The Relationship Between Commodity Prices and Australia's Gross Domestic Income

Luka Belobrajdic

November 2022

School of Economics University of Sydney

Thesis submitted in partial fulfilment of the award course requirements of the Bachelor of Economics (Honours)

Supervised by Dr. Luke Hartigan and Dr. Mariano Kulish

Statement of Originality

I hereby declare that this submission is my own work and to the best of my knowledge it contains no material previously published or written by another person. Nor does it contain

any material which has been accepted for the award of any other degree or diploma at the University of Sydney or at any other educational institution, except where due acknowledgment is made in this thesis.

Any contributions made to the research by others with whom I have had the benefit of working at the University of Sydney is explicitly acknowledged.

I also declare that the intellectual content of this study is the product of my own work and research, except to the extent that assistance from others in the project's conception and design is acknowledged.

Luka Belobrajdic 5 November 2022

Acknowledgments

I would like to thank my supervisors, Dr. Luke Hartigan and Dr. Mariano Kulish who have selflessly devoted hours of their own time over the past year guiding me through this thesis. The insights and recommendations they have offered have been crucial to the formation of my work, and I can say without a doubt this would not have been possible without both of them. I would also like to extend my thanks to the broader USYD School of Economics teaching staff for taking the time to provide invaluable feedback on my thesis proposal.

Abstract:

Commodities dominate Australia's export composition. To this effect, there is a plausible relationship between commodity prices and the prosperity of Australians. Gross domestic income is chosen as a proxy for prosperity given it is better able to capture purchasing power than gross domestic product in the Australian context. Using a discrete wavelet transformation, the commodity price series is decomposed into a trend and cycle component. Following, I run a series of structural vector autoregressions for the period 1985:Q4 to 2019:Q4, as well as two sub-samples, pre and post mid-2003, in view of the increase in price and variance of commodity prices at this time. I find that both the trend and cycle components of commodity prices meaningfully impact GDI primarily via gross operating surplus, while GDP is unaffected. Although a shock to the cycle component of the commodity price series has a larger effect on GDI when compared to the trend, the impact of the trend is far more persistent. Further, for the pre mid-2003 sub-sample, commodity price changes have no discernable impact on GDI, as opposed to the post mid-2003 sample where a noticeably strong relationship exists.

Contents

1. Introduction	5
2. Literature Review	8
3. Methods and Procedures	
3.1 Data	12
3.2 Models	14
4. Results	
4.1 Whole Sample (1985:Q4 - 2019:Q4)	17
4.2 Pre mid-2003 Sample (1985:Q4 - 2003:Q2)	24
4.3 Post mid-2003 Sample (2003:Q3 - 2019:Q4)	26
4.4 Robustness	30
5. Discussion and Conclusion	30
References	33
Appendix	
A.1 Data Sources	36
A.2 Models	38
A.3 Full IRFs	42
A.4 10 Period Variance Decomposition	49
A.5 Robustness Checks	56

1. Introduction

Donald Horne (1964) was the first to call Australia 'the lucky country'. While Horne's description was meant as a disparaging characterisation of Australia's leadership, one enduring interpretation is that Australia is lucky in the sense that its prosperity is generated by the sheer luck of its natural endowments. But is this interpretation fair? Using Gross Domestic Income (GDI) as a proxy for prosperity, I define my research question as 'the extent to which commodity price changes predict Australia's Gross Domestic income'. I select GDI as the focal metric as it is a measure of purchasing power and is influenced to a greater extent than GDP by commodity price movements for commodity-exporting countries. This sensitivity to commodity prices is due to the fact that higher export prices for commodities will result in an increase in nominal export earnings, thus appreciating the terms of trade. Subsequently, purchasing power increases while the level of real output remains unchanged, a result that GDI can capture. Indeed, Kohli (2004) claims "Real GDP was found to underestimate the growth in real domestic income in a majority of the countries in our sample... due to the improvements in the terms of trade that these countries have experienced" (Kohli, 2004, p. 102). While in theory GDI and GDP should be equal, Australian GDI and GDP are not perfectly correlated (Figures 1 and 2). It is thus expected that GDI will demonstrate a stronger response to commodity price shocks, than GDP, a claim which warrants a comparison between the two throughout the forthcoming analysis. GDI, is, however, a conglomeration of its four component elements. The first and largest of these is the compensation of employees, which accounts for the total remuneration, in cash or in kind, payable by an enterprise to an employee in return for work done by the latter during the accounting period (wages and salaries). The second component of GDI is gross operating surplus, which is the income from [the] production of corporate enterprises and is the second largest in value. The third is gross mixed income which is the income from the production of unincorporated enterprises (such as sole traders) and is on average the smallest in value. The fourth component of GDI is taxes less subsidies on production and imports. Taxes encompass those that are payable on goods and services, and taxes and duties on imports. Additional items included as taxes are those related to the payroll or workforce, recurrent taxes on land, buildings, or other structures, some business and professional licences, taxes on the use of fixed assets, taxes on pollution, and taxes on international financial transactions. Subsidies on the other hand encompass unrequited payments that government units make to resident producers or importers (Australian Bureau of Statistics, 2021). Given the capital intensity of commodity extraction, the response of gross operating surplus is of particular importance as it encapsulates the income earned on capital owned by large enterprises.



Figure 1



Figure 2

Broad data-based insights into the Australian economy validate a potential relationship between the focal variables proposed for study. The Reserve Bank of Australia (RBA) states "Australia is a relatively open, trade-exposed economy. This means that changes in other countries' demand for our goods and services can have significant implications for our economy" (Reserve Bank of Australia, n.d.). In the 2019-2020 financial year, Minerals and Fuels, Rural products, and Gold made up 67% of Australia's export value (Department of Foreign Affairs and Trade, 2021). Changes to demand (and prices) for commodities are then likely to have widespread economic consequences for Australia. Indeed, the rise in the Terms of Trade in the early 2010s generated by increased prices for Australian commodities caused increased investment into the mining sector, increased wages, increased profits, and increased government revenue, as well as decreased unemployment (Reserve Bank of Australia, n.d.; Gruen, 2011). An important aspect to consider when dealing with commodity prices is the differences in the permanent and transitory components of the series. In mid-2003 commodity prices saw a large and permanent increase in nominal value alongside increased volatility, as shown in Figure 3 (Kulish & Rees, 2017). As such, decomposing the analysis into pre and post mid-2003 samples, alongside a discussion of the permanent and transitory components of the commodity price series is likely to prove insightful.



Figure 3

To complete the permanent and transitory decomposition of the commodity price series, I employ the RBAs index of commodity prices (ICP) series that has had the Discrete Wavelet Transform (DWT) applied to it. A non-parametric approach, DWT filters a series into different frequencies which can be labeled as a short-term, business cycle, medium-term, and long-term component, that can be subsequently aggregated to form the cycle and trend. To explore the relationships of interest, I use a recursive small macro model SVAR. An extension of the standard VAR model, the SVAR importantly allows for the isolation of purely exogenous shocks, thereby permitting the identification of the dynamic effects of interest.

The importance of the following discussion and subsequent results is two-fold. This thesis expands upon the scarce existing literature that explores the interactions of GDI within an Australian context. Specifically, the forthcoming analysis explores a key determinant of GDI for Australia and the scale to which GDI responds to relevant shocks. While contributing to the literature, it is perhaps the practical application of the results through policymaking, which provides them with the most importance. By understanding the persistence, degree, and avenue by which commodity prices influence Australia's GDI, policymakers are better able to manage the economy and mitigate risk through improved forecasts. Policymakers may also be better prepared to capture the gains to incomes resulting from commodity price shocks through the creation of taxation policies that target the component of GDI where the gains are concentrated.

This thesis will begin with a literature review exploring works on commodity prices, their features and role in the economy, GDI, and the various models I employ. I will then introduce the data I worked with and the models and their variations to which I apply this data. I will present the results for the whole sample, as well as both the pre and post mid-2003 sub-samples, before ending with a discussion and conclusion. I find that commodity prices meaningfully impact GDI, with the response of GDI differing to a shock to either the trend or cycle component of the ICP, as well as across sub-samples.

2. Literature Review

The relationship between commodity prices and the macroeconomy has long been explored in the literature. Notably, however, discussions on GDI are lacking but do exist, even if not to the magnitude of GDP. Importantly, the literature on the models I intend to use, both the discrete wavelet transform and SVAR is solid and in the case of the latter extends to the Australian context. Nevertheless, the opportunity for research is vast, meaning there remain many vacant avenues for exploration. To begin, Ge and Tang (2020) introduce the importance of understanding commodity prices and their impact on the broader economy stating commodities are an important factor within the economy given they are used "for industrial production and... [are] necessary consumption goods for daily life" (Ge & Tang, 2020, p. 1). They find a significant relationship between commodity prices and GDP. Specifically, they find for developed countries, commodity returns can predict GDP growth at the 1% significance level. That is, commodity booms and busts correspond tightly with the economic cycle. Ge and Tang's work also takes a different approach to the approach taken here by decomposing commodity price changes into supply and demand-driven shocks. Downes, Hanslow and Tulip (2014) have done extensive work specifically on Australia's mining boom. Their work provides foundational insight into the interaction of the Australian economy and its commodities sector. Importantly, they assert the mining boom resulted in a rise in living standards. Their findings include, by 2013, a rise in disposable income per capita of about 13%, an increase in real wages of 6%, and lowered unemployment by 1.25% compared to the counterfactual. Interestingly concerning domestic income and subsequently my research question, they struggle to define the extent to which the profits of commodity producers accrue to foreigners.

Kulish and Rees (2017) explore a highly relevant phenomenon in Australian commodity prices. They decompose the fluctuations in commodity prices into a permanent and a transitory component and conclude that the long-run level of Australia's commodity prices increased permanently by around 40% in mid-2003 and that the volatility of shocks "more than doubled" shortly after this period (Kulish & Rees, 2017, p. 352). This significant finding in the behaviour and price level of Australian commodities is a crucial element to consider when modelling the impact of commodity price changes on Australia's GDI and is a guide for furthering the existing literature. Baffes and Kabundi (2021) delve deeper into the permanent and transitory distinction of commodity prices by applying an ideal band pass filter to a variety of commodity price series. They assert transitory shocks may originate from several sources, including recession, ad hoc policy measures, weather conditions, accidents, conflicts, and terrorist attacks. On the other hand, technology and policy shocks typically have a more permanent effect. They find permanent shocks have an upward trend for most industrial commodities and a downward trend for agricultural commodities. On average, though,

permanent shocks account for less than half of price variability, with the remainder, 33% attributed to the medium-term price cycle, 17% to the business cycle, and only 4% due to purely short-term fluctuations. Dehn (2000) steps away from the permanent and transitory distinction of commodity shocks and pays significant heed to the broader policy implications of commodity price shocks. For governments of developing economies, he finds unforeseen shocks to commodity prices can complicate budgetary planning and make meeting debt targets challenging. For exporters, commodity price shocks increase cash flow variability and reduce the collateral value of inventories, both of which increase borrowing costs. The author goes on to note five key policy errors that lead to a failure to capture the gains to incomes as generated by positive commodity price shocks in primary producing developing countries. The first is that the windfall is simply not saved, with the second error much similar in that when the windfall is saved, it is quickly spent. Third, windfall spending on capital projects typically occurs while the boom generated by the positive shock to commodity prices is still ongoing. This means domestic prices are still elevated, reducing their efficiency. Fourth, governments of developing countries often channel windfalls into low-return projects motivated by political rather than economic gain. Finally, governments typically exit the boom period with large fiscal deficits after attempting to capture the shock which must be financed by extracting taxes from the private sector post-boom. While tangential to Australia, these results still highlight pitfalls to be aware of.

The importance of GDI, while often ignored, is present in a small sample of the literature. Although there has been no direct exploration of the impact of commodity price changes on GDI, Macdonald (2010) investigates the evolution of GDI in OECD countries. Macdonald rationalises the use of GDI, stating it is a measure of purchasing power, and finds the change in the terms of trade is the most significant variable influencing GDI in developed countries. The significant influence of commodity price shocks on the terms of trade in the Australian context thus indicates the ability of commodity prices to influence GDI. Confirming this sentiment, Macdonald concludes "When commodity prices weakened, real GDI per capita performed... poorly relative to real GDP per capita in Australia" (Macdonald, 2010, p. 511). Building upon this finding, Macdonald remarks that commodity price cycles have been a source of real income fluctuations but does not elaborate on this point, signalling a potential extension of the literature. The preliminary relationship Macdonald finds is of direct consequence to my research question. In defence of GDI as a metric for use over GDP, Kohli (2004) finds real GDP tends to underestimate the growth in real domestic incomes. While

employing his own construction for real domestic incomes as opposed to GDI, his findings remain relevant. For Australia specifically, real GDP underestimated growth in real domestic income in the period 1980–1996, if only marginally, due presumably to the appreciation in the terms of trade. The author rationalises, however, that this small discrepancy is not trivial when discussing the value of entire economies. The literature review thus far, while useful, has not covered the empirical strategy used in dissecting the focal relationship.

To extract the permanent and transitory elements of the commodity price series, I choose to employ the DWT. Matthes, Lubik and Verona (2019) decompose various US macroeconomic series using the DWT. They state the DWT separates the original series into different time series components, with these representing fluctuations within a specific frequency band. They identify four groups in their paper. The first is the short-term which captures high-frequency fluctuations of two years or less. The next group they identify is the business cycle, which captures fluctuations at frequencies of between 2 and 8 years. Medium-term fluctuations cover frequencies up to 32 years, while long-term fluctuations are those frequencies in excess of 32 years. They find this approach performs similarly to the one and two-sided Haar and Daubechies filters while performing significantly differently to Christiano and Fitzgerald, and Hodrick-Prescott filters. Canova (2019) comments on the DWT, stating it has some advantages over bandpass filters as they work in the time domain, and their MA representation is finite. He goes on to claim the smaller approximation error of the wavelet transform means it performs better than bandpass filters when extracting the transitory and gap components of an economic series simultaneously. He also claims that commonly used unobserved components models are "competitive only in terms of real time MSE", and for all other statistics, are typically inferior to other decomposition methods (Canova, 2019, p. 16). A different type of model is, however, necessary to capture the focal relationship explored in this thesis. An SVAR model specification is the best candidate for this purpose. The work of Dungey and Pagan (2009) provides an example of the construction of an SVAR for a small open economy - Australia. They state that the SVAR model is a useful tool for analysing the macroeconomy given its ability to establish empirical relationships in the framework of theoretical understandings. Their paper works with both permanent and transitory shocks, providing initial intuition regarding the process for integrating these shocks into my model. An aside mentioned within the paper is that rational expectations may not be empirically supported within empirical models due to complex dynamics and the abundance of variables influencing focal variables. This discussion of existing literature thus serves to inform the

theoretical validity of my research question and provide guidance on the core conceptual issues to note and further develop throughout my thesis.

3. Methods and Procedures

3.1 Data

The primary data set I employ to track the level of commodity prices is the RBA's monthly index of commodity prices. I chose this dataset as the RBA states "The ICP is intended to provide a timely indicator of the prices received by Australian commodity exporters" (Reserve Bank of Australia, 2013, p. 23). Being an index it captures a desirable property whereby commodities are weighted by their importance in terms of export value. Figure 4 highlights this fact, with the index closely tracking the value of Australia's two most important commodities, iron, and coal, which together accounted for a third of all of Australia's exports in 2020 (Department of Foreign Affairs and Trade, 2021). Using an index will allow me to include the movements of a multitude of commodity price series of importance to Australia without having to work with these series individually. This is inclusive of energy prices which are implicit in the index with crude oil making up 2.7% of the index's value, and LNG 14.3% (Reserve Bank of Australia, 2022). The ICP, is, however, a monthly series, while the rest of the series used in this thesis are quarterly. As such, once all manipulations to the ICP were complete, I averaged it over the three months that compose a quarter. While this approach leads to a potential loss of information, it is both easily understood, and implemented, and makes some attempt to include the entirety of the information contained in the series. I proceed with the first difference of the ICP and its trend component to ensure stationarity. The cycle component does not require differencing.



Figure 4

To capture global demand, I use the seasonally adjusted chained volume measure of US GDP as sourced from the FRED database. The US being the largest economy globally is a satisfactory proxy for global demand trends. For GDI and GDP, I use ABS seasonally adjusted chain volume measures. For the component elements of GDI, compensation of employees (COE), gross operating surplus (GOS), gross mixed income (GMI), and taxes less subsidies on production and imports (TLS), I use the seasonally adjusted original series. The ABS does not provide chained volume measures for these series. As such, I manually apply the ABS chain price index for GDP to each series to construct the series in real terms and remove the effects of price changes over time. I express these series in growth rates to ensure stationarity. The chain price index being the shortest dataset sets the sample size for the forthcoming analysis. The first data entry is 1985:Q4. I prematurely end my analysis in 2019:Q4 to remove the complexities involved with working with Covid-19 pandemic-related data. Important to note, as shown in Figure 3 and defined by Kulish and Rees (2017), commodity prices saw a large and permanent increase in mid-2003. This finding rationalises the splitting of the sample into pre and post mid-2003 sub-samples for analysis going forward.

3.2 Models

Discrete Wavelet Transform

To pull the trend and cycle components from the commodity price series, I employ the discrete wavelet transform. As stated by Matthes et al., (2019) DWT decomposes an economic series into a trend, a cycle, and a noise component. The approach of a DWT is similar to the application of a Bandpass filter, in that the series is filtered based on frequency. Following the specification in Matthes et al., (2019), any economic series may be decomposed as

$$X_{t} = \sum_{j=1}^{J} D_{j,t} + S_{J,t}$$

In which X_t is the economic series of interest, $D_{j,t}$ are the wavelet coefficients at scale j, and $S_{j,t}$ is the scaling coefficient. The latter two coefficients are defined as:

$$D_{j,t} = \frac{1}{2^{j}} \left(\sum_{i=0}^{2^{j-1}-1} X_{t-i} - \sum_{i=2^{j-1}}^{2^{j-1}} X_{t-i} \right)$$
$$S_{J,t} = \frac{1}{2^{J}} \sum_{i=0}^{2^{J}-1} X_{t-i}$$

The wavelet coefficients as interpreted by Matthes et al., (2019) are the components of the economic series with different levels of persistence across time, operating at different frequencies. The scaling coefficient is the low-frequency trend of the series. As j increases, the decomposition captures lower frequency fluctuations in the series, i.e., more persistent cycles. It is thus possible to decompose the ICP into four components. Summing the results of scale coefficients 1 and 2 for monthly data produces the short-term component which captures fluctuations of two years or less. Summing the results of scale coefficients 3 and 4 produces the business cycle which captures persistent cycles of between 2 and 8 years. The medium-term component captures fluctuations of up to 32 years by summing the results of scaling coefficients 5 and 6. Finally, the long-term component, which captures fluctuations in excess of 32 years, uses scale coefficient S. To pull the cycle and trend from the commodity

price series, I combine the short-term and business cycle components to form the cycle, and the medium-term and long-term components to form the trend (Figure 5). This approach corresponds to definitions of trends and cycles as constructed using parameter methods.



Figure 5

With a finite amount of data, all filters generate distortions and leakages over other frequencies (Canova, 2019). Further, being nonparametric, the DWT does not provide any structure or method for interpreting the results obtained. Despite these criticisms, the DWT remains a strong candidate for the decomposition of the commodity price series as other choices including unobserved components models and the Butterworth filter proved problematic and were unable to adequately decompose the series. Moreover, Matthes et al., (2019) find the DWT approach to perform relatively well when matched against other filter types.

SVAR

To explore the focal relationship proposed in this thesis, I employ an SVAR model. An SVAR is an extension of the standard VAR model in which the current value of a variable is explained by its own lags, the current values of the other variables in the system, and their lags. It builds upon the standard VAR model by postulating that structural shocks induce unanticipated movements in the variables. This feature is central to the rationale for choosing

to employ an SVAR model. The identification of the structural model allows for an understanding of the dynamic effect of purely exogenous shocks. This is important given the endogenous nature of GDI and commodity prices. With regard to the research question, it is not unlikely that commodity-extracting enterprises invest in capital in response to past shocks, endogenously increasing exposure to current shocks. Alternatively, commodity-extracting enterprises may respond speculatively to unrealised commodity price shocks given past shocks by expanding employment or encouraging investment in capital, which again increases the exposure of GDI to current shocks. This is not the effect that this thesis seeks to explore, and the one which the standard VAR answers. Rather, this thesis seeks to understand the impact of a one-time exogenous shock to commodity prices on GDI and its component elements.

Given the correlation between the shocks due to the contemporaneous correlations between the variables in a standard VAR, to recover the structural shocks the SVAR permits each variable in the system to depend on the contemporaneous values of the other variables. This condition, however, creates a new problem, whereby structural (simultaneous) equations must be estimated, which requires restrictions. This process of identification involves restrictions on the contemporaneous impacts of the variables across the model, as well as specifying the shocks as being uncorrelated (Ouliaris et al., 2018). The restrictions I employ for my SVARs looking at GDI and GDP follow that of the Recursive Small Macro Model set out in Ouliaris, Pagan and Restrepo (2018). The recursive structure defines a lower-triangular matrix, A₀, and the structural shocks as being uncorrelated via matrix B. These two restrictions suggest the numerical method for estimating the recursive system is the Cholesky decomposition. This is to say, the variables further up the matrix contemporaneously influence those below it, but the reverse is not true. I order the more 'exogenous' internationally influenced variables (the ICP and its decomposition, and US GDP) above the domestic variables (GDI, GDP, and the components of GDI). Broadly, I run the SVAR:

$$A_0 z_t = A_1 z_{t-1} + \ldots + A_p z_{t-p} + B\eta_t$$

With restriction matrices:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 & 0 \\ \dots & \dots & 0 & 0 \\ \dots & \dots & \dots & 0 \\ \dots & \dots & \dots & a_{0,mn} \end{bmatrix} B = \begin{bmatrix} \sigma_{1} & 0 & 0 & 0 \\ 0 & \dots & 0 & 0 \\ 0 & 0 & \dots & 0 \\ 0 & 0 & 0 & \sigma_{m} \end{bmatrix}$$

A complete specification of the SVARs I run is available in appendix A.2. The AIC indicated 2 lags were optimal for my baseline models, SVAR 1 and 2. Subsequently, I run all the following models with 2 lags for the sake of comparison to this baseline. As a robustness check, I re-run the SVARs that include the components of GDI and specify the component elements as having no contemporaneous relationship. The p-value for the over-identified restriction for the model which does not decompose the ICP is 0.22. That is, I fail to reject the null that the data supports this restriction. For the model over the whole sample which decomposes the ICP, the over-identified restriction has a p-value of 0.21. For the pre mid-2003 sample, the p-value is 0.04, meaning I reject the null that the data supports this restriction. For the preduce is 0.12. While Lawson and Rees (2008) rationalsie this restriction and it is supported across the majority of samples, I leave it as a robustness check.

4. Results

4.1 Whole Sample (1985:Q4 - 2019:Q4)

Commodity Prices, Global Demand, and GDI/GDP (SVAR 1 & 2)

To begin, I present the key finding of the 3 variable SVAR, both with GDI and GDP in growth rates. Within the IRFs the suffix G signifies growth rates, while the suffixes T and C are the trend and cycle respectively. The dashed lines are representative of a 95% confidence interval.





Figure 6 - Impulse response of GDI growth to a one standard deviation shock to the ICP

Figure 7 - Impulse response of GDP growth to a one standard deviation shock to the ICP

In response to a one standard deviation shock to the ICP, GDI growth is shown to increase by around 30% of a standard deviation, before briefly turning negative in the 4th period post the shock. This finding is interesting when contrasted with the response of GDP. In response to the same shock, GDP growth falls by 10% of a standard deviation in the first period post-shock, but, within a 95% confidence interval, has no response post this period. Both responses are transitory in nature. A variance decomposition shows that on average, commodity prices determine ~13.4% of GDI growth over 10 periods (See Appendix A.4 for variance decompositions). In comparison, the variance decomposition for GDP growth shows on average, commodity prices determine only $\sim 2.6\%$ of its value over 10 periods. These preliminary results are important in two ways. Foremostly, they highlight that a meaningful relationship between commodity prices and GDI does in fact exist. When commodity prices increase, GDI growth correspondingly increases, at least initially. Secondly, these results rationalise the choice to examine GDI as the focal variable over GDP. Indeed, the response of GDP to a commodity price shock is negligible. This response (or lack thereof) is likely due to the change in the terms of trade, which, ceteris paribus, does not change the real output of the economy as production is predetermined by technical factors (Reserve Bank of Australia, 2005). As such, GDP is unable to capture the change in incomes, or prosperity, generated by the rise in commodity prices within a commodity-exporting economy.

Commodity Prices, Global Demand, and the Components of GDI (SVAR 3)

I then run an SVAR with the component elements of GDI.



Figure 8 - Impulse responses of growth in COE, GOS, GMI, and TLS, to a one standard deviation shock to the ICP

The components of GDI do not respond uniformly to a one standard deviation shock to the ICP. COE and TLS growth responds negatively to the shock (-40% of a standard deviation and -60% of a standard deviation respectively). This result is perhaps unexpected at first glance. For the former, only 2% of Australia's total workforce is directly employed by the mining sector specifically (Das, 2022). It may also be the fact that higher input costs in the form of higher energy costs induce a need by employers to cut costs, which reduces the compensation of employees. For the latter, the inverse relation to the ICP shock is puzzling, but an explanation for the absence of a clear proportional movement to the shock potentially is the fact that as of 2017, 86% of Australian mining operations are foreign-owned, indicating earnings (and subsequent taxation) are flowing overseas (Aulby, 2017). Further, Das (2020), states "Large write-offs, depreciation, capital allowances and avenues for cross-border planning limit local tax receipts". As per Dungey and Pagan (2009), it may simply be a case where rational expectations are not met within the framework of an empirical model given the complex interactions of real-world data. Moving on, given a 95% confidence interval, GMI responds ambiguously, likely due to the wealth of sectors within the economy in which

non-incorporated enterprises operate. Cardinally, gross operating surplus responds correspondingly to the shock to the ICP. A positive shock to the ICP results in a rise in GOS growth, peaking at an increase of 60% of a standard deviation in the second period. This is not surprising given some of Australia's largest and most influential enterprises are commodity extractors involved in mining and oil and gas. Additionally, commodity extraction is a highly capital-intensive industry that requires large economies of scale, only achievable by the largest corporate enterprise. Each response is, however, transitory, with the effect of the shock dissipating by the third or fourth period post shock. Throughout this analysis, one must recall the components of GDI are not of uniform value. A one standard deviation shift in a series as shown in the IRFs means larger changes in nominal dollar value for the growth of COE and GOS, for example, when compared to the growth of GMI and TLS. A variance decomposition reveals that on average, commodity prices determine ~27.8% of COE growth, ~13% of TLS growth, and ~9.4% of GOS growth over 10 periods. This is opposed to the attribution of only ~1.3% of the movement in GMI growth to the ICP shock. The results of these IRFs hold importance for a singular primary reason. Given GDI as a whole responds positively to the shock, it is likely that the majority of this gain is centred on the only component to respond positively, GOS. Over-identifying the restrictions for this SVAR by stipulating the component elements of GDI to have no contemporaneous impact upon one another yields similar results (see Appendix A.5)

Trend and Cycle Components of Commodity Prices, Global Demand, and GDI/GDP (SVAR 4 & 5)

I now re-run SVARs 1 and 2 with the decomposition of ICP into its trend and cycle component.





Figure 9 - Impulse responses of GDI growth to a one standard deviation shock to the trend and cycle components of the ICP



Figure 10 - Impulse response of GDP growth to a one standard deviation shock to the trend and cycle components of the ICP

The decomposition of the trend and cycle component of the ICP affirms the previous findings. GDI responds proportionally to the one standard deviation shock to the ICP, while GDP does not. In fact, with 95% confidence, GDP does not respond to a shock either to the trend or cycle of the commodity price series. The evolution of GDI growth in response to these two shocks closely follows the shock of the trend and cycle components of the ICP to themselves (see Appendix A.3). While both shocks appear cyclical in nature, the trend, as expected, is far more persistent. The impact of a shock to the cycle component of the ICP on GDI growth completely disappears within 20 periods (although with a 95% confidence interval, it disappears far earlier). Opposingly, the impact of the shock to the trend component of the ICP on GDI growth is still present after 20 periods. Interestingly, although far more transitory in nature, the impact of a shock to the cycle component results in larger deviations from the steady state level of growth. At its greatest effect, the cycle component of the ICP results in GDI growth falling by just under 20% of a standard deviation. This response is soon followed by an increase of 10% of a standard deviation above steady-state in period 6 post-shock. In contrast, the shock to the trend component of the ICP results in GDI growing at around 15% of a standard deviation above its steady-state level of growth in periods 3 and 4 at its peak. Following, GDI growth then falls to just under 10% of a standard deviation below steady-state in the 12th period. Analysing the variance decompositions for GDI growth confirms these findings. I find on average the trend component of commodity prices determines ~6.2% of GDI growth, and the cycle component determines a larger ~8.7% of GDI growth, over 10 periods. These SVARs thus reaffirm previous findings and additionally find that the response of GDI to the trend and cycle components of commodity prices are divergent. GDI is perhaps marginally influenced to a greater extent by the cycle component. Still, given its transitory nature, one could argue the trend component is more important to GDI in the long run. Nevertheless, GDI is shown to proportionally evolve in line with decomposed shocks to the ICP.

Trend and Cycle Components of Commodity Prices, Global Demand, and the Components of GDI (SVAR 6)

Similarly, I re-run SVAR 3 with the decomposition of the ICP into its trend and cycle component.



Figure 11 - Impulse responses of growth in COE, GOS, GMI, and TLS, to the trend and cycle components of the ICP

The component elements of GDI respond slightly differently in light of the trend and cycle decomposition of the commodity price series to previous findings. The shock to the trend component of the ICP generates more persistent responses from the component elements of GDI. Again, the impact of the shock to the cycle component is transitory, but the response exhibits greater amplitudes. Initially, in response to a shock to the trend component of the ICP, COE growth rises by 20% of a standard deviation above the steady-state, before falling by about 10% of a standard deviation in the 4th period. By the 6th period, however, COE growth returns to its steady-state level of growth. GOS growth initially appreciates in response to the shock, by 20% of a standard deviation, before marginally turning negative by 10% in period 13. TLS growth responds with growth below steady state, by 30% of a standard deviation in period 4, but this fall reverses by period 13 when TLS growth appreciates by just under 20% of a standard deviation. The shock to the trend component of the commodity price series does not significantly affect GMI growth. These results are somewhat expected. Given the expectation that commodity prices will remain high (the definition of a trend), commodity producers can commit to long-term investments by renegotiating higher wage contracts and seeking larger investments (Reserve Bank of Australia, 2005). The response of TLS growth may be attributed to a delay between the shock to the trend component of commodity prices and the collection period of taxation on production.

When looking at the response of the component elements of GDI to a one standard deviation shock to the cycle component of commodity prices, the results differ yet again. Initially, COE growth is negative, by 30% of a standard deviation, then by the 3rd period, appreciates by 20% of a standard deviation above steady-state. This cyclical response continues meaningfully until about the 15th period. GOS growth initially with 95% confidence in periods 3 and 4, responds negatively to the shock to the cycle component, falling by around 30% of a standard deviation below steady-state, before in the 6th and 7th periods, rising by 20% of a standard deviation. Much like COE growth, any meaningful response dissipates by the 15th period. GMI growth responds with positive growth, 40% of a standard deviation above steady-state, but with 95% confidence, this response only lasts a single period. TLS growth in response to the shock falls by 20% of a standard deviation in the 6th period, but much like the response to GMI, with 95% confidence, this response only lasts for one period. Interestingly, while growth in GOS tends to move more in line with the shock, growth in COE, GMI, and TLS appears to respond to the shock with a delay of roughly 2 periods (see

Appendix A.3). This delay may be the reason why COE and TLS growth seemingly responds inversely to the shock to the ICP in SVAR 3. Turning to the variance decomposition, I find on average the trend component of commodity prices determines ~4.3% of COE growth, and the cycle component ~17.5%, over 10 periods. For GOS growth, I find on average the trend component determines ~1.8% of growth, while the cycle component on average determines ~5.1% of growth over 10 periods. On average, the model attributes ~0.3% of GMI growth to the trend component, and ~0.8% to the cycle component, over 10 periods. Finally, I find the trend component determines ~2.6% of TLS growth, while the cycle determines ~4% of growth on average over 10 periods. The model thus again attributes more of the movement across key variables to the cycle, as opposed to the trend component of commodity prices. The decomposition of the commodity price series, therefore, suggests that the majority of the impact upon GDI attributed to changes in commodity prices stems from the COE and GOS component elements. As before, the over-identified restriction for this SVAR yields similar results.

4.2 Pre mid-2003 Sample (1985:Q4 - 2003:Q2)

Trend and Cycle Components of Commodity Prices, Global Demand, and GDI/GDP (SVAR 7 & 8)

As a robustness check, I split my sample into two smaller sub-samples, both pre and post mid-2003. I begin with the 'pre' sub-sample.





Figure 12 - Impulse responses of GDI growth to a one standard deviation shock to the trend and cycle components of the ICP

Figure 13 - Impulse response of GDP growth to a one standard deviation shock to the trend and cycle components of the ICP

For the pre mid-2003 sample, a one standard deviation shock to both the trend and cycle components of commodity prices have no impact on GDI or GDP growth. This is an unusual discovery when contrasted with the findings of SVAR 4, in which GDI is meaningfully impacted by both components of the ICP. One obvious reason for why this may be is shown in Figure 5. Pre mid-2003, both the trend and cycle components of the ICP show limited variance. It could thus be the case that the displayed variation in the data is not enough to induce a meaningful change in GDI. Put differently, the gains (or losses) of commodity prices in this sample period were not significant enough to induce a material change in the terms of trade for Australia, which would subsequently pass through to GDI,

Trend and Cycle Components of Commodity Prices, Global Demand, and the Components of GDI (SVAR 9)

Presenting the component elements of the GDI.





Figure 14 - Impulse responses of growth in COE, GOS, GMI, and TLS, to the trend and cycle components of the ICP

Given the findings of SVAR 7, the results presented here are not surprising. For the pre mid-2003 sub-sample, the component elements of GDI do not respond to a one standard deviation shock to either the trend or cycle component of the ICP. Again this is likely due to the minimally varying data employed within this sub-sample. Using the over-identified restrictions yields a broadly similar story, although the response of GMI growth to a one standard deviation shock to the trend component of the ICP briefly yields positive growth above steady-state in the 7th period post the shock. This restriction is not statistically significant.

4.3 Post mid-2003 Sample (2003:Q3 - 2019:Q4)

Trend and Cycle Components of Commodity Prices, Global Demand, and GDI/GDP (SVAR 10 & 11)

The final set of SVARs I examine are for the post mid-2003 sub-sample.



.1 .0 -.1 2 10 12 14 16 18 20 Response of GDPG to ICPC Innovation .2 .1 .0 -.1 -.2 2 10 12 14 16 18 20

Response of GDPG to ICPT Innovation

.2

Figure 15 - Impulse responses of GDI growth to a one standard deviation shock to the trend and cycle components of the ICP

Figure 16 - Impulse response of GDP growth to a one standard deviation shock to the trend and cycle components of the ICP

The presented SVARs appear more alike to SVARs 4 and 5. GDI is responsive to a one standard deviation shock to both the trend and cycle components of the ICP, while GDP is not. As recorded by Kulish and Rees (2017), a stark difference between this sample and the pre mid-2003 sample is that commodity prices saw an appreciation in price, with the volatility of prices also doubling. This finding could signal that the majority of the influence of the ICP on GDI stems from the post mid-2003 period. Although SVAR 10 looks similar to SVAR 4, the magnitude of movement in response to the various shocks is larger. In response to a one standard deviation shock to the trend component of the ICP, GDI growth peaks at just above 20% of a standard deviation above the steady state-level of growth in periods 3 and 4 post-shock. GDI growth then becomes negative, in the 11th and 12th periods, bottoming out at just above 10% of a standard deviation below the steady-state. Alternatively, in response to a one standard deviation shock to the cycle component of the ICP, GDI growth follows the path of the shock, which becomes negative early on, bottoming out at a little more than 20% of a standard deviation below steady-state. It then turns positive around period 6 at just under 20% of a standard deviation above its steady-state level. These amplitudes are greater than those exhibited in SVAR 4. A variance decomposition for the growth of GDI for this sub-sample affirms a stronger response to the shock than when compared to the whole sample. I find on average the trend component of commodity prices determines ~14.8% of GDI growth, and the cycle component determines $\sim 18.1\%$ of GDI growth, over 10 periods. Thus for the post mid-2003 sample, the model attributes far more of the variation in GDI growth to both the trend and cycle components of the commodity price series. This suggests that for the whole sample, the movement in GDI as a result of commodity price changes mostly derives from the post mid-2003 period, with the pre mid-2003 sample mediating the results.

Trend and Cycle Components of Commodity Prices, Global Demand, and the Components of GDI (SVAR 12)

The final SVAR I present employs the component elements of GDI for the post mid-2003 sample.





Figure 17 - Impulse responses of growth in COE, GOS, GMI, and TLS, to the trend and cycle components of the ICP

Again, these results are similar to those of the whole sample (SVAR 6), but the magnitudes are larger. Interestingly, the one standard deviation shock to the trend component of the ICP now does not have a statistically significant effect on COE growth. GOS growth peaks at around 30% of a standard deviation above its steady-state level in periods 4 and 5. Then in periods 12 and 13, GOS growth is below steady-state by 20% of a standard deviation. TLS growth initially in periods 4 and 5 falls below its steady-state level by just under 40% of a standard deviation. This fall is then followed by a rise above steady-state in period 13 of 20%. With regards to the one standard deviation shock to the cycle component of the ICP, growth in COE, GOS, and TLS are meaningfully impacted with 95% confidence. COE growth is initially negative at 40% of a standard deviation below steady-state, before reversing and rising just below 40% of a standard deviation above steady-state in period 3. GOS growth with 95% confidence initially falls just above 40% of a standard deviation below its steady-state in period 3, but by period 7, appreciates by about 20% of a standard deviation above its steady-state. The only certain reaction of TLS growth with 95% confidence is in period 3, where it rises 40% of a standard deviation above the steady-state. Again, growth in GOS seems to mirror the evolution of the shock to the cycle component of commodity prices. Growth in COE and TLS reacts with an apparent delay of roughly 2 periods, which appears as these series reacting seemingly inversely to the shock. On average I find the trend component of commodity prices determines ~6.7% of GOS growth and ~8.5% of TLS growth over 10 periods. Alternatively, on average I find the cycle determines ~29.8% of COE growth, ~9.7% of GOS growth, and ~8.7% of TLS growth over 10 periods. For the comparable variance decompositions of SVAR 6, this model attributes a greater share of the movement to the commodity price series. This affirms the previous finding that the majority of the influence of commodity prices on GDI stems from the post mid-2003 sample, likely due to the large appreciation and greater variance of commodity prices in this period. The over-identified restriction produces similar results.

4.4 Robustness

The presented results across all models are robust, with a broadly similar narrative told for various manipulations of the models. To this effect, the results of the robustness checks conducted for each SVAR are available in Appendix A.5. To begin, I choose to re-order the shocks. Given the recursive SVAR structure, it is plausible that rearranging the shocks to the system can produce different results. However, I find this manipulation to have a limited impact on the key findings. Particularly, whether I arrange US GDP above or below the decomposed ICP series has no real implication for the results. Choosing to arrange the cycle component over the trend similarly does not meaningfully change the results. As an extreme, arranging the focal variable (GDI, GDP, and the components of GDI) above all other variables does at times have a minor influence on specific conclusions, but the broad movements of the IRFs remain similar. I further change the lag structure of the SVAR by halving and doubling the lags (1 and 4 lags). This manipulation again did not materially change the results, although 1 lag would lead to a loss of information in the IRFs, while 4 would produce noticeably more movement. As mentioned previously, the over-identified restrictions for the SVARs examining the component elements of GDI produced near exact conclusions.

5. Discussion and Conclusion

In this thesis, I seek to establish the relationship between commodity prices and Australian prosperity. Through a decomposition of the RBAs index of commodity prices via the discrete wavelet transform, I ran multiple SVARs with the commodity price series, its permanent and transitory components, global demand, GDI, GDP, and the component elements of GDI. I did so for the period 1985:Q4 to 2019:Q4, as well as two sub-samples, pre and post mid-2003. I find that GDI is meaningfully and correspondingly influenced by commodity prices while GDP is not. That is, for an appreciation in commodity prices, GDI rises, and vice versa. While both the trend and cycle components of the commodity price series impact GDI, GDI responds more strongly to evolutions in the cycle component, although these are far more transitory in nature than evolutions in the trend. Further, while changes to commodity prices influence all components of GDI in some way, gains are concentrated in gross operating

surplus. Finally, splitting my sample into two smaller periods for analysis, both pre and post a large rise in the value and variance of commodity prices, yields interesting results. Pre mid-2003 there is no meaningful relationship between commodity prices and GDI, while the relationship post mid-2003 is exceptionally strong.

These findings reveal important relationships for consideration. The clear distinction between the response of GDI and GDP, especially in the more recent post mid-2003 period suggests GDI is a crucial yet under-represented macroeconomic metric to study in the Australian context. In periods where the variance of commodity prices is especially volatile, the choice to employ GDI when studying the Australian economy is advantageous. For policymakers, these findings suggest capturing gains to GDI generated by the cycle may yield greater benefits than those of the trend. Conversely, policy that attempts to mediate the response of GDI in relation to the trend component of commodity prices is likely to be more effective than a response to the cycle, given the trend has far more persistence. Perhaps of greatest utility in regard to policy is understanding where the gains of GDI are concentrated. Knowing gains to both the trend and cycle component of the commodity price series are concentrated in gross operating surplus may suggest that something akin to a resource super profits tax would be beneficial. Such a policy could save the windfall gains to GDI attributed to a rise in commodity prices. The case for this policy is strong. As stated previously, 86% of Australian mining operations are foreign-owned. Much of the profit generated without change to either output or investment is flowing overseas despite the fact that officially, Australians own the very resources generating these super profits (Department of Industry, Science and Resources, n.d.). A super profits tax would allow Australians to benefit from the rise in prices by shifting some of the gains from gross operating surplus to taxes less subsidies on production and imports. As noted by Dehn (2000), policymakers should responsibly and strategically invest the windfall in high-return projects post the commodity shock induced boom period. While discussions on the details of such a policy are far too broad for this thesis, the tax should only apply to those profits generated above the steady-state level of commodity prices.

The opportunities for further research remain vast. For one, conducting this same research in future periods of commodity price moderation may yield different results, as suggested by the comparison between the pre and post mid-2003 samples. Further, employing a mixed-frequency SVAR to reconcile the monthly ICP data with quarterly GDI and GDP data could aid in the robustness of the results. Additionally, the inclusion of other price series for

the sources of income for other industries of importance to Australia could prove useful. By including these different price series and comparing them to the impact of commodity prices, it would be possible to gauge the relative importance of commodities on Australia's prosperity. Moreover, running the same SVARs over a variety of commodity-exporting (such as Canada and Norway) and non-commodity-exporting countries (such as France and Japan) could help to further reveal the importance of GDI. By comparing the response of GDI and GDP to commodity price shocks in these economies alongside a discussion of the terms of trade, the importance of GDI in commodity-exporting economies may be better understood.

References

- Aulby, H. (2017). Undermining our democracy: Foreign corporate influence through the Australian mining lobby. https://australiainstitute.org.au/report/undermining-our-demo cracy-foreign-corporate-influence-through-the-australian-mining-lobby/
- Australian Bureau of Statistics. (2021). *Chapter 11 Gross Domestic Product Income approach (GDP(I))*. https://www.abs.gov.au/statistics/detailed-methodology-informati on/concepts-sources-methods/australian-system-national-accounts-concepts-sources-a nd-methods/2020-21/chapter-11-gross-domestic-product-income-approach-gdpi
- Baffes, J., & Kabundi, A. (2021). Commodity Price Shocks: Order within Chaos? *World Bank Policy Research Working Paper No. 9792.* https://doi.org/10.1596/1813-9450-9792
- Canova, F. (2020). FAQ: How do I extract the output gap? Sveriges Riksbank Working Paper Series No. 386. http://hdl.handle.net/10419/215464
- Das, S. (2022, June 14). Here's why Australia's reliance on commodities is unhealthy. *The Guardian*. https://www.theguardian.com/commentisfree/2022/jun/14/heres-why-austra lias-reliance-on-commodities-is-unhealthy
- Dehn, J. (2000). The Effects on Growth of Commodity Price Uncertainty and Shocks. World Bank Policy Research Working Paper No. 2455. https://doi.org/10.1596/1813-9450-2455
- Department of Foreign Affairs and Trade. (2021). *Trade and Investment at a glance 2021*. https://www.dfat.gov.au/publications/trade-and-investment/trade-and-investment-glan ce-2021
- Department of Industry, Science and Resources. (n.d.). *Taxes, royalties and export controls on minerals and petroleum*. https://www.industry.gov.au/mining-oil-and-gas/taxes-royalti es-and-export-controls-minerals-and-petroleum

Downes, P. M., Hanslow, K., & Tulip, P. (2014). The Effect of the Mining Boom on the

Australian Economy. SSRN Electronic Journal. doi:10.2139/ssrn.2701080

- Dungey, M., & Pagan, A. (2009). Extending a SVAR Model of the Australian Economy. *Economic Record*, 85(268), 1–20. doi:10.1111/j.1475-4932.2008.00525.x
- Ge, Y., & Tang, K. (2020). Commodity prices and GDP growth. *International Review of Financial Analysis*, 71, 101512. doi:10.1016/j.irfa.2020.101512
- Gruen, D. (2011). *The macroeconomic and structural implications of a once-in-a-lifetime boom in the terms of trade*. https://treasury.gov.au/speech/the-macroeconomic-and-stru ctural-implications-of-a-once-in-a-lifetime-boom-in-the-terms-of-trade

Horne, D. (1964). The Lucky Country. Penguin Random House Australia.

- Kohli, U. (2004). Real GDP, real domestic income, and terms-of-trade changes. *Journal of International Economics*, 62(1), 83–106. https://doi.org/10.1016/j.jinteco.2003.07.002
- Kulish, M., & Rees, D. M. (2017). Unprecedented changes in the terms of trade. *Journal of International Economics*, *108*, 351–367. doi:10.1016/j.jinteco.2017.07.005
- Lawson, J., & Rees, D. (2008). *A Sectoral Model of the Australian Economy*. https://www.rba.gov.au/publications/rdp/2008/2008-01/sec-aus-economy.html
- Macdonald, R. (2010). Real Gross Domestic Income, Relative Prices, and Economic Performance Across the OECD. *Review of Income and Wealth*, *56*(3), 498–518. doi:10.1111/j.1475-4991.2010.00399.x
- Matthes, C., Lubik, T., & Verona, F. (2019). Assessing U.S. Aggregate Fluctuations Across
 Time and Frequencies. *Federal Reserve Bank of Richmond Working Papers*, 19(06),
 1–44. https://doi.org/10.21144/wp19-06
- Ouliaris, S., Pagan, A.R., & Restrepo, J. (2018). *Quantitative Macroeconomic Modeling with Structural Vector Autoregressions – An EViews Implementation*.
- Reserve Bank of Australia. (n.d.). A *ustralia and the Global Economy The Terms of Trade Boom*. https://www.rba.gov.au/education/resources/explainers/australia-and-the-global

-economy.html

Reserve Bank of Australia. (2005). COMMODITY PRICES AND THE TERMS OF

TRADE. https://www.rba.gov.au/publications/bulletin/2005/apr/pdf/bu-0405-1.pdf

Reserve Bank of Australia. (2013). Changes to the RBA Index of Commodity Prices: 2013. https://www.rba.gov.au/publications/bulletin/2013/mar/3.html

Reserve Bank of Australia. (2022). *Weights for the Index of Commodity Prices*. https://www.rba.gov.au/statistics/frequency/commodity-prices/2022/weights-icp-2022 0401.html

Appendix

A.1 Data Sources

Data	Reference	Series ID	Frequency	Sample Period
Index of Commodity Prices	Reserve Bank of Australia. (2022). Commodity Prices - 12 (April 2022) [Data set]. https://www.rba.gov.au/statistics/frequenc y/commodity-prices/2022/	GRCPAIAD	Monthly	1982:M7 - 2022:M4
US Gross Domestic Product	Federal Reserve Economic Data. (2022). Real Gross Domestic Product (October 2022) [Data set]. https://fred.stlouisfed.org/series/GDPC1	GDPC1	Quarterly	1947:Q1 - 2022:Q2
Australian Gross Domestic Income	Australian Bureau of Statistics. (2021). Australian National Accounts: National Income, Expenditure and Product (December 2021) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021	A2304410X	Quarterly	1959:Q4 - 2021:Q4
Australian Gross Domestic Product	Australian Bureau of Statistics. (2021). Australian National Accounts: National Income, Expenditure and Product. Table 1. Key National Accounts Aggregates (December 2021) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021	A2304402X	Quarterly	1959:Q4 - 2021:Q4
Australian Compensation of Employees	Australian Bureau of Statistics. (2021). 5206.0 Australian National Accounts: National Income, Expenditure and Product. Table 11. National Income Account, Current prices (December 2021) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021	A2303359K	Quarterly	1959:Q4 - 2021:Q4
Australian Gross Operating Surplus	Australian Bureau of Statistics. (2021). 5206.0 Australian National Accounts: National Income, Expenditure and Product. Table 11. National Income Account, Current prices (December 2021) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021	A2303375K	Quarterly	1959:Q4 - 2021:Q4
Australian Gross Mixed Income	Australian Bureau of Statistics. (2021). 5206.0 Australian National Accounts: National Income, Expenditure and Product. Table 11. National Income Account, Current prices (December 2021) [Data set].	A2303377R	Quarterly	1959:Q4 - 2021:Q4

	https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021			
Australian Taxes Less Subsidies on Production and Imports	Australian Bureau of Statistics. (2021). 5206.0 Australian National Accounts: National Income, Expenditure and Product. Table 11. National Income Account, Current prices (December 2021) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/dec-2021	A2302831K	Quarterly	1959:Q4 - 2021:Q4
Chain Price Index	Australian Bureau of Statistics. (2022). 5206.0 Australian National Accounts: National Income, Expenditure and Product. Table 4. Expenditure on Gross Domestic Product (GDP), Chain price indexes (March 2022) [Data set]. https://www.abs.gov.au/statistics/economy /national-accounts/australian-national-acco unts-national-income-expenditure-and-pro duct/mar-2022	A2303862V	Quarterly	1985:Q3 - 2022:Q1

A.2 Models

SVAR 1 & 2

$$A_0 z_t = A_1 z_{t-1} + \ldots + A_p z_{t-p} + B\eta_t$$

With restriction matrices:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 \\ a_{0,21} & a_{0,22} & 0 \\ a_{0,31} & a_{0,32} & a_{0,33} \end{bmatrix} B = \begin{bmatrix} \sigma_{1} & 0 & 0 \\ 0 & \sigma_{2} & 0 \\ 0 & 0 & \sigma_{3} \end{bmatrix}$$

And where:

$$z_{t} = \begin{bmatrix} \kappa_{t} \\ d_{t} \\ g_{t} \end{bmatrix}, z_{t} = \begin{bmatrix} \kappa_{t} \\ d_{t} \\ y_{t} \end{bmatrix} \quad A_{i} = \begin{bmatrix} a_{i,11} & a_{i,12} & a_{i,13} \\ a_{i,21} & a_{i,22} & a_{i,23} \\ a_{i,31} & a_{i,32} & a_{i,33} \end{bmatrix} \quad \eta_{t} = \begin{bmatrix} \varepsilon_{\kappa_{t}} \\ \varepsilon_{d_{t}} \\ \varepsilon_{g_{t}} \end{bmatrix}, \eta_{t} = \begin{bmatrix} \varepsilon_{\kappa_{t}} \\ \varepsilon_{d_{t}} \\ \varepsilon_{g_{t}} \end{bmatrix}$$

In which κ is the commodity price series, *d* is global demand, *g* is GDI, and *y* is GDP.

SVAR 3

$$A_0 z_t = A_1 z_{t-1} + \ldots + A_p z_{t-p} + B\eta_t$$

With restriction matrices:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 & 0 & 0 & 0 \\ a_{0,21} & a_{0,22} & 0 & 0 & 0 & 0 \\ a_{0,31} & a_{0,32} & a_{0,33} & 0 & 0 & 0 \\ a_{0,41} & a_{0,42} & a_{0,43} & a_{0,44} & 0 & 0 \\ a_{0,51} & a_{0,52} & a_{0,53} & a_{0,54} & a_{0,55} & 0 \\ a_{0,61} & a_{0,62} & a_{0,63} & a_{0,64} & a_{0,65} & a_{0,66} \end{bmatrix} B = \begin{bmatrix} \sigma_{1} & 0 & 0 & 0 & 0 & 0 \\ 0 & \sigma_{2} & 0 & 0 & 0 & 0 \\ 0 & 0 & \sigma_{3} & 0 & 0 & 0 \\ 0 & 0 & 0 & \sigma_{4} & 0 & 0 \\ 0 & 0 & 0 & 0 & \sigma_{5} & 0 \\ 0 & 0 & 0 & 0 & \sigma_{6} \end{bmatrix}$$

And where:

$$z_{t} = \begin{bmatrix} \kappa_{t} \\ d_{t} \\ e_{t} \\ s_{t} \\ m_{t} \\ t_{t} \end{bmatrix} A_{i} = \begin{bmatrix} a_{i,11} & a_{i,12} & a_{i,13} & a_{i,14} & a_{i,15} & a_{i,16} \\ a_{i,21} & a_{i,22} & a_{i,23} & a_{i,24} & a_{i,25} & a_{i,26} \\ a_{i,31} & a_{i,32} & a_{i,33} & a_{i,34} & a_{i,35} & a_{i,36} \\ a_{i,41} & a_{i,42} & a_{i,43} & a_{i,44} & a_{i,45} & a_{i,46} \\ a_{i,51} & a_{i,52} & a_{i,53} & a_{i,54} & a_{i,55} & a_{i,56} \\ a_{i,61} & a_{i,62} & a_{i,63} & a_{i,64} & a_{i,65} & a_{i,66} \end{bmatrix} \eta_{t} = \begin{bmatrix} \varepsilon_{\kappa_{t}} \\ \varepsilon_{k_{t}} \\ \varepsilon_{e_{t}} \\ \varepsilon_{\kappa_{t}} \\ \varepsilon_{\kappa_{t}} \end{bmatrix}$$

In which e is the compensation of employees, s is gross operating surplus, m is gross mixed income, and t is taxes less subsidies of production and imports.

As a robustness check, I re-run the SVAR and specify the component elements of GDI as having no contemporaneous relationship. Where:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 & 0 & 0 & 0 \\ a_{0,21} & a_{0,22} & 0 & 0 & 0 & 0 \\ a_{0,31} & a_{0,32} & a_{0,33} & 0 & 0 & 0 \\ a_{0,41} & a_{0,42} & 0 & a_{0,44} & 0 & 0 \\ a_{0,51} & a_{0,52} & 0 & 0 & a_{0,55} & 0 \\ a_{0,61} & a_{0,62} & 0 & 0 & 0 & a_{0,66} \end{bmatrix}$$

SVAR 4, 5, 7, 8, 10 & 11
$$A_0 z_t = A_1 z_{t-1} + \ldots + A_p z_{t-p} + B \eta_t$$

With restriction matrices:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 & 0 \\ a_{0,21} & a_{0,22} & 0 & 0 \\ a_{0,31} & a_{0,32} & a_{0,33} & 0 \\ a_{0,41} & a_{0,42} & a_{0,43} & a_{0,44} \end{bmatrix} \quad B = \begin{bmatrix} \sigma_{1} & 0 & 0 & 0 \\ 0 & \sigma_{2} & 0 & 0 \\ 0 & 0 & \sigma_{3} & 0 \\ 0 & 0 & 0 & \sigma_{4} \end{bmatrix}$$

And where:

$$z_{t} = \begin{bmatrix} \tau_{t} \\ c_{t} \\ d_{t} \\ g_{t} \end{bmatrix}, z_{t} = \begin{bmatrix} \tau_{t} \\ c_{t} \\ d_{t} \\ y_{t} \end{bmatrix}, \eta_{t} = \begin{bmatrix} \varepsilon_{\tau_{t}} \\ \varepsilon_{c_{t}} \\ \varepsilon_{d_{t}} \\ \varepsilon_{i_{t}} \end{bmatrix}, \eta_{t} = \begin{bmatrix} \varepsilon_{\tau_{t}} \\ \varepsilon_{c_{t}} \\ \varepsilon_{d_{t}} \\ \varepsilon_{y_{t}} \end{bmatrix}$$

In which τ is the trend component of the commodity price series, and *c* is the cycle component.

SVAR 6, 9 & 12 $A_0 z_t = A_1 z_{t-1} + \ldots + A_p z_{t-p} + B \eta_t$

With restriction matrices:

$$A_{0} = \begin{bmatrix} a_{0,11} & 0 & 0 & 0 & 0 & 0 & 0 \\ a_{0,21} & a_{0,22} & 0 & 0 & 0 & 0 & 0 \\ a_{0,31} & a_{0,32} & a_{0,33} & 0 & 0 & 0 & 0 \\ a_{0,41} & a_{0,42} & a_{0,43} & a_{0,44} & 0 & 0 & 0 \\ a_{0,51} & a_{0,52} & a_{0,53} & a_{0,54} & a_{0,55} & 0 & 0 \\ a_{0,61} & a_{0,62} & a_{0,63} & a_{0,64} & a_{0,65} & a_{0,66} & 0 \\ a_{0,71} & a_{0,72} & a_{0,73} & a_{0,74} & a_{0,75} & a_{0,76} & a_{0,77} \end{bmatrix} B = \begin{bmatrix} \sigma_{1} & 0 & 0 & 0 & 0 & 0 & 0 \\ \sigma_{2} & 0 & 0 & 0 & 0 & 0 & 0 \\ \sigma_{2} & 0 & 0 & 0 & 0 & 0 & 0 \\ \sigma_{3} & \sigma_{3} & 0 & 0 & 0 & 0 \\ \sigma_{3} & \sigma_{3} \\ \sigma_{3} & \sigma_{3} \\ \sigma_{3} & \sigma_{3} \\ \sigma_{3} & \sigma_{3} \\ \sigma_{3} & \sigma_{3$$

And where:

$$z_{t} = \begin{bmatrix} \tau_{t} \\ c_{t} \\ d_{t} \\ e_{t} \\ s_{t} \\ m_{i} \\ t_{s} \end{bmatrix} \quad A_{i} = \begin{bmatrix} a_{i,11} & a_{i,12} & a_{i,13} & a_{i,14} & a_{i,15} & a_{i,16} & a_{i,17} \\ a_{i,21} & a_{i,22} & a_{i,23} & a_{i,24} & a_{i,25} & a_{i,26} & a_{i,27} \\ a_{i,31} & a_{i,32} & a_{i,33} & a_{i,34} & a_{i,35} & a_{i,36} & a_{i,37} \\ a_{i,41} & a_{i,42} & a_{i,43} & a_{i,44} & a_{i,45} & a_{i,46} & a_{i,47} \\ a_{i,51} & a_{i,52} & a_{i,53} & a_{i,54} & a_{i,55} & a_{i,56} & a_{i,57} \\ a_{i,61} & a_{i,62} & a_{i,63} & a_{i,64} & a_{i,65} & a_{i,66} & a_{i,67} \\ a_{i,71} & a_{i,72} & a_{i,73} & a_{i,74} & a_{i,75} & a_{i,76} & a_{i,77} \end{bmatrix} \quad \eta_{t} = \begin{bmatrix} \varepsilon_{\tau_{t}} \\ \varepsilon_{c_{t}} \end{bmatrix}$$

Again, I re-run these SVARs and specify the component elements of GDI as having no contemporaneous relationship. Where:

$$A_{0} = \begin{bmatrix} a_{i,11} & a_{i,11} & 0 & 0 & 0 & 0 & 0 \\ a_{i,21} & a_{i,22} & 0 & 0 & 0 & 0 & 0 \\ a_{i,31} & a_{i,32} & a_{i,33} & 0 & 0 & 0 & 0 \\ a_{i,41} & a_{i,42} & a_{i,43} & a_{0,44} & 0 & 0 & 0 \\ a_{i,51} & a_{i,52} & a_{i,53} & 0 & a_{0,55} & 0 & 0 \\ a_{i,61} & a_{i,62} & a_{i,63} & 0 & 0 & a_{0,66} & 0 \\ a_{i,71} & a_{i,72} & a_{i,73} & 0 & 0 & 0 & a_{0,77} \end{bmatrix}$$

A.3 Full IRFs



Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions

Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions



Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions





Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions



Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions













Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions

SVAR 9

		95% CLusing Standa	rd percentile bootstrap with 999 b	pootstrap repetitions		
Response of ICPT to ICPT Innovation	Response of ICPT to ICPC Innovation	Response of ICPT to USGDPG Innovation	Response of ICPT to COEG Innovation	Response of ICPT to GOSG Innovation	Response of ICPT to GMIG Innovation	Response of ICPT to TLSG Innovation
38 54 50 54	.04 .02 .00	04 02 00 02		.02	02	.04
2 4 6 8 10	.02 2 4 6 8 10	.04 2 4 6 8 10	.02 2 4 6 8 10	.04 2 4 6 8 10	.04 2 4 6 8 10	.02 2 4 6 8 10
Response of ICPC to ICPT Innovation	Response of ICPC to ICPC Innovation	Response of ICPC to USGDPG Innovation	Response of ICPC to COEG Innovation	Response of ICPC to GOSG Innovation	Response of ICPC to GMIG Innovation	Response of ICPC to TLSG Innovation
Response of USGDPG to ICPT Innovation	Response of USGDPG to ICPC Innovation	Response of USGDPG to USGDPG Innovation	Response of USGDPG to COEG Innovation	Response of USGDPG to GOSG Innovation	Response of USGDPG to GMIG Innovation	Response of USGDPG to TLSG Innovation
Response of COEG to ICPT Innovation	Response of COEG to ICPC Innovation	Response of COEG to USGDPG Innovation	Response of COEG to COEG Innovation	Response of COEG to GOSG Innovation	Response of COEG to GMIG Innovation	Response of COEG to TLSG Innovation
A 2 2 2 4 2 4 2 4 5 8 10	A 0 2 A 					
Response of GOSG to ICPT Innovation	Response of GOSG to ICPC Innovation	Response of GOSG to USGDPG Innovation	Response of GOSG to COEG Innovation	Response of GOSG to GOSG Innovation	Response of GOSG to GMIG Innovation	Response of GOSG to TLSG Innovation
8 4 0 4 8 2 4 6 8 10	8 4 0 4 3 2 4 6 8 10					
Response of GMIG to ICPT Innovation	Response of GMIG to ICPC Innovation	Response of GMIG to USGDPG Innovation	Response of GMIG to COEG Innovation	Response of GMIG to GOSG Innovation	Response of GMIG to GMIG Innovation	Response of GMIG to TLSG Innovation
2 1 0 1 2 4 5 8 10	2 1 0 1 2 2 4 6 8 10					
Response of TLSG to ICPT Innovation	Response of TLSG to ICPC Innovation	Response of TLSG to USGDPG Innovation	Response of TLSG to COEG Innovation	Response of TLSG to GOSG Innovation	Response of TLSG to GMIG Innovation	Response of TLSG to TLSG Innovation
8 4 0 4 8 2 4 5 8 2 4 5 8 10			10 05 00 05 10 2 4 6 8 10	10 03 03 10 2 4 5 8 10	0.8 0.4 0.4 0.2 1.2 2 4 6 8 10	3 2 1 0 1 2 4 6 8 10



Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions



Response to Cholesky One S.D. (d.f. adjusted) Innovations 95% CI using Standard percentile bootstrap with 999 bootstrap repetitions

Response of ICPT to ICPT Innovation	Response of ICPT to ICPC Innovation	Response of ICPT to USGDPG Innovation	Response of ICPT to COEG Innovation	Response of ICPT to GOSG Innovation	Response of ICPT to GMIG Innovation	Response of ICPT to TLSG Innovation
	.10 .05 .00 .05 .10 .10 .5 .10 .15 .20		15 10 65 05 10 10 5 10 15 20		.1 .1 .2 .5 .10 .15 .20	.15 .19 .05 .00 .05 .10 5 10 5 10 15 20
Response of ICPC to ICPT Innovation	Response of ICPC to ICPC Innovation	Response of ICPC to USGDPG Innovation	Response of ICPC to COEG Innovation	Response of ICPC to GOSG Innovation	Response of ICPC to GMIG Innovation	Response of ICPC to TLSG Innovation
2 1 0 4 2 5 10 15 20	5 10 15 20		2 1 0 4 -2 5 10 15 20	2 1 0 1 2 5 10 15 20		
Response of USGDPG to CPT Innovation	Response of USGDPG to ICPC Innovation	Response of USGDPG to USGDPG Innovation	Response of USGDPG to COEG Innovation	Response of USGDPG to GOSG Innovation	Response of USGDPG to GMIG Innovation	Response of USGDPG to TLSG Innovation
		.6 4 0 -1 -2 5 10 15 20	2 1 0 1 -2 5 10 15 20	2 1 0 1 2 5 10 15 20	2 1 0 1 1 2 5 10 15 20	3 2 3 4 -1 5 10 15 20
Response of COEG to ICPT Innovation	Response of COEG to ICPC Innovation	Response of COEG to USGDPG Innovation	Response of COEG to COEG Innovation	Response of COEG to GOSG Innovation	Response of COEG to GMIG Innovation	Response of COEG to TLSG Innovation
A 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 4 0 -8 5 10 15 20		A 5 10 15 20		A 2 0 -2 -2 -4 5 10 15 20	2 2 2 3 3 5 10 15 20
Response of GOSG to ICPT Innovation	Response of GOSG to ICPC Innovation	Response of GOSG to USGDPG Innovation	Response of GOSG to COEG Innovation	Response of GOSG to GOSG Innovation	Response of GOSG to GMIG Innovation	Response of GOSG to TLSG Innovation
a 5 10 15 20	A A A S 10 15 20	a a a s 10 15 20	A 0 -A -B 5 10 15 20	2 0 	A A A 5 10 15 20	A A A S 10 15 20
Response of GMIG to ICPT Innovation	Response of GMIG to KPC Innovation	Response of GMIG to USGDPG Innovation	Response of GMIG to COEG Innovation	Response of GMIG to GOSG Innovation	Response of GMIG to GMIG Innovation	Response of GMIG to TLSG Innovation
1.0 0.5 0.0 0.5 1.0 5 10 15 20	1.0 0.5 0.0 0.5 1.0 1.5 5 10 15 20	10 05 00 05 10 45 5 10 15 20	2 1 0 	0.4 0.4 -12 5 10 15 20	a 2 5 0 -1 5 10 15 20	0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4 0.4
Response of TLSG to ICPTInnovation	Response of TLSG to ICPC Innovation	Response of TLSG to USGDPG Innovation	Response of TLSG to COEG Innovation	Response of TLSG to GOSG Innovation	Response of TLSG to GMIG Innovation	Response of TLSG to TLSG Innovation
A A B A S 10 15 20		1.0 0.5 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	.8 5 10 15 20		8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 15 20	2 0 -1 5 10 15 20

A.4 10 Period Variance Decomposition

Variance Decomposition of GDI growth for

SVAR 1:

Variance Decomposition of GDP growth for SVAR 2:

Variance D	ecomposition of	of GDIG:			Variance D	ecomposition o	f GDPG:		
Period	S.E.	ICP	USGDPG	GDIG	Period	S.E.	ICP	USGDPG	GDPG
1	0.799888	10.53296	15.82831	73.63872	1	0.611262	2.372489	14.41945	83.20807
		(4.66911)	(5.85036)	(6.50579)			(2.68255)	(5.15301)	(5.00001)
2	0.851224	12.25356	20.14550	67.60094	2	0.617127	2.329703	16.00133	81.66897
		(5.00212)	(7.19230)	(7.25385)			(2.71969)	(5.40777)	(5.29060)
3	0.881519	12.30739	20.00067	67.69194	3	0.622850	2.420086	16.35333	81.22659
		(4.71865)	(7.16347)	(7.22566)			(2.78915)	(5.31854)	(5.06681)
4	0.896422	13.74353	20.53243	65.72404	4	0.624566	2.567735	16.64841	80.78385
		(5.10453)	(7.35449)	(7.60108)			(2.88788)	(5.38452)	(5.15056)
5	0.899056	14.11466	20.41230	65.47303	5	0.625202	2.670440	16.67564	80.65392
		(5.23421)	(7.27233)	(7.70731)			(2.90696)	(5.38031)	(5.19832)
6	0.899095	14.12134	20.41085	65.46781	6	0.625391	2.701442	16.69117	80.60739
		(5.21664)	(7.26462)	(7.73238)			(2.90506)	(5.38800)	(5.21715)
7	0.899343	14.14133	20.42601	65.43266	7	0.625416	2.705138	16.69125	80.60361
		(5.23638)	(7.24936)	(7.73980)			(2.90189)	(5.39176)	(5.22127)
8	0.899425	14.15650	20.42265	65.42085	8	0.625419	2,705206	16.69171	80,60309
		(5.26250)	(7.25264)	(7.74967)			(2.90102)	(5.39597)	(5.22579)
9	0.899441	14.15857	20.42234	65.41909	9	0.625419	2,705216	16.69172	80.60307
		(5.27266)	(7.25316)	(7.75530)			(2.90082)	(5.39795)	(5.22860)
10	0.899443	14,15855	20,42257	65.41888	10	0 625419	2 705214	16 69177	80 60302
		(5.27600)	(7.25245)	(7.75787)		0.020110	(2.90059)	(5.39900)	(5.23027)
								- /	

Variance Decomposition of the growth of the component elements of GDI for SVAR 3:

Variance D	ecomposition o	f COEG:					
Period	S.E.	ICP	USGDPG	COEG	GOSG	GMIG	TLSG
1	0.992186	23.91854	6.233680	69.84778	0.000000	0.000000	0.000000
		(6.51406)	(4.06096)	(6.59063)	(0.00000)	(0.00000)	(0.00000)
2	1.038965	28.92597	5.702152	63.71201	0.226469	0.749109	0.684290
		(6.30323)	(3.83509)	(6.48731)	(1.32118)	(1.82675)	(1.49668)
3	1.066418	27.88689	6.761174	61.35392	0.334043	1.698793	1.965180
		(5.99719)	(4.09280)	(6.20555)	(1.34258)	(2.21926)	(2.33623)
4	1.071830	28.25820	6.696805	60.74628	0.606005	1.709512	1.983197
		(5.99569)	(4.09718)	(6.20341)	(1.45502)	(2.24377)	(2.41730)
5	1.076572	28.03588	7.315143	60.21295	0.679065	1.761365	1.995600
		(5.98120)	(4.34139)	(6.29188)	(1.43402)	(2.26531)	(2.38119)
6	1.078852	28.11263	7.364075	59.96116	0.676222	1.813329	2.072580
		(5.96622)	(4.39580)	(6.35432)	(1.43776)	(2.27901)	(2.39798)
7	1.079819	28.19400	7.372046	59.85432	0.675904	1.818147	2.085587
		(5.95543)	(4.46585)	(6.41872)	(1.43413)	(2.28063)	(2.40915)
8	1.080097	28.20856	7.374915	59.82345	0.683191	1.819910	2.089974
		(5.95764)	(4.51370)	(6.45297)	(1.43716)	(2.28807)	(2.41944)
9	1.080122	28.20741	7.376401	59.82083	0.683276	1.821750	2.090327
		(5.95934)	(4.55698)	(6.48487)	(1.43930)	(2.29096)	(2.42646)
10	1.080131	28.20740	7.376648	59.81982	0.684049	1.821785	2.090300
		(5.96146)	(4.58916)	(6.50508)	(1.44182)	(2.29431)	(2.43157)

	S.E.	ICP	USGDPG	COEG	GOSG	GMIG	TLS
1	1,942207	0.156899	3.225621	1.095551	95.52193	0.000000	0.000
		(1.52175)	(3.03142)	(1.76368)	(3,73780)	(0.00000)	(0.000
2	2 101906	9 665347	4 330433	1 262181	84 09732	0 506065	0 138
-	2.101000	(5 24585)	(2 94102)	(2 24875)	(5.81467)	(1 40376)	(1 006
3	2 107775	0 795319	4 496040	1 3729/15	93 65940	0.503507	0 102
5	2.10///13	(4 00024)	(2 12022)	(2.64091)	(5 95107)	(1 72714)	(1 / 1 / 10
	0.400607	(4.99034)	(3.12023)	(2.04901)	(0.00107)	(1.73714)	(1.410
4	2.132037	10.25014	5.832158	1.348117	81.81907	0.528250	0.221
_		(4.92293)	(3.64594)	(2.60236)	(6.15626)	(1.89805)	(1.430
5	2.140948	10.63696	5.793750	1.341447	81.23261	0.570127	0.425
		(4.94284)	(3.67431)	(2.59359)	(6.22265)	(2.00486)	(1.506
6	2.143145	10.77768	5.792088	1.338701	81.09209	0.574723	0.424
		(5.00726)	(3.71290)	(2.58854)	(6.28433)	(2.06403)	(1.501
7	2.143263	10.77652	5.794979	1.338948	81.08439	0.575549	0.429
		(5.00402)	(3.70928)	(2.58954)	(6.30092)	(2.10216)	(1.521
8	2 143412	10 78624	5 794623	1 338764	81 07320	0 577403	0 429
-		(5.01185)	(3 71606)	(2 58815)	(6.31596)	(2 127/18)	(1.522
0	0 140470	10 70701	5.706642	1 220704	01.06000	(2.12740)	0.420
9	2.143479	10.78791	5.790043	1.338794	81.00923	0.577307	0.430
		(5.02194)	(3.71875)	(2.58780)	(6.32309)	(2.13941)	(1.524
10	2.143488	10.78782	5.797230	1.338790	81.06858	0.577366	0.430
		(5.02513)	(3.72132)	(2.58732)	(6.32485)	(2.14762)	(1.524
Variance D Period	Decomposition of S.E.	of GMIG: ICP	USGDPG	COEG	GOSG	GMIG	TLS
1	4.067120	0.113742	0.008627	2.083073	0.031875	97.76268	0.000
		(1.15721)	(1.00907)	(2.68257)	(1.04241)	(3.50923)	(0.000
2	4.238113	0.453972	0.331287	3.460141	3.402517	92.01932	0.332
		(1.45074)	(1.54475)	(3.51294)	(2.91761)	(4.68590)	(1.188
3	4 446803	1.456800	1 4 1 9 2 4 1	3 278768	3 355615	90.09879	0.300
5	4.440003	(0.40506)	(0.40470)	(2 40 207)	(2.42004)	(5 47060)	(4 405
	4 4700.40	(2.12020)	(2.40472)	(3.10307)	(3.13001)	(0.17202)	(1.400
4	4.478348	1.443920	1.798672	3.278138	3.455612	89.63716	0.386
		(2.14459)	(2.88882)	(3.09628)	(3.28136)	(5.45273)	(1.414
5	4.499689	1.488855	2.023997	3.249332	3.439737	89.35320	0.444
		(2.11749)	(3.05316)	(3.05735)	(3.25049)	(5.60083)	(1.549
6	4.506978	1.510541	2.099848	3.239724	3.428782	89,25589	0.465
		(2 13396)	(3 10876)	(3.05609)	(3.23989)	(5.64592)	(1.560
7	4 500332	1 509073	2,000160	3 226747	3 429356	80 25360	0 473
	4.303332	(0.44045)	(2.11000)	(2.04064)	(2.05075)	(5 65560)	(4 603
	4 5 4 0 4 7 0	(2.14243)	(3.11900)	(3.04604)	(3.20070)	(0.000000)	(1.003
8	4.510173	1.512404	2.10/3/0	3.235580	3.428734	89.24299	0.472
		(2.14275)	(3.14885)	(3.04618)	(3.25479)	(5.66303)	(1.593
9	4.510622	1.517165	2.107031	3.235024	3.429561	89.23653	0.474
		(2.14481)	(3.15563)	(3.04474)	(3.25707)	(5.67541)	(1.605
10	4 510735	1 517631	2 107802	3 234923	3 429578	89 23539	0 474
		(2.14623)	(3.16117)	(3.04417)	(3.25728)	(5.67971)	(1.609
Variance F	ecomposition o S.E.	f TLSG: ICP	USGDPG	COEG	GOSG	GMIG	TLS
Period							
Period	0.00	8 468701	0.140873	2.448371	0.019934	0.059523	88.862
Period 1	2.235630	0.100101				(0.95270)	(5.157
Period 1	2.235630	(4.31418)	(0.85955)	(2.73824)	(1.11392)	(0.03373)	
Period 1 2	2.235630 2.378877	(4.31418) 13.62375	(0.85955) 4.255522	(2.73824) 2.407424	(1.11392) 0.639854	0.071947	79.00
Period 1 2	2.235630 2.378877	(4.31418) 13.62375 (5.52419)	(0.85955) 4.255522 (3.35222)	(2.73824) 2.407424 (2.56617)	(1.11392) 0.639854 (1.74579)	0.071947	79.00 ⁻ (6.101
Period 1 2	2.235630 2.378877 2.485489	(4.31418) 13.62375 (5.52419) 13.55329	(0.85955) 4.255522 (3.35222) 8.953801	(2.73824) 2.407424 (2.56617) 2.315791	(1.11392) 0.639854 (1.74579) 1.985372	(0.03373) 0.071947 (1.08087) 0.784136	79.00 (6.101
Period 1 2 3	2.235630 2.378877 2.485489	(4.31418) 13.62375 (5.52419) 13.55329 (5.26272)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720)	(2.73824) 2.407424 (2.56617) 2.315791 (2.27470)	(1.11392) 0.639854 (1.74579) 1.985372 (2.20040)	(0.83379) 0.071947 (1.08087) 0.784136 (1.95652)	79.00 (6.101 72.40
Period 1 2 3	2.235630 2.378877 2.485489	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940)	(0.03379) 0.071947 (1.08087) 0.784136 (1.85652)	79.00 (6.101 72.40 (6.026
Period 1 2 3 4	2.235630 2.378877 2.485489 2.496587	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098	(0.0373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038	79.00 (6.101 72.40 (6.026 72.09
Period 1 2 3 4	2.235630 2.378877 2.485489 2.496587	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718)	(0.0373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559)	79.00 (6.101 72.40 (6.026 72.09 (6.169
Period 1 2 3 4 5	2.235630 2.378877 2.485489 2.496587 2.503358	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603	(0.0378) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81
Period 1 2 3 4 5	2.235630 2.378877 2.485489 2.496587 2.503358	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31290)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657)	(0.03379) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037)	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.210
Period 1 2 3 4 5	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.42700	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.296097	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425	0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.19772	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 74.74
Period 1 2 3 4 5 6	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.0051)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.29612)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425	0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74
Period 1 2 3 4 5 6	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.28213)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234)	0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630)	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250
Period 1 2 3 4 5 6 7	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.220013	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.28213) 2.285612	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202	0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250 71.73
Period 1 2 3 4 5 6 7	2.235630 2.378877 2.485489 2.496587 2.503358 2.503358 2.504920 2.505200	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915 (5.43575)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 9.221728 (4.32294) 9.221728 (4.32294) 9.220013 (4.33389)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.29611) 2.285612 2.285612 (2.27808)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202 (2.47785)	(0.05373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479)	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250 71.73 (6.270
Period 1 2 3 4 5 6 7 8	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575	(4.31418) 13.62375 (5.52419) 13.55329 (5.38641) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43709 (5.44188) 13.43915 (5.43575) 13.44886	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.222013 (4.3389) 9.227719	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.28213) 2.285612 (2.27808) 2.2855220	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202 (2.47785) 2.120182	(0.05373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250 71.73 (6.270 71.73
Period 1 2 3 4 5 6 7 8	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575	(4.3148) 13.62375 (5.52419) 13.55329 (5.36372) 13.55329 (5.36372) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915 (5.43575) 13.44886 (5.45575)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.220113 (4.33389) 9.222719 (4.33389)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.286112 (2.27808) 2.285512 (2.27808) 2.285520 (2.27808)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202 (2.47785) 2.120182 (2.47785)	(0.05373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373 (2.19840)	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250 71.73 (6.270 71.73 (6.270 71.71 (6.282
Period 1 2 3 4 5 6 7 8 0	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575 2.505525	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915 (5.43575) 13.44886 (5.45133) 13.44000	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.220013 (4.33289) 9.222719 (4.35374) 9.222719	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.29611) 2.285087 (2.28213) 2.285612 (2.27808) 2.285220 (2.27808) 2.285495	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47734) 2.114202 2.120182 (2.47736) 2.120182 (2.47309)	(0.93573) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373 (2.12810) 1.212373	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.219 71.74 (6.250 71.73 (6.270 71.71 (6.282 71.71
Period 1 2 3 4 5 6 7 8 9	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575 2.505639	(4.31418) 13.62375 (5.52419) 13.55329 (5.38641) 13.52468 (5.38641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43709 (5.44188) 13.43915 (5.45133) 13.44886 (5.45133) 13.44886	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.222013 (4.3389) 9.222719 (4.35374) 9.222445	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.28213) 2.285612 (2.27808) 2.285220 (2.27800) 2.285185 (2.27816)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202 (2.47785) 2.120182 (2.477309) 2.120396	(0.05373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373 (2.12810) 1.213065	79.00 (6.101 72.40 (6.026 72.09 (6.169 71.81 (6.250 71.73 (6.270 71.73 (6.270 71.71 (6.282 71.71
Period 1 2 3 4 5 6 7 8 9	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575 2.505639	(4.3148) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.36641) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915 (5.43575) 13.44886 (5.45133) 13.44888 (5.46594)	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32494) 9.220113 (4.33389) 9.222719 (4.35374) 9.222745 (4.36774)	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.286112 (2.27808) 2.285520 (2.27800) 2.285185 (2.27742)	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.47234) 2.114202 (2.47785) 2.120182 (2.47309) 2.120396 (2.47105)	(0.03373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373 (2.12810) 1.213065 (2.13125)	79.00 (6.101 72.40 (6.026 72.09 (6.165 71.81 (6.219 71.74 (6.250 71.73 (6.270 71.73 (6.270 71.71 (6.282 71.70 (6.292
Period 1 2 3 4 5 6 7 8 9 10	2.235630 2.378877 2.485489 2.496587 2.503358 2.504920 2.505200 2.505575 2.505639 2.505648	(4.31418) 13.62375 (5.52419) 13.55329 (5.36372) 13.52468 (5.36841) 13.45382 (5.43550) 13.43709 (5.44188) 13.43915 (5.43575) 13.44886 (5.45133) 13.44986 (5.45133) 13.44986	(0.85955) 4.255522 (3.35222) 8.953801 (4.20720) 9.118933 (4.30484) 9.179340 (4.31299) 9.221728 (4.32294) 9.220013 (4.33389) 9.222719 (4.35374) 9.223445 (4.36774) 9.223445	(2.73824) 2.407424 (2.56617) 2.315791 (2.37479) 2.297754 (2.30264) 2.288397 (2.29611) 2.286087 (2.29611) 2.285087 (2.27808) 2.285612 (2.27808) 2.285120 (2.27800) 2.285185 (2.27742) 2.285179	(1.11392) 0.639854 (1.74579) 1.985372 (2.39940) 2.026098 (2.39718) 2.110603 (2.47657) 2.111425 (2.477234) 2.114202 (2.477285) 2.120182 (2.47309) 2.120396 (2.47105) 2.120707	(0.95373) 0.071947 (1.08087) 0.784136 (1.85652) 0.935038 (1.90559) 1.150113 (2.09037) 1.197473 (2.10630) 1.209341 (2.12479) 1.212373 (2.12810) 1.212373 (2.13265)	79.00 (6.101 72.40 (6.026 72.09 (6.162 71.74 (6.219 71.74 (6.250 71.73 (6.270 71.71 (6.282 71.70 (6.292 71.70

Variance Decomposition of GDI growth for Variance Decomposition of GDP growth for SVAR 4:

SVAR 5:

Variance D	ecomposition o	of GDIG:				Variance D	ecomposition o	of GDPG:			
Period	S.E.	ICPT	ICPC	USGDPG	GDIG	Period	S.E.	ICPT	ICPC	USGDPG	GDPG
1	0.752824	0.428657	1.035370	16.14511	82.39086	1	0.611896	0.827313	0.757061	15.52580	82.88983
		(1.33580)	(1.67818)	(4.79742)	(4.59551)			(1.69591)	(1.52729)	(6.22385)	(6.30332
2	0.787835	1.442683	3.595024	18.51221	76.45009	2	0.620403	0.824723	0.801229	17.74167	80.63238
		(1.65347)	(2.47220)	(5.53076)	(5.55105)			(1.59081)	(1.74395)	(6.25274)	(6.43798)
3	0.834712	4.296222	8.484860	16.59773	70.62119	3	0.626431	0.816098	0.801246	18.38843	79.99423
		(2.72350)	(3.78911)	(5.09513)	(5.86218)			(1.54179)	(1.99719)	(6.32225)	(6.55264
4	0.852687	6.779977	9.403331	16.11070	67.70599	4	0.628615	0.829966	0.799867	18.92932	79.44084
		(3.67048)	(4.14911)	(5.12041)	(6.16764)			(1.57034)	(2.28467)	(6.45655)	(6.77471)
5	0.860118	7.877708	9.533014	15.97453	66.61475	5	0.629511	0.830546	0.857649	19.08525	79.22656
		(4.17481)	(4.11599)	(5.00200)	(6.26152)			(1.58995)	(2.33406)	(6.56130)	(6.88472
6	0.866705	7.950621	10.65747	15.77317	65.61874	6	0.630034	0.829864	0.888872	19.18603	79.09524
		(4.27861)	(4.47507)	(4.92587)	(6.46253)			(1.59690)	(2.35936)	(6.63118)	(6.94291)
7	0.868795	7.912499	10.96654	15.75207	65.36888	7	0.630156	0.830285	0.888957	19.21536	79.06539
		(4.29194)	(4.61967)	(4.88449)	(6.54606)			(1.60205)	(2.40399)	(6.66711)	(7.00056)
8	0.869425	7.982471	10.98575	15.72967	65.30210	8	0.630237	0.831781	0.894277	19.22864	79.04530
		(4.34475)	(4.62094)	(4.87137)	(6.54384)			(1.62821)	(2.41009)	(6.68956)	(7.03434)
9	0.871491	8.206457	11.14181	15.65564	64.99610	9	0.630270	0.832763	0.896613	19.23368	79.03694
		(4.52640)	(4.72785)	(4.84658)	(6.58390)			(1.67384)	(2.43693)	(6.69680)	(7.06494)
10	0.874171	8.724498	11,10770	15.56017	64.60764	10	0.630287	0.832733	0.897121	19.23745	79.03269
		(4.91037)	(4.77076)	(4.81773)	(6.63579)			(1.73241)	(2.46650)	(6.69968)	(7.09536)

Variance Decomposition of the growth of the component elements of GDI for SVAR 6:

	ecomposition o	f COEG:						
Period	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
1	0.934799	3.293355	11.94418	6.484323	78.27814	0.000000	0.000000	0.00000
		(2.89059)	(4.77356)	(4.23426)	(6.22984)	(0.00000)	(0.00000)	(0.0000
2	0.948643	3,239388	12 20961	6.466604	76.01120	0.292618	1.187915	0.59266
		(274908)	(4.53192)	(4 16198)	(6 11265)	(1.38624)	(2 22203)	(1 1185
3	1.022000	3,728407	17.07546	9.336863	66,17724	0.341954	1.566301	1,77377
		(2.63973)	(4.88445)	(4, 24026)	(5.66139)	(1.46957)	(2.09336)	(1.9871
4	1 038365	4 555157	17 53348	9 379952	64 14136	1 089730	1 518591	1 78173
		(2.82618)	(4.95006)	(4.25412)	(5.60427)	(1.79712)	(2.02790)	(2.0407
5	1.056217	4.763022	17.65523	10.66384	62.05712	1.476824	1.661594	1,72236
-		(287624)	(5 00578)	(4 17460)	(573752)	(1.98099)	(2.03997)	(2 0133
6	1 071268	4 675757	19 19968	10 66811	60 38504	1 435641	1 700191	1,93558
		(287425)	(5.33178)	(4 13309)	(5.85351)	(1.95313)	(2.01923)	(1 9504
7	1 075940	4 635381	19 65241	10 65107	59 86216	1 448819	1 707058	2 04310
- C		(2.83023)	(5.38420)	(4 12118)	(5 84049)	(1.93579)	(1.98981)	(1 9374
8	1 077121	4 625253	19 66612	10 64390	59 76665	1 449064	1 778202	2 07080
	1.011121	(2.80391)	(5 44068)	(4 12581)	(5 86072)	(1 95462)	(2.03240)	(1 9368
٥	1 07000/	4 605377	20.05044	10 60681	59 46531	1 443324	1 768940	2 05080
	1.010004	(2 78762)	(5 58241)	(4 15153)	(5.89835)	(1 95687)	(2 02544)	(1 9295
10	1 081099	4 596048	20 14552	10 61941	59 34521	1 469038	1 768317	2 05645
10	1.001000	(2 79607)	(5.62620)	(4 19546)	(5.02255)	(1.96267)	(2.01971)	(1 0255
Variance (Decomposition	of GOSG:						
Variance [Period	Decomposition (S.E.	of GOSG: ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
Variance [Period	Decomposition (S.E.	of GOSG: ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
Variance [Period 1	Decomposition (S.E. 1.950231	0.423101	ICPC	USGDPG 3.047003	COEG	GOSG 95.20854	GMIG	TLSG
Variance [Period 1	Decomposition S.E. 1.950231	0.423101 (1.78068)	ICPC 0.046473 (1.11040)	USGDPG 3.047003 (2.75078)	COEG 1.274885 (1.93282)	GOSG 95.20854 (3.76610)	GMIG 0.000000 (0.00000)	TLSG 0.00000 (0.0000
Variance D Period 1 2	Decomposition S.E. 1.950231 2.024431	0.423101 (1.78068) 0.577723	ICPC 0.046473 (1.11040) 1.608913	USGDPG 3.047003 (2.75078) 4.305658	COEG 1.274885 (1.93282) 1.575742 (2.05541)	GOSG 95.20854 (3.76610) 91.19783	GMIG 0.000000 (0.00000) 0.512013 (1.05027)	TLSG 0.00000 (0.0000 0.2221
Variance I Period 1 2	Decomposition (S.E. 1.950231 2.024431	0.423101 (1.78068) 0.577723 (1.79962)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 2.199522	USGDPG 3.047003 (2.75078) 4.305658 (2.62624)	COEG 1.274885 (1.93282) 1.575742 (2.22601)	GOSG 95.20854 (3.76610) 91.19783 (4.28352)	GMIG 0.000000 (0.00000) 0.512013 (1.05279)	TLSG 0.00000 (0.0000 0.22211 (1.0046
Variance D Period 1 2 3	Decomposition S.E. 1.950231 2.024431 2.061805	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.99724)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.0500)	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74050)	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.2000)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.70345)	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (4.52720)	TLSG 0.00000 (0.0000 0.2221 (1.0046 0.22062 (4.2200
Variance I Period 1 2 3	Decomposition S.E. 1.950231 2.024431 2.061805	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.90495	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269)	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.684761	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316)	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730)	TLSG 0.00000 (0.0000 0.2221 (1.0046 0.22069 (1.2389 0.2522
Variance D Period 1 2 3 4	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225	0.423101 (1.78068) 0.577723 (1.7962) 0.805893 (1.87701) 1.636956 (2.09315)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 2.74551)	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.90725)	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.10555)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460)	GMIG 0.000000 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.50730)	TLSG 0.00000 (0.0000 0.2221 (1.0046 0.22062 (1.2389 0.25336 (1.2087
Variance I Period 1 2 3 4	Decomposition (S.E. 1.950231 2.024431 2.061805 2.101225 2.445735	0.423101 0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.75564	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.406823	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 4.995242	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 92.70055	GMIG 0.000000 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.524394	TLSG 0.00000 (0.0000 0.2221 (1.0046 0.2206) (1.2389 0.25333 (1.2087 0.25335
Variance D Period 1 2 3 4 5	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735	0.423101 (1.78068) 0.577723 (1.7962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (2.65551)	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.96453)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.50460)	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.634978 (4.50201)	TLSG 0.0000 0.2221 (1.0046 0.2206 (1.2389 0.2533 (1.2087 0.3745) (4.2017
Variance I Period 1 2 3 4 5	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 5.6054470	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.498651	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.744055	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044)	GMIG 0.000000 (0.0000) 0.512013 (1.05279) 0.522143 (1.53730) 0.522394 (1.60940) 0.634978 (1.58421) 0.634978	TLSG 0.00000 (0.0000 0.2221 (1.0046 0.2206 (1.2389 0.2533 (1.2087 0.3745 (1.2917
Variance I Period 1 2 3 4 5 6	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.2224179	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.458576	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.4175)	GOSG 95.20854 (3.76610) 91.19783 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.76400)	GMIG 0.000000 0.512013 (1.05279) 0.522143 (1.53730) 0.522384 (1.60940) 0.634978 (1.58421) 0.631828	TLSG 0.0000(0.00000 0.2221 (1.0046 0.2206; (1.2389 0.2533; (1.2087 0.3745; (1.2917 0.3745; (1.2917
Variance [Period 1 2 3 4 5 6	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.422222	0.423101 (1.78068) 0.577723 (1.7962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.225661)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 0.73457	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.458576 (2.87594) 5.456576	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.741885 (2.14478)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400)	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.634978 (1.58421) 0.631828 (1.60302) 0.63052	TLSG 0.0000(0.0000 0.2221 ⁻ (1.0046 0.22062 (1.2389 0.25333 (1.2087 0.37452 (1.2087 0.37452 (1.2185 0.40130 (1.2885 0.40052
Variance I Period 1 2 3 4 5 6 7	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.26561) 2.470499 (2.0237)	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.456757)	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.496823 (2.89735) 5.498651 (2.92886) 5.498651 (2.92886) 5.498651 (2.92886) 5.498651 (2.92886) 5.498651 (2.92886) 5.418503 (2.95794) 5.418503 (2.95794) 5.418503 (2.95794) 5.418503 (2.95794) (2.87594) (2.87594) (2.87594) (2.87594) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.98651) (3.987555) (3.987555) (3.987555) (3.987555) (3.987555) (3.987555) (3.9875554) (3.9875554) (3.9875554) (3.9875554) (3.9875554) (3.9875554) (3.987556) (3.987566) (3	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.737867 (2.14788)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468	GMIG 0.000000 (0.0000) 0.512013 (1.05279) 0.522143 (1.532743) 0.522394 (1.60940) 0.634978 (1.58421) 0.634978 (1.58421) 0.634828 (1.60302) 0.630865 (1.60065)	TLSG 0.0000(0.0000 0.2221: (1.0046 0.2206; (1.2389 0.2533; (1.2087 0.3745; (1.2017) 0.4013; (1.2885 0.4136; 0.4136;
Variance I Period 1 2 3 4 5 6 7 2	Decomposition of S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.424425	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.49381 (2.17779) 2.472415 (2.26561) 2.470499 (2.28737) 0.469465	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 5.765951 6.224179 (3.87282) 6.874157 (4.15077) 6.874157	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406223 (2.89735) 5.498651 (2.92886) 5.458576 (2.87594) 5.418503 (2.88518) 5.436574	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 1.741885 (2.14478) 1.737867 (2.13062) 1.737867	GOSG 95.20854 (3.76610) 91.19783 97.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.522143 (1.53730) 0.522394 (1.60940) 0.634978 (1.58421) 0.631828 (1.60302) 0.630656 (1.58225) 0.630656	TLSG 0.0000 (0.0000 0.2221' (1.0046 0.2206' (1.2389 0.2533 (1.2087 0.3745' (1.2917 0.3745' (1.2917 0.47130' (1.2885 0.4136' (1.2753 0.4136' (1.2753)
Variance I Period 1 2 3 4 5 6 7 8	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.134485	0.423101 (1.78068) 0.577723 (1.79062) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.26561) 2.472415 (2.26561) 2.470499 (2.28737) 2.469193 2.42000	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.15077) 6.910826 (4.7202)	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.458576 (2.87594) 5.418503 (2.88518) 5.413189 9.20055	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640185 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.737867 (2.13062) 1.743415 (2.143415) (2.0473)	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.534978 (1.58421) 0.631828 (1.60302) 0.630656 (1.58225) 0.671003	TLSG 0.0000(0.0000 0.22211 (1.0046 0.2206; (1.2389 0.2533; (1.2087 0.3745; (1.2917 0.40130; (1.2855 0.4136; (1.2753) 0.4256(1.2257) 0.4256(1.2257)
Variance I Period 1 2 3 4 5 6 7 8	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.134485 2.420457	0.423101 (1.78068) 0.577723 (1.79962) 0.805693 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.26561) 2.470499 (2.28737) 2.469193 (2.30488) 0.470499	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.15077) (4.15077) 6.910826 (4.17409) 7.000026 (4.17409) 7.00000	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.498651 (2.92886) 5.438576 (2.87594) 5.418503 (2.88518) 5.413189 (2.91295) 5.413189	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.737867 (2.13062) 1.743415 (2.12453) 1.743415 (2.12453) 1.76767	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468 (5.99001) 82.36677 (6.05861) 92.05757	GMIG 0.00000 (0.0000) 0.512013 (1.05279) 0.522394 (1.50940) 0.534978 (1.58421) 0.634978 (1.58421) 0.634828 (1.6302) 0.630656 (1.58225) 0.671003 (1.56402) 0.672002	TLSG 0.0000(0.02211 (1.0046 0.22062 (1.2389 0.25335 (1.2087 0.37455 (1.2917 0.37455 (1.2917 0.37455 (1.2917 0.40130 (1.2885 0.41363 (1.2753 0.42566 (1.2721)
Variance I Period 1 2 3 4 5 6 7 8 9	Decomposition of S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.134485 2.136457	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.26561) 2.249381 (2.28737) 2.469193 (2.30488) 2.474303 (2.30488) 2.474303	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.15077) 6.910826 (4.17409) 7.030281 (4.0001) 7.030281	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.406823 (2.89735) 5.498651 (2.92886) 5.458576 (2.87594) 5.413189 5.41112 5.4112 5.412 5.4112 5.4112 5.41	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 1.741885 (2.14478) 1.737867 (2.13062) 1.743415 (2.12453) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) 1.756952 (2.14478) (2.14478) 1.756952 (2.14478) (2.144	GOSG 95.20854 (3.76610) 91.19783 91.19783 9(4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468 (5.99000	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.634978 (1.54221) 0.634978 (1.60302) 0.630656 (1.58225) 0.671003 (1.56402) 0.677211	TLSG 0.0000((0.0000 0.2221; (1.0046 0.2206; (1.2389 0.2533; (1.2087 0.3745; (1.2175) 0.4013; (1.2753 0.4136; (1.2753) 0.42560; (1.2721) 0.4248; (1.2753)
Variance I Period 1 2 3 4 5 6 7 8 9	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.134485 2.136457 2.136457 2.130727	0.423101 (1.78068) 0.577723 (1.79962) 0.805893 (1.87701) 1.636956 (2.02215) 2.249381 (2.17779) 2.472415 (2.26561) 2.470499 (2.28737) 2.469193 (2.30488) (2.30488) 2.474303 (2.32822) 2.408657	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.15077) 6.910826 (4.17409) 7.030281 (4.28802) 7.490455	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.408623 (2.89735) 5.498651 (2.92886) 5.458576 (2.87594) 5.413189 (2.91295) 5.411112 (2.92493) 5.411112	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.737867 (2.13062) 1.743415 (2.12453) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) 1.756952 (2.11480) (2.11480	GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468 (5.99001) 82.36677 (6.05861) 82.25255 (6.14730) 92.05364	GMIG 0.000000 (0.00000) 0.512013 (1.05279) 0.527143 (1.53730) 0.522394 (1.60940) 0.534978 (1.58421) 0.631828 (1.5631828 (1.56302) 0.671003 (1.56402) 0.677211 (1.55546) 0.677211	TLSG 0.0000((0.0000 0.22211 (1.0046 0.22066 (1.2389 0.25333 (1.2087 0.37453 (1.2087 0.40130 (1.2855 0.41365 (1.2753 0.42566 (1.2721 0.42468 (1.2699 0.42056) (1.2699 0.42056)
Variance I Period 1 2 3 4 5 6 7 8 9 9 10	Decomposition S.E. 1.950231 2.024431 2.061805 2.101225 2.115735 2.124866 2.133039 2.134485 2.136457 2.138727	0.423101 (1.78068) 0.577723 (1.79962) 0.805693 (1.87701) 1.636956 (2.02215) 2.479381 (2.17779) 2.4772415 (2.26561) 2.470499 (2.28737) 2.469193 (2.30488) 2.474303 (2.30488) (2.304888) (2.30488) (2.30488) (2.304888) (2.30488) (2.30488) (2.3048888) (2.3048888) (2.304888) (2.3048888) (2.30488888) (2.3048888) (2.30488888) (2.304888888888888888888888888888888888888	ICPC 0.046473 (1.11040) 1.608913 (2.19912) 3.920563 (2.95290) 5.821885 (3.74551) 5.765951 (3.67255) 6.224179 (3.87282) 6.874157 (4.15077) 6.910826 (4.17409) 7.030281 (4.127409) 7.030281 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) 7.188438 (4.127409) (4.127409) 7.188438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.18438 (4.127409) 7.	USGDPG 3.047003 (2.75078) 4.305658 (2.62624) 4.905156 (2.74269) 5.496823 (2.89735) 5.498651 (2.92886) 5.498651 (2.92886) 5.438576 (2.87594) 5.418503 (2.88518) 5.411112 (2.91295) 5.411112 (2.92293) 5.399634 (2.92993) 5.399654	COEG 1.274885 (1.93282) 1.575742 (2.22601) 1.684761 (2.30898) 1.640165 (2.19556) 1.696243 (2.20153) 1.741885 (2.14478) 1.737867 (2.13062) 1.743415 (2.12453) 1.756952 (2.14480) 1.755029 (2.1480) 1.755029 (2.1480) 1.755029 (2.1480) 1.755029 (2.1480) 1.755029 (2.1480) 1.755029 (2.1480) (GOSG 95.20854 (3.76610) 91.19783 (4.28352) 87.93586 (4.79316) 84.71839 (5.50460) 83.78026 (5.62044) 83.78026 (5.62044) 83.06982 (5.75400) 82.45468 (5.99001) 82.45468 (5.99001) 82.22525 (6.14730) 82.205391	GMIG 0.00000 (0.0000) 0.512013 (1.05279) 0.522394 (1.50340) 0.522394 (1.504940) 0.634978 (1.58421) 0.634828 (1.58421) 0.631828 (1.58225) 0.671003 (1.56402) 0.677211 (1.55546) 0.676017 (4.567007)	TLSG 0.0000(0.22211 (1.0046 0.22262 (1.2389 0.25333 (1.2087 0.37455 (1.2917 0.37455 0.41363 (1.2753 0.41365 (1.2721 0.42485 (1.2721 0.42485 (1.2699 0.42825

Variance D	ecomposition (of GMIG:	ICPC	USCORC	COEC	0900	CMIC	TIRC
renou	0.L.	ICFT		036DFG	COEG	0030	GMIG	1230
1	4.086127	0.041049	0.000787	0.002753	2.084983	0.013433	97.85699	0.000000
		(1.10397)	(1.15038)	(1.10731)	(2.63242)	(1.21877)	(2.81585)	(0.00000)
2	4.245718	0.122072	0.020247	0.343664	3.405573	3.213724	92.65049	0.244230
		(1.06209)	(1.25859)	(1.60657)	(3.30456)	(3.21318)	(4.87740)	(1.55575
3	4.432802	0.157321	0.018768	1.352428	3.251703	3.224730	91.72619	0.268859
		(1.06421)	(1.34938)	(3.00685)	(3.12512)	(3.11177)	(5.45218)	(1.68425
4	4.488829	0.183791	0.837889	1.993598	3.220789	3.229015	90.26940	0.265518
		(1.03733)	(1.74698)	(3.54117)	(3.05822)	(3.17305)	(6.05688)	(1.75966
5	4.511960	0.281766	1.019854	2.087699	3.194523	3.240071	89.87321	0.302876
		(1.15994)	(1.87600)	(3.97647)	(3.02349)	(3,15793)	(6.30614)	(1.77416
6	4.525284	0.360198	1.019209	2.272134	3,184057	3,232610	89,61920	0.312592
-		(1.21082)	(1.93372)	(4.23922)	(2.98991)	(3.13677)	(6.45806)	(1.76112
7	4.533238	0.399218	1,185459	2,264295	3,181893	3,224324	89,40509	0.339724
		(1 27200)	(2 13943)	(4 28631)	(2 97241)	(3 12256)	(6 54761)	(175261
8	4 536211	0 419127	1 258823	2 273831	3 177729	3 229104	89 29870	0.34268
	1.000211	(1 29902)	(2 23091)	(4 32676)	(2 96072)	(3 11824)	(6.61891)	(174473
9	4 537620	0.437089	1 258084	2 273021	3 177162	3 227853	89 27848	0 34830
	4.001020	(1 33082)	(2 25714)	(4 35303)	(2 95709)	(3 11090)	(6 63837)	(1 74722
10	4 539061	0.454950	1 297566	2 273247	3 176729	3 226716	89 22269	0 34810
10	4.555001	(1 35072)	(2 22/07)	(4 25049)	(2.05296)	(2 11020)	(6 66240)	(1 74550
/ariance D	ecomposition o	If TLSG:						
Period	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
1	2.188933	0.838548	1.940261	0.212542	2.537001	0.015222	0.090910	94.36552
		(1.83040)	(2.53473)	(1.35947)	(2.92518)	(0.91825)	(0.86436)	(4.61166)
2	2,239409	0.801348	1.856220	3,498668	2,701132	0.430998	0.157921	90.55371
		(1.69861)	(2.62489)	(3.30910)	(3.10907)	(1.47519)	(1.26562)	(5.54142
3	2 386777	1 049985	3 212160	10 93950	2 393598	2 176492	0.501056	79 7272
-		(1.51574)	(2.99372)	(478057)	(2 69279)	(2 49082)	(1.63617)	(6 76853
4	2 416079	2 235028	3 928431	10 67733	2 337348	2 128250	0.641072	78 0525
	2	(172749)	(3 14319)	(4.62920)	(2.64890)	(2 43450)	(1.67783)	(6.87910
5	2 447228	3 006407	4 039224	11 23222	2 390750	2 366159	0.879410	76.08583
5	2.447220	(2.02690)	(2 27209)	(4.91641)	(2.62052)	(2 30520)	(1 97970)	(7 15210
6	2 460094	2 406921	4 750022	11 20244	2.000000	2 225264	0.064967	74 97066
0	2.403304	(2 21/22)	(2.61062)	(1 01017)	(2 55502)	(2.323204	(1 07001)	(7 22167
7	0 470 400	(2.31432)	(3.01002)	(4.01017)	(2.000000)	(2.30301)	(1.07001)	74 4200
(2.4/0439	3.303922	0.004090	(4.00700)	2.373022	2.330003	(1.904020	74.4300
0	0.401160	(2.44207)	(3.09218)	(4.60720)	(2.03221)	(2.32014)	(1.04/01)	74 2024
ŏ	2.481160	3.008510	0.044424	11.20030	2.374033	2.331102	1.028038	74.2934
•	0.400707	(2.49208)	(3.71541)	(4.83990)	(2.52800)	(2.30245)	(1.85918)	(7.40418
9	2.483/8/	3.692026	5.181215	11.25593	2.374025	2.326904	1.029192	/4.140/
	0.404765	(2.50660)	(3.81395)	(4.86087)	(2.51801)	(2.29021)	(1.85273)	(7.42/84
10	2.484790	3 691348	5 224245	11 26806	2 372635	2 333845	1 028664	74 09190
			0.224240	11.20000	2.372033	2.000040	1.020004	74.00120
		(2.53065)	(3.84999)	(4.88116)	(2.51228)	(2.28349)	(1.84860)	(7.42724

_

Variance Decomposition of GDI growth for SVAR 7:

Variance Decomposition of GDP growth for SVAR 8:

Variance D	Variance Decomposition of GDIG:											
Period	S.E.	ICPT	ICPC	USGDPG	GDIG							
1	0.813696	3.322730	0.659773	26.52108	69.49641							
		(4.62378)	(3.18966)	(8.81238)	(9.29879)							
2	0.850056	3.082836	0.678715	31.68728	64.55117							
		(4.44077)	(3.49894)	(9.82184)	(9.37378)							
3	0.877126	3.778168	2.228814	30.02333	63.96969							
		(4.68029)	(4.41171)	(9.25475)	(9.42587)							
4	0.887782	4.040512	2.391722	30.88870	62.67907							
		(4.80379)	(4.57203)	(9.50126)	(9.62932)							
5	0.890899	4.357198	2.398664	30.67478	62.56935							
		(5.03595)	(4.57383)	(9.45439)	(9.68070)							
6	0.892010	4.453020	2.438740	30.69294	62.41530							
		(5.20308)	(4.63497)	(9.56087)	(9.82847)							
7	0.892442	4.528637	2.437564	30.67274	62.36106							
		(5.43523)	(4.64044)	(9.55860)	(9.90301)							
8	0.892590	4.544757	2.437129	30.67645	62.34167							
		(5.63838)	(4.62261)	(9.62837)	(10.0242)							
9	0.892596	4.544735	2.437116	30.67693	62.34122							
		(5.78925)	(4.61025)	(9.66395)	(10.0914)							
10	0.892741	4.570533	2.440117	30.66793	62.32142							
		(5.89504)	(4.59340)	(9.71424)	(10.1560)							

Variance Decomposition of GDPG: Period S.E. ICPT ICPC USGDPG GDPG												
1	0.750400	1.385441	1.130734	29.83685	67.64697							
2	0.764062	(3.06699) 1.461846	(2.88252) 1.091502	(7.45779) 31.93283	(7.64663) 65.51383							
3	0.789687	(2.99406) 1.765450	(3.32336) 4.717971	(7.96635) 31.31768	(8.18053) 62.19890							
4	0.796068	(2.94944) 1.898296	(4.97571) 4.959750	(8.14546) 31.79985	(8.04646) 61.34210							
5	0.796814	(2.96008) 1.943080	(5.31191) 5.043361	(8.41213) 31.77618	(8.27843) 61.23738							
6	0.797547	(3.01655) 1.969619	(5.45714) 5.156868	(8.55040) 31.74799	(8.39007) 61.12553							
7	0.797773	(3.08971) 2.017324	(5.66878) 5.155005	(8.65198) 31.73671	(8.47918) 61.09096							
8	0.798008	(3.23851) 2.053587	(5.70077) 5.157807	(8.72649) 31.73271	(8.55225) 61.05590							
9	0.798056	(3.40025) 2.062204	(5.75457) 5.157305	(8.78229) 31.73167	(8.63559) 61.04882							
10	0.798077	(3.54807) 2.062917 (3.66256)	(5.76669) 5.160838 (5.77054)	(8.82055) 31.73066 (8.84956)	(8.69827) 61.04558 (8.73672)							

Variance Decomposition of the growth of the component elements of GDI for SVAR 9:

Variance E	ecomposition o	f COEG:						
Period	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
1	1 034327	0 264554	4 016578	21 01204	74 70683	0.000000	0.000000	0 000000
	1.004021	(2 72275)	(5.40569)	(7.60476)	(0 22401)	(0.000000)	(0.000000)	(0.000000)
0	4.050000	(3.72373)	(0.49000)	(7.09470)	(0.32401)	(0.00000)	(0.00000)	(0.00000)
2	1.050200	0.332701	3.882287	20.35388	72.59135	0.411130	1.895363	0.533287
		(3.42062)	(5.42727)	(7.02496)	(8.41732)	(2.78822)	(3.55272)	(1.95612)
3	1.131433	0.321711	3.639720	22.87879	67.13666	0.382119	2.090642	3.550354
		(2.84641)	(4.99627)	(6.99970)	(7.21426)	(3.15693)	(3.57669)	(3.97330)
4	1.154624	0.327636	3.508463	22.04521	65.05349	1.421429	3.305648	4.338119
		(277160)	(4 79235)	(6.69128)	(7.28039)	(3 45714)	(3.64268)	(4.00564)
F	1 172022	0.495124	2 612510	22 50762	62 51207	1 007050	2 220200	4.645404
5	1.173233	(0.403134	3.012319	22.39703	(7.05500)	(2.07227)	3.230299	4.040494
		(2.77320)	(4.63082)	(0.03044)	(7.25508)	(3.27337)	(3.59608)	(3.87449)
6	1.177201	0.492572	3.648736	22.62049	63.09907	1.915186	3.343060	4.880884
		(2.77479)	(4.68877)	(6.63768)	(7.27763)	(3.30048)	(3.66059)	(4.01923)
7	1.178950	0.493032	3.734142	22.60215	62.91399	1.920339	3.400771	4.935578
		(2.79876)	(4.67705)	(6.67226)	(7.43875)	(3.31154)	(3.67734)	(4.04250)
8	1 180880	0.500067	3 723245	22 55738	62 71348	2 063150	3 519254	4 923430
•	1.100000	(2 92064)	(4 71056)	(6 70965)	(7 55672)	(2 24946)	(2 72475)	(4 10225)
•	4 404557	(2.03004)	(4.71930)	(0.70803)	(7.55075)	(3.34640)	(3.72473)	(4.10223)
9	1.181557	0.503569	3.737000	22.59967	02.04310	2.067365	3.528804	4.920361
		(2.82724)	(4.70527)	(6.75679)	(7.64046)	(3.42472)	(3.73264)	(4.10049)
10	1.181888	0.520428	3.736662	22.58746	62.60972	2.068033	3.541448	4.936251
		(2.83421)	(4.74012)	(6.78605)	(7.69802)	(3.45951)	(3.74422)	(4.11027)
	_							
Variance D	Decomposition of	of GOSG:						
Period	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
1	2 177883	0.036371	0.200830	1 112694	0 215414	98 43469	0.000000	0.000000
	2.111003	(2.00115)	(2.24620)	(2.06077)	(2,00604)	(5 61750)	(0.000000)	(0.000000)
	0.000500	(3.06115)	(2.21030)	(3.20211)	(2.00004)	(0.01700)	(0.00000)	(0.00000)
2	2.296583	0.148676	0.224447	6.806955	0.204564	90.33878	2.108265	0.168313
		(2.79783)	(2.33367)	(5.49100)	(2.24096)	(6.74419)	(2.39924)	(2.54301)
3	2.361355	1.172385	2.772201	7.244042	0.193928	85.98468	2.188880	0.443880
		(2.79276)	(3.60437)	(5.90478)	(2.72659)	(7.51155)	(2.29114)	(2.85709)
4	2 383667	1 228523	2 782725	7 502335	0 381424	84 88611	2 736548	0 482336
-	2.000001	(2 72055)	(2.61165)	(5 90209)	(2 72220)	(7 77522)	(2 20702)	(2.00405)
-	0.404704	(2.72000)	(3.01103)	(0.09200)	(2.73335)	(1.11322)	(2.30703)	(2.50455)
5	2.401701	1.212021	3.488703	1.395/97	0.395431	83.84960	3.104353	0.554040
		(2.70562)	(3.77787)	(5.82130)	(2.82138)	(8.01705)	(2.61804)	(3.06008)
6	2.406208	1.265781	3.492757	7.386282	0.442052	83.53580	3.317097	0.560230
		(2.73772)	(3.68272)	(5.82784)	(2.84500)	(8.11875)	(2.72595)	(3.16635)
7	2 411056	1 396199	3 478756	7 358360	0 500792	83 38215	3 320924	0.562822
		(2 702/0)	(3 70304)	(5.85214)	(2 03302)	(8 2/207)	(2 70707)	(3 17172)
0	0 414077	1 550046	2 476007	7 202406	(2.33332)	0246414	2.20101017	0.560500
•	2.414277	1.559940	3.470007	7.362100	0.523402	03.10414	3.331007	0.502528
		(2.88020)	(3.69801)	(5.85149)	(2.93819)	(8.27287)	(2.70174)	(3.15768)
9	2.416268	1.674015	3.494891	7.370177	0.536772	83.02738	3.328946	0.567814
		(2.93852)	(3.73874)	(5.84571)	(2.98577)	(8.33045)	(2.70682)	(3.18484)
10	2.418173	1.804692	3.491107	7.361442	0.536903	82,89944	3.334009	0.572402
		(3.02438)	(3 73285)	(5.83087)	(2 98374)	(8.34627)	(271063)	(3 18788)
		(3.02430)	(3.73203)	(3.03507)	(2.30374)	(0.34027)	(2.71503)	(3.10700)
Variance F	ecomposition o	f GMIG:						
Period	SE	ICPT	ICPC	USCOPC	COEC	6086	GMIC	TLSC
i enou	0.E.	IGET		JJGDFG	COEG	6036	Ginio	1200
	1 1 1 2 2 2 2 -	0.005.110	0.000007	4.0.400005	4 00 1105	0.770.4.47	00.070.44	0.000000
1	4.418797	0.805419	0.000937	1.848668	1.604132	2.770447	92.97040	0.000000
		(2.90730)	(2.04382)	(2.91863)	(3.33779)	(3.60505)	(6.73009)	(0.00000)
2	4.821966	0.693161	0.563012	1.645806	6.773037	8.693670	81.53649	0.094824
		(2.64989)	(2.66956)	(2.84563)	(5.92188)	(7.63902)	(8,73865)	(1.52511)
3	5 223202	0.618060	1 622605	3 /03320	6 085330	0.550254	78 53852	0.000013
	0.220202	(2 65032)	(2 77740)	(3 93000)	(5 000000)	(7.96640)	(0.00002	(1 01102)
	E 444500	(2.00000)	(3.11140)	(3.63000)	(0.00002)	(7.90040)	(0.04900)	(1.91193)
4	5.411589	0.040618	1.796295	4.329687	5.700080	10.19239	77.16391	0.177021
		(2.75382)	(3.51001)	(4.74851)	(4.87103)	(8.22140)	(9.55635)	(1.83923)
5	5.489347	1.054913	1.815451	5.167748	5.539739	10.43683	75.31481	0.670502
		(2.97799)	(3.53275)	(5.12471)	(4.64562)	(8,44559)	(10,0044)	(2.08591)
6	5 539954	1 270898	1 883880	5 486461	5 447999	10 30769	74 71444	0.888621
	0.000004	(2 76076)	(3 50752)	(5 21172)	(4 50040)	(9 54024)	(10.0050)	(2 20774)
7	5 500405	(2.10010)	(3.39793)	(0.21173)	(4.03919)	(0.04934)	(10.0000)	(2.20114)
(5.583125	1.950619	1.856687	5.459799	5.435815	10.18865	74.10745	1.000978
		(3.17497)	(3.61420)	(5.19063)	(4.56034)	(8.56359)	(10.1163)	(2.23434)
8	5.603668	2.348416	1.843201	5.449944	5.396201	10.28853	73.67994	0.993772
		(3,17059)	(3.64224)	(5.25882)	(4.52229)	(8.66206)	(10,1872)	(2.20314)
٥	5 620770	2 654655	1 862230	5 473040	5 3732/1	10 27882	73 34510	1 011002
9	0.020110	(2.42460)	(2 66004)	(5 20562)	(4 40000)	(0.60000)	(10.2614)	(2 22620)
40	5 000007	(3.43402)	(3.00004)	(0.30002)	(4.40000)	(0.09009)	(10.2011)	(2.23039)
10	5.626837	2.709130	1.883551	5.483470	5.365395	10.28118	/3.26611	1.011167
		(3.43498)	(3.67178)	(5.32976)	(4.47572)	(8.72639)	(10.3054)	(2.23318)

Variance Decomposition of TLSG:													
Period	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG					
1	2.393878	0.546714	0.363798	0.143891	4.597714	0.130551	8.759163	85.45817					
		(2.63974)	(2.79296)	(2.29775)	(5.08895)	(2.09975)	(6.40985)	(7.32272)					
2	2.484911	0.602619	1.110838	5.026623	4.837507	0.391273	8.606135	79.42501					
		(2.56259)	(3.39615)	(5.59751)	(4.87844)	(2.34924)	(6.07644)	(8.05382)					
3	2.675412	0.586627	1.843030	11.44587	4.796774	5.042616	7.478707	68.80637					
		(2.30275)	(3.17798)	(7.00939)	(4.67606)	(4.59842)	(5.28856)	(8.03759)					
4	2.714278	0.748673	1.912260	11.19853	4.708863	5.089350	8.329707	68.01262					
		(2.25948)	(3.37959)	(6.93805)	(4.60090)	(4.55678)	(5.05789)	(7.99891)					
5	2.726600	0.810885	2.062639	11.15153	4.906589	5.054794	8.465859	67.54770					
		(2.21092)	(3.45272)	(6.93292)	(4.55828)	(4.38573)	(4.96068)	(8.06083)					
6	2.736956	0.891446	2.092191	11.15985	4.869860	5.268455	8.642344	67.07585					
		(2.25784)	(3.46577)	(6.89666)	(4.59863)	(4.26736)	(4.83809)	(8.03071)					
7	2.742294	0.956993	2.086436	11.14031	4.878252	5.451785	8.626426	66.85980					
		(2.25610)	(3.47838)	(6.94519)	(4.52914)	(4.22222)	(4.81781)	(8.01427)					
8	2.744554	1.009545	2.083274	11.12941	4.879133	5.502574	8.628902	66.76717					
		(2.30948)	(3.48866)	(6.95288)	(4.52999)	(4.18210)	(4.83999)	(8.03809)					
9	2.745427	1.009534	2.099940	11.15400	4.884748	5.501141	8.623729	66.72690					
		(2.34939)	(3.50285)	(6.95434)	(4.53932)	(4.16793)	(4.83794)	(8.08321)					
10	2.745682	1.011029	2.104593	11.15193	4.884887	5.500118	8.623957	66.72348					
		(2.39413)	(3.49587)	(6.95132)	(4.51467)	(4.17713)	(4.83513)	(8.07657)					

SVAR 10:

Variance Decomposition of GDI growth for Variance Decomposition of GDP growth for **SVAR 11:**

5.748733

(5.12262) 5.722888

(5.02075) 5.652198

(4.74427) 5.712695

5.712695 (4.81907) 5.697248 (4.74380) 5.697619 (4.76155)

(4.76155) 5.722036 (4.84655) 5.727274 (4.93111) 5.725501 (5.02938) 5.727528 (5.00264)

(5.09064)

ICPC

1.903415

(2.91299) 2.673685

(3.33501) 3.409465

3.409465 (4.04056) 3.448722 (4.63459) 3.678740 (4.76061) 3.943739 (5.12063) 2.054067

3.954967 (5.44698)

4.009623 (5.55079)

4.070561 (5.69109) 4.072252

(5.81855)

USGDPG

5.096483

(5.11491) 5.218455

(5.49461) 5.145532 (5.94179) 5.187981

(5.99658) 5.206064 (6.20361)

5.211398 (6.20016)

5.209398 (6.25707)

(6.25707) 5.207441 (6.24945) 5.205099 (6.25637) 5.204924

(6.25221)

GDPG

87.25137

(7.59175) 86.38497

86.38497 (7.90167) 85.79280 (7.98223) 85.65060 (8.17574) 85.41795 (8.45959) 85.14724 (8.65344) 85.11360

85.11360 (8.85979)

85.05566 (8.97381)

84 99884 (9.07200) 84.99530

(9.14315)

Variance D	Variance Decomposition of GDIG:							ecomposition o	of GDPG:
Period	S.E.	ICPT	ICPC	USGDPG	GDIG		Period	S.E.	ICPT
1	0.685468	1.482289	5.555744	8.533375	84.42859	-	1	0.398839	5.7487
		(3.86085)	(5.69644)	(7.07114)	(9.66892)				(5.1226
2	0.718311	4.487561	10.35478	7.788551	77.36911		2	0.401909	5.7228
		(4.88407)	(6.53658)	(6.27368)	(10.5136)				(5.0207
3	0.798858	11.63659	18.37017	6.455999	63.53724		3	0.404890	5.6521
		(6.35208)	(7.38240)	(5.09710)	(9.93368)				(4.7442
4	0.836512	17.15860	18.64761	6.145014	58.04878		4	0.405376	5.7126
		(7.36569)	(7.50409)	(4.84182)	(9.72936)				(4.8190
5	0.855056	19.10240	18.89373	6.445694	55.55817		5	0.405928	5.6972
		(7.64084)	(7.27393)	(5.06343)	(9.71928)				(4.7438
6	0.872523	18.74246	21.30219	6.438772	53.51658		6	0.406578	5.6976
		(7.58391)	(7.85662)	(5.10948)	(9.73763)				(4.7615
7	0.878386	18.49348	21.82714	6.413439	53.26594		7	0.406665	5.7220
		(7.51736)	(8.21406)	(5.16984)	(9.78588)				(4.8465
8	0.880577	18.55989	21.83131	6.386629	53.22217		8	0.406810	5.7272
		(7.50602)	(8.33869)	(5.24702)	(9.76139)				(4.9311
9	0.885564	18.89164	22.16100	6.322460	52.62490		9	0.406948	5.7255
		(7.64028)	(8.56414)	(5.30080)	(9.72749)				(5.0293
10	0.892149	19.85843	21.92490	6.251026	51.96564		10	0.406957	5.7275
		(7.98940)	(8.65897)	(5.28804)	(9.77668)				(5.0906

Variance Decomposition of the growth of the component elements of GDI for SVAR 12

Variance D Period	ecomposition o S.E.	of COEG: ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
1	0.838673	5.849972	24.22350	1.093156	68.83337	0.000000	0.000000	0.000000
		(6.59085)	(9.52594)	(2.27578)	(10.9043)	(0.00000)	(0.00000)	(0.00000)
2	0.883218	5.359282	23.24801	2.851497	62.82632	0.144563	0.134178	5.436153
		(6.01181)	(8.76839)	(4.40635)	(10.2621)	(2.08881)	(2.16216)	(5.93209)
3	0.977768	4.990643	29.32636	4.624708	51.27404	2.257473	3.044808	4.481967
		(5.08080)	(8.38753)	(4.93018)	(8.67606)	(3.15186)	(3.81891)	(5.22412)
4	1.017128	6.475004	29.11437	5.926441	47.60114	2.839498	3.719494	4.324053
		(5.07589)	(7.88797)	(5.59346)	(8.41697)	(3.17067)	(3.52981)	(5.16071)
5	1.038607	7.448280	29.16085	6.421224	46.30386	2.890098	3.619115	4.156571
		(5.16326)	(7.58659)	(5.91486)	(8.11993)	(3.12021)	(3.43089)	(5.00356)
6	1.070097	7.242018	31.69985	6.180812	44.23495	2.984354	3.521959	4.136054
		(4.98571)	(7.86147)	(5.93920)	(8.15613)	(3.04203)	(3.22826)	(4.80120)
7	1.087672	7.010998	32.24721	6.161798	42.84651	3.731776	3.755300	4.246405
		(4.82767)	(7.83463)	(5.76074)	(8.15197)	(3.40444)	(3.16577)	(4.83391)
8	1.091830	7.041855	32.08700	6.270391	42.62361	3.920061	3.822148	4.234929
		(4.85423)	(7.84559)	(5.72558)	(8.10914)	(3.52254)	(3.15320)	(4.75409)
9	1.102596	6.989991	33.02278	6.150647	42.03164	3.861824	3.762870	4.180247
		(4.92398)	(8.13712)	(5.77238)	(8.14433)	(3.49036)	(3.12805)	(4.70047)
10	1.111249	6.962992	33.41091	6.137861	41.41932	4.072482	3.808149	4.188284
		(4.94303)	(8.21205)	(5.84140)	(8.20205)	(3.59061)	(3.10146)	(4.71349)

1 1 615696 3.484544 0.164748 2.25222 4.95313 82.73550 0.000000 0.000000 2 1.821844 3.736528 4.524600 3.69725 5.044588 80.34581 1.590958 0.000010 (0.00000) 3 1.941685 4.024738 9.473604 5.014603 7.157217 7.1322651 1.631220 1.077211 4 3.494164 6.526705 6.134473 6.43446 (2.95064) (2.651561) 4 1.995017 5.866815 1.17768 5.151699 6.834788 68.43008 1.5687511 1.257068 5 2.043200 7.326038 10.67856 6.694332 6.726184 6.464251 1.621251 (2.84211) (2.47318) 7 2.095000 8.555561 11.24904 6.534710 6.512263 6.678393 6.40422 1.27814 (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.494174) (2.49414)		S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
2 1821844 37.3562 4.524001 (1.28174) (1.28174) (1.28174) (1.28174) (1.28174) (1.28174) (1.28174) (1.28174) (1.281764) (1.281764) 3 1.941685 4.024730 8.73684 5.014500 (5.03687) (5.03687) (5.03687) (1.20174) (1.21174) (1.20174) (1.21174) (1.20174) (1.21174) (1.21174) (1.21174) (1.21174) (1.21174) (1.21174) (1.21174) (1.21174) (1.	1	1.615869	3.484544	0.164748	2.650292	4.963913	88.73650	0.000000	0.000000
a 1.9.4168 4.922301 (6.39227) (4.82064) (5.80964) (2.80164) (2.85164) (1.83106) 3 1.9.41685 4.02473 9.47364 5.151609 (5.44784) (2.84254) (2.95045) (2.95045) (2.93050) (2.72584) 4 1.995017 5.866165 1.147766 6.644783 (5.735744) (6.840854) (1.845841) 1.475949 5 2.043200 7.326303 10.67356 6.649430 (5.84728) (5.84728) (5.84728) (2.84251) (2.40165) 1.474942 6 2.068018 8.4785651 1.24994 (5.57328) (5.333111) (5.75677) (5.34423) (5.333111) (5.17562) (8.06969) (2.77948) (2.44147) 7 2.095000 8.555651 1.249146 (3.33311) (5.77578) (5.33442) (5.127914) (2.91731) 1.500624 (1.29144) 9 2.107131 8.50851 2.44914 (5.127577) (6.34428) (6.19811) (2.91451) (2.91652) (2.91414)	2	1 821844	(5.20661)	(1.88127) 4.524600	(4.02798) 3.696725	(5.51474) 6.084589	(7.66512) 80.34581	(0.00000) 1.590958	(0.00000) 0.020694
3 1.9.41685 4.0221738 9.473694 50.14503 7.157217 71.62651 1.531220 1.0772171 4 1.995017 5.866815 1.17768 5.151809 6.834464 (8.4346) (2.20054) 5 2.043200 7.226038 10.67856 6.694932 6.727814 6.649822 (2.30505) (2.72564) 6 2.068818 8.478552 1.12490 6.557328 6.678930 44.06426 1.621051 (2.43217) (2.47348) 7 2.095000 8.555651 1.52991 (5.31293) (6.09591) (2.27948) (2.8417) 8 2.102260 8.506386 1.234018 6.329034 6.505519 6.23308 1.956154 1.297481 (2.94149) 9 2.107131 8.508551 1.248975 6.423944 6.749440 (2.3308) 1.956154 1.500207 10 2.115975 8.628477 1.524975 6.23944 6.74940 (2.3308) 1.956154 1.500207 11 2.92607 1.5	2	1.021044	(4.92330)	(6.03827)	(4.52064)	(5.95994)	(8.60284)	(2.65164)	(1.83106)
4 198017 5.668165 11.7768 5.151809 6.834788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.844788 6.84981 1.457599 5 2.043200 7.325038 10.67566 6.649420 6.54605 1.64841 1.474949 6 2.068818 8.478552 11.12409 6.557328 6.678930 6.040426 1.521055 1.124914 7 2.095000 8.555561 1.229914 6.406351 6.23038 1.521057 1.463153 8 2.102260 8.505386 1.234148 6.378234 6.257130 1.59514 1.429141 9 2.107131 8.506811 2.592441 6.77677 8.04648 1.293140 1.293201 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301 1.2932301	3	1.941685	4.024738	9.473694	5.014503	7.157217	71.62651	1.631220	1.072121
4 1985017 5.866815 11.17768 5.51809 6.834786 68.04302 12.637069 5 2.043200 7.326038 10.67866 6.694932 6.725114 6.649622 (2.3050) (2.72594) 6 2.068816 8.478552 11.12490 6.557328 6.678930 4.06426 1.621052 (2.7318) 7 2.095000 8.555561 1.229941 6.406316 6.80549 (2.63723) (8.09954) (2.7318) 8 2.102260 8.506366 1.234018 6.392034 (5.167723) (2.5714) (2.84147) 9 2.107131 8.508651 1.248975 6.423944 6.749490 (2.3338) 1.956154 1.1500207 10 2.115975 8.629470 (5.9477) (5.8472) (2.9718) (2.9488) atrace Decomposition of GMIG (4.10687) (5.9977) (5.0477) (2.9718) (2.9888) 1 2.952007 1.15331 1.909474 1.756946 1.07270 2.47188 6.62475 (0.0000	-		(4.38404)	(6.62602)	(4.97650)	(6.13464)	(8.44346)	(2.95045)	(2.40043)
(4.19050) (6.20764) (6.12473) (6.73444) (8.4922) (2.93050) (2.72594) 5 2.043200 7.22508) (6.51470) (5.44520) (5.74776) (6.31285) (2.4251) (2.47030) 6 2.068818 8.478552 (11.2406) (5.57378) (6.33424) (6.31287) (2.82787) (2.77048) 7 2.095000 8.555661 (2.29414) (6.06569) (2.77948) (2.77948) (2.77948) (2.4147) 8 2.102260 8.00581 (2.4048) (5.39057) (5.24729) (5.29544) (5.12306) (8.09554) (2.79184) (2.944140) 9 2.107131 8.508511 2.99775) (5.03643) (8.04622) (2.79184) (2.94868) 10 2.115975 8.06811 (2.91784) (3.81724) (5.07577) (8.04282) (2.94688) 11 2.952007 (1.363811 (2.91783) (3.2009) (7.3415) (3.2009) (7.3415) (3.2009) (3.65787) (2.94688) 2 <td>4</td> <td>1.995017</td> <td>5.866815</td> <td>11.17768</td> <td>5.151809</td> <td>6.834788</td> <td>68.04308</td> <td>1.568761</td> <td>1.357068</td>	4	1.995017	5.866815	11.17768	5.151809	6.834788	68.04308	1.568761	1.357068
5 2.043200 7.326038 10.67565 6.694932 6.728104 65.40685 1.464569 6 2.068818 8.478552 11.12400 6.557328 6.678930 64.06425 1.6210652 (2.73188) 7 2.095000 8.555561 12.29941 6.406351 6.805519 62.8322 1.829737 1.466153 8 2.102260 8.503386 12.34018 5.322034 6.75723 62.57130 1.931171 1.500277 9 2.107131 8.508851 12.48975 6.423944 (5.794940 62.33308 1.986154 1.493291 10 2.115975 8.506811 12.14975 6.423944 (5.79440 62.33308 1.986154 1.493291 10 2.115975 8.506811 12.14949 3.31100 6.732452 61.86191 1.950244 1.50357 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.82009 0.000000 2 3.042813 0.1368314 1.908474			(4.19050)	(6.20764)	(5.12473)	(5.73544)	(8.49822)	(2.93050)	(2.72594)
(4.13450) (6.91470) (5.44520) (6.47376) (6.31225) (2.24251) (2.74394) 6 2.068818 8.475552 11.2409 6.573383 6.579393 (6.31293) (6.03422) (2.7368) (2.7368) 7 2.095000 8.555561 12.29941 6.406324 (6.75778) (5.3111) (5.17552) (8.06600) (2.7748) (2.8447) 8 2.102208 8.503386 12.244736 (5.29544) (5.12306) (6.09554) (2.97613) (2.8447) 9 2.107131 8.508651 12.49757 (5.24472) (5.09767) (8.04922) (2.79613) (2.94868) 10 2.115975 8.508611 2.91244 (3.3972) (4.11661) (3.80648) (2.76189) (2.94868) 2.405007 0.138331 (5.14472) (5.09767) (8.04922) (2.76189) (2.94868) 2.3042813 (1.56611) (3.76844) (3.89723) (4.11661) (3.8021) (6.65215) (0.00000) 2 3.108243 0.13	5	2.043200	7.326038	10.67856	6.694932	6.726184	65.46085	1.645841	1.467599
6 2.068818 8.478552 11.12490 6.557328 6.679930 64.0425 1.6210852 (2.73188) 7 2.09500 8.555561 12.29941 6.406351 6.805519 62.63522 1.827971 1.468153 8 2.102260 8.503386 12.34018 6.332034 6.758723 62.57130 1.931171 1.500277 4 4.06332 (5.84727) 5.292444 (5.17364) (6.249144) 1.291141 1.500277 9 2.107131 8.508851 12.48975 6.423944 (6.794940 62.33308 1.966154 1.493291 10 2.115975 8.606611 12.9149 8.381190 6.782452 (6.186191 1.950524 (2.76189) (2.94868) ariance Decomposition of GMIG: (167305) (1.44866) (5.19512) (6.30430) (8.602407) 2.347568 3 3.042813 0.136331 1.90474 1.755946 1.90770 2.671887 91.82009 0.000000 2 9.425201 0.310710 <			(4.13450)	(5.91470)	(5.44520)	(5.47376)	(8.31285)	(2.84251)	(2.74030)
(4.20892) (5.75078) (5.38442) (5.31293) (8.03942) (2.76182) (2.73187) 7 2.095000 8.55561 12.29241 6.4083011 (5.94236) (5.33111) (5.17552) (8.06860) (2.77348) (2.8447) 8 2.10220 8.550386 12.34475 6.223944 (5.12306) (8.09554) (2.79148) (2.8447) 9 2.107131 8.508611 12.91575 6.42394 (5.09767) (8.04922) (2.7918) (2.94868) 10 2.115975 8.608611 12.91349 6.381149 1.950224 (1.50527) 11 2.952007 0.136331 1.908474 1.755946 1.907270 2.671837 91.82009 0.000000 2 3.042813 0.130710 2.3342494 1.721544 3.556772 3.282768 86.62407 2.34768 3 3.108243 0.216687 2.294444 1.858149 5.445262 3.30464 43.30474 2.32239 2 3.42672 0.325480 3.055661	6	2.068818	8.478552	11.12490	6.557328	6.678930	64.06426	1.621085	1.474942
7 2.095000 8.555561 12.29411 6.406.351 6.800519 50.8322 13.82787 1.486133 4 0.80011 (5.94236) (5.33111) (5.175623) (6.27744) (2.244147) 8 2.102260 8.506386 12.44018 6.329034 (6.758723) (6.27744) (2.244147) 9 2.107131 8.508851 12.48075 6.423944 (6.739440) (6.233308) 1.956154 1.439231 10 2.115975 8.606811 12.91759 (6.38463) (8.04668) (2.76189) (2.94868) arance Decomposition of GMIC: arance Decomposition of GMIC: 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.82009 0.000000 2 3.042813 0.137012 2.344241 3.858149 5.452543 3.30644 3.30814 1.387450 (0.652516) (0.00000) 2 3.042473 0.2168672 2.44444 1.888149 5.464237 3.2477580 (0.07530) (7.5	-		(4.20892)	(5.75078)	(5.38442)	(5.31293)	(8.03942)	(2.76052)	(2.73188)
8 2.102260 8.506386 (12.34117) (5.1752/2) (6.10592) (12.04147) (12.94147) 9 2.107131 8.50836 (12.34176) (5.29244) (5.12306) (8.09554) (2.79144) (2.24147) 9 2.107131 8.508851 (12.49875 (4.22944) (5.79444) (2.23164) (2.9444) (2.24348) 10 2.115975 8.608811 (12.91346) (5.81910) (5.78242) (1.59573) (2.29330) 10 2.115975 8.608811 (1.91346) (5.19110) (5.78242) (1.59111) (1.595621) (1.59257) 10 2.115975 8.60811 1.99144 (1.4922) (1.4922) (1.29214) (1.59251) (1.59110) (1.59251) (1.59110)	(2.095000	8.555561	12.29941	6.406351	6.805519	62.63522	1.829787	1.468153
s 2.102200 8.300380 12.347129 5.236234 6.736723 6.237130 12.31111 1.300201 9 2.107131 8.508851 12.48975 6.423944 6.736440 6.23308 1.956154 1.493201 10 2.115975 8.606811 12.91346 6.381190 6.782452 61.86191 1.950624 1.503527 10 2.115975 8.606811 12.91346 6.381190 6.782452 61.86191 1.950624 1.503527 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.04243 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.04243 0.216887 2.244444 1.884149 5.64522 3.30844 8.30464 2.30758 8.652407 2.324758 3 3.108243 0.216887 2.244444 1.88419 5.64558 3.44427 8.334603 2.24758 3	0	0.400060	(4.08801)	(5.94236)	(5.33111)	(5.17562)	(8.06690)	(2.77948)	(2.84147)
9 2.107131 8.508851 12.4975 6.23944 6.74940 6.233303 (2.29140) (2.29140) 10 2.115975 8.608811 12.91744 6.31410 6.734472 (5.09767) (8.04922) (2.79513) (2.29330) 10 2.115975 8.608811 12.91346 6.31410 6.734242 (5.03643) (8.04648) (2.75189) (2.294868) ariance Decomposition of GMIG: ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.130710 2.334594 1.721514 3.58772 3.282768 86.65217 0.324470 2.3312416 3 3.108243 0.216887 2.252491 (4.45689) 4.917200 (4.17440) (3.3390) (7.63415) 3.30464 2.30973 4 3.126772 0.325460 3.055661 1.95148 5.561803 3.442472 83.340432 </td <td>8</td> <td>2.102260</td> <td>8.506386</td> <td>12.34018</td> <td>6.392034</td> <td>0.758723</td> <td>62.57130 (0.00554)</td> <td>1.931171</td> <td>1.500207</td>	8	2.102260	8.506386	12.34018	6.392034	0.758723	62.57130 (0.00554)	1.931171	1.500207
s 2.107131 (4.1087) (5.99057) (5.24472) (5.93643) (2.23530) (1.9354) (1.93521) 10 2.115975 8.606811 12.91349 6.381190 6.782452 (6.188191) 1.950624 1.503527 anance Decomposition of GMIG: ICPT ICPC USGDPG COEG GOSG GMIG TLSG anance Decomposition of GMIG: ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.130710 2.334594 1.721514 3.558772 3.282758 86.62407 2.399734 3 3.108243 0.216887 2.254442 1.898149 5.641522 3.30444 8.430444 2.309734 4 3.108243 0.216887 2.24444 1.88149 5.641503 3.442472 8.3.34603 2.25759 3 3.108243 0.219827 3.522444 3	0	2 107121	0 600061	(0.94729)	6 422044)	6 704040	(0.09004)	1.056154	(2.94140)
10 2.115975 8.006811 (4.09813) (2.91349 (5.19512) (5.30119) (5.19512) (5.782452 (5.03643) (6.185191) (8.06468) (2.76189) (2.76189) (2.94866) ariance Decomposition of GMIC: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.30710 2.334594 1.721514 3.558772 3.282768 86.62407 2.347588 3 3.108243 0.216887 2.254844 1.888149 5.645282 3.30464 4.30464 2.309734 4 3.26772 0.325480 3.065661 1.951648 5.561850 3.442472 83.34603 2.280858 2 2.920912 4.56619 3.494376 2.329093 5.481509 4.30464 2.292759 5 3.155589 0.802927 3.552340 2.390933 5.481509 3.42472 8.324453 2.2175914 4.244949 3.224533 1.27	9	2.107131	(4 10697)	(5 00057)	(5 24472)	(5.09767)	(9.04022)	(2 70512)	(2 0 2 9 2 0)
10 2.11010 (d.9813) (E.1446) (E.19512) (S.03643) (S.0468) (2.76189) (2.94868) ariance Decomposition of GMIC: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042213 0.130710 2.334594 1.721514 3.558772 3.282788 86.62407 2.347581 3 3.108243 0.216887 2.54844 1.888149 5.645282 3.30464 44.30464 2.309731 4 3.126772 0.325480 3.065661 1.91548 5.561560 3.44472 83.34603 2.286593 5 3.155589 0.002927 3.522349 2.390030 5.481560 3.44472 83.34692 4.89752) (4.64969) (4.7569) (4.14944) 8.82539 (4.9756) (4.14944) 8.82539 (2.92759) (4.37579) (3.244871 4.9926) (3.276982) (4.9756)	10	2 115075	8 606811	12 013/0	6 381100	6 782452	61 86191	1 950624	1 503527
ariance Decomposition of GMIC: erriod ICPT ICPC USGDPG COEG GOSG GMIG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.130710 2.334594 1.389723 (4.11651) (3.68021) (6.65215) (0.000000) 2 3.042813 0.130710 2.334594 1.721514 3.558772 3.282768 86.62407 2.347568 3 3.108243 0.216887 2.254844 1.888149 5.645282 3.30464 84.30464 2.309734 4 3.126772 0.325400 3.065661 1.951648 5.561850 3.442472 83.34603 2.265493 5 3.155589 0.02927 5.522349 2.30903 5.441860 3.555693 4.892539 (4.37579) 7 3.18989 1.556819 3.49376 2.23297 5.439664 3.224593 1.430874 2.2478974 6 3.169889 1.556819 4.472237)		2.110010	(4 09813)	(6 14486)	(5 19512)	(5.03643)	(8 06468)	(2 76189)	(2 94868)
ariance Decomposition of GMIG: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 0162009 0.000000 2 3.042813 0.130710 2.34694 1.721514 3.558772 3.282768 86 62407 2.347568 3 3.108243 0.216867 2.254844 1.888149 5.645282 3.380464 84.30464 2.309734 4 3.126772 0.325480 0.056661 1.91548 5.15850 3.442472 83.34603 2.286549 5 3.155589 0.802927 3.522349 2.30903 5.441580 3.565694 81.95289 2.297039 5.436964 3.825393 (4.37579) 6 3.169889 1.656819 3.44376 2.303408 5.523883 3.469621 80.22574 2.249771 7 3.189943 2.297032 3.454548 2.334488 5.523863 3.469821 4.2277710 (4.07904) 9.077131			(4.00010)	(0.14400)	(0.10012)	(0.00040)	(0.00400)	(2.70100)	(2.04000)
eriod S.E. ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.130710 2.334594 1.721514 3.558772 3.282768 86.62407 2.347568 3 3.108243 0.216887 2.254844 1.88149 5.642522 3.30464 84.30464 2.309734 4 3.126772 0.325480 3.065661 1.951648 5.581860 3.442472 83.34603 2.286858 2.272377 (4.89752) (4.67766) (4.717669) (4.19964) (8.82239) (4.31659) 6 3.169894 1.656819 3.494376 2.392397 5.436964 3.252459 81.21789 2.27659 7 3.189943 2.2970912 3.834548 2.383408 5.523583 3.466921 80.22574 2.248771 8 3.204599 2.693714 4.027810 2.337399 <t< td=""><td>ariance De</td><td>composition o</td><td>f GMIG:</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	ariance De	composition o	f GMIG:						
1 2.952007 0.136331 1.908474 1.755946 1.907270 2.671887 91.62009 0.000000 2 3.042813 0.130710 2.334594 1.721514 3.558772 3.282768 86.62207 2.347568 3 3.108243 0.216887 2.254844 1.888149 5.64522 3.304044 84.30464 2.309734 4 3.126772 0.325480 3.065661 1.951648 5.561850 3.442472 83.34603 2.266858 5 3.155589 0.802927 3.522349 2.390903 5.481850 3.556594 81.95289 2.292759 6 3.169889 1.656819 3.494376 2.392397 5.436964 3.524593 81.21789 2.276759 7 3.18943 2.297732 3.84548 2.33408 5.523583 3.486921 80.22574 2.24877 8 3.204589 2.693714 4.017101 (4.50926) (4.75710) (4.07904) (8.325448 79.54484 79.54484 2.244972 7 <td>eriod</td> <td>S.E.</td> <td>ICPT</td> <td>ICPC</td> <td>USGDPG</td> <td>COEG</td> <td>GOSG</td> <td>GMIG</td> <td>TLSG</td>	eriod	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TLSG
(15461) (3.76894) (3.8923) (4.11661) (3.68211) (6.65215) (0.0000) 2 3.042813 0.130710 2.334594 (4.25262) (4.54740) (3.63990) (7.63415) (3.92146) 3 3.108243 0.216887 2.254844 1.888149 5.645282 3.804644 84.30464 2.309734 4 3.126772 0.325480 3.056561 1.951648 5.581850 3.442472 83.34603 2.286858 5 3.155589 0.802927 3.522349 2.390903 5.481560 3.556594 81.95289 2.292759 6 3.169888 1.566819 3.494376 2.392397 5.438964 4.524593 81.12789 2.276962 7 3.189943 2.297032 3.834548 2.383408 5.523563 3.485921 80.22574 2.248771 8 3.204589 2.693714 4.021610 2.365296 5.499950 3.6224484 70.54884 2.2448942 9 3.21988 2.870494 4.008618	1	2.952007	0.136331	1.908474	1.755946	1.907270	2.671887	91.62009	0.000000
2 3.042813 0.130710 2.334594 1.721514 3.556772 2.322768 86.62407 2.347568 3 3.108243 0.216887 2.254844 1.888149 5.645282 3.380464 84.30464 2.309734 4 3.126772 0.325480 3.065661 1.951648 5.581850 3.442472 83.34603 2.226858 5 3.155589 0.802927 3.522349 2.309003 5.481560 3.4556594 81.95289 2.292759 6 3.169880 1.556819 3.494376 2.392907 5.436964 3.524593 81.21789 2.276662 (2.280066) (4.91202) (4.649966) (4.775710) (4.09947) (8.9472) (4.37579) 7 3.189943 2.297032 3.834548 2.383498 5.523683 3.489471 (2.24827) (2.8879) (5.08176) (4.57963) (4.70801) (4.1775) (9.25583) (4.27047) 9 3.204589 £.893714 4.021810 2.393789 5.47071 3.16528			(1.54661)	(3.76894)	(3.89723)	(4.11661)	(3.68021)	(6.65215)	(0.00000)
(167305) (4.80232) (4.32226) (4.54740) (3.3390) (7.63415) (3.92146) 3 3.108243 0.216887 2.254844 1.888149 5.645282 3.380464 8.30464 2.309734 4 3.126772 0.325480 3.065661 1.951648 5.581850 3.442472 83.34003 2.286858 (219625) (4.84188) (4.72456) (4.87090) (4.20925) (8.55877) (4.25549) 5 3.155589 0.802927 3.522349 2.390303 5.481580 3.526594 81.95289 2.229759 6 3.169889 1.656819 3.494376 2.392397 5.436964 3.524593 81.21789 2.276962 (2.50066) (4.97120) (4.64996) (4.775710) (4.002713) (4.30671) 8 3.204589 2.693714 4021810 2.385296 5.499503 3.224482 2.24041 (3.35971) (5.18278) (4.57963) (4.70801) (4.11775) (9.25583) (4.27047) 9 <td< td=""><td>2</td><td>3.042813</td><td>0.130710</td><td>2.334594</td><td>1.721514</td><td>3.558772</td><td>3.282768</td><td>86.62407</td><td>2.347568</td></td<>	2	3.042813	0.130710	2.334594	1.721514	3.558772	3.282768	86.62407	2.347568
3 3.108243 0.216887 2.254844 1.888149 5.645282 3.308044 84.30464 2.309734 4 3.126772 0.325480 3.065661 1.951648 5.581850 3.442472 83.34603 2.286858 5 3.155589 0.802927 3.522349 2.390905 5.481580 3.556594 81.9528 2.29275 6 3.169889 1.656819 3.494376 2.392397 5.435680 3.524593 44.3759 7 3.189943 2.297032 3.834548 2.333408 5.523583 3.496821 80.22574 2.248771 8 3.204589 2.693714 4.021810 2.365296 5.499950 3.625448 79.54884 2.23734 9 3.210988 2.870949 4.008618 2.39379 5.478071 3.716628 79.54884 2.247047 9 3.210988 2.870949 4.008618 2.39379 5.478071 3.716628 7.92461 2.23734 10 3.214178 2.917855 4.112275			(1.67305)	(4.80232)	(4.32626)	(4.54740)	(3.63990)	(7.63415)	(3.92146)
(2.26229) (4.46588) (4.59136) (5.01502) (4.19782) (8.07536) (4.07741) 4 3.126772 0.325480 3.065661 1.951648 5.581850 3.442472 83.34603 2.286658 5 3.155589 0.802927 3.522349 2.390903 5.481580 3.556594 81.95288 2.292759 6 3.169849 1.656819 3.494376 2.382397 5.436964 3.524593 81.21789 2.278062 7 3.189943 2.297032 3.834548 2.3834648 2.3834691 60.922574 (4.30779) 7 3.189943 2.297032 3.834548 2.383468 2.383789 5.478071 3.716628 79.54884 2.244942 (3.13599) (5.18278) (4.57663) (4.17081) (4.17074) (9.25583) (4.2001) 9 3.214178 2.917855 4.112275 2.391189 5.478071 3.716628 79.24861 2.237334 (3.29799) (5.30052) (4.56728) (4.74058) (4.14842)	3	3.108243	0.216887	2.254844	1.888149	5.645282	3.380464	84.30464	2.309734
4 3.125/72 0.325440 3.065651 1.951648 5.581850 3.424272 83.34603 2.228658 5 3.155589 0.802927 3.522349 2.390903 5.481580 3.5556594 81.95299 2.2292759 6 3.169889 1.566819 3.494376 2.392979 5.436964 3.524593 81.21799 2.276962 7 3.189943 2.297032 3.834464 2.3834464 2.3834484 2.3834648 3.348692 80.22774 2.248771 7 3.189943 2.297032 3.834584 2.383448 2.383448 2.383448 3.348694 5.625443 79.54884 2.248771 8 3.204589 2.893714 4.021810 2.365296 5.499950 3.652448 79.54884 2.244971 9 3.210988 2.870949 4.008618 2.393789 5.478071 3.716628 79.29461 2.237531 10 3.214178 2.917855 5.175577 (4.56816) (4.72263) (4.164482) (9.50748) (4.22070) </td <td></td> <td></td> <td>(2.26229)</td> <td>(4.46588)</td> <td>(4.59136)</td> <td>(5.01502)</td> <td>(4.19782)</td> <td>(8.07536)</td> <td>(4.05741)</td>			(2.26229)	(4.46588)	(4.59136)	(5.01502)	(4.19782)	(8.07536)	(4.05741)
(2) (4) (4) <td>4</td> <td>3.126772</td> <td>0.325480</td> <td>3.065661</td> <td>1.951648</td> <td>5.581850</td> <td>3.442472</td> <td>83.34603</td> <td>2.286858</td>	4	3.126772	0.325480	3.065661	1.951648	5.581850	3.442472	83.34603	2.286858
5 3.15369 0.002927 3.322349 2.33093 5.461860 (4.14964) (8.8253) (4.31659) (4.31679) (4.30771) (4.37579) (4.01713) (4.30674) (4.30674) (4.0926) (4.479801) (4.479704) (9.07713) (4.30674) (2.244971) (2.244971) (2.244971) (2.244942) (3.25747) (5.17557) (4.57963) (4.470801) (4.11775) (9.2583) (4.27047) (9.3338) (4.22001) 10 3.214178 2.917855 4.112275 2.391789 5.478063 3.729917 79.44641 2.237551 (3.29799) (5.30052) (4.56728) (4.14842) (9.50748) (4.22970) ariance Decomposition of TLSG ICPT <td< td=""><td>-</td><td>2 455500</td><td>(2.19625)</td><td>(4.84188)</td><td>(4.72456)</td><td>(4.87090)</td><td>(4.20925)</td><td>(8.55877)</td><td>(4.25549)</td></td<>	-	2 455500	(2.19625)	(4.84188)	(4.72456)	(4.87090)	(4.20925)	(8.55877)	(4.25549)
(2,27327) (4,89752) (4,77605) (4,77605) (4,77605) (4,77605) (4,7776062) 6 3.169889 1.656819 3.4912789 2.276962 (4,7776062) (4,77576) (4,19956) (4,77766) (4,19767) 7 3.189943 2.297032 3.834548 2.383408 5.523583 3.486921 80.22574 2.248771 (2.88879) (5.08176) (4.60926) (4,75710) (4,07904) (9,07713) (4.30674) 8 3.204589 2.693714 4.021810 2.365266 5.499950 3.625448 79.54884 2.244942 (3.13599) (5.18278) (4.57963) (4.70801) (4.11775) (9.2583) (4.27047) 9 3.210988 2.870949 4.008618 2.393795 5.478071 3.716628 79.29461 2.237334 (3.25717) (5.17557) (4.56728) (4.14842) (9.50748) (4.22070) 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 <	5	3.155589	0.802927	3.522349	2.390903	5.481580	3.556594	81.95289	2.292759
0 3.109869 1.09869 1.09869 1.09869 1.09869 1.09869 1.01779 2.27032 3.834549 2.323237 3.43690 (4.37579) 7 3.189943 2.297032 3.834548 2.383469 5.523583 3.466921 80.22574 2.248771 8 3.204589 2.693714 4.021810 2.365296 5.49950 3.622448 79.54844 2.244942 (3.13599) (5.18278) (4.57963) (4.70801) (4.11775) (9.25583) (4.27047) 9 3.210988 2.870949 4.008618 2.393789 5.478071 3.716628 79.29461 2.23734 10 3.214178 2.917855 4.112275 2.391789 5.478071 3.716628 79.29461 2.237551 10 3.214178 2.917855 4.112275 2.391789 5.478071 3.716628 79.29461 2.237551 10 3.214178 2.917855 4.11227 2.391789 5.473076 3.524493 (4.22970) 11 1	6	2 160000	(2.2/32/)	(4.89752)	(4.07800)	(4.71009)	(4.14904)	(8.82539)	(4.31009)
1 1.797934 2.891002 (4.705047) (4.70507)<	0	3.109009	(2 59066)	3.494370	2.392.397	(4 700 4 1)	3.024093	01.21/09	(4.27570)
1 1.03943 2.24042 2.03476 2.04371 2.044771 3.716628 79.29461 2.237334 3.210988 2.870949 4.008618 2.393789 5.478071 3.716628 79.29461 2.237334 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 2.237551 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.70917 79.14641 2.237551 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 1 1.797934 5.61592761 (5.645700) (1.47682) 3.22433 (9.06983) 2 1.888305 5.217076 4.259866 7.306602	7	2 1900/2	2 207022	2 92/6/9	2 292409	5 522592	3 496021	(0.94072) 90.22574	2 2/19771
8 3.204589 2.693714 4.021810 2.365296 5.49950 3.625448 79.54884 2.244942 (3.13599) (5.18278) (4.57963) (4.70801) (4.11775) (9.25583) (4.27047) 9 3.210988 2.870949 4.008618 2.393795 5.478071 3.716628 79.29461 2.237334 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 2.237551 (3.29799) (5.30052) (4.56728) (4.74058) (4.14842) (9.50748) (4.22970) ariance Decomposition of TLSG: ICPT ICPC USGDPG COEG GOSG GMIG TLSG 2 1.888305 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 (5.36062) (5.6062) 2.787137 1.526418 1611251 7.729166 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744	1	3.103343	(2 88879)	(5.08176)	(4.60926)	(4 75710)	(4.07904)	(9.07713)	(4 30674)
0 0.20100 (2.13090) (5.1278) (4.57963) (4.70801) (4.11775) (9.25583) (4.27047) 9 3.210988 2.870949 4.008618 2.393789 5.478071 3.716628 79.29461 2.237334 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 2.237534 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 2.237551 (3.29799) (5.30052) (4.56728) (4.74058) (4.14842) (9.50748) (4.22970) ariance Decomposition of TLSG: ieriod S.E. ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 1 1.797934 5.6159276 (5.64570) (4.39064) (4.1146) (3.50759) (8.95568) 2 1.888305 5.217076 4.259866	8	3 204589	2 693714	4 021810	2 365296	5 499950	3 625448	79 54884	2 244942
9 3.210988 2.870949 4.008618 2.33789 5.478071 3.716628 79.29461 2.237334 10 3.214178 2.917855 4.10275 2.391189 5.478071 3.716628 79.29461 2.237334 10 3.214178 2.917855 4.112275 2.391189 5.478006 3.720917 79.14641 2.237551 eriod S.E. ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211758 8.471339 8.816321 4.358817 1.313945 4.88854 66.93897 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 4 2.076939 7.115540 9.058379 <td></td> <td>0.204000</td> <td>(3 13599)</td> <td>(5 18278)</td> <td>(4 57963)</td> <td>(4 70801)</td> <td>(4 11775)</td> <td>(9.25583)</td> <td>(4 27047)</td>		0.204000	(3 13599)	(5 18278)	(4 57963)	(4 70801)	(4 11775)	(9.25583)	(4 27047)
10 3.214178 (3.25717) (5.17557) (4.56816) (4.72263) (4.16468) (9.38338) (4.26000) 10 3.214178 2.917855 4.112275 2.391189 5.473806 3.720917 79.14641 2.237551 iariance Decomposition of TLSG: eriod S.E. ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 (5.36062) (6.06377) (2.76116) (4.25700) (1.47682) (3.22843) (9.06983) 2 1.888305 5.217076 4.259866 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211758 8.471339 8.815321 4.358817 1.313945 4.88854 66.93897 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.629513 62.00823 4 2.076939 7.115544 9.058379	9	3,210988	2,870949	4.008618	2,393789	5.478071	3,716628	79,29461	2,237334
10 3.214178 2.917855 (3.29799) 4.112275 (5.30052) 2.391189 (4.56728) 5.473806 (4.74058) 3.720917 (4.14842) 79.14641 (9.50748) 2.237551 (4.22970) ariance Decomposition of TLSG: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211758 8.47139 8.816321 4.358817 1.313454 4.888854 66.93897 4 2.076939 7.115540 9.058379 8.53192 4.324380 1.520893 4.797860 64.64976 4.498006) (6.32205) (5.98349) (6.15561) (4.77342) (3.60053) (4.68644) (9.01934) 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.622513 62.00823 6			(3.25717)	(5.17557)	(4.56816)	(4,72263)	(4.16468)	(9.38338)	(4.26000)
(3.29799) (5.30052) (4.56728) (4.74058) (4.14842) (9.50748) (4.22970) ariance Decomposition of TLSG: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211705 8.471339 8.816321 4.358817 1.313945 4.88854 66.93897 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520693 4.797860 64.4976 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620443 8.438243 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620443 8.438243	10	3.214178	2.917855	4.112275	2.391189	5.473806	3.720917	79.14641	2.237551
ariance Decomposition of TLSG: leriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164685 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211776 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 4.2907939 7.115540 9.058379 8.513108 (3.71835) (5.10959) (8.79632) 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620443 8.438243 4.955881 1.862263 4.629513 62.00823 7 2.184387 10.58384 10.39851 8.340004			(3.29799)	(5.30052)	(4.56728)	(4.74058)	(4.14842)	(9.50748)	(4.22970)
ariance Decomposition of TLSG: eriod ICPT ICPC USGDPG COEG GOSG GMIG TLSG 1 1.797934 5.615929 4.410729 0.164885 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211776 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 4 2.041096 5.211758 8.471339 8.816321 4.358817 1.313945 4.888854 66.93897 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620843 8.438243 4.955111 2.159014 4.505205 59.99371 (4.98006) (6.32205) (5.94463)									
enod S.E. ICP1 ICP2 OSGDPG COEG GOSG GMIG ILSG 1 1.797934 5.615929 4.410729 0.164885 3.073912 0.000529 1.576778 85.15744 2 1.888305 5.217076 4.259867 7.306602 2.787137 1.526418 1.611251 77.29166 3 2.041096 5.211776 4.259856 7.306602 2.787137 1.526418 1.611251 77.29166 4 2.041096 5.211758 8.471339 8.816321 4.358817 1.313945 4.888854 66.93897 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620843 8.438243 4.959111 2.159014 4.500520 59.99371 7 2.184387 10.58364 10.32856 <td>ariance De</td> <td>composition o</td> <td>fTLSG:</td> <td>1000</td> <td></td> <td>0050</td> <td>0000</td> <td>01110</td> <td>TI 00</td>	ariance De	composition o	fTLSG:	1000		0050	0000	01110	TI 00
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	eriod	S.E.	ICPT	ICPC	USGDPG	COEG	GOSG	GMIG	TESG
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	1	1.797934	5.615929	4.410729	0.164685	3.073912	0.000529	1.576778	85.15744
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$			(5.36062)	(6.06377)	(2.76116)	(4.25700)	(1.47682)	(3.22843)	(9.06983)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2	1.888305	5.217076	4.259856	7.306602	2.787137	1.526418	1.611251	77.29166
3 2.041096 5.211758 8.471339 8.816321 4.358817 1.313945 4.888854 66.93897 4 2.076939 7.115540 9.05832) (6.55206) (5.31108) (3.71835) (5.10959) (8.79632) 4 2.076939 7.115540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 (4.28599) (6.06138) (6.19112) (4.77342) (3.60693) (4.86684) (9.01934) 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.0823 6 2.156750 10.32856 9.620843 8.438243 4.959111 2.159011 4.500520 59.99371 (4.64922) (5.88364 10.32856 9.620843 8.438243 4.959111 2.159011 4.500520 59.99371 (4.64927) (5.89463) (4.68797) (3.75751) (4.48901) (9.92859) 7 2.184387 10.58364 10.34385 8.340004 4.940576 <			(4.59355)	(5.50276)	(5.64570)	(4.39064)	(4.11146)	(3.50759)	(8.85568)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	3	2.041096	5.211758	8.471339	8.816321	4.358817	1.313945	4.888854	66.93897
4 2.079339 7.15540 9.058379 8.533192 4.324380 1.520893 4.797860 64.64976 5 2.121073 9.027914 8.803797 8.712398 4.955881 1.862263 4.629513 62.00823 6 4.649221 (5.88349) (6.15561) (4.77242) (3.60053) (4.86864) (9.01934) 6 2.156750 10.32856 9.620443 8.438243 4.959111 2.150750 (4.69026) (6.3205) (5.94963) (4.68797) (3.75751) (4.49801) (9.09859) 7 2.184387 10.58364 10.39851 8.340004 4.940576 2.516269 4.707497 58.51351 6 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.806603 58.21283 (5.24172) (6.72837) (5.79268) (4.60173) (3.95592) (4.365561) (4.43802) 9 9 2.197075 10.56631 10.76498 8.20148 4.956381 2.765621 4.788922 57.8		0.070000	(4.21139)	(5.98832)	(6.55206)	(5.31108)	(3./1835)	(5.10959)	(8.79632)
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	4	2.076939	7.115540	9.058379	8.533192	4.324380	1.520893	4./9/860	64.64976
5 2.121073 9.02/914 8.803/97 8.712398 4.955881 1.862263 4.629513 62.00823 6 2.156750 10.32856 9.620843 8.438243 4.959111 2.150050 (4.64922) 6 2.156750 10.32856 9.620843 8.438243 4.959111 2.150051 (4.72200) (3.62005) (4.64927) 7 2.184387 10.58364 10.39851 8.340004 4.940576 2.516269 4.707497 58.51351 (5.166565) (6.69789) (5.80547) (4.61164) (3.85881) (4.31791) (9.32686) 8 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.806603 58.21283 9 2.197075 10.564631 10.76469 8.320148 4.956381 2.765621 4.788922 57.85733 9 2.197075 10.56748 11.12876 8.284381 4.940850 3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876	-	0.404070	(4.28599)	(6.06138)	(6.19112)	(4.77342)	(3.60693)	(4.86684)	(9.01934)
(4.04922) (5.88349) (6.15501) (4.72200) (3.52005) (4.63437) (8.99559) 6 2.156750 10.32856 9.620443 8.438243 4.959111 2.159011 4.505520 59.99371 7 2.184387 10.58364 10.39851 8.340004 4.940576 2.516259 4.707497 58.51351 6 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.806603 58.21283 (5.24172) (6.72837) (5.79268) (4.60173) (3.95592) (4.36556) (9.41303) 9 2.197075 10.56431 10.76489 8.220148 4.965631 2.765621 4.788922 57.86793 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128	5	2.121073	9.02/914	8.803/9/	8.712398	4.955881	1.802203	4.029513	62.00823
0 2.150750 10.52650 9.620843 8.458243 4.59111 2.159111 4.500520 59.99371 7 2.184387 10.58364 10.39851 8.43004 4.940576 2.516269 4.707497 58.51351 7 2.184387 10.58364 10.39851 8.340004 4.940576 2.516269 4.707497 58.51351 8 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.806603 58.21283 6.524172) (6.7268) (4.60173) (3.95552) (4.35656) (9.41303) 9 2.197075 10.54631 10.76469 8.320148 4.956381 2.765621 4.788922 57.85793 (5.23489) (6.92425) (5.66555) (4.60928) (3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876 8.284361 4.908500 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.2876 (5.5935)4 (5.45454) (3.9860)<	6	0 456750	(4.04922)	(5.88349)	(0.15561)	(4.72200)	(3.62005)	(4.63437)	(8.99559) E0.00074
(4.9000) (0.32209) (2.94953) (4.68797) (3.75751) (4.48071) (9.99859) 7 2.184387 10.58364 10.38951 8.340004 4.94676 2.516269 4.707497 58.51351 (5.16656) (6.69789) (5.80547) (4.61164) (3.85881) (4.37191) (9.32686) 8 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.806603 58.21283 9 2.197075 10.54631 10.76469 8.320148 4.956381 2.765621 4.788922 57.85793 (5.23489) (6.92425) (5.66555) (4.60928) (3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 (7.04556) (5.59035) (4.564541) (3.95860) (4.2375) (9.87420)	0	2.150/50	10.32856	9.020843	8.438243	4.959111	2.109011	4.500520	00.00050
* 2.10507 10.3504 10.3504 4.940570 2.51629 4.07497 58.51351 8 2.190216 10.61236 10.34385 8.346783 4.915677 2.761897 4.80603 58.21283 (5.24172) (6.72837) (5.79268) (4.60173) (3.95592) (4.36556) (9.41303) 9 2.197075 10.54631 10.76498 8.320148 4.956381 2.765621 4.788922 57.85793 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128		2 10/207	(4.96000)	(0.32205)	(0.94903)	(4.00/9/)	(3.79751)	(4.49801)	(9.09809) E0 E13E1
8 2.190216 10.61236 10.34358 8.346783 4.915677 2.761897 4.806603 58.21283 9 2.197075 10.54631 10.76469 8.320148 4.956381 2.765621 4.78892 57.85793 (5.24472) (6.72837) (5.79268) (4.60173) (3.95592) (4.36556) (9.41303) 9 2.197075 10.54631 10.76469 8.320148 4.956381 2.765621 4.788922 57.85793 (5.23489) (6.92425) (5.66555) (4.60128) (3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 (5.24087) (7.04556) (5.59035) (4.564541) (3.98680) (4.2375) (9.8743)	7	2.104307	(5 16656)	(6.60700)	6.340004	4.540570	(3,85001)	4.707497	00.01301
0 2.16210 10.1250 10.4503 0.34753 4.915077 2.10167 4.00503 35.21283 9 2.197075 10.54631 10.76469 8.320148 4.956381 2.765621 4.788922 57.85793 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 10 2.204605 10.56748 11.42876 (5.59035) (4.56454) (3.95860) (4.24375) (9.8740)	7		(0.10000)	(0.09709) 10 3420F	(J.00047) 8 3/6703	(4.01104)	2761007	(4.37191)	(3.32000) 58 21202
9 2.197075 10.54631 10.76459 8.320148 4.956381 2.765621 4.788922 57.85793 (5.23489) (6.92425) (5.66555) (4.60928) (3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 (5.24887) (7.04556) (5.59035) (4.56454) (3.95860) (4.24375) (9.58740)	7 8	2 100216	10 61006		0.340703	4.513077	2.101091	4.000000	JU.2 1203
10 2.204605 10.56748 11.12876 8.284361 4.900581 (3.90315) (4.28125) (9.49589) 10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 (5.24087) (7.04556) (5.59035) (4.56454) (3.95860) (4.24375) (9.8749)	7 8	2.190216	10.61236	(6 72027)	(5 70060)	(4 60172)	(3 05502)	(4 36556)	(0 /1202)
10 2.204605 10.56748 11.12876 8.284361 4.940850 2.810864 4.766406 57.50128 (5.24087) (7.04556) (5.59035) (4.56454) (3.95860) (4.24375) (9.58740)	7 8 9	2.190216	10.61236 (5.24172) 10.54631	(6.72837)	(5.79268)	(4.60173) 4 956391	(3.95592)	(4.36556) 4 788922	(9.41303) 57 85702
(5 24087) (7 04556) (5 59035) (4 56454) (3 95860) (4 24375) (9 58749)	7 8 9	2.190216 2.197075	10.61236 (5.24172) 10.54631 (5.23489)	(6.72837) 10.76469 (6.92425)	(5.79268) 8.320148 (5.66555)	(4.60173) 4.956381 (4.60928)	(3.95592) 2.765621 (3.90315)	(4.36556) 4.788922 (4.28125)	(9.41303) 57.85793 (9.49589)
	7 8 9 10	2.190216 2.197075 2.204605	10.61236 (5.24172) 10.54631 (5.23489) 10.56748	(6.72837) 10.76469 (6.92425) 11.12876	(5.79268) 8.320148 (5.66555) 8.284361	(4.60173) 4.956381 (4.60928) 4.940850	(3.95592) 2.765621 (3.90315) 2.810864	(4.36556) 4.788922 (4.28125) 4.766406	(9.41303) 57.85793 (9.49589) 57.50128

A.5 Robustness Checks

Re

1 2 3 4 5 6 7 8 9 10

1 2 3 4 5 6 7 8 9 10

.....

-2 1 2 3 4 5 6 7 8 9 10

SVAR 1

US ordered first:

GDI ordered first:



2 3

Re

4

4 1 2 3 4 5 6 7

5 6 7 8 9 10

8 9 10

1 2 3

Res

-2 1 2 3

4

2

.0

4 5 6 7 8 9 10

5 6 7 8 9 10

2

1 2 3 4 5 6 7 8 9 10

-2 1 2 3 4 5 6 7 8 9 10

56

US ordered first:

GDP ordered first:



1 lag:





US ordered first:

Components ordered first:

		Response to Cholesky One 5 95% O using Standard petentile bo	D. (d.f. adjusted) Innovations otstrap with 999 bootstrap repetition	116		Response to United System 20, 12, 12, 14, 20, 30, 30, 30, 30, 30, 30, 30, 30, 30, 3						
Regionar of CP to CP Innovation	Aspense of CP to S202PS Investore	Response of KP to CDIS Imposition	Reasonar of KF to 5255 Innovation	Reparent of CP is SMS to ovalian	Response of KP to 3.51 Imposition	Requirise al OF to OF Investigan	Reamonal OF to 1552PG Interation	Response of CP to CORE Innevation	Insporte of ICP or SOM Investigat	Response of KP to \$MS Immedian	Insurant O to 336 Security 1	
	~		<u> </u>		\sim			\sim				
Response of USEDPG to CP Invasilian	Response of US\$0P\$ to US\$0P\$ Invasitio	 Response of USGOPG to COEG Investiget 	Response of \$350PE to \$555 Invasion	Response of USGOPS to GMNI Involution	Requires of USEDPE to 1352 Investiget	Reasonant of USBOP 2 to CP Investment	Regarder of USEOPE to USEOPE Innovation	Requires of USERPE to COES Innovation	Regards of USEDPS to 6255 in-readius	Register of USCPE to SME In novation	Reporter of USERVE to 738 In-reading-	
	<u> </u>										<u>/~</u>	
Response of COG to CP Involution	Response of CDEE to USGDPG Invarian	Response of CONE on CONE Incompliant	Response of CDIG to GOSG Imposition	Response of COES to GMIS Increaster	Response of COES to 70.55 interaction	Response of COSE to CP Investigen	Amperiar of COEL to UNDER A Internation	Requiring of CORD to CORD Propulsion	Response of COUS to SONS Invasation	Response of COES to SMIG Invasion	Angument of \$200 to \$130 termsteiner	
\sim				~~~~								
Response of \$20% to \$29 imposition	Reported 60% to 2500% Investige	Response of \$2552 to \$2552 invasion	Response of 6055 to 6055 Innuation	Response of GOM to GME Immedian	Response of \$5555 to 7,555 Immediate	Response of \$2005 to \$29 minutes in	Amports of \$20% to \$350045 in tension	Anaportal of GONE to CORE Annovation	Reported GOID to GOID Invasion	Response of \$2000 to \$3450 innovation	Require of 00% to 530 in revolution	
		~ ~	1					2			\sim	
Reported ONE to CP Inspector	Reported CME to USERS Instantion			Reparter of CAME to SAME Internation	Report of EME to %26 Investion	Regeneral DBE is CP Investige 13 14 14 14 14 14 14 14 14 14 14	Regions of DBM is Oktober to research	Regenter of GME to COSE Invandues	Regeneration CARC to EDEL Interesting	Reported of DBE to UME Introduce	Require of GME is 152 in results of 44 45 45 45 45 2 * * * * * *	
Annuarus of \$155 to CP Invanition	Response of 1236 to 1360PG Incovation	Response of 7595 to 2005 Invasidian	Response of 7555 to 6055 invasion	Response of 1535 to GMMs investigation	Response of R286 to Y286 Invariant	Reported of TAN in OF Imputtion	Reported TAX to USDPG Inspection	Angertas of 5,36 to 0248 Internalian	Response of 70.06 to \$2006 Intervaliant	Reported of TUE to DANE in resultion	Angest soul 5,30 to 7,50 breastics	
\mathcal{T}	<u></u>			~~~	<u> </u>	\sim	<u></u>		1-		<u> </u>	

1 lag:

4 lags:

		Response to Cholesky One 5 95% O using Standard percentile bo	I.D. (d.f. adjusted) innovations costrap with 999 bootstrap repetition				Response to Cholesky One 5.D. (d.f. adjusted) innovations 95% Ci using Standard percentile bootstrap with 999 bootstrap repetitions					
Response of KP to KP Innexitian	Amports of EP to \$550PG Innevation	Anaparon of CP to CD65 Invasion	Required of KP to \$256 Innevation	Reparat of KP to SMS investion	Respond of CP to 7:36 Interaction	Reported ICF is ICF Installant	Required OF is UNDER Interaction	Regards of CF to COSE Immediate	Response of KP no GOSE Increasion	Respond of CP to DAME Innovation	Response of KP to 7.35 Invasation	
											$\langle \rangle \sim$	
Reserve of USEOPS to OP Inneutien	Angument of USERS to USERS increased	in Anaster of UNDPE to COLE Investor	Angunut of USEDPE to GOSE Immunitien	Reporte of USEPS to EME Interaction	Response of USEDPE to 7155 Innumber	Insure of \$160PS to Chanadian	Amperial of USERS to USERS tensorie	A Reserve of \$150046 to 1003 Investigen	Reported all UNIOPS to 6055 to construct	Assurance of USEOPE to SME economics	Anaporto of CMOPD to 526 Internation	
Response of COEE to CP Introduction	Response of COEE to 1550PE Involution	Amportant of COND to COND Innovation	Response of CDIS to GOSS Impositor	Amporton of CDEE to GRMG Immediate	Response of CDES to 7,36 Invasion	Response of COIC to CP Innuation	Requires of CONG to 1960/PG resonation	Augurun of (2005 14 (2005 Impagien 1.8	Response of 1000 to 60% innovation	Angenus of COUS to SHMS Interaction	Reparter of CORE to 5.56 internation	
F			\bigcirc	<u> </u>								
Assgument of \$255 to 42 Amountain	Regional of GOMS to UNIDPS Invasion	Annual of SONE to CODE Investory	Response of 6055 to 6056 Invision	Assponse of \$255 to SMMS Amountain	Require of \$555 to \$35 Invasion	Regarder of \$2000 to CP Resources	Assported of \$2050 to USEDPE in-resultion	Response of \$2000 to 2000, the positive	Requirise of \$250 to \$256, investigat	Assessed COL to DRS Investors	Response of \$256 to \$38 to navalise to	
<u></u>		<i>?</i>	V	~		Harmon of Utility to Character	Annual of Media and Annual					
Report of DMC is CP Investion 54 55 50 50 50 50 50 50 50 50 50	Requested of GMR2 is USEDFQ investige 15 15 15 15 15 15 15 15 15 15	e Regarded GARE to CIRE Introduction	Reported 4 DME to 5010 Intendition		Regional of CME is T2E Instantion					h		
Napara d'US to O'Amadar 10 04 03	Reporte of TSE to USEPE Interaction 18 19 10 10	n Keysener of 138 to 1588 Intensitien 18 18 19 19	Response of TAM to 6000 measures	Regarded PSS to SME Investige R R R	Response of 135 to 136 through	Report V.U. u.D. Immine		Regence of TEE to CEEE Invasilier	Regioner of TLE 1+0.000 h resident	Register of ELE to CME is required		

SVAR 4

Cycle component ordered first:



1 lag:

		Response to Cholesky One 5.D. 95% Clusing Standard percentile boot	(d.f. adjusted) Innovations trap with 999 bootstrap repetitions	
	Response of CPT to ICPT innovation	Response of ICPT to ICPC Innovation	Response of ICPT to USGDPG inneretion	Response of IOP to GDIG Involution
3 2 1 0			12 99 94 94	08 04 00 04 08
	Response of ICRC to KPT innovation	Response of ICPC to ICPC Innovation	Response of KPC to USGDPG innovation	Response of KPC to GDIG Innovation
10 05 00 45 40	1 2 2 4 3 4 7 4 7 3 5			
	Response of USGDPG to ICPT Innovation	Response of USGDPG to IOPC Innovation	Response of USGOPG to USGDPG Innovation	Response of USGDPG to GDIG Innovation
2 .1 .0 .1			a 2 3 3 1 2 3 4 5 6 7 6 7 10 - 10	15 10 05 05 1 2 3 4 5 5 7 8 9 21
	Response of GDIG to ICPT innovation	Response of GDIG to IOPC innovation	Response of GDIG to USGDPG Innovation	Response of GDIG to GDIG Innovation
3 2 1 0				
-1	1 2 3 4 5 6 7 8 9 20	1 2 3 4 5 6 7 8 9 10	3 2 3 4 5 4 7 8 9 10	

4 lags:

GDI ordered first:



Cycle component ordered first:

GDP ordered first:







Cycle component ordered first:

Components ordered first:

	Response to Cholesky One S.D. (d.f. edjusted) innovations					Response to Cholesky for 8.0. (d.f. adjusted) innovations 89.5. C using theratine presenting bacterized units 98 to categorized							
		95% O using Stands	and percentilite bootstrap with 9991	bootstrap repetitions			Reported of OPI to OPI American	Improved Of to ON Imposion	Angenes of CPT to USGDPE increasion	Response of GPT to COED encounter	Insurance of CPT-to-10061 Incomentant	Angeneral OFT to GMB Investige	Anarese of OF to 1285 Innovation
Angeneral of DP to OP surgers	Reported of \$771 to \$291 Investigation	Responded of EPT to challenge between the	Angente d' CP 1a 1185, broading	Reported of CPT to SCOOL Recording 1	Reported of Or to Only Streament	Response of CPT to 1.50 Knowledge		-	-	-	-	-	-
1			*				1	*		:		" There are a second	-
		-								-	· ····································		
		-	a	and the second second									
Inserve of OT w OT Investigat	Analysis of OT & OT Invasion	Assessed OC wid6046 Invasion	Asserts of OH a DBE invasion	Response of KPC to \$555 Invasorer.	Reported of KPC to GMS Investment	Response of KPC to 7,96 Imposition	Important OC to OF Interaction	Assessed CPC & CPC Imagine	Regardle of EPC is USEDPG Projection	Reporter of CPC & COLL Investor	Regeneral CPL to 2010 Provement	Regenue of EPC to GMS Investor	Ingerse of O'C is Tall Investor
		· ·	i la la la	- A.	i land			1.4					
	1	" 1	100		15 mm	1000		1		1		*	"
				44						the local sectors			
Insurse of 1060PS to OPI Insulation	Amproved (1804) to OC Installer	Inserie of (SQMS to UNDPE Installer	Reports of USDPE to USB Immediate	Reported of USER In ADM Investige	Reported of 1000PE to DME Increasion	Amperiary of UNDPA to 7280 investion	Assessor's SUBARS to CP* measured	Assume of \$55045 to OC Investion	Angentus of USEDPS to USEDPS increasion	Adaptive of \$2000PG to \$2000 interaction	Apparent of USERPE to 50% Investment	Approach (NEPE to SME Interator	Reported of USERPE to 5.06 Investment
	1. 10000	1	: _			1							
	1		- Contraction	1	1 Annual Internet	1.0					N_	. ~ ~ ~	· ^
	1	· ····································			,	. /	-		a construction		V	~~~~	· ·
	*	*	*	* * * * * *	* * * * * *	*	*				* * * * * *		
Internet COL to Officeration	Assessed 1985 a UN investor	Assessed of LENS on UNLIFE Assessed	Response of CORE on CORE Investment	Reserve at COSE to \$20% immunitien	Reserve of COSE or SAME Incounter	Response of CORE on Table Incompany.	Response of COS to OP Invanian	Adjustice of COEL to CPC housedate	Reported of COEB to 12502492 Internation	Response of CORE in CORE In resolution	Reporte of CORE to 6008 Interaction	Adjusted of COST to OMM Intervalian	Angene of 1281 to 7.50 investors
4		**	M .	1			had been	1 10	* A.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I.I	10 L		: L. L. L. L.	1
1 Annual	: 0 -	1100	-1	1	1 American			1	'An	-			. Jahren
		, V V	to Constanting	4	, where the second seco			1	· · · · · · · · · · · · · · · · · · ·				
			44						* * * * * *	A	*		
							Insurance of \$255 to \$27 investigat	Important of \$255 to 40% immunitient	Response of 40% is UNDER Investige	Reporter of \$755 to COSL Invanient	Angeros of \$10% to \$10% transition	Response of \$2755 to \$445 immunitien	Ampurper of GONE on 7.85 immediant
4	A CONTRACTOR OF CALL PROPERTY.	A	8	1	1	*	*			* ~~~ ·		*	* m
it may	1 1 -		1000	1	in			:1 ~	: ^ ~	1.~~~~	1	a farmer and	
				1				. 0 -		1.1-1	· Linia		
										*			
							And the second se	Reserves of Section 2 is still be supported	Reserve a state of the state of	Annual of the state of the second	Annual states a state and states		Annual of States of States of States
A STATE OF SHELE A STATE OF STATE OF STATE	A support of party to CPL Internation	And a state of the	a second a second second second	And a state of the state state of the	Regional of Gring is under monador	La Contraction of Contraction of Contraction		1	18	1			10
			1	1. A.	•		:	·	" 1 A ~ ~ ~	1	-	.1	**
				. V	100			1000				100000	
A 10 1 10 10	-	A Charles have			· · · · · · · · · · · · · · · · · · ·		· Comment						
Response of T28 to CP7 Innexation Int	Response of USE to OC immunities	Response of TAS to USDAL Impaction	Reported of Table or Cable Internation	Response of 1.15 to 0.015 immunities	Reported of TUES to GMC Investment and	Response of Table to Table Internation	Response of 155 to OFT Innacation	Requirise of Total is KPC Invasiation	Reported of 7276 to 19620PG formation	Reparts of 108 in 1088 investige	Response of Note to SIGE Invaniant	Reporte of 178 to SME introduce .	Response of 5,56 to 5,56 horsesfor
	. (2)	··· /	1	1	a financial second	* X	· ^		** A			a contraction	1.1
:>>>		" V V	-	. An	· ~~~		:7-			in Province	.M	*~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	1
					111	the set						~	and the second second
									1 4 4 4 8				1

1 lag:

4 lags:

	Response to Onleasy One 5.0. (#1.4. adjusted) introversions (%5.0. using Standard preventies bacarosay unit 99% posstars projections							Response to Charlesto Char					
Reported of OPI to OPI Instantion	Reported OF to OC Invasion	Reports of OP1 to UNOP5 Investory	Inspanse of GPT to COSE mountain	Reports of OF to GDE Investige	Reported OT to DND Instalant	Augurean of GPT or TUS Investory	Requires at OT to OT impaging	Reported OF to OC installer	Reporte of DPT to 2020PE invasion	Reported KPT to CAR Investig	Augurus of KPT to KDK Investory	Insperse of OT to \$305 imputies	Reported OF to Michropolan
	-		$\langle \rangle$	\bigcirc			\wedge		\langle		6	$\overline{}$	$\langle \langle \rangle$
			*	* * * * * *	* * * * * *		*						* * * * * *
Repared of CPL to CPI Investige	Reported Of a Officerator	Reported OC to 100045 termination	Reported OFL to 1984 invasion	Reported of KPC to 4256 invasorian	Response of GPC to \$10% transmission	Reserve of OC is 758 investor	Repairing of 10% to 10% termination	Reporter of OFE to OFE Innovation	Response of CPU to 1000PU Invision	Response of KPC at CBE Investor	Appende of CPC to \$256 Invasion	Reported of CPC to \$996 Amounton	Angleman of GHC to 5250 resonation
		\sim	\sim	· 🏊		$\overline{\mathbf{v}}$	\sim	\sim	\approx	\sim	\sim	\sim	
Reported of VMUPS to CPT Invariant	Anarrow of 1000PE to OT Annualise	Assesse at 2000PE to 2000PE temperature	Response of VMGPS or (005 Investment	Assessed of UNLERS to GOSI to water	Reported (NOPE in DAME Intervalue)	Reserver of LOGPE to 7/36 Impository	Response of USEPH to OPT Investiget	Require of UNDPS to KPC Investory	Assessed 20075 to 20075 Income	Reported (1929) to 1280 Interaction	Regense of USERMS to \$256 Investige	Reporte of UNIDFE to GME to control	Reported 2000PE to 328 Interested
	1		\sim	\sim		~		\sim	\			~~~~	<u>A</u>
Assessed 1981 to OF Investor	Annual INI & OK Insula	Reserve of CORD or UNDER Annuation	Amount of 1984 to 1984 Investiga	Response of CORE on ADML Incometion	Reserve of 1981 to 1981 increasion	Researce of CORE on Total Increasion	Requires of CODE to KPT Investigation	Reporte of COLE & CPU Interaction	Response of CORE on URDERS Increasion.	Angene of CORE is CORE broadler	Response of CORE to CORE Investments	Reporte of 1285 to DML Investige	Response of CORE to TAIL Immunities
<u> </u>				~	<u>A</u>		August of VIII to Of Interaction	America 202 is CP. Insulate		Reported 50% to 00% broader		August of DOD to DMD instantion	
			2	V	~		Reported CME to D [*] Invasion			Angene of SME to SME investor	house of Delt with the second		
		>	<u>^</u>	×	1				~~~~		\sim	$h \sim$	
							Assessed 75.00 to 10 ¹⁴ invasion	Amprove of \$16 to 10% Investion	Adaptive of \$26 to 1262PG Investor	Augurius of SAL to 1265 American	Registrat of 7536 to 6256 increasion	Amportunial Table to DMML Ampountum	Angenesis of Table to Table Investory
	-				>		\approx	\sim					1

SVAR 7

Cycle component ordered first:



1 lag:

	Response to Cholesky One 95% CL using Standard percentile b	S.D. (d.f. adjusted) innovations ootstrap with 999 bootstrap repetitions			Response to Cholesky Or 95% CLusing Standard percentile
Response of ICPT to ICPT Innevation	Response of ICPT to ICPC Innevation	Response of ICPT to USG DPG innevation	Response of ICPT to GOIG Innovation	Response of ICPT to ICPT innovation	Response of ICPT to ICPC involvation
	83 -03 -04		41 41 41 41		
1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	3 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
Response of ICPC to ICPT Innovation	Response of ICPC to ICPC Innovation	Response of ICPC to USGOPG innovation	Response of ICPC to GDIG Innovation	Response of ICPC to ICPT innovation	Response of ICPC to ICPC Innovation
*	10 23 04 45 50 60 60 60 60 60 60 60 60 60 6				
Response of US GDPG to ICPT Innovation	Response of USGOPS to ICPC Innovation	Response of USGOPG to USGOPG Innovation	Response of USGOPG to GDIG Innovation	Response of US GDPG to ICPT inner ation.	Response of USGDPG to ICPC innovation
			25 29 31 34 45 56 		
famous of Chilles Chilles and	farming of Child in 1787 (and after	Increase of COLUMN 181 ONC INSTANT	Annana di And ta (A) inanatian	Response of GDIG to ICFT Innovation	Response of GDI G to I CPC I nnovation

GDI ordered first:



......

.......

ons	
tion	Response of ICPT to GDIG Innovation
	44
	44
-	41
	81
	an and the second second
9 38	-01 1 2 3 4 5 6 7 8 8 10
tion	Response of ICPC to GOIG Innovation
	1
	1
	1
_	1
	34 2
* 20	1 1 1 1 1 1 1 1 1
vater.	Response of USGOPS to GOIG Innovation
	3
	100
	1///
1.000	
	-
8 30	1 2 3 4 5 6 7 8 9 10
ation	Response of GDIG to GD IG innovation
	* 1
	* 1

Cycle component ordered first:

GDP ordered first:







Cycle component ordered first:

Components ordered first:

	Response to Cholesky One 5.0. (#7. adjusted) innovations 954.0 using Sandaer percentile boommap with 989 boosting repetitions								Response to Cholesky One 3.0. (d.f. adjusted) innovations 95% Ci using Standard percentile bootstrap with 999 Bootstrap experitions					
Response of OPT to OPT Internation	Response of CPT in CPC torouting	Angenue of CPT to UNDPE Incention	Response of CPT to 1003 increasing	Response of OFT to \$256 incombine	Angurer of CPT to CME Investore	Assessment OT to 3.55 immediate	Insurant Office Officeautory	Insurant of OPT to OPT Investige	Reporter of OP1 to USOP1 Investory	Requiring of GPT to CORD Information	Reported of OPT to \$255 Investment	Reasonarul (CPT to 2005) Invasion	Inspores of OPT to 728 Investion	
	-		$\langle \langle \rangle$	<	$\langle \langle \rangle$		\frown	0	<		\sim			
Reported of KPC to KPT Investige	Insurant OC & OC Insuran	Angenes of KPC to 1960PE resultant	Angene of KHC & COLL Increasing	Reported of CPC to \$256 Invasion	Assessed GK to SME Investiget	Assertant of KPC to TUG Investment	Angenus of OC to OF travelery	Angenuel OC to OC mysalar	Amportunal GPC to USGPS Introvation	Angene of GPC a 1088 investiga-	Amazonar of KPC to 80% immunism	Associated OC to UMS Impution	Response of IOVC to 7(36) internation	
	<u>\</u>	\sim	\sim	~	\sim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		1	-	$\wedge \rightarrow$	~	\sim		
Reserve of children in the boundary	Assessment of 1500 Million in 1997 According	Reserve of USADES is USADES himselfer.	Reserves of Arbitratic to Pitel Incomplete	Residence of UNIONS in GAME Incompany.	Research of children in Addi Annuality	Restance of USARDE to USA Incompany	Amounts of USUPP) to CPT Investory	Anapproxi of USER AN OC Investige	Angenes of USER is USER'S America	Amazone of UNIOPS in COSt Amazone	Anappropriate Contraction of Contrac	Response of UNIOPE to DRML Investore	Resource of USER In TAL Investor	
~					A	A				<u>h</u>			A	
Reported of CORE to OPT Involution	Reporte al 1283 a CPC Investion	Anyone of 1288 to UNDPE Investor	Requires of CORE to CORE Investigat	Reported CORL to GORL Interestion	Required of 2203 to 5865 increasing	Amporter of CDEE to "UNE Amountaint	Reporter of CORE to CPT Investigation	Assessed of CORE & KPC Investige	Reported of COSE to 2020PE Innovation	Reported of CORE to CORE Investment	Registrat of 1288 to 9298 Immediate	Anappenar of COSE to DMG Investiget	Reported of COSE to TAIL Internation	
	\sim	ha	\	\sim	~~~~	\sim	6	-	4		\sim	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	\sim	
Response of \$576 to 1077 Involution	Reporter of \$255 to KPC forcestion	Requester of 6050 to USEDPG Innerellant	Response of BONE to COES Investation	Reasons of \$256 to \$256 Provation	Reported of \$2000 to \$9900 inconstant	Requirie at \$150 to 530 transition	Response of \$10% to \$27 to syndrom	Response of GOM to OPI Invanient	Reserve of 60% to (160%) incoments	Amportunal \$2555 to CDEE Amportum	Response of \$1555 to \$256 invasion	Reported of \$2555 to \$3455 immunities	Response of \$255 to \$255 increasion	
	\sim			1		6		~~~			<u> </u>			
Response of \$885, in OPT Invanition	Reported 2005 to KPC Investion	Reserve of 2995 to 2022PG investige	Response of EMRE to CORE Invasion	Requirise of GMHL to SOME Immedian	Reported 2002 to 2002 Investige	Amperiar of GMG in 122 becaution	Requiries at UMIC to CFT Investigation	Repairor of SME to CP(Invasitor	Angenies of \$1000 to \$1000% incention	Response of \$1000 to CODS investiges	Reasonan of GRIG to GOIS Innovation	Imported of URINE to UAMS Incommen-	Response of GMN to 7280 measures	
					h	$\sim \sim $		\sim	~~~~	^		h		
Reported of Table in CPT Investment	Angeneral 104 or O'C Interaction	Amproved Table to UNIDPO Incompany	Amportune of 75.56 to CODE Amportune	Response of 7080 to \$250 Annualized	Response of Table to UMM Immunition	Angeror of Table to Table Internation	Reparts of 136 to OF Internation	Insparse of SMI to RPC invasation	Amportunal TAS in VALUES Investigat	Augurus of 7144 in 1264 immuniter	Amportunal of TASE on \$2016 Internations	Augurus of 7/16 in DML Interaction	Anapyrer of 1,16 in Told Internation	
5	\sim	<u></u>		<u> </u>	p	<u>L</u>		\sim	1-	V~~~	A	<i>~~</i>	1	

1 lag:

sponse to Cholesky One S.O. (d.f. adjusted) Innovations

95% C) using Standard pecentile bootstrap with 999 bootstrap repetitions											
Reparts of CPT to CPT Innovation	Assessed DPLs Of Linearise	Assessed of GPT to USEDFD Investigation	Assessed OFT to COSE Investige	Asserve of CPT to 6280 (manatise	Assesse of CPT to SMU Investige	Assessment GPT to 'U.S. Immunitien'					
and a second sec	-	-	-	-	- contractions						
and the second sec			-	-	*	-					
		* Lawrence		-							
	*	*	*	*	*	*					
Assessed OV to OT Incession	Income of CAL & CAL Income int	Reserve of CVI to USEAR Investor	Assessed EX a City brought	Reserve of KW to \$250 investion	Income of UN to SMI incoming	Income of CM to XM income int					
a contraction of the second	H	*	*	*	1						
	"\	1	1 1	1 A.	· V	· A					
			-		1						
					a the last of the						
1	A COLOR COLOR COLOR	A CONTRACTOR OF CONTRACTOR	A CONTRACTOR OF CONTRACTOR OF CONTRACTOR	A CONTRACTOR OF A CONTRACTOR OFTA CONTRACTOR O	A COLORS & COLORS & COLORS	Augura a chart a ta round					
		. \		+ A	• A	* A					
			· V	.~							
					+						
Reserver of LOGS to DY Investor	A Statement of CORE & CPC Investment	Anappropriet of CORE or CORD/PE Investment	Reparent of COES in COES Promiting	Andrease of Child in \$550 second day	And a construction of the second seco	And a second state of					
and the second part of the secon	1	: .	** \		· A	1					
		i d									
 10 k 10 k 	1 1 1 1 1 1 1 1 1 1			 California 							
Reported SON to CPT Investige	Response of GONG to OPC Incrustee	Response of 60% to UNERPS Increasion	Reparts of GONE to CORE broadler	Requirise of GONE to GONE Invasion	Response of \$7552 to \$4462 introduction	Reporter of GOG to 'ENG transation					
				11	· A						
· Comment	1			1	. ^						
and the second s	N. L.	**		Provide State							
Response of UME to CP1 Investige	Reported SME to CPC Invasion	Readerner of SIRRS to USDOP'S Investory	Response of ERME to COEE Innovation	Response of GME to S255 Innovation	Reporte al DME to DME Intention	Response of UMM to 'E2E Interaction'					
1 martine	~			120	1						
		1	. ^	· / ·	1 Xammun	A					
		in the second									
Reporter of 7.35 to OT Investige	Angene of 536 is CPC Investion	Reported VIII in USOPE Insulator	Reporter of 7.56 to 1203 Invasion	Reporter of TAX to \$200 invasion	Reparent of 7236 to DMG Intravallen	Reporter of 7250-to 7250 Personalities					
						1					
	1	· Comment									
1	120	· · · · · · · · · · · · · · · · · · ·				· ·					
	2 4 4 4 2										

Resource to Chalesia One 5.0. (67. adjusted) Innovations											
Income of OT a OT income	Internet of Collector Internet	Internet III're Utiliti Internet	International Contracting with the	Amount of the solid imposion	Income of City of Links income of	Annual Office Table Street					
: _	-	: 11	:		: 114						
Reported Of to OT Investor	Reserved OFC & OFC Invasion	Response of KPC or UNIOPS in contrar	Angenes of CPC to 1000 inconstant	Reserve of OPI to \$258 Investor	Apparent of R/M to DME inclusion	Analorus of OFC is 5.50 minut					
~	1		1		$ \land $	-					
Response of UNIDER to CPT because	Research of USED Philos Children and	Reserve of USERS in Children Investory	Response of UNIONS to COM Actualized	Reserve of UNIONS to 1250 Investors	Reserve of UNION IS AND DOCUMENTS	Reserved of Street in Solitone					
		h		im	im	in					
a a a a se	· · · · · ·	*	*		· · · · · ·	*					
*	1 0	* 200 D			*	* m					
	:1	· m	"h~		:m	:~~~					
Anamous of \$200, so GPT Incometion	Regenerat of GOSE us CPC treasalter	Response of Addition of Maliferty Secondary	Angene of SOL to 1988 Answerter	Reported of \$256 to \$256 Antendian	Reporter of \$2000 to (MMC Records)	Response of 2006 to 1.06 former					
			:~~~	: Loom		: w					
						* * * * *					
Reasonal of DMG to CPT terminise 4	Reasonar of SMG to ON Internation	Response of GANG to USGOPE Invocation	Regards of DMG to 1285 invasion	Regarde at DMG to 50% installer	Reporte of DMG to DMG Investion	Response of \$1000 to 7,05 knows					
		:m		·ww	: Nar	:					
* * * * * *	* * * * * *		*		* * * * * *	*					
Anaros of 336 to OT Anastan	Anaprise of 336 to OC Promition	Response of Table to UNEDFE Investment	Requirement Table to CORE desperation	Amportuni of 72.80 to 5056 Promatori	Assessed of 3.56 to 2896 increasion	Amprile of 326 in 526 immed					
1	\sim	m	No.	~~~	~~~	:la					
	44			4.0		1000					

GDI ordered first:

4 lags:

SVAR 10

Cycle component ordered first:



1 lag:

	Response to Cholesky One 95% Clusing Standard percentile bo	5.D. (d.f. adjusted) Innovations sotstrap with 999 bootstrap repetitions			Response to Cholesky One 95% Clusing Standard percentile b	5.0. (d.f. adjusted) innovations sotstrap with 999 bootstrap repetitions	
Response of IOPT to IOPT Innovation	Response of IOPT to IOPC innovation	Response of IOPT to USGOPG Innovation	Response of ICPT to GDIG Innovation	Response of IOPT to IOPT Innovation	Response of IOPT to IOPC Innovation	Response of IOPT to USGOPG Innovation.	Response of ICPT to GDIG Innovation
			20 8 9 9 9 9 9 9 9 9 9 9 9 9 9				
Response of IOCto IOT Innovation	Response of ICPC to ICPC Innovation	Response of KPC to USGDPG innovation	Response of ICPC10-GDIG Innovation	Response of IOC to IOT Innovation	Response of KPC to IOC Imovetion	Response of KPC to USGDPG innovation	Response of IDPC to GDIG Innovation
				4			
Response of USGDPG to 10PT innovation	Response of USGOPG to IOPC Innovation	Response of USGDPG to USGDPG Innovation	Response of USGOPG to GDIG Innovation	Response of USGOPG to IOPT innovation	Response of USGDPG to IOPC Innovation	Response of USGDPG to USGDPG Innovation	Response of USGDPG to GDIG Innovation
				Response of GDIG to IOT Innovation	Response of GDIG to IOC innovation	Response of GDIG to USGDPG Innovation	Response of GDIG to GDIG Innovation

SVAR 11

62

4 lags:

Cycle component ordered first:

GDP ordered first:



1 lag:



SVAR 12

Cycle component ordered first:

Components ordered first:

ne SD (MI ad

	95% Clusing Standard percentile bootsings with 999 bootsings mpetitions						19% D using Standard percentile bootstrap with 399 bootstrap repetitions						
Assessed Of a Off mounter	Reported OF to OC Installer	Reported OF to UNDPG Investige	Requires of 101" to COLL Invasion	Angeneral CPT & GOM Investige	Amportant CPT to GMIC Imposition	Response of CPT to 3.30 immunities	Assessment OF to OF meaning	Assessed OF to OC meaning	Response of GPT to UNIDA'S Investment	Anguine of 1011 to 1285 to marrier	Augenteed CPT to \$255 Investor	Angersed CF's GMG records	Assessed of OP1 to 3.50 innexed as
\sim	-		\langle	\langle	$\langle \rangle$	\sim		$\langle \rangle$				\sim	
* * * * * *	* * * * * *	*					*	******	*	* * * * * *	* * * * * *	* + + + + + +	* + + + + + +
Aspene of OC to OT Impactor	Insurant of CPC to CPC Invasion	Amperatual DPC to USEDPE Invasation	Anyone of EFC to COELineanian	Reported OC to 2022 invasion	Insurant OC to Diff. Insulat	Imperson OV is U.S. Impartan	Reported OC to OT master	Assame all OPC to OPC immunities	Regioner of EPC uncluided involution	Angene of KPC to 1052 measure	Improved (PC to \$25), Invasian	Angune of CPC to DML Invastor	Associated KPC ar TAN resonant
5	~	\sim	~	~~	\sim	~	5	\sim	\sim	1	\sim	\sim	~
*	* * * * * *	* * * * * *	* * * * * *	* * * * * *	* * * * * *	* * * * * *			* 1. 1. 1. 1. H.	· · · · · ·			
Anyone of USOPS to OT Interaction	Assessed UNIDPERSION OVER INVALUES.	Reasonan of LOSOPE is LOSOPE Income	Reported VISIPE's COS House	Angeneral UNIDA's a \$555 minute	Assessed 20074 to DML Incoder	Reported of USDPD to 1288 Investment	Repairs of USOPE to OF Investor	Reporter of UNIOPE to OC Interaction	Amportan of 1966/PG to 1966/PG through a	Ampartural's SECIPE va CORE Provident	Reported USERPS to 5006 Revealer	Reported UNDAGE SNRS Revealer	Reports of (\$1045 to \$16, biosense
1	:		0		-	1		\sim		1	· >>>		
			*	* * * * * *	******	*							
Reported CBL to OT Invasion	Repairs of COLD to CPC measure	Reprint COS In VISOPI Invitin	Repartment CORD & CORD Investor	Reparated 2005 to 0000 Measure	Reprint COSt is DML In custor	Report and 1000 is '0.00 travation'	Reported 125 to OT tenance	Requires of COSS in CPC Incastor	Responsed 1283 to 1962/45 Imposture	Regeneral COID to COID Invasion	Reported 1285 to 0255 Investige	Reported CORE & SME Investige	Responsed COE3 to 525 immediate
~	\sim		:	\sim	~~~			\sim			\sim		\sim
							Assessed \$250 a CPT resultan	Insuranced \$555 to 495 Advantage	Reported \$250 to \$500*2 tenants	Anarray 2000 a COL Investor	Annual and the local devices of	Angene (PDD) is GMD investige	Amportunal OCH in TAX Investor
Reported 50% to 67" tensolite	Response of SCBL to OPC Annualize	Reported 60% urbit0P6 resultat	Responsed \$256 to 2565 Innovatian	Response of SONE to SONE Investige	Reports of 2010 to DMC Involution	Response of \$200 to 7230 Innovation	* 1	+	+	•	*	•	* I I I I I I I
:	1		~~~	-	\sim	~~~~		1				~~~	~~~~
Income (1995) is CPT investige	Ampunes of LAME in 1741 meaning	Reserved (and section) includes	Reported DMG to 1000 Incoming	Annual of DAM to DAM Income	Anioni stickly to itell bound to	Research of GAME or "Life Investigation	Responsed 6805 to CP1 Investion	Response of GMB to CPT Invasion	Responsed EME to VMCPS to putter	Reported SMG to 1505 Resources	Anzerse utiANS to SOST measure	Response of SMS to SMS meaning	Response of GME to TAS termstee
\sim	\sim		~		1-			\sim	ê~~	~ <u> </u>	~	\	$\langle \rangle$
							Reasonan of Table in CPT Invasion	Reasonard 128 to CPC minutes	Anaster of \$35 to \$550% investige	Reported TAS & CRE records	Reserved TAN to \$250 Provide	Angenes of 5.55 p-1985 investige	Augurus of \$250 to \$250 investige
Response of TUNE to CPT Interaction	Impaired 7/36 to GPC Investige	Angeorys of Tables 1202245 increasion	Requirement Tuble as CONG increasion	Response of 7335 to 6055 Interestion	Response of 7535 to 2945 Innovation	Responses of 12.50 to 15.50 to southing	1	1011	*	10	1	10	·
-	\sim	~~~	~~	\sim	~	:		~	V		~~~	\sim	
			1 1 1 1 1										

1 lag:

4 lags:

Response to Challesky One 5.1. (2) A dyuated innovations 650 - U us databated executed is approximate with relationships executions.								Response to Divisitial provide a subject of the sub					
Report Of a Offension	Assessed 101 to OC Invasion	Amportent Of to 202045 instantion	Angune of 10 ¹⁷ to CBD Impaction	Reported Of a 2010 Investige	Insurand OT & EMIL Insuran	Angone of OFT to 'EMIR menator.	Report and OT & OT Impublic	Angunar of GPT to GPC Immediate	Insure of OT to USEPE Insuring	Anguster of 1071 is CBE Invasion	Augurous OF a 2015 Investor	Angeneral CPT & CMIC Innuation	Insurant of OT in Tablementing
:			\sim		\sim	\sim						-	
*	*	*	*						· · · · · ·	*	*	*	* * * * * *
Require of Or(to OT Invance	Insurant af OFC to OfContaining	Angena of EPC scottight transm	Report of OC a Obliverance	Reports of tPC to USE Invasion	Response of KPC to GMS Impediate	Internation (PC to 7.55 Internation	Response of GPC to GPT Invanian	Instruction (In Orlination	Imports of CPU scy200046 Invasion	Aspenical OF a UNI Impaire	Aspense of OV to UNL Invastor	Response of GPC to (1885) inclusion	Resourced OFC to Table Installer
-		C	\sim		· · · ·		\sim			~~~	~~~	~~~	\sim
Annual College of Coll	A T T T T T	Annual of the local data and the second seco	A T T T T T	And a state of the second seco	Annual country in the second	Annual of the late of the location	Second of Addition of Connector	Annual Alific Of Instan	Income of 1982/198 as 1982/1988 Accounting	Reserved Villetine (198) Income	Internet (1997) a 1010 Internet	Reserved (MIDPL to ONL Income)	Amount of Malifel or VAI from the
			\sim	· ~	\sim				-				
Report of CEL to OT Invasion	Representation of COSt & COCHMANNER			Reserved (2005 to 6000) Invanishin 		Represent COEL & Table Headaw							
Reparated 6256 a GPT Invastation	Response of GOSL to OC Invasion	Reported 2003 w/080PE Investige	Reportunal \$205 to COEE Incounter	Response of \$700 to \$700 housing	Response of \$2055 to GMC Immunian	Response of GONL in 7.35 Invasion	Repartment 5056 to CPT Inconstant	Answers of \$200 to OC Invasion	Registration GOSE in VIGOPE transation	Responsed 60% to CORE resultion	Response of \$1005 to \$2550 monuture	Ampartur affilititi to \$946 instantar	Regeneral \$2006 to 1/36 involution
-	~			h	~	5-	\sim	\sim		~~~	h		~~~
Required GML a CP1 movement	Reporter of GME to OV measurer	Anapatosol SME scy55045 involution	Amperianal GRML is COSE Investment	Response al SMIG to SON Immediate	Regarder of DMG to GMG temporalise	Reporter of DMI to 5.55 Interestion	Reported SMG to OF Impution	Reporter of \$946 to GHL Invasion	Reported GMC sc/300PS Insulae	Responses of GARE to CORE resources	Response of GMRL to GOSE Involution	Response at GAME to GAME Investment	Angene of DHG to 7/55 Investige
	1	2	7					\sim	~~~	\sim	~~~~	\	
Angene of U.S. is Offerenzian	Reported VAL & OV Instalan	Apparts of \$15 to 1500% broadler	Angeneral 7(3) to 1(31) investige	Angence of TOS to 60% immediate	Reported 104 a data investor	Reported 104 a 704 Invasion	Reserve of 536 to OFTension	Reported 125 to O'Creanite	Reasons of \$25 to 1260PE newstar	Anaeronal 1/16 a COES revulation	Anguarter of 7236 to 9256 Investment	Anaamers of 335 to 0880 invasation	Anasro-of 335 to 526 investor
	\sim	>		~	2		\sim	\sim	~~~	~~~~	· ~~~~		ha

Over-Identification

SVAR 3

SVAR 6

		Response to Cholesky One 1	D. (d.f. adjusted) innovations	25				Response to	Cholesky One S.D. (d.f. adjusted	() Innovations		
and the second se	Annual of the second second second	HING COUNTY STRATE OF THE OWNER OF	restring with any bouldting repetition	s .	Annual of the local data and the	Record of the Other sector	Annual of Station and Annual State	95% U Lising Standa	es berdeus es pograde mui alan	constant repetitions	Annual states and second	Reserves of Party in State Section 1995
	in the second se	-	and the second second second second		ingenity to a car interact	4		IN COLUMN THE OWNER OF THE OWNER OF	10	A Contraction of the second se		
		1 million						the section of the se			a start	
								-				
									and the state of t	-		
	and the second s			**								
						Required of OPC to OPT tempories	Augurat of OC to OC Intensitian.	Response of IOPC in 1068245 Inconstant	Assessed of OFC to 1000 Amountain	Resource of KPC to 60% immediate	Reports of KPC to GMS transition	Response of IOPC to 536 minister
Assponas of ublibits to UP mecation	Reporte of usablishs usablinks innovation	Response of USBDHS to COES innovation	Response of uSSORS to GCSG immunition	Response of USGDHE to Darid Innovation	Reports of children to 7,04 intervation		•	" A line	i ha har har har har har har har har har	** /m		: Low
*	· · · · · · · · · · · · · · · · · · ·	-	2 4	-			1	"	100		1000	int
		-	- 10-	- Marine		· The second				41		
	·				in							
				-		Insurance of UNIOPE to CPT Investigat	Response of URGONG to KINC Immediate	Reserve of URDERS to URDERS Investigation	Response of USEDPE to CORE Immunitient	Response of URLOPE to 2018 Immediate	Response of UNCOPE to DBME Inconstitut	Annurus of URDER on U.M. Investigation
							1. 50					
Reporte d'1085 to Chimevalian	Response of CORE Is USED TO Investment	Response of COES to COES inner allori	Response of CORE to GODE immunition	Requires of 2085 to Dank innovation	Response of COES to TUDE Innovation	a service of the second s			" I and the second	1.	1 Press	1
	* *		*		*		1-	1 million and the second	a Commentation			
	11		:/	1 1	· A	- Contraction		2010-1010 (COLO)	* M 1 1 1			
. /	. ha	-			1							
			• V			Requires of CORD to CPT Investments	Response of COES & CPC Investore	Response of CORE to CROPE revealers	Response of CIRG to CIRG Immunition	Response of COES to SCHE Inconstitute	Response of COED to SIME Invasion	Response of CORE to 1036 involvement
* * * * * *	* * * * * *	**	*	* * * * * *	* * * * * *		: ^ -	1.	** 1	10	1.0	1 1
Income of Advanta of the same start	Income of Article Acceleration	Income of billing in 1988, many start	Descentes of Arithma in Arithma successful	Income of addition instal provider	Descente of Sciences in T. M. State atten-		1	· vv	**	1		10-
									and the second s			
			**		· Marine							
- /			. \	:		Imported \$1056 to OF Invasion	Reported of \$155 to CPU investors	Response of \$200 ro-1502/HS Innovation	Reports of \$256 to \$285 Invasion	Resource of \$1056 to \$256 Intervation	Repaired of GOSE to GMME Increasion	Response of \$256 to 7136 Ampunism
				1		i de la d		St. 19	1		·	in
**		*				1	11	· \	1		: ~~~	in
										· 100000	1	· ·
Requires 2' dving to iC* interation	Reporte of EMILE 10 LODGE INVESTIGA	Response of SAVIS to COES Innovation	Reparce of SAVIS 19 OCSS Invalidation	Response of GAING to Shink Wrowefore	Requires of Shine to 1256 Innovation	*	*	* * * * * *	* * * * * *		*	* * * * * *
	TAN		11 V / V 11			Automated SMG is OF Internation	Insurant of GMS to OV Insurant	Requirise of GARS in UNDERS Immunism	Angenus of GMG to 1285 Investor	Resource of GANG on SUSSE Increasion	Response of GANG to GANG Invasion	Response of GMML to 7.34 immunities
			·		-		*	1 Think I I	4	A A A A A A A		1 12
	-			·	11			·~~	: ~	1	: \	in a sum
						· · ··································					· han	
Regime of 1,30 to CP resvetter	Requires of 1,25 to 2550% innovation	Requires of 1200 to 2080 renevation	Reported (*1.26%-9.050 meta-attor	Response of 7135 to 04/10 meta-sture	Requires of 1.30 to 1.30 million							
*	-	*				Requiring of 1,00 to CP1 Installing	A CALL OF CHARTER	Reparent of Sold is country in and the	Andrea of the Google Provident	And the other states and the states of the s	Report of the or over the party of	Amperia of Sale or Sale Processor
	· · · · · · · · · · · · · · · · · · ·			1		·		" A			a contraction	1
. 21				·~~~	1 million		1	" V		, An	· ~~~	1
	N N									. VMTT	111	Contraction of the local division of the loc
												3 4 5 8 8

SVAR 9

Response to Chonesty One 5.0. List adjusted innovations												
Reported of DT is DT-Immediate Reported of DT-in DDL Immediate												
-	28		-		an antitute -	-						
:	-		:/			:						
-	· ····································		· ·									

Amazonia el OC la OT monariat	Reported OC to OC Intension	Reserves of KPC to (MOPE Investigation	Response of CPC & 0085 Investment	Response of KPI to \$255 incompany	Requester al CPC to DMM Investment	Reasons of IOC to 75% investion						
:	:	\sim	-	\sim	\sim							
Response of USEPS to CPT Invandian	Reserve of UNLIPS is OC broading	Response of USEOPC to STEEPS Innovation	Reported \$1500PE to 1082 broading	Response of UNEDPE to 60%E Involution	Response of UNCOPE to GMME tensoration	Response of USERPE to TOE Inspector						
:~~		1	:	:00-	im	1						
Response of COSE-to OFT Invasion	Reparat of CORE & CPC Invasion	Angenese of COKE to USGOPG Intravaliant	Requirier of CORE to CORE Inconstruct	Requirise of CORD to GOSE Invasion	Reported of LDGL to GMR, increasion	Response of CORE to 3.5% invasion						
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	:h-	-	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~						
Reporte of \$258 to OT Integration	Reported \$256 to CPC Invasion	Assessed \$256 to 20074 Investor	Requirement of GONE to COEE In-southart	Reparce of \$25% to \$25% invasion	Adaption of \$250 to \$9850 investory	Response of \$256.14 7(35-tenandrate						
~	$\sim$	2-		1		6						
Reporte of DML to OT Investor	Reported DML to DPC Investion	Reserve of DARS in USEDPE Investory	Requirement of DRME to COEE Internation	Reasonar of GME to \$256 investiger	Assessed 2010 to 2010 Involution	Reported of DMG to TOL Investory						
	<i>~</i>				h	63%						
Augurous of 7256 to OT Incoment	Augurius of NJM in KPC Invasion	Amproviol 106 to 150246 minutest	Reported of 7634 or 0005 instandant	Reporte of 70% in 60% transfer.	Represent TAX to \$896 American	Augument of 326 or 7286 immediate						
	-~~	·	-		~~~~	1						

Response to Diviewky One S.D. (d.f. edjusted) innovations												
92% C using Standard percentile bootbings with 999 bootbings repetitions												
Reported OFT to OFT Involution	Reported OT to OC imagine	Reporte of OT to USDPS Investion	Response of OPT to COES Invasion	Reparatal OT a GOSE in solition	Represent OFT to SMG invasion	Reported of OT to 105 immediate						
				-		a ma						
			-	-	/	-						
	-	and the second second		and the second s		-						
	-	4		-	-	- Count						
Reports of OCto OT Insulation	Repairs (10% to Chilanatan	Reporte of DPI 101255245 becaution	Regardle of OFE as (DEE) invasion	Reporte of OC to 5255 Invastor	Reported of 10% to GME invasion	Apparatal OC & US Impactor						
						i la						
			16			in the second						
	. ~ .					V						
				* U. U. U. U. U.								
Reports of Chille's to Or' Intention	Repares of USEPPIne CR. Invasion	Anderes of USEDPE & USEDPE Investor	Requires of USEDPOInt (1985) requirements	Reparent LINEPE to SON Incodes	Reported Children to SME Income	Angence of UNCOPE to TURE Investor						
the second se		X	11-11-11-11-11-11-11-11-11-11-11-11-11-									
. The second second			· horizon		. Channe to bear							
a desta de la constante	-	a contraction of the second second										
* * * * * *		*		*								
Reparter of CORE to OF Templature	Reparts and the to Chinasan	Augustural CORE IN SHEEP's Incondision	Angerous Citta & Citta Internation	Reprint 1983 a SUSE Reported	Response of CORS & EMPS Processor	Responsed COES to 5,56 terms and						
	· · · · · · · · · · · · · · · · · · ·		1	1								
			1 miles			1						
	./											
*	*	*	*	*	*	* * * * * *						
Responsed Colle & CPT Research	Reported 2000, to CPC Invasion	A COLUMN A COLUMN A COLUMN A	Response of BORE & CORE Processes	Response of Solids to Solids Provide an	Response of SCHE 12 DAVE Recording	Angeror of score is first investor						
· )		·	· A month		a management							
		1		1 million		1-1-1-1						
• V			- 10		- Contraction	A . Carpertante						
				* * * * * *		* * * * * *						
Reserved SME a CPI benetic	Annual of Station (St. Annual of	Assessed DAM to UNDER Incoding	Reserved DME & COST Investige	Reserved of CAME on SAME Income line	Reserves of Date or Date becausing	Reserve of Calif. or 7.55 incomes						
1.0		14				1.8						
	1 ~ ~		10		• \	an and a second second						
81		at and the second		44	. ]	** V						
					-							
**	**		* * * * * *	**	* * * * * *	** * * * * *						
Reported of Solid to Officeration	Incompany Table is 4740 recognized	Research of \$100 or oblight investors	Reserved 7.16 to 1993 recentler.	Reserves of State or Solid Incompany.	Income of \$150 is detail income in	Amountained West in West Incomentary						
	*					1						
**	· / ~	10	1.2.2	· min	· · · · · · · · · · · · · · · · · · ·	. \						
	1	"		.~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		. Antonio antonio						
#1 ······		**				American and a second						