

Configuring Dynare ...

[mex] Generalized QZ.

[mex] Sylvester equation solution.

[mex] Kronecker products.

[mex] Sparse kronecker products.

[mex] Local state space iteration (second order).

[mex] Bytecode evaluation.

[mex] k-order perturbation solver.

[mex] k-order solution simulation.

[mex] Quasi Monte-Carlo sequence (Sobol).

[mex] Markov Switching SBVAR.

Using 64-bit preprocessor

Starting Dynare (version 4.5.7).

Starting preprocessing of the model file ...

Found 38 equation(s).

Evaluating expressions...done

Computing static model derivatives:

- order 1

Computing dynamic model derivatives:

- order 1

- order 2

Processing outputs ...

done

Preprocessing completed.

STEADY-STATE RESULTS:

c	1.33352e-11
r	-0.00623105
pi	-0.00247913
w	0.00904639
n	-0.00799637
y	-0.0200989
kp	-0.162242
mrs	0.262853
mc	0.0231884
rk	0.0519009
inv	-0.162242
q	0.972476
u	0.129752
b	5.62517
gc	0
zA	1.50157e-18
zpref	0
zlnv	0
t_N	7.44478e-18
t_k	0
t_n	-0.00401978
t_c	0.562517
zgc	0
zt_c	0
zt_n	-4.23751e-18
zt_k	0
zt_N	3.27204e-18
tb	0
zn	0

kg	0
gi	0
zgi	0
c_n	-8.57583e-05
c_s	-0.15563
tr	0
ztr	0
nr	-0.0059569
ns	-0.0172873

EIGENVALUES:

Modulus	Real	Imaginary
0.01192	-0.01192	0
0.09979	-0.09979	0
0.2348	0.2348	0
0.5571	0.3938	0.394
0.5571	0.3938	-0.394
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8	0.8	0
0.8664	0.8664	0

0.8879	0.8879	0
0.9	0.9	0
0.9	0.9	0
0.9749	0.9749	0
0.975	0.975	0
1	0.2505	0.9686
1	0.2505	-0.9686
5.842	5.842	0
18.24	18.24	0
53.75	53.75	0
2.732e+16	2.732e+16	0
3.025e+17	3.025e+17	0
1.61e+19	-1.61e+19	0
1.03e+24	-1.03e+24	0

There are 9 eigenvalue(s) larger than 1 in modulus
for 9 forward-looking variable(s)

The rank condition is verified.

Residuals of the static equations:

Equation number 1 : 0

Equation number 2 : 0

Equation number 3 : 0

Equation number 4 : 0

Equation number 5 : 0

Equation number 6 : 0

Equation number 7 : 0

Equation number 8 : 0

Equation number 9 : 0

Equation number 10 : 0

Equation number 11 : 0

Equation number 12 : 0

Equation number 13 : 0

Equation number 14 : 0

Equation number 15 : 0

Equation number 16 : 0

Equation number 17 : 0

Equation number 18 : 0

Equation number 19 : 0

Equation number 20 : 0

Equation number 21 : 0

Equation number 22 : 0

Equation number 23 : 0

Equation number 24 : 0

Equation number 25 : 0

Equation number 26 : 0

Equation number 27 : 0

Equation number 28 : 0

Equation number 29 : 0

Equation number 30 : 0

Equation number 31 : 0

Equation number 32 : 0

Equation number 33 : 0

Equation number 34 : 0

Equation number 35 : 0

Equation number 36 : 0

Equation number 37 : 0

Equation number 38 : 0

Initial value of the log posterior (or likelihood): -114585.0112

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Change in the posterior covariance matrix = 4.

Change in the posterior mean = 0.9045.

Mode improvement = 117087.1542

New value of jscale = 0.00057439

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Change in the posterior covariance matrix = 0.0061702.

Change in the posterior mean = 0.49214.

Mode improvement = 7.6895

New value of jscale = 0.16017

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Change in the posterior covariance matrix = 0.0027579.

Change in the posterior mean = 0.54835.

Mode improvement = 438.6876

New value of jscale = 0.12507

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Optimal value of the scale parameter = 0.12507

Final value of minus the log posterior (or likelihood):-2933.141196

RESULTS FROM POSTERIOR ESTIMATION

parameters

	prior mean	mode	s.d.	prior	pstdev
h	0.700	0.5797	0.0044	beta	0.1000
mu	0.300	0.3811	0.0068	beta	0.1000
sigma_c	1.000	0.9156	0.0102	norm	0.3000
phi	2.000	2.1305	0.0586	norm	0.5000
gam_p	0.400	0.0906	0.0050	beta	0.2500
gam_w	0.400	0.6702	0.0133	beta	0.2500
theta_p	0.550	0.7455	0.0066	beta	0.1000
theta_w	0.550	0.4729	0.0075	beta	0.1000
psi	4.000	5.3495	0.0601	norm	1.5000
rho_r	0.800	0.8135	0.0070	beta	0.1000
kappa_pi	1.700	1.3407	0.0086	norm	0.3000
kappa_y	0.400	0.0120	0.0143	norm	0.3000
rho_tb	0.800	0.7244	0.0062	beta	0.1000
rho_g	0.800	0.6465	0.0070	beta	0.1000
rho_gi	0.800	0.9298	0.0042	beta	0.1000
rho_tr	0.800	0.5708	0.0052	beta	0.1000

rho_tc	0.800	0.6852	0.0068	beta	0.1000
rho_tn	0.800	0.5246	0.0045	beta	0.1000
rho_tk	0.800	0.7127	0.0058	beta	0.1000
rho_tN	0.800	0.7108	0.0045	beta	0.1000
rho_a	0.850	0.8771	0.0066	beta	0.1000
rho_pref	0.800	0.7436	0.0040	beta	0.1000
rho_Inv	0.800	0.7350	0.0048	beta	0.1000
rho_gy	0.000	-0.1866	0.0217	norm	0.5000
rho_gb	0.010	0.0355	0.0135	norm	0.5000
rho_giy	0.000	0.4467	0.0303	norm	0.5000
rho_gib	0.000	0.0127	0.0079	norm	0.5000
rho_trn	0.000	0.7935	0.0506	norm	0.5000
rho_trb	0.000	0.1096	0.0213	norm	0.5000
rho_tcy	0.010	0.0487	0.0165	norm	0.5000
rho_tcb	0.010	-0.0314	0.0373	norm	0.5000
rho_tky	0.000	0.8909	0.0225	norm	0.5000
rho_tkb	0.000	-0.0197	0.0131	norm	0.5000
rho_tny	0.000	0.1127	0.0244	norm	0.5000
rho_tnb	0.000	0.0522	0.0164	norm	0.5000
rho_tNy	0.000	-0.0313	0.0307	norm	0.5000
rho_tNb	0.000	0.0650	0.0313	norm	0.5000

standard deviation of shocks

	prior mean	mode	s.d.	prior	pstdev
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epst_k	0.010	0.0471	0.0022	invg	2.0000
epst_n	0.010	0.0127	0.0006	invg	2.0000
epst_c	0.010	0.0129	0.0066	invg	2.0000
epst_N	0.010	0.0325	0.0056	invg	2.0000

epsG 0.001 0.0259 0.0013 invg 1.0000
epsA 0.010 0.0132 0.0007 invg 2.0000
epsG_i 0.010 0.0187 0.0012 invg 2.0000
epsPref 0.010 0.0047 0.0601 invg 2.0000

Log data density [Laplace approximation] is 2656.632196.

Estimation::mcmc: Multiple chains mode.

Estimation::mcmc: Searching for initial values...

Estimation::mcmc: Initial values found!

Estimation::mcmc: Write details about the MCMC... Ok!

Estimation::mcmc: Details about the MCMC are available in new2/metropolis\new2_mh_history_0.mat

Estimation::mcmc: Number of mh files: 1 per block.

Estimation::mcmc: Total number of generated files: 2.

Estimation::mcmc: Total number of iterations: 20000.

Estimation::mcmc: Current acceptance ratio per chain:

Chain 1: 15.645%

Chain 2: 14.365%

Estimation::mcmc: Total number of MH draws per chain: 20000.

Estimation::mcmc: Total number of generated MH files: 1.

Estimation::mcmc: I'll use mh-files 1 to 1.

Estimation::mcmc: In MH-file number 1 I'll start at line 9001.

Estimation::mcmc: Finally I keep 11000 draws per chain.

MCMC Inefficiency factors per block

Parameter	Block 1	Block 2
SE_epst_k	488.461	665.922
SE_epst_n	579.080	616.100
SE_epst_c	79.375	59.581
SE_epst_N	547.613	502.788
SE_epscp	690.404	641.198
SE_epsI	570.942	622.918
SE_epsG	637.190	506.820
SE_eps_q	640.679	582.369
SE_epsA	623.157	678.650
SE_epsG_i	518.513	658.831
SE_epsPref	102.186	91.922
h	720.918	602.479
mu	689.855	615.658
sigma_c	720.737	601.094
phi	593.861	615.103
gam_p	569.524	479.533
gam_w	548.517	581.054
theta_p	532.726	647.784
theta_w	512.638	619.735
psi	594.805	643.026
rho_r	437.221	592.616
kappa_pi	586.355	625.850
kappa_y	473.566	421.328

rho_tb	655.725	661.893
rho_g	624.007	658.544
rho_gi	617.866	609.512
rho_tr	430.767	637.875
rho_tc	583.437	511.201
rho_tn	568.094	632.767
rho_tk	493.787	650.602
rho_tN	535.200	646.779
rho_a	350.958	507.706
rho_pref	629.213	668.617
rho_Inv	458.671	398.076
rho_gy	563.152	540.600
rho_gb	680.187	600.818
rho_giy	618.427	683.403
rho_gib	644.910	547.218
rho_trn	618.334	638.562
rho_trb	707.190	658.912
rho_tcy	701.114	638.740
rho_tcb	483.554	277.060
rho_tky	656.365	648.046
rho_tkb	667.975	577.447
rho_tny	639.577	582.101
rho_tnb	621.033	390.525
rho_tNy	538.207	581.639
rho_tNb	618.132	682.409

Estimation::mcmc::diagnostics: Univariate convergence diagnostic, Brooks and Gelman (1998):

Parameter 1... Done!

Parameter 2... Done!

Parameter 3... Done!
Parameter 4... Done!
Parameter 5... Done!
Parameter 6... Done!
Parameter 7... Done!
Parameter 8... Done!
Parameter 9... Done!
Parameter 10... Done!
Parameter 11... Done!
Parameter 12... Done!
Parameter 13... Done!
Parameter 14... Done!
Parameter 15... Done!
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Parameter 32... Done!
Parameter 33... Done!
Parameter 34... Done!
Parameter 35... Done!
Parameter 36... Done!
Parameter 37... Done!
Parameter 38... Done!
Parameter 39... Done!
Parameter 40... Done!
Parameter 41... Done!
Parameter 42... Done!
Parameter 43... Done!
Parameter 44... Done!
Parameter 45... Done!
Parameter 46... Done!
Parameter 47... Done!
Parameter 48... Done!

Estimation::marginal density: I'm computing the posterior mean and covariance... Done!

Estimation::marginal density: I'm computing the posterior log marginal density (modified harmonic mean)... Done!

ESTIMATION RESULTS

Log data density is 2646.063451.

parameters

prior mean	post. mean	90% HPD interval	prior	pstdev
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h	0.700	0.5759	0.5712	0.5831	beta	0.1000
mu	0.300	0.3704	0.3616	0.3814	beta	0.1000
sigma_c	1.000	0.9073	0.8975	0.9231	norm	0.3000
phi	2.000	2.1170	2.0801	2.1664	norm	0.5000
gam_p	0.400	0.0926	0.0878	0.0985	beta	0.2500
gam_w	0.400	0.6565	0.6469	0.6651	beta	0.2500
theta_p	0.550	0.7381	0.7218	0.7566	beta	0.1000
theta_w	0.550	0.4740	0.4671	0.4797	beta	0.1000
psi	4.000	5.3050	5.2088	5.3852	norm	1.5000
rho_r	0.800	0.8134	0.8056	0.8204	beta	0.1000
kappa_pi	1.700	1.3616	1.3320	1.3870	norm	0.3000
kappa_y	0.400	0.0095	0.0015	0.0162	norm	0.3000
rho_tb	0.800	0.7315	0.7258	0.7378	beta	0.1000
rho_g	0.800	0.6531	0.6418	0.6628	beta	0.1000
rho_gi	0.800	0.9290	0.9205	0.9393	beta	0.1000
rho_tr	0.800	0.5775	0.5730	0.5824	beta	0.1000
rho_tc	0.800	0.6936	0.6860	0.7012	beta	0.1000
rho_tn	0.800	0.5362	0.5193	0.5528	beta	0.1000
rho_tk	0.800	0.7132	0.6999	0.7248	beta	0.1000
rho_tN	0.800	0.7119	0.7077	0.7164	beta	0.1000
rho_a	0.850	0.8760	0.8701	0.8825	beta	0.1000
rho_pref	0.800	0.7439	0.7357	0.7528	beta	0.1000
rho_Inv	0.800	0.7342	0.7289	0.7406	beta	0.1000
rho_gy	0.000	-0.1699	-0.1813	-0.1541	norm	0.5000
rho_gb	0.010	0.0514	0.0321	0.0690	norm	0.5000
rho_giy	0.000	0.4315	0.3985	0.4616	norm	0.5000
rho_gib	0.000	0.0134	-0.0021	0.0239	norm	0.5000
rho_trn	0.000	0.8069	0.7580	0.8823	norm	0.5000

rho_trb	0.000	0.1315	0.1048	0.1566	norm	0.5000
rho_tcy	0.010	0.0685	0.0489	0.0941	norm	0.5000
rho_tcb	0.010	-0.0362	-0.0512	-0.0202	norm	0.5000
rho_tky	0.000	0.8996	0.8608	0.9436	norm	0.5000
rho_tkb	0.000	-0.0205	-0.0531	0.0090	norm	0.5000
rho_tny	0.000	0.0718	0.0356	0.1146	norm	0.5000
rho_tnb	0.000	0.0603	0.0483	0.0727	norm	0.5000
rho_tNy	0.000	-0.0148	-0.0395	0.0089	norm	0.5000
rho_tNb	0.000	0.0693	0.0377	0.0938	norm	0.5000

standard deviation of shocks

	prior mean	post. mean	90% HPD interval		prior	pstdev
epst_k	0.010	0.0491	0.0445	0.0523	invg	2.0000
epst_n	0.010	0.0123	0.0114	0.0133	invg	2.0000
epst_c	0.010	0.0130	0.0117	0.0143	invg	2.0000
epst_N	0.010	0.0337	0.0275	0.0406	invg	2.0000
eps_cp	0.010	0.0128	0.0036	0.0226	invg	2.0000
eps_l	0.010	0.2261	0.1966	0.2494	invg	2.0000
eps_G	0.001	0.0259	0.0237	0.0282	invg	1.0000
eps_q	0.010	0.1549	0.1434	0.1711	invg	2.0000
eps_A	0.010	0.0130	0.0117	0.0143	invg	2.0000
eps_G_i	0.010	0.0189	0.0173	0.0207	invg	2.0000
eps_Pref	0.010	0.0089	0.0027	0.0170	invg	2.0000

Total computing time : 0h43m16s