TD Economics

Special Report

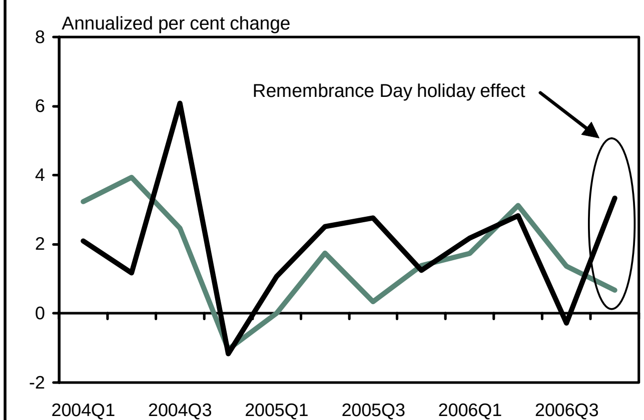
March 13, 2007

MIS-MEASUREMENT OF HOURS WORKED LEADS TO A SURPRISE INCREASE IN LABOUR PRODUCTIVITY

HIGHLIGHTS

- Canadian fourth quarter labour productivity significantly higher than expected
- Source of the surprise traced to poor measurement of hours worked from the Labour Force Survey
- Canada's productivity woes remain a fundamental concern

HOURS WORKED: TOTAL ECONOMY



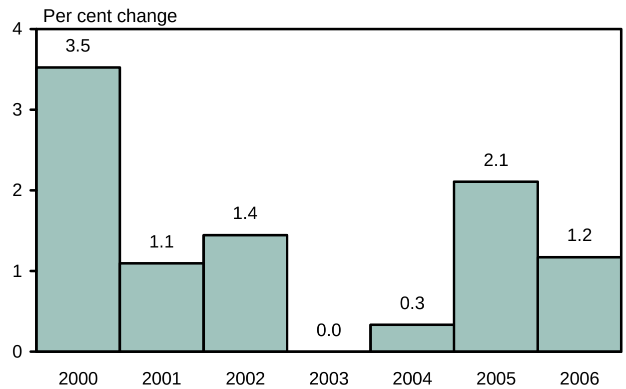
Source: Statistics Canada / Haver Analytics

Canadian labour productivity was poised to end 2006 with a truly dismal quarter. With real GDP growth rising by an anaemic annualized rate of 1.4% and hours worked (as measured by the monthly Labour Force Survey (LFS)) leaping by 3.3%, the growth rate of productivity looked hard-pressed to reach positive territory (recall productivity rises when the growth rate of output exceeds that of hours worked). Hence the simultaneous jaw-drop and head-scratch that accompanied Statistics Canada's release that reported a 1.0% *increase* in fourth quarter business-sector productivity. The monkey-wrench thrown into analysts' initial expectation was that instead of growing by 3.3%, hours worked actually rose by a significantly more subdued 0.7% in the quarter. This divergence was not a clerical error but rather the result of a flaw in the methodology used in the LFS to calculate hours worked. Statistics Canada is in the process of updating their measurement techniques, but this experience casts an unfortunate shadow over a key piece of economic data. In no way should this upside surprise alleviate any concern about the health of Canada's labour productivity. For 2006 as a whole, labour productivity managed to increase by just 1.2% – marginally worse than the tepid 1.4% annual average growth rate observed since the turn of the millennium.

The nuts and bolts of hours worked

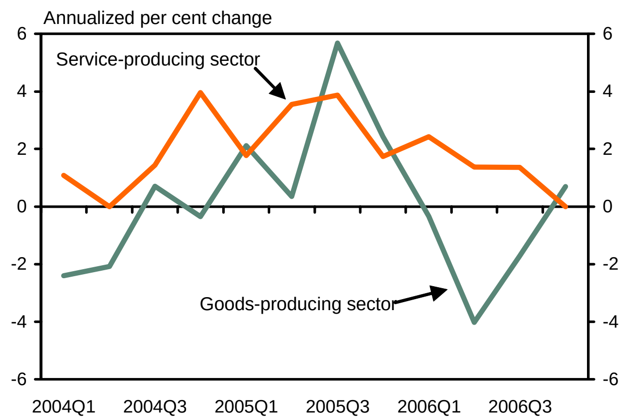
The shortcoming in the calculation of hours worked in the LFS can be traced to the treatment of statutory holidays – in this instance Remembrance Day. In any given month, Statistics Canada gathers information for the LFS over the period of a single "reference" week. This data is then adjusted to eliminate the effects of seasonality so that the underlying cyclical trends are easily identifiable. However, one of the drawbacks of the current seasonal adjustment procedure is that it does a poor job of capturing the effect of statutory holidays. Given that statutory holidays do not always fall in the same week from year to year, there are instances when the reference week will either include or exclude an extra working day. This is precisely

LABOUR PRODUCTIVITY: BUSINESS SECTOR



Source: Statistics Canada / Haver Analytics

LABOUR PRODUCTIVITY: BUSINESS SECTOR



Source: Statistics Canada / Haver Analytics

what occurred in November of last year as Remembrance Day fell on a Saturday, pushing the holiday out of the reference week and adding an extra day of work (Statistics Canada estimates that an extra 25 million hours worked were added to November).

The estimate of hours worked from the LFS is one of the main inputs into the calculation of labour productivity. However, one of the key adjustments made to the data is that of hours lost from special events such as statutory holidays. Total hours worked are also adjusted to include members of the military and multiple job holders and exclude employees and the self-employed that are absent from work during the reference week. As such, the measure of hours worked in the productivity accounts represent a superior estimate but are only released at a quarterly frequency. When trying to estimate productivity growth over the course of the quarter, analysts must rely on the LFS measure of hours worked. Fortunately, Statistics Canada has begun work on implementing new statistical techniques that better adjust for statutory holidays, but the completion date remains unknown. If the process takes more than a year, this report may once again see the light of day as Remembrance Day (falling on a Sunday in 2007) will once again not be in the reference week and create a wedge between the two reports of hours worked.

The big picture

While a 1.0% increase in labour productivity is better than an outright decline, Canada's productivity performance remains miserable. In a recent report, Statistics Canada lauded productivity growth in the service sector and blamed much of the overall weakness on the production of goods (and in particular mining). However, the fourth quarter saw a reversal in this trend as the goods sector pushed total business productivity higher (to be fair, the increase in productivity was because hours worked (-1.8%) fell by more than output (-1.6%)). By contrast, productivity in the service sector was flat in the quarter, marking the fourth consecutive quarter of decelerating growth and the first time since 2004Q2 that services productivity hasn't increased. While Canada's goods producing sector continues to adjust to the changing face of the global manufacturing industry and the sustained increase in the price of commodities, the weakness on the services side is a larger concern. While less-productive new entrants into the labour market may be partly responsible for suppressing growth, this sector will deserve close observation as it plays an increasingly important role in Canada's overall economic makeup in the coming years.

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