2002 Olympic Winter Games

Economic, Demographic and Fiscal Impacts

State of Utah
Governor's Office of Planning and Budget
Demographic and Economic Analysis Section
April 1998
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The Economic, Demographic, and Fiscal Impacts

The Demographic and Economic Analysis Section of the Governor's Office of Planning and Budget has authored this study to provide the Governor, legislature, state agencies, local government, the organizing committee, and the public with credible estimates of the economic, demographic, and fiscal impacts of the 2002 Olympic Winter Games. It also includes an organization and summary of macroeconomic data from the 1988 Calgary Olympic Winter Games and the 1996 Atlanta Olympic Summer Games. This analysis is critical to state government for planning, budgeting, and policy making. Individuals outside of state government will also find it useful because of the far reaching impacts of a such a mega-event.

The research is limited to strictly defined economic issues associated with the Utah Olympics and a consideration of macroeconomic indicators from two past Olympics. Specifically, this study analyzes the additional output, income, employment, population, and government revenue and expenditure that is generated because of the injection of new money into the Utah economy.

Many other relevant issues lie beyond the scope of this work. The research will be updated and expanded as additional information becomes available.

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Executive Summary

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Executive Summary

The 2002 Olympic Winter Games will generate a significant amount of employment, earnings, and output in the Utah economy prior to and during 2002. Analysts have estimated the economic, demographic, and fiscal impacts by analyzing the effect of new out-of-state money that enters the Utah economy as a result of the Games and by considering the effect of the Games on the economies in Calgary and Atlanta. The likely long term impacts of hosting the Olympics have also been briefly described.

Economic, Demographic, and Fiscal Impacts

State economic, demographic, and financial models indicate that the Olympics will generate the following impacts between 1996 and 2002[1]:

- **Output: $2.8 billion in economic output or sales.**
  This is the broadest measure of economic activity and includes all sales (both final and intermediate) that are estimated to occur because of the Games.

- **Employment: 23,000 job years of employment.[2]**
  Since some people may be employed for a decade or more, while others will be employed for just a few months, it is difficult to characterize the number of jobs created. The measure of jobs used here is derived from the sum of jobs created in annual terms from 1996 through 2002. Olympic related jobs start in 1996 with less than 100, but increase steadily, reaching a yearly peak of 7,135 in 2001, and a monthly peak of 14,261 in February 2002. The sum of employment in all of these years is equivalent to 23,000 jobs lasting one year.

  Olympic related employment is small compared to the size of the total economy. It is 0.2% of total jobs in the state in 1997 and peaks at 0.5% of total jobs in 2001. However, Olympic related jobs are an important source of new job growth. Olympic related jobs represent 6.2% of projected employment growth in 1998 and 21.4% of projected employment growth in 2001.

- **Earnings: $972 million in earnings to Utah workers.**
  The people who are employed because of the Olympics will receive these earnings, which, in addition to wages and salaries, include health and retirement benefits and proprietor's income.

- **Visitors: Net increase of 50,000 visitors per day during the Games.**
  The Wasatch Front is expected to have about 20,000 out-of-state visitors per day during the Games. During the Olympics, 70,000 visitors per day are expected. Therefore, the net increase because of the Olympics is estimated to be 50,000 per day. Net visitor spending is estimated at $123 million, after accounting for out-of-state leakages and displacement effects.

- **Population: 12,600 peak population increase in Utah during 2001.**
  Olympic related jobs will expand the population in the years leading up to and during 2002. Once the Olympic related jobs end, many of the people who held these jobs will eventually leave the state. This out-migration offsets the population increases that occurred prior to the Games.

  This population dynamic is best illustrated by considering the population impact of host broadcasters. Prior to the Games, NBC will relocate many highly specialized, professional employees to arrange for the television production of the Games. After the Games, these

[1] These impacts are in 1998 dollars and include direct, indirect, and induced economic activity. In other words, the impacts include the direct effects of Olympic spending, such as expenditures by the Organizing Committee and visitors, and the secondary and tertiary spending that occurs as these initial expenditures are circulated within the economy.

[2] The actual estimate is 22,732. Throughout the rest of this report all figures are presented in an unrounded form. This is done to ensure internal consistency in the reporting of the figures, but should not imply strict precision.

broadcasters will remove their equipment and move on to their next project. The end result is a migration of people into the state prior to the Games and an out-migration of these same people after the Games. The migration behavior of construction workers, athletes, business professionals, and temporary tourism vendors will be much the same.

In terms of the state's total population, the Olympic related population impact is small. Olympic related population represents 0.2% of the population in 1997 and increases to 0.9% during the Games. However, Olympic related population growth represents a significant portion of new population growth in the year before and during the Games. An estimated 28.8% of the new population growth in 2001 is expected to occur because of the Olympics. This impact declines to zero within a year of the Games.

- **Net Revenue to State and Local Government: $80 million to $140 million.** Because the Olympics present several unique circumstances that impact the estimation of government costs, the Governor's Office of Planning and Budget estimates the net revenue to state and local government will be within the range of $80 million to $140 million. These unique circumstances include the temporary nature of the event, the unique work force that it attracts, and the public health and safety costs that have not yet been explicitly estimated.

  State and local government revenue can also be broken out in terms of what state financial models actually calculate. According to these models, the Olympics will generate an estimated $236 million in gross state and local government tax revenue and $120 million in additional expenditures because of services provided by state and local government. This leaves an estimated $116 million in net revenue to state and local governments.

  Sources of revenue include sales (including state and local, resort, tourism, car rental, and transient room taxes), income (both personal and corporate), property, and fuel taxes, as well as service charges and other revenue sources. Expenditures are estimated using a state and local cost model that considers government expenditures on a per capita and per student basis, as well as other factors. Expenditures for growth in higher education, public education, transportation, public safety, corrections, human services, health, water, sewer and other state and local services are all included.

Long Term Legacies and Growth Issues

The Olympics will leave many enduring assets for Utah. Many facilities will be built that last long after the Games. Utah will also receive a significant amount of national and international recognition. Community benefits such as volunteerism, youth programs, cultural exchanges, and educational opportunities will also occur. These facilities, recognition, and benefits are the Olympic legacy. In some cases, these legacies are directly attributable to the Olympics. In others, the Olympics is simply a catalyst for their development. What follows is a listing of some of the larger facilities with an Olympic connection.

- **Public Olympic Facilities.** The largest of these include the University of Utah Student Housing and Olympic Village; Salt Palace Convention Center expansion; Rice Stadium expansion; Winter Sports Park, including ski jumps and the bobsled and luge run; West Valley Hockey Arena; Wasatch Mountain State Park enhancements; Provo ice sheet; and the Kearns speed skating oval.

- **Public Infrastructure Facilities.** A variety of new public infrastructure will help support the Olympics and will be an enduring asset for the state. These assets may or may not have a direct Olympic connection, but the timing, funding, and characteristics may, and, in some cases, are Olympic related. Examples include public buses; highway improvements; transit hubs; light rail; Salt Lake International Airport expansion; and the commuter rail system.

- **Private Facilities.** Several hotels and ski resort expansions are currently being planned or constructed in Utah. While these developments are not being built specifically for a 17-day event like the Olympics, they may be constructed sooner or in a more expansive fashion because of the

economic opportunities that the Olympics present. Examples include the Little America Hotel expansion and construction of the Royal Crown Hotel and Kimpton Hotel; Snowbasin facilities; The Canyons (formerly Wolf Mountain) expansion; Park City Mountain Resort expansion; and the development of Deer Crest Resort (a new resort adjacent to Deer Valley).

Economic growth, in-migration and high birth rates have placed strains on the state's resources and infrastructure. Two-thirds of Utah's past and expected future population growth comes from the children and grandchildren of current residents. This population growth is expected to continue unaffected by the Olympics. The state has responded to urban growth with a focus on intense planning. All Utahn's need to help the state plan for a desirable future.

1988 Calgary and 1996 Atlanta Olympic Games

The macroeconomic data from Calgary, Canada and Atlanta, Georgia were analyzed because both Games provide similarities and contrasts to the Utah Olympic Games. Calgary was analyzed because it was the last winter Olympics hosted in North America, is in the same favorable time zone as Utah, and is similar in size and culture to Utah. Atlanta was chosen because it was the last Olympic Games hosted in the United States, has consistent and timely data available, and provides a contrast to the winter Olympics. The review of Calgary and Atlanta demonstrated that:

- **Difference in Size.** Winter and summer Games are considerably different in size and popularity. The Calgary Olympics included 57 nations, 46 events, and 1,634 athletes. The U.S. television contract was awarded to ABC for $309 million. In contrast, the Atlanta Olympics included 197 nations, 271 events, and 10,744 athletes. The U.S. television contract was awarded to NBC for $456 million. In other words, depending on the measure, the summer Olympics is 1.5 to 6 times larger than the winter Olympics.

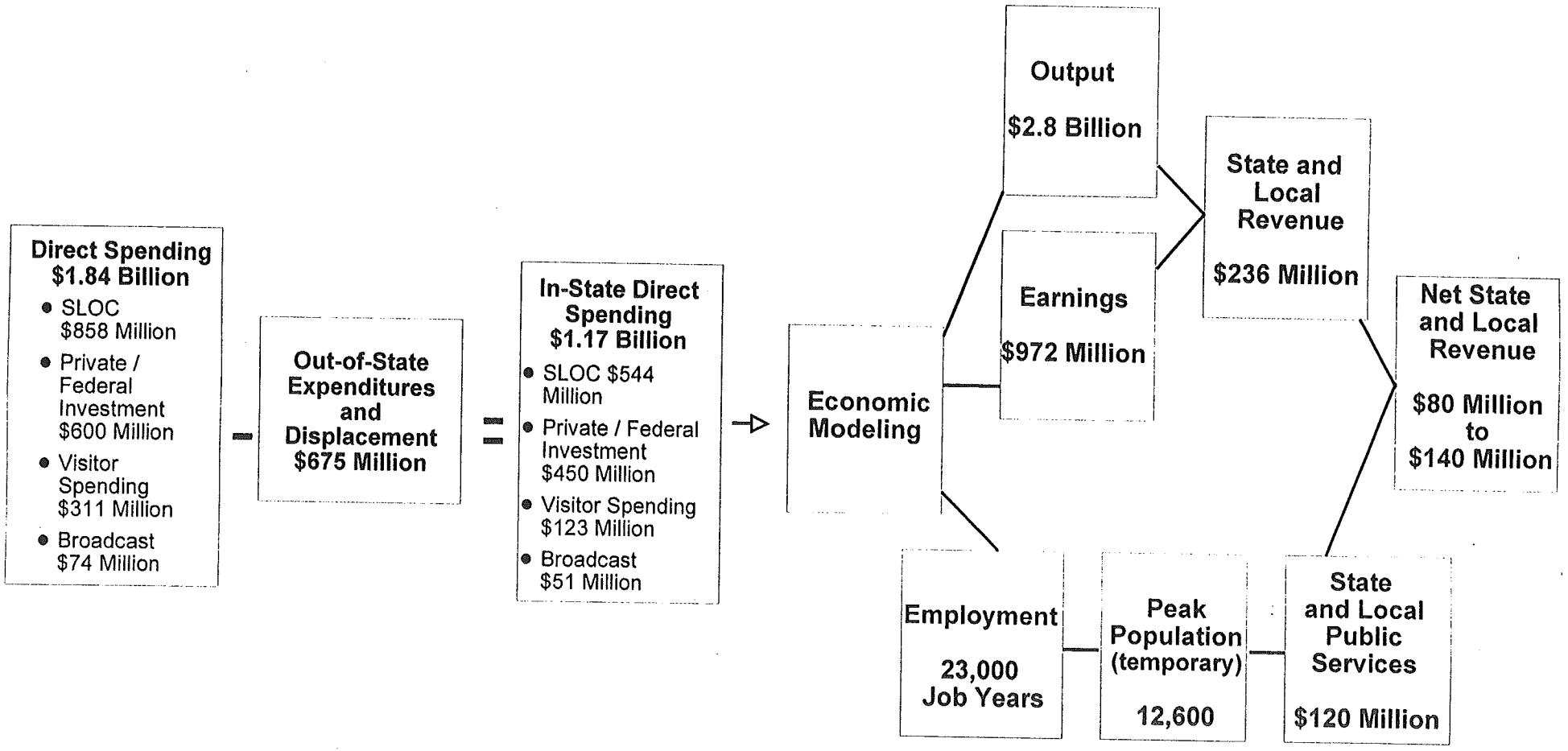
- **Increasing Popularity.** The popularity of winter Games in terms of both the size of the U.S. television contract and the number of participating nations has grown dramatically since the 1988 Olympic Winter Games in Calgary. The U.S. television contract has increased from $309 million in Calgary (1988) to $545 million in Salt Lake City (2002). The number of participating nations is expected to increase from 57 in Calgary to 80-85 in Salt Lake City.

- **Olympic Impacts Overshadowed by Other Major Economic Trends.** Major economic occurrences such as a natural resource recession in Calgary and a multi-year economic expansion in Atlanta overshadow the impact of the Olympic Games in annual terms. In both of these cities, the Olympics appear to sustain and diversify economic activity, but are not enough to significantly alter macroeconomic indicators. In Calgary, the Olympics did not create significant long-term growth problems nor did it create a severe boom/bust cycle.

- **Tourism Positively Impacted.** Tourism indicators in Calgary and Atlanta appear to be positively influenced by the hosting of the Olympic Games. Tourism visits, hotel occupancy rates, and convention activity increase in the years prior to and following the Olympics.

Economic, Demographic and Fiscal Impacts in Utah
2002 Olympic Winter Games

April 1998



Source: Utah Governor's Office of Planning and Budget

Table 1: Utah's 2002 Olympic Winter Games Summary Findings

Spending (millions of 1998 dollars)	1996 - 2002
Direct Spending	$1,843
Less Leakages and Displacement	$675
Total In-State Direct Spending	$1,168
SLOC Budget	$858
Less Leakages and Displacement	$314
Total In-State	$544
Infrastructure Investment	$600
Less Leakages and Displacement	$150
Total In-State	$450
Visitor Spending	$311
Less Leakages and Displacement	$188
Total In-State	$123
Broadcast Expenditure	$74
Less Leakages and Displacement	$23
Total In-State	$51

Economic & Demographic	
Output (millions of 1998 dollars)	$2,809
Employment	23,000
Earnings (millions of 1998 dollars)	$972
Population (peak year of 2001)	12,600

Fiscal (millions of 1998 dollars)	
State and Local Revenue	$236
Sales Tax	$96
Income Tax	$50
Property Tax	$37
Other Revenue	$53
State and Local Expenditure	$120
Net State and Local Revenue	$80 to $140
State Revenue	$150
Sales Tax	$59
Income Tax	$50
Other Revenue	$42
State Expenditure	$79
Net State Revenue	$71
Local Revenue	$86
Property Tax	$37
Sales Tax	$20
Other Revenue	$29
Local Expenditure	$41
Net Local Revenue	$45

Visitors	
Visitor Days	1,190,000
Average Visitors per Day	70,000
Displaced Visitors per Day	20,000
Net Visitors per Day	50,000
Spending Per Visitor Day (1998 dollars)	$261
Total Visitor Spending (millions of 1998 dollars)	$311
In-State Visitor Spending	$206
Displaced Visitor Spending	$83
Net In-State Visitor Spending (millions of 1998 dollars)	$123

Source: Utah Governor's Office of Planning and Budget

I. Introduction

The Governor's Office of Planning and Budget has prepared this analysis as part of a more than decade-long commitment to understanding the potential economic issues and impacts associated with the Olympic Winter Games. This legacy of involvement includes research that started with the original 1985 Olympic Feasibility Study.

Research by the Governor's Office of Planning and Budget on the impacts of the Olympic Winter Games was last published in August 1994. This work has now been revised. The main differences between the 1994 research and the present analysis is (1) the Olympics have now been awarded to Salt Lake City -- in previous analyses the bid was still speculative; (2) all major television contracts, which is the largest source of funding, have been awarded; (3) the size of the organizing committee budget has increased consistent with growth in revenues; and (4) externally funded infrastructure investment associated with the hosting of the Games has been estimated and included as well.

The research in this report is limited to a consideration of the additional output, income, employment, population and government revenue and expenditure that is generated because of the injection of new money into the economy. A brief description of the type of long term legacies that will be created and an assessment of the macroeconomic indicators from two past Olympics are also part of this strictly defined scope of work. Other relevant issues are beyond the scope of this report. Specifically, this research does not evaluate the environmental and social impacts; quantify the long term impacts on the community and economy (including the tourism industry); estimate in a more precise fashion the direct costs outside of the Salt Lake Organizing Committee's budget of providing public services; or capture the myriad of new spending in the Utah economy that could have an Olympics connection.

This report begins with a detailed discussion about the estimated economic, demographic, and fiscal impacts of the 2002 Olympic Games in Utah. It is followed by a brief discussion about the long term impacts of hosting the Olympics. The final section provides a summary of macroeconomic indicators before and after the 1988 Calgary, Canada and 1996 Atlanta, Georgia Olympics.

This research will be updated and expanded as more complete and accurate information becomes available in the years leading up to and perhaps following the 2002 Olympic Winter Games.

II. Estimated Impacts of the 2002 Olympic Winter Games

Modeling Framework

To estimate the impacts resulting from the 2002 Olympic Winter Games, the Governor's Office of Planning and Budget (GOPB) used the Utah State and Local Government Fiscal Impact Model (FIM). The FIM captures the interaction between the economy, the population, and government revenue and expenditure. The basic idea is that the Olympics will generate new spending in the economy. This spending creates additional output, income and employment. The expansion of employment opportunities results in a larger resident population. This population, in turn, needs public services which require additional government expenditure. Likewise, the additional income these people earn generates additional government revenue. This is the same methodology and model that is used by state government to evaluate other projects and policies.

Olympic Related Sources of Spending

GOPB identified the following sources of estimated Olympic related spending:

- Salt Lake Olympic Organizing Committee (SLOC): $858 million
- Infrastructure investment: $600 million
- Visitor spending during the Olympic Games: $311 million
- NBC's spending to broadcast the Games: $74 million[3]

While there are certainly other sources of Olympic related spending, this analysis is limited to an examination of these four.

The total amount of spending directly related to the Olympics is estimated to be approximately $1.8 billion. Only $1.2 billion, however, actually impacts the Utah economy because of the leakages that occur. The term leakage is used to describe the fact that although a good or service may be purchased in-state, some of the value is produced out-of-state. In this sense, some of SLOC's spending leaks out of Utah's economy. Further, employees of SLOC and the other entities involved with the Olympics spend only about 80% of their income in Utah. The remainder goes for non-consumption related purposes such as taxes and saving which do not immediately impact the Utah economy. Finally, 10% of SLOC's budget comes from sources within Utah and therefore is not considered to generate an economic impact. Table 2 provides these direct Olympic related spending estimates by industry and year. Most of this spending will occur during 2001 and 2002 although significant amounts will be spent between 1997 and 2000.

In order to have an economic impact, Olympic related spending must originate from outside sources. Spending that originates from in-state sources is considered a redistribution of economic activity. Table 3 presents externally financed in-state spending by source. Only $544 million, or about 63%, of SLOC's budget is estimated to be both externally financed and spent in-state. Of the $600 million spent on infrastructure investment $450 million will be spent in-state. Of the $311 million Olympics visitors are estimated to spend in connection with their attendance at the Games, $123 million, or about 40% will be spent in-state. NBC's Utah Broadcast operations will cost $74 million, of which $51 million is estimated to be spent in-state.

The following five sections document the major assumptions used to develop Tables 2 and 3.

SLOC Budget.[4] SLOC's current budget is an

[3] All spending estimates are in inflation-adjusted 1998 dollars. SLOC's budget is $920 million in non-inflation adjusted dollars, and is current as of February 1, 1998. It is based on an extrapolation of the original bid budget. Adjusting the budget for inflation brings the $920 million to $858 million in 1998 dollars. SLOC is currently revising this budget based on a ground-up approach. The new budget will be reported in the Fall of 1998. GOPB intends to update this analysis once the new budget is finalized.

[4] A number of Olympic facilities, such as the Olympic Village and Rice Stadium at the University of Utah

extrapolation of the original budget established during 1994 for the successful bid in June 1995. When the budget was last revised in late 1996, it was set at $920 million in non-inflation adjusted dollars. Adjusting the budget for inflation brings the $920 million to $858 million in 1998 dollars. SLOC's $544 million of in-state spending, shown in Table 3, is $314 million, or about 37%, less than the $858 million budget. The reasons for this are as follows:

- In 1998 inflation adjusted dollars, $90 million of SLOC's budget will be for purposes related to the Winter Sports Park. In non-inflation adjusted dollars, the $90 million is $99 million. Of this $99 million, $59 million will go to repay the sales tax diversion and provide a $40 million legacy fund to operate the Winter Sports Park.[5]

- $86 million, or 10%, of SLOC's total budget will be financed from sources inside the state. The portion of SLOC's budget financed internally, from various local sponsors, resident ticket sales, and other intrastate expenditures, would have been spent in the state regardless of whether Utah hosted the Olympics. Thus, the internally financed portion has no impact on the growth of the economy.

- $103 million of SLOC's budget will be for goods and services produced outside the state.

- $35 million is employee compensation devoted to non-consumption purposes such as taxes.

and the Hockey Arena in West Valley City will cost substantially more than SLOC has budgeted. The difference between the SLOC budget figures for these facilities and their final cost is assumed to be a redistribution of internal spending. In other words, if these facilities were not built, the part of their cost funded from sources other than SLOC would have been spent in Utah in other ways. Therefore, only the SLOC funded portion of these facilities impacts the Utah economy.

[5] The $59 million is the original investment of Utah tax dollars to build Olympic facilities. This money is repaid to state and local government and is not a net increase to the Utah economy. The $40 million Legacy Fund will not be used until after 2002 and so the economic, demographic, and fiscal impact of this money is not included in the time frame of this analysis.

Olympic Related Infrastructure Investment. The Olympic Games will accelerate the development of projects that would normally occur after the Games. It will also encourage new investment that would otherwise not occur. Both of these will result in a large amount of construction before 2002. Major expansions of lodging facilities, ski resorts, and transportation systems will be completed prior to the Games. Some of this infrastructure investment would have occurred regardless of the Olympics, though likely after 2002.

With over 80 percent occupancy in recent years, for example, the lodging industry along the Wasatch Front warrants additional hotel construction. A study of Salt Lake area lodging capacity by Hire and Associates estimates about 6,000 additional lodging rooms will be built between 1996 and 2001. Further, little additional lodging construction is foreseen for the years immediately after the Olympics. GOPB estimates similar acceleration effects for other types of infrastructure.

While infrastructure is not built exclusively for visitors attending a three week event such as the Olympics, the prominence of the Games can impact the timing of construction. The experience of influential visitors during the Games combined with the impression of the millions of people watching on television around the world will increase visitation to the Wasatch Front to some extent. Because of this exposure, GOPB estimates 25 percent of the hotel construction taking place during the 1996 to 2002 period is accelerated from the 2003 to 2007 period. In other words, without the Olympics, only 75 percent of the hotel construction forecast to take place between 1996 and 2002 would have been undertaken. The remaining 25 percent would have occurred sometime after 2002.

In addition to hotels, a variety of other infrastructure investments will be affected by the Olympics. Public facilities, such as the Salt Lake City International Airport and various highways and transit systems, and private facilities, such as ski resorts, will be influenced by the Olympics. Some projects, such as Olympics venues and access roads are built specifically for the Olympics. In other cases, only the timing of the infrastructure investment is impacted. The end result is more economic activity from 1996 to 2002 than would otherwise occur. As presented in Table 2, GOPB estimates public and private sector infrastructure investment to

total $600 million between 1996 and 2002. Of the $600 million, $450 million is estimated to be spent in-state, in equal increments of $90 million per year from 1997 through 2001. Given all the construction activity associated with the various infrastructure projects along the Wasatch Front, this $600 million appears to be a conservative estimate.

Visitor Spending During the Olympic Games. SLOC estimates there will be at least 70,000 visitors on any given day during the Games. Since the Wasatch Front typically has about 20,000 out-of-state visitors skiing and involved in other activities during this period, the net increase in visitation will be around 50,000.[6] The net increase in spending associated with these visitors is $123 million. If anecdotes from Nagano are to be believed, however, certain segments of Utah's tourism sector could experience less business during February 2002 than if the Olympics were held elsewhere. Tourism industry officials are acutely aware of this possibility and are already working hard to mitigate any negative impacts resulting from the Olympics. In many respects, GOPB's analysis of visitor spending during the Games, and visitor spending displaced because of the Games, can be characterized as a hard look at what Utah's tourism sector can anticipate before, during, and after February 2002.

Atlanta and Calgary. Atlanta and Calgary provide considerable insight to possible negative impacts associated with hosting the Olympics. The results for these two host cities suggest there will be little if any aggregate displacement of economic activity resulting from the 2002 Olympic Winter Games, but specific industries and locations could experience short term declines in business.

Atlanta. As Figure 2 demonstrates, hotel occupancy was down during the period around the 1996 Summer Games. From 71 percent in 1995, occupancy declined 3 percentage points to 68 percent in 1996. Though occupancy was down, room revenue actually increased almost 20 percent, from $1.1 billion in 1995 to $1.3 billion in 1996. Further, except for October and December, room revenue was up in every month of 1996 relative to 1995. Tourism officials anticipate the largest amount of Olympic related displacement of travel business in the month just prior to the Games. But in Atlanta, even during the month of June, just prior to the Games in July and August, room revenue was up slightly relative to 1995. Finally, Atlanta's tourism sector appears to be back on track during 1997 as Figure 3 depicts. Though all the data for 1997 are not yet available, monthly room rents are up in the range of five to 10 percent relative to 1995.

When considering the parallels between Atlanta and Salt Lake, it is important to understand exactly what the Atlanta data mean. Although the Olympics appeared to displace little travel business in the aggregate, anecdotes indicate many lodging properties experienced substantially less business than normal during the months just before, and just after the Games. A partial explanation for the aggregate result depicted in Figure 2 is that a relatively few well situated, very large, hotels were able to take advantage of the particular dynamics leading up to the Games while a large number of fairly small lodging businesses, which were poorly situated could not. Because of this possibility, it is important for the lodging industry to coordinate their activities with SLOC.

Calgary. Calgary's experience reinforces the notion that individual businesses and industries could see less business during 2002 than normal. Figure 4 compares Calgary's 1987 skier visits with 1988; both years were bad snow years. Thus, the main explanation for the differences in visitation observed in Figure 4 appear to result from the Olympics. For the year as a whole, skier visits were down almost 20 percent in the 1988 Olympics year relative to 1987.

Visitor Spending Calculation. The visitor spending estimate presented in Table 3 and detailed in Table 4 results from the 1996 Skier Survey conducted by Wikstrom and Associates, information from SLOC, the Atlanta and Calgary data, and assumptions by GOPB. As detailed in Table 4, the total number of visitor days anticipated during the Games is almost 1.2 million, while the total amount these visitors are

[6] Precise estimates of destination skier visits by week during the ski season are not available. Without considering the impact of the Olympics on visitation, GOPB forecasts 3.8 million skier visits during 2002, of which 2.1 million will be made by destination skiers. Dividing these 2.1 million annual destination skier visits by 120 ski days during the season, yields almost 18,000 destination skiers per day, on average. This 18,000 average is adjusted up to 20,000 to account for the fact that the President's day weekend, one of the busiest of the season, occurs during the Olympics.

estimated to spend is estimated to be $311 million, thus the spending per visitor day is $261. As described below, however, only $123 million of the $311 million is estimated to impact Utah's economy. The most important items underlying Table 4 are as follows:

- **Lodging Expenditures.** SLOC estimates Olympic visitors who pay for lodging will pay about $170 per night during the Games.

- **Adjustments for Ski and Lodging Expenditures.** Based on the Wikstrom and Associates spending estimates, and SLOC's estimate of lodging, visitors who pay for lodging are estimated to spend $346 per day, while those who do not pay for lodging are estimated to spend $176 per day. These estimates include air fare of $343 for the visitor's entire stay.

- **Gross Visitor Expenditures.** Based on Atlanta's experience, SLOC estimates 35,000 visitors will pay for lodging and 35,000 will stay in existing residences. Combining this information with the per day spending estimates and the 17 day duration of the Games implies Olympics visitors will spend a total of $311 million during the Games.

- **Adjustment for Out-of-State Leakages.** Considering the out-of-state portion of the goods visitors buy results in the in-state spending estimate of $206 million, as presented in Table 4. Air fare accounts for much of the difference between gross spending and adjusted spending.

- **Displaced Visitor Spending.** In order to develop a worst case estimate of displaced spending, GOPB assumed the pattern of skier visits to Utah resorts in 2002 would resemble Calgary's experience in 1988. In addition, all the displaced skiers are assumed to be non-residents. Without considering the Olympics, GOPB forecasts 3.8 million skier visits during 2002. If almost 20 percent of these visits are displaced by the Olympics, and all the displaced visits would have been made by destination skiers, there will be almost 700,000 fewer destination skier visits in 2002 than could be expected if the Olympics were being held elsewhere. Since the results in Atlanta suggest room rents were not displaced because of the Olympics, only the skiing related expenditures associated with these 700,000 skier visits have been displaced in this analysis. In addition, since there would normally be 20,000 visitors on any given day during the Games, all of their spending is displaced. The total amount of displaced spending is $83.3 million.

- **Net Visitor Expenditures.** Subtracting the displaced spending of $83 million from the $206 million implies the net increase in visitor spending resulting from the Games will be $123 million, as presented in Table 3 and detailed in Table 4.

NBC Spending to Broadcast the Olympics. Based on discussions with SLOC and sources in the broadcast industry, NBC is estimated to spend about $74 million to broadcast the Games, of which $51 million will be spent in Utah, as presented in Table 3. NBC's spending is estimated to increase yearly from $6 million in 2000 to $28 million in 2002. Most spending will be in the services sector for lodging, equipment leasing and a variety of business services. Other purchases include electricity and materials and supplies.

Economic, Demographic and Fiscal Impacts

Thus far, the discussion of the Olympics has focused on the spending directly related in some fashion to hosting the Games. This spending is known as a direct impact.

The total impact of the Olympics includes what are known as indirect and induced impacts, in addition to the direct impact. Indirect impacts involve the purchasing and hiring done by the suppliers used by those directly involved with Olympic related activities. In addition, indirect impacts include the activities of the suppliers' suppliers, and so on. Induced impacts involve the consumer purchases made by those who are either directly or indirectly employed because of the Olympics. The initial consumer spending of those directly or indirectly employed because of the Olympics generates further employment which generates further consumer spending, and so on. The induced impact includes all these cascading rounds of consumer spending.

Economic impacts include output, employment and income, which is referred to as employee earnings. Output, employment and earnings result from the various rounds of spending described previously. These economic impacts generate demographic and fiscal impacts. The expansion of the economy above what would have been the case without the Olympics results in an expanded population. Basically, the population is larger because of the employees and their families. These additional people pay various taxes and fees with their income which results in additional state and local government revenue. However, these people also require various public services which results in additional state and local government expenditure.

As depicted in Figure 5, output and employment rise steadily from small levels in 1996 to a peak during 2001 and drop off during 2002. Interestingly, employment drops off much more dramatically during 2002 than output. This relatively sharp drop-off in employment reflects the fact that a large amount of work will be accomplished in January and February 2002, but Olympic related activities will essentially cease shortly after the Games' closing ceremony on February 24th.

A summary of the various impacts expected to occur between 1996 and 2002 is as follows:

- **Output.** Output peaks at $790 million during 2001 and totals $2.8 billion for the 1996 to 2002 period.

- **Employment.** Employment will peak around 14,267 (in monthly terms) during the Games, while total job years of employment will be approximately 22,732 for the 1996 to 2002 period. Direct, indirect, and induced Olympic related employment is estimated to be 0.5% of projected total employment in Utah during 2001, and 21.4% of employment growth during that year.

- **Earnings.** Employee earnings peak at $278 million during 2001, and totals $972 million.

- **Population.** Additional population will peak at 12,600 during 2001, but decline to zero several months after the Games. Additional Olympic related population is estimated to be 0.9% of projected total population on February 1, 2002. An estimated 28.8% of the new population growth in 2001 is expected to occur because of the Olympics.

- **Net Revenue to State and Local Government.** Net revenue to state and local government is estimated to fall within the range of $80 million to $140 million.

What follows is a more detailed discussion of each of these impacts.

Output. Output is a bit more complicated than employment or income, but is valuable because it measures the dollar value of all the transactions comprising economic activity. Total gross output, as it is known, includes output delivered to both intermediate and final demand, or, all the intermediate transactions necessary to complete a final sale, as well as the final sale. In this sense, output incorporates a large amount of double counting. Not only is the value of a good or service counted at the point of final sale, but the value of all the components, the value of their components, and so on, are added to the final sale value to arrive at the amount of output required to provide the final good or service. But again, output is an important measure because it gives a dollar value for all the activity associated with the Olympics.

Output impacts by sector resulting from the Olympics are presented in Table 5. Total output is $2.8 billion from 1996 through 2002. Output is anticipated to grow steadily from approximately $8 million in 1996 to almost $790 million during 2001, before falling off to around $683 million during 2002. The largest output impacts are in the services sector, which includes SLOC's activities. Construction has the next largest impact because of hotel acceleration, transportation and Olympic facilities constructed by SLOC. The other sectors with major output impacts – manufacturing; transportation and public utilities; trade; and finance, insurance and real estate – all provide goods and services used in Olympic related activities.

Employment. Employment impacts by sector resulting from the Olympics are presented in Table 6. The total employment impact is estimated to be 22,732 job years. Employment is anticipated to grow steadily between now and 2002. Average annual employment is expected to almost double from 3,992 during 2000 to 7,135 during 2001. The average level of

employment during 2001 is expected to double again, peaking at 14,267 during the month of the Games, February, 2002. After the Games, Olympic related employment is expected to drop rapidly, so that average annual employment during 2002 is approximately 3,551.

For the purpose of relating Olympics' impacts to the overall size of Utah's economy, Table 6 also includes GOPB projections of total statewide employment and employment growth.[7] Direct, indirect, and induced Olympic related employment relative to total employment increases steadily from 0.2% in 1997 to 0.5% in 2001, before falling to 0.3% in 2002. Since the Olympics are a component of the state's economic growth, it is interesting to also compare Olympic related employment to projected employment growth. The Olympics represent 6.2% of projected employment growth in 1998. The Games' importance increases steadily to 21.4% of projected employment growth during 2001, before declining to 8.0% in 2002.

The distribution of employment impacts closely patterns the distribution of output impacts. The largest employment impacts are in the services sector, which includes SLOC employees. During February 2002, services are expected to employ 6,915 people, followed by trade with almost 4,601, while the rest of the sectors employ less than 1,000. Mining has significant employment between 1996 and 2001 because of sand and gravel purchases related to construction activity. The $600 million additional Olympic related infrastructure investment supports several hundred jobs in the construction sector which, when combined with SLOC's construction spending, results in almost 1,000 construction jobs between 1999 and 2001.

Employment impacts by detailed industry are presented in Figure 6 and Table 7. With over 4,500 job years of employment, the construction industry has the largest employment impact. Highly skilled business services such as engineering and management consulting, legal services, accounting services, broadcast consulting, and the like, have the second largest employment impact, with over 3,000 job years of employment. Figure 6 reveals the impacts to the component parts of the tourism sector: retail and wholesale trade, eating and drinking, amusements, and hotels each have over 1,000 job years of employment.

Employee Earnings. Employee earnings impacts resulting from the Olympics are presented in Table 8. Earnings, which include wages and benefits as well as non-corporate business profits, are anticipated to grow steadily from approximately $77 million during 1997 to $278 million during 2001, and fall to about $236 million during 2002. The total amount of income earned by people between 1996 and 2002 because of the Olympics is estimated to be $972 million.

With average earnings of $42,741, Olympic related jobs are relatively high paying. The $42,741 Olympics average exceeds the estimated 1998 state average earnings of $26,968 by almost 60 percent. The main reason the Olympics average pay is so high is because a large amount of business is generated in the high paying construction and business services industries.

The distribution of earnings by sector mirrors the distribution of output and employment. About half of the $972 million earnings total ($469 million), is received by service sector workers. Approximately $226 million in earnings is generated in the construction sector and $122 million in trade. About $70 million of earnings is generated in manufacturing, $53 million in transportation and public utilities and over $28 million in the finance sector.

Population. Population impacts by age group resulting from the Olympics are presented in Table 9. These impacts are estimated based on the historical relationship between job growth and population growth. The idea is that people either migrate into the state to take advantage of expanding employment opportunities or do not migrate out of the state because of the job opportunities that the Olympics provides. Although many of the jobs created because of the Olympics will be filled by residents, when these residents vacate jobs, the vacated jobs may be filled by in-migrants or those who might have migrated out but for the better job prospects.

In demographic research, it is conventional to estimate annual population impacts as of July

[7] The Governor's Office of Planning and Budget projects employment as part of the state's official demographic and economic model system. For more information see www.governor.state.ut.us/dea.

1st in a given year. For the years from 1996 to 2001, the estimated impacts in Table 9 are based on the relationship between job growth and the July 1st resident population by age group. For special events such as the Olympics, however, it is desirable to estimate population impacts on a monthly basis around the time of the event. Thus, impacts for January 1st, February 1st, and March 1st 2002 are presented in Table 9. To the extent that these estimates exceed the estimates for 2001, the excess can be viewed as non-residents temporarily living in Utah to work at Olympic related activities. GOPB estimates the population impact resulting from the Olympics will decline to zero after the Games are over. In other words, the people and their families who came to the state to help put on the Games will leave afterwards.

This finding is perhaps best illustrated by considering the population impact of broadcasters. Prior to the Games, NBC will relocate several highly specialized, professional employees to arrange for the television production of the Games. After the Games these broadcasters will remove their equipment and move on to another project. The end result is a migration of people into the state prior to the Games and an out-migration of these same people after the Games. The Governor's Office of Planning and Budget has incorporated this reasoning into the long term projections for the state. These projections show net in-migration above would be expected in the absence of the Olympics in 2001 and 2002 and net out-migration in 2003. This phenomenon is presented in Figure 7.

Table 9 also includes GOPB's projected statewide population and the growth in population. The people and their families who are residing in the state to help with Olympic related activities are estimated to be 0.2% of the population, or 3,589 people, in 1997, but increase to 0.9% of the population, or 37,109, during February 2002, the period of the Games. As a share of projected growth, the Olympic related population increases from 8.8% in 1998 to 56.5% in February 2002. As mentioned above, since the Olympic related population is anticipated to leave the state after the Games, their share of population growth from July 1, 2001 to July 1, 2002 is expected to be very small.

Fiscal. Government revenues and expenditures have both been estimated. These estimates are described here in terms of net revenue impacts (which are government revenues less expenditures); direct revenue (which include revenues paid directly by SLOC, visitors, NBC, and other contractors whose activity is directly connected to the hosting of the Games); total revenue (which includes direct revenue plus revenue derived from indirect activity such as income taxes paid from the salaries of SLOC workers); and expenditures (which include direct and indirect government costs associated with hosting the Games).

Net Revenue Impacts. GOPB estimates the net revenue to state and local government will fall within the range of $80 million to $140 million. Estimating a range is prudent because of the very unique circumstances that the Olympics presents. The temporary nature means that it does not become a permanent feature of the Utah economy. This presents uncertainty about how revenues and costs should be treated. The Olympics also attracts a unique workforce. This work force will likely have smaller household sizes than those that exist presently in Utah. This has important ramifications on the costs of providing public education and other government services. Finally, GOPB has not attempted to explicitly cost out many of the direct public safety, health, and other costs that will be incurred by state and local government. Rather, these costs have been considered in general terms based on historic per capita and per pupil expenditures and other factors. These expenditures will need to be reevaluated as more information is forthcoming in the years leading up to the Games.

The range of $80 million to $140 million was derived based on the calculations of the state fiscal impact model. According to this model, the Olympics will generate an estimated $236 million in gross state and local government tax revenue and $120 million in additional expenditures because of services provided by state and local government. This leaves an estimated $116 million in net revenue to state and local governments. Tables 10, 11, 12 and 13 present these impacts.

Sources of revenue include sales (including state and local, resort, tourism, car rental, and transient room taxes), income (both personal and corporate), property, and fuel taxes, as well as service charges and other revenue sources. Expenditures are estimated using a state and local cost model that considers government expenditures on a per capita and per student basis, as well as other factors. Expenditures for

growth in higher education, public education, transportation, public safety, corrections, human services, health, water, sewer and other state, local, and special district services are all included.

Direct Revenue Based on the type of spending associated with Olympic related activities, GOPB has developed estimates of sales tax revenue generated directly by these activities. As presented in Table 10, the largest amount of direct revenue will be generated during 2002, about $16 million of the $36 million total. Visitor spending on items such as Olympic tickets, hotel rooms, meals, souvenirs, car rental and the like will generate almost $15 million in direct sales tax revenue. Construction purchases of materials and supplies to complete the infrastructure investment associated with the Olympics will generate over $14 million in sales tax. Contractors working for the Organizing Committee will pay almost $7 million in sales tax. NBC's purchases of materials and supplies will generate almost 1 million in sales tax. Total direct sales taxes generated by Olympic related activities between 1996 and 2002 are estimated to be over $36 million.

The specific taxes associated with these revenues, and their rates, include:

- State sales and use tax, 4.75%
- Local sales and use tax, 1.00%
- Resort tax (Park City), 1.00%
- County option sales tax, 0.25%
- Transient room tax, 3.00%
- Tourism transient room tax (Salt Lake County), 0.50%
- Botanical, cultural and zoo sales tax (Salt Lake County), 0.10%
- Car rental tax, 7.00%
- Restaurant tax, 1.00%

Many of these taxes are very recent additions to Utah's tax structure and are implemented specifically to make tourism pay more of the costs of hosting visitors.

Total Revenue. State and local revenue is estimated to increase annually and steadily from about $1 million in 1996 to $63 million in 2001 and over $65 million in 2002. Although more revenue is generated by the direct, indirect and induced effects of the Olympics during 2002 than in any of the previous five years, the $65 million revenue total for 2002 is less than one-third of the $236 million total revenue generated from 1996 to 2002. By far the largest source of state and local government revenue is the sales tax, followed by income taxes, property taxes and indirect federal funds. While Olympic visitors during the three week period of the Games will pay substantial amounts of sales tax, almost three-fourths of the sales tax (about $70 million of the $96 million total) is generated during the five years before the Games are held. Indirect federal funds include ongoing federal programs which tend to grow with the size of a state's economy. These funds do not include the direct Olympics-related federal funding for transportation.

Expenditure. State and local expenditure increases annually and steadily from $0.5 million in 1996 to over $42 million in 2001, before falling off sharply to $25 million during 2002. General government expenditures – items such as public health and safety, criminal justice, transportation, and the like – comprise $74 million, or 62%, of the $120 million in total expenditure. It is important to note that these expenditure estimates include the normal expenditures required to provide public services for the additional people in the Wasatch Front Area between 1996 and 2002 because of the Olympics. In essence, these estimates measure the public sector costs of the growth associated with the Olympics. Estimated on a per capita or per student basis, the expenditure estimates include: state public and higher education, state general government, local public education, city and county general government and special districts.

Figure 2

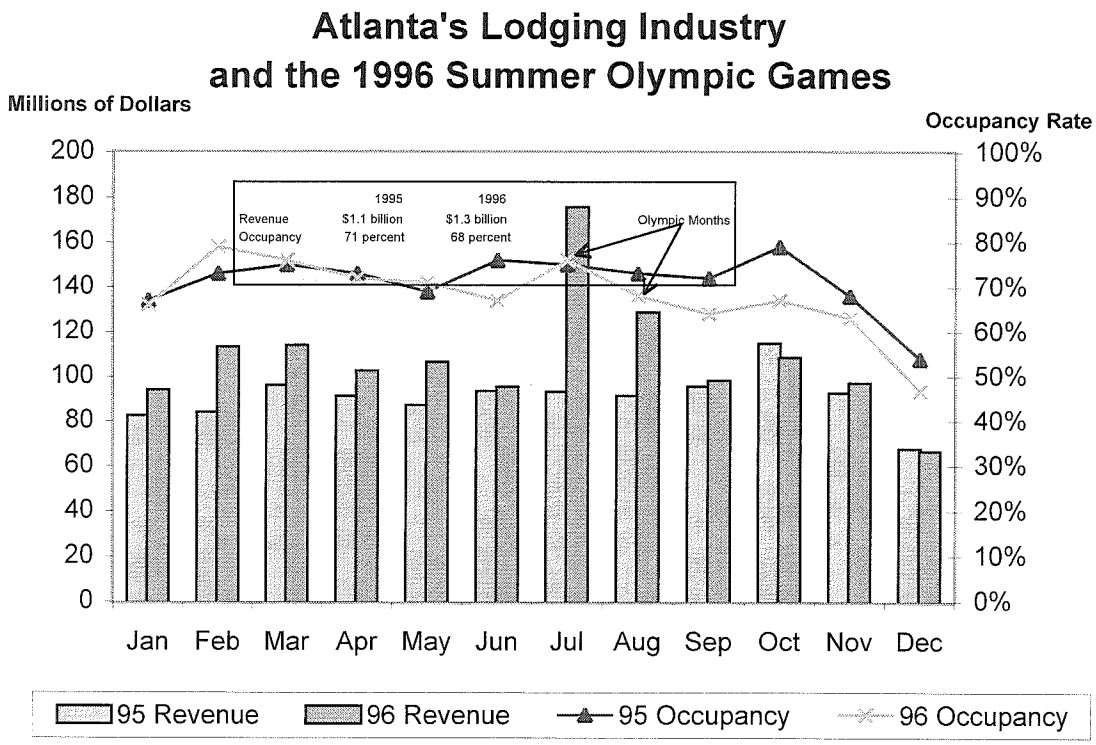


Figure 3

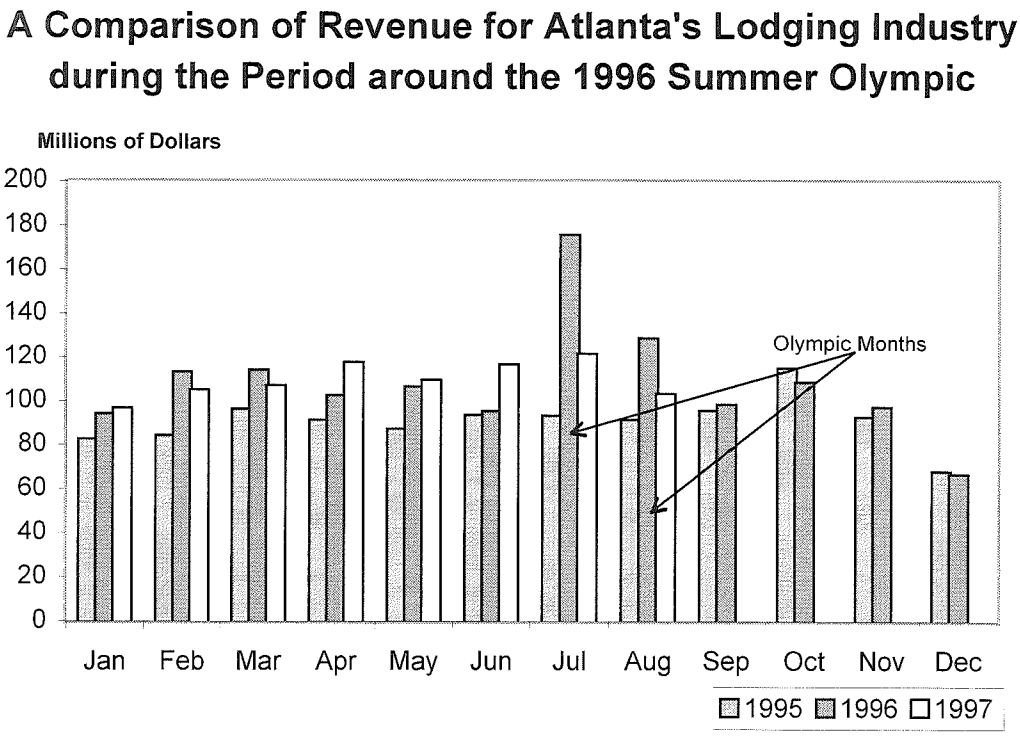


Figure 4

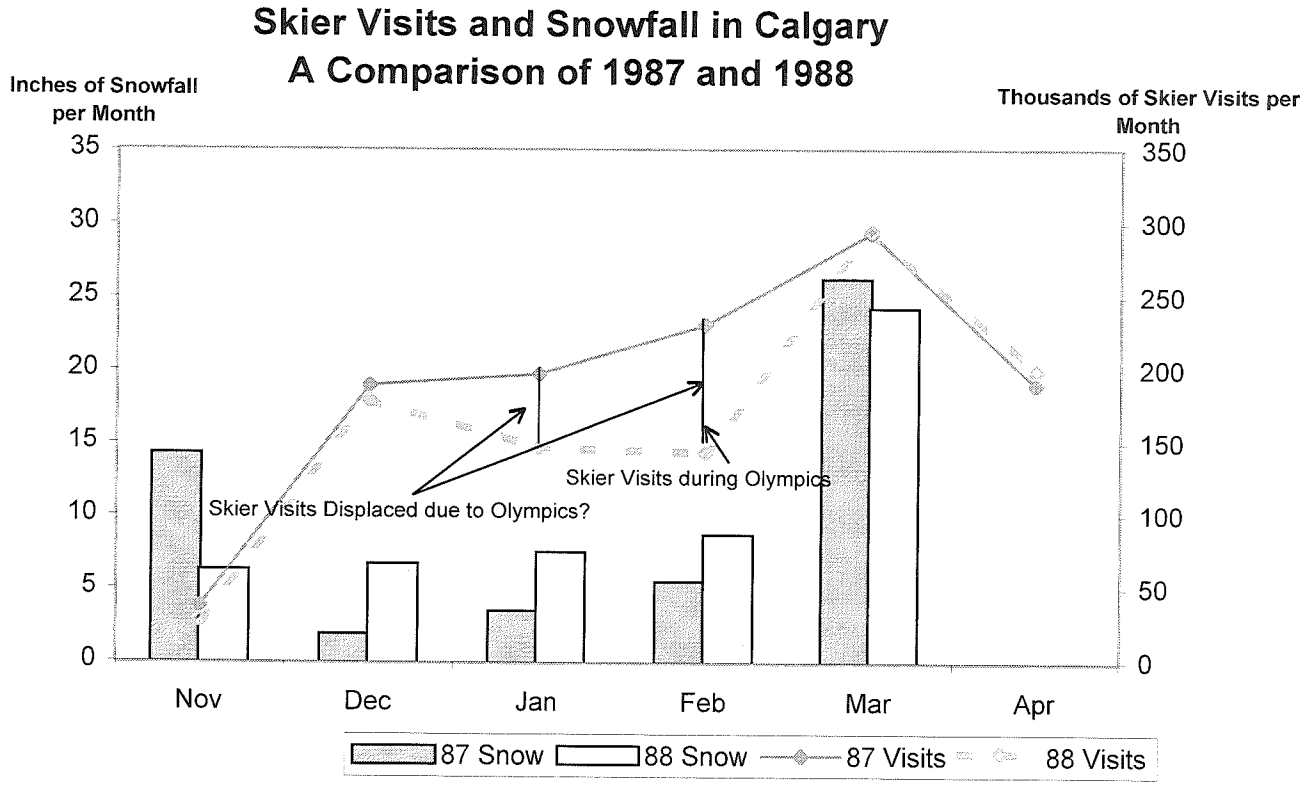


Figure 5

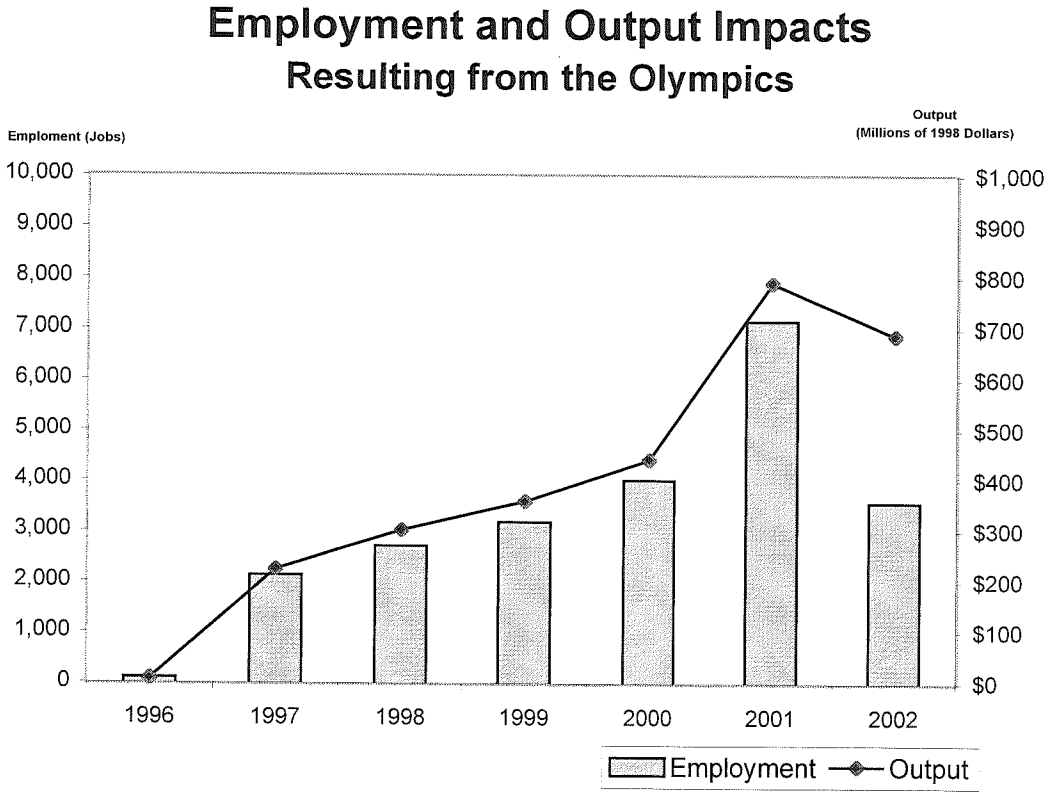


Figure 6

Employment Impacts Resulting from the Olympics

Job Years of Employment by Detailed Industry

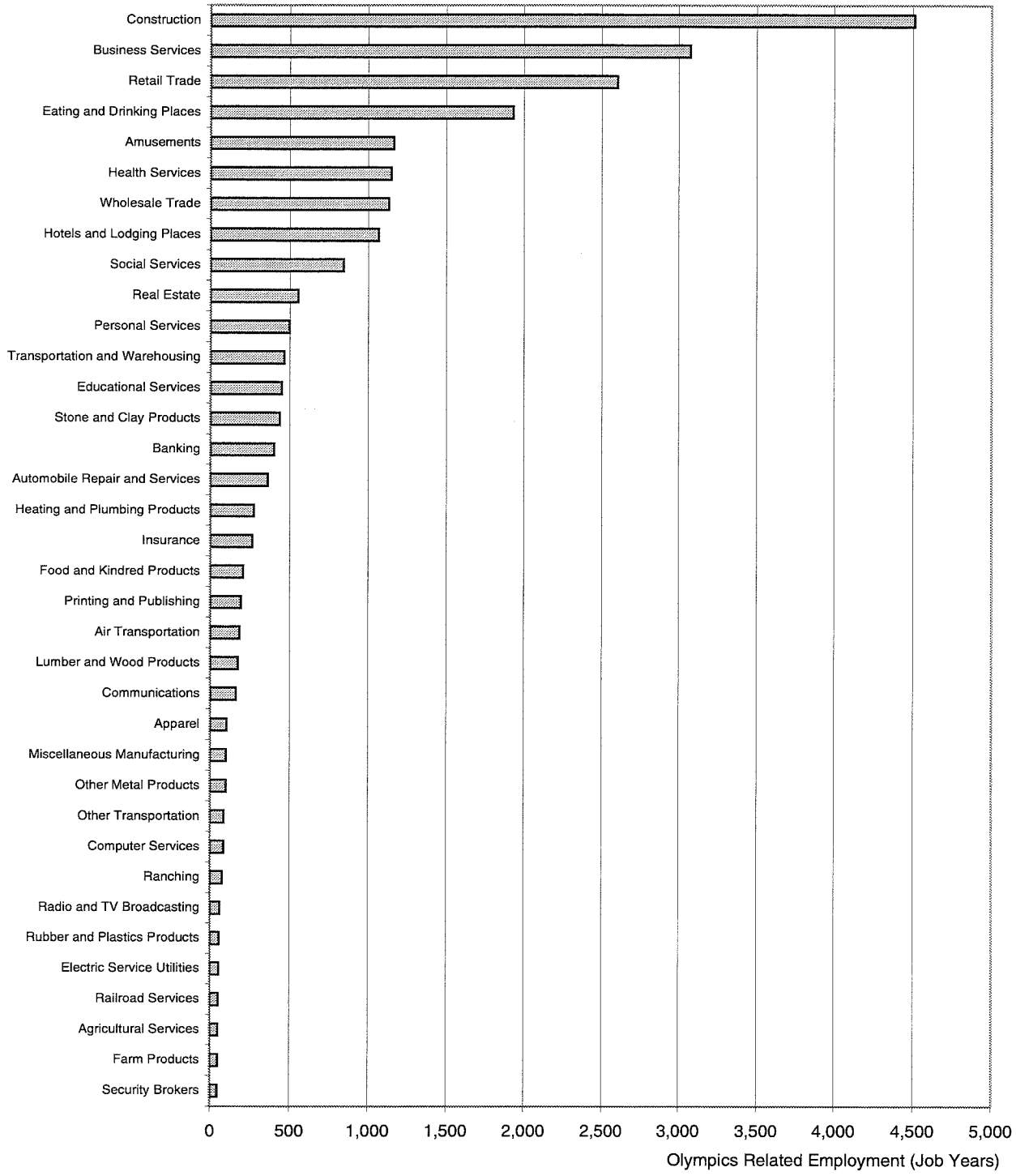
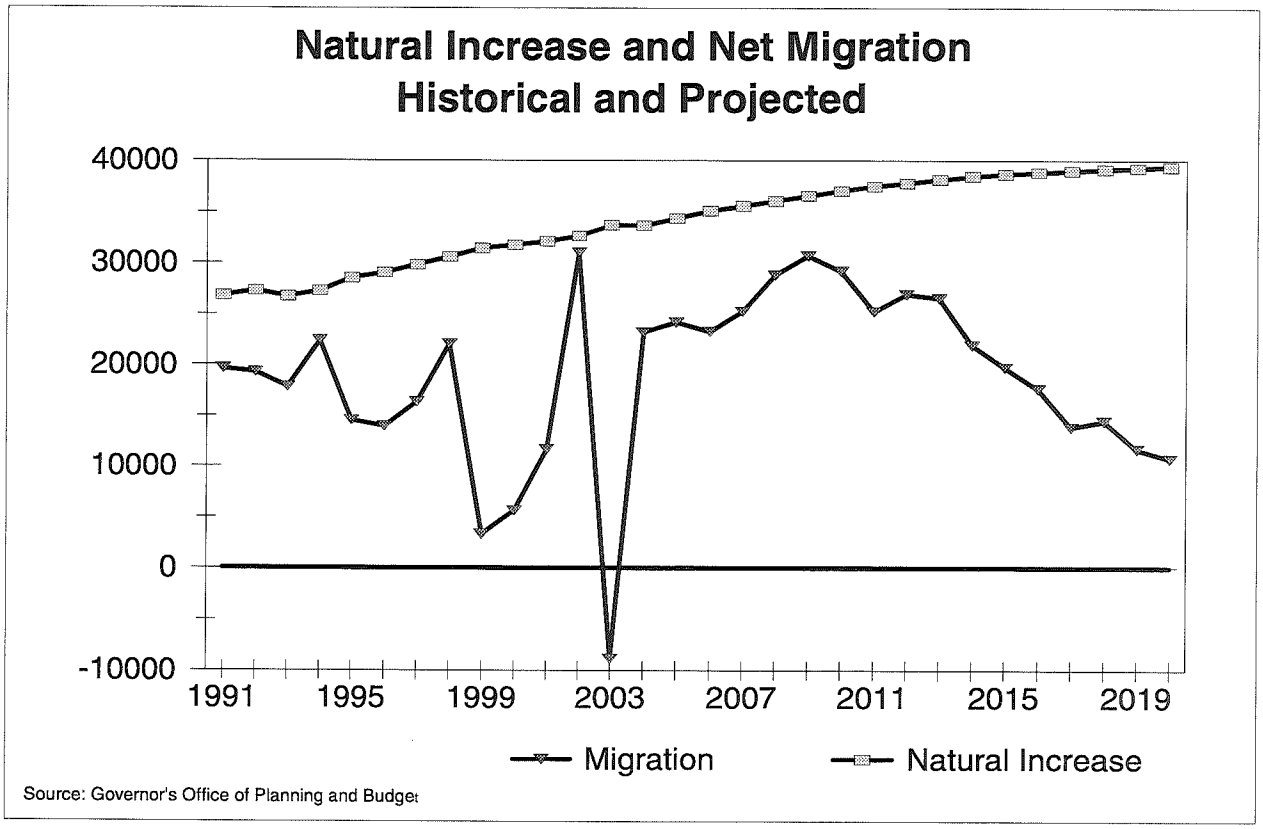


Figure 7



Source: Governor's Office of Planning and Budget

Table 2: Total Direct Olympics Related In-State Spending by Industry
(Millions of 1998 Dollars)

Industry	1996	1997	1998	1999	2000	2001	2002	Total
Agriculture	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mining	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Construction	0.0	99.3	119.1	128.9	126.5	162.7	20.3	656.9
Manufacturing	0.0	0.0	0.1	0.4	0.7	2.5	0.9	4.6
Transportation & Public Utilities	0.0	0.1	0.1	0.2	0.3	0.6	34.0	35.2
Trade	0.0	0.2	0.4	0.9	2.8	18.7	43.7	66.8
Finance, Insurance & Real Estate	0.2	0.4	0.7	0.9	1.4	2.2	1.3	7.1
Services	0.7	1.0	3.6	8.0	19.6	60.4	147.4	240.7
Employee Spending	2.2	3.9	7.3	12.2	31.9	58.9	40.3	156.7
Total	3.2	104.9	131.3	151.5	183.2	306.1	287.9	1,168.1

Source: Governor's Office of Planning and Budget.

Table 3: Total Direct Olympics Related In-State Spending by Source
(Millions of 1998 Dollars)

Spending Source	1996	1997	1998	1999	2000	2001	2002	In-State Total	Total
Organizing Committee	3.2	14.9	41.3	61.5	86.8	199.1	137.4	544.1	858.2
Infrastructure Investment	0.0	90.0	90.0	90.0	90.0	90.0	0.0	450.0	600.0
Visitor Spending	0.0	0.0	0.0	0.0	0.0	0.0	122.6	122.6	310.9
Broadcast Spending	0.0	0.0	0.0	0.0	6.4	17.0	27.9	51.4	74.0
Total	3.2	104.9	131.3	151.5	183.2	306.1	287.9	1,168.1	1,843.1

Note: Since the timing of infrastructure investment is uncertain, it is assumed this funding will be received in equal increments from 1997 through 2001.

Sources: Salt Lake Olympic Organizing Committee and Governor's Office of Planning and Budget.

Table 4: Estimated Olympic Visitor Spending
(Monetary Figures in 1998 Dollars)

Net Ticket Capacity	1,600,000
Percent of Tickets Sold to Visitors	25%
Public Tickets Sold to Visitors	400,000
Visitor Days	1,190,000
Number of Days during Olympics	17
Visitors per Day during Olympics	70,000
Spending per Visitor Day	$261
Total Visitor Spending	$310,942,439
Less:	
Portion Created Outside Utah	$105,070,605
Total In-State Visitor Spending	$205,871,835
Less:	
Displaced In-State Visitor Spending	$83,306,134
Net In-State Visitor Spending	$122,565,701

Sources: Salt Lake Olympic Organizing Committee and Governor's Office of Planning and Budget.

Table 5: Output Impacts Resulting from the 2002 Olympic Winter Games (Millions of 1998 Dollars)

Industry	1996	1997	1998	1999	2000	2001	2002	Total
Agriculture	0.0	0.8	1.0	1.2	1.6	2.8	0.0	7.4
Mining	0.0	0.6	0.7	0.8	0.8	1.2	0.0	4.1
Construction	0.1	101.1	121.3	131.5	130.0	168.9	27.7	680.7
Manufacturing	0.5	29.3	36.1	40.7	45.5	70.0	44.6	266.7
Transportation & Public Utilities	0.6	13.3	16.9	19.8	31.7	60.1	104.3	246.8
Trade	0.9	22.3	28.3	33.4	43.7	86.4	95.9	310.9
Finance, Insurance & Real Estate	1.1	15.8	20.5	24.6	33.4	58.4	53.4	207.1
Services	5.0	41.4	77.3	107.4	154.8	341.9	357.2	1,085.1
Total	8.2	224.5	302.2	359.5	441.5	789.7	683.2	2,808.9

Source: Governor's Office of Planning and Budget.

Table 6: Employment Impacts Resulting from the 2002 Olympic Winter Games

	Annual Average						2002		
Industry	1996	1997	1998	1999	2000	2001	Jan	Feb	Annual Average
Agriculture	1	18	23	28	37	65	0	0	0
Mining	0	7	9	10	10	13	0	0	0
Construction	1	655	786	852	842	1,094	269	359	280
Manufacturing	4	253	312	353	395	615	549	732	235
Transportation & Public Utilities	3	102	127	146	177	290	710	947	199
Trade	19	447	570	671	875	1,817	3,451	4,601	1,050
Finance, Insurance & Real Estate	10	109	143	170	230	399	535	713	187
Services	51	518	718	938	1,426	2,842	5,186	6,915	1,601
Olympics-related Total	89	2,109	2,688	3,168	3,992	7,135	10,700	14,267	3,551
Projected State Total Employment	1,146,548	1,189,828	1,233,396	1,264,856	1,295,534	1,328,904			1,373,068
Projected State Employment Growth		43,280	43,568	31,460	30,678	33,370			44,164
Olympics as a Percent of									
State Total Employment	0.0%	0.2%	0.2%	0.3%	0.3%	0.5%			0.3%
State Employment Growth		4.9%	6.2%	10.1%	13.0%	21.4%			8.0%

Source: Governor's Office of Planning and Budget.

Table 7: Employment Impacts by Detailed Industry Resulting from the 2002 Olympic Winter Games

	1996	1997	1998	1999	2000	2001	2002	Total
Construction	1	655	786	852	842	1,094	280	4,509
Business Services	12	161	231	315	496	1,167	692	3,075
Retail Trade	11	250	317	371	477	790	385	2,602
Eating and Drinking Places	5	94	125	147	195	643	721	1,930
Amusements	21	53	93	148	271	487	90	1,162
Health Services	6	100	129	155	214	371	170	1,145
Wholesale Trade	3	102	128	153	203	384	155	1,129
Hotels and Lodging Places	0	9	14	17	31	92	902	1,066
Social Services	4	73	94	113	156	273	128	842
Real Estate	3	45	59	72	101	182	89	552
Personal Services	2	41	53	64	87	152	95	496
Transportation and Warehousing	1	56	68	77	86	130	45	463
Educational Services	2	39	50	60	83	145	67	446
Stone and Clay Products	0	65	78	85	84	110	11	434
Banking	2	36	46	54	71	124	67	399
6Automobile Repair and Services	1	22	28	33	43	73	159	359
Heating and Plumbing Products	0	41	49	53	53	69	7	272
Insurance	4	24	34	38	50	79	33	262
Food and Kindred Products	1	17	22	26	36	67	36	204
Printing and Publishing	1	16	20	24	33	60	37	190
Air Transportation	0	9	12	14	19	34	92	182
Lumber and Wood Products	0	26	31	33	33	44	5	172
Communications	1	14	18	21	28	50	29	161
Apparel	1	9	12	14	19	33	16	104
Miscellaneous Manufacturing	0	4	7	11	17	48	13	99
Other Metal Products	0	14	17	19	19	25	4	98
Other Transportation	0	6	7	8	11	19	33	85
Computer Services	0	6	8	10	14	27	16	83
Ranching	0	8	10	12	16	30	0	75
Radio and TV Broadcasting	0	3	3	4	5	9	36	59
Rubber and Plastics Products	0	6	8	9	10	15	6	54
Electric Service Utilities	0	5	6	7	9	16	10	54
Railroad Services	0	5	7	8	9	14	6	49
Agricultural Services	0	6	7	8	10	16	0	48
Farm Products	0	5	6	7	10	18	0	47
Security Brokers	0	4	5	6	8	14	7	43
Stone and Clay Mining	0	7	8	9	9	11	0	43
Gas Service Utilities	0	4	5	6	8	13	7	42
Cleaning Preparations	0	3	4	5	6	11	6	36
Motor Vehicle Equipment	0	3	3	4	5	8	11	34
Paper Products	0	3	4	4	6	11	6	34
Electronic Components	0	2	3	4	5	9	5	29
Communication Equipment	0	3	4	5	5	7	2	26
Miscellaneous Machinery	0	3	3	4	4	7	5	26
Other Steel Manufacturing	0	4	4	5	5	7	1	26
Electric Wiring Equipment	0	4	4	5	5	6	1	25
Other Industries	2	47	58	69	85	136	(934)	(537)
Total	89	2,109	2,688	3,168	3,992	7,135	3,551	22,732

Source: Governor's Office of Planning and Budget.

Table 8: Employee Earnings Impacts Resulting from the 2002 Olympic Winter Games (Millions of 1998 Dollars)

Industry	1996	1997	1998	1999	2000	2001	2002	Total
Agriculture	0.0	0.2	0.3	0.3	0.4	0.8	0.0	2.0
Mining	0.0	0.2	0.2	0.2	0.2	0.3	0.0	1.2
Construction	0.0	33.6	40.4	43.7	43.2	56.2	9.2	226.4
Manufacturing	0.1	8.0	9.8	11.0	12.2	18.5	10.6	70.3
Transportation & Public Utilities	0.1	3.8	4.8	5.5	6.8	11.3	20.5	52.9
Trade	0.4	9.0	11.4	13.5	17.6	34.1	35.7	121.7
Finance, Insurance & Real Estate	0.2	2.2	2.9	3.4	4.5	7.7	6.9	27.7
Services	3.8	20.0	29.8	41.8	72.0	148.8	153.1	469.4
Total	4.7	77.1	99.6	119.6	157.1	277.7	235.9	971.6

Source: Governor's Office of Planning and Budget.

Table 9: Population Impacts Resulting from the 2002 Olympic Winter Games

Population by Age Group	July 1 1996	July 1 1997	July 1 1998	July 1 1999	July 1 2000	July 1 2001	2002 Jan 1	2002 Feb 1	2002 Mar 1
0-4	11	329	491	650	907	1,757	1,687	1,687	1,687
5-17	29	688	875	1,032	1,300	2,302	2,497	2,497	2,497
18-24	23	491	544	550	575	876	1,351	1,801	901
25-29	23	581	700	780	927	1,540	2,014	2,685	1,342
30-39	30	816	1,110	1,396	1,838	3,404	5,113	6,817	3,408
40-49	13	349	476	600	795	1,496	2,478	3,305	1,652
50-59	6	149	191	238	309	566	969	1,292	646
60-64	3	61	76	86	107	184	300	400	200
65+	3	125	165	201	268	476	475	475	475
Olympics-related Total	141	3,589	4,628	5,533	7,026	12,601	16,884	20,959	12,808
Projected State Total Population	2,002,400	2,048,002	2,100,561	2,135,227	2,172,513	2,216,213	2,248,021	2,253,322	2,258,623
Projected State Population Growth		45,602	52,559	34,666	37,286	43,700	31,808	37,109	42,410
Olympics as a Percent of State Total Population	0.0%	0.2%	0.2%	0.3%	0.3%	0.6%	0.8%	0.9%	0.6%
State Population Growth		7.9%	8.8%	16.0%	18.8%	28.8%	53.1%	56.5%	30.2%

Notes

1. Monthly 2002 state total population is a linear interpolation of GOPB population projections for July 1, 2001 and July 1, 2002.
2. The Olympics percentage of state population growth during January, February and March 2002 is based on population growth calculated relative to the July 1, 2001 population

Source: Governor's Office of Planning and Budget

Table 10: Direct Revenue by Direct Expenditure Source
(Thousands of 1998 Dollars)

	1996	1997	1998	1999	2000	2001	2002	Total
Organizing Committee	6	301	928	1,253	1,216	2,189	856	6,749
Infrastructure Investment	0	2,813	2,813	2,813	2,813	2,813	0	14,063
Visitor Spending	3	5	9	19	38	75	14,782	14,930
General Sales	0	0	0	0	0	0	7,379	7,379
Olympic Tickets	0	0	0	0	0	0	1,969	1,969
Oympic Merchandise	3	5	9	19	38	75	150	298
Hotel	0	0	0	0	0	0	3,852	3,852
Car Rental	0	0	0	0	0	0	1,211	1,211
Restaurant	0	0	0	0	0	0	205	205
Resort	0	0	0	0	0	0	16	16
NBC Spending	0	0	0	0	24	387	343	755
Total	9	3,118	3,750	4,084	4,090	5,464	15,982	36,497

Note: direct revenue is entirely comprised of sales tax revenue.

Source: Governor's Office of Planning and Budget.

Table 11: Estimated State and Local Government Fiscal Impacts resulting from the 2002 Olympic Winter Games (Millions of 1998 Dollars)

Impacts	1996	1997	1998	1999	2000	2001	2002	Total
Revenue:								
Sales Tax	0.4	8.2	10.3	12.0	14.8	24.9	25.6	96.1
Income Tax	0.2	3.9	5.1	6.1	8.1	14.3	12.2	50.0
Property Tax	0.2	3.0	3.8	4.6	6.0	10.7	9.1	37.4
Indirect Federal Funds	0.1	1.8	2.4	2.9	3.8	6.7	5.6	23.3
Other Revenue	0.0	1.9	2.5	2.8	3.7	6.1	12.6	29.6
Total	0.9	18.8	24.0	28.5	36.3	62.7	65.2	236.4
Expenditure:								
General Government	0.3	6.7	8.5	10.2	12.9	13.6	21.9	74.1
Public Education	0.1	2.4	3.0	3.5	4.5	4.7	14.5	32.7
Higher Education	0.1	1.6	1.9	2.0	2.3	1.9	3.4	13.2
Total	0.4	10.7	13.4	15.8	19.7	20.2	39.9	120.0
Net Revenue	0.5	8.1	10.6	12.7	16.6	42.5	25.3	116.4

Note: Other revenue includes various items explicitly listed in tables 8 and 9.

Source: Governor's Office of Planning and Budget.

Table 12: Estimated State Government Fiscal Impacts resulting from the 2002 Olympic Winter Games (Millions of 1998 Dollars)

Impacts	1996	1997	1998	1999	2000	2001	2002	Total
Revenue:								
Sales Tax	0.2	5.2	6.5	7.4	8.8	14.2	16.5	58.7
Income Tax	0.2	3.9	5.1	6.1	8.1	14.3	12.2	50.0
Corporate Income Tax	0.0	0.5	0.7	0.8	1.1	1.9	1.6	6.7
Departmental Collections	0.0	0.6	0.8	0.9	1.2	2.2	1.9	7.6
Indirect Federal Funds	0.1	1.6	2.1	2.5	3.3	5.8	4.9	20.3
Other Revenue	0.0	0.6	0.7	0.9	1.1	2.0	1.7	7.1
Total	0.6	12.4	15.8	18.7	23.6	40.4	38.9	150.4
Expenditure:								
General Government	0.2	3.9	5.0	6.0	7.6	7.4	13.8	43.9
Public Education	0.1	2.0	2.5	2.9	3.7	3.9	7.1	22.2
Higher Education	0.1	1.6	1.9	2.0	2.3	1.9	3.4	13.2
Total	0.3	7.5	9.4	11.0	13.6	13.2	24.4	79.3
Net Revenue	0.3	4.9	6.4	7.7	10.0	27.2	14.5	71.1

Note: Other revenue includes fuel, cigarette, alcohol and insurance taxes.

Source: Governor's Office of Planning and Budget.

Table 13: Estimated Local Government Fiscal Impacts resulting from the 2002 Olympic Winter Games (Millions of 1998 Dollars)

Impacts	1996	1997	1998	1999	2000	2001	2002	Total
Revenue:								
Property Tax	0.2	3.0	3.8	4.6	6.0	10.7	9.1	37.4
Sales Tax	0.0	1.2	1.5	1.7	2.0	3.3	10.2	19.9
Other Taxes	0.0	0.4	0.5	0.6	0.9	1.5	1.3	5.2
Charges	0.1	1.6	2.1	2.5	3.3	5.9	5.0	20.5
Indirect Federal Funds	0.0	0.2	0.3	0.4	0.5	0.9	0.7	3.0
Total	0.3	6.4	8.2	9.8	12.7	22.3	26.3	86.0
Expenditure:								
County	0.0	0.9	1.1	1.3	1.7	1.7	3.1	9.8
City	0.1	1.3	1.7	2.0	2.5	2.5	4.6	14.7
Special District	0.0	0.6	0.7	0.9	1.1	2.0	0.4	5.7
School District	0.0	0.4	0.5	0.6	0.8	0.8	7.4	10.5
Total	0.1	3.2	4.0	4.8	6.1	7.0	15.5	40.7
Net Revenue	0.2	3.2	4.2	5.0	6.6	15.3	10.8	45.3

Source: Governor's Office of Planning and Budget.

III. Long Term Legacy Impacts

The Olympics will leave many enduring impacts on Utah. These long term or legacy impacts are impossible to quantify, but can be identified and described. Four categories of the Olympic legacy have been considered:

- **Facilities** – These are Olympic facilities, public investment projects, and private developments that exist solely, partially, or earlier because of the Olympic Games.
- **Recognition** – This includes increased national and international visibility that occurs because of media attention before the Games, advertising, and the actual broadcasting of the Games in 2002.
- **Community Benefits** – This includes the state and community-level benefits that occur as residents join together to share their culture with the world. Specific types of benefits include youth and education programs, volunteer projects, cultural programs, and community-level preparation to advance a positive impression of the state.
- **Growth Issues** – This includes a heightened awareness about growth and the impacts caused by growth that may be related to the Olympics.

Facilities

In preparation for the Olympics, many public and private facilities are being built that last long after the Games. The construction and use of these facilities brings economic benefits now and in the future as the public benefits from these community assets. These facilities include Olympic facilities, public investment projects, and private developments.

Olympic Facilities. Olympic facilities are those that will host Olympic venues or activities. Some of these, such as Rice Stadium, where Opening Ceremonies are planned to be held, were in place prior to receiving the Olympic bid. They will, however, be enhanced in a small or major way to accommodate the Olympics . Others, such as the Delta Center and E Center, would have been built with or without the Olympic Games, but the Olympics is a business factor that influences the design, timing, and, in some cases, even the funding for the development. Still others, such as the bobsled and luge run, are built specifically for the Olympics with an eye towards developing Utah as a winter sports capital. Depending on the project, SLOC pays none, a portion, or all of the construction amount.

The largest of these facilities include the Olympic Village; Rice Stadium expansion; Winter Sports Park; West Valley Hockey Arena/E Center; bobsled and luge runs; Salt Palace convention center expansion; Wasatch Mountain State Park enhancements; media village; Provo ice sheet; and the Kearns speed skating oval.

Public Investment Projects. Public investment projects include new road, mass transit, and airport projects that have an Olympic connection, as well as smaller and less visible investments made by the public land agencies in the state (U.S. Forest Service, Bureau of Land Management, and National Park Service) and other public entities as they focus their investment here and now because of the visibility of the Olympics. Most of these developments are public projects that have been planned for many years and need to occur regardless of the Olympic Games. The

Olympics, however, serve as a catalyst impacting the timing, design, and, in some cases, funding.

Examples of transportation projects include highway investment; the light rail system; special Olympic buses; transit hubs; Snowbasin/Trappers Loop road; Winter Sports park road; Salt Lake Airport expansion; and the commuter rail system. Public land examples include planning programs; recreation facility repair and maintenance; visitor information services; and public safety investment (i.e. U.S. Weather Service and Forest Service investment in avalanche safety preparations).

Private Olympic Facilities. Several hotels and ski resort expansions are currently being planned or constructed in Utah. While these developments are not being built specifically for a short term event like the Olympics, they may be being built sooner or more lavishly because of the economic opportunities that the Olympics presents. The Olympics generates excitement, attention, and capital for these projects to come to fruition. Examples include the Little America Hotel; Royal Crown Hotel; Kimpton Hotel; Snowbasin facilities; The Canyons' (formerly Wolf Mountain) expansion; Park City Mountain Resort expansion; and Deer Crest Resort.

Recognition

Utah, like other Olympic host areas, already has and will continue to receive a significant amount of national and international recognition as a direct result of hosting the Games. This includes references and features on Utah in magazine articles, studies, radio programs, television broadcasts, and other forms of communication. It also includes the dramatic impact of being the focal point of the world in the winter of 2002. In addition, millions of people around the globe will watch some portion of the Games.

These media hits, stories, and coverage will increase people's awareness of Utah. This increase in awareness will ultimately impact some of these people's decisions regarding visiting and investing in Utah. A longitudinal awareness and image study was prepared on the 1988 Calgary Olympic Games. The authors concluded that "... hosting of the 1988 Olympic Winter Games had a dramatic impact, not only on levels of awareness of the city, but also in the connotations associated with it."[8] Like Calgary, people's awareness of Utah as a tourism destination and place to do business will be enhanced. Economic and financial rewards to the state will follow.

Community Benefits

Olympic organizers and community leaders will utilize the Olympics as a catalyst for a variety of community benefits. The most notable of these will include youth, education, and cultural programs and volunteer opportunities to serve visitors and improve the community. The impact of these initiatives will positively affect the quality of life in Utah and serve as an important legacy of the 2002 Olympics Games.

Growth Concerns

Urban growth has accelerated throughout the state over the past seven years. Most of Utah's population, about 75%, lives along the Wasatch Front (comprised of Salt Lake, Davis, Utah, and Weber Counties). Population is also growing rapidly in areas outside of the Wasatch Front. Washington and Grand Counties are becoming increasingly urbanized.

Two-thirds of Utah's past and expected future population growth comes from the children and grandchildren of current residents. This population growth is expected to continue unaffected by the Olympics. What is of interest is the in-migration that the job opportunities associated with the Olympics will attract.

The demographic analysis completed in this report shows only a minor, temporary population impact from 1996 through 2002 resulting from the Olympics. This is based on the premise that the jobs created by the Olympics are short term in nature and small relative to other growth factors. There is also an acceleration effect before 2002 and a deceleration effect after 2002. In other words, a portion of the growth the state is currently experiencing serves as an offset to future growth.

[8] *The Impact of a Mega-Event on Host Region Awareness & Image in International Markets – A Longitudinal Study*, p.20, J.R. Brent Ritchie and Brian H. Smith, World Tourism Education and Research Centre, University of Calgary.

The examination of Calgary and Atlanta discussed in the next section indicates the Olympics were overshadowed by more fundamental economic forces. Neither city experienced unmanageable growth associated with the Olympics.

The actual long term impact on the level of Utah's population is unknown. What is known is that economic growth, in-migration, and high birth rates have placed strains on the State's resources and infrastructure.

The state has responded to urban growth with a focus on intense planning. There have been several initiatives dealing with managing growth and preserving the quality of life in Utah. Currently, Envision Utah, the Salt Lake City Futures Commission, and others are working to develop growth strategies that address issues of growth and will help the state plan for a better future.

IV. Macroeconomic Indicators in Calgary and Atlanta

Economic indicators for Calgary and Atlanta have been organized and evaluated to improve the state's understanding about the relationship between hosting an Olympic Games and the performance of the local economy. The key macroeconomic indicators of unemployment, growth in personal income, inflation, and net migration have been chosen because they provide a broad indication of economic performance and are also available for the level of geography and time frame desired. Tourism activity has been characterized in terms of visitation, skier days, hotel occupancy rates and convention attendance. The analysis has been framed in terms of two key milestones in an area's Olympic experience: the year the International Olympic Committee selected the host city (the announcement year) and the year the city hosted the Olympics (the Olympic year). The analysis seeks to determine whether broad macroeconomic and tourism indicators show a significant response to these key Olympic milestones.

Selecting Calgary and Atlanta

The first international Olympic Games occurred in Athens, Greece in 1896. Olympic Games have been held consistently ever since, except for in 1916, 1940 and 1944 because of world wars.[9] Table 14 presents past Olympic host site cities. While a significant amount of information can be gleaned from all of the recent Olympics, the Governor's Office of Planning and Budget has organized economic and demographic information for the two Olympic events most relevant to the Utah winter Olympic Games. These are the 1988 winter Olympic Games held in Calgary, Canada and the 1996 summer Olympic Games held in Atlanta, Georgia.

Calgary was chosen because it was the last winter Olympics held in North America. It is in the same favorable time zone (an important advantage to the U.S. broadcaster because of the importance to the viewing audience of watching events live) and it possesses similar economic, demographic, and cultural characteristics as Utah. Information about the Calgary Games is also much more readily available than the more recent winter sites of Albertville, France; Lillehammer, Norway; and Nagano, Japan.

Calgary is larger than Salt Lake City, but similar in size to Salt Lake County. The 1994 population of Calgary and Alberta was 738 thousand and 2.6 million, respectively. Population in 1994 in Salt Lake County was estimated to be 795 thousand and 1.9 million for the State of Utah.[10] Both Utah and Alberta's economic base have similarities, relying on tourism, as well as many manufacturing and service industries. Their economies are also similar in size. However, Alberta and, to a greater extent, Calgary are heavily dependent on natural resources.

The Atlanta Summer Games was chosen because it was the last Olympic Games held in the United States. This means that comparisons can be made that originate with a more common base of government involvement, data collection techniques, and other similarities. Information about Atlanta is also readily available, although the Atlanta Games were so recent that the post Olympic impacts can only be gaged from one or two years of data.

Equally important to the similarities are the differences. The Calgary Games were held in 1988, 14 years earlier than the Salt Lake Games will be held. Leading up to and in the years since 1988, the popularity of the Games has increased dramatically. This popularity is demonstrated by the steady and dramatic increases in the U.S. television rights to broadcast the Games. As shown in Figure 8, these contracts have increased in inflation-

[9] Except for the noted exceptions, the Olympics were held every four years from 1896-1992 and started alternating winter and summer Games every two years after 1992.

[10] Utah Population Estimates Committee

adjusted 1998 dollars from $29.5 million in 1980 to $492 million in 2002. Figure 9 shows that the number of nations participating in the Olympic Games has also increased significantly. Alberta's ski industry is also a contrast to that of Utah's. Skier visits in Utah outnumber those in Alberta almost three to one.

The Atlanta Olympic Games provide a contrast to past and likely future winter Games because the summer Games are so much larger in scale. As shown in Table 15, which compares the Calgary, Atlanta and Salt Lake City Olympic Games, the Calgary Olympics included 57 nations, 46 events, and 1,634 athletes. The U.S. television contract to broadcast the Calgary Games was awarded to ABC for $309 million. In contrast, the Atlanta Olympics included 197 nations, 271 events, 10,744 athletes, and 3.0 million visitor days. The U.S. television contract to broadcast the Atlanta Games was awarded to NBC for $456 million. In other words, depending on the measure, the summer Olympics is 1.5 to 6 times larger than the winter Olympics.

Atlanta also has a much larger population and economy than Salt Lake City. The Salt Lake City-Ogden and Provo-Orem metropolitan areas include a four-county area with approximately 1.5 million residents. The Atlanta metropolitan area is a 20-county area with 3.3 million residents, more than double that of the northern metropolitan areas in Utah.

Calgary

In September of 1981, the city of Calgary won the bid to be the host of the 1988 winter Olympic Games. Calgary is situated one hour east of the Rocky Mountains and is the largest city in the Province of Alberta. It is surrounded by gorgeous scenery, mountains, forests and lakes and it offers extensive recreational opportunities. Calgary is noted as being one of the cleanest and safest cities in Canada. The province it is located in has a young population and enjoy's one of the highest personal incomes in Canada.

The economy in Alberta and Calgary is natural resource based with two main industries, energy and agriculture. The main energy products are oil, gas, coal, forests and non-fuel minerals. The main agricultural products are wheat, canola seed, live cattle and barley. Other growing areas of the economy are food processing, electronics and tourism. The three largest components of Alberta's gross domestic product are: Services (19.6%), Finance (19.1%) and Mining (16%). The mining industry accounts for 6% of total employment within the province. Figures 10, 11 and 12 show employment and gross domestic product data for Canada and Alberta.

Unemployment

Unemployment rates in Canada, Alberta and Calgary before, during, and after the Olympic Winter Games all follow the same overall pattern (see Figure 13). Rates in Alberta are generally lower than for Canada, although the rates converged during the 1984 to 1989 period. Rates in Calgary, which are only available since 1987, are almost identical to Alberta. This is not surprising since Calgary is the largest city in the province.

In terms of the two key Olympic dates, the announcement in 1981 of Calgary as the host city and the actual Games in 1988, unemployment rates follow a very interesting pattern. In the year following the announcement, unemployment rates increased dramatically in both Alberta and Calgary. Rates peaked in the 1983 to 1984 period, and then followed a general downward trend through and following the Games in 1988. In 1990 for Canada and in 1991 for Alberta and Calgary, unemployment rates started to rise again, but the historical meaning of this trend is not tractable because of a redesign in the labor force survey in 1991 which precludes historic comparison.

The pattern of unemployment in Alberta and Calgary, and, to a lesser extent, Canada tracks very closely with real oil prices during the same period. This relationship is illustrated in Figure 14. Calgary, like all oil dependent economies, struggled during the collapse of world oil prices from 1982 to 1988. *Every economic indicator examined in this research follows a similar pattern, demonstrating the significance of energy to the Calgary and Alberta economies, and the lesser significance of the Olympic Games. The dramatic impact of the boom and bust in the energy sector is so pronounced that is difficult to isolate the effect of the Olympics.* It is, however, instructive to note that the Calgary economy, as measured by unemployment rates, adjusted to the shock of the oil bust. Unemployment rates declined from a high of 11.1% in 1984 to 7.3% in the year following the Olympics. The economic activity related to the Olympics may have helped with this transition.

Income
Growth in the economy, as measured by the change in personal income varies over time for both Canada and Alberta (Figure 15). Income growth in Alberta was particularly high during the energy boom years from 1978 to 1981, but dropped dramatically when oil prices fell and even went negative for several years. In the years between the Olympic announcements and the hosting of the Games, real personal income growth in Alberta has been very volatile, swinging as low as -3% and as high as 7%. These swings correlate with movement in oil prices.

There appears to be no significant correlation between overall economic growth and the Calgary announcement of the hosting of the Games. Moreover, income growth during the year of the Games and afterwards has continued a gradual downward trend. The absence of any sort of an Olympic effect in the Alberta personal income data once again demonstrates the dominant influence of the natural resource booms and busts. It also shows that a 16-day Olympic event does not in and of itself impact macroeconomic data.

Inflation
The inflation rates in Canada, Alberta, and Calgary are all similar and follow the same general trend from 1978 to 1996 (Figure 16). Like the other indicators, inflation rates appear to have been significantly influenced by movement in oil prices. Inflation rates declined significantly after the Calgary announcement in 1981, which was also the start of the oil price collapse. Rates stabilize from 1984 to 1988 just as oil prices stabilized. Interestingly, prices increased in Alberta for the three years following the Games, still only reaching a relatively modest 6 percent rate (compared to the double-digit rates experienced at the start of the decade). Inflation rates in Canada, Alberta, and Calgary are now very stable and low, oscillating in the 2-3 percent range.

Migration
Both Calgary and Alberta show net in-migration peaking in the announcement year, but changing to a period of out-migration following the announcement year (Figure 17). Once again the significance of the oil price collapse is demonstrated in the macroeconomic data. It is possible that the out-migration in these years would have been even greater if not for the Olympic Games. Following the Olympic Games, net in-migration once again started to occur in both areas, but at only one-third to half of the level experienced during the oil boom years.

Tourism
In general, tourism activity before and after the Olympic Games follows an upward trend. Total trips to Alberta dropped for a few years after the Calgary announcement, but followed a general upward trend from 1984 to 1991 (Figure 18). Visits to Banff National Park, which is the park closest to Calgary and Alberta's most popular park, increased significantly in the Olympic year and have increased fairly steadily since the Games (Figure 19). This was in the face of out-migration from 1983 to 1989.

Skier days at major Alberta resorts increased in the years prior to the Games, decreased in the year of the Games, and increased again for three years following the Games (Figure 20). The decrease in the year of the Games provides an indication of the displacement effect that occurs in an Olympic year. The decline could have been partially due to the fact that it was a mediocre snow year for the area. Figures 21 and 22 show yearly snowfall in Banff National Park and Calgary. Skier days declined from 1.18 million in 1987 to 963 thousand in1988, an 18% decrease. After the Olympic year, however, skier days more than recovered with a 24% increase.

Hotel occupancy rates, particularly in the years of the Olympics, and the immediate years following the Olympics, increased notably. In Alberta, occupancy rates reached a record high the year of the Olympics, after a three-year decline. The increase in Calgary's occupancy rates is even more dramatic. In Calgary's case, occupancy rates were higher in the two years following the Games than in the year of the Games. These data are shown in Figure 23.

Atlanta

In September of 1990 the city of Atlanta was awarded the 1996 summer Olympic Games. Atlanta, the capital city of the state of Georgia, had a population of 394,000 in 1996, but it is part of a larger metropolitan region that is home to nearly 3 million people. Although the city of Atlanta is in Fulton County, the entire metropolitan area is composed of 20 counties. One of Atlanta's main selling points was that the venues would be in a centralized location. The city was also attractive as a host site because of

its international airport and the fact that it already had many of the required facilities for sporting events as well as good hotel accommodations. Figures 24 to 32 show economic and tourism indicators for Georgia and Atlanta.

Atlanta is one of the countries most popular convention destinations and a top tourist destination. It has an extensive network of hotels and facilities which attract many conventions. In addition, the city has one of the largest airports in the nation with the largest passenger terminal complex in the world. The large airport along with the cities geographic location make the city accessible and bring large volumes of people through. Atlanta is also rich in culture and it is home to several professional sports teams. Its reputation as an 'international city', its extensive network of hotels and facilities and numerous tourist attractions help feed Atlanta's economy.

Unemployment[11]

The general trend of unemployment rates in Georgia and the Atlanta Metropolitan Statistical Area (MSA) nearly mirrors that of the nation between 1990 to 1996. The major difference is in 1991, one year after the announcement, when unemployment rates in both Georgia and the Atlanta MSA declined, while the U.S. unemployment rate increased. From 1992 through 1996, rates in all three areas declined steadily. Unemployment rates in every year are lowest in the Atlanta MSA, followed by Georgia, and then the U.S. The degree of correlation is indicative of the importance of U.S. economic conditions to Georgia and Atlanta.

In terms of the key Olympic dates, the announcement of Atlanta in 1990 and the actual Games in 1996, unemployment rates follow an interesting pattern. Unemployment rates in both Georgia and the Atlanta MSA declined in the year following the announcement while the national unemployment rate increased. Unemployment rates then increased in 1992 – a year of a national recession. In the years leading up to the Games, unemployment rates declined for four consecutive years, reaching their lowest points in the year of the Games. Job creation associated with the preparation and acceleration of activity before the Games may have helped with this steady decline in unemployment rates.

The pattern of unemployment in Georgia and Atlanta tracks very closely with a multi-year economic expansion in both areas. This expansion has been characterized as occurring because of the good economic fundamentals that were and still are present.[12] These include Atlanta's role as a distribution, transportation, and communication hub; a healthy and growing high tech sector; and a business climate that has attracted in-migration from the northeast and midwest. Every economic indicator examined in this research follows a similar pattern, demonstrating that the economic expansion is the single most important economic trend in Atlanta. This expansion started before the announcement that Atlanta would host the Olympic Games. Certainly the expansion may be related to the preparation for and acceleration of activity caused by the Olympic Games, but is caused by much more than just the Olympics. For this reason it is difficult to isolate the effect of the Olympics from the other very positive elements of the larger expansion. It is, however, instructive to note that the timing and magnitude of the expansion has certainly been impacted by the hosting of the Games.

Income

Growth in real personal income in Georgia and Fulton County correlate. In both areas the change in income follows a steady decline leading up to the Olympic announcement. Growth in real personal income recovers beginning in 1992 and continuing through the Games.

Inflation

Inflation for the Atlanta MSA does not show any significant increases either in the year the Olympic bid was won nor the actual Olympic year. Inflation in the U.S. and Atlanta mirror each other; rates in both Atlanta and the U.S. peaked in the 1989-91 period. After the announcement year, 1990, rates in Atlanta declined whereas in the U.S. they increased. While inflation in Atlanta declined in the years following the Olympic announcement they increased slightly in the years prior to hosting the Games. Because the Atlanta Olympic

[11] There is a significant lag time in reporting sub-state economic data. Consequently, it is too early to track many of the post-Olympic trends for Atlanta.

[12] Report from Mark Zandi, Chief Economist, Regional Financial Associates, to the State Economic Coordinating Committee, February 3, 1998

Games were so recent it is to early to know if inflation will increase in the years following the Games.

Migration

Net in-migration to Georgia and Fulton County increases steadily from 1990 to 1994. In both areas net in-migration dropped in the year prior to hosting the Games, but rebounded in the year of the Games. How much of the migration is due to the Olympics is not known.

Tourism

Hotel occupancy rates showed significant increases following the announcement year. In the Olympic year, however occupancy rates declined from 73% to 68% in 1996. Data for 1997 is not yet available. Number of conventions and convention attendance both show significant increases since 1991 then decline in the year of the Games. Overnight visitors to Atlanta increase from 1993 and decline in the year of the Games. These data show increases prior to the Games, but a displacement effect in the year of the Games.

Findings

Macroeconomic indicators in Calgary and Atlanta show varying responses to the Games. There appears to be some general improvements in economic activity in the years leading up to and following the Games. However, this impact occurs simultaneously with many other larger and overwhelming activities in the economy. Consequently, it is difficult to isolate an Olympic effect in macroeconomic data. The tourism industry is an exception and does show significant Olympic-related gains in activity. Highlights from Calgary and Atlanta include:

- Unemployment, income, inflation, and migration in Calgary track very closely with natural resource cycles which reached a peak in the year following the announcement of Calgary as a host city. Consequently, in the years leading up to and following the Olympics, the Calgary economy was in a natural resource recession. The Olympics appear to have helped sustain and diversify economic activity during this energy bust, but the impacts were not enough to significantly alter macroeconomic indicators.
- Tourism indicators appear to be positively influenced by the hosting of the Olympic Games. Visits to Banff National Park and skier visits in Alberta increased in the years following the Olympic Games. While it is not known how much of these increases are directly related to the Olympics, the data show clear evidence of growth following the Games. Hotel occupancy rates in Alberta, for instance, reached a record high in the year of the Olympics after a three year decline. In Calgary, hotel occupancy rates were higher in the two years following the Games. Similar results appear to have been obtained in Atlanta. Hotel occupancy rates, attendance at conventions, and total visitors show general increases in the years prior to the Olympics. There are, however, notable displacement effects in the data.
- While there is not yet sufficient data to analyze the impact of the Atlanta Olympics on the economy following the Games, unemployment rates decreased and net migration increased in the years leading up to the Games. In this sense, Atlanta was much like Utah is today. In both areas, the economy expanded or is expanding prior to the Olympics. Atlanta's economic expansion started prior to the Olympic announcement date. Atlanta's economic expansion is credited to good economic fundamentals such as its location and role as a regional center for transportation, communication, and distribution; growing high tech sector; and business climate which attracts in-migration from the northeast and midwest.
- The review of macroeconomic indicators in Calgary and Atlanta shows that even though the Olympics are a very large economic event, the impacts are not sufficiently large to dramatically alter macroeconomic indicators. A natural resource recession in Calgary and a multi-year economic expansion in Atlanta were both much more important to the performance of the economy than the Olympic Games. The Olympics, however, certainly supplemented economic activity and provided a direct stimulus to the tourism industry.

Figure 8

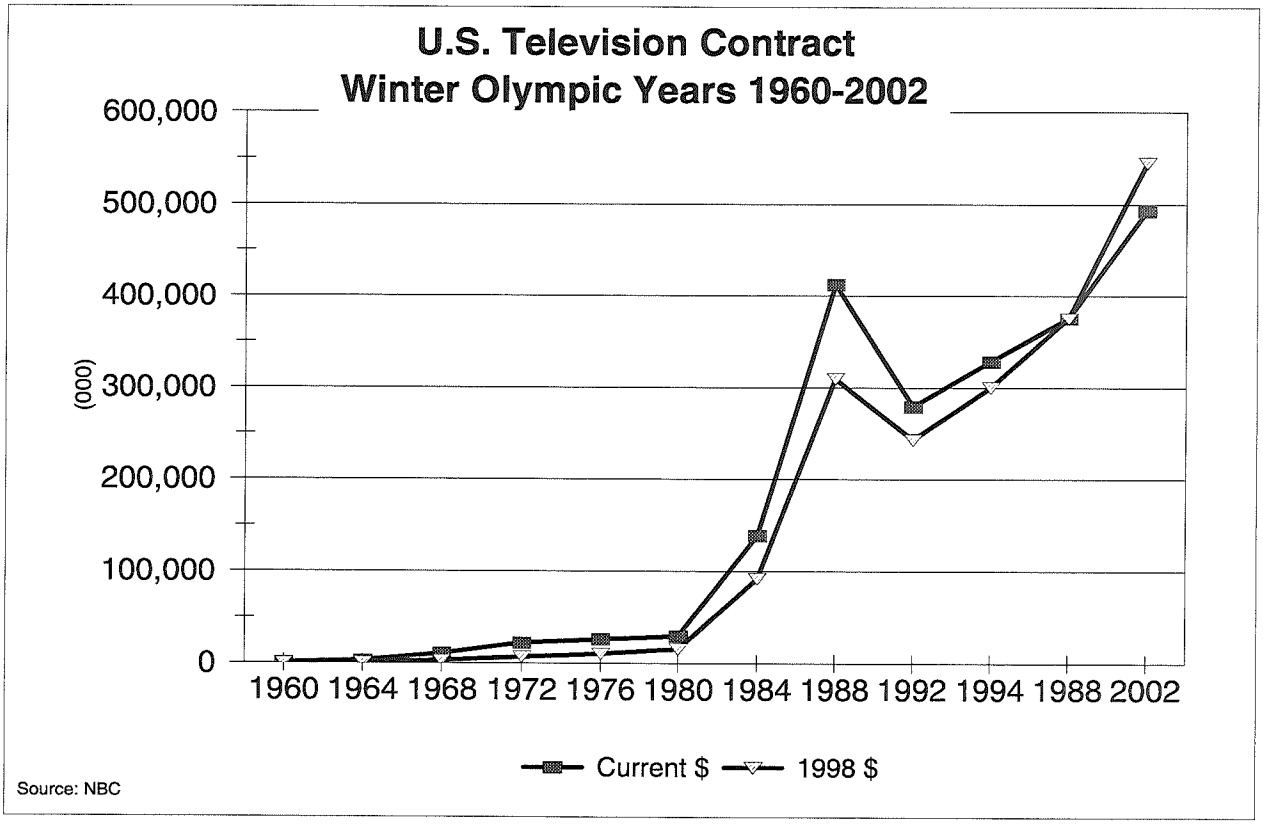


Figure 9

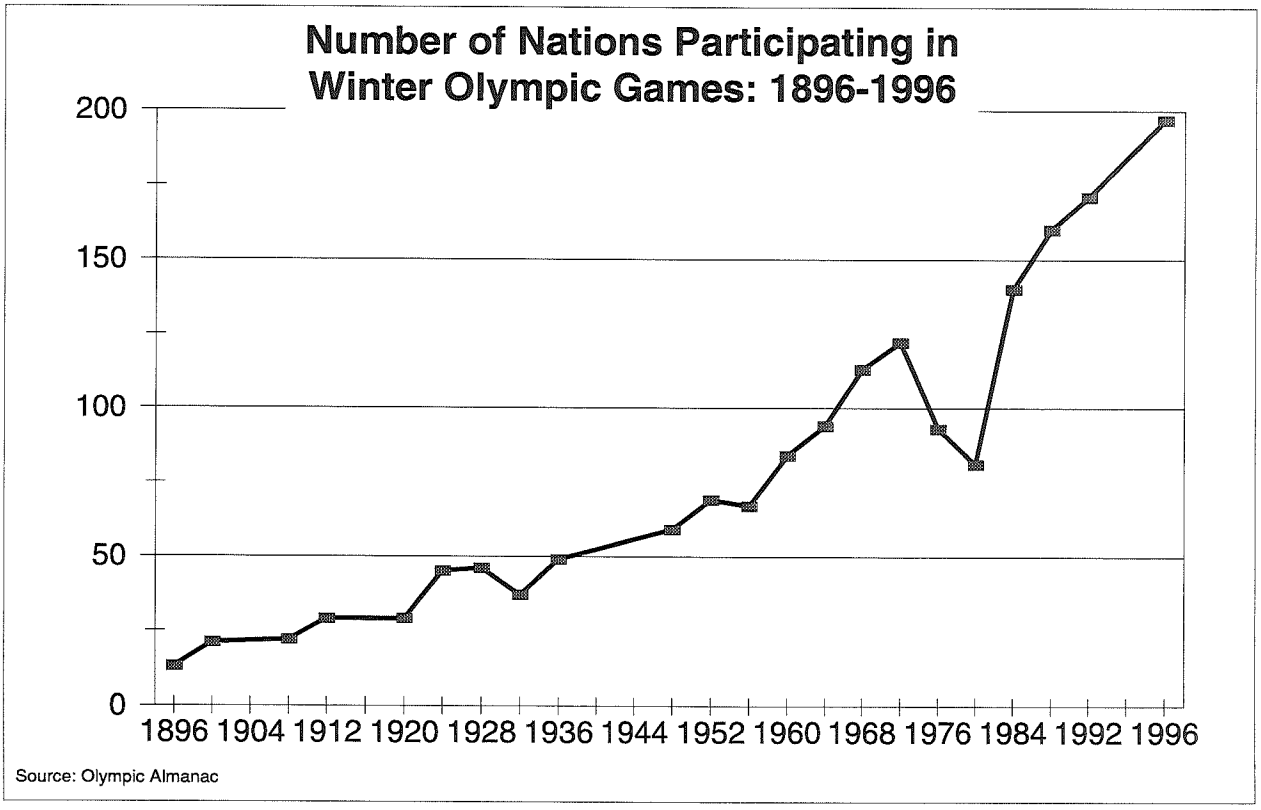
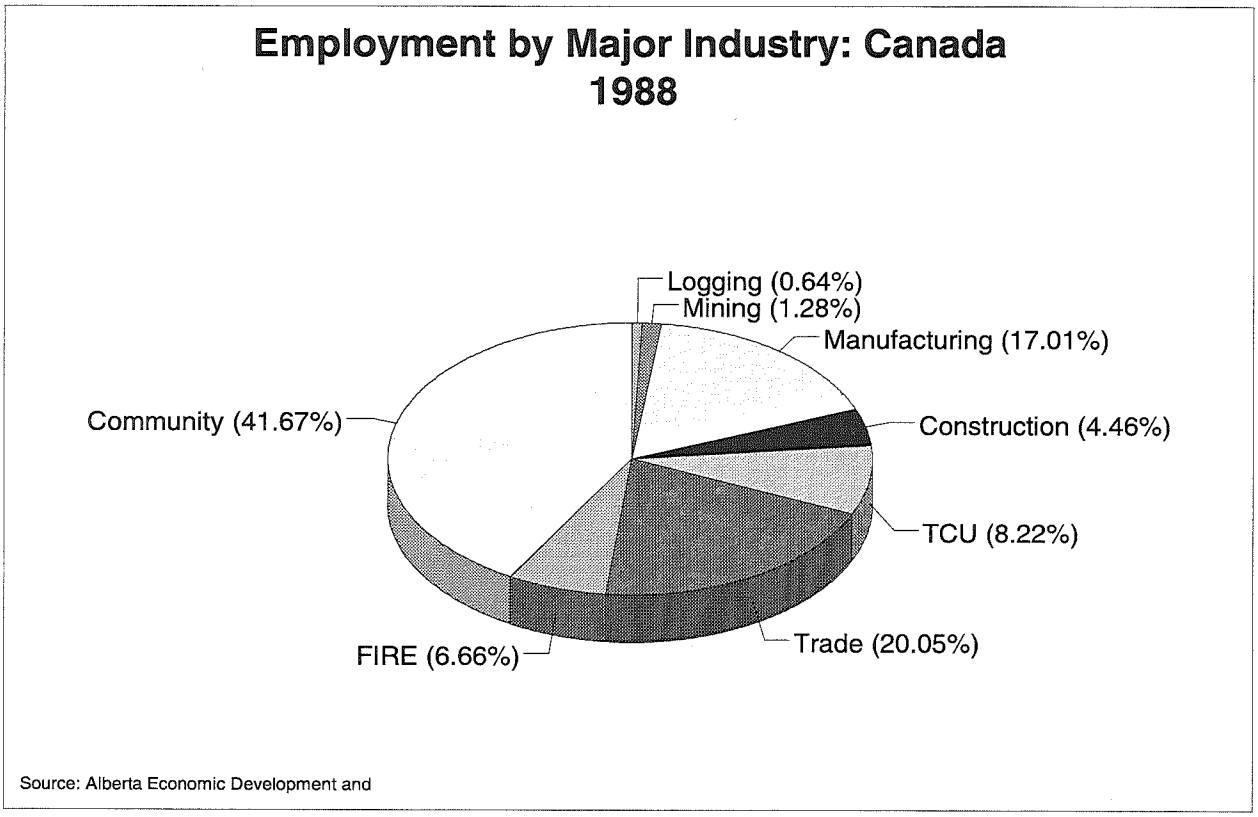
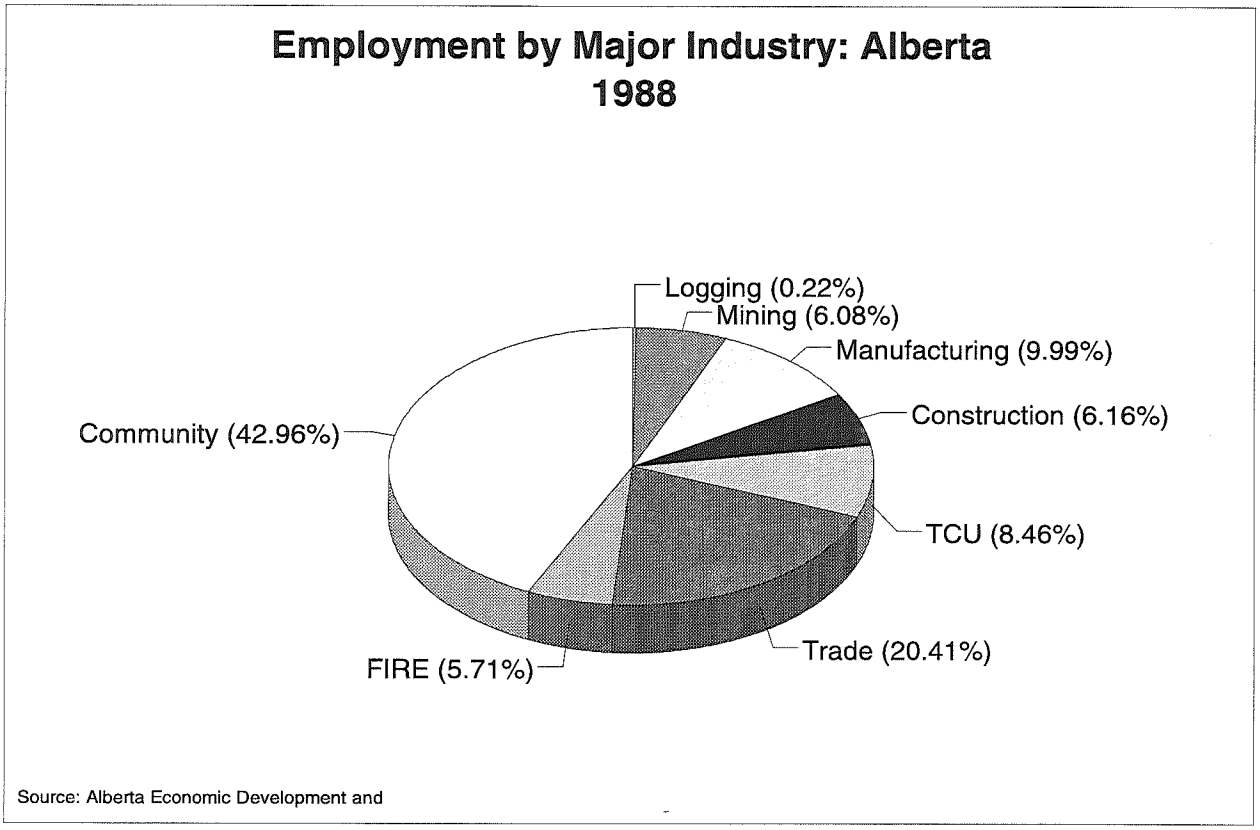


Figure 10



Source: Alberta Economic Development and

Figure 11



Source: Alberta Economic Development and

Figure 12

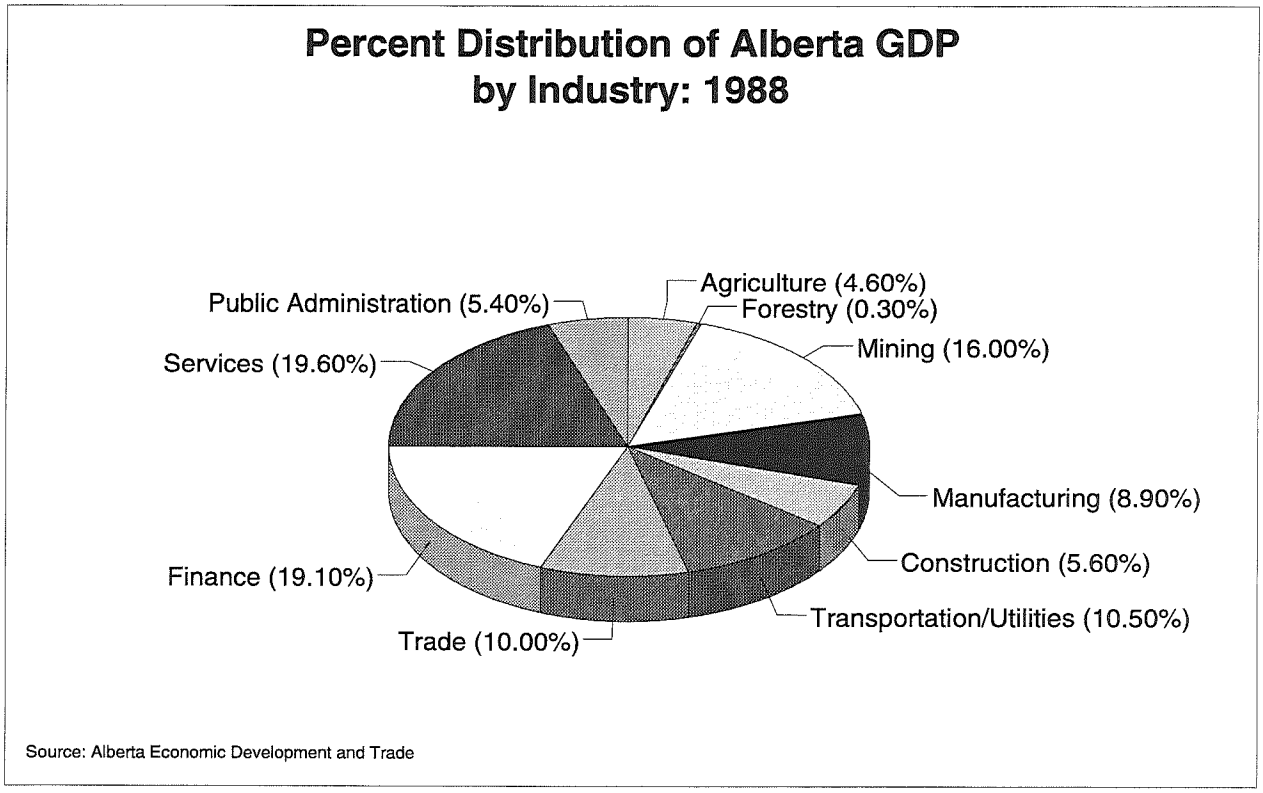


Figure 13

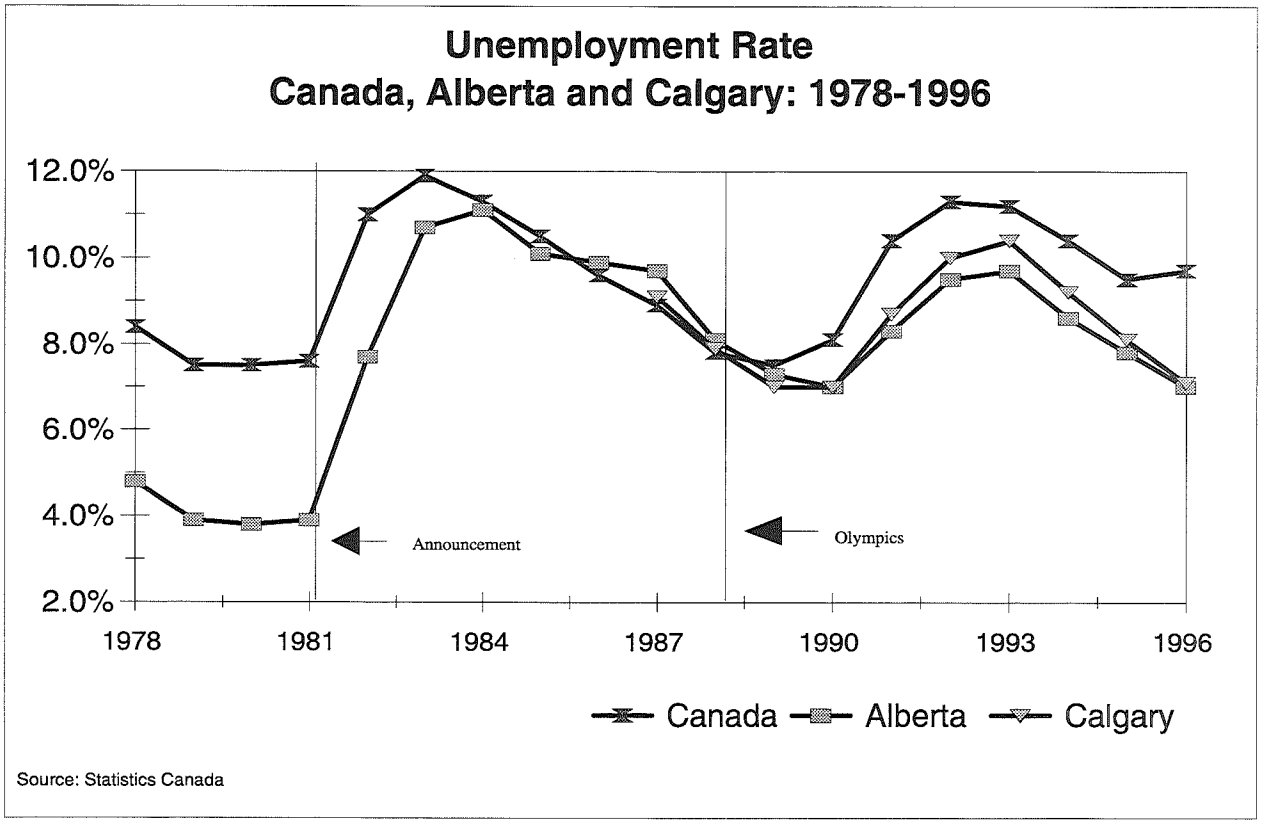


Figure 14

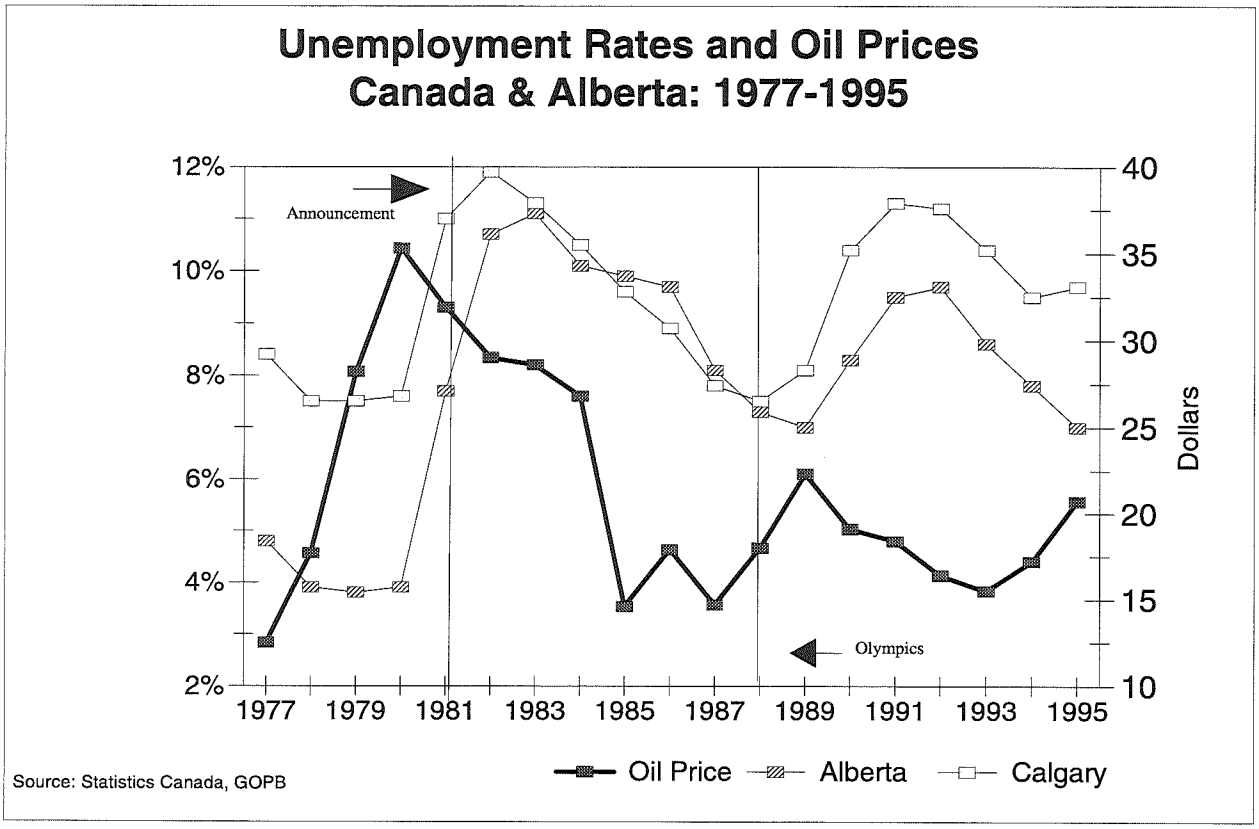


Figure 15

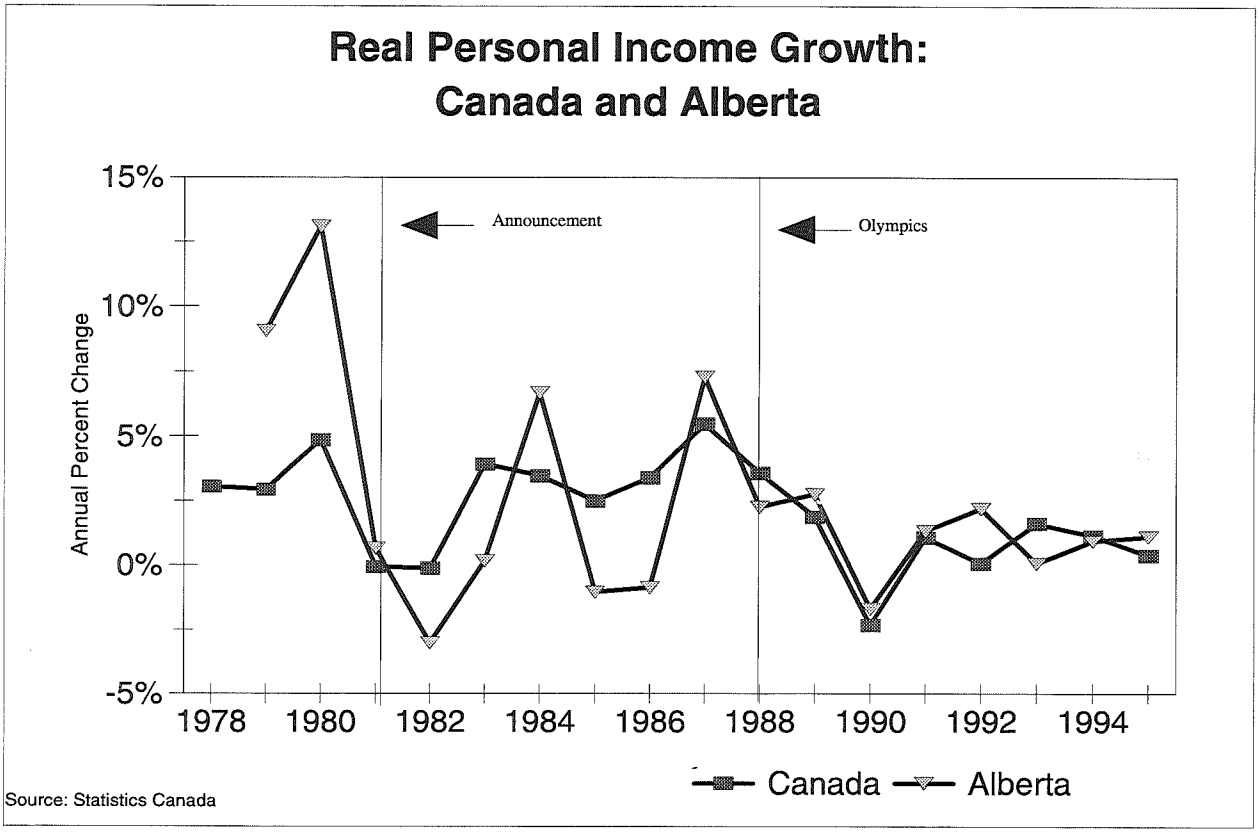
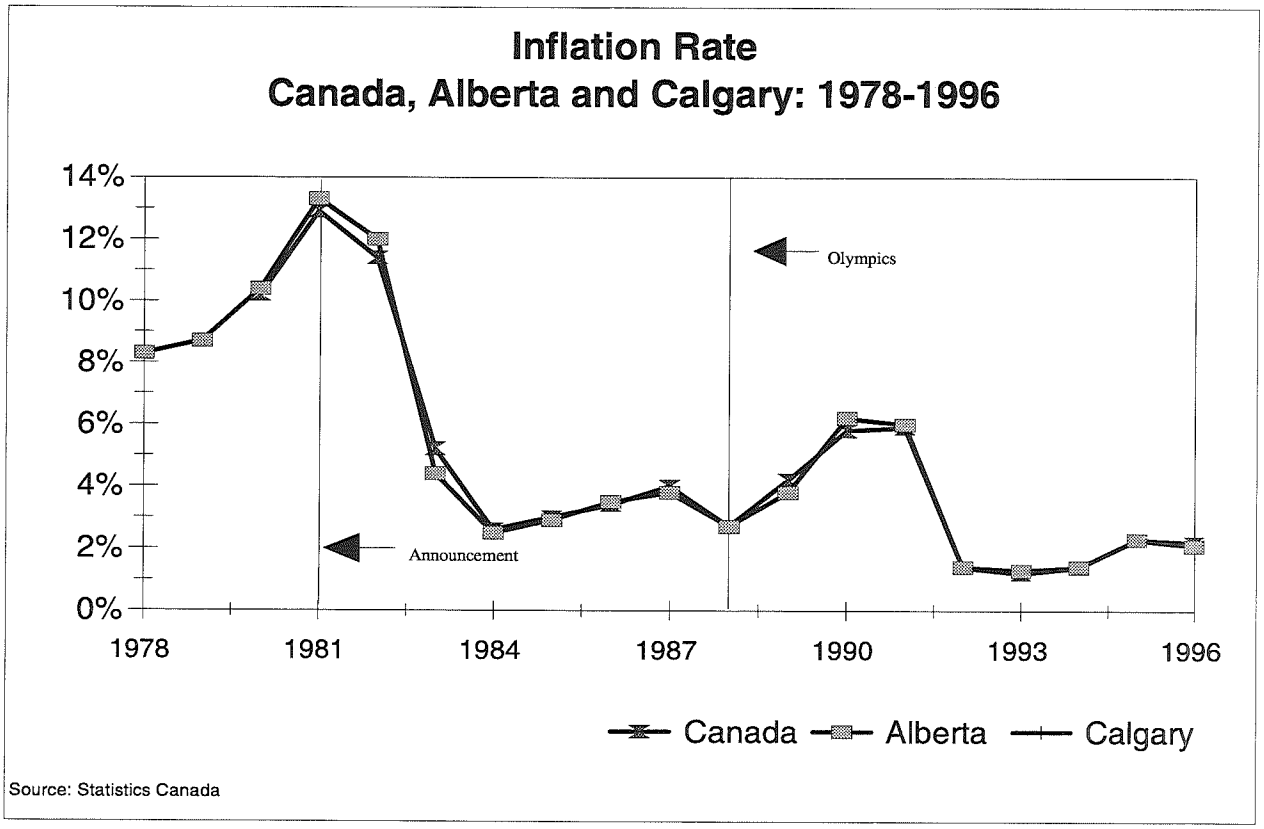


Figure 16



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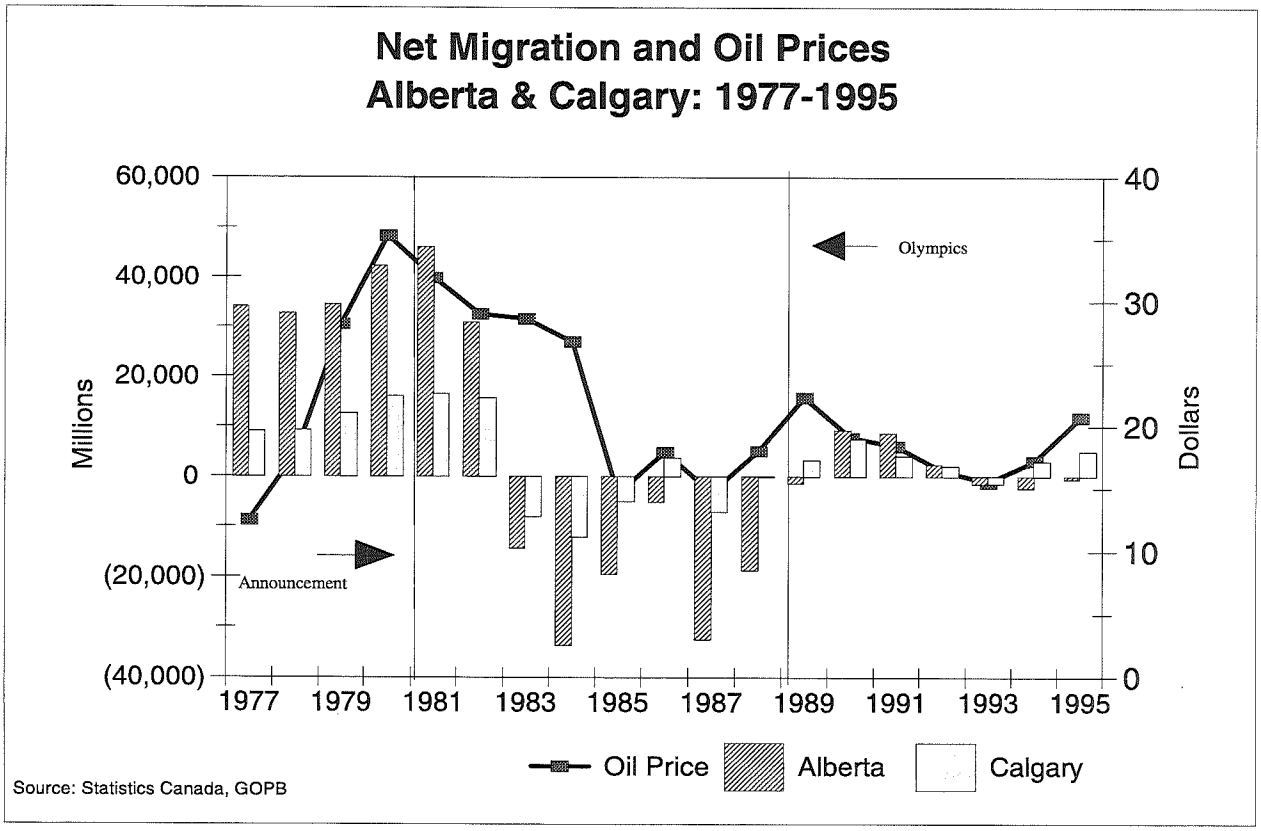
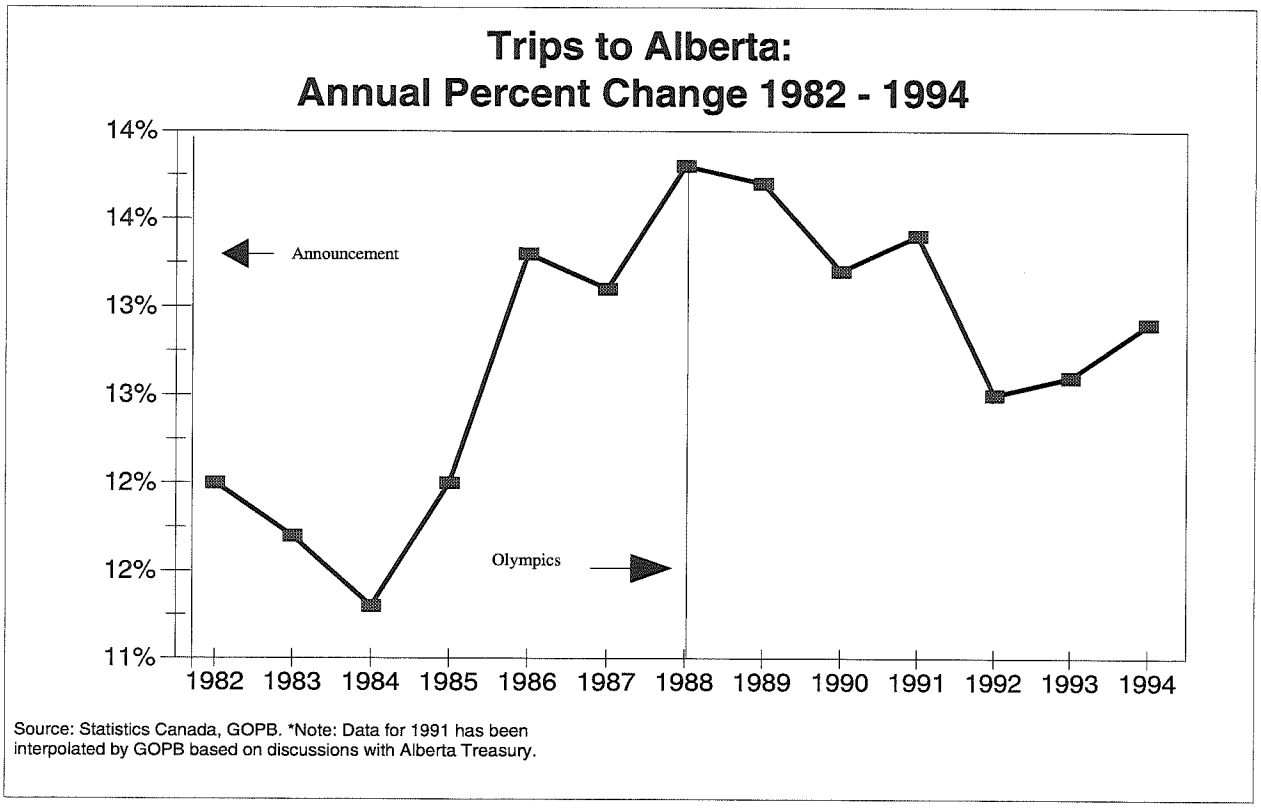
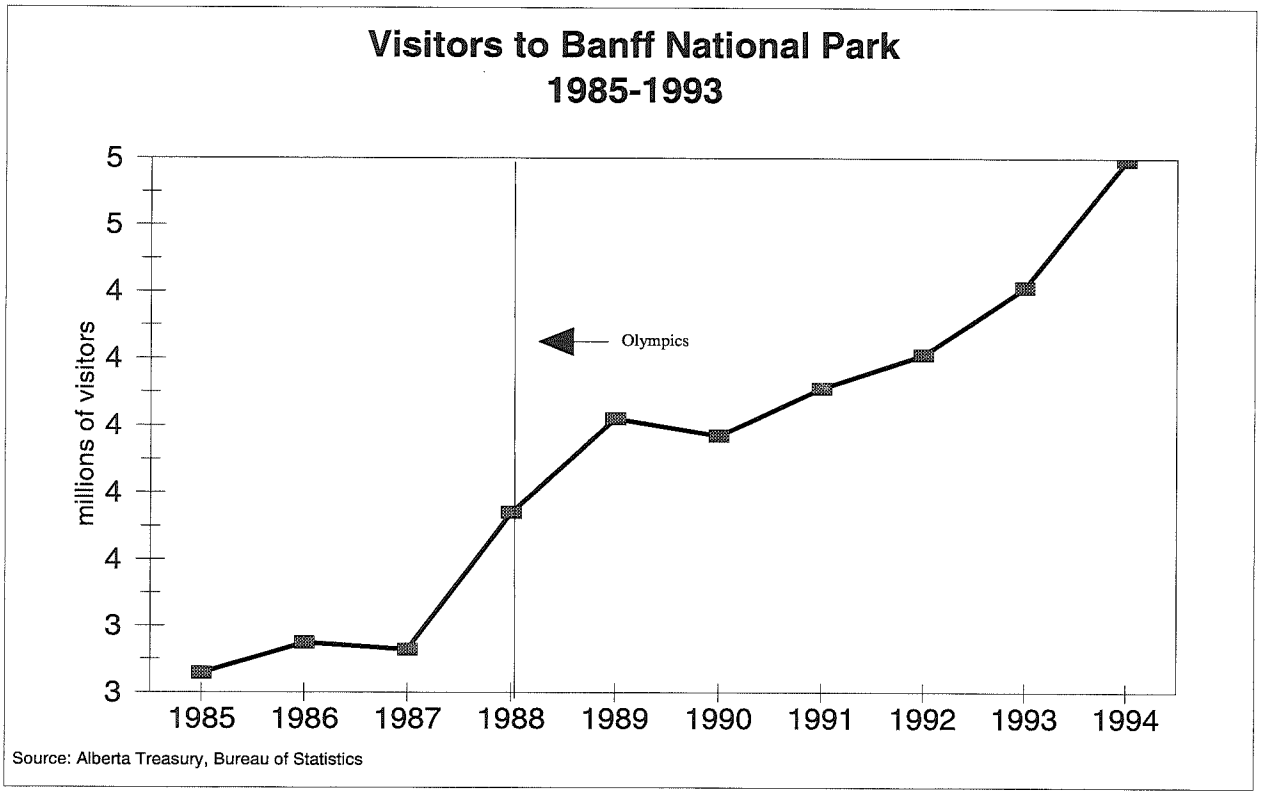


Figure 18



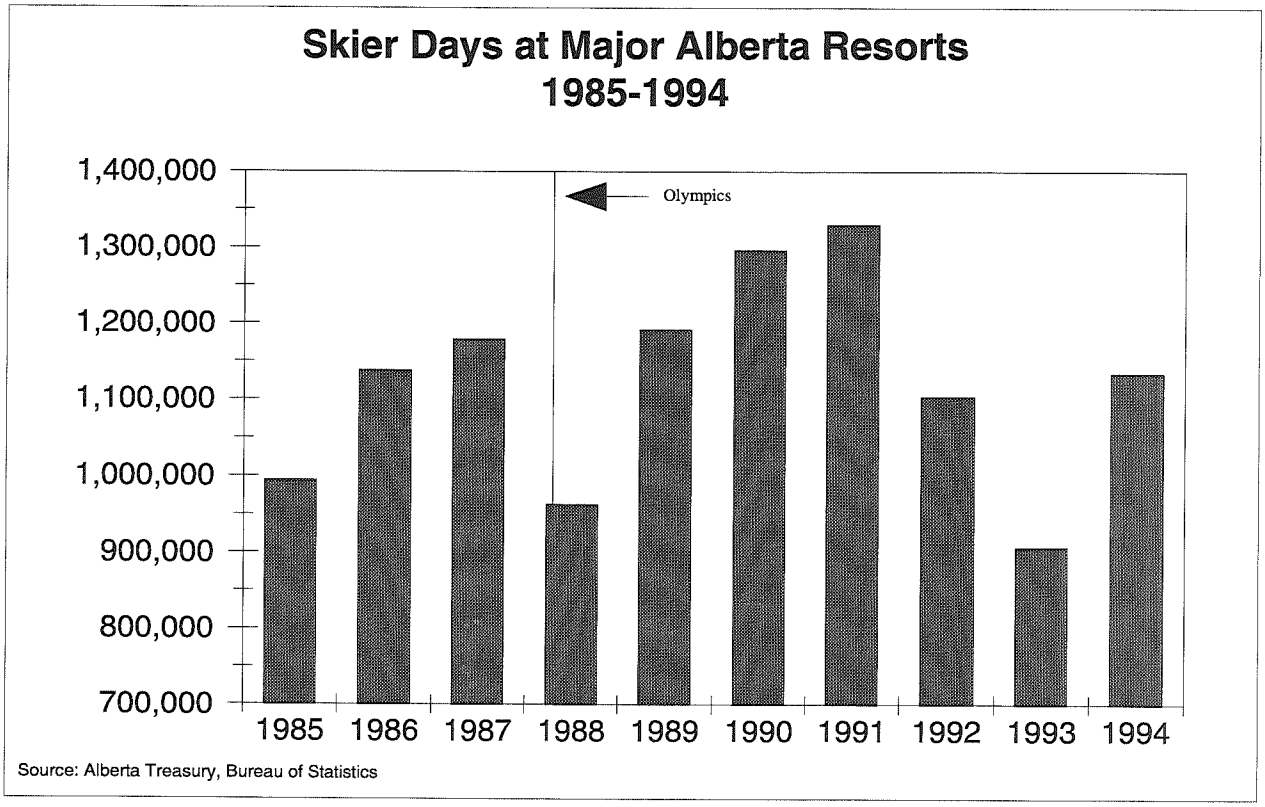
Source: Statistics Canada, GOPB. *Note: Data for 1991 has been interpolated by GOPB based on discussions with Alberta Treasury.

Figure 19



Source: Alberta Treasury, Bureau of Statistics

Figure 20



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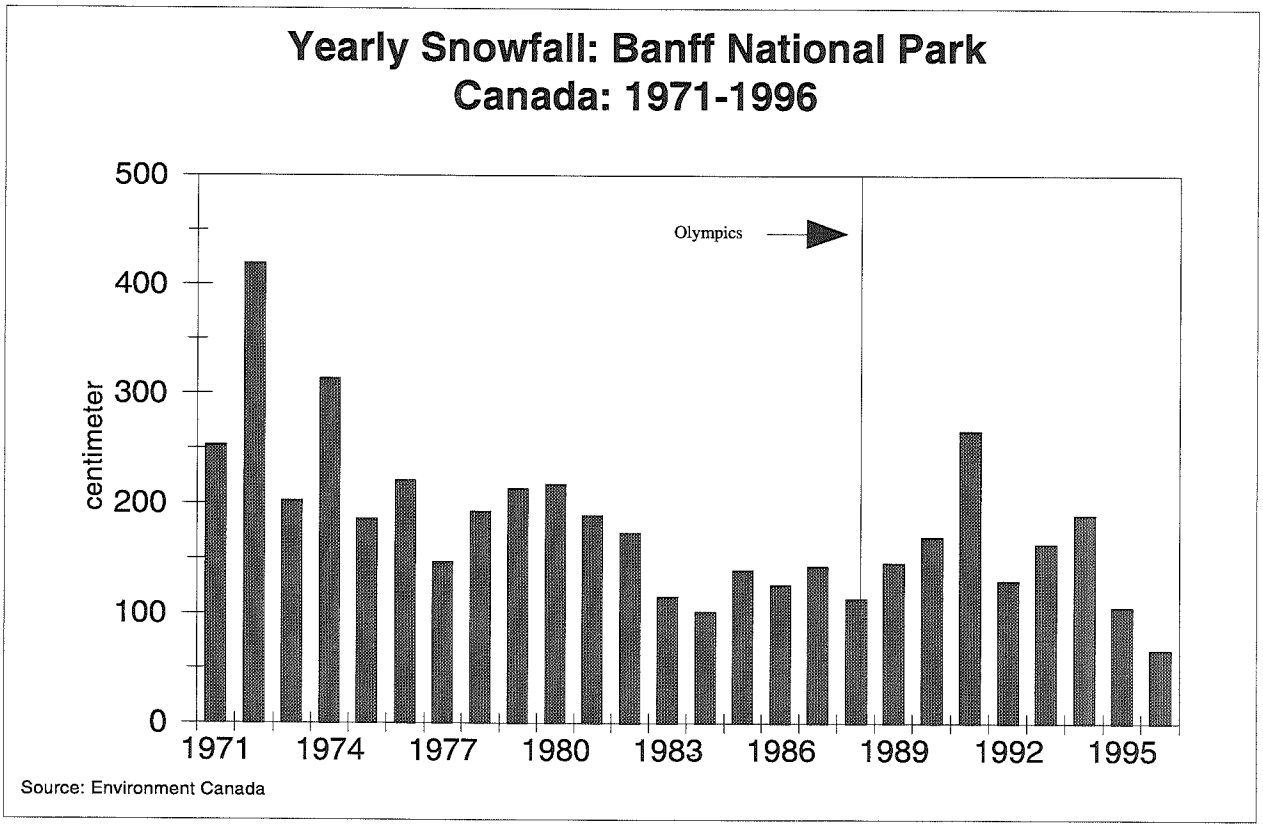
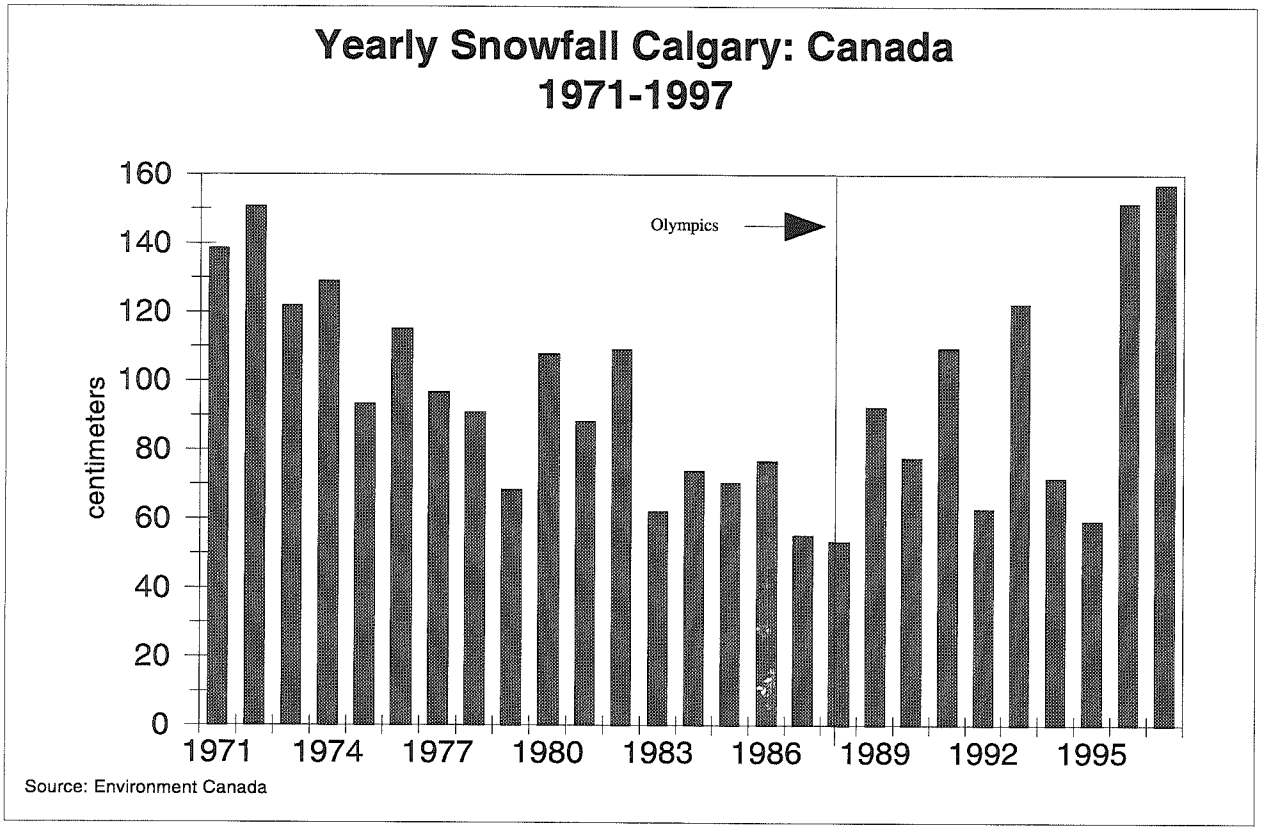


Figure 22



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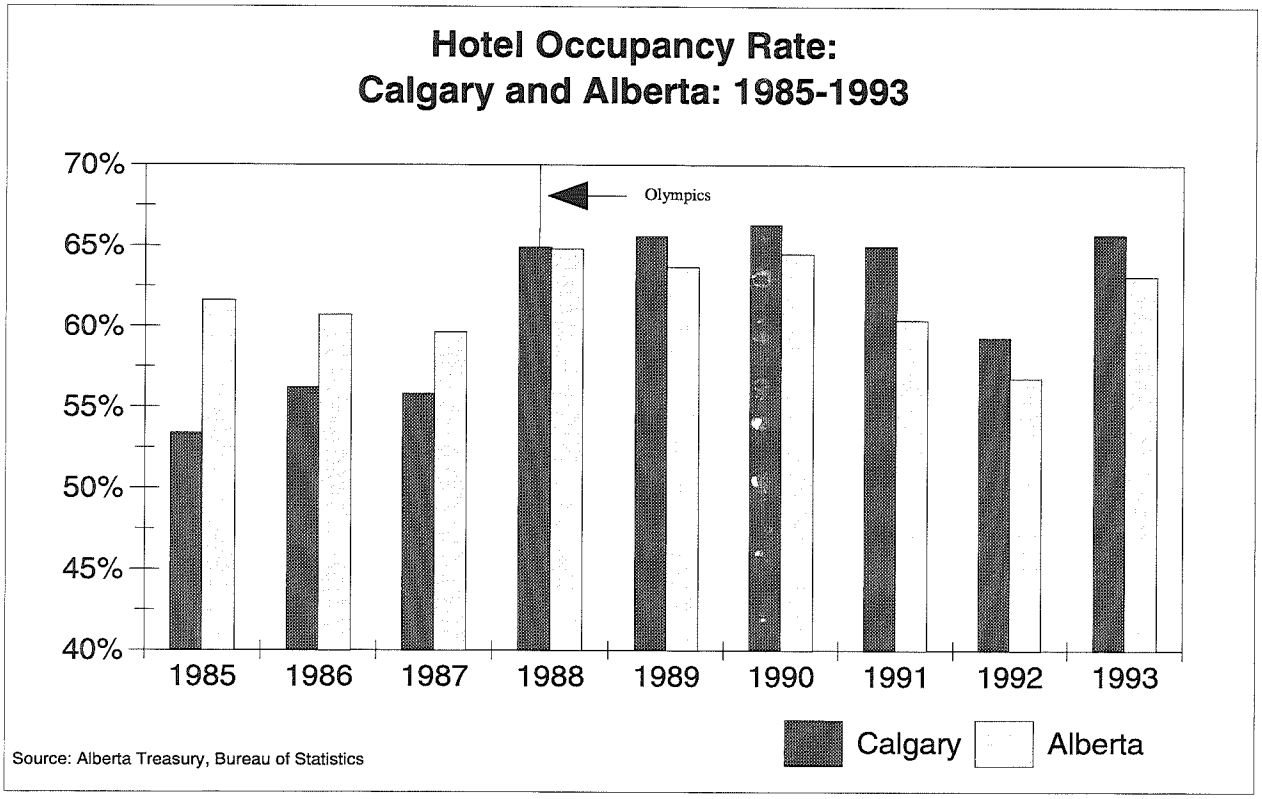
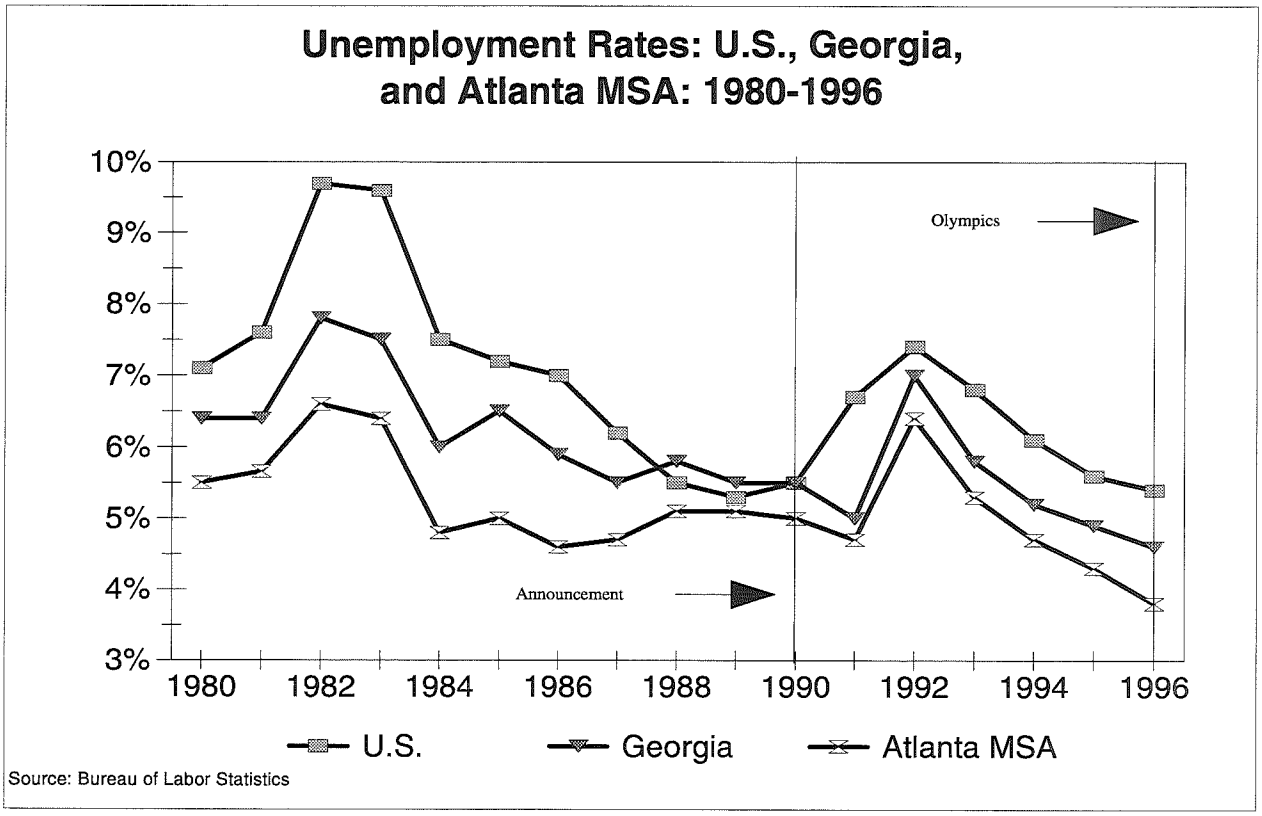


Figure 24



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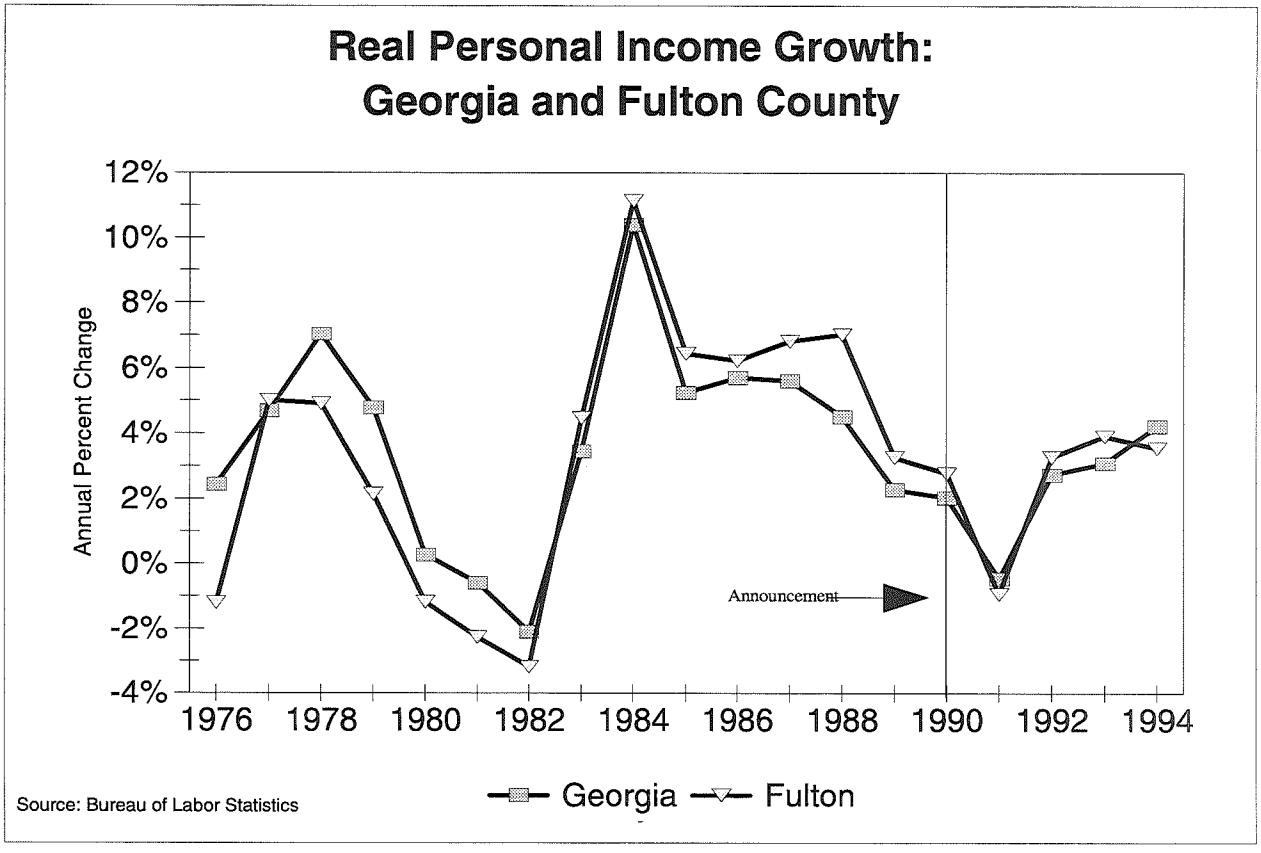


Figure 26

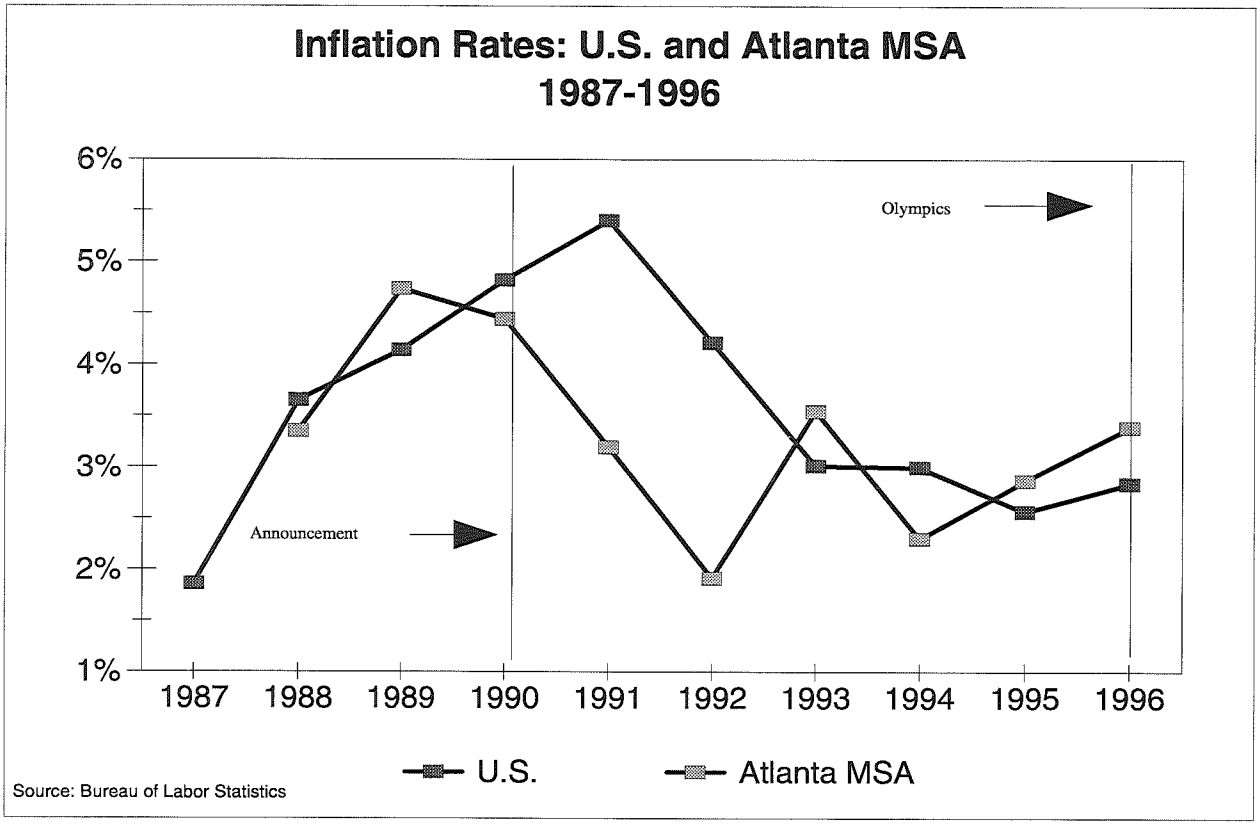


Figure 27

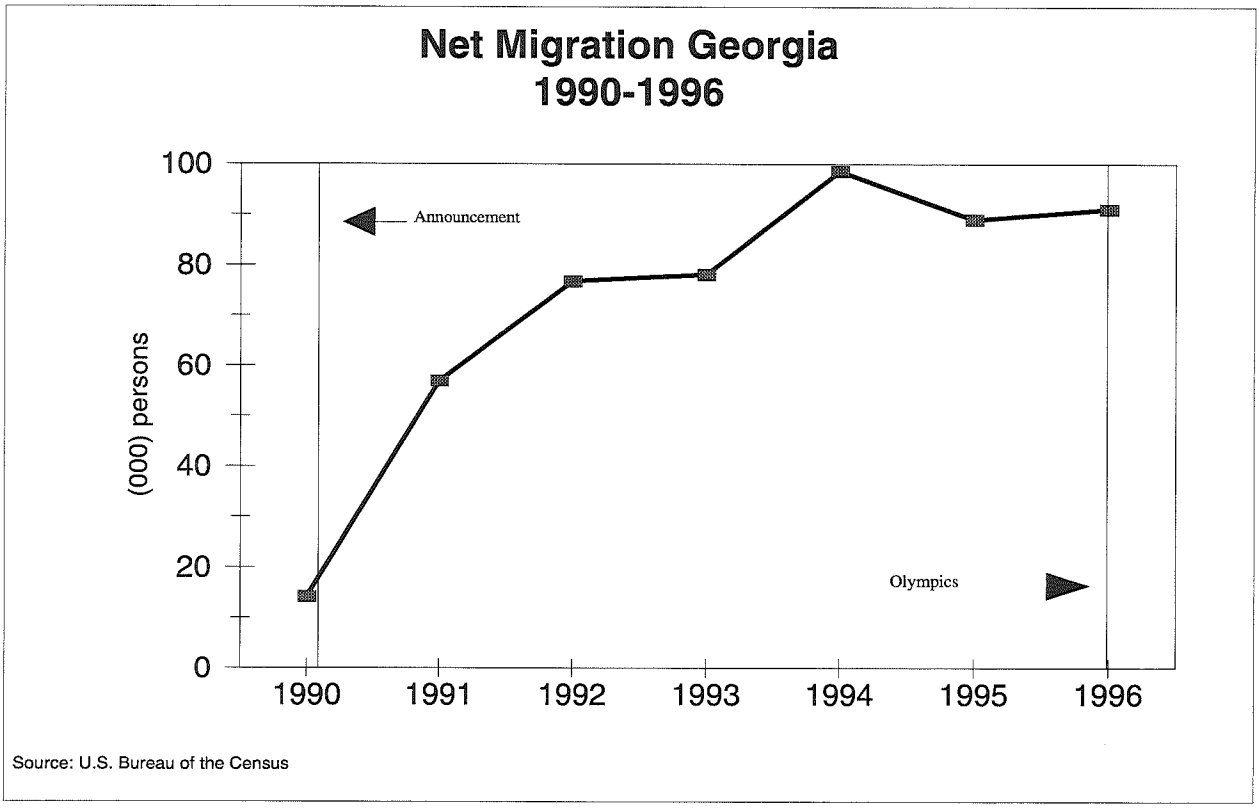
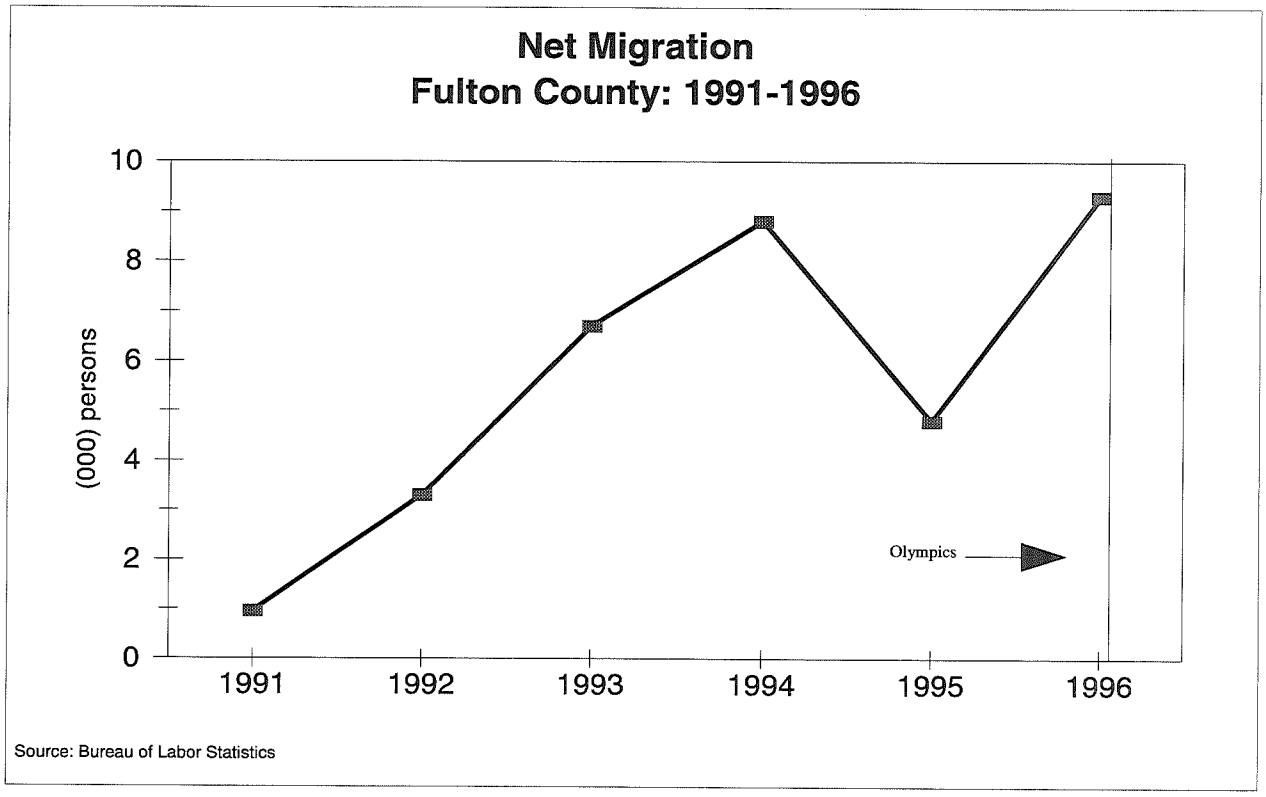
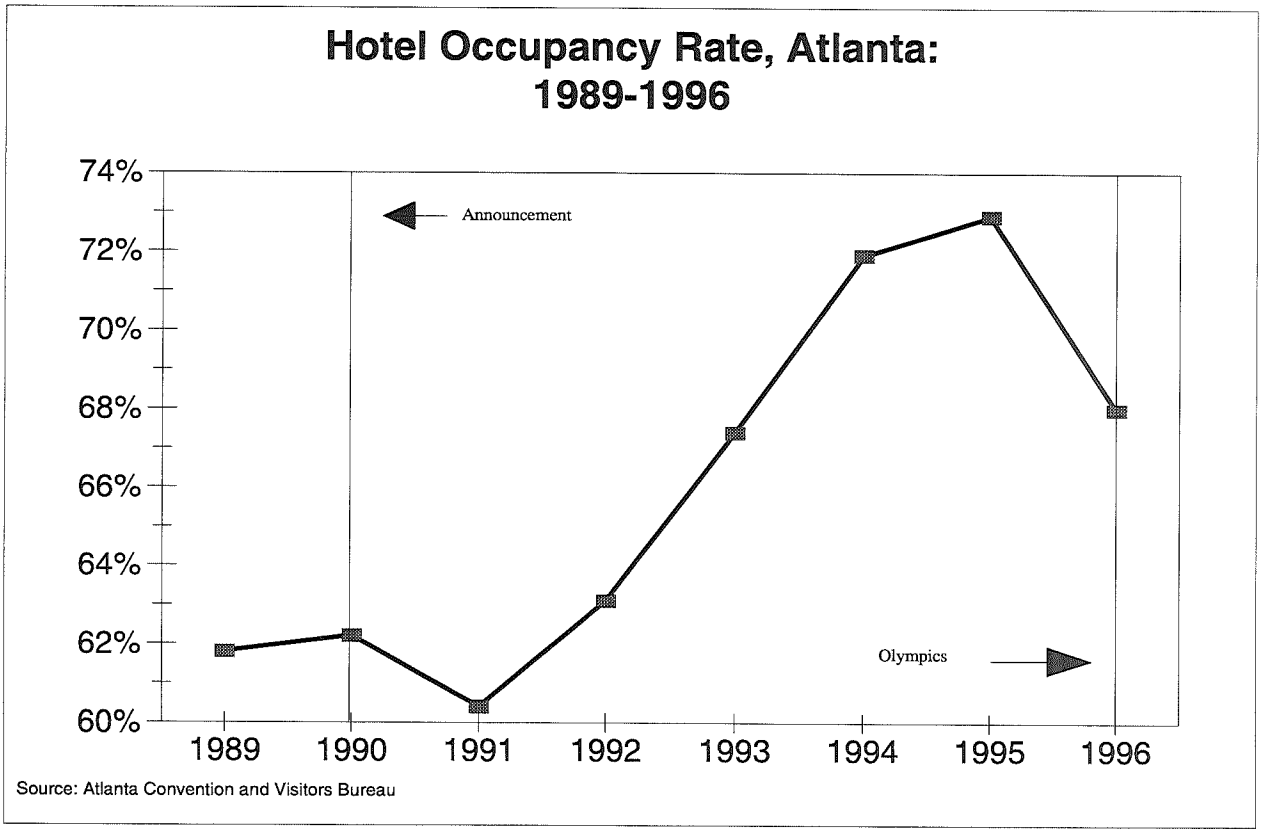


Figure 28



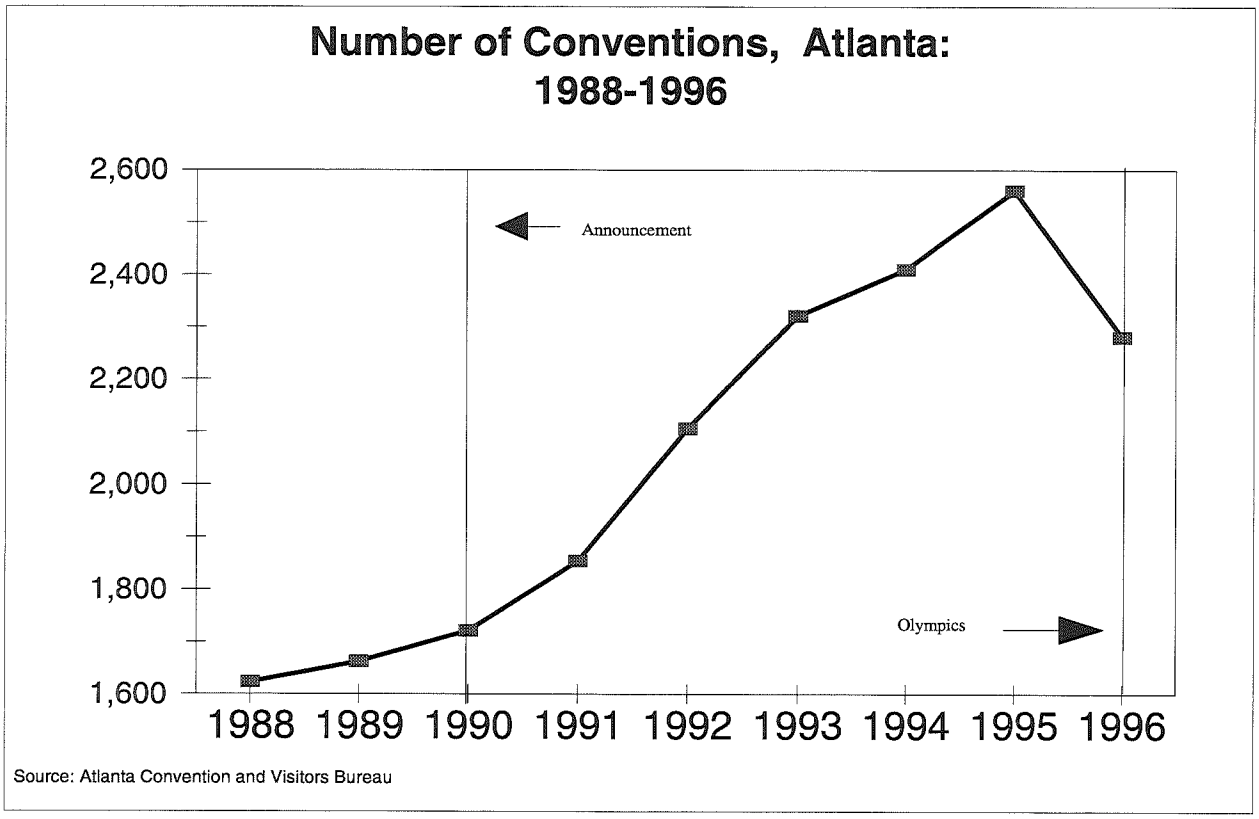
Source: Bureau of Labor Statistics

Figure 29



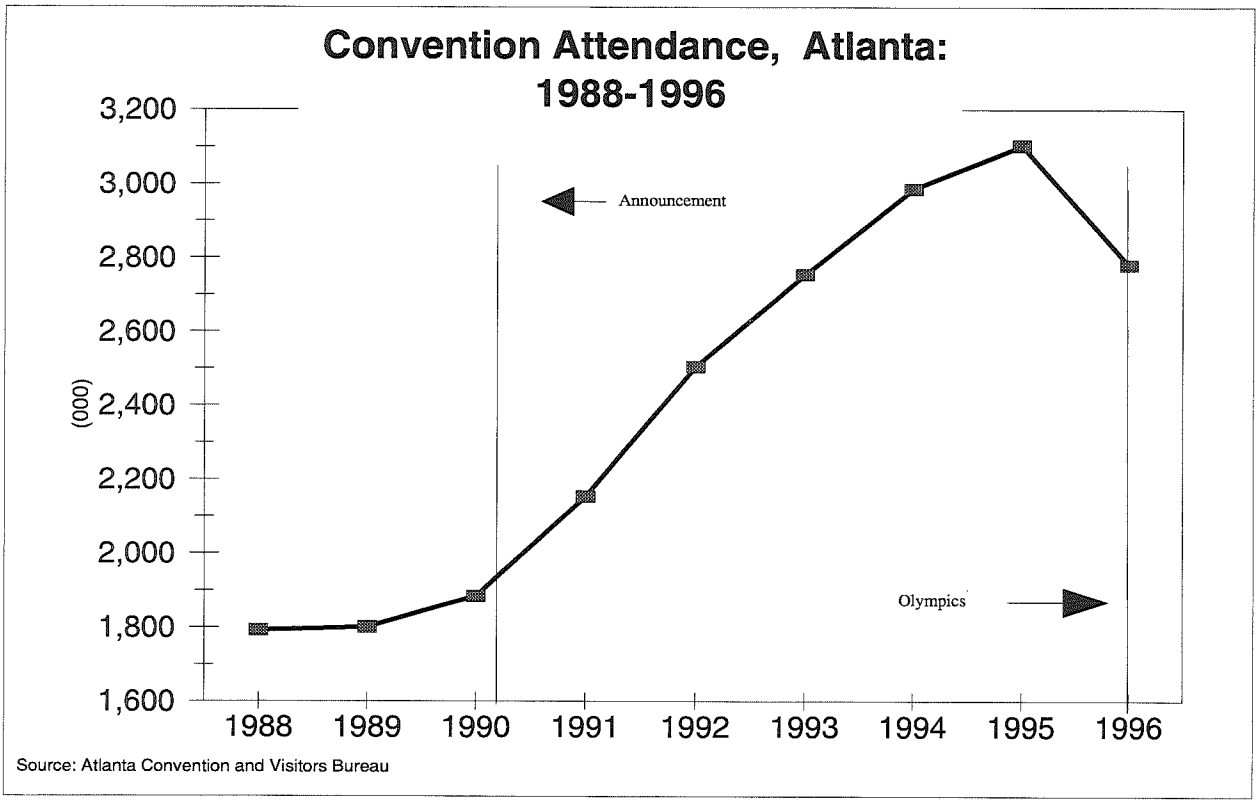
Source: Atlanta Convention and Visitors Bureau

Figure 30



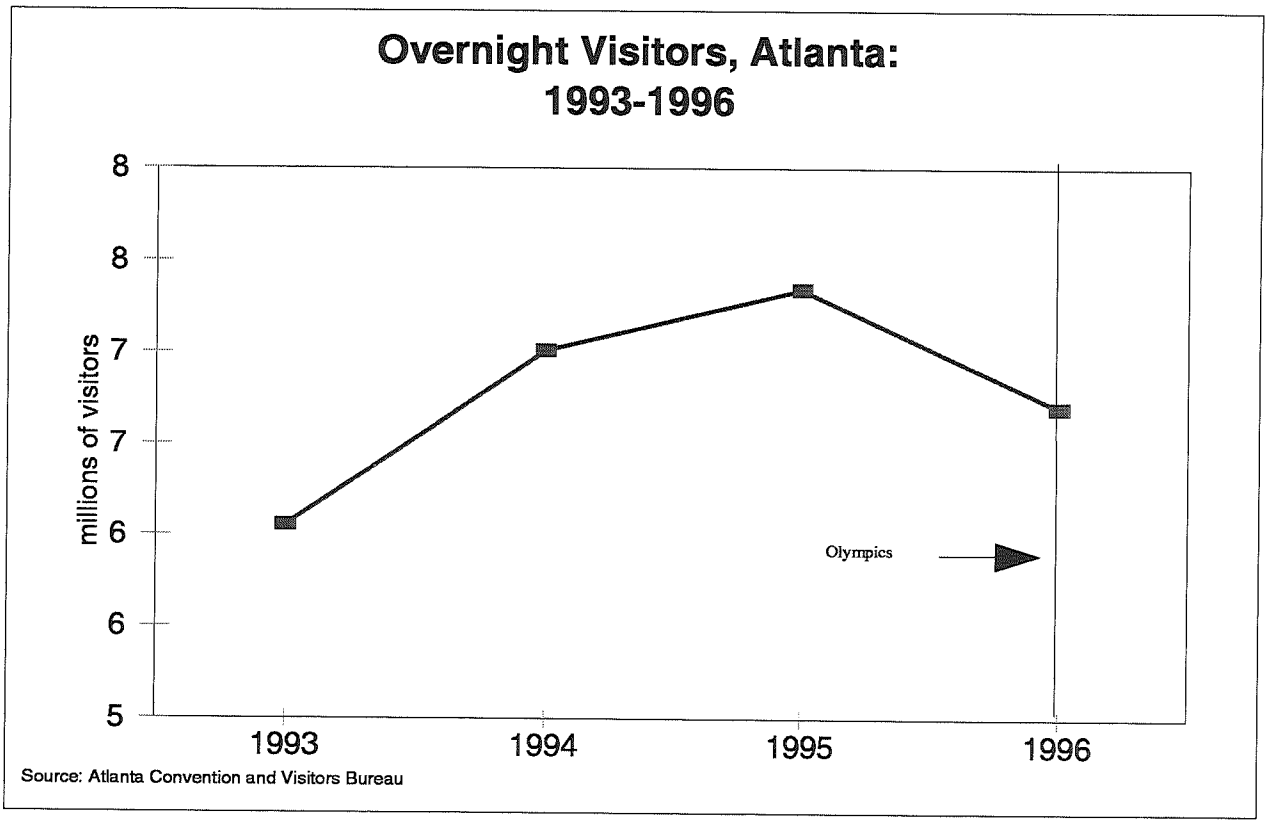
Source: Atlanta Convention and Visitors Bureau

Figure 31



Source: Atlanta Convention and Visitors Bureau

Figure 32


Overnight Visitors, Atlanta:
1993-1996
millions of visitors
8
8
7
7
6
6
5
Olympics
1993
1994
1995
1996
Source: Atlanta Convention and Visitors Bureau

Appendix

Table 14: Past Olympic Host Sites

Year	Summer Games	Winter Games
1896	Athens, Greece	NA
1900	Paris, France	NA
1904	St.Louis, Mo. USA	NA
1908	London, England	NA
1912	Stockholm, Sweden	NA
1916	Not Held due to wartime	NA
1920	Antwerp, Belguim	NA
1924	Paris, France	Chamonix, France
1928	Amsterdam, The Netherlands	St. Moritz, Switzerland
1932	Los Angeles, California, USA	Lake Placid,N.Y., USA
1936	Berlin, Germany	Garmisch-Partenkirchen, Germany
1940	Not held due to wartime	Not Held due to wartime
1944	Not held due to wartime	Not Held due to wartime
1948	London, England	St.Moritz, Switzerland
1952	Helinski, Finland	Oslo, Norway
1956	Melbourne, Austrailia	Cortina, Italy
1960	Rome,Italy	Squaw Valley, California, USA
1964	Tokyo, Japan	Innsbruck, Austria
1968	Mexico City, Mexico	Grenoble, France
1972	Munich, West Germany	Sapporo, Japan
1976	Montreal,Canada	Innsbruck,Austria
1980	Moscow, Soviet Union	Lake Placid,N.Y., USA
1984	Los Angeles, California, USA	Sarajevo, Yugoslavia
1988	Seoul, Korea	Calgary, Alberta, Canada
1992	Barcelona, Spain	Albertville, France
1994		Lillehammer, Norway
1996	Atlanta,Ga., U.S.A.	
1998		Nagano, Japan
2000	Sydney, Australia	
2002		Salt Lake City, UT, U.S.A.

Source: Communications Accessibles Montreal, Olympic Almanac
NA=not aplicable
*Beginning in 1994, Winter and Summer Olympic Games alternate every tw

Table 15:Comparison of Calgary, Atlanta and Salt Lake

	Calgary	Atlanta	Salt Lake
Dates	2/13 to 2/28	7/19 to 8/4	2/8 to 2/24
Nations	57	197	80 to 85
Sports	7	26	7
Events	46	271	68
Athletes	1,634	10,744	2,600
U.S. TV Coverage	ABC	NBC	NBC
Television Contract Amount (gross millions)	309	456	545
Visitor days	*150000	3,000,000	1,000,000

Source: Communications Accessibles Montreal, Olympc Almanac; SLOC, Canadian Travel
*number of out of town visitors

Table 16: Winter Olympics Television Contract Amount

Year	Location	TV Affiliate	Contract Amount	1998 Dollars
1960	Squaw Valley	CBS	50,000	246,914
1964	Innabruck	ABC	597,000	2,801,502
1968	Grenoble	ABC	2,500,000	10,390,690
1972	Sapporo	NBC	6,400,000	22,008,253
1976	Innsbruck	ABC	10,000,000	25,793,139
1980	Lake Placid	ABC	15,500,000	29,518,187
1984	Sarajavo	ABC	91,500,000	138,468,523
1988	Calgary	ABC	309,000,000	412,384,893
1992	Albertville	CBS	243,000,000	279,214,064
1994	Lillehammer	CBS	300,000,000	328,012,246
1988	Nagano	CBS	375,000,000	375,000,000
2002	Salt Lake	NBC	545,000,000	492,321,590

Source: NBC

Table 17: Economic Indicators: Calgary

Year	Personal Income Canada millions	Personal Income Alberta millions	Per Capita Income Canada	Per Capita Income Alberta	CPI Canada	CPI Alberta	CPI Calgary CSA	Total Employment Canada(000)	Total Employment Alberta(000)	Total Employment Calgary MSA	Unemp Rate Canada	Unemp Rate Alberta	Unemp Rate Calgary CSA	Net Migration Calgary	Net Migration Alberta
1978	195,163	17,262	8,120	8,508	55.9	N/A	57.6	10,320	967	N/A	8.4%	4.8%	N/A	9,191	32,674
1979	219,467	20,545	9,040	9,760	61	62.8	62.2	10,761	1,042	N/A	7.5%	3.9%	N/A	12,601	34,490
1980	248,890	24,688	10,120	11,217	67.2	69.2	69.1	11,082	1,116	N/A	7.5%	3.8%	N/A	16,017	42,242
1981	293,215	31,513	11,776	13,678	75.5	78.1	78.3	11,398	1,194	N/A	7.6%	3.9%	N/A	16,427	45,991
1982	324,837	35,331	12,889	14,864	83.7	87	87.7	11,035	1,173	N/A	11.0%	7.7%	N/A	15,659	30,914
1983	343,052	36,030	13,476	15,019	88.5	91.5	91.6	11,106	1,146	N/A	11.9%	10.7%	N/A	(8,037)	(14,276)
1984	372,239	37,035	14,483	15,438	92.4	93.9	93.9	11,402	1,149	N/A	11.3%	11.1%	N/A	(12,214)	(33,579)
1985	400,199	40,685	15,427	16,875	96	96.7	96.6	11,742	1,170	N/A	10.5%	10.1%	N/A	(4,899)	(19,484)
1986	427,262	41,631	16,305	17,069	100	100	100	12,095	1,189	N/A	9.6%	9.9%	N/A	3,606	(5,131)
1987	461,191	42,921	17,371	17,562	104.4	104	103.8	12,422	1,188	367,800	8.9%	9.7%	9.1%	(7,050)	(32,444)
1988	506,042	47,290	18,815	19,200	108.6	106.8	106.6	12,819	1,224	379,800	7.8%	8.1%	7.9%	(159)	(18,752)
1989	550,180	50,395	20,095	20,126	114	111.3	110.7	13,086	1,254	391,200	7.5%	7.3%	7.0%	3,250	(1,308)
1990	587,529	54,754	21,141	21,422	119.5	117.7	117.6	13,165	1,277	395,400	8.1%	7.0%	7.0%	7,418	9,159
1991	605,967	56,978	21,549	21,906	126.2	124.6	124.6	12,916	1,290	395,900	10.4%	8.3%	8.7%	4,051	8,647
1992	621,776	58,576	21,785	22,129	128.1	126.4	126.3	12,842	1,285	394,300	11.3%	9.5%	10.0%	2,009	2,370
1993	633,379	60,573	21,881	22,551	130.4	127.9	128	13,015	1,296	398,200	11.2%	9.7%	10.4%	(1,459)	(1,491)
1994	645,157	61,469	22,052	22,632	130.7	129.7	129.8	13,292	1,337	407,400	10.4%	8.6%	9.2%	2,959	(2,331)
1995	666,542	63,484	22,507	23,068	133.5	132.7	132.8	13,506	1,373	427,300	9.5%	7.8%	8.1%	4,934	(499)
1996	679,605	65,595	22,681	23,511	135.6	135.6	135.6	13,676	1,413	449,900	9.7%	7.0%	7.1%	N/A	5,739

Source: Statistics of Canada
Number of Employed and the Unadusted Unemployment Rate for Calgary
are not available prior to 1987.
CMA= census metropolitan area
Note: Labor force survey was changed in 1991implementing new methodology
Boundaries for Calgary were changed in 1986
N/A = not avialable

Table 18: Tourism Indicators: Calgary

Year	National Park Visits Banff	Total Person Trips to Alberta	Skier Days Major Alberta Resorts	Hotel Occupancy Rates Calgary	Hotel Occupancy Rates Mtn Dest	Hotel Occupancy Rates Alberta
1985	3,257,700	12,045,100	994,200	53.4	60.7	61.6
1986	3,349,300	13,388,800	1,137,500	56.2	64.8	60.7
1987	3,329,200	13,118,400	1,178,800	55.8	63.4	59.6
1988	3,740,200	13,802,000	962,700	64.9	62.2	64.8
1989	4,020,600	13,708,400	1,191,200	65.6	61.4	63.7
1990	3,969,100	13,248,600	1,296,400	66.3	63.1	64.5
1991	4,110,200	16,160,200	1,330,300	65	62.6	60.4
1992	4,210,600	12,543,300	1,103,200	59.3	62.4	56.8
1993	4,411,500	12,686,000	907,100	65.7	68.9	63.1
1994	4,794,200	12,925,500	1,134,400	N/A	N/A	65

Source: Statistics of Canada
Total person trips to Alberta = in thousands, direct entries into Alberta customs of visitors staying one or more nights.
Source: Alberta Treasury, Bureau of Statistics
Note: Visitors to national parks = in thousands of visits, Banff is very close to Calgary, Visitors just passing through the park and do not stop are not counted.

Table 19: Snow Indicator Banff National Park: Alberta

Banff Alberta — **Max & Min Monthly Means....Snow Monthly Totals 0.1 cm** — **Normals 1961-90**

Winter	Oct			Nov			Dec			Jan			Feb			Mar			Snow	% of
Years	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Totals	Normal
1970-71	9.3	-2.5	4.8	-1.1	-10.5	33.0	-7.3	-16.4	45.7	-8.3	-17.1	98.1	0.7	-11.0	28.4	1.2	-11.2	43.1	253.1	136
1971-72	8.3	-3.1	50.4	1.7	-6.0	23.9	-9.4	-18.4	81.3	-10.6	-20.6	83.6	-3.9	-15.2	142.2	5.1	-5.8	37.9	419.3	225
1972-73	9.3	-3.9	38.1	1.9	-6.4	8.8	-8.3	-17.3	86.7	-4.0	-14.4	20.9	1.2	-12.2	19.1	5.2	-5.7	29.0	202.6	109
1973-74	8.2	-0.1	16.3	-4.4	-13.0	63.2	-2.3	-10.7	19.7	-6.4	-16.7	157.2	1.6	-8.0	17.6	2.7	-9.7	39.6	313.6	169
1974-75	13.6	0.3	20.6	2.0	-6.8	28.5	-1.2	-8.6	39.7	-5.6	-14.9	19.6	-6.9	-18.8	59.4	1.2	-11.1	18.5	186.3	100
1975-76	8.1	-2.0	10.0	0.5	-7.9	13.0	-3.9	-12.6	103.0	-2.5	-11.4	13.4	-0.3	-9.7	36.8	1.6	-10.0	44.8	221.0	119
1976-77	10.1	-1.7	3.3	2.9	-7.7	19.0	-1.0	-9.3	36.5	-4.3	-14.6	30.0	4.2	-6.8	11.6	2.9	-8.0	46.8	147.2	79
1977-78	10.2	-1.5	0.2	-1.9	-10.4	55.3	-9.2	-17.7	69.4	-8.3	-18.2	36.9	0.1	-12.4	14.8	5.2	-6.4	16.5	193.1	104
1978-79	11.4	-1.0	38.6	-1.9	-12.2	64.8	-7.2	-15.6	26.6	-10.3	-22.0	7.4	-5.0	-17.4	62.6	5.6	-7.5	13.8	213.8	115
1979-80	11.3	-0.2	5.9	1.0	-9.6	4.4	-1.3	-9.8	105.0	-8.3	-18.1	22.7	0.5	-10.6	20.2	2.2	-9.0	59.5	217.7	117
1980-81	12.4	0.1	9.0	2.1	-6.6	64.0	-5.1	-13.3	84.4	0.1	-9.2	11.0	1.1	-9.0	12.4	7.4	-5.8	8.4	189.2	102
1981-82	9.4	-0.5	12.0	4.6	-3.8	5.0	-5.2	-13.5	23.0	-9.3	-19.2	43.4	-2.4	-14.5	27.2	1.5	-9.4	62.9	173.5	93
*1982-83	11.0	-0.5	11.4	-2.4	-10.8	32.7	-4.7	-12.1	19.6	-0.9	-9.7	32.9	2.9	-5.8	6.6	4.4	-6.0	12.3	115.5	62
*1983-84	10.2	-0.6	Tr	1.8	-5.0	15.2	-12.7	-22.3	22.1	-1.9	-8.7	16.3	3.6	-5.9	21.8	5.3	-5.7	26.4	101.8	55
1984-85	6.9	-2.6	28.4	-0.3	-9.0	25.2	-10.0	-18.7	64.6	-4.6	-13.7	0.6	-2.8	-12.8	10.2	4.0	-7.5	11.0	140.0	75
1985-86	6.2	-1.3	29.4	-9.3	-18.0	23.6	-3.0	-10.9	1.4	1.0	-6.3	19.8	-3.0	-13.3	39.0	7.7	-2.7	13.2	126.4	68
*1986-87	13.8	0.0	9.4	-1.4	-9.2	72.2	-2.4	-9.6	4.4	-1.7	-9.4	12.6	2.9	-8.2	19.6	5.4	-5.3	25.2	143.4	77
*1987-88	13.3	-1.3	2.0	4.6	-3.1	3.8	-3.3	-11.2	42.4	-5.8	-15.6	26.0	0.9	-10.7	12.8	5.2	-4.5	26.8	113.8	61
1988-89	13.5	-0.3	6.0	2.2	-6.3	10.8	-3.9	-11.0	43.6	-3.4	-12.6	53.8	-5.8	-18.3	15.6	2.5	-10.3	16.6	146.4	79
1989-90	9.6	-1.7	7.6	1.5	-6.8	44.0	-2.5	-10.5	16.4	-3.0	-11.0	46.0	-1.3	-12.2	32.0	6.9	-7.1	24.1	170.1	91
1990-91	6.8	-1.7	57.8	0.2	-6.5	88.4	-10.0	-17.5	51.6	-5.5	-15.0	10.4	5.5	-2.6	14.4	2.7	-9.9	43.4	266.0	143
*1991-92	8.8	-4.4	27.4	1.0	-8.6	32.8	-0.8	-7.8	14.8	-0.2	-8.1	38.0	4.4	-7.6	13.8	10.6	-3.9	3.6	130.4	70
*1992-93	10.0	-1.0	35.2	0.8	-7.1	30.7	-8.9	-18.4	25.0	-6.6	-18.3	9.6	-2.2	-16.5	17.4	4.5	-6.5	45.4	163.3	88
1993-94	11.0	-1.2	29.0	-0.9	-9.2	30.4	-2.0	-9.5	29.8	-1.0	-10.1	37.6	-6.3	-16.9	40.6	6.9	-4.6	22.4	189.8	102
1994-95	9.4	-1.3	27.4	-1.5	-8.7	17.3	-4.1	-11.9	25.1	-2.9	-16.0	5.4	-0.2	-12.4	23.4	3.7	-9.8	7.2	105.8	57
1995-96	9.6	-4.5	19.8	0.3	-11.0	26.5	-7.2	-17.9	20.6	-10.2	-22.7	Misg	-0.9	-13.1	Misg	0.6	-11.5	Misg	66.9	36
1996-97	7.4	-2.3					-10.5	-20.5	Misg	-6.1	-16.7	Misg	1.1	-9.8	Misg				0.0	
Normals	10.1	-1.1	18.9	0.5	-8.2	33.6	-5.3	-13.8	43.9	-5.3	-14.9	38.2	0.1	-11.3	30.0	3.8	-7.9	21.5	186.1	

* EL Nino Winters

Notes: Measurements taken on the road at the same elevation as the city of Banff, not in the mountains.

Source: Environment Canada

Table 20: Snow Indicator Calgary: Alberta

Normals 1961-90

Calgary, Alberta	Max & Min Monthly Means....Snow Monthly Totals 0.1 cm																			
Winter	Oct			Nov			Dec			Jan			Feb			Mar			Snow	% of
Years	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Max	Min	Snow	Totals	Normal
1970-71	12.2	-2.5	14.5	-0.5	-12.9	23.6	-6.2	-18.8	17.0	-7.5	-20.3	33.6	0.7	-9.6	15.7	0.0	-10.3	34.2	138.6	141
1971-72	11.7	-2.5	30.8	3.3	-7.4	2.2	-7.5	-20.3	39.1	-10.3	-21.1	29.7	-8.4	-18.3	32.6	4.2	-8.1	16.3	150.7	154
1972-73	10.2	-4.7	21.7	3.3	-6.3	6.5	-5.8	-19.3	48.2	-0.5	-13.3	4.4	-1.7	-12.7	27.7	5.9	-5.2	13.3	121.8	124
1973-74	12.1	-2.0	4.6	-6.8	-17.6	38.5	-1.2	-13.3	15.2	-6.5	-19.9	39.6	1.7	-10.2	5.3	0.2	-11.5	25.8	129.0	131
1974-75	15.2	0.7	7.8	5.9	-8.1	8.6	3.3	-8.2	7.6	-2.3	-14.1	13.5	-6.7	-18.1	22.3	-0.6	-11.0	33.5	93.3	95
1975-76	11.1	-1.7	11.6	3.4	-9.2	13.7	-0.2	-12.7	49.8	0.4	-12.4	7.5	1.9	-10.2	17.4	2.9	-9.3	15.1	115.1	117
1976-77	10.6	-2.5	11.9	6.6	-6.7	29.2	1.6	-9.9	17.6	-2.1	-14.3	29.4	7.5	-3.6	0.2	5.3	-8.1	8.4	96.7	99
1977-78	12.5	-1.8	3.4	1.2	-10.8	8.5	-8.2	-19.2	17.9	-10.5	-20.6	35.1	-5.7	-17.0	18.3	3.2	-7.4	7.7	90.9	93
1978-79	14.1	-0.1	1.0	0.7	-10.7	22.7	-3.7	-14.4	10.7	-7.7	-19.8	11.1	-11.5	-22.0	11.0	6.1	-6.6	12.0	68.5	70
1979-80	13.4	-0.1	12.6	5.9	-7.4	9.1	2.1	-11.7	21.3	-7.2	-19.4	16.9	-1.4	-12.0	21.0	0.8	-10.3	27.0	107.9	110
1980-81	14.8	0.9	15.0	7.7	-4.8	20.0	-3.8	-15.3	26.1	5.4	-7.6	5.8	3.0	-9.0	10.9	8.9	-4.8	10.5	88.3	90
1981-82	11.3	-0.7	16.1	8.2	-4.4	8.2	-2.1	-13.5	5.0	-12.7	-25.3	27.8	-5.5	-16.2	15.0	0.2	-10.2	37.0	109.1	111
*1982-83	13.4	-0.7	4.0	1.6	-11.8	9.0	1.2	-10.4	9.6	2.5	-11.6	11.2	4.2	-7.5	6.0	2.1	-7.3	22.3	62.1	63
*1983-84	13.6	-1.7	1.0	3.3	-7.6	14.1	-10.8	-23.4	22.2	2.0	-9.2	13.0	7.2	-5.3	2.6	4.0	-7.4	21.0	73.9	75
1984-85	7.4	-3.7	18.9	0.4	-11.2	7.2	-6.4	-18.6	12.4	1.5	-11.8	6.7	-2.8	-14.0	20.7	5.1	-6.2	4.6	70.5	72
1985-86	10.7	-1.4	11.6	-7.6	-17.5	20.0	2.7	-8.5	16.0	5.2	-6.7	1.2	-3.1	-14.1	20.2	9.0	-3.2	7.8	76.8	78
*1986-87	14.7	0.9	4.2	0.8	-11.5	14.2	4.9	-8.2	1.8	5.2	7.3	3.4	5.6	-8.5	5.4	4.2	-6.6	26.2	55.2	56
*1987-88	14.7	-0.5	0.4	8.5	-4.5	6.2	2.7	-8.5	6.6	-2.6	-14.3	7.4	3.0	-10.7	8.6	6.9	-5.1	24.2	53.4	54
1988-89	14.2	-0.6	6.0	5.3	-6.5	3.8	1.3	-11.3	12.7	-0.6	-13.6	34.2	-6.5	-17.9	22.1	-1.3	-12.6	13.6	92.4	94
1989-90	12.5	-1.2	3.6	4.8	-6.2	14.2	0.8	-9.8	23.6	1.4	-10.6	12.0	0.5	-13.5	10.2	7.9	-6.2	14.2	77.8	79
1990-91	10.6	-2.5	11.0	1.1	-9.0	30.9	-4.7	-16.6	17.2	-3.1	-14.4	11.1	6.4	-4.6	15.4	2.1	-9.0	24.0	109.6	112
*1991-92	8.7	-4.4	24.0	3.5	-8.7	13.6	4.3	-8.4	2.6	5.1	-7.4	4.2	4.2	-9.3	7.8	10.4	-4.2	10.7	62.9	64
*1992-93	10.9	-0.3	4.4	3.6	-6.3	39.4	-5.7	-17.8	22.2	-4.9	-17.9	8.8	-1.3	-13.0	21.0	4.9	-5.5	26.6	122.4	125
1993-94	13.4	-0.9	4.2	3.3	-9.2	12.0	4.3	-8.1	8.2	-3.5	-15.0	21.4	-7.9	-19.1	13.4	9.7	-4.8	12.6	71.8	73
1994-95	10.4	-1.4	12.2	2.8	-9.3	25.0	0.9	-12.6	5.8	-0.9	-13.7	4.3	1.6	-11.9	2.5	4.3	-10.2	9.6	59.4	61
1995-96	10.7	-2.4	5.2	0.4	-9.9	38.8	-4.9	-17.1	23.6	-10.2	-21.3	33.4	0.9	-12.5	3.8	-0.4	-11.5	47.0	151.8	155
1996-97	10.4	-2.0	19.2	-5.3	-14.1	41.6	-8.9	-19.9	24.8	-5.7	-19.2	34.8	2.6	-8.2	5.6	1.9	-9.9	31.2	157.2	160
Normals	12.6	-1.2	11.5	2.9	-9.0	16.0	-2.3	-14.4	19.0	-3.6	-15.7	18.0	-0.5	-12.3	14.9	3.3	-8.4	18.7	98.1	

* EL Nino Winters
Notes: Measurements taken at the Calgary Airport
Source: Environment Canada

Table 21: Economic Indicators: Atlanta

Year	Personal Income Georgia(000)	Personal Income Fulton(000)	Per Capita Income Georgia	Per Capita Income Fulton	CPI U.S.	CPI Atlanta MSA	Total Employment Georgia(000)	Total Employment Fulton(000)	Unemp Rate U.S.	Unemp Rate Georgia	Unemp Rate Atlanta MSA	Population Georgia	Population Fulton	Migration Georgia	Migration Fulton
1969	1,433,693	254,909	3,150	4,150	36.7	N/C	211,581	47,852	N/C	2.90%	N/C	455,100	61,300	N/C	N/C
1970	1,553,366	277,219	3,370	4,580	38.8	N/C	211,785	49,015	4.90%	3.70%	N/C	460,500	60,400	N/C	N/C
1971	1,704,195	298,026	3,610	4,930	40.5	N/C	216,516	50,323	5.80%	4.00%	N/C	471,000	60,300	N/C	N/C
1972	1,922,528	330,734	3,990	5,440	41.8	N/C	224,980	52,989	5.60%	4.10%	N/C	480,700	60,700	N/C	N/C
1973	2,183,095	361,219	4,440	6,020	44.4	N/C	235,203	56,665	4.90%	3.90%	N/C	490,600	59,900	N/C	N/C
1974	2,407,306	391,199	4,820	6,660	49.3	N/C	237,203	56,797	5.60%	5.20%	N/C	499,400	58,700	N/C	N/C
1975	2,581,588	404,653	5,100	7,010	53.8	N/C	230,824	52,605	8.50%	8.60%	N/C	505,800	57,700	N/C	N/C
1976	2,885,739	436,232	5,620	7,650	56.9	N/C	239,580	53,407	7.70%	8.10%	N/C	512,600	56,900	N/C	N/C
1977	3,194,707	484,444	6,130	8,540	60.6	N/C	250,046	54,552	7.00%	6.90%	N/C	521,100	56,700	N/C	N/C
1978	3,641,618	541,248	6,880	9,490	65.2	N/C	262,179	56,868	6.10%	5.70%	N/C	528,600	57,000	N/C	N/C
1979	4,105,045	594,794	7,610	10,070	72.6	N/C	269,786	58,870	5.80%	5.10%	N/C	539,100	59,000	N/C	N/C
1980	4,583,182	654,481	8,350	11,060	82.4	N/C	273,600	59,093	7.10%	6.40%	7.60%	548,600	59,100	N/C	N/C
1981	5,171,203	725,889	9,280	12,160	90.9	N/C	277,695	58,625	7.60%	6.40%	5.66%	556,800	59,700	N/C	N/C
1982	5,584,017	775,235	9,880	12,950	96.5	N/C	279,551	58,456	9.70%	7.80%	6.60%	564,900	59,800	N/C	N/C
1983	6,132,642	859,733	10,700	14,170	99.6	N/C	288,506	60,058	9.60%	7.50%	6.40%	572,800	60,600	N/C	N/C
1984	6,987,753	986,226	11,970	16,150	103.9	N/C	307,347	63,633	7.50%	6.00%	4.80%	583,500	61,000	N/C	N/C
1985	7,671,309	1,095,015	12,860	17,780	107.6	N/C	320,428	65,110	7.20%	6.50%	5.00%	596,300	61,500	N/C	N/C
1986	8,396,696	1,204,482	13,790	19,080	109.6	N/C	332,469	66,751	7.00%	5.90%	4.60%	608,500	63,100	N/C	N/C
1987	9,031,198	1,310,385	14,540	20,600	113.6	116.5	344,286	68,569	6.20%	5.50%	4.70%	620,900	63,600	N/C	N/C
1988	9,781,941	1,453,476	15,480	22,740	118.3	120.4	355,428	70,680	5.50%	5.80%	5.10%	631,700	63,900	N/C	N/C
1989	10,418,378	1,562,889	16,250	24,230	124	126.1	360,975	70,672	5.30%	5.50%	5.10%	641,100	64,400	N/C	N/C
1990	11,140,649	1,683,451	17,120	25,930	130.7	131.7	367,489	71,280	5.50%	5.50%	5.00%	647,800	64,900	14,212	N/C
1991	11,687,929	1,757,857	17,640	26,800	136.2	135.9	362,582	68,055	6.70%	5.00%	4.70%	662,500	65,500	56,915	960
1992	12,512,076	1,891,769	18,490	28,460	140.3	138.5	370,712	68,373	7.40%	7.00%	6.40%	676,700	66,400	76,803	3,377
1993	13,284,543	2,024,693	19,240	29,920	144.5	143.4	383,801	70,480	6.80%	5.80%	5.30%	690,600	67,600	78,114	6,721
1994	14,259,819	2,158,993	20,210	31,260	148.2	146.7	400,654	73,618	6.10%	5.20%	4.70%	706,300	69,000	98,631	8,823
1995			21,900		152.4	150.9			5.60%	4.90%	4.30%	720,900	69,300	89,081	4,818
1996			22,970		156.9	156			5.40%	4.60%	3.80%	735,300	70,300	91,062	9,359

Source:
Personal and percapita income - Bureau of Labor Statistics
U.S. CPI, Economic Report to the Governor 1998, Atlanta MSA CPI, Bureau of Labor Statistics
Employment and unemployment - Bureau of Labor Statistics
Unemployment for Georgia 1969-1977 from the Georgia Institute of Technology, 1978-1996 BLS
Population, Georgia 1969 to 1989 and 1969 - 1994 Fulton County - U.S. Bureau of the Census, REIS Data,
Population of Georgia years 1990 to 1996, Statisitcal Abstract of the United States
Population for Fulton County 1995-1996 from BEA, all other years from the U.S. Bureau of the Census
Migration - U.S. Bureau of the Census
N/C = data not collected

Table 22: Tourism Indicators: Atlanta

Year	Number of Conventions Atlanta	Convention Attendance Atlanta	Number of Visitors Atlanta	Hotel Occupancy Atlanta
1988	1,623	1,737,800	N/A	N/A
1989	1,662	1,800,792	N/A	61.80%
1990	1,721	1,883,546	N/A	62.20%
1991	1,854	2,152,386	N/A	60.40%
1992	2,105	2,503,522	N/A	63.10%
1993	2,321	2,753,412	6,058,000	67.40%
1994	2,410	2,985,641	7,009,900	71.90%
1995	2,560	3,102,455	7,342,000	72.90%
1996	2,280	2,780,000	6,695,000	68.00%

Source: Convention Attendance, Conventions, Overnight Visitors, Percent Hotel Occupancy
Atlanta Convention and Visitors Bureau