SPECIAL REPORT

TD Economics

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ESTIMATING LONGER-TERM GROWTH PROSPECTS IN CANADA'S PROVINCIAL ECONOMIES

Six Provinces Set to Grow by Less than 2% per Year over the Long Run

Highlights

- In this report, we project provincial economic growth for the 2016-21 period. We have honed in on this timeframe as it will take about three to four years for the economy to fully heal from the 2008-09 economic crisis; our interests also lie in assessing long-run trends absent of cyclical influences.
- We have based our projections on a series of assumptions about labour productivity and labour supply growth. Armed with these numbers, we conclude that an ageing populace and lacklustre productivity growth will weigh down all growth prospects. However, behind the headline, regional divergences will endure.
- Alberta is expected to retain its position at the top of the provincial leader board, with annual average real GDP growth of 2.5%. Saskatchewan should follow close behind with 2.3%.
- Ontario and British Columbia are slated to be tied for third place, each with 2.1% annual real GDP growth. Above-average labour supply growth, helped in part by a large share of immigrants who choose to settle in these provinces, will contribute to these showings.
- Québec and the Atlantic provinces will round out a tightly-packed bottom five, due in large part to acute demographic challenges in each location.
- The numbers we have projected are not set in stone – there are many upside and downside risks to our analysis. Going forward, a concerted effort across the public and private sector is likely required to ensure all Canadians enjoy the same standard of living, regardless of geographical location.

We received new Census estimates yesterday surrounding population changes that have occurred since 2006. These new data have reignited discussions about long-term economic challenges stemming from demographic shifts and an ageing population. In a report published just over two years ago, we assessed the potential of Canada's economy to expand over the longer-term, taking into some of these key structural influences. At the time, it was estimated that an ageing population and relatively lacklustre productivity trends would be instrumental in holding the economy's natural "cruising speed" to an annual rate of roughly 2% over the next decade, down from the long-run average rate of 2.6% posted over the past twenty years.

In this report, we take this analysis one step further by assessing the longer-term growth prospects across the Canadian provinces. Armed with these projections, we conclude that while no region will be immune to upcoming demographic challenges, significant regional differences should endure from coast to coast. The west will continue to reign supreme. Québec and the Maritime provinces will not only fail to make up ground over the next decade, but could actually see further slippage. In per capita terms (a reasonable proxy for standard of living), these regional variations remain present, but are less stark as population trends mitigate some of the differences in economic growth. However, a continued

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regional divide under the national landscape has important implications for income disparities, budgetary revenues and government spending pressures.

What drives long-term economic growth?

An economy's long-term growth potential can be boiled down to the sum of two components: (1) growth in the supply of labour (or employment); and (2) how effectively labour effort is translated into higher output (or gains in labour productivity). The first component is fairly easy to measure. It takes into account projected population growth, the underlying age structure of the population, and labour market participation rates. Immigration inflows to Canada and inter-provincial migration trends significantly influence this part of the growth equation. The second component is more challenging to quantify given the multitude of factors at play and their complex interactions. For example, tax policies are often thought of as an important influence on productivity levels, but so too are the quality of infrastructure, education, business investment intensity and the industrial makeup of an economy. Case in point, in mature resource-based economies, declining output rates as the resource is used up can weigh on productivity rates.

Historical growth numbers as context

To enhance their usefulness, projections need a point of comparison. We have chosen the 1990-2007 period as a benchmark with which we can contrast our long-term outlook. While the choice of years may seem arbitrary to some, this timeframe does capture two full economic cycles. For the reader's reference, we have summarized these historical rates in the accompanying chart.

During this period, average annual economic growth varied quite significantly across Canada. Newfoundland and Labrador trailed the rest of the provinces; Alberta was at the other end of the list. While the spread of GDP growth rates across the country may seem insignificant to some upon first glance, it is important to note that the differences compound over time. To best demonstrate this, consider the following two otherwise identical economies. An economy growing at a rate of 3.5% per year would double its level of GDP in 21 years. By contrast, an economy realizing a 1.2% annual growth rate would need to wait nearly three times as long for this same event to occur.

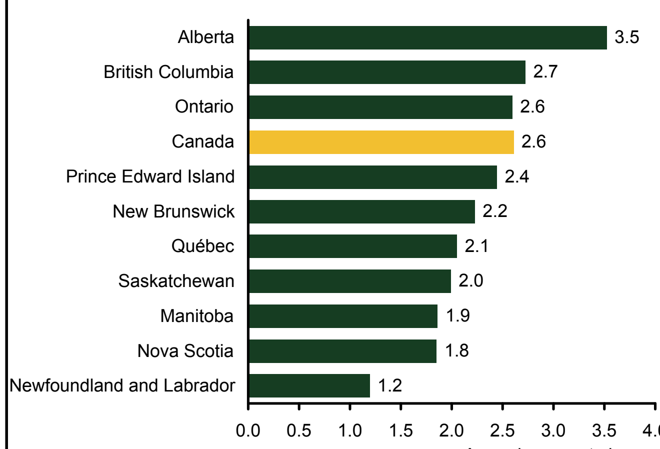
Recalling that long-term growth can be dis-aggregated into sub-components, we next highlight some of the more interesting regional takeaways:

- Despite recording strong growth toward the end of our benchmark period, annual average labour supply growth rates from 1990-2007 span a wide range. Newfoundland and Labrador came in at the bottom, with zero labour supply growth. Hibernia oil field began in 1997, and the project brought in gains in physical capital accumulation and human capital. The Terra Nova oil field commenced production in 2002 and White Rose three years later in 2005. These large-scale projects translated into a 1.2% annual increase in labour productivity, roughly in line with the national performance. The province also experienced some out-migration to other parts of the country, namely Alberta. With economic growth being driven exclusively by one sub-component, the province was a negative outlier on the economic growth rankings (1.2%).

- The Saskatchewan picture closely resembles that of Newfoundland and Labrador. Labour supply growth was anaemic at just 0.4% per year during 1990-2007. Productivity gains contributed another 1.6% per year, leaving the province with a 2.0% total economic growth tally. The labour supply part of the equation makes sense as Saskatchewan struggled to lure new immigrants to the region; according to Statistics Canada estimates, annual population growth, averaged zero, during 1990-2007. Productivity gains were recorded, however, as Saskatchewan began to secure its own natural resources, while reaping the spill over benefits from neighbouring Alberta.

- Québec, the Maritimes, and Manitoba rounded out the middle-to-bottom positions. We see that productivity

HISTORICAL AVERAGE PROVINCIAL ECONOMIC GROWTH: 1990-2007



Source: Statistics Canada, Haver Analytics.

gains among the group were tightly clustered (1.1-1.5%). Therefore, the difference in the headline GDP growth number among these five provinces stemmed primarily from labour supply growth. Québec generally had a lower labour force participation rate than the others in large part due to an older populace. However, this did not translate into lacklustre labour supply growth because of the province's ability to attract about 15-20% of all new immigrants admitted to Canada each year. Of the group, Prince Edward Island (PEI) recorded the highest labour supply growth of roughly 1.0% per year from 1990-2007. While annual population gains within PEI were not significant, the labour force participation rate did increase by more than three percentage points over the benchmark period. In comparison to both Québec and PEI, the remaining three provinces (Nova Scotia, New Brunswick and Manitoba) fell somewhere in the middle on labour supply growth front. In spite of their underlying differences, economic growth among the five provinces in this group came in at 1.8-2.4% per year.

- Economic growth in British Columbia (2.7%) and Ontario (2.6%) was evenly split across the labour supply and productivity sub-components. Both provinces saw annual population gains (1.2%-1.5%) come in above the national average (1.0%). Roughly 65-70% of new immigrants settle in these two provinces and this segment of the population generally has high participation rates. By contrast, productivity gains were more muted. British Columbia's productivity growth averaged 1.0% per year, but the lacklustre number vis-à-vis the national statistic may come from inherent difficulties measuring productivity gains in service-based economies and the slow pace of physical capital accumulation recorded. Manufacturing-heavy Ontario, on the other hand, increasingly faced pressure from competition from emerging markets. When the loonie was low relative to other currencies until mid-2003, manufacturers here at home benefitted. Productivity levels, however, fell relative to the period of a strong Canadian dollar

- The 1990s were a time of fairly low crude oil and commodity prices; from 2001-2007, we witnessed a resource boom accompanied by higher oil and commodity prices. The Alberta economic growth performance was impacted from both periods. When prices were fairly low, productivity gains and labour supply growth were above average as the province explored conventional oil fields. This type of activity is quite labour-intensive and labour shortages were often reported in the media, even with above average labour supply growth. However, as the province entered the 2000s, the energy sector began the transition to the extraction of non-conventional fields such as the oil sands. In this type of work, production and exploration are more complex and costly, as well as, less labour-intensive. Therefore, we saw productivity gains decelerate during the first part of the decade. Overall, Alberta recorded an annual average 3.5% real economic growth rate from 1990-2007, putting it nearly a percentage point ahead of the other provinces.

Projecting long-term provincial growth

In looking to the future, we specifically hone in on the 2016-21 period. We landed in on this timeframe because our interests lie in the notion of the estimated cruising speed of provincial economies. By 2016-21, the wounds from the recent downturn will have healed and excess slack created by the recession will have been absorbed. While this timeline may be too far out for some, it could take up to three to four years from now for the healing process to run its course in all parts of the country. However, for those readers more interested in the near- to medium-term forecasts for each province, our Provincial Economic Forecast can be found here.

Labour supply growth

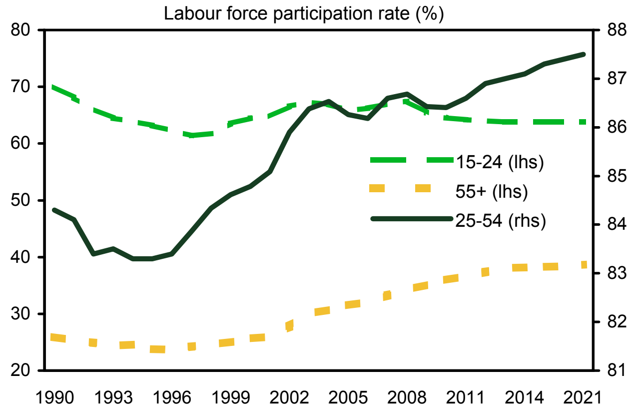
Over the long-run, labour supply tends to grow in line with the size of the labour force. For this reason, we use the latter in our projections. Underlying these estimates are status-quo population projections generated by Statistics

ANNUAL POPULATION GROWTH ACTUAL AND PROJECTIONS (Average Annual Per Cent Change)

	1990-2007	2016-2021
Canada	**1.0**	**0.9**
British Columbia	1.5	1.2
Alberta	1.8	1.4
Saskatchewan	0.0	1.0
Manitoba	0.4	0.8
Ontario	1.2	0.9
Québec	0.5	0.5
Newfoundland and Labrador	-0.7	-0.1
Prince Edward Island	0.3	0.3
New Brunswick	0.2	0.1
Nova Scotia	0.0	0.1

Source: Statistics Canada.

NATIONAL LABOUR FORCE PARTICIPATION RATES INCORPORATED INTO PROJECTIONS



Source: Statistics Canada. Projections by TD Economics.

Canada. While these numbers are based on a July 1, 2009 estimate date, it will take some time for the new population projections to be published. Still, it is unlikely that new projections based on 2011 Census figures would alter these forecasts, our implications or conclusions substantially.

We have used the "medium scenario" series that extends out to 2036 which assumes annual immigration, inter-provincial migration and emigration rates remain consistent with recent history. To these demographic trends, we have made a series of assumptions concerning the labour force participation rates for three different age cohorts.

- For young workers (aged 15-24), we expect a gradual decline in the participation rate as a result of stay in-school initiatives, combined with, an increasing importance placed on human capital acquisition by employers.

- After a noticeable surge in the 1970s owing to the heightened contribution of females to the labour force, the participation rate of middle-age workers (aged 25-54) will continue to edge up going forward. However, we expect any gains to be realized at a much more subdued pace than witnessed historically.

- The last cohort represents workers aged 55 and older. Policy initiatives such as the end of mandatory retirement, and changes to pension plan regimes precluding some degree of labour force attachment, should boost the participation rate of these workers.

In the chart on the left, we graphically present the assumptions made at the national level. We have implicitly built in these trends onto the prevailing rates for each respective province. The impact of the changes in labour supply varies across the country. With their strong pull of international and inter-provincial migrants, labour force growth is expected to be positive, but modest, in most of the west and Ontario. In particular, Saskatchewan should also benefit from a larger-than-average Aboriginal population, which tends to have higher fertility rates than other communities. Population growth strength is not expected for the eastern part of the country. The relatively weak total population projections in Québec and the Atlantic provinces suggest that labour force growth may actually be negligible or depending upon the province, even a drag on potential growth output.

Labour productivity gains

Compared to projecting demographics and labour force trends, forecasting productivity gains is inherently more challenging. This is because productivity is a function of a number of complex factors and complicated inter-linkages. For the purposes of projecting long-term provincial economic growth forecasts, we have assumed that the average productivity gains witnessed in 1990-2007 continue to prevail throughout 2016-2021. The historical period is long enough to be a reasonable basis on which to build our analysis.

NATIONAL AND PROVINCIAL LONG-TERM ECONOMIC GROWTH
(Annual Per Cent Change)

	1990-2007			2016-2021		
	Growth in Labour Supply	Gains in Labour Productivity	Long-Term Economic Growth	Growth in Labour Supply	Gains in Labour Productivity	Long-Term Economic Growth
Canada	**1.3**	**1.3**	**2.6**	**0.7**	**1.3**	**2.0**
British Columbia	1.7	1.0	2.7	1.1	1.0	2.1
Alberta	2.3	1.2	3.5	1.3	1.2	2.5
Saskatchewan	0.4	1.6	2.0	0.7	1.6	2.3
Manitoba	0.7	1.2	1.9	0.5	1.2	1.7
Ontario	1.3	1.3	2.6	0.8	1.3	2.1
Québec	0.9	1.1	2.1	0.3	1.1	1.4
Newfoundland and Labrador	0.0	1.2	1.2	-0.1	1.2	1.1
Prince Edward Island	1.0	1.5	2.4	-0.1	1.5	1.4
New Brunswick	0.7	1.5	2.2	-0.4	1.5	1.1
Nova Scotia	0.7	1.2	1.8	0.0	1.2	1.2

Source: Statistics Canada, Haver Analytics. Projections by TD Economics.

Bringing everything together and interpreting the results

To arrive at our long-term economic growth projections, we have summed the labour force growth and productivity estimates previously outlined. This is simply a mechanical exercise, as productivity gains are assumed constant and we have made assumptions to arrive at labour supply growth estimates.

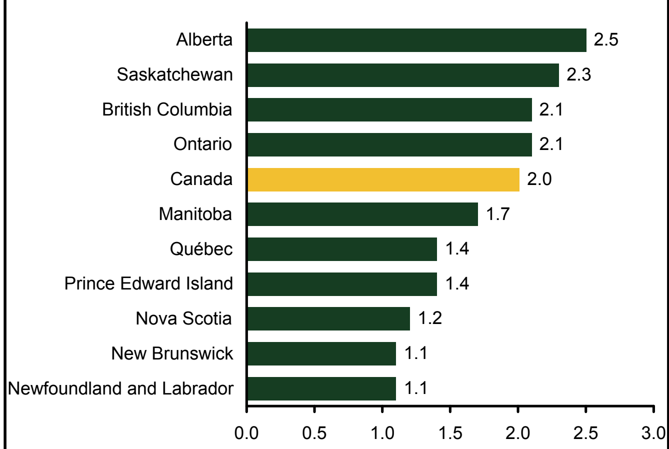
Relative to the numbers during 1990 2007, we take note of some of the pertinent trends expected to materialize.

- As was the case in our benchmark period, Alberta will continue to be the growth leader. It is expected to clock in at 2.5% over 2016-21 period.

- Saskatchewan and Manitoba have moved up in relative rankings to second and fifth spot respectively. What's more, Saskatchewan is the only province set to record higher annual economic growth (2.3%) in 2016-21 relative to the benchmark period (2.0%). The move up in rankings in both provinces can be explained by better labour supply growth. If we rewind the clock back ten years ago, Toronto, Vancouver and Montréal were home to four out of every five new immigrants to Canada. Now, that statistic has slipped to three in five; Saskatoon, Regina and Winnipeg are successfully vying for a larger slice of the total pie.

- Ontario and British Columbia are tied for third spot in 2016-21, with GDP growth of 2.1%. While their placement on the provincial growth ladder has not considerably changed, their absolute growth rate is set to decrease by roughly half a percentage point.

ANNUAL PROVINCIAL LONG-TERM ECONOMIC GROWTH: 2016-2021



Note: Projections by TD Economics.

REAL GDP PER CAPITA ACTUAL AND PROJECTIONS (Average Annual Per Cent Change)	1990-2007	2016-2021
Canada	**1.6**	**1.2**
British Columbia	1.2	0.8
Alberta	1.7	1.1
Saskatchewan	2.0	1.3
Manitoba	1.4	1.0
Ontario	1.4	1.2
Québec	1.5	0.9
Newfoundland and Labrador	1.9	1.2
Prince Edward Island	2.1	1.1
New Brunswick	2.1	1.1
Nova Scotia	1.8	1.1

Source: Statistics Canada. Projections by TD Economics.

- The expected outflow of individuals to other parts of the country, combined with struggles to attract international migrants, weigh down the labour supply prospects for Québec and the Atlantic provinces. Our projections have Québec clocking in at a mere 0.3% labour supply growth over 2016-21. The numbers for the Atlantic provinces are not much better. Combining these disappointing numbers, with lacklustre productivity gains, results in economic growth range from 1.1% to 1.4% per year in each of these provinces.

Factoring in population changes

GDP growth expressed on a per capita basis is typically interpreted as a proxy for living standards. Based on our analysis, national real economic growth per capita is set to decline from an annual average 1.6% from 1990-2007 to 1.2% in 2016-21. At the regional level, all provinces will see growth in real GDP per capita, but the rate of increase will be slower than was the case over the past two decades. Put another way, there will be fewer new resources per person with which to support higher living standards.

Regional differences endure using the per capita measure, but the gap between leader and laggard is less pronounced than was the case with economic growth alone. During 1990-2007, the gap between the province that ranked first and last was 0.9 percentage points. Over our forecast horizon, the spread is set to shrink by roughly half to 0.5 percentage points.

The ranking order among the provinces using the per capita measure is different than in the previous section because living standards take into account projections in both economic growth and population changes. Saskatchewan edges out all of the provinces using the per capita measure helped in part by resource-driven economic growth and average labour force growth. Newfoundland and Labrador catapults into second spot, which is markedly different than the tenth place ribbon the province received on the economic growth report card. With nearly zero to slightly negative population growth on tap, the growth per capita measure gives the province a distinct advantage. Ontario and British Columbia round out the bottom two positions. In both cases, each province is set to record only modest economic growth. However, the same is true for population growth as well. As a result, the ratio of the two measures effectively cancels each trend out.

Implications of regional income disparities

A key takeaway from this exercise is that the balance of economic power will continue to gravitate westward in the future. In theory, lower income regions tend to make up ground on higher income regions in per-capita terms over time – so-called "convergence". And in the Canadian context, some progress on this front has been recorded over the past 25 years – especially between the Atlantic region and Ontario. However, our status-quo projections imply that Québec and the Maritime provinces should not make up any ground over the next decade. In fact, they could actually experience some slippage relative to the leaders.

With regional differences not going away any time soon, we turn our attention to the resulting implications. To start, the federal Equalization program aims to offset any differences in the ability of each province to provide public services and/or raise revenue. Given our projections, the program should retain its redistributive function over the 2016-21 period. Because the total funding pot carries with it both a ceiling and floor for annual program cost increases, federal government coffers should not face undue pressure from Equalization relative to where the program sits today. Next, varying labour supply growth projections across the country in 2016-21 indicate that employment conditions and even the overall housing market performance will likely favour the west and Ontario versus other provinces.

An ageing population will undoubtedly add pressures to public expenditures for public pension programs, health care and low-income senior benefits. A moderate economic growth environment will also restrain the revenue intake side of the equation. Pressure to both spending and revenues will place significant strain on the overall budgetary balance. These pressures will be most acute for Québec and eastern Canada.

Risks to these projections

The analysis that we have undertaken is a projection and not a forecast. This simply means that we have made many status-quo assumptions and assumed long-term trends continue to prevail. Case in point, we have been reluctant to build in a long-term productivity boom into our projections given the weak track record of provinces. In addition, an ageing population could accompany a noticeable shift to capital relative to labour over the long haul.

Governments have long acknowledged the long-term economic challenges in store and have made several strides to improve the policy environment. Examples of such measures include corporate tax reductions at the provincial and federal level and the Harmonized Sales Tax in Ontario. Indeed, provinces enjoy some of the lowest business marginal effective tax rates in North America. The western provinces have also implemented enhanced labour mobility and trade agreements in an effort to reduce barriers. Also, the 2016-21 period will likely begin to reap the rewards of the run-up in infrastructure and education outlays made in the last few years. While we accept the fact that a noticeable effort has already been expended, there is often a long lag between the point in time public policy and implemented to when it seeps into productivity measurements.

While governments have done many things right recently, we are embarking on an era of fiscal restraint. At present, only two provinces are in surplus situation, and the combined federal and provincial deficit-to GDP for fiscal year 2011-12 sits at 3.3%. Depending upon how governments choose to eliminate their deficits and over how many years, cost-cutting or revenue-generating could be a negative deterrent to the long-term economic growth profile.

On the productivity front, there are still many areas to address to boost our long-term prospects. For instance, there could be improved efforts to effectively integrate newcomers into Canada's job market. Governments and businesses could strive to grow trade relationships more globally, as opposed to focusing the bulk of our efforts south of the border. Lastly, the appreciation of the Canadian dollar relative to the greenback has cheapened the cost of American-made capital equipment. As a result, the higher currency has put pressure on export-oriented Canadian businesses to come up with new ways to stay viable. To date, investment growth has not responded to the extent implied by these dramatic incentive changes. However, there may be long lags associated with these moves that might begin to bear fruit. A coordinated and integrated public and private sector effort to address the long-run economic challenges could help enhance the competitiveness and growth environment.

To come up with provincial labour supply projections, we have applied fairly conservative labour market participation rates to the age cohort of fifty-five and older. This makes sense given recent discussions of inadequate retirement income savings and growing labour shortages of younger workers. If participation rates continue to edge up relative to our base line case, there would be upside risk to our economic growth projections. The same is true if national immigration policy is loosened or if some provinces are more successful at luring and integrating newcomers than others. In fact, in the absence of international immigrants, the nation would experience an outright population decline. On a more positive note, a growing labour force participation among the Aboriginal community could also help alleviate some of the burden on the labour force and demographic front.

Resource-based provinces are expected to lead the way over our forecast horizon. We have implicitly assumed that commodity prices stay close to their recent levels. Any major deviation from this assumption could magnify or shrink the regional disparities across the country.

There are also specific risks to individual provincial projections. For example, the recent $25 billion contract awarded to Irving Shipbuilding Inc. in Nova Scotia could bring with it out-sized productivity gains and greater labour supply growth than what we have assumed in our status quo analysis (for details of the near-term economic impacts of the project, readers can find our report here). Prior to the contract announcement, Statistics Canada had projected that the province would record annual population increases of just 0.1% from 2016-21. In our analysis, we have assumed labour supply growth to be more plentiful than in the absence of the contract, but a significant turnaround in momentum is required to turn this sub-component into an important driver for long-term economic growth. By contrast, productivity gains could experience upward pressure as machinery and equipment are acquired and shipbuilding production gets underway.

The tenure of resource-based provincial leaders depends heavily on resource extraction schedules. Based on provincial government documents and industry organization publications, Alberta is not expected to deviate from the fairly labour-intensive oil sands extraction process until after 2021. In contrast, oil production in eastern Canada (primarily through Newfoundland and Labrador offshore fields) has been declining for some time. Hebron Field is expected to come online in 2017, which should help reverse some of these trends. In their reference case, the National Energy Board also assumes that a new field will be discovered in the province and commence operation by 2022. No supporting details were provided on possible location. Since 2022 extends beyond our forecast horizon, there is some downside risk to the province's productivity levels relative to the numbers included our analysis. This is because these types of gains tend to wane as resource extraction matures.

Bottom line

The moderate provincial long-term growth outlook is a result of lower labour supply and relatively modest productivity gains. No province will be immune from these trends. Still, our analysis suggests that some provinces will perform better than others. The ability to draw international and inter-provincial migrants will help the west and Ontario lead the provincial economic growth pack in 2016-21. By contrast, growth in Québec and the eastern provinces will be almost exclusively driven by productivity gains. We recognize that much has been done by the public sector to improve overall labour force participation and to spur productivity. But, only moderate growth prospects over the next ten years and the recent Census data suggest that the subject will not go away any time soon.

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