n,id	0.53	0.86
n,n	1.00	1.00

Table 5: Variance decomposition

variable	horizon	eac	ead	em	ecstar	emuc	emud	eg
y	1	0.21	0.32	0.05	0.00	0.30	0.01	0.11
	2	0.20	0.41	0.02	0.01	0.23	0.06	0.07
	4	0.15	0.47	0.01	0.02	0.15	0.16	0.04
	8	0.09	0.43	0.01	0.02	0.08	0.34	0.03
	Inf	0.03	0.19	0.00	0.01	0.03	0.73	0.01
R	1	0.05	0.07	0.02	0.29	0.11	0.14	0.32
	2	0.09	0.05	0.01	0.24	0.18	0.15	0.28
	4	0.10	0.04	0.01	0.23	0.19	0.19	0.25
	8	0.09	0.08	0.01	0.24	0.16	0.20	0.23
	Inf	0.06	0.14	0.01	0.20	0.11	0.33	0.16
pic	1	0.07	0.09	0.22	0.20	0.13	0.11	0.18
	2	0.08	0.09	0.21	0.19	0.15	0.11	0.17
	4	0.08	0.10	0.21	0.18	0.15	0.11	0.17
	8	0.08	0.11	0.20	0.18	0.15	0.11	0.16
	Inf	0.08	0.12	0.19	0.17	0.15	0.14	0.15
pid	1	0.00	0.20	0.04	0.05	0.02	0.68	0.02
	2	0.00	0.19	0.04	0.05	0.02	0.67	0.03
	4	0.00	0.19	0.04	0.05	0.03	0.66	0.03
	8	0.00	0.19	0.04	0.06	0.03	0.66	0.03
	Inf	0.00	0.19	0.03	0.06	0.03	0.66	0.03
c	1	0.05	0.02	0.02	0.57	0.25	0.04	0.05
	2	0.07	0.03	0.02	0.52	0.28	0.04	0.04
	4	0.06	0.08	0.01	0.50	0.25	0.06	0.04
	8	0.04	0.14	0.01	0.47	0.18	0.12	0.03
	Inf	0.02	0.12	0.00	0.32	0.10	0.42	0.02
id	1	0.03	0.88	0.01	0.02	0.00	0.02	0.03
	2	0.02	0.91	0.00	0.01	0.00	0.04	0.02
	4	0.01	0.84	0.00	0.00	0.01	0.13	0.01
	8	0.01	0.65	0.00	0.00	0.01	0.32	0.01
	Inf	0.00	0.26	0.00	0.00	0.00	0.73	0.00
n	1	0.47	0.18	0.03	0.03	0.24	0.03	0.02
	2	0.37	0.16	0.03	0.03	0.35	0.03	0.03
	4	0.27	0.29	0.02	0.02	0.32	0.06	0.02
	8	0.18	0.37	0.01	0.01	0.21	0.19	0.02
	Inf	0.07	0.22	0.01	0.01	0.08	0.60	0.01

FIGURES

Figure 1: Priors

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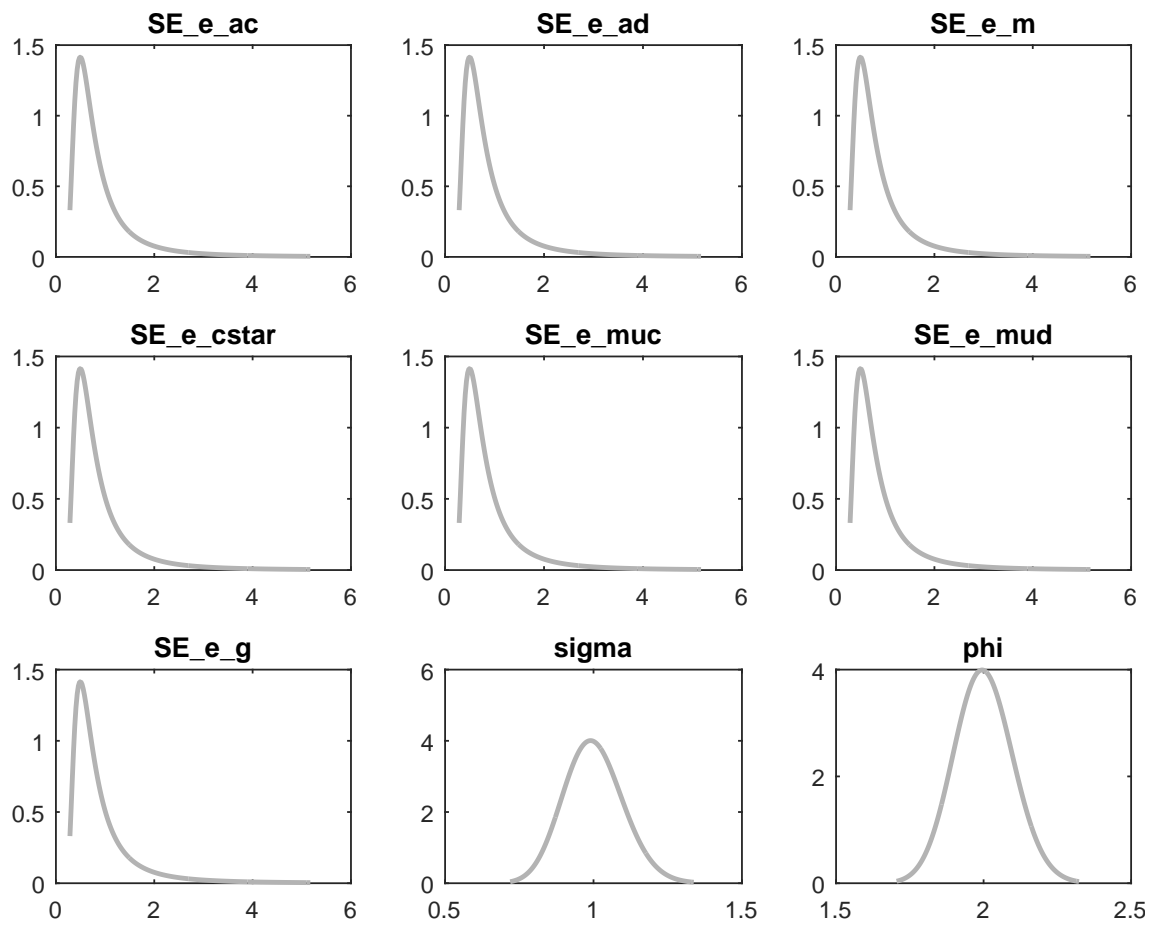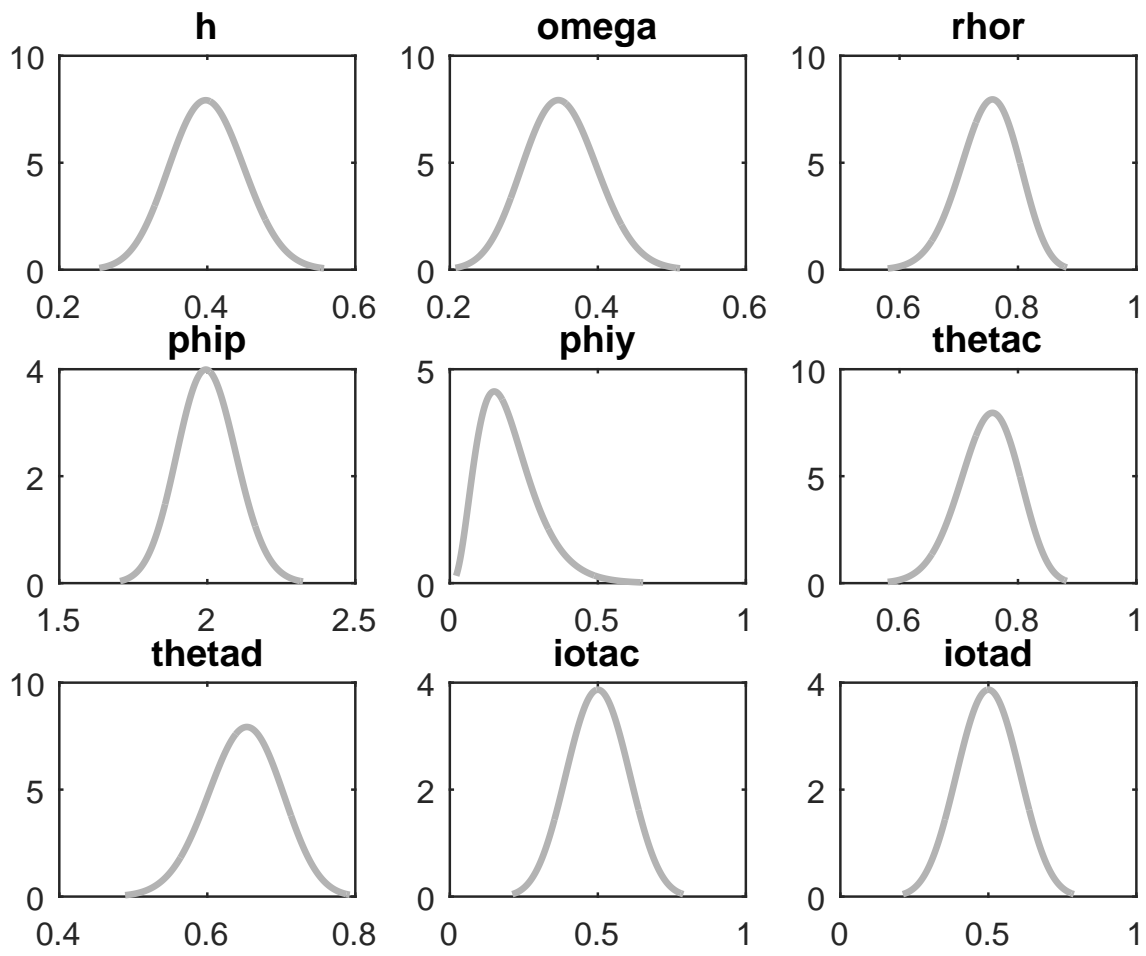
Figure 2: Priors

Figure 3: Priors
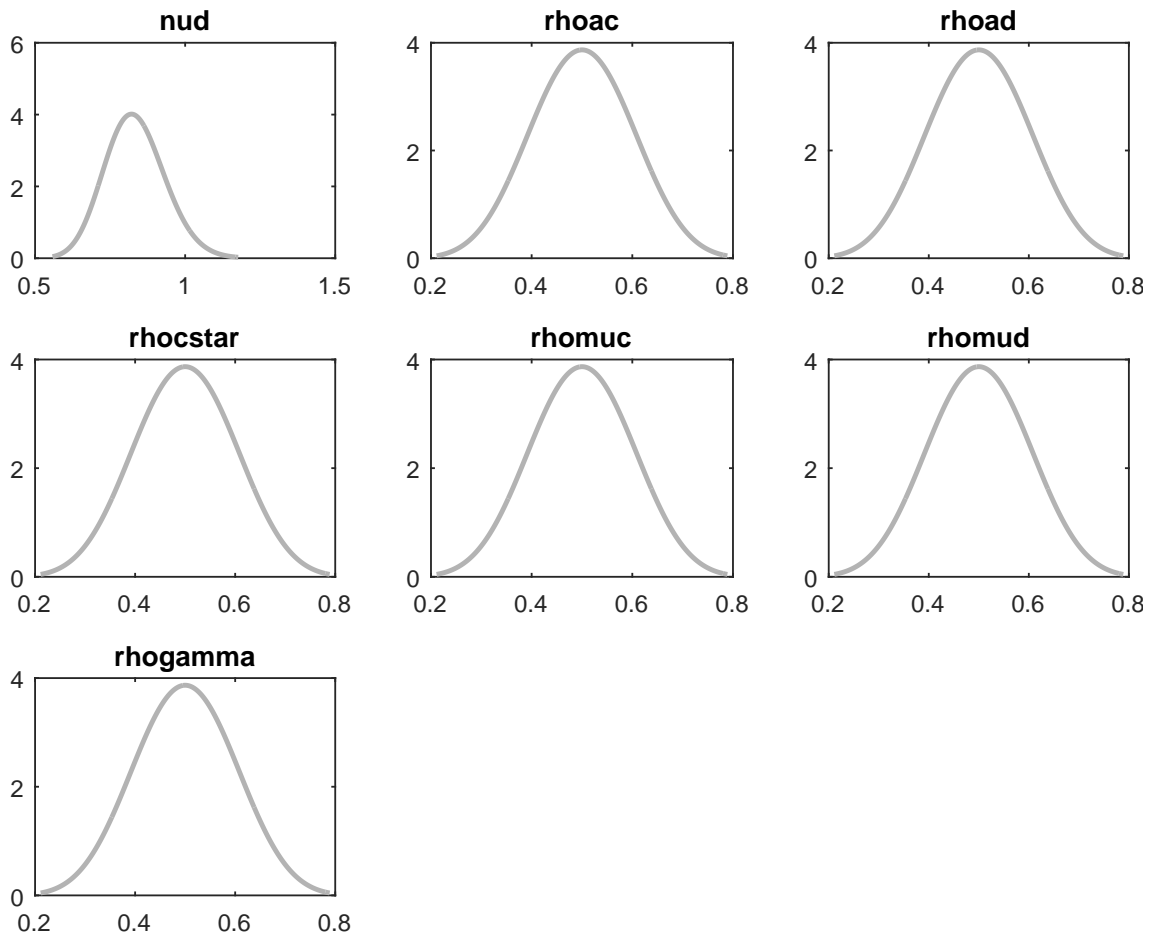
Figure 4: Mode check plots
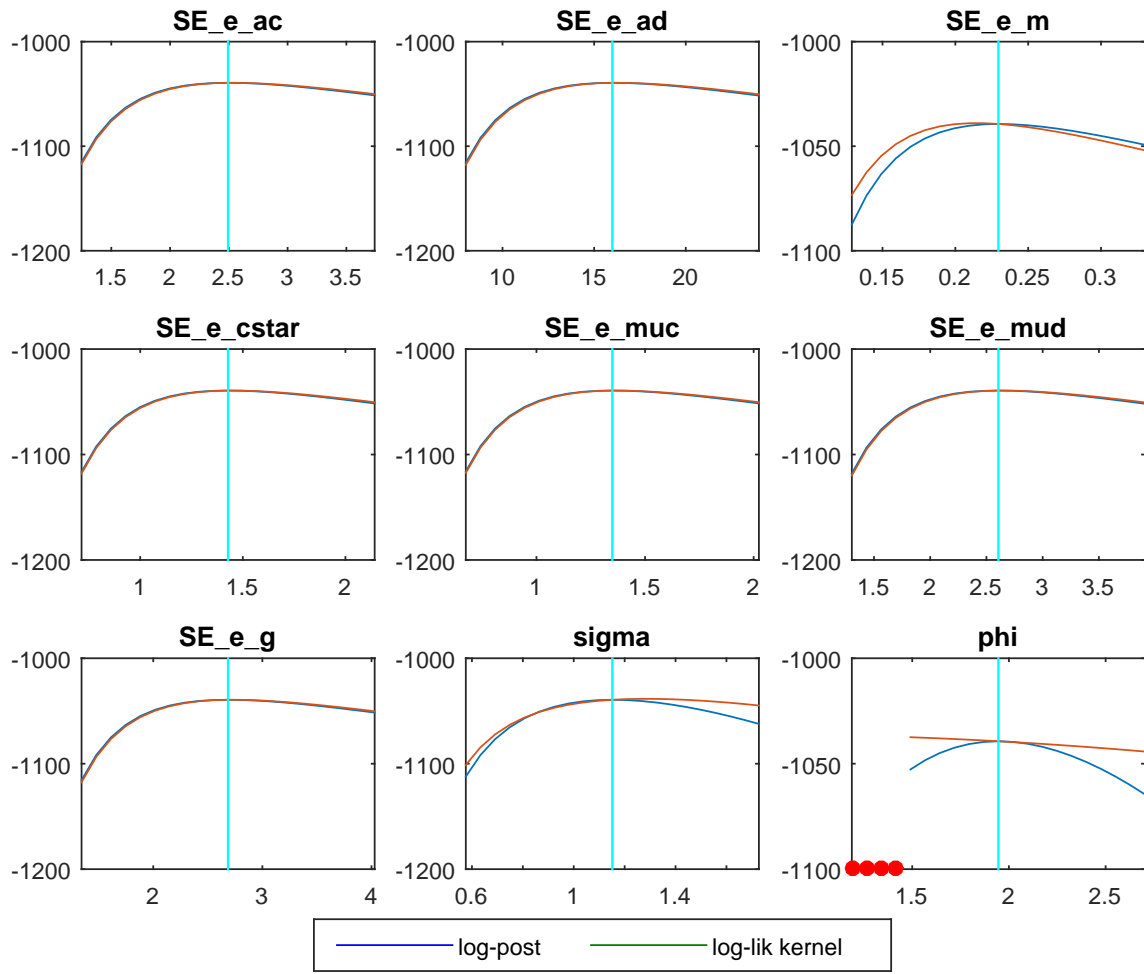
Figure 5: Mode check plots
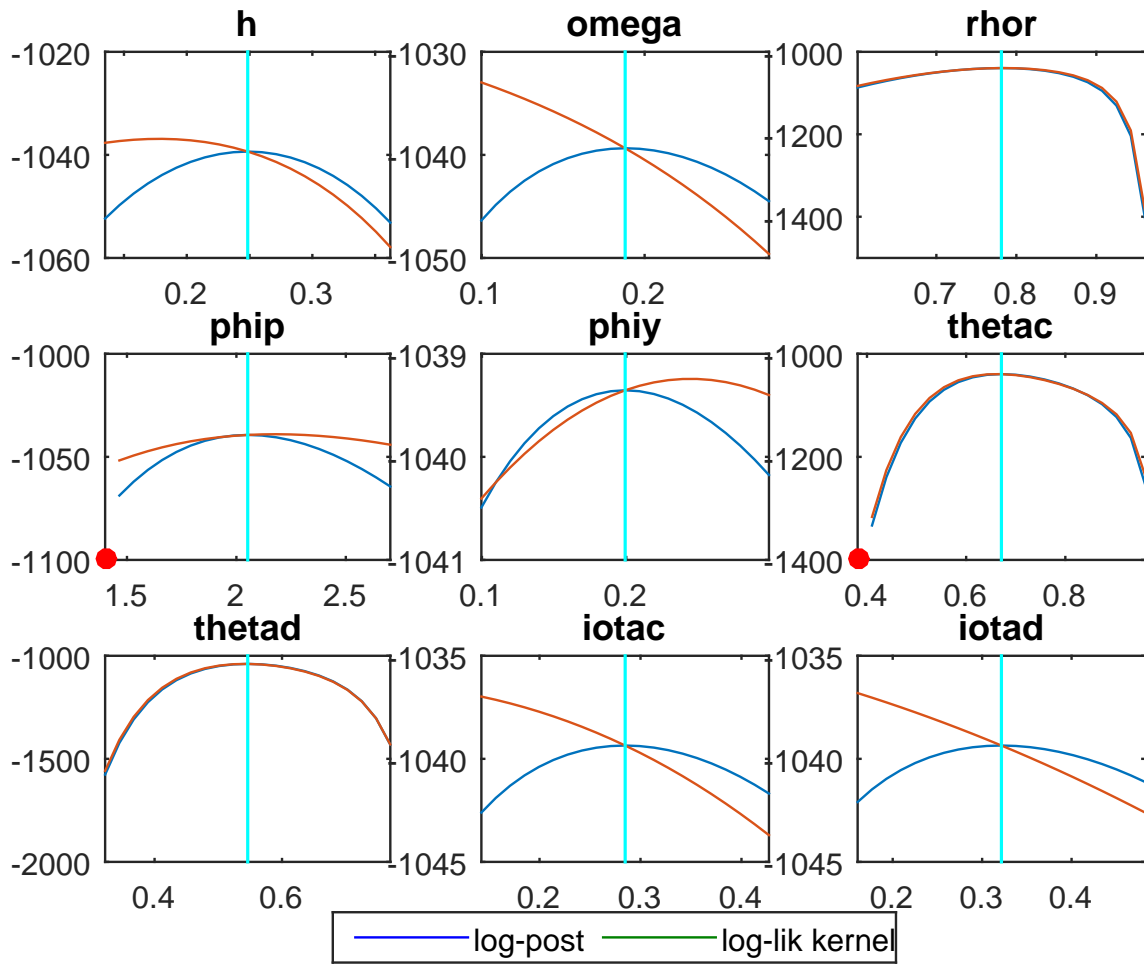
Figure 6: Mode check plots
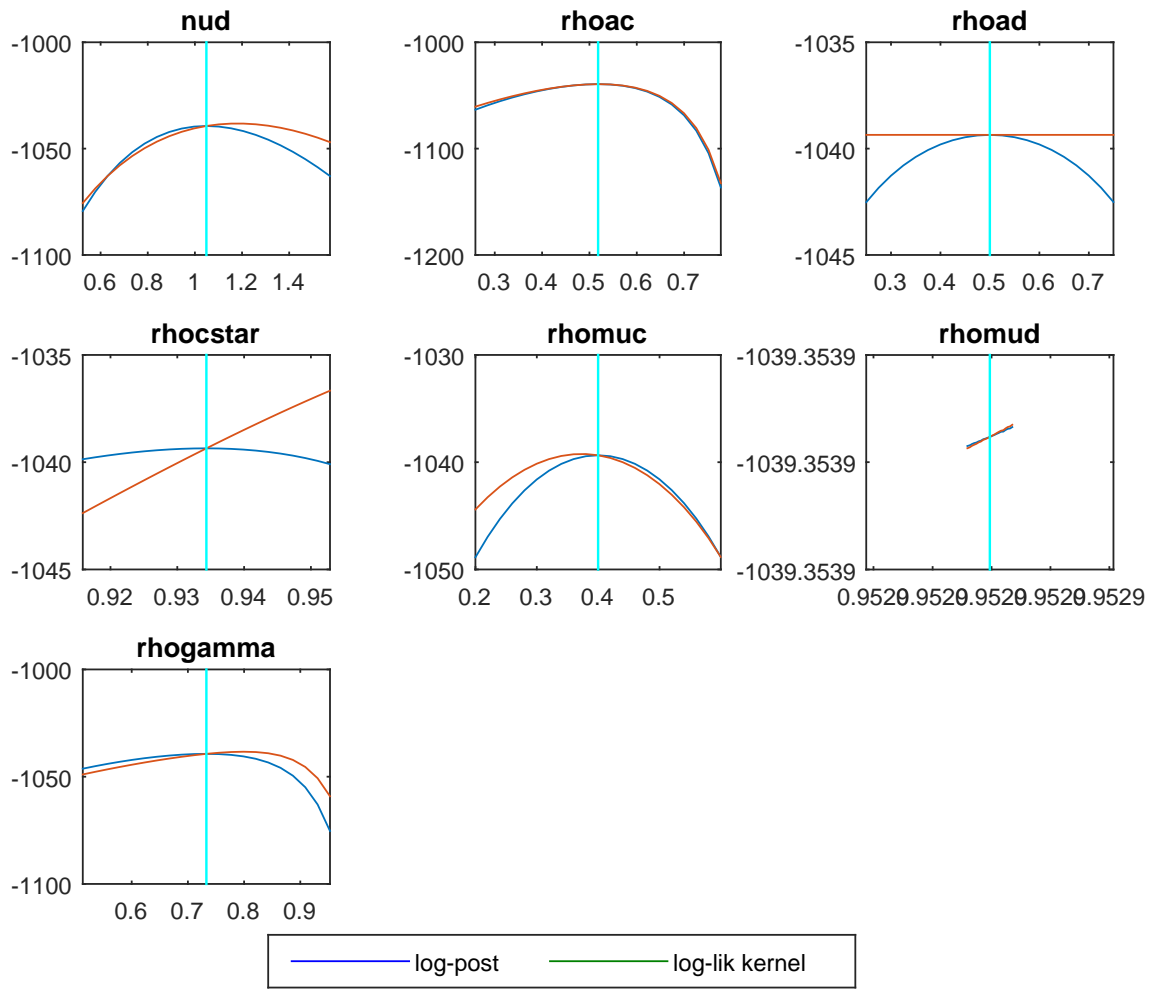
Figure 7: MCMC univariate convergence diagnostic (Brooks and Gelman, 1998)
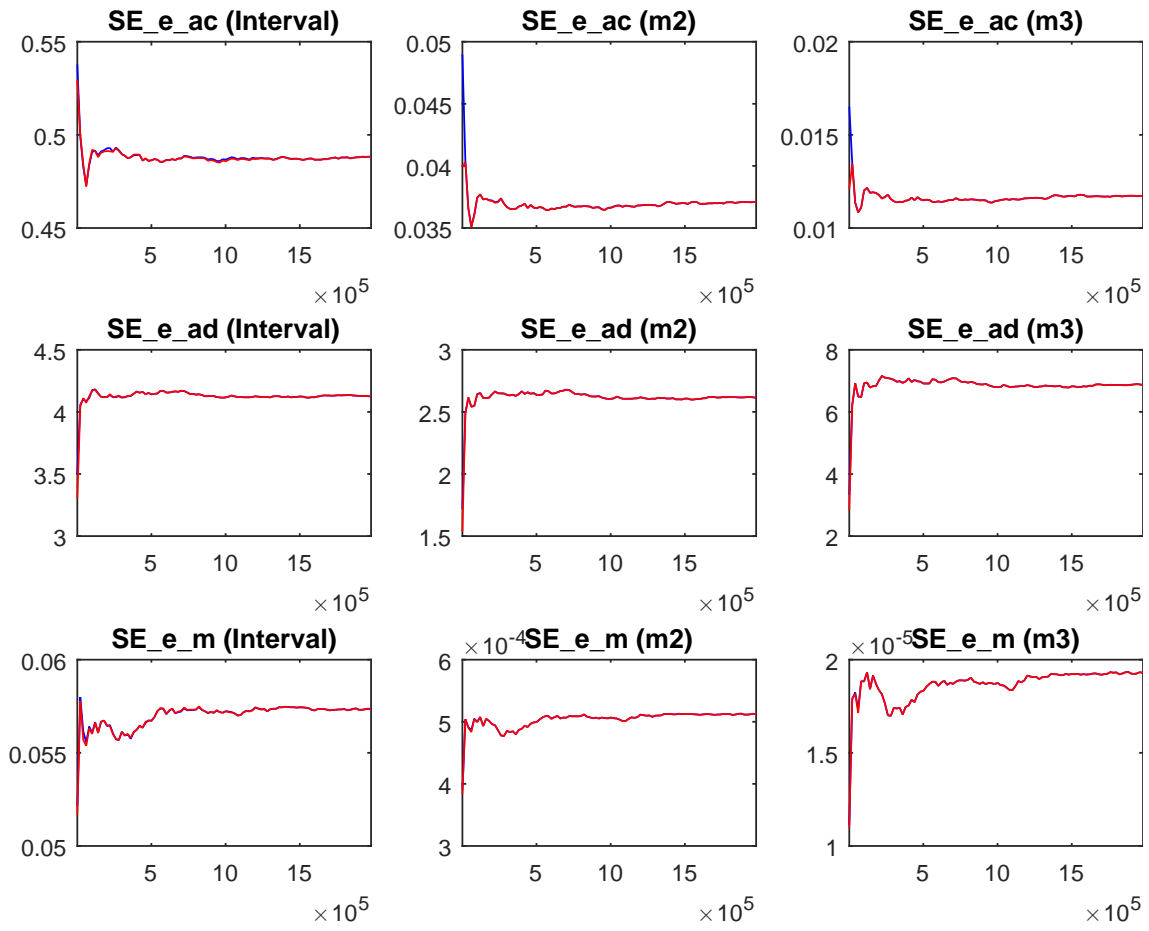
Figure 8: MCMC univariate convergence diagnostic (Brooks and Gelman, 1998)
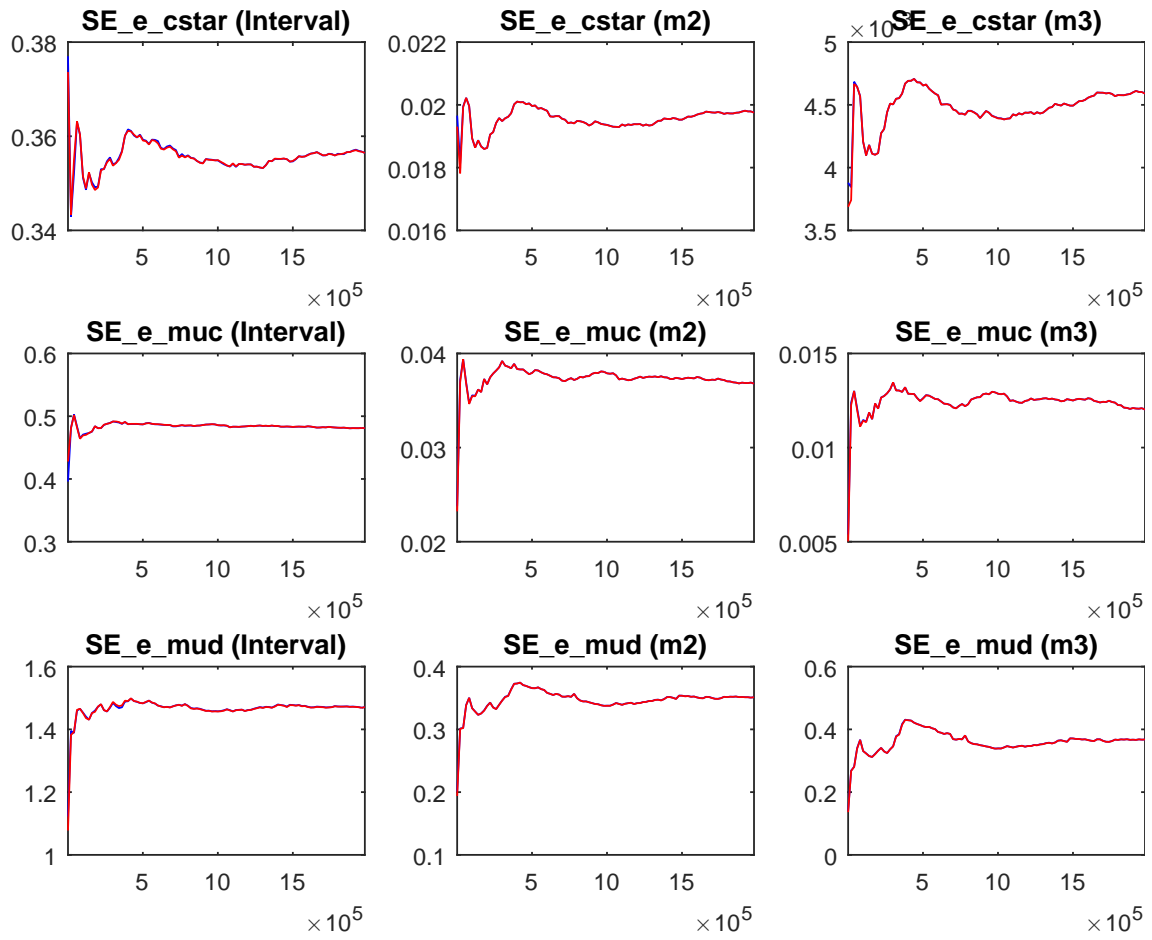
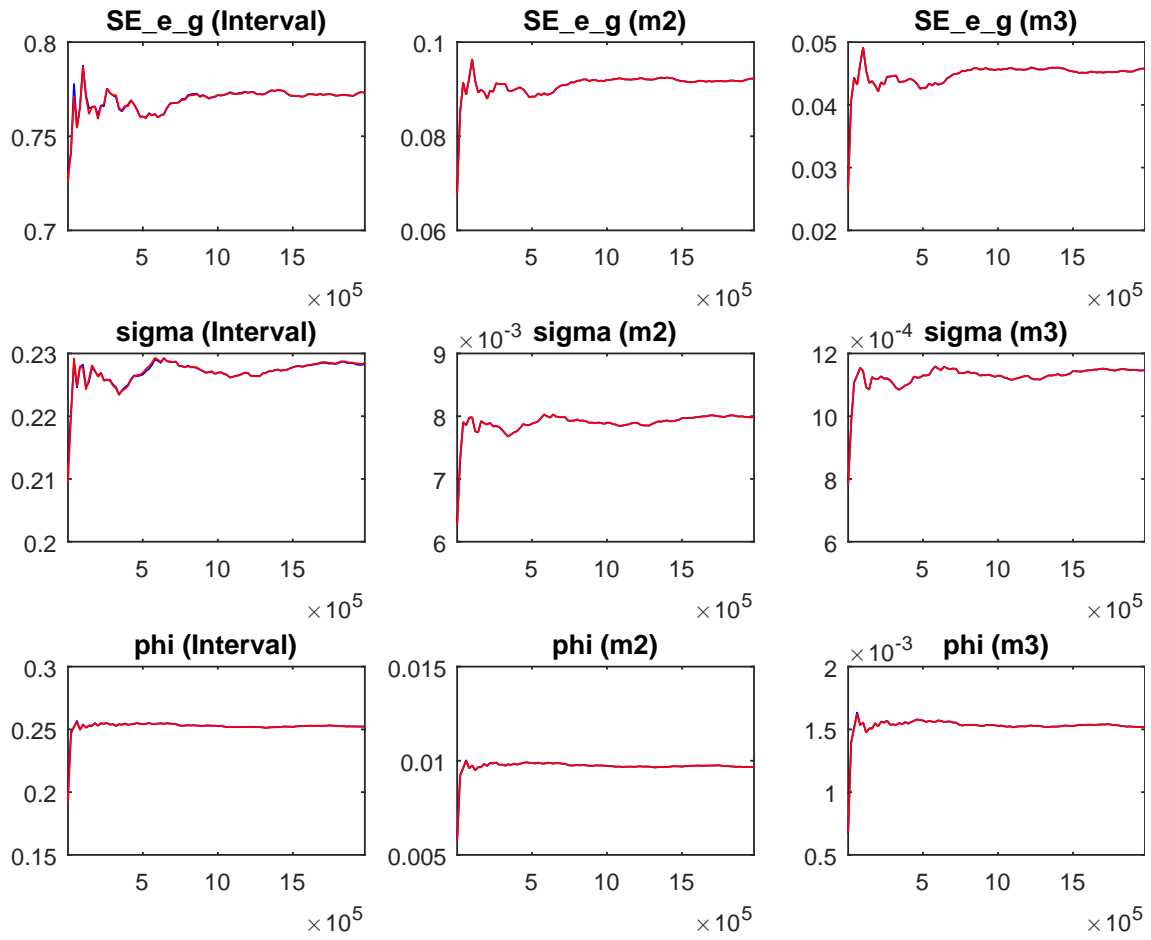Figure 9: MCMC univariate convergence diagnostic (Brooks and Gelman, 1998)

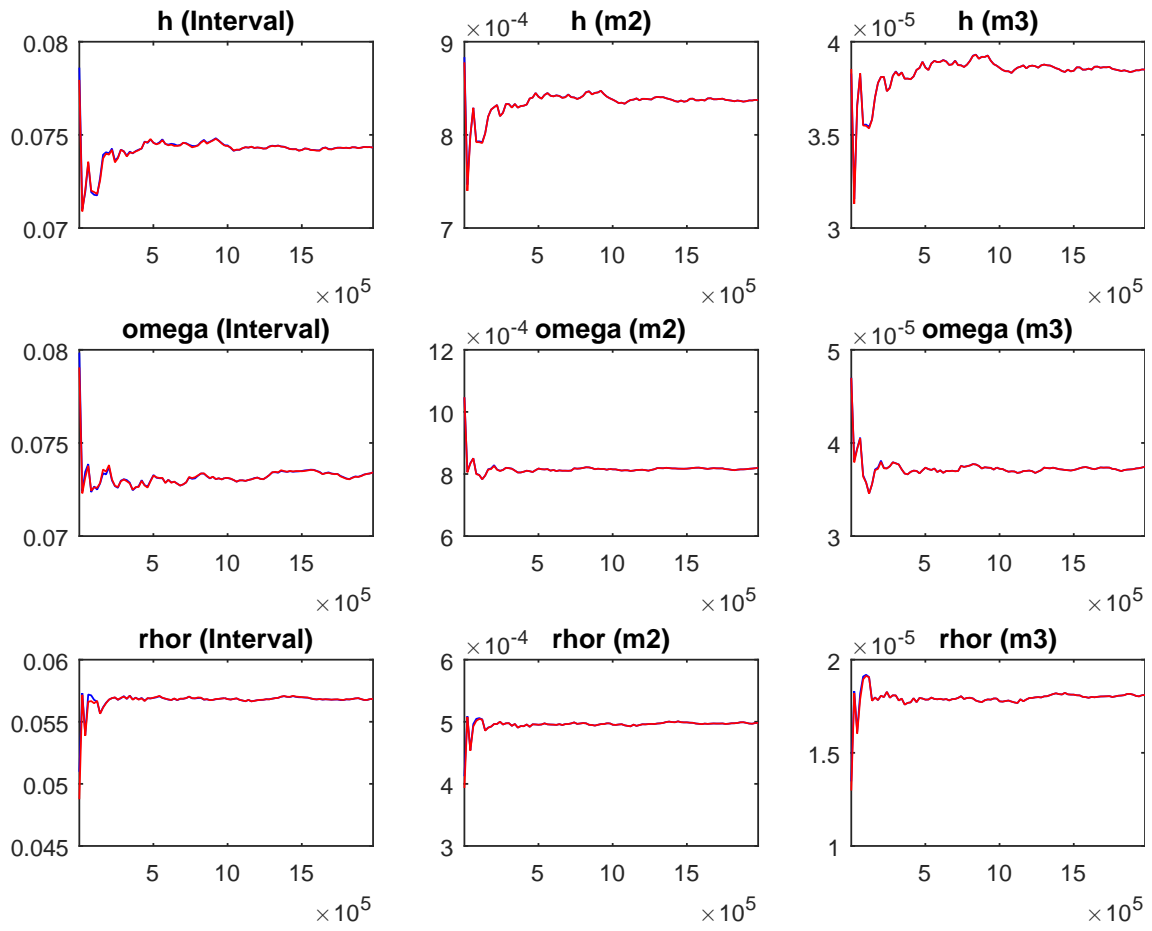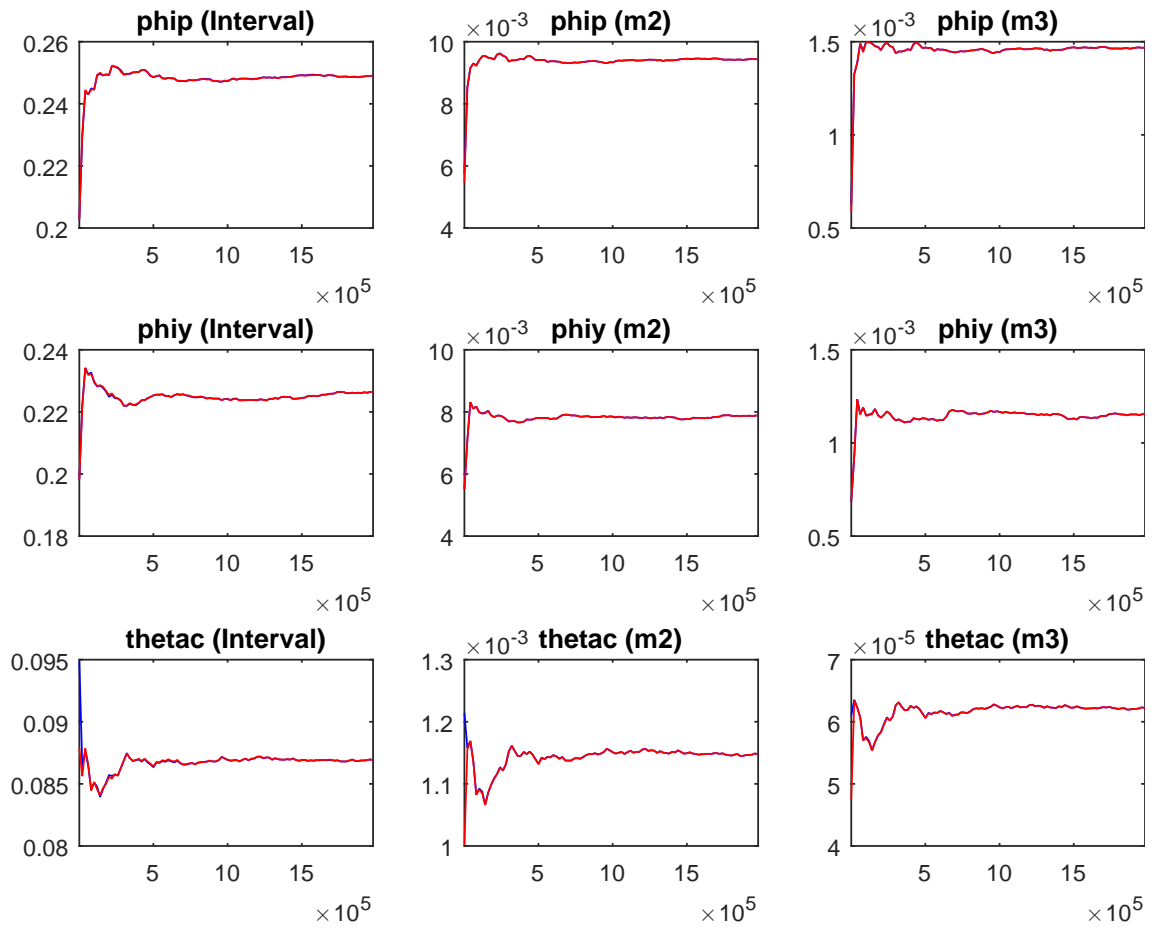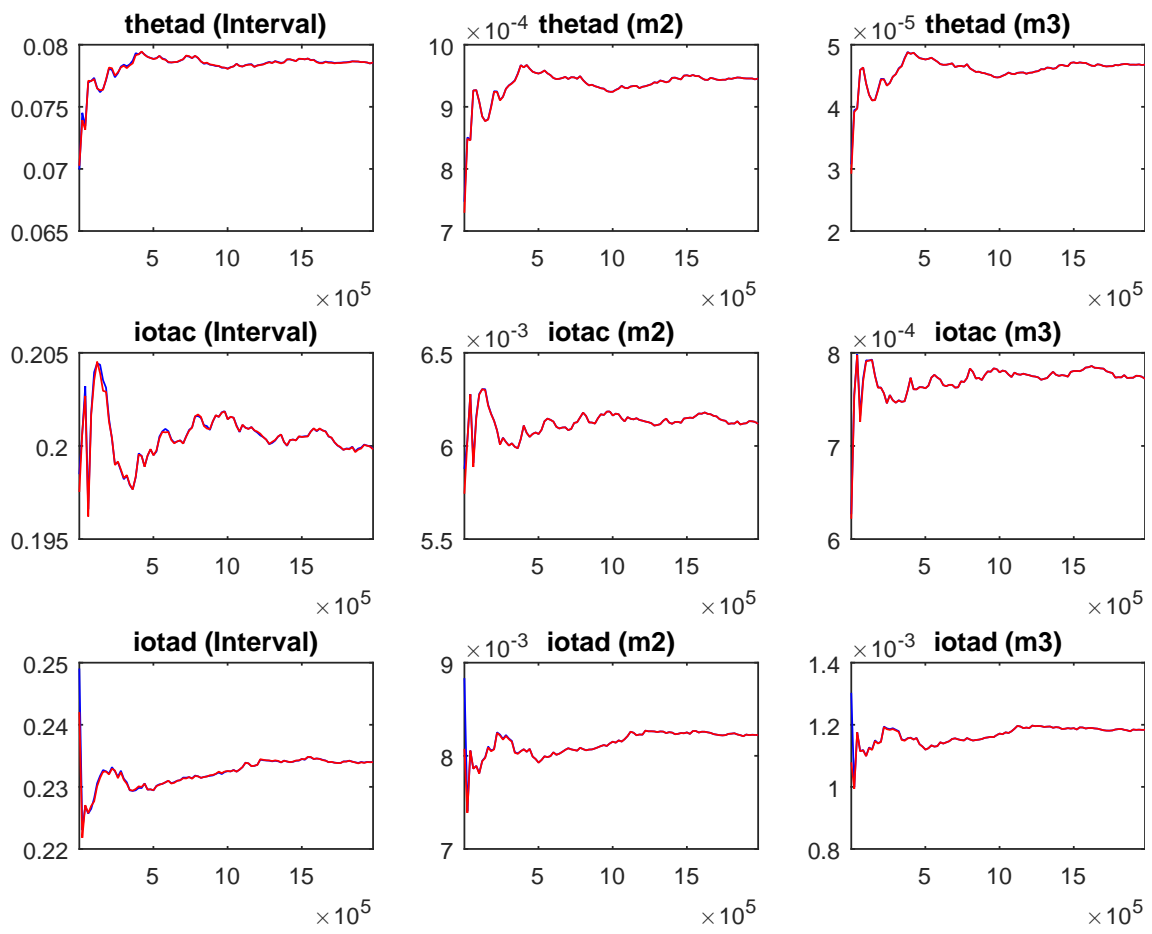Figure 10: MCMC univariate convergence diagnostic (Brooks and Gelman, 1998)

Figure 11: MCMC univariate convergence diagnostic (Brooks and Gelman, 1998)

Figure 12: Convergence diagnostic

Figure 13: Convergence diagnostic
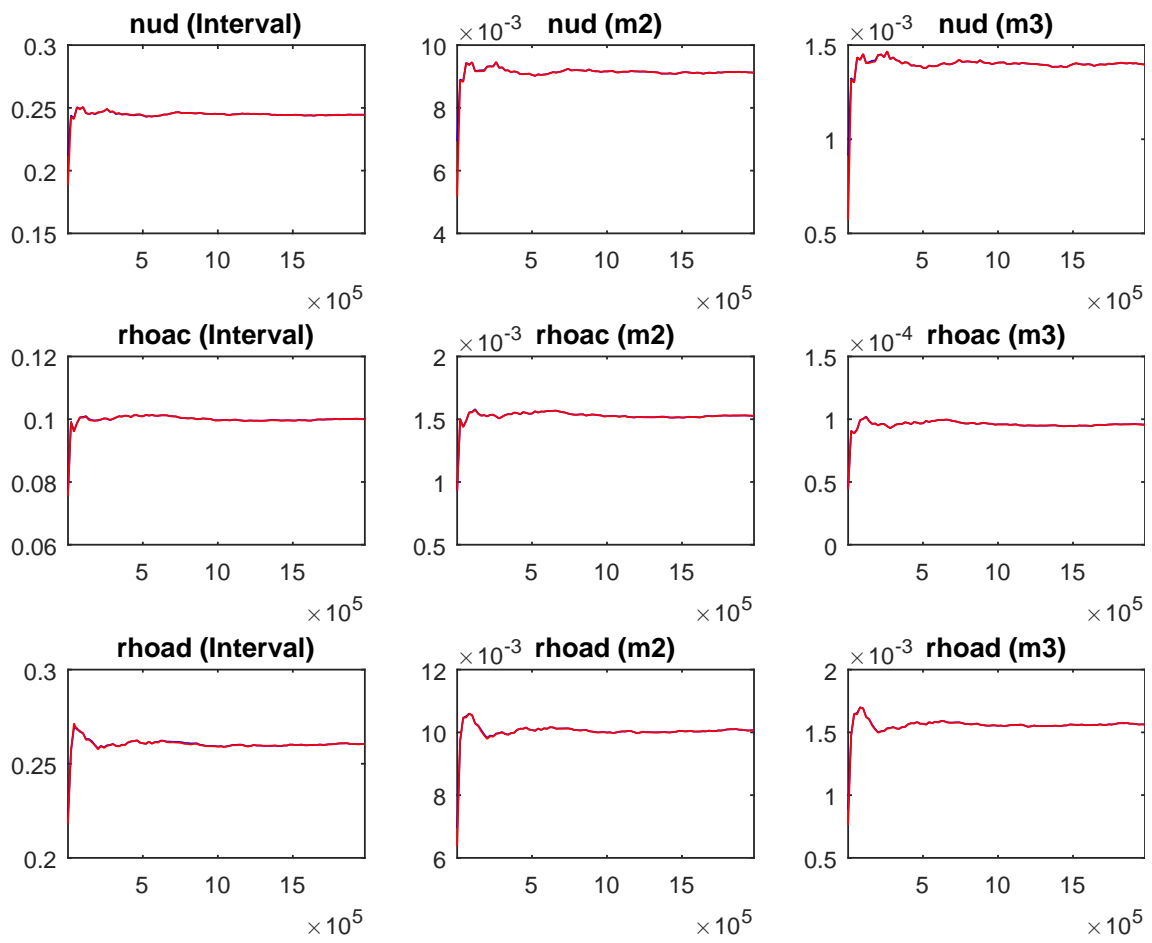
Figure 14: Convergence diagnostic
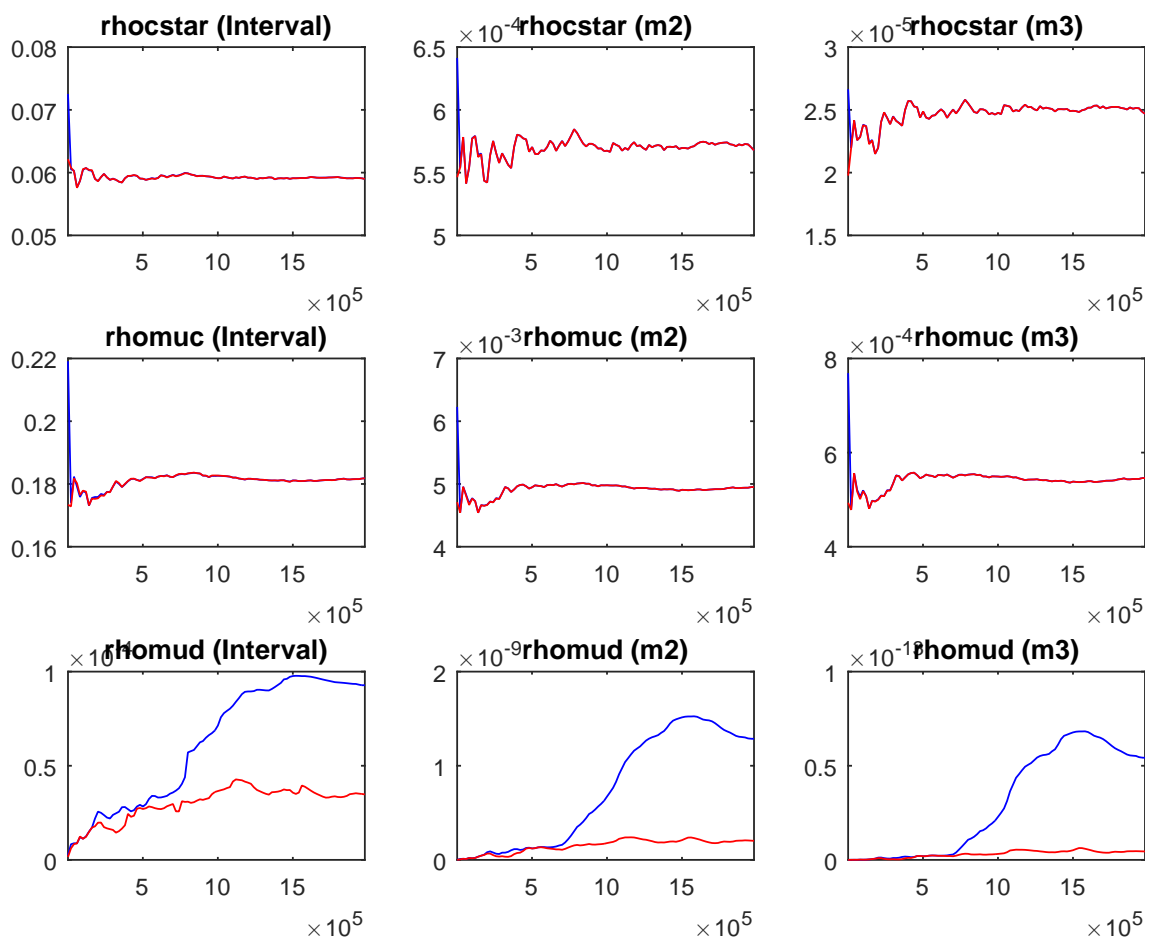
Figure 15: Convergence diagnostic
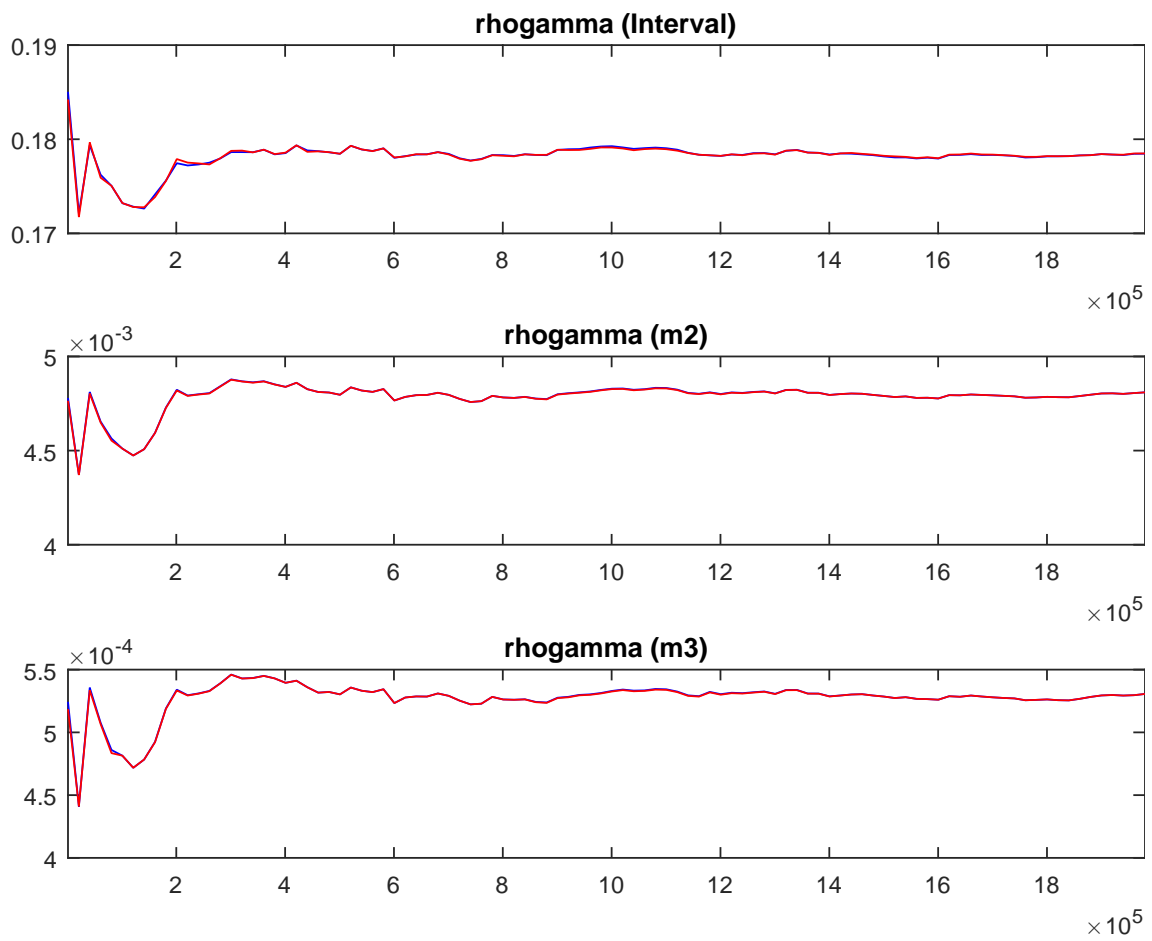
Figure 16: Convergence diagnostic
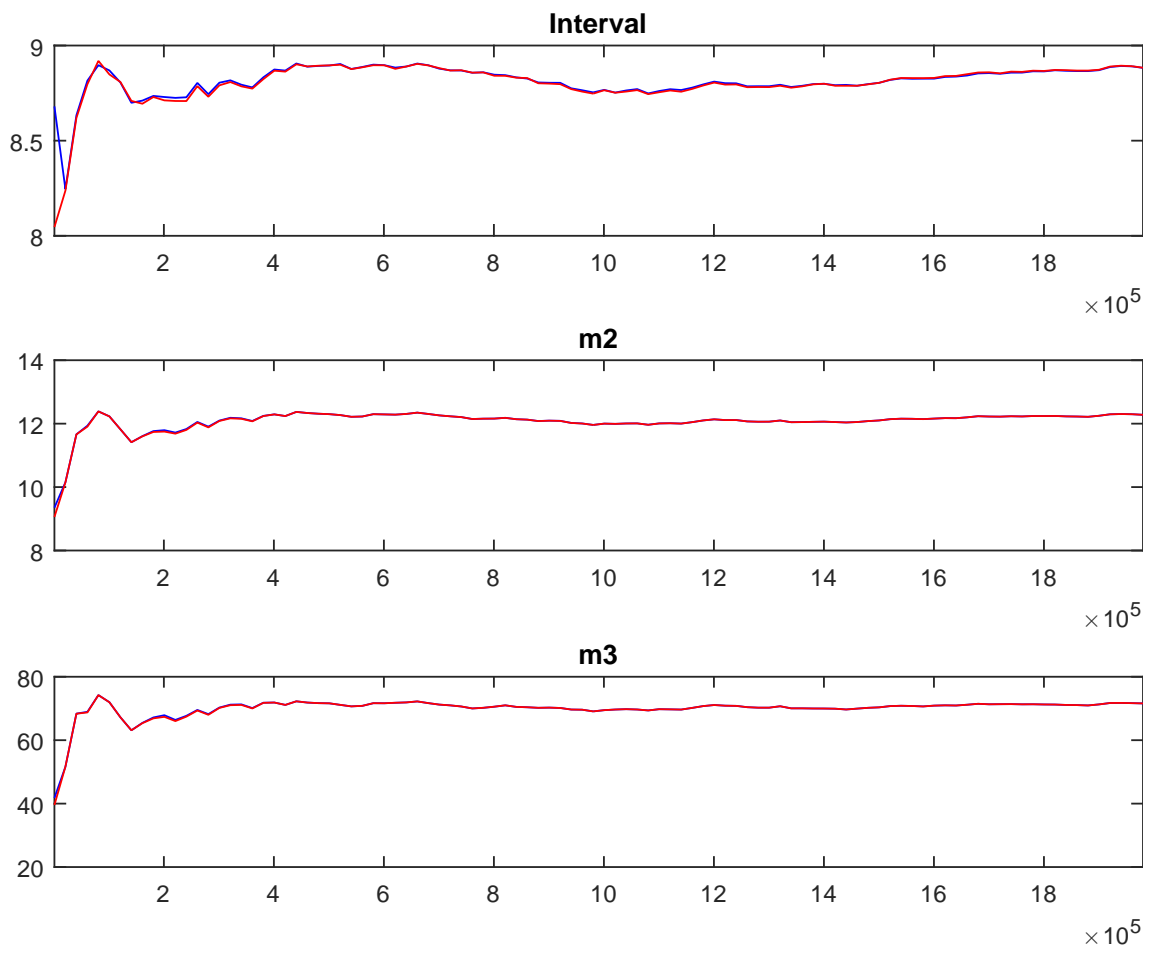
Figure 17: Priors and posteriors
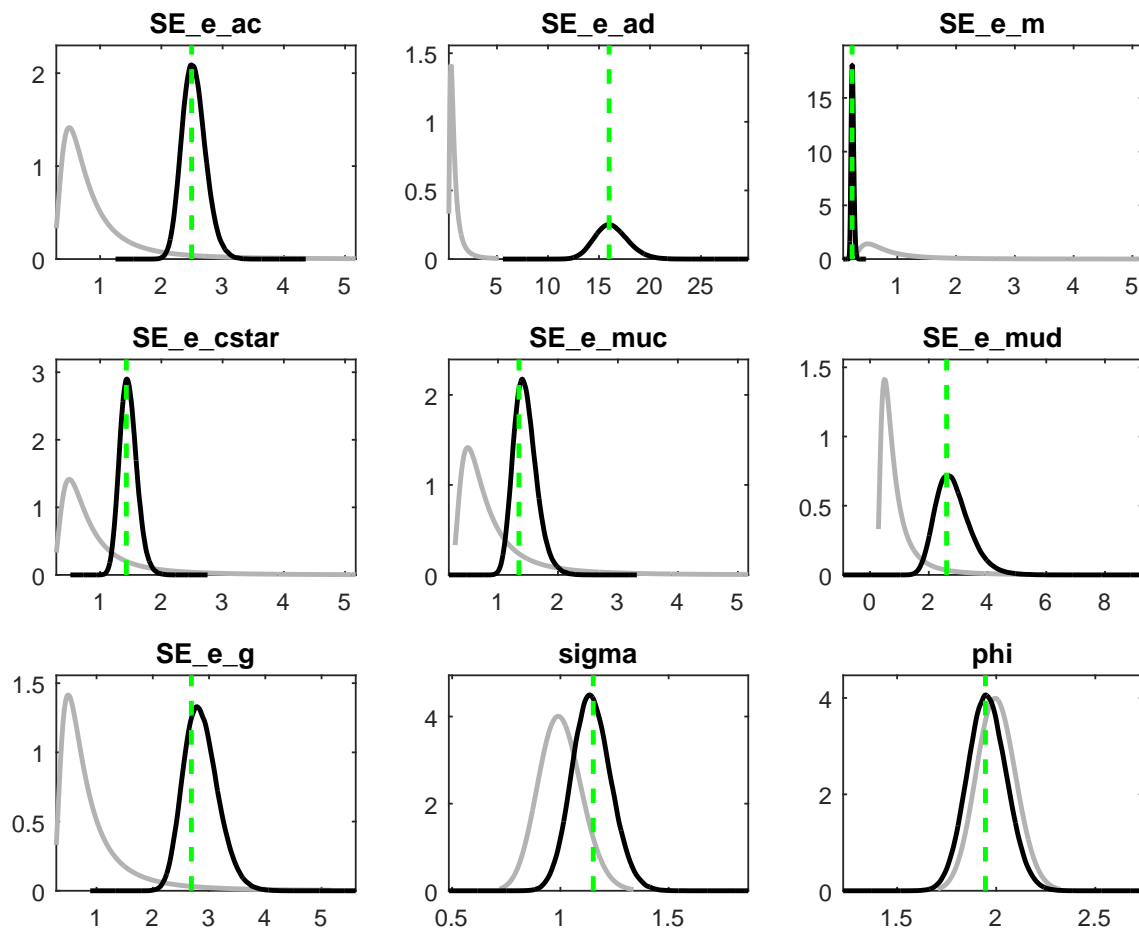
Figure 18: Priors and posteriors
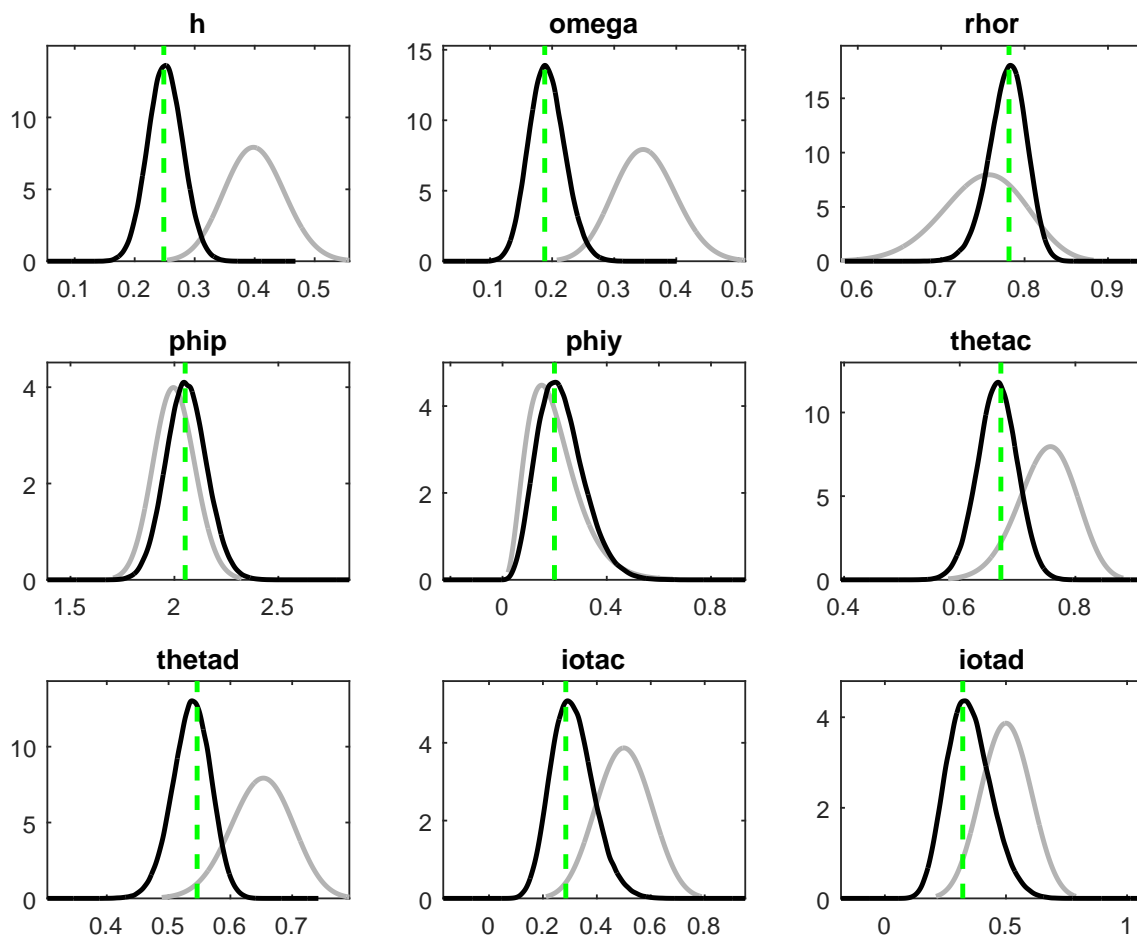
Figure 19: Orthogonalized shock to e_{ac}
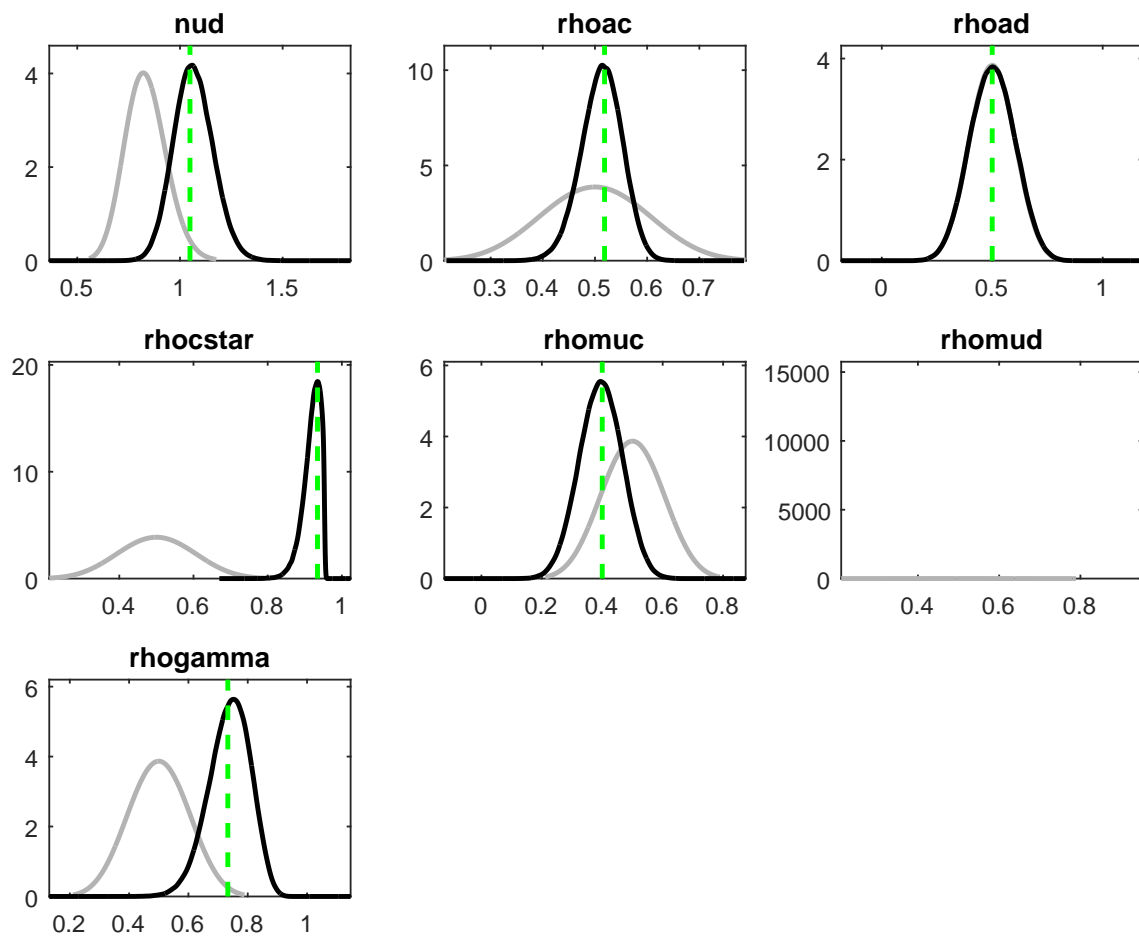
Figure 20: Orthogonalized shock to e_{ac}
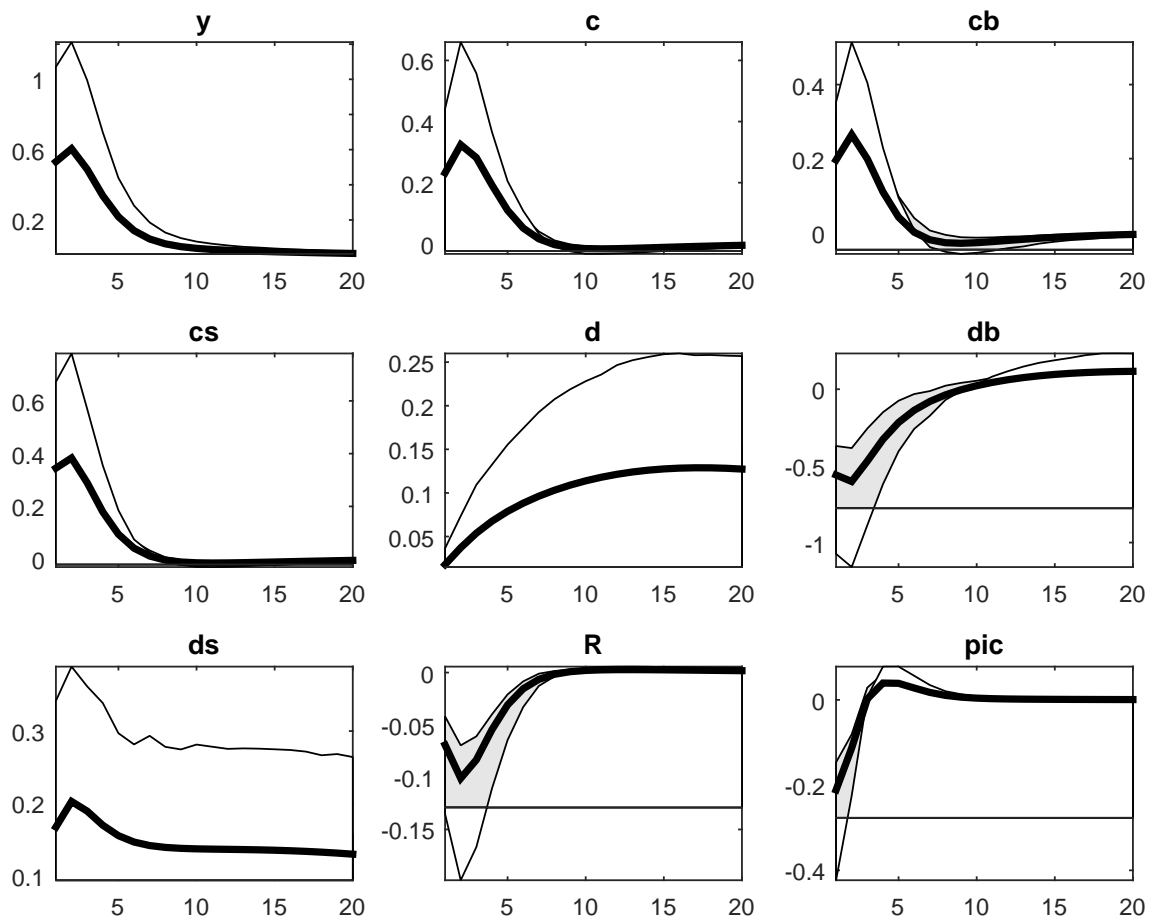
Figure 21: Orthogonalized shock to e_{ad}
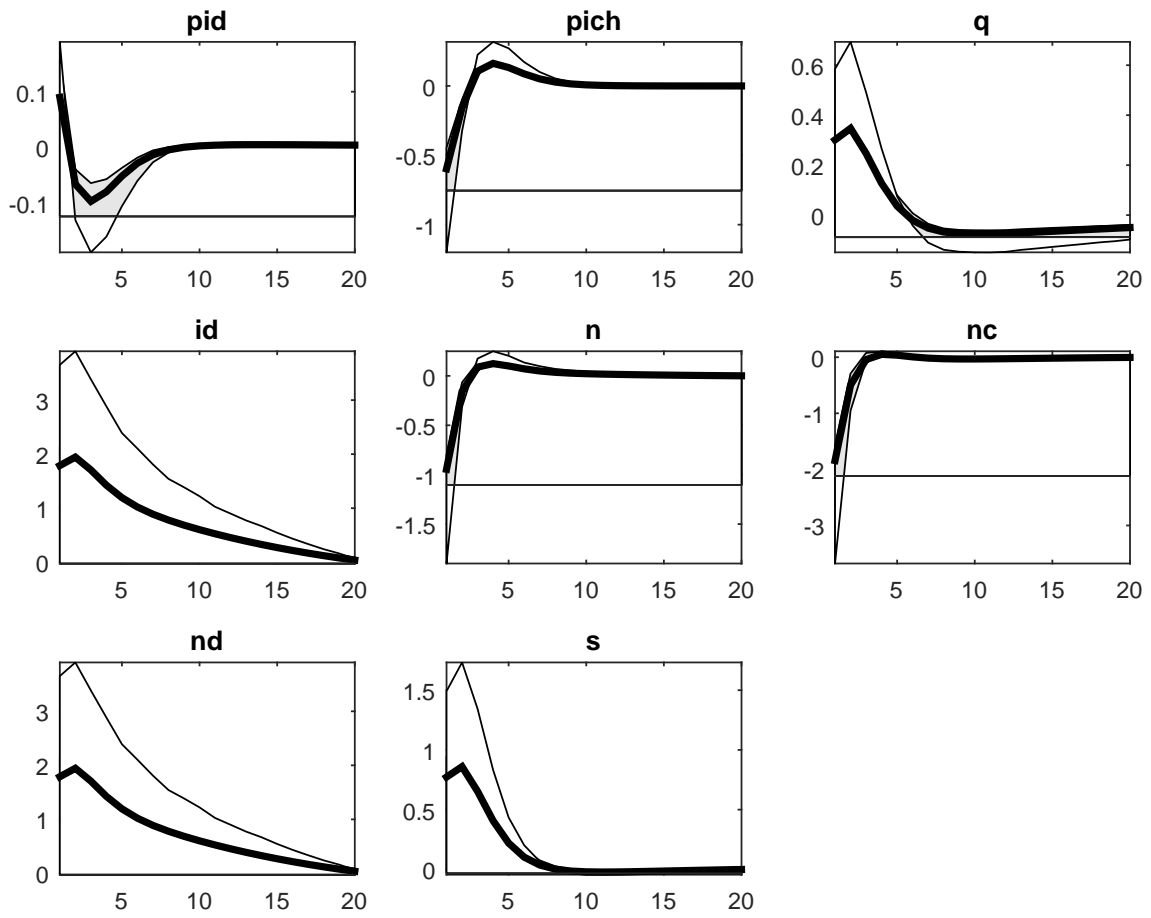
Figure 22: Orthogonalized shock to e_{ad}
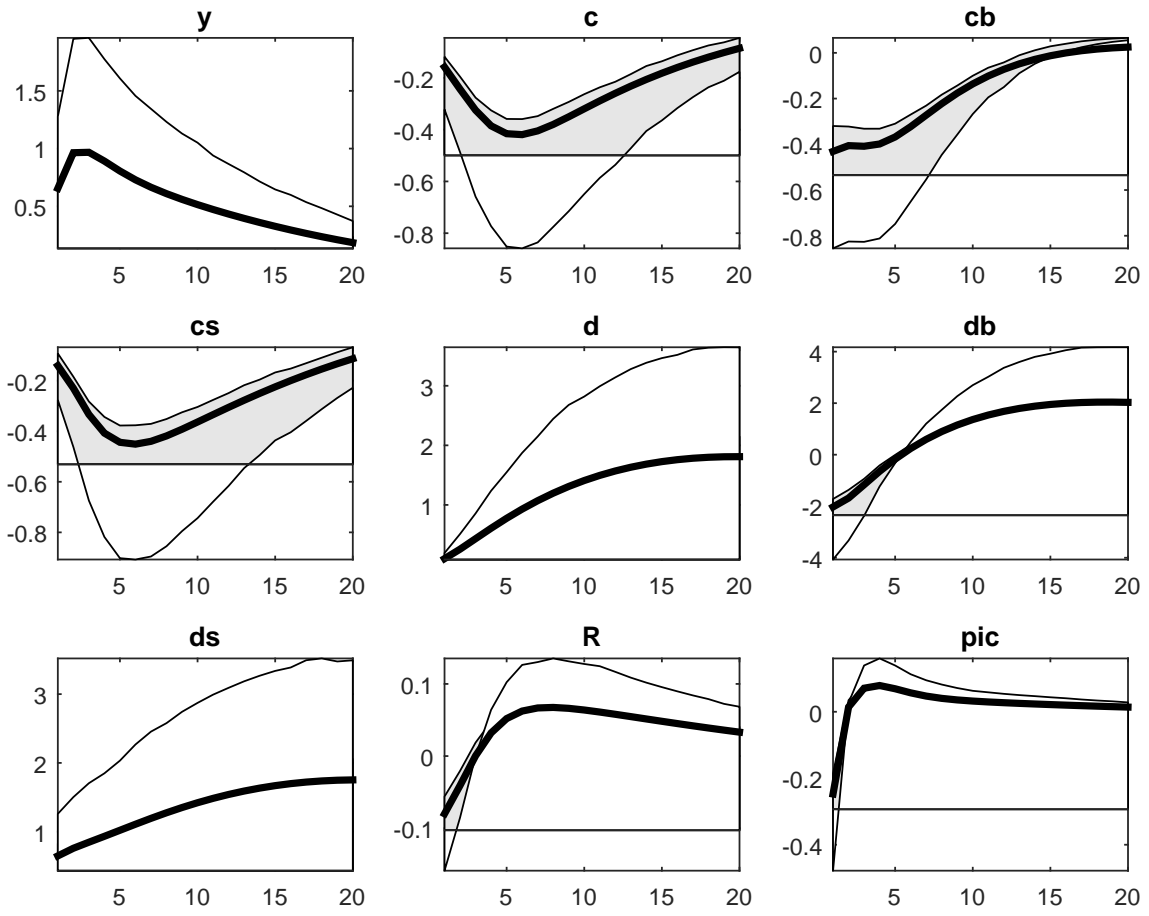
Figure 23: Orthogonalized shock to e_m
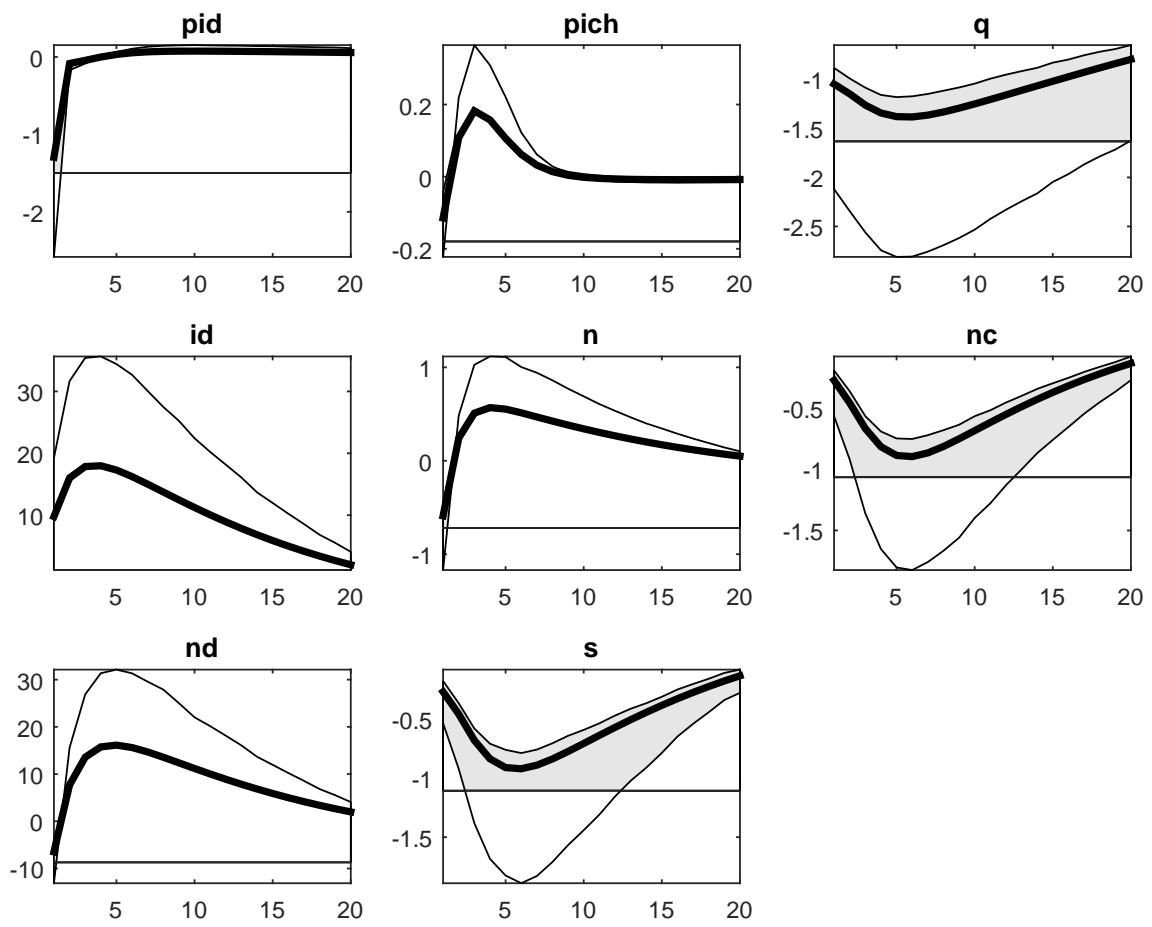
Figure 24: Orthogonalized shock to e_m
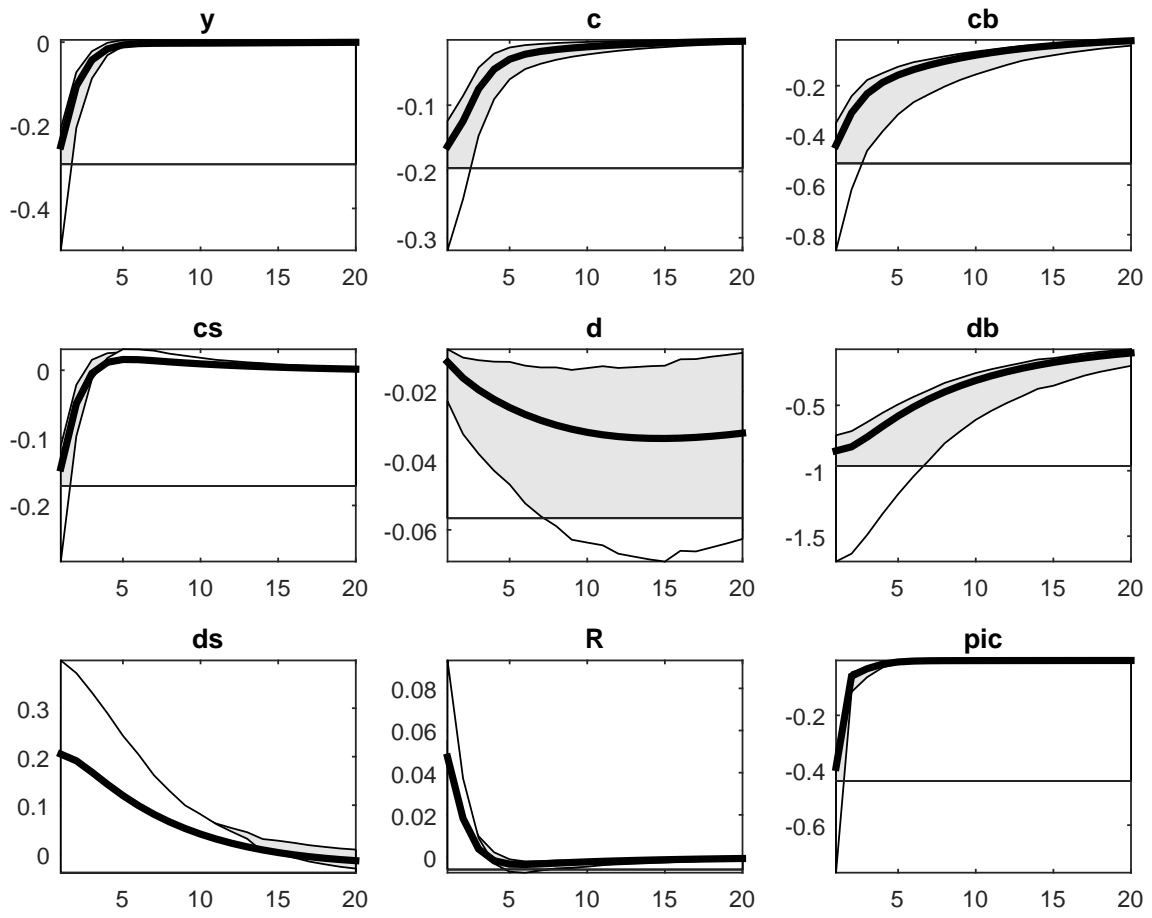
Figure 25: Orthogonalized shock to e_{cstar}
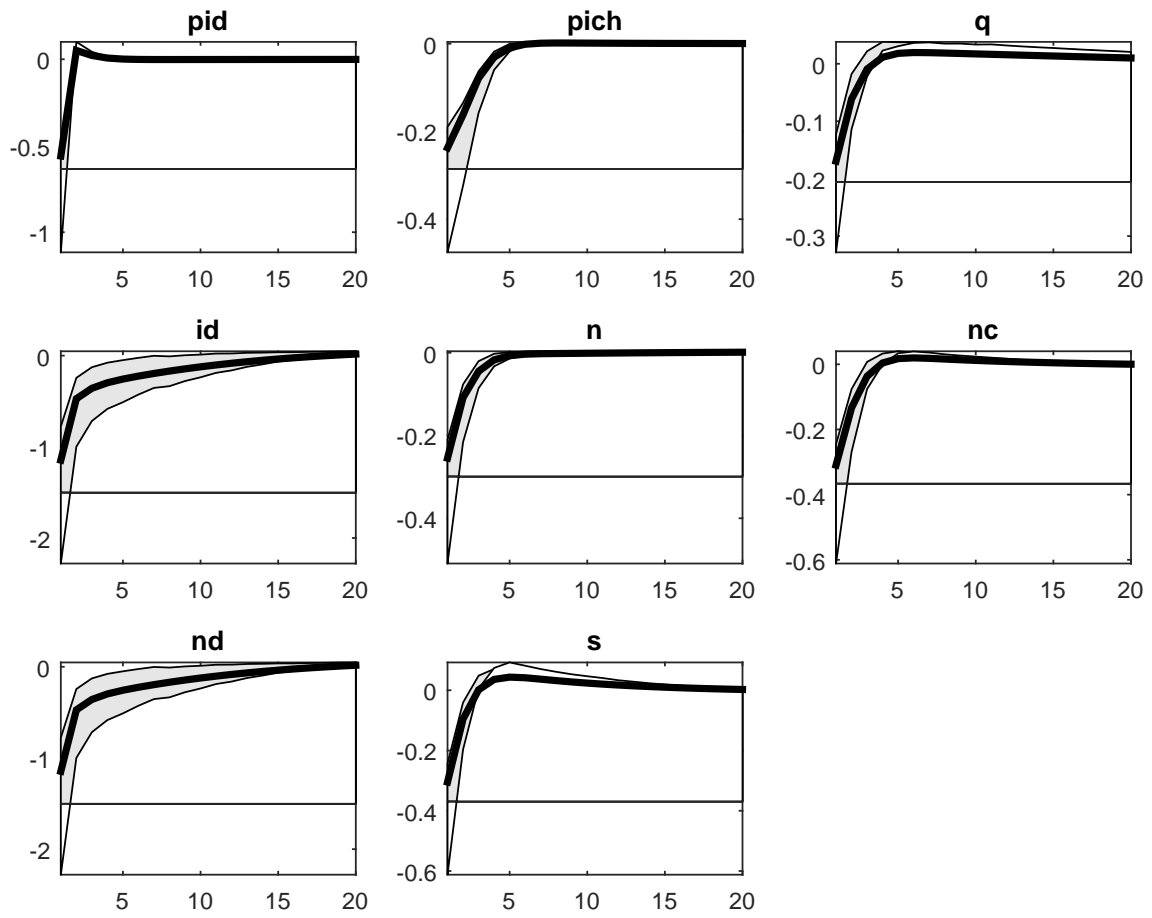
Figure 26: Orthogonalized shock to e_{cstar}
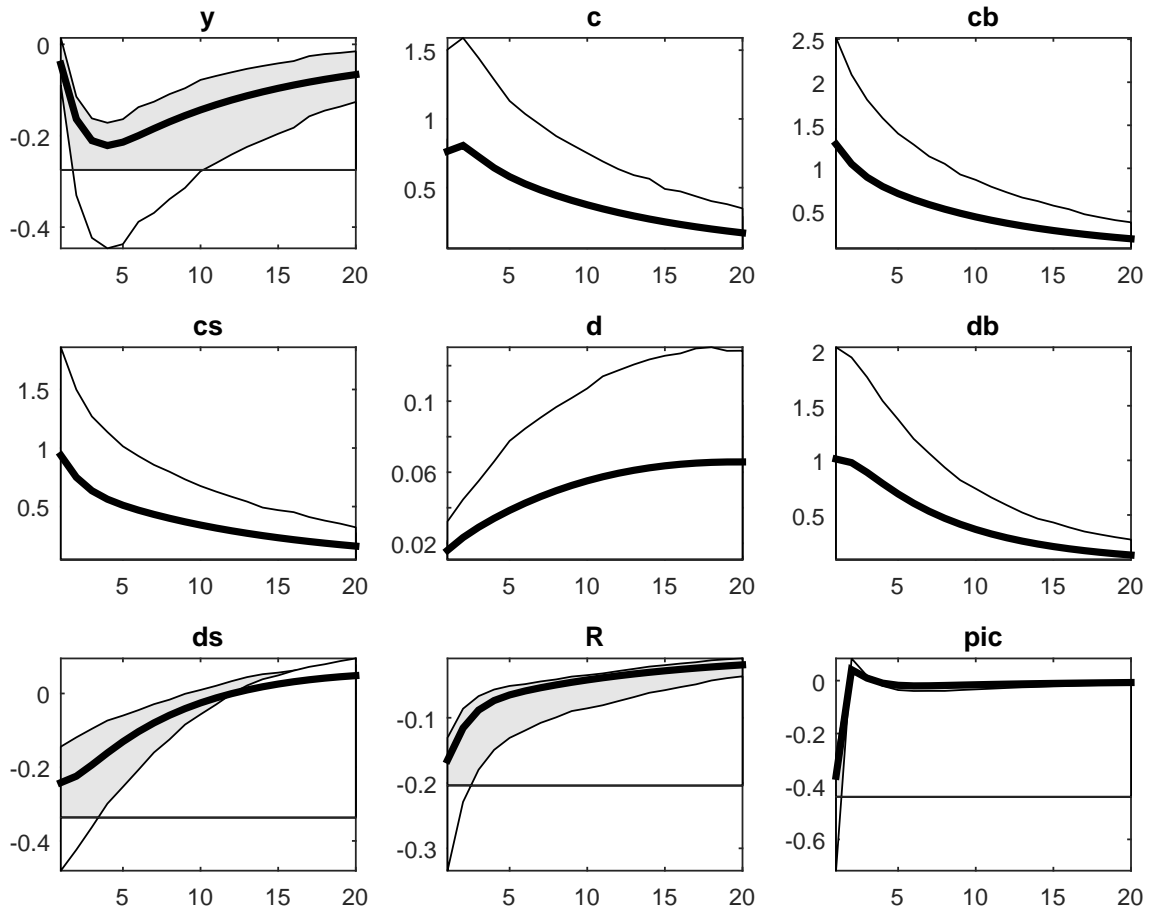
Figure 27: Orthogonalized shock to e_{muc}
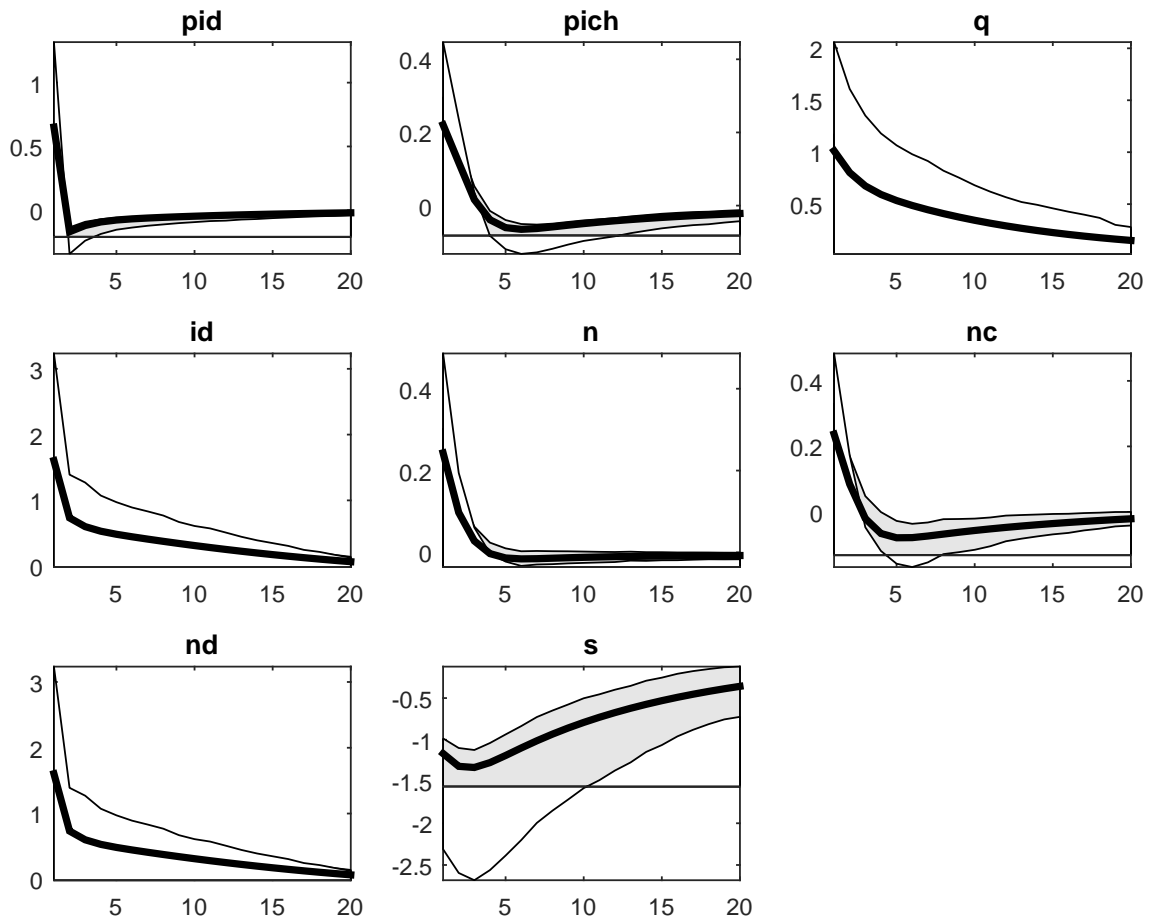
Figure 28: Orthogonalized shock to e_{muc}
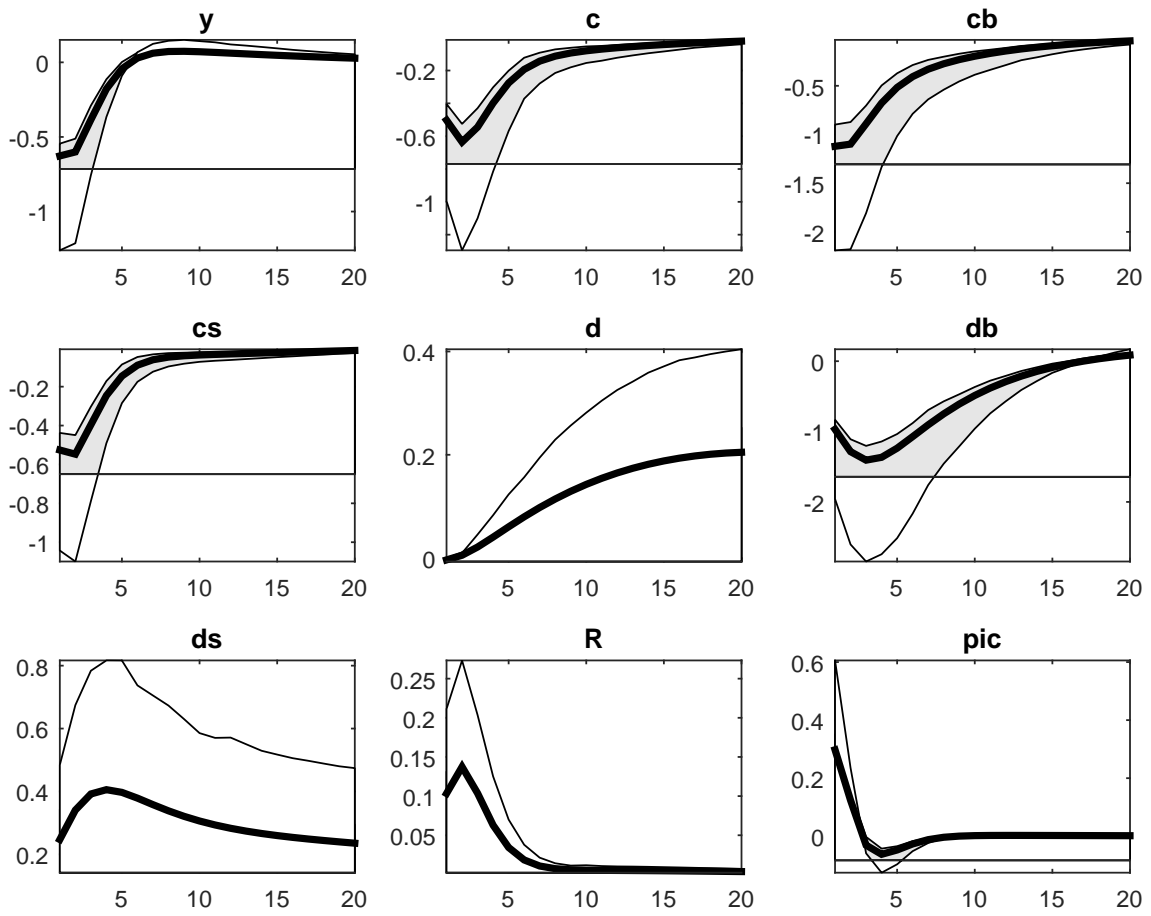
Figure 29: Orthogonalized shock to e_{mud}
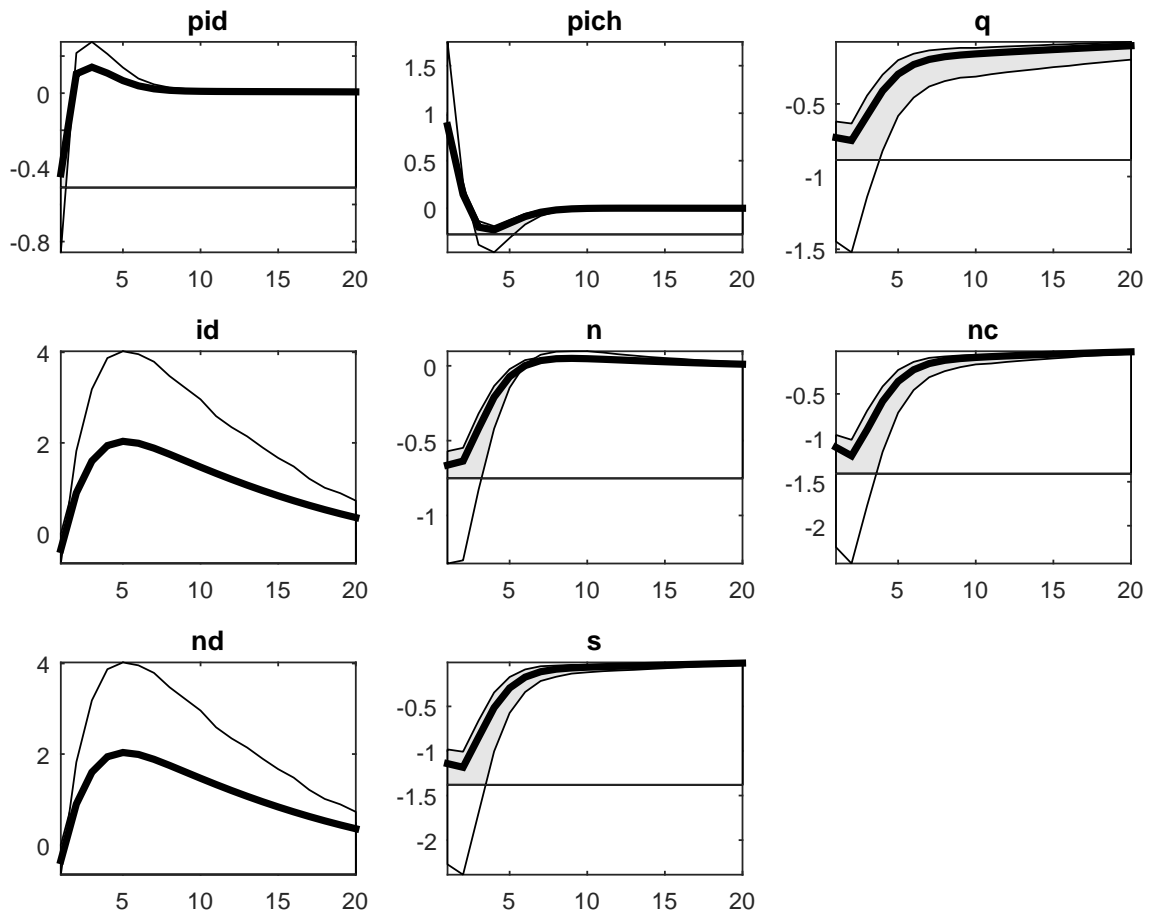
Figure 30: Orthogonalized shock to e_{mud}
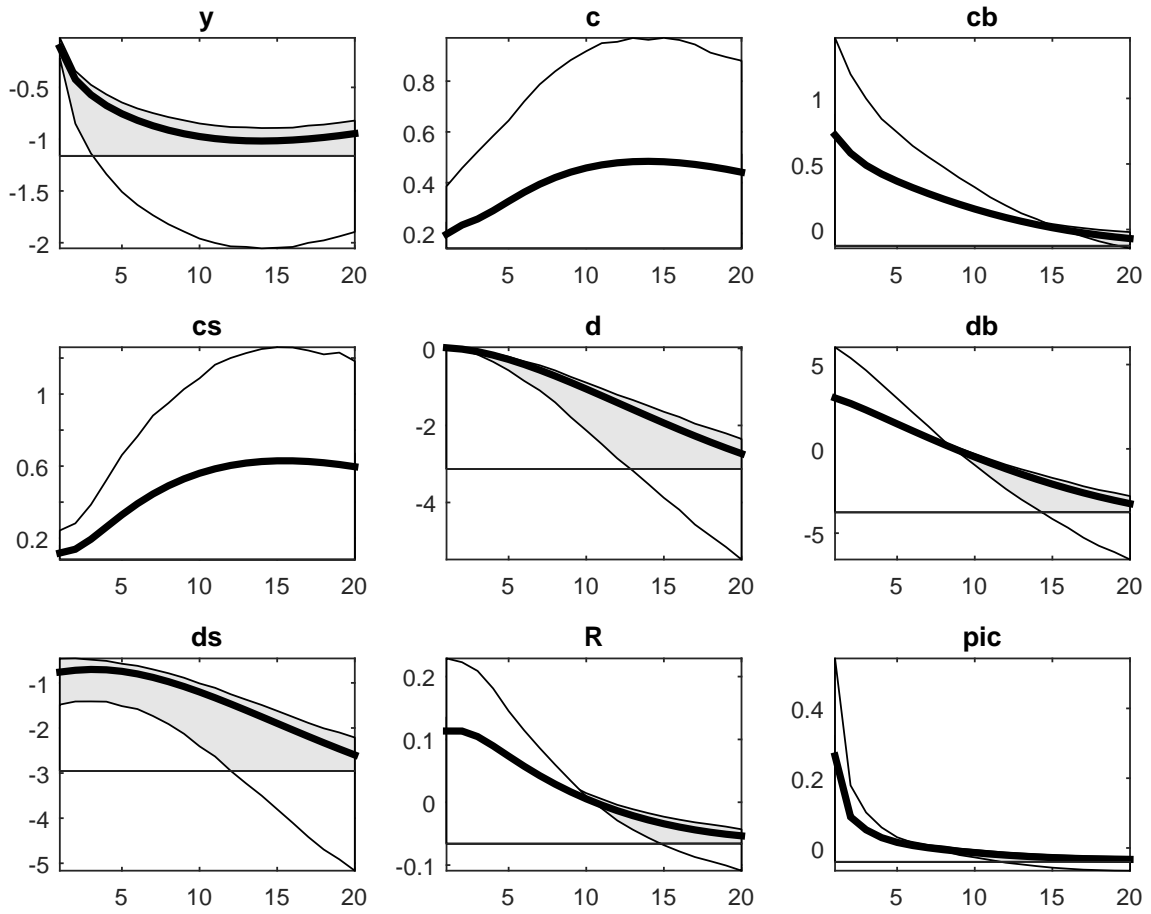
Figure 31: Orthogonalized shock to e_g
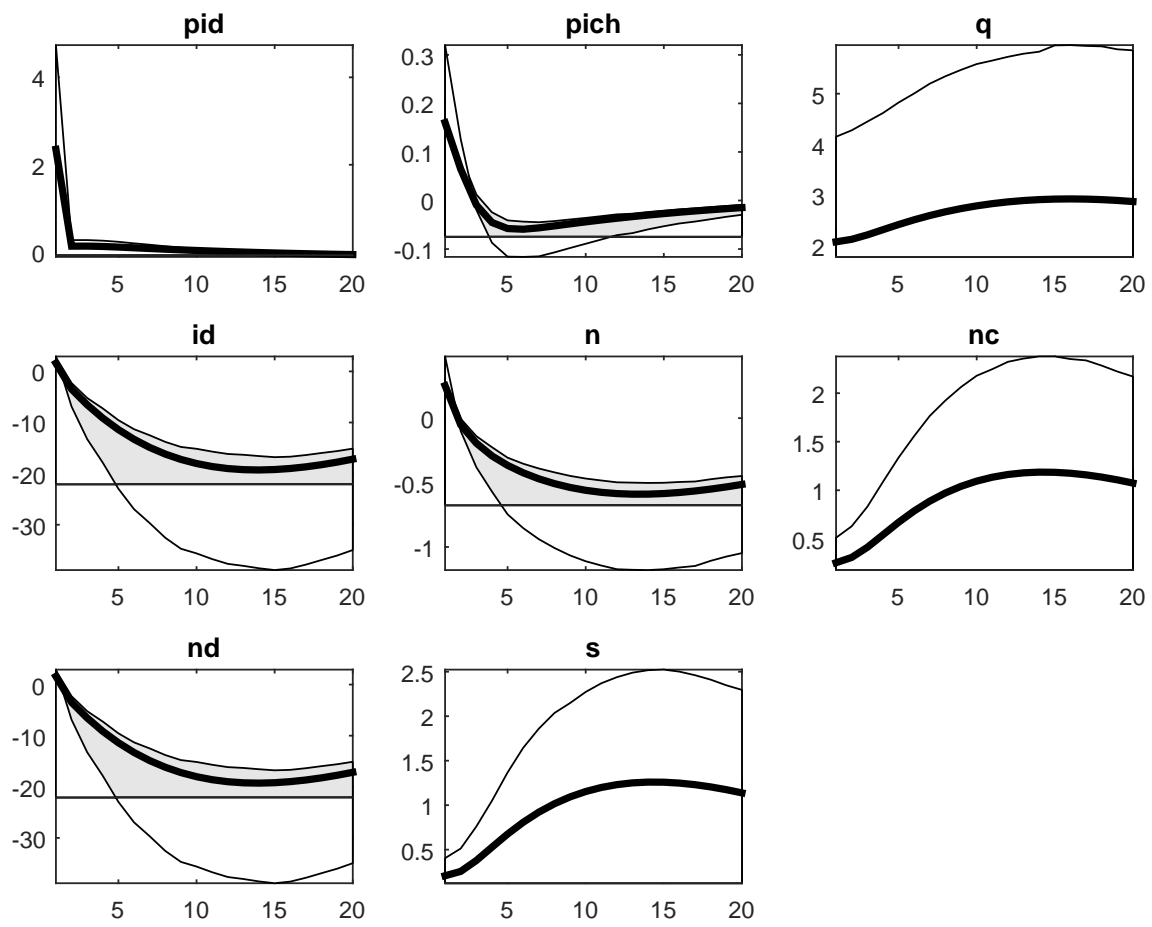
Figure 32: Orthogonalized shock to e_g
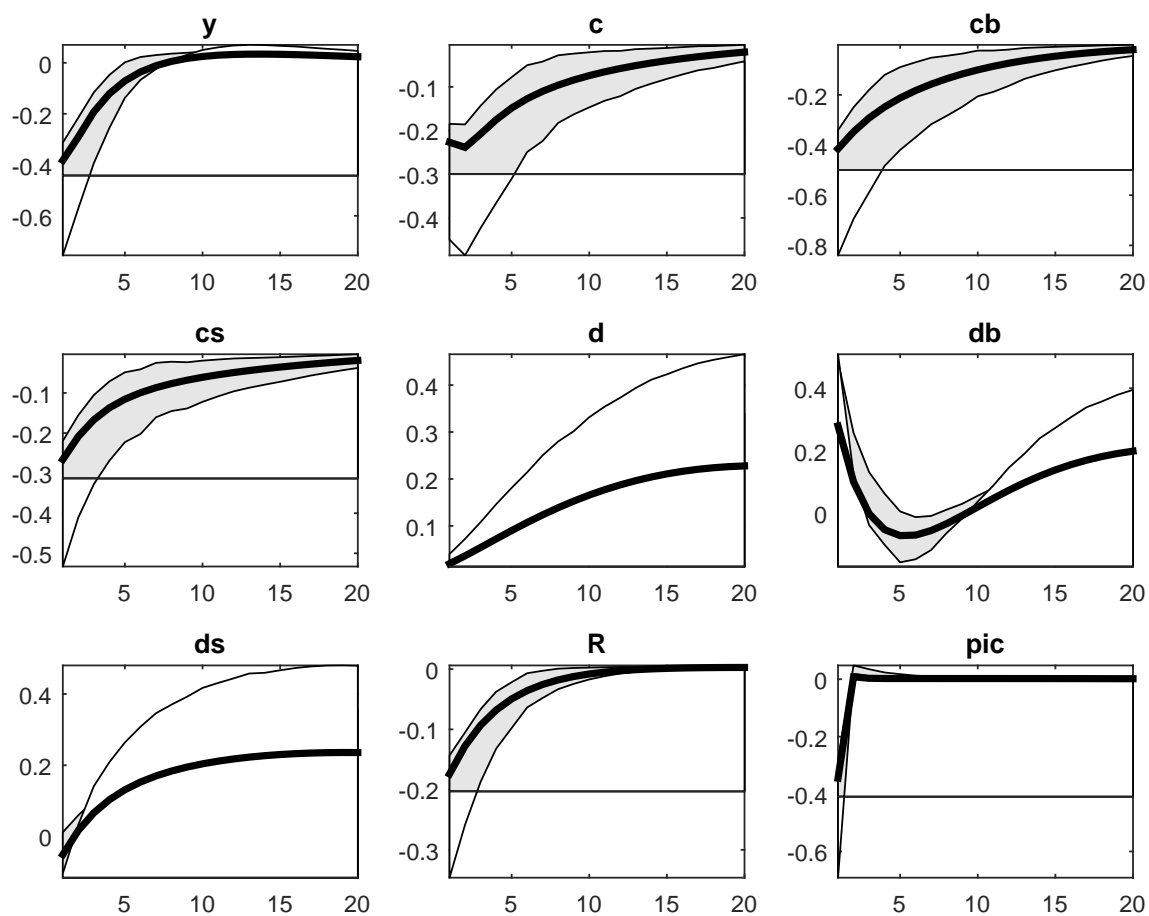
Figure 33: Smoothed shocks

37
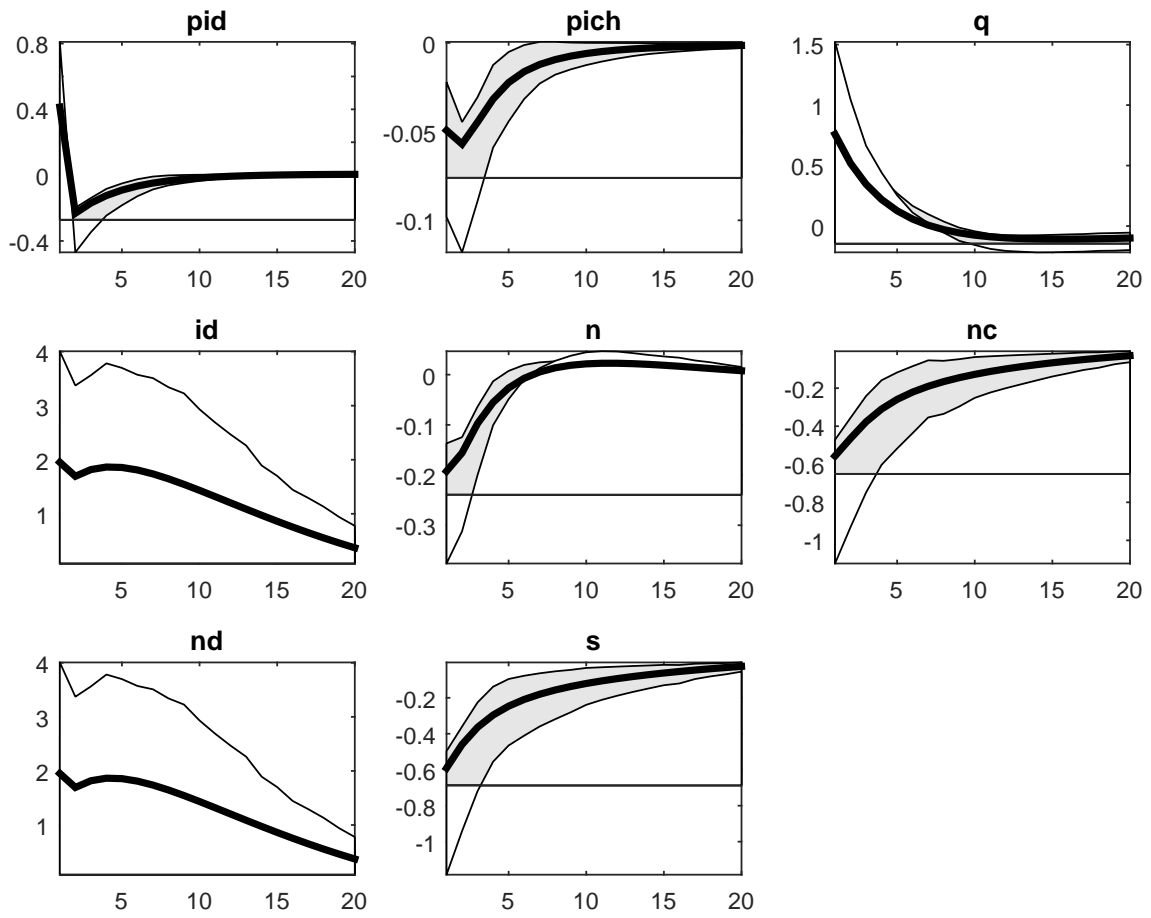
Figure 34: Historical and smoothed variables
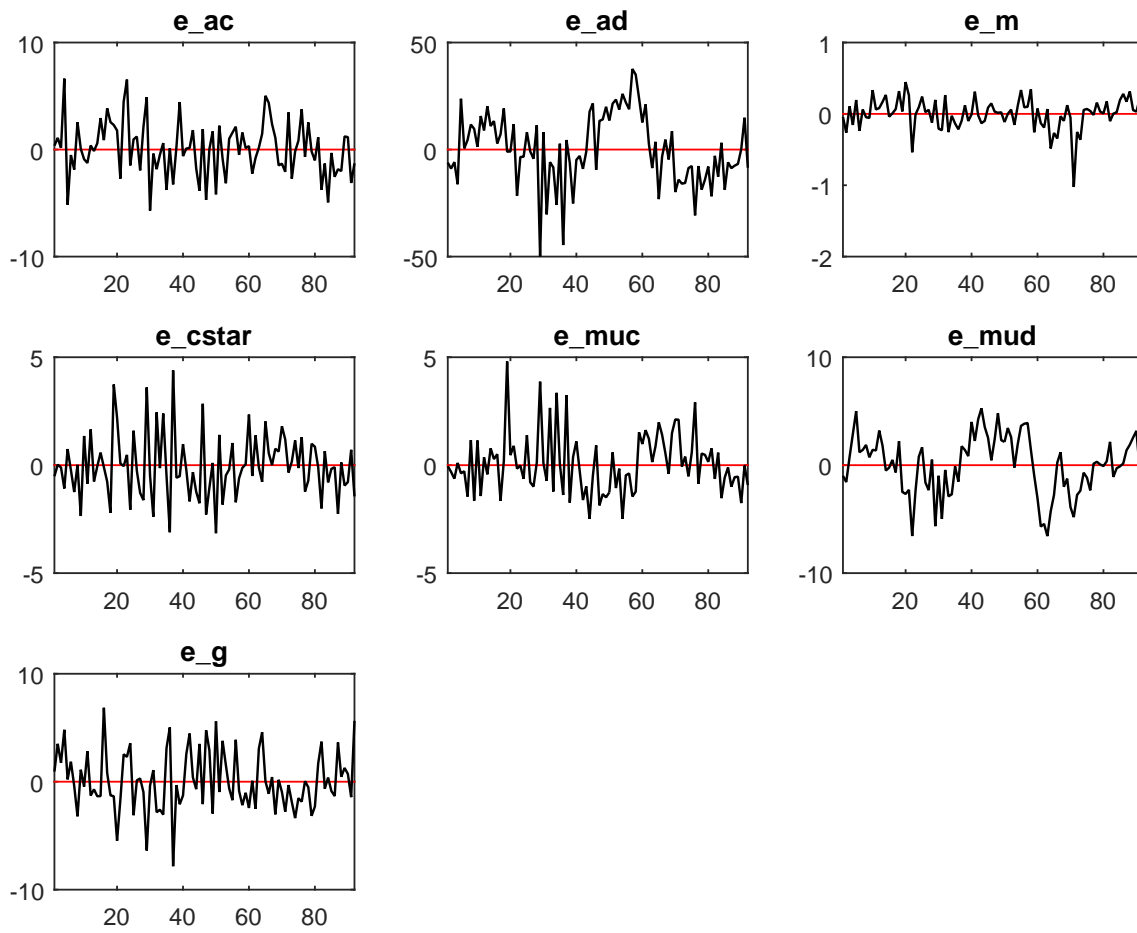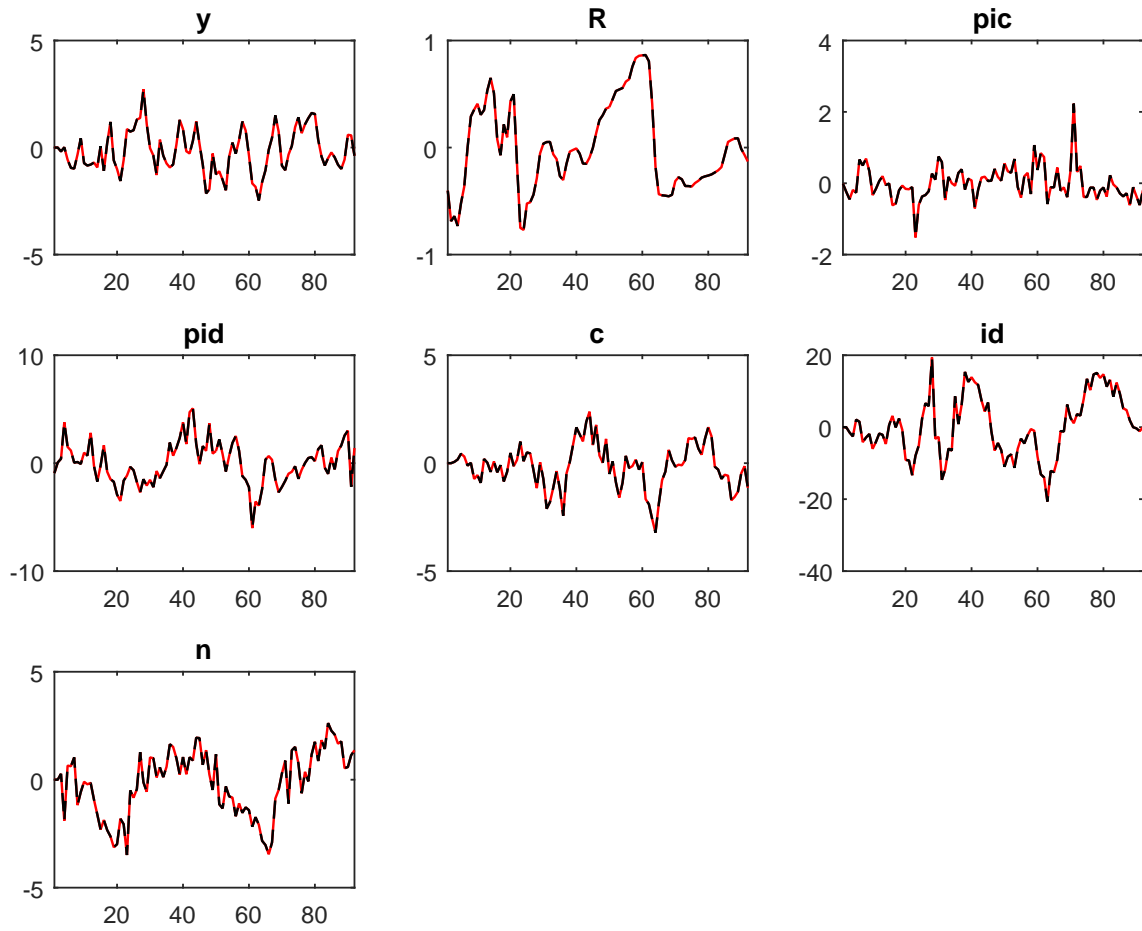
Figure 35: Historical Shock Decomposition: Output

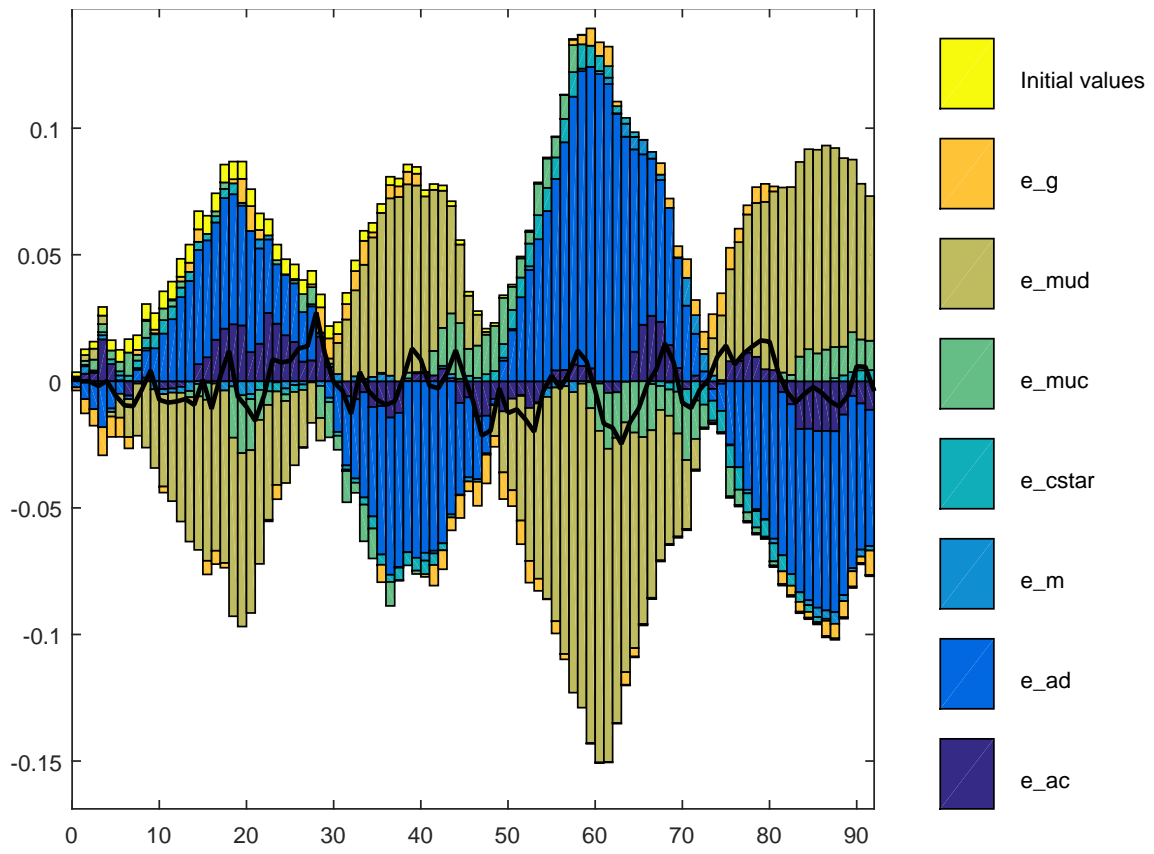Figure 36: Historical Shock Decomposition: Interest Rate

Legend:
- Initial values
- e_g
- e_mud
- e_muc
- e_cstar
- e_m
- e_ad
- e_ac

Figure 37: Historical Shock Decomposition: CPI Inflation

Legend:
- Initial values
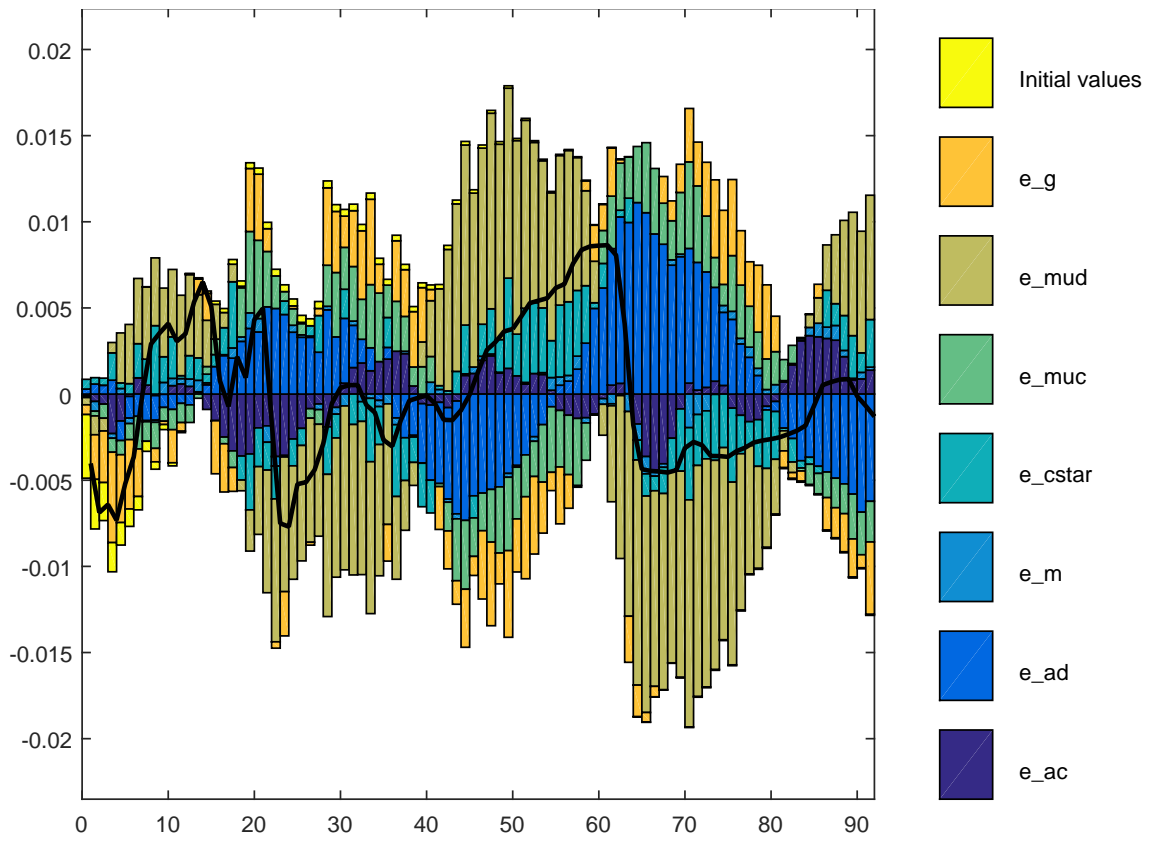- e_g
- e_mud
- e_muc
- e_cstar
- e_m
- e_ad
- e_ac

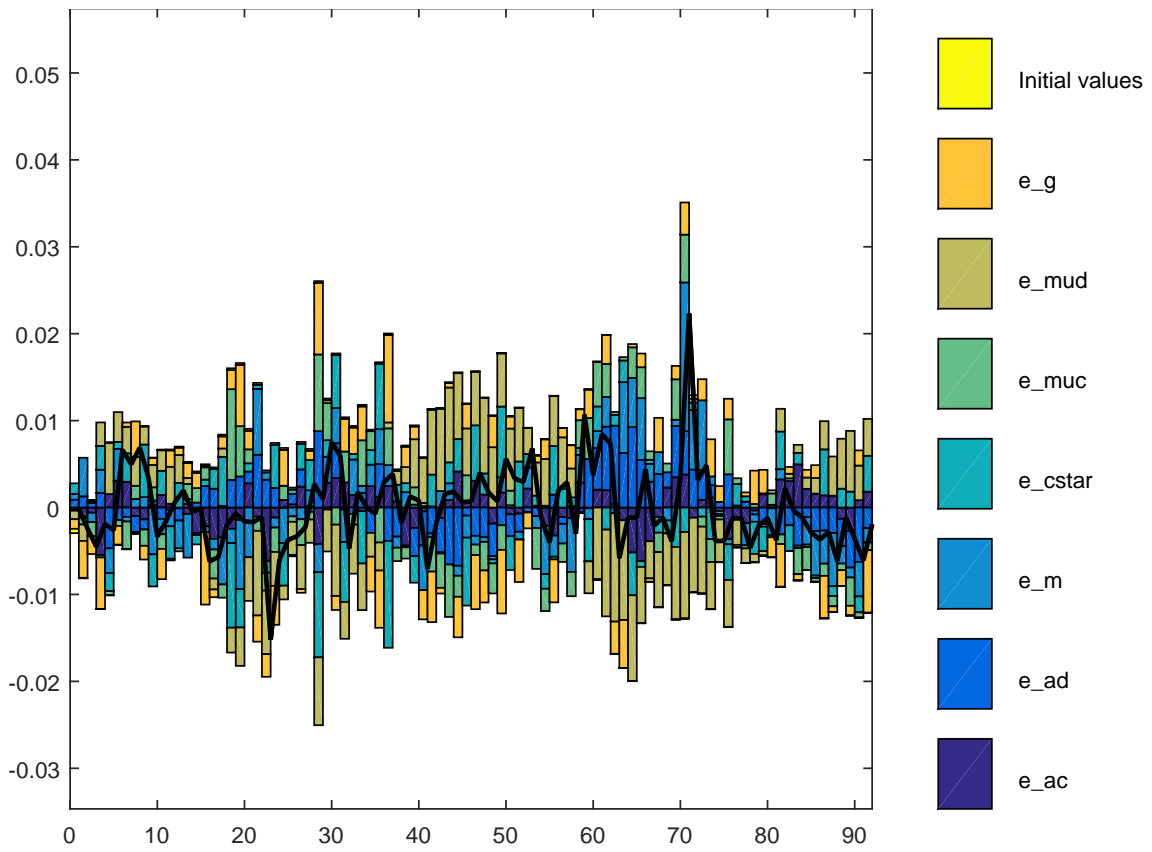Figure 38: Historical Shock Decomposition: Housing Inflation

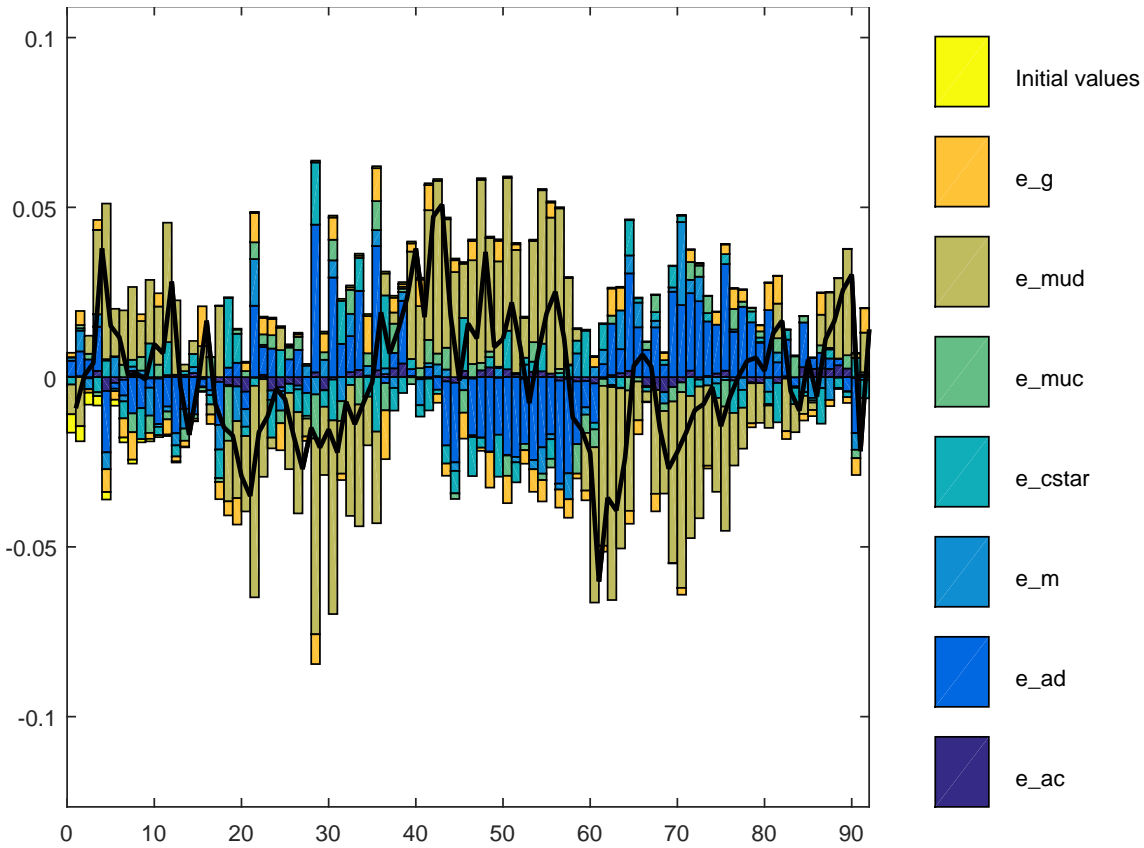Figure 39: Historical Shock Decomposition: Consumption
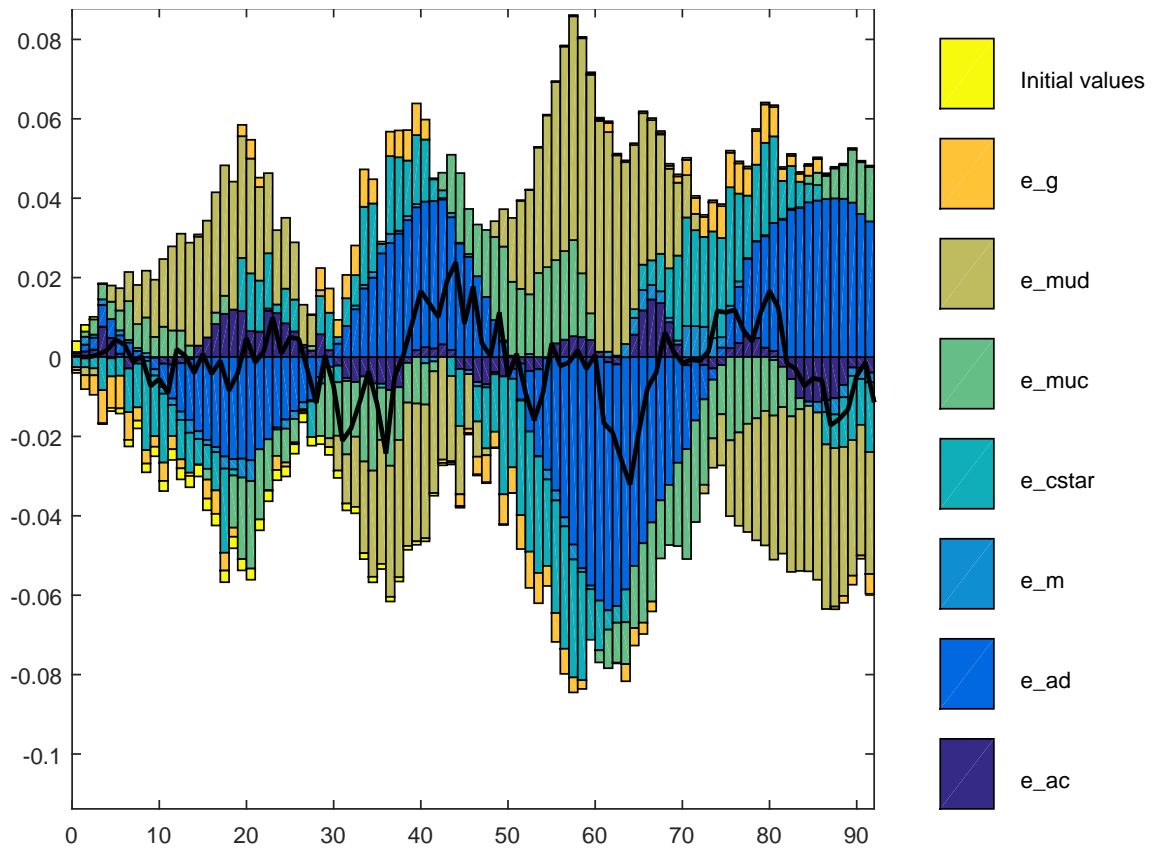
Figure 40: Historical Shock Decomposition: Real Housing Investment

Figure 41: Historical Shock Decomposition: Employment