

# Competitiveness Trends - An Update

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*Anne-Marie Brook and Murray Scott examine recent trends in the external and internal competitiveness of New Zealand's tradeable goods sector.*

This article updates the analysis of external and internal competitiveness trends by Ulf Schoefisch that was published in the *Reserve Bank Bulletin* March quarter 1992. The previous article discussed the theoretical concepts underlying the various competitiveness indices, analysed their shortcomings and reviewed the trends in the indices during the 1980s. In addition to focusing on recent movements in the competitiveness measures, this article introduces a real exchange rate index published by the International Monetary Fund (IMF) which has now replaced the real exchange rate series previously published in the statistical section of the *Bulletin*.

## External Competitiveness

### Recent Trends

Figure 1 shows the four measures of external competitiveness presented in the March 1992 article, updated to the March quarter of 1993 (up to December 1992 in the case of relative unit labour costs). As the graph shows, the various measures<sup>1</sup> indicate a further improvement in external competitiveness over the first half of 1992, mainly driven by a further moderate depreciation in the trade weighted exchange rate index (TWI) over that period. The consumer price index (CPI) based measure remained flat over the remainder of 1992 and early 1993, while both relative producer price indices showed a reversal of the earlier competitiveness gains. The latter was due to recession related weak producer price inflation in a number of New Zealand's trading partner economies. The impact of strengthening international commodity prices on New Zealand's producer output prices may also have contributed to the slight upturn in the relative producer output price (all sectors) index. The further moderate descent in the relative unit labour cost measure over the second half of 1992 reflects low average wage settlements in New Zealand since the enactment of the Employment Contracts Act in 1991, as well as recession related cyclical increases in unit labour costs overseas.

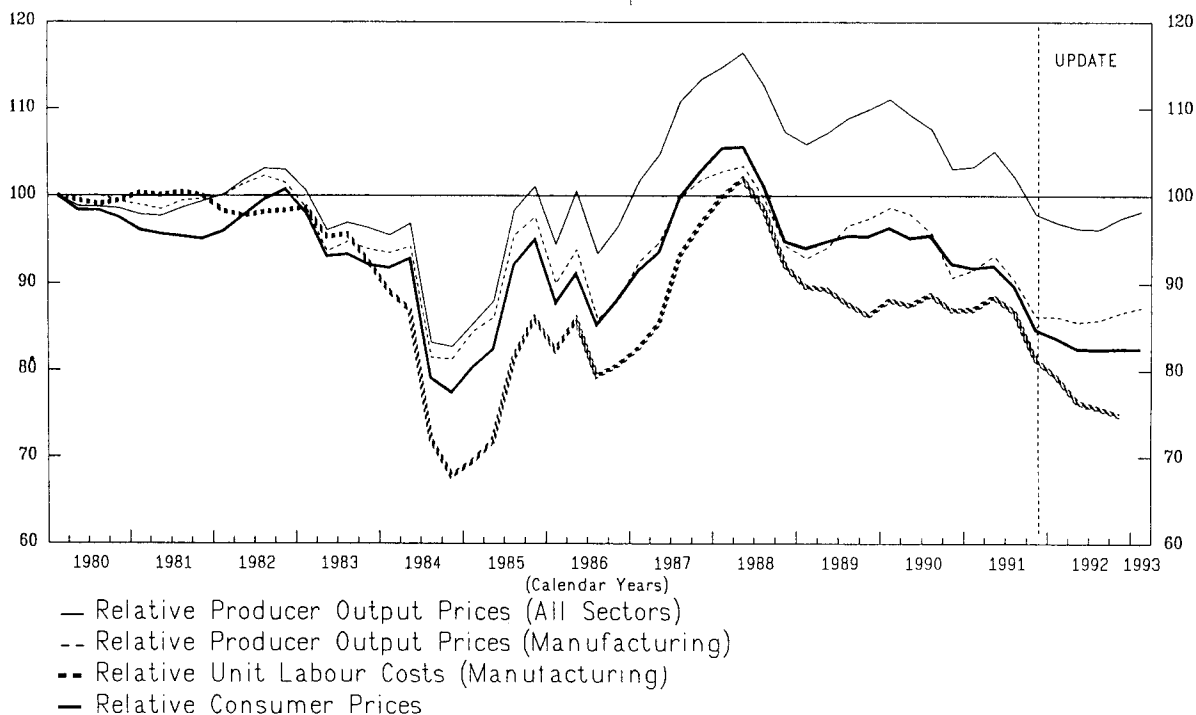
### IMF Real Effective Exchange Rate

Due to difficulties in obtaining timely data, the Reserve Bank has decided not to maintain the comprehensive real exchange rate index that has been published in Table C3 of the statistical section of the *Bulletin* since 1988. This index (discussed in Cooper, 1988) was based on global trade weights for twenty countries in order to provide a comprehensive measure of competitiveness, capturing not only changes in costs and prices relative to our main trading partners, but also relative to those of third market competitors. This

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<sup>1</sup> All measures are five country trade weighted indices for which a decline indicates an improvement in external competitiveness.

Figure 1  
External Competitiveness



Note: Values for the March 1993 quarter are partially estimated

approach recognised that New Zealand's exports to, for example, Australia compete not only with goods produced in Australia, but also with Australian imports of similar goods from other countries with which we may not trade directly.

As a replacement the Reserve Bank will publish the official IMF real exchange rate index as published in the International Financial Statistics. As with the Reserve Bank index, the IMF index uses domestic and international consumer prices as a proxy for tradeable goods prices<sup>2</sup>.

The main differences between the former Reserve Bank index and the IMF real exchange rate index are the way in which the weights for each foreign country are calculated and the degree of disaggregation of commodities traded. The IMF index is considerably more comprehensive than the old Reserve Bank index. Although the Reserve Bank index assigned trade weights on the basis of each country's share of world trade (in order to incorporate the effects of third market competition), it did not disaggregate the data to distinguish between different goods categories. In contrast, the IMF index calculates weights separately for manufactured exports, manufactured imports, primary product exports and primary product imports. This separation reflects the fact that third market competition is a more important influence on manufactured goods sector competitiveness than on primary goods sector competitiveness.

2 Using the CPI as the price deflator in estimating real exchange rate indices has two main drawbacks. Firstly, the CPI measures the prices paid by consumers rather than the prices received by producers for internationally tradeable goods. Secondly, the CPI includes factors irrelevant in an assessment of competitiveness, such as the prices of non-tradeable goods and existing assets. Despite these theoretical deficiencies, CPIs are commonly used as deflators in calculations of real exchange rates as they are readily available on a quarterly and more or less comparable basis for all relevant countries.

Figure 2  
A Comparison of the IMF and Reserve Bank Real Exchange Rate Indices

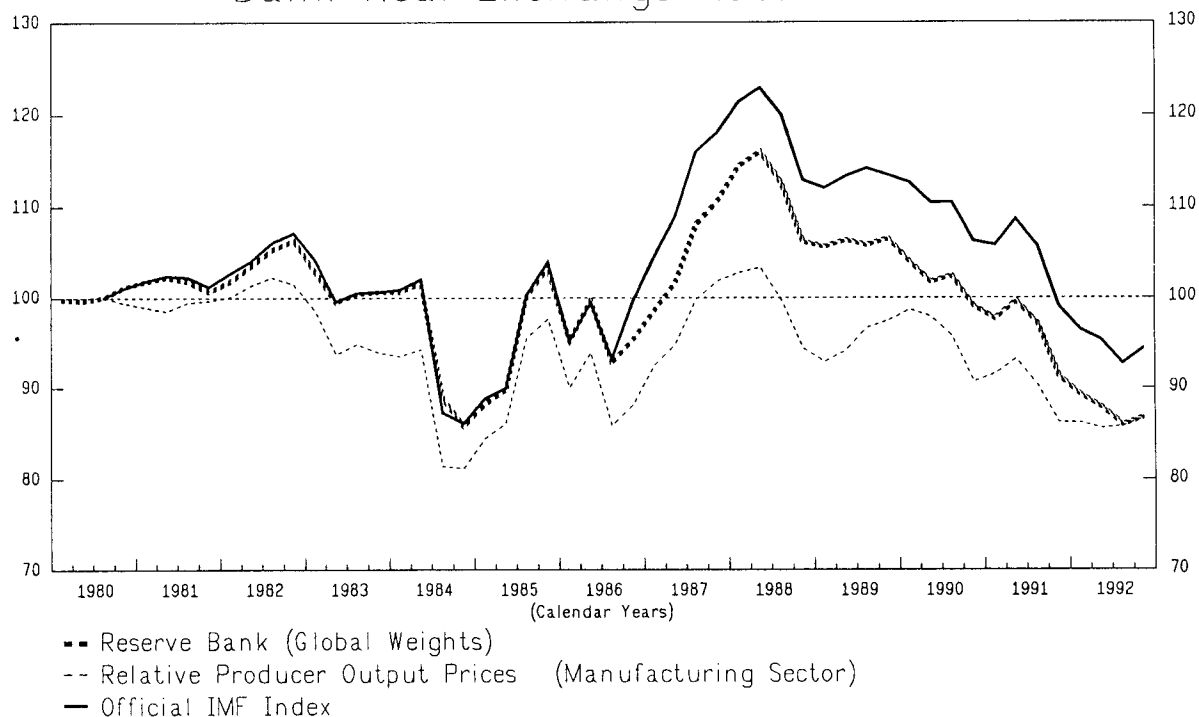


Figure 2 shows that the effects of these weighting differences on the real exchange rate index have been fairly minimal in practice. Since 1988, when the Reserve Bank real exchange rate index was first published, it has moved almost exactly in line with the IMF index. The five country indices have also trended in line with the IMF index. As an example, Figure 2 shows the relative producer output price index (manufacturing).

The IMF index of external competitiveness would be the theoretically preferred measure with respect to the sophisticated weighting structure. However, given the problems associated with using CPIs as a proxy for costs and prices, a greater understanding of external competitiveness is likely to be gained by analysing, in addition to the IMF index, a range of external competitiveness indices (such as the four indices graphed in Figure 1) which are calculated using alternative proxies of costs and prices.

## Internal Competitiveness

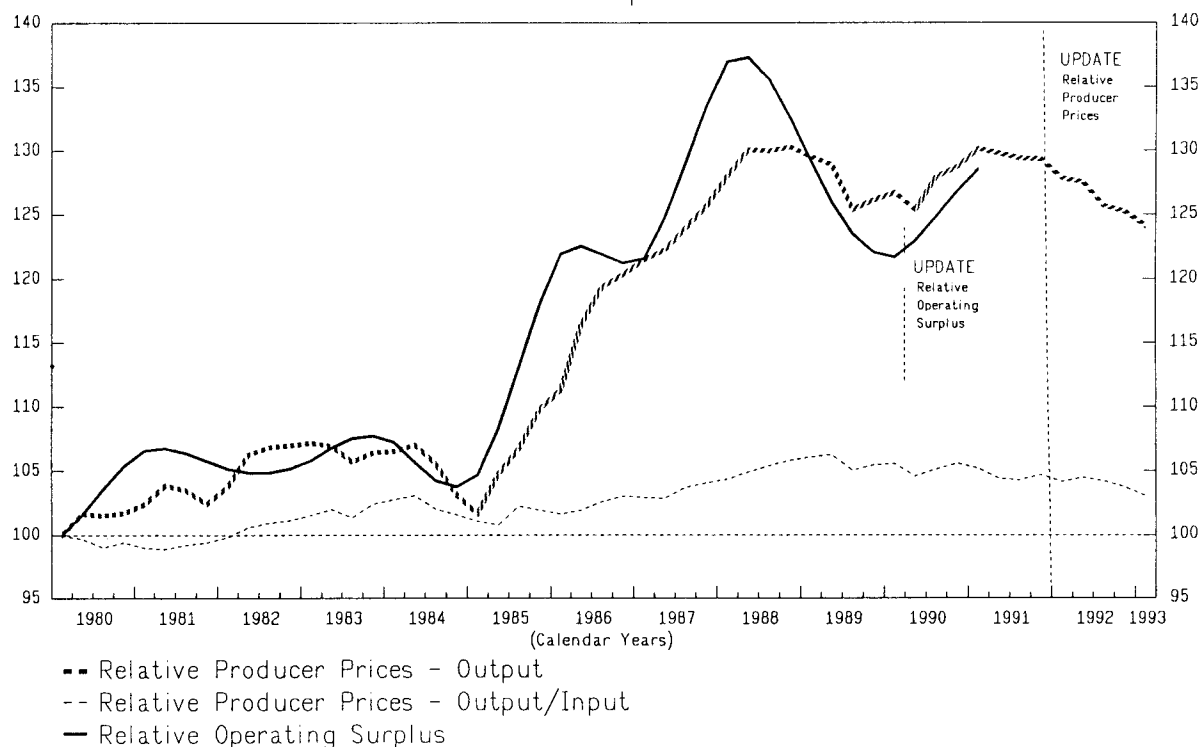
### Recent Trends

Internal competitiveness refers to the ability of the tradeable goods sector to attract resources from the non-tradeable goods sector. This can be measured by the relative profitability of production in the two sectors. A decrease in an internal competitiveness index indicates increased incentives for resources to move into the tradeable goods sector.

Figure 3 provides an update of the three measures of internal competitiveness discussed in the March 1992 article. Recent movements in the relative producer output price index indicate that internal competitiveness improved over 1992. When the index is extended,

Figure 3

## Internal Competitiveness



however, to take account of relative input price movements in the tradeable and non-tradeable goods sectors, no significant improvement has been recorded.

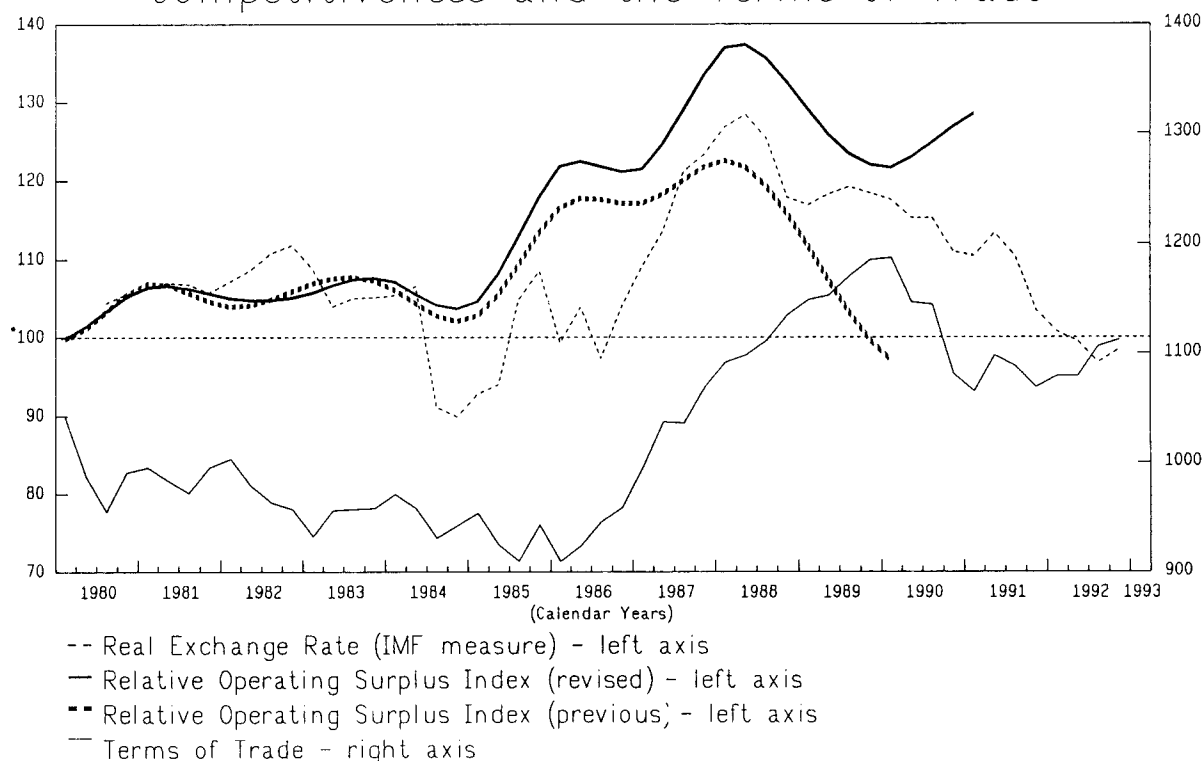
As discussed in the March 1992 article, the relative price indices are inferior to the relative operating surplus measure as indicators of internal competitiveness. The data with which the relative operating surplus index is calculated has been revised significantly since the March 1992 article, due to new information published by the Department of Statistics. In aggregate, operating surplus relative to total sector output has been revised up for the non-tradeable goods sector and down for the tradeable goods sector.

The revisions imply that, while internal competitiveness over the 1984-1990 period was worse than previously thought, the basic trends have remained unchanged. The latter were driven by the effects of deregulation and a high real exchange rate during the post 1984 period, with a nominal exchange rate depreciation and strengthening terms of trade causing a trend reversal in 1988. The availability for the first time of data for 1990, however, indicates that the post-1988 improvement was reversed somewhat in that year. That probably reflects the fall in New Zealand's terms of trade, which impacted on the operating surplus of the agricultural sector.

Due to lags in the availability of recent data, the relative operating surplus index can only be calculated up until March 1991. However, an improvement in the terms of trade since then, as well as further external competitiveness gains (see Figure 4), suggest that it is very likely that internal competitiveness, as measured by relative operating surplus, has subsequently resumed its trend improvement.

Figure 4

## Relative Operating Surplus vs External Competitiveness and the Terms of Trade



### Interpretation of the Relative Operating Surplus Measure

In interpreting the relative operating surplus trends, it should be noted that a true measure of relative profitability requires sectoral capital stock data. As this is not available, the relative operating surplus measure of internal competitiveness uses output as a capital stock proxy, which implicitly assumes that the tradeable and non-tradeable goods sectors operate under the same capital intensity of production. As this assumption is unlikely to hold, the level of the operating surplus ratio (using relative operating surplus per unit of output) does not give an accurate measure of relative profitability. This validates the use of an index and the focus on changes rather than the level of the series<sup>3</sup>. Even changes over time should be interpreted carefully, since relative capital intensities of production may have changed over time. Thus, the index should only be used to analyse the direction of changes rather than their exact magnitudes.

## Bibliography

Cooper, S. (1988). Estimating New Zealand's real effective exchange rate. *Reserve Bank of New Zealand Discussion Paper, G88/7*, November 1988.

Durand, M., Simon, J., & Webb, C. (1992). OECD's Indicators of International Trade and Competitiveness. *OECD Economics Department Working Papers*, No. 120.

<sup>3</sup> The choice of the year 1980 as the base year for the index was arbitrary and hence does not represent an equilibrium benchmark against which the current level of the index should be measured.

Schoefisch, U. (1992). Measures of external and internal competitiveness. *Reserve Bank Bulletin*, Vol 55, No.1 1992.

Wickham, P. (1987). A revised weighting scheme for indicators of effective exchange rates. Unpublished Manuscript. *International Monetary Fund*, December 30, 1987.

