

Table 1: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3906	0.0241
ψ	beta	0.500	0.1500	0.6150	0.0490
Φ	norm	1.250	0.1250	1.1968	0.0549
ι_w	beta	0.500	0.1500	0.1752	0.0759
ξ_w	beta	0.500	0.1000	0.8972	0.0193
ι_p	beta	0.500	0.1500	0.1815	0.0676
ξ_p	beta	0.500	0.1000	0.8428	0.0493
σ_c	norm	1.500	0.3750	1.4501	0.0742
σ_l	norm	2.000	0.7500	0.0404	0.3553
λ	beta	0.700	0.1000	0.3156	0.0641
φ	norm	4.000	1.5000	0.0780	0.0181
r_π	norm	1.500	0.2500	1.7781	0.2067
r_y	norm	0.125	0.0500	0.0606	0.0330
$r_{\Delta y}$	norm	0.125	0.0500	0.2875	0.0258
ρ	beta	0.750	0.1000	0.9311	0.0223
n_*	norm	0.000	2.0000	2.9819	0.9572
γ	norm	0.400	0.1000	0.5781	0.0848
ζ_{sp}	beta	0.050	0.0050	0.0434	0.0046
$\bar{\pi}$	gamm	0.625	0.2000	0.3870	0.0694
ρ_{ga}	beta	0.500	0.2000	0.6122	0.1967
ρ_a	beta	0.500	0.2000	0.9677	0.0110
ρ_b	beta	0.500	0.2000	0.8577	0.0238
ρ_g	beta	0.500	0.2000	0.9835	0.0077
ρ_i	beta	0.500	0.2000	0.9956	0.0021
ρ_r	beta	0.500	0.2000	0.0641	0.0385
ρ_p	beta	0.500	0.2000	0.9673	0.0264
ρ_w	beta	0.500	0.2000	0.2546	0.1427
ρ_{σ_w}	beta	0.750	0.1500	0.9890	0.0109
ρ_{π_*}	beta	0.750	0.1500	0.9940	0.0049
μ_p	beta	0.500	0.2000	0.8372	0.0503
μ_w	beta	0.500	0.2000	0.4425	0.1204

Table 2: Results from posterior maximization (standard deviation of structural shocks)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
η^a	invg	0.100	2.0000	0.5696	0.0294
η^b	invg	0.100	2.0000	0.1271	0.0137
η^g	invg	0.100	2.0000	2.5326	0.1214
η^i	invg	0.100	2.0000	1.8464	0.2507
η^m	invg	0.100	2.0000	0.3307	0.0266
η^p	invg	0.100	2.0000	0.1886	0.0128
η^w	invg	0.100	2.0000	0.4943	0.0300
η^{σ_w}	invg	0.100	2.0000	0.0777	0.0134
$\eta^{\pi*}$	invg	0.100	2.0000	0.0577	0.0242

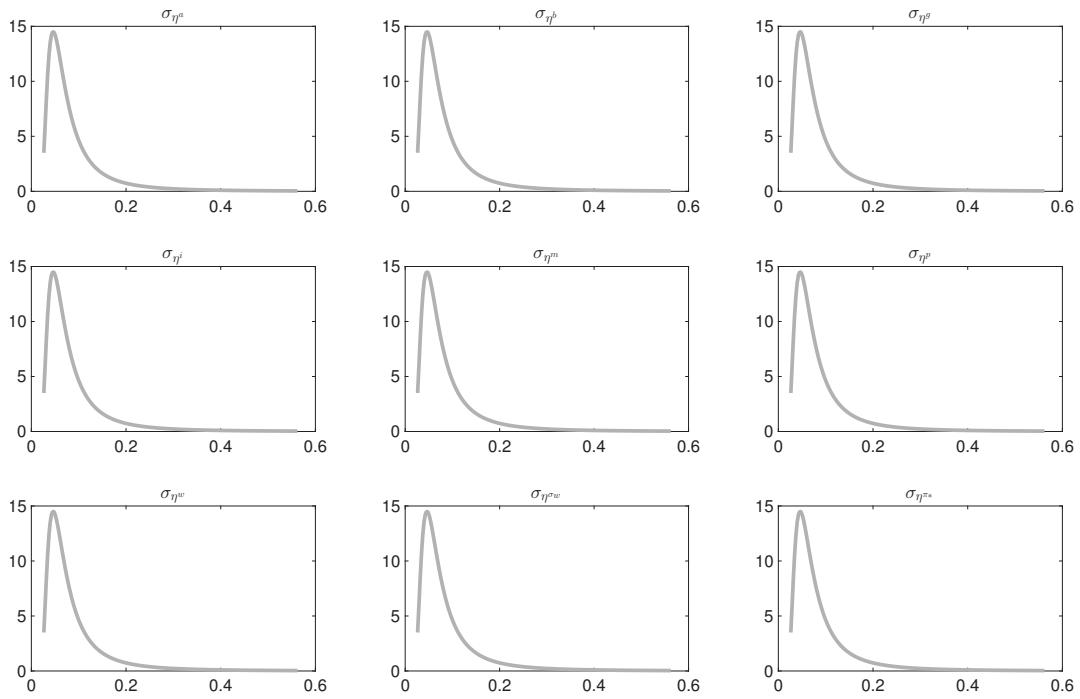


Figure 1: Priors.

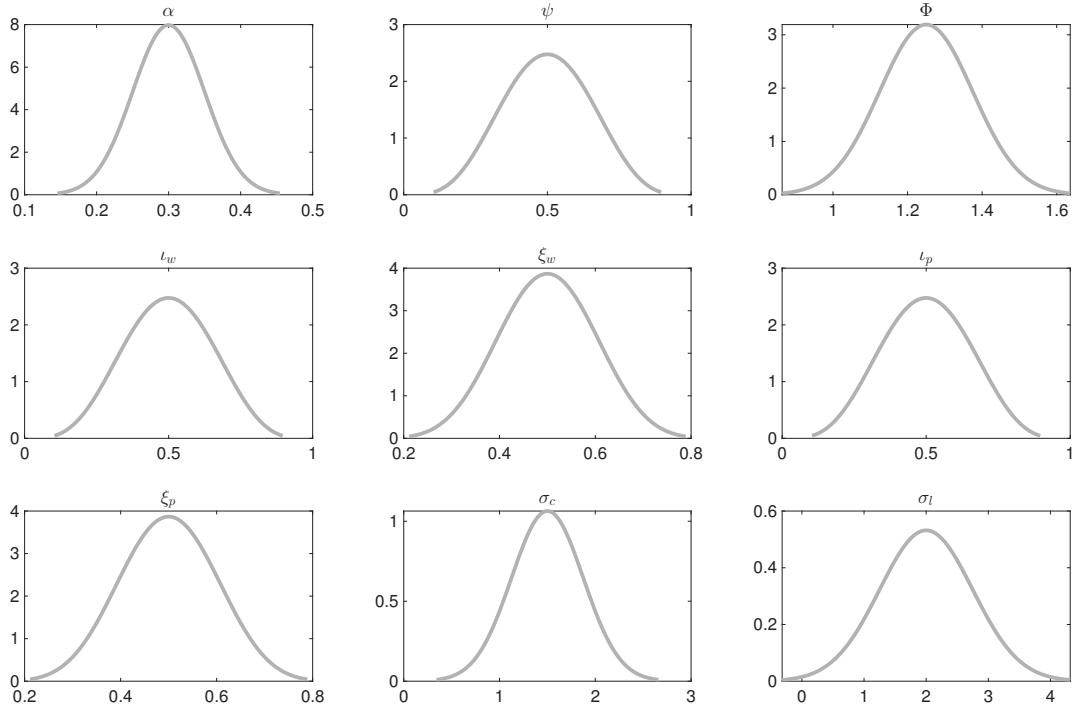


Figure 2: Priors.

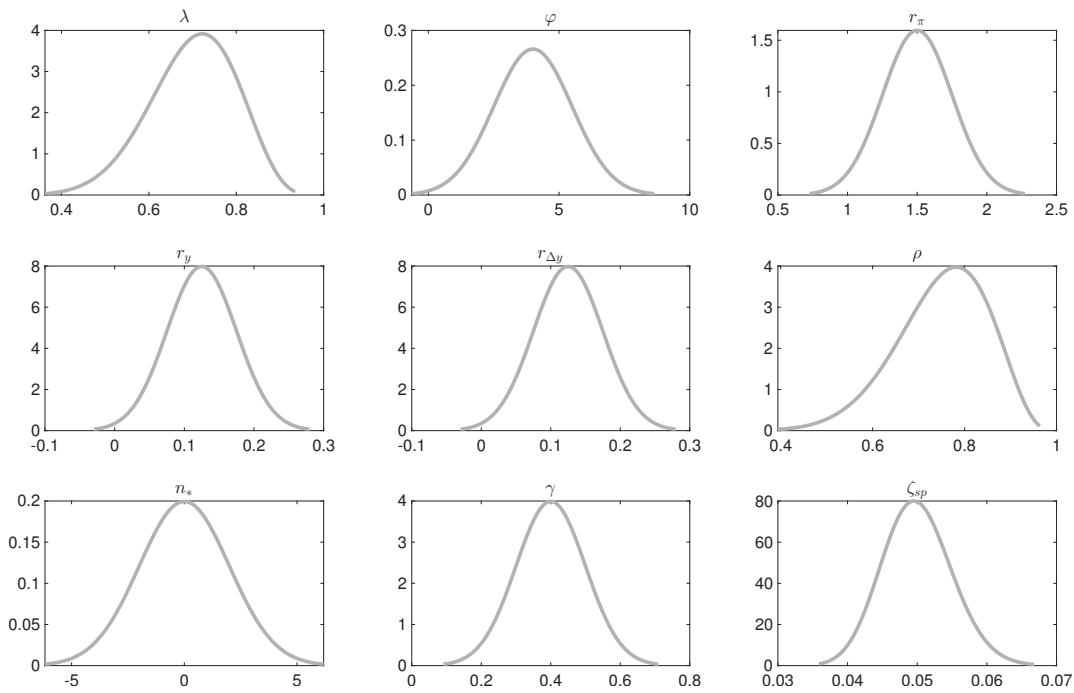


Figure 3: Priors.

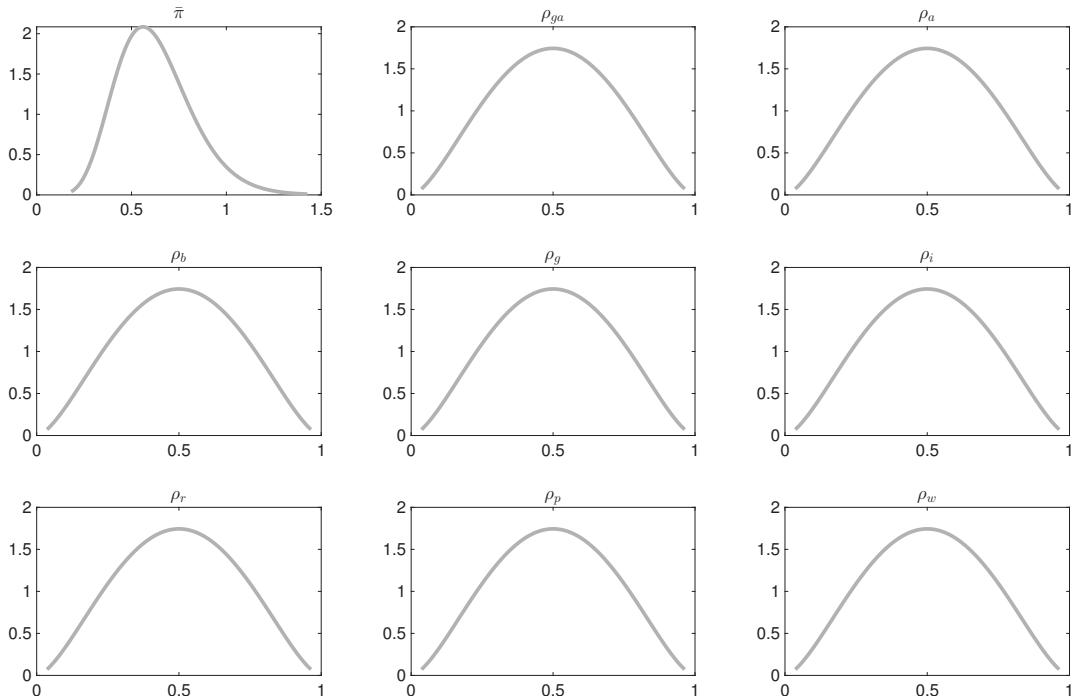


Figure 4: Priors.

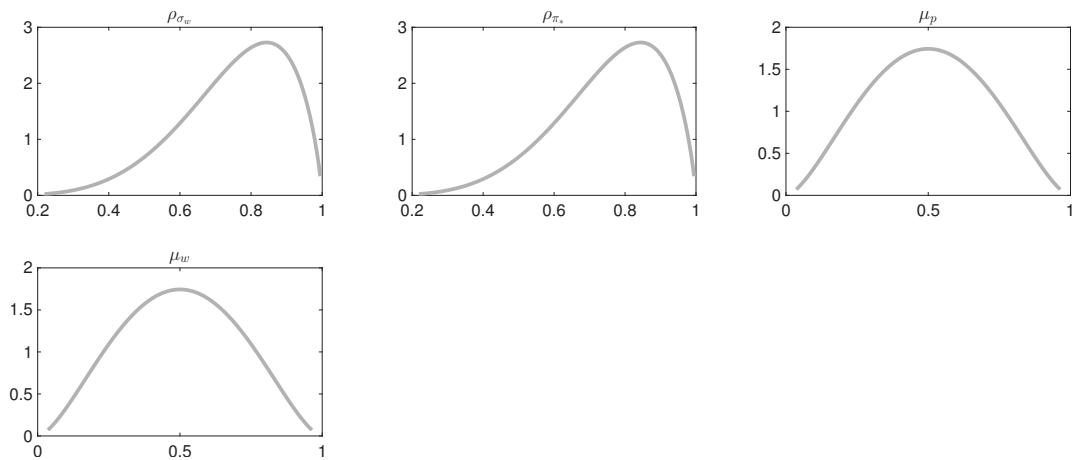


Figure 5: Priors.

Table 3: MATRIX OF COVARIANCE OF EXOGENOUS SHOCKS

<i>Variables</i>	η^a	η^b	η^g	η^i	η^m	η^p	η^w	η^{σ_w}	η^{π_*}
η^a	0.324482	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
η^b	0.000000	0.016165	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
η^g	0.000000	0.000000	6.413922	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
η^i	0.000000	0.000000	0.000000	3.409015	0.000000	0.000000	0.000000	0.000000	0.000000
η^m	0.000000	0.000000	0.000000	0.000000	0.109337	0.000000	0.000000	0.000000	0.000000
η^p	0.000000	0.000000	0.000000	0.000000	0.000000	0.035568	0.000000	0.000000	0.000000
η^w	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.244287	0.000000	0.000000
η^{σ_w}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.006033	0.000000
η^{π_*}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.003333
η^{z_p}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 4: Endogenous

Variable	LATEX	Description
c	c	Consumption
inve	i	Investment
y	y	Output
lab	l	hours worked
pinf	π	Inflation
w	w	real wage
r	r	nominal interest rate
rk	r^k	rental rate of capital
k	k^s	Capital services
mc	μ_p	gross price markup
spinf	ε^p	Price markup shock process
sw	ε^w	Wage markup shock process
g	ε^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	<i>Spread</i>	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	σ_w	Financial shock
pist	π_*	Inflation Target
og	<i>OG</i>	OutputGap
zp	z_p	Permanent Technology shock
n	n	Entrepreneurial Net Worth
z	w	Trend growth rate
u	u	Capital utilization rate
mu	ε^i	Investment-specific technology
rm	ε^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 4 – Continued

Variable	LATEX	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	$AUX_EXO_LAG_52_0$	$AUX_EXO_LAG_52_0$
AUX_EXO_LAG_53_0	$AUX_EXO_LAG_53_0$	$AUX_EXO_LAG_53_0$

Table 5: Exogenous

Variable	LATEX	Description
ea	η^a	TFP shock
eb	η^b	Risk Premium shock
eg	η^g	Spending shock
eqs	η^i	Investment-specific technology shock
em	η^m	Monetary policy shock
epinf	η^p	Price markup shock
ew	η^w	Wage markup shock
esigw	η^{σ_w}	Financial shock
epist	η^{π_*}	Inflation Target shock
ezp	η^{z_p}	Permanent technology shock

Table 6: Parameters

Variable	LATEX	Description
cbeta	β	discount rate
cepssp	ε_w	Curvature Kimball aggregator wages
cepsw	ε_p	Curvature Kimball aggregator prices
calfa	α	capital share
czcap	ψ	capacity utilization cost
csadjcost	φ	investment adjustment cost
ctou	δ	depreciation rate
csigma	σ_c	risk aversion
chabb	λ	external habit degree
cfc	Φ	fixed cost share
cindw	ι_w	Indexation to past wages
cprobw	ξ_w	Calvo parameter wages
cindp	ι_p	Indexation to past prices
cprobp	ξ_p	Calvo parameter prices
csigl	σ_l	Frisch elasticity
crpi	r_π	Taylor rule inflation feedback
crdy	$r_{\Delta y}$	Taylor rule output growth feedback

Table 6 – Continued

Variable	LATEX	Description
cry	r_y	Taylor rule output level feedback
crr	ρ	interest rate persistence
czeta_spb	ζ_{sp}	Spread elasticity
cgammstar	γ^*	Wealth parameter
cvstar	v^*	Wealth parameter
cnstar	n_*	SS Entrepreneurial wealth
czeta_nRk	ζ_{nRk}	Net Worth parameter
czeta_nR	ζ_{nR}	Net Worth parameter
czeta_nsigw	$\zeta_{n\sigma_w}$	Net Worth parameter
czeta_spsigw	$\zeta_{s\sigma_w}$	Net Worth parameter
czeta_nqk	ζ_{nqk}	Net Worth parameter
czeta_nn	ζ_{nn}	Net Worth parameter
cgy	ρ_{ga}	Feedback technology on exogenous spending
cmaw	μ_w	coefficient on MA term wage markup
cmap	μ_p	coefficient on MA term price markup
crhosigw	ρ_{σ_w}	persistence Financial shock
crhopist	ρ_{π_*}	persistence Inflation Target shock
crhozp	ρ_{zp}	persistence permanent technology shock
csigma_spinf	σ_{map}	price markup MA scaling
csigma_sw	σ_{maw}	wage markup MA scaling
crhoa	ρ_a	persistence productivity shock
crhob	ρ_b	persistence risk premium shock
crhog	ρ_g	persistence spending shock
crhoqs	ρ_i	persistence risk premium shock
crhom	ρ_r	persistence monetary policy shock
crhopinf	ρ_p	persistence price markup shock
crhow	ρ_w	persistence wage markup shock
cgamma	γ	Adjusted trend
crkstar	$r\bar{k}$	SS return on capital
ckstar	k^*	Capital-Output ratio
ckbarstar	\bar{k}^*	SS Capital-Output ratio
cinvestar	$\frac{\bar{i}}{\bar{y}}$	Private investment share in aggregate output
cystar	$\frac{y_p}{\bar{y}}$	Private output share in aggregate output
ccstar	$\frac{\bar{c}}{\bar{y}}$	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	$\frac{\bar{g}}{\bar{y}}$	steady state exogenous spending share

Table 7: Parameter Values

Parameter	Value	Description
β	0.999	discount rate
ε_w	10.000	Curvature Kimball aggregator wages
ε_p	10.000	Curvature Kimball aggregator prices
α	0.391	capital share
ψ	0.615	capacity utilization cost
φ	0.078	investment adjustment cost
δ	0.025	depreciation rate
σ_c	1.450	risk aversion
λ	0.316	external habit degree
Φ	1.197	fixed cost share
ι_w	0.175	Indexation to past wages
ξ_w	0.897	Calvo parameter wages
ι_p	0.182	Indexation to past prices
ξ_p	0.843	Calvo parameter prices
σ_l	0.040	Frisch elasticity
r_π	1.778	Taylor rule inflation feedback
$r_{\Delta y}$	0.288	Taylor rule output growth feedback
r_y	0.061	Taylor rule output level feedback
ρ	0.931	interest rate persistence
ζ_{sp}	0.043	Spread elasticity
γ^*	0.990	Wealth parameter
v^*	2.471	Wealth parameter
n_*	2.982	SS Entrepreneurial wealth
ζ_{nRk}	1.694	Net Worth parameter
ζ_{nR}	0.693	Net Worth parameter
$\zeta_{n\sigma_w}$	0.004	Net Worth parameter
$\zeta_{sp\sigma_w}$	0.028	Net Worth parameter
ζ_{nqk}	0.002	Net Worth parameter
ζ_{nn}	0.999	Net Worth parameter
ρ_{ga}	0.612	Feedback technology on exogenous spending
μ_w	0.443	coefficient on MA term wage markup
μ_p	0.837	coefficient on MA term price markup
ρ_{σ_w}	0.989	persistence Financial shock
ρ_{π_*}	0.994	persistence Inflation Target shock
ρ_{zp}	0.950	persistence permanent technology shock
σ_{map}	1.000	price markup MA scaling
σ_{maw}	1.000	wage markup MA scaling
ρ_a	0.968	persistence productivity shock
ρ_b	0.858	persistence risk premium shock
ρ_g	0.983	persistence spending shock
ρ_i	0.996	persistence risk premium shock
ρ_r	0.064	persistence monetary policy shock
ρ_p	0.967	persistence price markup shock

Table 7 – Continued

Parameter	Value	Description
ρ_w	0.255	persistence wage markup shock
γ	0.578	Adjusted trend
r_k	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
$\bar{\pi}$	0.387	steady state inflation rate
$\bar{\gamma}$	0.400	net growth rate in percent
\bar{g}	0.180	steady state exogenous spending share

Table 8: Prior information (parameters)

Distribution		Mean	Mode	Std.dev.	Bounds*		90% HPDI	
					Lower	Upper	Lower	Upper
σ_{η^a}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^b}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^g}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^i}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^m}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^p}	Inv. Gamma	0.1000	0.0461	2.0000	0.0118	5595.7204	0.0326	0.2490
σ_{η^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
α	Gaussian	0.3000	0.3000	0.0500	-0.0181	0.6181	0.2178	0.3822
ψ	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
Φ	Gaussian	1.2500	1.2500	0.1250	0.4548	2.0452	1.0444	1.4556
ι_w	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
ξ_w	Beta	0.5000	0.5000	0.1000	0.0471	0.9529	0.3351	0.6649
ι_p	Beta	0.5000	0.5000	0.1500	0.0040	0.9960	0.2526	0.7474
ξ_p	Beta	0.5000	0.5000	0.1000	0.0471	0.9529	0.3351	0.6649
σ_c	Gaussian	1.5000	1.5000	0.3750	-0.8855	3.8855	0.8832	2.1168
σ_l	Gaussian	2.0000	2.0000	0.7500	-2.7710	6.7710	0.7664	3.2336
λ	Beta	0.7000	0.7222	0.1000	0.1025	0.9960	0.5242	0.8525
φ	Gaussian	4.0000	4.0000	1.5000	-5.5420	13.5420	1.5327	6.4673
r_π	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
ρ	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
γ	Gaussian	0.4000	0.4000	0.1000	-0.2361	1.0361	0.2355	0.5645
ζ_{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
ρ_{ga}	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_a	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_b	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_g	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_i	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_r	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_p	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_w	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
ρ_{σ_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

(Continued on next page)

Table 8: (continued)

Distribution		Mean	Mode	Std.dev.	Bounds*		90% HPDI	
					Lower	Upper	Lower	Upper
ρ_{π_*}	Beta	0.7500	0.8438	0.1500	0.0114	1.0000	0.4671	0.9519
μ_p	Beta	0.5000	0.5000	0.2000	0.0001	0.9999	0.1718	0.8282
μ_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 9: COEFFICIENTS OF AUTOCORRELATION

<i>Order</i>	1	2	3	4	5
<i>y</i>	0.9957	0.9895	0.9828	0.9760	0.9691
<i>c</i>	0.9968	0.9927	0.9883	0.9837	0.9791
<i>i</i>	0.9918	0.9760	0.9567	0.9363	0.9159
π	0.9218	0.8906	0.8672	0.8447	0.8220
<i>r</i>	0.9606	0.9102	0.8595	0.8115	0.7669
<i>w</i>	0.9952	0.9892	0.9817	0.9729	0.9628
<i>k^s</i>	0.9980	0.9955	0.9926	0.9894	0.9858
<i>l</i>	0.9941	0.9852	0.9754	0.9653	0.9550
<i>q</i>	0.9944	0.9894	0.9848	0.9803	0.9760
<i>n</i>	0.9959	0.9916	0.9871	0.9821	0.9769
<i>r^{ktil}</i>	0.3502	0.3642	0.3641	0.3576	0.3479
<i>OG</i>	0.9955	0.9887	0.9811	0.9732	0.9653

Table 10: MATRIX OF CORRELATIONS

<i>Variables</i>	<i>y</i>	<i>c</i>	<i>i</i>	π	<i>r</i>	<i>w</i>	k^s	<i>l</i>	<i>q</i>	<i>n</i>
<i>y</i>	1.0000	0.9712	0.8865	0.1858	0.2021	0.2148	0.7377	0.7943	-0.3040	0.4420
<i>c</i>	0.9712	1.0000	0.8422	0.1708	0.1612	0.2187	0.7473	0.7469	-0.3358	0.4544
<i>i</i>	0.8865	0.8422	1.0000	0.2678	0.2908	0.4037	0.8073	0.5599	-0.4294	0.5132
π	0.1858	0.1708	0.2678	1.0000	0.7961	0.6805	0.4593	-0.1385	-0.0093	0.4916
<i>r</i>	0.2021	0.1612	0.2908	0.7961	1.0000	0.5619	0.3652	-0.0251	-0.0284	0.3196
<i>w</i>	0.2148	0.2187	0.4037	0.6805	0.5619	1.0000	0.7521	-0.3598	-0.3462	0.7019
k^s	0.7377	0.7473	0.8073	0.4593	0.3652	0.7521	1.0000	0.1789	-0.5810	0.7724
<i>l</i>	0.7943	0.7469	0.5599	-0.1385	-0.0251	-0.3598	0.1789	1.0000	0.0805	-0.0451
<i>q</i>	-0.3040	-0.3358	-0.4294	-0.0093	-0.0284	-0.3462	-0.5810	0.0805	1.0000	-0.2654
<i>n</i>	0.4420	0.4544	0.5132	0.4916	0.3196	0.7019	0.7724	-0.0451	-0.2654	1.0000
r^{ktile}	0.1873	0.1671	0.2168	0.6478	0.5143	0.4024	0.2891	0.0161	-0.0092	0.2939
<i>OG</i>	0.9299	0.9200	0.7925	0.2775	0.2929	0.1792	0.6004	0.8218	-0.0095	0.3767

Table 11: THEORETICAL MOMENTS

<i>VARIABLE</i>	<i>MEAN</i>	<i>STD.DEV.</i>	<i>VARIANCE</i>
y	0.0000	14.2027	201.7175
c	0.0000	16.9755	288.1670
i	0.0000	20.6558	426.6604
π	0.0000	0.8082	0.6532
r	0.0000	0.8875	0.7877
w	0.0000	13.7878	190.1021
k^s	0.0000	18.7751	352.5045
l	0.0000	13.2707	176.1105
q	0.0000	8.6545	74.9001
n	0.0000	19.4626	378.7932
r^{ktil}	0.0000	1.2146	1.4752
OG	0.0000	13.1281	172.3470

Table 12: VARIANCE DECOMPOSITION (in percent)

	η^a	η^b	η^g	η^i	η^m	η^p	η^w	η^{σ_w}	η^{π^*}	η^{z_p}
y	0.65	1.86	3.10	9.90	17.22	1.73	0.07	0.44	52.09	12.94
c	0.37	2.14	0.11	12.08	15.33	0.92	0.07	0.39	55.46	13.13
i	1.84	1.80	0.45	20.28	22.01	5.12	0.31	9.88	32.06	6.25
π	1.24	0.49	0.06	0.02	1.94	18.87	0.78	0.19	11.58	64.83
r	1.86	24.72	0.37	0.87	1.63	3.38	0.53	1.85	12.31	52.47
w	2.97	0.03	0.09	14.91	2.37	10.99	0.79	0.55	8.01	59.29
k^s	1.72	0.31	0.61	39.36	10.22	3.82	0.08	1.74	33.10	9.04
l	1.06	2.39	3.66	3.31	13.51	0.37	0.17	0.22	32.04	43.26
q	0.01	0.05	0.00	99.75	0.10	0.01	0.00	0.06	0.00	0.01
n	1.87	3.04	0.70	26.35	7.52	2.78	0.08	10.62	30.18	16.87
r^{ktil}	0.78	3.91	0.19	42.33	6.15	10.08	0.76	3.04	6.74	26.01
OG	0.55	2.18	0.11	0.28	20.15	2.03	0.08	0.52	60.97	13.14

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

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

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

$$clandap=\Phi$$

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

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

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

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

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

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

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

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

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

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

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

$$18$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$19$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

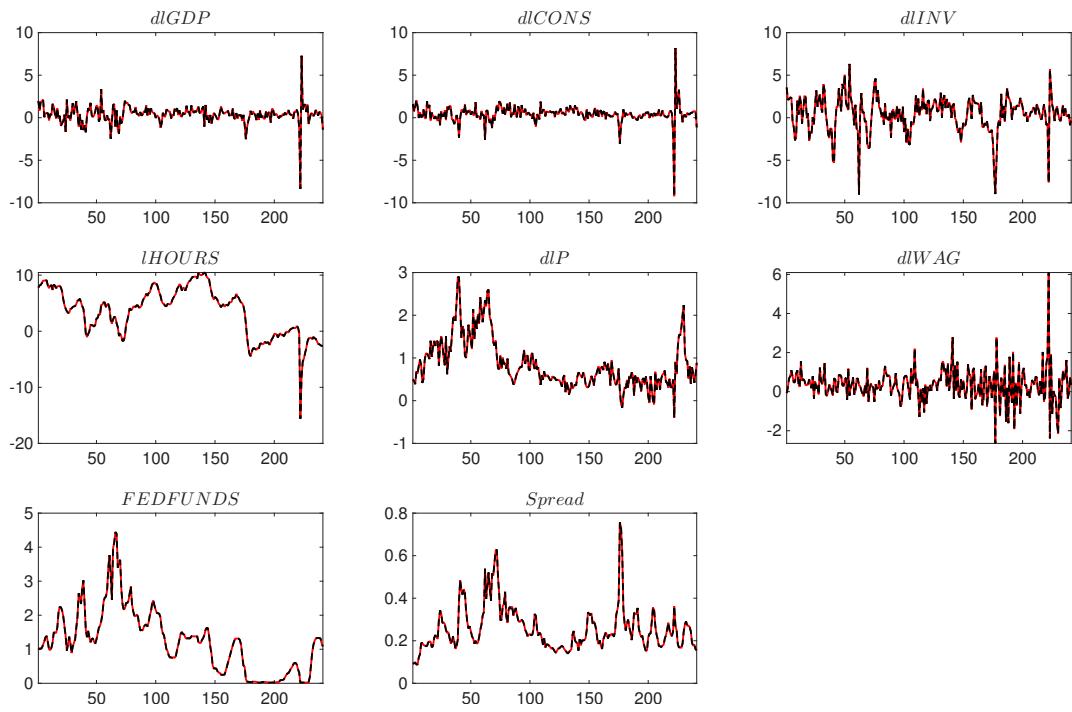


Figure 6: Historical and smoothed variables.

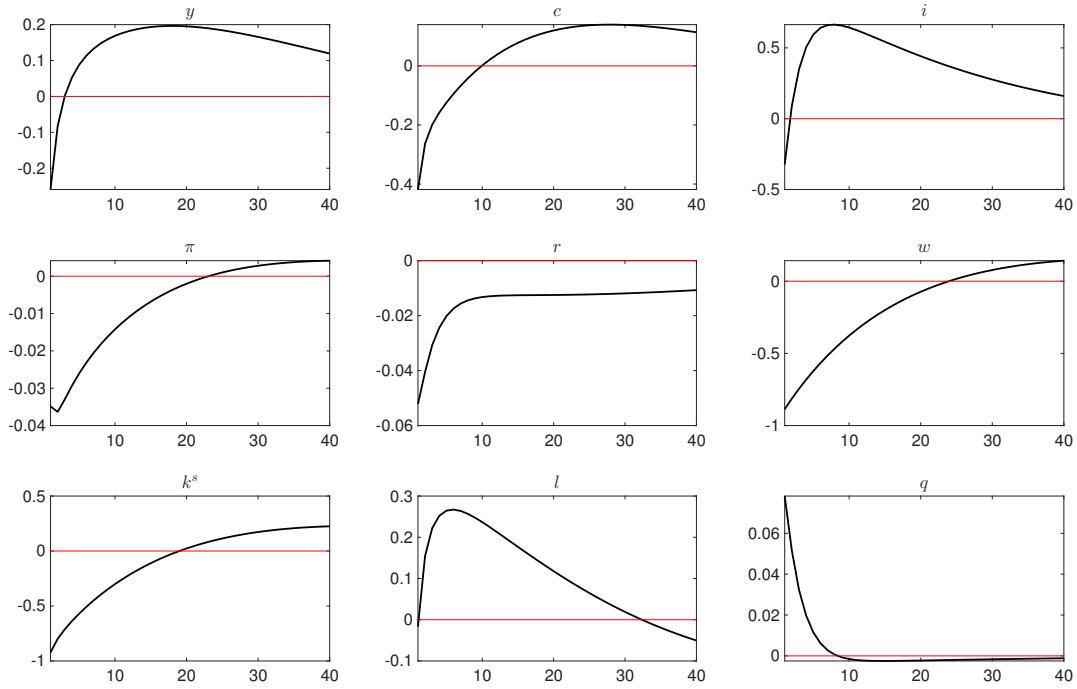


Figure 7: Impulse response functions (orthogonalized shock to η^a).

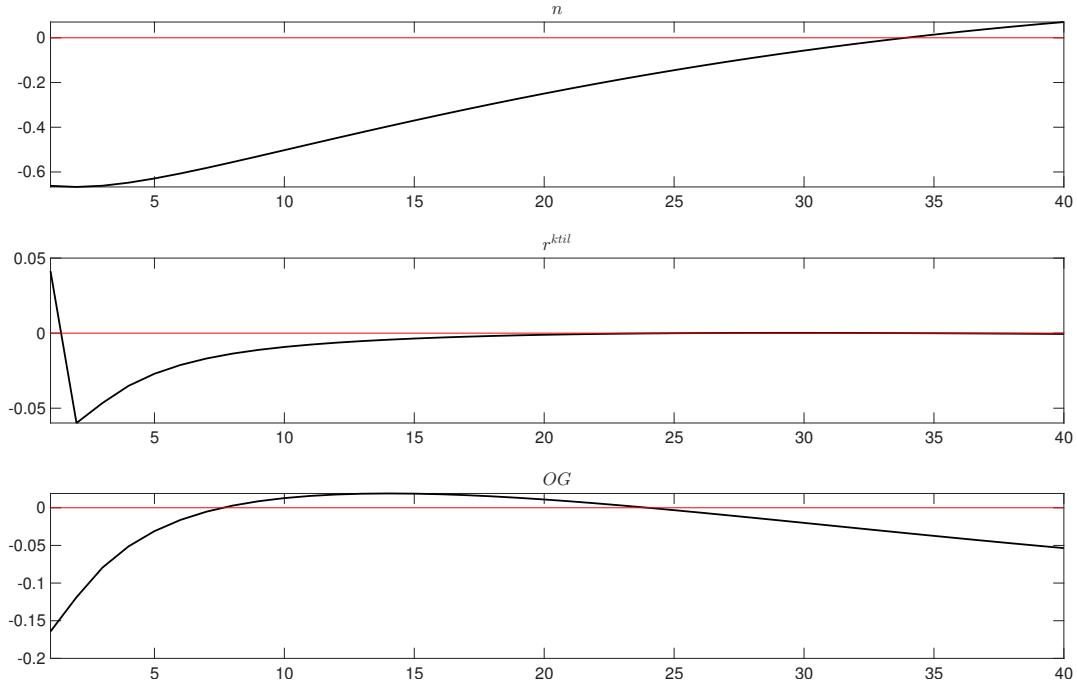


Figure 8: Impulse response functions (orthogonalized shock to η^a).

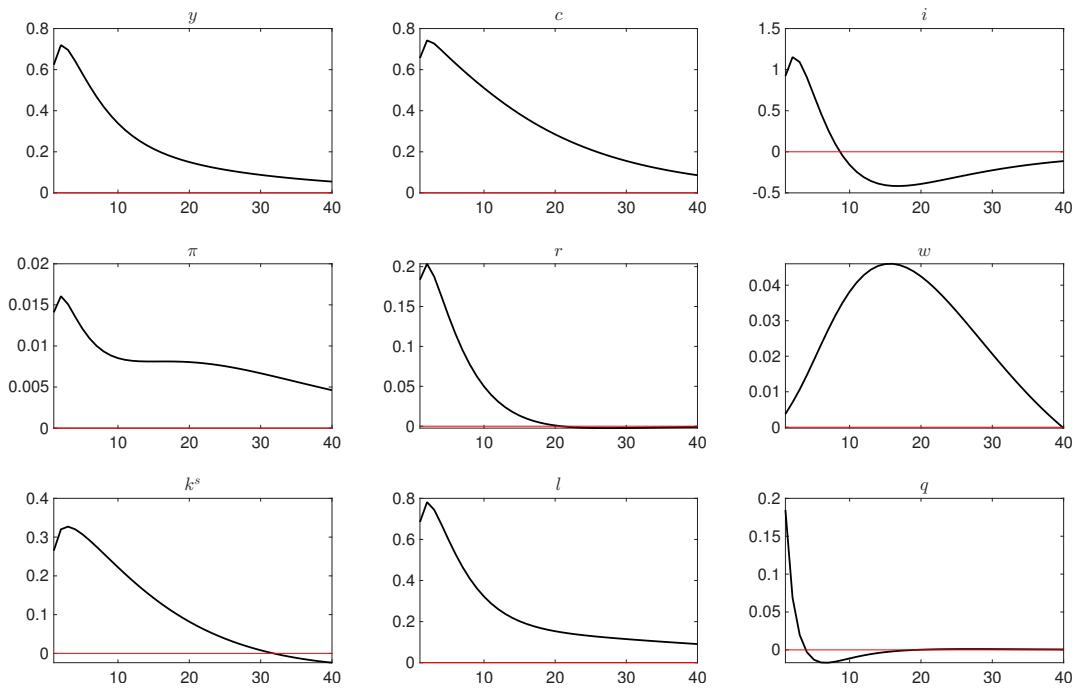


Figure 9: Impulse response functions (orthogonalized shock to η^b).

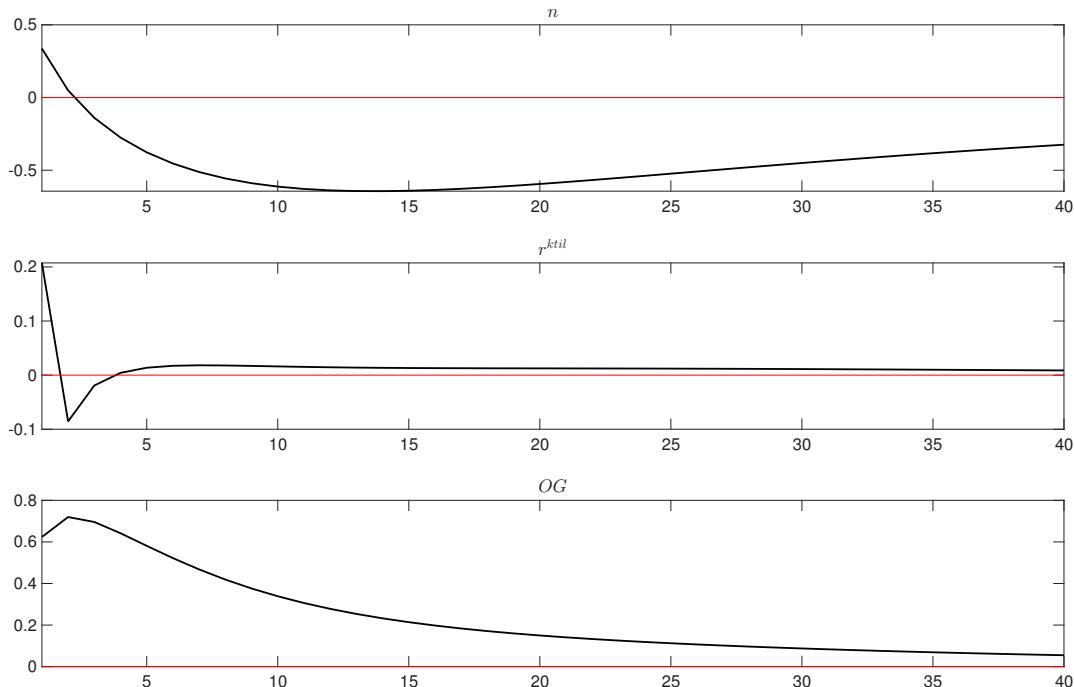


Figure 10: Impulse response functions (orthogonalized shock to η^b).

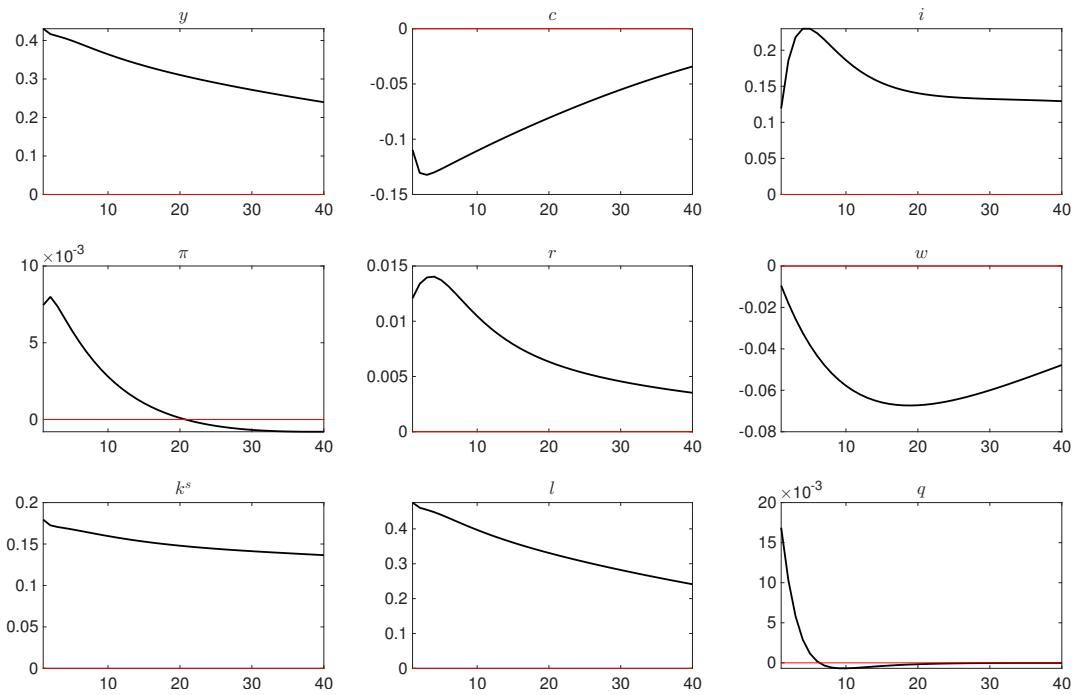


Figure 11: Impulse response functions (orthogonalized shock to η^g).

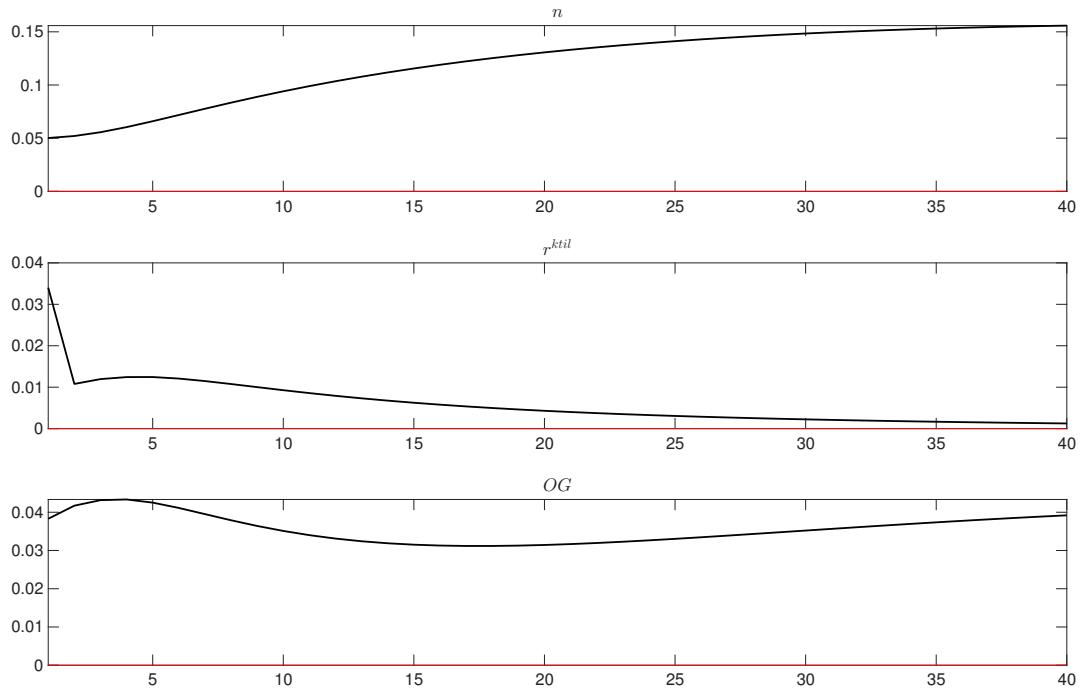


Figure 12: Impulse response functions (orthogonalized shock to η^g).

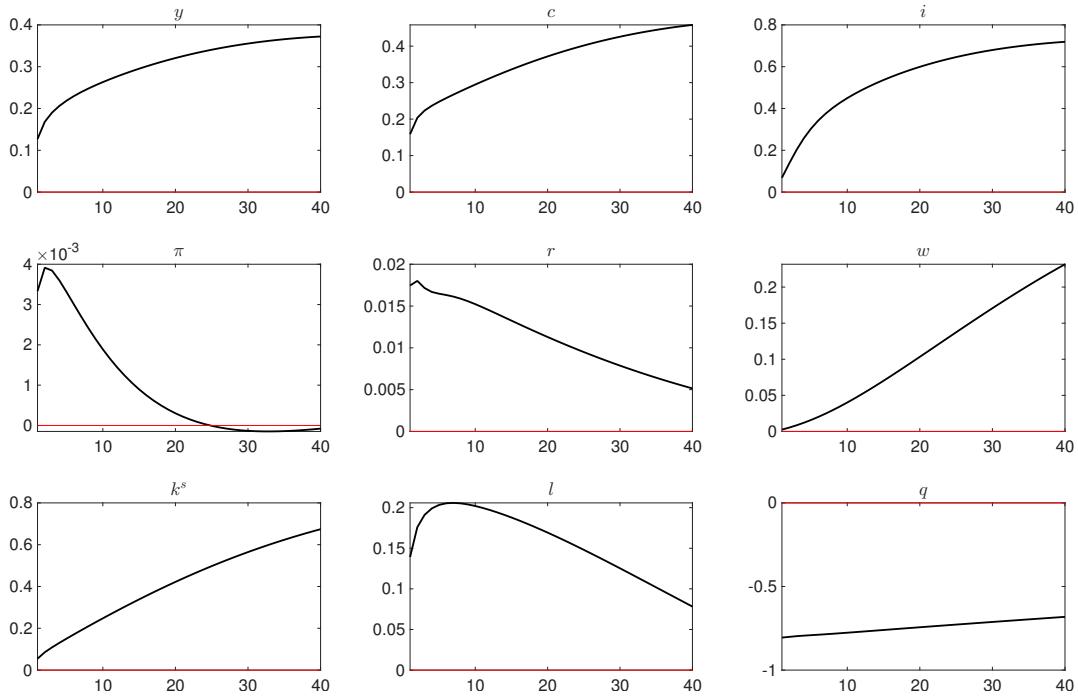


Figure 13: Impulse response functions (orthogonalized shock to η^i).

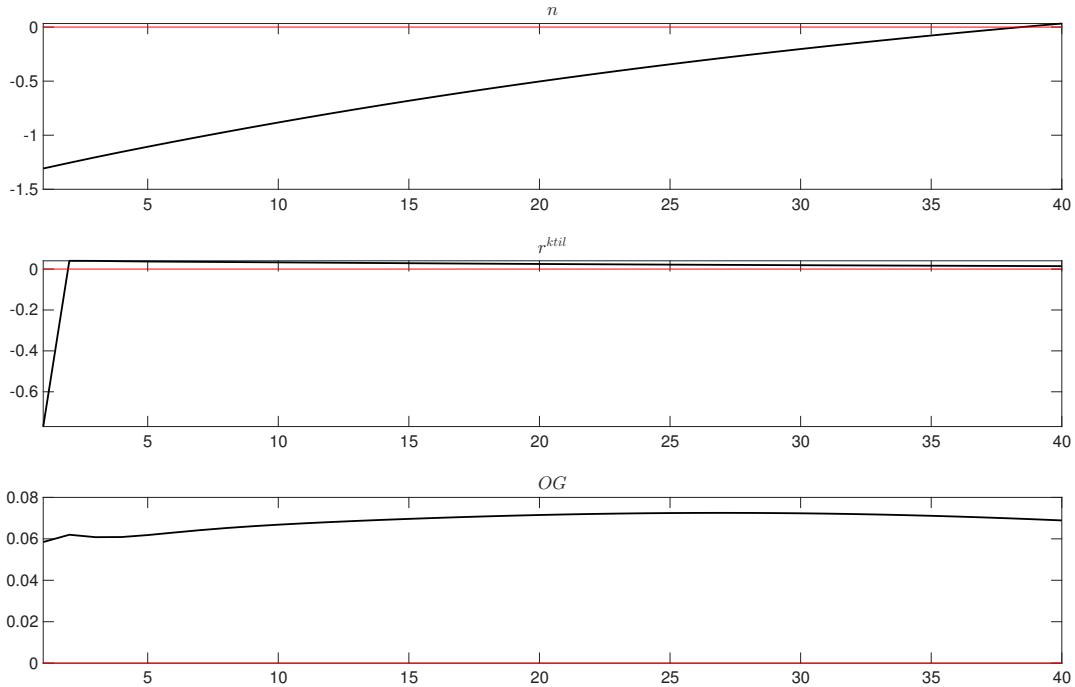


Figure 14: Impulse response functions (orthogonalized shock to η^i).

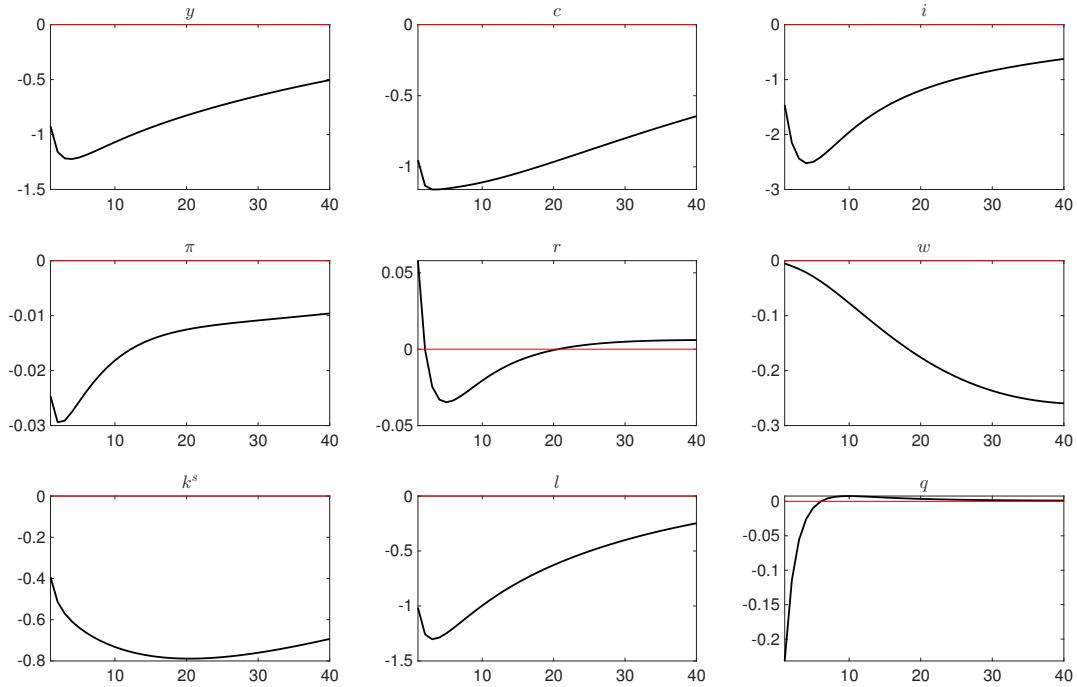


Figure 15: Impulse response functions (orthogonalized shock to η^m).

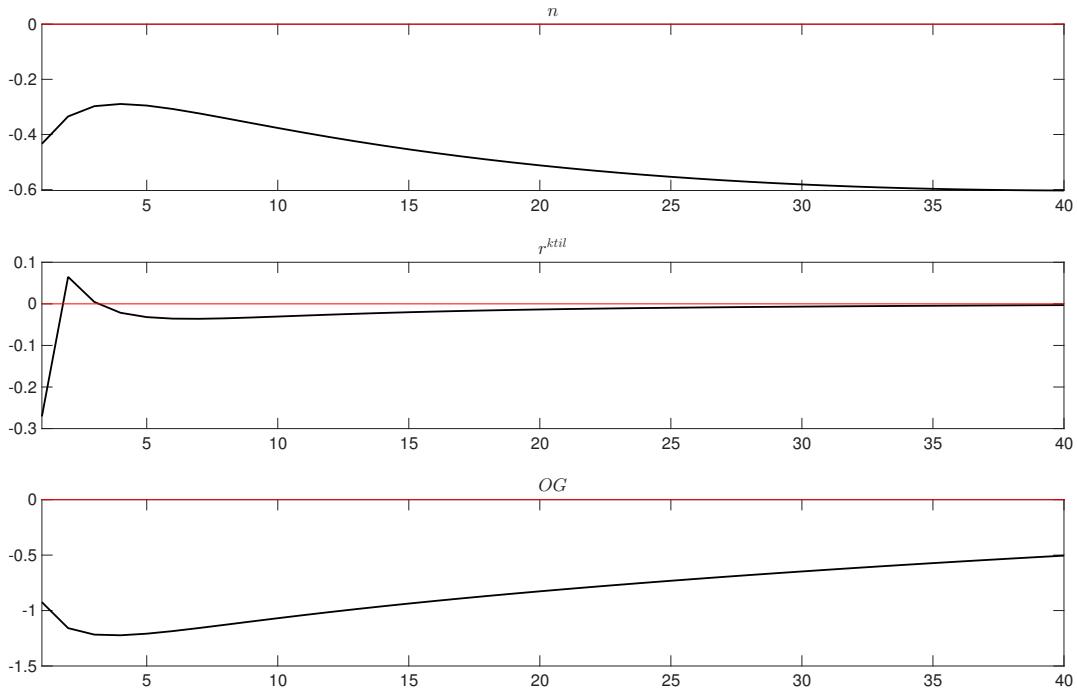


Figure 16: Impulse response functions (orthogonalized shock to η^m).

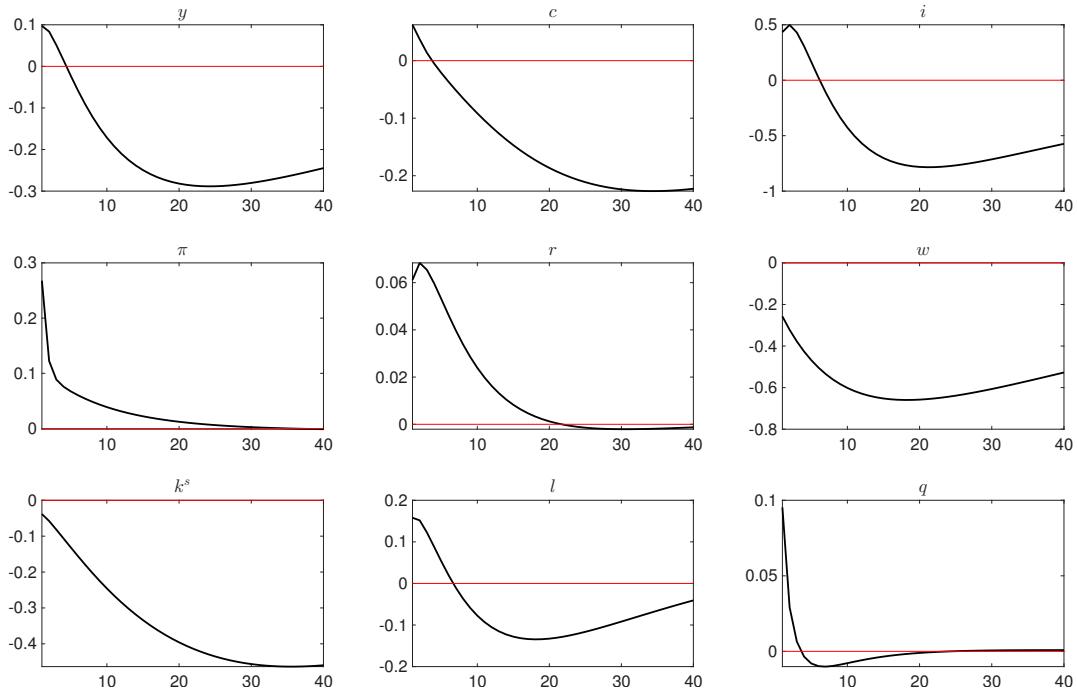


Figure 17: Impulse response functions (orthogonalized shock to η^p).

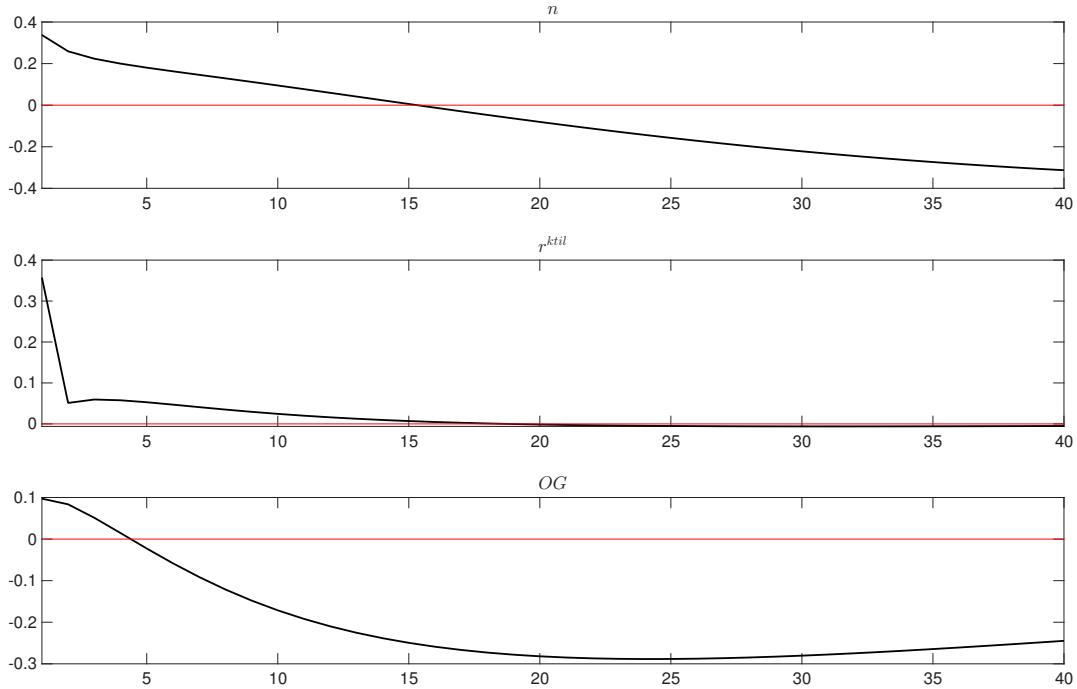


Figure 18: Impulse response functions (orthogonalized shock to η^p).

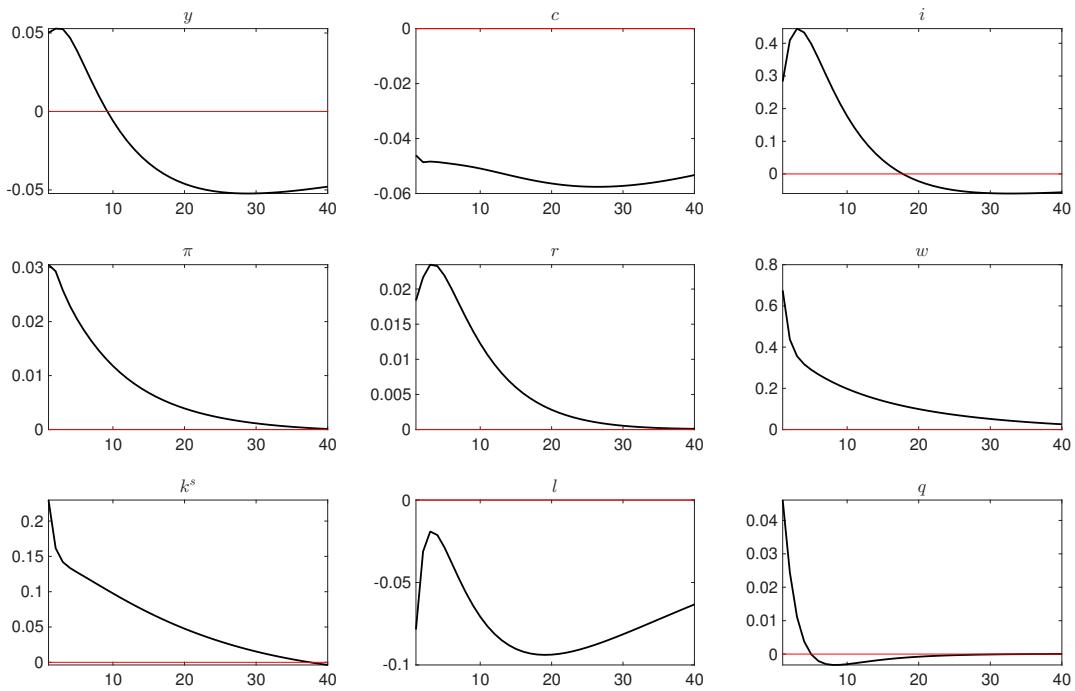


Figure 19: Impulse response functions (orthogonalized shock to η^w).

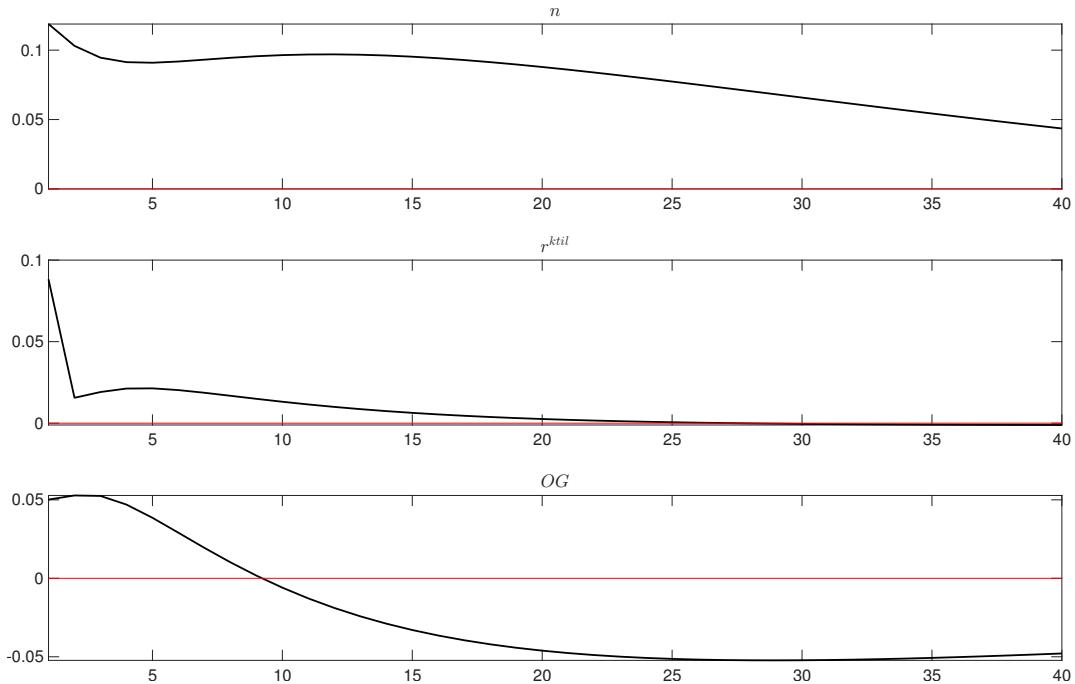


Figure 20: Impulse response functions (orthogonalized shock to η^w).

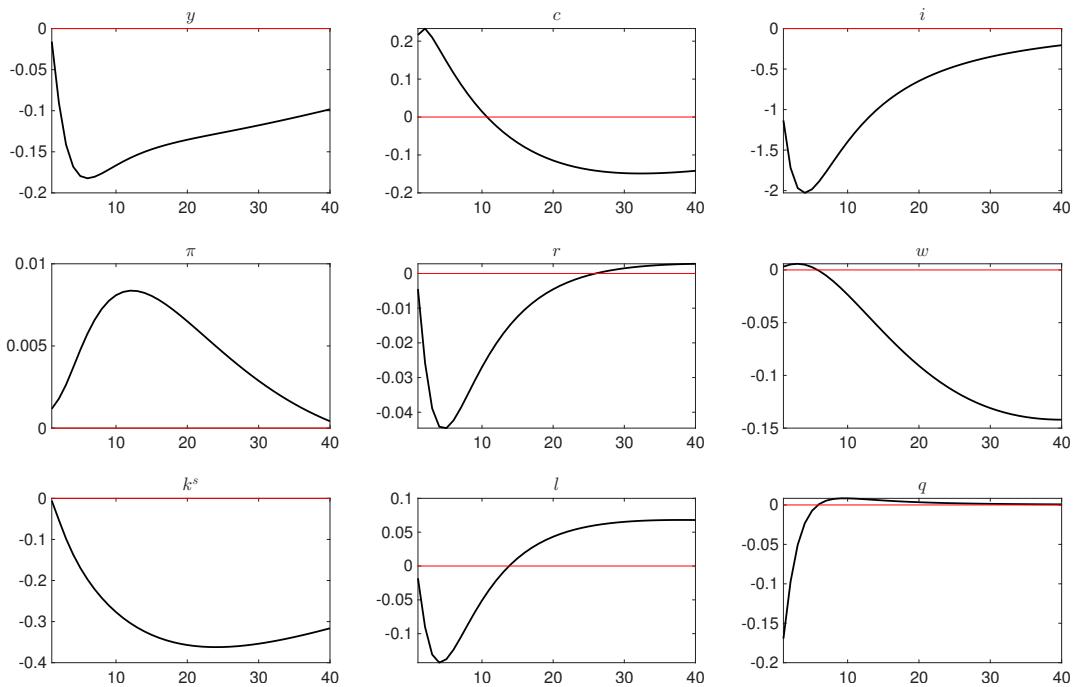


Figure 21: Impulse response functions (orthogonalized shock to η^{σ_w}).

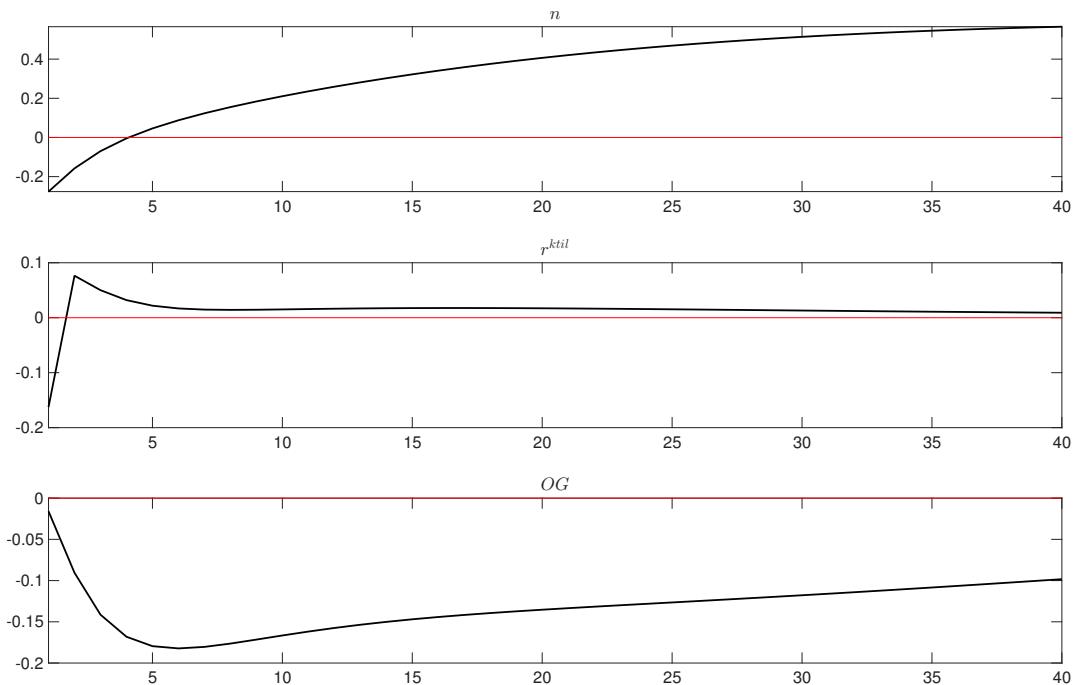


Figure 22: Impulse response functions (orthogonalized shock to η^{σ_w}).

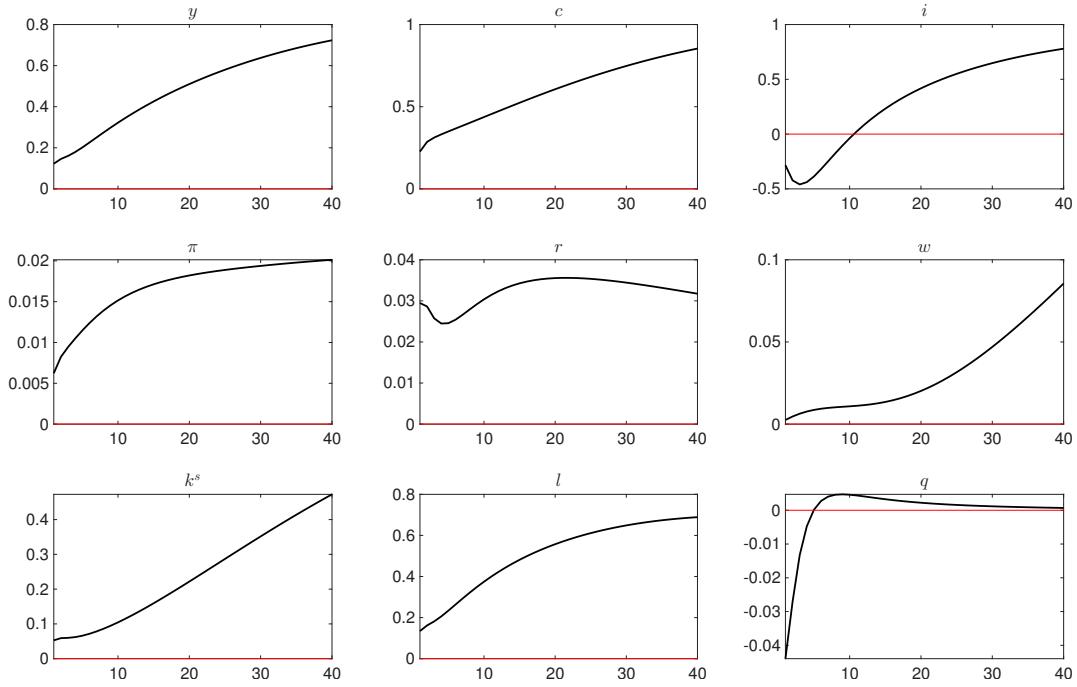


Figure 23: Impulse response functions (orthogonalized shock to $\eta^{\pi*}$).

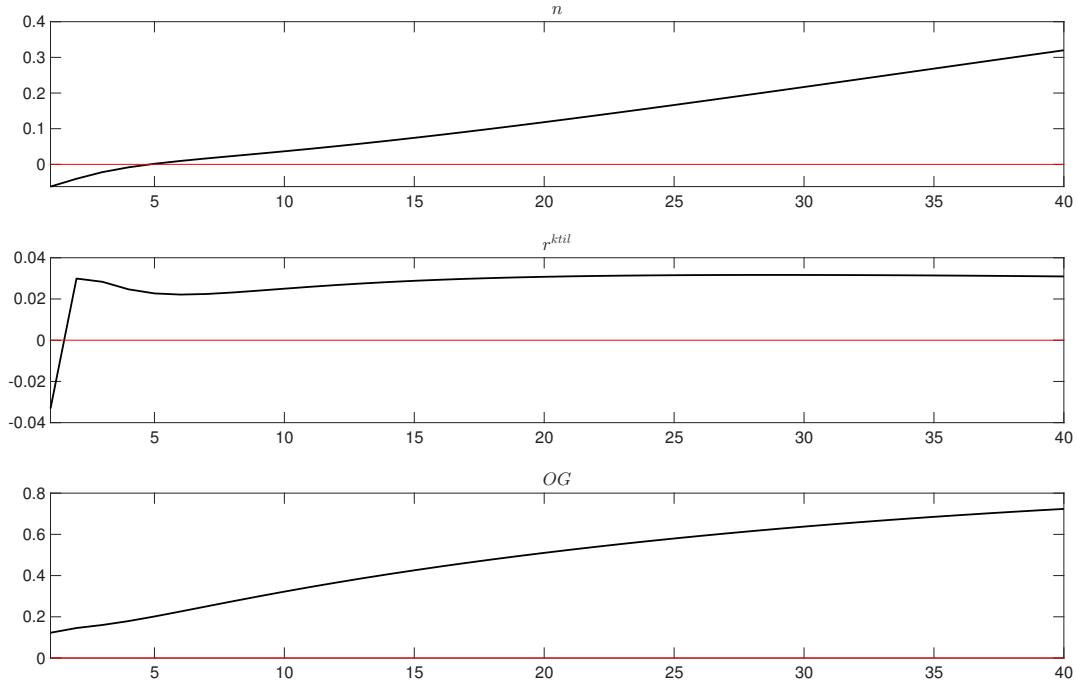


Figure 24: Impulse response functions (orthogonalized shock to $\eta^{\pi*}$).

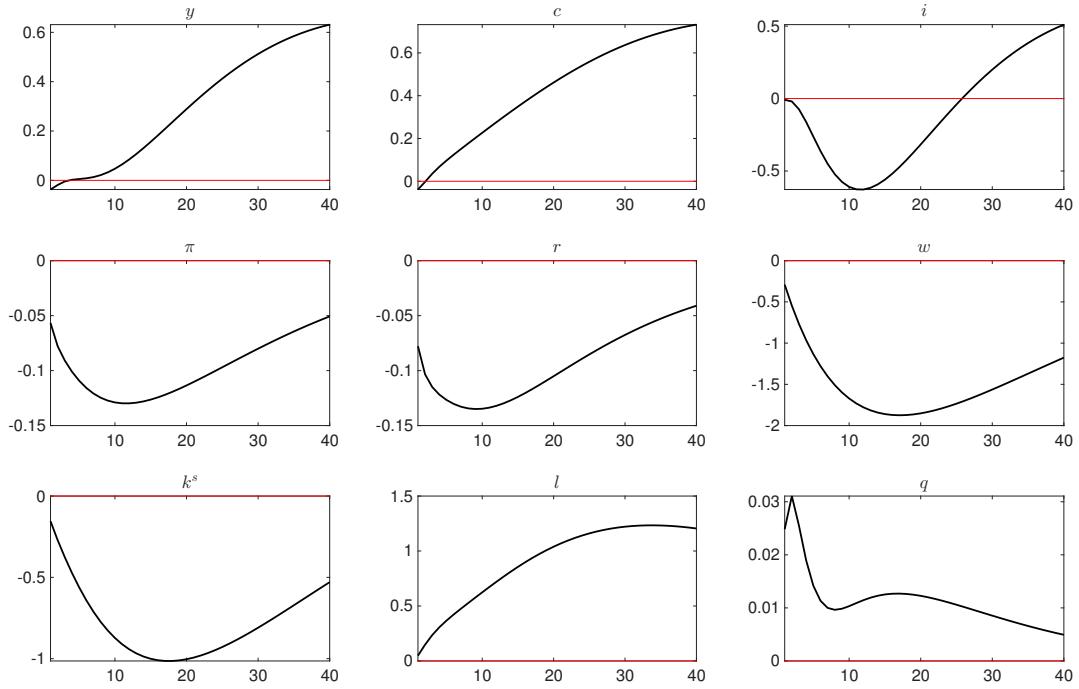


Figure 25: Impulse response functions (orthogonalized shock to η^{z_p}).

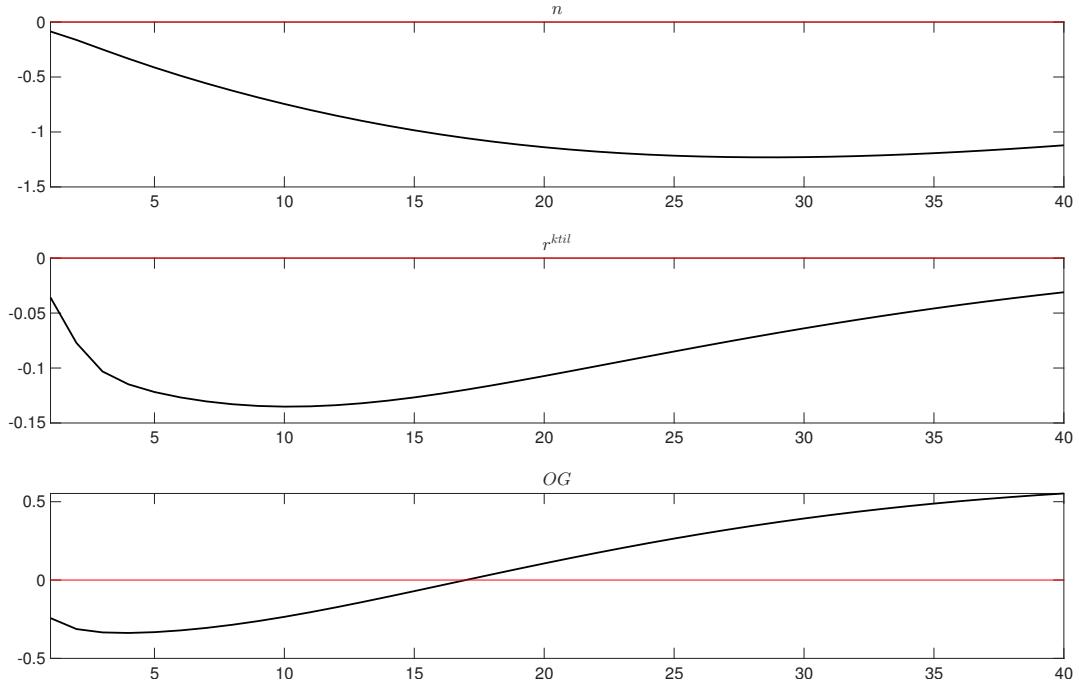


Figure 26: Impulse response functions (orthogonalized shock to η^{z_p}).

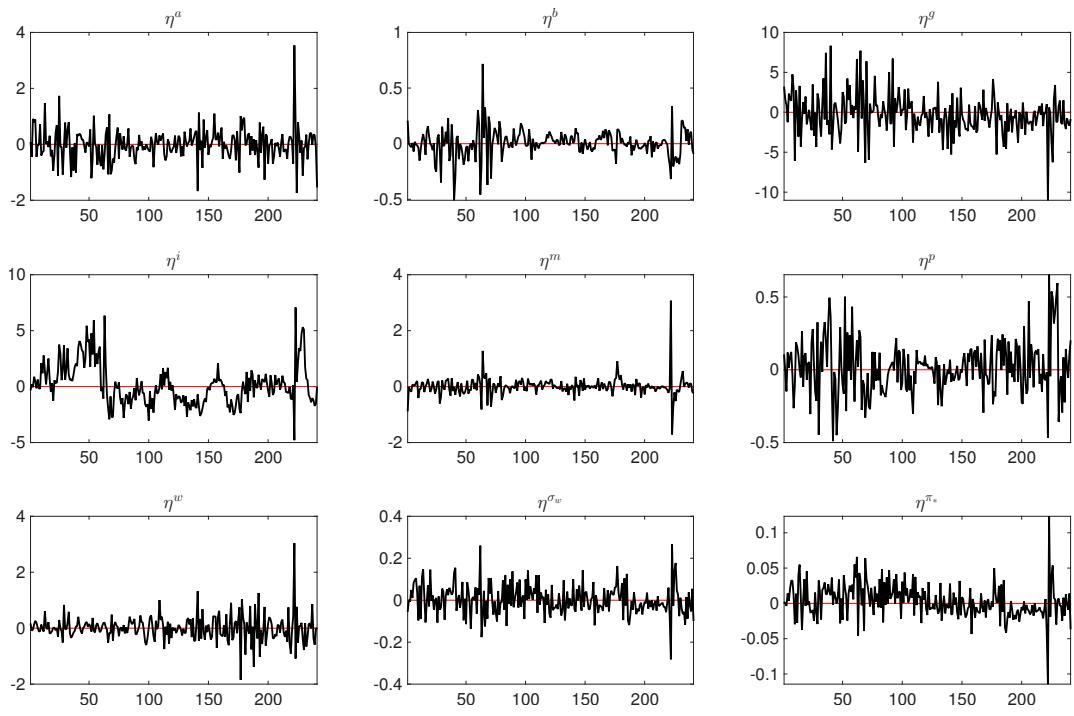


Figure 27: Smoothed shocks.

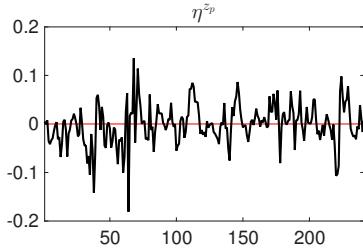


Figure 28: Smoothed shocks.