

‘Unobserved Components Business  
Cycles for New Zealand: What are  
they, and what may drive them?’ by  
Viv Hall and John McDermott

Comments by Dimitris Margaritis

# Business Cycles

- Interest in the study of business cycles has currently spread well beyond the circles of academics, market and policy analysts to become a fascinating topic of discussion among media commentators and the public at large.
- So .....

# what do they all want to know?

- Are we there yet?? Have we got to the bottom of the business cycle? What the good doctor has to say?
- How about the housing slide? When would that end? What do the experts say??
- What does Mr Paulson have to say??
- The envelope please ...

# Treasury Issues New Dollar Bill



# Even if we don't have the answers we may have some help ...

- The paper by Hall and McDermott that I have been asked to discuss is the latest of a series of papers on business cycles the two authors have put together over the last few years.
- Their focus is regional cycles. They continue to use the unobserved components methodology which is now standard in the modern analysis of business cycles.
- The main point of departure from their earlier work is that this time they use a multivariate framework to decompose regional economic activity into its unobserved permanent (trend) and transitory (cycle) components.

# The Model

- Trend components are modelled as a random walk with a (piecewise) drift while ensuring estimated growth rates are consistent with well accepted regional growth rates.
- The cyclical component for each region has two parts – a common cycle across regions modelled by a stationary AR(2) process with policy and other exogenous drivers and a regional idiosyncratic cycle modelled as VAR(1).
- As per standard practice the authors assume that innovations to the trend and cycle are uncorrelated at all leads and lags. They also assume that the idiosyncratic regional cycles do not affect each other.
- They formulate the model into state-space form and apply the Kalman filter for ML estimation of the parameters and to estimate the transitory components.

# What did we learn?

- Do regional cycles exist? Do they have common cycles? Indeed with nice complex roots ...and remarkably with all regions exhibiting the same persistence to transitory shocks.
- What are the common cycle main policy drivers?
- Who's on the driver's seat, the Treasury or the RBNZ? Why, by the way, is the answer in small font??
- How important for the common cycle are TOT and net immigration? World activity?

# More findings ...

- Are there any regions that are less sensitive to the common cycle? Regions that move closer together? Why?
- How important are the idiosyncratic cycles? Are there any spillovers from one region to another? How can they be exploited?
- Have the regional trend growth rates picked up post reform?

# The Questions ...

- Regional cycles exist and idiosyncratic shocks dominate common shocks. So what is the role of policy as a shock absorber? Fiscal policy? Monetary policy? Regional development policy? Public – Private Partnerships for infrastructure, business start ups and wealth enhancing activities?
- Given the size of these idiosyncrasies, is NZ more or less an appropriate common currency area as, say, NZ-AU combined??
- Are regional idiosyncrasies necessarily bad?
- How important are permanent vs transitory shocks for regions? What is the role of policy for sustainable regional growth?

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- You purged the state space model from any non-stationary dynamics but then can the permanent and transitory movements of regional activity explicitly analysed?;
- Given the common cycles closely match a Hodrick-Prescott filter that is often known to produce spurious cycles – how effective have you been in truly removing the spurious cycle?

# A few more ...

- Is it worth to consider additional region specific drift breaks? How would this impact on the dynamics/persistence of the idiosyncratic component?
- Worth including breaks in the var-cov matrix in the 5-region model?
- StDev values of the innovation to the regional trend and to the common cycle are extremely small in the 14 region model. How robust are the results?

# ... and more

- Why didn't you allow for correlation between permanent and transitory components? Is this likely to explain low StDev values for permanent and transitory innovations?

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- Even if innovations are positively correlated across regions, permanent and transitory shocks may be negatively correlated if for example permanent shocks are pervasive and observed output takes time to adjust to a changing steady state. What are the policy implications?

# We still want to know ..

- How far and how deep the bottom of this cycle is going to be? Shall we start to extrapolate the model to find this out? Perhaps with another structural break in place??
- Which regions are going to fare best along the current cycle? Worst? Can Government policy help? How?

Good stuff!