David Dodge: Demographics, labour input, and economic potential – implications for monetary policy

Remarks by Mr David Dodge, Governor of the Bank of Canada, to the St. John's Board of Trade, St. John's, Newfoundland and Labrador, 13 June 2007.

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Good afternoon. I'm very happy to be here in St. John's and to have the opportunity to address the Board of Trade. Once a year, the Bank of Canada holds a meeting of its Board outside of Ottawa. There are several reasons why we hold these meetings outside Ottawa, but perhaps the most important is that it gives us the opportunity to meet with, and to listen to, business and labour leaders from various parts of the country. I certainly hope that we will have time for a good discussion following my remarks. It is very important for us to hear and to understand your perspectives and preoccupations. This information helps us in our task of gauging the country's economic prospects over the medium term and setting monetary policy so that our economy can deliver the maximum sustainable growth of employment and incomes over the long term.

Of course, with the passage of time, the "long term" turns into the "near term." And in my remarks today, I want to discuss an issue that has gone from being a long-term, theoretical question to being a near-term, practical consideration for monetary policy; that is, the impact of Canada's aging population on our economic potential. The Bank addressed this subject in the April edition of its *Monetary Policy Report* and, today, I want to elaborate a bit on this topic. I plan to talk about how we see trends in the labour force evolving in the future, and about the implications of these trends for monetary policy, in particular, and for the economy in general. Then, I'd like to take a few minutes to discuss the current state of the Canadian economy and its prospects, before opening the floor to your questions and comments.

Labour and potential output

So, let me begin by talking about demographics and trends in the labour force. I should start by explaining how this topic fits into the conduct of monetary policy. The concepts involved are reasonably straightforward, but things can get pretty complicated rather quickly. My aim is to give you a clear and accurate description of the issues without burying you in jargon or complex details.

Over the years, we at the Bank of Canada have learned that the best contribution that monetary policy can make to the economic welfare of Canadians is to keep inflation low, stable, and predictable. We try to keep the annual increase in consumer price inflation at 2 per cent, which is the middle of a 1 to 3 per cent inflation-control range. If inflation expectations are well anchored, an environment of low and stable inflation can be sustained when the economy is operating at its production potential; that is, when the economy is generating the maximum amount of output that it can without sparking inflationary pressures. Economists call this amount of production the "potential output" of the economy. If the economy operates above its production potential, this can lead to upward pressure on future inflation. Similarly, if the economy operates below its potential, this can lead to downward pressure on future inflation.

Unfortunately for central bankers, there is no way to directly measure an economy's potential output; it must be estimated. Nevertheless, we do know that growth in potential output does vary from year to year. How fast it grows essentially depends on two things: growth in the hours that our population can spend at work, and growth in the productivity of that work. The greater the number of people in the labour force, and the greater the time that they spend at work each week, the greater the output that can be produced without triggering inflation. And the higher the level of investment in machinery, equipment, and structures, again, the greater the output that can be generated without leading to inflation. Of course, there is more to productivity than just the quantity of labour and capital. Quality matters as well. Improved education and training of the labour force can make a big difference in terms of the productivity gains that can be realized over time, as can the way a company organizes itself to get the work done.

But in the interest of keeping things simple, let me focus on my main point; that growth in potential output equals the growth in the total hours supplied by the labour force – what economists call "trend labour input growth" – plus the growth in trend labour productivity. Over the past several years, the

Bank has estimated trend labour input to be growing at an annual rate of about 1 1/4 per cent, although the actual growth has been a bit higher over roughly the past 4 years. And, based on long-term trends, the Bank has assumed the annual growth of trend labour productivity to be 1 3/4 per cent, although over the past 4 years, average productivity growth has come in well short of this figure.

The evolution of trend labour input

I'll say a few words about productivity in a few minutes. But my focus today is on trend labour input, so let me spend a bit of time on this issue. Just over half of Canada's economic growth since 1980 can be attributed to growth in labour input. Much of this rise in labour input has come from the fact that Canada's working-age population is continuing to grow. But we have known for some time that our population is aging and that this will have a profound impact on labour input, as members of the baby boom generation begin to retire, over the next few years.

It's difficult to overstate the importance of the changing age profile of the workforce. According to Statistics Canada, 40 years ago, the median age in Canada was about 25, which means that there were as many people younger than 25 as there were older than 25. Twenty years later, the median age had risen to about 31, and last year, the median age climbed to almost 39. Statistics Canada projects that, under a medium population-growth scenario, the percentage of working-age Canadians – that is, Canadians aged 20 to 64 – is expected to peak in about 2011, and then fall off fairly sharply, even as our total population continues to increase.

But if the percentage of working-age Canadians is still approaching its peak, and only the leading edge of the baby boom generation is approaching retirement age, why is that a concern for monetary policy today? It's because we know that participation in the labour force tends to change over time: Participation is typically low in the early working years, from age 15 to 24, because a large portion of these individuals are still attending school. Participation then increases and stabilizes in the prime working years of 25 to 54, before declining in the late fifties and beyond, as people make the transition out of the labour market and into retirement. So, with the first of the baby boomers now older than 60, and many more of this generation right behind them, we know that the shifting age distribution of the population has begun to have, and will continue to have, a direct impact on the supply of labour in the economy, and thus, on the growth of our economy's potential output.

Of course, we cannot directly measure how much labour Canadians want to supply to the economy. We have to infer this measure by looking at actual participation rates and the hours actually worked each week. But these two variables tend to fluctuate with the ups and downs of the economic cycle. At the Bank, we try to look through these fluctuations to get a sense of the trend of labour input over time.

I mentioned earlier that growth in labour input has been an important factor in overall economic growth in recent decades. Where has this growth come from? Besides the continued increase of the total working-age population, the employment rate of women has risen sharply, more than offsetting a small decline in the rate for men. While these two factors have increased labour input, there has also been a small declining trend in the average number of hours worked per week. All told, as I noted, the Bank has estimated that trend labour input has been growing at an annual rate of 1 1/4 per cent in recent years.

But because of the labour force's changing age profile, which I just mentioned, we can expect that the growth of trend labour input will start to drop significantly below this current estimate. Indeed, demographic and economic models suggest that annual growth of trend labour input will fall to about 1 per cent in 2010, and that it will continue to fall to about 0.6 per cent in 2015.

Of course, there is always an element of uncertainty involved in forecasting anything, particularly people's behaviour. Several factors could serve to slow the projected decline in the growth of trend labour input. Chief among these is the possibility that the participation rate of older workers might increase. Why might this occur? The reasons include the fact that the nature of work is changing: it's becoming less physical and more service-oriented. And people are remaining healthier later in life. As life expectancy increases, people may want to remain in the workforce longer. In addition, strong demand for labour in the economy might make it more attractive for older workers to remain in the labour force. These are all uncertainties. But what we can be certain about is that, over the next few years, as the baby boom generation reaches – and passes – the previous traditional retirement age, the proportion of older workers who choose to remain in the labour force will have a significant impact on the growth of trend labour input in the economy.

It's worth noting at this point that changes in immigration are not likely to have any major impact on trend labour input. While immigration of workers with skills in short supply can, at the margin, increase labour input, this is unlikely to have any significant impact on the population's age structure.

In sum, it seems clear that growth in trend labour input will decline, and contribute less to the growth of potential output in future years. In the April *Monetary Policy Report*, we said that we expect the growth rate of trend labour input to decline by 0.1 percentage points in 2009. But from 2011 to 2020 we will see a more significant slowdown, as population growth continues to slow and the decline in the employment rate accelerates. Remember that if there is a slowdown in trend labour input and the trend rate of productivity growth remains unchanged, the growth rate of potential output will also slow down. In other words, the economy will not be able to grow as quickly without sparking inflationary pressures.

So it will be increasingly important that our economy uses the labour that is available in the most efficient way. What does this mean for policy-makers? To begin with, it means that we must remove any unnecessary barriers either to labour force participation or to labour mobility. Governments should remove barriers to older workers remaining in the workforce. In this regard, we have seen some encouraging signs recently. Mandatory retirement provisions have been eliminated in a number of provinces. And last year, British Columbia and Alberta reached an accord to harmonize labour credentials and business regulations and standards by early 2009. These are just a couple of examples of positive policy moves. Canada's labour force has shown remarkable strength and flexibility, much more so than in previous decades. But more can be done to boost the flexibility of our labour markets.

Let me now talk briefly about productivity. The need for Canada to focus on productivity is certainly not new. Trend productivity growth has been subdued since the late 1970s and, unlike that of the United States, has failed to post a meaningful increase on a consistent basis over the past decade or so. There are a number of potential causes. Canada appears to have taken less advantage of information and communications technologies and has invested less, not just in physical capital per worker but also in research and development, workplace reorganization, and worker training. And, most recently, the movement of labour and capital to take advantage of high prices for resources and strong domestic demand has likely led to some adjustment costs in the form of slower productivity growth.

But while we don't fully understand the causes behind Canada's productivity performance, it is absolutely clear that the record of the past few years has been very disappointing. On average, the annual growth in productivity since 2003 has fallen well short of our assumed rate of 1 3/4 per cent. For this reason, in our October 2006 *Monetary Policy Report*, we lowered our assumption for annual trend labour productivity growth to 1 1/2 per cent. The combination of our views on the growth of trend labour input and trend labour productivity led to our projection for potential output growth of 2.8 per cent this year and 2008, and 2.7 per cent in 2009. This compares with the 3 per cent assumption for annual growth of potential output that the Bank had been using earlier this decade.

That's a quick look at how the Bank sees developments in trend labour input and trend productivity. We'll continue to work on these important issues, and will have more to say about them in coming months. In August, in the summer edition of the *Bank of Canada Review*, we will publish articles on trend labour input and past productivity performance, and we'll return to the issue of the outlook for productivity growth in our October *Monetary Policy Report*.

Recent developments in the Canadian economy

Let me now turn to developments in the Canadian economy since the time of the April *Monetary Policy Report*. In that document, we said that we judged that the Canadian economy was operating at a level just above its production potential in the first quarter of this year, and that this had been contributing to higher-than-expected inflation. And we projected that with average annual real GDP growth of 2.2 per cent this year, the Canadian economy would move back down to its full production potential in the second half. Core inflation was projected to move down to 2 per cent in 2008, and total inflation was projected to return to target by mid-2008.

Since that time, economic developments in the rest of the world have been essentially in line with the expectations we had in April. However, economic growth in Canada has come in stronger than we had been expecting. Indeed, the national accounts indicated that the Canadian economy grew by 3.7 per cent in the first quarter of this year – more than a full percentage point higher than we projected in the

April *Report*. So, the economy is now judged to be operating further above its production potential than was earlier thought to be the case.

Inflation in Canada has also been stronger than we anticipated in April. Inflation for services prices continues to run well above 2 per cent, and inflation for goods prices – particularly semi-durable goods – has been higher than anticipated. Some of this strength may prove to be temporary. Nonetheless, there is an increased risk that future inflation will persist above the 2 per cent inflation target.

The base-case projection in our April *Report* was developed using a number of assumptions, including an assumption that the Canadian dollar would continue to trade within a range of 86.5 to 89.5 cents U.S. But since that time, the Canadian dollar has moved well above that range. Indeed, since the April *Report*, the Canadian dollar has been significantly stronger than other major currencies against the U.S. dollar. Much of this appreciation can be linked to factors such as the strength of demand for Canadian goods and services, continuing firm prices for commodities, and a positive outlook for Canadian economic growth. But over this period, the overall response of the Canadian dollar to these factors appears to have been stronger than historical experience would have suggested.

So, since April, we have seen two things: an increased risk of future inflation and a rise in the Canadian dollar that appears to have been stronger than historical experience would have suggested. At our last fixed announcement date, we said "that some increase in the target for the overnight rate may be required in the near term to bring inflation back to the target." As we prepare for our next fixed announcement date on 10 July, we will look at all the available evidence. And, in our *Monetary Policy Report Update* on 12 July, we will publish an updated analysis of our outlook for growth and inflation, including trends and risks.

Conclusion

Let me now conclude. Canada's aging population has been an issue of interest for a number of years. But as the leading edge of the baby boom generation begins to retire, this is no longer an abstract issue for policy-makers. The projected decline in the growth of trend labour input has real consequences for the conduct of monetary policy. Declining growth in trend labour input implies lower growth of potential output. And if the trend rate of productivity growth remains unchanged, this means that inflationary pressures can begin to build at a lower rate of economic growth.

What should policy-makers be doing? First, we should minimize constraints on labour mobility and participation, so that there are no artificial barriers to prevent people who want to work from doing so. Second, we should concentrate on increasing productivity, so that we can have sustainable economic growth and rising standards of living in the future. And finally, from the Bank of Canada's perspective, we will have to continue to take into account the evolution of Canada's labour market as we continue to conduct monetary policy with a view to keeping inflation low, stable, and predictable.