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Today's Labour Market and the Future of Work

Introduction

I am delighted to be back at Queen's, where I earned an undergraduate degree in economics some 40 years ago. I remember this time of year well. It is a stressful time—whether you are stressed about starting your career, getting into your next degree program, or just getting this year's work done.

Those of you who hope to join the workforce may be feeling both excitement and nervousness about an uncertain future. At least the macroeconomic situation you face is a positive one. The economy has created 283,000 jobs over the past 12 months, and the unemployment rate is as low as it has been in more than 40 years.

However, this may still leave you wondering about the future. We have all heard stories of people struggling to get a foot in the door, of being overqualified and underemployed, and of the challenges of building a stable career in the "gig economy." Meanwhile, automation and digitalization are disrupting entire industries and threatening to make some jobs obsolete.

Given this backdrop, I will use my time today to talk about Canada's labour market—why the central bank pays such close attention to it, and what role monetary policy can play in its performance. I will also take the risk of speculating a little on what lies further ahead for you—on the future of work.

Labour, economic supply and potential output

Let me start with why the Bank of Canada—whose central objective is to target low and stable inflation—cares so much about the labour market. Simply put, it is because inflation is driven by the balance of demand and supply in the economy, and the labour market is the heart of that balance.

When demand is less than supply, inflation tends to fall, and vice versa. When supply and demand are roughly in balance, inflation tends to stabilize around the level where people's inflation expectations lie—in Canada's case, our target of 2 per cent annual inflation.

To maintain this balance, a central bank needs to understand all the elements that make up supply and demand. At the top of the list for supply is labour. The

I would like to thank Russell Barnett for his help with this speech.

more people available to work, and the more productive they are, the greater the contribution that labour makes to supply. In every economy, demographic forces and immigration determine the available workforce.

A complementary role in supply growth is played by investment. Investment spending expands or improves an economy's capital stock—the machinery and equipment available to workers, as well as infrastructure such as roads, ports or information technology networks. New investment can give existing workers updated tools that raise their productivity. Or, it can mean an expansion of the firm, which is accompanied by new job creation. Both channels raise the economy's potential output.

Canada has reached the phase of the economic cycle where investment usually takes over as the lead engine of growth and this capacity-building process becomes central. I think of this phase of the cycle as the "sweet spot," where rising demand actually drives the creation of new supply. With many companies operating near their capacity limits, growing their sales further means increasing investment, leading to the creation of new jobs and increased aggregate supply. Obviously, this is a phase worth nurturing.

By far the most potent form of business investment is the creation of brand new companies. New firms apply the latest technologies in novel ways, sometimes creating completely new industries. As successful new firms exploit new technologies, they can grow very rapidly. Their sales growth chart sometimes looks like a hockey stick, or the left side of the Eiffel Tower.

You can imagine how the creation of numerous new companies might affect the overall performance of our economy. Each firm that sees hockey-stick growth adds disproportionately to the overall productivity of the economy. Indeed, historically, a large share of an economy's gains in productivity and new job creation have come from young companies.

This is why a period of slow productivity growth is usually associated with slow rates of new company formation. We are—at long last—finally seeing some encouraging signs in these data. This follows a long lacklustre stretch in the wake of both the global financial crisis and the period of high oil prices and exceptional Canadian dollar strength from 2010 to 2013.

Importantly, this process of rapid growth generates higher incomes that people spend in every sector of the economy, benefiting everyone. However, newly created economic growth is disruptive, sometimes destroying existing companies and jobs along the way. This may sound like today's issue, but it has been a characteristic of economic growth for all time. It was aptly described a long time ago by Joseph Schumpeter as "creative destruction." I will say more about this process in a few minutes.

However, none of this highly desirable economic growth can happen unless there are people available to fill the newly created jobs. Accordingly, a healthy, well-functioning labour market is critical, particularly at this stage of the business cycle.

There are many ways to measure labour market health. We start with the unemployment rate because it is intuitive and the most commonly reported

indicator. It is also as low as it has been since 1976 when Statistics Canada started tracking it this way, which is good.

But the unemployment rate does not tell the whole story. To illustrate, imagine someone whose company closed back in 2010 and who gave up looking for work after months or years of unemployment. This person is no longer participating in the labour market and so is not counted as unemployed. But he or she could still be pulled back into the workforce if the right opportunity came along and so represents a potential source of new supply.

Furthermore, no analysis of the labour market is complete without considering the impact of demographics, specifically, the impact of the Baby Boom generation. The first Baby Boomers began to enter the labour market in the early 1960s and fuelled labour force and economic growth for the next 50 years. This demographic support is now fading. Immigration can help provide an important offset, but we should also be doing everything we can to develop untapped sources of labour supply within our existing population.

Breaking down the numbers

After looking at a much wider range of labour market indicators, the Bank has concluded that there remains a degree of untapped supply potential in the economy. This is important, for it means that Canada may be able to have more economic growth, a larger economy, and therefore more income per person, without generating higher inflation. So, let me turn to a deeper analysis of that issue.

Young people represent one source of untapped potential. Yes, the unemployment rate for people in the 15 to 24 age group has declined to around 11 per cent. However, youth are not participating in the workforce as much as they did 10 years ago.

Traditionally, labour force participation rates decline during recessions and rebound during periods of economic growth. But while most other population groups have seen their participation rates recover from the Great Recession, that has yet to occur for young Canadians.

Some have argued that this should not be a concern, because it reflects an increasingly popular choice to remain in school and get more education. In cases where that is true, I certainly agree. School enrolment has increased over the last decade. However, the full story is more complex.

For one thing, many students historically have chosen to work and go to school at the same time. I am sure that many of the students in this room have a part-time job, not just to earn money but also to gain valuable work experience. I know I did. However, the current participation rates of all student groups—males and females, 15 to 19 years old and 20 to 24 years old—are all below pre-crisis levels. Further, while young people who are not at school have higher labour force participation rates than students do, their rates are all lower than they were before the crisis.

Because this drop in youth participation coincided with the crisis and Great Recession, I cannot believe that everything we are seeing today simply represents people choosing to stay out of the workforce. Clearly, a good part of

the decline is tied to the economic cycle, and a shortage of opportunities. Other forces, including demographics, may be acting here as well.

The key point is that youth represent an important untapped source of potential economic growth. If the youth participation rate were to return close to its level before the crisis, more than 100,000 additional young Canadians would have jobs.

An even more significant source of economic potential is higher labour force participation by women. While about 91 per cent of prime-age men participate in the labour force, the rate for women is only about 83 per cent.

History suggests that this gap can narrow. Consider Quebec, where, 20 years ago, the prime-age female participation rate was about 74 per cent. The provincial government identified barriers keeping women out of the workforce and acted to reduce them, particularly by lowering the cost of child care and extending parental leave provisions. Within a few years, proportionately more prime-age Quebec women had jobs than women in the rest of Canada. Today, Quebec's prime-age female participation rate is about 87 per cent.

If we could simply bring the participation rate of prime-age women in the rest of Canada up to the level in Quebec, we could add almost 300,000 people to our country's workforce. The recent Federal Budget introduced some new measures in this direction.

There's more. Employment rates among indigenous peoples—one of the youngest demographic groups in Canada—remain well below those of the rest of the country. And, as Senior Deputy Governor Carolyn Wilkins pointed out in [a speech](#) last month, technological advances are breaking down barriers that have been keeping some of the millions of Canadians who live with disabilities out of the workforce.

Finally, much could be done to speed up the integration into the workforce of the growing number of recent immigrants. This would allow their important contribution to the workforce to increase more rapidly over time.

Put it all together, and it is not much of a stretch to imagine that Canada's labour force could expand by another half a million workers. To put this thought experiment into perspective, this could increase Canada's potential output by as much as 1.5 per cent, or about \$30 billion per year. That's equal to a permanent increase in output of almost \$1,000 per Canadian every year, even before you factor in the possible investment and productivity gains that would come with such an increase in labour supply. Clearly, that is a prize worth pursuing.

The role of monetary policy

The central bank has no role in implementing specific policies aimed at breaking down barriers to labour force participation. However, that does not mean we have no role to play at all. The Bank can certainly use its monetary policy to help bring about a stronger, better functioning economy while still pursuing our inflation-targeting goal. This is particularly important in the current phase of the economic cycle, with demand prompting investment that can pull more people into the workforce.

Statistics Canada data show that job vacancies have been rising quickly, reaching a record 470,000 last autumn. And we hear from business leaders that many of these vacancies are going unfilled because they cannot find workers with the right skills. To have companies looking for so many skilled workers is surely a sign of a strong economy. It shows the need for more targeted education, as well as on-the-job training programs that the employer tailors to fill a specific need.

But another important way to fill job vacancies is a process that economists call labour market churn. Basically, churn describes the way people switch to jobs that better match their skills and experience. Churn falls sharply during recessions, because people are less likely to take a chance on a new opportunity and companies are more inclined to hold onto their skilled workers. However, in periods of strong growth and rising wages, we often see people who are already employed become more willing to leave their current position and switch to a higher-paying job.

When one person takes that step, he or she leaves an opening that needs to be filled. A period of job switching follows, where people move into better employment. Ultimately, people who have been outside the labour force then see more opportunities and can be drawn back in.

Of course, we will never have a perfect matching of all workers and jobs. The regional nature of our economy means the perfect job to match a person's skills and experience might be thousands of kilometres away. Further, there are still too many barriers that prevent workers in one province from moving to a job in another province.

Labour market churn is a highly complex process that is difficult to predict. So is the creation of new economic supply through investment prompted by strong demand or new firm creation. But it should be clear that there are likely to be significant economic benefits associated with allowing the economy to find its way to a higher, more productive economic equilibrium, if this can happen within our inflation-targeting regime. We cannot know in advance how far the capacity-building process can go, but we have an obligation to allow it to occur.

This is why the Bank has been careful to explain that it cannot take a mechanical approach to policy in this context, even though we believe that interest rates are likely to move higher over time. In fact, we have described this as a risk-management process. If the economy builds more supply than usual, that will put downside risk on inflation; if less, that will create upside risk to inflation, and it is our job to balance those risks.

Of course, these are not the only issues we are watching closely. My colleague, Deputy Governor Tim Lane, listed many of these in his [progress report speech](#) last week. The issues include heightened uncertainty about future US trade policies, changes in inflation dynamics, wage behaviour and the impact of interest rates on the economy, given high levels of household debt. In this situation, we will remain cautious in considering future policy adjustments and dependent on incoming data to guide our assessments.

The future of work

So far, I have been talking about the untapped potential in today's economy. Let me now say a few words about the future of work, and what theory and history suggest may be in store.

We are at the start of what has been called the fourth industrial revolution. The integration of digital technologies in virtually every part of our lives is just getting started. Like all revolutions in human history, we can expect it to cause some significant dislocations. And like all economic progress since the beginning of time, it will involve creative destruction.

The first industrial revolution saw the introduction of the steam engine and led to the first factories and urbanization. This spawned the Luddite movement—textile workers who fought against the technology that threatened their livelihood.

In the second industrial revolution, electricity and the internal combustion engine changed the way goods could move around the globe. Countries began to specialize more, and international trade became key to connecting supply and demand.

In the third industrial revolution, advances in computing power and communications technology led to breakthroughs in the way information could be stored, processed and transmitted. The associated advances in global logistics enabled even greater specialization in production—the development of global supply chains—making the world even more dependent on trade to connect supply and demand.

Importantly, all of these revolutions caused hardship for people in industries that were disrupted. Yet, the enormous gains in productivity and the advances these new technologies spawned form the basis of our modern economy.

Whenever a groundbreaking technology arrives, a predictable pattern follows. The technology disrupts existing industries, leading to job losses. Governments can, and do, have in place safety-net policies to cushion the blow for people directly affected. And, as I mentioned before, new companies will exploit these technologies to create new types of jobs and entirely new industries. The hockey-stick growth and productivity gains help boost income, which flows throughout the entire economy. This in turn increases demand in every sector of the economy, creating new job opportunities and raising living standards.

Let me give an example from Canada's history. At Confederation, 151 years ago, about half of working Canadians were employed in agriculture in one form or another. As new technologies disrupted farming, fewer people were needed on the farm, yet farm output continued to expand. The same technologies created new opportunities for those who moved to cities. By the 1920s, only one-third of Canadians were still involved in agriculture. By the 1950s, that figure was down to 15 per cent and, today, it is less than 2 per cent. And, yet, agricultural output has more than tripled over the past century.

Here at the start of the fourth industrial revolution, new applications are creating jobs that were unimaginable just a few years ago. When most of us were kids, we did not dream about what we would create with a 3-D printer, because 3-D

printing had not been invented yet. Ten years ago, there were no smartphone app developers, or cloud computing engineers or social media managers.

It is human nature to focus on the negative. So, when we think about autonomous vehicles, for example, people tend to dwell on the jobs that will begin to disappear for truckers and taxi drivers. Clearly, governments need to support people who bear the brunt of technological change.

At the same time, we need to remember the positives—all the new jobs that will be created and the people who will be needed to build these vehicles, to write their software, to maintain the fleets once they are built, to redesign and construct roads, to coordinate traffic and so on. What is more, truly creative entrepreneurs will think about new ways to apply this technology, for example, to boost independence and productivity for many people living with disabilities.

Beyond this, we also need to remember the income-generating effect of these new jobs. The higher incomes that are generated create demand, not just in the new sectors but also for other goods and services throughout the economy, including such ordinary things as housing and home renovations. This income-generating effect is likely one factor behind Canada's strong job growth last year in sectors such as manufacturing and construction—jobs where the required skills are not too far removed from those required in sectors of the economy that are being disrupted.

The bottom line is this: throughout history, technological advances have always led to rising productivity and living standards, and they have always created more jobs than they destroyed. This is not to underestimate the pain that disruption can cause for individuals—we owe it to them to work hard to create pathways forward, so all can participate in the evolving economy.

Conclusion

It is time for me to conclude.

The Bank of Canada has plenty of reasons to care about the state of the labour market. It has become a good deal healthier over the past year or so, but we still see some slack remaining. We expect to see increased investment—both in existing and brand new companies—as well as labour market churn create more supply through higher productivity and employment. However, these uncertain processes entail both upside and downside risks to inflation, and our monetary policy remains particularly data-dependent as we balance those risks.

Of course, we are watching issues other than the state of the labour market and the evolution of supply. Yet, even with all the unknowns, there is good reason to be optimistic about the Canadian economy. These are exciting times. New opportunities, new technologies and new industries are all waiting right around the corner. The students here today will be the ones who will shape the future, with the tools developed through their imagination and ingenuity. I cannot wait to see how it turns out.