```
1 . varbasic IndiumPrice IndiumProduction REA1, lags(1/2) step(8) irf
```

Vector autoregression

Sample: **1970 - 2014** Number of obs = **45**
Log likelihood = **53.95139** AIC = **-1.464506**
FPE = **.0000468** HQIC = **-1.150203**
Det(Sigma_ml) = **.0000182** SBIC = **-.6213969**

Equation	Parms	RMSE	R-sq	chi2	P>chi2
IndiumPrice	7	.17337	0.1870	10.35263	0.1106
IndiumProduction	7	.093334	0.1307	6.768214	0.3428
REA1	7	.376775	0.4694	39.81101	0.0000

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
IndiumPrice						
IndiumPrice						
L1.	.3913282	.1396921	2.80	0.005	.1175368	.6651196
L2.	-.2774656	.1426399	-1.95	0.052	-.5570345	.0021034
IndiumProduction						
L1.	-.0736547	.2702025	-0.27	0.785	-.6032418	.4559325
L2.	.0490905	.2710923	0.18	0.856	-.4822407	.5804217
REA1						
L1.	.098126	.0662785	1.48	0.139	-.0317774	.2280295
L2.	-.0645198	.0669777	-0.96	0.335	-.1957937	.0667541
_cons	.0056514	.0260893	0.22	0.829	-.0454827	.0567855
IndiumProduction						
IndiumPrice						
L1.	.1121667	.075203	1.49	0.136	-.0352285	.2595618
L2.	.0591405	.0767899	0.77	0.441	-.091365	.209646
IndiumProduction						
L1.	-.1347798	.1454631	-0.93	0.354	-.4198822	.1503225
L2.	.1867694	.1459421	1.28	0.201	-.0992719	.4728107
REA1						
L1.	.0360503	.0356809	1.01	0.312	-.033883	.1059836
L2.	-.0190595	.0360573	-0.53	0.597	-.0897306	.0516116
_cons	.0226652	.0140451	1.61	0.107	-.0048628	.0501932
REA1						
IndiumPrice						
L1.	.4530836	.3035842	1.49	0.136	-.1419304	1.048098
L2.	-.3320257	.3099904	-1.07	0.284	-.9395958	.2755443
IndiumProduction						
L1.	-.6174783	.5872144	-1.05	0.293	-1.768397	.5334408
L2.	-.8471059	.5891482	-1.44	0.150	-2.001815	.3076034
REA1						
L1.	.7469936	.1440389	5.19	0.000	.4646825	1.029305
L2.	-.2163047	.1455585	-1.49	0.137	-.5015941	.0689848
_cons	.0603782	.0566983	1.06	0.287	-.0507484	.1715049

```
2 . varstable
```

Eigenvalue stability condition

Eigenvalue	Modulus
.4132601 + .482703*i*	.635442
.4132601 - .482703*i*	.635442
-.534862	.534862
.4829338	.482934
.114475 + .3727593*i*	.389941
.114475 - .3727593*i*	.389941

All the eigenvalues lie inside the unit circle.
VAR satisfies stability condition.

```
3 . predict error44, resid
(10 missing values generated)

4 . summarize error44
```

Variable	Obs	Mean	Std. Dev.	Min	Max
error44	45	1.24e-10	.1611165	-.265579	.4872707

```
5 . tsline error44, yline(1.24e-10 )

6 . varlmar
```

Lagrange-multiplier test

lag	chi2	df	Prob > chi2
1	6.2785	9	0.71175
2	15.2943	9	0.08316

H0: no autocorrelation at lag order

```
7 . vargranger
```

Granger causality Wald tests

Equation	Excluded	chi2	df	Prob > chi2
IndiumPrice	IndiumProduction	.12041	2	0.942
IndiumPrice	REA1	2.1927	2	0.334
IndiumPrice	ALL	2.3191	4	0.677
IndiumProduction	IndiumPrice	3.7654	2	0.152
IndiumProduction	REA1	1.0428	2	0.594
IndiumProduction	ALL	4.5874	4	0.332
REA1	IndiumPrice	2.6866	2	0.261
REA1	IndiumProduction	2.8563	2	0.240
REA1	ALL	7.4342	4	0.115

```
8 .  irf table fevd, impulse( IndiumPrice IndiumProduction REA1 ) response( IndiumPrice IndiumProduction R
> i
```

Results from varbasic

step	(1) fevd	(2) fevd	(3) fevd	(4) fevd	(5) fevd	(6) fevd	(7) fevd	(8) fevd
0	0	0	0	0	0	0	0	0
1	1	.050863	.137219	0	.949137	.00381	0	0
2	.964912	.063184	.098485	.000573	.919466	.009598	.034515	.01735
3	.958612	.098733	.099624	.000647	.882673	.054475	.040741	.018594
4	.955724	.097995	.122367	.002955	.88098	.071187	.041321	.021025
5	.950807	.098462	.138138	.003023	.880351	.075837	.04617	.021187
6	.949468	.099376	.139947	.003096	.878984	.075597	.047437	.02164
7	.949218	.099315	.139868	.003398	.878584	.075577	.047384	.022101
8	.948997	.099365	.140351	.003459	.878515	.075696	.047544	.02212

step	(9) fevd
0	**0**
1	**.858971**
2	**.891918**
3	**.845901**
4	**.806447**
5	**.786025**
6	**.784456**
7	**.784554**
8	**.783953**

(1) irfname = varbasic, impulse = IndiumPrice, and response = IndiumPrice
(2) irfname = varbasic, impulse = IndiumPrice, and response = IndiumProduction
(3) irfname = varbasic, impulse = IndiumPrice, and response = REA1
(4) irfname = varbasic, impulse = IndiumProduction, and response = IndiumPrice
(5) irfname = varbasic, impulse = IndiumProduction, and response = IndiumProduction
(6) irfname = varbasic, impulse = IndiumProduction, and response = REA1
(7) irfname = varbasic, impulse = REA1, and response = IndiumPrice
(8) irfname = varbasic, impulse = REA1, and response = IndiumProduction
(9) irfname = varbasic, impulse = REA1, and response = REA1

9 .