

# Economic Notes

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*The following are summaries from recent Discussion Papers:*

## **LEADING INDICATORS OF ECONOMIC ACTIVITY**

*Discussion Paper G92/14*

*Christopher Green and Craig Beaumont*

- One of the major problems associated with monitoring and forecasting economic activity is the time lag from economic activity to the release of the corresponding economic data. In addition, National Accounts data releases are sometimes substantially revised, which effectively increases the duration of the measurement process. This paper analyses the usefulness of various leading indicators in overcoming these difficulties.

The indicators examined are principally drawn from the New Zealand Institute of Economic Research's long-running Quarterly Survey of Business Opinion (QSBO). In particular, the series examined include measures of respondents' past experiences and future expectations regarding employment, overtime, profitability, and labour turnover. Both graphical and statistical analysis are used to assess the usefulness and reliability of the indicators.

The overall conclusion is that the QSBO surveys are useful indicators of GDP growth rates. The graphical analysis suggests the indicators may predict GDP growth one to two quarters ahead, with the econometric analysis reinforcing this conclusion. Finally, the results show that the QSBO surveys are probably more useful in indicating turning points in economic activity, rather than predicting specific quarterly changes.

## **PRICE AND INCOME ELASTICITIES FOR NEW ZEALAND'S IMPORTS**

*Discussion Paper G93/2*

*Murray Scott*

For many years the New Zealand economy was largely insulated from foreign competition. Although some liberalisation occurred in the early 1980s, it was the widespread deregulation of the mid to late 1980s which removed the barriers to foreign competition in many spheres of the economy. As a result the economy-wide import penetration ratio (i.e. ratio of imports to GDP) increased markedly, so that a change in the exchange rate now has a greater impact on the tradeables sector and the current account balance. This paper estimates the price and income elasticities for New Zealand's imports to understand better these exchange rate effects and to enable better forecasts of potential outcomes.

Three equations are specified, taking the theory and evidence into account. Imports of services are found to depend upon real disposable income, the price of imports of services relative to domestic prices, and a variable capturing a change in the seasonal distribution of imports. Imports of food and live animals (SITC categories 0 and 1) are

found to depend on their relative price and domestic demand. Similarly, in the third equation, imports of chemicals, manufactured goods, machinery and transport equipment and other manufactured goods (SITC categories 5-8) are found to depend on their relative price and domestic demand. In addition, the author finds this equation is best modelled by incorporating the effects of a structural break in the mid-1980s. Overall, in some respects the new equations appear to be an improvement on the equations used currently in the Reserve Bank's Model XII.

## **FORECASTING INFLATION AND REAL GDP: BAYESIAN VAR MODELS OF THE NEW ZEALAND ECONOMY**

*Discussion Paper G93/3*

*Jason Wong and Peter Jolly*

The effectiveness of Reserve Bank monetary policy depends, to a large extent, on the Bank's ability to forecast accurately a wide range of economic variables. The Bank's current forecasting method is based on a disaggregated spreadsheet approach and limited use of a structural theory-based model of the economy. An alternative forecasting method is to analyse the historical time series properties of the data, and assume that any relationships uncovered will hold in the future. These models are typically non-structural and atheoretical in nature since they are not derived from an explicit theory of economic behaviour. A Bayesian vector autoregression belongs to this class of models.

This paper builds two Bayesian vector autoregression models of the New Zealand economy - one model for the rate of inflation, based on mostly nominal variables, and one model for forecasting growth in economic activity (real GDP).

Based on the period 1988 to 1992, the inflation model produces relatively low forecast errors of consumer price inflation, producer input prices, and wages. In fact, the model's forecasts of annual inflation over the last four years compare favourably to the official forecasts published by the Reserve Bank. This suggests the model may be a useful complement to the Bank's current forecasting methods.

The real sector model produces large forecast errors of all variables in the model, reflecting the volatility of the series. The model's forecasts of real GDP are shown to compare well, on average, to the Bank's official forecasts, but on a period by period basis the forecasts do not show the same drawn out adjustment process as happens in real life. Therefore the real model is unlikely to be a useful tool for forecasting.

## **THE VALUE OF REAL ASSETS AND INTEREST RATES: IS THERE A RELIABLE RELATIONSHIP?**

*Discussion Paper G93/4*  
*Hayden Griffiths*

There should, in theory, be a significant and stable relationship between the value of real assets (e.g. buildings, shares) and interest rates. Theory suggests that changes in the value of real assets, due to interest rate movements, should be inversely related to corresponding changes in the value of debt. If this hypothesis is true, then it has implications for managing variability in the net value of a portfolio containing real assets and debt. The maturity structure of the debt could be changed so that the sensitivity of its value to interest rate movements matches that for the real assets. This sensitivity matching would insulate the net value of the portfolio against interest rate movements, as the corresponding changes in values of the real assets and debt would offset each other.

The paper uses regression analysis to measure the statistical significance and stability of the relationship between interest rates and the value of real asset. Data on nominal government bond yields and real asset value indices for five countries, including New Zealand, were used. The results show significant and stable relationships between sharemarket price indices and some of the interest rate variables. However, relationships between the interest rates and the other real assets indices were statistically insignificant. These results seemed to accord with other studies in this area. The conclusion is that there is no prevailing relationship between interest rates and the value of real assets, contrary to the hypothesis.

## **WAGE DETERMINATION UNDER THE EMPLOYMENT CONTRACTS ACT IN HISTORICAL CONTEXT**

*Discussion Paper G93/5*  
*Craig Beaumont*

The Employment Contracts Act 1991 (ECA) was the most dramatic reform of New Zealand's labour market arrangements in the last twenty years. However, the ECA was not the only significant development in the wage setting system over that period. This paper describes the impact of the ECA on the framework and properties of wage determination, against the backdrop of the evolution in wage fixing over the last two decades.

The paper first outlines the statutory framework of wage determination prior to the ECA, analyses the role of union registration, and describes the structure of union and employer organisations that developed under the registration system. It then focuses on the conciliation and arbitration procedures within which employers and unions settled awards and made agreements. The effect of arbitration, where wage awards were made on a relativity basis, was to effectively place a floor on wage settlements, equal to the settlements reached by the strongest 'trend-setting' unions.

The history of wage setting in this environment through the 1970s and 1980s is then discussed, documenting the nature of the repeated interventions into wage setting in the period to 1984. It is argued that modifications to the arbitration system in 1984, followed

by restrictions on multi-tier bargaining in 1987, may have weakened the relativity system of wage determination over the later 1980s.

The key feature of the ECA is the removal of union registration procedures, and the rights that were attached to being a registered union. Specifically, unions lost the guaranteed right to bargain on behalf of their members, with the level of negotiation, whether at an industry, enterprise or individual level, itself becoming a matter for negotiation. The paper reports survey evidence on the impact of the ECA on the structure and process of bargaining, highlighting the shift towards individual contracts, and collective contracts primarily on an enterprise basis.

Existing official measures of wages are not reliable, but the available evidence suggests that labour cost increases under the ECA have to date been moderate. The paper concludes by arguing that the more decentralised bargaining under the ECA has further significantly weakened the relativity system, making much less likely the wage explosions of the past.

