Table 1: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.4648	0.0787
ψ	beta	0.500	0.1500	0.5788	0.1709
Φ	norm	1.250	0.1250	1.1860	0.1619
ι_w	beta	0.500	0.1500	0.7078	0.2499
ξ_w	beta	0.500	0.1000	0.7184	0.1779
ι_p	beta	0.500	0.1500	0.5577	0.2793
ξ_p	beta	0.500	0.1000	0.6813	0.1230
σ_c	norm	1.500	0.3750	0.9284	0.0203
σ_l	norm	2.000	0.7500	1.3551	4.5087
λ	beta	0.700	0.1000	0.4871	0.0874
φ	norm	4.000	1.5000	1.8683	1.7241
r_π	norm	1.500	0.2500	1.1966	0.2483
r_y	norm	0.125	0.0500	0.2333	0.0625
$r_{\Delta y}$	norm	0.125	0.0500	0.0049	0.0105
ρ	beta	0.750	0.1000	0.9265	0.0366
n_*	norm	0.000	2.0000	1.0965	0.3451
γ	norm	0.400	0.1000	0.4634	0.2138
ζ_{sp}	beta	0.050	0.0050	0.0452	0.0046
$\bar{\pi}$	gamm	0.625	0.2000	0.6560	0.1524
ρ_{ga}	beta	0.500	0.2000	0.1595	0.1202
ρ_a	beta	0.500	0.2000	0.6717	0.0884
ρ_b	beta	0.500	0.2000	0.7848	0.0713
ρ_g	beta	0.500	0.2000	0.7151	0.1261
ρ_i	beta	0.500	0.2000	0.9955	0.0191
ρ_r	beta	0.500	0.2000	0.4590	0.0845
ρ_p	beta	0.500	0.2000	0.4230	0.2727
ρ_w	beta	0.500	0.2000	0.4433	0.2622
ρ_{σ_w}	beta	0.750	0.1500	0.9801	0.0038
ρ_{π_*}	beta	0.750	0.1500	0.7546	0.2337
μ_p	beta	0.500	0.2000	0.6523	0.1285
μ_w	beta	0.500	0.2000	0.5153	0.2744

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	0.6704	0.0841
η^b	invg	0.100	2.0000	0.0888	0.0576
η^g	invg	0.100	2.0000	1.8461	0.2187
η^i	invg	0.100	2.0000	0.3296	0.0675
η^m	invg	0.100	2.0000	0.0690	0.0093
η^p	invg	0.100	2.0000	0.2329	0.0290
η^w	invg	0.100	2.0000	0.7866	0.1354
η^{σ_w}	invg	0.100	2.0000	0.1162	0.0253
η^{π_*}	invg	0.100	2.0000	0.0459	0.0186

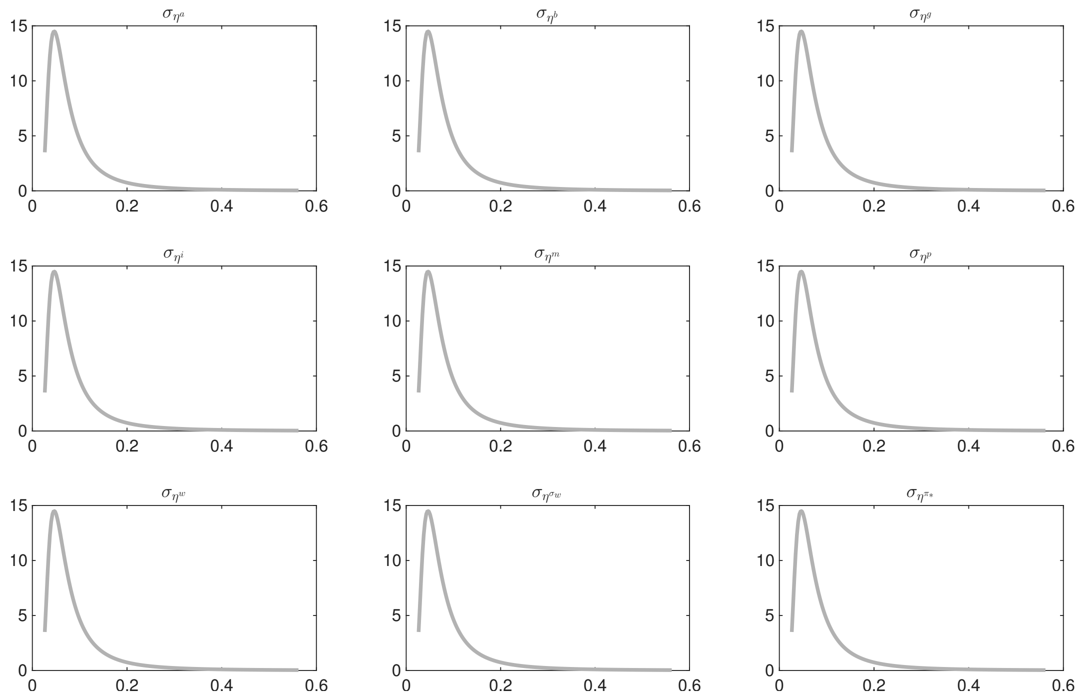

Figure 1: Priors.

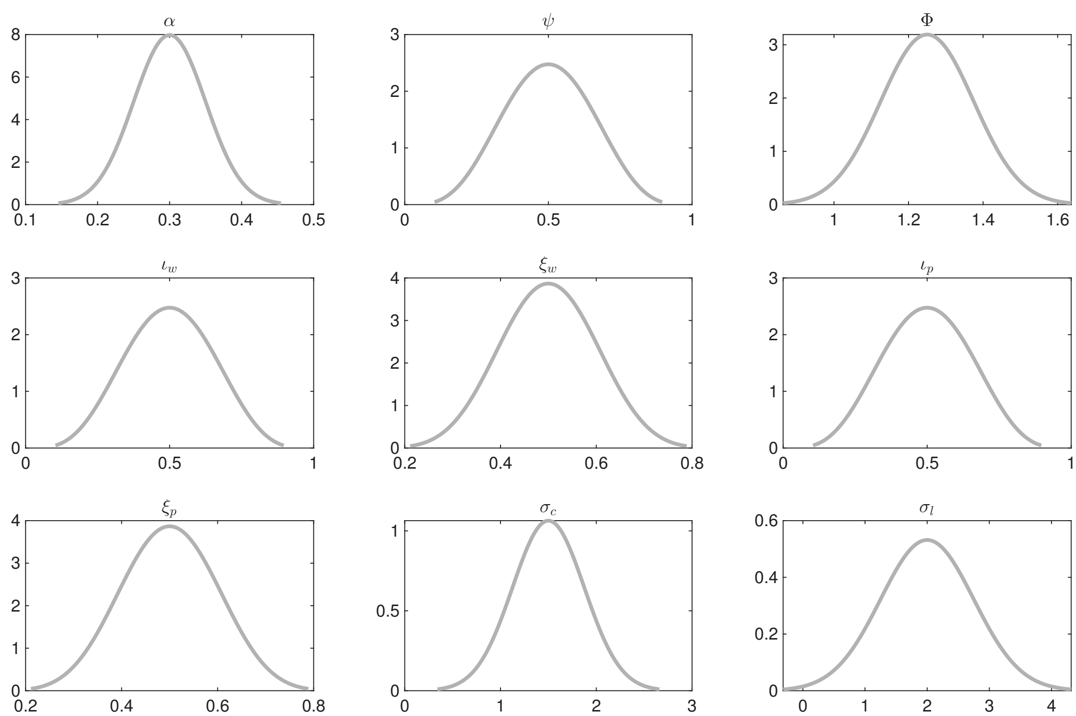

Figure 2: Priors.

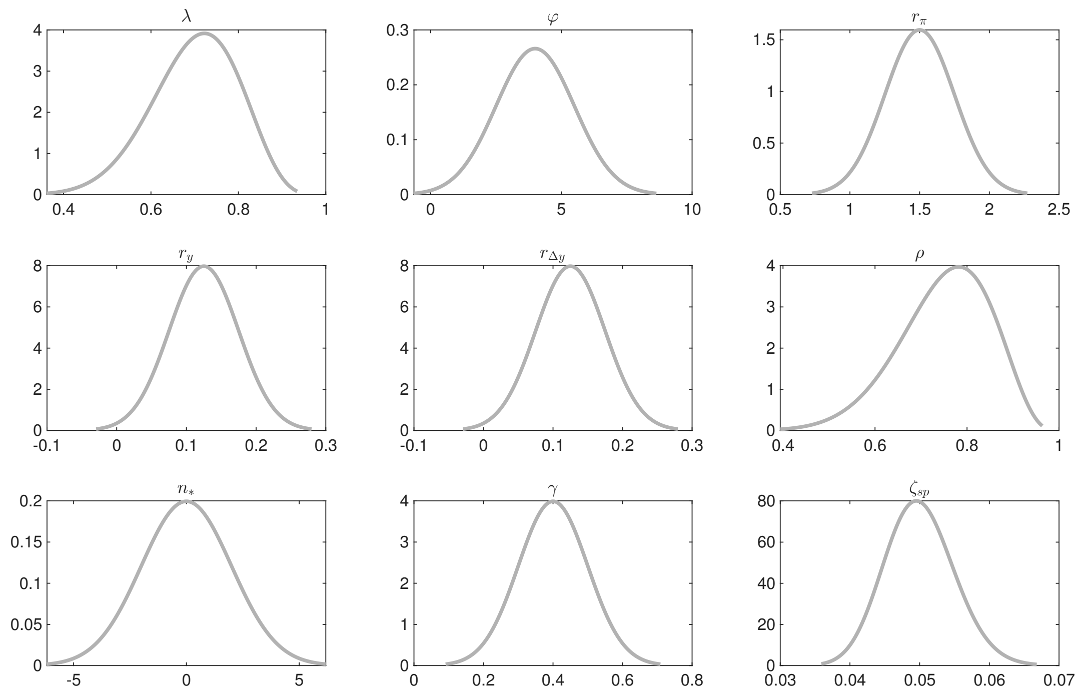

Figure 3: Priors.

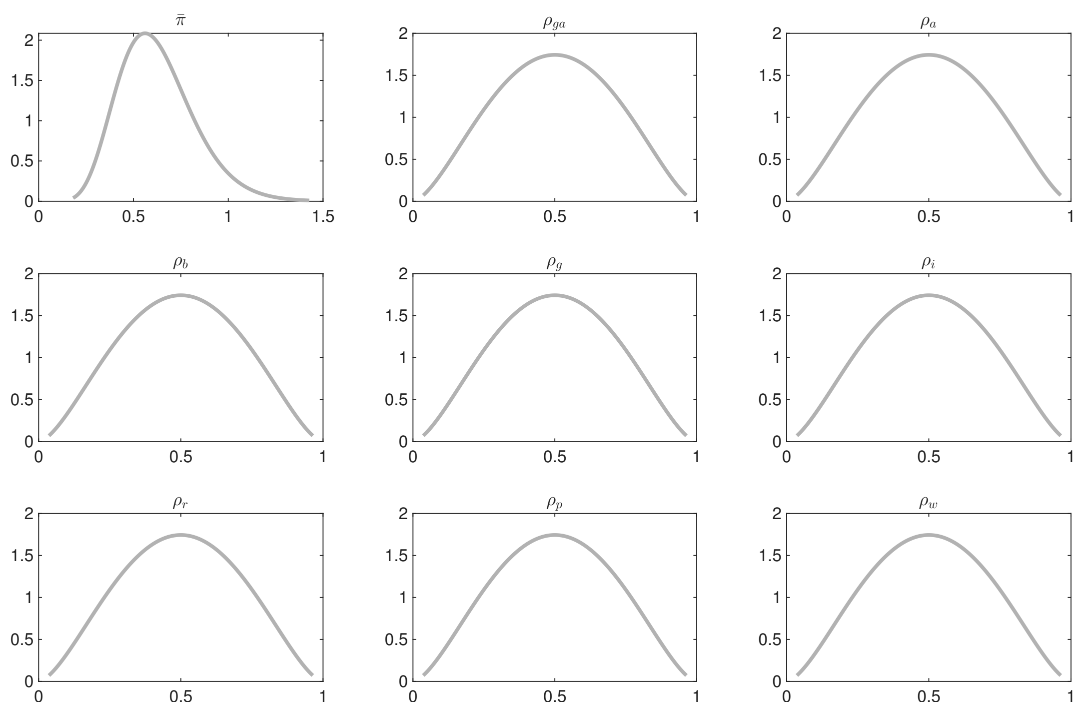

Figure 4: Priors.

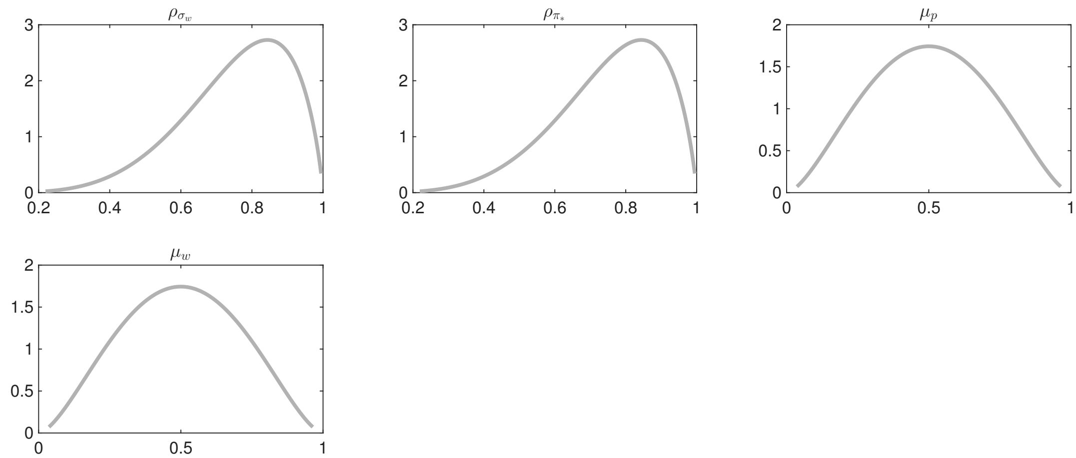

Figure 5: Priors.

Table 3: MATRIX OF COVARIANCE OF EXOGENOUS SHOCKS

$Variables$	η^a	η^b	η^g	η^i	η^m	η^p	η^w	η^{σ_w}	η^{π_*}
η^a	0.449492	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^b	0.000000	0.007881	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^g	0.000000	0.000000	3.408093	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^i	0.000000	0.000000	0.000000	0.108657	0.000000	0.000000	0.000000	0.000000	0.00000
η^m	0.000000	0.000000	0.000000	0.000000	0.004758	0.000000	0.000000	0.000000	0.00000
η^p	0.000000	0.000000	0.000000	0.000000	0.000000	0.054235	0.000000	0.000000	0.00000
η^w	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.618687	0.000000	0.00000
η^{σ_w}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.013494	0.00000
η^{π_*}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00211
η^{z_p}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000

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`	$Spread$	BBB-AAA Rate Spread
`labobs`	$lHOURS$	log hours worked
`robs`	$FEDFUNDS$	Federal funds rate
`pinfobs`	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
`rktil`	r^{ktil}	Return to capital
`ztil`	z^{til}	Stationary Technology shock
`sigw`	σ_w	Financial shock
`pist`	π_*	Inflation Target
`og`	OG	OutputGap
`zp`	z_p	Permanent Technology shock
`n`	n	Entreprenurial 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
cepsp	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	$\zeta_{sp\sigma_w}$	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
crhoms	ρ_r	persistence monetary policy shock
crhopinf	ρ_p	persistence price markup shock
crhow	ρ_w	persistence wage markup shock
cgamma	$\underline{\gamma}$	Adjusted trend
crkstar	$\bar{rk}$	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	$\frac{\bar{yp}}{\bar{y}}$	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	0.465	capital share
ψ	0.579	capacity utilization cost
φ	1.868	investment adjustment cost
δ	0.025	depreciation rate
σ_c	0.928	risk aversion
λ	0.487	external habit degree
Φ	1.186	fixed cost share
ι_w	0.708	Indexation to past wages
ξ_w	0.718	Calvo parameter wages
ι_p	0.558	Indexation to past prices
ξ_p	0.681	Calvo parameter prices
σ_l	1.355	Frisch elasticity
r_π	1.197	Taylor rule inflation feedback
$r_{\Delta y}$	0.005	Taylor rule output growth feedback
r_y	0.233	Taylor rule output level feedback
ρ	0.927	interest rate persistence
ζ_{sp}	0.045	Spread elasticity
γ^*	0.990	Wealth parameter
v^*	2.471	Wealth parameter
n_*	1.097	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}	0.160	Feedback technology on exogenous spending
μ_w	0.515	coefficient on MA term wage markup
μ_p	0.652	coefficient on MA term price markup
ρ_{σ_w}	0.980	persistence Financial shock
ρ_{π_*}	0.755	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	0.672	persistence productivity shock
ρ_b	0.785	persistence risk premium shock
ρ_g	0.715	persistence spending shock
ρ_i	0.996	persistence risk premium shock
ρ_r	0.459	persistence monetary policy shock
ρ_p	0.423	persistence price markup shock

Table 7 – Continued

Parameter	Value	Description
ρ_w	0.443	persistence wage markup shock
$\underline{\gamma}$	0.463	Adjusted trend
$\bar{rk}$	0.036	SS return on capital
k^*	4.149	Capital-Output ratio
$\bar{k}^*$	4.165	SS Capital-Output ratio
$\frac{\bar{i}}{\bar{y}}$	0.120	Private investment share in aggregate output
$\frac{\bar{yp}}{\bar{y}}$	0.845	Private output share in aggregate output
$\frac{\bar{c}}{\bar{y}}$	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
$\bar{\pi}$	0.656	steady state inflation rate
$\bar{\gamma}$	0.400	net growth rate in percent
$\frac{\bar{g}}{\bar{y}}$	0.180	steady state exogenous spending share

Table 8: Prior information (parameters)

	Distribution	Mean	Mode	Std.dev.	Bounds* Lower	Upper	90% HPDI 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

Order	1	2	3	4	5
y	0.9975	0.9943	0.9913	0.9887	0.9866
c	0.9981	0.9958	0.9937	0.9920	0.9906
i	0.9984	0.9951	0.9910	0.9863	0.9816
π	0.9949	0.9877	0.9798	0.9719	0.9644
r	0.9994	0.9980	0.9957	0.9929	0.9896
w	0.9981	0.9966	0.9954	0.9942	0.9931
k^s	0.9994	0.9989	0.9984	0.9979	0.9974
l	0.9566	0.8939	0.8308	0.7739	0.7248
q	0.9989	0.9968	0.9937	0.9901	0.9860
n	0.9976	0.9954	0.9933	0.9912	0.9891
r^{ktil}	0.9712	0.9700	0.9681	0.9655	0.9623
OG	0.9672	0.9192	0.8714	0.8285	0.7918

Table 10: MATRIX OF CORRELATIONS

$Variables$	y	c	i	π	r	w	k^s	l	q	n
y	1.0000	0.9971	0.9721	-0.5689	-0.6016	0.9730	0.9912	-0.4750	-0.8964	0.8895
c	0.9971	1.0000	0.9548	-0.5958	-0.6250	0.9748	0.9922	-0.4988	-0.8788	0.9047
i	0.9721	0.9548	1.0000	-0.4939	-0.5190	0.9567	0.9683	-0.4935	-0.9388	0.8313
π	-0.5689	-0.5958	-0.4939	1.0000	0.9851	-0.6345	-0.6084	0.5676	0.2468	-0.8379
r	-0.6016	-0.6250	-0.5190	0.9851	1.0000	-0.6486	-0.6257	0.4829	0.2553	-0.8510
w	0.9730	0.9748	0.9567	-0.6345	-0.6486	1.0000	0.9933	-0.6527	-0.8853	0.9294
k^s	0.9912	0.9922	0.9683	-0.6084	-0.6257	0.9933	1.0000	-0.5868	-0.9001	0.9146
l	-0.4750	-0.4988	-0.4935	0.5676	0.4829	-0.6527	-0.5868	1.0000	0.5042	-0.6384
q	-0.8964	-0.8788	-0.9388	0.2468	0.2553	-0.8853	-0.9001	0.5042	1.0000	-0.6752
n	0.8895	0.9047	0.8313	-0.8379	-0.8510	0.9294	0.9146	-0.6384	-0.6752	1.0000
r^{ktil}	-0.5578	-0.5788	-0.4854	0.9707	0.9836	-0.6073	-0.5830	0.4671	0.2173	-0.8121
OG	0.2877	0.2800	0.2264	-0.5471	-0.6427	0.2000	0.2218	0.2892	0.0488	0.3544

Table 11: THEORETICAL MOMENTS

$VARIABLE$	$MEAN$	$STD.DEV.$	$VARIANCE$
y	0.0000	29.1494	849.6847
c	0.0000	38.4141	1475.6402
i	0.0000	52.1659	2721.2853
π	0.0000	5.7390	32.9358
r	0.0000	5.6446	31.8614
w	0.0000	30.3832	923.1401
k^s	0.0000	57.5050	3306.8284
l	0.0000	7.5164	56.4956
q	0.0000	32.8914	1081.8423
n	0.0000	54.9783	3022.6181
r^{ktil}	0.0000	5.9802	35.7629
OG	0.0000	7.2790	52.9840

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	0.11	0.05	0.02	97.22	0.11	0.01	0.03	0.22	0.00	2.24
c	0.11	0.04	0.00	97.38	0.07	0.00	0.02	0.23	0.00	2.15
i	0.08	0.03	0.00	95.11	0.20	0.00	0.02	1.71	0.00	2.84
π	0.03	0.05	0.00	69.30	0.36	0.17	0.15	1.51	0.01	28.41
r	0.02	0.06	0.00	71.42	0.47	0.00	0.05	1.07	0.01	26.91
w	0.25	0.00	0.00	94.54	0.04	0.01	0.24	0.15	0.00	4.78
k^s	0.10	0.01	0.00	97.24	0.04	0.00	0.01	0.19	0.00	2.41
l	0.51	0.82	0.30	58.24	1.27	0.07	0.83	0.96	0.02	36.97
q	0.01	0.05	0.00	99.62	0.07	0.01	0.01	0.04	0.00	0.20
n	0.48	0.07	0.00	86.84	0.19	0.00	0.04	1.45	0.00	10.94
r^{ktil}	0.07	1.18	0.00	66.85	1.36	0.00	0.31	1.75	0.02	28.46
OG	0.65	0.75	0.05	60.35	1.78	0.08	0.40	3.57	0.03	32.33

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

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

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

$$clandap = \Phi$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$ff4 = \frac{\gamma^*\, \upsilon^*}{n_*}$$

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

$$c_t = (-c2)\ (r_t - \pi_{t+1}) + c_2 * \varepsilon^b_{t\,t} + c1\ (c_{t-1} - w_t) + c3\ \left(c_{t+1} + c4\, {z^{til}}_t\right) + c5\ (l_t - l_{t+1}) \tag{1}$$

$$q_t = i3\ \left(i_t - i1\ (i_{t-1} - w_t) - i2\, i_{t+1} - {z^{til}}_t\, c4\, i2 - {\varepsilon^i}_t\right) \tag{2}$$

$$k_t = k1\ (k_{t-1} - w_t) + i_t\, k2 + {\varepsilon^i}_t\, k3 \tag{3}$$

$${k^s}_t = k_{t-1} + u_t - w_t \tag{4}$$

$$u_t = u1\, {r^k}_t \tag{5}$$

$$\mu_{p_t} = w_t + \alpha\, l_t - \alpha\, {k^s}_t \tag{6}$$

$${k^s}_t = l_t + w_t - {r^k}_t \tag{7}$$

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

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

$$\pi_t = \mu_{p_t}\, pi1\, pi2 + pi3\, \pi_{t-1} + \pi_{t+1}\, pi4 + {\varepsilon^p}_t \tag{10}$$

$$w_t = w1\, w2\ \left({w^h}_t - w_t\right) - \pi_t\, w3 + w2\ (w_{t-1} - w_t + \iota_w\, \pi_{t-1}) + w4\ \left(\pi_{t+1} + c4\, {z^{til}}_t + w_{t+1}\right) + {\varepsilon^w}_t \tag{11}$$

$${w^h}_t = mrs1\ (c_t - \lambda\ \exp((-\gamma))\ c_{t-1} + \lambda\ \exp((-\gamma))\ w_t) + l_t\, \sigma_l \tag{12}$$

$$\begin{aligned} r_t = \rho\, r_{t-1} + (1 - \rho)\ r_\pi\ (\pi_t - \pi_{*t}) + (1 - \rho)\ r_y\ \left(y_t - {y^{flex}}_t\right) \\ + r_{\Delta y}\ \left(y_t - {y^{flex}}_t - \left(y_{t-1} - {y^{flex}}_{t-1}\right)\right) + {\varepsilon^r}_t \end{aligned} \tag{13}$$

$${r^{ktil}}_t = \pi_t + {r^k}_t\, ff1 + q_t\, ff2 - q_{t-1} \tag{14}$$

$$r^{ktil}{}_{t+1} = r_t - c_2 * \varepsilon^b_{t\,t}\, ff3 + \zeta_{sp}\ (q_t + k_t - n_t) + \sigma_{wt} \tag{15}$$

$$n_t = \zeta_{nRk}\ \left(r^{ktil}{}_t - \pi_t\right) - \zeta_{nR}\ (r_{t-1} - \pi_t) + \zeta_{nqk}\ (k_{t-1} + q_{t-1}) + \zeta_{nn}\, n_{t-1} - \frac{\zeta_{n\sigma_w}}{\zeta_{sp\sigma_w}}\, \sigma_{wt-1} - w_t\, ff4 \tag{16}$$

$$c^{flex}{}_t = c_2 * \varepsilon^b_{t\,t} + (-c2)\ r^{flex}{}_t + c1\ \left(c^{flex}{}_{t-1} - w_t\right) + c3\ \left(c4\, z^{til}{}_t + c^{flex}{}_{t+1}\right) + c5\ \left(l^{flex}{}_t - l^{flex}{}_{t+1}\right) \tag{17}$$

$$q^{flex}{}_t = i3\ \left(i^{flex}{}_t - i1\ \left(i^{flex}{}_{t-1} - w_t\right) - i2\, i^{flex}{}_{t+1} - z^{til}{}_t\, c4\, i2 - \varepsilon^i{}_t\right) \tag{18}$$

$$k^{flex}{}_t = \varepsilon^i{}_t\, k3 + k1\ \left(k^{flex}{}_{t-1} - w_t\right) + k2\, i^{flex}{}_t \tag{19}$$

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

$$z^{flex}{}_t = u1\, r^{k,flex}{}_t \tag{21}$$

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

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

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

$$y^{flex}{}_t = \frac{\bar{g}}{\bar{y}}\, \varepsilon^g{}_t + y1\, c^{flex}{}_t + y2\, i^{flex}{}_t + y3\, z^{flex}{}_t - z^{til}{}_t\, c4\, \frac{\bar{g}}{\bar{y}} \tag{25}$$

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

$$q^{flex}{}_t = c_2 * \varepsilon^b_{t\,t}\, ff3 + ff1\, r^{k,flex}{}_{t+1} + ff2\, q^{flex}{}_{t+1} - r^{flex}{}_t \tag{27}$$

$$OG_t = y_t - y^{flex}{}_t \tag{28}$$

$$w_t = c4\, z^{til}{}_{t-1} + \frac{1}{1 - \alpha}\, \eta^a{}_t + z_{p_t} \tag{29}$$

$$z^{til}{}_t = \eta^a{}_t + \rho_a\, z^{til}{}_{t-1} \tag{30}$$

$$\varepsilon^g{}_t = \rho_g\, \varepsilon^g{}_{t-1} + \eta^g{}_t + \eta^a{}_t\, \rho_{ga} \tag{31}$$

$$c_2 * \varepsilon^b_{t\,t} = \rho_b\, c_2 * \varepsilon^b_{t\,t-1} + \eta^b{}_t \tag{32}$$

$$\varepsilon^i{}_t = \rho_i\,\varepsilon^i{}_{t-1} + \eta^i{}_t \tag{33}$$

$$\varepsilon^p{}_t = \rho_p\,\varepsilon^p{}_{t-1} + \eta^p{}_t - \mu_p\,\sigma_{map}\,\eta^p{}_{t-1} \tag{34}$$

$$\varepsilon^w{}_t = \rho_w\,\varepsilon^w{}_{t-1} + \eta^w{}_t - \mu_w\,\sigma_{maw}\,\eta^w{}_{t-1} \tag{35}$$

$$\varepsilon^r{}_t = \rho_r\,\varepsilon^r{}_{t-1} + \eta^m{}_t \tag{36}$$

$$\sigma_{wt} = \sigma_{wt-1}\,\rho_{\sigma_w} + \eta^{\sigma_w}{}_t \tag{37}$$

$$\pi_{*t} = \rho_{\pi_*}\,\pi_{*t-1} + \eta^{\pi_*}{}_t \tag{38}$$

$$z_{p_t} = \rho_{zp}\,z_{p_{t-1}} + \eta^{z_p}{}_t \tag{39}$$

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

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

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

$$dlWAG_t = w_t + \bar{\gamma} + w_t - w_{t-1} \tag{43}$$

$$lHOURS_t = l_t + \bar{l} \tag{44}$$

$$FEDFUNDS_t = r_t + \bar{r} \tag{45}$$

$$dlP_t = \bar{\pi} + \pi_t \tag{46}$$

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

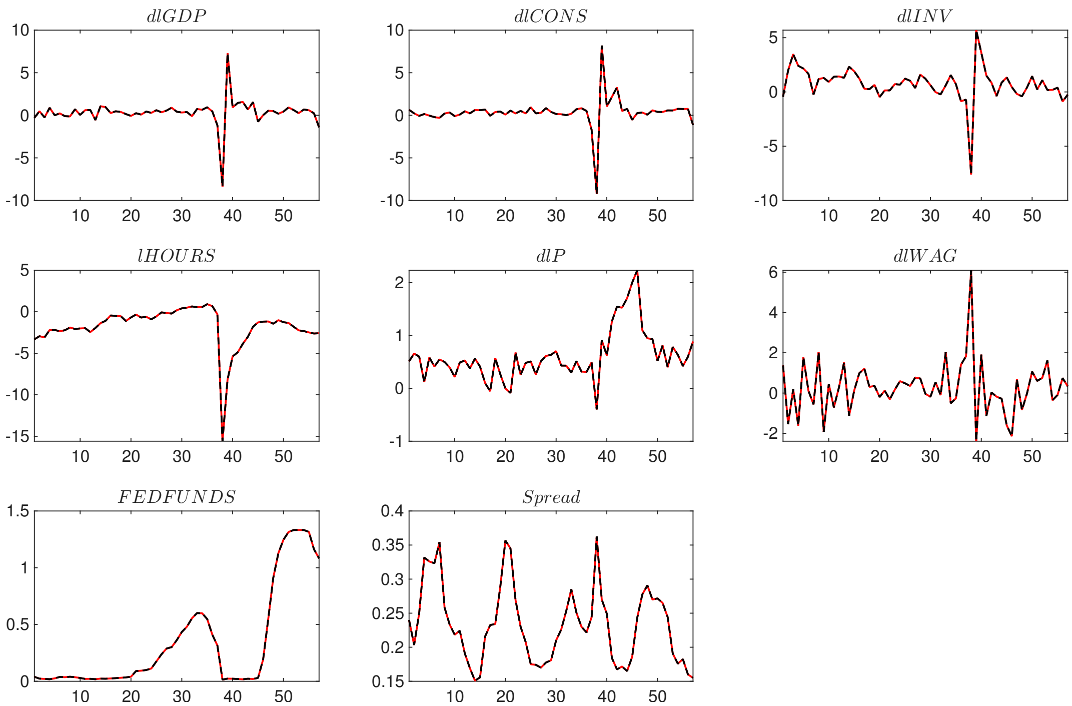

Figure 6: Historical and smoothed variables.

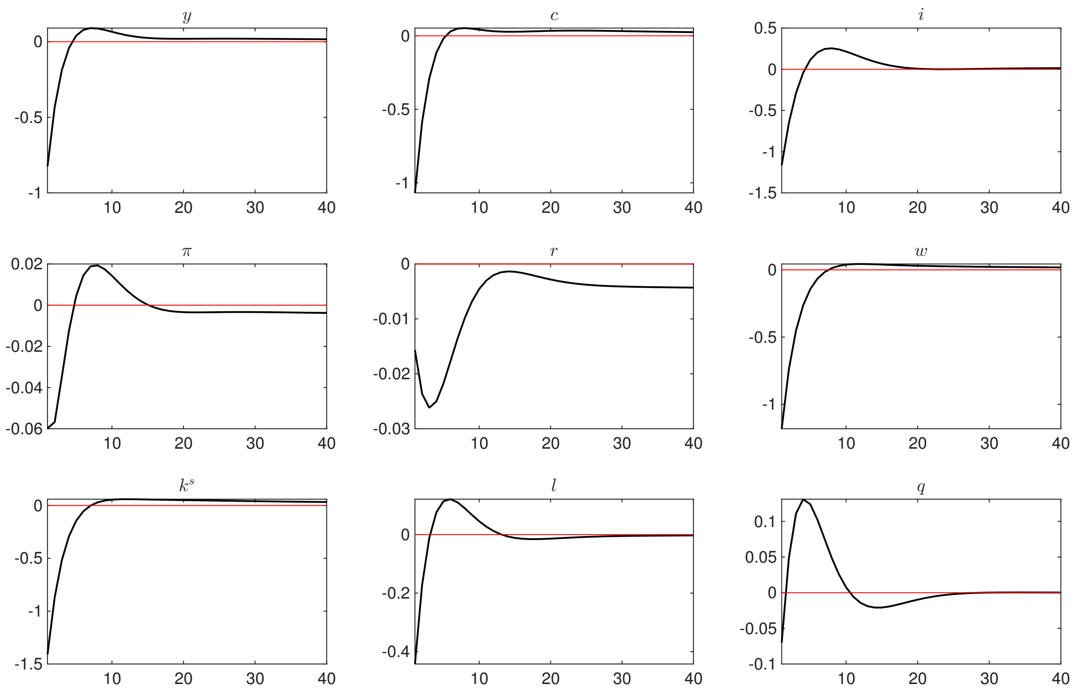

Figure 7: Impulse response functions (orthogonalized shock to η^a).

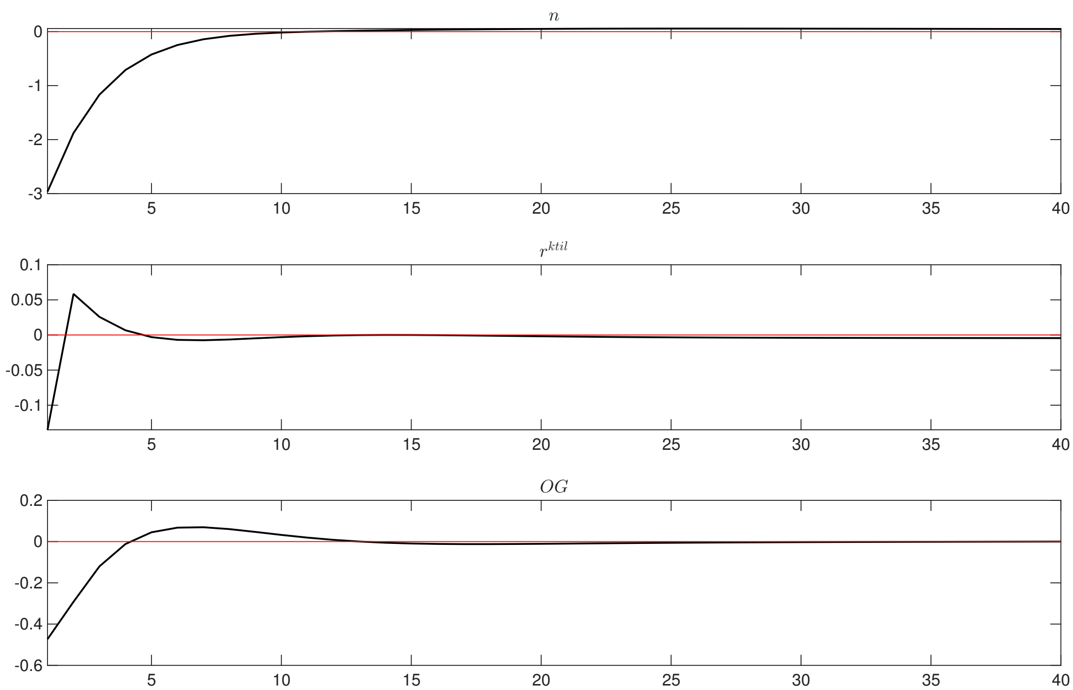

Figure 8: Impulse response functions (orthogonalized shock to η^a).

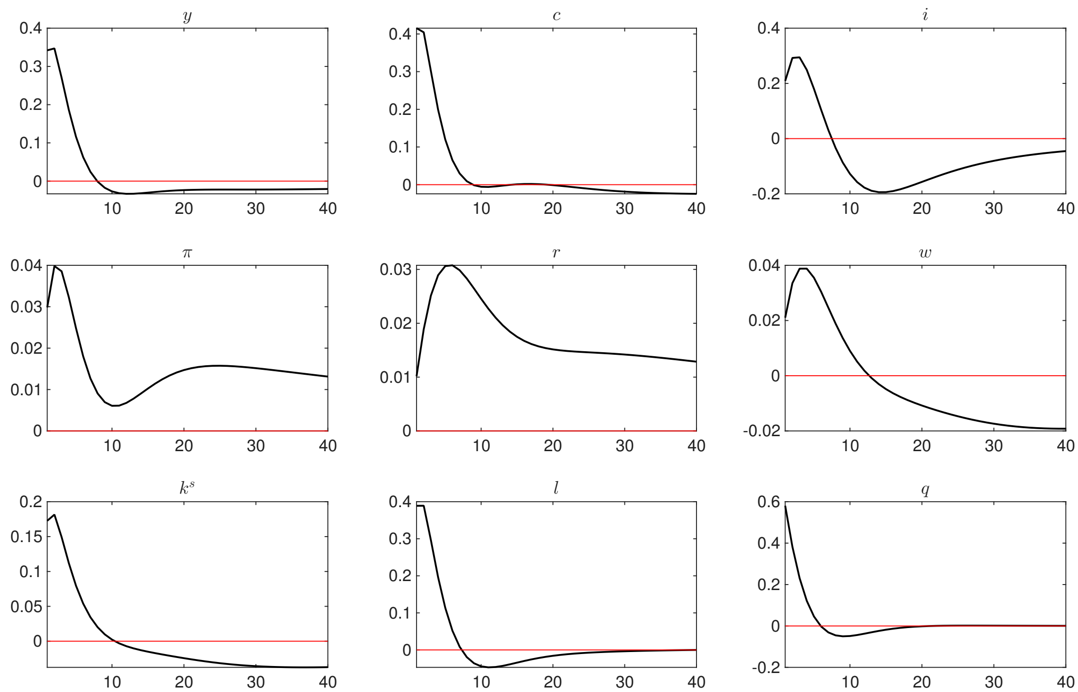

Figure 9: Impulse response functions (orthogonalized shock to η^b).

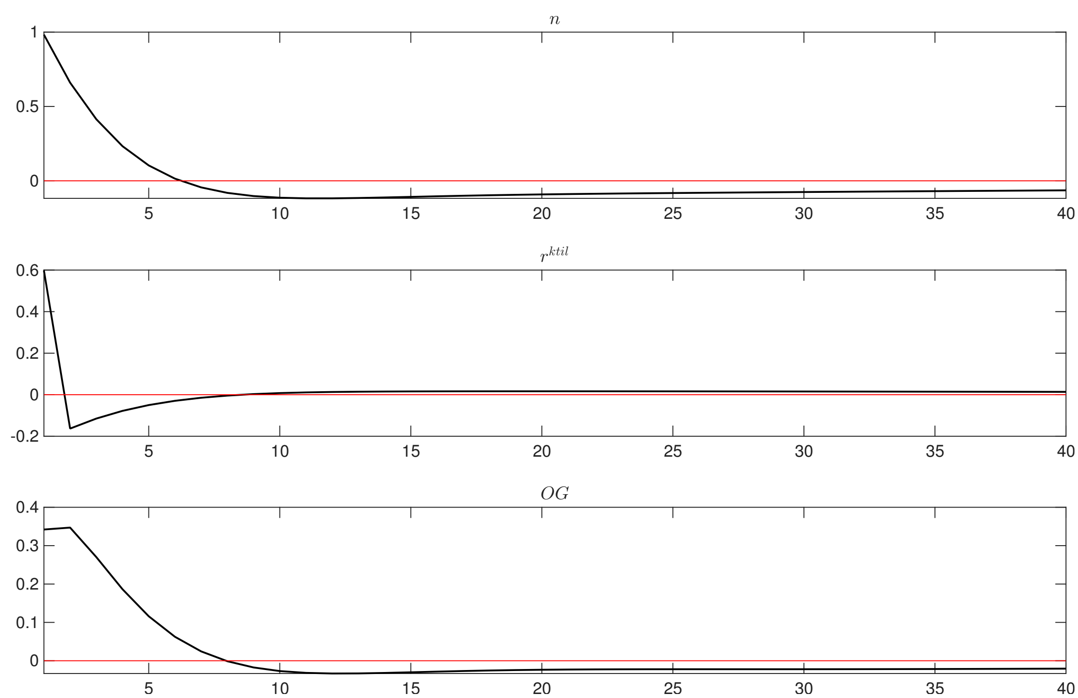

Figure 10: Impulse response functions (orthogonalized shock to η^b).

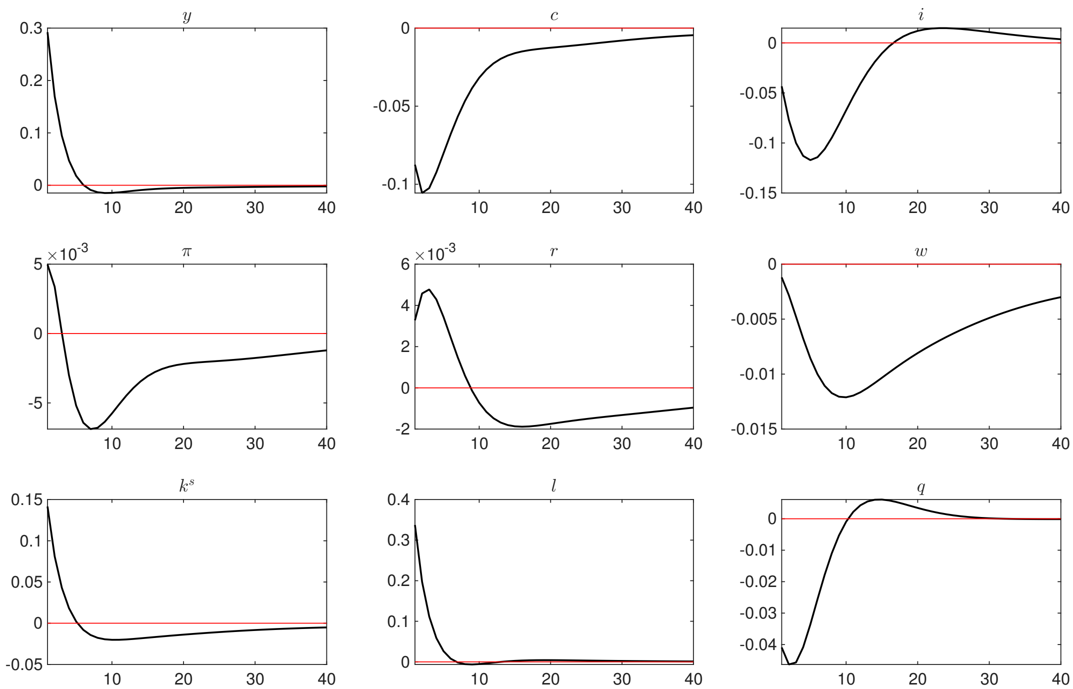

Figure 11: Impulse response functions (orthogonalized shock to η^g).

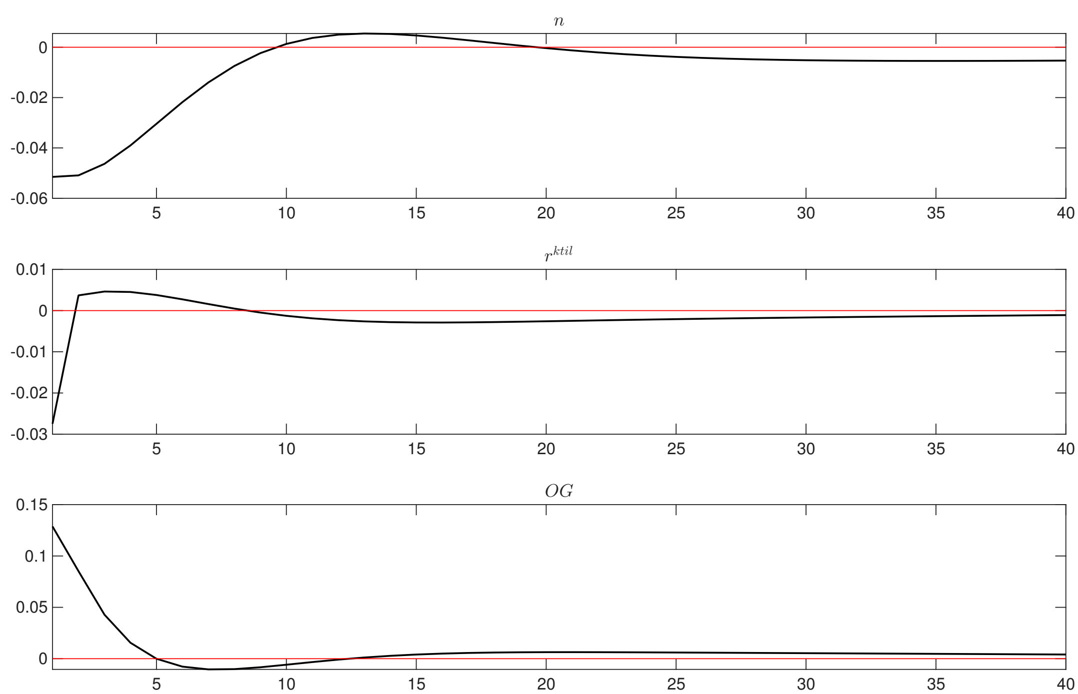

Figure 12: Impulse response functions (orthogonalized shock to η^g).

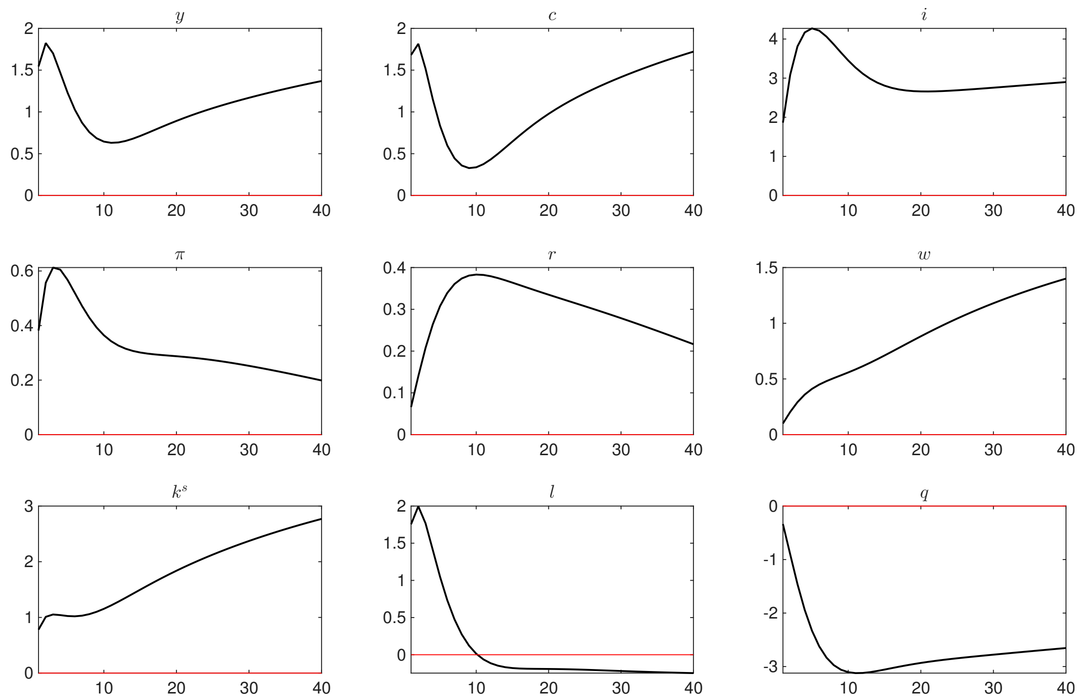

Figure 13: Impulse response functions (orthogonalized shock to η^i).

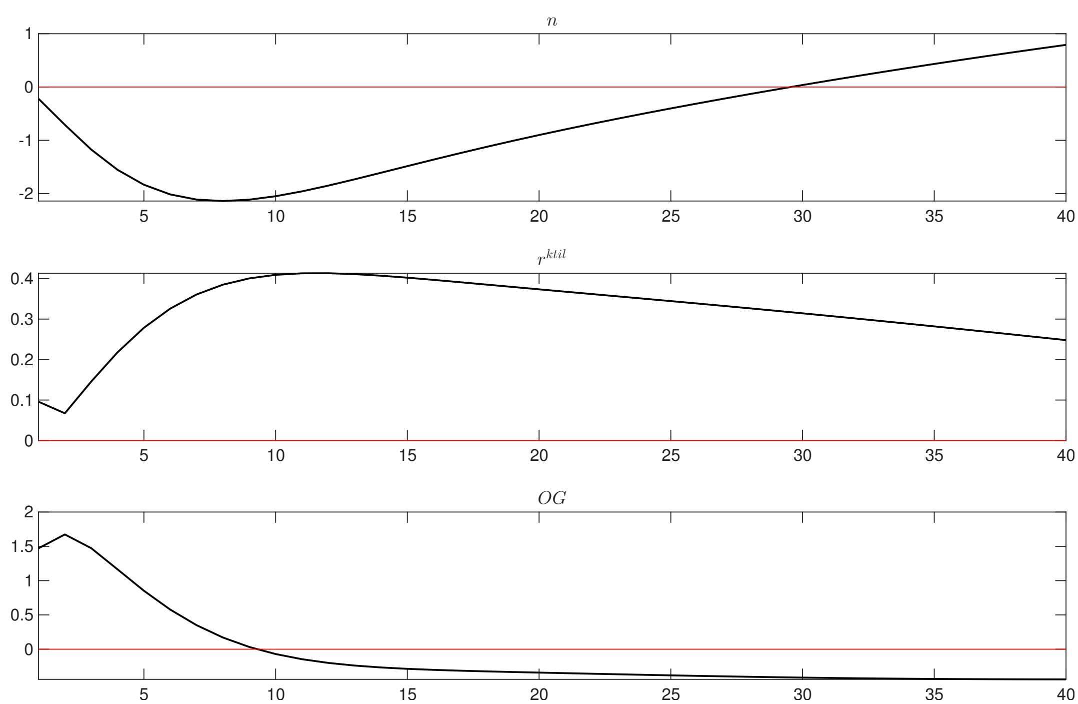

Figure 14: Impulse response functions (orthogonalized shock to η^i).

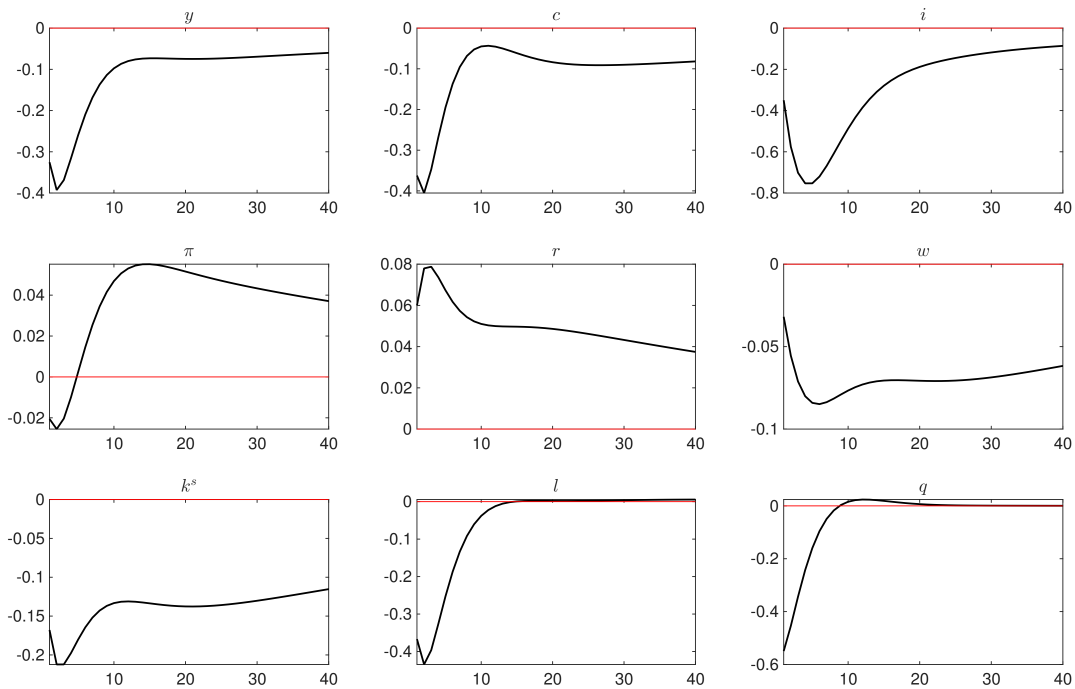

Figure 15: Impulse response functions (orthogonalized shock to η^m).

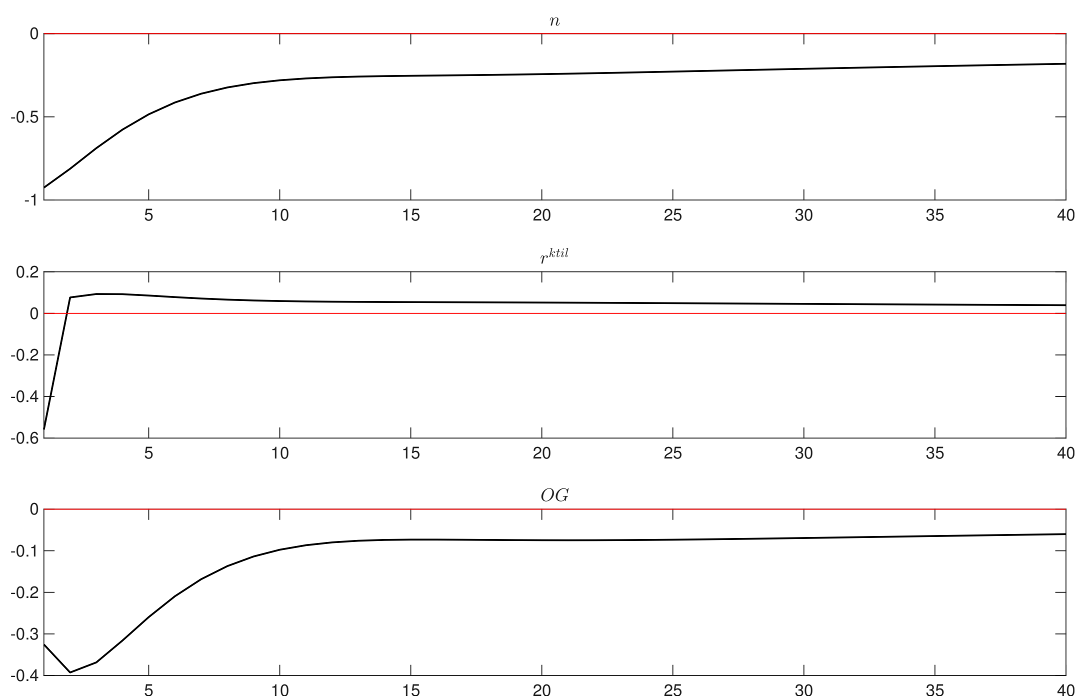

Figure 16: Impulse response functions (orthogonalized shock to η^m).

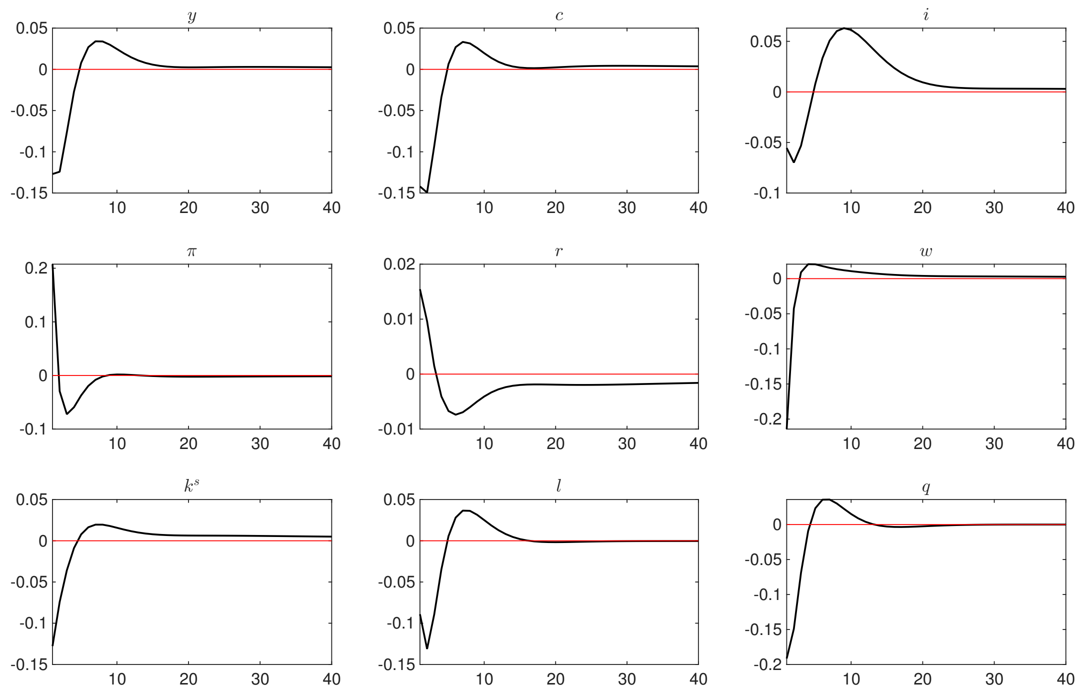

Figure 17: Impulse response functions (orthogonalized shock to η^p).

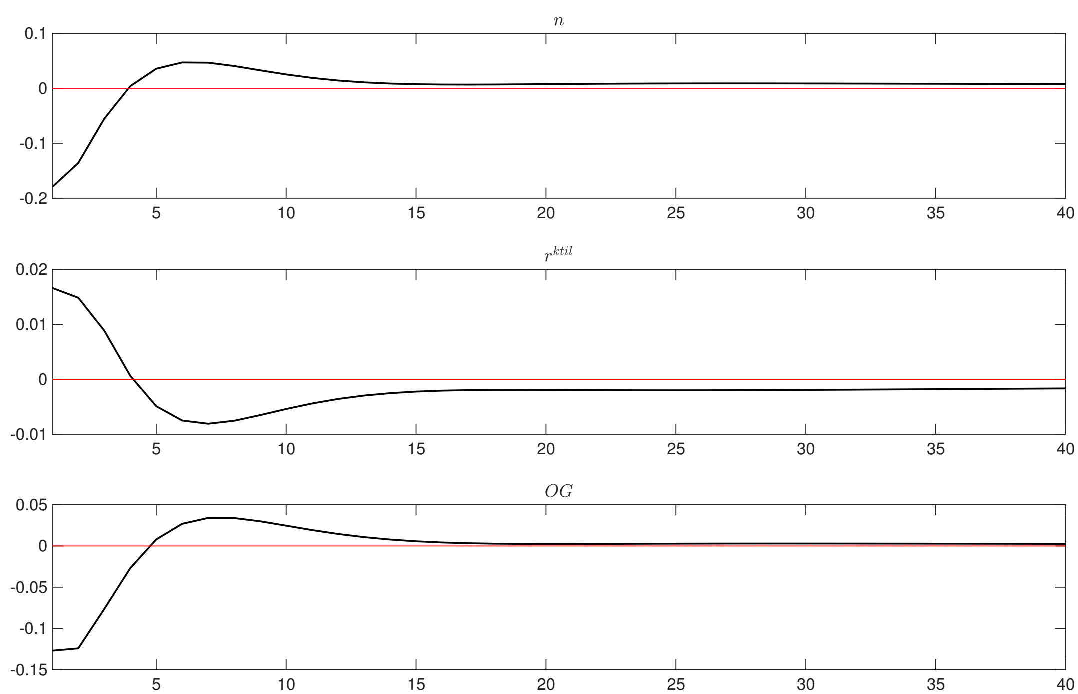

Figure 18: Impulse response functions (orthogonalized shock to η^p).

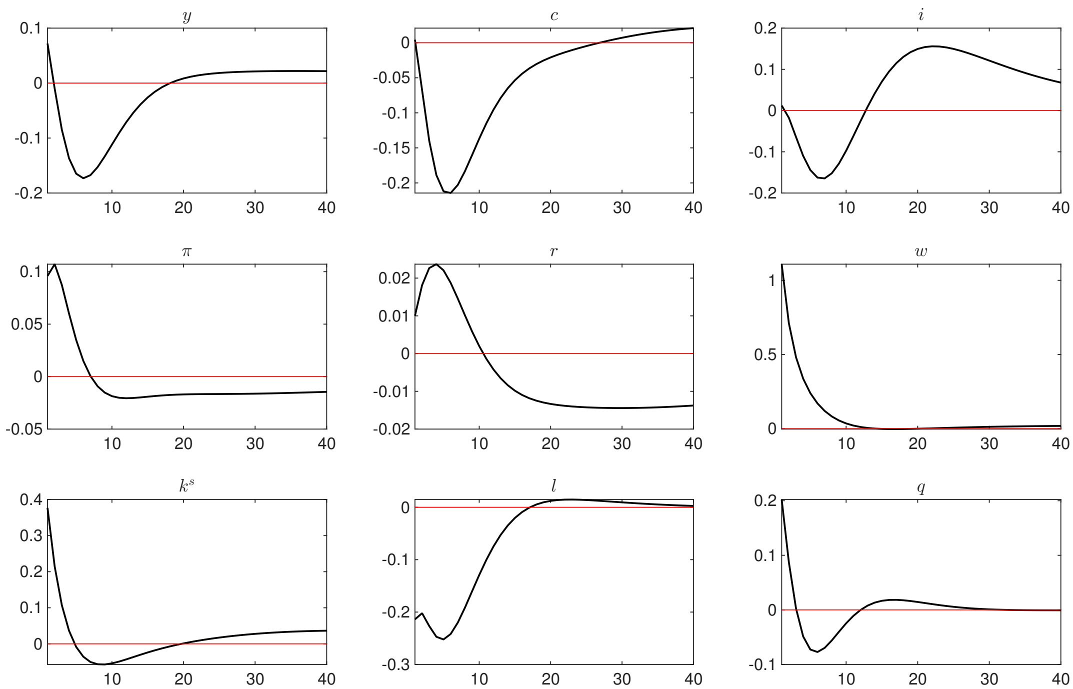

Figure 19: Impulse response functions (orthogonalized shock to η^w).

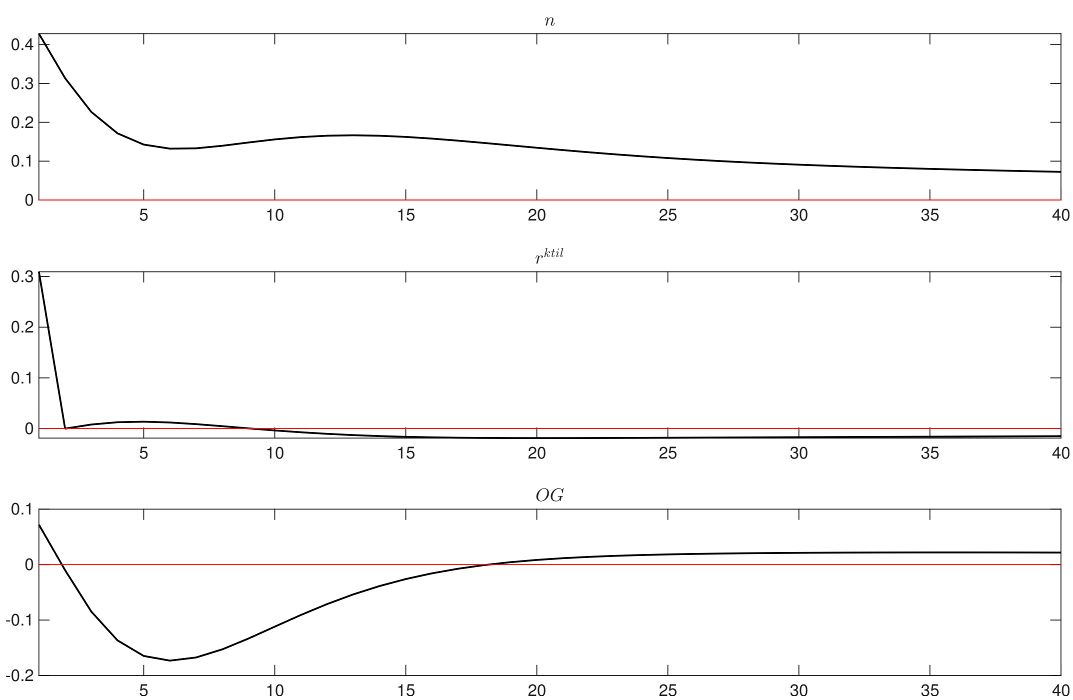

Figure 20: Impulse response functions (orthogonalized shock to η^w).

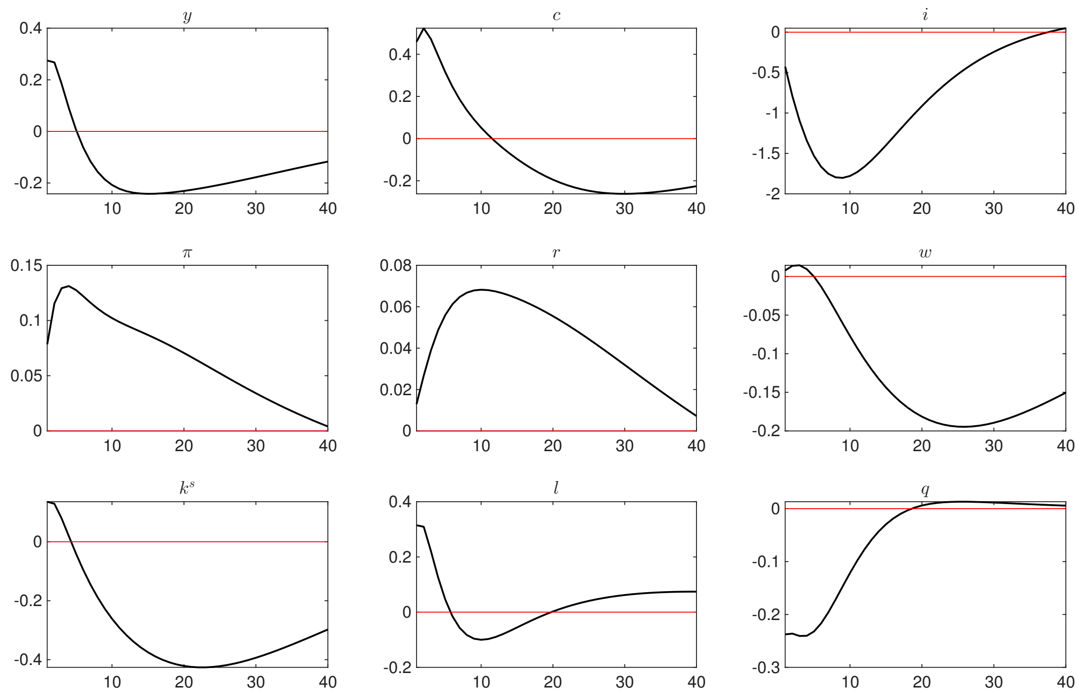

Figure 21: Impulse response functions (orthogonalized shock to η^{σ_w}).

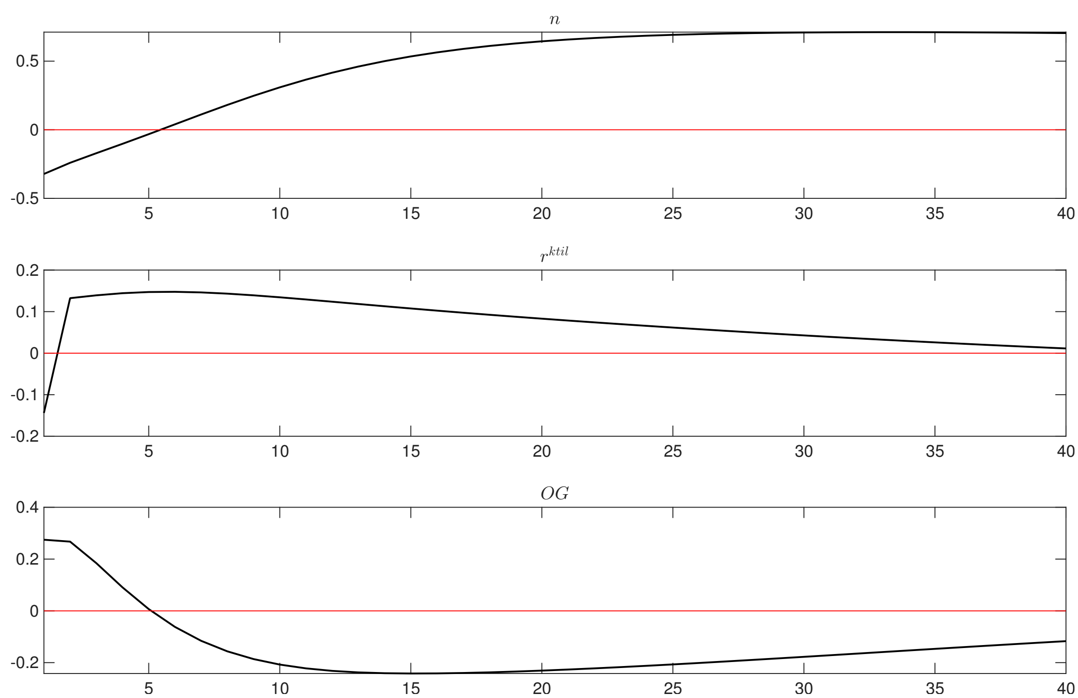

Figure 22: Impulse response functions (orthogonalized shock to η^{σ_w}).

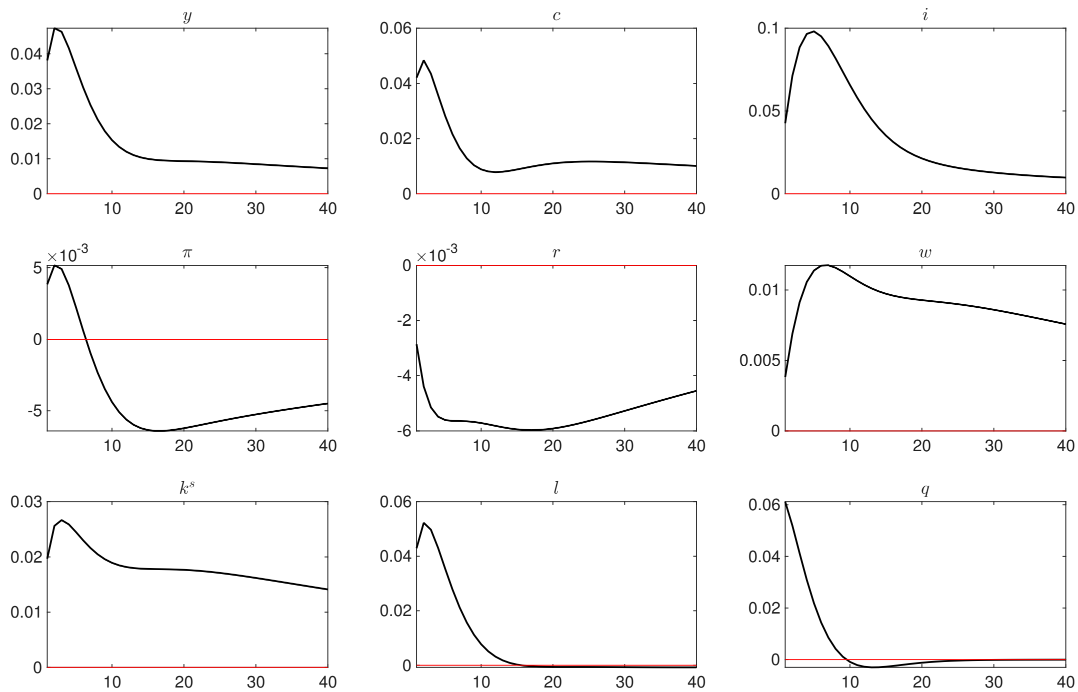

Figure 23: Impulse response functions (orthogonalized shock to η^{π_*}).

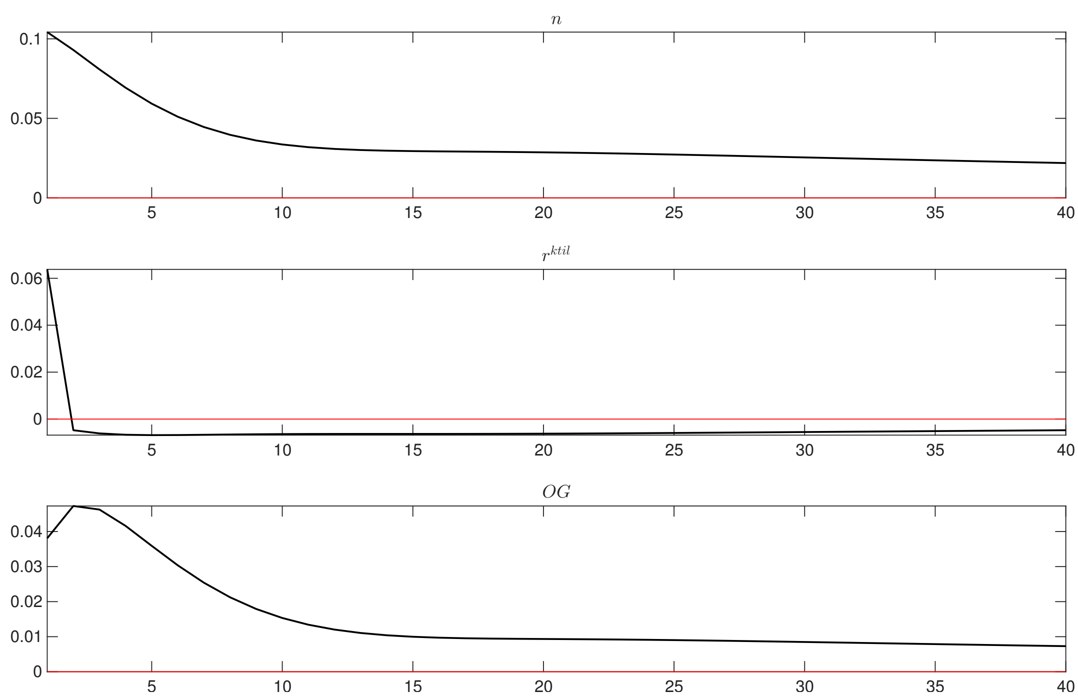

Figure 24: Impulse response functions (orthogonalized shock to η^{π_*}).

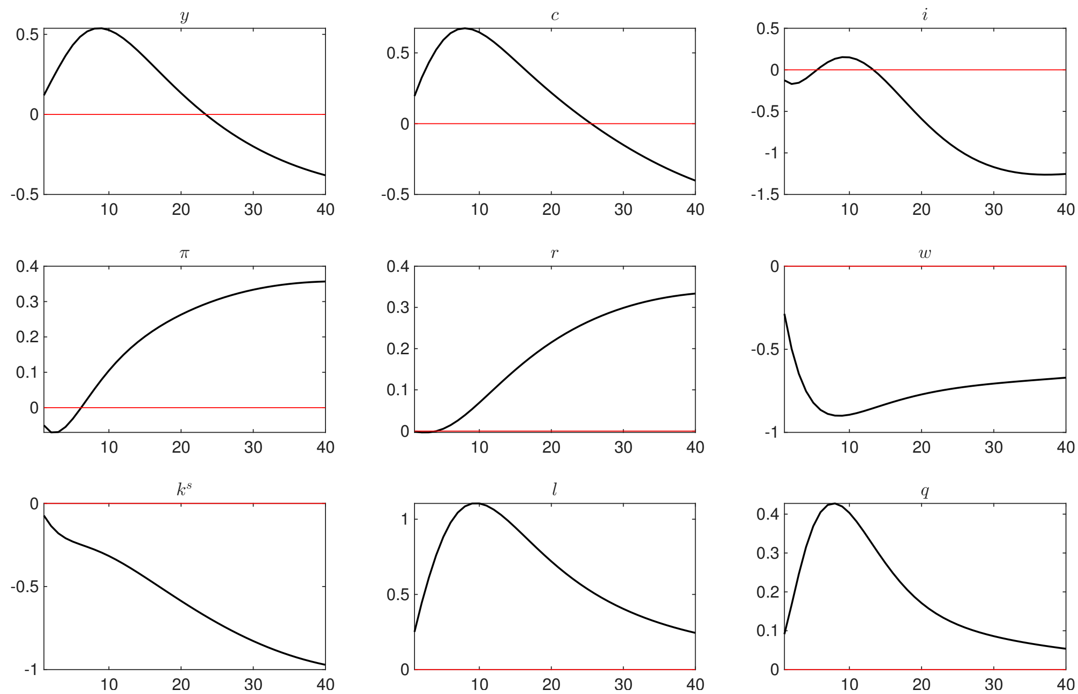

Figure 25: Impulse response functions (orthogonalized shock to η^{z_p}).

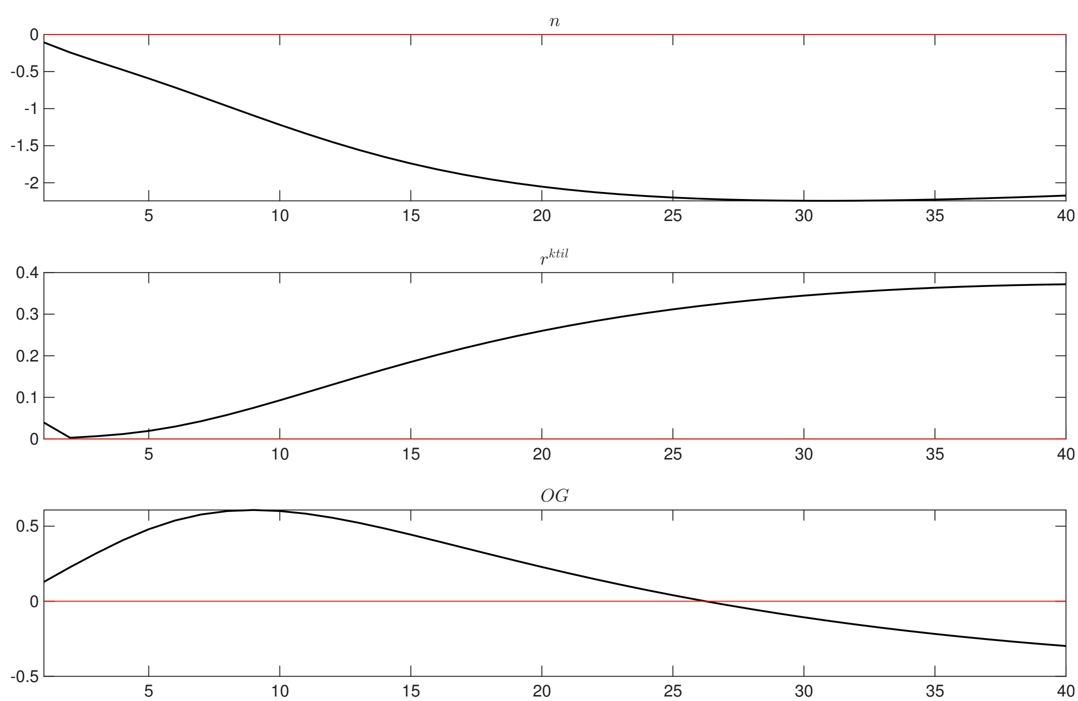

Figure 26: Impulse response functions (orthogonalized shock to η^{z_p}).

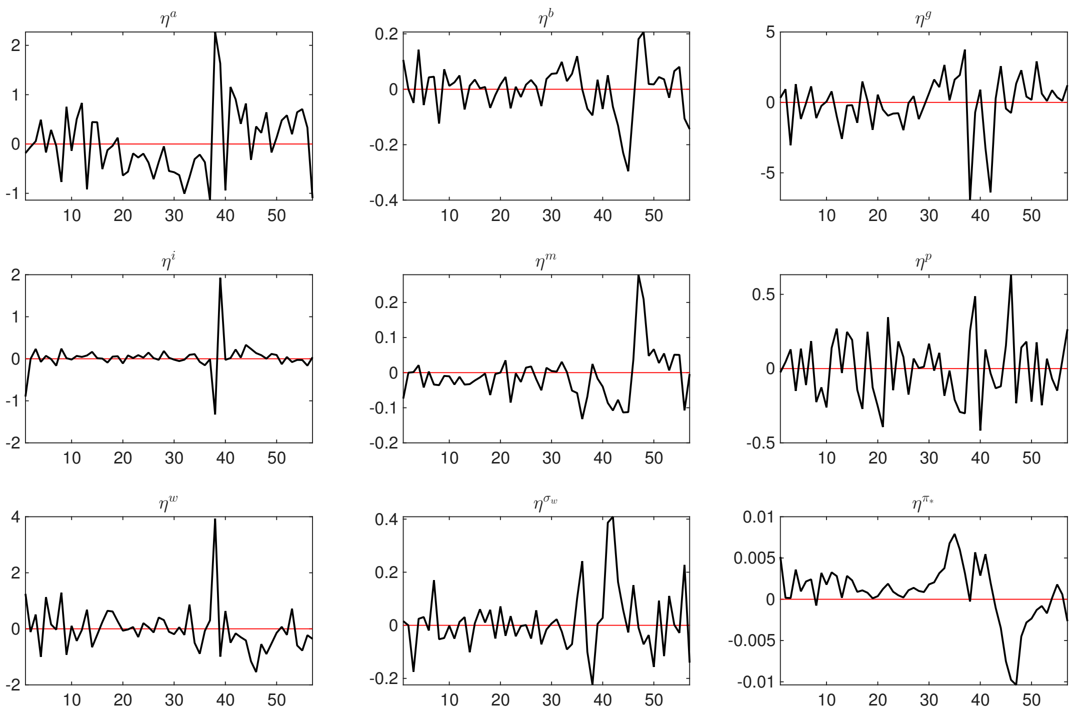

Figure 27: Smoothed shocks.

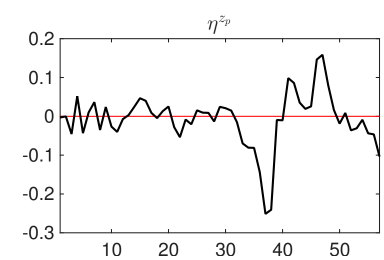

Figure 28: Smoothed shocks.