# LAMPIRAN

## Uji Stasioneritas

Null Hypothesis: Unit root (individual unit root process)
Series: X2
Date: 11/15/24 Time: 14:38
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 112
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 14.4498 | 0.0708 |
| ADF - Choi Z-stat | -0.93392 | 0.1752 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Unit root (individual unit root process)
Series: X3
Date: 11/15/24 Time: 14:38
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 112
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 23.2347 | 0.0031 |
| ADF - Choi Z-stat | -3.17581 | 0.0007 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Unit root (individual unit root process)
Series: X4
Date: 11/15/24 Time: 14:38
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 108
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 32.9307 | 0.0001 |
| ADF - Choi Z-stat | -4.24000 | 0.0000 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Unit root (individual unit root process)
Series: D(X3)
Date: 11/15/24 Time: 14:40
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 108
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 78.9076 | 0.0000 |
| ADF - Choi Z-stat | -7.74848 | 0.0000 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Null Hypothesis: Unit root (individual unit root process)
Series: D(X4)
Date: 11/15/24 Time: 14:41
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 108
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 25.6232 | 0.0012 |
| ADF - Choi Z-stat | -3.47490 | 0.0003 |

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

## Uji Lag Optimal

Null Hypothesis: Unit root (individual unit root process)
Series: D(X1)
Date: 11/15/24 Time: 14:39
Sample: 1994 2023
Exogenous variables: Individual effects
User-specified lags: 1
Total (balanced) observations: 108
Cross-sections included: 4

| Method | Statistic | Prob.** |
|---|---|---|
| ADF - Fisher Chi-square | 65.8855 | 0.0000 |
| ADF - Choi Z-stat | -6.77800 | 0.0000 |

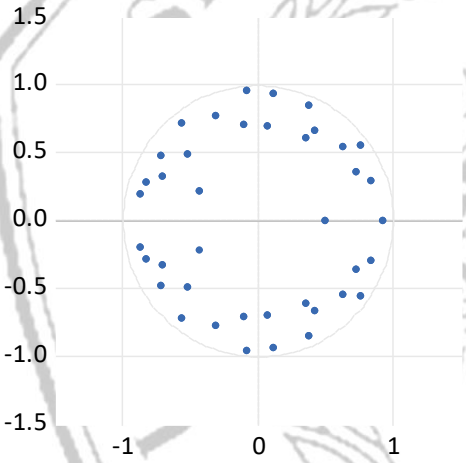
** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

VAR Lag Order Selection Criteria
Endogenous variables: D(Y) D(X1) D(X2) D(X3) D(X4)
Exogenous variables: C
Date: 11/15/24 Time: 14:41
Sample: 1994 2023
Included observations: 84

| Lag | LogL | LR | FPE | AIC | SC | HQ |
|---|---|---|---|---|---|---|
| 0 | -1913.848 | NA | 4.78e+13 | 45.68685 | 45.83154 | 45.74501 |
| 1 | -1852.370 | 114.1736 | 2.01e+13 | 44.81832 | 45.68647* | 45.16731* |
| 2 | -1828.031 | 42.30273 | 2.05e+13 | 44.83407 | 46.42568 | 45.47388 |
| 3 | -1795.460 | 52.73421 | 1.74e+13 | 44.65381 | 46.96887 | 45.58444 |
| 4 | -1776.811 | 27.97321 | 2.09e+13 | 44.80502 | 47.84355 | 46.02648 |
| 5 | -1740.405 | 50.27522* | 1.67e+13* | 44.53345 | 48.29543 | 46.04573 |
| 6 | -1721.235 | 24.19003 | 2.08e+13 | 44.67227 | 49.15771 | 46.47538 |
| 7 | -1698.129 | 26.40685 | 2.44e+13 | 44.71737 | 49.92626 | 46.81130 |
| 8 | -1665.076 | 33.84004 | 2.36e+13 | 44.52563* | 50.45798 | 46.91038 |

## Uji Stabilitas Lag Optimal

Inverse Roots of AR Characteristic Polynomial




| Root | Modulus |
|---|---|
| -0.084057 - 0.957508i | 0.961191 |
| -0.084057 + 0.957508i | 0.961191 |
| 0.116173 + 0.939190i | 0.946348 |
| 0.116173 - 0.939190i | 0.946348 |
| 0.764606 + 0.552730i | 0.943469 |
| 0.764606 - 0.552730i | 0.943469 |
| 0.374265 + 0.856162i | 0.934392 |
| 0.374265 - 0.856162i | 0.934392 |
| 0.919711 | 0.919711 |
| -0.559351 - 0.719646i | 0.911463 |
| -0.559351 + 0.719646i | 0.911463 |
| -0.868262 - 0.191749i | 0.889183 |
| -0.868262 + 0.191749i | 0.889183 |
| 0.837333 + 0.289337i | 0.885914 |
| 0.837333 - 0.289337i | 0.885914 |
| -0.825677 - 0.283075i | 0.872854 |
| -0.825677 + 0.283075i | 0.872854 |
| -0.720434 - 0.478771i | 0.865013 |
| -0.720434 + 0.478771i | 0.865013 |
| -0.312969 - 0.776015i | 0.836749 |
| -0.312969 + 0.776015i | 0.836749 |
| 0.631055 + 0.547940i | 0.835744 |
| 0.631055 - 0.547940i | 0.835744 |
| 0.730716 + 0.355352i | 0.812540 |
| 0.730716 - 0.355352i | 0.812540 |
| 0.418012 - 0.666058i | 0.786363 |
| 0.418012 + 0.666058i | 0.786363 |
| -0.702895 + 0.330888i | 0.776884 |
| -0.702895 - 0.330888i | 0.776884 |
| -0.517342 + 0.493428i | 0.714923 |
| -0.517342 - 0.493428i | 0.714923 |
| -0.104745 + 0.704887i | 0.712627 |
| -0.104745 - 0.704887i | 0.712627 |
| 0.356691 - 0.606841i | 0.703907 |
| 0.356691 + 0.606841i | 0.703907 |
| 0.068925 + 0.695069i | 0.698478 |
| 0.068925 - 0.695069i | 0.698478 |
| 0.503031 | 0.503031 |
| -0.428209 + 0.219411i | 0.481149 |
| -0.428209 - 0.219411i | 0.481149 |

No root lies outside the unit circle.
VAR satisfies the stability condition.

## Uji Kointergasi

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized No. of CE(s) | Eigenvalue | Trace Statistic | 0.05 Critical Value | Prob.** |
|---|---|---|---|---|
| None * | 0.529074 | 158.2263 | 69.81889 | 0.0000 |
| At most 1 * | 0.474146 | 97.98205 | 47.85613 | 0.0000 |
| At most 2 * | 0.305968 | 46.56348 | 29.79707 | 0.0003 |
| At most 3 * | 0.112223 | 17.34446 | 15.49471 | 0.0260 |
| At most 4 * | 0.093143 | 7.821657 | 3.841465 | 0.0052 |

Trace test indicates 5 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

## Estimasi Vecm Jangka Panjang

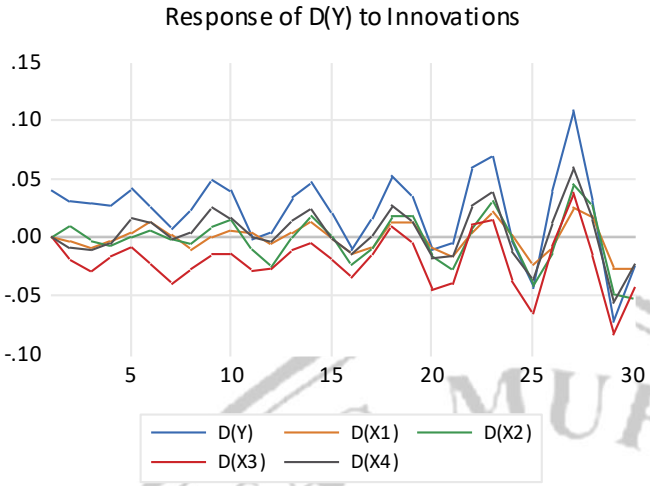
| Cointegrating Eq: | CointEq1 |
|---|---|
| D(Y(-1)) | 1.000000 |
| D(X1(-1)) | 3.28E-11<br>(1.1E-11)<br>[ 3.10696] |
| D(X2(-1)) | -0.075888<br>(0.12213)<br>[-0.62136] |
| D(X3(-1)) | 1.513528<br>(0.33116)<br>[ 4.57033] |
| D(X4(-1)) | 0.162852<br>(0.02390)<br>[ 6.81346] |
| C | -0.072984 |

# Estimasi Vecm Jangka Pendek

| Error Correction: | D(Y,2) | D(X1,2) | D(X2,2) | D(X3,2) | D(X4,2) |
|---|---|---|---|---|---|
| CointEq1 | -0.158314 | -1.39E+10 | 0.752416 | -0.352956 | -21.93943 |
| | (0.12016) | (1.7E+10) | (0.45099) | (0.14052) | (4.33564) |
| | [-1.31751] | [-0.80934] | [ 1.66837] | [-2.51182] | [-5.06025] |
| D(Y(-1),2) | -0.319554 | 2.03E+10 | -0.989979 | 0.113373 | 20.93044 |
| | (0.17871) | (2.5E+10) | (0.67074) | (0.20899) | (6.44822) |
| | [-1.78811] | [ 0.79707] | [-1.47596] | [ 0.54249] | [ 3.24593] |
| D(Y(-2),2) | -0.338146 | 3.18E+10 | -0.843285 | -0.141050 | 7.965778 |
| | (0.18074) | (2.6E+10) | (0.67835) | (0.21136) | (6.52145) |
| | [-1.87089] | [ 1.23389] | [-1.24313] | [-0.66735] | [ 1.22147] |
| D(Y(-3),2) | -0.410682 | 8.98E+09 | -1.163599 | -0.084769 | 0.289903 |
| | (0.19726) | (2.8E+10) | (0.74036) | (0.23068) | (7.11758) |
| | [-2.08192] | [ 0.31943] | [-1.57166] | [-0.36747] | [ 0.04073] |
| D(Y(-4),2) | -0.248993 | 1.87E+10 | -0.540775 | 0.928470 | 27.85179 |
| | (0.29637) | (4.2E+10) | (1.11235) | (0.34658) | (10.6937) |
| | [-0.84013] | [ 0.44328] | [-0.48616] | [ 2.67892] | [ 2.60450] |
| D(Y(-5),2) | -0.064360 | -1.64E+10 | -0.462317 | 0.176466 | 4.970424 |
| | (0.23221) | (3.3E+10) | (0.87152) | (0.27155) | (8.37846) |
| | [-0.27716] | [-0.49460] | [-0.53047] | [ 0.64986] | [ 0.59324] |
| D(Y(-6),2) | -0.248846 | 1.43E+10 | -1.383668 | 0.575650 | 18.83596 |
| | (0.21622) | (3.1E+10) | (0.81151) | (0.25285) | (7.80154) |
| | [-1.15091] | [ 0.46559] | [-1.70506] | [ 2.27667] | [ 2.41439] |
| D(Y(-7),2) | -0.011120 | -1.24E+10 | 0.143275 | -0.052441 | 3.246083 |
| | (0.12803) | (1.8E+10) | (0.48051) | (0.14972) | (4.61949) |
| | [-0.08685] | [-0.67714] | [ 0.29817] | [-0.35026] | [ 0.70269] |
| D(Y(-8),2) | -0.472922 | -5.79E+09 | -0.910257 | 0.418353 | -8.003463 |
| | (0.09878) | (1.4E+10) | (0.37075) | (0.11552) | (3.56425) |
| | [-4.78752] | [-0.41108] | [-2.45518] | [ 3.62156] | [-2.24548] |
| D(X1(-1),2) | 4.84E-12 | -0.856083 | -2.35E-11 | 1.06E-11 | 6.12E-10 |
| | (3.8E-12) | (0.54002) | (1.4E-11) | (4.4E-12) | (1.4E-10) |
| | [ 1.27616] | [-1.58527] | [-1.64908] | [ 2.39256] | [ 4.47894] |
| D(X1(-2),2) | 3.11E-12 | -0.625641 | -1.66E-11 | 1.19E-11 | 5.03E-10 |
| | (3.6E-12) | (0.51425) | (1.4E-11) | (4.2E-12) | (1.3E-10) |
| | [ 0.86285] | [-1.21662] | [-1.22220] | [ 2.82370] | [ 3.86204] |
| D(X1(-3),2) | 2.07E-12 | -0.739824 | -1.56E-11 | 8.66E-12 | 4.18E-10 |
| | (3.3E-12) | (0.47307) | (1.2E-11) | (3.9E-12) | (1.2E-10) |
| | [ 0.62495] | [-1.56387] | [-1.25359] | [ 2.23005] | [ 3.48792] |
| D(X1(-4),2) | 2.39E-12 | -0.832049 | -1.29E-11 | 5.87E-12 | 3.79E-10 |
| | (3.2E-12) | (0.45488) | (1.2E-11) | (3.7E-12) | (1.2E-10) |
| | [ 0.75001] | [-1.82918] | [-1.07939] | [ 1.57234] | [ 3.29084] |
| D(X1(-5),2) | 3.99E-12 | -0.650446 | -6.78E-12 | 1.62E-12 | 3.15E-10 |
| | (3.0E-12) | (0.42181) | (1.1E-11) | (3.5E-12) | (1.1E-10) |
| | [ 1.34871] | [-1.54202] | [-0.61075] | [ 0.46663] | [ 2.94540] |
| D(X1(-6),2) | 2.71E-12 | -0.561312 | -3.82E-12 | 4.27E-12 | 2.22E-10 |
| | (2.7E-12) | (0.39004) | (1.0E-11) | (3.2E-12) | (9.9E-11) |
| | [ 0.99094] | [-1.43911] | [-0.37170] | [ 1.33458] | [ 2.24404] |
| D(X1(-7),2) | 4.55E-14 | -0.527550 | -1.05E-12 | 3.83E-12 | 1.45E-10 |
| | (2.2E-12) | (0.31435) | (8.3E-12) | (2.6E-12) | (8.0E-11) |
| | [ 0.02065] | [-1.67822] | [-0.12712] | [ 1.48449] | [ 1.81756] |
| D(X1(-8),2) | 1.68E-13 | -0.211184 | 7.78E-13 | 2.51E-12 | 1.12E-10 |
| | (1.4E-12) | (0.19952) | (5.3E-12) | (1.6E-12) | (5.1E-11) |
| | [ 0.11988] | [-1.05845] | [ 0.14813] | [ 1.53237] | [ 2.20727] |
| D(X2(-1),2) | 0.036160 | 3.10E+09 | -0.369769 | -0.011349 | 0.179902 |
| | (0.04063) | (5.8E+09) | (0.15251) | (0.04752) | (1.46614) |
| | [ 0.88990] | [ 0.53593] | [-2.42462] | [-0.23884] | [ 0.12270] |
| D(X2(-2),2) | -0.038890 | -1.22E+09 | -0.470331 | 0.015361 | -1.506018 |
| | (0.04470) | (6.4E+09) | (0.16776) | (0.05227) | (1.61277) |
| | [-0.87007] | [-0.19120] | [-2.80362] | [ 0.29387] | [-0.93381] |
| D(X2(-3),2) | -0.011393 | 6.55E+09 | -0.258356 | 0.045681 | -1.042257 |
| | (0.04418) | (6.3E+09) | (0.16581) | (0.05166) | (1.59407) |
| | [-0.25787] | [ 1.04032] | [-1.55811] | [ 0.88420] | [-0.65384] |
| D(X2(-4),2) | 0.050479 | 5.89E+09 | -0.367723 | -0.020937 | 1.968131 |
| | (0.04389) | (6.3E+09) | (0.16471) | (0.05132) | (1.58349) |
| | [ 1.15024] | [ 0.94120] | [-2.23251] | [-0.40796] | [ 1.24291] |
| D(X2(-5),2) | 0.045063 | 3.13E+08 | -0.362431 | -0.005108 | 1.273900 |
| | (0.04052) | (5.8E+09) | (0.15208) | (0.04738) | (1.46204) |
| | [ 1.11213] | [ 0.05420] | [-2.38316] | [-0.10779] | [ 0.87132] |
| D(X2(-6),2) | 0.009733 | 3.09E+09 | -0.285192 | 0.024146 | -1.660202 |
| | (0.03929) | (5.6E+09) | (0.14745) | (0.04594) | (1.41753) |
| | [ 0.24775] | [ 0.55135] | [-1.93416] | [ 0.52557] | [-1.17119] |
| D(X2(-7),2) | 0.010826 | 4.52E+09 | -0.110939 | -0.023358 | -4.201954 |
| | (0.03671) | (5.2E+09) | (0.13778) | (0.04293) | (1.32455) |
| | [ 0.29492] | [ 0.86490] | [-0.80520] | [-0.54412] | [-3.17237] |
| D(X2(-8),2) | -0.025523 | 3.30E+09 | -0.269621 | 0.003697 | -2.380029 |
| | (0.03035) | (4.3E+09) | (0.11391) | (0.03549) | (1.09511) |
| | [-0.84095] | [ 0.76395] | [-2.36693] | [ 0.10416] | [-2.17333] |
| D(X3(-1),2) | -0.231976 | 1.21E+10 | -0.983295 | 0.307285 | 22.88231 |
| | (0.23169) | (3.3E+10) | (0.86960) | (0.27095) | (8.35997) |
| | [-1.00122] | [ 0.36554] | [-1.13075] | [ 1.13412] | [ 2.73713] |
| D(X3(-2),2) | -0.435170 | 9.44E+09 | -1.028308 | -0.092304 | 19.18262 |
| | (0.20439) | (2.9E+10) | (0.76713) | (0.23902) | (7.37490) |
| | [-2.12908] | [ 0.32420] | [-1.34046] | [-0.38618] | [ 2.60107] |
| D(X3(-3),2) | -0.278299 | 4.46E+10 | -1.642242 | -0.088215 | 10.60584 |
| | (0.21760) | (3.1E+10) | (0.81668) | (0.25446) | (7.85130) |
| | [-1.27897] | [ 1.43844] | [-2.01087] | [-0.34667] | [ 1.35094] |
| D(X3(-4),2) | -0.319846 | 3.45E+10 | -0.929843 | 0.255253 | 7.283171 |
| | (0.23422) | (3.3E+10) | (0.87906) | (0.27390) | (8.45096) |
| | [-1.36560] | [ 1.03257] | [-1.05777] | [ 0.93194] | [ 0.86182] |
| D(X3(-5),2) | -0.334804 | 1.06E+10 | -1.167166 | 0.411641 | 11.23479 |
| | (0.21624) | (3.1E+10) | (0.81159) | (0.25287) | (7.80231) |
| | [-1.54831] | [ 0.34461] | [-1.43813] | [ 1.62786] | [ 1.43993] |
| D(X3(-6),2) | -0.284949 | 1.51E+10 | -1.445565 | 0.625498 | 17.89494 |
| | (0.22538) | (3.2E+10) | (0.84589) | (0.26356) | (8.13210) |
| | [-1.26431] | [ 0.46888] | [-1.70892] | [ 2.37326] | [ 2.20053] |
| D(X3(-7),2) | -0.091667 | 4.78E+08 | -0.760338 | 0.184753 | 9.685134 |
| | (0.16554) | (2.4E+10) | (0.62132) | (0.19359) | (5.97318) |
| | [-0.55373] | [ 0.02027] | [-1.22374] | [ 0.95435] | [ 1.62144] |
| D(X3(-8),2) | -0.353742 | 1.52E+09 | -1.065723 | 0.356758 | 9.642731 |
| | (0.11650) | (1.7E+10) | (0.43727) | (0.13624) | (4.20371) |
| | [-3.03629] | [ 0.09178] | [-2.43725] | [ 2.61856] | [ 2.29386] |
| D(X4(-1),2) | 0.019658 | 2.11E+09 | -0.109707 | 0.063208 | 1.882320 |
| | (0.01873) | (2.7E+09) | (0.07028) | (0.02190) | (0.67564) |
| | [ 1.04981] | [ 0.79050] | [-1.56100] | [ 2.88653] | [ 2.78597] |
| D(X4(-2),2) | 0.012574 | 1.49E+09 | -0.113987 | 0.050620 | 1.460812 |
| | (0.01651) | (2.4E+09) | (0.06196) | (0.01931) | (0.59566) |
| | [ 0.76169] | [ 0.63459] | [-1.83970] | [ 2.62211] | [ 2.45245] |
| D(X4(-3),2) | 0.005203 | 1.53E+09 | -0.090141 | 0.037447 | 1.066159 |
| | (0.01333) | (1.9E+09) | (0.05003) | (0.01559) | (0.48098) |
| | [ 0.39035] | [ 0.80525] | [-1.80171] | [ 2.40224] | [ 2.21664] |
| D(X4(-4),2) | 0.004215 | 6.39E+08 | -0.066386 | 0.023527 | 0.745297 |
| | (0.01002) | (1.4E+09) | (0.03759) | (0.01171) | (0.36137) |
| | [ 0.42082] | [ 0.44798] | [-1.76611] | [ 2.00883] | [ 2.06245] |
| D(X4(-5),2) | 0.006867 | 5.95E+08 | -0.048914 | 0.016561 | 0.570264 |
| | (0.00707) | (1.0E+09) | (0.02655) | (0.00827) | (0.25528) |
| | [ 0.97055] | [ 0.58993] | [-1.84208] | [ 2.00173] | [ 2.23389] |
| D(X4(-6),2) | 0.006535 | 2.01E+08 | -0.030837 | 0.010422 | 0.337385 |
| | (0.00471) | (6.7E+08) | (0.01769) | (0.00551) | (0.17006) |
| | [ 1.38652] | [ 0.29918] | [-1.74318] | [ 1.89096] | [ 1.98388] |
| D(X4(-7),2) | 0.004503 | 1.57E+08 | -0.011502 | 0.006806 | 0.213757 |
| | (0.00288) | (4.1E+08) | (0.01081) | (0.00337) | (0.10388) |
| | [ 1.56397] | [ 0.38231] | [-1.07368] | [ 2.02138] | [ 2.05773] |
| D(X4(-8),2) | 0.004121 | 24000933 | -0.000864 | 0.000284 | 0.024101 |
| | (0.00152) | (2.2E+08) | (0.00570) | (0.00178) | (0.05480) |
| | [ 2.71320] | [ 0.11089] | [-0.15163] | [ 0.15995] | [ 0.43978] |
| C | -0.014959 | 1.92E+08 | -0.005928 | -0.014425 | -0.609125 |
| | (0.00698) | (1.0E+09) | (0.02621) | (0.00817) | (0.25201) |
| | [-2.14182] | [ 0.19318] | [-0.22616] | [-1.76613] | [-2.41706] |
| R-squared | 0.776050 | 0.829260 | 0.740383 | 0.761689 | 0.938835 |
| Adj. R-squared | 0.534420 | 0.645040 | 0.460270 | 0.504564 | 0.872840 |
| Sum sq. resids | 0.062683 | 1.27E+21 | 0.882983 | 0.085721 | 81.60703 |
| S.E. equation | 0.040615 | 5.79E+09 | 0.152435 | 0.047495 | 1.465453 |
| F-statistic | 3.211731 | 4.501475 | 2.643158 | 2.962326 | 14.22600 |
| Log likelihood | 172.5527 | -1882.061 | 66.74398 | 160.0325 | -114.3106 |
| Akaike AIC | -3.263818 | 48.10153 | -0.618599 | -2.950812 | 3.907766 |
| Schwarz SC | -2.013254 | 49.35210 | 0.631965 | -1.700249 | 5.158330 |
| Mean dependent | -0.002694 | 87801311 | -0.004845 | 0.001785 | -0.011676 |
| S.D. dependent | 0.059523 | 9.71E+09 | 0.207489 | 0.067477 | 4.109579 |

| | |
|---|---|
| Determinant resid covariance (dof adj.) | 3.20E+12 |
| Determinant resid covariance | 7.73E+10 |
| Log likelihood | -1570.393 |
| Akaike information criterion | 44.63482 |
| Schwarz criterion | 51.03651 |
| Number of coefficients | 215 |

## Uji Impluse Respons Fuction




## Forecast Error Variance Decomposition (FEVD)

Response of D(Y):

| Period | D(Y) | D(X1) | D(X2) | D(X3) | D(X4) |
|---|---|---|---|---|---|
| 1 | 0.040615 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| 2 | 0.031330 | -0.003329 | 0.010135 | -0.018482 | -0.008233 |
| 3 | 0.030228 | -0.007811 | -0.002257 | -0.028995 | -0.010866 |
| 4 | 0.028169 | -0.003156 | -0.005898 | -0.015617 | -0.005172 |
| 5 | 0.041501 | 0.004839 | 0.000991 | -0.008039 | 0.016536 |
| 6 | 0.026602 | 0.012633 | 0.006109 | -0.023559 | 0.013882 |
| 7 | 0.008383 | 0.002057 | -0.001366 | -0.040062 | -0.001243 |
| 8 | 0.024776 | -0.009764 | -0.005303 | -0.026852 | 0.004467 |
| 9 | 0.049326 | 0.001195 | 0.008858 | -0.014278 | 0.026607 |
| 10 | 0.041226 | 0.005618 | 0.015450 | -0.014004 | 0.017695 |
| 11 | -0.001292 | 0.004649 | -0.010032 | -0.028329 | 0.000569 |
| 12 | 0.004575 | -0.004418 | -0.024913 | -0.025749 | -0.003801 |
| 13 | 0.035404 | 0.004485 | 0.000790 | -0.010964 | 0.015835 |
| 14 | 0.047691 | 0.012359 | 0.018977 | -0.004207 | 0.023942 |
| 15 | 0.020957 | -0.000607 | 1.62E-05 | -0.019735 | -0.001745 |
| 16 | -0.010887 | -0.013302 | -0.023429 | -0.034714 | -0.014700 |
| 17 | 0.016039 | -0.008656 | -0.009388 | -0.013739 | 0.002893 |
| 18 | 0.052191 | 0.013784 | 0.019498 | 0.008982 | 0.027787 |
| 19 | 0.034525 | 0.012434 | 0.018937 | -0.004950 | 0.012784 |
| 20 | -0.010151 | -0.008431 | -0.015592 | -0.044700 | -0.017302 |
| 21 | -0.004916 | -0.016463 | -0.026057 | -0.038681 | -0.015578 |
| 22 | 0.059593 | 0.004158 | 0.008255 | 0.010908 | 0.026830 |
| 23 | 0.069007 | 0.022530 | 0.030697 | 0.015257 | 0.038297 |
| 24 | -0.002509 | 0.001859 | -0.000570 | -0.038339 | -0.012456 |
| 25 | -0.043439 | -0.022102 | -0.040345 | -0.064527 | -0.035998 |
| 26 | 0.039686 | -0.008673 | -0.012044 | -0.006656 | 0.012356 |
| 27 | 0.110079 | 0.026407 | 0.046625 | 0.038395 | 0.060598 |
| 28 | 0.031613 | 0.019462 | 0.028619 | -0.015873 | 0.015211 |
| 29 | -0.071964 | -0.026732 | -0.049150 | -0.082827 | -0.056347 |
| 30 | -0.022146 | -0.026944 | -0.051542 | -0.040520 | -0.021287 |

**Data Penelitian**

| Negara | GNIK (Y) | PI (X1) | RE (X2) | KURS (X3) | INF (X4) |
|---|---|---|---|---|---|
| Malaysia | 3670 | 1649228925 | 119271873,5 | 2,62425667 | 3,724971 |
| Malaysia | 4120 | 435632560,6 | 115796006 | 2,50440417 | 3,450575 |
| Malaysia | 4570 | 268289120,3 | 164153195,1 | 2,5159425 | 3,488559 |
| Malaysia | 4690 | 247761291,3 | 194441070,8 | 2,81319167 | 2,662515 |
| Malaysia | 3690 | -283102404,8 | 189584328,7 | 3,924375 | 5,270342 |
| Malaysia | 3430 | 1024473684 | 322894736,8 | 3,8 | 2,744561 |
| Malaysia | 3490 | 2532105263 | 342368421,1 | 3,8 | 1,53474 |
| Malaysia | 3570 | 411842105,3 | 367105263,2 | 3,8 | 1,416785 |
| Malaysia | 3800 | 1398947368 | 435000000 | 3,8 | 1,807872 |
| Malaysia | 4160 | -978157894,7 | 571052631,6 | 3,8 | 1,089676 |
| Malaysia | 4710 | -8388684211 | 801868421,1 | 3,8 | 1,421271 |
| Malaysia | 5230 | 3700304285 | 1116972560 | 3,78709167 | 2,975071 |
| Malaysia | 5770 | -3435892078 | 1365476253 | 3,66817696 | 3,609236 |
| Malaysia | 6540 | -5388143289 | 1556236305 | 3,43756938 | 2,027353 |
| Malaysia | 7400 | 23960720566 | 1329070850 | 3,33583333 | 5,440782 |
| Malaysia | 7470 | 291400434,4 | 1130872358 | 3,52450291 | 0,583308 |
| Malaysia | 8110 | -14993955418 | 1102925378 | 3,22108691 | 1,622852 |
| Malaysia | 8890 | -8678199378 | 1211496096 | 3,06000301 | 3,174471 |
| Malaysia | 9980 | -20680452461 | 1293805738 | 3,08880087 | 1,663571 |
| Malaysia | 10600 | 813576453,4 | 1423370252 | 3,15090855 | 2,105012 |
| Malaysia | 10870 | 11883325039 | 1579517557 | 3,27285975 | 3,142991 |
| Malaysia | 10400 | 7226139225 | 1643720838 | 3,90550026 | 2,10439 |
| Malaysia | 9880 | 3331961296 | 1603918551 | 4,14830066 | 2,090567 |
| Malaysia | 9680 | 3298702716 | 1648944928 | 4,30044088 | 3,871201 |
| Malaysia | 10360 | 12431150396 | 1685578502 | 4,03513014 | 0,884709 |
| Malaysia | 10960 | 7757677164 | 1597353742 | 4,14246974 | 0,662892 |
| Malaysia | 10320 | 12033737658 | 1426684075 | 4,20348195 | -1,138702 |
| Malaysia | 10740 | -4560040626 | 1552334623 | 4,1432976 | 2,477102 |
| Malaysia | 11830 | 11285060970 | 1617714310 | 4,40107635 | 3,378699 |
| Malaysia | 11970 | 8121775203 | 1704437564 | 4,56062343 | 2,488866 |
| Thailand | 2410 | -2661452934 | 1280921387 | 25,1499519 | 5,047749 |
| Thailand | 2740 | -4121073975 | 1695279817 | 24,9151757 | 5,818182 |
| Thailand | 2950 | -3698230129 | 1805949705 | 25,3426829 | 5,805106 |
| Thailand | 2670 | -4494812609 | 1658406238 | 31,3643345 | 5,625797 |
| Thailand | 2080 | -355284353,5 | 1424466820 | 41,3593875 | 7,994729 |

| | | | | | |
|---|---|---|---|---|---|
| Thailand | 1980 | 111335844,6 | 1460133614 | 37,8136558 | 0,284726 |
| Thailand | 1980 | 705725821,5 | 1696785433 | 40,1118033 | 1,591969 |
| Thailand | 1960 | 885655311,6 | 1252447488 | 44,4319 | 1,626909 |
| Thailand | 1980 | 1607725958 | 1379995429 | 42,9600833 | 0,697309 |
| Thailand | 2170 | 88254928,3 | 1607350389 | 41,4846167 | 1,80435 |
| Thailand | 2520 | -3087620266 | 1621875957 | 40,2224149 | 2,759149 |
| Thailand | 2780 | -6493767040 | 1187020000 | 40,2201302 | 4,540369 |
| Thailand | 3080 | -4912188739 | 1333360000 | 37,8819832 | 4,637474 |
| Thailand | 3490 | 3910211871 | 1634850000 | 34,5181806 | 2,241541 |
| Thailand | 3920 | -159370139,8 | 1898410000 | 33,3133006 | 5,468489 |
| Thailand | 4080 | 429038549,4 | 3808000000 | 34,2857741 | -0,845716 |
| Thailand | 4510 | -4870256146 | 4433160000 | 31,685705 | 3,247588 |
| Thailand | 4860 | -6163260155 | 5255620000 | 30,4917333 | 3,808791 |
| Thailand | 5420 | -3398281660 | 5656788795 | 31,0830917 | 3,0149 |
| Thailand | 5610 | 4766363948 | 6584860455 | 30,7259667 | 2,184886 |
| Thailand | 5640 | 12012826034 | 6524114892 | 32,4798333 | 1,895142 |
| Thailand | 5580 | 16508135076 | 5894665233 | 34,2477167 | -0,900425 |
| Thailand | 5570 | 2797621810 | 6270025972 | 35,2963833 | 0,18815 |
| Thailand | 5820 | 2151550277 | 6720117054 | 33,9398111 | 0,665632 |
| Thailand | 6450 | 5760452386 | 7466081912 | 32,3102257 | 1,063898 |
| Thailand | 7080 | 8798248347 | 8162162551 | 31,0476058 | 0,706729 |
| Thailand | 6910 | 11948117841 | 8256962268 | 31,2936732 | -0,845937 |
| Thailand | 7100 | 11966126436 | 9064843603 | 31,9770934 | 1,230395 |
| Thailand | 7240 | -5766874948 | 8916777158 | 35,0613502 | 6,077412 |
| Thailand | 7180 | 13079650915 | 9618245721 | 34,8021886 | 1,228026 |
| Indonesia | 850 | -3877000000 | 449000000 | 2160,75368 | 8,532005 |
| Indonesia | 980 | -4100000000 | 651000000 | 2248,60798 | 9,420323 |
| Indonesia | 1080 | -5005000000 | 796000000 | 2342,29629 | 7,973281 |
| Indonesia | 1090 | 2632000000 | 725000000 | 2909,38 | 6,226142 |
| Indonesia | 650 | 1878000000 | 958170000 | 10013,6225 | 58,45104 |
| Indonesia | 570 | 1792350000 | 1109000000 | 7855,15 | 20,47783 |
| Indonesia | 570 | 1910730193 | 1190200000 | 8421,775 | 3,688619 |
| Indonesia | 710 | 243802437,8 | 1046000000 | 10260,85 | 11,50011 |
| Indonesia | 780 | -1221849941 | 1258917563 | 9311,19167 | 11,90012 |
| Indonesia | 890 | -2251268404 | 1488709351 | 8577,13333 | 6,757317 |
| Indonesia | 1070 | -4409156156 | 1866314990 | 8938,85 | 6,06406 |
| Indonesia | 1210 | -4189585521 | 5419620729 | 9704,74167 | 10,4532 |
| Indonesia | 1360 | -4276626526 | 5722357517 | 9159,31667 | 13,10867 |
| Indonesia | 1580 | -5566080000 | 6174340000 | 9141 | 6,406563 |

| | | | | | |
|---|---|---|---|---|---|
| Indonesia | 1920 | -1764251470 | 6794200933 | 9698,9625 | 10,22666 |
| Indonesia | 2130 | -10336230327 | 6792907280 | 10389,9375 | 4,386416 |
| Indonesia | 2510 | -13201983671 | 6916051073 | 9090,43333 | 5,134204 |
| Indonesia | 2990 | -3806371952 | 6923970511 | 8770,43333 | 5,356048 |
| Indonesia | 3550 | -9908345748 | 7212196578 | 9386,62917 | 4,2795 |
| Indonesia | 3710 | -10872605550 | 7614419340 | 10461,24 | 6,412513 |
| Indonesia | 3600 | -26066630212 | 8551164469 | 11865,2113 | 6,394925 |
| Indonesia | 3420 | -16182680883 | 9659168639 | 13389,4129 | 6,363121 |
| Indonesia | 3400 | -18995589857 | 8906655811 | 13308,3268 | 3,525805 |
| Indonesia | 3530 | -21059012443 | 8989529971 | 13380,8339 | 3,808798 |
| Indonesia | 3850 | -9311908007 | 11215344812 | 14236,9388 | 3,198346 |
| Indonesia | 4070 | -21990288572 | 11666395059 | 14147,6714 | 3,030587 |
| Indonesia | 3900 | -3368890604 | 9650926142 | 14582,2035 | 1,920968 |
| Indonesia | 4170 | -5085568837 | 9402427089 | 14308,1439 | 1,56013 |
| Indonesia | 4580 | 11630577025 | 13089296495 | 14849,8539 | 4,209464 |
| Indonesia | 4870 | -2250088172 | 14466835210 | 15236,8847 | 3,670131 |
| Philipina | 1060 | -269000000 | 3452000000 | 26,4171667 | 10,38647 |
| Philipina | 1170 | -1190000000 | 5360000000 | 25,7144667 | 6,831996 |
| Philipina | 1330 | -5317000000 | 4875000000 | 26,2161 | 7,476104 |
| Philipina | 1400 | -591000000 | 6799000000 | 29,4706583 | 5,590259 |
| Philipina | 1320 | 928000000 | 5130000000 | 40,89305 | 9,234934 |
| Philipina | 1250 | -3315000000 | 6693000000 | 39,0889833 | 5,939049 |
| Philipina | 1180 | 553000000 | 6924000000 | 44,19225 | 3,977125 |
| Philipina | 1170 | -1027000000 | 8760000000 | 50,99265 | 5,345502 |
| Philipina | 1130 | -746000000 | 9735000000 | 51,6035667 | 2,722772 |
| Philipina | 1170 | -562000000 | 10239000000 | 54,2033333 | 2,289157 |
| Philipina | 1290 | 1713000000 | 11468000000 | 56,0399167 | 4,829211 |
| Philipina | 1380 | -1297816084 | 13732557722 | 55,0854917 | 6,516854 |
| Philipina | 1490 | -3019136466 | 15496088457 | 51,3142725 | 5,485232 |
| Philipina | 1710 | -1575412305 | 16437434092 | 46,1483912 | 2,9 |
| Philipina | 2000 | 1587166473 | 18850672419 | 44,3232876 | 8,260447 |
| Philipina | 2160 | -2054057110 | 19959507639 | 47,6796885 | 4,219031 |
| Philipina | 2360 | -4890306884 | 21556633836 | 45,1096642 | 3,789836 |
| Philipina | 2500 | -3663239395 | 23053626019 | 43,3131369 | 4,718417 |
| Philipina | 2840 | -3205030476 | 24609679613 | 42,2287947 | 3,026964 |
| Philipina | 3140 | -1001143810 | 26716840269 | 42,4461848 | 2,582688 |
| Philipina | 3300 | 2708286753 | 28690797896 | 44,3951543 | 3,597823 |
| Philipina | 3350 | 5470919991 | 29799395700 | 45,5028399 | 0,674193 |
| Philipina | 3410 | 1480205009 | 31141973475 | 47,4924639 | 1,253699 |

| | | | | | |
|---|---|---|---|---|---|
| Philipina | 3480 | 2454355419 | 32809770434 | 50,4037198 | 2,853188 |
| Philipina | 3640 | 1447844569 | 33808967986 | 52,66143 | 5,309347 |
| Philipina | 3770 | -2473905671 | 35167471832 | 51,7957827 | 2,392065 |
| Philipina | 3350 | -1679733366 | 34882844550 | 49,624096 | 2,393162 |
| Philipina | 3550 | 10237125496 | 36685313168 | 49,2545977 | 3,92718 |
| Philipina | 3950 | -1683741735 | 38048724464 | 54,4777858 | 5,821158 |
| Philipina | 4230 | 924992303,8 | 39096890142 | 55,6303632 | 5,978025 |