

**The Construction and Use of Coincident Indicators
Based on the Data Contained in Business Surveys**

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Knowing how well an economy is performing is a far more difficult task than it often appears to be. There are so many aspects to economic conditions that it can be extremely difficult to gauge with any sort of precision our actual position at any given moment in time.

There is also the problem that for most of the major activity measures, such as the level of national output or the rate of investment, official figures are at the minimum three months out of date on the day they are published, and even then, if we are to identify an actual trend, the data may well be half a year old before one can infer that the direction of the economy has changed.

The National Accounts are the most comprehensive measure of economic activity available within any economy. They are also the most watched measure because they bring together into a single framework all the different aspects that make up the total level of economic activity.

Yet aside from the delay in having such data published there is also the “noise” that surrounds the figures each time they are produced. Because the National Accounts are a complex array of different features of the economy, the underlying direction of economic activity is often obscured. That this is the case is widely understood which is why a slowdown in a single quarter is never taken as in itself evidence that the economy is indeed slowing. The random factors which affect the measurement of not just the total level of activity but also each of the individual components make it impossible to draw any hard and fast conclusions about economic conditions from quarterly shifts in national accounting estimates.

The one other measure that has genuine value as a measure of the state of the national economy is the data on the labour force. Movements in employment and unemployment are a reflection of the strength of the economy. Indeed, in many ways the labour force is the most important such measure since maintaining low rates of unemployment is amongst the most crucial outcomes sought by governments and the community.

However, as is well recognised from past experience, employment is a lagging indicator. It is only after the economy has turned down that the slowing in the economy generally is reflected in labour market data. And similarly, it is only after the economy has begun to recover that an upturn in labour market data becomes clearly evident.

The Role of Business Surveys

It is because of this gap in the state of our knowledge that business surveys were designed. Their aim is to provide an early indication of the state of the economy and of its various components. While such surveys are less comprehensive than the national accounts, their advantage is that they focus on conditions within the private sector and their results are almost immediately available.

The private sector aspect is of major importance. While the design of the National Accounts is based on expenditure, the structure of business surveys focuses instead on production. While GDP is supposed to measure value added, there are many extraneous elements in its composition, from public sector outlays on valueless forms of government spending to the estimated productivity of non-market transactions such as the value added of owner occupied homes. The intention is to estimate the level of production but the actual result is not as easily interpreted as it is often assumed.

Business surveys are more straightforward. They generally avoid providing dollar values and instead concentrate on whether there has been an increase in some area of activity, a decrease or no movement at all. Thus, for example, businesses will be asked about their level of sales and the measure of economic direction is read from the data showing the proportion of firms which have had an increase in sales relative to those who have experienced decline.

There are also typically two elements to such surveys. They measure both the *actual* movement in various economic activity measures and they ask about *expectations* for the future. This is an extremely important distinction because many observers assume that surveys deal only with expectations. That is not the case but the reason this has become the general view is that business surveys provide data well before the official data are released.

Therefore, a survey result which states that business sales are slowing at the present time will be seen as a forecast since there is a sense in which nothing has actually happened in an economy until the official statistics have been compiled and distributed. It is the time sequence between unofficial business survey results and the official nationally compiled sources of data that leads to the view that these surveys deal with forecasts alone.

It is therefore important to appreciate that business surveys provide up-to-the-minute estimates of the actual state of the economy in real time. They provide an immediacy available from no other source about what is taking place in the economy right now. The time differential between sending out survey questionnaires and putting the results into the public arena is generally less than a month. In actual fact, most survey results have been gathered within a fortnight of their actual date of publication. When published these are data which provide the most immediate information about the

current state of the economy. If properly conducted they provide information about things as they are which are essential for the proper management of economic affairs.

Expectations

But not only do such surveys provide information about the current state of the economy, they also provide expectations data outlining where business believes economic conditions both nationally and within their own firms are heading.

This is an attempt to measure business confidence. Knowing how business conditions actually are leads to questions about what respondents believe will be the case in the period ahead. These are a more ephemeral type of question but do provide an important measure of *current* conditions. The future always remains before us and is always and only a matter of conjecture essentially based on our knowledge of the present. Asking about future conditions tells us about the future only if expectations are fulfilled. This does happen in placid periods but not when conditions have become unsettled. It is at such times that the differential between actual and expected outcomes can provide a good deal of information about the state of the economy.

But it must always be understood that expectations data are telling us something about the present and only to a lesser extent about the future it is attempting to describe. A survey will, for example, ask about the expected level of sales. The replies will again show a general tendency in one direction or the other, either upwards or down. They provide an insight into the respondent's current state of mind. We can therefore infer whether there is general optimism or a more pessimistic view within business. Whether the projected outcome will actually come to pass is another matter entirely.

The Business Barometer

What is needed is a measure of the current state of the economy which indicates the present level of activity as well as its present trends. To some extent this is the role assigned to the National Accounts but with limited success. Perhaps from a distance of years the ebb and flow of economic activity can be isolated, but given the time in which it takes for a trend to be identified, and given the frequency with which major revisions occur to the quarterly data, it has limitations as a contemporary measure of activity.

To provide such a measure of current economic conditions, the Australian Chamber of Commerce and Industry (ACCI), Australia's largest business association, has developed its Business Barometer which is built from a composite of the three national economic surveys it conducts. These surveys are:

- . the ACCI/Westpac Survey of Industrial Trends
- . the National Survey of Business Expectations
- . the Survey of Investor Confidence.

Each of these surveys measures a different aspect of the economy. The *ACCI/Westpac Survey* concentrates on trends in the manufacturing sector and is the longest running survey in Australia. It dates back to the 1960s and has been run continuously for almost forty years.

The *National Survey* is a weighted aggregate of the surveys done by ACCI member associations which includes the surveys of each of the major State and Territory associations in Australia. This is the most comprehensive private sector survey in Australia.

The *Survey of Investor Confidence* is specifically designed to assess economic trends with a particular focus on investment. The survey provides equal weight to conditions within the national economy and each of the respondent's firms.

In constructing the barometer, each of these surveys provides measures of current economic conditions in a number of significant areas of the economy. Most importantly, the three surveys provide data on current business conditions, which is a coincident indicator, investment, which is generally a leading indicator, and employment, which tends to lag.

Each of the measures in each of the surveys was converted into an index. These separate indexes were then converted into a composite index in which 1998 was made the base period equal to 100.

So, for example, if the actual level of business activity were estimated to have been unchanged, then the index would have been equal to 100. The greater the proportion of firms indicating an improvement, the greater the index reading over 100 would have been. If on the other hand, a greater proportion of firms indicated that business conditions were deteriorating, then the index would be lower than 100, and the larger was the proportion of firms, the farther below 100 the index would be.

For the period from March 1966 through until October 1997, the barometer is comprised exclusively of the data from the *ACCI/Westpac Survey*. Since October 1997, however, each quarter is comprised of the results of the three surveys conducted by ACCI so that as each additional observation of the economy is made, these can be incorporated into the barometer. It should thus be seen that even though the ACCI Barometer is constructed from three different measures, a single confidence series is sufficient to construct a coincident indicator along these lines.

From October 1997, the barometer is made up of a composite of the three different activity measures for each of the three surveys conducted. And importantly, these are the actual results indicating where business believes conditions at each moment in time actually are. They are not derived from the forecasts.

Interpreting the Barometer

Business surveys are an accurate measure of the strength of the economy and of its current trends. If a properly structured survey indicates that business conditions are falling, investment levels are flat and employment growth is stagnant, the proper inference is that these are the conditions then prevailing within the economy. There has never yet been a survey in which all firms state that conditions are getting worse (or, for that matter, where all state that conditions are improving), but changes in the proportion of firms showing improving or worsening conditions do provide an accurate guide to the conditions of the time.

But as with any set of time series data, it is made up of random, seasonal, trend and cyclical components. What we are looking for are the current trends because it is these which genuinely matter. The seasonal and random factors can obscure present conditions and it is therefore imperative to remove their influence before examining the data.

There are two aspects to the data as presented by the barometer. Firstly, by looking at the level of the barometric reading one can make judgements about the state of the economy. The higher the barometer is above 100, the better economic conditions are. Similarly, the lower the barometer is below 100, the worse one would say conditions have become.

Thus, one can distinguish between the periods of strong economic performance and those in which it has been weak. The higher the barometer has become, the relatively more robust the economy was measured to have been at the time.

Secondly, the movements between quarters provide a measure of current economic trends. If each quarterly reading is higher than the quarter before, then the appropriate interpretation would be that the economy is improving. And if each subsequent reading is lower than in the previous period, then one would conclude that the economy was slowing relative to its previous level

Measuring the Past

Although the barometer was only introduced in 2001, because of the form of its composition it already had a 35-year history stretching back to 1966. It was therefore possible to test the accuracy of its construction by looking at its historical record. If it provided an accurate reading of past movements in the economy, there was strong reason to be confident that it would continue to estimate the economy's relative strength between periods and its trends into the future.

The graph showing the barometer provides the contours of the economy over the past third of a century. It shows the periods of relative strengths and weakness. But what is evident are the deep pockets where the barometer has fallen sharply indicating a downturn in economic activity. It is in an examination of these periods that the value of the barometer became clearly visible.

Each of the periods in which the barometer has fallen sharply is numbered from 1 to 8. These periods in fact represent genuine periods of economic weakness in Australia and moreover, represent all of the periods of economic slowdown experienced over this period. The barometer was thus able to identify each downturn Australia had experienced, and provided a measure of relative intensity which would closely align with the impression of those who experienced those periods of weakness.

The Barometer and the Australian Cycle

All of the following descriptions accord with the Australian experience of the cycle.

Number 1: The low point was reached in June 1971 and is a downturn the most distant from the present time. Moreover, because of subsequent events it is a slowing no longer generally recalled. At the time, however, there was no doubting that the economy had been through a period of recession, which the Budget Papers of 1973-74 make very clear where they state: "The economy recovered strongly through 1972-73 from the 1971-72 slowdown" (Budget Statement No. 2 – page 5).

Number 2: The low point of this recession was reached in December 1974. This is a recession which, unlike the previous downturn, has burned its way into the Australian community consciousness. It was the product of an unparalleled confluence of events which included the first oil shock, a monstrous increase in the level of public spending and a major wage explosion. The resulting downturn was comprehensive.

Number 3: The low point of this recession occurred in December 1982. This recession was the consequence of a second wage explosion that consisted not only of an increase in award wages of 19.2% but also reduced the standard work week from 40 hours to 38 hours. Although there were other contenders for the title, this is probably the deepest recession since the Great Depression. Although the unemployment rate went higher in 1992, the fall in employment was far worse in 1982. It is notable that at the depths of this recession the barometer fell to the lowest point it has ever reached.

Number 4: The low point of this recession occurred in June 1986. This recession is best remembered in Australia as being a consequence of the fall in the terms of trade. Other causes have also been put forward to explain what was a comprehensive slowdown in activity. But whatever the cause, the consequence was not in doubt and the economy plummeted throughout 1986 and into 1987.

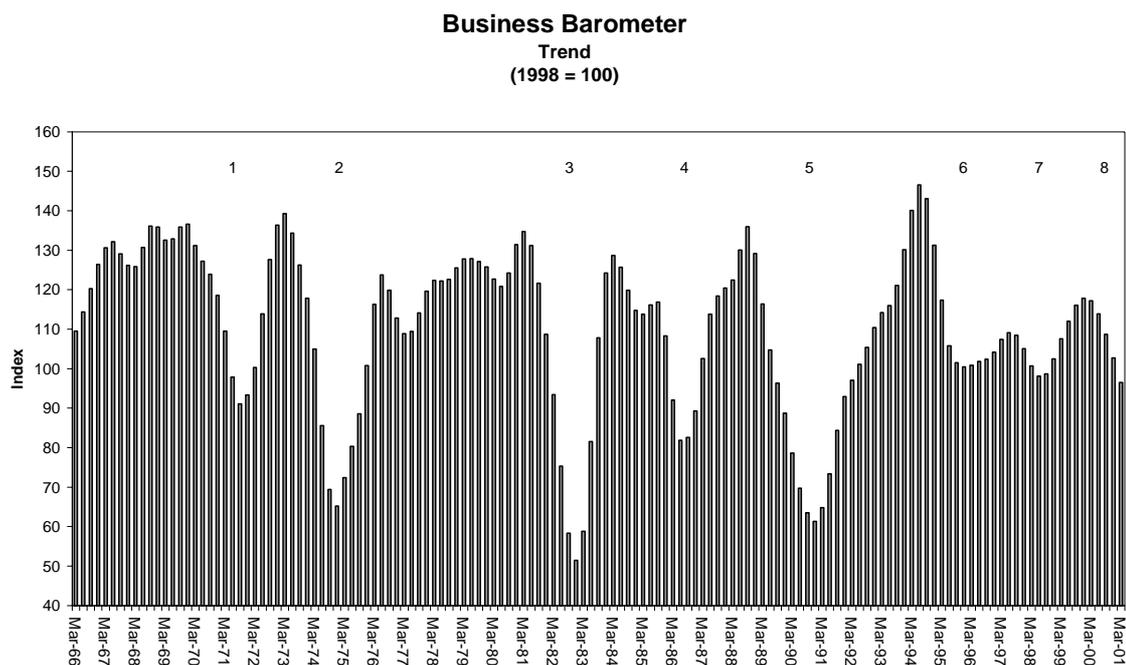
Number 5: The trough of this recession occurred in December 1990. It was an extraordinarily deep recession and brought on by the deliberate actions of the Australian central bank. Concerns over the strength of the economy in the late 1980s led to massive rate increases that drove the economy into the highest unemployment rate since the 1930s.

Number 6: This slowdown reached its low point in December 1995 after the barometer had reached its highest level during the entire period in June 1994. It was

also at that point that the Reserve Bank again began to lift rates with the consequence that the economy immediately began to slow. Only when rates were again lowered did the economy begin to recover.

Number 7: While the low point was reached in June 1998, it is difficult to determine whether to classify this dip in the barometer as a genuine slowdown. What is registered by the barometer are the effects of the Asian Financial Crisis which led to only a slight slowdown in Australia. Although the National Accounts record only a minor fall off in growth, the ABS data on full-time employment provide an unmistakable tapering off in the number of jobs created.

Number 8: The low point was recorded in mid 2001. The data show a continuation of the downwards movement which began in December 1999. The slowing in the economy commenced almost immediately upon the first increase rates which occurred in November 1999. The slowdown continued into the year 2000 but was heralded by the data in the barometer.

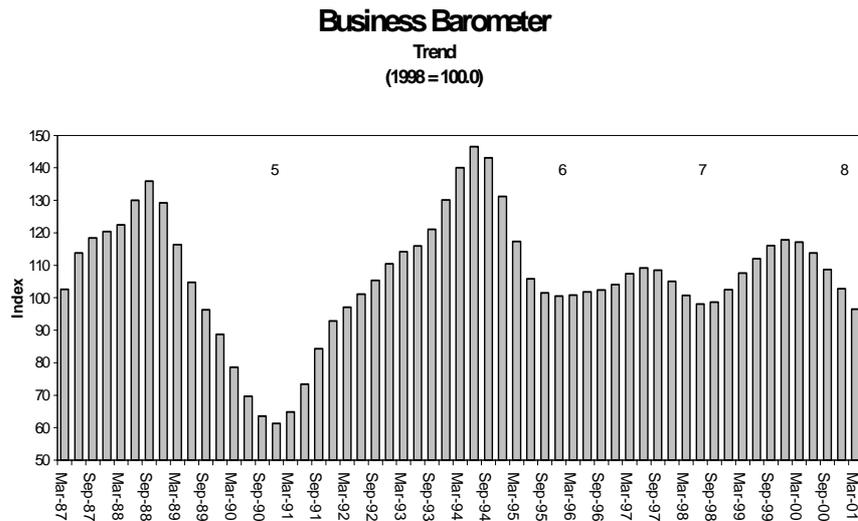
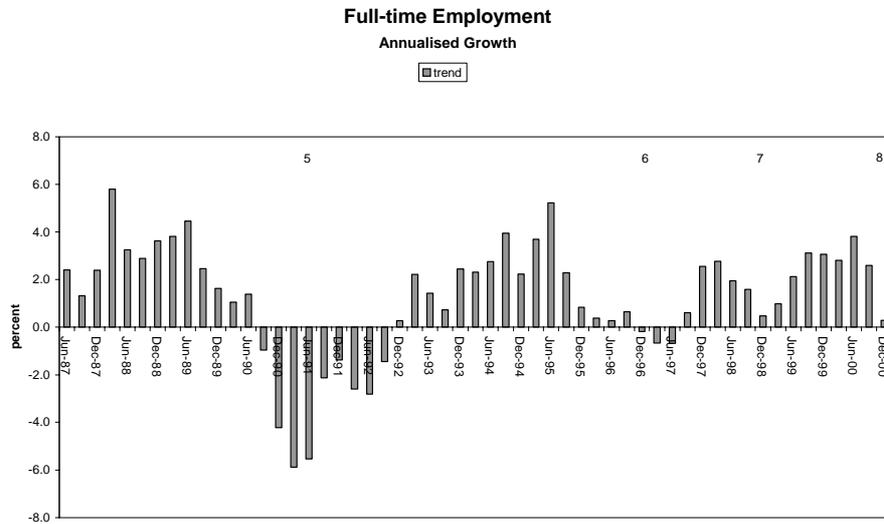


Comparison with Employment Data

It is an important confirmation of the validity of the barometer that fluctuations in the economy itself are reflected in changes in the index. The close connection between movements in the barometer and movements in what the ABS tells us about the economy is necessary if we are to use the barometer to measure the state of the national economy. A look at the overlap between the survey data embodied in the barometer and the economy overall brings out how close this relationship is.

While the National Accounts data are clouded by a series of other considerations beyond the plain state of the economy, Australian Bureau of Statistics (ABS) employment data are more straightforward. The two tables below show the movement in the barometer and the movement in full-time employment. The employment measure is the annualised quarterly growth rate based on the trend data.

What is shown is that even though the employment data is more volatile, the movement in employment growth and the contours of the barometer closely match, although the slowing in employment tends to come with a delay.



For each of the slowdowns identified in the barometer there is a matching slowdown which occurs in employment growth. The massive downturn in the barometer during the early 1990s is seen in the massive contraction in employment which occurred over

the same period. There is a similar slowdown in full-time employment following the raising of rates in 1994 and this too mirrors the downwards movement in the barometer. It is also clear that the Asian crisis was reflected in both the downwards movement in the barometer and in the growth rate of full-time employment. And then, finally, the present period has shown both a fall in the barometer and a fall in the growth in the number of full-time jobs, although with a slight delay between the economy beginning to slow and the growth rate of employment beginning to fall.

Concluding Comment

The kinds of series that can be developed from business surveys allows such surveys to be used in a more systematic way than at present. They provide information that is timely and because of the form of construction provide an indication of the strength of the current trend in economic activity.

The accuracy of the barometer over the past not only provides strong evidence that it will continue to provide genuine assistance in measuring the strength of the economy, but it also demonstrates the value and accuracy of the business surveys which lie beneath. These surveys provide comprehensive data on the condition of the economy and do so far earlier than any other source. Although official statistics provide a series of partial indicators on the level of various aspects of the economy, they do not provide a full range of indicators on conditions overall.

It is why business surveys are so important to the stability of an economy because they provide virtually immediate information on current conditions available from no other source. But they provide information only to those who are attuned to the messages they send. One obviously cannot react to every fluctuation in business surveys as they, in company with official statistics, have a random component which will suggest strength where there is none, or weakness when the economy is strong. However, over time, these are a critically important measure of the health of an economy that the barometer allows for presentation in a more systematic way.

And because the barometer is focused on the private sector, and is not obscured by data from non-market activities, it provides a more concentrated view of current economic conditions.

The strength of this barometer lies in the basis of its collection. The views in such surveys are those of the chief executives of businesses. These are the decision makers across the economy and it is they who determine the level of output, investment and employment. These surveys tap into a different form of data from those found in official statistics since they seek from those who make these decisions an indication of the decisions they are in the process of making.

This is information of the most crucial kind and the results of such surveys deserve to be listened to closely. The Business Barometer systematises the views of those who own, operate and manage firms. They therefore provide the data necessary for policy

making in a form that is easy to understand and which can be incorporated into the official family of major statistics used for assessing economic trends.