

## Calgary's Economic Performance: 1999-2009

### Executive Summary

- ▶ Alberta benefited from a resource boom in the 1999-2009 period as higher energy sales and prices boosted energy companies' cash flow.
- ▶ Higher cash flow stimulated business investment spending throughout the economy, thus increasing the overall levels of output and employment in Alberta.
- ▶ Calgary which is home to the energy industry benefited significantly from the spin-off effects of the resource boom.
- ▶ The Calgary Economic Region led the province and nation in most broad measures of economic growth.
- ▶ The resource boom resulted in a significant increase in The City's revenue bases (property tax & non-tax).

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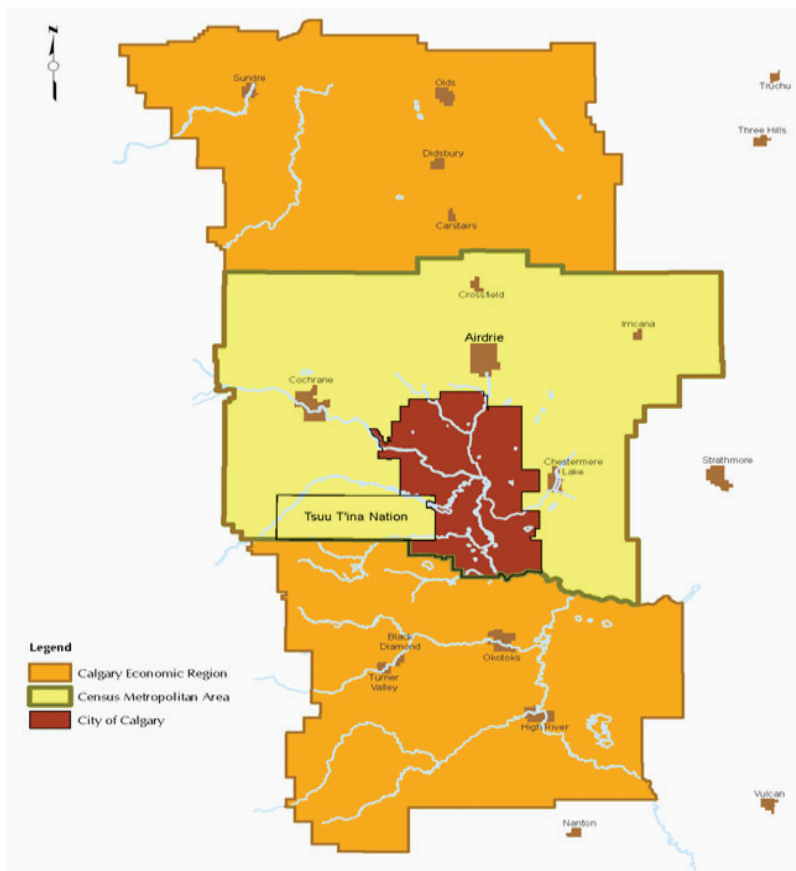


## Briefing Note

### Introduction

The aim of the document is to review Calgary's performance over the 1999-2009 period, this is done by comparing the local economy against those of the province and country. The report attempts to answer the following questions:

- ▶ How fast did Calgary grow over the 1999-2009 period?
- ▶ How did this growth rate compare to those of the province and country?
- ▶ What industries is the region specialized in?
- ▶ How has economic growth affected the municipality's property tax revenue base?

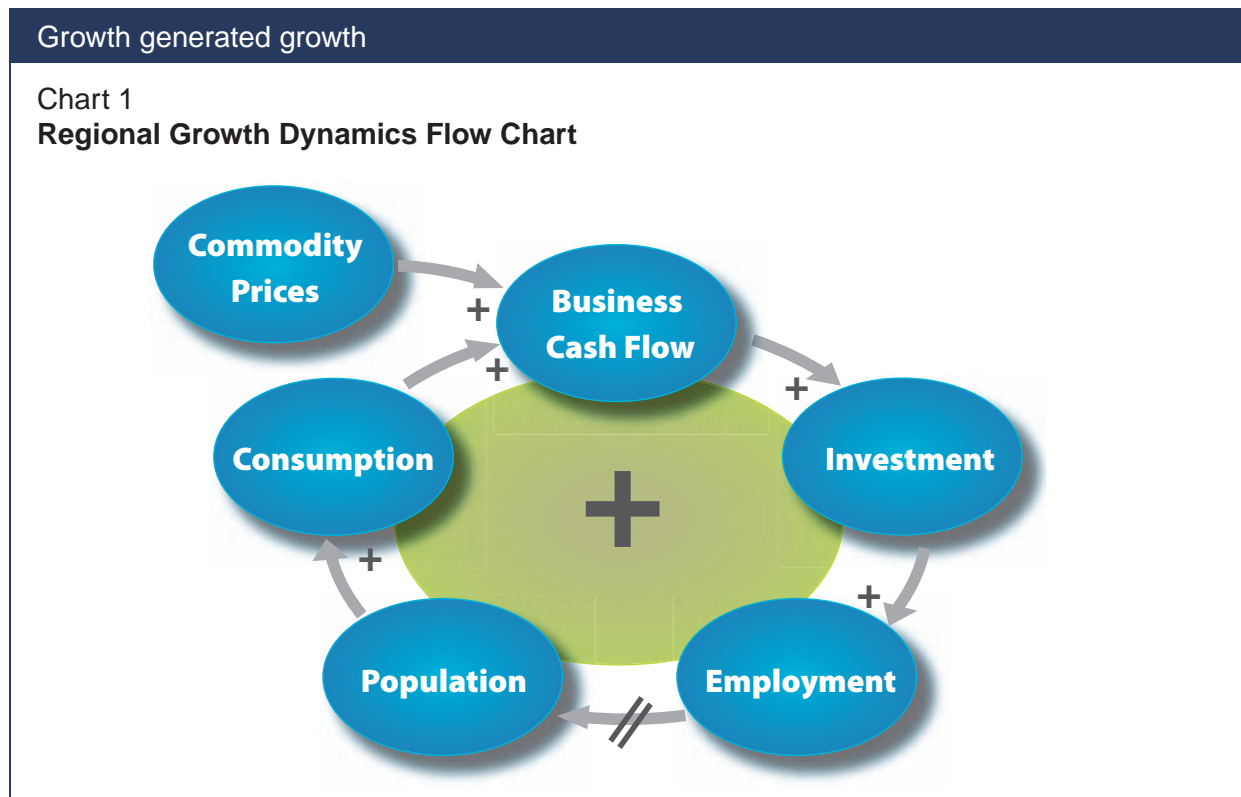


### Calgary Economic Region

Businesses are often located in one municipality while their customers live in another and individuals live in one municipality and work in another. Also, recreation and sporting events generally cater to a regional rather than a local audience. These arrangements are common characteristics of a modern society, where specialization of economic and social activities is the norm. The geographic area is bound together by various transportation and communication links.

## Regional Growth Dynamics

Economic growth in the local economy can be explained by the diagram below. Strong demand for energy from a growing world economy resulted in increased cash flow for businesses and the provincial government. This revenue created the basis for a sharp increase in investment spending which, resulted in increased output and job creation. In turn, higher output levels created a robust demand for labour and drove regional unemployment to relatively low levels. This resulted in increased net migration to the region inducing population growth. Strong population growth along with growing labour income drove house prices and consumer spending higher which further increased business cash flow. Growth resulted in further growth. The chart below serves as template for guiding the discussion of the region's economic performance over the 1999-2009 period. This template serves as a reminder that local economic activity is influenced by the region's ability to export to the world outside its borders.





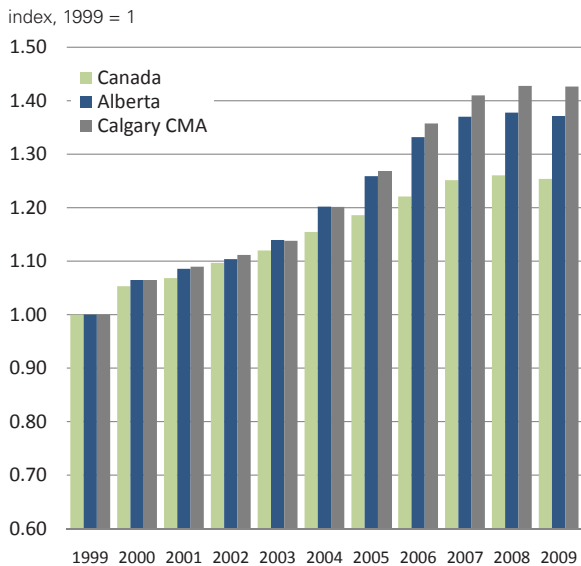
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### Real GDP Growth

- ▶ Gross domestic product (GDP) is the broadest measure of economic activity. It represents the sum of all goods and services that is produced by an economy over a given time.
- ▶ The Canadian economy expanded by 25 per cent over the 1999-2009 period. In this period, Alberta grew by 37 per cent and the Calgary Census Metropolitan Area (CMA) by 43 per cent.
- ▶ The consumer sector is the largest sector in the Canadian economy representing roughly 60 per cent of GDP. Calgary's consumption/GDP ratio was similar to the national average.
- ▶ Retail sales, adjusted for inflation, grew by 30 per cent in Canada between 1999 and 2009, while Alberta and Calgary grew by 60 and 55 per cent respectively. Consumer spending was therefore a major contributor to Calgary's economic performance.

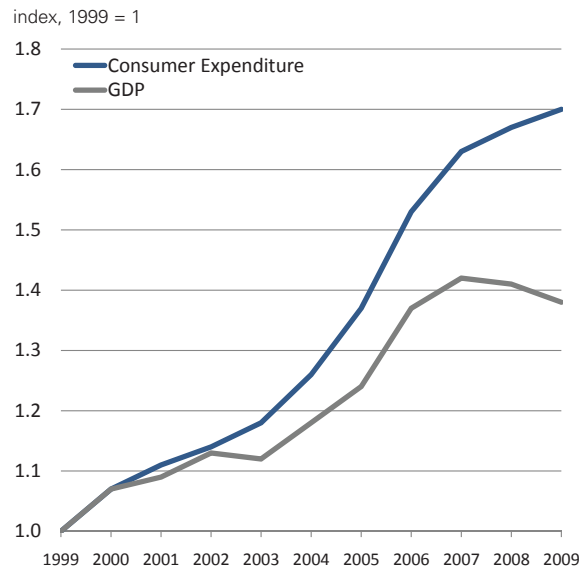
#### Consumer spending a major driver.

**Chart 2**  
**Canada, Alberta and Calgary CMA:**  
**Real GDP Growth**



Source: Conference Board of Canada; Corporate Economics

**Calgary:**  
**Consumer Spending and GDP**

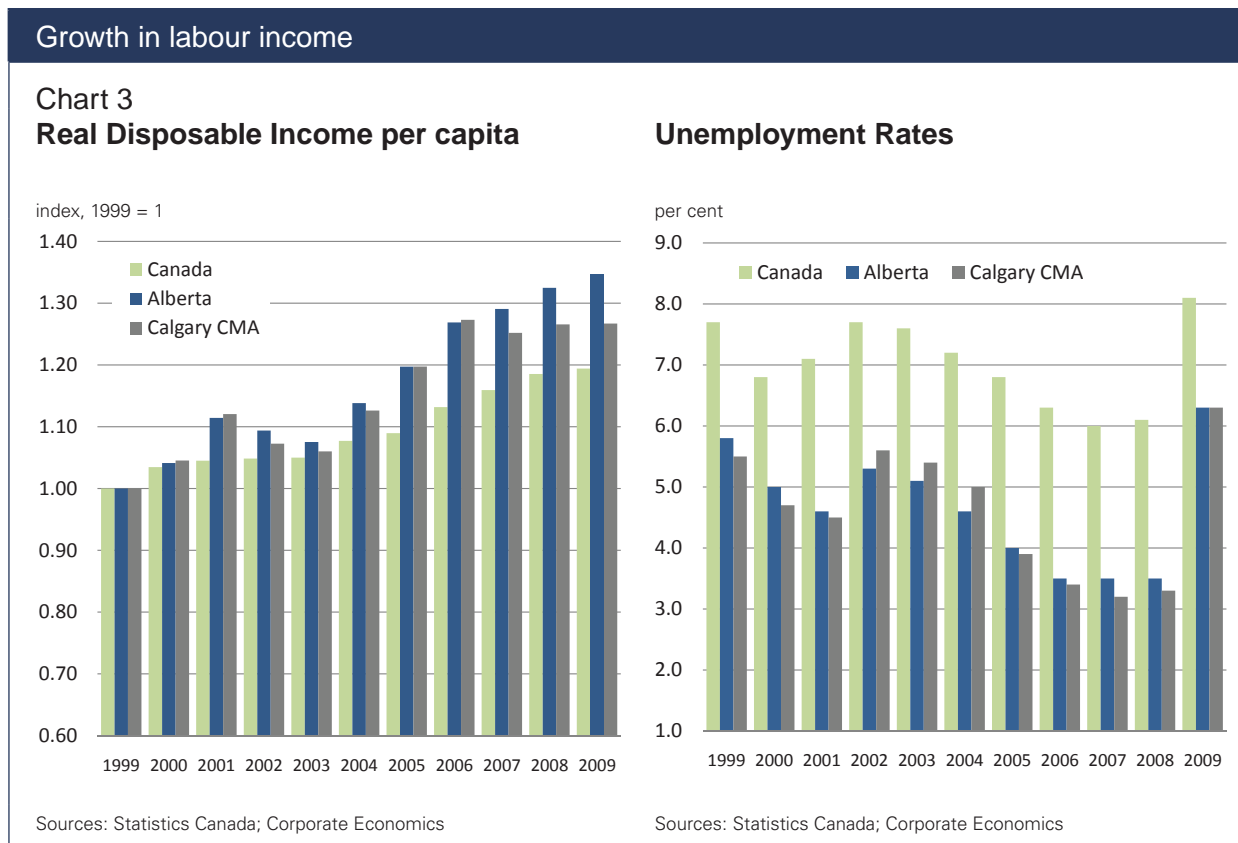


Source: Statistics Canada; Corporate Economics

# Briefing Note

## Real Personal Disposable Income

- ▶ Calgary's real personal disposable income per capita was higher than Canada's. This is explained by the difference in the industry mix between Calgary and the rest of Canada. Calgary had a higher proportion of jobs in industries that enjoyed larger output/employee ratios than the rest of Canada. Other primary and utilities are examples of sectors that are concentrated in Calgary and have higher output/employment ratios.
- ▶ Real disposable income per capita grew faster in Alberta and Calgary than in Canada during this period. This could be partly explained by the relatively stronger job market in Alberta where fast employment growth and the associated low unemployment rates were present in the 1999-2009 period.





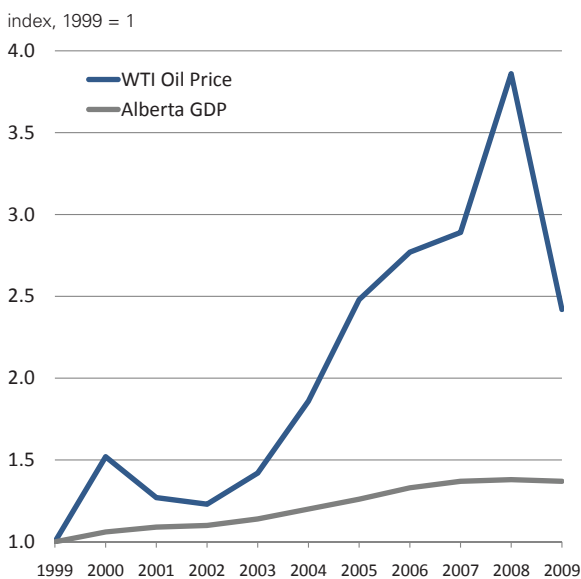
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### Investment Activity

- ▶ In the 1999-2009 period, world commodity prices rose in response to increasing economic growth in the emerging economies. Increased demand for commodities resulted in increased price pressures. For example, between 1999 and 2009, the price for West Texas Intermediate oil climbed from \$19.25 (US per barrel) to \$61.78 (US per barrel). Adjusted for inflation, oil prices grew by 139 per cent between 1999 and 2009.
- ▶ Investment intentions in Alberta adjusted for inflation, rose by 77 per cent between 1999 and 2009. In Canada as a whole, investment intentions increased by 29 per cent.
- ▶ In this period, Alberta's provincial GDP, rose 38 per cent, from \$130.6 billion in 1999 to \$179.8 billion by 2008. Investment spending was an important contribution to the GDP growth. For example, non-residential construction grew by 89 per cent between 1999 and 2009.

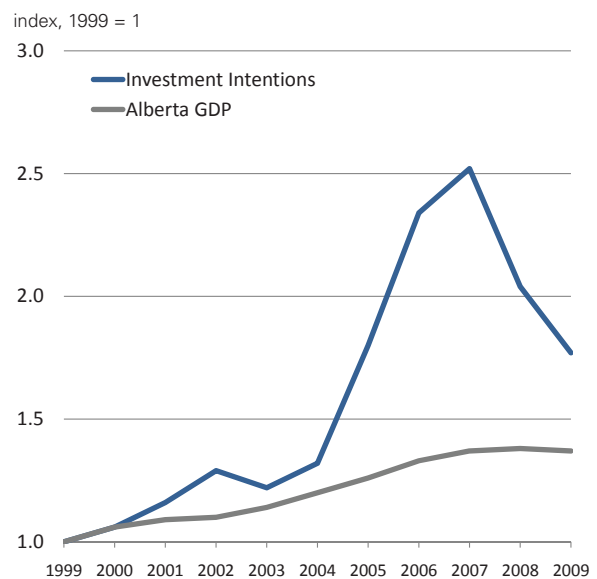
#### Significant increase in commodity prices

**Chart 4**  
**WTI Oil Price and Alberta GDP**  
(adjusted for inflation)



Sources: GLJ Energy Publications; Corporate Economics

**Investment Intentions and Alberta GDP**  
(adjusted for inflation)



Sources: Statistics Canada; Corporate Economics

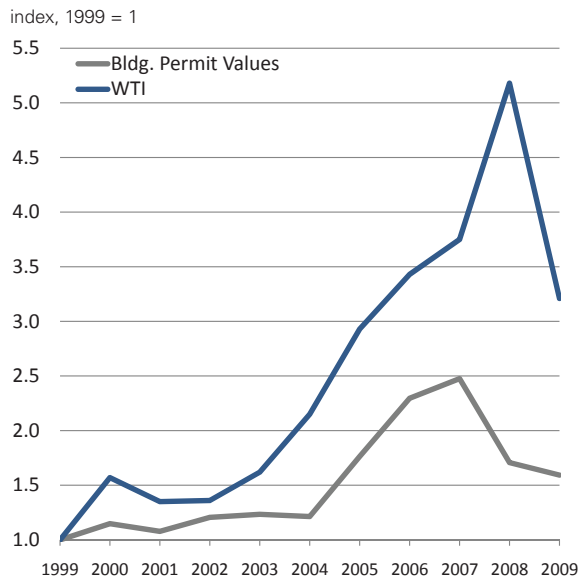
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## Building Permit Values and West Texas Intermediate Oil Price

- ▶ The resource boom was quite visible in Alberta's cities, where high oil prices were accompanied by sharp increases in investment intentions. For example, the city of Calgary's total building permit values, adjusted for inflation, rose by 60 per cent while oil prices adjusted for inflation rose by 50 per cent.
- ▶ High oil prices drove investment spending in northern Alberta creating a number of spin-off effects in Calgary and throughout Alberta. Increased labour incomes drove consumer spending and this further increasing the overall rate of economic growth.

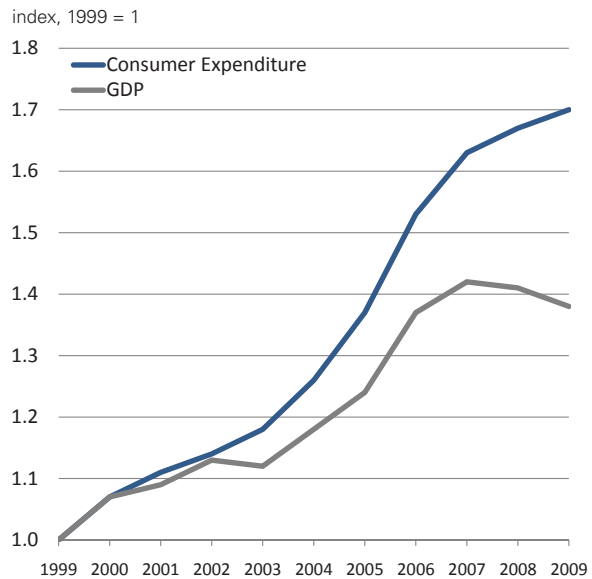
### Rising cash flow drove investment spending

**Chart 5**  
**Building Permit Values and West Texas Intermediate Oil Price**



Sources: GLJ Energy Publications; Conference Board of Canada; Corporate Economics

**Calgary Economic Region: Consumer Expenditure and GDP**



Sources: Centre for Spatial Economics; Calgary Economic Model

## Briefing Note

### Calgary Economic Region Location Quotients: 2008

The table below compares the employment by industry distribution in the Calgary Economic Region against that for Canada as a whole. The results of the comparisons are summarized in column four, which is labelled location quotients. The results are tabulated by dividing the percentage of employment in a given industry in Calgary by the equivalent distribution in Canada as a whole. A result that is greater than one implies that the local economy has a greater concentration of employment in that industry than Canada as a whole. The analysis shows that Calgary is specialized in industries such as oil and gas extraction, construction, air transportation, and architectural, engineering and design services.

Description	2008 % Dist Calgary	2008 % Dist Canada	Location Quotients
Agriculture	1.84	1.92	0.96
Forestry, Fishing, Mining, Oil and Gas :	7.40	1.99	3.72
Mining and Oil and Gas Extraction	7.37	1.54	4.80
Utilities	0.75	0.88	0.85
Construction	9.97	7.17	1.39
Manufacturing	6.98	11.53	0.60
Trade	14.40	15.67	0.92
Transportation and Warehousing:	4.90	5.00	0.98
Air Transportation	0.81	0.37	2.20
Truck Transportation	0.92	1.00	0.92
Finance, Insurance, Real Estate and Leasing	6.60	6.27	1.05
Professional, Scientific and Technical Services:	11.90	6.99	1.70
Legal Services	0.74	0.78	0.95
Architectural, Engineering and Design Services	4.67	1.82	2.56
Computer System Design Services	2.09	1.65	1.27
Management, Scientific and Technical Services	2.01	1.03	1.96
Other Professional Services	2.22	1.71	1.30
Business, Building and Other Support Services	3.65	4.03	0.91
Educational Services	5.14	6.98	0.74
Health Care and Social Assistance	8.96	11.08	0.81
Information, Culture and Recreation	4.25	4.45	0.95
Accommodation and Food Services	5.45	6.27	0.87
Other Services	4.32	4.38	0.99
Public Administration	3.43	5.39	0.64

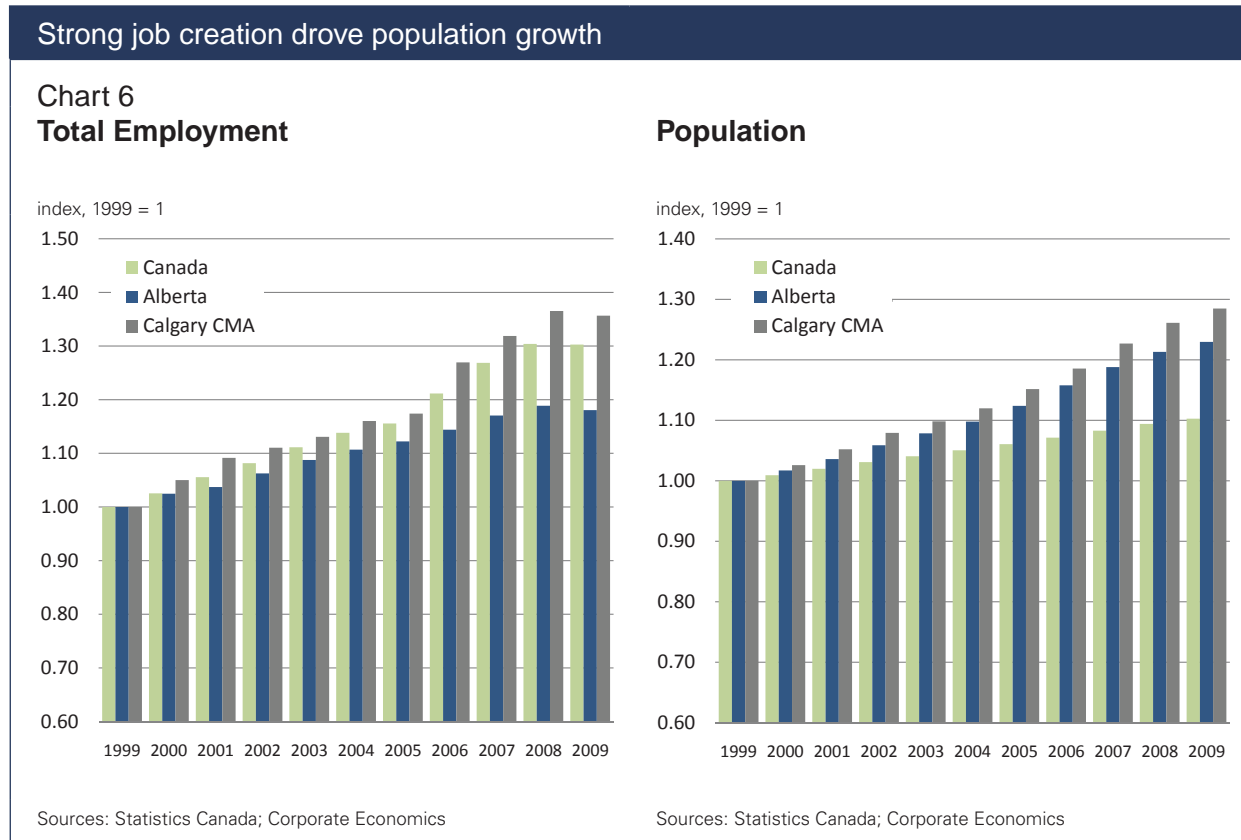
Sources: Statistics Canada; CANSIM; Corporate Economics



# Briefing Note

## Labour Market

- ▶ Total employment in Calgary grew by 36 per cent between 1999 and 2009. In this period, Alberta's and Canada's employment grew by 30 and 18 per cent respectively. Strong investment spending and output growth in Alberta and Calgary contributed to an equally strong demand for labour, pushing the unemployment rate to relatively low levels.
- ▶ Low unemployment rates in Calgary and Alberta served as a major attractor for job seekers from the rest of Canada. Consequently, Calgary's and Alberta's population growth rates exceeded the national population growth rate.
- ▶ Net migration was the major source of population growth in the Calgary CMA accounting for roughly 69 per cent of total population growth in the 1999-2009 period.





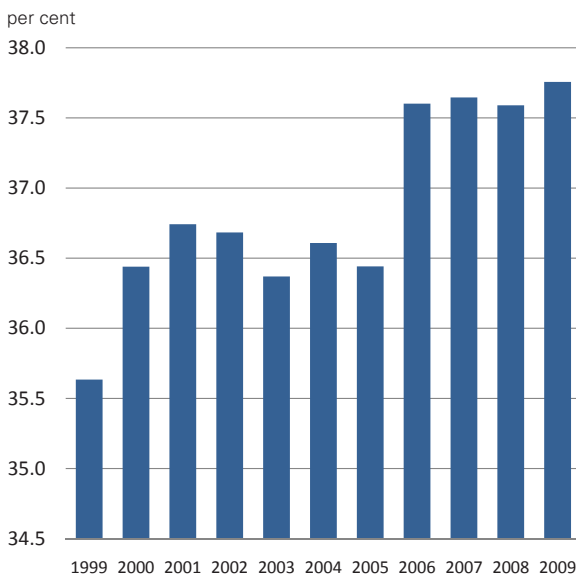
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## Calgary's Share of Alberta's Employment

- ▶ In 1999, the Calgary Economic Region employed labour force was estimated at 549,091 persons and by 2009 it increased to 751,541. Employment therefore grew by 36.9 per cent over the 1999-2009 period or annually by 3.7 per cent. In this period, total provincial employment increased by 467,710 or by 30.2 per cent.
- ▶ In 1999, the Calgary Economic Region was home to 35.6 per cent of the province's employed labour force, increasing to 37.8 per cent by 2009. This occurred because Calgary's employment growth rate exceeded that of the rest of the province.
- ▶ Employment in the rest of Alberta grew by 25 per cent between 1999 and 2009 while employment in Calgary increased by 37 per cent.

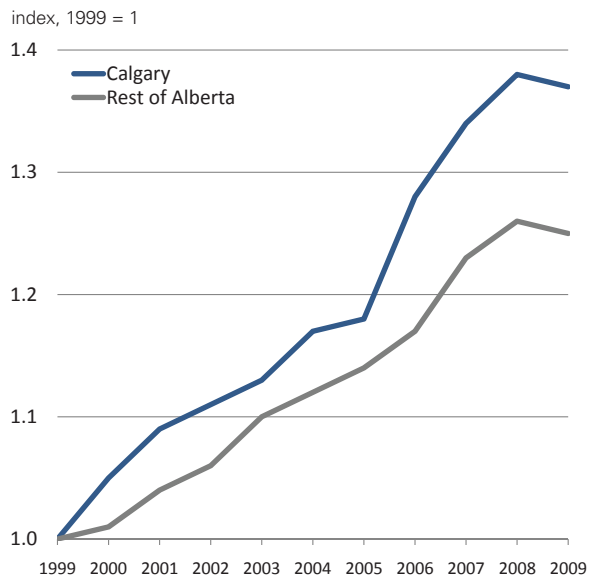
### Job growth in Calgary outpaced the provincial average

Chart 7  
Calgary's Share of Alberta's Employment



Sources: Statistics Canada; CANSIM; Corporate Economics

Calgary vs. rest of Alberta:  
Employment Growth



Sources: Statistics Canada; CANSIM; Corporate Economics

## Briefing Note

### Calgary CER: Employment by Industry

- ▶ In this period, the Calgary Economic Region accounted for 43 per cent of all new jobs created in the province. This is a good performance, given that the region has close to one third of the province's population.
- ▶ A significant number of the jobs created in the 1999-2009 period were in Scientific and Technical Services (32,000), Construction (31,300), and Health Care and Social Assistance (24,700). The industries experiencing the lowest levels of job increase were Accommodation and Food Services (4,300), Business, Building and Other Support Services (1,600), and Manufacturing (1,500).

Industry	1999 (‘000 Persons)	2009 (‘000 Persons)	Difference 2009 - 1999 (‘000 Persons)
All Industries	549.1	751.5	202.4
Agriculture	4.6	12.9	8.3
Forestry, Fishing, Mining, Oil and Gas	27.3	50.2	22.9
Utilities	3.2	8.1	4.9
Construction	40.5	71.8	31.3
Manufacturing	45.4	46.9	1.5
Trade	86.6	103.4	16.8
Transportation and Warehousing	39.9	41.5	1.6
Finance, Insurance, Real Estate and Leasing	33.2	48.8	15.6
Professional, Scientific and Technical Services	52.7	84.7	32.0
Business, Building and Other Support Services	28.5	30.1	1.6
Educational Services	32.4	44.3	11.9
Health Care and Social Assistance	44.2	68.9	24.7
Information, Culture and Recreation	29.0	36.0	7.0
Accommodation and Food Services	37.7	42.0	4.3
Other Services	21.6	35.1	13.5
Public Administration	20.1	26.2	6.1

Sources: Statistics Canada; CANSIM; Corporate Economics

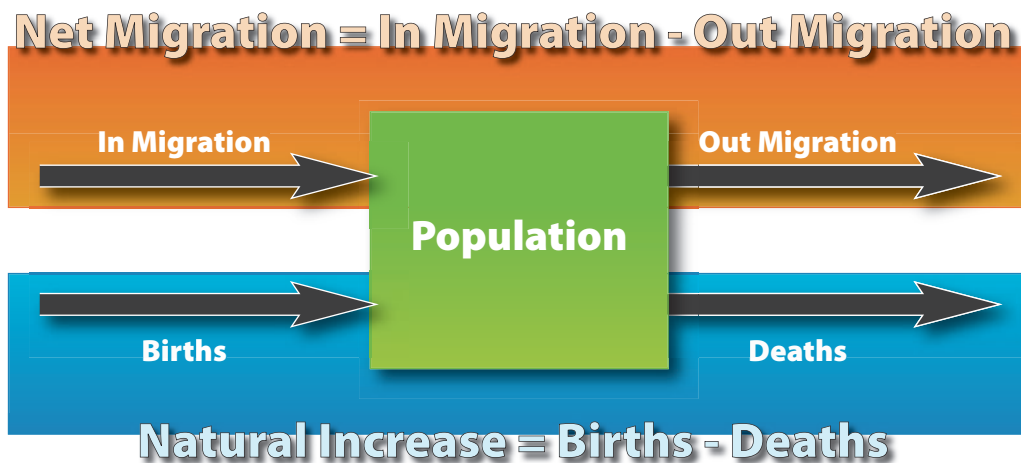
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### Population Change

- ▶ Population growth over time is determined by in migration, out migration, births and deaths. The difference between in migration and out migration is referred to as net migration and that between births and deaths as natural increase.
- ▶ Net migration, particularly net inter-provincial migration, tends to be sensitive to economic conditions. Good job prospects act as a major attractor to the region for individuals seeking employment. Net migration therefore tends to be volatile as it fluctuates with changes in the economy. Natural increase is generally influenced by the size and age composition of the population and therefore tends to be relatively more stable than net migration over time.

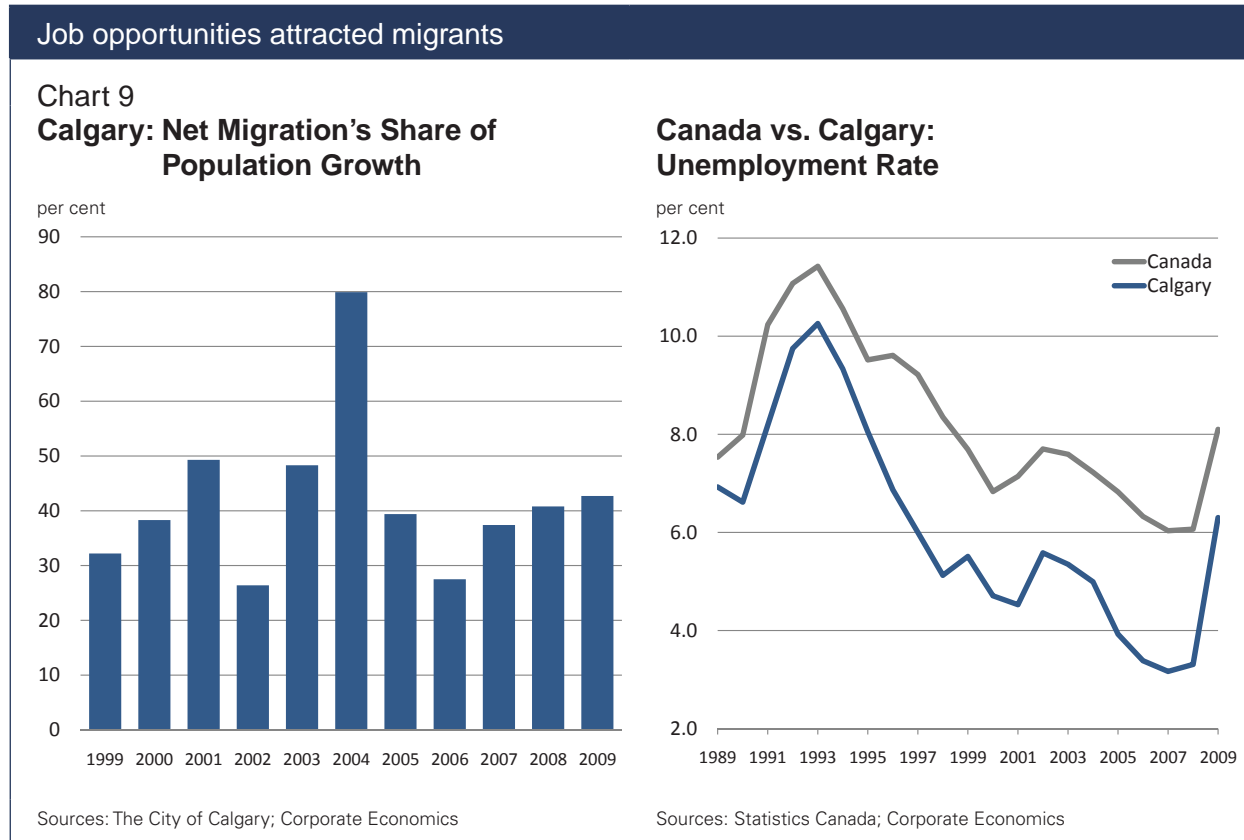
#### Labour market conditions drives net migration

Chart 8  
Regional Growth Dynamics Flow Chart



## Net Migration's Share of Population Growth

- ▶ Over the period 1999-2009, net migration was the major source of population growth in the city of Calgary. A strong labour market created an increasing demand for workers and therefore drawing job seekers from the rest of Canada.
- ▶ Net migration is influenced by economic and social conditions in the sending and receiving areas. Conditions that cause individuals to migrate out of the area are generally referred to as the push factors, while conditions that cause people to come to an area are referred to as the pull factors.





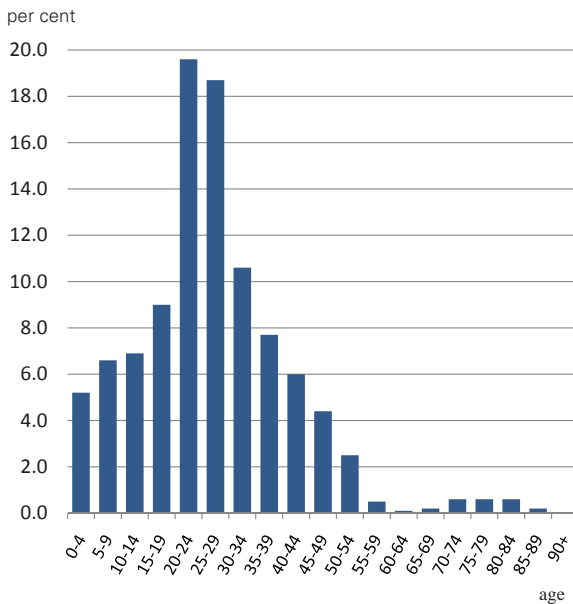
# Briefing Note

## Net migration and relative unemployment rate

- ▶ The unemployment rate in Calgary and Canada could be used as proxies to represent the pull factors in Calgary and the push factors in Canada respectively. The data in the chart above shows the unemployment rate in Calgary was consistently below that for Canada for the period 1988 to 2009. From the job seekers' perspective, Calgary offered a better chance of finding employment than elsewhere.
- ▶ The data analysis shows that there is a negative correlation between net migration and the relative unemployment rate. When the unemployment rate in Calgary is high relative to Canada as a whole, net migration in Calgary tends to be lower than when the Calgary unemployment rate is low.
- ▶ The migrants who came to Calgary were generally young and of the childbearing age. This contributed both directly and indirectly to current and future population and economic growth.

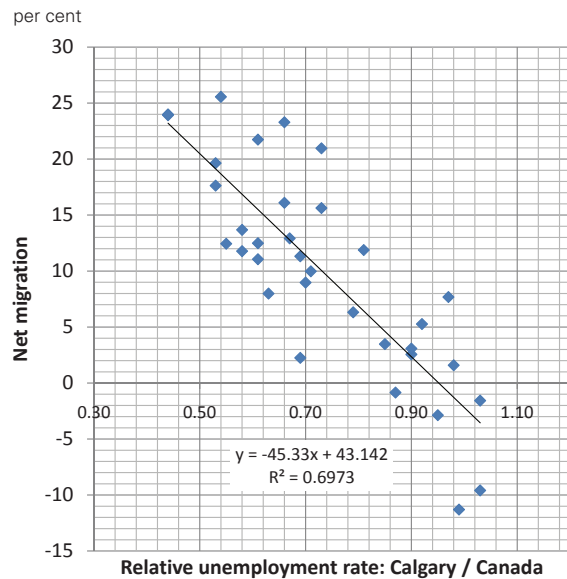
### Tight labour market attracted migrants

Chart 10  
Calgary CER: Age Distribution of Net Migrants (1996-2000)



Sources: Statistics Canada; Corporate Economics

Calgary: Net Migration and Relative Unemployment Rate (1976-2009)

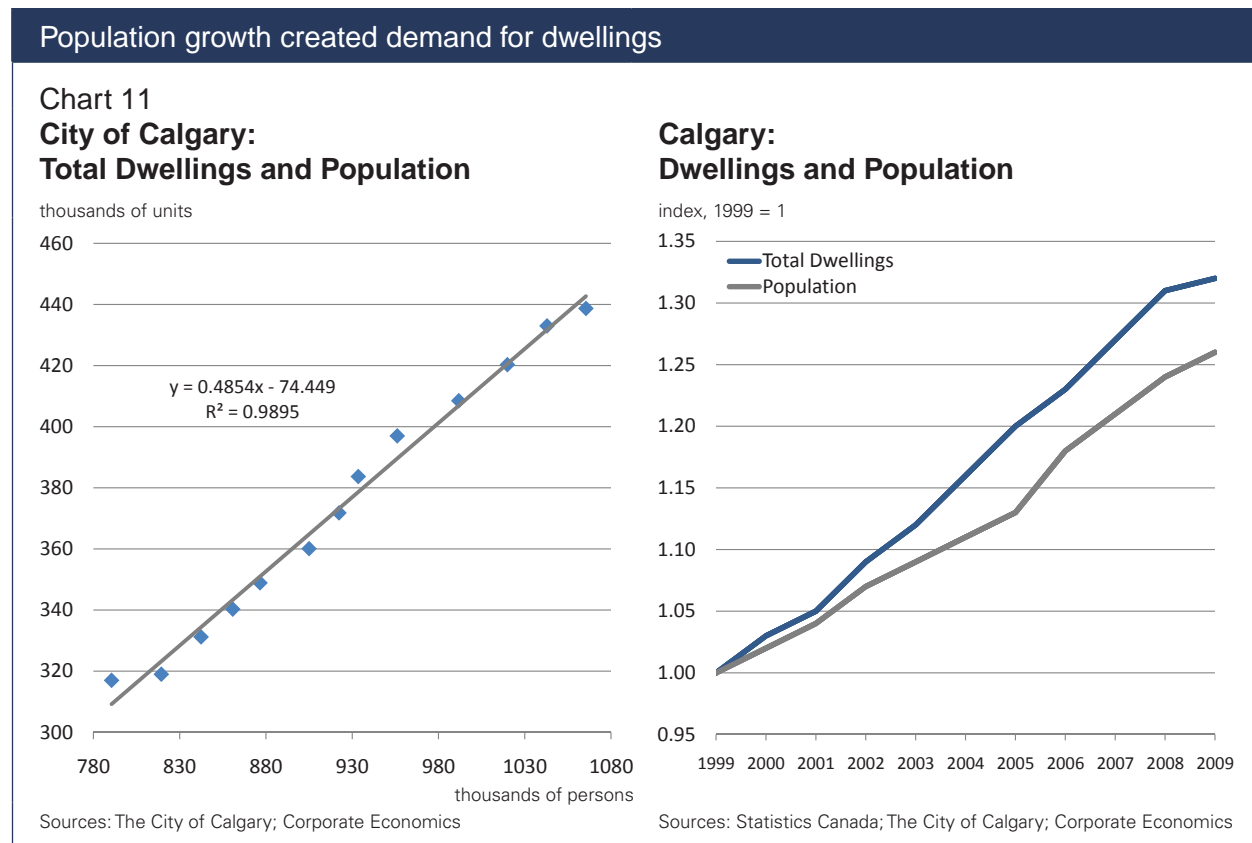


Sources: Statistics Canada; Corporate Economics

# Briefing Note

## Total Dwellings

- ▶ Between 1997 and 2007, the city of Calgary’s population increased by roughly 25 per cent. In this period, the dwelling stock grew by 35 per cent.
- ▶ The vacancy rate remained below 4.0 per cent between 1999 and 2003, and then rose from 4.2 per cent in 2004 to 6.5 per cent in 2009, with some fluctuation. In this period, relatively low interest rates and population growth drove activity in the residential construction sector.





## Briefing Note

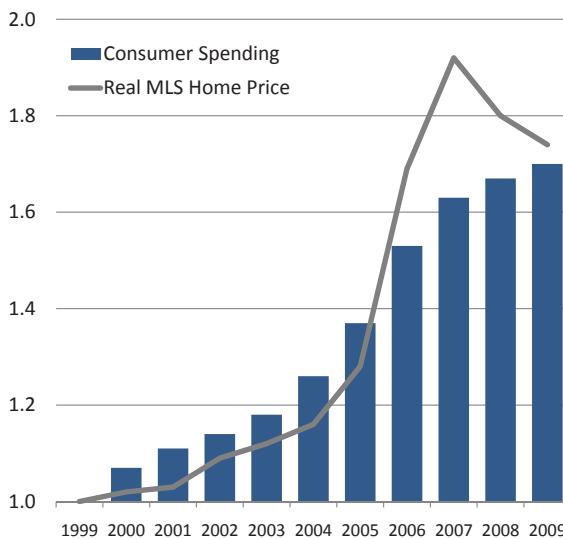
### Population Growth and MLS Prices

- ▶ The analysis of the population and housing relationship charted on the previous page shows a strong correlation between the city's population size and the housing stock. Population increase created an increased need for shelter resulting in an increase in the supply of housing units.
- ▶ The growth in consumer spending is generally influenced by the growth in income and wealth. The family home represents a significant portion of the average household's balance sheet and consequently the growth in house prices contributed to the growth in consumer spending. The average resale price, adjusted for inflation, of a house in Calgary increased by 74 per cent between 1999 to 2009. In this period, real consumer expenditure grew by 70 per cent.

#### Consumer spending driven by wealth increase

**Chart 12**  
**Calgary:**  
**Consumer Spending and Home Prices**

index, 1999 = 1

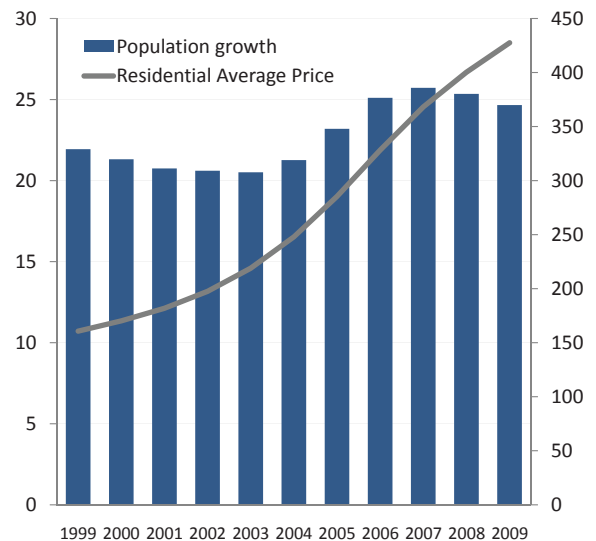


Sources: Centre for Spatial Economics; CREB; Corporate Economics

**City of Calgary:**  
**Population Growth and MLS Prices**

thousands of persons

thousands of dollars



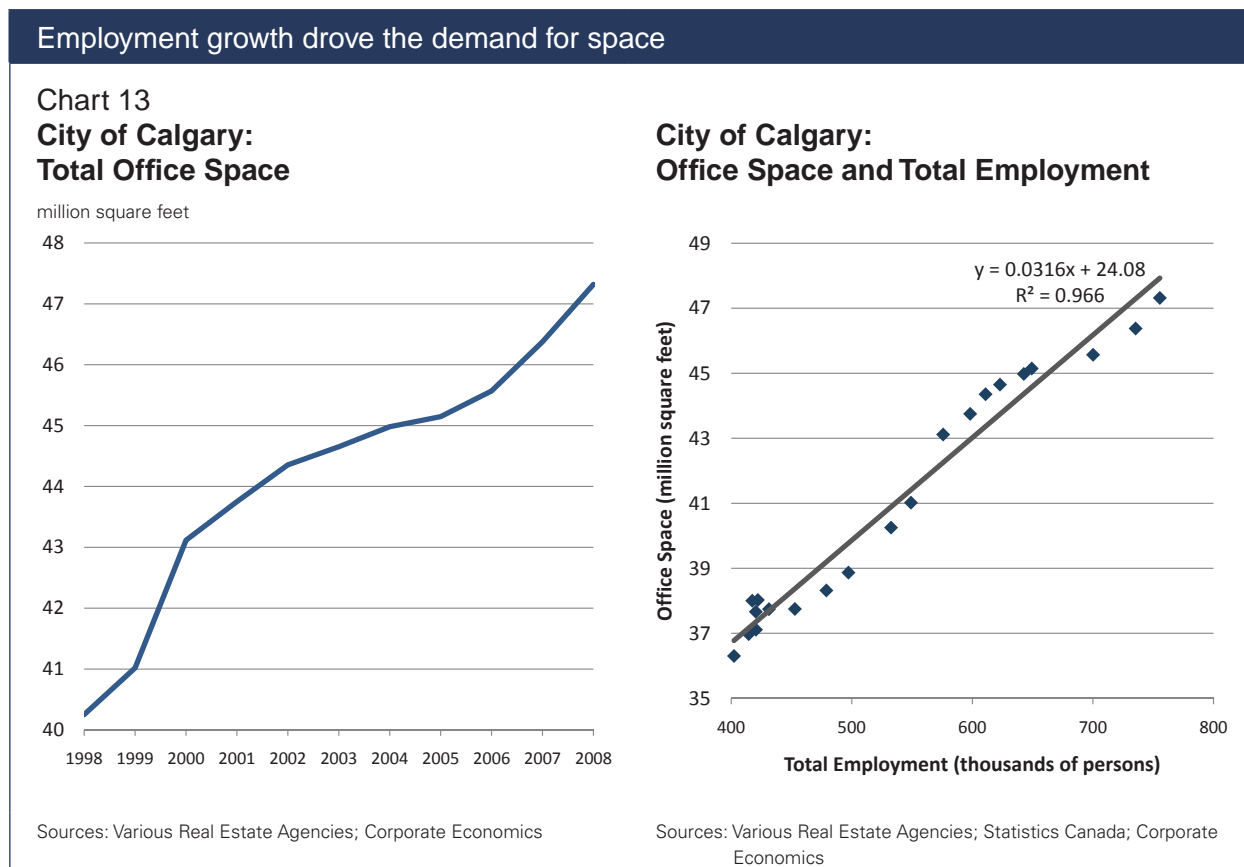
Sources: The City of Calgary; CREB; Corporate Economics



# Briefing Note

## Total Office Space

- ▶ The growth in total employment created an increase in the demand for non-residential space. The chart below shows a strong correlation between total employment and the total office space in the city of Calgary.
- ▶ For example, total employment in the Calgary Economic Region increased by 223,016 between 1998 and 2008, and employment in the service producing sector grew by 152,200. In this period, total office space inventory grew by 7 million square feet.





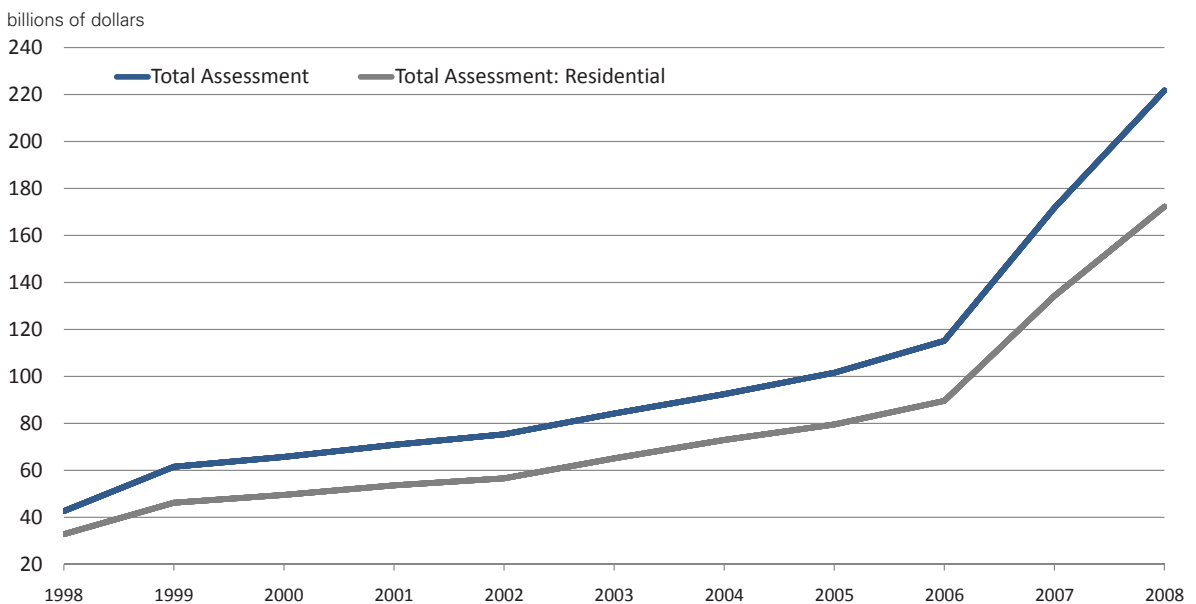
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### Assessment Values

- ▶ The economy and the stock of building space formed a causal loop over time. For example, increased economic growth resulted in population and employment growth which created a need for space. The construction activity that ensued resulted in higher levels of economic activity and this induced further construction activity which added to the stock of building space.
- ▶ In this period, economic growth created excess demand for space which resulted in price inflation and this caused the price for space to grow over time.
- ▶ The combination of growth in building space and growth in the price for this space caused the market value for property to increase over time.

#### Economic growth drove the demand for space

Chart 14  
**City of Calgary:  
Assessment Values**



Sources: GLJ Energy Publications; Conference Board of Canada; Corporate Economics

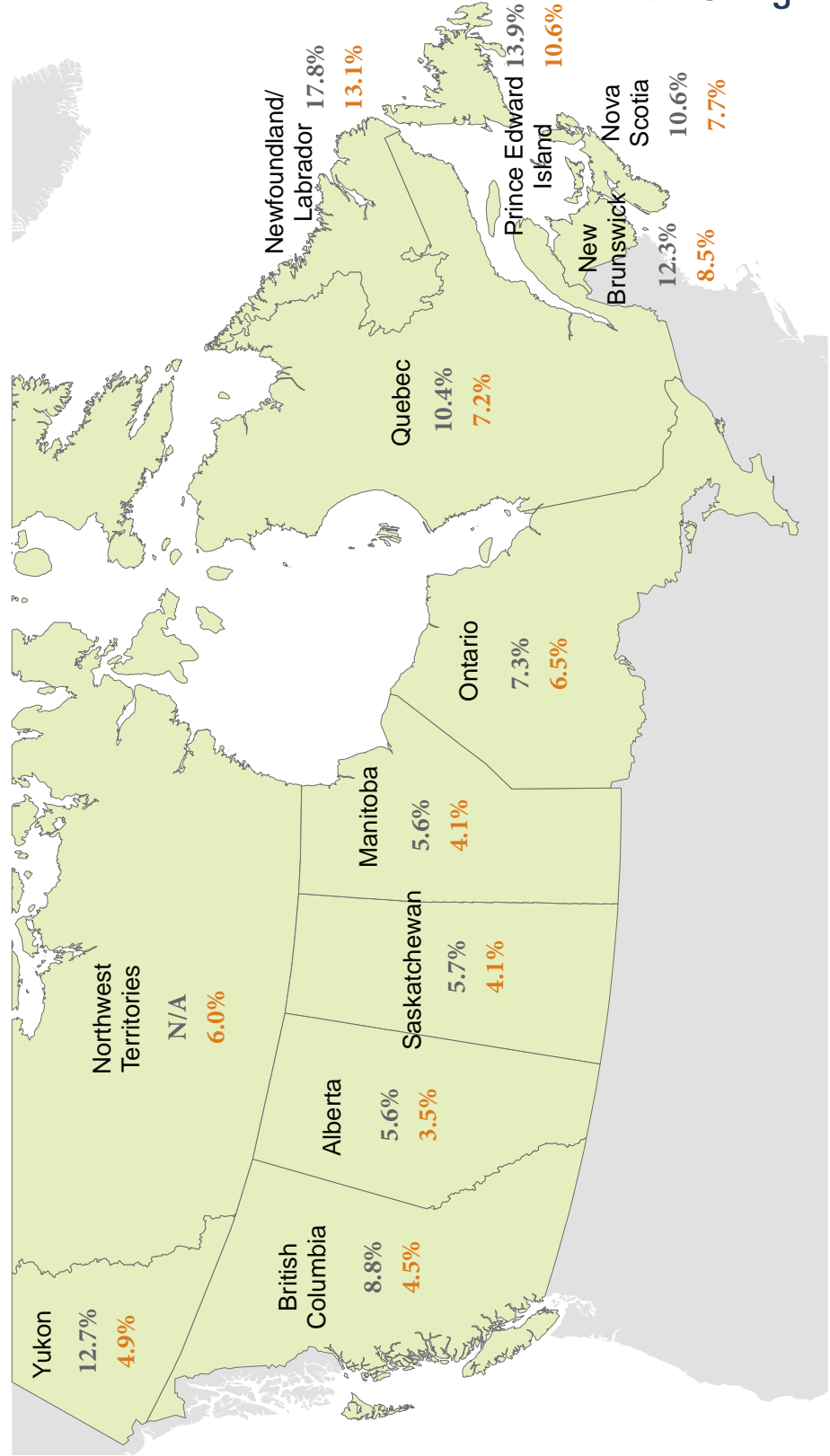
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## Unemployment Rates across Canada, 1998 vs. 2008 (per cent)

### Canada

1998 8.3%

2008 6.1%



## Who We Are

Over the past ten years Corporate Economics has researched dozens of economic topics and developed reliable methods of forecasting and analysis. Monitoring economic trends allows us to develop unique insights on how external events are impacting the local economy and the Municipal Corporation. We provide services in four areas: forecasting, information provision, consulting and policy analysis.

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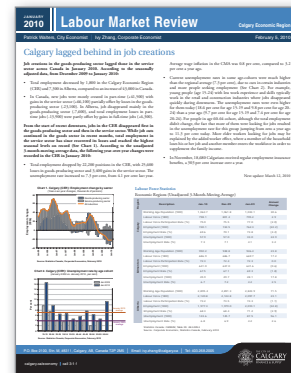
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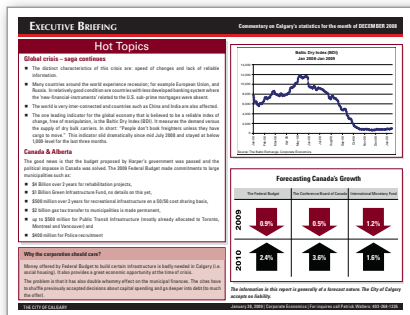
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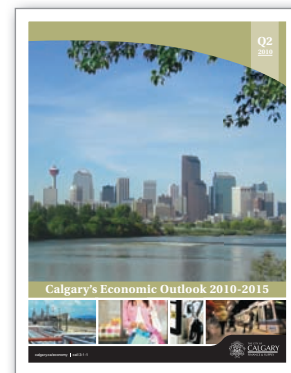
Monthly  
Review of Economic Trends



Commentary  
Executive Briefing



Quarterly  
Calgary's Quarterly Economic  
Outlook



Corporate Research Analyst: Estella Scruggs

Sources:

Statistics Canada, Conference Board of Canada, Centre for Spatial Economics, Calgary Economic Model, GLJ Energy Publications, The City of Calgary, CMHC, CREB, and others.