TD Economics

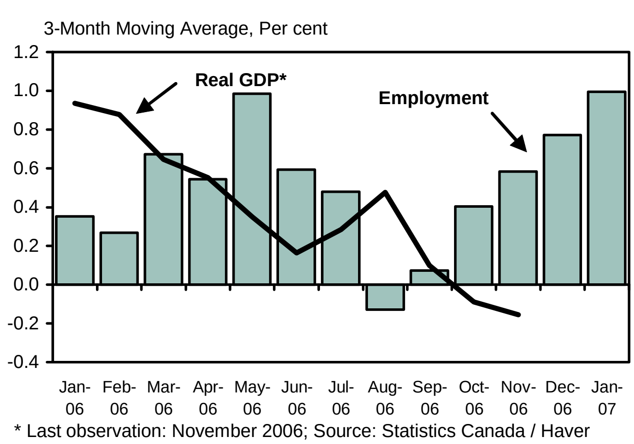
Special Report

February 12, 2007

LABOUR PRODUCTIVITY TUMBLES INTO THE CHASM BETWEEN CANADIAN EMPLOYMENT AND GDP GROWTH

When Canada recently entered a period of slower economic growth no one told the labour market. So while real GDP growth steadily decelerated over the first three quarters of 2006, employment growth remained remarkably robust. And in the final quarter of the year, with annualized economic growth hard-pressed to exceed 1.0%, job growth rose by a solid 2.4%. The job boom carried over into 2007 as employment jumped by an annualized 6.6% in January. The clear victim in this divergent performance is labour productivity, which is on track to chalking up yet another disappointing year. While Canada's poor productivity performance certainly has longer-term implications for the nation's overall standard of living, it also has had a significant impact on monetary policy. Faced with continued weak and worsening labour productivity, the Bank of Canada twice revised downward their estimate of Canada's potential growth rate – which is essentially the speed limit that the economy can grow at without generating an increase in inflation. Even though economic growth was decelerating, there was no accumulation of economic slack. Accordingly, the Bank judged the economy to be close to

CANADIAN REAL GDP AND EMPLOYMENT



* Last observation: November 2006; Source: Statistics Canada / Haver Analytics

HIGHLIGHTS

- **The breakneck pace of job creation in Canada is increasingly at odds with the anaemic growth rate of real GDP. The result is extremely poor labour productivity**
- **While labour hoarding may help explain the surge in employment and the weakness in productivity, it is clear that the Canadian economy is still adjusting to the surge in commodity prices and the emergence of low cost international competition for manufactured products. As this adjustment subsides, labour productivity should begin to recover**
- **Historically, real GDP tends to be revised higher – lessening the gulf between employment and the broader economy – but it will not cure Canada's productivity woes**
- **The weakness in labour productivity has also had a significant impact on the conduct of monetary policy, as the economy's potential growth rate has been revised down by the Bank of Canada. As such, understanding labour productivity is key to predicting future movements in interest rates. However, any upward revision to GDP growth is unlikely to impact policy going forward**

* 2006 is the annual average over the first three quarters; Source: Statistics Canada / Haver Analytics

capacity and the current level of interest rates as consistent with keeping inflation on target. The clear message is that having a solid grasp of what is happening to labour productivity is crucial in understanding the path of future interest rates.

Could labour productivity actually be this weak?

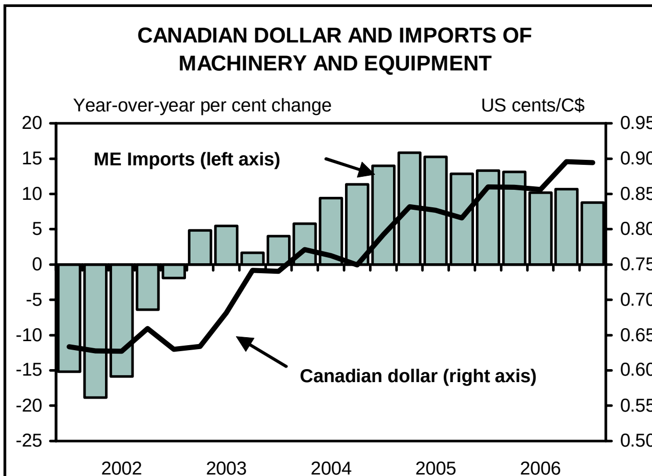
At the dawn of the new millennium Canadian labour productivity tumbled out of bed and has yet to find its footing. In fact, with the exception of 2005, the annual growth rate of productivity has not managed to exceed 1.5% this decade. And 2005 was likely an outlier, as the year-over-year growth rate decelerated sharply over the first three quarters of 2006. Using an estimate of 1.0% real GDP growth and the 3.3% increase in hours worked from the Labour Force Survey (LFS), labour productivity could end up falling by a year-over-year rate of 2.5% in the fourth quarter of 2006 – leaving the annual average increase at just 0.3%. This is just a rough estimate because Statistics Canada uses a slightly different methodology when estimating productivity, but the implication is still that productivity in Q4 was likely abysmal.

There are some logical explanations of why productivity should be weak in the current economic environment. For one, there is good reason to believe that the economic slowdown may prove to be temporary. So, firms may be holding on to their workers in an effort to wait out the economic soft-path without resorting to job cuts and then hiring and training new workers once the economy picks up. While this type of behaviour would slow the rate of job losses, it cannot fully account for the rapid pace of job *growth* observed in past months.

An alternative explanation, and one articulated by the Bank of Canada in an effort to explain the productivity lull, comes from the significant structural changes currently taking place in the Canadian economy. These changes are a result of both the recent surge in commodity prices as well as the emergence of low-cost competition from Asia for traded goods. Their combined effect has led to a reallocation of resources towards the commodity sector and non-traded goods and services. During this transitional phase, workers are usually the first to move and are typically less productive while they adapt to new lines of work. There is also a lag before firms purchase and install new or improved productivity-enhancing capital equipment in the rapidly growing industries, which contributes to the initial period of weakness in labour productivity.

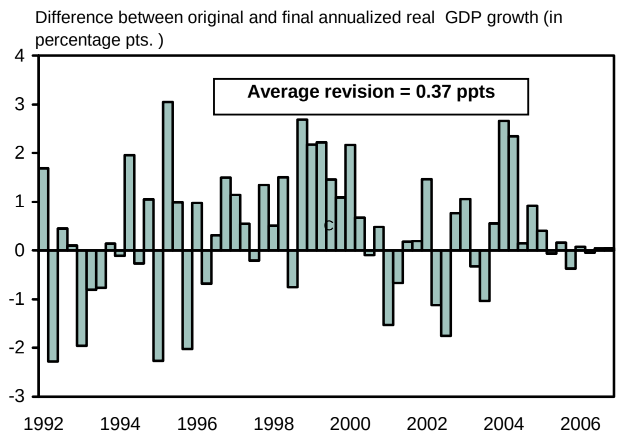
In the case of the commodity sector, some of the exploration and extraction industries rely on relatively new and inefficient production processes which act as a further drag on productivity. Moreover, given the acute labour shortages across Western Canada, it is possible that less productive workers are being drawn into the labour force. Meanwhile, given that it is notoriously difficult to measure productivity in the service-sector, the recent job growth within service industries could dampen the estimates of productivity.

It appears that the economy is still struggling to adapt to shifting international demand for Canadian products. However, there is some hope that this transitional period may soon come to an end. Firstly, the price of commodi-



Source: Statistics Canada / Haver Analytics ties and the Canadian dollar have stabilized somewhat. This stability allows firms to make more informed plans for future investment, hiring and output. Secondly, the higher value of the Canadian dollar has reduced the cost of imported capital goods (many of which are priced in U.S. dollars). This has already translated to a certain extent into greater imports of investment goods as well as a higher growth rate of domestic investment in machinery and equipment. With new capital equipment in place and continued stabilization in the price of commodities, greater productivity growth should eventually ensue.

CANADIAN GDP REVISIONS



Source: Informa Global Markets/Haver Analytics

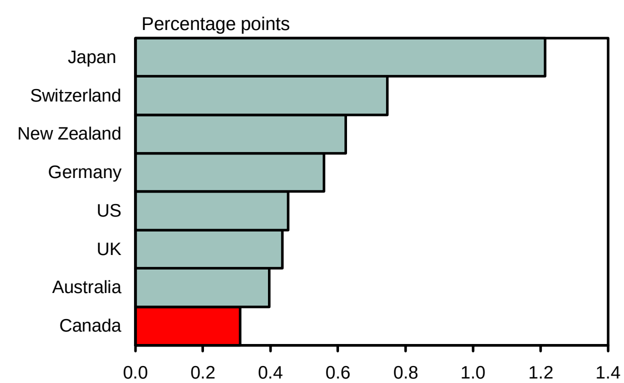
Will revisions rush to the rescue?

Revisions to economic data are a fact of life, as statistical agencies balance the competing demands of timeliness and completeness. However, when the data is telling seemingly contradictory stories, as is the case between Canadian employment and real GDP, it raises the potential of an error in the underlying data. While there is no evidence to date suggesting that either real GDP or employment has been mis-measured, historical patterns suggest that economic growth and labour productivity may end up being revised higher. For instance, there is a persistent and positive bias in the revisions to Canadian real GDP growth. Dating back to the early 1990s, the average quarterly real GDP annualized growth rate has been revised upwards by 0.4% since its initial release. The size of this upward revision is also inversely related to the size of the initial estimate, so that lower estimates of economic growth typically end up being revised by more than occurrences of a larger initially reported growth rate. In fact, any initial estimate below 6% growth is likely to be revised higher by some margin. On this basis, a Q4 estimate of 1.0% could end up being much closer to the Bank of Canada's 1.5% forecast expressed in January's update to the Monetary Policy Report (MPR). However, from the perspective of labour productivity, an average upward revision of 0.4% to fourth quarter real GDP growth will only boost the annual

Canadian GDP revisions in an international context

From an international perspective, Statistics Canada has an excellent track record estimating GDP. In a recent study conducted by the OECD, Canada had the smallest relative mean absolute revision for real GDP growth between 1995 and 2002 in a group of 18 countries (this revision measure takes into account the average size of growth, acknowledging that higher growth rates typically receive larger revisions). However, Canada's mean revision to GDP was statistically different from zero, supporting the finding of a positive bias to revisions.

RELATIVE MEAN ABSOLUTE REVISION FOR REAL GDP GROWTH BETWEEN FIRST AND LATEST ESTIMATE (1995Q1 - 2002Q4)



Source: OECD

Sources of a positive bias in GDP revisions

One of the difficulties germane to estimating the output of the Canadian economy is the trade-off between completeness and timeliness. The faster the data is produced, the more valuable it is, but the more difficult it is to ensure that it is complete. As a result, Statistics Canada revises their historical estimates of GDP in order to incorporate new information. Since the mid 1990s, the annualized growth rate of quarterly real GDP has been revised higher by an average of 0.4%. Three sources for this positive bias are as follows:

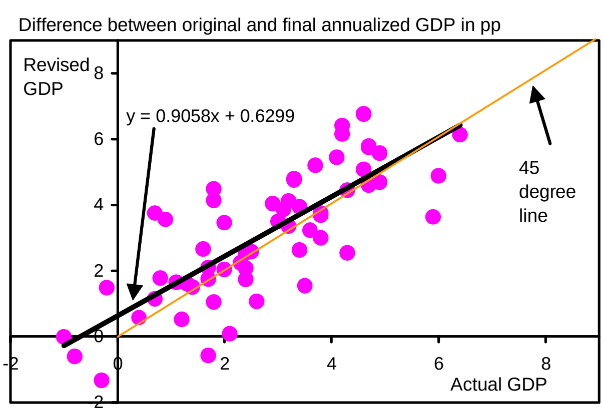
1. Conservatism. When Statistics Canada does not receive a response from a company to a survey (or it is late), they tend to use the last observed value. However, on average, a company grows over time, leading to an underestimation of economic activity which is subsequently corrected.
2. New Businesses: There is an inevitable lag before Statistics Canada recognizes the creation or destruction of firms. But in a growing economy, births outpace deaths, leading to underestimation and an upward revision in later periods.
3. Survey Coverage: In the past when reviewing their survey practices, Statistics Canada has recognised that certain areas have suffered from under-coverage. For example, manufacturing was discovered to be under-represented. This problem was subsequently addressed between 1999-2002, leading to an upward revision to economic growth.

growth rate for productivity by a tenth of a percentage point to 0.4% in 2006.

In terms of the labour market, the scope for revisions seems more limited. The recent strength in LFS can be corroborated by other surveys and anecdotal evidence. For example, the Survey of Employment, Payrolls, and Hours (SEPH) covers 11,000 firms on a monthly frequency and has shown roughly the same employment growth as the LFS over the last couple of months. Moreover, the number of Employment Insurance beneficiaries in Canada has trended consistently downwards over the last several years. Moving beyond the realm of statistics, from TD Economics' perspective of travelling around the country and speaking to clients, Canada's labour market also "feels" pretty good. Although there are pockets of weakness, such as the on-going suffering in the auto sector, we don't hear about huge layoff announcements every day. We see a fair number of "help wanted" signs. We don't read about recent graduates struggling to find work. As such, there is no reason to think that there is a methodological problem in the LFS.

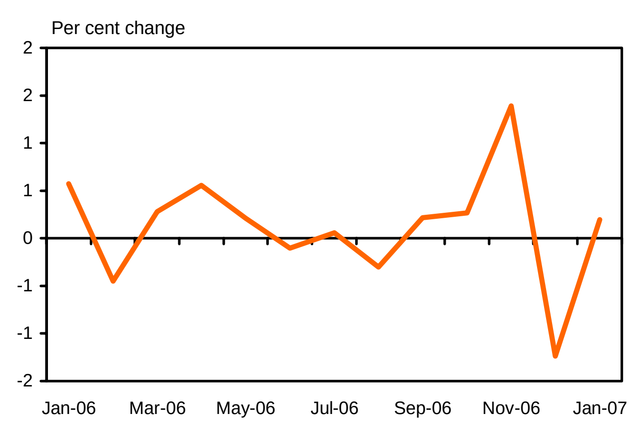
This is not to say that the LFS is perfect. In fact, the measure of hours worked has recently been plagued by complications surrounding the timing of the Remembrance Day holiday which fell on a Saturday in 2006 leaving an extra day of hours worked in November. While these extra hours were reduced in part by Statistics Canada's seasonal adjustments, they did not fully remove this effect. As a result, November's positive contribution to the 3.3% annualized jump in hours worked in the fourth quarter of 2006 is likely more modest. There are also some meth-

CANADIAN GDP REVISIONS



Source: Informa Global Markets/Haver Analytics, TD Economics

CANADIAN HOURS WORKED



Source: Statistics Canada / Haver Analytics odological differences between the measure of hours worked used in the LFS and those in the calculation of labour productivity that limit the ability of the LFS to accurately predict the productivity measure of hours worked. As we saw in the third quarter of 2006, the 2.4% annualized increase in hours worked included in the productivity release was entirely at odds with the 0.3% *decrease* recorded in the LFS. Nevertheless, taking November's growth in LFS hours worked as given, labour productivity in Q4 may also be somewhat higher than what is currently implied by the growth in hours. But this alone will not eliminate the overall weakness in labour productivity. Alternatively, by measuring productivity as output per employee (thereby removing any uncertainty surrounding the estimate of hours worked), the picture remains very bleak, as output per employee has slowed significantly over the course of 2006.

Implications

Canada's poor productivity performance remains a fundamental challenge to both the Bank of Canada and the broader economy. Recent experience shows how sensitive the Bank is to the slowing in productivity growth as it helped keep rates unchanged in the midst of the recent slowing in economic growth. While there may be relief in the form of upward revisions to real GDP growth, it is likely to have an ambiguous effect on monetary policy. If an upward revision to real GDP growth is accompanied by a similar rise in productivity (recall productivity is simply output per hours worked), the overall level of capacity in the economy could be unchanged – implying no change in the Bank's outlook for interest rates. Only if real GDP is revised higher in the absence of a revision to productivity will there be a tighter monetary policy stance. Even making allowances for future revisions, Canada's recent productivity performance remains dismal. This has been a concern for some time, which we have flagged in a number of reports including our latest: The Economists' Manifesto for Curing Ailing Canadian Productivity (available at http://www.td.com/economics/special/dd0906_prod.pdf). Indeed, poor productivity is arguably the single greatest economic challenge facing the country.

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