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# Information Bulletin

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## **Recession in Review: The Alberta Economy and Employment**

### *“Weathering the Storm”*

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## Executive Summary

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- The Canadian economy was technically in recession for the fourth quarter of 2008 and the first quarter of 2009 over which GDP growth rates were -6.6% and -8.5%, respectively.
- In Alberta, crude oil receipts, manufacturing sales, and wholesale trade all fell precipitously during the recession but have rebounded slowly since. The number and value of building permits issued, on the other hand, have returned to pre-recession levels after a marked decline.
- Leading macroeconomic indicators, such as money supply growth, TSE 300 stock price index, and wholesale inventories suggest that business performance, consumer confidence, and thus final demand are on the rise.
- The aggregate unemployment rate in Alberta increased almost 4% during the recession, peaking at 7.7% in August 2009, two months after the recession technically ended. In January 2010, the unemployment rate in the province was 6.8%, 3.0% higher than in July 2008.
- The oil and gas, construction, and manufacturing sectors were the hardest hit, with unemployment rates peaking at 9.7%, 12.9%, and 10.3%, respectively. The construction and manufacturing sectors have been the slowest to recover, with January 2010 unemployment rates of 7.6% and 6.6% higher than pre-recession levels.
- Total employment in Alberta underwent a 'double dip' in 2009. Roughly 50,000 jobs were lost from November 2008 to March 2009. In January 2010 roughly 73,800 fewer people were employed than before the recession, the most since the economic downturn. Seasonal adjustment moderates employment fluctuations, suggesting that only 25,600 of the jobs lost over the last year and a half were due to the recession.
- In the Alberta oil and gas sector 19,000 jobs have been lost since July 2008.<sup>1</sup> For the construction, manufacturing, wholesale trade, and professional services sectors these figures are 23,400, 34,600, 12,600, and 19,200, respectively.
- Labour force participation in Alberta has fallen 3.2% since July 2008. However, since the working age population increased by 99,500 over the same time, the labour force decline was only 17,463 persons.
- Average weekly EI payments have fallen slightly since they peaked at over \$380/week in May 2009. While the number of EI beneficiaries was still 30,000 higher in November 2009, than in July 2008, this is a substantial decline from the more than 60,000 that existed in August 2009. More people are working albeit, on average, fewer hours. Unemployment and underemployment are still major issues and are likely to be largest economic hurdles of 2010.

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<sup>1</sup> Not seasonally adjusted.

- The Government of Alberta's *Budget 2009* forecasts for employment and unemployment rates in 2009 were overly optimistic, with employment actually falling by 10,000 more jobs than expected, and the unemployment rate reaching 0.8% higher than forecasted.
- The 2010-11 forecasts of an additional 15,000 jobs being created should be viewed with caution, given the experience of actual results compared to the budget forecasts. Given modest economic recovery trends, with occasional monthly setbacks, employment may not rebound completely and unemployment rates, equally, may be persistently more than desired.

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## 1. Introduction

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Over the past year and a half, Canada, along with the rest of the world, experienced an economic downturn, the likes of which had not been seen since the Great Depression of the 1930s. After more than a decade of relatively stable economic growth that culminated in the housing market bubble collapse in the U.S., the world financial system, and subsequently the world economy began to fall apart. Massive, previously unseen, fiscal stimulus expenditure in the form of both infrastructure spending and 'bailouts' was undertaken in the U.S., and to a lesser degree in Canada, in order to stabilize the banking and financial systems, spur demand, and carry the economy on the path of expansion. Now, in the first months of 2010, many economic indicators indicate that the worst has passed and Canada is on the path to economic recovery, but the process is likely to be long.

Such indicators, however, must be interpreted with caution. Although aggregate output, as seen below, grew in the second and third quarters of 2009, after two quarters of negative growth, in which Canada was in the textbook definition of a recession, labour force statistics still suggest that recovery is occurring at a slow pace, and many jobs are yet to be 'reborn'. Furthermore, government deficit and debt problems, especially those in the U.S., do not bode well. Roughly 75% of Canada's exports and 87% of Alberta's exports (2008 values) are destined for the U.S., so a slumbering American economy is sure to have adverse impacts north of the border.<sup>2</sup>

In light of these facts, what follows is a summary of the recession, from both the output and input sides of the Alberta economy. First, aggregate output data is analyzed, then leading macroeconomic indicators are presented. These two sections paint a relatively positive picture of recovery. Following is an analysis of the labor force statistics, typically lagging variables, which tell a very different story. Sector analysis is included for the oil and gas, construction, manufacturing, wholesale, transportation and warehousing, and professional and technical service sectors. All reported figures are unadjusted unless otherwise indicated primarily because seasonally adjusted figures for most indicators are typically published by Statistics Canada with a three month lag.

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<sup>2</sup> Source: Trade Data Online (TDO), Industry Canada.

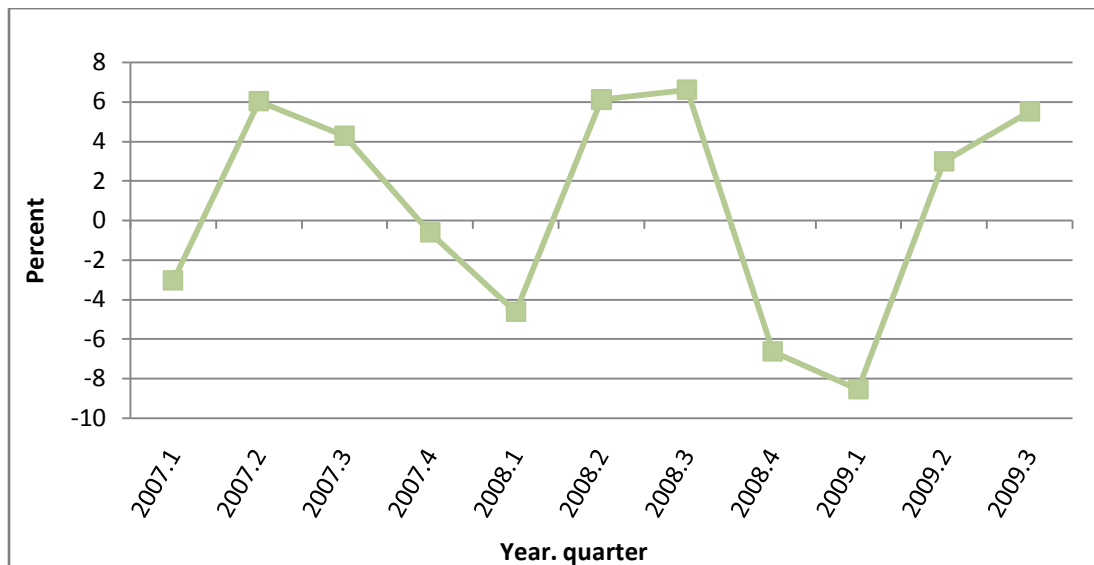


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## 2. Aggregate and Sectoral Output Indicators

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Figure 2.1: Canada's GDP Growth Rate\*



\*Actual figures and available in Appendix 1.

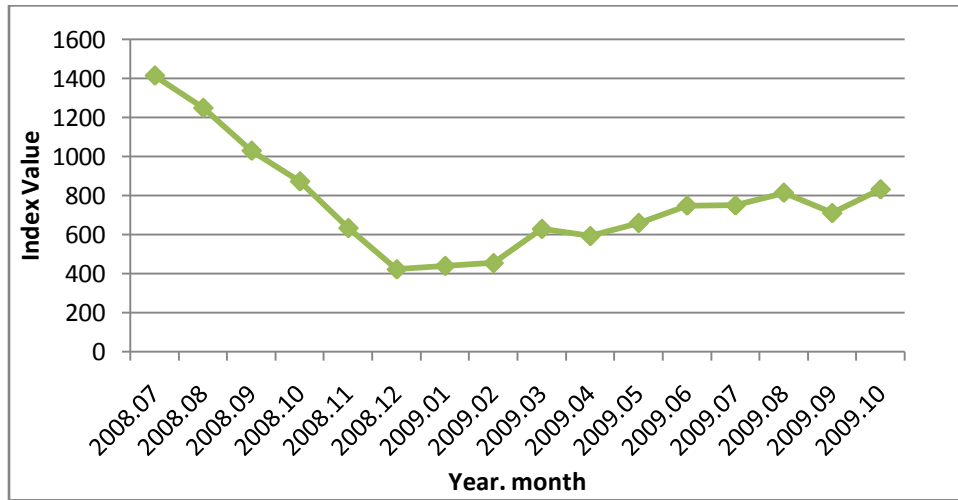
As mentioned above, Canada was technically in a severe recession for the last quarter of 2008 and the first quarter of 2009 over which time aggregate economic output declined 15.1%. Since then, GDP growth has been positive, and has almost returned to the relatively high level previously seen in the second and third quarters of 2008, prior to the economic slowdown.

In the oil and gas, construction, manufacturing, and wholesale sectors, similar patterns are observed.<sup>3</sup>

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<sup>3</sup> Figures for the transportation and warehousing and the professional and technical services sectors are not included due to a lack of requisite data.

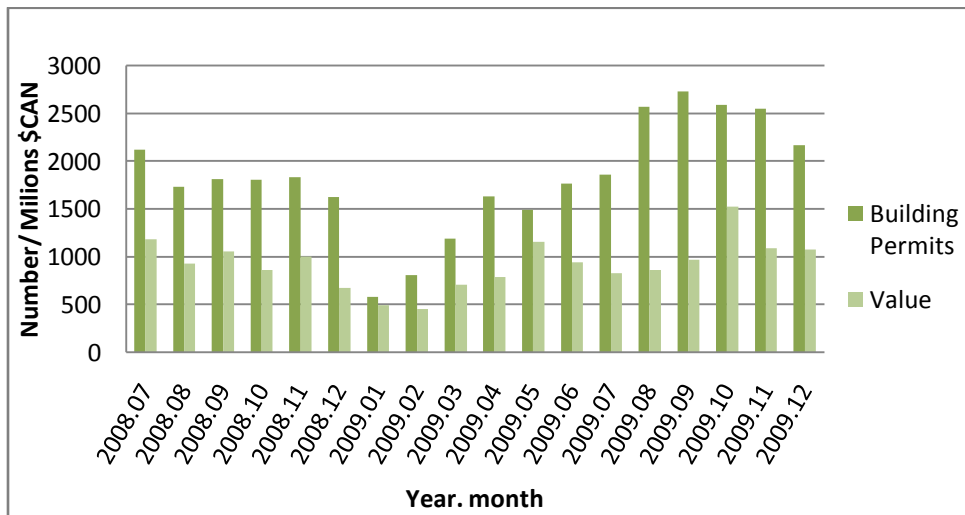
**Figure 2. Alberta's Crude Oil Receipts\***



\*Actual figures and sources available in Appendix 1. This index is the product of a crude oil price index (1997=100) and the volume of crude oil receipts in cubic metres.

First, in the oil and gas sector receipts for crude oil, as measured by the index in Figure 2.2 (above), began to fall precipitously until they finally bottomed in the last quarter of 2008, when the recession was in full swing. Total receipts, hindered by low demand and prices, have only recovered slightly since then.

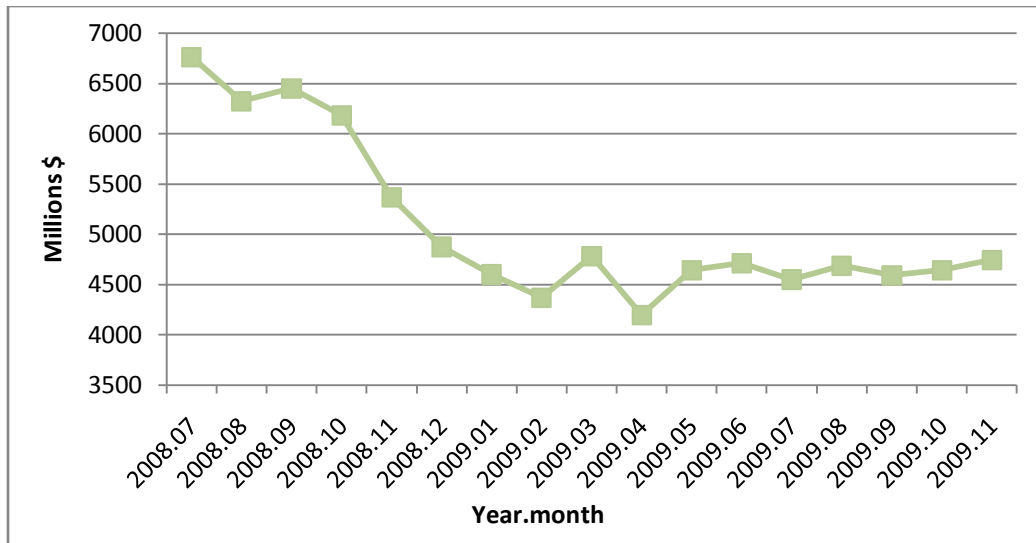
**Figure 2.3. Building Permits in Alberta\***



\*Actual figures and sources available in Appendix 1.

In the construction sector (see Figure 2.3, above), the number of building permits, fell to a monthly low of 578 in January 2009, then rebounded strongly only to decrease again in the fourth quarter of 2009. This was partially due to the seasonal nature of the construction industry. In December 2009, the number of building permits issued surpassed that in July 2008 by 48 permits. Similarly, the value of all building permits issued in Alberta fell from nearly \$1.2 billion in July 2008, to under \$500 million in the first quarter of 2009. Since then, the value of permits had rebounded, and was roughly \$100M less in January 2010, than in July 2008.

**Figure 2.4. Manufacturing Sales in Alberta\***



\*Actual figures and sources available in Appendix 1.

The manufacturing sector (see Figure 2.4, above) was hit particularly hard in this recession. Aggregate sales in Alberta fell roughly \$2 billion in the seven month period from July 2008 to February 2009. While subsequent declines have been curtailed and output has stabilized, manufacturing sales near the end of 2009 were only 70.2% of their pre-recession levels.

Figure 2.5. Wholesale Trade in Alberta\*



\*Actual figures and sources available in Appendix 1.

Similarly, the wholesale sector (Figure 2.5, above) in Alberta witnessed marked declines in activity, although the decline did not appear to start until October 2008, the first month Canada was technically in a recession. Wholesale trade fell from a high of \$6.5 billion in October 2008 to a low of \$4.5 billion in August 2009, and has since moderately stabilized.

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### 3. Macroeconomic Leading Indicators

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Figure 3.1. Money Supply Growth in Canada\*



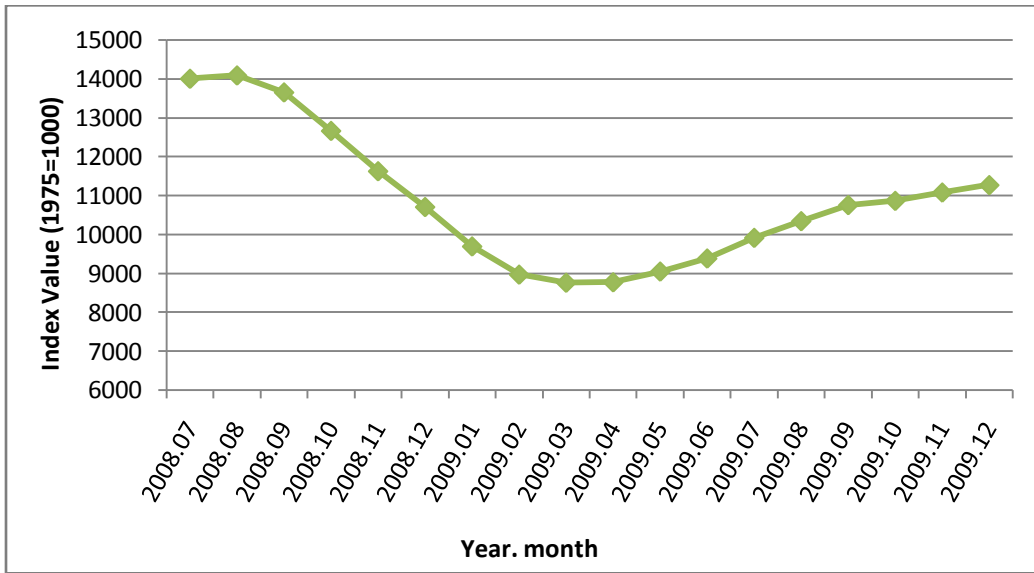
\*Actual figures and sources available in Appendix 2.

In response to the economic downturn in the U.S., the effects of which Canada was fully yet to experience, the Bank of Canada (BOC) began to lower interest rates to historic lows in an effort to stimulate the economy through expansionary monetary policy. From February 2008 to December 2009, the average monthly bank rate dropped from 3.08% to 0.37%.<sup>4</sup> Lower interest rates provide spending and borrowing incentives, which in turn increase the growth rate of the money supply. As can be seen in Figure 3.1 above, starting in July 2008, the growth rate of the money supply in Canada shot upwards, peaking at 1.75% in January 2009, when the recession was in full swing. Subsequently, growth rates slowed as the economy started to recover.

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<sup>4</sup> Derived from CANSIM series V39078.

Figure 3.2. TSE 300 Stock Price Index\*



\*Actual figures and sources available in Appendix 2.

The stock market was hit particularly hard in the recession, as can be seen in its precipitous decline starting in the fall of 2008 (see Figure 3.2 above). The TSE 300 stock market index bottomed in the third month of 2009, the last month of the technical recession. Since then, stock prices have been slowly increasing, a welcome sign of recovery.

Wholesale inventories (Figure 3.3), another leading indicator, tell a similar story. Starting in the fall of 2008, as the economy began to slide into recession, wholesale inventories in Canada began to rise, eventually increasing roughly \$4 billion by March 2009 the last month of the recession. Since then, inventories have been steadily decreasing.

Figure 3.3. Wholesale Inventories in Canada\*



\*Actual figures and sources available in Appendix 2.

While these three leading indicators are certainly not an exhaustive list, they do shed some light into the timing and nature of the economic decline and recovery. These indicators, pre-recession, signalled the economic downturn to come, and similarly display the post-recession subsequent market upturn. The increasing money supply growth rate demonstrates that the Bank of Canada correctly and successfully implemented expansionary monetary policy, while a recently rising TSE 300 stock price index and falling wholesale inventories suggest that business performance, consumer confidence, and thus final demand, are rising.

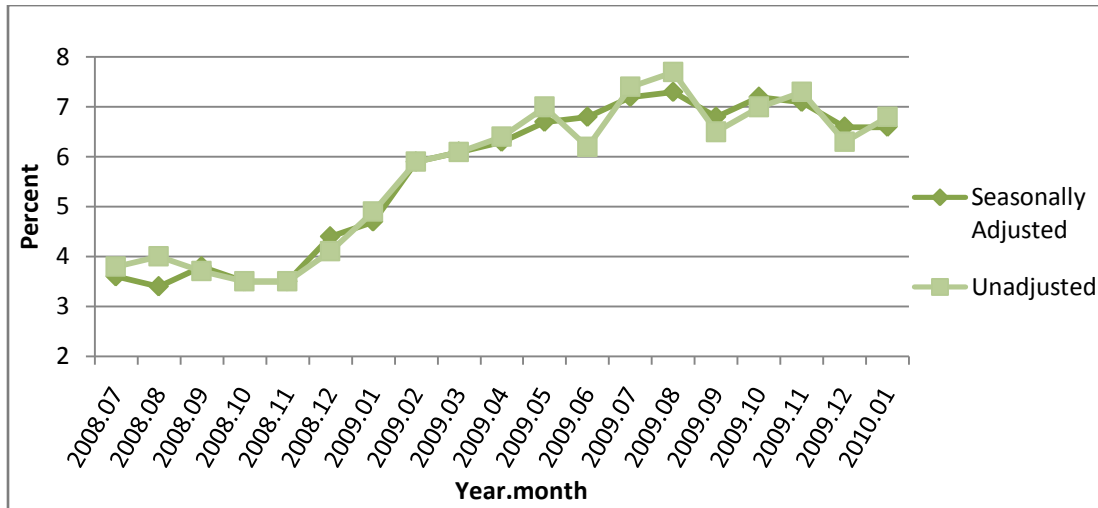
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## 4. Alberta Unemployment Rates and Employment

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The other half of the story is not so optimistic. The labour force data suggest that, although the economy is recovering, many jobs have been lost and employment growth is slow, lagging behind other macroeconomic indicators. Such trends are evident in Figure 4.1 - 4.7, below. Although technically the recession ended in the second quarter of 2009, aggregate unemployment continued to rise until November 2009, and has subsequently only fallen slightly, remaining 3.0% higher than in July 2008.

**Figure 4.1. Unemployment Rates in Alberta\***

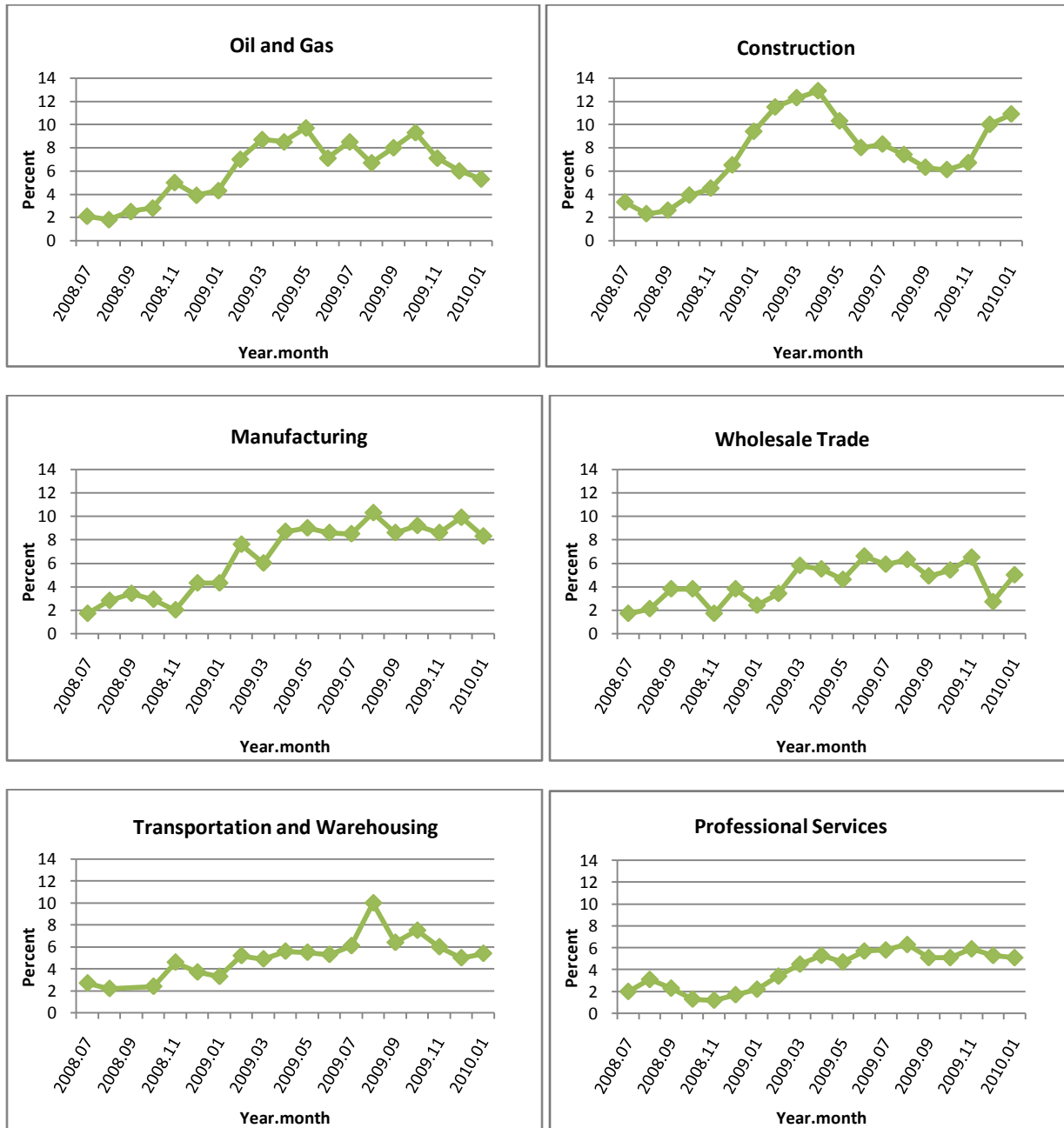


\*Actual figures and sources available in Appendix 3.

Sector by sector, the same story repeats, although the extent of the damage varies. The oil and gas, construction, and manufacturing sectors were the hardest hit, with unemployment rates peaking at 9.7%, 12.9%, and 10.3% respectively. The unemployment rate in the construction sector has fallen from historic highs in the waning months of 2009, but still remains 7.6% higher than before the recession. In the transportation and warehousing sectors, the unemployment rate has fallen considerably since the trough of the recession, and is now within three percentage points of the pre-recession level at 5.4%. The unemployment rate in the manufacturing sector still remains almost 7.0% higher than in July 2008. In the wholesale trade sector, unemployment rates, after falling considerably from a high of 6.6% in June 2009, to 2.7% in December 2009, rebounded to 5.0% in January 2010. The professional services sector saw a gradual increase in its unemployment rate which has since leveled off at around 5%. For all sectors, however, unemployment rates are still higher than they were pre-recession.



Figures 4.2-4.7. Alberta Unemployment Rates by Sector\*



\*Actual figures and sources available in Appendix 3.

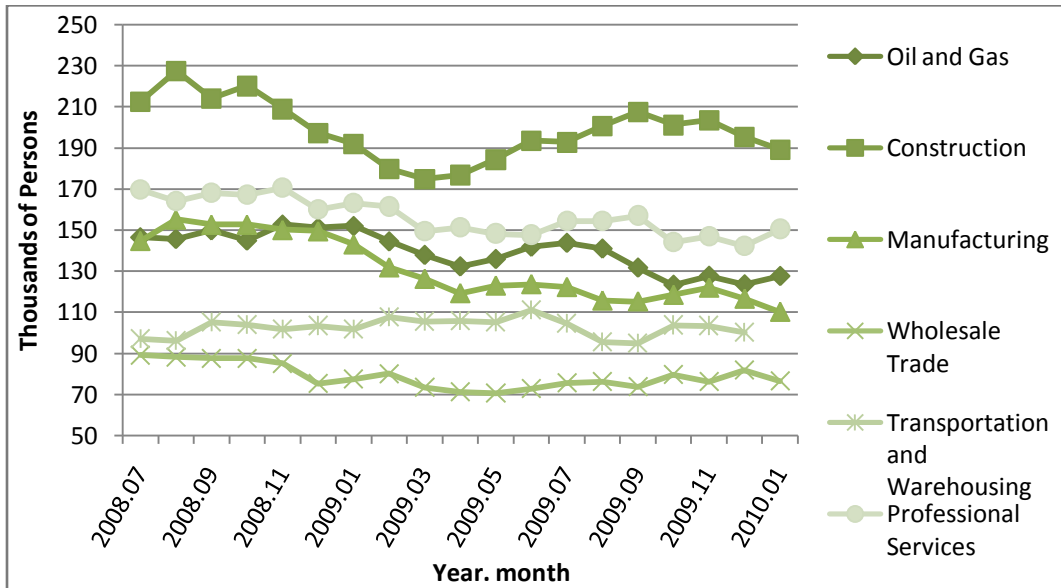
The number of employed persons is related to unemployment rates. While the latter tells us percentage of persons in the labor force who are out of a job and actively seeking work, the former tells us the total number of employed persons. Employment numbers can tell a different story if discouraged workers drop out of the labor force, in which case unemployment rates may hide employment declines. Total employment (see Figure 4.8, below) in January 2010, was the lowest since the beginning of the recession, with 1,961, 200 persons employed, 78,300 fewer than in July 2008. However, in December 2009, this figure was only 48,400, implying that roughly 30,000 jobs were lost in a month. When adjusted for seasonality, 25,600 fewer persons were employed in January, 2010 than in July, 2008, ( a loss of 7,700 in January 2010) Employment losses peaked at 69,100 in August 2009, relative to the seasonally adjusted employment high of 2,044,000 in October 2008. The ‘double dip’ nature of the employment figures for Alberta is interesting, with the construction and manufacturing sectors assisting second and third quarter 2009 employment growth which subsequently declined. Unadjusted (seasonally adjusted) employment was 72,900 (25,400) below pre-recession levels in October 2009, which suggests this employment swing was primarily due to seasonality.

**Figure 4.8. Total Employment in Alberta\***



\*Actual figures and sources available in Appendix 3.

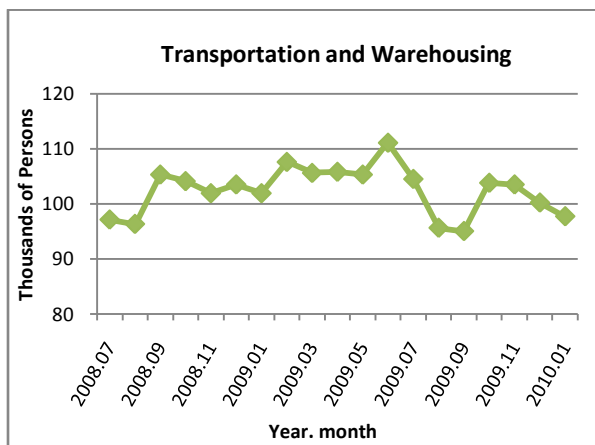
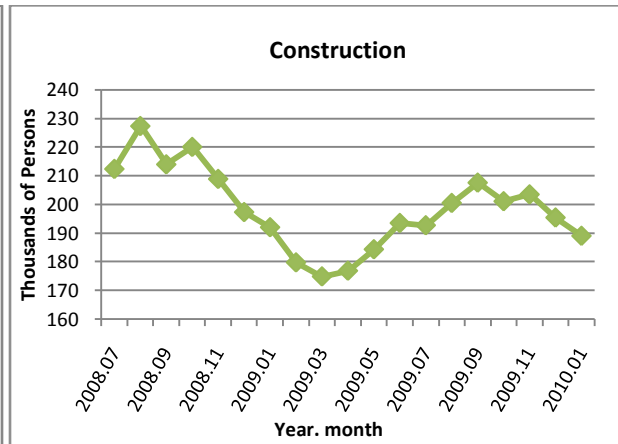
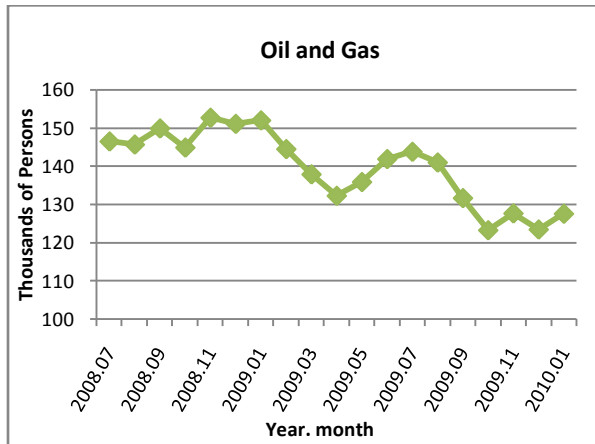
Figure 4.9. Employment by Sector in Alberta\*



\*Actual figures and sources available in Appendix 3.

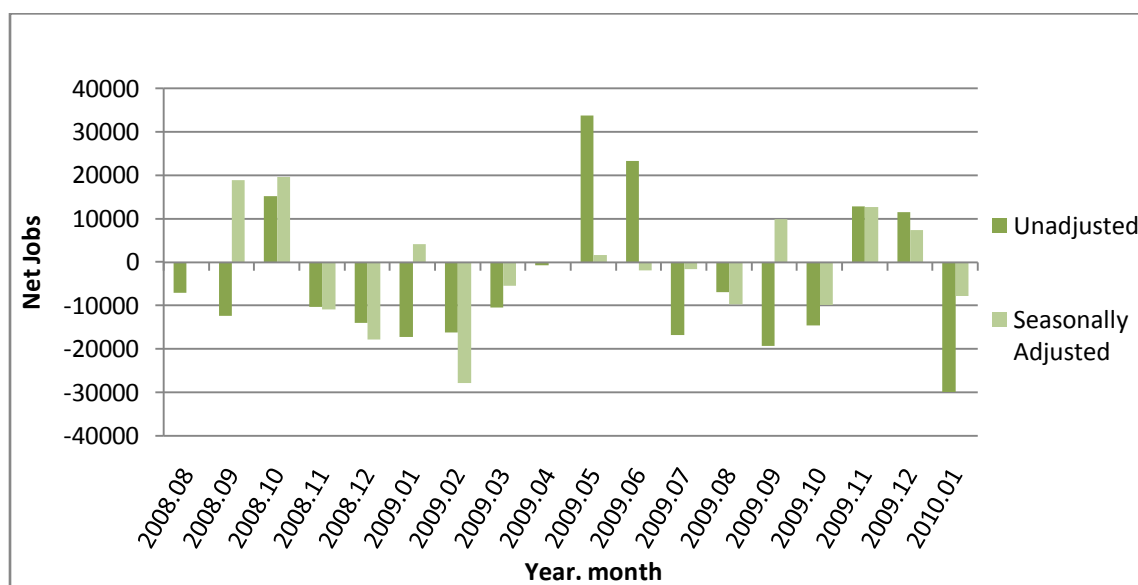
In the oil and gas sector, roughly 19,000 jobs have been lost since July 2008. For the construction, manufacturing, wholesale trade, and professional services sectors these figures are 23,400, 34,600, 12,600, and 19,200 respectively. Employment in the transportation and warehousing sector has actually increased by 600 jobs. Higher unemployment rates in these first five sectors can account for the decline in employment. In the transportation and warehousing sector, however, the unemployment rate is higher in the second period, suggesting that more persons have entered this sector for employment. See Figures 4.10 – 4.16 below.

Figures 4.10-4.16. Employment by Sector in Alberta\*



\*Actual figures and sources available in Appendix 3.

**Figure 4.17. Monthly Employment Changes in Alberta**



\*Actual figures and sources available in Appendix 3.

Month-to-month net changes in employment also provide further insight into how the overall economy and certain sectors were affected by the economic downturn.

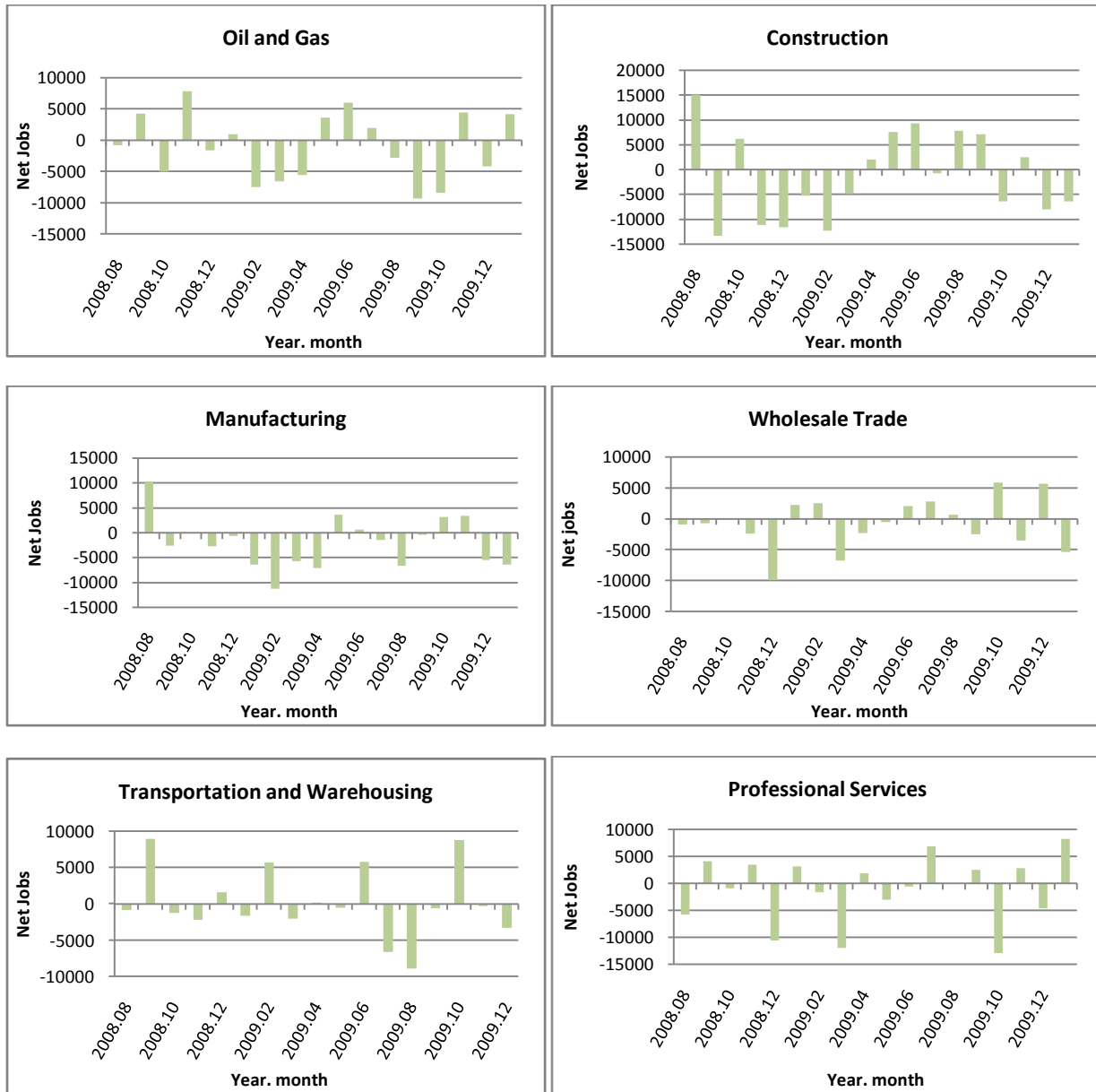
As can be seen in Figure 4.17 above, unadjusted aggregate monthly employment for the province of Alberta fell by more than 10,000 jobs each month from November 2008, to March 2009, during which time the province was in a full recession. Once the figures are seasonally adjusted, 57,700 jobs were lost in the five month period.

The following rebound in total employment, which according to the data was almost entirely due to seasonality, was short lived as net employment growth became negative again in the third quarter of 2009.

After two months of positive employment growth in November and December of 2009, when roughly 20,000 jobs were created, employment growth became negative again in January 2010. The 50,000 plus jobs that were created in May and June of 2009, which appear to be primarily due to seasonality, could also be a bi-product of federal stimulus spending, of which 80% of the 2009-10 funding was already committed.

Increased employment in the oil and gas, construction, and manufacturing sectors were primarily responsible for this temporary employment upswing (see Figures 4.18 – 4.24). However, the construction sector was initially hit hardest with more than 10,000 jobs lost from September 2008, to February 2009. Job loss and creation fluctuated much less in the wholesale trade sector, which saw only one month of employment losses near 10,000. Conversely, in the professional services sector, employment fluctuated substantially, where there were three months when employment fell by more than 10,000. The transportation and warehousing sector also experienced relatively large employment fluctuations, with large losses occurring midway through 2009.

Figures 4.18 - 4.24. Net Monthly Employment Changes by Sector in Alberta\*

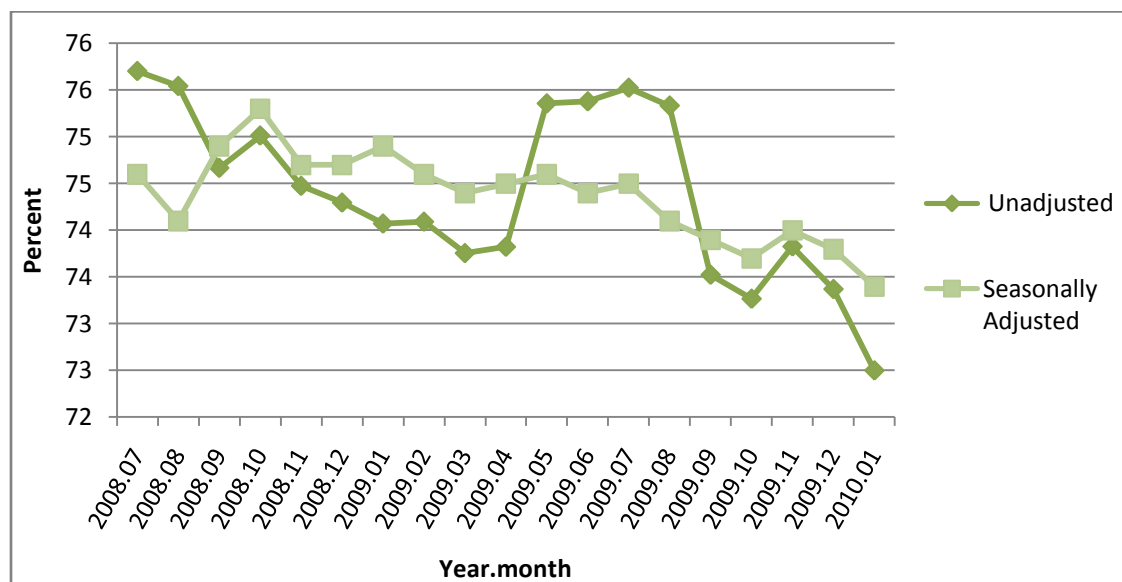


\*Actual figures and sources available in Appendix 3.

## 5. Labour Force Participation

Another key labour force indicator is the participation rate; or the number of persons of working age (15+) who are either employed or unemployed. When the participation rate falls, *ceteris paribus*, the labour force contracts. This was the case in Alberta as shown in Figure 5.1, below.

Figure 5.1. Participation Rates in Alberta\*



\*Actual figures and sources available in Appendix 4.

From July 2008 to January, 2010 the participation rate in Alberta fell 3.2% from 75.7% to 72.5%. Due to an increase in the working age population over this time of 99,500 individuals, mostly due to migration into the province, the labour force contracted by only 17,463 persons. However, due to the large influx of working age persons into the province, such an end period analysis can be misleading. From July 2009, the month in which the size of the labour force in Alberta peaked, to January 2010, 65,563 persons left the labour force. This is disheartening, but not devastating.

Looking at it another way, there were 2,899,500 persons of working age in January 2010, and only 72.5% of them were part of the labour force, implying 797,363 were not. In July 2008, 75.7% of the working age population was in the labour force, meaning 680,400 were not. Therefore 116,963 more persons of working age population in Alberta were not the labour force by January, 2010.

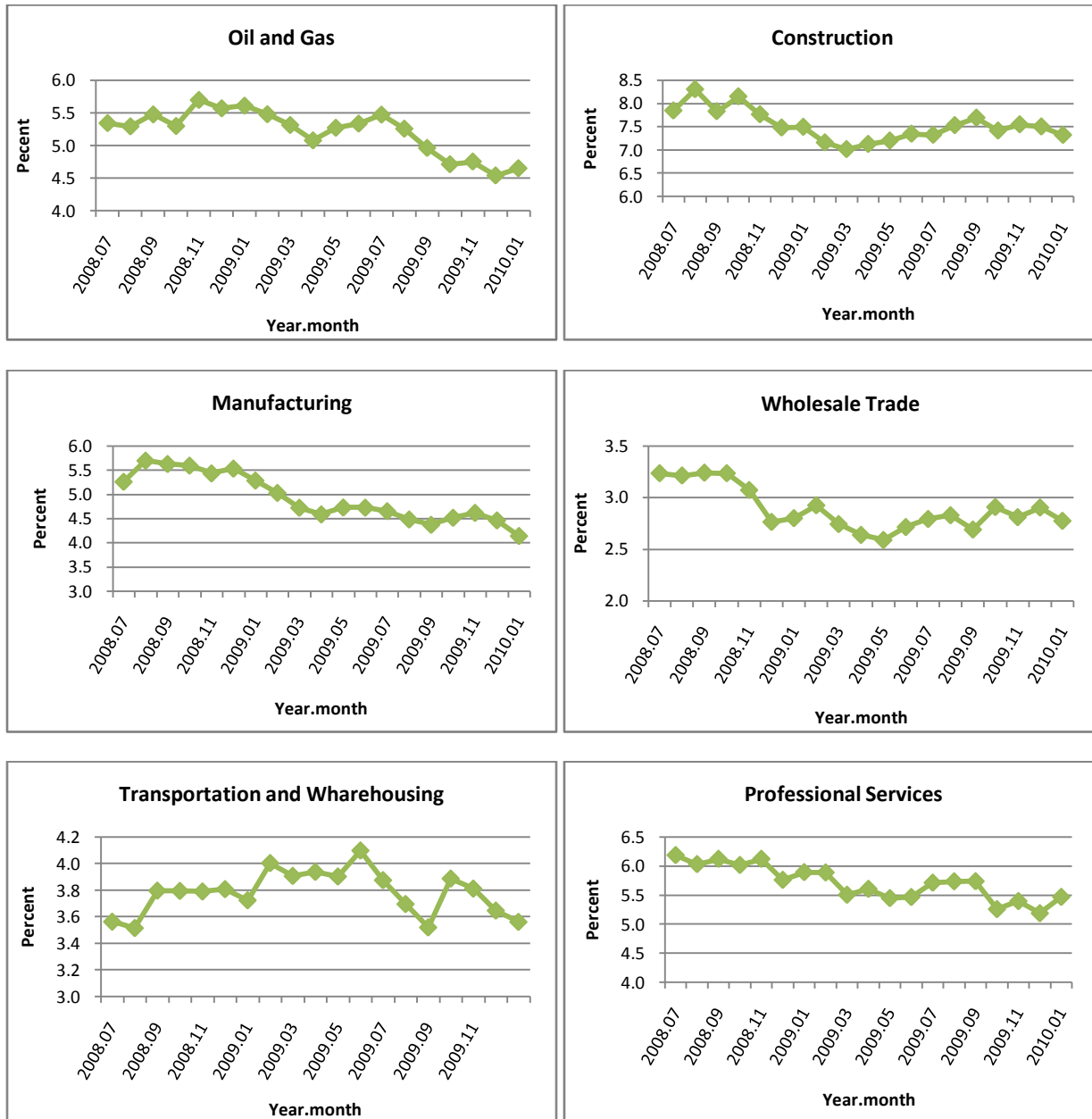
These persons are not simply unemployed, but are rather either discouraged workers who are no longer actively seeking employment or persons who were never even part of the labour force. As is shown in Figure 5.1 above, when adjusted for seasonality, variations in the participation rate are diminished (1.2% decline over the period), with monthly adjustments in the 0% to 1% range. According to these figures, the labor force expanded by 39,433 persons from July 2008 to January 2010, whereas the number of working age persons not in the labour force increased 60,067. It is important to

note that even if the labour force is expanding, when the unemployment rate is increasing, employment can still fall.

Participation rates in the sectors also fell over the last year and a half, although by no more than 1% (Figures 5.2 – 5.6). Given that the aggregate participation rate in Alberta fell 3.2% over the same time period, this implies that participation rates fell by more than 2% in other sectors. Interestingly, in the transportation and warehousing sector, the participation rate was actually increasing for most of the period in question, finally falling in the third quarter of 2009, and returning to its pre-recession level (3.6%) in December 2009. The rest of the sectors display an overall reduction in participation rates, with unsustained periods of growth in the third quarter of 2009. In the manufacturing sector, participation has leveled off at roughly 4%, whereas in the construction and wholesale trade sectors, participation rates are within 0.5% of their respective pre-recession levels.



Figures 5.2 - 5.6. Participation Rates by Sector in Alberta\*



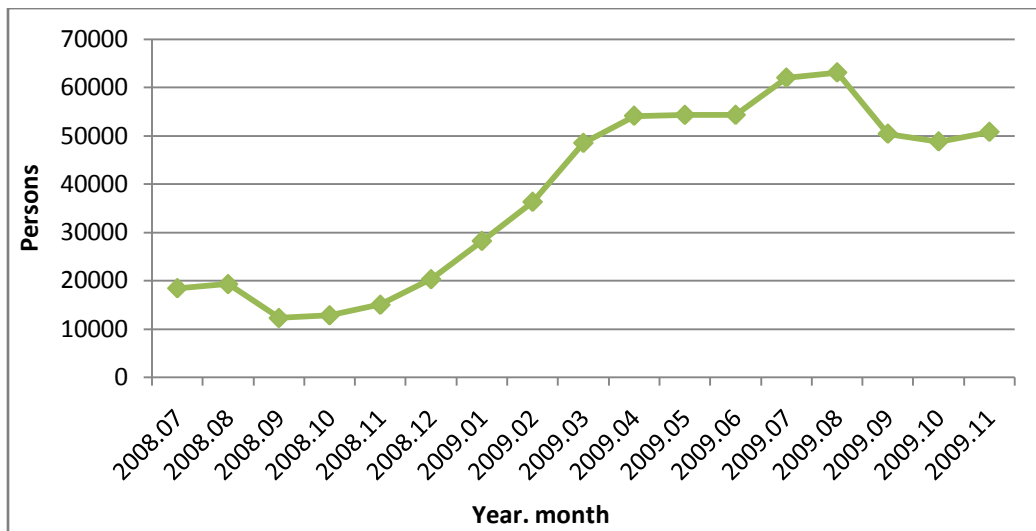
\*Actual figures and sources available in Appendix 4.

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## 6. EI and Hours Worked

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Fig 6.1. EI Beneficiaries without Reported Earnings\*



\*Actual figures and sources available in Appendix 5.

Given the rising unemployment rates for the majority of 2009, the number of EI recipients without reported earnings also increased drastically (Figure 6.1, above), from a low of 18,470 persons in September 2008, to a high of 63,120 in August 2009, a 242% increase. Since then, the number of EI beneficiaries has declined slightly, but this must be interpreted with caution. The trend could be indicative of increasing employment, a result of persons losing EI eligibility, or individuals leaving the labour force.

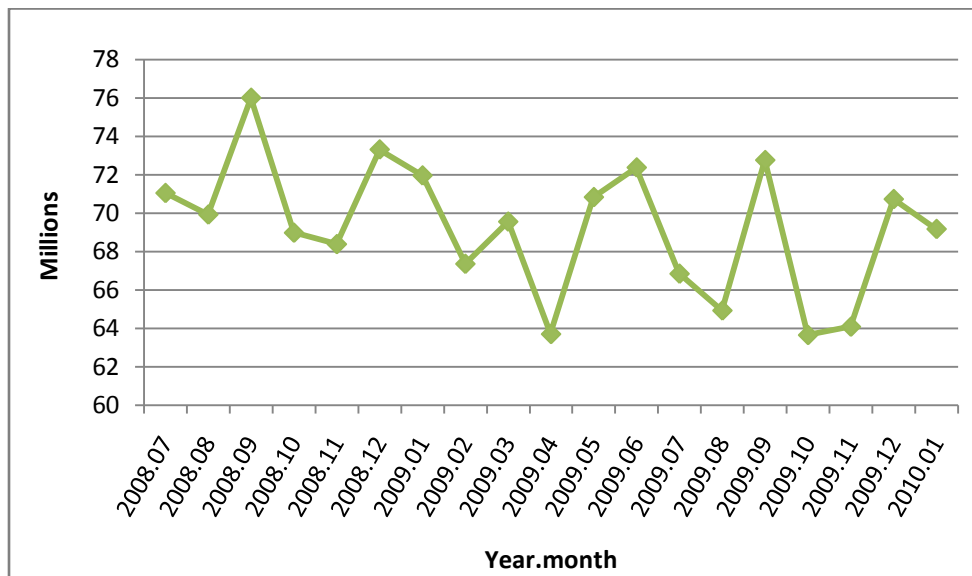
On the other hand, average weekly EI payments have fallen after increasing from \$350 in July, 2008 to over \$380 in May, 2009. Unfortunately, lower compensation may be the result of lower wages/incomes due to the recession, which reduces the amount an unemployed individual is eligible to receive.

**Fig 6.2. Average Weekly EI Payments (Total Income Benefits)\***



\*Actual figures and sources available in Appendix 5.

**Figure 6.3. Total Hours Worked in Alberta\***



\*Actual figures and sources available in Appendix 5.

Total hours worked in January 2010, were 1,872,100 less than in July 2008. Over the same period, total employment decreased by 78,300 people. This implies that the average number of hours worked increased from 34.8/week to 35.3/week, but still remained below levels earlier in 2008 (37.6/week in September 2008). Average hours worked reached its minimum of 34.2/week in April 2009. However, if persons who

worked zero hours are not included in the analysis, the average weekly hours fell from 40/week to 37.7/per week.

While unemployment rates and employment may be respectively higher and lower than desirable, it appears that more people are working albeit fewer hours on average, a mixed blessing indeed.

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## 7. Conclusion

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The highly integrated nature of the world economy and financial systems ensured that the past recession wreaked havoc on the Canadian economy, as it did the rest of the world. However, the extent of the damage in Canada was relatively less than in many other developed countries. A well-regulated and conservative banking system staved off the collapse of our financial system, and expansionary federal monetary and fiscal policies helped curb economic decline and spur recovery. While it is clear the worst is over, there still exist thousands of unemployed Canadians.

The technical recession in Canada occurred during the last quarter of 2008 and the first quarter of 2009, reducing output in sectors across the economy, particularly in oil and gas, construction, manufacturing, and wholesale trade. While the oil and gas and constructions sectors have rebounded in recent months, only modest stabilization has occurred in manufacturing and wholesale trade sectors.

Leading macroeconomic indicators such as money supply growth, stock prices and wholesale inventories, predicted the onset of the recession, and conversely, the subsequent recovery. Labour force data, however, paints a different portrait, one of persisting high unemployment rates, low employment, and reduced participation rates. While the extent of damage varied across sectors, the overall picture remains the same – the Canadian economy is recovering, but employment is lagging and improvement will be slow.

With respect to Alberta in the period July 2008 to January 2010, aggregate unemployment rose from roughly 4% to a peak of nearly 8%. The oil and gas, construction, and manufacturing sectors were the hardest hit, with unemployment rates peaking at 9.7%, 12.9%, and 10.3% respectively. The construction sector has been the slowest to recover, with an unemployment rate 7.6% higher in January 2010, than in July 2008. In manufacturing, this figure is 6.6%. For the rest of the sectors studied, unemployment rates are within 4% of those in July, 2008. The unemployment rate in the transportation and warehousing sector is the closest to its pre-recession level, at 5.4%. Out of the sectors analyzed here, the wholesale trade sector has the lowest unemployment rate at 5.0%.

Aggregate employment in Alberta appears to have undergone a ‘double dip’ in 2009, dropping 72,600 persons from July 2008, to April 2009, only to increase to 15,500 below the pre-recession level of 2,039,500 by June 2009. By October 2009, however, 72,900 fewer persons were employed than in July 2008. Employment grew 24,500 by December 2009 and then subsequently fell again in January 2010 to 73,800 below the July 2008 figure. Adjustment for seasonality moderates these fluctuations to 25,600 jobs lost over the entire period, with a maximum of 69,100 fewer persons employed in August, 2009 than in July, 2008. The large employment increase in the second quarter of 2009 was primarily due to seasonality. Regardless of adjustment, it appears that roughly 50,000 jobs were lost from November, 2008 to March, 2009, the period in which the Canadian economy was fully in recession. While total employment grew by more than 10,000 jobs per month in the last two months of 2009, employment has subsequently fallen and is still well below the level that prevailed before the recession.

In the Alberta oil and gas sector, 19,000 jobs have been lost since July, 2008, wherein the construction, manufacturing, wholesale trade, and professional services sectors these figures are 23,400, 34,600, 12,600, and 19,200 respectively. This implies employment in other sectors has increased, as is the case in the transportation and warehousing sector, in which employment actually grew by 600. Employment fluctuations were largest in the oil and gas, construction, and professional services sectors.

The labour force participation rate in Alberta fell over the last year and a half, wherein the size of the labour force (working age population) decreased (increased) by 17,463 (99,500) according to the unadjusted data. When adjusted for seasonality, it appears that the labour force expanded by 39,433 persons, from July 2008, to January 2010, whereas the number of working age persons not in the labour force increased by 60,067. However, what this implies is that many more persons (116,963) of working age who reside in Alberta are not in the labour force. These persons could be either discouraged workers or people who never joined the labor force in the first place. To the extent the former is more predominant, this is troubling. Since the labour force peaked in July 2009, 65,563 persons who previously were part of the labour force no longer are.

While average weekly EI payments have begun to fall after a year of constantly increasing, the number of EI beneficiaries in November 2009 was 30,000 higher than in July 2008. This represents a substantial drop from the over 60,000 that existed in August 2009. The average hours worked per week has increased from 34.8 to 35.3 over the last year and half, bottoming at 34.2/week in April 2009. However, if these figures include persons who worked zero hours, average weekly hours worked have actually fallen from 40 to 37.7. This implies more people are working positive hours, but on average less than in July 2008. Indeed, unemployment and underemployment are likely to be the biggest economic hurdles of 2010, possibly more so than the provincial government anticipates.

According to the Government of Alberta's *Budget 2009* forecast, 1,998,000 persons would be employed in the province, on average, in 2009, 15,000 less than actually were in 2008. However, due to the economic downturn being more severe than anticipated, only 1,988,000 persons were employed in 2009; 25,000 fewer than in 2008. Similarly, while the Government of Alberta forecasted the unemployment rate in Alberta to be 5.8% in 2009, a 2.2% increase from the year before, the unemployment rate in 2009 rose to 6.6%, implying roughly 17,000 more persons became unemployed in the province than expected.<sup>5</sup>

In the *Budget 2010*, the Government of Alberta estimated employment in 2010 to reach 2,003,000, an increase of 15,000 jobs over the previous year, while the provincial unemployment rate is expected to stay steady at 6.6%. Given the optimistic forecasts in the previous budget, however, these estimates should be considered with caution. If the same modest economic recovery continues, employment may not rebound completely, and the unemployment rate may, equally, be persistently more than desired.

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<sup>5</sup> The discrepancy between the unexpected increases in unemployed persons is due to the increase in the labour force that was also unanticipated. The Government of Alberta expected the labour force to be 2,121,019 in 2009, but it increased to 2,127,825. Such unexpected changes in 2010 are sure to also affect the accuracy of the Government of Alberta's forecasts.

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**Appendix 1**

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Canada: Quarterly GDP Growth<sup>1</sup>    Alberta: Crude Oil Receipts<sup>2</sup>

Year. quarter	Canada GDP Growth (%)
2007.1	-3.05
2007.2	6.02
2007.3	4.27
2007.4	-0.61
2008.1	-4.63
2008.2	6.10
2008.3	6.60
2008.4	-6.64
2009.1	-8.54
2009.2	2.97
2009.3	5.50

Year. month	Total Crude Oil Net Receipts (millions cubic metres)	Crude Oil Price Index	Index Value
2008.07	14.2	100.0	1415.1
2008.08	14.2	87.7	1249.4
2008.09	13.3	77.3	1030.4
2008.10	14.1	61.9	873.2
2008.11	13.9	45.7	634.3
2008.12	14.4	29.3	423.1
2009.01	14.3	30.8	440.6
2009.02	13.9	32.8	455.0
2009.03	14.4	43.7	629.8
2009.04	13.7	43.3	593.5
2009.05	14.2	46.4	660.4
2009.06	14.1	53.1	749.7
2009.07	15.2	49.3	750.1
2009.08	15.3	53.3	815.5
2009.09	13.6	52.4	711.3
2009.10	15.0	55.5	832.5

<sup>1</sup> Source: Derived from CANSIM series V499722 (GDP at market prices, unadjusted), Statistics Canada.

<sup>2</sup> Source: Derived from CANSIM series V20962 (crude oil receipts in cubic meters) and series V1576530 (crude oil price index 1997=100), Statistics Canada.

Alberta: Building Permits<sup>3</sup>Alberta: Manufacturing Sales<sup>4</sup>Alberta: Wholesale Trade<sup>5</sup>

Year. month	Building Permits	Value (millions \$)	Year. month	Manufacturing Sales (Millions \$)	Year. month	Wholesale Trade (Millions \$)
2008.07	2117	1180.3	2008.07	6758.7	2008.07	5781.7
2008.08	1728	929.3	2008.08	6319.2	2008.08	5857.3
2008.09	1811	1052.5	2008.09	6446.3	2008.09	6110.7
2008.10	1806	861.5	2008.10	6179.8	2008.10	6484.5
2008.11	1832	1004.8	2008.11	5365.6	2008.11	5552.3
2008.12	1625	675.3	2008.12	4873.7	2008.12	5514.1
2009.01	578	495.8	2009.01	4600.5	2009.01	4986.4
2009.02	807	452.9	2009.02	4369.2	2009.02	4650.9
2009.03	1186	709.3	2009.03	4781.4	2009.03	5295.4
2009.04	1628	790.6	2009.04	4196.9	2009.04	4982.1
2009.05	1490	1153.5	2009.05	4640.9	2009.05	5144.8
2009.06	1765	942.2	2009.06	4711.7	2009.06	5226.7
2009.07	1858	829.1	2009.07	4549.5	2009.07	4810.4
2009.08	2565	858.9	2009.08	4687.2	2009.08	4537.4
2009.09	2723	968.5	2009.09	4589.9	2009.09	4867.8
2009.10	2583	1525.3	2009.10	4643.1	2009.10	4944.2
2009.11	2544	1089.1	2009.11	4742.6	2009.11	4593.4
2009.12	2165	1077.4				

<sup>2</sup>Source: CANSIM series V41347 (building permits, total dwellings), V488 (value of building permits, residential and non-residential), Statistics Canada.

<sup>3</sup>Source: CANSIM series V807041 (total manufacturing sales, all industries), Statistics Canada.

<sup>4</sup>Source: CANSIM series V21645626 (wholesale trade, all trade groups), Statistics Canada.



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**Appendix 2**

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Canada: Money Supply<sup>1</sup>

Year. Month	Money Supply Growth Rate (%)
2008.02	0.19
2008.03	0.45
2008.04	0.33
2008.05	0.14
2008.06	-0.02
2008.07	0.14
2008.08	0.30
2008.09	0.66
2008.10	1.22
2008.11	1.49
2008.12	1.72
2009.01	1.75
2009.02	1.39
2009.03	1.11
2009.04	1.04
2009.05	0.73
2009.06	0.52
2009.07	1.03
2009.08	1.16
2009.09	1.09
2009.10	1.38
2009.11	1.29
2009.12	0.87

Canada: Stock Prices<sup>2</sup>

Year. month	Stock Price Index TSE 300(1975=1000)
2008.07	14012.0
2008.08	14097.0
2008.09	13660.0
2008.10	12669.0
2008.11	11630.0
2008.12	10709.0
2009.01	9694.0
2009.02	8968.0
2009.03	8759.0
2009.04	8770.0
2009.05	9047.0
2009.06	9383.0
2009.07	9915.0
2009.08	10345.0
2009.09	10759.0
2009.10	10867.0
2009.11	11082.0
2009.12	11273.0

Canada: Wholesale Inventories<sup>3</sup>

Year. month	Wholesale Inventories (billions)
2008.07	55.9
2008.08	56.1
2008.09	56.7
2008.10	57.5
2008.11	58.3
2008.12	58.1
2009.01	58.9
2009.02	59.8
2009.03	60.2
2009.04	59.0
2009.05	57.0
2009.06	55.6
2009.07	55.3
2009.08	54.4
2009.09	54.1
2009.10	53.5
2009.11	53.2

<sup>1</sup> Source: Derived from CANSIM series V7682 (money supply, monthly), Statistics Canada.

<sup>2</sup> Source: CANSIM series V7678 (TSE 300 stock price index, 1975=1000), Statistics Canada.

<sup>3</sup> Source: CANSIM series V21645656 (wholesale inventories, all trade groups), Statistics Canada.

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**Appendix 3**


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 Alberta: Unemployment Rates<sup>1</sup>

Year. month	Seasonally Adjusted	Unadjusted
2008.07	3.6	3.8
2008.08	3.4	4.0
2008.09	3.8	3.7
2008.10	3.5	3.5
2008.11	3.5	3.5
2008.12	4.4	4.1
2009.01	4.7	4.9
2009.02	5.9	5.9
2009.03	6.1	6.1
2009.04	6.3	6.4
2009.05	6.7	7.0
2009.06	6.8	6.2
2009.07	7.2	7.4
2009.08	7.3	7.7
2009.09	6.8	6.5
2009.10	7.2	7.0
2009.11	7.1	7.3
2009.12	6.6	6.3
2010.01	6.6	6.8

 Alberta: Unemployment Rates by Sector<sup>2</sup>

Year. month	Oil and Gas	Construction	Manufacturing	Wholesale Trade	Transportation and Warehousing	Professional Services
2008.07	2.1	3.3	1.7	1.7	2.7	2.0
2008.08	1.8	2.3	2.8	2.1	2.2	3.1
2008.09	2.5	2.6	3.4	3.8		2.3
2008.10	2.8	3.9	2.9	3.8	2.4	1.3
2008.11	5.0	4.5	2.0	1.7	4.6	1.2
2008.12	3.9	6.5	4.3	3.8	3.7	1.7
2009.01	4.3	9.4	4.3	2.4	3.3	2.2
2009.02	7.0	11.5	7.6	3.4	5.2	3.4
2009.03	8.7	12.3	6.0	5.8	4.9	4.5
2009.04	8.5	12.9	8.7	5.5	5.6	5.3
2009.05	9.7	10.3	9.0	4.6	5.5	4.7
2009.06	7.1	8.0	8.6	6.6	5.3	5.7
2009.07	8.5	8.3	8.5	5.9	6.1	5.8
2009.08	6.7	7.4	10.3	6.3	10.0	6.3
2009.09	8.0	6.3	8.6	4.9	6.4	5.1
2009.10	9.3	6.1	9.2	5.4	7.5	5.1
2009.11	7.1	6.7	8.6	6.5	6.0	5.9
2009.12	6.0	10.0	9.9	2.7	5.0	5.3
2010.01	5.3	10.9	8.3	5.0	5.4	5.1

<sup>1</sup> Source: CANSIM series V2066595 (unadjusted) and V2064516 (seasonally adjusted), Statistics Canada.

<sup>2</sup> Source: CANSIM series V2721250 (oil and gas), V2721252 (construction), V2721253 (manufacturing), V2721258 (wholesale trade), V2721260 (transportation and warehousing), and V2721264 (professional services), Statistics Canada. All figures are in percentage terms.

Alberta: Total Employment<sup>1</sup>

Year. month	Unadjusted	Seasonally Adjusted
2008.07	2039.5	2013.2
2008.08	2032.5	2005.4
2008.09	2020.2	2024.4
2008.10	2035.4	2044
2008.11	2025.1	2033.1
2008.12	2011.2	2015.3
2009.01	1994.1	2019.5
2009.02	1978	1991.7
2009.03	1967.6	1986.3
2009.04	1966.9	1986.3
2009.05	2000.7	1988
2009.06	2024	1986.1
2009.07	2007.3	1984.6
2009.08	2000.4	1974.9
2009.09	1981.1	1984.9
2009.10	1966.6	1975.1
2009.11	1979.5	1987.8
2009.12	1991.1	1995.3
2010.01	1961.2	1987.6

Alberta: Employment by Sector<sup>2</sup>

Year. month	Oil and Gas	Construction	Manufacturing	Wholesale Trade	Transportation and Warehousing	Professional Services
2008.07	146.5	212.4	144.8	89.1	97.1	169.7
2008.08	145.7	227.4	155.2	88.2	96.3	163.9
2008.09	149.9	214.0	152.7	87.5	105.3	168.0
2008.10	144.9	220.1	152.7	87.5	104.1	167.1
2008.11	152.7	208.9	150.1	85.1	101.9	170.5
2008.12	151.1	197.3	149.5	75.2	103.5	159.9
2009.01	152.0	192.0	143.1	77.5	101.9	163.0
2009.02	144.5	179.7	131.9	80.1	107.6	161.4
2009.03	137.9	174.8	126.3	73.4	105.6	149.5
2009.04	132.3	176.8	119.3	71.1	105.8	151.3
2009.05	135.9	184.3	123.0	70.6	105.3	148.3
2009.06	141.9	193.5	123.7	72.7	111.1	147.7
2009.07	143.8	192.7	122.3	75.5	104.5	154.5
2009.08	141.0	200.5	115.7	76.2	95.6	154.5
2009.09	131.7	207.6	115.3	73.7	95.0	157.0
2009.10	123.3	201.1	118.5	79.6	103.8	144.1
2009.11	127.7	203.5	122.0	76.1	103.5	146.9
2009.12	123.5	195.4	116.6	81.8	100.2	142.3
2010.01	127.6	189.0	110.2	76.5	97.7	150.5

<sup>1</sup> Source: CANSIM series V2066591(unadjusted) and V2064512(seasonally adjusted), Statistics Canada.

<sup>2</sup> Source: CANSIM series V2721137(oil and gas), V2721139(construction), V2721140 (manufacturing), V2721145(wholesale trade), V2721147(transportation and warehousing), and V2721151(professional services), Statistics Canada. All figures are in terms of thousands.

### Alberta: Monthly Employment Changes<sup>3</sup>

Year. month	Unadjusted	Seasonally Adjusted
2008.08	-7000	0
2008.09	-12300	19000
2008.10	15200	19600
2008.11	-10300	-10900
2008.12	-13900	-17800
2009.01	-17100	4200
2009.02	-16100	-27800
2009.03	-10400	-5400
2009.04	-700	0
2009.05	33800	1700
2009.06	23300	-1900
2009.07	-16700	-1500
2009.08	-6900	-9700
2009.09	-19300	10000
2009.10	-14500	-9800
2009.11	12900	12700
2009.12	11600	7500
2010.01	-29900	-7700

### Alberta: Monthly Employment Changes by Sector<sup>4</sup>

Year. month	Oil and Gas	Construction	Manufacturing	Wholesale Trade	Transportation and Warehousing	Professional Services
2008.08	-800	15000	10400	-900	-800	-5800
2008.09	4200	-13400	-2500	-700	9000	4100
2008.10	-5000	6100	0	0	-1200	-900
2008.11	7800	-11200	-2600	-2400	-2200	3400
2008.12	-1600	-11600	-600	-9900	1600	-10600
2009.01	900	-5300	-6400	2300	-1600	3100
2009.02	-7500	-12300	-11200	2600	5700	-1600
2009.03	-6600	-4900	-5600	-6700	-2000	-11900
2009.04	-5600	2000	-7000	-2300	200	1800
2009.05	3600	7500	3700	-500	-500	-3000
2009.06	6000	9200	700	2100	5800	-600
2009.07	1900	-800	-1400	2800	-6600	6800
2009.08	-2800	7800	-6600	700	-8900	0
2009.09	-9300	7100	-400	-2500	-600	2500
2009.10	-8400	-6500	3200	5900	8800	-12900
2009.11	4400	2400	3500	-3500	-300	2800
2009.12	-4200	-8100	-5400	5700	-3300	-4600
2010.01	4100	-6400	-6400	-5300	-2500	8200

<sup>3</sup> Source: Derived from CANSIM series V2066595 (unadjusted) and V20664516 (seasonally adjusted), Statistics Canada.

<sup>4</sup> Source: Derived from CANSIM series V2721250 (oil and gas), V2721252 (construction), V2721253 (manufacturing), V2721258 (wholesale trade), V2721260 (transportation and warehousing), and V2721264 (professional services), Statistics Canada.

Alberta: Participation Rate<sup>1</sup>

Year. month	Unadjusted	Seasonally Adjusted
2008.07	75.7	74.6
2008.08	75.5	74.1
2008.09	74.7	74.9
2008.10	75.0	75.3
2008.11	74.5	74.7
2008.12	74.3	74.7
2009.01	74.1	74.9
2009.02	74.1	74.6
2009.03	73.8	74.4
2009.04	73.8	74.5
2009.05	75.4	74.6
2009.06	75.4	74.4
2009.07	75.5	74.5
2009.08	75.3	74.1
2009.09	73.5	73.9
2009.10	73.3	73.7
2009.11	73.8	74
2009.12	73.4	73.8
2010.01	72.5	73.4

Alberta: Participation Rates by Sector<sup>2</sup>

Year. month	Oil and Gas	Construction	Manufacturing	Wholesale Trade	Transportation and Warehousing	Professional Services
2008.07	5.3	7.8	5.3	3.2	3.6	6.2
2008.08	5.3	8.3	5.7	3.2	3.5	6.0
2008.09	5.5	7.8	5.6	3.2	3.8	6.1
2008.10	5.3	8.1	5.6	3.2	3.8	6.0
2008.11	5.7	7.8	5.4	3.1	3.8	6.1
2008.12	5.6	7.5	5.5	2.8	3.8	5.8
2009.01	5.6	7.5	5.3	2.8	3.7	5.9
2009.02	5.5	7.2	5.0	2.9	4.0	5.9
2009.03	5.3	7.0	4.7	2.7	3.9	5.5
2009.04	5.1	7.1	4.6	2.6	3.9	5.6
2009.05	5.3	7.2	4.7	2.6	3.9	5.4
2009.06	5.3	7.3	4.7	2.7	4.1	5.5
2009.07	5.5	7.3	4.7	2.8	3.9	5.7
2009.08	5.3	7.5	4.5	2.8	3.7	5.7
2009.09	5.0	7.7	4.4	2.7	3.5	5.7
2009.10	4.7	7.4	4.5	2.9	3.9	5.3
2009.11	4.8	7.5	4.6	2.8	3.8	5.4
2009.12	4.5	7.5	4.5	2.9	3.6	5.2
2010.01	4.6	7.3	4.1	2.8	3.6	5.5

<sup>1</sup> Source: CANSIM series V2066596(unadjusted) and V2064517(seasonally adjusted), Statistics Canada.

<sup>2</sup> Source: Derived from CANSIM series V2721108 (labor force, oil and gas), V2721110 (construction), V2721111(manufacturing), V2721116(wholesale trade), V2721118(transportation and warehousing), and V2721122(professional services), and V2096709 (Alberta population, 15+, both sexes), Statistics Canada. All figures are in percentage terms.

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**Appendix 5**


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 Alberta: EI Benefits<sup>1</sup>

Year. month	Average Weekly Payments (Total Income Benefits)
2008.07	350.02
2008.08	347.9
2008.09	350.64
2008.10	354.93
2008.11	358.67
2008.12	363.21
2009.01	370.33
2009.02	375.97
2009.03	379.59
2009.04	381.74
2009.05	382.38
2009.06	378.44
2009.07	375.54
2009.08	375.99
2009.09	370.46
2009.10	361.61
2009.11	370.55

 Alberta: EI Recipients<sup>2</sup>

Year. month	EI Beneficiaries without Reported Earnings
2008.07	18470
2008.08	19310
2008.09	12300
2008.10	12860
2008.11	15040
2008.12	20330
2009.01	28250
2009.02	36340
2009.03	48530
2009.04	54150
2009.05	54330
2009.06	54340
2009.07	62040
2009.08	63120
2009.09	50440
2009.10	48840
2009.11	50820

 Alberta: Total Hours Worked<sup>3</sup>

Year. month	Total Hours Worked (millions)
2008.07	71.04
2008.08	69.92
2008.09	75.99
2008.10	68.97
2008.11	68.38
2008.12	73.31
2009.01	71.95
2009.02	67.35
2009.03	69.55
2009.04	63.70
2009.05	70.83
2009.06	72.37
2009.07	66.84
2009.08	64.93
2009.09	72.75
2009.10	63.65
2009.11	64.09
2009.12	70.72
2010.01	69.17

<sup>1</sup> Source: CANSIM series 4384465 (average weekly EI benefits, total income benefits), Statistics Canada.

<sup>2</sup> Source: CANSIM series V385135 (EI beneficiaries with no reported earnings, persons), Statistics Canada.

<sup>3</sup> Source: CANSIM series V35012421(actual hours worked, full and part time, both sex, 15+ years old), Statistics Canada.