Table 1: Results from posterior maximization (parameters)

		Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.4249	NaN
ψ	beta	0.500	0.1500	0.7546	NaN
Φ	norm	1.250	0.1250	1.1083	NaN
ι_w	beta	0.500	0.1500	0.4304	NaN
ξ_w	beta	0.500	0.1000	0.5160	NaN
ι_p	beta	0.500	0.1500	0.3461	NaN
ξ_p	beta	0.500	0.1000	0.7423	NaN
σ_c	norm	1.500	0.3750	1.1880	NaN
σ_l	norm	2.000	0.7500	-1.0500	NaN
λ	beta	0.700	0.1000	0.6653	NaN
φ	norm	4.000	1.5000	1.3303	NaN
r_π	norm	1.500	0.2500	1.6391	NaN
r_y	norm	0.125	0.0500	0.0039	NaN
$r_{\Delta y}$	norm	0.125	0.0500	0.1339	NaN
ρ	beta	0.750	0.1000	0.9228	NaN
n_*	norm	0.000	2.0000	0.5067	NaN
γ	norm	0.400	0.1000	0.2944	NaN
ζ_{sp}	beta	0.050	0.0050	0.0465	NaN
$\bar{\pi}$	gamm	0.625	0.2000	0.6896	NaN
ρ_{ga}	beta	0.500	0.2000	0.1931	NaN
ρ_a	beta	0.500	0.2000	0.8288	NaN
ρ_b	beta	0.500	0.2000	0.8861	NaN
ρ_g	beta	0.500	0.2000	0.7293	NaN
ρ_i	beta	0.500	0.2000	0.8371	NaN
ρ_r	beta	0.500	0.2000	0.6185	NaN
ρ_p	beta	0.500	0.2000	0.6287	NaN
ρ_w	beta	0.500	0.2000	0.4358	NaN
ρ_{σ_w}	beta	0.750	0.1500	0.2915	NaN
ρ_{π_*}	beta	0.750	0.1500	0.7652	NaN
μ_p	beta	0.500	0.2000	0.5308	NaN
μ_w	beta	0.500	0.2000	0.4374	NaN

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	0.6549	NaN
η^b	invg	0.100	2.0000	0.0532	NaN
η^g	invg	0.100	2.0000	1.9535	NaN
η^i	invg	0.100	2.0000	0.1858	NaN
η^m	invg	0.100	2.0000	0.2462	NaN
η^p	invg	0.100	2.0000	0.1848	NaN
η^w	invg	0.100	2.0000	0.7973	NaN
η^{σ_w}	invg	0.100	2.0000	2.9932	NaN
η^{π_*}	invg	0.100	2.0000	0.0439	NaN
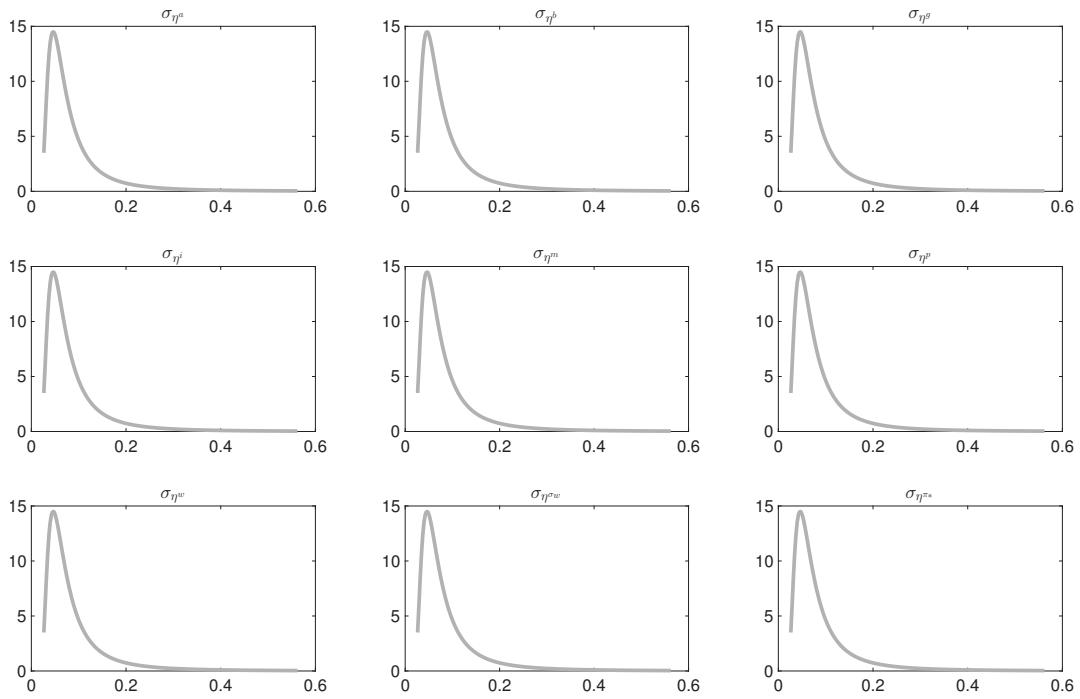
Figure 1: Priors.
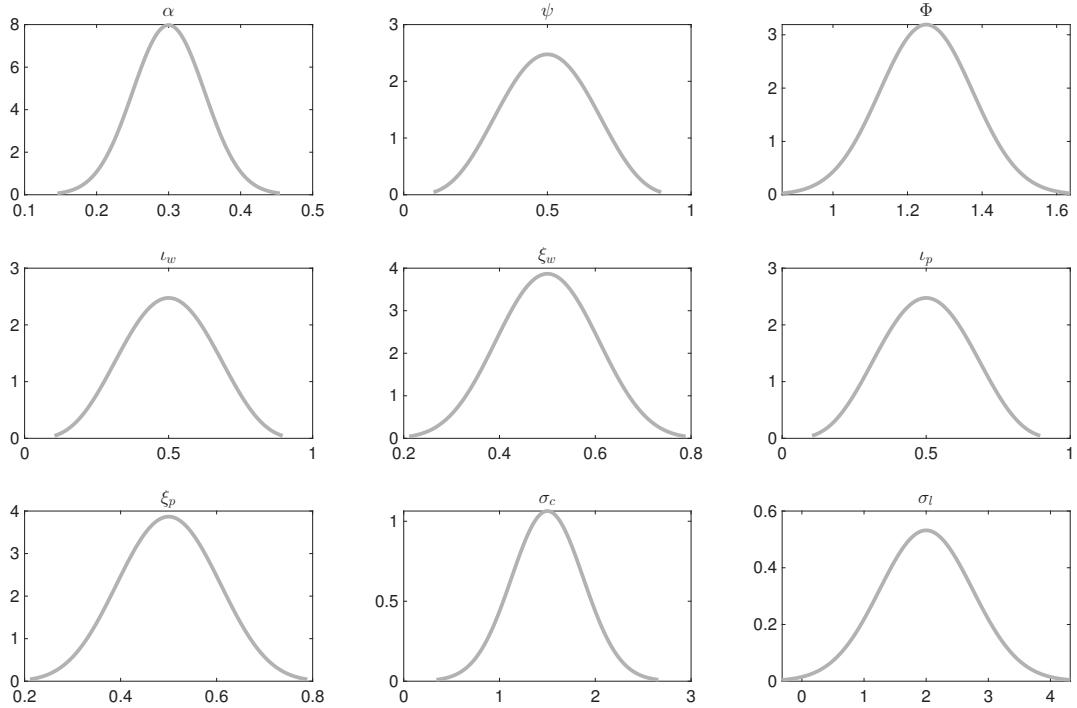
Figure 2: Priors.
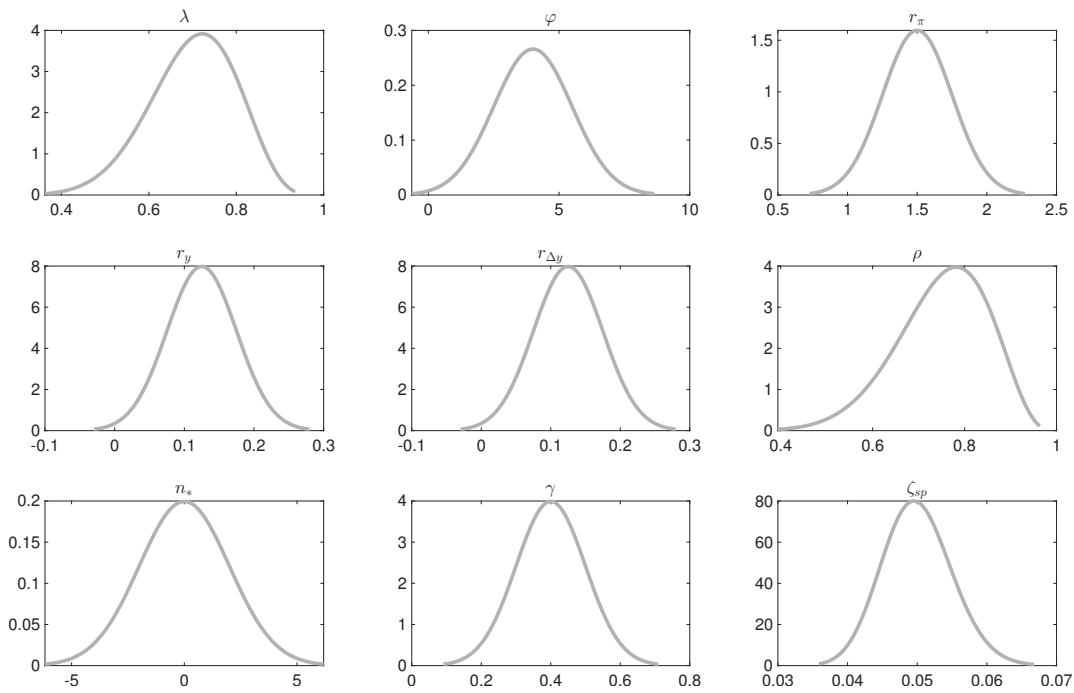
Figure 3: Priors.

Figure 4: Priors.

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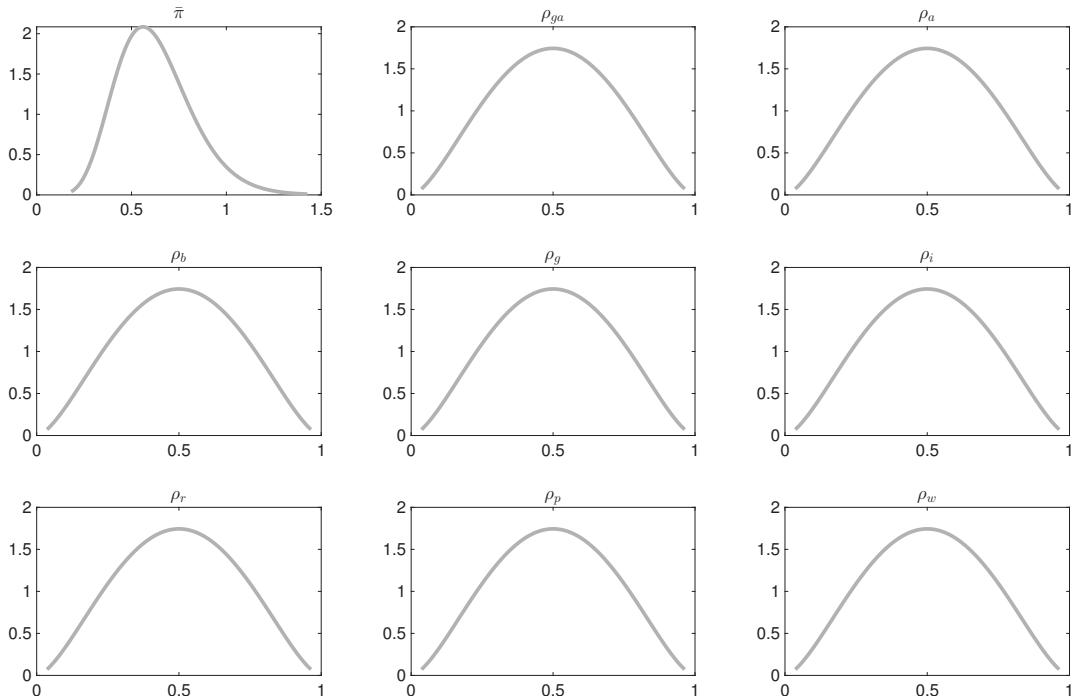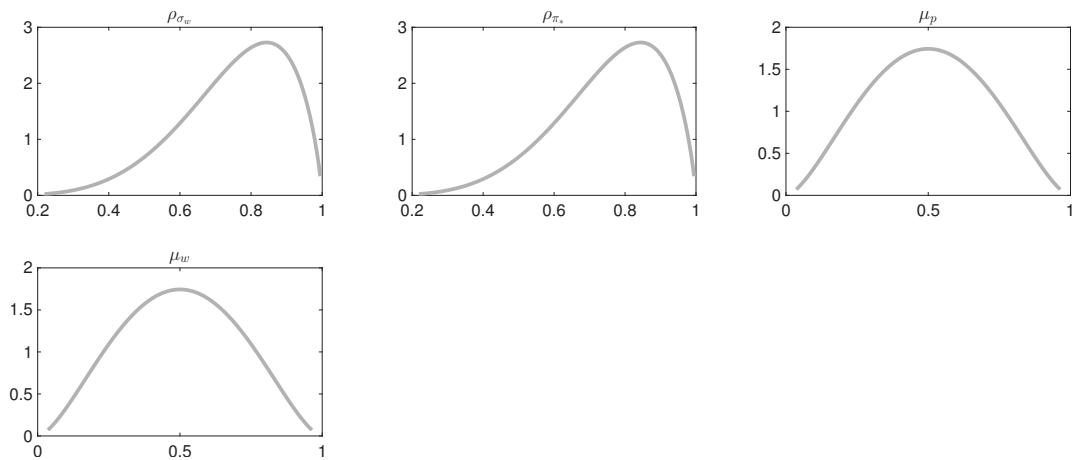
Figure 5: Priors.

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}	$\eta^{\pi*}$
η^a	0.428854	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^b	0.000000	0.002825	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^g	0.000000	0.000000	3.816334	0.000000	0.000000	0.000000	0.000000	0.000000	0.00000
η^i	0.000000	0.000000	0.000000	0.034536	0.000000	0.000000	0.000000	0.000000	0.00000
η^m	0.000000	0.000000	0.000000	0.000000	0.060621	0.000000	0.000000	0.000000	0.00000
η^p	0.000000	0.000000	0.000000	0.000000	0.000000	0.034134	0.000000	0.000000	0.00000
η^w	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.635731	0.000000	0.00000
η^{σ_w}	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	8.959519	0.00000
$\eta^{\pi*}$	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.00192
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	$\eta^{\pi*}$	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	γ	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	0.425	capital share
ψ	0.755	capacity utilization cost
φ	1.330	investment adjustment cost
δ	0.025	depreciation rate
σ_c	1.188	risk aversion
λ	0.665	external habit degree
Φ	1.108	fixed cost share
ι_w	0.430	Indexation to past wages
ξ_w	0.516	Calvo parameter wages
ι_p	0.346	Indexation to past prices
ξ_p	0.742	Calvo parameter prices
σ_l	-1.050	Frisch elasticity
r_π	1.639	Taylor rule inflation feedback
$r_{\Delta y}$	0.134	Taylor rule output growth feedback
r_y	0.004	Taylor rule output level feedback
ρ	0.923	interest rate persistence
ζ_{sp}	0.047	Spread elasticity
γ^*	0.990	Wealth parameter
v^*	2.471	Wealth parameter
n_*	0.507	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}	0.193	Feedback technology on exogenous spending
μ_w	0.437	coefficient on MA term wage markup
μ_p	0.531	coefficient on MA term price markup
ρ_{σ_w}	0.292	persistence Financial shock
ρ_{π_*}	0.765	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	0.829	persistence productivity shock
ρ_b	0.886	persistence risk premium shock
ρ_g	0.729	persistence spending shock
ρ_i	0.837	persistence risk premium shock
ρ_r	0.618	persistence monetary policy shock
ρ_p	0.629	persistence price markup shock

Table 7 – Continued

Parameter	Value	Description
ρ_w	0.436	persistence wage markup shock
γ	0.294	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
$\bar{\pi}$	0.690	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	Bounds* Upper	90% HPDI Lower	90% HPDI 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

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

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

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

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

$$clandap = \Phi$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$y3 = \bar{rk}\ \frac{k^*}{\frac{\bar{yp}}{\bar{y}}}$$

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

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

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

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

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

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

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

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

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

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

$$\mu_{pt} = w_t + \alpha\, l_t - \alpha\, k^s_t \tag{6}$$

$$k^s_t = l_t + w_t - r^k_t \tag{7}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$Spread_t = 100 \left(r^{ktil}{}_t - r_t \right) + 0.02 \tag{47}$$
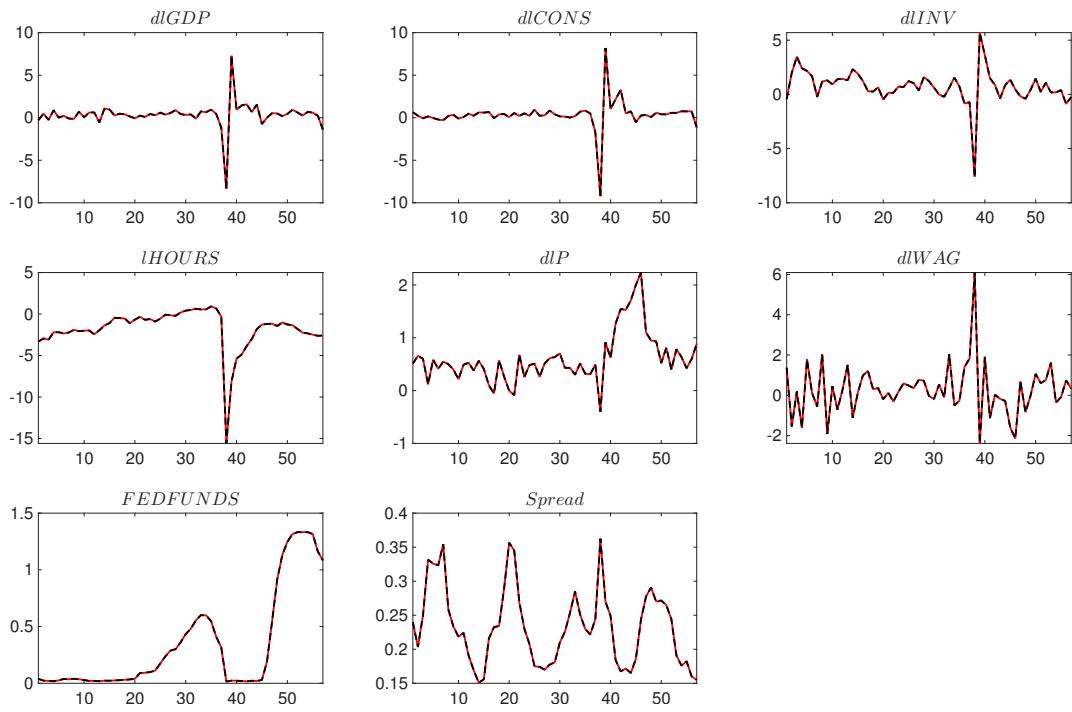
Figure 6: Historical and smoothed variables.
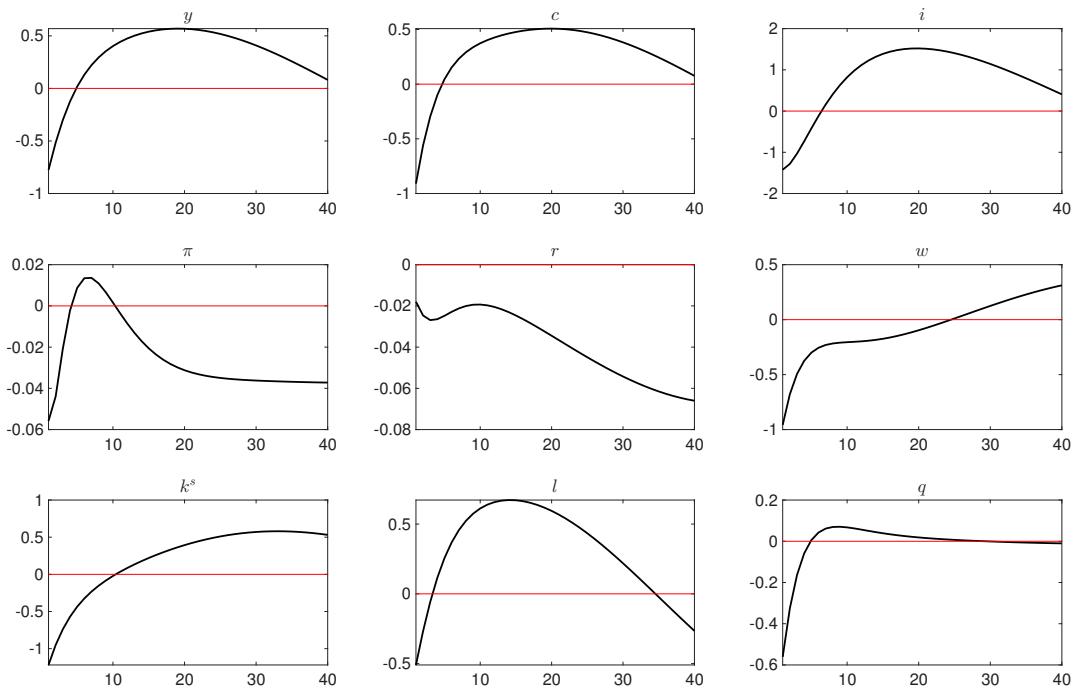
Figure 7: Impulse response functions (orthogonalized shock to η^a).
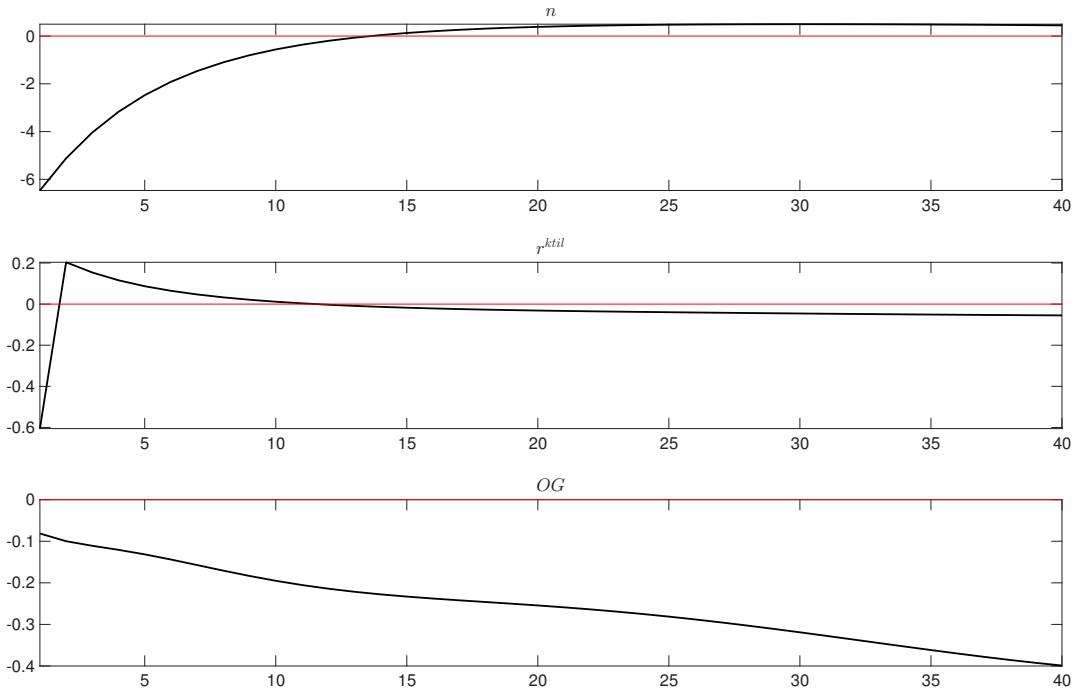

Figure 8: Impulse response functions (orthogonalized shock to η^a).
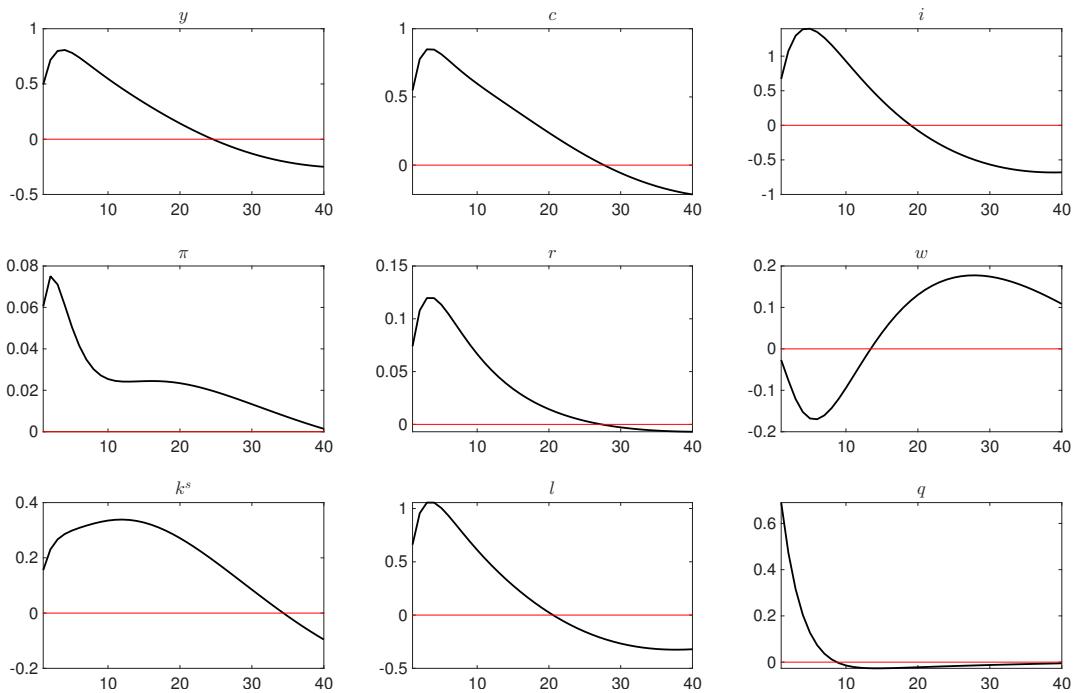
Figure 9: Impulse response functions (orthogonalized shock to η^b).
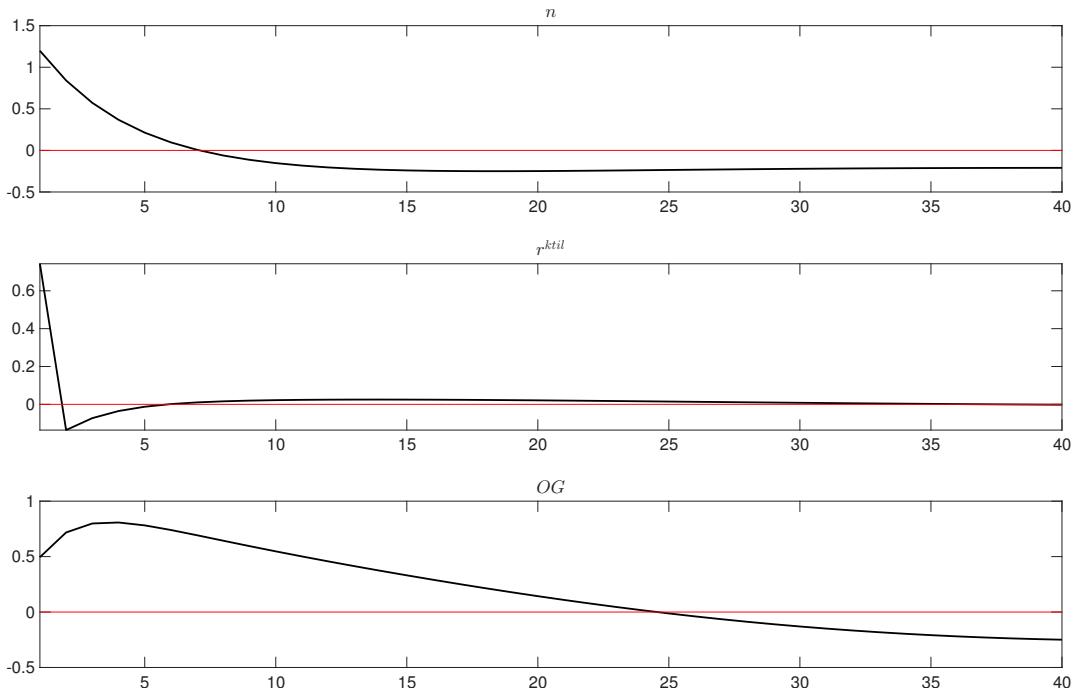
Figure 10: Impulse response functions (orthogonalized shock to η^b).
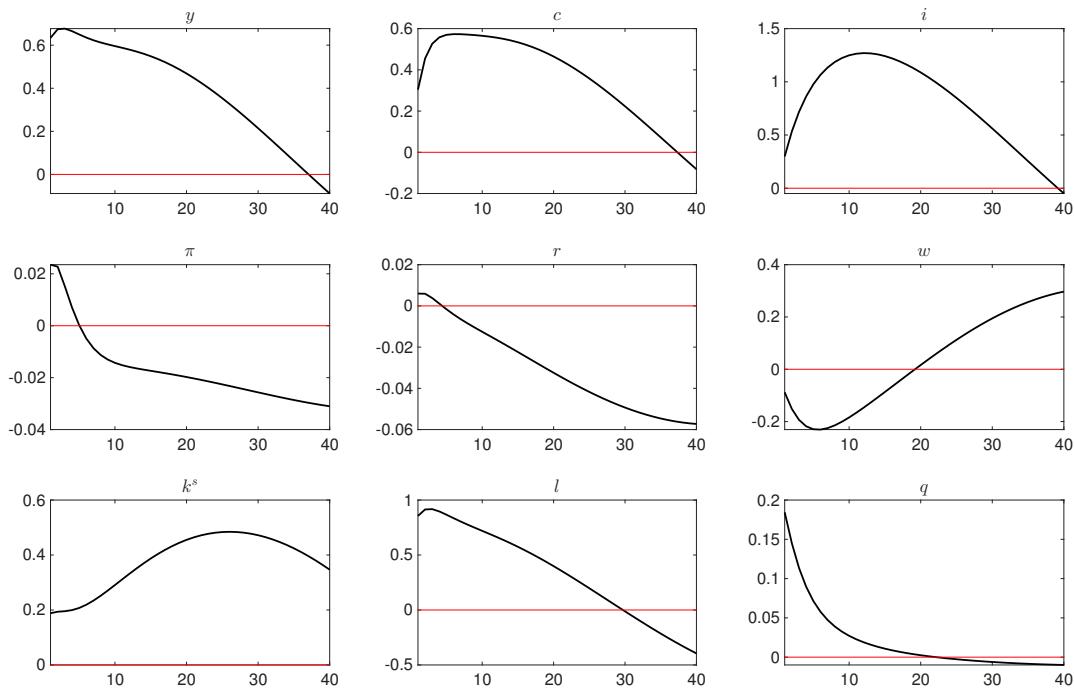
Figure 11: Impulse response functions (orthogonalized shock to η^g).
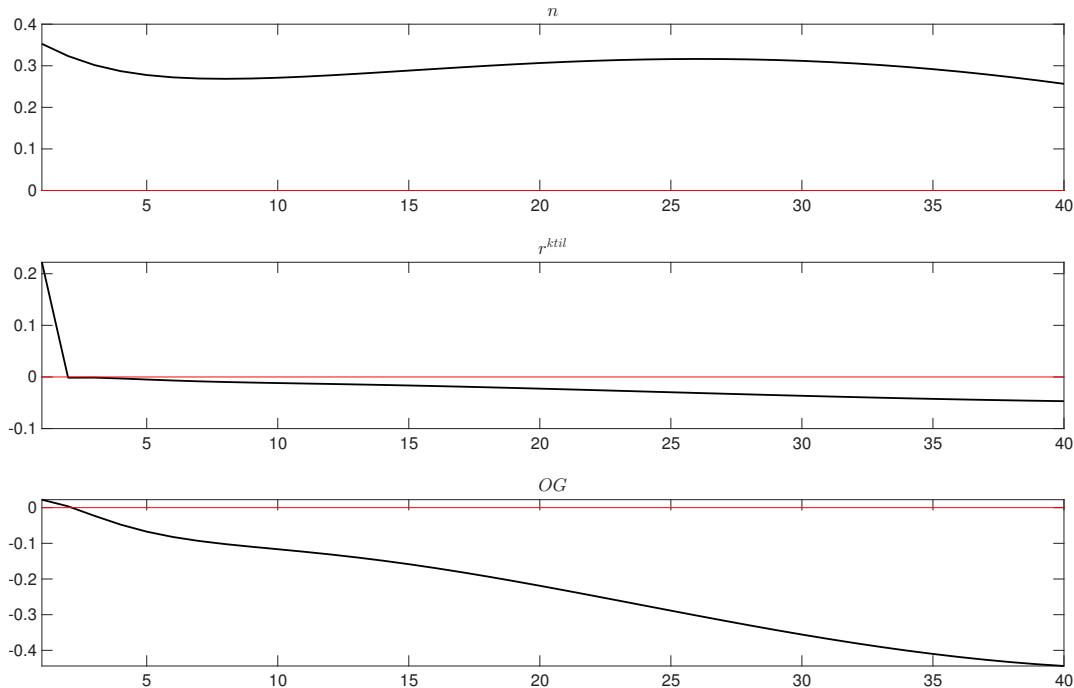
Figure 12: Impulse response functions (orthogonalized shock to η^g).
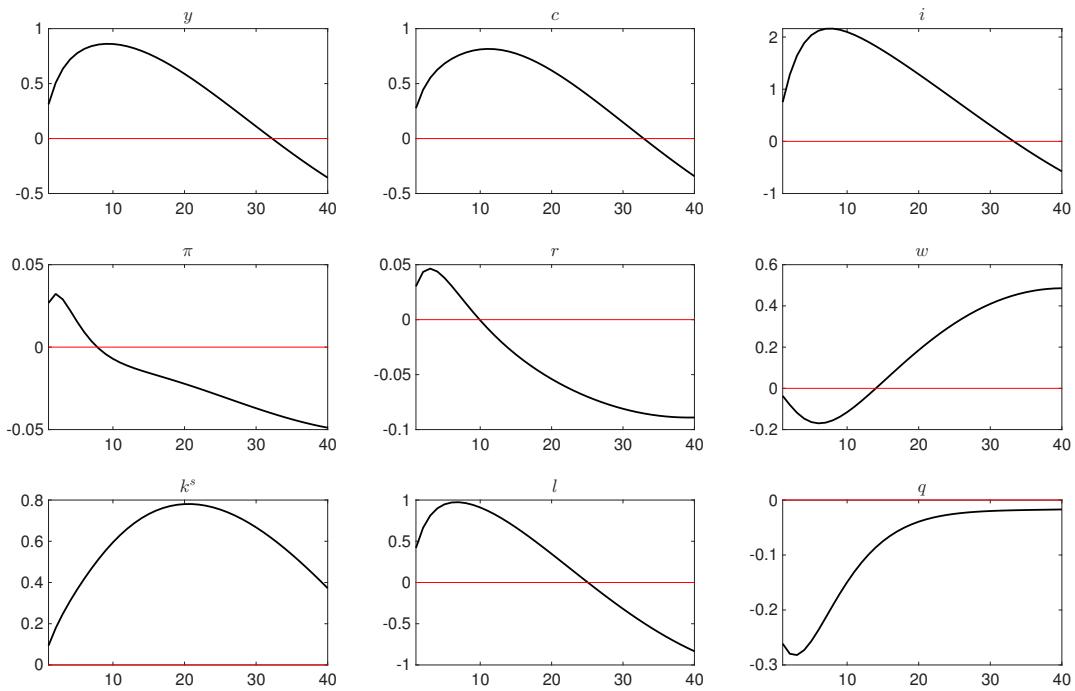
Figure 13: Impulse response functions (orthogonalized shock to η^i).
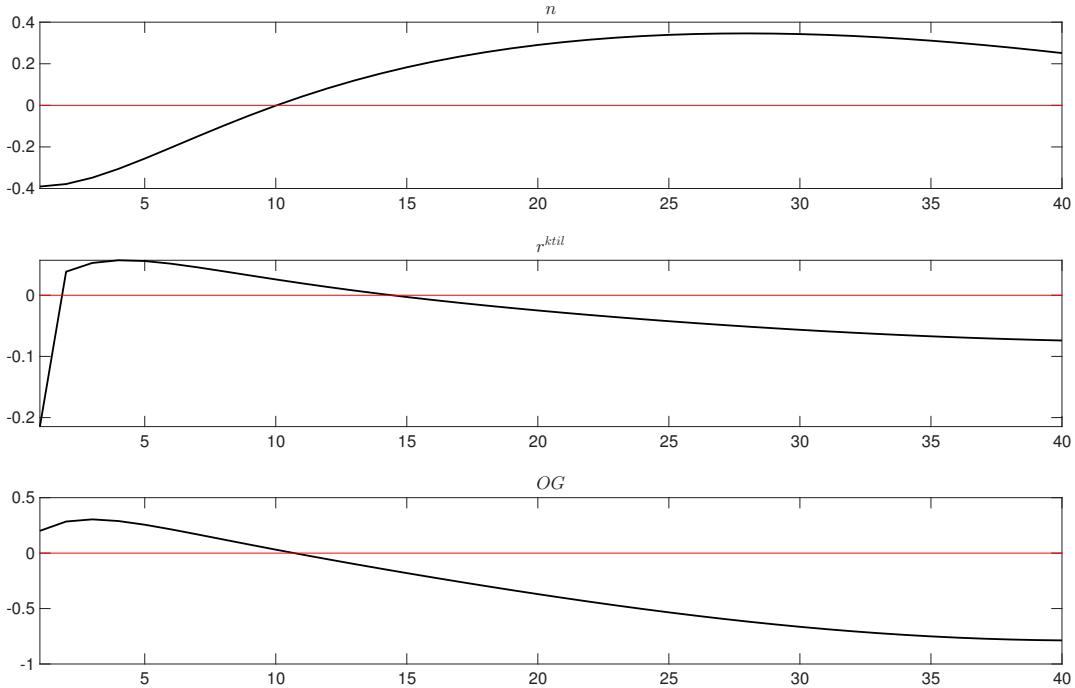
Figure 14: Impulse response functions (orthogonalized shock to η^i).

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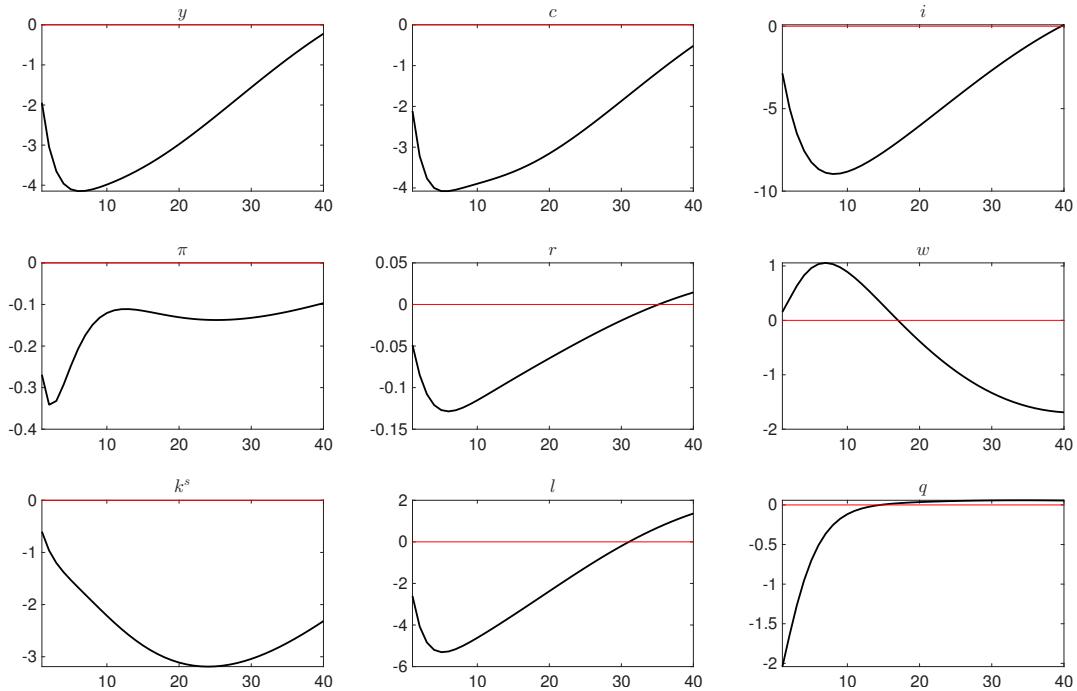
Figure 15: Impulse response functions (orthogonalized shock to η^m).
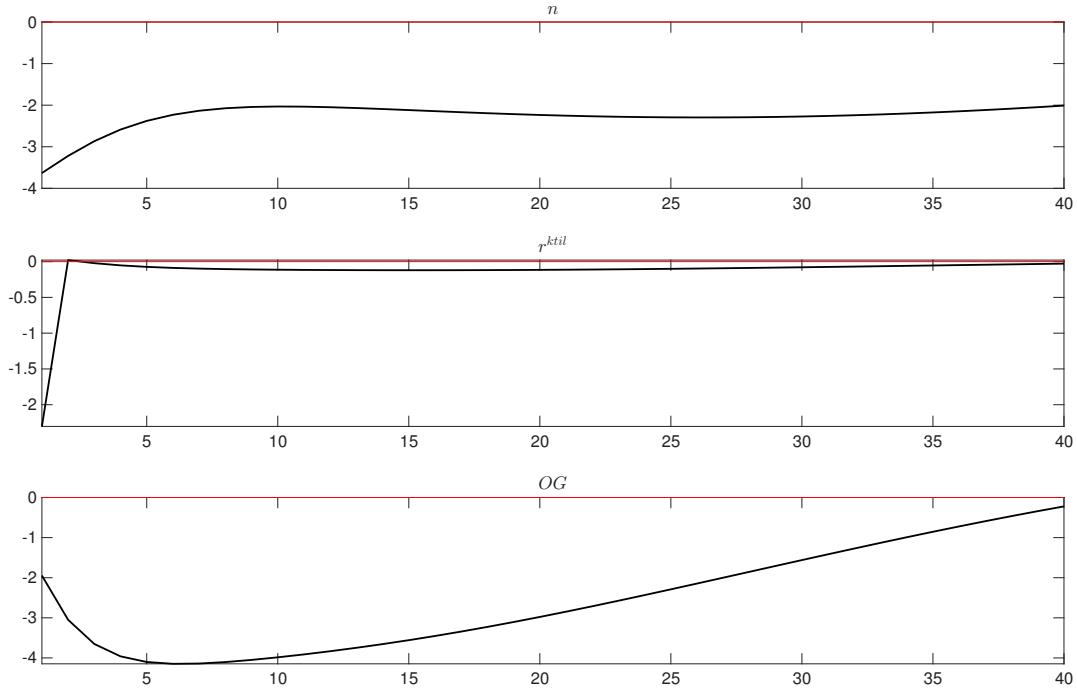
Figure 16: Impulse response functions (orthogonalized shock to η^m).
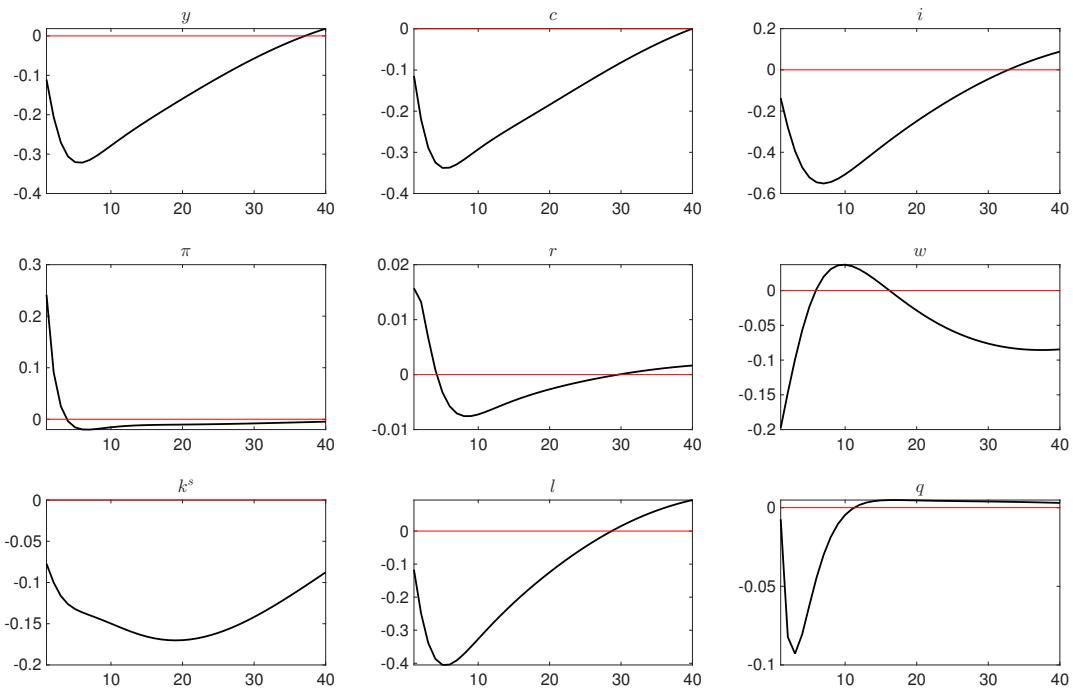
Figure 17: Impulse response functions (orthogonalized shock to η^p).
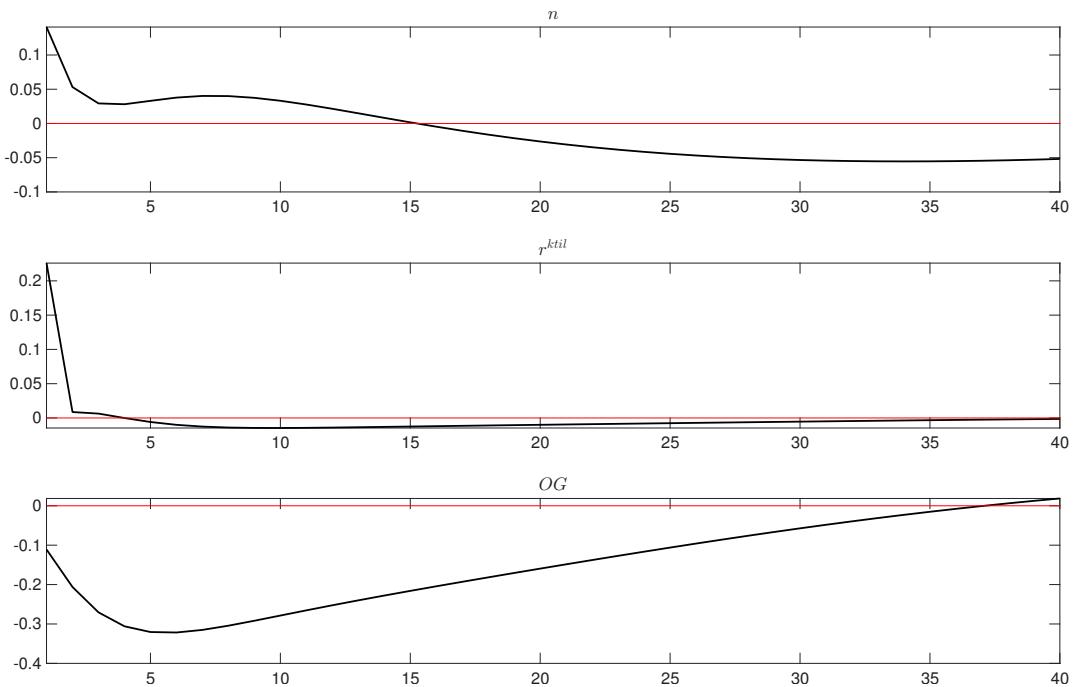
Figure 18: Impulse response functions (orthogonalized shock to η^p).
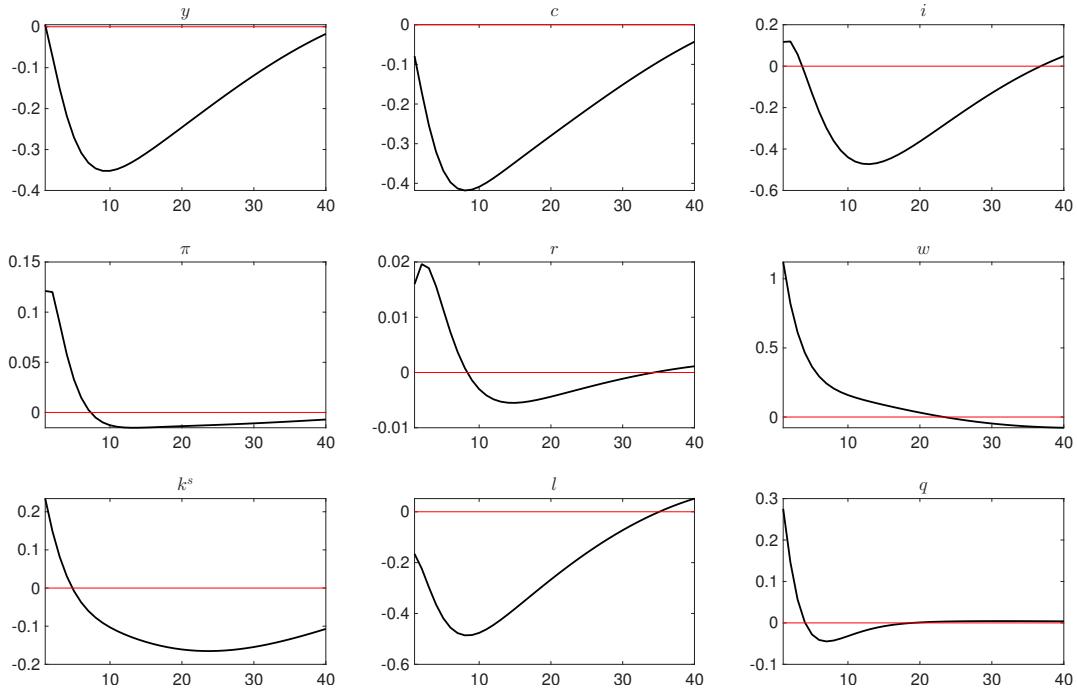
Figure 19: Impulse response functions (orthogonalized shock to η^w).
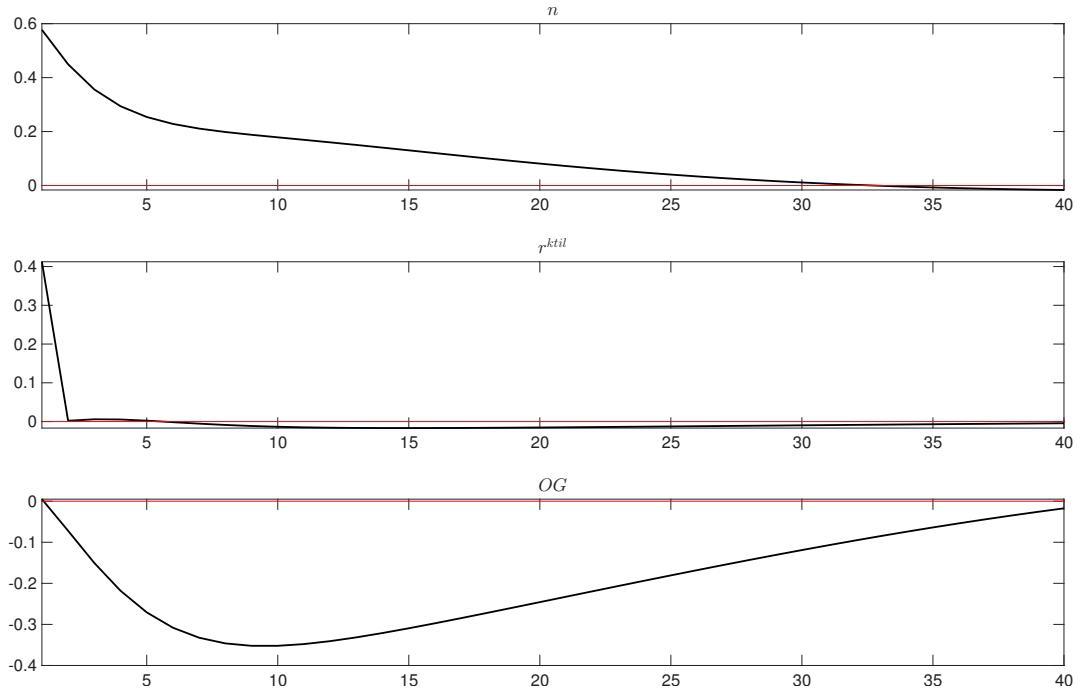
Figure 20: Impulse response functions (orthogonalized shock to η^w).
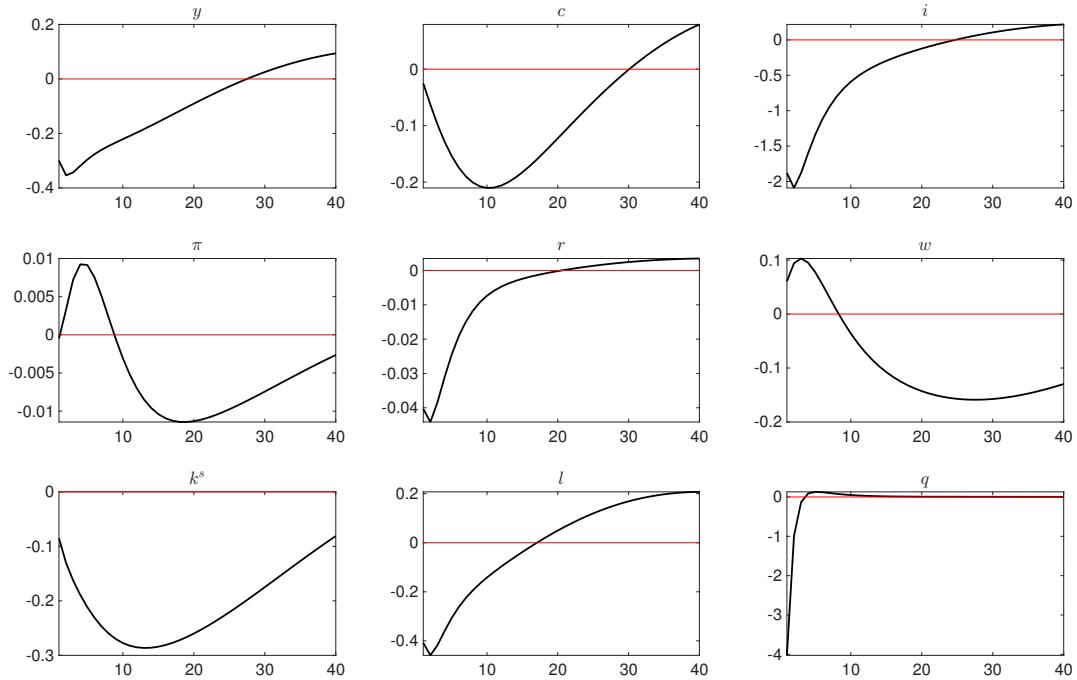
Figure 21: Impulse response functions (orthogonalized shock to η^{σ_w}).
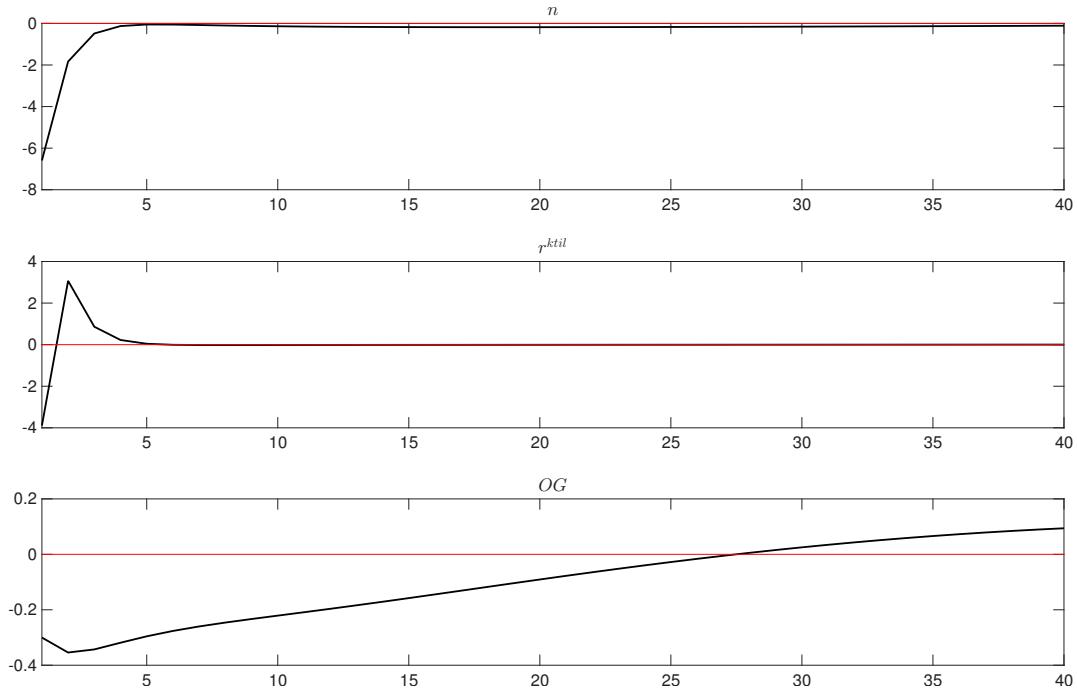
Figure 22: Impulse response functions (orthogonalized shock to η^{σ_w}).
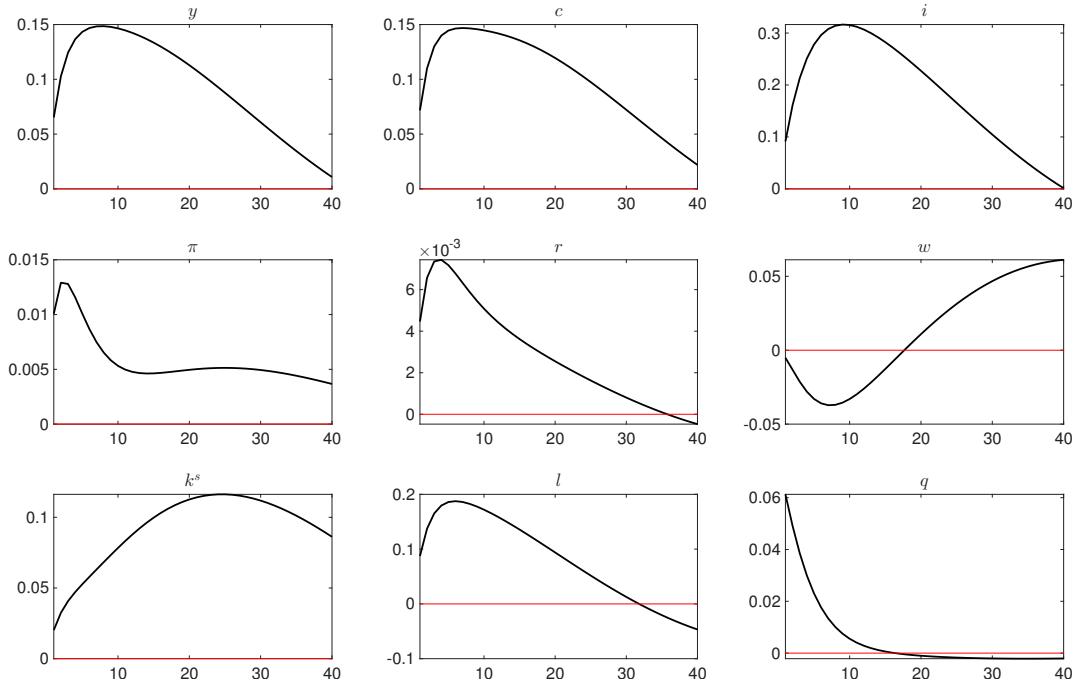
Figure 23: Impulse response functions (orthogonalized shock to η^{π_*}).
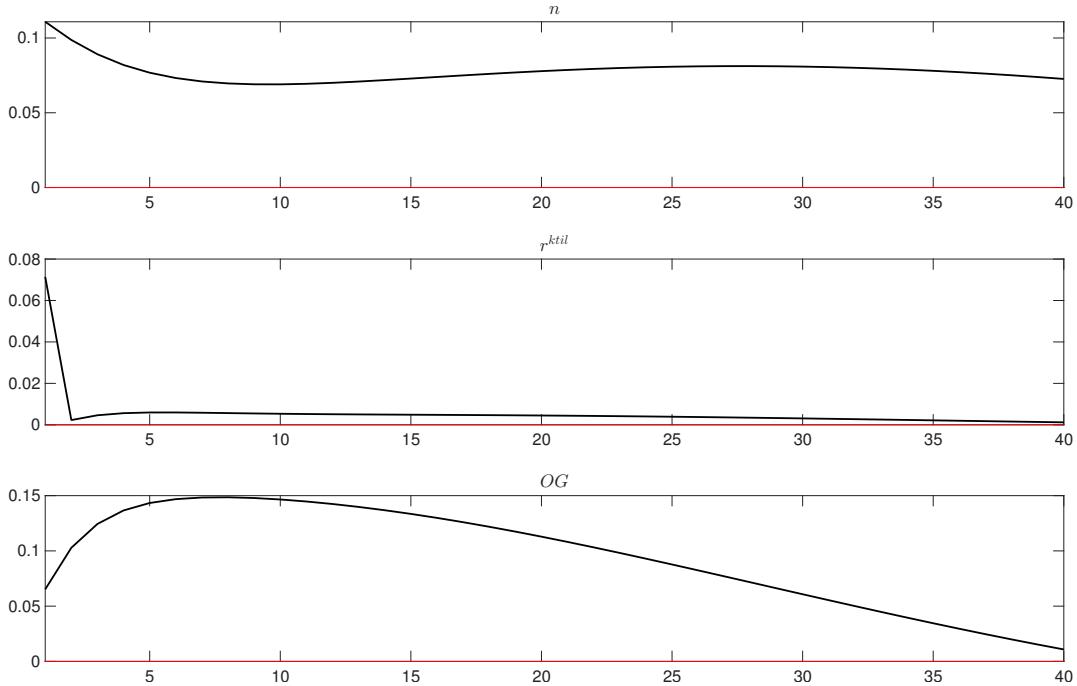
Figure 24: Impulse response functions (orthogonalized shock to η^{π_*}).
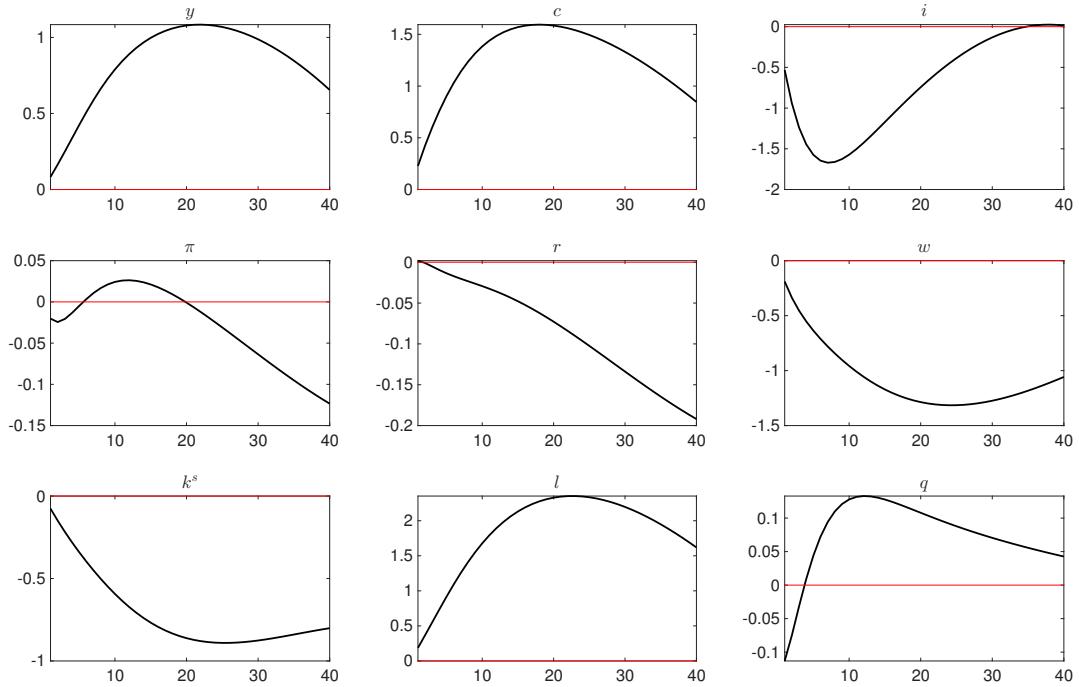
Figure 25: Impulse response functions (orthogonalized shock to η^{z_p}).
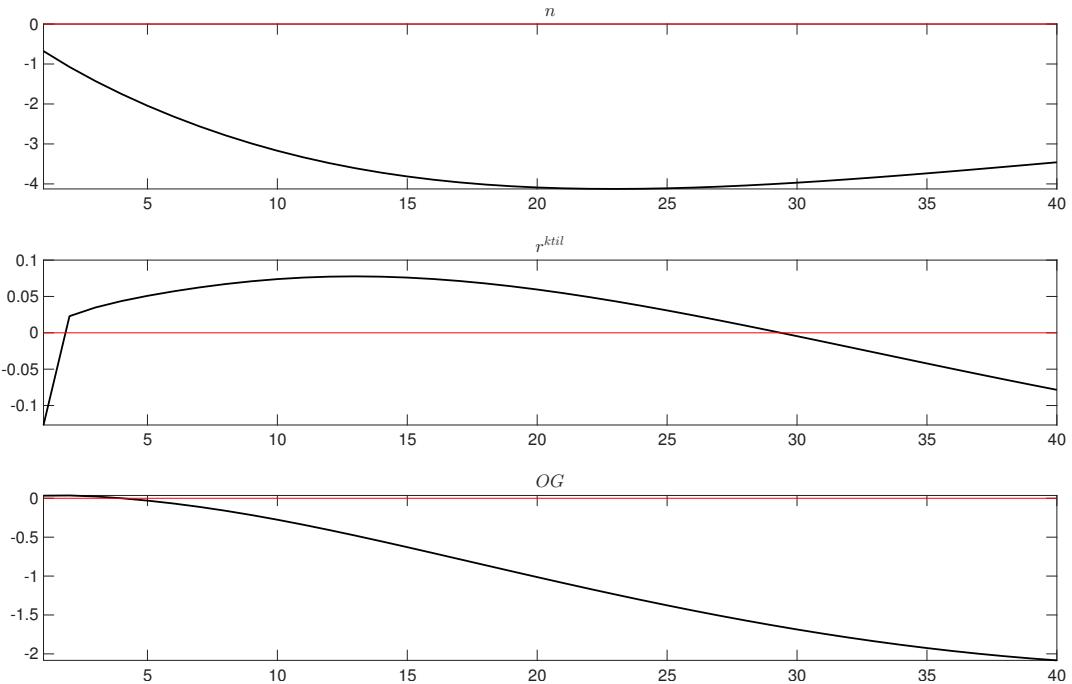
Figure 26: Impulse response functions (orthogonalized shock to η^{z_p}).
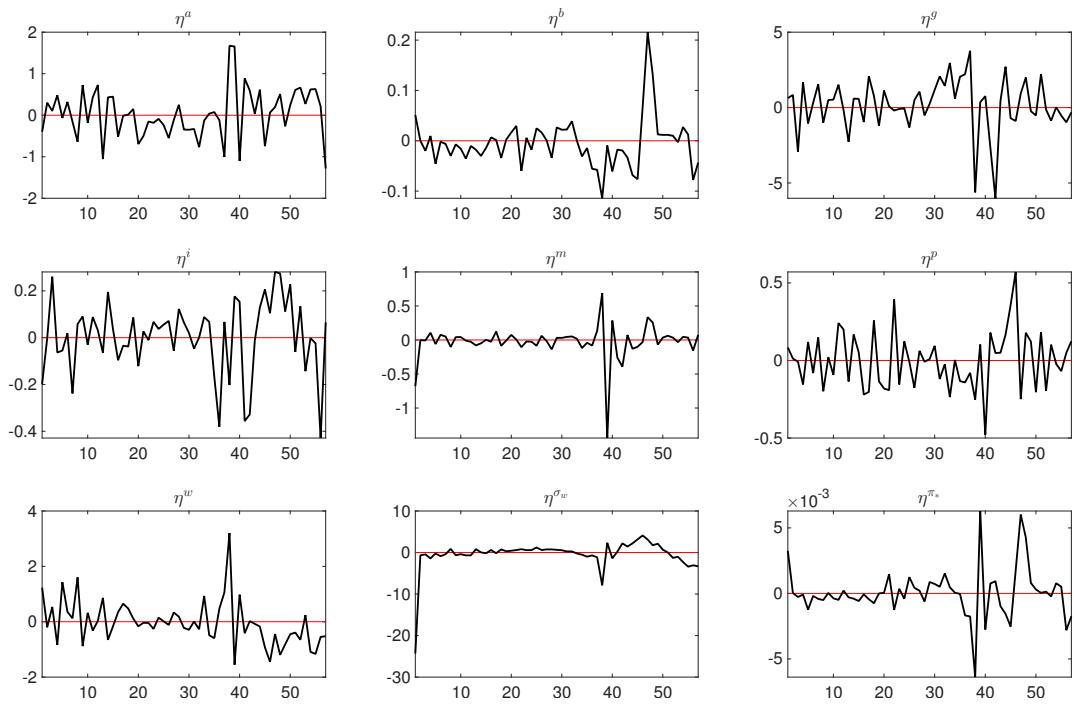
Figure 27: Smoothed shocks.
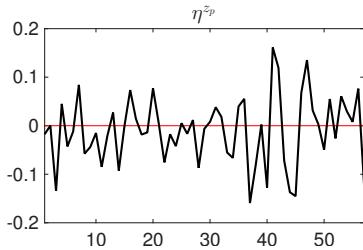
Figure 28: Smoothed shocks.