PREPARED BY HOBBS, ONG & ASSOCIATES • FEBRUARY 2004

The Impact of a Growth Interruption in Southern Nevada

Prepared For:

Southern Nevada Water Authority

Hobbs, Ong & Associates, Inc.

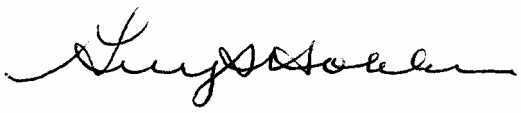
TRANSMITTAL LETTER

To the Board Members of the Southern Nevada Water Authority:

I am pleased to transmit to the Southern Nevada Water Authority ("SNWA"), our final report on the Impacts of a Growth Interruption in Southern Nevada pursuant to our contracted scope of work approved in September 2003.

This report outlines, at least in part, the economic, fiscal and social impacts that the Las Vegas Valley and the State of Nevada might anticipate should we experience an abrupt change in our growth cycle. As Dr. William T. White and his colleagues wrote more than ten years ago, "[e]ven with the best in community adaptation. . .there will be strong and undesired socio-economic effects. . ." Our conclusions are the same.

Respectfully,



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EXECUTIVE SUMMARY

Hobbs, Ong & Associates ("HOA") was retained by the Southern Nevada Water Authority ("SNWA") to review and analyze the economic impacts of a growth interruption in Southern Nevada. This executive summary provides an outline of our findings, an overview of the project and an introduction to the analysis undertaken. Beyond our base analytical team, other individuals and groups assisted in the preparation of this report. Included are our Ph.D. economist review panel and many others who provided meaningful information and insights.[1]

Generally speaking, this project was intended to be a substantive update of *The Impact of a Water Imposed Interruption of Growth in the Las Vegas Region* report prepared by Dr. William T. White et. al. for the Las Vegas Valley Water District in 1992 ("the White Report"). In that analysis, the authors concluded *that should Clark County suffer a sudden and severe interruption to its normal growth patterns, there would be strong and undesired economic, fiscal and social effects.* We have applied updated economic models to updated assumptions and reviewed the recent literature in the area. Having done so, our conclusions are materially unchanged from those presented in the White Report nearly 12 years ago. If anything, it would appear that Southern Nevada is more dependent upon growth economies today than it was in 1992; and, significantly, Nevada is more dependent upon Clark County today than it was in 1992. These assertions being held as accurate, we would argue that a growth interruption on the order of that analyzed by Dr. White and his colleagues would have a more severe and more far-reaching impact than the same interruption analyzed a decade ago.

Importantly, where Dr. White's analysis focused on the specific impacts of a "water-imposed growth moratorium," we were asked to

[1] Included on our economist review panel were: Dr. Robert Burchell, Distinguished Professor at the Rutgers University Center for Urban Policy Research; Dr. W. Michael Hanemann, Chancellor's Professor in the Department of Agricultural and Resource Economics at the University of California, Berkeley; Dr. Thomas Harris, director of the University of Nevada, Reno Center for Economic Development; Dr. Stephen M. Miller, chair of the University of Nevada, Las Vegas Department of Economics; Dr. Keith Schwer, head of the University of Nevada, Las Vegas Center for Business and Economic Research; and Dr. Marshall Vest, director of Economic and Business Research at the Eller College of Business and Public Administration at the University of Arizona.

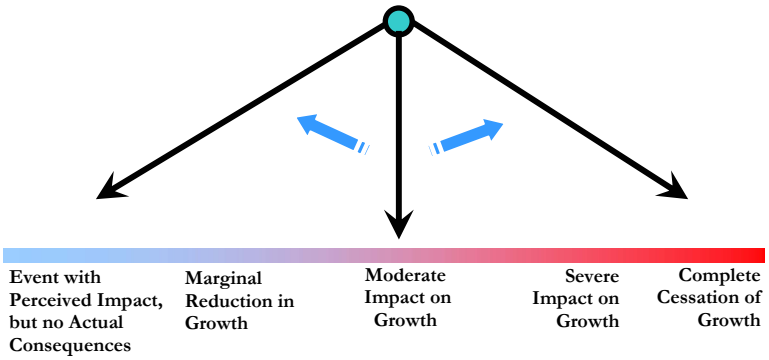
take a broader look at the economic and fiscal consequences of an interruption in growth absent a particular source or magnitude. This report concentrates on the identification of impacts resulting from an interruption, despite its underlying pathology. Throughout this executive summary, we highlight scenarios closely resembling those assumed in the White Report but focus more heavily on a general impact range.

To test the impacts of an interruption in growth, certain possible conditions were modeled. Essentially, the model needed to assess the following:

- The duration of an interruption;
- The severity of the interruption;
- The length of time it would take for recovery to occur; and
- The degree to which recovery would occur.

In the analysis, we examined illustrative examples of levels of severity and degrees of recovery; both over similar timeframes. It was assumed that the interruption would have a three-year duration (e.g., year 1 through 3), and that the severity of the interruption would impact construction employment by 10, 30 and 65 percent. That is, under the first scenario, a 10 percent reduction in direct construction employment would occur; under the second scenario, a 30 percent reduction would occur; and, under the third scenario, a 65 percent reduction would occur. These levels were chosen to illustrate a conservative, moderate and severe level of impact on direct construction employment, and, in turn, the economy as a whole. It was further assumed that it would take three years for the hypothetical level of impact to be fully realized, with 25 percent of the impact felt in year one, 75 percent in year two, and 100 percent in year three.

ILLUSTRATION OF GROWTH INTERRUPTION
RANGE OF POTENTIAL IMPACTS



Three recovery alternatives were also considered. For modeling purposes, we assumed any recovery would occur during the 10 years following the initial interruption (e.g., years 4 through 14). Recovery scenarios included a "rapid recovery" scenario, a "moderate recovery" scenario and a scenario in which the economy fails to recover altogether. The rapid recovery scenario operates under the assumption that the economy is able to fully rebound, returning to baseline performance levels 10 years after the initial impacts are

realized. The moderate recovery scenario assumes the economy returns to baseline growth rates 10 years post-interruption, but never "makes up" for lost growth. The final recovery scenario assumes that the economy enters a period of stagnation or a sustained period of decline.

MODELED IMPACT SCENARIOS

	Initial Impact *(period: years 1-3)*	Recovery *(period: years 4-14)*
Scenario 1	10% initial impact	Rapid recovery
Scenario 2	10% initial impact	Moderate recovery
Scenario 3	10% initial impact	No recovery
Scenario 4	30% initial impact	Rapid recovery
Scenario 5	30% initial impact	Moderate recovery
Scenario 6	30% initial impact	No recovery
Scenario 7	65% initial impact	Rapid recovery
Scenario 8	65% initial impact	Moderate recovery
Scenario 9	65% initial impact	No recovery

These "initial impact" and "recovery" scenarios are intended to demonstrate a broad range of potential fiscal and economic outcomes. Importantly, each reflects a hypothetical set of assumed circumstances. One could effectively argue that a rapid recovery is simply too optimistic, given the region's dependence on growth, lack of industrial diversity and transferable skills in the labor force. Conversely, a viable argument could be presented that any scenario assuming a failure to recover is simply too pessimistic because, in the long run, economies tend to reestablish some degree of balance. Both would be right; and as such, we focus on intermediate scenarios and present our findings as order of magnitude estimates. While not an exact replication of the work performed by Dr. White and his colleagues, the 65 percent initial impact scenario with a moderate recovery (Scenario 8 in the table above) offers the closest comparison to the trend assumptions made in their report. From time to time, when we make comparisons to the White Report, it is this scenario which is referenced.

FINDINGS IN SUMMARY

The tables and charts provided at the end of this summary, reflect a broad spectrum of potential outcomes. They are far-reaching and, in most cases, unparalleled in Nevada's modern history. The losses in employment, output, income, population and tax collections are devastating to be sure; however, the exhibits provided do little to reflect the ramifications of these outcomes on the individual Nevadan, the small business owner, the college graduate or the senior citizen in need of care long-term. The suggestion that certain segments of the population, certain sectors of our economy or certain political subdivisions would be unaffected is to turn a blind eye to reality.

Highlights:

- **Southern Nevada is unique.** Southern Nevada has been the fastest-growing region in the United States during the past 20 years. As a result, a significantly higher-than-average share of our employment, income, gross state product and tax payments are directly linked to growth-related sectors of the economy.

- **Growth rates will decline as the economy matures.** Over time, growth will slow naturally as the economy matures. However, artificially interrupting this process will cause economic, fiscal and social consequences.

- **Rates of growth do not necessarily equate to quality of life.** There are benefits and drawbacks associated with fast-growing and slow-growing regions. In many respects, it is not a question of whether or at what rate a community grows, but how that growth is occurring.

- **It's the fall that's going to kill you.** Sudden and severe shifts in normal growth patterns are closely associated with broad, negative impacts on communities.

- **Few, if any, escape the impact.** A significant interruption to normal growth patterns, would affect large and small businesses in every industry. Children, families and senior citizens are likely to be impacted by government's reduced capacity to provide public services combined with increasing demands tied to rising rates of unemployment, crime, poverty and indigent care needs.

- **As goes Clark County, so goes the State of Nevada.** A significant economic interruption in Clark County would reduce revenues at state and local levels, affecting fiscal balances in southern, northern and rural counties. Funding sources for traditionally protected programs, such as education and health care, would be significantly reduced. This could have particularly severe consequences for rural counties that are already under fiscal pressure.

- **The potential for a race to the bottom.** Any recovery would be dependent on the continued presence of the interrupting force and the effectiveness of policy responses. Importantly, suppressing growth is infinitely easier than stimulating it; an artificial interruption to normal growth patterns could result in race to the bottom, as decline begets decline.

- **The greater the interruption the greater the impact.** More intense interruptions are associated with more far-reaching economic, fiscal and social consequences. This having been said, even comparatively mild, yet unrelenting, interruptions would have major costs to the region and the state over the long run.

The growth interruption scenario most similar to conditions underlying the White Report (e.g., a 65 percent initial impact followed by a moderate recovery) resulted in the conclusions provided below. As noted above, this is merely one scenario that is offered as a point of reference. The broader range of impacts is provided in the tables at the end of this summary. All dollar amounts are expressed in constant 2000 dollars, unless otherwise stated.

- Construction-related sectors would be the first and hardest hit, losing 97,800 person years[2] of employment during the first three years post-interruption. This represents a reduction of 43.1 percent when compared to non-interruption conditions.

- Economic impacts are not limited to construction and growth-related industries. Total employment losses account for 170,000 person years of employment during the first three impact years, mounting to more than 1.3 million person years lost during the 14-year impact study period.

- Fewer jobs results in fewer wage and salary payments and less overall consumption. On average, $3.8 billion per year is lost in labor income. This represents an 11.5 percent decline when compared to baseline conditions.

- Total economic output, the value of all goods and services produced, is reduced 12.3 percent or by $148 billion over the 14-year impact study period. Significant losses are realized in wholesale trade, retail trade and services, as fewer consumers demand fewer goods and services from Nevada businesses.

- Population declines 278,000 person years versus baseline conditions in the initial impact period (years 1-3), in-migration is significantly reduced and the families of displaced workers relocate out of Nevada. In total, the population is reduced by more than 11.3 percent by the close of the study period.

[2] A person year of employment is defined as one job for one year. Thus, one job lost for a three-year period would equate to three lost person years of employment. Additional discussion is provided later in this report.

- Total tax payments are reduced by $15.1 billion, with state and local government losing roughly $2.9 billion in collections during the 14-year study period. Traditionally "protected" programs such as education and long-term care could require significant cuts.

- Rising unemployment would lead to lower incomes, higher crime rates and an increased incidence of poverty. Demands placed on state and local governments would increase dramatically, with fewer tax dollars available to supply them. Significant caseload increases in welfare and health programs would be expected.

Following is a summary of the general conclusions drawn from the analysis of the impact of an interruption in growth:

- Nevada is heavily dependent upon growth as an industry, much the same as it is dependent upon other industries from an economic and fiscal perspective. Nevada is also a unique economy - due to both its opportunities and its limitations - that makes it difficult to compare to any other state economies. The fact that Nevada's population grew by 61 percent between 1992 and 2002, nearly five times than the national average and more than 20 percentage points higher than the second fastest growing state (Arizona), is a reality that cannot be ignored.

- Growth, through policy initiatives, can be artificially limited or halted. However, it cannot be as easily stimulated/created. Artificially altering Nevada's dependency upon growth would not occur without significant economic, fiscal and social consequences. Population and employment growth in Nevada has been extraordinary over the past three decades, yet is expected to slow over the next, and coming, decades. If this occurs as projected, the dependence upon growth as an economic sector will naturally lessen over time. In fact, assuming no interruption in growth, construction-related employment is assumed to decline from more than 9 percent of Clark County employment in 2003, to 7 percent in 2013 and 6 percent in 2023. While the overall economy is projected to add nearly 200,000 new jobs over the next 20 years, construction-industry positions are expected to decrease by nearly 10,000 positions.

- It is less a question as to whether a slowdown in population growth, et al, will occur than when it will occur. While there is widespread agreement among economists that rates of growth will slow and move toward national norms, we have yet to reach the predicted "elbow in the curve." Nonetheless, it continues to

be accepted that future rates of growth will lessen as we move toward maturity.

- ❖ As Nevada enters a phase of reduced growth rates, the economy will naturally shift into a new economic equilibrium. However, a swift or artificial interruption in this pattern will not allow the same natural maturation to occur.

- ❖ Nevada is viewed in some ways as a state that already has a form of growth control in place (i.e., Bureau of Land Management disposal boundaries). As such, the community benefits in some ways (i.e., less overall sprawl) and suffers in others (i.e., increasing costs of housing associated with decreased land availability).

- ❖ The state and local government entities spend a dominant amount of their general fund dollars in support of education, public safety and other essential programs. These programs are dependent upon public revenues that would be impacted by an interruption in growth in Southern Nevada. Thus, beyond the fiscal and economic consequences noted above, there is a clear potential for significant social impacts that would affect those both within and outside the construction industry. These would likely include the following:

  - ♦ Increased demand for public assistance programs associated with increased unemployment;
  - ♦ Increased crime rates as an outfall of increased unemployment;
  - ♦ Increased expenditures in support of public safety and criminal justice programs;
  - ♦ Increased densification (e.g., smaller houses on smaller lots) and reduced rates of homeownership, as disposable income lessens the amount of money families can afford to spend on housing declines; and
  - ♦ Increased costs associated with aging infrastructure and less capital improvement costs (i.e., roads, police and fire stations, and flood control facilities) absorbed by private developers.

- ❖ Anecdotal and case study research suggest that there are both benefits and drawbacks to being fast-growing and slow-growing communities. However, swift or severe changes to the patterns of growth are closely associated with significant economic and fiscal consequences and challenges.

- ❖ The construction industry, which most directly reflects the "growth industry," is a significant component of the economy of

Southern Nevada and the state as a whole. The industry directly employs 9 percent of the state's workforce (77,700 jobs), pays 11 percent of all wages and salaries ($3.8 billion) and accounts for 13 percent of state output ($11.6 billions). Including indirect and induced impacts, it accounts for roughly 17 percent of the employment base (157,400 positions), 19 percent of the wage base and 20 percent of Clark County's total output is linked, directly or indirectly, to growth industries.

- The construction industry is tied to other economic sectors within the overall economy, providing for material "ripple effects" throughout other sectors if construction activity is impacted.

- Impacts within the construction sector reverberate throughout the balance of the economy. For example, for every $1.00 in labor income lost within the construction sector, a total of $1.71 is throughout in the Nevada economy. For every $1.00 in construction activity, $1.59 is created within the overall economy.

- For every 10 construction-related jobs created in the economy, approximately 10 jobs are created in other sectors. The inverse is also true. Additionally, lost population growth results in less demands for goods and services -- from popsicles to pediatricians. While construction sectors are the most severely impacted in the early years of our analysis, trade and services sectors are the hardest hit in the long run.

- The construction industry is a significant contributor to the fiscal system of the State and its local government entities, providing as much as $244 million in combined State and local government revenue in fiscal year 2002 and $486 million in additional public infrastructure improvements. Downward cycles in the construction industry, whether for natural or artificial reasons, will result in less revenue to support public programs and projects.

PROJECT OVERVIEW

For the past three decades, Nevada has been characterized by unprecedented levels of population, economic and fiscal growth. A vast majority of this growth has occurred in Southern Nevada, resulting in the Las Vegas area consistently being among the fastest growing metropolitan statistical areas ("MSA's") in the country. There is little question that the growth that has occurred has created

both opportunities and challenges for the Las Vegas MSA, as well as the State as a whole.

Despite beliefs about the positive or negative characteristics of growth, it is undeniable that growth has been a part of the reality of Nevada for many decades. In other words, growth has been as real a part of Nevada's socioeconomic make-up as have gaming, tourism, mining and other industries that make Nevada what it is today. As a result, growth is as important to fully understand as any of the aforementioned parts of our economic landscape. To help focus more directly upon growth-related impacts, the Las Vegas Valley Water District, in 1992, commissioned a study of the potential impacts of water restrictions artificially slowing growth in Southern Nevada. This study, entitled *The Impact of a Water Imposed Interruption of Growth in the Las Vegas Region* (undertaken by Dr. William T. White, et al) concluded that an interruption in growth would have far-reaching economic, fiscal and social impacts. We have likewise concluded that an interruption in growth, particularly a swift or severe interruption, would have significant negative economic, fiscal and social consequences.

Given that the study referenced above was completed more than a decade ago, and that the issue of growth remains an ever-present part of life in Nevada, the SNWA recently commissioned an update of the work previously performed by Dr. White and his colleagues. Though the work product commissioned by the SNWA can be generally referred to as an update, a slightly different – yet very important – clarification was made to the question being addressed by the research. The study recently commissioned by the SNWA, which is described herein, takes a broad look at the economic and fiscal consequences of an interruption in growth, regardless of the cause of the interruption.

The study described herein was conducted by Hobbs Ong & Associates, Inc. and Applied Analysis; both Nevada-based consulting firms specializing in public finance, policy research and applied economics. While these firms directed the compilation of the work product, very meaningful and valuable assistance was provided to the effort through the assembly of a panel of additional experts in the field of economics. This report and its findings were reviewed by this panel. It is noteworthy that this panel of additional experts included six Ph.D.-level economists; three from within the State of Nevada, and three from outside the State. The contribution made by these experts to the final work product was truly exceptional.

It is widely accepted that rates of growth can be affected by a litany of factors, including the supply of land, supply of other resources

necessary to accommodate growth, interest rates, acts of God, acts of war, availability of jobs and a variety of other factors. However, any interruption in growth, despite its cause(s), will have similar impacts upon the economic and social systems. Consequently, the cause of the interruption, while important to understand, is perhaps less important than its impact upon the social and economic well-being of the state. Put another way, the findings may have broader value if they are less dependent upon cause than upon effect. For this reason, this report concentrates its efforts upon the identification of impacts that may result from an interruption in growth, despite the reason for the interruption.

BACKGROUND

Growth in Nevada can be measured in a number of conventional ways, including changes in population, employment, income, and other fiscal and economic factors. Taken from a different angle, growth can also be measured as a component of an overall economy. That is, growth itself viewed as an industry working in conjunction with other industries to form our overall economy. Both ways of viewing growth can be helpful in evaluating impacts that changes in rates of growth might have upon the economy as a whole.

Expanding upon the above, the meaning of "growth" seems to be driven by the context in which the term is used. To some, the term conjures up feelings about only the less desirable consequences of growth (i.e., traffic, air quality and other strains on public infrastructure), despite the benefits that growth may provide. To others, the term represents the strength and attractiveness of the community or state as a whole. If the community were not highly desirable and attractive in enough ways, would growth even be an issue?

In the most balanced sense, both of the extremes noted above are appropriate when considering the effects and impacts of growth. It is true that growth provides for tremendous economic opportunities, including jobs, income and other forms of community wealth. At the same time, growth can also lead to increased congestion and other strains on public facilities and services. In the end, it is more a question of whether the benefits of growth outweigh the costs of growth or, conversely, whether the benefits associated with constrained growth are worth the accompanying costs.

APPROACH & METHODOLOGY

A review of Nevada's growth characteristics centers upon the establishment of "baseline" values, against which changes in otherwise expected rates of growth can be measured. It is important to note that these baseline values are not trivial, as disagreement about baseline values will surely lead to disagreement about deviations from the baseline. The projected rates of growth used in this analysis are derived from the forecasts prepared by the Center for Business and Economic Research at the University of Nevada, Las Vegas and the Office of the State Demographer. These two sources are the most widely accepted sources of population forecasts for the State of Nevada.

For other economic and fiscal information, the "IMPLAN" model was used. Again, this model is widely accepted among economists as a standard for producing "multiplier" data to be used in conjunction with economic forecasts. Thus, similar to the report proffered by Dr. White and his colleagues, this report has used accepted population estimates and one of the most widely accepted economic and fiscal models to produce baseline values for use as a measurement of impact for interruptions in Nevada and Southern Nevada economies. These projections are summarized in detail within the body of the full report, have only been referenced in this summary as is necessary to support the report's findings and conclusions.

The State of Nevada has experienced compound annual population growth of approximately 5.0 percent per year since 1960. The growth rate for the United States as a whole was 1.1 percent, while the western states averaged 1.9 percent per year. Over this same period, Clark County experienced a growth rate of approximately 5.5 percent. Forecasts prepared by the aforementioned sources indicate an expected growth rate of 3.2 percent per year from the year 2000 through the year 2010, declining to a rate of 1.5 percent per year through 2020. Forecasts for employment, and other employment-related statistics, generally follow this same pattern. This baseline forecast assumes that generally expected conditions will prevail throughout the forecast period. In other words, the forecasts do not presume further acts of terrorism, natural disasters, or other forms of interruption that would be difficult, or impossible, to predict.

It should be noted here that the declining rates of growth described above are consistent with models developed for other communities that are reaching maturity. That is, it is widely accepted that fast-growing communities grow initially at accelerated rates and, over time, tend to move more toward national norms as they reach

maturity. Thus, it is less a question as to whether declining rates of growth will occur than it is when they will occur.

As a means of measuring the impacts of various levels of interruptions in growth, the analysis focuses upon the construction industry within the state and Southern Nevada. Clearly, if growth patterns were altered, the construction industry would be the most directly affected component of our overall economy. Beyond the direct impacts upon the construction industry, there would also be indirect impacts upon other industries as well as induced impacts created by altered spending patterns. It should be emphasized here that while the most direct impacts of an interruption in growth would be felt by construction-related industries, nearly all other segments of the economy – including the average household – would also feel the effects. For this part of the analysis, the use of IMPLAN to determine the inter-dependencies of the various components of our economy proved invaluable.

The construction industry in Clark County supported 77,700 direct jobs in 2003, or roughly 8.6 percent of the 907,700 positions within the county. When indirect jobs are added, the construction industry supports a total of 157,400 jobs, or 17 percent of total positions. Looking at income, construction-related activities accounted for 11.2 percent of total labor income within Clark County in 2003 ($3.8 billion of a total $33.7 billion in county income). From a sensitivity standpoint, $1.71 in income is lost throughout the overall economy for every $1.00 lost within the construction sector. Construction-related output amounted to $11.6 billion, or 13 percent of the total Clark County output of $88 billion in 2003. For every $1.00 in construction activity, $1.59 is created within the total economy. The foregoing clearly establishes the construction component of the Clark County economy as an extremely significant and far-reaching part of the overall economy.

From a fiscal perspective, construction is also a major force in the State and local government fiscal systems. Based upon analysis performed as a part of this project, it is estimated that construction-related activities were responsible for generating $244 million in annual state and local revenues in fiscal year 2001-2002 (from taxes, fees, charges, etc). Beyond this, an additional $486 million in required infrastructure improvements (i.e., exactions) were paid for by the construction industry

When consideration is given to the fact that the State spends 53 percent of its general fund revenues in support of education, and 28 percent in support of various health care programs, the meaning of the above numbers becomes clear. Local governments in Southern

Nevada likewise spend a dominant part of their general fund budgets in support of public safety, criminal justice, local transportation, and other critical activities. The clear inference is that reduced general fund monies at the state and local levels will clearly impact the programs that are supported by these units of government. This is where the average person, not just those directly or indirectly employed in construction-related activities, would undoubtedly feel the impacts of an interruption in the growth sector.

It should also be added here that, while a majority of the growth under discussion has occurred in Southern Nevada, the impacts of an interruption would not be confined to Southern Nevada. Based upon both Nevada's fiscal system (which ties its various local governments together through the sharing of intergovernmental revenues), and the interplay between industries within the state (regardless of physical location), an interruption in Southern Nevada's growth would be felt throughout the state.

Growth Impact Scenario Summaries
10% Initial Impact Scenarios

	10% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(15,043)	(32,201)	(47,245)	(15,043)	(44,315)	(59,358)	(15,043)	(228,731)	(243,775)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Labor income (in millions)[1]	$ (729)	$ (1,561)	$ (2,290)	$ (729)	$ (2,148)	$ (2,877)	$ (729)	$ (11,086)	$ (11,816)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Economic output (in millions)[1]	$ (2,252)	$ (4,820)	$ (7,071)	$ (2,252)	$ (6,633)	$ (8,884)	$ (2,252)	$ (34,235)	$ (36,486)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(26,083)	(55,832)	(81,915)	(26,083)	(233,970)	(260,053)	(26,083)	(623,610)	(649,693)
Loss as a percent of baseline	-0.9%	-0.6%	-0.6%	-0.9%	-2.4%	-2.1%	-0.9%	-6.3%	-5.1%
Labor income (in millions)[1]	$ (1,115)	$ (2,387)	$ (3,502)	$ (1,115)	$ (8,977)	$ (10,092)	$ (1,115)	$ (25,178)	$ (26,293)
Loss as a percent of baseline	-1.1%	-0.7%	-0.7%	-1.1%	-2.5%	-2.2%	-1.1%	-6.9%	-5.6%
Economic output (in millions)[1]	$ (3,173)	$ (6,793)	$ (9,967)	$ (3,173)	$ (23,693)	$ (26,866)	$ (3,173)	$ (68,978)	$ (72,151)
Loss as a percent of baseline	-1.2%	-0.7%	-0.8%	-1.2%	-2.5%	-2.2%	-1.2%	-7.4%	-6.0%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (82)	$ (176)	$ (259)	$ (82)	$ (243)	$ (325)	$ (82)	$ (1,253)	$ (1,335)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Total tax payments (in millions)[1]	$ (428)	$ (917)	$ (1,345)	$ (428)	$ (1,261)	$ (1,690)	$ (428)	$ (6,511)	$ (6,939)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Population Impacts (Person Years)	-	-	-	-	(421,961)	(421,961)	-	(1,349,759)	(1,349,759)
Loss as a percent of baseline	0.0%	0.0%	0.0%	0.0%	-3.9%	-3.1%	0.0%	-6.9%	-5.0%
Share attributed from natural declines (births vs. deaths)	0.0%	0.0%	0.0%	0.0%	1.3%	10.8%	0.0%	3.3%	2.5%
Share attributed to foregone in-migration	0.0%	0.0%	0.0%	0.0%	98.7%	89.2%	0.0%	62.7%	48.2%
Share attributed to out-migration of displaced workers and families	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.7%	12.1%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	14.1%

Growth Impact Scenario Summaries
10% Initial Impact Scenarios

	10% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Selected Qualitative Consideration:[2]									
Impacts on unemployment	-2	-1	-1	-2	-2	-2	-2	-2	-2
Impacts on poverty	-1	-1	-1	-1	-1	-1	-1	-2	-2
Impacts on crime	-2	-1	-1	-2	-1	-1	-2	-2	-2
Impacts on traffic	+1	+1	+1	+1	+1	+1	+1	-1	-1
Demands on indigent care	-2	-1	-1	-2	-1	-1	-2	-2	-2
Impacts on long-term care	-1	-1	-1	-1	-2	-2	-1	-2	-2
Impacts on air quality	+1	+2	+2	+1	+2	+2	+1	+3	+3
Impacts on housing affordability	-1	-1	-1	-1	-1	-1	-1	-1	-1
Impacts on homeownership	-1	-1	-1	-1	-1	-1	-1	+1	+1
Impacts on capital project funding	-1	-2	-2	-1	-2	-2	-1	-3	-2
Impact on commercial markets	-2	-1	-1	-2	-1	-1	-2	-2	-2
Impact on industrial markets	-2	-1	-1	-2	-1	-1	-2	-2	-2
Impact on rural counties	-1	-1	-1	-1	-2	-2	-1	-2	-2
Impact on state	-1	-1	-1	-1	-2	-2	-1	-3	-3
Impact on school districts	-1	-2	-2	-1	-2	-2	-1	-3	-3

Notes:

[1] Figures expressed in constant 2000 dollars.

[2] This analysis is provided for general illustrative and comparative purposes; it is certainly conceivable that a given particular interruption could alter the degree or direction of a selected considerations. Legend is as follows:

Mild positive impact: +1
Moderate positive impact: +2
Strong positive impact: +3
Very strong positive impact: +4

Mild negative impact: -1
Moderate negative impact: -2
Strong negative impact: -3
Very strong negative impact: -4

Growth Impact Scenario Summaries
30% Initial Impact Scenarios

	30% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(45,130)	(96,604)	(141,734)	(45,130)	(194,405)	(239,535)	(45,130)	(341,057)	(386,187)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Labor income (in millions)[1]	$ (2,187)	$ (4,682)	$ (6,870)	$ (2,187)	$ (9,423)	$ (11,610)	$ (2,187)	$ (16,570)	$ (18,757)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.5%	-41.5%
Economic output (in millions)[1]	$ (6,755)	$ (14,459)	$ (21,214)	$ (6,755)	$ (29,097)	$ (35,852)	$ (6,755)	$ (51,047)	$ (57,802)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(78,248)	(167,497)	(245,745)	(78,248)	(682,841)	(761,089)	(78,248)	(882,155)	(960,403)
Loss as a percent of total	-2.8%	-1.7%	-1.9%	-2.8%	-6.9%	-6.0%	-2.8%	-9.0%	-7.6%
Labor income (in millions)[1]	$ (3,345)	$ (7,160)	$ (10,506)	$ (3,345)	$ (26,934)	$ (30,280)	$ (3,345)	$ (36,468)	$ (39,813)
Loss as a percent of total	-3.2%	-2.0%	-2.2%	-3.2%	-7.4%	-6.5%	-3.2%	-10.0%	-8.5%
Economic output (in millions)[1]	$ (9,520)	$ (20,379)	$ (29,900)	$ (9,520)	$ (72,581)	$ (82,101)	$ (9,520)	$ (98,481)	$ (108,002)
Loss as a percent of total	-3.5%	-2.2%	-2.5%	-3.5%	-7.7%	-6.8%	-3.5%	-10.5%	-9.0%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (247)	$ (529)	$ (776)	$ (247)	$ (1,065)	$ (1,312)	$ (247)	$ (1,868)	$ (2,115)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Total tax payments (in millions)[1]	$ (1,285)	$ (2,750)	$ (4,034)	$ (1,285)	$ (5,534)	$ (6,818)	$ (1,285)	$ (9,708)	$ (10,993)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Population Impacts (Person Years)	(122,680)	(324,193)	(446,873)	(122,680)	(989,603)	(1,112,283)	(122,680)	(1,847,983)	(1,970,663)
Loss as a percent of baseline	-2.4%	-1.7%	-1.8%	-2.4%	-5.0%	-4.5%	-2.4%	-9.4%	-7.9%
Share attributed from natural declines (births vs. deaths)	2.5%	28.8%	22.7%	2.5%	7.2%	6.1%	2.5%	4.3%	3.9%
Share attributed to foregone in-migration	79.3%	52.7%	58.8%	79.3%	75.7%	76.6%	79.3%	54.8%	60.5%
Share attributed to out-migration of displaced workers and families	18.2%	18.5%	18.4%	18.2%	17.1%	17.3%	18.2%	24.3%	22.9%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.6%	12.8%

Growth Impact Scenario Summaries
30% Initial Impact Scenarios

	30% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Selected Qualitative Consideration:[2]									
Impacts on unemployment	3	2	2	3	2	2	3	2	2
Impacts on poverty	2	2	2	2	2	2	2	3	3
Impacts on crime	2	2	2	2	2	2	2	2	2
Impacts on traffic	1	1	1	1	2	2	1	2	2
Demands on indigent care	2	2	2	2	2	2	2	3	2
Impacts on long-term care	2	2	2	2	2	2	2	3	3
Impacts on air quality	1	1	1	1	1	1	1	1	1
Impacts on housing affordability	3	2	2	3	2	2	3	1	1
Impacts on homeownership	1	2	2	1	2	2	1	1	1
Impacts on capital project funding	1	2	2	1	2	2	1	3	3
Impact on commercial markets	2	2	2	2	2	2	2	3	3
Impact on industrial markets	2	2	2	2	2	2	2	3	3
Impact on rural counties	2	2	2	2	2	2	2	3	3
Impact on state	2	2	2	2	3	3	2	4	4
Impact on school districts	2	2	2	2	3	3	2	4	4

Notes:

[1] Figures expressed in constant 2000 dollars.

[2] This analysis is provided for general illustrative and comparative purposes; it is certainly conceivable that a given particular interruption could alter the degree or direction of a selected considerations. Legend is as follows:

Mild positive impact: 1
Moderate positive impact: 2
Strong positive impact: 3
Very strong positive impact: 4

Mild negative impact: 1
Moderate negative impact: 2
Strong negative impact: 3
Very strong negative impact: 4

Growth Impact Scenario Summaries
65% Initial Impact Scenarios

	65% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(97,781)	(225,038)	(322,819)	(97,781)	(432,307)	(530,088)	(97,781)	(484,750)	(582,531)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Labor income (in millions)[1]	$ (4,739)	$ (10,907)	$ (15,647)	$ (4,739)	$ (20,953)	$ (25,693)	$ (4,739)	$ (23,495)	$ (28,235)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Economic output (in millions)[1]	$ (14,635)	$ (33,682)	$ (48,317)	$ (14,635)	$ (64,705)	$ (79,340)	$ (14,635)	$ (72,554)	$ (87,189)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(169,538)	(390,182)	(559,720)	(169,538)	(1,145,354)	(1,314,892)	(169,538)	(1,788,961)	(1,958,499)
Loss as a percent of total	-6.1%	-4.0%	-4.4%	-6.1%	-11.6%	-10.4%	-6.1%	-18.2%	-15.5%
Labor income (in millions)[1]	$ (7,248)	$ (16,680)	$ (23,928)	$ (7,248)	$ (46,380)	$ (53,628)	$ (7,248)	$ (70,290)	$ (77,538)
Loss as a percent of total	-7.0%	-4.6%	-5.1%	-7.0%	-12.7%	-11.5%	-7.0%	-19.3%	-16.6%
Economic output (in millions)[1]	$ (20,628)	$ (47,474)	$ (68,101)	$ (20,628)	$ (127,335)	$ (147,963)	$ (20,628)	$ (188,808)	$ (209,436)
Loss as a percent of total	-7.7%	-5.1%	-5.6%	-7.7%	-13.6%	-12.3%	-7.7%	-20.1%	-17.4%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (536)	$ (1,233)	$ (1,768)	$ (536)	$ (2,368)	$ (2,903)	$ (536)	$ (2,655)	$ (3,191)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Total tax payments (in millions)[1]	$ (2,783)	$ (6,406)	$ (9,189)	$ (2,783)	$ (12,306)	$ (15,089)	$ (2,783)	$ (13,798)	$ (16,582)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Population Impacts (Person Years)	(277,745)	(725,751)	(1,003,496)	(277,745)	(2,408,650)	(2,686,396)	(313,589)	(4,032,506)	(4,346,095)
Loss as a percent of baseline	-5.4%	-3.7%	-4.0%	-5.4%	-12.3%	-10.8%	-6.0%	-20.6%	-17.5%
Share attributed from natural declines (births vs. deaths)	1.3%	24.5%	19.1%	1.3%	5.3%	4.4%	1.2%	4.1%	3.5%
Share attributed to foregone in-migration	54.0%	35.4%	39.7%	54.0%	56.1%	55.6%	47.6%	40.6%	42.2%
Share attributed to out-migration of displaced workers and families	44.7%	40.1%	41.1%	44.7%	38.5%	39.9%	39.5%	41.9%	41.4%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	1.7%	3.0%

Growth Impact Scenario Summaries
65% Initial Impact Scenarios

	65% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Selected Qualitative Consideration:[2]									
Impacts on unemployment	4	3	3	4	3	3	4	4	4
Impacts on poverty	3	2	2	3	3	3	3	4	4
Impacts on crime	3	2	2	3	3	2	3	3	3
Impacts on traffic	1	3	2	1	3	3	1	3	3
Demands on indigent care	3	2	2	3	3	3	3	4	4
Impacts on long-term care	2	3	2	2	4	3	2	4	4
Impacts on air quality	1	2	2	1	3	3	1	4	4
Impacts on housing affordability	1	1	1	1	2	2	1	3	3
Impacts on homeownership	2	2	2	2	2	2	2	1	1
Impacts on capital project funding	2	2	2	1	3	3	2	4	4
Impact on commercial markets	3	2	2	3	3	3	3	4	4
Impact on industrial markets	3	2	2	3	3	3	3	4	4
Impact on rural counties	3	2	2	3	3	3	3	4	4
Impact on state	3	2	2	3	3	3	3	4	4
Impact on school districts	3	2	2	3	3	3	3	4	4

Notes:

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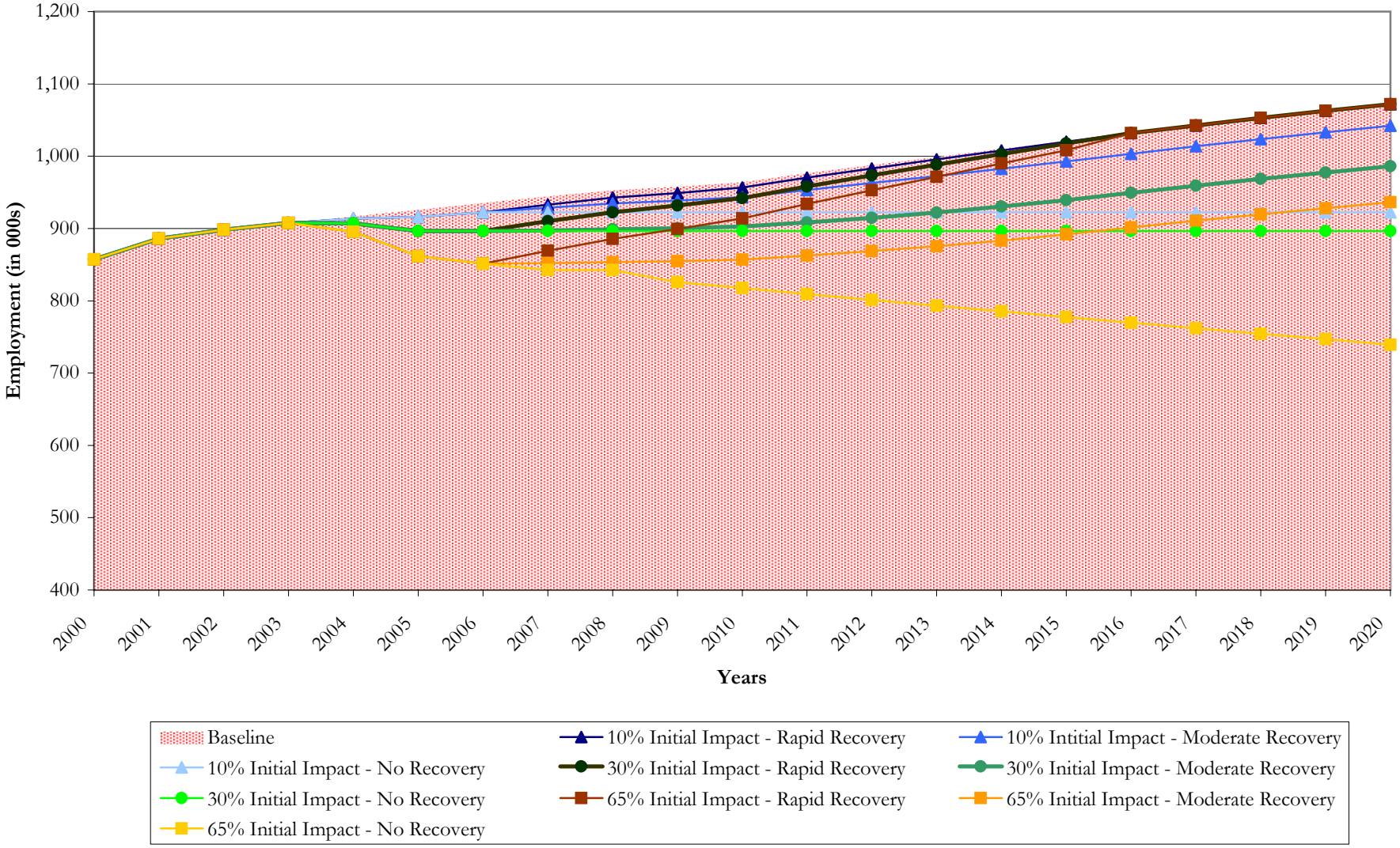
Mild positive impact: 1
Moderate positive impact: 2
Strong positive impact: 3
Very strong positive impact: 4

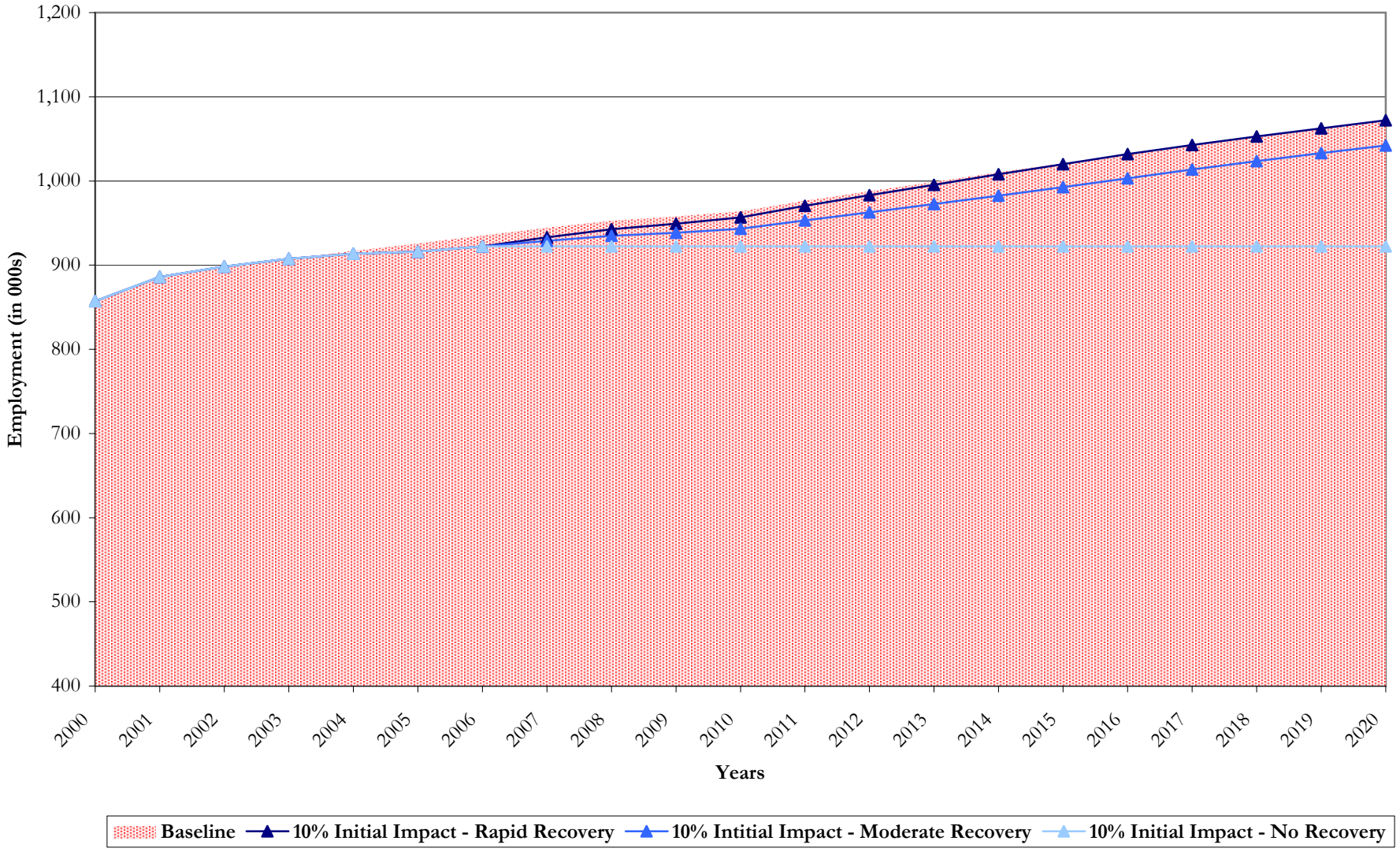
Mild negative impact: 1
Moderate negative impact: 2
Strong negative impact: 3
Very strong negative impact: 4

Summary of Modeled Employment Impacts
Selected Initial Impact and Recovery Scenarios
2000 - 2020



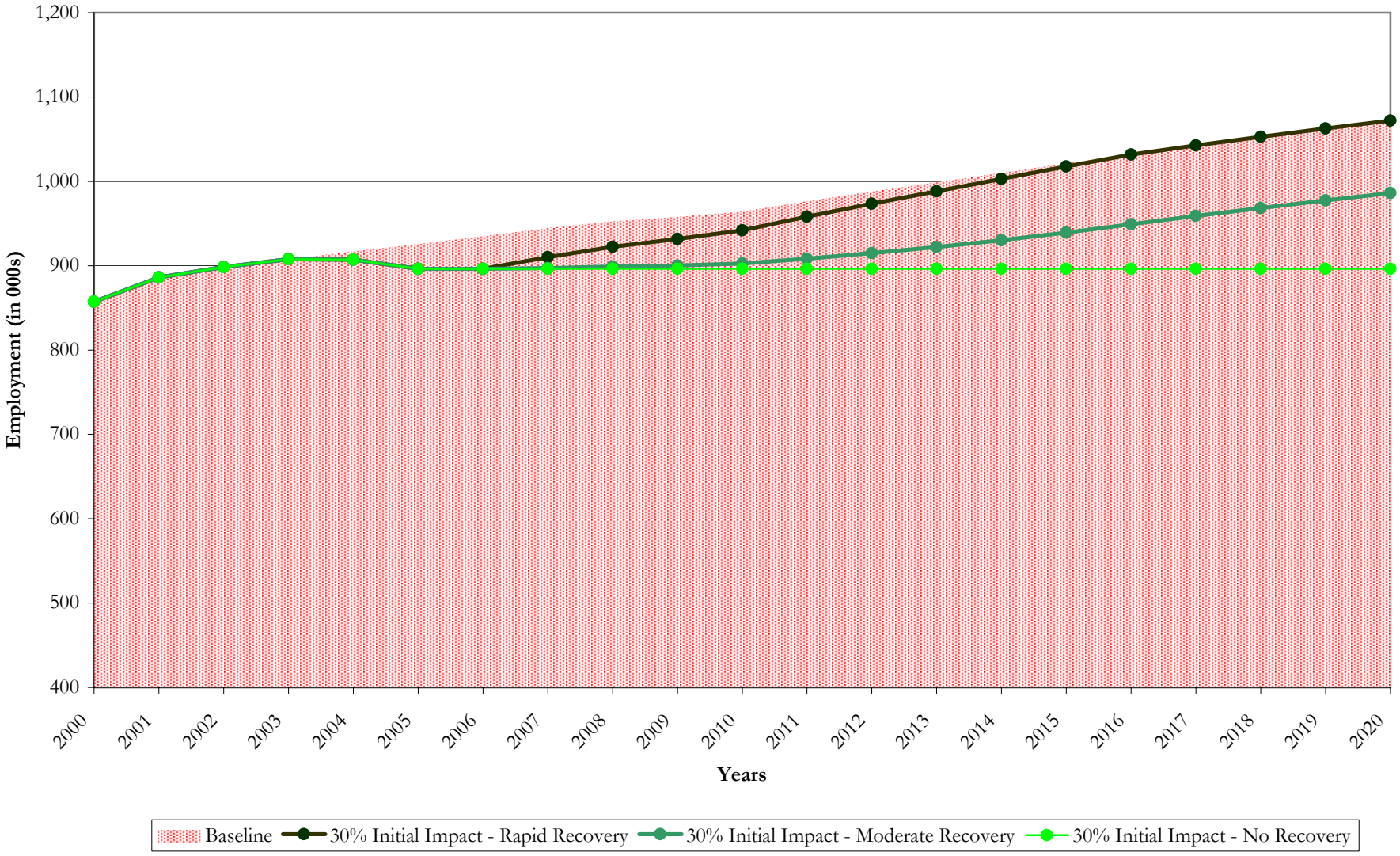
Prepared by: Hobbs, Ong & Associates

Summary of Modeled Employment Impacts
10% Initial Impact Scenarios, 2000 - 2020



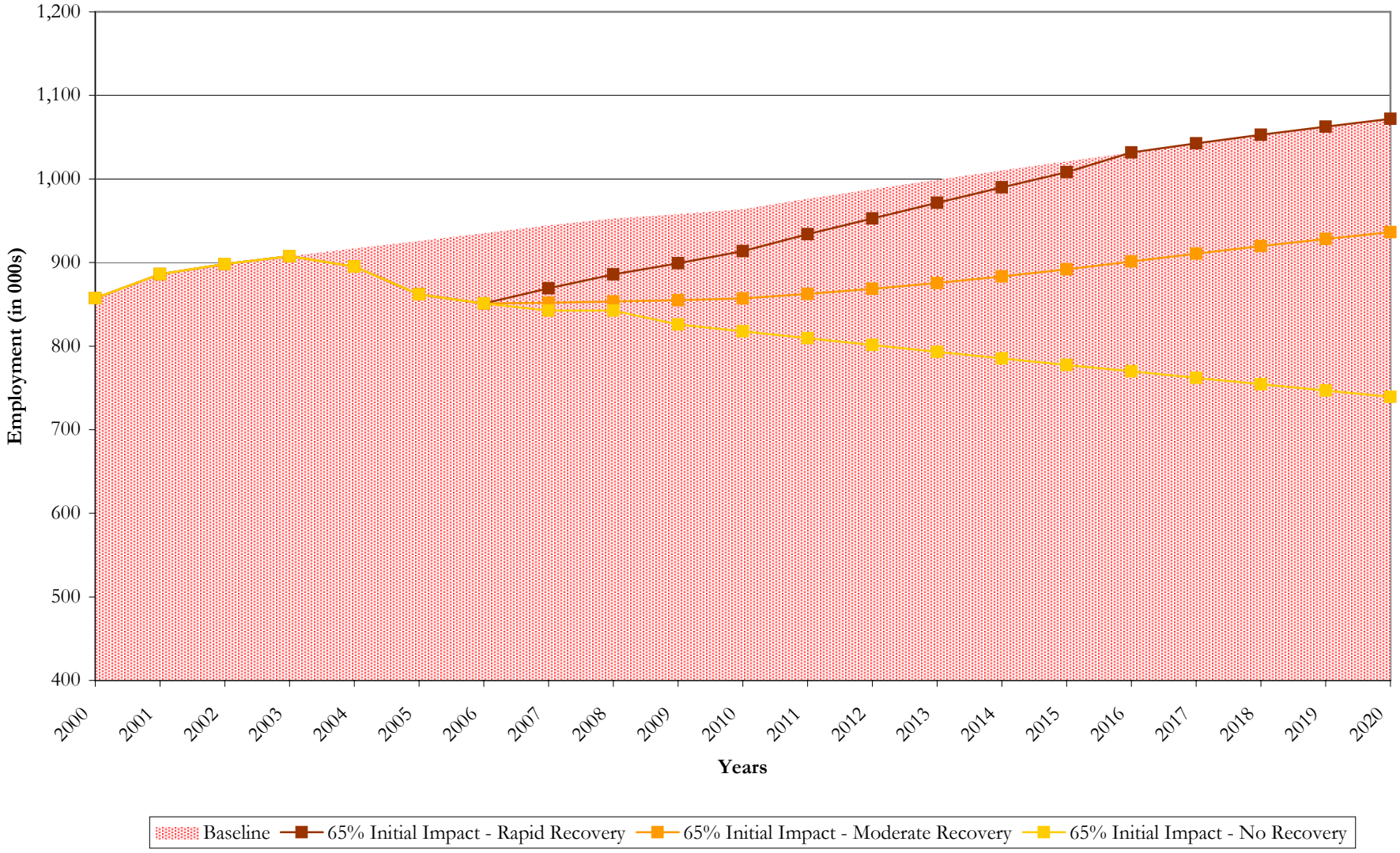
Prepared by: Hobbs, Ong & Associates

Summary of Modeled Employment Impacts
30% Initial Impact Scenarios, 2000 - 2020



Prepared by: Hobbs, Ong & Associates

Summary of Modeled Employment Impacts
65% Initial Impact Scenarios, 2000 - 2020



Prepared by: Hobbs, Ong & Associates

INTRODUCTION

In November 1992, the Las Vegas Valley Water District (the District) entered into a contract with William T. White Associates to review the potential impacts of water restrictions artificially slowing growth in Southern Nevada.[3] Dr. White's report, entitled *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region* ("the White Report"), concluded that an arbitrary interruption of the natural growth process would have severe and far-reaching impacts on Nevada's economy.

This report is a substantive update of the analysis conducted by Dr. White and his colleagues 11 years ago. Changes in the structure of Nevada's economy, new research and updates to input-output modeling software provide meaningful insights as to how growth affects our economy as a whole.

Dr. White's report was principally concerned with a water shortage resulting from the full utilization of the Las Vegas Valley's Colorado River water allocation by 2006.[4] A proactive water resource master plan has abrogated the particularized risk contemplated by Dr. White and his colleagues; however, today, a new danger threatens our water resources and our economy – *drought*. The United States Drought Monitor places the majority of Nevada at D2 – Severe Drought Conditions.[5] **Importantly, this report differs from the White Report in that we were asked to look at growth generally, where Dr. White's analysis was specific to a condition occurring a set time in the future. While we are cognizant of the underlying conditions giving rise to this report, Southern Nevada's water resource availability and related conservation measures are once removed from our efforts**. The question presented to us is: *how will artificially interrupting our natural grow cycle impact the economy*? The dismal nature of this contemplation need not be enumerated with specifics here. It is enough to say that a drought is not the only conceivable reason Southern Nevada's growth pattern could suddenly slow.

On July 7, 2003, Lake Mead was nearly 100 feet below full elevation. (*see* www.nasa.gov/vision/earth/lookingatearth).

[3] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Executive Summary. November 1992.
[4] *Id.* at 13.
[5] U.S. Drought Monitor is a collaborative effort of federal agencies and the National Drought Mitigation Center located at the University of Nebraska-Lincoln. Data is available at http://drought.unl.edu/dm/about.html (Feb. 2004).

There are five sections to this study. The first is a general economic overview. The goal of this overview is establish a baseline of economic conditions from which any individual change or set of changes to the economy might be measured. Key to the analysis is the ability to view how the state and local economy has evolved over the past several years. These data not only provide an important perspective, but they also lay the foundation for tasks that follow.

The second part of this report is a comparative analysis and literature review. The principal objective of this section is to review reports and case studies that focus on normal patterns of community development, taking a closer look at those affected by major "disturbances." Particular attention is given to population growth, employment, income and other key economic and social indicators.

The third section of this study compares and contrasts fast-growing and slow-growing metropolitan areas. A number of economic, fiscal and social considerations are compared and contrasted, and we focus specifically on how population growth relates to these factors.

The fourth section of this report analyzes the impact of growth-industries on Nevada assuming no exogenous restrictions on Southern Nevada's ability to grow. We employ the Minnesota IMPLAN Group's economic "input-output" model ("IMPLAN") to evaluate these impacts among various sectors of the state's economy. Areas particularly sensitive to changes in growth patterns are highlighted.

The final section of this report is a conditional impact assessment, highlighting economic, fiscal and social impacts associated with abrupt changes to Southern Nevada's growth cycle. We review a number of scenarios, focusing on changes in the initial impact period as well as during a period of local recovery. IMPLAN is again used to estimate the consequences of our hypothetical impact scenarios. This reduction in growth is reflected throughout all sectors of the state's economy and traced through changes in population growth patterns, labor incomes and overall economic output. The conditional impact assessment assumes various scenarios, making assumptions about the extent to which growth is slowed and the ability of business leaders, government authorities and the community as a whole to adapt, adjust and move on. It is important to note that this analysis is a simulation based on a number of limiting assumptions. No one can know for sure of how deep or how long Nevada's economy would be impacted as the result of rapid structural change in our trade and industry landscape. History, analysis and respected authority, however, all suggest that the potential affects would be extensive and incomparable with any post-Great Depression event.

GENERAL ECONOMIC OVERVIEW

This section reviews an array of economic and fiscal variables, each of which provides meaningful insight into how Nevada's economy has evolved during the past several years and how it is expected to develop into the future. Generally speaking, our study period for this analysis is 1980 through 2020. The goal of this analysis is simply to identify key trends and projected growth levels assuming the continuation of a "normal" growth cycle. **It is from this baseline that all impacts in later sections are measured.**

To preserve the flow of this text, two sets of exhibits are provided in Appendices 1.1 and 1.2. Appendix 1.1 offers economic data specific to Southern Nevada, and Appendix 1.2 presents similar information for the entire state. The data contained in these appendices are extensive, comprising nearly 200 charts, tables, graphs and exhibits. This text simply highlights key trend variables such as population, employment, income and development activity.

Information was collected from numerous local, state and federal sources. Federal sources include, without limitation, the United States Census Bureau, the Bureau of Economic Analysis,[6] and the Bureau of Labor Statistics.[7] State sources include, without limitation, the Nevada State Demographer's Office,[8] the State Budget Office,[9] the Nevada State Department of Taxation,[10] and the Nevada Department of Employment, Training and Rehabilitation.[11] Local sources include the Southern Nevada Water Authority as well as local comprehensive planning agencies, the Clark County School District, the Clark County Assessor's Office and the University of Nevada, Las Vegas Center for Business and Economic Research.[12] In addition to these public sector data providers, we also collected information from private sector providers where necessary and appropriate.

These data represent the best available estimates from sources believed to be reliable. While we have no reason to doubt their accuracy, we did not audit the historical data or projection

[6] *See* Bureau of Economic Analysis website: www.bea.gov.
[7] *See* Bureau of Labor Statistics website: www.bls.gov.
[8] *See* Nevada State Demographer's Office website: www.nsbdc.org/demographer
[9] *See* Nevada State Budget Office website: http://budget.state.nv.us/
[10] *See* Nevada Department of Taxation website: http://tax.state.nv.us/
[11] *See* Nevada Department of Employment, Training and Rehabilitation website: http://detr.state.nv.us/.
[12] *See* UNLV Center for Business and Economic Research website: http://www.unlv.edu/Research_Centers/cber/.

methodologies and can make no representations as to their completeness or accuracy. We are also cognizant of the fact that events of local, national, or international significance may significantly impact any or all of the variables discussed. Readers should note that long-term projections rarely materialize precisely as estimated due to the complexity and ever-changing nature of our local, national and global economies. This having been said, there are a number of considerations with the potential to significantly impact Southern Nevada's economy. Some of these considerations, and assumptions made with regard to them, are provided below.

- **Recession**:[13] This analysis assumes that Nevada and the nation entered a period of recession in early 2001. It further assumes that this condition has slowly improved, with moderate growth persisting through 2003 and a full recovery anticipated in 2004.

- **Housing market**:[14] Southern Nevada, similar to other parts of the country, is experiencing a surge of construction activity. There is some concern that this may lead to a supply-demand imbalance. This analysis assumes that overall construction activity will slow somewhat in 2004, returning to a rate of growth more consistent with historical averages thereafter.

- **Acts of terrorism**: This analysis assumes that there will be no more terrorist attacks on U.S. soil.

- **Military conflicts**: This analysis assumes that additional sustained military conflicts will not persist as a part of the economic landscape.

- **Travel patterns and consumer spending**: The tragic events of September 11, 2001 dramatically changed the way individuals view their ability to travel nationally and internationally. Such a change in consumer attitudes directly impacts Southern Nevada's

[13] *See* Miller, S., *Jobless Recovery: The New Economy?* InBusiness (2003).

[14] When economists refer to housing bubbles, they typically mean home prices exceed the price predicted by fundamental housing market variables. Some commentators contend that Nevada's housing market lacks from supply, which is evidenced by price inflation, new home waiting lists and inventory levels that are now being measured in days. Others express concerns that recent construction activity has been buoyed by Federal monetary policy, and that the Federal Reserve's next move will be to reverse this trend, which may impact affordability for existing homeowners with variable rate mortgages as well as prospective purchasers. This assumption merely establishes the belief that the housing market will remain in relative balance throughout the study period as opposed to being on the precipice of a boom-bust cycle.

hospitality-oriented industrial core. This analysis assumes a continued return to more normal consumer spending patterns in 2004.

- **Inflation**: This analysis assumes that sound monetary policy will keep inflation at or below historical levels.

- **Federal nuclear waste repository**: This analysis assumes the nuclear waste repository sited for Southern Nevada will not become operational for several years. While there is evidence that such a facility could negatively impact the region's economy,[15] the long-run nature of this consideration requires that it be held as exogenous until more information becomes available.

- **Expansion of gaming**: This analysis assumes that gaming will expand throughout California and other jurisdictions nationally and internationally during the next 20 years. The availability of close-proximity gaming alternatives is anticipated to have a negative impact on some sectors of the economy. While it is unlikely that any emerging jurisdiction will provide an entertainment destination comparable to that of Nevada's primary offerings, it would be imprudent to suggest none will exist.

The estimates provided in the subsections that follow are based on long-term projections. Long-term forecasts involve trend relationships between economic, demographic and fiscal variables. We have not attempted to predict short-term, cyclical movements in the economy, as forecasting short-run volatility (i.e., business cycles) over the long run is generally accepted as being impractical. Instead, most analysts attempt to capture "average" growth rates over a projection period, effectively smoothing out economic volatility.

[15] *See* Clark County Comprehensive Planning, Nuclear Waste Division. http://www.co.clark.nv.us/comprehensive_planning/NuclearWaste.htm.

POPULATION

Historical Population

It is no secret that Nevada has been among the fastest growing states in the Union for the past several decades. The state's population increased nearly ten fold since 1960, or from 290,000 to 2.2 million.[16] This rate of growth equates to a compound annual growth rate ("CAGR") of approximately 5.0 percent. During the same period, the United States and western states averages grew at rates of 1.1 and 1.9 percent, respectively.

COUNTY POPULATION ESTIMATES & RANKINGS[17]
2000 AND 2002

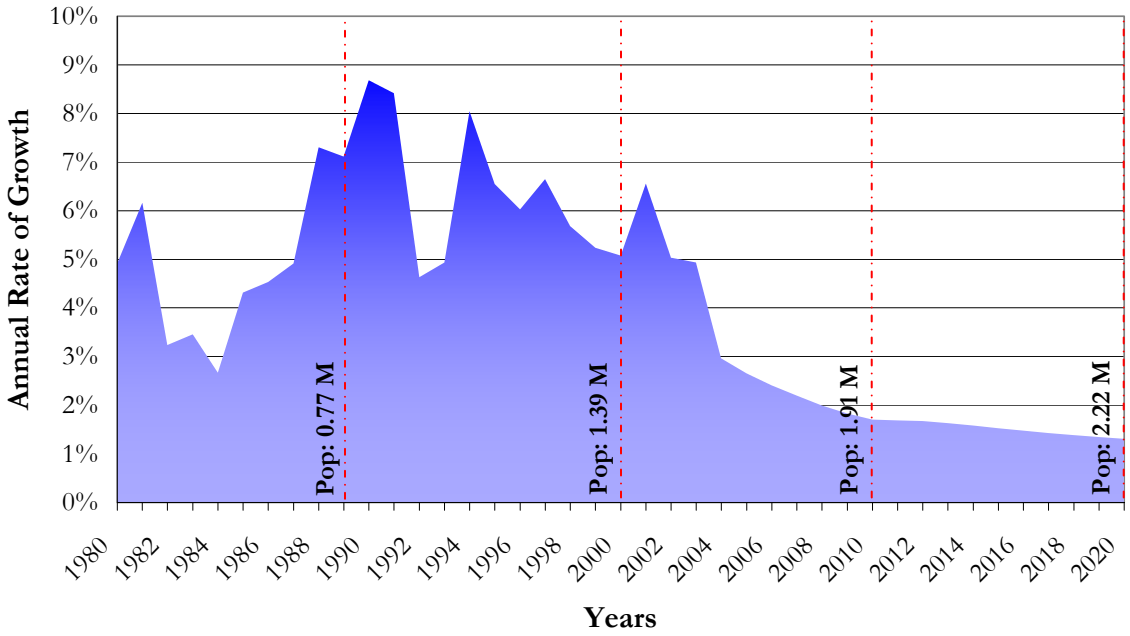
County	State	County Population 2000	County Population 2002	New Residents	Rank	Growth Rate	Rank
Los Angeles County	California	9,519,338	9,806,577	287,239	1	3.0%	578
Maricopa County	Arizona	3,072,149	3,303,876	231,727	2	7.5%	120
Harris County	Texas	3,400,578	3,557,055	156,477	3	4.6%	323
Riverside County	California	1,545,387	1,699,112	153,725	4	9.9%	56
Clark County	**Nevada**	**1,375,765**	**1,522,164**	**146,399**	**5**	**10.6%**	**41**
San Bernardino County	California	1,709,434	1,816,072	106,638	6	6.2%	184
San Diego County	California	2,813,833	2,906,660	92,827	7	3.3%	517
Orange County	California	2,846,289	2,938,507	92,218	8	3.2%	535
Broward County	Florida	1,623,018	1,709,118	86,100	9	5.3%	250
Sacramento County	California	1,223,499	1,305,082	81,583	10	6.7%	168

Clark County's population has experienced a similar, if not more pronounced, trend. The county's population increased from 277,000 in 1970 to 1.56 million in 2002. [18] Growing at a compound annual growth rate of 5.5 percent, Clark County currently accounts for more than 70 percent of the state's population.[19] Between 2000 and 2002, Nevada ranked 5th out of the nation's 3,140 counties in terms of absolute population growth with 146,400 new residents. Clark County's aggregate population growth rate of 10.6 percent ranked the county 41st; however, this rate of growth was 1st among counties adding more than 80,000 new residents over the two-year period.[20]

[16] Bureau of Economic Analysis, Regional Economic Accounts. Population Table SA1-3. September 2003.
[17] U.S. Census Bureau, Current Population Estimates. September 2003. Please note that these may vary from figures produced by the University of Nevada, Las Vegas, Center for Business and Economic Research and the Nevada State Demographer.
[18] University of Nevada, Las Vegas, Center for Business and Economic Research. Clark County & Nevada's Populations, 1970-2002. September 2003.
[19] Id.
[20] Author's calculations based on files provided by The United State Census Bureau, Population Estimates, County Population Data files.

Historical & Projected Population Growth

Clark County, Nevada: 1980 - 2020



Future Population Growth

Population projections prepared by both the Nevada State Demographer and the University of Nevada, Las Vegas Center for Business and Economic Research reflect continued population growth but at declining rates for both Clark County and the state through 2020.[21] By 2020, Clark County's population is anticipated to reach 2.2 million, growing at a compound annual rate of just over 3.2 percent between 2000 and 2010 and 1.5 percent between 2010 and 2020.[22] The decline in overall growth is illustrated in the exhibit provided above.[23]

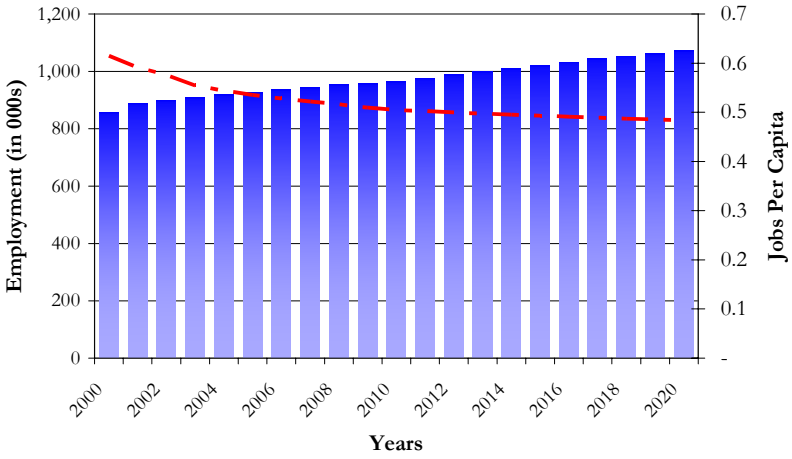
[21] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Pg. 2. January 10, 2003; *see also* Nevada State Demographer, Population Projection by Single Digit Age Group. June 2002.
[22] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Pg. 2. January 10, 2003.
[23] Source: *Id.*

EMPLOYMENT & UNEMPLOYMENT

Historical Employment

Employment growth in Nevada and Southern Nevada has also been remarkable during the past twenty years. In 1980, wage and salary employment in Nevada was 434,000.[24] By 2001, that number had increased to 1.3 million, growing at a compound annual rate of 4.8 percent.[25] Clark County, which accounted for approximately 55 percent of statewide employment in 1980, saw its share increase to nearly 76 percent in 2001.[26] During that period, Clark County's wage and salary employment grew from 266,000 to nearly 890,000, or at a compound growth rate in excess of 5.9 percent.

Employment Growth Trends
Clark County, Nevada: 2000 - 2020



Projected Employment

Clark County's total employment is anticipated to reach 1.1 million by 2020, growing at a compound annual rate of 1.1 percent.[27] An aging population is one of the key factors affecting the employment population ratio, which is anticipated to decline from 0.62 jobs per capita to 0.48 jobs per capita. This rate of growth is considerably less robust than that reported during the 1980-2000 period, mirroring the related population growth.

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[24] U.S. Department of Commerce, Bureau of Economic Analysis. Table SA27. Accessed October 2003. http://www.bea.gov/bea/regional/spi/default.cfm.
[25] *Id.*
[26] *Id.*; *see also* Nevada Department of Employment, Training and Rehabilitation. http://detr.state.nv.us/; *see also* UNLV Center for Business and Economic Research, http://www.unlv.edu/Research_Centers/cber/snoutlk.html.
[27] *Id.*

Employment Distribution and Location Quotients

Differences between Clark County's and the United States' industrial structures show up in the distribution of employment, income or production by industry. The degree of this difference is sometimes referred to as the "location quotient."[28] In this analysis we focus on employment, paying specific attention to the construction sector. We use the United States as the standard for comparison because it is a good proxy for a diversified community.[29]

The table on the following page provides the location quotient for the major industrial sectors. Any sector having a location quotient higher than 1.0 accounts for a greater share of Clark County's overall employment than the same sector does in the national economy. Not surprisingly hospitality and entertainment sectors have extremely high scores in the analysis. The industries with the next highest scores are construction and real estate and leasing, reporting location quotients of 1.5 and 1.4, respectively. This analysis suggests that roughly 38,000 jobs are attributable to Southern Nevada's larger-than-average construction and development industries.

Naturally, there is an expectation that the number of construction employees will be reduced, at least in relative terms, as the intensity of growth wanes. The table on the lower left looks at employment by industry in 2000, 2010, and 2020. These data reflect this trend, anticipating that the construction sector will decline from 9 percent of total employment to roughly 6.4 percent of total employment by 2020.

Unemployment

Nevada's unemployment rate tends to roughly track that of the nation. In fact, both the United States and Nevada unemployment rates have averaged 6.3 percent during the past 20 years. During the past 10 years, Nevada's unemployment rate has slightly out-performed the national average, reporting an average rate 0.2-

[28] Miller. M..M, J.L.Gibson, and G.N. Wright. *Location Quotient Basic Tool for Economic Development Analysis Economic Development Review*, 9(2);65 (1991); Mack, R.S. and D.S. Jacobson *Core Periphery Analysis of the European Union: A Location Quotient Approach*, The Journal of Regional Analysis and Policy, 26(1):3- 22 (1996).
[29] *See* Gilmer, R. and Wang, T. *Diversification of Houston's Economic Base.* The Federal Reserve Bank of Dallas. (Sept. 2000).

Location Quotient Analysis
Clark County, Nevada, 2001 Employment Figures

Industrial Sector	Location Quotient	Employment Concentration Greater/ (Lesser) than the National Average
Forestry, fishing, etc.	0.07	(4,613)
Mining	0.33	(2,856)
Utilities	0.81	(656)
Construction	**1.49**	**25,976**
Manufacturing	0.24	(69,956)
Wholesale trade	0.67	(11,313)
Retail trade	0.94	(6,586)
Transportation and warehousing	0.97	(784)
Information	0.74	(5,811)
Finance and insurance	1.05	2,124
Real estate and rental and leasing	**1.39**	**11,930**
Professional and technical services	0.71	(16,500)
Management of companies and enterprises	0.76	(2,346)
Administrative and waste services	1.13	6,689
Educational services	0.20	(12,846)
Health care and social assistance	0.59	(34,641)
Arts, entertainment, and recreation	1.55	9,797
Accommodation and food services	3.86	171,494
Other services, except public administration	0.67	(15,904)
Government and government enterprises	0.66	(43,197)

Employment Distribution
Clark County, Nevada

Economic Sector	2000	2010	2020
Ag. Services	1.0%	1.0%	1.1%
Mining	0.2%	0.1%	0.1%
Construction	**9.0%**	**7.3%**	**6.4%**
Manufacturing	2.6%	2.2%	2.2%
Trans. and utilities	5.2%	5.6%	5.4%
Retail trade	17.0%	17.3%	16.0%
Wholesale trade	2.9%	2.5%	2.2%
F.I.R.E.	8.9%	9.4%	8.5%
Services	44.6%	45.5%	48.9%
Government	8.5%	9.1%	9.3%

percentage points lower than the nation's average.[30] During the past 16 months, Nevada's unemployment rate has again fallen under the national average, as the economy continues to rebound and expand.

The unemployment rate for the Las Vegas MSA stood at 4.9 percent as of October 2003, roughly 0.1 percentage points lower than the statewide average and 1.1 percentage points lower than the national average.[31] Changes in the rate of employment can be an indicator of changing economic conditions. Rising unemployment is usually accompanied by slower economic growth; however, there are occasions where falling unemployment can constrain economic growth (i.e., in situations where a labor shortage arises). This analysis assumes that the unemployment rates in Nevada and the Las Vegas MSA will remain at or below national averages.

INCOME & EARNINGS

Per Capita Incomes

Nevada's per capita income was estimated at $30,200 in 2002, placing the state 20th out of the 50 states plus the District of Columbia.[32] Nevada reported per capita incomes above the national average between 1960 and 2000; however, the gap between Nevada's per capita average and that of the nation had been thinning since the mid to late-1980s.[33] The state's per capita income was 5.5 percent above the national average in 1990.[34] By 2000, that gap had fallen to 0.1 percent. In 2002, Nevada's per capita incomes reportedly fell nearly $700 below the national average.[35]

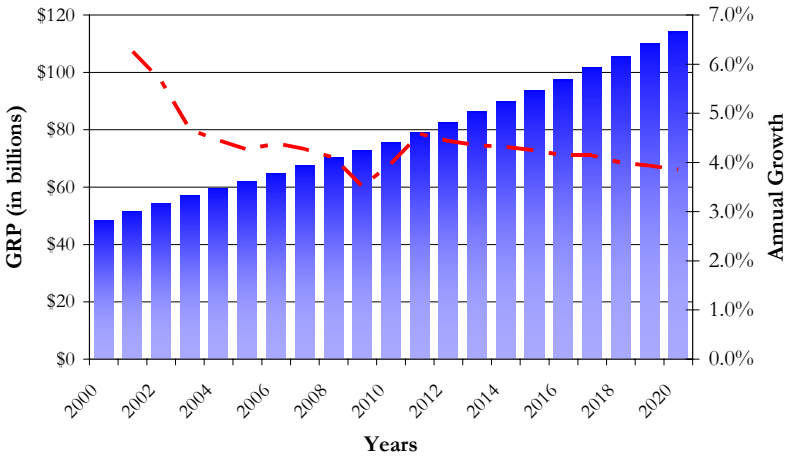
Historical & Projected Personal & Disposable Income
Total & Per Capita

	2000	2010	2020
Personal Income (in billions)	$ 40.8	$ 69.5	$ 108.9
Per Capita	$ 29,293	$ 36,316	$ 49,075
Disposable Income (in billions)	$ 34.8	$ 60.2	$ 94.8
Per Capita	$ 24,985	$ 31,488	$ 42,701

[30] U.S. Bureau of Labor Statistics. http://www.bls.gov/sae/home.htm.
[31] State of Nevada, Department of Employment, Training and Rehabilitation. Current Unemployment Rates. October 2003. Accessed November 2003. http://www.nevadaworkforce.com/.
[32] U.S. Department of Commerce, Bureau of Economic Analysis. Table SA1-3. Accessed October 2003. http://www.bea.gov/bea/regional/spi/drill.cfm.
[33] *Id.*
[34] *Id.*
[35] *Id.*

Clark County's per capita income was an estimated $29,600 in 2002, up only 1.0 percent over 2001 estimates.[36] It is important to note that Clark County estimates and statewide estimates are generated by different sources; therefore, they are not comparable. The erosion of per capita income growth has a number of causes, not all of which are addressed or considered in this review. They include growth in population segments with a lower workforce participation rate (i.e., under the age of 18 and over the age of 65) and the mix of industries within which employment is concentrated (i.e., heavy growth in services and retail trade, which have lower-than-average wages), the level of government transfer payments, and amount of retirement income. As these trends continue to develop, per capita income growth is anticipated to continue its current growth trend.

Gross Regional Product Estimates
Clark County, Nevada: 2000 - 2020



Per capita incomes are projected to increase to $36,300 in FY 2010 and $49,100 in 2020, or at a compound annual rate of 2.7 percent.[37] This rate is just higher than the anticipated rate of inflation.[38] Given the previously cited expectations for population growth, total personal income is anticipated to increase by roughly 5 percent per year.[39]

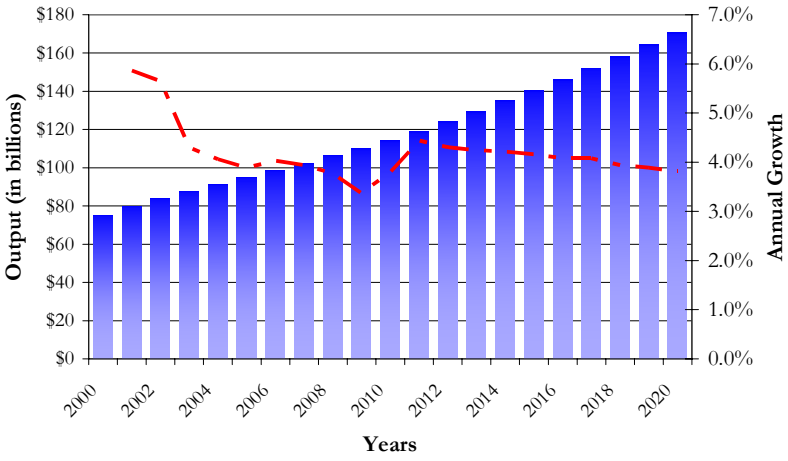
GROSS REGIONAL PRODUCT & OUTPUT

Gross product for a state or region is conceptually the same as national estimates of gross domestic product. It is the value of all goods produced for final sale in an accounting period (i.e., a year) originating from a particular geographic region (i.e., Clark County or Nevada).[40] Gross product is defined as the market value of all output minus the value of intermediate production costs.[41] Alternatively, this measure can be computed as the sum of payments to labor, capital

[36] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003.
[37] *Id.*
[38] *Id.*
[39] *Id.*
[40] *See* Gilmer, B. *Houston Business.* Federal Reserve Bank of Dallas. (April 1995).
[41] *Id.*

and other factors applied in the area under examination. By contrast, output is essentially the sum of all goods and services produced, without any deduction for production expenses.

Total Economic Output Estimates
Clark County, Nevada: 2000 - 2020



Gross domestic product is generally believed to be the best and most comprehensive measure of the nation's economic performance, and economists closely follow quarterly releases of these figures for insight into the U.S. business cycle.[42] In 1991, the Department of Commerce began providing estimates of gross state product, with annual releases of new data and a historical series reaching back to 1977. Compared with national data, these gross state product figures are released only after a two to three year delay. Currently, for example, only 2001 data are available.[43] Economic models are routinely used to estimate and project gross regional product at the local level.[44] These data are important to this analysis, because they provide an overall expectation of how rapidly the economy is anticipated to expand under "normal" conditions.

The latest available figures report Nevada's gross state product is $79.2 billion.[45] In 1991, the Bureau of Economic Analysis reported Nevada's gross state product at $33.7 billion, suggesting the economy has expanded at a clip of approximately 9 percent per year.[46] Removing the impacts of inflation from this estimate, the real rate of growth is roughly 6.2 percent annually. By way of comparison, the

[42] Note that gross regional product is not the only means of measuring local economic well-being.
[43] *See* U.S. Bureau of Economic Analysis. Regional Economic Accounts. http://www.bea.gov/bea/regional/gsp/action.cfm.
[44] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003.
[45] *See* U.S. Bureau of Economic Analysis. Regional Economic Accounts. http://www.bea.gov/bea/regional/gsp/action.cfm.
[46] *Id.*

United States reported nominal and real growth rates of 5.6 percent and 3.5 percent, respectively.[47]

Clark County's gross regional product was estimated to be roughly $48.4 billion in 2000, expanding to an estimated $57 billion in 2003.[49] The economy, which grew by an estimated 6.3 percent in 2001 and 5.8 percent in 2002, is projected to see a gradual slowing in its rate of growth to 4.3 percent through 2020.[50] In inflation adjusted terms, this translates into an average annual growth rate just above 2.2 percent.[51]

Clark County Development Activity Trends[48]
Annual & Total Estimates for Selected Land Uses, 2002

	2002 (Annual)		2002 (Total)	
Land Use	Development	Acres Per 1,000 Residents	Development	Acres Per 1,000 Residents
Single family	3,359	44	68,492	44
Multi-family	382	5	14,815	10
Commercial	1,859	24	28,581	18
Industrial	435	6	12,760	8
Hotel-gaming	52	1	3,938	3

Clark County's total output is anticipated to witness a somewhat similar trend. Total output in 2000 was estimated to be approximately $75 billion, growing at just over 5.7 percent, reaching nearly $84 billion by the close of 2003.[52] By 2020, total output in Clark County is anticipated to reach $170 billion, translating into an average annual growth rate of 4.2 percent.[53] In inflation adjusted terms, total output is anticipated to grow at just over 2.0 percent annually.[54]

DEVELOPMENT TRENDS

Current Trends

As each new resident enters Southern Nevada, additional demand for housing is created. Similarly, the creation of new jobs results in the development and absorption of industrial and commercial property. Between 1980 and 2002, an average 3,700 acres were improved

[47] *Id.*
[48] *Id.*
[49] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003.
[50] *Id.*
[51] *Id.*
[52] *Id.*
[53] *Id.*
[54] *Id.*

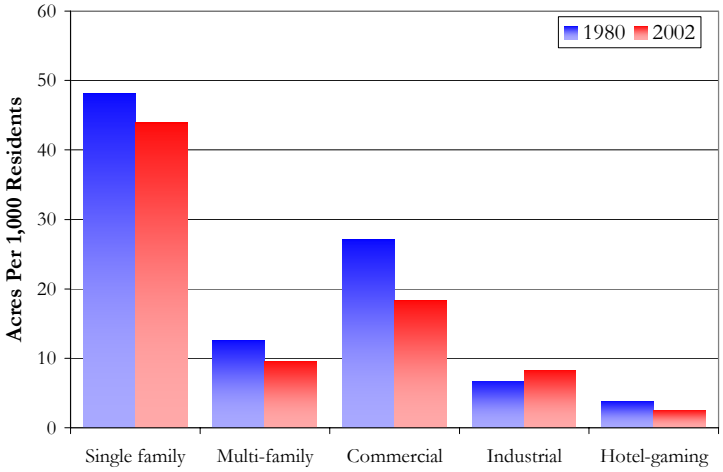
annually.[55] The overall rate of development appears to have accelerated during the past five years, with average annual development increasing to nearly 5,600 acres per year.[56] Through August 2003, approximately 133,000 acres of residential, commercial and industrial property supported the County's 1.6 million residents and 910,000 employees.[57] This translates in to a development factor of approximately 81.4 acres per 1,000 residents.[58]

Projected Development Activity

Three factors are expected to materially impact Clark County's development trend over the next 20 years: slower population growth, slower employment growth and increasing densities. The preceding sections on population and employment both indicate a significantly slower rate of expansion, and thus, we anticipate fewer houses, industrial complexes, office buildings and retail centers will be constructed. Increasing densities are not novel. The figure provided on the following page shows that between 1980 and 2002 fewer acres were constructed per 1,000 residents in almost every primary development category.[59] Less available and more costly land is increasing densities per acre in order to obtain required returns on investment. We anticipate this trend to continue into the future.

Clark County Development Trend

Improved Acres Per 1,000 Residents (Total): 1980 and 2002



During the past 10 years, the overall rate of densification has been about 0.7 percent per year.[60] That is to say that the number of acres developed per 1,000 residents has declined on average by 0.7 percent

[55] *See* Clark County Assessor's Office. *AOEXTRACT*.dbf. August 2003. Note that this estimate excludes public/semi-public uses, transportation, communications and utility improvements as well as other miscellaneous improvements.

[56] *Id.*

[57] *Id. See also* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada*. University of Nevada, Las Vegas, Center for Business and Economic Research. Page 2. January 10, 2003; *see also* U.S. Department of Commerce, Bureau of Economic Analysis. Table SA27. Accessed October 2003. http://www.bea.gov/bea/regional/spi/default.cfm.

[58] *Id.*

[59] *Id.*

[60] *Id.*

each year, or from 88.3 acres per 1,000 residents in 1993 to 81.4 improved acres per 1,000 residents in 2002.[61] While we anticipate that development will continue to become increasingly dense, we anticipate the rate of densification will slow. This is primarily a function of less robust population and employment projections. Should these projections materialize as provided, less pressure will be placed on the Valley's available land supply. Additionally, it also considers the reality that if the current trend continues in a linear fashion, Southern Nevada would begin to look like San Francisco, California by 2020. To support the projected population and employment increases, roughly 50,000 acres of residential and employment uses will be required. This level of development is also consistent with the reduction in construction-related employment as referenced earlier.[62]

[61] *Id.*

[62] *See also* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada*. University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003

LITERATURE REVIEW

A literature review surveys scholarly articles, books and other sources (i.e., dissertations, conference proceedings, and pertinent news accounts) relevant to a particular issue, area of research, or theory, providing a description, summary and critical evaluation.[63] Its purpose is simply to offer an overview of significant literature on a topic of interest. [64]

Here, our review focuses on the nature of growth and changes in growth patterns. This issue covers a broad cross section of topics and circumstances, from the use of urban boundaries in Oregon to the impact of Hawaii's declining tourism industry. The intent of this section is not to answer the specific question presented, but rather, to lay a foundation for our analysis by considering the work others have done that might be relevant to our current course. Importantly, Southern Nevada's unique economic, fiscal and social landscape inevitably limits the relevance of any comparison that might be drawn or implied.

This sections that follow are divided into four parts. Part I begins by considering the "normal" growth curve contemplated by Dr. White and his colleagues. Part II takes a closer look at studies focusing on the nature of growth. Part III reviews how a selected group of communities were impacted when they faced unexpected structural changes that impacted their growth pattern, and Part IV takes a closer look at studies evaluating the actual or expected impacts of intentional growth interruptions.

SOUTHERN NEVADA AND A NORMAL GROWTH CURVE

In many ways, Southern Nevada's modern history can be traced by the character and intensity of the region's growth. From the dusty railroad stop that was home to only 3,300 in 1910;[65] to the 16,000 workers and their families who traveled across the United States to

[63] Cooper, H. *Synthesizing Research: A Guide for Literature Reviews.* Thousand Oaks, California: Sage Publications. (1998); *see also* Galvan, J.L. *Writing Literature Reviews*. Los Angeles: Pyrczak Publishing (1999).
[64] Cooper, H. *Synthesizing Research: A Guide for Literature Reviews.* Thousand Oaks, California: Sage Publications. (1998); *see also* Galvan, J.L. *Writing Literature Reviews*. Los Angeles: Pyrczak Publishing (1999).
[65] *See* www.nevadahistory.org. October 2003.

build Hoover Dam in the 1930s;[66] to the opening of the Flamingo Hotel in the 1940s, which created jobs and helped Clark County break the 50,000 resident population barrier;[67] to the 1950s and 1960s when the nuclear arms race brought federal dollars and the atomic bomb to Southern Nevada;[68] to the 1980s when a *Mirage* in the desert transformed an industry and an economy;[69] to the 1990s when Clark County added nearly nine new residents every hour for 10 years;[70] to today with a population above 1.6 million,[71] visitation in excess of 30 million people per year[72] and a growing tension between the scarcity of resources (i.e., land, labor, air quality, water, transportation capacity and public revenues) and an economy branded by growth.

The history of urbanization has been called by some notable observers "[o]ne of the most exciting aspects of. . .humanity."[73] Questions over the positive and negative impacts of growth have a perennial place among economic literature as well as legislatures from coast to coast. Dr. White and his colleagues cited as an "underlying principal" of their 1992 study that there is a common growth pattern cities generally follow from growth to maturation.[74] This common growth pattern is one in which a city exhibits slow growth in the early stages of its development; followed by increasing growth in absolute

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[66] *See* U.S. Department of the Interior, Bureau of Reclamation. Hoover Dam and National Historic Landmark. October 2003. Note in 1928, the U.S. Government appropriates $165 million for the Boulder Canyon Project. First President Hoover's interior secretary called it Hoover Dam. It was later renamed Boulder Dam, Las Vegas by President Roosevelt, but changed again by Congress in 1947 to Hoover Dam. It is still referenced as Boulder Dam by some.

[67] *See* www.nevadahistory.org. October 2003.

[68] *See* United States Department of Energy, Nevada Test Site. http://www.nv.doe.gov/nts/default.htm; *see also* United States Air Force. http://www.nellis.af.mil/home.htm. October 2003.

[69] *See* Mirage Las Vegas. http://www.themirage.com/pages/frameset_flash.asp. *See also* Las Vegas Convention and Visitors Authority. http://www.lasvegas24hours.com/press/home.html. October 2003.

[70] *See* University of Nevada Las Vegas, Center for Business and Economic Research. Historical Population. December 2002; *see also* Nevada State Demographer's Office. Population Estimates. June 2003.

[71] *Id.*

[72] Las Vegas Convention and Visitors Authority. http://www.lasvegas24hours.com/press/home.html. October 2003.

[73] Bairoch, P. *Cities and Economic Development: from the dawn of history to the present.* University of Chicago Press: Chicago. 1988.

[74] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region.* Page 3. (Nov 2002).

and percentage terms; followed by a period in which growth continues, but the rate of increase declines; and finally maturation, where the city's growth stabilizes at or near national averages.[75] Dr. White described the point of maturation as occurring when the marginal cost of growth exceeds its marginal benefit, warning that "destructive surprises" in this pattern would result in an inefficient allocation of resources and increased uncertainty for public and private decision makers.[76] Dr. White's report did not advocate for growth at all costs; rather, it concluded that resources necessary to the "well-rounded maturation" of the region should be made available only as long as the cost for doing so is not greater than the benefit derived therefrom.[77]

This concept of "normal growth" is one that is theoretical and often illusive. *Where are we on this road to maturity?* There are those who argue we remain in the second stage of rapid and increasing growth, and those who contend we have turned the corner to a period of continued expansion but at lower annual rates. Reasonable arguments can be formed in support of either position; however, prudence demands both concede that no one can be certain. Projecting long-term growth is often a Sisyphean task because inevitable short-run ups and downs may stimulate growth in one year and dampen it in another, effectively masking long-run trends. Understanding that there is no mathematical formula that can be universally applied to pinpoint our position on the growth map or provide an advent calendar for the date at which we might move between growth phases, economists and demographers do offer meaningful insights relating to the health of the economy, growth trends and forecasts.

The value of these insights notwithstanding, the growth debate is often reduced to a matter of public policy. This is reflected in the modern literature on the impacts of growth, the benefits of economic diversity, and the desirability of growth restrictions.[78] The limitations

[75] *Id.*
[76] *Id.* at 3-4.
[77] *Id.*
[78] *See*, for example, Malizia, EE, et. al. *The Influence of Economic Diversity on Unemployment & Stability*. Journal of Regional Science (1993); *see also* Norse, H. *Regional Economics*. New York: Praeger (1968); Wagner, J., and Deller, S., *Measuring the Effects of Economic Diversity on Growth and Stability*. Land Economics. (November 1998); *see also* Siegel, P. et. al., *Regional Economic Diversity and Diversification*. Growth and Change. (Spring 1995); *see also* Kort, John R., *Regional Economic Instability and Industrial Diversification in the U.S.*; Land Economics (November 1981); *see also* Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City*

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of this research are notable. Forecasting the economic and fiscal impacts of growth-control policies have been referenced as being without significant study as recently as November 2003,[79] and reports attempting to tackle the issue directly have been called "guesswork,"[80] "questionable,"[81] and "without any degree of certainty"[82] by authors and their critics. Of equal importance, a number of studies have found state and local policies can do little to influence metropolitan growth trends.[83]

Respective to the study that is the focus of this report, the applicability of these works is narrowed and their limitations compounded by the unique nature of the Southern Nevada economy. One well-respected Wharton School economist argues that robust growth (as in Las Vegas) is often a function of fate, circumstance or idiosyncratic features, with policymakers simply in a position to maximize economic returns.[84] Another report categorizes the Las

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of Santa Fe. University of New Mexico, Bureau of Business and Economic Research (May 2002); *see also* Brezis, E. and Krugman, P. Technology and the Life Cycle of Cities. NBER Working Paper #4561 (Dec. 1993); *see also* Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. (2002).

[79] Mattera, P. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment*. Good Jobs First: Washington D.C. Pg. 7 (Nov. 2003) (Noting "[w]hen we began this project it appeared that no one had previously addressed the question of the construction-employment impacts of smart growth policies in a systematic way. Consultation with experts and a thorough search of policy reports and academic literature in economics, urban planning and related fields failed to turn up any significant material. . .")

[80] Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe*. University of New Mexico, Bureau of Business and Economic Research. Pg. 41 (May 2002) (Noting that "[m]odeling the longer-term impacts of a water shortage and moratorium is at best *guesswork*.") [emphasis added].

[81] Mattera, P. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment*. Good Jobs First: Washington D.C. Pgs. 5-7 (Calling into question an Arizona study estimating the impacts of a proposed ordinance for the authors' use of the "unsupported assumption that construction activity would. . .decline by 40 percent in the first year of implementation.")

[82] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. iii (July 2002) (Noting that the "[b]ecause [the initiatives] passage would represent a major break with past historical trends, it is not possible to forecast what *will* happen with any degree of certainty." [emphasis included in original])

[83] Bradbury, K., Kodrzycki, Y. and Tannenwald, R. *The Effects of State and Local Public Policies on Economic Development: an Overview*. The New England Economic Review. (March 1997); *see also* Wasylenko, M. *Taxation and Economic Development: The State of the Economic Literature*. New England Economic Review. (1997).

[84] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. Pg. 89 (2002)

Vegas MSA as a region "with smart growth policies" for comparison and analysis purposes due to the natural growth barriers created by our geographic landscape.[85] Whether Southern Nevada is properly distinguished or classified in any report may be debatable, the uniqueness of the Southern Nevada economy is not.

The sections that follow look more closely at the issue of growth, and, in particular, the impacts of changes in growth patterns, whether unanticipated or deliberate. We recognize, and the reader is reminded, that the question presented here is how the Nevada economy might be impacted by a moratorium or limitation on future growth.

THE NATURE OF GROWTH

During the past 30 years, population and income growth have been more robust in Sun Belt states than in Frost Belt states.[86] In fact, between 1960 and 1990 total income[87] in the Northeastern and Midwestern metropolitan areas grew by 101 percent and 91 percent respectively, compared with 234 percent and 216 percent in the South and West, respectively.[88] In her book *Growth and Convergence in Metropolitan America*, Janet Rothenberg Pack, professor of public policy and real estate at The Wharton School, University of Pennsylvania and senior fellow in Economic Studies with the Center on Urban and Metropolitan Policy at the Brookings Institution, asks what factors underlie these movements and how might they be predicted and harnessed.[89]

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[85] Nelson, A. and Burby, J. *The Effects of Regional Smart Growth on Metropolitan Growth and Construction: a Preliminary Assessment.* (Noting that "Las Vegas and Phoenix are naturally contained because of public ownership of vast amounts of land around them, and water that is expensive to acquire, treat and distribute.")
[86] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. Pg. 9 (2002).
[87] Total income is a function of both population and income growth (e.g., Total Income = Total Population * Per Capita Income)
[88] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. Pg. 9 (2002).
[89] *Id.*

Pack notes that "[a] substantial part of local and federal urban policy represents an attempt to stimulate local growth," under the belief that rapid growth will result in less poverty, lower unemployment rates, and better overall quality of life.[90] She concludes, however, that there is no relationship between population growth and key socioeconomic measures (i.e., unemployment, poverty rate, educational attainment).[91] Pack notes that population growth itself may be necessary to the long-run viability of an economy, reasoning that "slow growth or a decline in population may preclude support for institutions that are important to the attractiveness of a MSA," such as hospitals, cultural institutions, and retail shops and stores.[92] Additionally, declines in population growth can reflect poor support for necessary public institutions and infrastructure.[93] Nonetheless, Pack's analysis concluded that growth in per capita income is highly correlated to quality of life measures, and she suggests that increases in income, as opposed to population, should be the focus of regional growth measures.[94]

Pack also asserts that growth is often the result of conditions largely outside the control of policymakers. She states, "in the face of idiosyncratic features such as gambling laws and inherent characteristics such as a dependence on manufacturing, the fates of MSAs might well be viewed as being outside [policymakers'] control."[95] Pack found that population growth and migration were highly correlated to the size of the MSA (e.g., smaller MSAs tended to grow more rapidly than larger MSAs), to the climate (e.g., warmer MSAs grew faster than colder MSAs), to the presence of major research institutions, and to growth itself (e.g., growth begets

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[90] *Id.* at 49. (citing Bartik, T.J. *Who Benefits from Local Economic Job Growth: Migrants or the Original Residents?* Regional Studies. 27(4):297-311 (1993).
[91] *Id.* at 83 and 90.
[92] *Id.* at 140; *see also* page 90 (noting "Population loss will reduce the vibrancy of an MSA, lead to a loss of tax revenue and public expenditure that enhance the business environment and the quality of life; and may set in motion further losses as both business and households view the area as undesirable.")
[93] Discussion and email exchange with Dr. Stephen M. Miller, University of Nevada Las Vegas.
[94] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C.(2002).
[95] *Id.*

growth).[96] The majority of these factors are beyond the range of traditional, short-term policy influence.

Similar findings were also made in a Federal Reserve Bank of Boston report entitled, *The Effects of State and Local Public Policies on Economic Development*: *an Overview*.[97] The reserve bank report was the summary of a symposium held in November 1996, and concluded "[t]he considerations under which state policies can significantly influence business location and economic growth are limited, mainly because the most important determinants of a jurisdiction's relative rate of economic growth are largely beyond the control of state and local governments."[98] Interestingly, the report's authors also concluded that policy measures intended to stimulate growth "sometimes work at cross purposes."[99] By way of example, the authors noted that tax incentives, which may lower business costs, can also indirectly impede development if they reduce expenditures on services valued by businesses.[100]

Pack concludes that "[u]nsuccessful MSAs are all unhappy in a similar manner, but the high performers are cheerful for very different reasons."[101] She also notes that some economies are more prepared for change than are others. By way of example, she contrasts the impacts of Lake Charles, Louisiana and Austin, Texas in the 1970s and 80s.[102] These metropolitan areas benefited from the rise in energy prices during the 1970s, both ranking among the fasting growing regions in terms of per capita income.[103] When oil prices declined in the 1980s, Lake Charles witnessed a severe reversal of fortune, changing from one of the twenty fastest-growing MSAs in terms of per capita income to one of the twenty slowest growing.[104] Austin, however, did not.[105] Pack attributes this to relatively low-cost

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[96] Id. at 117.
[97] Bradbury, K., Kodrzycki, Y and Tannenwald, R. *The Effects of State and Local Public Policies on Economic Development: an Overview*. The New England Economic Review. (March/April 1997).
[98] *Id.*. at 1.
[99] *Id.* at 2.
[100] *Id.*
[101] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. Pg. 145 (2002).
[102] *Id.*
[103] *Id.*
[104] *Id.*
[105] *Id.*

of land and office space in Austin as well as the presence of University of Texas. These factors were important to Austin's ability to attract two major high-tech companies that helped stabilize and diversify its economy into the 1980s and 90s.

THE IMPACT OF RAPID DECLINE

What if slower growth is not the consequence of natural transition or maturation, but rather the affect of a sudden shock to the economy? Dr. White and others referred to a natural life cycle of urban rise, maturity and decline, and warned about the impact of "destructive surprises."[106] Both relevant news articles and economic research in the area of economic diversity indicate these warnings are well founded.

Texas and Energy in the 1970s & 1980s

Texas' dependence on the oil industry in the 1970s is an oft cited example. An estimated 28 percent of the state's economy was dependent on the oil industry at the height of its reign.[107] According to Bernard Weinstein, Director of Southern Methodist University's Center for Enterprising, the industry's downturn in the late-1970s and early 1980s required nothing less than a "structural transformation," which he estimated could take as many as 20 years. Between 1981 and 1985, Texas lost an estimated 234,000 industrial jobs, and $10.5 billion in related purchasing power.[108] Looking back, one observer noted that "[t]here was so much money coming into [Texas] that it became an intoxicant." He continued by stating, "[p]eople started believing that it would never end."[109]

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[106] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Pg. 3-4. (Nov 1992); *see also* Brezis, E. and Krugman, P. *Technology and the Life Cycle of Cities*. National Bureau of Economic Research. NBER Working Paper Series. Paper No. 4561. Pg. 1 (Dec. 1993).

[107] *See* Texas *Rises Slowly from Hard Times 'Can-Do' Spirits Battle Adversity With Diversity*, The San Diego Tribune. (May 1988).

[108] Rogers, W. *Report Shows Higher Taxes Vital to Texas' Future*. The Dallas Morning News. Dallas Morning News 1D. (December 1986).

[109] *Id.* (Quoting Mr. Steve Klinkerman, financial writer for the Dallas-Times Herald); *See also* Halkais, M. and Brown, S., *Healthy & Wealthy in the Dallas-Fort Worth Area, Economic Diversity is the Rule and a Major Reason for Growth.* The Dallas Morning News. (August 1984); See also, *Accent on Diversity Spells Growth for San Antonio Economy*, Los Angeles Business Journal. (June 1994).

Louisiana and Energy in the 1970s & 1980s

Similar impacts were witnessed in Louisiana, where one commentator noted that that the region was on the "[r]ight side of the energy crisis" and there was "[n]ot much the state can do in the short run to create more jobs. . ."[110] Moreover, he noted that Louisiana did nothing overt to attract the jobs and wealth inured to the state in the 1970s -- *they were merely the right place at the right time*.[111]

Seattle & Aerospace from 1960 through 1980

A third example of the problems that can arise when economies rapidly decline is Seattle, Washington in the 1960s, 1970s and 1980s. The area's economy was largely dependent on Boeing Corporation, which represented approximately 19 percent of the region's workforce in 1970.[112] Boeing executed major layoffs around 1970.[113] These layoffs, which were largely the result of cyclical changes affecting Boeing's business, rippled through the economy with such force that one Wall Street Journal observer described it as "worse than the height of the Great Depression." A billboard placed on the main highway announcing, "[i]f you are the last person to leave Seattle, please turn of the lights," perhaps best exemplified the magnitude of the downturn.

This event was not isolated. By the 1980s Seattle had diversified to the point that significantly fewer of the region's employees worked directly for Boeing Corporation. When Boeing again laid off a significant portion of its workforce, the region's unemployment rate followed suit by more than doubling, from 5 percent to 11 percent. It was not until the 1990s, when four-fifths of the area's economy was "independent of the aerospace giant" that diversification efforts were given credit for helping "offset Boeing cuts."[114]

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[110] Albarado, S. *LA can win says officials*. The Baton Rouge Sunday Advocate. (Nov. 1986).
[111] *Id.* (quoting LSU economist James Richardson).
[112] Wallace, J. *A New Beginning How They Battled Back From the Big Boeing Bust of '70s.* Seattle Post-Intelligencer (March 1993); *See also Boeing Layoffs Threaten to Cripple Seattle's Economy.* Dow Jones Service-Edited Wall Street Journal Stories (April 1982); See also, *Seattle Braces for Boeing Slump*, Chicago Tribune (1993).
[113] It was estimated that for every one Boeing employee another 2.5 employees were generated in service and related industries.
[114] *Seattle Braces for Boeing Slump*, Chicago Tribune (1993).

Maui and Tourism Declines in the early-1990s

Tourism dependent economies are not immune to cyclical changes. This is exemplified by economic turmoil in Hawaii, specifically on the Island of Maui during the early 1990s. The island's downturn in tourism that lagged on after the national recession in the early 1990s reportedly doubled its unemployment by 1994. The impact of the tourism industry's downturn not only reported social impacts, including increasing instances of homelessness and an estimate that "[o]ne out of every five Mauians [was] suffering some food deprivation," but economic turmoil translated into serious fiscal ramifications for the local government.[115] Specifically, falling real estate values were cited as having "slashed" the island's tax revenues.[116]

Arizona's Real Estate Fall in the mid-1980s

Perhaps most analogous to this study are the declines the Arizona real estate market witnessed in the mid-1980s. Arizona's economy suffered an extended period of "below trend" growth during the late 1980s and early 1990s, as the result of serious overbuilding in commercial markets and apartments. This overbuilding occurred from 1984 through 1987 in response to changes in federal tax laws which greatly accelerated depreciation of income producing property. As one analyst put it, during this period buildings were erected to shelter tax dollars rather than people. Vacancies soared in apartments, offices and industrial markets. Then, tax laws regarding depreciation schedules were reversed, instantly plunging project values under water.

In inflation adjusted terms, non-residential building fell by nearly two-thirds from 1987 to 1991, to the lowest level since the depths of the severe 1974-75 recession. It remained there for the next three years. In the office market, zero new developments were brought on line for five full years. The collapse of building activity and the savings and loan industry affected all of the economy's components tied to growth. Developers, mortgage brokers, engineering firms, commercial real estate brokers, title companies, residential real estate agents, apartment managers and subcontractors all suffered. Growth

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[115] Ybarra, M.J.. *Tourists Find Maui Heavenly, but Locals Tend to Disagree.* Dow-Jones News Service-Edited Wall Street Journal Stories. (May 1994); See *Jones, T.*, *Resisting Progress in Molokai: Hard Times in Paradise. Los Angeles Times* (February 1988); See also, Blackford, M., *Business, Government, Tourism, and the Environment: Maui in the 1980s and 1990s.* Business & Economic History. (October 1998).

[116] *Id.*

had become such an important component of Arizona's economy that some referred to Arizona's economic base as "growth itself." As growth evaporated, so did Arizona's future some argued: an example of this idea was portrayed in an article published in Barron's entitled *Phoenix Descending.*[117] While the rest of the nation continued expanding until the Gulf War, Arizona's growth machine slowed to a crawl. Arizona dropped from the rankings as one of the fastest-growing states into the bottom tier. After growing by 9.7 percent in 1984 and 8.2 percent the following year, nonfarm employment growth slowed to less than 2.5 percent annually in 1988 and 1989, less than two percent in 1990, and only 0.6 percent in 1991.

From 1984 through 1987, Arizona's population grew at a 6.5 percent annual rate. From 1989 through 1992, the increase averaged 1.7 percent annually. In commenting on how Arizona's experience might relate to Nevada's current condition, one notable observer said: [118]

[a]s bad as this episode was for Arizona, it could be even worse in a Nevada water crisis. In Arizona, growth receded for roughly five years but returned by the mid-1990's once the oversupply of building was absorbed and building resumed. But during those years, Arizona's economy and population continued to grow, albeit at a slow rate. A water crisis could not only bring growth to a halt but could prompt an outright decline in population, which would be much worse.

The cases of Arizona, Seattle, Maui, Texas and Louisiana shed some meaningful light on the potential problems that can arise as a result of a growth interruption, particularly where there is a lack of economic diversity. These are not isolated or unusual scenarios. Rapid structural changes have lead to economic instability in several other jurisdictions, including without limitation:

1) Military base closures in Northern California during the early 1990s;

2) Automobile plant relocations/closures in Michigan and other Midwestern states during the 1970s and 1980s;

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[117] Laing, J.R. *Phoenix Descending: Is a Boom Town Going Bust?* Barron's (December 1988).

[118] Interview and email exchange with Dr. Marshall Vest, University of Arizona, review panel member. 2003.

3) Financial market reliance in New York in the 1980s and 1990s;

4) Declines in Pittsburgh's steel industry during the 1980s; and

5) West Virginia's dependence on the coal industry throughout the mid-1900s.

THE IMPACT OF GROWTH LIMITATIONS

The preceding section looked at how rapid, unexpected changes affected selected communities. Also relevant to this vein of research are studies that focus on the impacts of deliberate growth control measures. How land use policy affects state and local economies has witnessed increasing attention over the past several years. Arizona's attempt to pass Proposition 202 (the *Citizens Growth Management Initiative*);[119] Santa Fe, New Mexico's potential water shortage;[120] and a desire to persuade construction unions to embrace "smart growth" concepts by the Community Resource Development Unit of the Ford Foundation;[121] all add to relevant studies in the area. In addition, a number of smaller comparative analyses and academic articles are also helpful.

Research Overview

Faced with increasing population pressures, various communities throughout the United States have adopted some form of growth-control.[122] These controls manifest themselves in several ways, including annual limits on the issuance of building permits, a reduction in allowable development densities, the imposition of development impact fees, the establishment of urban growth boundaries or timing ordinances designed to delay development

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[119] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. (July 2002)

[120] Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe*. University of New Mexico, Bureau of Business and Economic Research. (May 2002).

[121] Mattera, P. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment*. Good Jobs First: Washington D.C. Pgs. 5-7 (Nov. 2003)

[122] Brueckner, J.K. *Strategic Control of Growth in a System of Cities*. Journal of Public Economics. 57 Pg. 393 (1995); *see also* Nelson, A. and Moore T., *Assessing urban growth management: The Case of Portland, Oregon, The USA's largest urban growth boundary*. Land Use Policy. (October 1993). (Noting that many states (e.g., Florida, Georgia, Maine, New Jersey, Rhode Island and Washington) are implementing features of the Oregon growth management plan; however, there had been no systematic assessment of its effectiveness).

projects.[123] Popular support for these measures is linked to a number of motivations, which, according to at least one commendatory, are typically tied to a rationale that preserving open spaces or reducing the impacts of "far-flung development" will have positive impacts on the life-styles of existing residents.[124] These motivations are distinct from, and at times opposed to, the issue of whether the outcome of such limitations is economically beneficial to the community as a whole.[125]

A number of studies have attempted to analyze, measure and document the effects of growth management or control initiatives. They have shown that different types of restrictions have different impacts on growth, *some effective*, *some ineffective*, and *some producing unintended consequences*.[126] These differences notwithstanding, these studies have shown that supply-restriction growth controls generally lead to increased real estate prices.[127] They suggest that positive benefits can be achieved where urban sprawl is limited;[128] however,

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[123] *Id* at 393-94. *See also* Rosen, K. and Katz, L. *Growth management and land use controls: The San Francisco bay area experience*. Journal of the American Real Estate and Urban Economic Association 9. Pg. 321-344 (1981).

[124] *See* Turnbull, G. *Urban Growth Controls: The Transitional Dynamics of Development Fees and Growth Boundaries*. Georgia State University School of Policy Studies, Working Paper No. 03-05 (August 2003).

[125] *Id.*

[126] *Id.* (Noting that "[b]ecause the efficient [urban growth boundary] decreases the supply of developable land to the market in the long run, it leads to higher returns to developed land out of the steady state. The higher private returns elicit faster development than is efficient in the short run." [internal parenthetical omitted]) also (noting that urban growth policies do not necessarily survive from design to implementation without serious modification.); *see also* Wu, JunJie and Plantinga, A. *The influence of public open space policies on urban spatial structure*. The Journal of Environmental Economics and Management. Volume 46, Issue 2 (Sept. 2003) (noting that public policies aimed at addressing open space preservation should not be viewed as "independent of – or necessarily compatible with – growth management goals" as such policies tend to attract residents to a region); *see also* Porter, D. *Managing Growth in American Cities*. The Center for Resource Economics (1997) (noting, "[growth] moratoriums are a visible reminder that the local government has not kept pace with growth, that its pas actions have been too little and too late. A moratorium is an admission of failure on the part of government official.")

[127] *See* Fischel, W.A., *Do Growth Controls Matter? : A Review of Empirical Evidence on the Effectiveness and Efficiency of Local Growth Control Measures*. Lincoln Institute of Land Policy. WP 87-9 (1990); *see also* Riddel, M. *A Dynamic Approach to Estimating Hedonic Prices for Environmental Goods: An Application to Open Space Purchase*, Land Economics, V. 77(4), (2001); *see also* Brueckner, J.K. *Strategic Control of Growth in a System of Cities*. Journal of Public Economics. 57 Pg. 393 (1995).

[128] *See* Frankena, M.W. and Scheffman, D.T., *A theory of development controls in a 'small' city*. Journal of Urban Economics. 15, 203-34 (1981); *see also* Brueckner, J.K. *Growth Controls and land values in an open city*. Land Economics 66 237-248. (1990); *see also*

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growth controls tend to harm consumers to the benefit of landowners.[129] One commentator suggested that it was an antiquated notion to associate "growth management" with efforts to curb growth rather than accommodate it.[130] Studies also often note the potential for "spillover effects," where the growth control measures of a single locality impact all cities in an intertwined region.[131] They have shown that growth control measures are rarely static, which may lead to unanticipated policy challenges and the creation of a heightened policy risk.[132] This risk has the potential to limit beneficial investment into the community.[133]

The outcomes experienced by communities within situ growth management plans can best be described as mixed. Taken on balance, these studies show that policies aimed at controlling growth have differing degrees of effectiveness and unique economic and fiscal consequences.

Arizona's Look at Growth Control

In July 2000, University of Southern California School of Policy, Planning and Development researchers Peter Gordon and Harry Richardson released a report entitled, *The Economic Effects of Arizona's Proposed Citizens Growth Management Initiative*.[134] The initiative had six

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Footnote continued from the previous page.
Engle, R., Navarro P., and Carson R., *On the theory of growth controls*. Journal of Urban Economics 32, 269-83.

[129] Brueckner, J.K. *Strategic Control of Growth in a System of Cities*. Journal of Public Economics. 57 (1995). (Noting that supply-side growth control measures will only be adopted where "landowners have political power.")

[130] Porter, D. *Managing Growth in American Cities*. The Center for Resource Economics (1997). (Also noting that when both San Diego and Portland studies pointed out the difficulties and potential consequences of actions that would cause development to decline, the notion was "dropped as a viable strategy."); *see also* San Diego Economic Development Corporation, *Growth Management and the Economy* (September 1987); *See also* Metro. *Evaluation of Slow-growth and No-growth Policies for the Portland, Region* (1994).

[131] *Id.* at 415; *see also* Turnbull, G. *Urban Growth Controls: The Transitional Dynamics of Development Fees and Growth Boundaries.* Georgia State University School of Policy Studies, Working Paper No. 03-05 (August 2003). (noting that urban growth boundaries must be established at a regional level if they are to be effective.)

[132] Turnbull, G. *Urban Growth Controls: The Transitional Dynamics of Development Fees and Growth Boundaries.* Georgia State University School of Policy Studies, Working Paper No. 03-05 (August 2003).

[133] *Id.*

[134] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. (July 2000).

primary requirements, including, without limitation the establishment of urban growth boundaries.[135]

The Citizens Growth Management Initiative, which became Proposition 202 eventually failed by a two-to-one margin.[136] Nonetheless, the work of Gordon and Richardson was meaningful and is clearly analogous to the course of study undertaken here.

The primary purpose of Gordon and Richardson's study was to estimate the potential impacts of Proposition 202 over a ten-year study period.[137] Introducing their study, the authors cautioned that "[b]ecause [the growth initiative's] passage would represent a major break with past historical trends, it is not possible to forecast what *will* happen with any degree of certainty." [emphasis included in original].[138] The analysis, thus, was a review of "plausible scenarios" reflecting what might occur if growth were to be limited or eliminated altogether.[139]

The conclusion of Gordon and Richardson's analysis is summarized in table format on the following page. It reflects the immediate loss of 235,000 person-years of employment in the short run as well as continued employment erosion, reductions in overall consumer spending and lower rates of homeownership in the longer run.[140] In total, the report concluded that Arizona could expect a cumulative output loss of $120 billion, or $10 billion per year.[141]

In the short-run, Gordon and Richardson provide two alternative impact scenarios. These include: 1) a "best case" where 60 percent of

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[135] *Id.* at ii.
[136] Davis, T. and Juarez, M. *Prop 202: Growth Controls Fail Overwhelmingly*. Arizona Daily Star. http://www.azstarnet.com/vote2000/eday-propositions.shtml. Referenced October 2003.
[137] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. ii-iii (July 2000). Note that two ten year periods were analyzed in this analysis one beginning in 2001 and another beginning in 2003. For purposes of this review only the later is referenced.
[138] *Id.* at iii.
[139] *Id.*
[140] *Id.* at iv-v.
[141] *Id.* at vii.

normal construction takes place in year 1 but only 40 percent takes place in year 2; and 2) a "worst case" where only one-half of normal construction takes place in year 1; and, in year 2, however, builders are presumed to adopt a wait and see stance, not exercising the rest of their vested rights, and a complete (new construction) shut-down occurs.[142] While the authors provide a somewhat extensive treatment of their contention that the "worst case" is in fact the most likely, they provide no direct substantiation for these short-run assumptions.[143]

It is important to note that the long-run impacts tabled are not alternative scenarios (e.g., high, mid and low), but rather, cumulative impacts resulting from the differently impacted sectors of the economy.[144]

Summary of Arizona Impact Analysis Impacts
Short-term & Long-term[145]

Short-term Impacts		**Long-term Impacts** *Impact Categories*		
"Best Case"	*"Most Likely"*	*A*	*B*	*C*
SCENARIO				
60% of the normal construction in yr.1; 40% in yr. 2	50% of the normal construction in yr.1; Shutdown in yr. 2	15% reduction in state's projected employment growth rates (approximates experience in OR and WA)	Reduction of consumer spending on all commodities in response to higher housing costs	Shift in composition of new housing from single family to multi-family units, approximating OR/WA shift
OUTCOME				
Employment loss of 156,115 person-years	Employment loss of 234,696 person-years	Employment loss of 1,256,156 person-years over 12 year period (2001-12)	60% increase in real housing costs over 10 year period (8%/year initially then diminishing to 3% annually); Employment loss of 266,119 person-years over 12-year period	Reduction in new single family housing share from 81% to 67% (in contrast to national trends); Increased "leapfrogging" in search of affordable single-family homes; employment loss of 1,499 person-years over 12-year period

[142] *Id.* at 11.
[143] *Id.* at 12.
[144] *Id.*

Interestingly, Gordon and Richardson conclude "[o]ver the long run, the construction industry escapes relatively mildly, compared with the huge losses in services and retail trade. . ."[146] In fact, they note that service workers will be the hardest hit by a growth moratorium over the long run, making such a proposition regressive by nature.[147]

Gordon and Richardson also considered the fiscal impacts of the proposed growth initiative. They concluded that between 2001 and 2012, the average annual decline in state, local and federal payments would be approximately four percent per year.[148] While this decline may seem small on the surface, the authors warned that many programs and agencies (including schools, public safety, and highways) would need to seek out new revenue sources to make up for the induced shortfalls, and service demands could be expected to increase with increases in the rate of unemployment.[149]

Looking beyond the fiscal and economic ramifications of growth control, Gordon and Richardson also considered impacts on infrastructure and transportation. Citing a study conducted by Professor Helen Ladd, they noted infrastructure costs are lowest in the 250 to 1,250 persons per square mile range, a condition present in the ten fastest growing cities in the United States in the 1990s.[150] They also suggested that policy makers should not discount the "benefits of suburban life," including satisfying residential preferences, the principle of consumer sovereignty, access to good schools, relative safety from crime, access to countryside and recreational amenities, a high degree of mobility and others.[151] With regard to infrastructure, Gordon and Richardson caution that limitations on growth, may lead to unintended consequences.

Footnote continued from the previous page.

[145] *Id.* at iv.

[146] *Id.* at viii.

[147] *Id.* Also noting that only 11 percent of the job losses were anticipated to occur in the high-status groups, including executive, administrative, and managerial workers.

[148] *Id.* at ix.

[149] *Id.*

[150] *Id.* (citing Ladd, Helen F. *Population Growth, Density, and the Costs of Providing Public Services.* Urban Studies, 29:2, 273-295.)

[151] *Id.*

Although omitting attribution, they note, "[r]esearch reveals that a doubling of densities . . .only reduce[s] per capita automobile use by 10 percent, so that with twice as many people in a neighborhood or city, both congestion and air pollution would increase."[152]

Water-Imposed Restrictions on Growth in Santa Fe, New Mexico

In May 2002, Lee Reynis and Tony Sylvester of the University of New Mexico Bureau of Economic Research released a study entitled *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe.*[153] The report considers the economic and fiscal ramifications of four alternative scenarios over the 2000-10 period. They included: 1) a baseline market growth scenario (no water shortage); 2) a water shortage scenario, in which a building moratorium is imposed; 3) a water budget scenario, in which new growth is constrained; and 4) a tightened water budget scenario, in which growth limits are enacted that will lower, but not eliminate, the city's expected growth trend.[154] A summary of these impacts is provided below.

Summary of Santa Fe Impact Analysis Impacts
Scenario Comparison[155]

	Scenarios			
	Market Growth No Water Shortage	*Market Growth Water Shortage*	*Water Budget Moderate Limits*	*Water Budget Tight Limits*
Urban Area Population, 2000-10				
Change	9,679	9,570	9,679	8,872
Compound Annual Growth	1.1%	1.1%	1.1%	1.1%
City Employment, 2000-10				
Change	8,491	5,457	8,491	6,877
Compound Annual Growth	1.6%	1.1%	1.6%	1.3%
City Commercial Floor Area, 2003-10				
Square Feet (000)	2,531	1,629	2,497	1,689
City Taxable Gross Receipts, 2000-10				
Compound Annual Growth	3.9%	3.1%	3.9%	3.4%
City Property Tax Base Additions, 2003-10				
New Construction ($000,000)	197	149	195	159

[152] *Id.* at x.

[153] Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe.* University of New Mexico, Bureau of Business and Economic Research. (May 2002).

Clearly the comparative value of this report is limited by the size of the market. Santa Fe's total urban area population change anticipated to occur between 2000 and 2010, even at optimal levels, accounts for less than two months of Clark County's historical population growth.[156] Nonetheless, the approach, impact magnitude and comparisons are all meaningful.

Reviewing growth limitations in comparable communities, Reynis and Sylvester concluded that 1) growth limitations do not always limit growth; 2) growth limitation may merely shift growth to surrounding areas, and 3) the design of growth control measures can disparately impact low-income and minority households.[157] They found that studies relying primarily on statistical analysis and those relying on case studies of comparable cities illustrate a "continuum of involvement between growth management and growth controls."[158] The authors note the need to differentiate between and coordinate among these key urban growth strategies.

Reynis and Sylvester also consider the question of "growth dependency" in their analysis.[159] They note that construction employment accounted for only 6.9 percent of Santa Fe's non-agricultural employment and between 7.5 and 9.7 percent of the tax base.[160] While the authors concede that these numbers are relatively small and tend to suggest the construction sector plays a relatively minor role in the city's economy, they conclude that their actual effect is much greater than what is implied.[161] They attribute this apparent asymmetry to the interrelationship of construction and other sectors, and find "[b]ecause construction, and particularly housing construction, has such an impact on the overall growth of

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Footnote continued from the previous page.

154 *Id.* at iii-vii.

155 *Id.* at v.

156 *Compare* Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe.* University of New Mexico, Bureau of Business and Economic Research. Pg. v. (May 2002) to University of Nevada Las Vegas, Center for Business and Economic Research. Historical Population. December 2002 and Nevada State Demographer's Office. Population Estimates. June 2003.

157 *Id.* at iv.

158 *Id.* at 55 (citing Katz, Lawrence and Rosen, Kenneth. *The interjurisdictional effects of growth control on housing prices.* Journal of Law & Economics. April 1987. Vol. 30, Issue 1 and Landis, John D. *Do growth controls work?* Journal of American Planning Association. Autumn 92. Vol 58, issue 4. pp 489-509.)

159 *Id.* at 49.

160 *Id.*

161 *Id.* at 49 and 52.

the [tax] base, many. . . municipalities are in a sense addicted to growth."[162]

The Impacts of Smart Growth on Construction Services

In November 2003, *The Jobs are Back in Town*: *Urban Smart Growth & Construction Employment* was released. The report was commissioned by the Ford Foundation and penned by Philip Mattera and Greg LeRoy, two staff members of Good Jobs First.[163] The report was supplemented by the work of Arthur Nelson, Professor and Director of Urban Affairs and Planning at Virginia Polytechnic Institute and State University and Raymond Burby, Professor of City and Regional Planning, University of North Carolina. The Nelson and Burby appendix is entitled, *The Effects of Regional Smart Growth on Metropolitan Growth and Construction: A Preliminary Assessment.*

The fundamental question addressed by Materra and LeRoy is whether smart growth policies, such as the use of growth boundaries in Oregon, reduce construction employment within the policy's implementation area.[164] They concluded that rather than diminishing the number of construction jobs, it turns out that smart growth in many ways increases the demand for construction services.[165]

Mattera and LeRoy cautioned readers that "[c]onsultation with experts and a thorough search of policy reports and academic literature in economics, urban planning and related fields failed to turn up any significant material. . ." putting them in what they called "uncharted research territory."[166] They did cite the work of Gordon and Richardson, but dismissed it out of hand questioning "[t]he authors' unsupported assumption that construction activity would, in the best case scenario, decline by 40 percent in the first year after the growth management plan went into effect."[167]

The authors attempted to craft an analytical approach based on spatial dispersion and labor intensity. While they make a few interesting observations, the analysis lacked technical rigor and analytical precision. Mattera and LeRoy conclude, for example, that Oregon's construction industry has been unaffected by the state's

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[162] *Id.* at 52.
[163] For more information on Good Jobs First see, http://www.goodjobsfirst.org.
[164] Mattera, P. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment*. Good Jobs First: Washington D.C. Pg. 5 (Nov. 2003).
[165] *Id.* at 1.
[166] *Id.* at 7.
[167] *Id.* at 5.

adoption of urban growth boundaries, by comparing Oregon's relative performance as reported in U.S. Census Bureau's Census of Construction for selected years between 1972 and 1997.[168] The author's use years in which Oregon's growth outpaced national averages as empirical evidence that the state's growth measures had no affect on the Oregon economy and dismissed years of significant decline as attributable to outside influences.[169]

Recognizing the limitations of their analysis, Mattera and LeRoy note, "[w]e reach our conclusion concerning Oregon's [urban growth boundaries] on the basis of what is admittedly a simple analysis of construction activity and employment data. For a more sophisticated exercise in data analysis, we turned to [Nelson and Burby]."[170] The work of Nelson and Burby, however, appears to have similar limitations. Nelson and Burby addressed the question of whether regional growth policies dampen development activity by separating the 35 largest metropolitan areas into those with and without growth management policies and comparing relative construction volumes between 1985 and 1995.[171] The authors note that some of these metropolitan areas, including Las Vegas, have natural growth boundaries.[172] Yet, instead of removing these areas from the analysis all-together, the authors characterized these regions as being with growth management policies.[173] Compounding this bias, Nelson and Burby also removed from their study regions that were "grow restrictive" as opposed to "growth accommodating."[174] After making these adjustments, they draw the somewhat questionable conclusion that new construction per capita in regional smart growth areas averaged 30 percent more than in non-regional smart growth areas.[175]

A Closer Look at Portland, Oregon

Beyond the work of Mattera and LeRoy, much has been written about the impact of Oregon's growth management policies. In 1995, the *Wall Street Journal* ran a front-page story entitled: *Portland, Oregon Shows Nation's Planners How to Guide Growth*. By 1998, however, articles run in *The Economist, The Washington Post*, the *Oregonian* began to

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[168] *Id.* at 12.
[169] *Id.* at 14.
[170] *Id.* at 15.
[171] Nelson, A. and Burby, J. *The Effects of Regional Smart Growth on Metropolitan Growth and Construction: a Preliminary Assessment.* Pg. 43. (Nov. 2003).
[172] *Id.* at 46.
[173] *Id.* at 46. Note that areas similarly classified also included Phoenix, Arizona and Los Angles, California.
[174] *Id.* at 49-50.
[175] *Id.* at 54.

question how the impacts of this growth policy were affecting the economy, particularly home prices. Relatively recent studies include *Sprawl and Smart Growth in Metropolitan Portland: Comparing Portland, Oregon, with Vancouver, Washington during the 1990s*,[176] *Assessing Urban Growth Management: the Case of Portland, Oregon,*[177] *A Tale of Two Cities: Phoenix, Portland, Growth and Control*,[178] *Growth Management and Housing Prices: The Case of Portland, Oregon*,[179] and *The Folly of "Smart Growth."*[180] While these reports reflect different degrees of analytical precision and varying viewpoints on the value of growth, they almost uniformly point to presence of measurable impacts. On the one hand, the authors conclude, "[the Oregon] policies real effects appear to be increases in traffic congestion, air pollution, consumer costs, taxes, and just about every other impediment to urban livability"[181] while on the other hand they conclude Portland's growth management impacts effectively "softened the impact of rapid population increases. . ."[182]

Growth Control Measures in Lexington, Kentucky

Similar research has also been conducted in Lexington, Kentucky, where policy measures aimed at limiting growth were implemented beginning in the early 1990s.[183] A report entitled *Urban Growth Controls and Affordable Housing: the Case of Lexington Kentucky* was prepared by Professor Brent Ambrose, director of the University of Kentucky Center for Real Estate Studies, and released in January of 2003.[184] Ambrose concluded that Lexington's "[i]mplementation of the urban growth boundary had produced the intended effect of limiting Lexington's growth. . .as the supply of developable land declined."[185] While Ambrose found that growth controls had only a weak impact

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[176] *Sprawl and Smart Growth in Metropolitan Portland: Comparing Portland, Oregon, with Vancouver, Washington during the 1990s*. Northwest Environment Watch (May 2002).
[177] Nelson, A. and Moore, T. *Assessing urban growth management: the case of Portland, Oregon, the USA's largest urban growth boundary*. Land Use Policy (October 1993).
[178] Franciosi, Robert, *A Tale of Two Cities: Phoenix, Portland, Growth and Control*. The Goldwater Institute. Arizona Issue Analysis 152. (Oct. 1998).
[179] Phillips, J. and Goodstien, E. *Growth Management and Housing Prices: The Case of Portland, Oregon*. Contemporary Economic Policy. Western Economic Association International. Vol. 18, No. 3 (July 2000).
[180] O'Toole, R. *The Folly of "Smart Growth*". Regulation. Pgs. 20-26 (Fall 2001).
[181] *Id.*
[182] *Sprawl and Smart Growth in Metropolitan Portland: Comparing Portland, Oregon, with Vancouver, Washington during the 1990s*. Northwest Environment Watch (May 2002).
[183] Ambrose, B. *Urban Growth Controls and Affordable Housing: The Case of Lexington, Kentucky*. UK Center for Real Estate Studies, Gatton College of Business and Economics, University of Kentucky. Pgs. 2-4 and 105.
[184] *Id.*
[185] *Id.* at 105.

on the city's housing market, he cautioned that Lexington should expect "significant impacts" into the future.[186]

[186] *Id.*

COMPARATIVE ANALYSIS: SLOW-GROWING VS. FAST-GROWING REGIONS

As part of their analysis, Dr. White and his colleagues performed a cross-sectional study of more than 300 metropolitan areas.[187] This analysis focused on the relationship between population growth and economic performance and well-being.[188] It should be noted that this analysis was "independent" of the group's modeling effort and was merely intended to be a reality check for the more operative analyses. Key findings of the analysis found that, generally speaking, fast-growing areas have a number of economic and social benefits.[189] Dr. White and his colleagues performed a second analysis in which they looked at the growth patterns during the 1960s, 1970s and the period between 1980 and 1984.[190] They concluded, with certain limitations, that metropolitan areas moving from high growth to slow growth tend to suffer economically and socially.[191] Taken total, Dr. White and his colleagues concluded that there is a "[s]trong relationship between the natural maturation growth pattern and community well being."[192]

We undertook a similar set of analyses using updated information available from the U.S. Census Bureau and other national data providers. These analyses are summarized in Appendices 3.1 through 3.3. For the first analysis, metropolitan areas were segmented into

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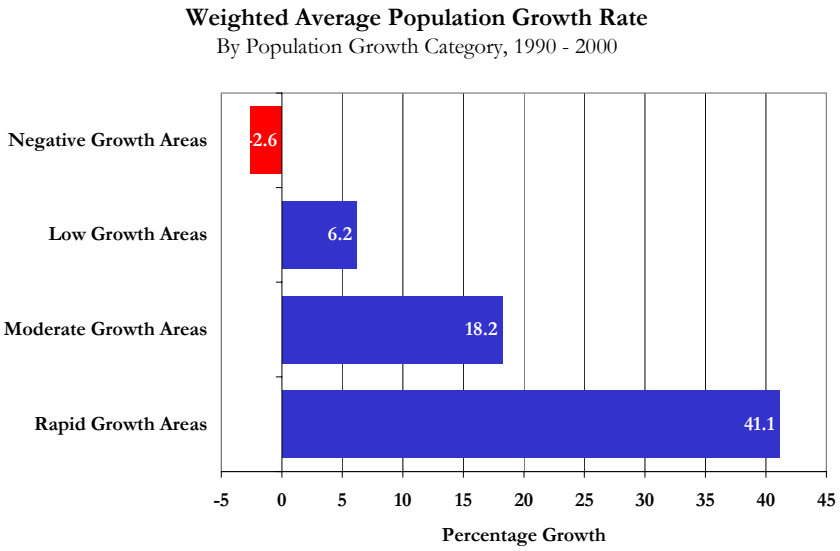
[187] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Executive Summary. November 1992.
[188] *Id.*
[189] *Id.*. Pgs. 44-46 November 1992 (per capita incomes tend to be greatest in those areas with the most rapid population growth; negative-growth communities tend to have higher rates of unemployment; housing values and rents tend to have a direct relationship with population growth; property taxes tend to be higher at lower rates of population growth; areas with low growth tend to have higher concentrations of manufacturing employment; rapidly growing areas tend to have the highest proportion of workers in government positions; A rapid shift from high growth to slow growth could displace up to 18 percent of workers in retail trade).
[190] *Id.* at 47.
[191] *Id.* at 47-50. (areas moving from high growth to low growth tend to have the highest rates of unemployment; cities that follow a natural rate of unemployment tend to have the lowest rates of unemployment; areas moving from high growth to low growth tend to have the lowest rates of unemployment; monthly housing rents were highest in area moving from high to low growth and areas with consecutive high growth (noting that the high rents attributable to the high to low growth group were an aberration); housing vacancy rates tend to be low in areas moving from high to low grow and high in areas with higher growth (here that the authors cite their surprise at the finding); building permits are highest in high growth areas.
[192] *Id.* at 51.



four growth groups based on population growth between 1990 and 2000.

Growth rates ranged from a low of minus 2.6 percent for the "negative" growth group to 41.1 percent for the metro areas reporting "rapid" growth. The majority of metropolitan areas were classified as "low" or "moderate" growth areas, with average growth rates of 6.2 and 18.2 percent, respectively.

Our analysis found relatively little correlation between population growth and the majority of social and economic variables reviewed.[193] Unemployment rates tended to be higher in faster-growing areas, and per capita income and income growth tended to be higher as well. Not surprisingly, building permits, median housing values and rents were higher in faster-growing regions. Property taxes also tended to be lower in those areas. These general trends notwithstanding, the variability of cases within each growth group was relatively wide, making the analysis largely inconclusive.

The second comparative analysis (e.g., the analysis looking at growth rates between 1960 and 1984) was also replicated and extended to include the decades between 1980 and 1990 and 1990 and 2000.[194] Some of our findings were consistent with those of the 1992 study, while others were quite different. Taken as a whole, the analysis was predominately inconclusive, as we did not find the same "strong relationship" between natural maturation (e.g., going from high growth to moderate growth to low growth in each of the study periods).

A third analysis was undertaken which compared a number of socio-economic variables among the 15 fastest-growing and the 15 slowest-growing metro areas for the ten years ending 2000.[195] There were a number of limitations to this analysis; however, speaking generally, faster-growing MSAs had slightly more growth in per capita income; significantly more retail sales activity; lower property, income and sales taxes; lower commercial and industrial power charges; lower

[193] Please see Appendix 3.1.
[194] Please see Appendix 3.2.
[195] Please see Appendix 3.3.

construction costs; lower home values; a lower cost of living; longer commute times; and higher crime rates. Again, some of these findings are consistent with those of the White Report while some conflict with it. Additionally, some of these findings are consistent with the other two analyses outlined in this section and others are not.

"[a] swift and severe change in growth patterns has far-reaching ramifications for a region's economy and the well-being of its residents."

We note that the findings contained herein are generally consistent with the work of Pack, whose considerably more detailed and complex study in this area concluded that there is no relationship between population growth and key socioeconomic measures (i.e., unemployment, poverty rate, and educational attainment).[196] Pack did note a relatively strong relationship between income growth and these measures. The somewhat close relationship between population growth and income growth provides at least some explanation as to why some of the relationships seem rational and others do not.

Taking the information contained in this section and that provided in the preceding section (literature review), it appears reasonable to conclude that there are good and bad attributes to slow-growing and fast-growing economies; however, a swift and severe change in growth patterns has far-reaching ramifications for a region's economy and the well-being of its residents.

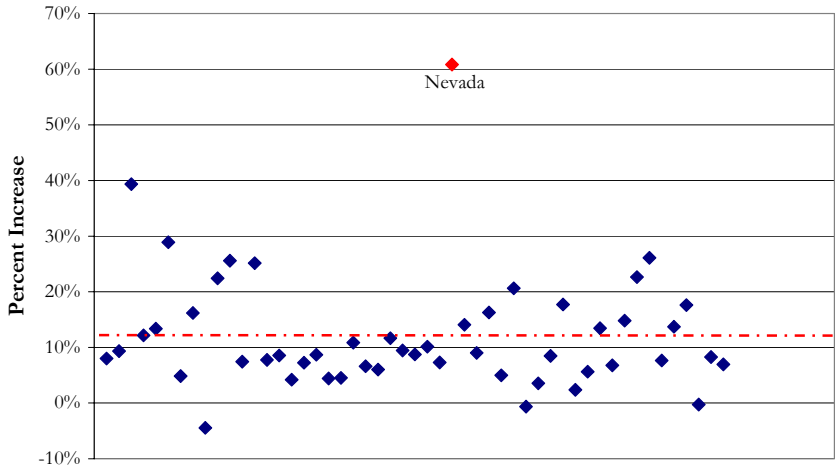
[196] Pack, J.R. *Growth and Convergence in Metropolitan America*. Brooking Institute Press: Washington, D.C. Pgs. 83 and 90 (2002).

BASELINE IMPACT CONSIDERATIONS

In the first section of this summary report, we reviewed a number of economic indicators for the Nevada and Clark County economies. In the second and third sections, we look at how deliberate and unexpected changes in growth patterns have (or were expected to) impact communities as well as the attributes of slow-growing and fast-growing metropolitan areas. This section expands upon these foundational analyses by looking more closely at the impacts of growth-related industries.

Population Growth by State, 1992 - 2002

(Each dot represents one state)



Learned members of our review panel cautioned us on more than one occasion to recognize and reflect the unique character of Nevada's economy and socio-economic structure. In economic terms, Nevada is in many ways an "outlier." An outlier is generally defined as a data point lying apart from the balance of data points.[197] At times outliers are properly removed from an analysis because they tend to "pull" trendlines away from a true central tendency.[198] Importantly, the focal point of this analysis is on the outlier itself opposed to the central tendency. While the experiences of other jurisdictions are important to our study, their relevance is undeniably limited by the reality that Nevada is like no other state. This is clearly demonstrated by the chart provided above. Each dot on this chart represents a single state's population growth between 1992 and 2002. At more than 60 percent, Nevada is not only distant from the mean but also more than 20 percentage points above the next closest state (Arizona at 39 percent).

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[197] *See* Black, K. *Business Statistics An Introductory Course.* West Publishing. New York. 509 (1992); *see also* University of California, Berkley. *Glossary of Statistical Terms.* Available at http://stat-www.berkeley.edu/~stark/SticiGui/Text/gloss.htm#o. Accessed October 2003. (Noting "[a]n outlier is an observation that is many SD's from the mean. It is sometimes tempting to discard outliers, but this is imprudent unless the cause of the outlier can be identified, and the outlier is determined to be spurious. Otherwise, discarding outliers can cause one to underestimate the true variability of the measurement process.").

[198] *Id.*

As noted in the preceding sections, three types of impacts are considered in this analysis: 1) economic, 2) fiscal and 3) social. Economic impacts include changes in employment, wages and output. These are normally classified as direct, indirect or induced, as they consider effects stemming directly from development activity as well as those related to dollars moving through the economy.[199] The relationship of these direct and indirect impacts is sometimes referred to as the "ripple effect." To measure these impacts we have used an input-output model developed and maintained by the Minnesota Implan Group, Inc. ("IMPLAN").[200] This model is one of three widely used and generally accepted in the area of economic impact analysis.[201]

Fiscal impacts, by comparison, are associated with public service demands and revenues.[202] Public service demands include, without limitation, police and fire protection, the maintenance of roads, the cost of building schools and educating children, economic development costs and the like.[203] Public revenues include taxes, fees, and other levies imposed on individuals and businesses within a

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[199] Economic impacts are generally classified as direct, indirect and induced. *Direct impacts* are changes in the final demand for services. If we were to construct a new house, for example, the labors building the house would be direct employment and the wages and salaries they are paid would be direct compensation. *Indirect impacts* are those resulting from the interaction of local industries purchasing from other local industries. Using our homebuilding example, if we were to purchase the wood used in constructing our house from a local lumber yard, those expenditures would be *indirect* spending and the lumber yard employees supported by our spending would be considered indirect employment. Finally, *induced impacts*, are impacts resulting from the interaction of institutions (most often households). Again relying on our home construction example, if the labors directly paid by the project were to purchase goods and services from their local mall or grocery store, this would likely result in the employment of additional people, the payment of additional wages and salaries, and the stimulation of additional output. These impacts are referred to as *induced*. Oftentimes *indirect* and *induced* impacts are lumped together, as we have done here, and referred to as indirect impacts. *See Implan Professional v.2.0 User's Guide, Analysis Guide, and Data Guide*. MIG, Inc. Minnesota (2000); *see also* Schwer, R.K. and Rickman, D.S. *A comparison of the multipliers of IMPLAN, REMI, and RIMS II: Benchmarking ready-made models for comparison*. The Annals of Regional Science 29 (4)363-374 (1995).

[200] *Implan Professional v.2.0 User's Guide, Analysis Guide, and Data Guide*. MIG, Inc. Minnesota (2000).

[201] Schwer, R.K. and Rickman, D.S. *A comparison of the multipliers of IMPLAN, REMI, and RIMS II: Benchmarking ready-made models for comparison*. The Annals of Regional Science 29 (4)363-374 (1995).

[202] Burchell, R.W. and Listokin, D., *The Fiscal Impact Handbook: Estimating Local Costs and Revenues of Land Development*. Center for Urban Policy Research. New Jersey (6th ed. 1988).

[203] *Id.*

particular jurisdiction.[204] When public revenues exceed the cost of services demanded, a policy or development decision is said to have a net positive fiscal impact. Conversely, when a policy decision's associated service demands exceed the revenues generated, a net negative fiscal impact is said to exist. By contrast to economic impacts, fiscal impacts reflect only the *direct* consequence of a development or policy decision.[205] This is attributed to the "near impossibility" of accurately predicting the secondary fiscal consequences of growth as well as the potential for double counting.[206]

Social impacts are less concrete than either fiscal or economic impacts. They include quality of life issues stemming from the utility of time and retention or maximization of well-being. While not easily measurable, social impacts are by no means ethereal. It is widely recognized that there is value associated with having safe streets, low levels of pollution and quality education.[207]

ECONOMIC IMPACTS

Input-Output Modeling[208]

Input-output analysis, also known as the inter-industry analysis, is the name given to an analytical work first conducted by Wassily Leontief

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[204] *Id.*
[205] *Id.*
[206] *Id.*
[207] *See*, for example, Kenneth D. Frederick and Gregory E. Schwarz, *Socioeconomic Impacts of Climate Variability and Change on U.S. Water Resources*. Resources for the Future, Discussion Paper 00–21. May 2000; *see also* Dallas Burtraw and Alan Krupnick, *Measuring the Value of Health Improvements from Great Lakes Cleanup*. Resources for the Future, Discussion Paper 99-34. April 1999; Sandra E. Black, *Measuring the value of better schools*. Article provided by Federal Reserve Bank of New York in its journal Economic Policy Review. 1998; *see also* Keita Kawagoe and Nao Fukunga, *Identifying the Value of Public Services by the Contingent Valuation Method*, Nomura Research Institute. Paper No. 39 December 1, 2001.
[208] This sections provides only a cursory treatment of input-output models. There is an extensive body of work on input-output modeling systems. The interested reader is directed to Rey, S. *Integrated regional econometric input-output modeling: Issues and opportunities*, Papers in Regional Science (web site) 2000 79 (3)271-292; and Schwer, R.K. and Rickman, D.S. *A comparison of the multipliers of IMPLAN, REMI, and RIMS II: Benchmarking ready-made models for comparison*. The Annals of Regional Science 29 (4)363-374 (1995).

in the late 1930's.[209] The fundamental purpose of the input-output framework is to analyze the interdependence of industries in an economy through market based transactions. Input-output analysis can provide important and timely information on the interrelationships in a regional economy and the impacts of changes on that economy.

To identify the interrelationships in a regional economy, IMPLAN (Impact Analysis for Planning) software and databases are used. IMPLAN employs a regional social accounting system and can be used to generate a set of balanced accounts and multipliers. The social accounting system is an extension of input-output analysis. Input-output analysis has been expanded beyond market-based transaction accounting to include non-market financial flows by using a social accounting matrix (or SAM) framework. The model describes the transfer of money between industries and institutions (i.e., households) and contains both market-based and non-market financial flows, such as inter-institutional transfers.

IMPLAN uses regional purchase coefficients generated by complex econometric equations that predict local purchases based on a region's characteristics. In this case, the region is Clark County or Nevada. Output from the model includes descriptive measures of the economy including total industry output, employment and value-added for over 500 industries. For reporting purposes these 500 plus industries have been aggregated by standard industry classifications. Reported industries are:

1) Agriculture, Forestry and Fishing;
2) Manufacturing;
3) Mining;
4) Construction;
5) Transportation, Communication and Public Utilities (TCPU);
6) Finance, Insurance and Real Estate (FIRE);
7) Retail Trade;
8) Wholesale Trade;
9) Services; and
10) Government.

[209] *See* U.S. Bureau of Economic Analysis. *Wassily Leontief and His Contributions to Economic Accounting.* March 1999. Survey of Current Business. Available at http://www.bea.doc.gov/bea/ARTICLES.

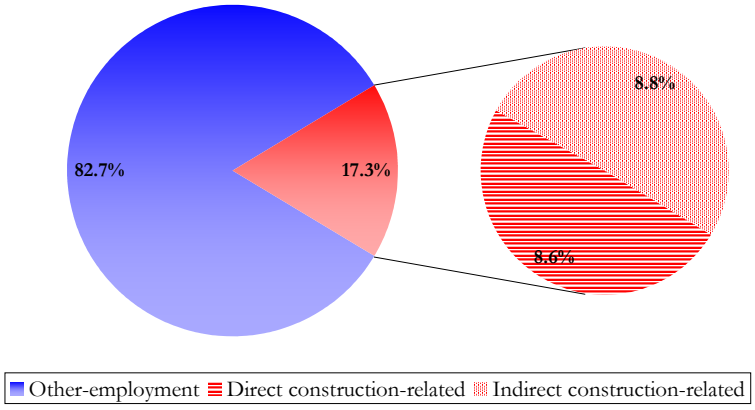
Total industry "output" is defined as the value of production by industry per year. Employment represents total wage and salary employees, as well as self-employed jobs in a region, for both full-time and part-time workers. Total value added is defined as all income to workers paid by employers; self-employed income; interests, rents, royalties, dividends, and profit payments; and excise and sales taxes paid by individuals to businesses. With regard to value added, this analysis focuses most directly on the income paid to workers and proprietors, or labor income.

The model also can be used for predictive purposes by providing estimates of multipliers. Multipliers describe how economies relate to one another, and are used to analyze how changes or shocks to the economy, such as a growth interruption, will impact not only growth-related industries (e.g., the construction industry) but all industries within our interrelated economic framework. Multipliers measure the response of the economy to a change in demand or production. Multiplier-based analyses generally focuses on the effects of exogenous changes to 1) production (or output), 2) income and 3) employment. In this analysis, we focus on changes in employment; however, we note that a similar disturbance could have been modeled by other means, such as by reducing levels of production.

The notion of multipliers rests upon the difference between the initial effect of an exogenous change and the total effects of that change. **Direct effects** measure the response for a given industry following a change in final demand for that same industry. For example, direct employment, income and output losses in this analysis relate specifically to declines in the construction sector. **Indirect effects** represent the response by all local industries following a change in final demand for a specific industry. In this case, how all other sectors of our economy respond to an interruption to normal growth in the construction sector. **Induced effects** represent the response by all local industries caused by increased (or decreased) expenditures of new household income and inter-institutional transfers generated (or lost) from the direct and indirect effects of a change in final demand for a specific industry. In this case, if a construction employee were to lose her job, she would be expected to spend less money at the supermarket, at her local movie theater or on a vacation with her family. Induced effects capture these additional impacts as they ripple through the economy. **Total effects** are the sum of direct, indirect and induced effects. In this analysis, we are interested in the effects of a reduced level of growth-related employment (e.g., construction employment) associated with a hypothetical "shock" to the Clark County economy. This baseline quantifies these effects assuming no "shock" takes place. It is from this baseline, that conditional assessments are measured.

Input-output models, as is the case with all economics-based models, are not without their limitations.[210] The static model used in this analysis, IMPLAN, for example, assumes that capital and labor are used in fixed proportions.[211] This means that for every job lost, a fixed loss in investment, income and employment will result. In reality, developers, consumers and governments respond to growth interruptions in complex ways by changing their mix of capital, labor and types and frequencies of development. Importantly, each interrupting force would have its own unique characteristics, affecting how consumers and businesses respond to the given disturbance. The question presented in this analysis was specific to the impacts of a growth interruption *irrespective of its underlying cause*. Thus, the IMPLAN model is used to provide insights into how Nevada's economy might be impacted, notwithstanding the additional analysis that would be warranted should more specific information on the source of the interruption be made available. We would highly recommend that should a specific interruption be identified as occurring or eminent, these issues be revisited with greater precision and scrutiny.

Clark County Employment Distribution
Direct & Indirect Construction Related Employment
as a Percentage of Total Employment: 2003



Employment

In 2003, construction-related employment accounted for 77,700 jobs or roughly 8.6 percent of the region's 908,000 positions.[212] Indirect employment multipliers available through IMPLAN, suggest that 1.03

[210] *See Charney, A.. and Vest, M. Modeling Practices and Their Ability to Assess Tax/Expenditure Economic Impacts.* Economic and Business Research Eller College of Business and Public Administration.

[211] It is important to note here that IMPLAN is a static model. Very simply put, this means that the impacts assumed to occur materialize in the year in which the interrupting force is realized. More dynamic models may reflect indirect and induced impacts flowing into later periods. While the timing of these impacts differs from model to model, when reduced to their essence, the relative degree of the impacts tends to be quite similar. See Schwer, R.K. and Rickman, D.S. *A comparison of the multipliers of IMPLAN, REMI, and RIMS II: Benchmarking ready-made models for comparison.* The Annals of Regional Science 29 (4)363-374 (1995).

[212] Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. January 2003.

jobs are supported by each job existing or created in the construction sector. Thus, total employment directly or indirectly related to construction activity is estimated to be approximately 157,000, or 16 percent of the region's employment total.

The industries most dependent upon construction activity include wholesale and retail trade and services sectors. This is generally consistent with the findings of Gordon and Richardson who studied the impacts of proposed growth restrictions in Arizona and concluded, "[t]he pain is spread widely"[214] as "[o]ther hard-hit sectors are services and retail trade[, and] [t]he longer run analysis shows that while the construction sector experiences the most losses in the moratorium years, services and retail trade suffer proportionally greater employment losses in every year thereafter."[215] (internal tabular references omitted).

Estimated Employment Impacts, by Industry
100 Construction Jobs[213]

Sector	Direct	Indirect	Induced	Total
Agriculture	0	0.9	0.3	1.2
Mining	0	0.1	0	0.1
Construction	100	0.4	0.3	100.7
Manufacturing	0	1.7	0.4	2.1
TCPU	0	3.8	2.6	6.4
Trade	0	25.3	16	41.3
FIRE	0	1.6	4	5.6
Services	0	23.8	18.9	42.7
Government	0	1.3	1.3	2.6
Total	100	58.9	43.8	202.7

In the longer run, the number of construction-related employees is anticipated to decline. By 2020, the number of direct construction jobs is projected to be just over 68,000, or approximately 6.4 percent of the region's projected 1.1 million employees.[216] Including direct and indirect employment, total construction-related employment is anticipated to decline to 138,000 by 2020; 19,000 fewer jobs than exist today. Importantly, with or without an unforeseen "interruption" in the region's growth pattern, Southern Nevada will need to adapt to normal structural changes in its economy. That is to say that some of those employees dependent on the region's higher-than-average rate of growth will be displaced, at least in part, should the projected growth pattern materialize as anticipated.

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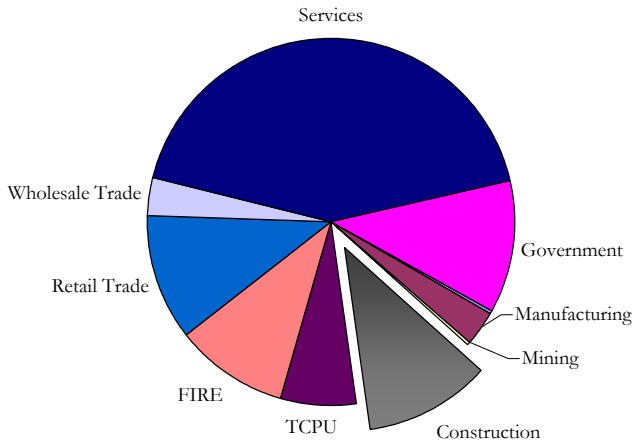
[213] Based on analysis of 100 jobs reduced in IMPLAN model. Sectors have been aggregated to the one-digit standard industrial classification level for summary reporting purposes. Please see footnote 167, supra, for an explanation of direct, indirect and induced impacts.

[214] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. 19 (July 2000).

[215] *Id.* at 18.

[216] Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. January 2003.

Clark County Labor Income Distribution
Direct Income by Sector



Estimated Labor Income Impacts by Industry
100 Construction Jobs[218]

Sector	Direct	Indirect	Induced	Total
Agriculture	$0	$12,701	$4,905	$17,606
Mining	$0	$6,124	$857	$6,981
Construction	$4,846,897	$19,611	$15,119	$4,881,627
Manufacturing	$0	$73,489	$18,607	$92,097
TCPU	$0	$169,459	$116,633	$286,092
Trade	$0	$678,503	$428,586	$1,107,089
FIRE	$0	$61,515	$154,583	$216,098
Services	$0	$855,673	$679,783	$1,535,456
Government	$0	$65,795	$66,022	$131,817
Total	**$4,846,897**	**$1,942,871**	**$1,485,094**	**$8,274,862**

Labor Income

Labor income includes wages and salaries paid to employees as well as income accruing to proprietors.[217] For consistency purposes, all labor income figures are expressed in constant 2000 dollars. In 2003, Clark County's total labor income is estimated to be $33.7 billion, with approximately 11 percent of that total ($3.8 billion) attributed to construction-related activities.

Wages and salaries paid directly to construction-related employees do not reflect the impact of labor income dependent upon supplier purchases (i.e., a homebuilder purchasing cement to lay a foundation from a local supplier) or induced impacts (i.e., laborers spending their wages and salaries at grocery stores or hospitals, which, in part, support wages and salaries of grocery store and hospital employees). Multipliers available through IMPLAN suggest for every one $1 of labor income lost in the construction sector a total of $1.71 in labor income is lost throughout the economy.

Overall, labor income is anticipated to follow the general trend of employment growth. That is to say, all other things held constant, the more employees Southern Nevada has the more labor income growth the region can expect. The falling share of construction-related employment, however, suggests that wages and salaries paid to construction-related employees will

[217] *See* Minnesota IMPLAN Group, *User's Guide, Analysis Guide, Data Guide*, IMPLAN Professional Addition v.2. 2000.
[218] Based on analysis of 100 jobs reduced in IMPLAN model. Sectors have been aggregated to the one-digit standard industrial classification level for summary reporting purposes. Please see footnote 167, supra, for an explanation of direct, indirect and induced impacts.

increase from its present level, approximately, $3.8 billion, to approximately $3.3 billion by 2020. In nominal terms, this is a decline of

Estimated Output Impacts by Industry
100 Construction Jobs[219]

Sector	Direct	Indirect	Induced	Total
Agriculture	$0	$33,884	$13,084	$46,968
Mining	$0	$20,226	$2,829	$23,055
Construction	$14,967,278	$60,559	$46,688	$15,074,525
Manufacturing	$0	$275,888	$69,853	$345,741
TCPU	$0	$561,790	$386,662	$948,452
Trade	$0	$1,510,558	$954,165	$2,464,723
FIRE	$0	$393,034	$987,664	$1,380,698
Services	$0	$1,853,828	$1,472,760	$3,326,588
Government	$0	$88,236	$88,540	$176,775
Total	**$14,967,278**	**$4,798,001**	**$4,022,244**	**$23,787,523**

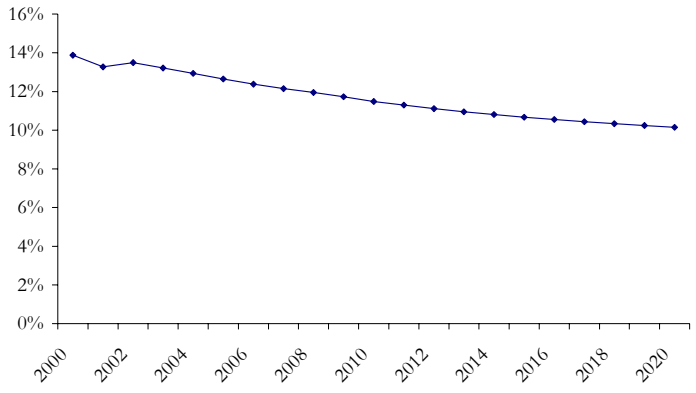
in construction industry earning, as it declines to 7.8 percent of total labor income.

Economic Output

Economic output is a measure of activity occurring within a regional economy, or the value of production by industry per year.[220] It is often erroneously referred to as sales and confused with gross regional product. Output differs from sales in that product need not be sold to be produced; it differs from gross regional product in that it reflects the total value of production as opposed to the value-added by the industry. All economic output estimates are expressed in nominal 2000 dollars.

IMPLAN suggests that total economic output in Clark County is roughly $88 billion, or approximately 60 percent of statewide production. Construction activities account for $11.6 billion, or 13 percent of the statewide output. Output in the construction sector does not occur in a vacuum; other industries are also impacted. For every $1 in direct construction activity a total of $1.59 in economic output is created within the overall economy. In total, the IMPLAN multiplier data suggest that more than one-fifth of Southern Nevada's economy is either directly or indirectly dependent upon the construction sector.

Clark County Construction Output
Construction as a Percentage of Total Output



As a more "average" level construction emerges in the longer run, construction output is anticipated to decline from

[219] Based on analysis of 100 jobs reduced in IMPLAN model. Sectors have been aggregated to the one-digit standard industrial classification level for summary reporting purposes. Please see footnote 167, supra, for an explanation of direct, indirect and induced impacts.

[220] *See* Minnesota IMPLAN Group, *User's Guide, Analysis Guide, Data Guide*, IMPLAN Professional Addition v.2. 2000.

roughly 13 percent of the region's gross output to approximately 10 percent by 2020. If output per employee were to remain relatively constant ($150,000 in 2000 dollars), total economic output associated with construction would decline to $10.2 billion. Again, this trend reflects the structural changes anticipated as the region's population and employment as growth slows and the demand for new construction is reduced.

A Broader Look: The State of Nevada

The baseline impacts discussed in the preceding sections looked only at Clark County; however, it would be naïve to believe that the effects of a growth interruption in Clark County would be confined to Southern Nevada. Construction-related industries purchase or demand goods and services from businesses throughout the state, be it turf, architectural design or legal services. This section briefly looks at how Nevada's economy is impacted by employment, income and output generated by development activity in Clark County.

The relative magnitude of the "balance of state" impacts is relatively small when compared to impacts within Clark County's boundaries. The relative smallness of these numbers should not be interpreted as a lack of materiality. Losing 100 construction jobs in Southern Nevada not only results in a statewide job loss of 210 positions, but more than 7 of those displaced will be in the northern and rural region's of the state. Labor income and output are also lost, as the amount of instate purchases decline so do salaries and wages paid.

Impact of a Construction Employment in Nevada
100 Construction Jobs[221]

		Total Impact (Direct + Indirect)		
	Baseline Impact	Clark County	Balance of Counties	Statewide
Employment	100.0	202.7	7.2	209.9
Labor Income	$4,846,900	$8,274,900	$229,500	$8,504,400
Output	$14,967,300	$23,787,500	$732,400	$24,591,900

Including direct, indirect and induced impacts, Southern Nevada's growth-related industries (e.g., construction) account for roughly 12.3

[221] Based on analysis of 100 jobs reduced in IMPLAN model. Sectors have been aggregated to the one-digit standard industrial classification level for summary reporting purposes. Please see footnote 167, supra, for an explanation of direct, indirect and induced impacts. Totals may not sum to 100 percent due to rounding.

percent of statewide employment, 13.6 percent of the state's labor income and 12.2 percent of its total economic output. While the majority of these impacts are specific to Southern Nevada, roughly 6.5 percent of the indirect and induced employment impacts are sourced to areas outside its borders.

FISCAL IMPACTS

This analysis focuses on selected revenues that support state and local government services and the funds that account for them. Included are:

- State of Nevada - General Fund;
- Clark County - General Fund;
- The General Funds for the following cities: Las Vegas, Henderson, North Las Vegas, Mesquite and Boulder City;
- The General Funds and certain debt service funds of the following Library Districts: Las Vegas-Clark County, Henderson, North Las Vegas and Boulder City;
- Selected special revenue funds from the county and the cities;
- Selected capital projects funds from the county and the cities;
- Selected debt service funds from the county and the cities;
- Clark County School District's General Fund, special revenue funds, capital projects and debt service funds; and
- Selected Enterprise Funds from the county and the cities.

The analysis focused on activities performed by these governmental units and the revenues that support those activities. The analysis did not include a complete compilation of all governmental funds. The funds of the state and local units of government analyzed in this report reflect approximately $7.5 billion of revenue during FY 2001-02. That was the last year for which audited financial statements were available at the time this analysis was completed. Revenues were generally classified into six major categories:

- Taxes;
- Licenses and permits;
- Intergovernmental revenues;
- Charges for services;

- Fines and forfeitures; and
- Other miscellaneous revenues.

Within each of these categories there can be more than a hundred sub-classifications that further distinguish between revenue sources. The revenues are enumerated in the exhibits and appendices to this analysis. While there are well over one hundred individual sources of revenue, approximately seven sources comprise the vast majority of the total. These are:

- Ad valorem (property tax);
- Sales and use tax;
- Gaming fees;
- Licenses and taxes;
- Room tax;
- Interest; and
- Consolidated tax ("C-Tax").

Some of these revenues are self explanatory; however, certain revenues warrant additional description for the sake of clarity. Brief descriptions for the Nevada's sales and use tax and the consolidated tax follow.

Sales and Use Taxes

The table on the following page demonstrates the components of Nevada's sales and use tax in Clark County as well as the entities to which these revenues are distributed. The base rate is 6.5 percent, and is uniformly applied throughout the state. This "base rate" is comprised of a 2 percent tax that is deposited into the State's General Fund; a 2.25 percent Local School Support Tax that is earmarked for the county school district; a 1.75 percent Supplemental City/County Relief Tax and the 0.5 percent Basic City/County Relief Tax; both of which are deposited into the State Tax Distributive Fund. The State Tax Distributive Fund contains a number of revenues that are ultimately distributed to units of local government. This funding source is commonly referred to as the Consolidated Tax (or "C-tax") and is discussed further below. Finally, there are three 0.25 percent county option increments of the sales and use tax for flood control, water and sewer infrastructure and public mass transit.

Taxable sales in Nevada for Fiscal Year 2001-02 totaled approximately $31.8 billion of which nearly $23 billion represents Clark County sales activity. This level of sales generated approximately $2.2 billion statewide in sales and use tax revenue. Sales tax accounted for approximately 37 percent of all state general fund revenues, and is Nevada's second largest source of funding (property tax is first). The various compiling schedules attached as appendices to this report and discussed in later sections detail the importance of the sales and use tax in funding state and local governments at all levels.

Sales and Use Tax Components

	Rate	Percent of Total	Benefiting Entity
State Sales and Use Tax	0.0200	27.6%	State General Fund
Local School Support Tax	0.0225	31.0%	County School District
Supplemental City/County Relief Tax	0.0175	24.1%	Consolidated Tax
Basic City/County Relief Tax	0.0050	6.9%	Consolidated Tax
Subtotal	**0.0650**	**89.7%**	
County Option Tax	0.0025	3.4%	Flood Control
County Option Tax	0.0025	3.4%	Public Mass Transit
County Option Tax	0.0025	3.4%	Sewer/Water Infrastructure
Subtotal County Options	**0.0075**	**10.3%**	
Total Sales and Use Tax	**0.0725**	**100.0%**	

To better understand the importance of this revenue source, particularly as it relates to education funding, a brief discussion of the funding mechanism for education may be beneficial. The funding of education is a state responsibility, which is often misunderstood. While education revenues are referred to as "local" (i.e., the $0.50 property tax and the local school support tax), it is important to note that local governments have no control over these levies or their distributions. The Nevada Plan requires that school districts are guaranteed a predisposed funding level. The State Distributive School Account (the "DSA") is the mechanism by which the state provides financial aid to school districts, and ensures, at least in theory, an equal educational opportunity for all Nevada children. Revenue offsets include certain federal funds, a $0.50 property tax levy, the Local School Support Tax, the Governmental Services Tax and others.

The significance of the guarantee and its potential impact upon state finances should not be minimized or lost. If any "local" source of education funding, including, without limitation, the local school support tax (e.g., the portion of the sales tax earmarked for education), falls short, the state is obligated to "make up" the difference. This difference is historically made up via the state's general fund. As noted above, the state's direct share of the sales and use tax is approximately 37 percent of its general fund revenue total. Thus, if there is a shortfall in the sales taxes earmarked for education, the state is forced to "make up" the difference through a funding source that will also be under performing.

Consolidated Tax

Six revenues, described below, are distributed by the state to local entities via a two-tiered allocation regime. Revenues are first distributed among counties as outlined in the table below. This first tier, commonly referred to as the inter-county distribution, is accomplished through individual distribution formulae. The first-tier distribution formulae are summarized as follows:

Revenue	Distribution Methodology
Basic City/County Relief Tax	Point of origin
Supplemental City/County Relief Tax	Formula based on rural guarantee and exporting counties
Cigarette Tax	Population
Liquor Tax	Population
Real Property Transfer Tax	Point of origin
Governmental Services Tax (Previously Motor Vehicle Privilege Tax)	Point of origin

These revenues are then pooled to form the C-Tax and distributed based on the C-Tax formula within each county (e.g., the second-tier distribution regime). This second-tier distribution is driven by factors including changes in population, assessed valuation and the Consumer Price Index.

Key Baseline Findings

The Narrowness of Nevada's Revenue Base

In FY 2001-02, the State of Nevada General Fund collected approximately $1.75 billion in revenues. The State Sales and Use Tax comprised approximately 37 percent of State General Fund revenues; State Gaming Fees, Licenses and Taxes comprised approximately 34 percent; and the Insurance Premium Tax, approximately 9 percent. The Liquor, Cigarette, Other Tobacco, and the Business License Fees and Taxes together comprise approximately 8 percent. These taxes, in combination, comprise approximately 93 percent of the State General Fund Revenues. The remaining 7 percent is comprised of miscellaneous licenses, Secretary of State Fees, charges for services, fees and fines, interest earnings and other miscellaneous revenues.

In any discussion about the funding of state and local government services would be incomplete without mentioning that the burden of funding governments services falls upon very few revenue sources. As discussed above, the sales and use tax and gaming revenues represent approximately 71 percent of the state General Fund

revenues. Any event which might interrupt the anticipated performance of these revenues would have potentially catastrophic impacts to the provision of government services.

While losses in sales and use tax revenues are somewhat easier to quantify as discussed later in this section, gaming revenue losses are more difficult to assess. It is recognized that the substantial portion of gaming revenues are generated from visitors; however, approximately 20 percent of gaming revenues are attributable to residents of the state.[222] In addition to any lost visitation, an event affecting the number of jobs in the state would be expected to also impact gaming revenues produced.

A loss in gross gaming revenue associated with declines in consumer spending, however, is only one half of the fiscal equation. While some have attempted to make arguments to the contrary, it is abundantly clear that taxes paid by the gaming industry and its patrons offset tax liability that would otherwise be borne by residents if existing services levels were to be maintained and Nevada did not tax gaming. So long as gross gaming revenue growth outpaces population and employment growth, the state's fiscal position will improve. This circumstance was witnessed throughout most of the 1990s; it is not occurring today. This creates a paradox important report to this study for two reasons. First, local governments tend to be less reliant on gaming taxes than is the state. Thus, a reduction in population and employment growth combined with strong growth in gross gaming revenue would likely improve the state's fiscal position while potentially harming the fiscal position of some local entities. Second, Nevada's is heavily steeped in two key sectors: *hospitality* and *construction*. Rapid declines in either will result in negative economic and fiscal consequences. It would be a perilous position to conclude that by merely slowing or stopping growth that the state's overall fiscal position would improve. The result of our current condition is an asymmetrical dependence, in which greater growth in gross gaming revenue would almost certainly improve our fiscal outlook, but a decline in either sector will be problematic. This is a circumstance that exists in absence of the interruption that is the subject of this missive. Nonetheless, it is a fragile equilibrium that cannot be ignored.

While our economy is robust, it is also fragile. Given the extent of the reliance upon these few revenue sources, any event that impedes

[222] *See* Bybee, S., et al. *The Hospitality Industries Impact on the State of Nevada*. The International Gaming Institute. 1998.

the flow of sales tax and gaming revenues will be deeply felt in our state and local government operations.

Key Revenues Impact all Levels of County Services

A summary compilation of the majority of revenues that support local government activities in Clark County was prepared for FY 2001-02. These units included Clark County, the cities of Las Vegas, Henderson, North Las Vegas, Mesquite and Boulder City, the four library districts and redevelopment districts.

Clark County Local Government Units
Revenue Contribution Summary

Revenue Source	Contribution
Ad Valorem (property tax)	26.5%
Consolidated Tax	27.4%
Sales and Use Tax (Flood and Mass Transit)	5.2%
Subtotal	59.1%
Others	40.9%
Total	100.0%

The compilation did not include minor special revenue, capital projects and debt service or internal service funds. The compilation was prepared to demonstrate what revenues support local government services, and to what extent. The compilation is included as Appendix 4.2. The table to the left summarizes the revenues detailed that appendix.

The analysis demonstrates that in FY 2001-02, ad valorem (property tax) comprised approximately 27 percent of total revenues for these selected local government units, C-Tax comprised nearly 27 percent and the sales and use tax represents approximately 5 percent. These three major sources comprise approximately 59 percent of the total revenues received by these local governments. We should note that the 5 percent value shown for the sales and use tax represents only the county option sales taxes for flood control and mass transit. As noted earlier, the Consolidated Tax includes the Basic and Supplemental City/County Relief Tax components of the sales and use tax. While the individual revenues lose their identity in the C-Tax distribution formula, we should point out that these two sources represented approximately 83 percent of the Consolidated Tax in Fiscal Year 2001-02. We should clarify too, that the sales and use tax component in Appendix 4.2 does not include all of the 0.25 percent that supports sewer and water infrastructure. Part of that revenue accrues to the Southern Nevada Water Authority and is included in the Enterprise Funds compilation.[223] The balance of the revenues, approximately 41 percent are comprised of nearly 70 various taxes, licenses and permits, intergovernmental revenues, charges for service and other miscellaneous sources.

[223] The Enterprise Funds compilation is provided in Appendix 4.4.

Appendix 4.3 details the distribution of each revenue source to the various receiving entities included in Appendix 4.2. The following table summarizes that distribution information for the three most significant revenue sources.

Clark County Local Government Units
Revenue Distribution Summary

Revenue Source	County Funds	County Option	City Funds	Library Districts	Debt Service	Redevelopment Districts	Total
Ad Valorem (property tax)	65.1%	0.0%	20.6%	4.2%	8.1%	2.0%	100.0%
Consolidated Tax	53.2%	0.0%	44.4%	2.4%	0.0%	0.0%	100.0%
Sales and Use Tax	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Ad valorem (property taxes) represent approximately 28 percent of total revenues for local governments in Clark County. Of the total property tax, approximately 65 percent of property tax revenues are allocated to funds within the jurisdiction of Clark County; approximately 21 percent to various cities, approximately 4 percent to the four library districts, approximately 8 percent to various local government debt service funds and approximately 2 percent to redevelopment districts.

In the C-Tax distribution, approximately 53 percent accrues to funds within the jurisdiction of the County; 44 percent of the C-Tax accrues to the cities and funds within their jurisdiction; and approximately 2 percent of the C-Tax is distributed to the various library districts. The Debt Service Funds and Redevelopment Districts do not receive distributions of the C-Tax.

The Depreciation Factor and Property Tax Collections

Another consideration that should not be omitted in any discussion of the impacts of a growth interruption is the impact upon the total assessed valuation if there were no new construction value added to the existing ad valorem (property) tax base. In Nevada, the taxable value of land is based upon the full cash value. The value of improvements is based on replacement cost, less depreciation. Improvements are depreciated at a rate of 1.5 percent per year up to 50 years, with a minimum residual value of 25 percent. The assessed value of property is set at 35 percent of the taxable value.

The Assessment Roll prepared by the Assessor annually for the purposes of levying property taxes represents the value of the existing assessed value plus any new construction added during the year. Since 1999, the assessed valuation in Clark County has grown from

$26.7 billion to $45.2 billion, or at the average rate of approximately 11 percent. This growth reflects the net impact of increases in land values, the addition of new construction and the depreciation of existing structures to the roll. If there is no new construction added to the roll, and all other factors held constant, the value of existing properties would decline by the 1.5 percent annual depreciation factor. Under such a scenario, the total assessed valuation could, in fact, decline unless rates were increased to mitigate the impact of the depreciated value.

"Real world" examples of such a scenario have been a reality in certain Nevada counties. The dramatic declines in assessed valuations in White Pine and Mineral Counties during the last few years reflect, in part, assessment rolls with little new construction value added to offset decreases attributed to the depreciation factor. Clark County's assessed valuation for Fiscal Year 2003-04 was $45.7 million. One percent of the assessed valuation represents approximately $457 million in taxable value, or approximately $160 million in assessed valuation (35%). The impacts of declining taxable property values would be significant.

Funding Clark County's Schools

The Clark County School District ("the District") received approximately $1.7 billion in revenues for its operations, capital and debt service needs.[224] For the School District, property taxes represent approximately 29 percent of the District's total revenues. The Local School Support Tax component of the sales and use tax discussed earlier in this analysis represents approximately 28 percent, and the monies the District receives from the state through the State Distributive Fund represents nearly 23 percent of its revenues. State and federal sources represent approximately 11 percent and the balance, approximately 10 percent of the revenues, are comprised of room tax, real property transfer tax, franchise taxes, interest and other miscellaneous sources.

In this case too, the reader should be mindful of the overlapping relationship that the sales and use tax has in relation to the funding of schools in the State of Nevada. There is the direct relationship for the Local School Support Tax that is paid directly to the District; however, beyond that, sales and use taxes represent 37 percent of the revenues for the State General Fund that is responsible for funding of schools through the State Distributive Fund. Given this

[224] These revenues are detailed in Appendix 4.4.

interdependence, it is unlikely that Clark County's schools could avoid the impact of a significant decline in public revenue.

Enterprise Funds

Enterprise funds are used to account for operations financed and operated in a manner similar to private business enterprises – where the intent of the governing body is that the costs (including depreciation) of providing goods and services to the general public are financed or recovered primarily through user charges. Examples of enterprise funds include Public Transit, University Medical Center, McCarran Airport, the Southern Nevada Water Authority, the Las Vegas Valley Water District, the Water Reclamation District, Henderson and North Las Vegas sewer and water utility operations and others.

"[i]t became very apparent that while there are more than one hundred individual revenue sources that support service delivery, the reality is that there is a marked dependence upon very few."

Enterprise Fund activities in Clark County generated approximately $1.9 billion in FY 2001-02.[225] As is to be expected, approximately 73 percent of enterprise fund revenues are represented by charges for service to customers. Capital contributions represent approximately 10 percent, and interest income represents approximately 5 percent. The sales and use tax revenue from the 0.25 percent tax that is retained by the Southern Nevada Water Authority represents an additional 6 percent. Grants, property tax and other miscellaneous revenues represent the balance – approximately 6 percent. As a note of clarification, in the case of the 0.25 percent sales and use tax revenue for public transit, the tax is first distributed to the Master Transportation Plan and subsequently transferred to the Public Transit Fund. In this analysis, it is shown as revenue to the Master Transportation Plan and reflected in the County listing of funds to avoid double counting of this source.

In the examination of revenues supporting the state's General Fund and the vast majority of local government service providers in Clark County, it became very apparent that while there are more than one hundred individual revenue sources that support service delivery, the reality is that there is a marked dependence upon very few. These include property tax, gaming-related revenues, the various components that comprise the sales and use tax and the components of the C-Tax. When seen in this light, the narrowness of the revenue

[225] Please see Appendix 4.5.

base is clearly demonstrated, and further, bears witness to the fragility of the state and local government financial structure. With the acknowledged reliance upon such a narrow revenue base, any incident that negatively affects the performance of any one of these major sources of revenue portends serious financial consequences. Knowing this, we worked to identify the contribution of certain major industries to the funding of government services to better demonstrate the impact of any slowdown in that economic sector.

A Closer Look: Homebuilding

The construction industry, primarily including the new single family residential construction and the commercial property sectors was isolated for a more specific examination. The findings related to the new single family home construction industry follows.

New Single Family Home Construction

As noted previously, Appendices 4.1 through 4.5 were compiled to demonstrate the contribution of individual revenues to the myriad of governmental services provided to residents, businesses and visitors in Clark County. Another recent analysis prepared for the Southern Nevada Home Builders Association demonstrated the various component costs of the average new single family residences sold in Clark County. In that analysis, it was shown that the builder paid approximately $3,900 in sales and use taxes for that average priced home. Home Builders Research in Las Vegas indicated 22,500 new single family residential units were sold in Clark County during 2002. Based upon these estimates, there was approximately $87 million in sales and use taxes generated by the new single family home construction industry in FY 2001-02. These revenues were distributed for the benefit of the receiving agencies as demonstrated in the following table.

Sales and Use Tax Components

	Rate	Percent of Total	Distribution	Benefiting Entity
State Sales and Use Tax	0.0200	27.6%	$24,091,107	State General Fund
Local School Support Tax	0.0225	31.0%	27,102,495	County School District
Supplemental City/County Relief Tax	0.0175	24.1%	21,079,718	Consolidated Tax
Basic City/County Relief Tax	0.0050	6.9%	6,022,777	Consolidated Tax
Subtotal	**0.0650**	**89.7%**	**78,296,097**	
County Option Tax	0.0025	3.4%	3,011,388	Flood Control
County Option Tax	0.0025	3.4%	3,011,388	Public Mass Transit
County Option Tax	0.0025	3.4%	3,011,388	Sewer/Water Infrastructure
Subtotal County Options	**0.0075**	**10.3%**	**9,034,165**	
Total Sales and Use Tax	**0.0725**	**100.0%**	**$87,330,262**	

New Development Fees, Permits, Taxes, Exactions and Contributions

Units of local government assess a variety of fees, permits, taxes or other exactions on new development. These assessments come in a variety of forms. They include such charges as the Residential Construction (park) Tax, the Transportation Impact Fee, facility extension charges, building permits, inspection fees, etc. The same study referenced above documented that for the subject home, the contractor paid $10,800 in government charges. Again, if the average priced home is "representative" of the homes built, the industry paid approximately $240 million to state and local governments for such charges in FY 2001-02.

Beyond these charges, developers are also required to pay for, construct or put into place certain off site improvements in conjunction with the development of a project. These off-site improvements or exactions are typically water and sewer line extensions, streets, street lights, sidewalks, curbs and gutters, etc. In the case of the subject home, these costs total approximately $21,600. And, if the average priced home is representative of the homes built, the industry paid approximately $490 million to construct these government-required improvements.

Other Fiscal Observations

In our effort to demonstrate impacts of any financial and economic "changes" resulting from a growth interruption to the state and its local government structure, we looked to other states or regions which had witnessed significant decreases in a major economic sector. We researched anecdotal and published materials relating to the construction industry slowdown in Arizona of the late 1980s, the reductions in oil and gas activity in Texas in the mid 1970s, and the Boeing Aerospace industry layoffs in the late 1960s and early 1970s, among others.

Beyond these nationally and regionally prominent demonstrations, there are smaller, but yet dramatic, demonstrations of the impacts to a local economy when a major employer ceases operation to be found in Nevada. The boom and bust cycles of the mining industry have been the focus of discussion for as long as mining has been a contributor to the state's rural economies. For example, the gold, silver and copper mining industries have suffered through cycles of decline at various times throughout the state's history.

In a recent analysis of the financial status of White Pine County, the impacts of a downsizing industry upon local government finances became very apparent. When the BHP mine ceased operations in the late 1990s the area suffered the loss of nearly 500 high paying jobs. This closure caused a cascade of impacts from which the County is only now starting to recover. The table below demonstrates the impacts on various statistical indicators for the County.

White Pine County, Nevada
Statistical Indicators

	FY 1997-98 (Actual)	FY 1998-99 (Actual)	FY 1999-00 (Actual)	FY 2000-01 (Actual)	FY 2001-02 (Actual)	FY 2002-03 (Estimated)	FY 2003-04 (Budget)
Assessed Valuation	$201,418,476	$179,444,183	$184,114,033	$145,216,000	$130,738,788	$125,152,460	$129,929,629
Percent Change		-10.9%	2.6%	-21.1%	-10.0%	-4.3%	3.8%
Ad Valorem Revenue	1,791,977	2,162,366	2,305,968	1,966,077	1,589,847	1,749,444	1,749,872
Percent Change		20.7%	6.6%	-14.7%	-19.1%	10.0%	0.0%
General Fund Revenues	5,683,105	6,250,947	6,152,040	6,817,748	6,419,096	5,945,576	6,191,096
Percent Change		10.0%	-1.6%	10.8%	-5.8%	-7.4%	4.1%
Population	10,640	10,960	11,150	9,181	8,783	8,863	
Percent Change		3.0%	1.7%	-17.7%	-4.3%	0.9%	

Assessed valuation declined from a high of $200 million in Fiscal Year 1997-98 to $125 million in Fiscal Year 2002-03, a cumulative decline of approximately 38 percent. The County's assessed valuation grew in Fiscal Year 2003-04 to approximately $130 million, an increase of approximately 4 percent over the prior year. Property tax revenue collections for the County's General Fund declined from a high of $2.3 million in Fiscal Year 1999-00 to $1.6 million in Fiscal Year 2001-02, a decline of nearly 34 percent. The County's population declined from 10,640 at July 1, 1997 to 8,783 at July 1, 2001, a cumulative decline of approximately 17 percent. The County's population grew to 8,863 at July 1, 2002, a 1 percent increase over the prior year.

For White Pine County, the impact to the General Fund was devastating. Revenues declined from a high of $6.8 million in Fiscal Year 2000-01 to an estimated $5.9 million in Fiscal Year 2002-03, a decline of nearly 13 percent. The County was somewhat insulated from further erosion of its revenue base because White Pine County is a "guaranteed" county in the first-tier distribution of the Supplemental City/County Relief Tax, the greatest component of the Consolidated Tax. This guaranteed status spared the County from realizing the full impact of the loss in taxable sales transactions – a luxury Clark County does not share.

In Mineral County, Nevada, there have been a combination of scale backs among major employers and shutdowns of mining properties that have resulted in a similar economic scenario to that in White Pine County. The Ammunition Depot has been scaling back operations for many years and nearly all major mining operations in the County have ceased. The table on the following page demonstrates the impacts on various statistical indicators for the County while it has struggled with a declining economic base.

Mineral County, Nevada
Statistical Indicators

	FY 1997-98 (Actual)	FY 1998-99 (Actual)	FY 1999-00 (Actual)	FY 2000-01 (Actual)	FY 2001-02 (Actual)	FY 2002-03 (Estimated)	FY 2003-04 (Budget)
Assessed Valuation	$124,446,509	$110,843,538	$98,463,435	$92,634,556	$85,078,257	$77,455,299	$73,108,979
Percent Change		-10.9%	-11.2%	-5.9%	-8.2%	-9.0%	-5.6%
Ad Valorem Revenue	1,869,236	1,270,200	1,182,802	973,434	856,707	889,091	748,637
Percent Change		-32.0%	-6.9%	-17.7%	-12.0%	3.8%	-15.8%
General Fund Revenues	5,512,611	4,420,137	4,446,954	4,058,147	3,762,338	3,803,765	3,681,370
Percent Change		-19.8%	0.6%	-8.7%	-7.3%	1.1%	-3.2%
Population	6,860	6,620	6,450	5,071	4,743	4,695	
Percent Change		-3.5%	-2.6%	-21.4%	-6.5%	-1.0%	

Mineral County's assessed valuation has decreased from $124 million in Fiscal Year 1997-98 to a projected $73 million in Fiscal Year 2003-04, a decline of approximately 41 percent. The County's population has decline from a high of 6,860 in July 1997 to 4,695 in July 1, 2002, a declined of nearly 32 percent. In this case too, the County's General Fund has seen dramatic decreases in revenues to support its operations. Property tax revenues have declined from a high of approximately $1.9 million in Fiscal Year 1997-98 to approximately $750,000 in Fiscal Year 2003-04, a decline of nearly 60 percent. In this case, the County has had to scale back its operations significantly and has essentially skeletal staffing for most of its departments, including public safety. Similar to that in White Pine County, Mineral County is a "guaranteed" county for the purposes of the first-tier distributions of the Supplemental City/County Relief Tax; and as such, the County has been insulated from more dramatic decreases in taxable sales.

Again, these anecdotal observations relating to the economies of White Pine County and Mineral County are offered as micro examples of the impacts of declining growth economic environments. When a locale, or region, suffers a decline in employment, an out-migrating population and declining assessed valuation, the impacts are evident and dramatic. Structurally speaking, Clark County's local revenue system is not that different from these rural areas. When the regions are larger than those described in White Pine and Mineral Counties, the impacts would be expected to be similar, but on a larger scale.

SOCIAL IMPACT CONSIDERATIONS

A project or policy decision's social impact is the culmination of a chain of events. Land development, policy decisions or other stimuli that constitute a significant change in the type and intensity of land use result in a new flow of people and workers to a region.[227] This change in the social construct has important ramifications.[228] For example, more or fewer children must be educated and new demands are placed public services from recreation to public safety to welfare. Social impact analysis often refers to the study of the distributional impacts of policy reforms on the well-being or welfare of different stakeholder groups, with particular focus on the poor and vulnerable.

Selected Socio-economic Variables
Clark County, Nevada and the United States[226]

	Clark County	Nevada	US
Persons under 5 years old, percent	7.5%	7.3%	6.8%
Persons under 18 years old, percent	25.6%	25.6%	25.7%
Persons 65 years old and over, percent	10.7%	11.0%	12.4%
White persons, percent	71.6%	75.2%	75.1%
Black or African American persons	9.1%	6.8%	12.3%
American Indian and Alaska Native persons	0.8%	1.3%	0.9%
Asian persons, percent	5.3%	4.5%	3.6%
Native Hawaiian and Other Pacific Islander, percent	0.5%	0.4%	0.1%
Living in same house in 1995 and 2000, percent	34.5%	37.4%	54.1%
Foreign born persons, percent	18.0%	15.8%	11.1%
Language other than English spoken at home, percent	26.0%	23.1%	17.5%
High school graduates, percent of persons age 25+	79.5%	80.7%	80.4%
Bachelor's degree or higher, pct of persons age 25+	17.3%	18.2%	24.4%
Persons with a disability, age 5+, percent	18.1%	17.8%	17.5%
Mean travel time to work, workers age 16+ (min.)	24.3	23.3	25.5
Homeownership rate	59.1%	60.9%	66.2%
Housing units in multi-unit structures, percent	36.3%	32.2%	26.4%
Median value of owner-occupied housing units	$ 139,500	$ 142,000	$ 119,600
Persons per household	2.65	2.62	2.59
Median household money income	$ 44,616	$ 44,581	$ 41,994
Per capita money income	$ 21,785	$ 21,989	$ 21,587
Persons below poverty, percent	10.8%	10.5%	12.4%
Retail sales per capita,	$ 11,151	$ 10,874	$ 9,190
Minority-owned firms, percent of total	14.0%	11.7%	14.6%
Women-owned firms, percent of total	26.3%	25.7%	26.0%

An analysis of the social environment does not necessarily lend itself to the same type of quantitative analysis provided in the preceding sections. Moreover, there is little agreement on what methodology is best when conducting a social

[226] U.S. Census Bureau. *QuickFacts*. http://quickfacts.census.gov/qfd/states/32/32003.html.
[227] Christensen, K., *Social Impact of Land Development: An Initial Approach for Estimating*. Washington, D.C.: The Urban Institute (1976); *see also* Burchell, R., et. al., *Development Impact Assessment Book*. Urban Land Institute. Washington, D.C. (1994).
[228] *Id.*

impact analysis.[229] As one analyst put it, a social impact analysis should give the reader an understanding of the meaning that population of the affected region, individually and collectively, finds or fails to find as a result of the analyzed change.[230] Such meaning is to be found in the social problems, dilemmas, hopes, confusions, anxieties, interests, and needs that a prospective change creates in and among current and future residents. [232]

Las Vegas Ranking for Selected Development Concentration Measures[231]
(Out of 83 Major MSAs, Ranked from Worst (1) to Best (83))

Residential density	68th
Mix of homes, jobs and services	18th
Strength of town centers/downtowns	41st
Overall sprawl index	48th
Accessibility of street network	55th

This analysis looks at the baseline, or *status quo*, social environment. It focuses on the population supported by construction-related industries, employment in these sectors, and the social costs they generate. The ultimate question presented here and addressed in sections that follow is how a growth interruption might impact or alter Nevada's social environment. In sections evaluating the impacts of a growth interruption, the focus will be shifted from one industry's relative costs to the social ramifications of higher unemployment and other similar social outcomes.

Population

The starting point of any social impact analysis is population. In this context, the proper question is what share of the Clark County's population is supported by growth-related industries (primarily construction). Clark County has an estimated 1.6 employees per

[229] Burchell, R., et. al., *Development Impact Assessment Book*. Urban Land Institute. Washington, D.C. (1994) (noting, "[t]here is little agreement on the exact methodology to be followed and the variables to be evaluated in conducting a social impact analysis," and "[t]there is no one generally accepted procedure for conducting a social impact assessment. . .")
[230] Gold, R.L., "*Linking Social with Other Impact Assessments*." In Environmental Impact Analysis. Emerging Issues in Planning, edited by R.K. Jain and B.L. Hutchings. Urbana, IL: University of Illinois Press (1978); *see also* Burchell, R., et. al., *Development Impact Assessment Book*. Urban Land Institute. Washington, D.C. (1994).
[231] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.
[232] Gold, R.L., "*Linking Social with Other Impact Assessments*." In Environmental Impact Analysis. Emerging Issues in Planning, edited by R.K. Jain and B.L. Hutchings. Urbana, IL: University of Illinois Press (1978); *see also* Burchell, R., et. al., *Development Impact Assessment Book*. Urban Land Institute. Washington, D.C. (1994).

Selected Socio-economic Variables[234] Las Vegas Region and US Averages

	Las Vegas	US Average
Workforce Breakdown		
Executive	10.7%	12.6%
Professional	9.2%	14.7%
Technical	3.2%	3.6%
Sales	12.4%	12.5%
Clerical	15.1%	15.9%
Blue-collar	49.5%	40.7%
Unemployment rate	4.0%	5.7%
Recent job growth	5.6%	2.6%
Future job growth	42.3%	10.8%
Selected Tax Rates		
Sales taxes	7.3%	6.4%
Income taxes	0.0%	4.6%
Property tax rate (per $1,000)	$ 10.50	$ 16.40
Cost of Living Indices		
Overall	108.0	100.0
Housing	105.8	100.0
Food	114.2	100.0
Transportation	121.1	100.0
Utilities	93.0	100.0
Health	128.5	100.0
Miscellaneous	100.9	100.0
Illnesses per 100,000		
Adult asthma	3,898	3,896
Pediatric asthma	1,615	1,609
Emphysema	690	724
Chronic bronchitis	5,354	5,363
Acute bronchitis	4,589	4,571
Common cold	23,387	23,305
Pneumonia	1,785	1,816
Physicians per 100,000	188	272
Student-teacher ratio	20.7	17.7
Achievement index (10=best)	3.0	5.1
Watershed quality (100=best)	73	49

household and an estimated 2.6 persons per household.[233] Thus, Clark County's 77,700 construction jobs support approximately 131,400 residents (or 50,000 households). From a broader perspective, including direct and indirect construction-related employment, 100,400 households are dependent on construction-related activities, roughly 270,000 Southern Nevada residents.

From a demographic perspective, we assume that these households have an average number of children under the age of 18. In Clark County, children under the age 18 account for 26 percent of the population, resulting in an average of 0.7 children per household.[235] Also important, school-aged children account for 18.1 percent of the population, equating to roughly 0.5 school-aged children per household.[236] On the other side of the demographic landscape are senior citizens, generally defined as persons over the age of 65. While this group is undoubtedly impacted by any change to the social environment, they are not included in the supported population subset.

[233] *See* U.S. Census Bureau, U.S. Bureau of Labor Statistics, and Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. January 2003.

[234] National comparison data may not be consistent with other references made in this report, do to analysis methodologies.

[235] *See* Hardcastle, J. Nevada State Demographer, Single Year County and State Population Estimates and Projections 1990 – 2022.

[236] *Id.*

Employment

As an industry, building and construction is highly diverse. Building is an extremely complex and often underestimated process, involving numerous decisions and trade-offs between the costs, skills, materials, building systems and processes that deliver outcomes in terms of fitness for purpose, aesthetics, durability and other factors relevant to the end-user. As noted earlier the industry is estimated to employ more than 77,700 individuals, around 9 percent of the labor force. Important from a social perspective, construction-related businesses are often small businesses. In the most recent Economic Census (1997), 11,900 construction-related firms were identified as being in the construction industry and 62 percent of those firms (approximately 7,400 businesses) were non-employing firms (e.g., they had no employees other than owners).[239]

Selected Growth Measures for Selected Western Cities[237]

	Las Vegas	Salt Lake City	Sacramento	San Diego	Phoenix	Denver	Portland	Seattle
Peak 8-hour ozone level[238]	73.0	80.0	91.0	71.0	81.0	69.0	57.0	60.0
Fatal accidents per 100,000	13.5	9.0	10.4	9.3	14.0	11.0	7.7	7.0
Daily miles driven per person	19.2	24.8	20.9	23.7	27.3	22.1	23.6	25.8
Avg. number of vehicles per HH	1.6	1.9	1.8	1.8	1.7	1.8	1.7	1.8
% of commuters using transit	4.5%	3.1%	2.8%	3.5%	2.2%	4.8%	7.6%	8.5%
% commuters walking to work	2.4%	1.9%	2.3%	3.6%	2.1%	2.2%	3.5%	3.4%
Avg. commute time (minutes)	24.3	22.4	25.6	25.3	26.1	26.5	24.3	27.2
Avg. annual traffic delay (hours)	18.0	9.3	19.5	24.1	27.9	34.6	22.9	33.8

[237] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.
[238] Expressed in parts per billion.
[239] U.S. Census Bureau. 1997 Economic Census Nonemployer Statistics – Nevada. Available at http://www.census.gov/epcd/nonemployer/1997/nv/NV000.HTM. Note that non-employer firms are firms that are owned an operator by the owner and do not have any non-owner employees.

Social Service Demands

Nevada's state and local governments provide many services, including, without limitation, recreation facilities, cultural centers and open spaces; health care; special care for the elderly and indigent; police and fire protection; building permitting and control; as well as countless administrative functions.

There was no evidence, empirical or otherwise, uncovered or provided during our research to suggest growth-related industries, or the population supported by those industries, place any greater or lesser demand on these standard services than do other demographic segments. This having been said, development industries clearly have a direct link to certain services, such as building and permitting, air quality and municipal infrastructure. These links notwithstanding, the fiscal impact subsection of this report illustrates that special fees are imposed on these activities and well-formulated argument could be made as to whether this activity is in response to or responsible for these costs. Additionally, the population base is directly dependent on development-related industries could be argued to place a relatively low burden on special health care services such as those for the elderly and a disparately high burden on indigent care due to a low rate of employer-offered health care coverage. Again, the evidence to support these arguments is tangential and often conclusory. For the purposes of this analysis, we assume that the social costs and benefits associated with a health and balanced construction and development sector are materially similar to those in other sectors of the economy.

The Costs of Growth

Growth does not come without social costs. As our population and employment bases expand, so will the overall need for public services, such as parks, libraries, schools and police officers. Below are a number of social impacts generally associated with growth.[240]

- Reduction of wilderness areas and other open spaces;
- Increases traffic congestion;
- Reduction in air quality;

[240] *See* Gottlieb, P.D., *Growth Without Growth: An Alternative Economic Development Goal for Metropolitan Areas*. Regional Center For Economic Issues: Weatherhead School of Management, Case Western Reserve University. The Brookings Institute (Feb. 2002); *see also* Nelson, A.C. and Moody, M., *Paying for Prosperity: Impact Fees and Job Growth*. The Brookings Institute on Urban Metropolitan Policy (Jun 2003).

- Increasing home prices;
- Over crowding in schools, universities and cultural centers;
- Insufficient infrastructure leading to higher service costs;
- Disruptions occurring due to significant levels of construction activities; and
- Higher costs associated with more distant public facilities.

The preceding section concluded that there is little evidence that growth-related industries impose a greater burden on society than do other industries. Additionally, although it is recognized that rapid growth may be accompanied by certain negative externalities, Nevada's geographic constraints and its public policies appear to be limiting their relative impact.

CONDITIONAL IMPACT ASSESSMENT

In Section I of this report, we looked at general growth trends in Nevada and Clark County. We concluded from that analysis that Nevada, and more particularly Clark County, is unique in many ways and most clearly distinguished by seemingly rapid, and seemingly endless, growth. Our analysis in Section I also highlighted a general belief that growth will continue, with even the most conservative projections forecasting population and employment growth rates in excess of national and regional averages through 2010. Sections II and III took a closer look at changes in community growth patterns, whether deliberate or the product of some unintended consequence or unexpected event. We concluded from those analyses that growth has both its benefits and its drawbacks; however, rapid changes in a region's growth pattern appear to have far-reaching and severe economic consequences. In Section IV, we examined the economy's dependence on growth, focusing on its economic, fiscal and social contributions. We concluded that growth (measured as a function of construction activity) is a vital component of our state and local economies. It supports hundreds of thousands of jobs, pays hundreds of millions in wages and accounts for a greater share of our gross product than do similar industries in most other states and metropolitan areas. We further concluded that growth-related activities generate billions of dollars in tax payments, supporting public programs from education to public safety at the state level, in Clark County and throughout Nevada's rural communities.

This section builds on the preceding analyses and attempts to simulate the effects of a growth interruption in Clark County. It is worth reiterating here that the force or forces causing the interruption, be it air quality, availability of water, public will or a natural disaster, are one step removed from this analysis. The catalyst giving rise to the interruption may have unique characteristics impacting the duration and depth of any downturn as well as the economy's ability to recover. These considerations notwithstanding, the general character of a growth interruption would likely share many of the same consequences; it is these consequences that we focus on here.

FINDINGS IN SUMMARY

The primary purpose of this section is to model the potential impacts of a growth interruption. Because such an interruption would represent a major break with historical trends, it is not possible to forecast what will happen with any degree of certainty. Instead, the analysis proceeds on a "what if" basis; that is, we identify a set of plausible scenarios, and then use an economic model to measure what the impacts might be if these hypothetical scenarios were to take place.

Even under conservative assumptions used to model an interruption in Southern Nevada's growth patterns, the economic, fiscal and social repercussions appear extensive. This is supported not only by the quantitative analysis provided herein, but also by the qualitative information referenced throughout the balance of this study. Taken in whole, the evidence unambiguously supports the finding that a significant premature or artificial reduction in any major economic sector, including without limitation, the "industries of growth," will have considerable negative consequences. The unique ability of growth-related sectors to restrict the normal maturation of related and unrelated industries magnifies this problem amongst and between diverse sectors of our economy. Moreover, the benefits of similar reductions, even at the margin, are at best uncertain.

Clark County Residential Units Permitted
12 Months Ended January 1990 through November 2003

ANALYZING THE IMPACT OF A GROWTH INTERRUPTION

In this analysis, we were asked to evaluate the impacts of a growth interruption, *but what does this really mean*? A growth interruption can take on an almost infinite number of forms. It could denote a one percent reduction in construction activity that lasts for only a single month, where the economy moves on with little, if any, measurable impact. One could certainly argue, for example, that the tragic events of September 11, 2001 resulted in a mild "growth interruption." The chart provided above indicates a decline in the number of residential units permitted for the seven months following that fateful day. This decline may or may not have been a direct reaction to those events;

however, it would be difficult to argue that individuals, business owners, developers and financiers did not pause, whether for one hour, one day, or year, to consider the viability of development projects. On the other end of the "growth interruption" spectrum is a complete cessation of growth. This is a difficult concept to grasp because even economies in decline report some level of development activity and there is no readily available example of a comparable economy where development activity ceased instantaneously. Somewhat severe interruptions reported in Arizona, Texas and Hawaii were discussed in our literature review.[241] In these areas as many as a third of all construction jobs lost were due to recession, structural changes in the economy or unintended consequences of policy decisions drying up the impetus for growth. None of these examples resulted in the complete cessation of development activity, and analyses considering the impact of a halt to growth have projected impacts well-exceeding those experienced in these regions.

The Two Analysis Phases: Initial Impact and Recovery

Initial Impact

Any impact analysis is rightly segmented into two phases: 1) *initial impact* and 2) *recovery*.[242] Initial impacts are modeled through reductions in construction-related employment usually occurring in the first two to five years following the interruption. In the White Report, for example, the authors assumed a cessation of growth that resulted in a 61 percent decrease in the level of construction employment. Similarly, Gordon and Richardson, in their analysis of Arizona's proposed growth moratorium[243] looked at a series of alternatives, with their "most likely" scenario assuming a 50 percent reduction in construction in the initial impact year and a complete shutdown of construction activity in the second year.[244] This change was projected to displace nearly two-thirds of all construction workers by the close of the second year. Input-output models provide meaningful insights into how these reductions might impact the economy as a whole. The reality is, however, where they approach catastrophic levels of decline, increasing uncertainty ensues.

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[241] *See* Section II: Literature Review.

[242] The recovery stage might also be thought of as the economy's efforts to find a new equilibrium.

[243] Referred to as Arizona Proposition 202 (2000) in early sections.

[244] Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. iv (July 2000).

As alluded to above, one important element of this analysis is the degree of impact. *What initial impacts might Clark County expect if it were to only marginally decrease growth*? *What might it expect if it were to cut growth in half*? *What about stopping growth altogether*? Because there are an infinite number of potential impact scenarios, we have chosen a few representative examples to assist in this discussion. The first assumes a 10 percent reduction in construction employment, the second a 30 percent reduction in construction employment and the third a 65 percent reduction in construction employment. An obvious question is why we did not include a reduction of 100 percent, which might rightly be expected to represent a complete cessation of growth and its related activities. It is important to remember that even economies in a state of decline issue building permits and report 4 to 6 percent of their workforce as being employed in construction-related sectors.

A second and related question is the rate at which these impacts materialize. *Will the impacts be realized overnight or might they be phased in over two, three or four years*? For analysis purposes, we assume the initial impacts are phased in at 25 percent in the first year, 75 percent in the second year and 100 percent in the third year. This is consistent with the belief that many projects under construction would be completed and projects in the development pipeline would be either accelerated or scrapped depending on their stage of development. If one was to assume that growth would stop all together in year one, the impacts would be greater; if one was to assume a longer phase in period, the impacts would be less.

The initial impact phase begins, from a modeling standpoint, with a reduction in construction-related employment. For analysis purposes we refer here to *person years of employment*. If one job is lost for one year, the result is the loss of one person year of employment. If a one job is for three years, the result is the loss of three person years of employment. This initial impact analysis looks at the first three years of impact, and thus, the losses are expressed over a three-year period. Because this analysis is purely hypothetical and near-term data tends to be most accurate, we have used the years 2004, 2005 and 2006 as the initial impact study period.

Initial Construction Sector Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%

	2004	2005	2006	Total Person Years of Employment
Impact Assumption: 10%				
Construction Employment (Baseline)	76,719	75,593	74,558	226,870
Phase in Assumption	25%	75%	100%	n/a
Direct Impact on Employment	**(1,918)**	**(5,669)**	**(7,456)**	**(15,043)**
Impact Assumption: 30%				
Construction Employment (Baseline)	76,719	75,593	74,558	226,870
Phase in Assumption	25%	75%	100%	n/a
Direct Impact on Employment	**(5,754)**	**(17,008)**	**(22,367)**	**(45,130)**
Impact Assumption: 65%				
Construction Employment (Baseline)	76,719	75,593	74,558	226,870
Phase in Assumption	25%	75%	100%	n/a
Direct Impact on Employment	**(12,467)**	**(36,852)**	**(48,463)**	**(97,781)**

Total Employment Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%

	2004	2005	2006	Total Person Years of Employment
Impact Assumption: 10%				
Direct employment losses	(1,918)	(5,669)	(7,456)	(15,043)
Indirect and induced impacts	(1,408)	(4,161)	(5,471)	(11,040)
Total impact (direct + indirect)	**(3,326)**	**(9,830)**	**(12,927)**	**(26,083)**
Impact Assumption: 30%				
Direct employment losses	(5,754)	(17,008)	(22,367)	(45,130)
Indirect and induced impacts	(4,223)	(12,482)	(16,414)	(33,119)
Total impact (direct + indirect)	**(9,977)**	**(29,490)**	**(38,781)**	**(78,248)**
Impact Assumption: 65%				
Direct employment losses	(12,467)	(36,852)	(48,463)	(97,781)
Indirect and induced impacts	(9,149)	(27,043)	(35,564)	(71,756)
Total impact (direct + indirect)	**(21,616)**	**(63,895)**	**(84,027)**	**(169,538)**

The table to the left illustrates the first round of impacts: layoffs in the construction industry. Between 15,000 and 98,000 person years of direct construction-related employment is lost by the close of the initial impact period (2006). As we discussed in some detail in Section IV, the impacts are not likely to end in the construction sector. Supporting and supplier services purchases as well as the spending power of displaced workers are also lost. In total, IMPLAN suggests that for every one displaced construction-related employee, roughly one employee in other sectors of the economy (i.e., retail trade, government and manufacturing) is displaced. The second table summarizes these losses and suggests that even the most conservative scenario results in 26,100 person years of employment less than baseline conditions. By contrast, the outcome of the most aggressive scenario results in nearly than 170,000 person years of employment lost.

The other two key economic impact variables are labor income and economic output. Both of these impacts are expressed in constant 2000 dollars and are summarized in the exhibits on the following page. Labor income is reduced by between $1.1 billion and $7.2 billion by the close of the third year, roughly 2 to 9 percent off

Total Output Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%
(Figures expressed in constant 2000$)

	2004	2005	2006
Impact Assumption: 10%			
Economic output losses (direct)	$(287,068,638)	$(848,566,048)	$(1,115,930,265)
Economic output losses (total)	$(404,612,474)	$(1,196,022,007)	$(1,572,861,840)
Percent of total lost	-0.5%	-1.3%	-1.7%
Impact Assumption: 30%			
Economic output losses (direct)	$(861,205,914)	$(2,545,698,143)	$(3,347,790,795)
Economic output losses (total)	$(1,213,837,423)	$(3,588,066,020)	$(4,718,585,519)
Percent of total lost	-1.3%	-3.9%	-5.1%
Impact Assumption: 65%			
Economic output losses (direct)	$(1,865,946,146)	$(5,515,679,311)	$(7,253,546,723)
Economic output losses (total)	$(2,629,981,084)	$(7,774,143,044)	$(10,223,601,957)
Percent of total lost	-2.7%	-8.1%	-10.5%

Total Labor Income Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%
(Figures expressed in constant 2000$)

	2004	2005	2006
Impact Assumption: 10%			
Labor income losses (direct)	$(92,962,260)	$(274,793,576)	$(361,374,896)
Labor income losses (total)	$(142,163,738)	$(420,231,629)	$(552,637,234)
Percent of total lost	-0.4%	-1.2%	-1.6%
Impact Assumption: 30%			
Labor income losses (direct)	$(278,886,780)	$(824,380,727)	$(1,084,124,689)
Labor income losses (total)	$(426,491,214)	$(1,260,694,888)	$(1,657,911,701)
Percent of total lost	-1.2%	-3.5%	-4.6%
Impact Assumption: 65%			
Labor income losses (direct)	$(604,254,689)	$(1,786,158,242)	$(2,348,936,827)
Labor income losses (total)	$(924,064,298)	$(2,731,505,590)	$(3,592,142,020)
Percent of total lost	-2.5%	-7.2%	-9.4%

baseline expectations. Economic output follows a similar path. The conservative scenario results in a loss of $3.2 billion, the mid scenario results in a loss of $9.5 billion and the most aggressive scenario results in a loss in economic output of $20.6 billion. All in all, these figures represent declines of between 2 and 11 percent of baseline levels by the close of the initial impact period (2006).

The next round of impacts deals with population. There are notable examples where economic shocks have led to massive population out-migration and others where displaced workers remain in the region even after extended periods of unemployment, stagnation and decline. Unproductive residents tend to be a drain on a community, so post-impact out-migration, in this sense, is viewed as a benefit to the community. Southern Nevada residents tend to be more transient than residents of other communities, so we tend to believe that the majority of displaced workers would choose to leave the region, seeking employment opportunities elsewhere. The degree of this impact is likely to differ by scenario. At a 10 percent initial impact level, workers may be able to find other opportunities within the economy, and thus, they may stay in the region. At a 30 percent reduction, we assume that 50 to 60 percent of displaced workers exit the market. This is roughly the same percentage of people who cite motivations other than retirement, family or health concerns for their

Population Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%
(Figures expressed in constant 2000$)

	2004	2005	2006
Population (Baseline)	**1,686,062**	**1,730,698**	**1,772,274**
Impact Assumption: 10%			
Share attributed from natural declines (births vs. deaths)	-	-	-
Share attributed to foregone in-migration	-	-	-
Share attributed to out-migration of displaced workers and families	-	-	-
Share attributed to displaced young adults entering the workforce	-	-	-
Total population loss	-	-	-
Percent reduction	*0.0%*	*0.0%*	*0.0%*
Impact Assumption: 30%			
Share attributed from natural declines (births vs. deaths)	(448)	(1,092)	(1,545)
Share attributed to foregone in-migration	(14,137)	(34,427)	(48,735)
Share attributed to out-migration of displaced workers and families	(3,239)	(7,888)	(11,167)
Share attributed to displaced young adults entering the workforce	-	-	-
Total population loss	**(17,825)**	**(43,407)**	**(61,448)**
Percent reduction	*-1.1%*	*-2.5%*	*-3.5%*
Impact Assumption: 65%			
Share attributed from natural declines (births vs. deaths)	(641)	(1,585)	(2,360)
Share attributed to foregone in-migration	(25,755)	(63,691)	(94,817)
Share attributed to out-migration of displaced workers and families	(21,316)	(52,713)	(78,473)
Share attributed to displaced young adults entering the workforce	(3,263)	(8,068)	(12,011)
Total population loss	**(47,712)**	**(117,989)**	**(175,650)**
Percent reduction	*-2.8%*	*-6.8%*	*-9.9%*

relocation into Southern Nevada.[245] This level of decline is commensurate with little or no growth; and as such, we have reduced assumed levels of in-migration. The most aggressive reduction (65 percent) is commensurate with an economy in decline. We assume an accelerated amount of out-migration for displaced workers and their families (80 percent) and the elimination of almost all in-migration. In addition, we also assume significant out-migration of new entrants into the workforce who find themselves without employment opportunities.

It is important to restate here that these hypothetical scenarios are intended to demonstrate a range of possibilities. Depending on the reasons underlying the interruption, population in-migration could conceivably be halted even in the most conservative scenario. Additionally, there is no guarantee that people would choose to leave. This would be a function of opportunities present in other regions, workers' ties to the community and the availability of social assistance programs.

State and local governments would undoubtedly feel the impacts of any of these scenarios. Displaced workers, less income and wages earned and decreased productivity translates into less public revenue and greater demand for public services. IMPLAN suggests that initial impact declines would reduce state and local revenues by between $82 million and $536 million by the close of the initial impact period (2006). Generally speaking, we believe these figures to be particularly conservative as they do not reflect secondary spending impacts, fully account for administrative and development fees or reveal the reductions in collections resulting from out-migrations, bankruptcy and increased delinquency. Considering that some $2.5 billion of the county's $26 billion in projected taxable sales is attributable to construction and development-related categories, as much as $181 million in collections could potentially be lost annually in retail sales and use tax alone.

[245] *See* Las Vegas Perspective, 2003.

State and Local Public Revenue Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%
(Figures expressed in constant 2000$)

	2004	2005	2006
State and Local Taxes (Baseline)	**$ 430,779,689**	**$ 425,439,241**	**$ 420,219,296**
Impact Assumption: 10%			
Indirect Bus Tax: Motor Vehicle License	$ (73,508)	$ (217,288)	$ (285,751)
Indirect Bus Tax: Other Taxes	$ (1,036,093)	$ (3,062,658)	$ (4,027,633)
Indirect Bus Tax: Property Tax	$ (2,025,464)	$ (5,987,210)	$ (7,873,646)
Indirect Bus Tax: NonTaxes	$ (497,347)	$ (1,470,141)	$ (1,933,350)
Indirect Bus Tax: Sales Tax	$ (5,986,417)	$ (17,695,664)	$ (23,271,173)
Indirect Bus Tax: Severance Tax	$ (118,969)	$ (351,668)	$ (462,471)
Personal Tax: Estate and Gift Tax	$ -	$ -	$ -
Personal Tax: Income Tax	$ -	$ -	$ -
Personal Tax: Motor Vehicle License	$ (194,454)	$ (574,801)	$ (755,908)
Personal Tax: NonTaxes	$ (303,500)	$ (897,135)	$ (1,179,802)
Personal Tax: Other Tax	$ (3,580)	$ (10,582)	$ (13,916)
Personal Tax: Property Taxes	$ (46,394)	$ (137,138)	$ (180,347)
Social Ins Tax- Employee Contribution	$ (45,385)	$ (134,156)	$ (176,425)
Social Ins Tax- Employer Contribution	$ (174,373)	$ (515,441)	$ (677,845)
Total Loss	**$ (10,505,482)**	**$ (31,053,882)**	**$ (40,838,267)**
Percent reduction	***-2.4%***	***-7.3%***	***-9.7%***
Impact Assumption: 30%			
Indirect Bus Tax: Motor Vehicle License	$ (220,525)	$ (651,864)	$ (857,252)
Indirect Bus Tax: Other Taxes	$ (3,108,278)	$ (9,187,973)	$ (12,082,899)
Indirect Bus Tax: Property Tax	$ (6,076,393)	$ (17,961,630)	$ (23,620,939)
Indirect Bus Tax: NonTaxes	$ (1,492,040)	$ (4,410,423)	$ (5,800,049)
Indirect Bus Tax: Sales Tax	$ (17,959,251)	$ (53,086,993)	$ (69,813,520)
Indirect Bus Tax: Severance Tax	$ (356,906)	$ (1,055,004)	$ (1,387,412)
Personal Tax: Estate and Gift Tax	$ -	$ -	$ -
Personal Tax: Income Tax	$ -	$ -	$ -
Personal Tax: Motor Vehicle License	$ (583,363)	$ (1,724,403)	$ (2,267,724)
Personal Tax: NonTaxes	$ (910,499)	$ (2,691,406)	$ (3,539,407)
Personal Tax: Other Tax	$ (10,739)	$ (31,745)	$ (41,747)
Personal Tax: Property Taxes	$ (139,181)	$ (411,415)	$ (541,042)
Social Ins Tax- Employee Contribution	$ (136,154)	$ (402,468)	$ (529,276)
Social Ins Tax- Employer Contribution	$ (523,119)	$ (1,546,323)	$ (2,033,534)
Total Loss	**$ (31,516,447)**	**$ (93,161,647)**	**$ (122,514,802)**
Percent reduction	***-7.3%***	***-21.9%***	***-29.2%***
Impact Assumption: 65%			
Indirect Bus Tax: Motor Vehicle License	$ (477,803)	$ (1,412,372)	$ (1,857,379)
Indirect Bus Tax: Other Taxes	$ (6,734,602)	$ (19,907,276)	$ (26,179,614)
Indirect Bus Tax: Property Tax	$ (13,165,518)	$ (38,916,866)	$ (51,178,701)
Indirect Bus Tax: NonTaxes	$ (3,232,752)	$ (9,555,917)	$ (12,566,773)
Indirect Bus Tax: Sales Tax	$ (38,911,711)	$ (115,021,819)	$ (151,262,627)

State and Local Public Revenue Impacts of a Hypothetical Growth Interruption
Assumed Rates of Impact: 10%, 30% and 65%
(Figures expressed in constant 2000$)

Indirect Bus Tax: Severance Tax	$ (773,297)	$ (2,285,842)	$ (3,006,059)
Personal Tax: Estate and Gift Tax	$ -	$ -	$ -
Personal Tax: Income Tax	$ -	$ -	$ -
Personal Tax: Motor Vehicle License	$ (1,263,953)	$ (3,736,207)	$ (4,913,403)
Personal Tax: NonTaxes	$ (1,972,747)	$ (5,831,379)	$ (7,668,716)
Personal Tax: Other Tax	$ (23,268)	$ (68,781)	$ (90,452)
Personal Tax: Property Taxes	$ (301,559)	$ (891,398)	$ (1,172,258)
Social Ins Tax- Employee Contribution	$ (295,001)	$ (872,013)	$ (1,146,765)
Social Ins Tax- Employer Contribution	$ (1,133,424)	$ (3,350,366)	$ (4,405,991)
Total Loss	**$ (68,285,636)**	**$ (201,850,235)**	**$ (265,448,737)**
Percent reduction	***-15.9%***	***-47.4%***	***-63.2%***

Recovery

Speaking generally, there are three recovery scenarios that might reasonably be expected to follow the initial impact scenarios discussed above. The first is a robust or rapid recovery in which the economy is able to return to where it would have been should no interruption have been realized. The second is moderate recovery in which the economy returns to its baseline growth rates, but never "makes up" for losses experienced during the interruption. Finally, the third recovery scenario is no recovery at all or an elongated period of decline. Any of these recovery scenarios, and each to varying degrees, could be assumed to follow the 10 percent, 30 percent or 65 percent hypotheticals presented in the initial impact discussion. It would be incorrect to conclude that a rapid recovery necessarily follows a 10 percent decline or a no recovery follows a 65 percent decline; the opposite is also possible. The tables on the pages that follow briefly summarize the hypotheticals set forth in the *Modeled Impact Scenarios* table to the left. We have chosen a 10-year recovery period for illustrative purposes (e.g., 2007 through 2016). If one were to assume the recovery would occur over a longer period, the impacts would likely be greater. Conversely, if a recovery was to occur in 5 instead of 10 years the impacts would likely be reduced.

Modeled Impact Scenarios

	Initial Impact *(period: years 1-3)*	Recovery *(period: years 4-14)*
Scenario 1	10% initial impact	Rapid recovery
Scenario 2	10% initial impact	Moderate recovery
Scenario 3	10% initial impact	No recovery
Scenario 4	30% initial impact	Rapid recovery
Scenario 5	30% initial impact	Moderate recovery
Scenario 6	30% initial impact	No recovery
Scenario 7	65% initial impact	Rapid recovery
Scenario 8	65% initial impact	Moderate recovery
Scenario 9	65% initial impact	No recovery

Growth Impact Scenario Summaries
10% Initial Impact Scenarios

	10% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(15,043)	(32,201)	(47,245)	(15,043)	(44,315)	(59,358)	(15,043)	(228,731)	(243,775)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Labor income (in millions)[1]	$ (729)	$ (1,561)	$ (2,290)	$ (729)	$ (2,148)	$ (2,877)	$ (729)	$ (11,086)	$ (11,816)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Economic output (in millions)[1]	$ (2,252)	$ (4,820)	$ (7,071)	$ (2,252)	$ (6,633)	$ (8,884)	$ (2,252)	$ (34,235)	$ (36,486)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(26,083)	(55,832)	(81,915)	(26,083)	(233,970)	(260,053)	(26,083)	(623,610)	(649,693)
Loss as a percent of baseline	-0.9%	-0.6%	-0.6%	-0.9%	-2.4%	-2.1%	-0.9%	-6.3%	-5.1%
Labor income (in millions)[1]	$ (1,115)	$ (2,387)	$ (3,502)	$ (1,115)	$ (8,977)	$ (10,092)	$ (1,115)	$ (25,178)	$ (26,293)
Loss as a percent of baseline	-1.1%	-0.7%	-0.7%	-1.1%	-2.5%	-2.2%	-1.1%	-6.9%	-5.6%
Economic output (in millions)[1]	$ (3,173)	$ (6,793)	$ (9,967)	$ (3,173)	$ (23,693)	$ (26,866)	$ (3,173)	$ (68,978)	$ (72,151)
Loss as a percent of baseline	-1.2%	-0.7%	-0.8%	-1.2%	-2.5%	-2.2%	-1.2%	-7.4%	-6.0%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (82)	$ (176)	$ (259)	$ (82)	$ (243)	$ (325)	$ (82)	$ (1,253)	$ (1,335)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Total tax payments (in millions)[1]	$ (428)	$ (917)	$ (1,345)	$ (428)	$ (1,261)	$ (1,690)	$ (428)	$ (6,511)	$ (6,939)
Loss as a percent of baseline	-6.6%	-4.6%	-5.1%	-6.6%	-6.3%	-6.4%	-6.6%	-32.4%	-26.2%
Population Impacts (Person Years)	-	-	-	-	(421,961)	(421,961)	-	(1,349,759)	(1,349,759)
Loss as a percent of baseline	0.0%	0.0%	0.0%	0.0%	-3.9%	-3.1%	0.0%	-6.9%	-5.0%
Share attributed from natural declines (births vs. deaths)	0.0%	0.0%	0.0%	0.0%	1.3%	10.8%	0.0%	3.3%	2.5%
Share attributed to foregone in-migration	0.0%	0.0%	0.0%	0.0%	98.7%	89.2%	0.0%	62.7%	48.2%
Share attributed to out-migration of displaced workers and families	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.7%	12.1%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	18.4%	14.1%

Growth Impact Scenario Summaries
30% Initial Impact Scenarios

	30% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(45,130)	(96,604)	(141,734)	(45,130)	(194,405)	(239,535)	(45,130)	(341,057)	(386,187)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Labor income (in millions)[1]	$ (2,187)	$ (4,682)	$ (6,870)	$ (2,187)	$ (9,423)	$ (11,610)	$ (2,187)	$ (16,570)	$ (18,757)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.5%	-41.5%
Economic output (in millions)[1]	$ (6,755)	$ (14,459)	$ (21,214)	$ (6,755)	$ (29,097)	$ (35,852)	$ (6,755)	$ (51,047)	$ (57,802)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(78,248)	(167,497)	(245,745)	(78,248)	(682,841)	(761,089)	(78,248)	(882,155)	(960,403)
Loss as a percent of total	-2.8%	-1.7%	-1.9%	-2.8%	-6.9%	-6.0%	-2.8%	-9.0%	-7.6%
Labor income (in millions)[1]	$ (3,345)	$ (7,160)	$ (10,506)	$ (3,345)	$ (26,934)	$ (30,280)	$ (3,345)	$ (36,468)	$ (39,813)
Loss as a percent of total	-3.2%	-2.0%	-2.2%	-3.2%	-7.4%	-6.5%	-3.2%	-10.0%	-8.5%
Economic output (in millions)[1]	$ (9,520)	$ (20,379)	$ (29,900)	$ (9,520)	$ (72,581)	$ (82,101)	$ (9,520)	$ (98,481)	$ (108,002)
Loss as a percent of total	-3.5%	-2.2%	-2.5%	-3.5%	-7.7%	-6.8%	-3.5%	-10.5%	-9.0%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (247)	$ (529)	$ (776)	$ (247)	$ (1,065)	$ (1,312)	$ (247)	$ (1,868)	$ (2,115)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Total tax payments (in millions)[1]	$ (1,285)	$ (2,750)	$ (4,034)	$ (1,285)	$ (5,534)	$ (6,818)	$ (1,285)	$ (9,708)	$ (10,993)
Loss as a percent of total	-19.9%	-13.7%	-15.2%	-19.9%	-27.6%	-25.7%	-19.9%	-48.4%	-41.4%
Population Impacts (Person Years)	(122,680)	(324,193)	(446,873)	(122,680)	(989,603)	(1,112,283)	(122,680)	(1,847,983)	(1,970,663)
Loss as a percent of baseline	-2.4%	-1.7%	-1.8%	-2.4%	-5.0%	-4.5%	-2.4%	-9.4%	-7.9%
Share attributed from natural declines (births vs. deaths)	2.5%	28.8%	22.7%	2.5%	7.2%	6.1%	2.5%	4.3%	3.9%
Share attributed to foregone in-migration	79.3%	52.7%	58.8%	79.3%	75.7%	76.6%	79.3%	54.8%	60.5%
Share attributed to out-migration of displaced workers and families	18.2%	18.5%	18.4%	18.2%	17.1%	17.3%	18.2%	24.3%	22.9%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.6%	12.8%

Growth Impact Scenario Summaries
65% Initial Impact Scenarios

	65% Initial Impact Scenarios								
	Rapid Recovery			Moderate Recovery			Failure to Recovery		
	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*	Initial impacts *(Years 1-3)*	Impacts occurring during recovery *Years (4-14)*	Total impacts *Years (1-14)*
Direct Economic Impacts									
Employment (person years of employment)	(97,781)	(225,038)	(322,819)	(97,781)	(432,307)	(530,088)	(97,781)	(484,750)	(582,531)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Labor income (in millions)[1]	$ (4,739)	$ (10,907)	$ (15,647)	$ (4,739)	$ (20,953)	$ (25,693)	$ (4,739)	$ (23,495)	$ (28,235)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Economic output (in millions)[1]	$ (14,635)	$ (33,682)	$ (48,317)	$ (14,635)	$ (64,705)	$ (79,340)	$ (14,635)	$ (72,554)	$ (87,189)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Total Economic Impacts (Direct + Indirect + Induced)									
Employment (person years of employment)	(169,538)	(390,182)	(559,720)	(169,538)	(1,145,354)	(1,314,892)	(169,538)	(1,788,961)	(1,958,499)
Loss as a percent of total	-6.1%	-4.0%	-4.4%	-6.1%	-11.6%	-10.4%	-6.1%	-18.2%	-15.5%
Labor income (in millions)[1]	$ (7,248)	$ (16,680)	$ (23,928)	$ (7,248)	$ (46,380)	$ (53,628)	$ (7,248)	$ (70,290)	$ (77,538)
Loss as a percent of total	-7.0%	-4.6%	-5.1%	-7.0%	-12.7%	-11.5%	-7.0%	-19.3%	-16.6%
Economic output (in millions)[1]	$ (20,628)	$ (47,474)	$ (68,101)	$ (20,628)	$ (127,335)	$ (147,963)	$ (20,628)	$ (188,808)	$ (209,436)
Loss as a percent of total	-7.7%	-5.1%	-5.6%	-7.7%	-13.6%	-12.3%	-7.7%	-20.1%	-17.4%
Direct Fiscal Impacts									
State & local tax payments (in millions)[1]	$ (536)	$ (1,233)	$ (1,768)	$ (536)	$ (2,368)	$ (2,903)	$ (536)	$ (2,655)	$ (3,191)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Total tax payments (in millions)[1]	$ (2,783)	$ (6,406)	$ (9,189)	$ (2,783)	$ (12,306)	$ (15,089)	$ (2,783)	$ (13,798)	$ (16,582)
Loss as a percent of total	-43.1%	-31.9%	-34.6%	-43.1%	-61.3%	-56.9%	-43.1%	-68.7%	-62.5%
Population Impacts (Person Years)	(277,745)	(725,751)	(1,003,496)	(277,745)	(2,408,650)	(2,686,396)	(313,589)	(4,032,506)	(4,346,095)
Loss as a percent of baseline	-5.4%	-3.7%	-4.0%	-5.4%	-12.3%	-10.8%	-6.0%	-20.6%	-17.5%
Share attributed from natural declines (births vs. deaths)	1.3%	24.5%	19.1%	1.3%	5.3%	4.4%	1.2%	4.1%	3.5%
Share attributed to foregone in-migration	54.0%	35.4%	39.7%	54.0%	56.1%	55.6%	47.6%	40.6%	42.2%
Share attributed to out-migration of displaced workers and families	44.7%	40.1%	41.1%	44.7%	38.5%	39.9%	39.5%	41.9%	41.4%
Share attributed to displaced young adults entering the workforce	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.6%	1.7%	3.0%

In addition to the provided summaries, Appendices 5.1 and 5.2 provide additional detail relative to the impacts of the "best case" scenario (e.g., a 10 percent initial impact followed by a rapid recovery); Appendices 5.3 and 5.4 provide additional detail relative to the potential impacts of the "worst case" scenario (e.g., a 65 percent initial impact followed by continued decline); and Appendices 5.5 and 5.6 provides additional detail relative to the scenario most similar to the model used by Dr. White and his colleagues (e.g., a 65 percent initial impact followed by a moderate recovery). These tables and charts are provided to illustrate a range of potential outcomes.

Modeling economic recovery presents its own set of challenges. As noted in our literature review, forecasting the economic and fiscal impacts of growth has been widely noted for its difficulty.[246] *If all new construction in the public and private sector were to be halted, what jobs would there be for construction-related employees*? *What level of business refurbishment (or reinvestment) might we expect after the economy enters a state of stagnation, decline or uncertainty*? We contend the answer to these questions is *very little, if any*. The good news is that history has shown that economies tend to recover; some relatively rapidly, some over very long periods of time. The long-run magnitude of any impact assessment is principally a function of the assumptions used to model the rate of economic recovery. Whether adjustments are the function of increased resource availability, heightened public security or the reversal of some policy limitation, market forces naturally want to move toward recovery and seek a state of general equilibrium.

Importantly, input-output models tend to reflect a natural trend toward recovery. If "dairy farming," for example, is removed from the economy, its absence is reflected in other sectors (i.e., cattle farming, fluid milk production, retail and distribution) while the balance of the economy is assumed to move on. Growth, measured

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[246] Additional discussion provided in the literature review. *See* Reynis, L. and Sylvester, T. *The Economic Impact of a Growth Rate Ordinance in the City of Santa Fe*. University of New Mexico, Bureau of Business and Economic Research. Pg. 41 (May 2002) (Noting that "[m]odeling the longer-term impacts of a water shortage and moratorium is at best *guesswork*." [emphasis added]; see also Mattera, P. *The Jobs are Back in Town: Urban Smart Growth and Construction Employment*. Good Jobs First: Washington D.C. Pgs. 5-7 (Calling into question an Arizona study estimating the impacts of a proposed ordinance for the authors' use of the "unsupported assumption that construction activity would. . .decline by 40 percent in the first year of implementation."); *see also* Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. iii (July 2002) (Noting that the "[b]ecause [the initiatives] passage would represent a major break with past historical trends, it is not possible to forecast what *will* happen with any degree of certainty." [emphasis included in original]).

as a function of construction activity, provides a novel and more difficult dilemma. If we consider construction in the same way that we halted dairy farming (e.g., a 100 percent removal from the economy), economic models generally want to behave in a similar manner, but, in reality, the economy cannot simply move on in absence of the affected sector. Without development activity occurring, the region is constrained by a finite inventory of residential housing, office and industrial buildings, retail centers and government facilities. Thus, one question that must be asked here is: *how does the economy adjust and recover if construction activity is halted?*

The possibility that a significant shock to the economy sparks continued declines must be considered. Effectively, this ill-fated outcome becomes a "race to the bottom," in which the abrupt change in the growth sector fuels less reinvestment in existing buildings and infrastructure, rapidly aging the region and compounding the magnitude of the initial interruption. A related issue is the manner in which any recovery might be facilitated. There are a finite number of options available to Southern Nevada. The region, for example, is certainly not going to shift to salmon fishing, lumber harvesting, oil production or international shipping. In their analysis, Dr. White and his colleagues suggested that lower wages emerging in the wake of the devastation would "attract new employers not dependent on water" and that "new construction would be financed out of water savings from reduced lawn watering and fewer leaky faucets."[247] [internal quotations omitted] Even in the best of times, with considerable effort focused toward economic diversification, the ability to attract new firms has been no trivial pursuit; it would be even more challenging under the circumstances noted.[248]

How the economy recovers is almost exclusively a function of how well the community is able react to the downturn. The research in this area indicates that it is easier to eliminate than to stimulate growth, and there is no guarantee that recovery measures will be successful. Many communities want to grow more rapidly; few are successful.

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[247] *Id.* at 103.

[248] Interview with A. Somer Hollingsworth, Nevada Development Authority. September 2003.

Selected Impact Scenarios

As was noted in the preceding sections, there are countless permutations of initial impact and recovery combinations. This section discusses in greater detail a few selected hypothetical scenarios. Because this is an update of the work conducted by Dr. White and his respected colleagues, we discuss the model most analogous to the one used in their analysis (e.g., a 65% initial impact, followed by a moderate recovery).[249] Additionally, we discuss the "best" and "worst" cases of scenarios modeled. This is intended to provide a general range of potential outcomes. All dollar amounts discussed in this section are provided in constant 2000 dollars unless otherwise noted.

White Report Update Scenario

The White Report assumed that at some year in the future,[250] we will use 2004, a complete cessation of building is to occur.[251] This means no new residential structures (e.g., homes), no new industrial or commercial buildings (including hotel-casinos), no new utility structures, no new highway or street construction and no new government facilities.[252] Our analysis assumes that this slowdown is phased in over three years (e.g., 2004-2006), and 65 percent of Southern Nevada's construction employees are displaced at the end of the third year.

Assuming no interruption to growth, employment is anticipated to reach 935,200 in 2006, an increase of roughly 18,200 jobs over 2003.[253] With an impact on the order of that evaluated by Dr. White and his colleagues IMPLAN suggests that total employment would decline to 836,000, or a net loss of roughly 56,000 positions by the close of 2006. This represents a decline of 9 percent in aggregate

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[249] *See* Appendices 5.1 and 5.2; *see also* William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Executive Summary. Pg. 102. November 1992

[250] Dr. White and his colleagues used 2006. This was the year in which they assumed that water resources would be fully utilized.

[251] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Pg. 102-05 November 1998.

[252] Note that Dr. White and his colleagues assumed that all projects that had not yet reached the water hookup stage would be halted and all projects on the drawing board would be scrapped.

[253] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada*. University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003. (Note that estimates do not equate exactly to those reported in the referenced study do to rounding in benchmarking to IMPLAN's 500 plus industrial categories).

employment, or roughly 84,000 employees less than the baseline condition.

Continuing along the same line of analysis, reductions in employment would be expected to result in higher unemployment rates. During the Great Depression, unemployment levels reached 12.5 percent, roughly two and one half times the level most recently reported.[254] In the wake of the tragic events of September 11, 2001, Clark County's employment total decreased by approximately 13,500 between September 2001 and December 2001, and unemployment increased from 5.4 to 6.8 percent.[255] A reduction in the construction workforce of more than 60 percent would mean displacement of more than 50,000 employees, more than four times the post-September 11th total -- without consideration of "ripple" effects. Under these assumptions, the rate of unemployment would be expected to approach 10 percent, as workers are faced with social dilemmas unprecedented in Nevada's modern history. We would anticipate significant out-migration, withdrawals from the labor force, early retirement, unwanted changes in career plans, skyrocketing welfare caseloads, distressed home sales, few, if any, new opportunities for young adults entering the workforce and forced family separations.

A notable consequence is the expectation of population out-migration. Assuming that the same percentage of people who cite motivations other than retirement, family or health concerns for their relocation into the Southern Nevada, we would expect between 50 and 60 percent of displaced workers to attempt to find employment opportunities outside the state (assuming that opportunities existed).[256] As the condition becomes worse, that ratio would be expected to increase to between 75 and 85 percent. Baseline population growth between 2004 and 2006 is projected to be 86,200. Assuming a three-fourths decline in in-migration and the relocation of 57 percent of displaced employees and their families, population

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[254] *See* Nevada Department of Employment, Training and Rehabilitation, *Nevada Employment and Unemployment, November 2003*. Available at: http://www.nevadaworkforce.com/admin/uploadedPublications/999_November2003EmploymentUnemploymentPressRelease.pdf.

[255] *Id.* (Note that employment decreased by an additional 8,000 employees in January and the unemployment rate increased to 7.3 percent. These figures were not used in this analysis, because they tend to reflect the post-holiday layoffs that occur in absence of special circumstances.)

[256] *The Las Vegas Perspective, 2003.*

would be expected to be nearly 144,000 less than baseline estimates.[257]

Under these assumptions, total economic output and labor income also decline significantly. Less employment translates into less income and less spending. Total labor income, which was projected to reach more than $34.7 billion in 2006 under normal conditions, would be expected to drop to $31.1 billion. Similarly, output, which is anticipated to reach $90.2 billion under normal conditions in 2006, would be expected to be less than $80 billion, decreasing by just over than 11 percent.

While these impacts are devastating to be sure, it is likely that they would worsen over time. Dr. White and his colleagues operated under the assumption that employment declines would last for only one year and population declines would persist for only two years; however, a full recovery was neither swift nor certain. The authors commented that their "[s]imulation of the abrupt cessation of construction activity. . . provides a ***best-case scenario*** of the impact. . .on the Las Vegas area economy."[258] [emphasis added] Moreover, they noted that the "devastating influences" of such a condition would make it unsustainable, resulting in correcting adjustments that might facilitate the "efficient operation of a competitive economy."[259] They warned that "[w]ith widespread discouragement in the wake of diminished construction activity and pessimism about future water resources, the adjustment process. . .could be less than fully effective and perhaps not effective at all."[260]

As noted above, the longer-run question that is presented here is how much recovery can occur as well as how fast. Dr. White and his colleagues assumed that declines in construction would peak three years after the onset of a growth interruption,[261] and overall population and employment growth rates would be reduced significantly even in the out years.[262] Our recovery assumptions are somewhat more aggressive, under "moderate" recovery conditions we assume the economy returns to near normal growth rates by the end of year 14. Even under these assumptions, a total of 1.3 million person years of employment has been lost, a total of $148 billion in

[257] *See* Riddel, M. and Schwer, R.K. *Population Forecasts: Long-term projections for Clark County Nevada.* University of Nevada, Las Vegas, Center for Business and Economic Research. Appendix A. January 10, 2003.
[258] *Id.* at 103.
[259] *Id.* at 103.
[260] *Id.* at 103.
[261] *Id.* at 106.
[262] *Id.* at 110.

economic output has been lost and labor incomes have been reduced by nearly $54 billion. Simply put, the economy has been pushed into a recession, and its recovery is slow and arduous.

Total tax payments (federal, state and local) attributable to construction and development activities are estimated by IMPLAN to account for nearly $2.2 billion in 2004. With a reduction on the order discussed above, total tax payments are projected to fall by $1.4 billion to $720 million by the close of 2006. While federal personal income taxes are most affected, the sharp reduction in construction-related employment, wage and salary payments and business productivity decreases state and local tax collection attributable to the construction sector from $420 million to $142 million, or by more than 60 percent, by 2006. The loss gap declines as the economy recovers and construction-related employment returns to levels more consistent with baseline projections. We note, however, that Dr. White and his colleagues estimated in their recovery assumptions that the construction sector would remain 51 percent below its potential nearly 30 years after the impact.[263]

Socially, the impacts are equally unfavorable. While many of the "problems often associated with growth" are avoided,[264] a new set of social issues arise. Rising unemployment leads to lower incomes, higher crime rates and an increased incidence of poverty.[265] Demands placed on state and local governments increase dramatically, with fewer tax dollars available to provide them. Caseload increases in welfare and health programs between post-September 11th indicate increases in the 15-percent range; one would expect significantly greater increases under the provided assumption given the number of employees hypothetically displaced. Traditionally "protected" programs such as education and long-term care would require

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[263] William T. White, Ph.D. et al. *The Impact of a Water-Imposed Interruption of Growth in the Las Vegas Region*. Pg. 102-05 November 1992.

[264] These factors are discussed in Section IV. They include: Reduction of wilderness areas and other open spaces; increases traffic congestion; reduction in air quality; increasing home prices; over crowding in schools, universities and cultural centers; insufficient infrastructure leading to higher service costs; and higher costs associated with new public facilities.

[265] *See* Elliott, C. and Ellingworth, D., *Exploring the Relationship between Unemployment and Property Crime.* Applied Economics Letters, vol. 5, issue 8, pages 527-30 (1998); *see also* Raphael, S. and Rudolf, W. *Identifying the Effect of Unemployment on* Crime. Journal of Law & Economics, 44 (1)259-83 (2001); Bernstein, J. and Baker, D. *The benefits of full employment: When markets work for people.* Economic Policy Institute. (Forthcoming 2004). Introduction available online at: ww.epinet.org/content.cfm/books_full_employment.

significant cuts. All-in-all, the impacts would be devastating and without precedent in Nevada's modern history.

"Best Case" Scenario

This subsection explores the hypothetical impacts of a scenario applying more conservative assumptions on the effects of the initial impact and more aggressive assumptions relating to the rate and extent of recovery. Importantly, this is the "best case" scenario of those modeled for reporting purposes; conditions with less significant impacts are certainly conceivable. In this hypothetical, construction employment is projected to decrease by 10 percent between 2004 and 2006, and the economy is expected to be fully recovered by 2016. Full recovery in this scenario means that by 2016 the economy is back to where it would have been under baseline conditions had no interruption taken place.

Construction employment declines during the initial impact period moratorium from representing 9 percent of Clark County's employment to representing between 6 and 7 percent of total employment. This level approximates the share of construction employment in metro areas experiencing less rapid growth.

During the initial impact period (e.g., 2004 through 2006), direct employment losses total just over 15,000 person years. This represents a loss of roughly 6.6 percent when compared to baseline conditions. Total employment declines by a little less than 1 percent, as 26,100 person years are lost in total and labor incomes and economic output decline by $1.1 billion and $3.2 billion, respectively. State and local tax collections are off more than $82 million through the first three years.

Throughout the entire study period, more than 47,200 person years of direct construction related employment are lost. Including direct and indirect impacts 81,900 person years are lost, or roughly 0.6 percent of baseline employment totals. Labor income decreases by 0.7 percent, or $3.5 billion, and state and local tax collections are reduced by approximately $260 million.

While on the surface these impacts appear comparatively mild, in reality they are far from inconsequential. Unemployment rates would be expected to rise, insecurity may lead to decreased investment and a measurable increase in public service demands is likely. Fewer displaced employees would be expected to relocate out of the state, as a milder slowdown would sustain workers' hopes of finding a job

in other sectors of the economy. Uncertainty would be an issue. Business plans predicated on growth and expansion would have to be revisited, and short-run increases in commercial and industrial vacancies would be expected.

"Worst Case" Scenario

The impacts indicated in the White Report Update scenario are far-reaching to say the least, yet they do not represent the worst case scenario. This section discusses the "worst case" of the alternatives cited herein; however, it should be noted that outcomes more devastating than those presented here are certainly conceivable.[266] This scenario assumes over a three-year initial impact period (e.g., 2004 through 2006) an interruption to Southern Nevada's growth cycle displaces 65 percent of the region's construction employees. The economy fails to recover in any meaningful way, instead entering a state of prolonged decline.

During the initial impact period, a total of 98,000 person years of direct construction employment is lost. That number increases to 582,500 throughout the duration of the study period, as construction employment declines from 7.1 percent of total employment in 2004 to under 3.0 percent of employment by 2010. Total employment, labor incomes and economic output decline significantly. In total, more than 1.96 million person years of employment are lost, and foregone labor income total nearly $78 billion. Economic output is lowered from its baseline potential of $97.4 billion to just under $71 billion, a decline of 27.2 percent. While the construction industry is most impacted in the early years, the retail trade and services suffer most as the growth predicated on new population is lost.

Population enters a state of annual decline as in-migration nearly halts, displaced workers and their families relocate and young adults wishing to enter the workforce leave in absence of future opportunities. By 2016, population has declined to below 1.5 million, off more than 580,000 residents from of its baseline potential.

Fiscally, $16.6 billion in federal, state and local tax payments are lost. State and local collections related to development activity declines from a peak of $351 million in 2004 to $125 million in 2010 and $97 million in 2016. In total, these funds are off approximately 63 percent from baseline expectations. Rising unemployment leads to lower

[266] For example, if a terrorist attack, nuclear waste accident and necessary growth control measure in light of resource limitations were all to impact the community at the same time, the impacts would compounded increasing in severity.

incomes, higher crime rates and an increased incidence of poverty.[267] Demands placed on state and local governments increase dramatically, with fewer tax dollars available to supply them. One note properly added is that this "worst case" analysis assumes the economy fails to recover altogether.

While this potential unfolding of events is certainly conceivable, history suggests that economies tend to recover in one way or another. It is highly unlikely that perpetual state of decline would exist for any significant period of time.

The Broader Impact: State of Nevada

The impacts provided in the preceding sections have been specific to Clark County; however, the total impacts of a growth interruption would be felt throughout the state. Dr. White and his colleagues concluded, "As goes Clark County, so goes the state of Nevada." We find this to be as true today as it was when the White Report was first issued in 1992. In fact, Clark County has grown from 63 percent of the state's population in 1992 to more than 70 percent today. In this sense, Nevada as a whole is more dependent upon Clark County than it was a decade ago.

From an economic perspective, IMPLAN suggests that more than seven jobs are lost outside of Clark County for every one hundred development-related positions lost within the County's borders. Depending on the scenario and assumptions applied, this translates into thousands of jobs lost statewide and millions of dollars in terms of lost wages and foregone state productivity.

Fiscally, lay people often misunderstand the impact of Nevada's rural guarantee as well as how state programs, such as education are funded. Ten of Nevada's 17 counties are guaranteed to receive a set amount of sales and use tax revenue regardless of the amount of taxable sales actually occurring within their borders.[268] One would

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[267] *See* Elliott, C. and Ellingworth, D., *Exploring the Relationship between Unemployment and Property Crime.* Applied Economics Letters, vol. 5, issue 8, pages 527-30 (1998); *see also* Raphael, S. and Rudolf, W. *Identifying the Effect of Unemployment on* Crime. Journal of Law & Economics, 44 (1)259-83 (2001); Bernstein, J. and Baker, D. *The benefits of full employment: When markets work for people.* Economic Policy Institute. (Forthcoming 2004). Introduction available online at: ww.epinet.org/content.cfm/books_full_employment.

[268] Guarantee counties include Douglas, Lyon, Esmeralda, Lander, Lincoln, Mineral, Nye, Pershing, Storey, and White Pine.

expect that in the face of severely declining revenue streams, Clark County would exert substantial pressure to reduce the amount of this subsidy. Additionally, the Nevada Plan, which establishes how

Nevada's schools are funded, is also dependent on an asymmetrical allocation of revenues. Declines in Clark County's ability to generate public funds will lead to significant instability within each of the state's 17 school districts.

A decline in the Clark County economy, even with a limited recovery, will be felt throughout Nevada, with a general decline in quality of life and a myriad of new state fiscal challenges. The table below provides a look at how an interruption in Southern Nevada might impact regions outside of Clark County. The table above summarizes impacts at the 10 percent, 30 percent and 65 percent initial impact level, assuming a moderate recovery for all three scenarios.

Conditional Impact Assessment Summary
Statewide Impacts, 10%, 30% and 65% Initial Impact Scenarios, Followed by a Moderate Recovery
Initial Impacts and Total Impacts, Years 1-14

	Initial Impact (Years 1-3)			Total Impact[2] (Years 1-14)		
	Clark County	Balance of Counties	Statewide	Clark County	Balance of Counties	Statewide
10% Initial Impact						
Employment	(26,083)	(1,076)	(27,158)	(260,053)	(4,244)	(264,297)
Labor Income (in millions)	$ (1,115.0)	$ (34.5)	$ (1,149.6)	$ (10,091.7)	$ (136.2)	$ (10,228.0)
Economic Output (in millions)	$ (3,173.5)	$ (110.2)	$ (3,283.7)	$ (26,866.5)	$ (434.8)	$ (27,301.2)
30% Initial Impact						
Employment	(78,248)	(3,227)	(81,475)	(761,089)	(17,127)	(778,216)
Labor Income (in millions)	$ (3,345.1)	$ (103.6)	$ (3,448.7)	$ (30,279.5)	$ (549.8)	$ (30,829.3)
Economic Output (in millions)	$ (9,520.5)	$ (330.5)	$ (9,851.0)	$ (82,101.2)	$ (1,754.4)	$ (83,855.6)
65% Initial Impact						
Employment	(169,538)	(6,991)	(176,529)	(1,314,892)	(37,901)	(1,352,793)
Labor Income (in millions)	$ (7,247.7)	$ (224.4)	$ (7,472.1)	$ (53,628.0)	$ (1,216.7)	$ (54,844.7)
Economic Output (in millions)	$ (20,627.7)	$ (716.2)	$ (21,343.9)	$ (147,962.5)	$ (3,882.5)	$ (151,845.0)

Notes:
[1] All dollar amounts expressed in constant 2000 dollars.
[2] Assumes a moderate recovery during years 4 through 14.

The Impact of a Marginal Decline

This section considers the question of how marginal declines in growth might impact the economy. The most oft-cited examples of this brand of interruption are policy decisions that restrict residential and/or non-residential permitting and urban growth boundaries. This section focuses on the general impacts associated with deliberate

growth control measures, including reductions in the rate of employment growth, reductions in consumer spending in response to higher housing costs and shifts in the composition of homeownership and construction.

The range of possibilities here is nearly endless: growth could be restricted by 1 percent or 99 percent; restrictions could last 1 day or 20 years. Thus, this discussion too should be viewed as a general overview.

Reduced Employment Growth

First, we consider a reduction in projected employment growth more closely approximating growth in western states with some form of growth limitations. Both Oregon and Washington are in Nevada's peer group, and both also have statewide growth controls.[269] During the 1990s, Washington and Oregon experienced average annual job growth rates of approximately 3.0 percent, compared to Nevada's average approaching 6 percent. Also worth noting is the growth in Arizona, which is also in Nevada's peer group, had no growth control measures during the 1990s, and reported employment growth of 3.4 percent during the period of interest. Reducing Nevada's employment growth rate to that of Washington and Oregon would result in a 57 percent reduction. To be conservative, we have reduced overall employment growth by only 15 percent for analysis purposes. This approximates the difference between Washington and Oregon's employment growth rates and those reported in Arizona. Arizona's growth rate during the 1990s is more similar to the rates projected to occur in Nevada during the next several years.[270]

Conditional Impact Analysis: Marginal Reduction

Baseline & Conditional Employment Totals, Assuming 15 Percent Reduction in the Rate of Growth

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	857,304		857,304			
2005	925,797	8.0%	921,514	7.5%	(4,283)	-0.5%
2010	964,036	4.1%	950,522	3.1%	(13,514)	-1.4%
2015	1,021,164	5.9%	993,379	4.5%	(27,785)	-2.7%
2020	1,071,943	5.0%	1,030,995	3.8%	(40,948)	-3.8%

The job losses start small (2,200 or 0.2 percent of employment) in year one, but rise rapidly to 41,000, or 3.8 percent of employment by

[269] Including urban growth boundaries.

[270] Note also that the expected rate of employment growth throughout the 2000s is anticipated to be significantly lower than that reported during the past ten years.

2020; this increase is explained by the fact that cutbacks in annual growth rates have a cumulative effect. Expressed in total person years of reduced employment, a total of 350,000 jobs are lost over the year 2004-2020 period.

Higher Housing Prices & Shifts in Spending

Areas with growth restrictions, whether the result of geography or policy, tend to have higher housing prices. Managing this phenomenon has been challenging. In one study, it was shown that an open space purchase program developed to manage growth actually had the unintended consequence of increasing residential demand. Home prices to increase by 3.75 percent and construction activity increased after the policy was implemented.[271] Any suggestion that a limitation on new development is eminent will likely result in home price escalations. This effect may be somewhat offset, however, by the perception of existing land scarcity.

A second issue with regard to housing prices is tied to consumer spending. Home-price appreciation, it is argued, makes households wealthier and boosts demand for other goods and services. This trend has been observed nationally during the past few years, as home prices have risen nationally and low mortgage interest rates have incentivized many households to refinance their primary residence. As home prices go up, additional sources of spending capital can be made available through home-equity loans and additional disposable income is "freed" as a result of lower home mortgage interest rates. Some believe that this phenomenon has kept the national economy out of a double-dip recession.

The other side of this trend is one that also warrants consideration. A reduction in consumer spending on non-housing goods and services in response to higher housing prices has been noted as a probable consequence of this trend. One study which considered this impact suggested that housing prices could be expected to rise as much as 60 percent faster per decade where growth is artificially limited. Increased spending on housing goes somewhere (i.e., higher profits for developers, windfall gains for landowners and house sellers, some of whom move out of state or "trade up"), but some researchers have concluded that little of this spending is converted into local consumer expenditures, so many sectors of the economy experience a cutback in consumer demand. As 5/1 and 3/1 adjustable rate mortgages ("ARMs") begin catching up with consumers who

[271] Riddel, M. *A Dynamic Approach to Estimating Hedonic Prices for Environmental Goods: An Application to Open Space Purchase*, Land Economics, V. 77(4), 2001.

extended their credit in hopes of a brighter tomorrow, the potential for reversal in spending trends will increase. This will be acutely problematic if household incomes continue to increase at very modest rates.

Housing Composition[272]

This consideration involves a shift in the composition of new dwelling units from single-family homes to multi-family housing. Some growth control measures (i.e., the use of urban growth boundaries) tend to increase the density of housing and the number of multi-family units added to the market. Some researchers have argued that concentrated development activity leads to decreased employment. A second consequence often cited is the interference with household preferences; if given a choice, survey data tend to show that a minority of people prefer to live in apartments, condominiums or townhouses. A study of Portland's urban growth boundary, conducted by researchers at Portland State University criticized the state's growth boundary planning for failing to adequately account for consumers' preferences.

From an economic perspective, there are mixed indications as to the consequence of this shift. Some reports suggest, all other things being held constant, the construction of multi-family versus single family housing will result in *increased* employment and others find that such a shift *decreases* employment, output and spending.

While studies tend to disagree as to the severity of these impacts, they do tend to agree that increased and higher housing costs tend to lower rates of homeownership. Even at the margin, these impacts may be material.

Fiscal Issues

There are two fiscal considerations that arose in our analysis of a marginal decline in growth rates. First, the question was presented as to whether increases in home costs could be expected to translate into greater property tax revenues. In other words, could state and

[272] It should be noted that the State of Nevada enacted legislation during 2003 aimed at addressing the issue of construction defect litigation. Defect law suits had been impacting the development of multi-family, owner-occupied for sale homes (e.g., condominiums). Most expect this legislation to be followed by increases in mutli-family housing during the next several years, with an expectation that construction insurance rates will drop. While the outcome of this condition is uncertain, it also has the potential to impact the composition of housing throughout the state.

local governments have an improved fiscal condition if the value of improved property (i.e., homes) rose while the population did not.

To address this question, it is important to first note that Nevada's property tax system is based on the market value of underlying land and the replacement cost of any improvements. Thus, supply constraints leading to higher land values will (and have) put upward pressure on property tax collections. Improvements are taxed on replacement cost. Thus, if the increase in improvement value is a function of increased costs of replacement, property tax collections will increase. If increases are merely the result of windfall profits inuring to land holders, home builders and home sellers, Nevada's state and local governments would realize a lesser benefit.

The second fiscal consideration relates to tax collections attributable to gaming activities and particularly tax payments made by visitors. The question presented is whether the tax contributions made by the gaming industry and its patrons subsidizes payments that would otherwise be borne by Nevada's residents and businesses. The question continues, if population and non-gaming businesses were to be slowed and visitation was to be unaffected, might state and local governments be in an improved fiscal condition. At the state level, this is a possibility. Gaming taxes accounted for more than $736 million in state revenue during FY 2003, roughly 16 percent of all state revenue sources and a considerably higher share of its own-source revenue collections.[273] The gaming industry is the highest taxed of any individual industry, and the revenue it generates supports a number of key state programs (i.e., education). County and city governments, while dependent upon direct and indirect gaming activity, are dependent to a lesser degree. At the end of the day, visitors generate a substantial amount of public revenue and demand relatively fewer services. Having more visitors per capita either as a function of increased visitation or decreased population, or both, could improve the state's fiscal condition.

OTHER CONDITIONAL CONSIDERATIONS

Traffic Congestion

As cited early in this report, one of the benefits often associated with slower growth is improved traffic and environmental conditions. The

[273] Augustine, K. *State of Nevada Comprehensive Annual Financial Report For the Fiscal Year Ended June 30, 2003*. State of Nevada (2004).

evidence is ambiguous as to whether reduced growth rates are actually correlated with improved traffic or environmental conditions. Moreover, there is some evidence that growth control measures may result in unintended consequences, including increased traffic and air quality challenges.[274] Importantly, growth control measures tend to increase development densities.[275] One study found a high positive correlation between population density and commute times, noting that most of commuting occurs between suburbs and not to a central downtown region where densities tend to be greatest.[276]

There are certainly circumstances where reductions in the rate of growth might lead to decreased traffic congestion or improved air quality. Generally speaking, communities with high incidences of urban sprawl or limited infrastructure capacity are challenged by rapid rates of growth. Slower growing communities do not necessarily have greater usage of transit, fewer miles driven per day or fewer traffic delays. Rather, these social outcomes are more likely a function of public investment, planning and management.

Social Impact of Growth Measures, Selected Western Cities[277]

	Las Vegas	Salt Lake City	Sacramento	San Diego	Phoenix	Denver	Portland	Seattle
Peak 8-hour ozone level[278]	73.0	80.0	91.0	71.0	81.0	69.0	57.0	60.0
Fatal accidents per 100,000	13.5	9.0	10.4	9.3	14.0	11.0	7.7	7.0
Daily miles driven per person	19.2	24.8	20.9	23.7	27.3	22.1	23.6	25.8
Avg. number of vehicles per HH	1.6	1.9	1.8	1.8	1.7	1.8	1.7	1.8
% of commuters using transit	4.5%	3.1%	2.8%	3.5%	2.2%	4.8%	7.6%	8.5%
% commuters walking to work	2.4%	1.9%	2.3%	3.6%	2.1%	2.2%	3.5%	3.4%
Avg. commute time (minutes)	24.3	22.4	25.6	25.3	26.1	26.3	24.3	27.2
Avg. annual traffic delay (hours)	18.0	9.3	19.5	24.1	29.9	34.6	22.9	33.8

[274] O'Toole, R. *The Folly of "Smart Growth*". Regulation. Pgs. 20-26 (Fall 2001).
[275] Discussion and email exchange with Dr. Stephen M. Miller, University of Nevada Las Vegas.
[276] See Pickrell, D and Paul, S. *Trends in Motor Vehicle Ownership and Use: Evidence from the Nationwide Personal Transportation Survey*. Journal of Transportation and Statistics, 2:1, 1-17 (1999); *see also* Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. 25 (July 2000).
[277] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.
[278] Expressed in parts per billion.

Other cross-sectional studies corroborate these findings. One report concluded, "[t]he Ballston rail transit station in Northern Virginia, often cited as a national model of a compact transit-oriented 'village'

Las Vegas, NV Ranking for Selected Development Concentration Measures[279]
(Out of 83 Major MSAs, Ranked from Worst (1) to Best (83))

Residential density	68th
Mix of homes, jobs and services	18th
Strength of town centers/downtowns	41st
Overall sprawl index	48th
Accessibility of street network	55th

Seattle, WA Ranking for Selected Development Concentration Measures[280]
(Out of 83 Major MSAs, Ranked from Worst (1) to Best (83))

Residential density	61st
Mix of homes, jobs and services	16th
Strength of town centers/downtowns	37th
Overall sprawl index	44th
Accessibility of street network	63rd

Portland, OR Ranking for Selected Development Concentration Measures[283]
(Out of 83 Major MSAs, Ranked from Worst (1) to Best (83))

Residential density	58th
Mix of homes, jobs and services	40th
Strength of town centers/downtowns	68th
Overall sprawl index	76th
Accessibility of street network	71st

that is supposed to encourage walking and reduce car use, is a case in point. With density five times higher than their neighboring spread-

out Fairfax City/Oakton area, Ballston creates more than four times as many daily vehicle trips than its low-density neighbor. . ." Another report found that when and where everything is within walking distance and everyone rides bicycles, people still use their automobiles quite a lot.[281] Household trip frequencies were cited as a wild card, and it is not clear that they are reduced when access is improved.[282]

Infrastructure Costs

One question that is often asked is whether growth controls leading to increased densities are associated with lower infrastructure costs. In 1974, the *Costs of Sprawl* report made a case for infrastructure savings associated with high residential densities and, although the report's methods have been challenged, the conclusions have been widely cited. This concept did receive more credible support from simulations carried out by Dr. Robert Burchell and his colleagues in 1992.[284]

[279] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.
[280] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.
[281] *See* Gordon, P. and Richardson, H. *The Economic Effects of Arizona's Proposed Citizen's Growth Management Initiative*. University of Southern California. Pg. 25 (July 2000). (citing Crane, R. "Access and Travel: An Application of Trip Frequency and Mode Split in the New Suburbs" (19XX)).
[282] *Id.*
[283] Ewing, R., Pendall, R., Chen, D., *Measuring Sprawling and its Impact*. Smart Growth America. Available at: http://www.smartgrowthamerica.com/sprawlindex.

In their report, the research team concluded that compact settlements would save $1.3 billion in infrastructure capital costs and $400 million in annual operating costs to the State of New Jersey. The savings accrued to the state because new development was presumed to be guided into already developed areas, enabling new projects to, "[d]raw on usable excess operating capacity in already developed areas. . ."[285] These conclusions are somewhat contradicted by the work of Duke University Professor Helen Ladd.[286] Ladd's research showed that high density urban areas have the higher infrastructure costs, and that the lowest per capita infrastructure costs are in the range of 250-1250 people per square mile.[287] All of the ten fastest growing cities in the 1990s, including Southern Nevada, were within this range.[288]

The trouble with both the simulated and the econometric cost comparisons is that they are necessarily incomplete, because cost-minimizing is not the same as optimizing. Moreover, Southern Nevada is easily distinguished from the jurisdictions for which these studies have been conducted. These studies have also been criticized for failing to reflect the substantial benefits of suburban lifestyles and the lesser appeal of many already developed areas. Cost minimization is never the whole story, and even if it were, the evidence is at best inconclusive and requires a subjective analysis of any particular project.

Footnote continued from the previous page.

[284] Burchell, Robert W. et al. *Impact Assessment of the New Jersey Interim State Development and Redevelopment Plan.* Rutgers University: Center for Urban Policy Research. (1992)

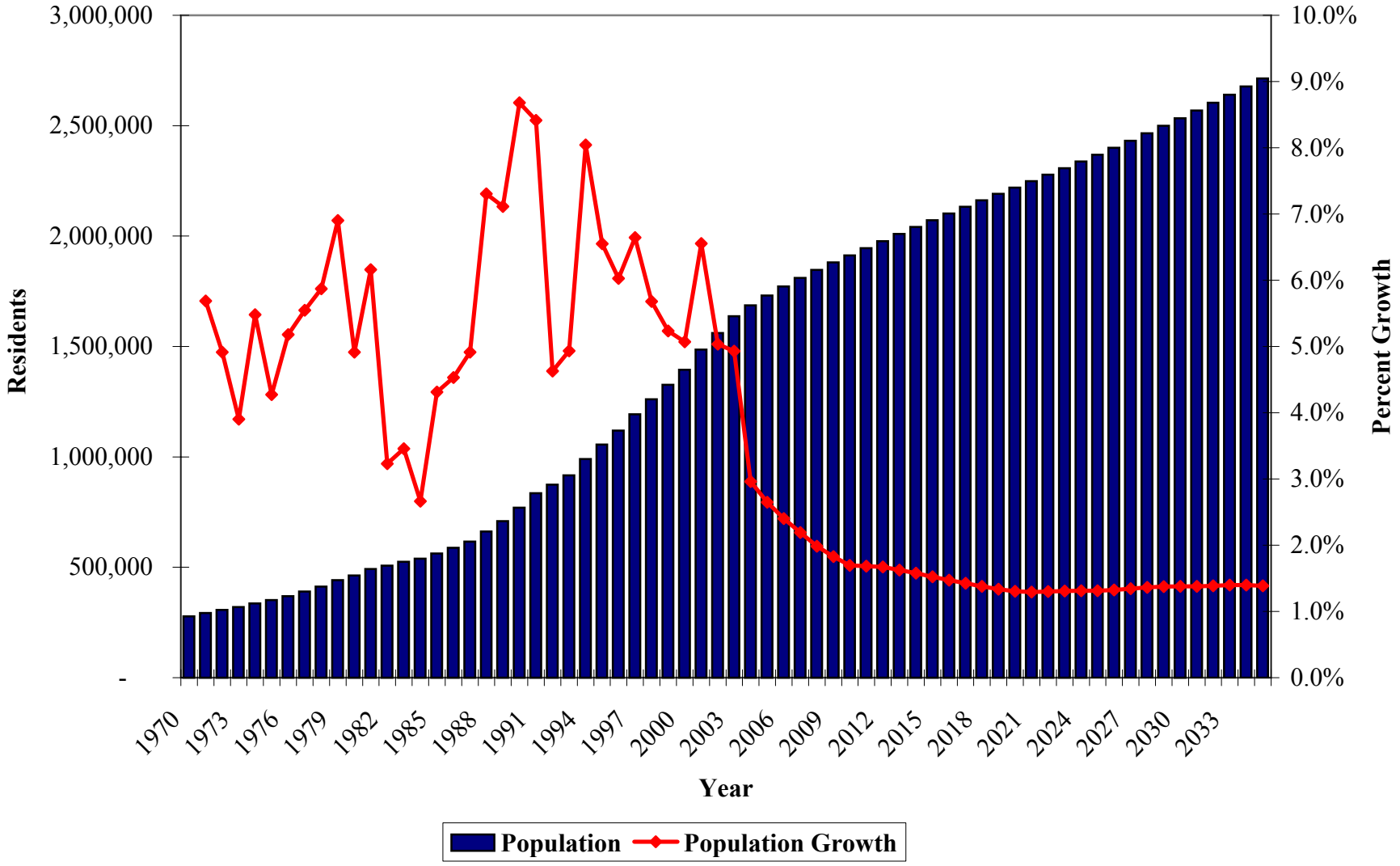
[285] *Id.* at 11.

[286] Ladd, H.F. *Population Growth, Density, and the Costs of Providing Public Services.* Urban Studies, 29:2, 273-295. (1992).

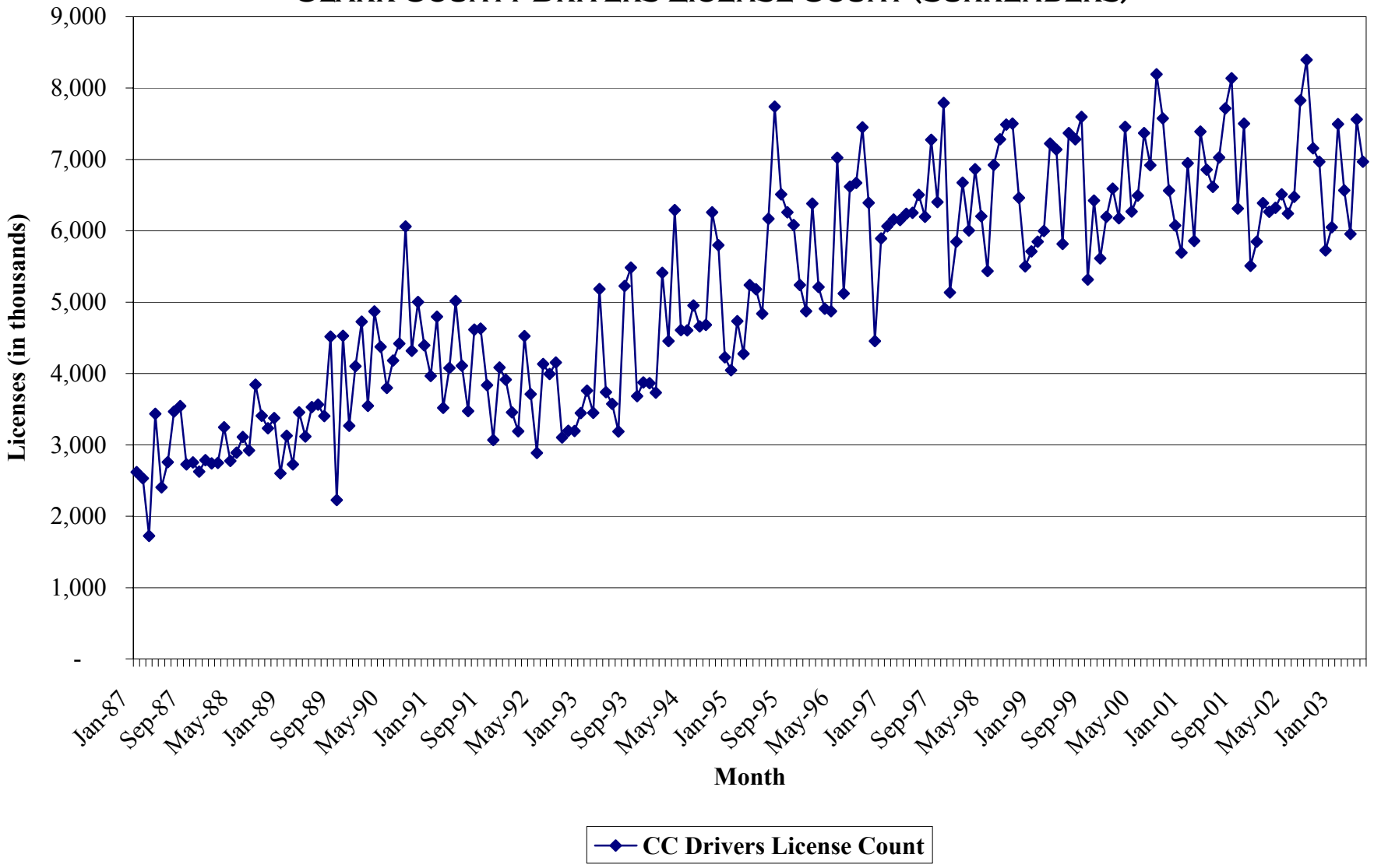
[287] *Id.*

[288] *Id.*

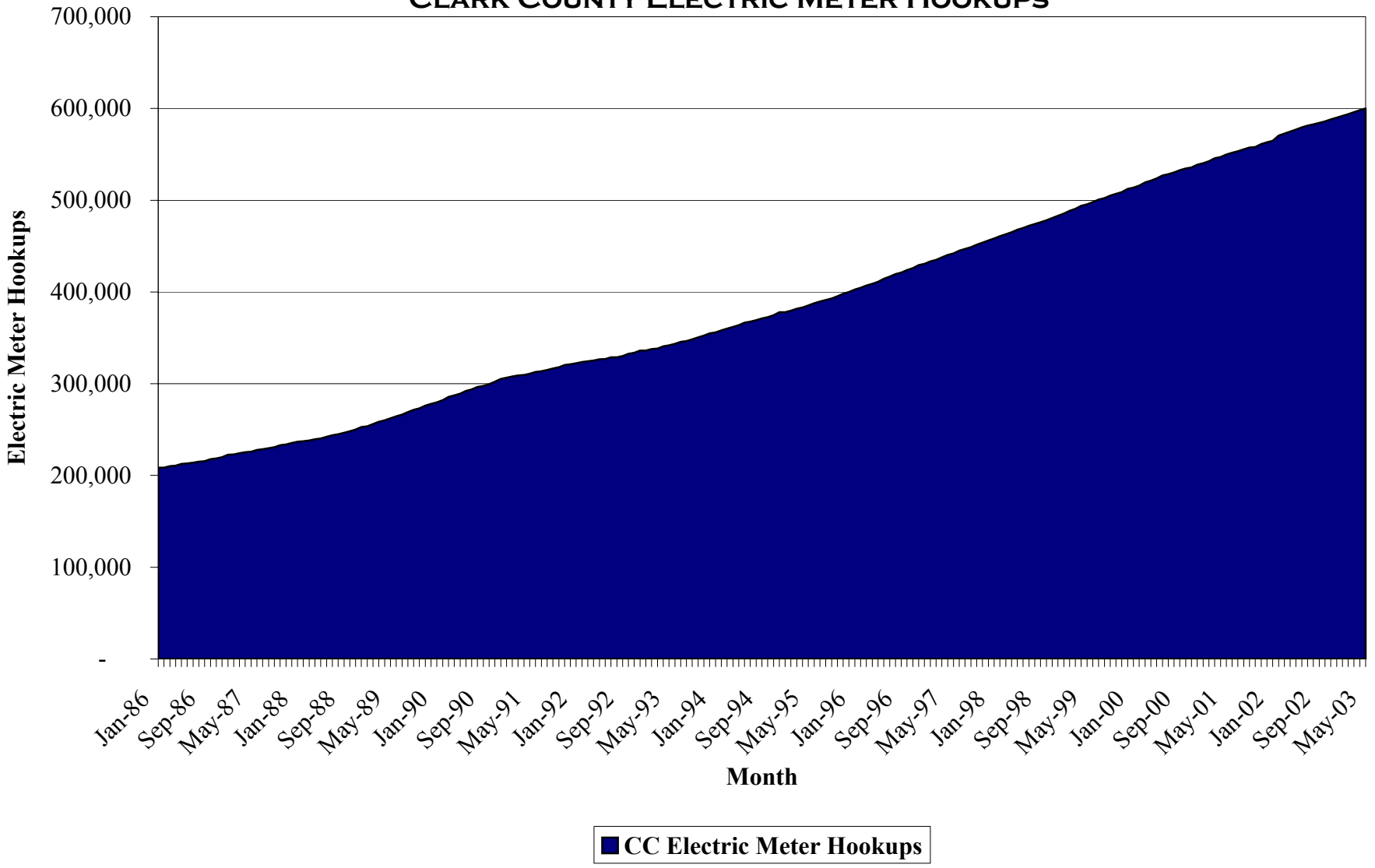
Appendix 1.1-A
Clark County Population and Population Growth



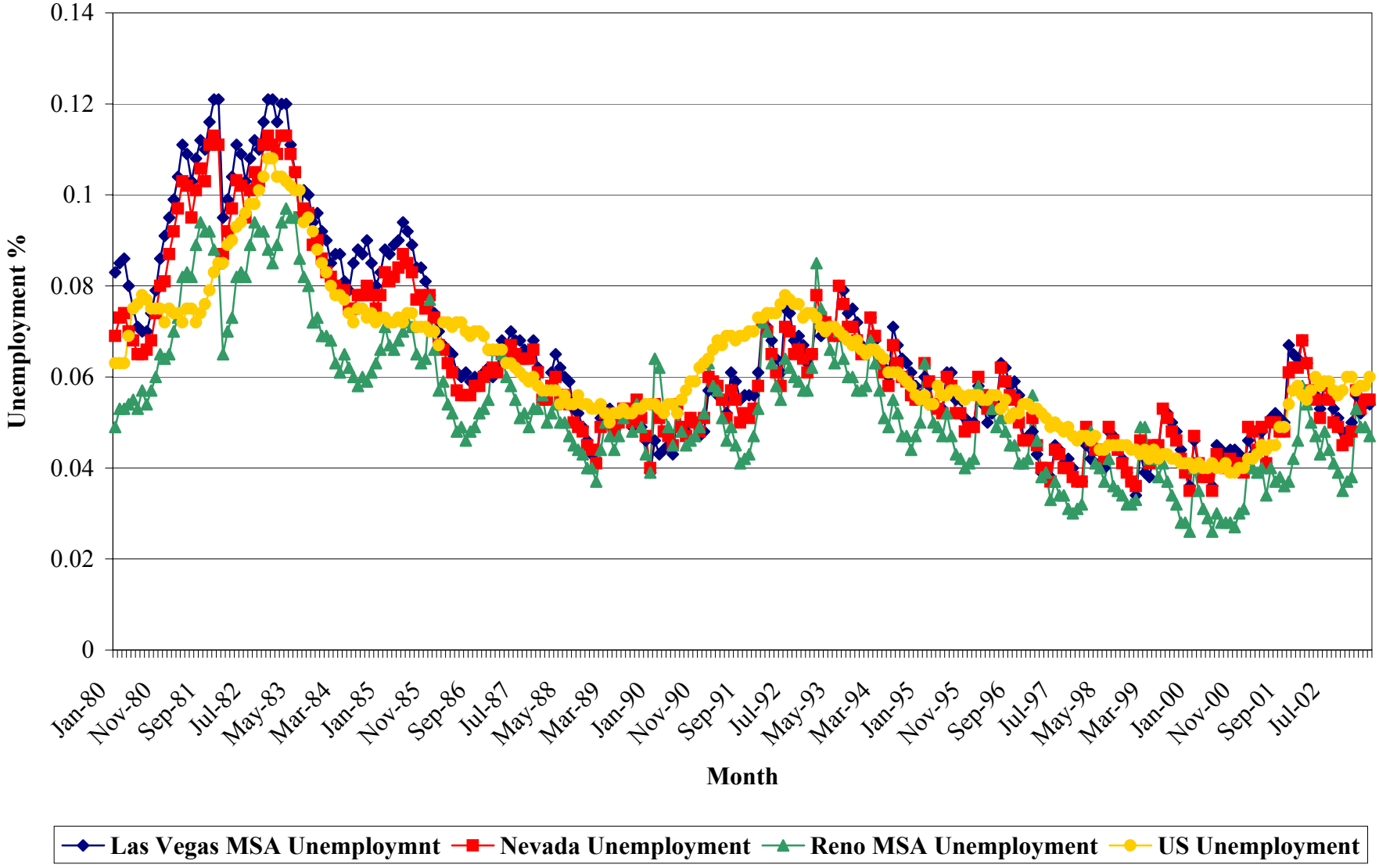
Appendix 1.1-B
Clark County Drivers License Count (Surrenders)



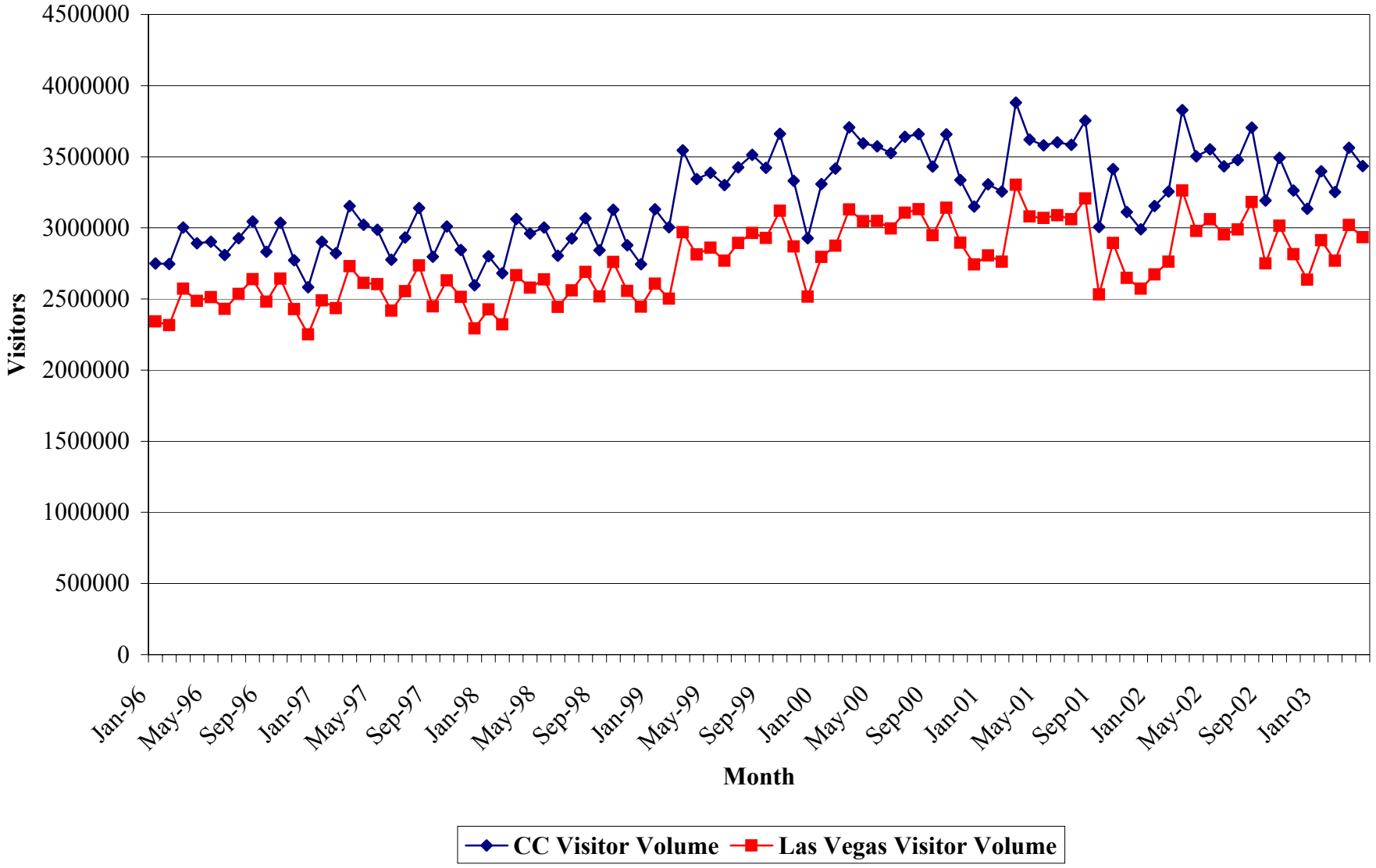
Appendix 1.1-C
Clark County Electric Meter Hookups



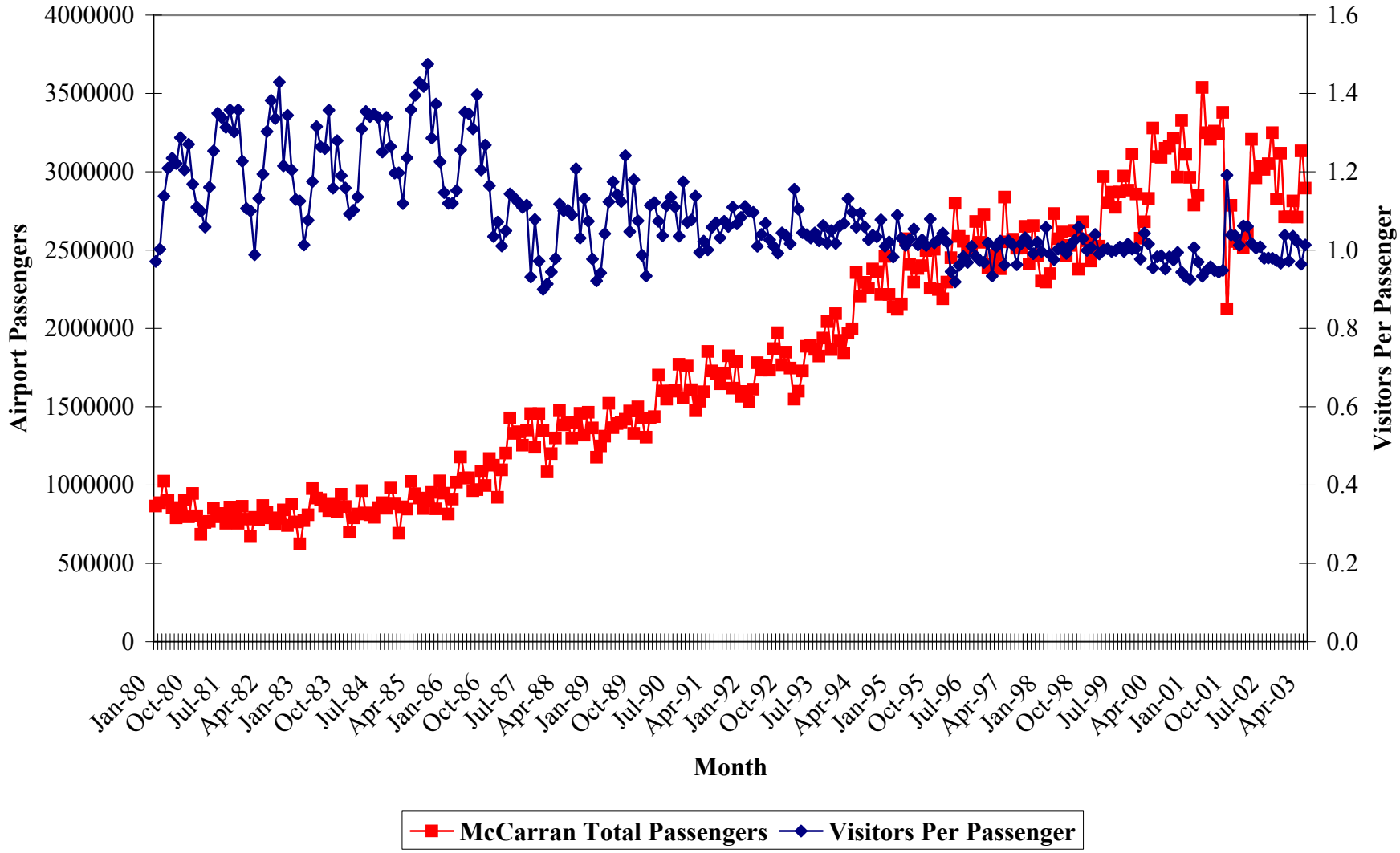
Appendix 1.1-D
Nevada and Sub-area Unemployment Rates



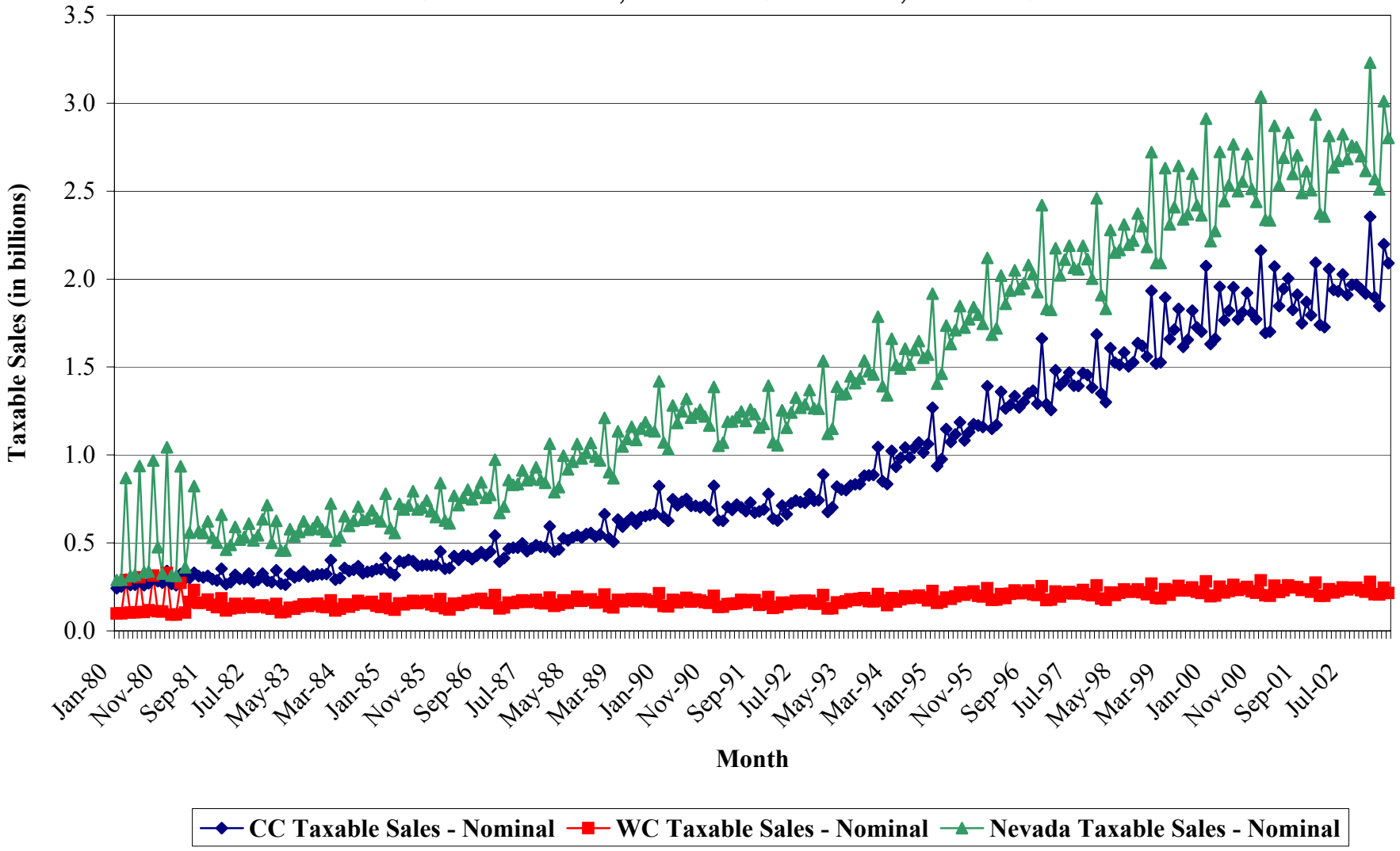
Appendix 1.1-E
Clark County and Las Vegas Visitor Volumes



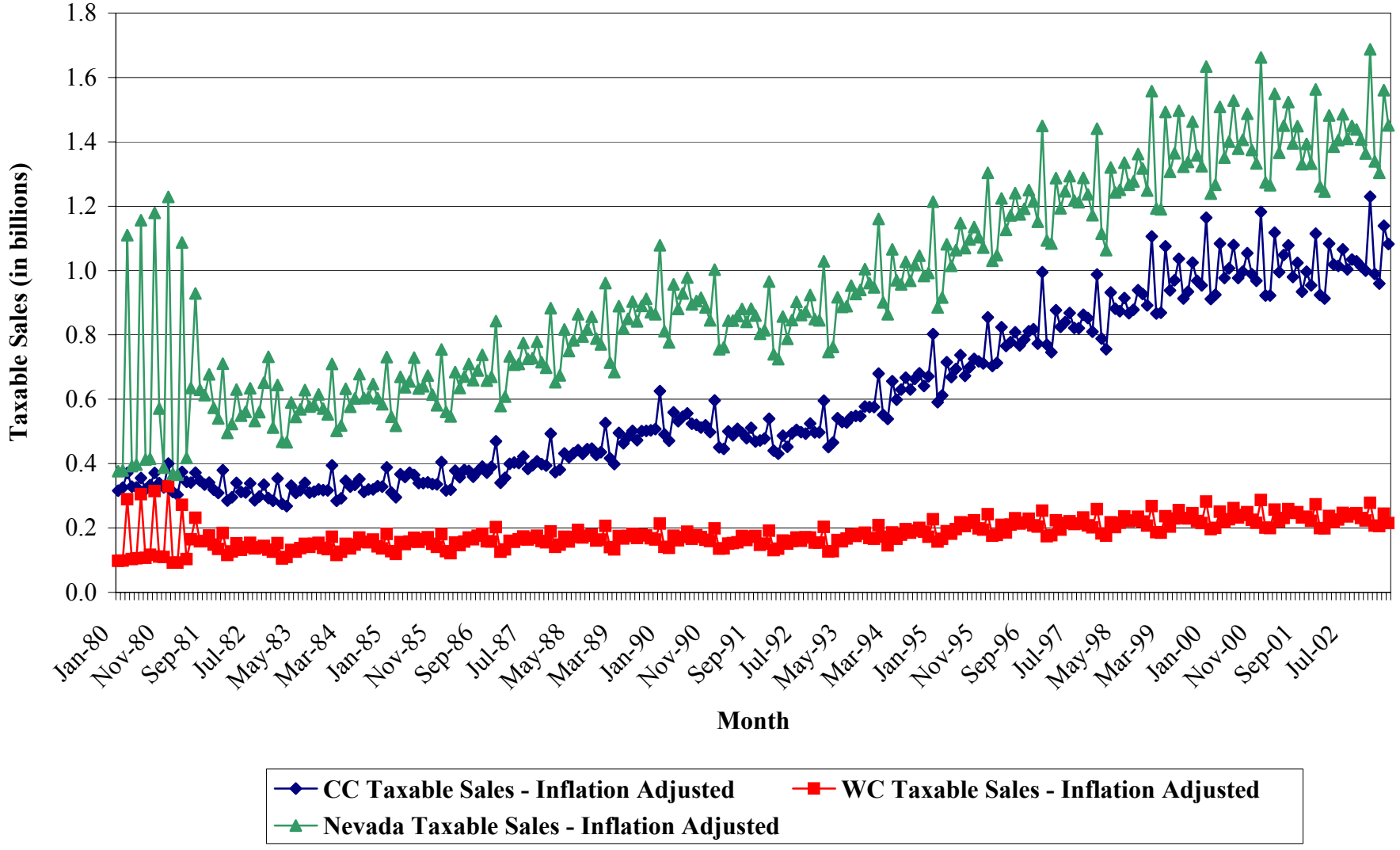
Appendix 1.1-F
Clark County Airport Traffic and Visitors Per Passenger



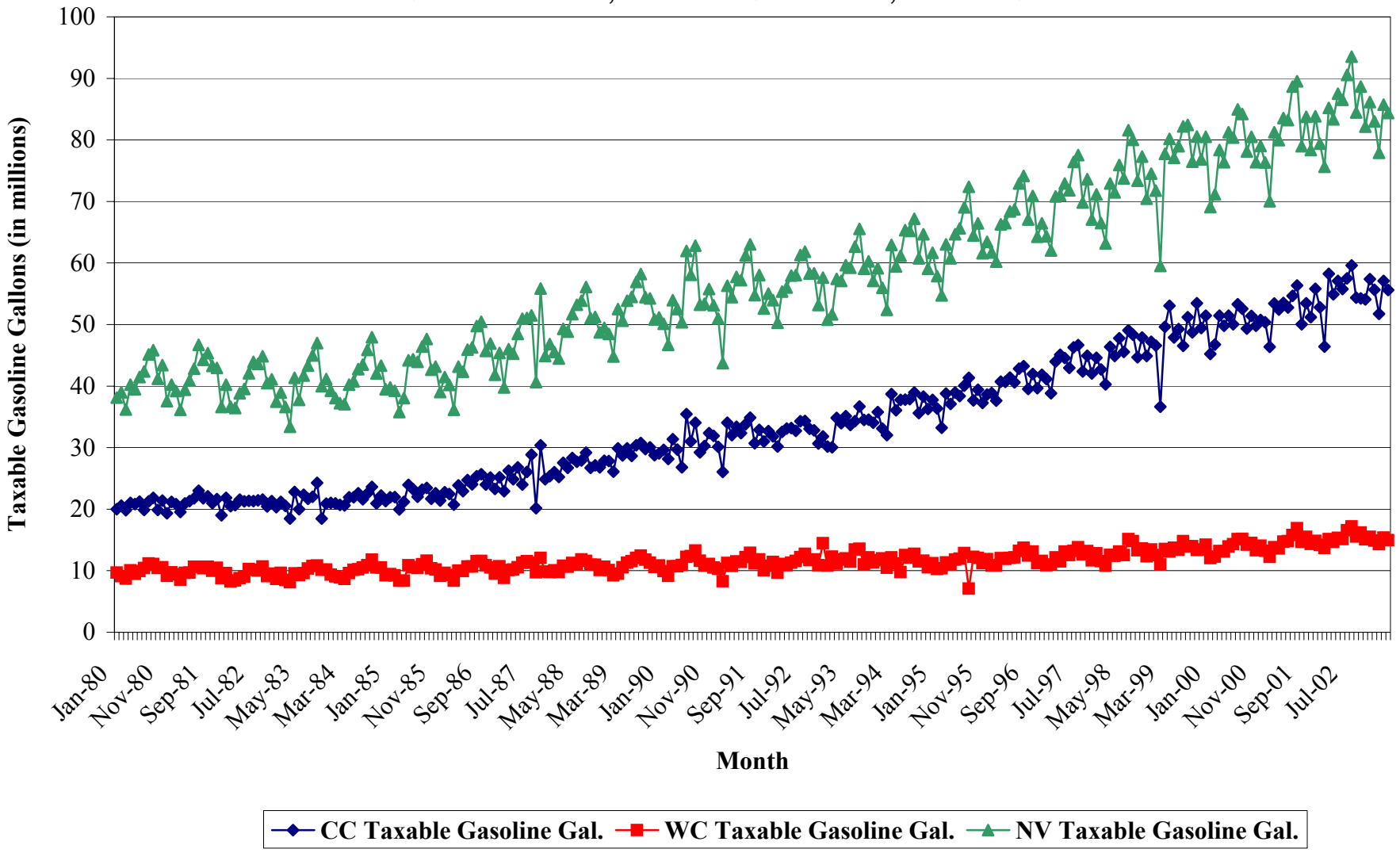
Appendix 1.1-G
Nominal Taxable Sales
Clark County, Washoe County, and Nevada



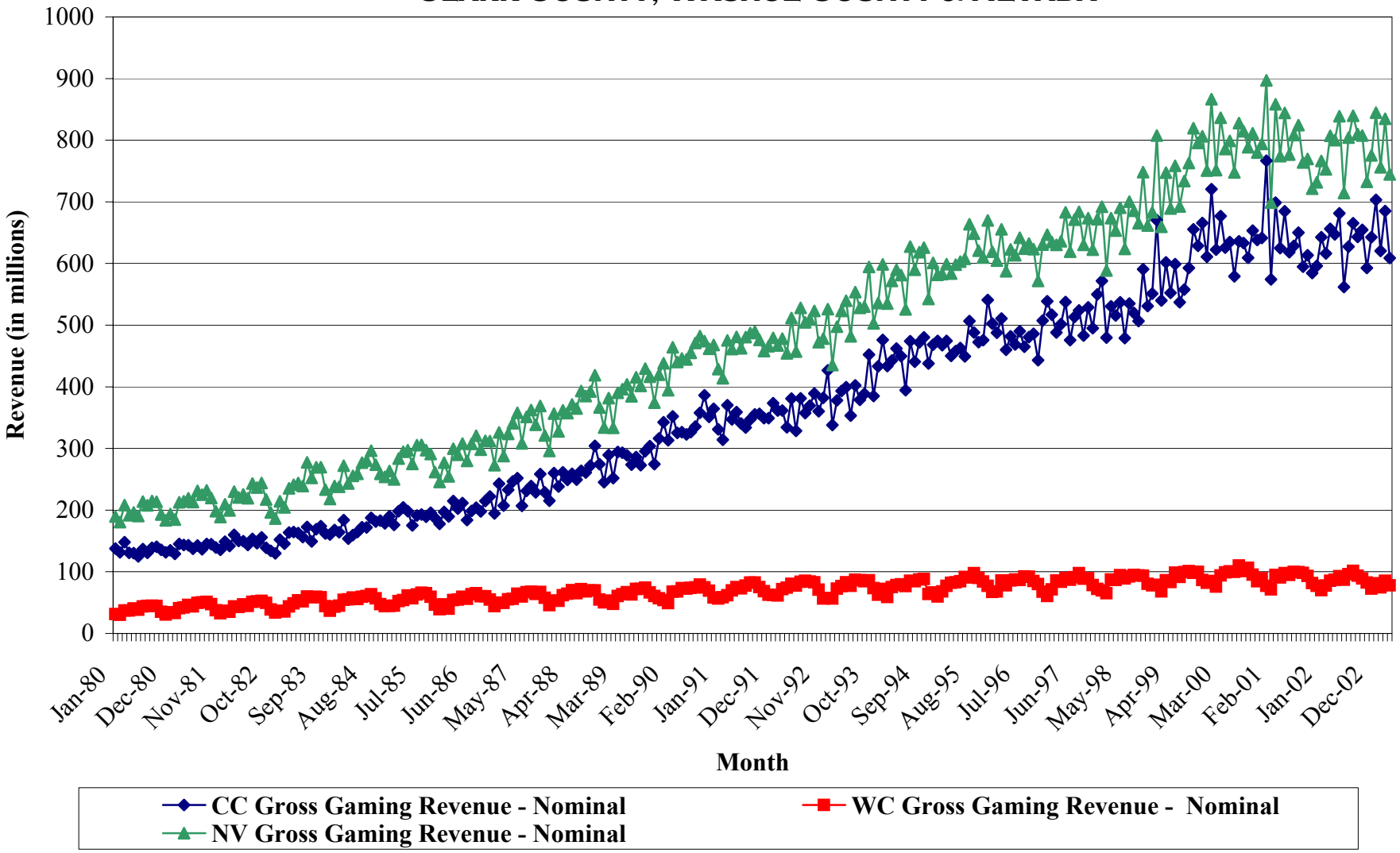
Appendix 1.1-H
Inflation Adjusted Taxable Sales
Clark County, Washoe County, and Nevada



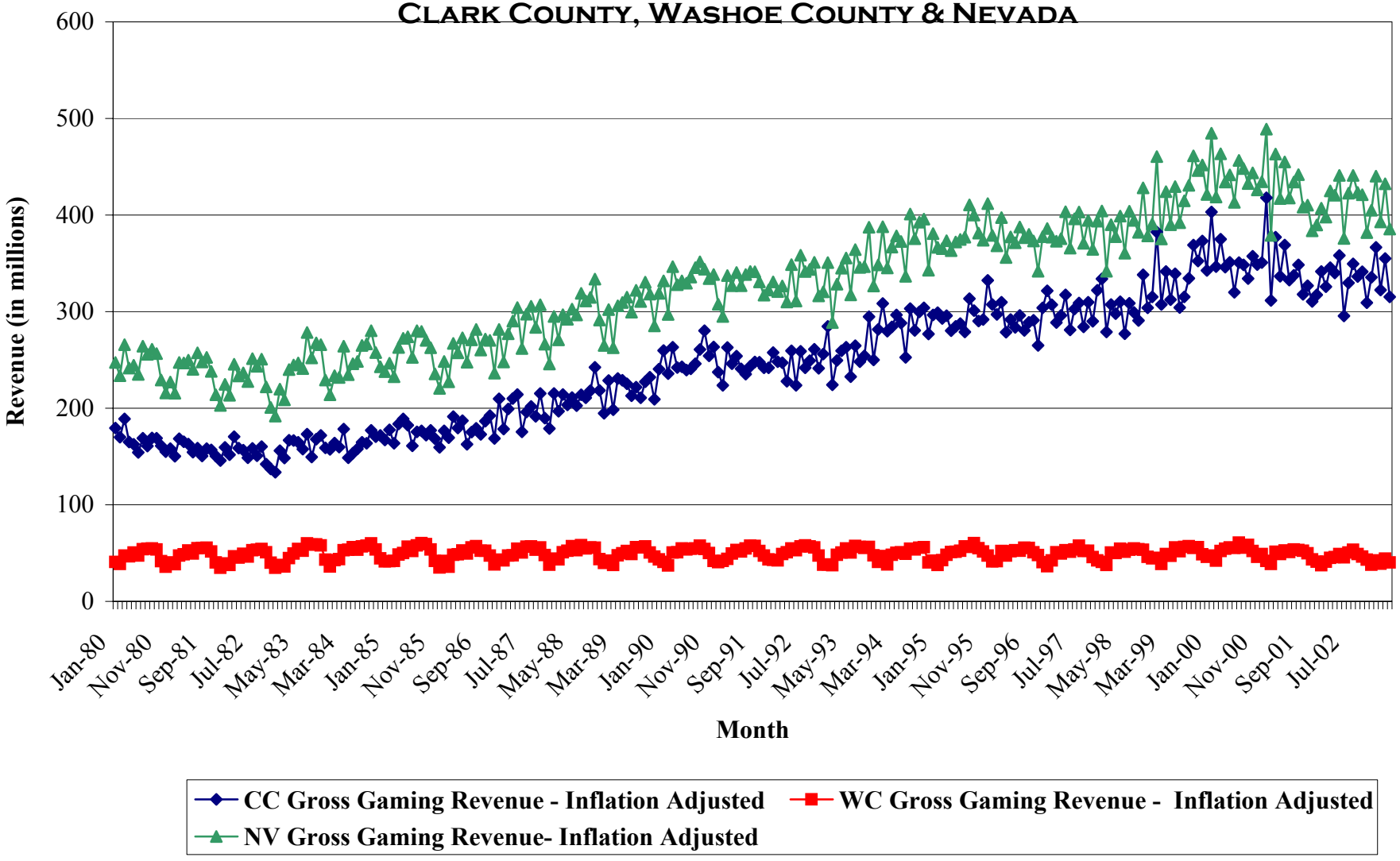
Appendix 1.1-I
Taxable Gasoline Gallons
Clark County, Washoe County, and Nevada



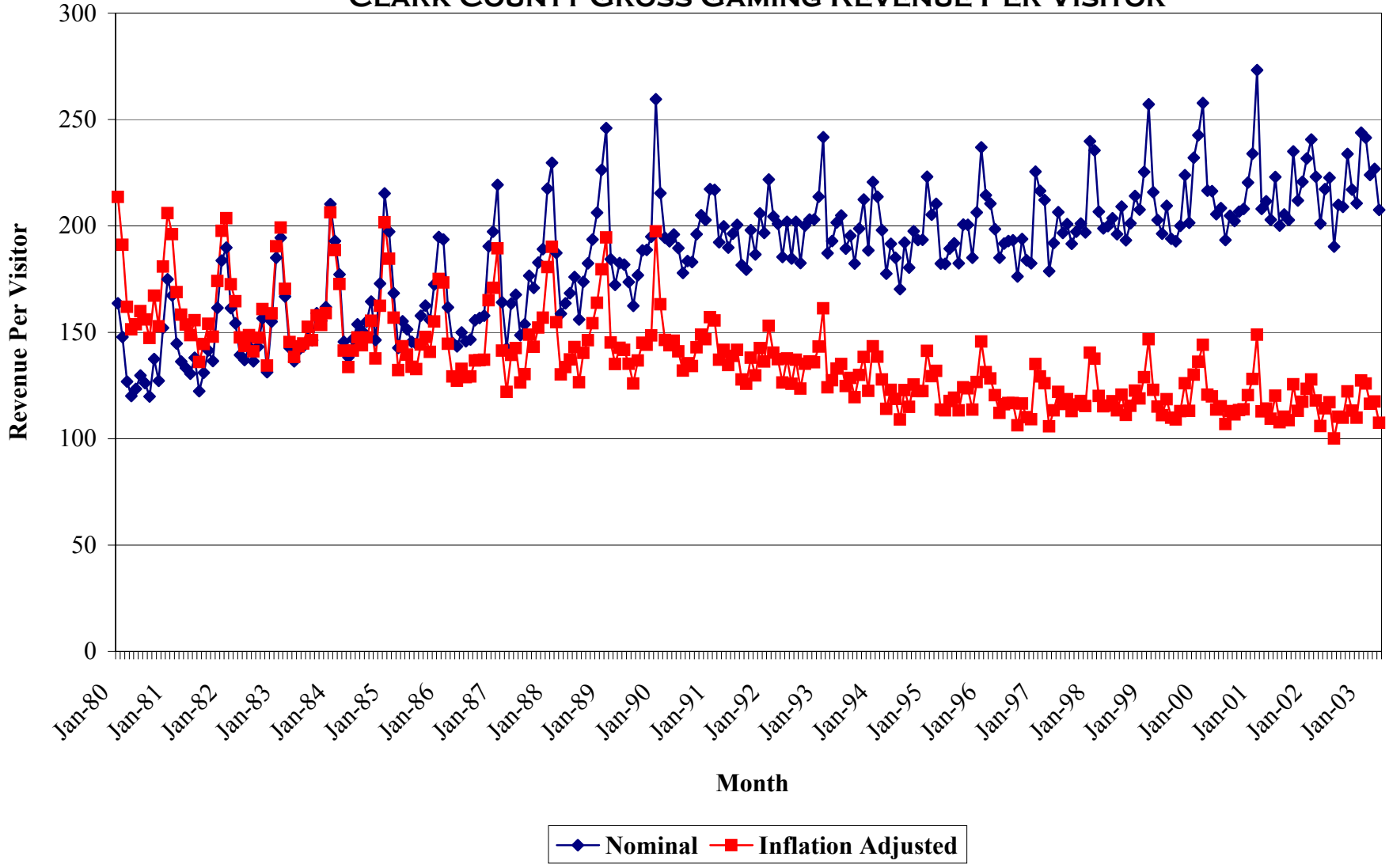
Appendix 1.1-J
Nominal Gross Gaming Revenue
Clark County, Washoe County & Nevada



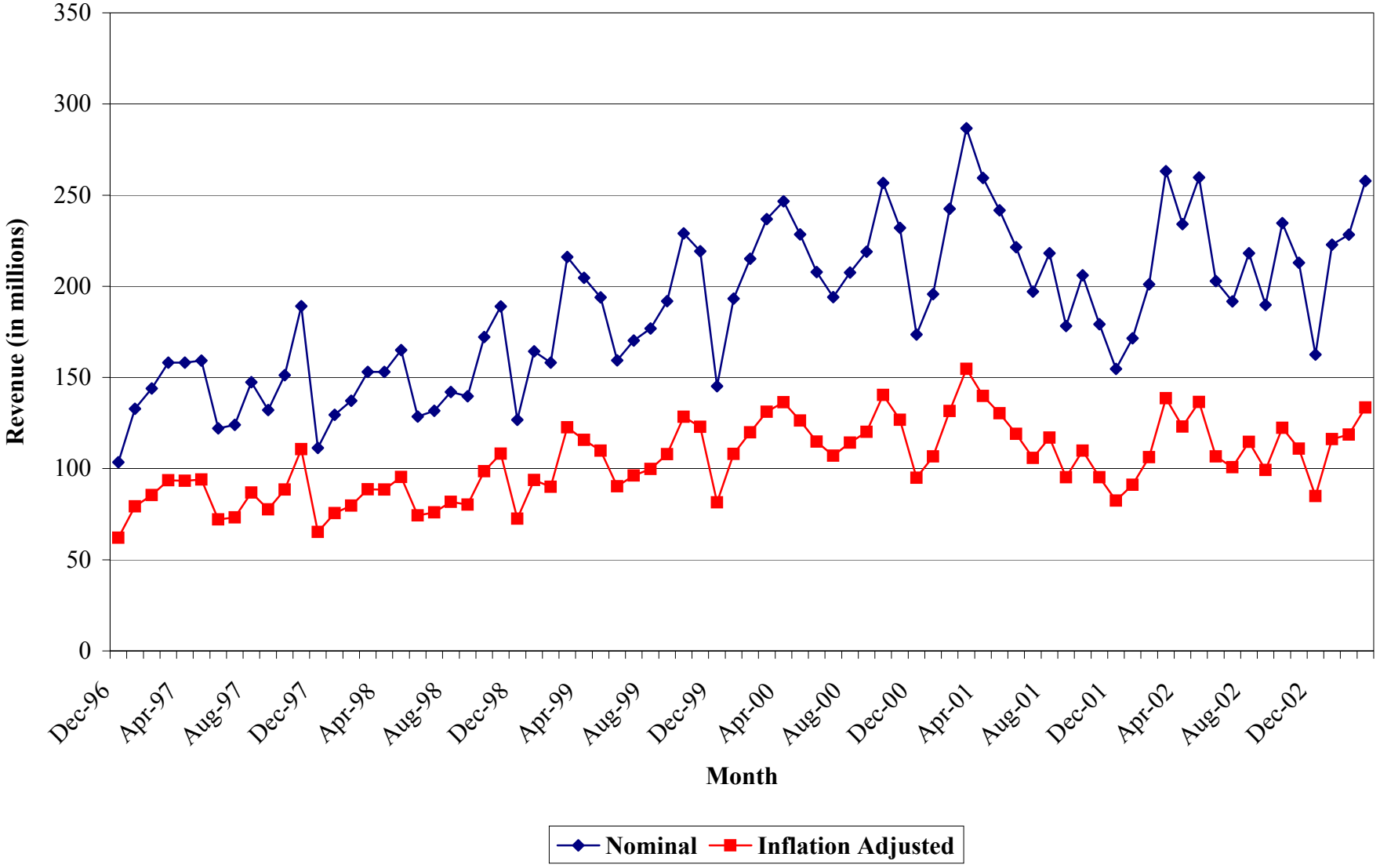
Appendix 1.1-K
Inflation Adjusted Gross Gaming Revenue
Clark County, Washoe County & Nevada



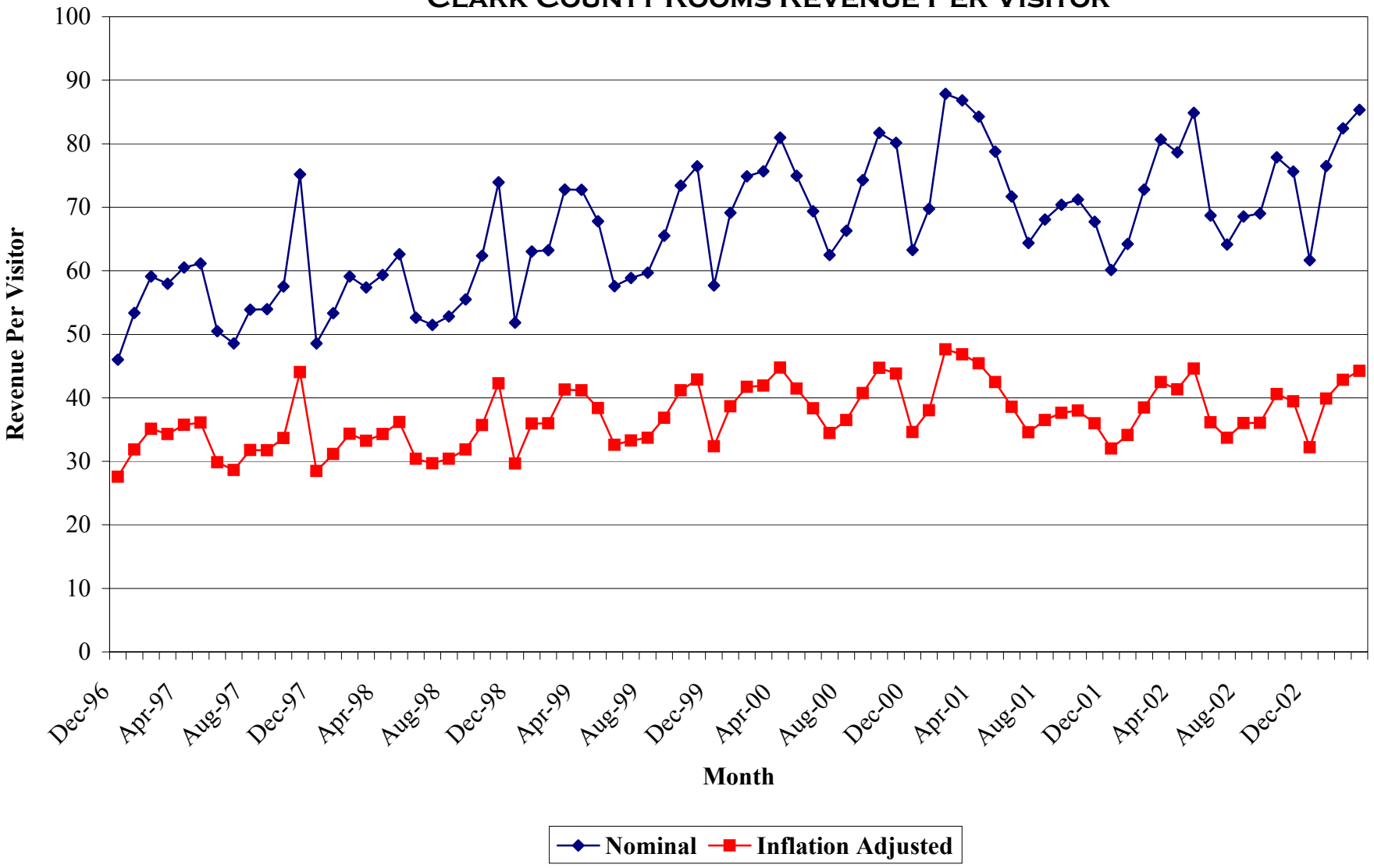
Appendix 1.1-L
Clark County Gross Gaming Revenue Per Visitor



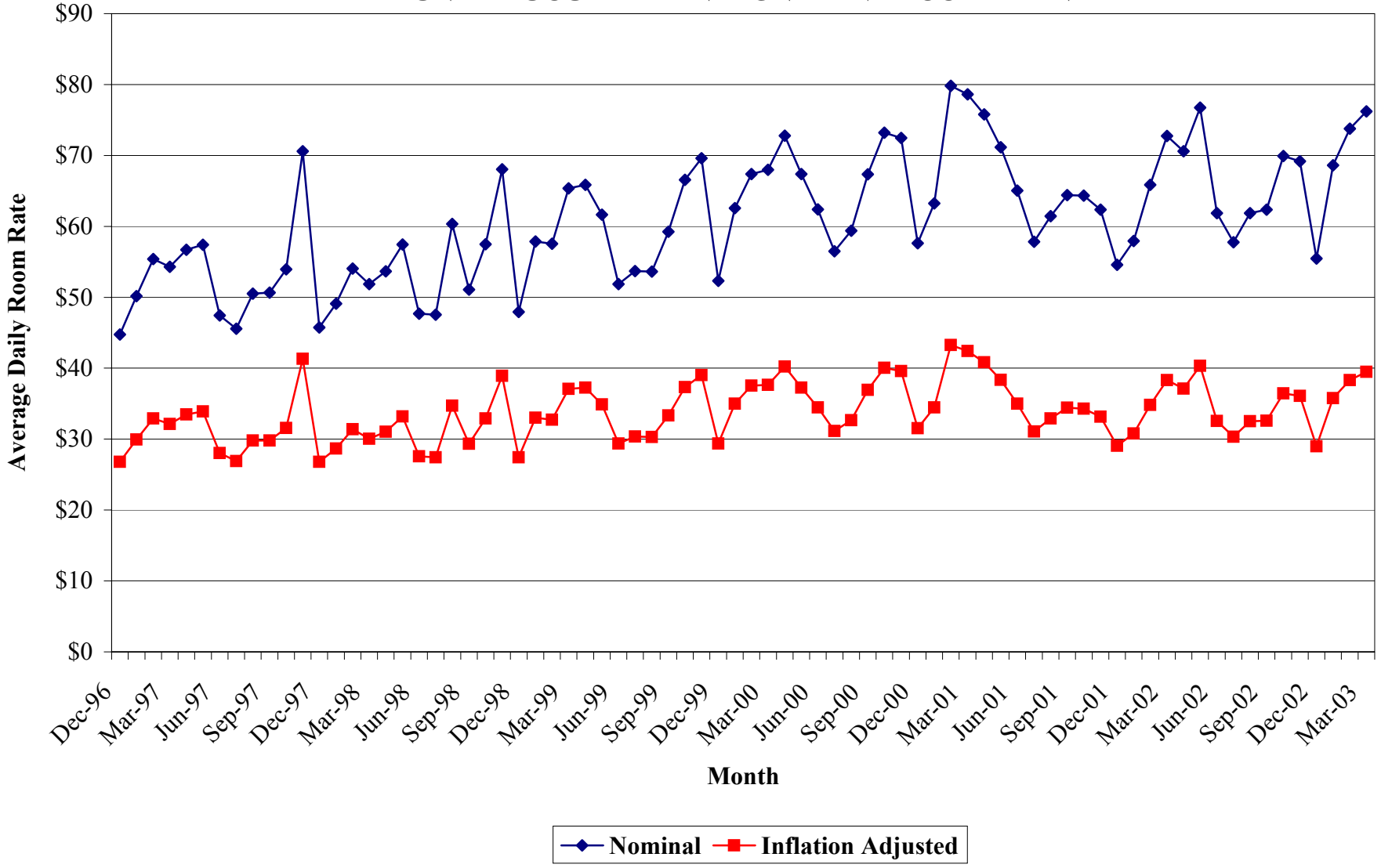
Appendix 1.1-M
Clark County Rooms Revenue



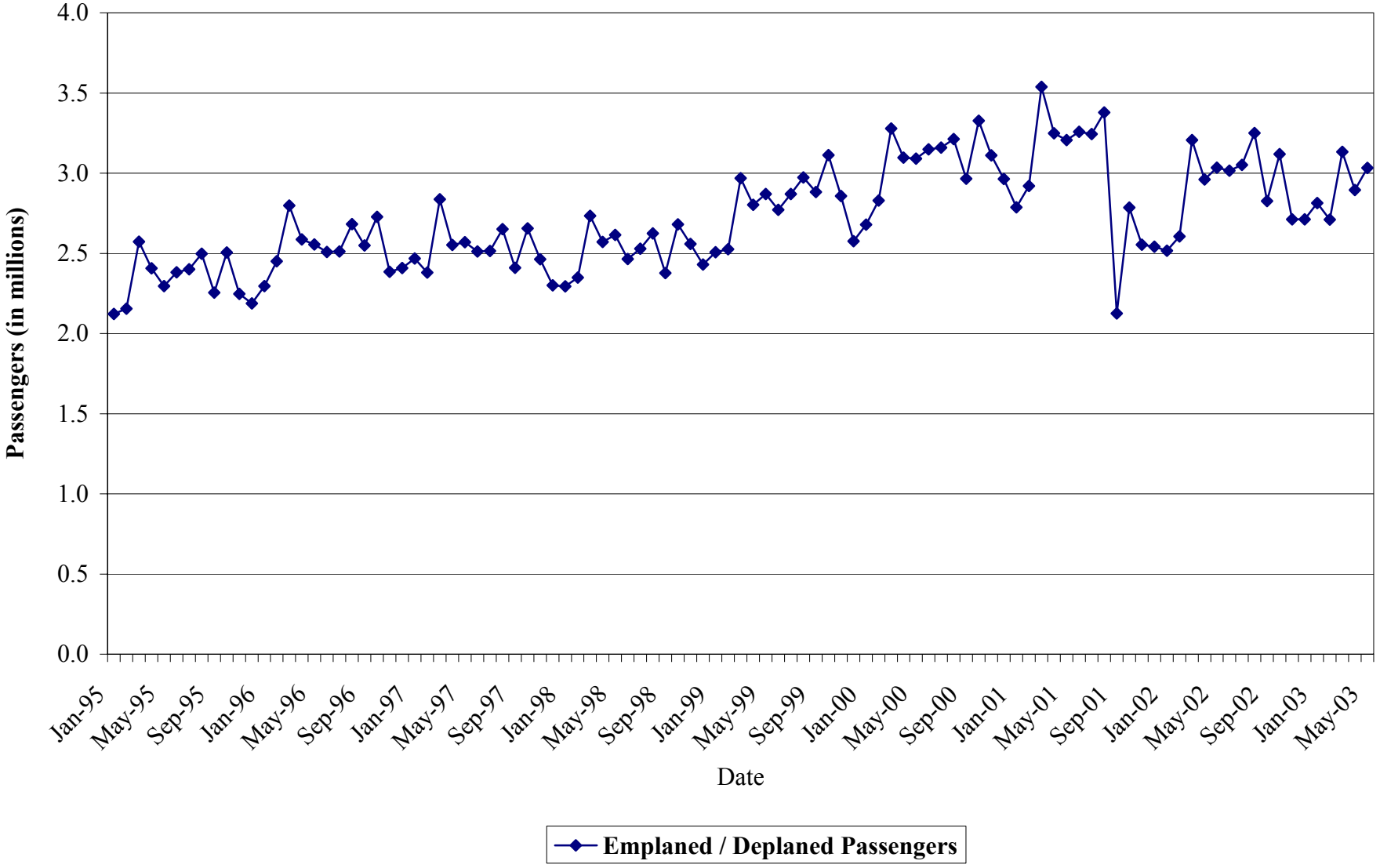
Appendix 1.1-N
Clark County Rooms Revenue Per Visitor



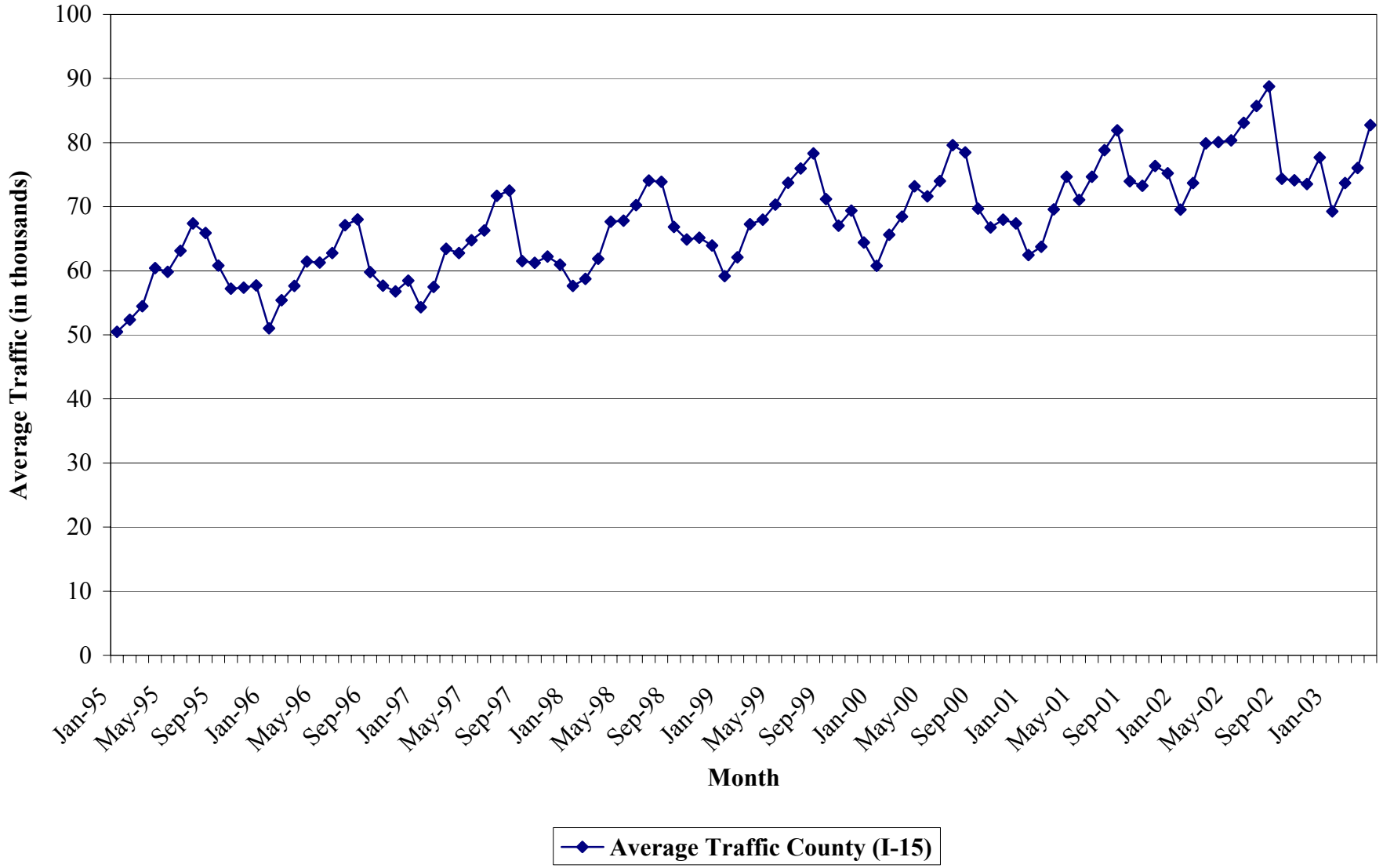
Appendix 1.1-O
Clark County Average Daily Room Rate



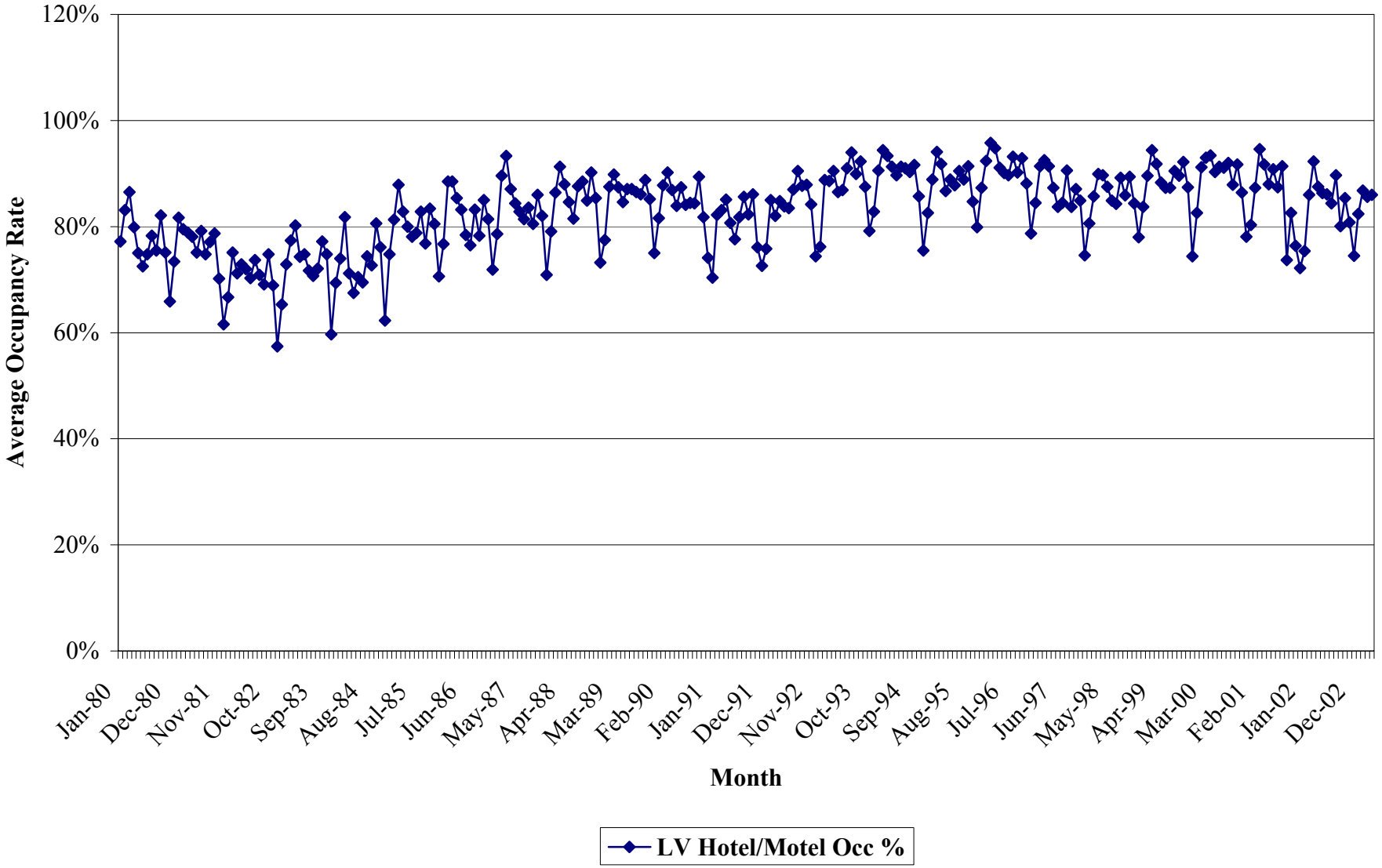
Appendix 1.1-P
Emplaned / Deplaned Passengers



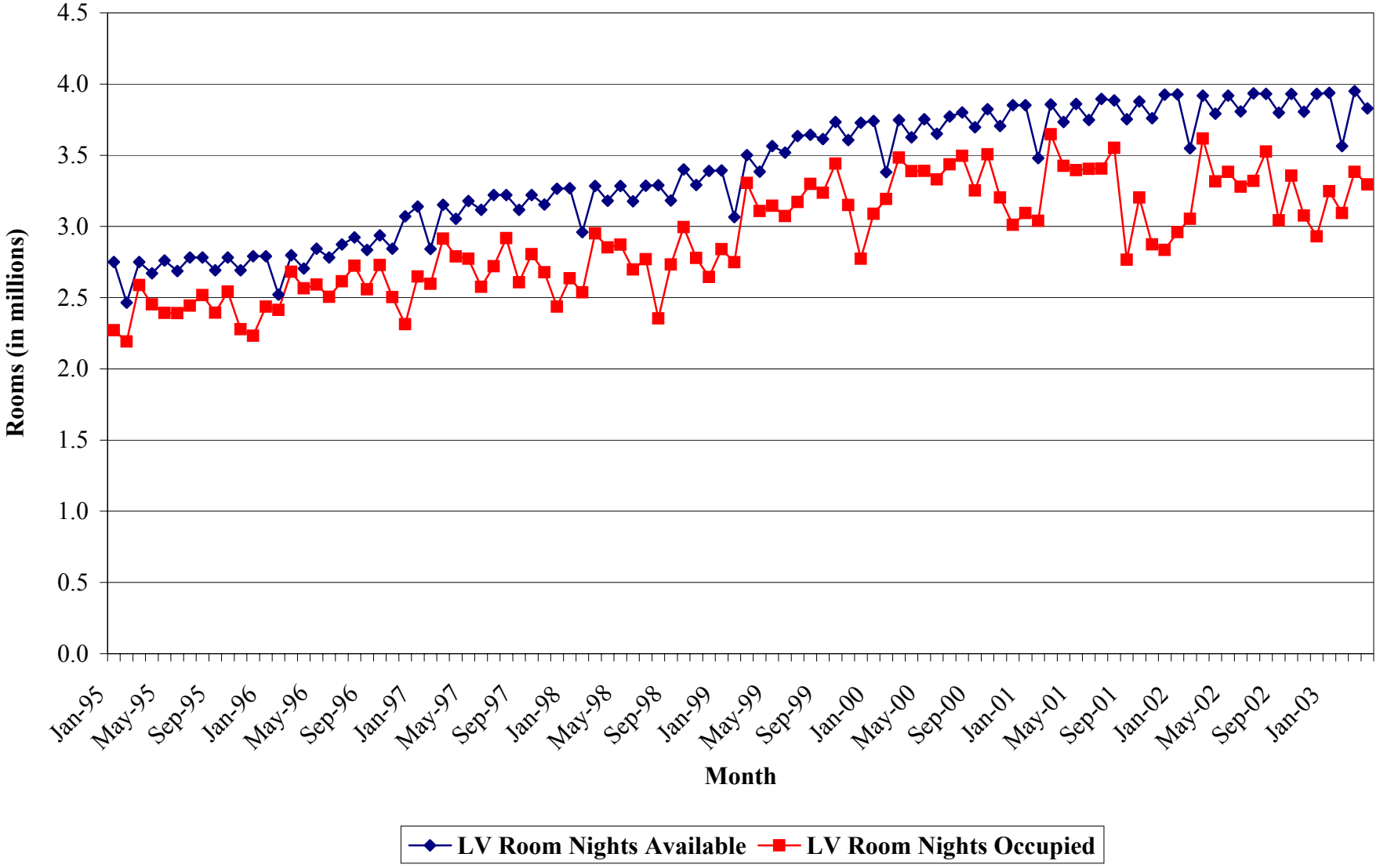
Appendix 1.1-Q
Average Traffic County (I-15)



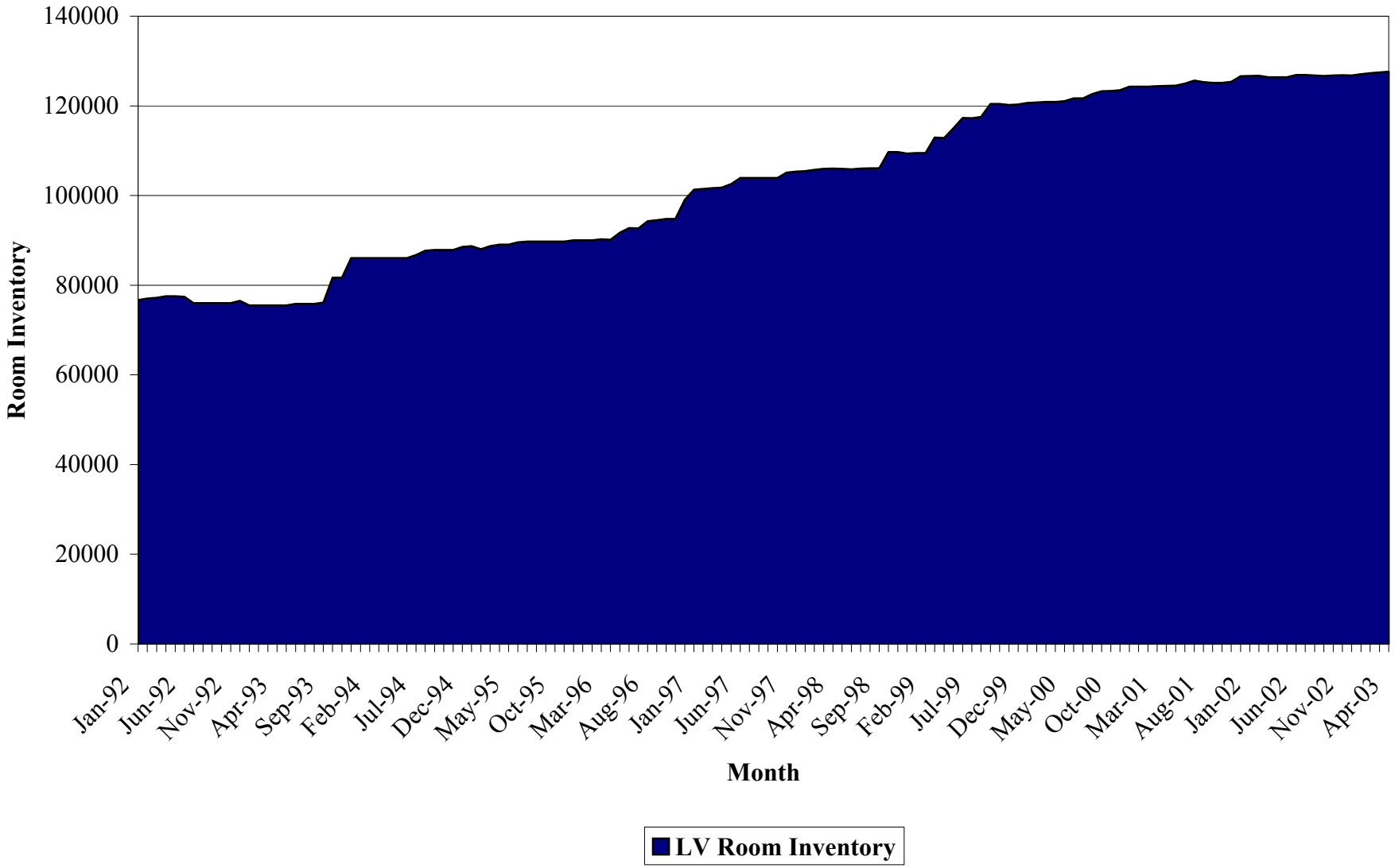
Appendix 1.1-R
Las Vegas Hotel/Motel Occupancy Rate



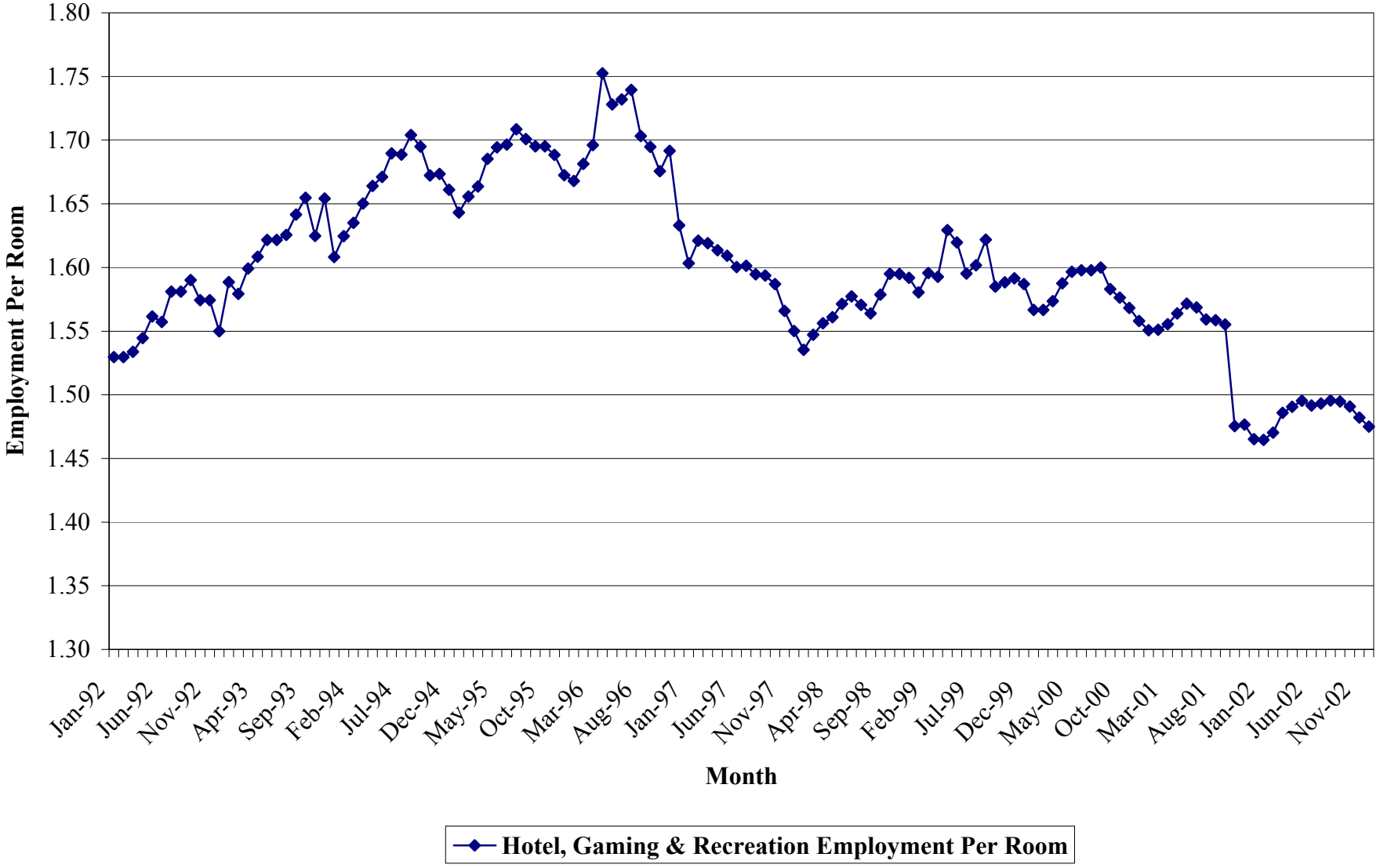
Appendix 1.1-S
Las Vegas Rooms Nights Available and Occupied



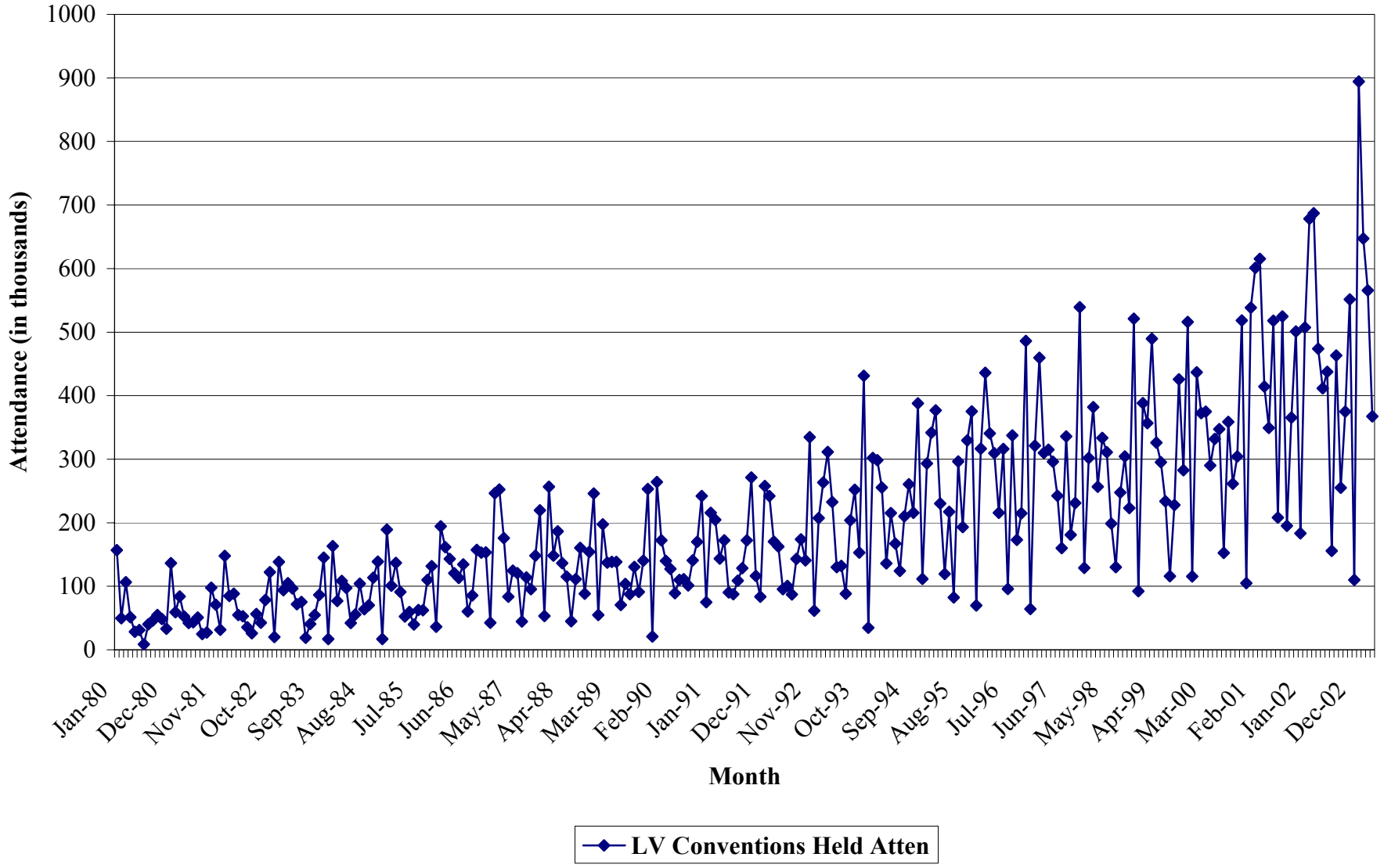
Appendix 1.1-T
Las Vegas Room Inventory



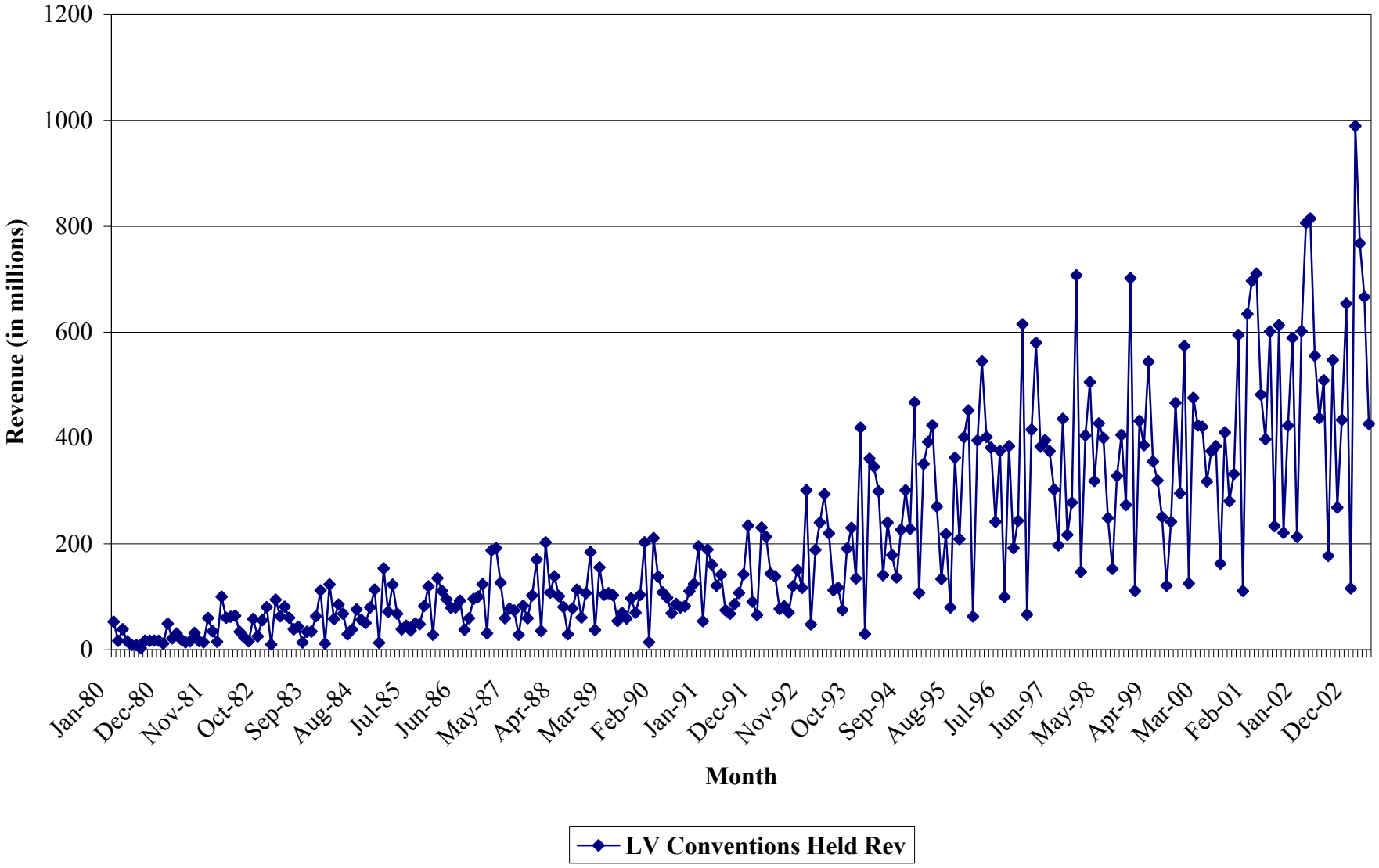
Appendix 1.1-U
Hotel, Gaming & Recreation Employment Per Room



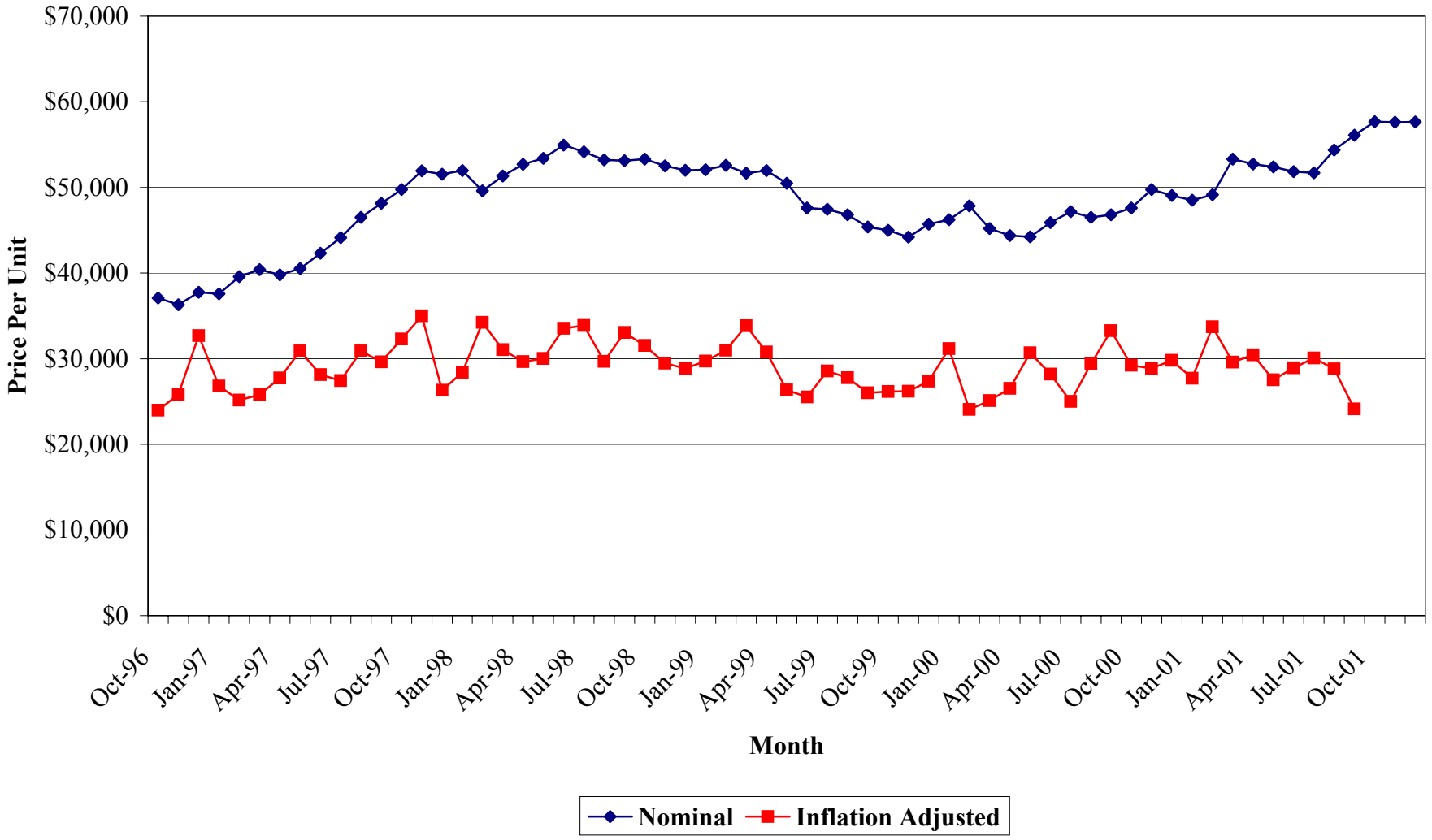
Appendix 1.1-V
Las Vegas Conventions Held Attendance



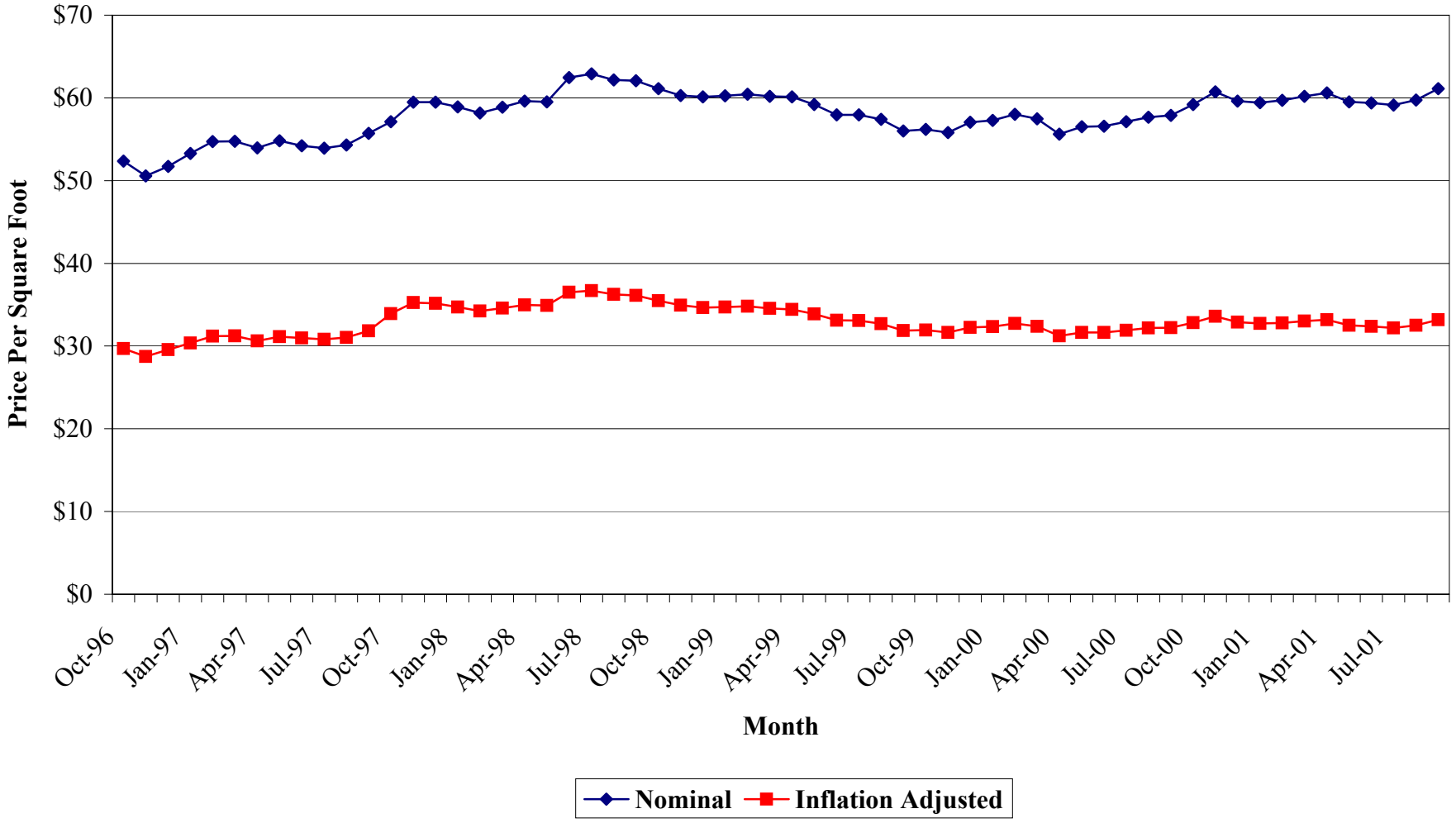
Appendix 1.1-W
Las Vegas Conventions Held Revenue



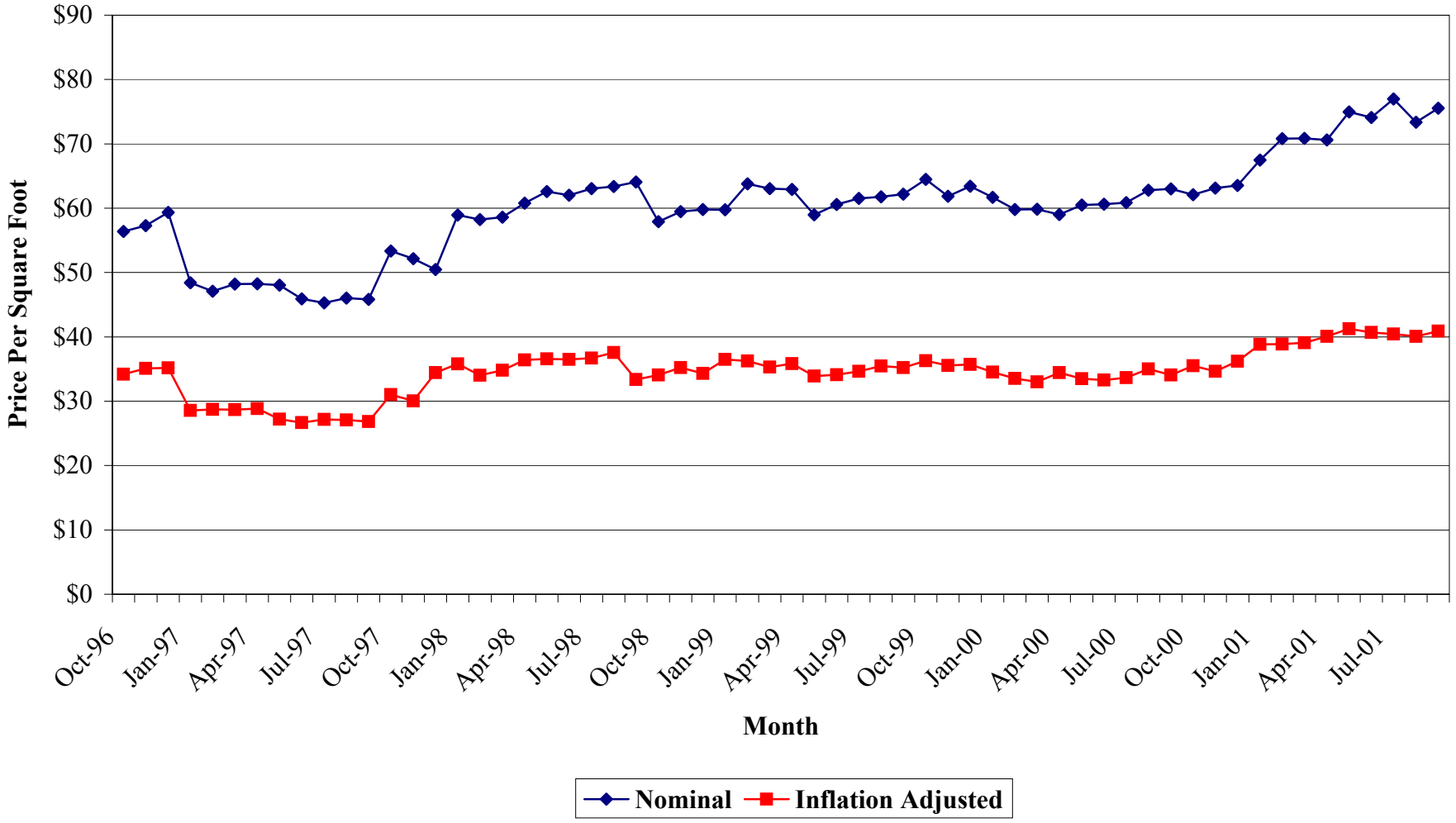
Appendix 1.1-X
12-Month Rolling Average of Apartment Project Sales
Nominal and Inflation Adjusted Prices Per Unit



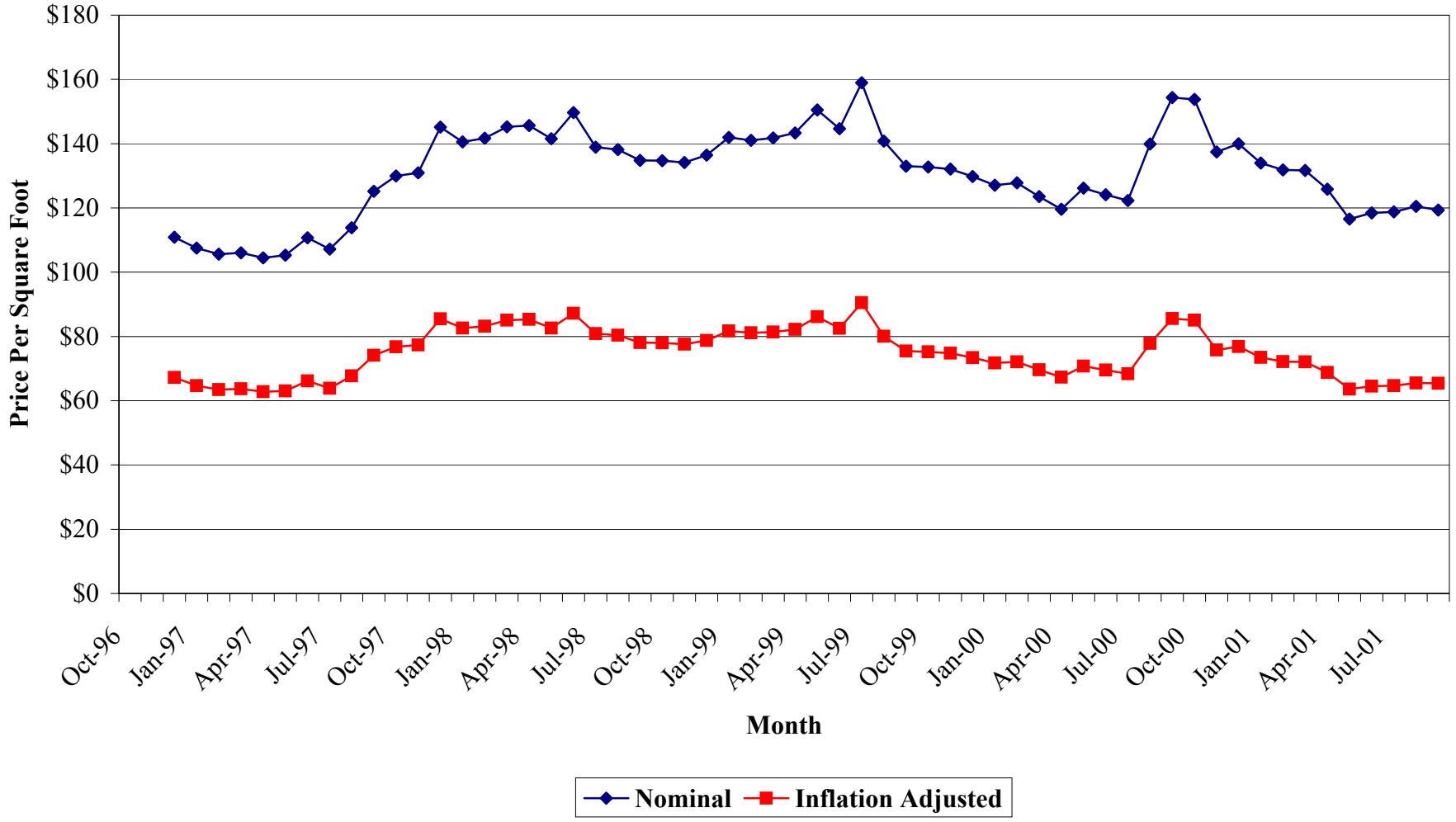
Appendix 1.1-Y
12-Month Rolling Average of Apartment Project Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



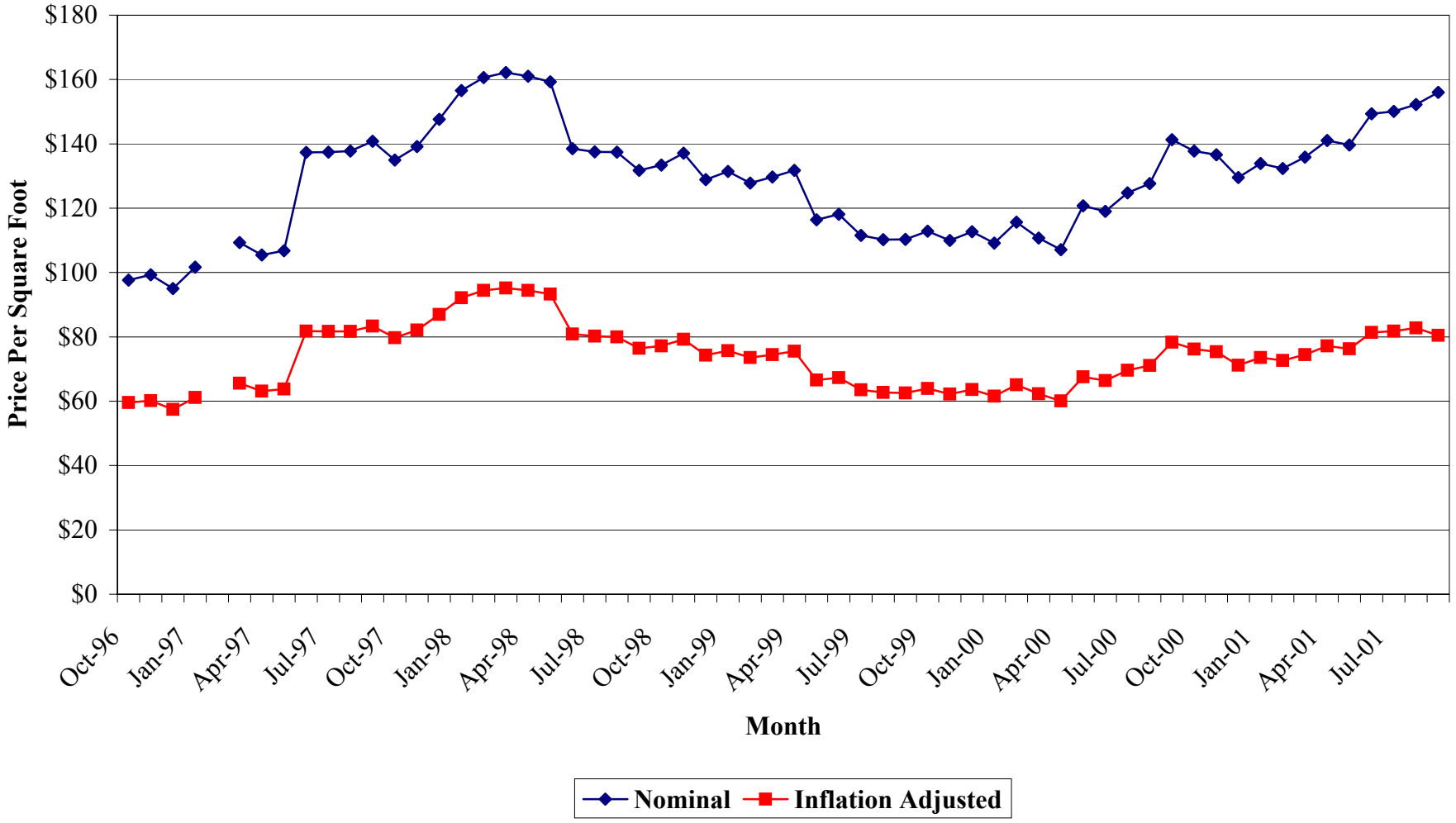
Appendix 1.1-Z
12-Month Rolling Average of Industrial Project Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



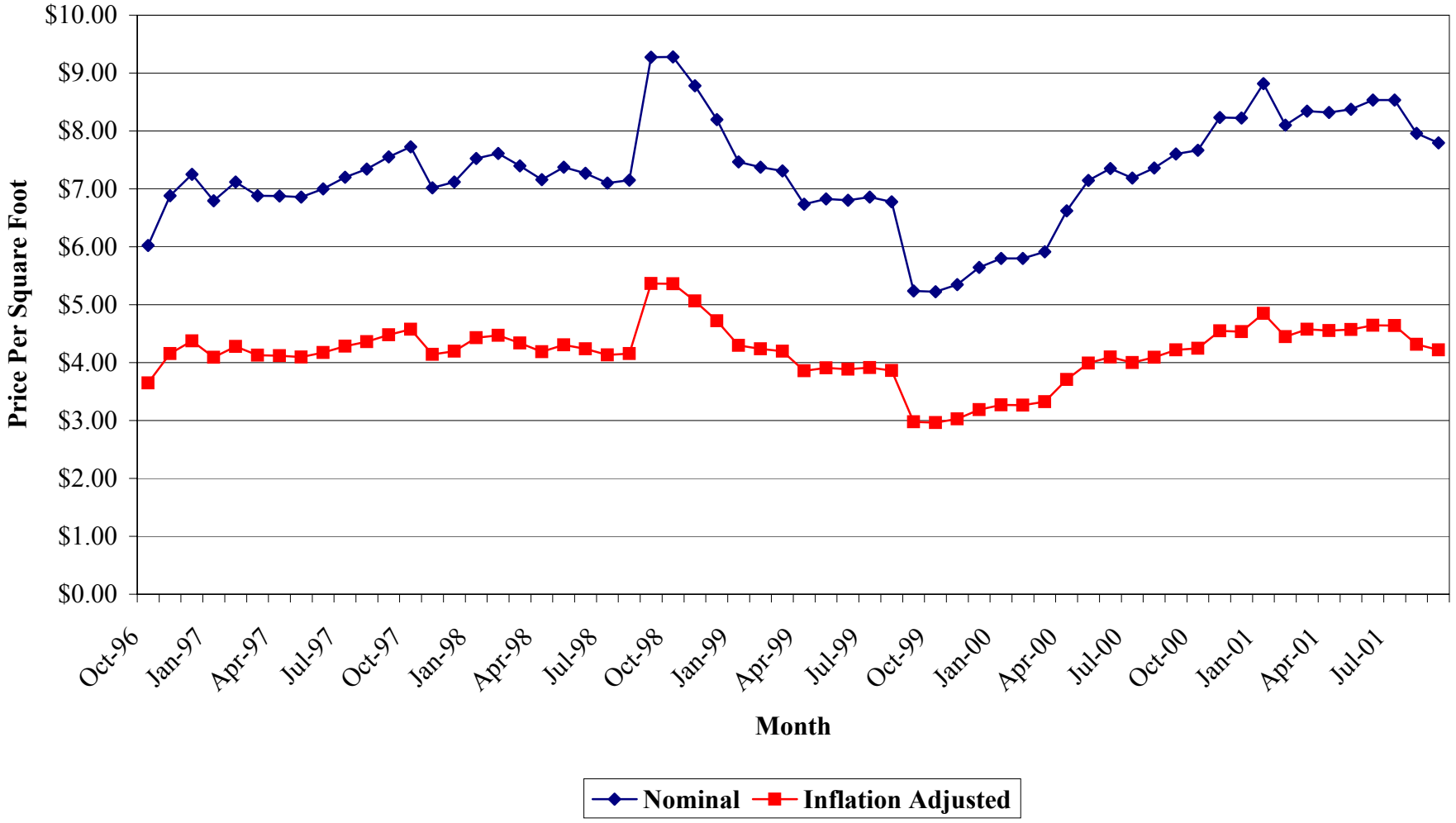
Appendix 1.1-AA
12-Month Rolling Average of Office Project Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



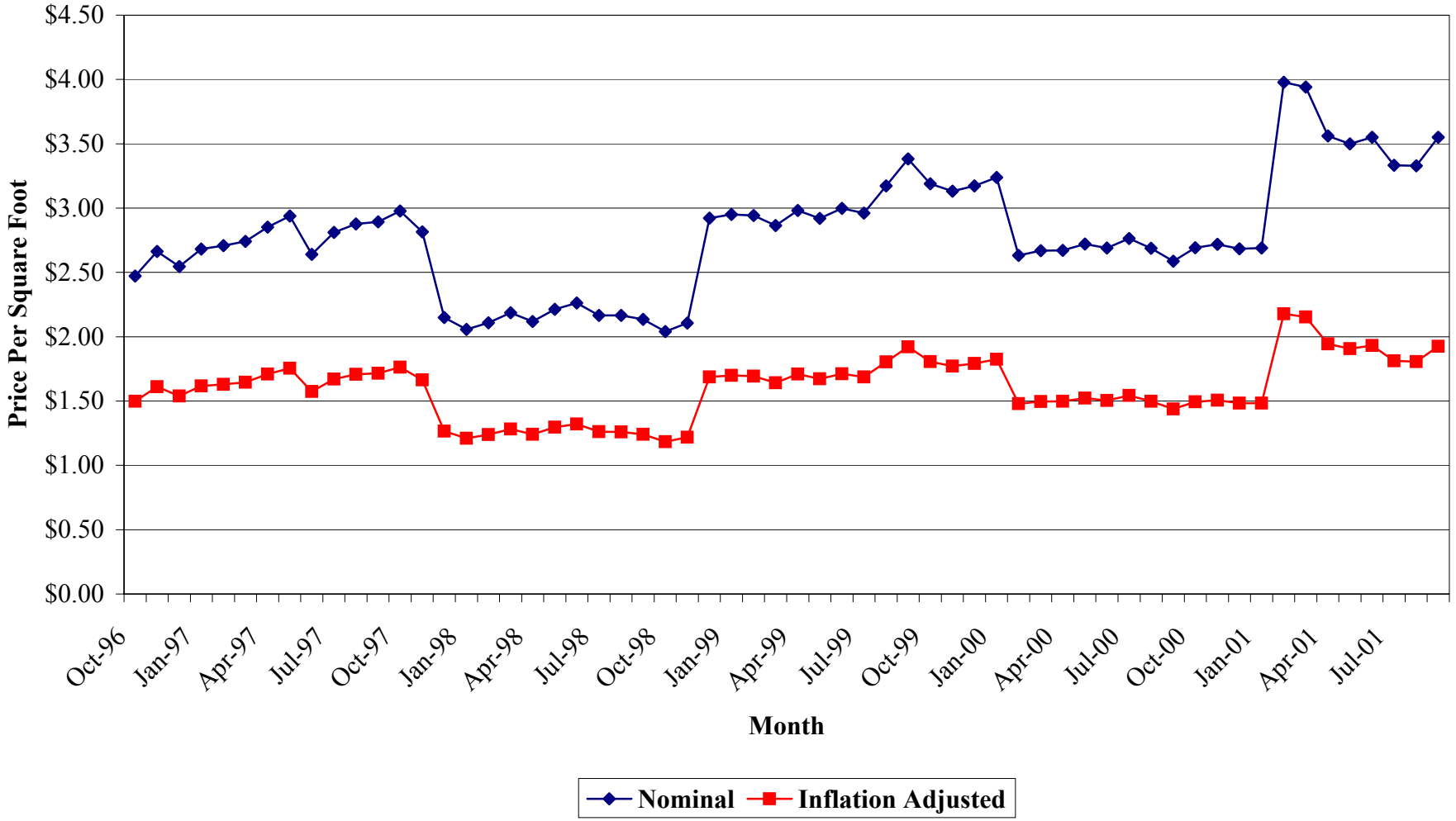
Appendix 1.1-AB
12-Month Rolling Average of Retail Project Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



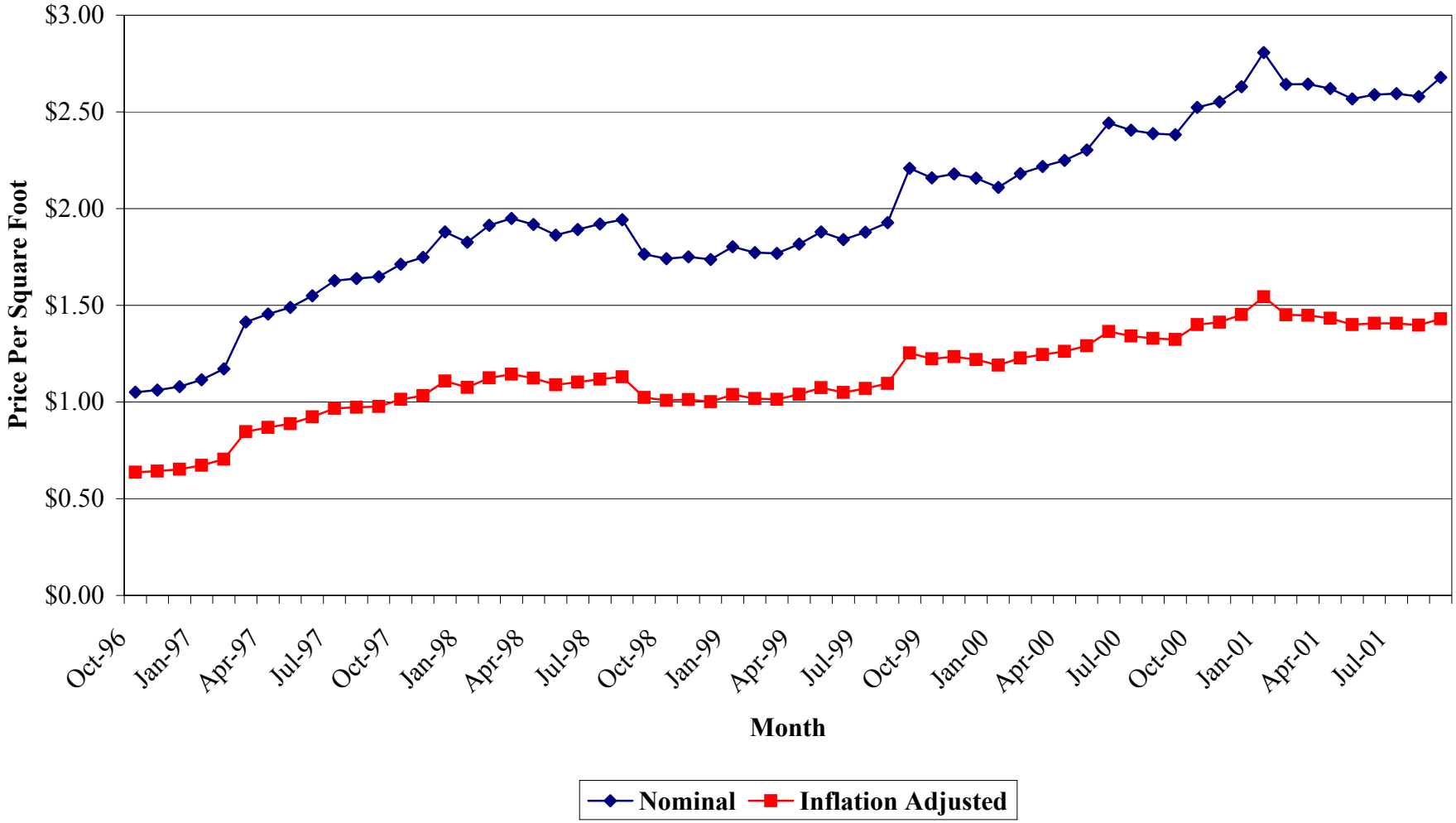
Appendix 1.1-AC
12-Month Rolling Average of Commercial Land Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



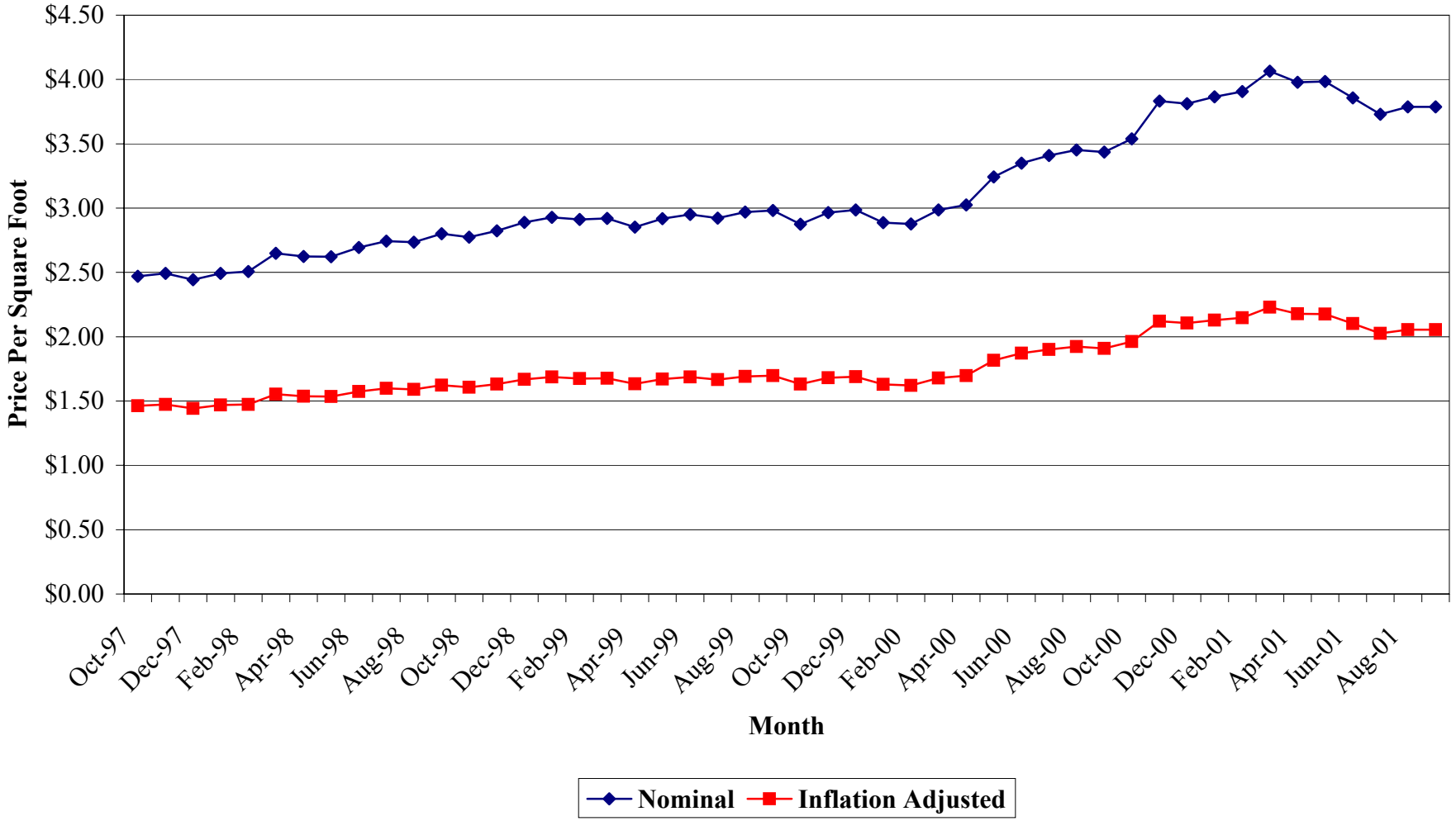
Appendix 1.1-AD
12-Month Rolling Average of Industrial Land Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



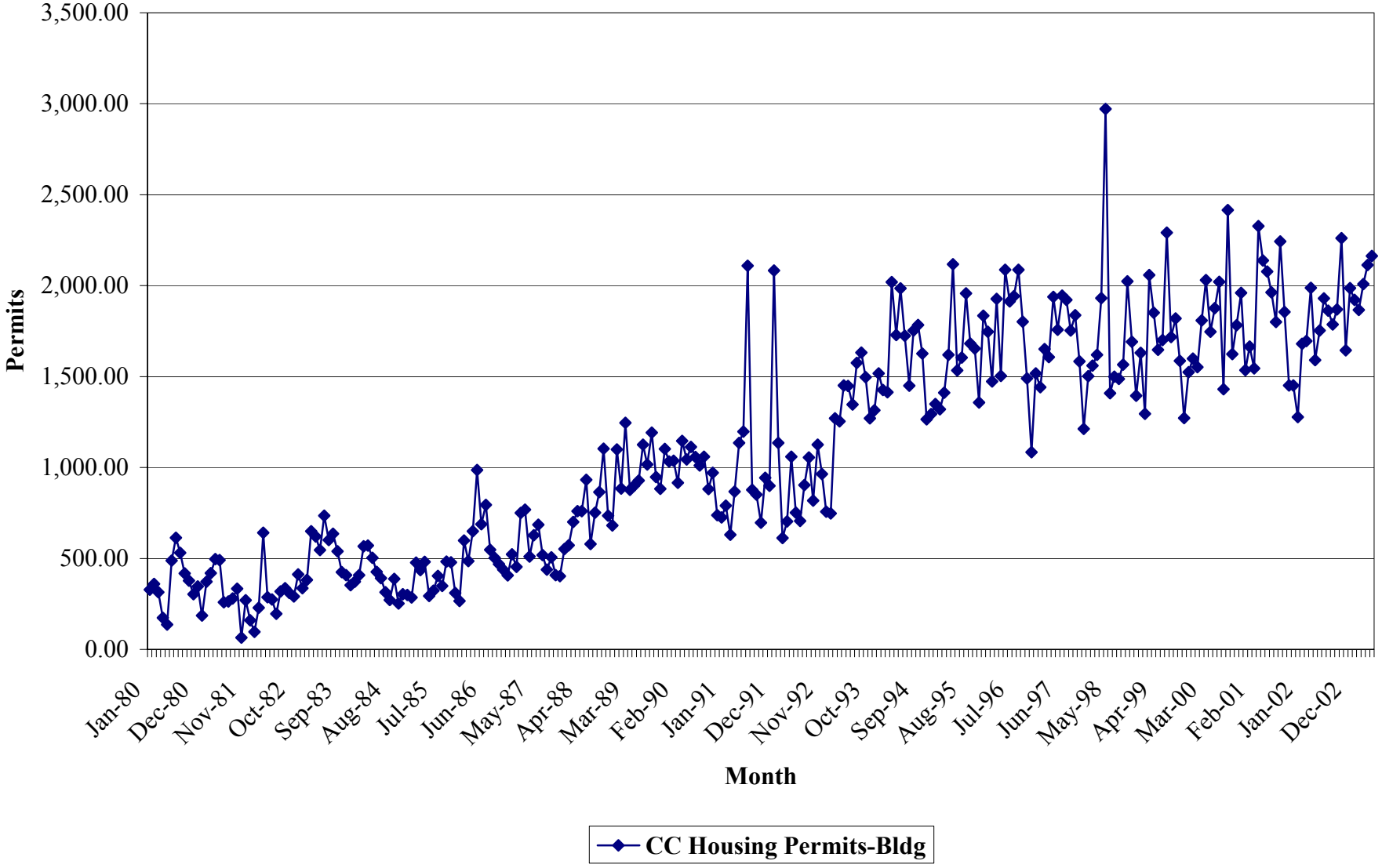
Appendix 1.1-AE
12-Month Rolling Average of Residential Land Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



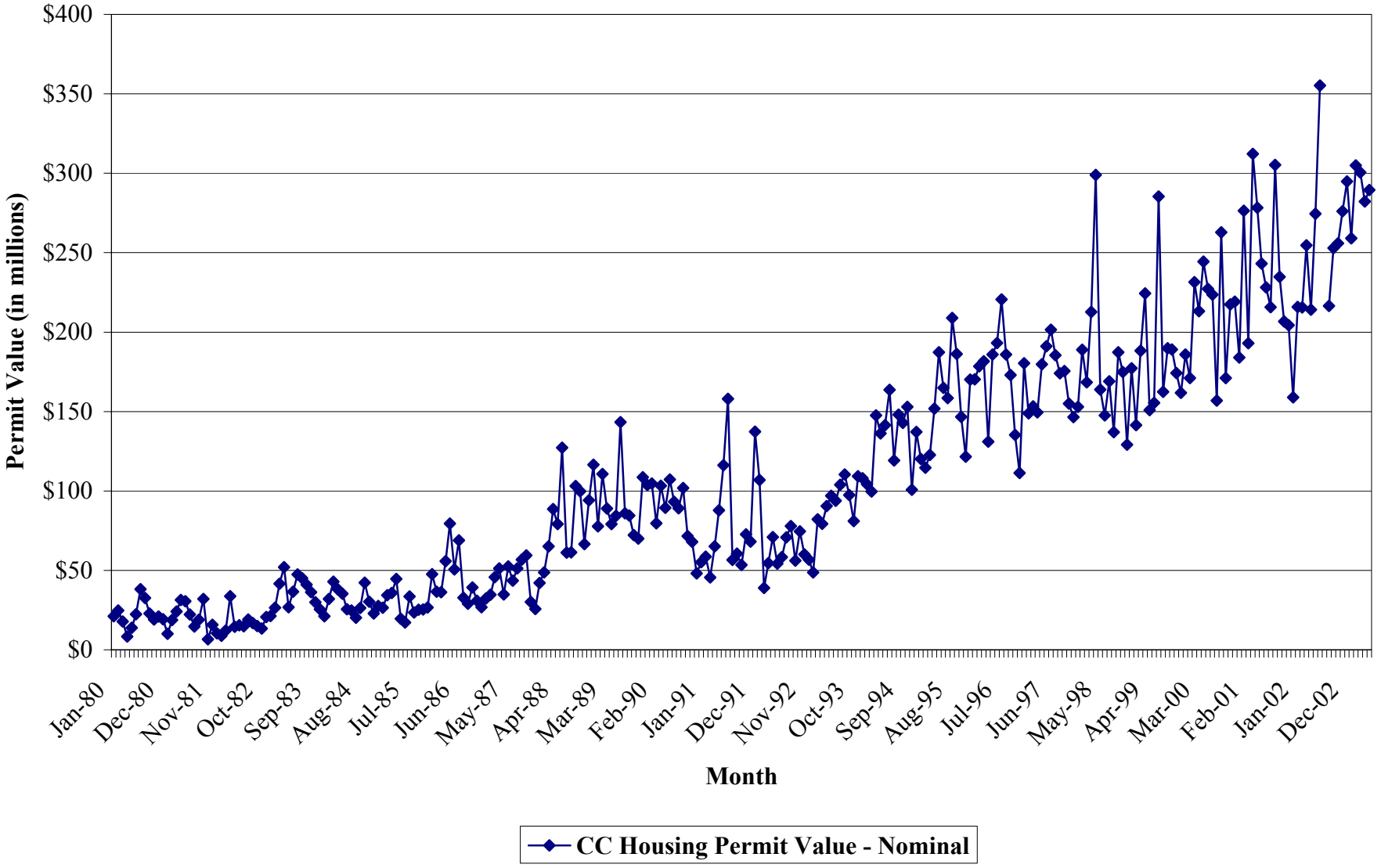
Appendix 1.1-AF
12-Month Rolling Average of All Land Sales
Nominal and Inflation Adjusted Prices
Per Square Foot



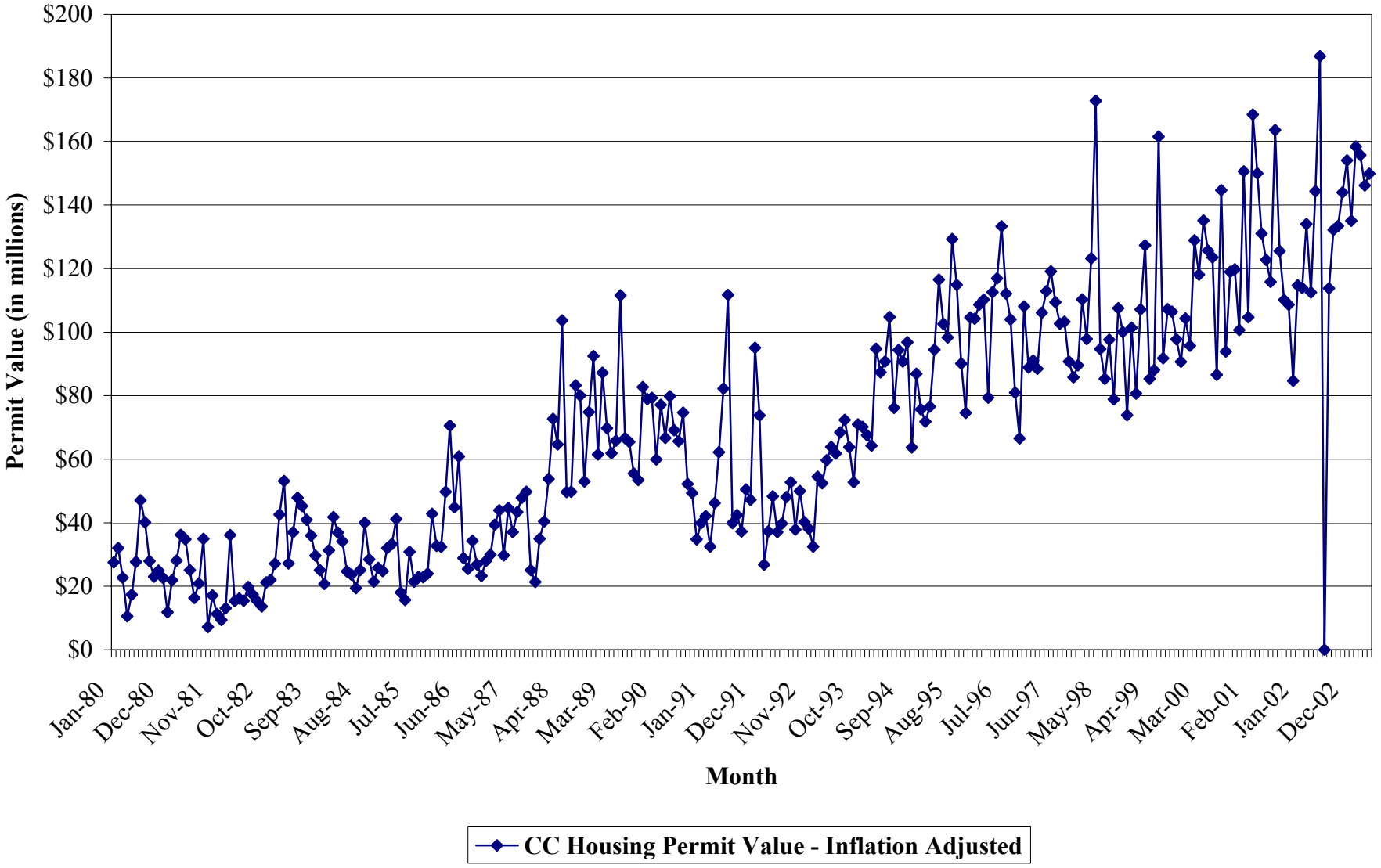
Appendix 1.1-AG
Clark County Housing Permits-Bldg



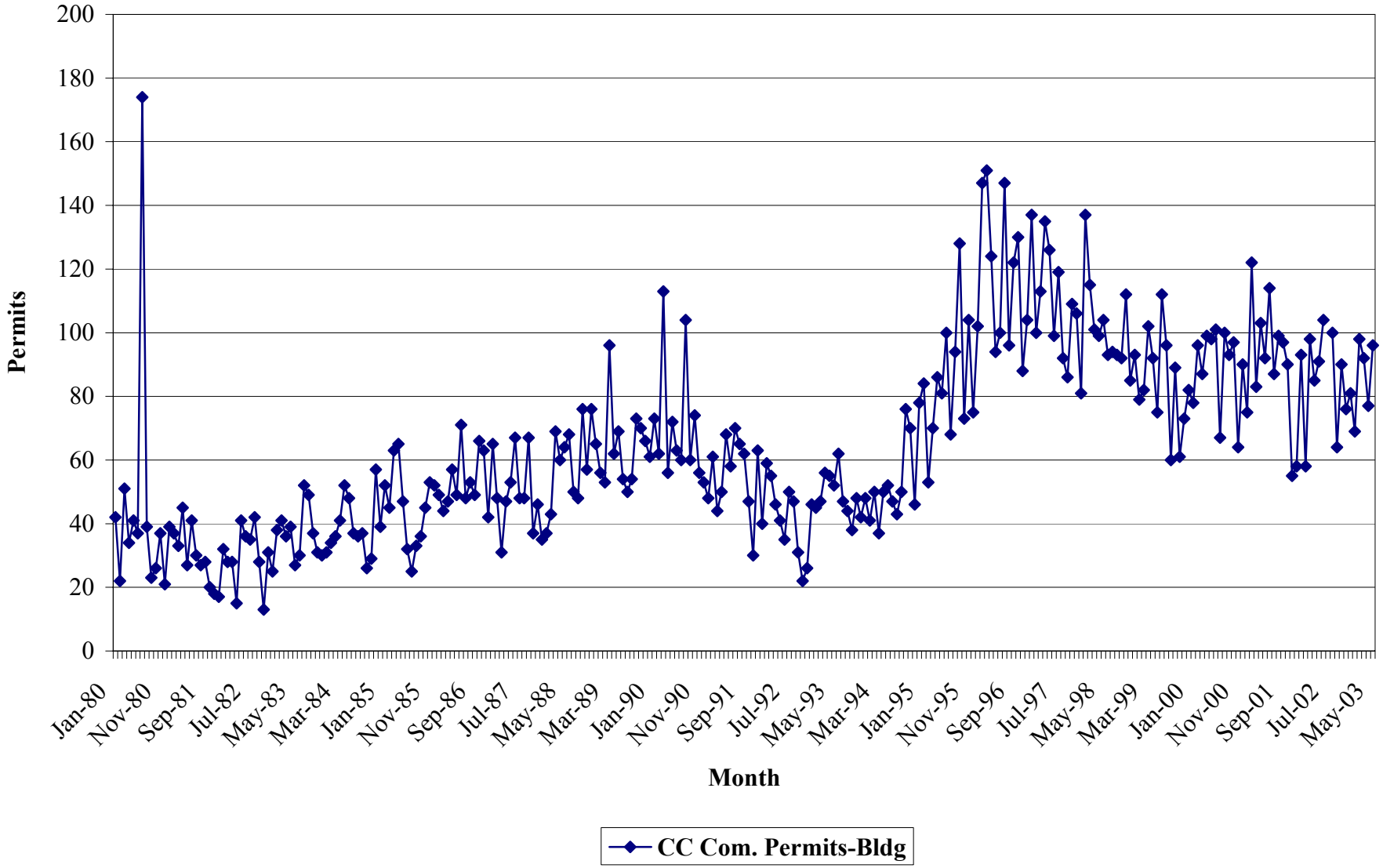
Appendix 1.1-AH
Clark County Housing Permit Value - Nominal



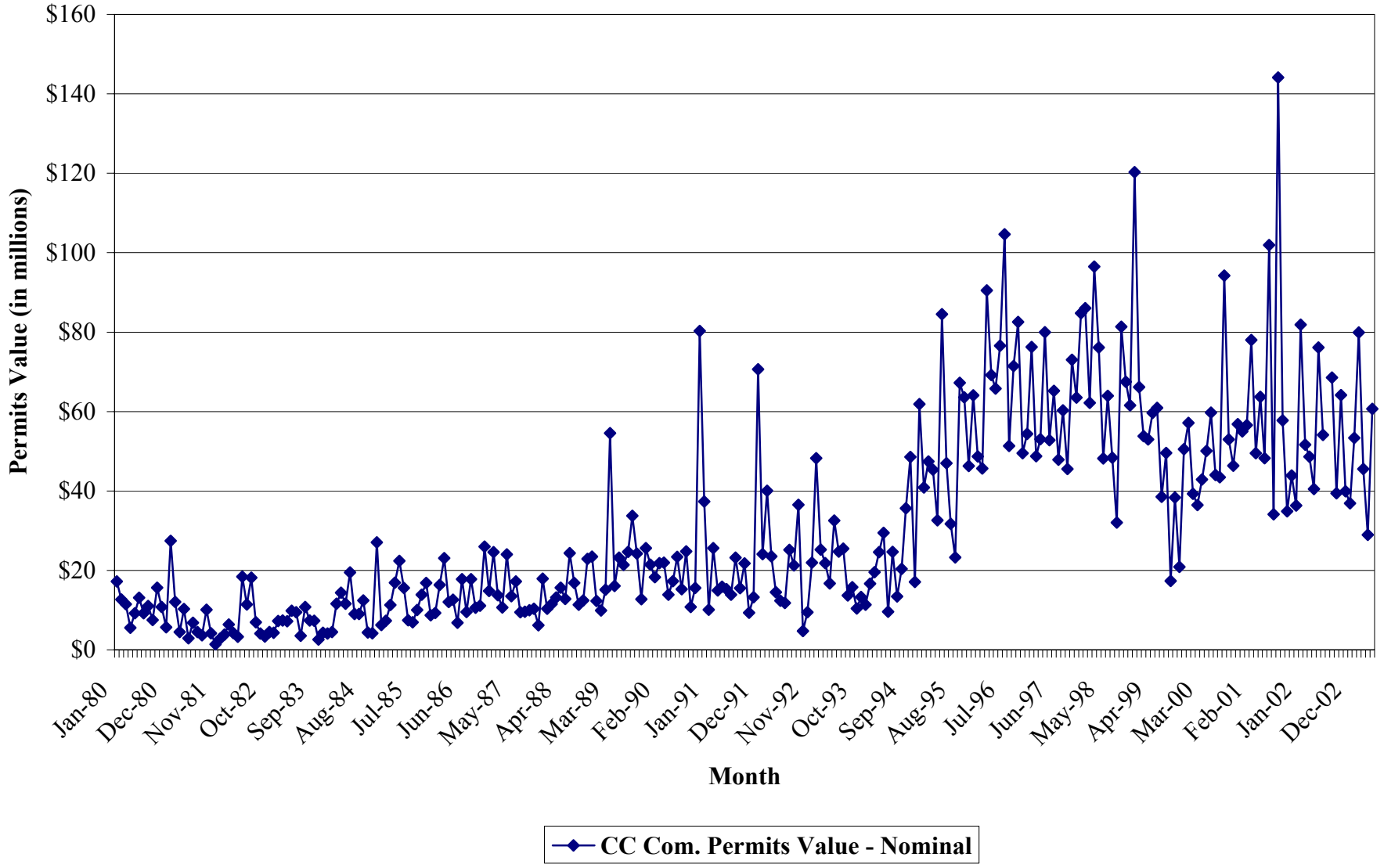
Appendix 1.1-AI
Clark County Housing Permit Value - Inflation Adjusted



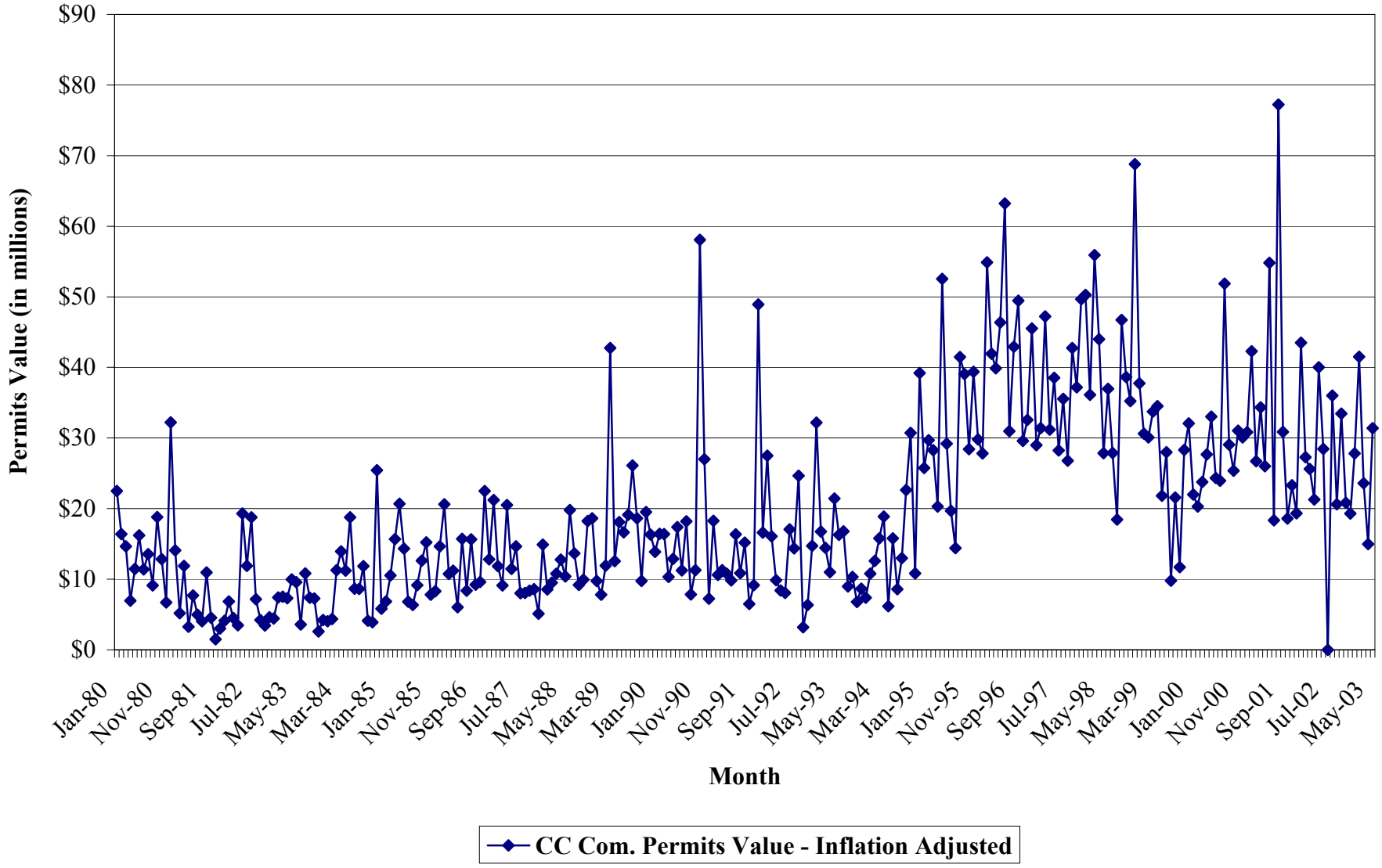
Appendix 1.1-AJ
Clark County Commercial Building Permits



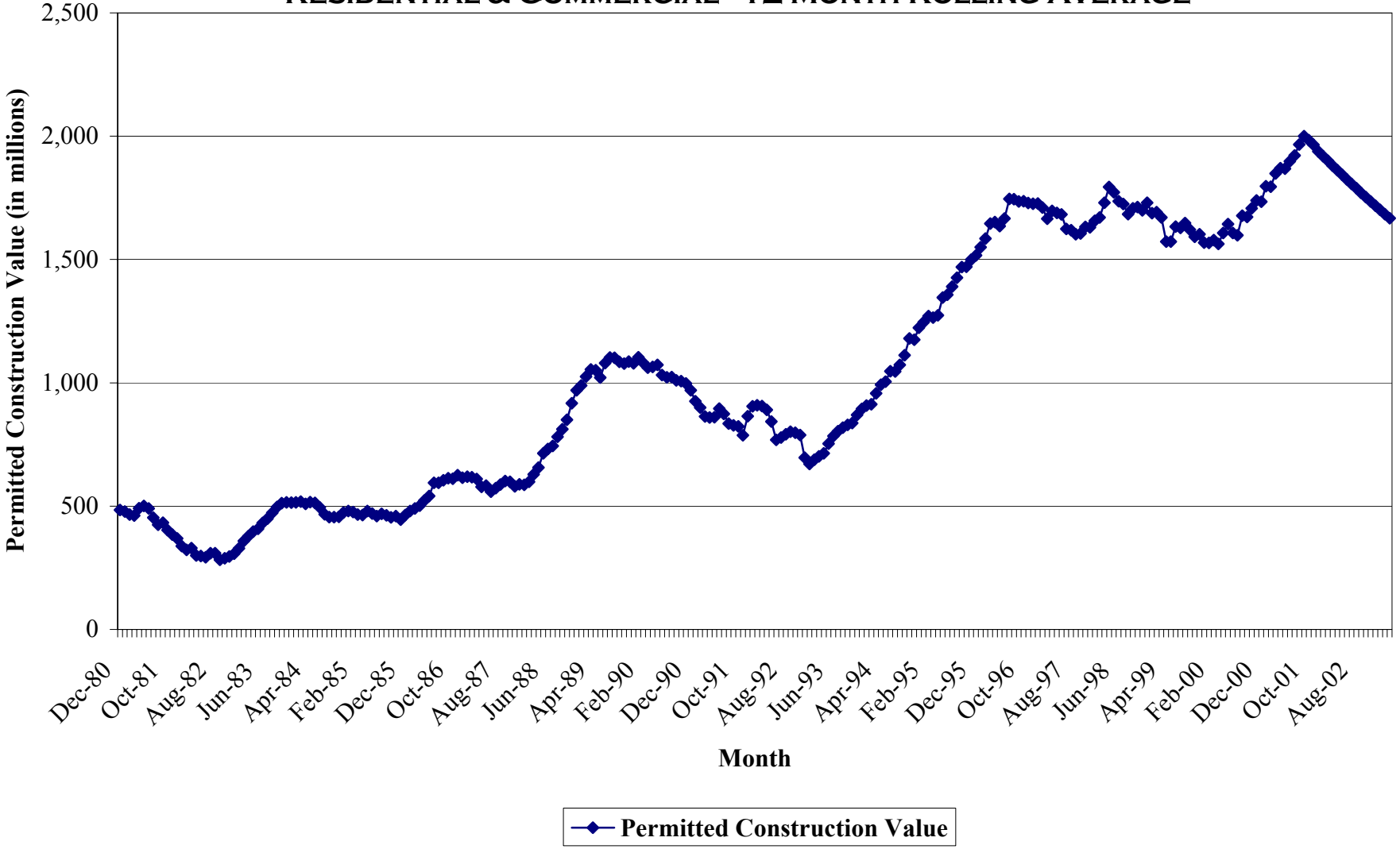
Appendix 1.1-AK
Clark County Commercial Building Permit Value - Nominal



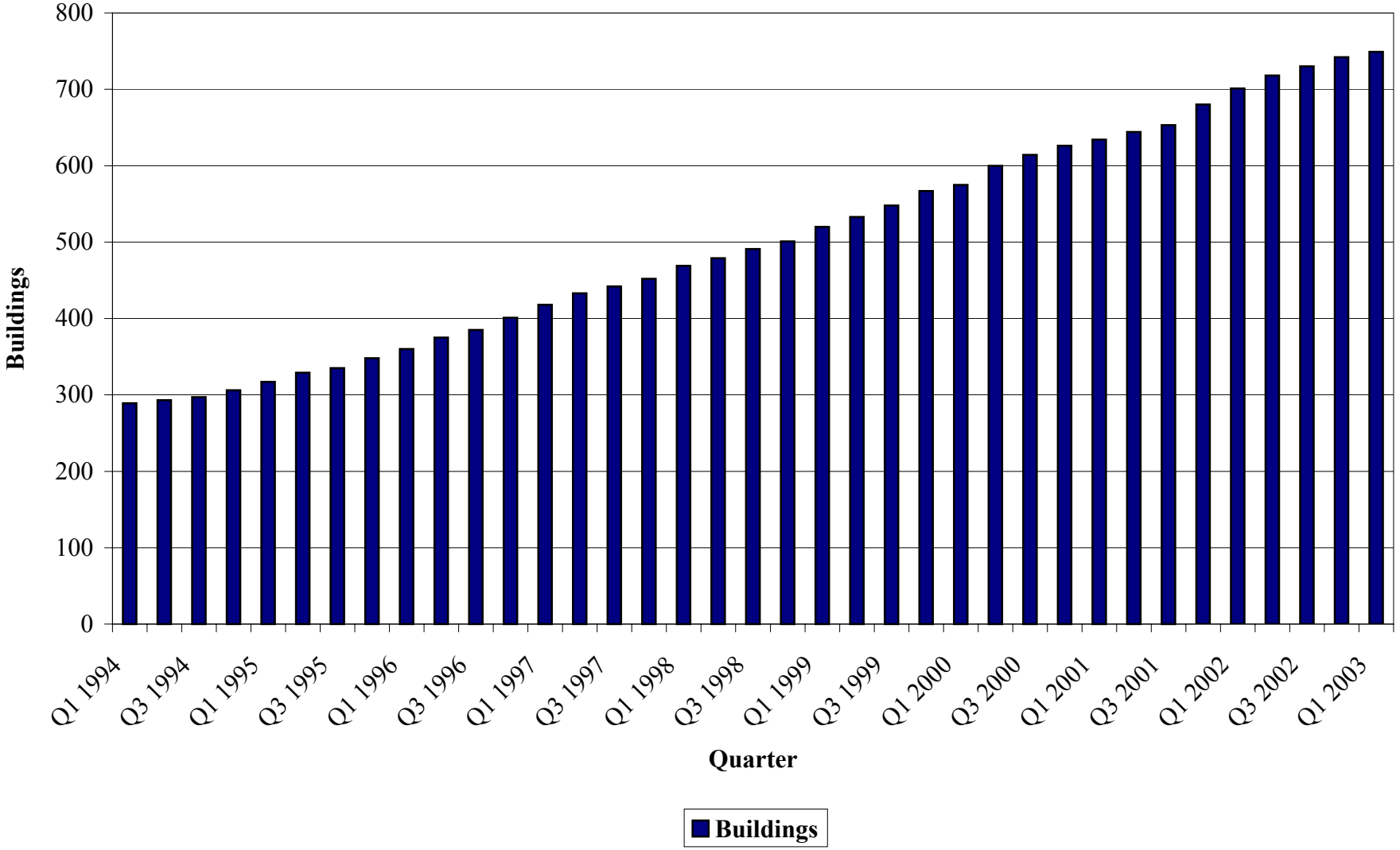
Appendix 1.1-AL
Clark County Commercial Permit Value - Inflation Adjusted



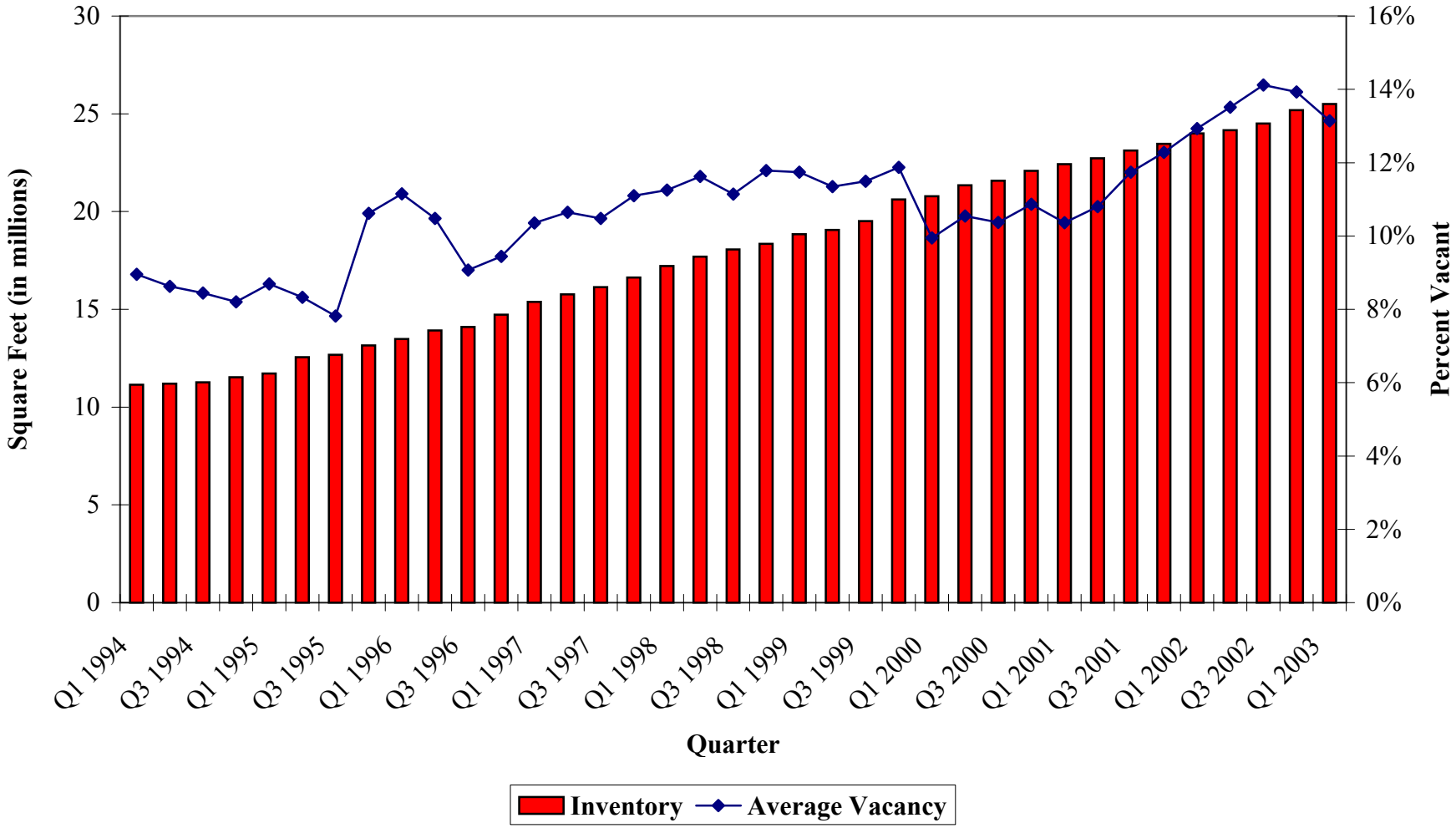
Appendix 1.1-AM
Inflation Adjusted Clark County Permitted Construction Value
Residential & Commercial - 12-Month Rolling Average



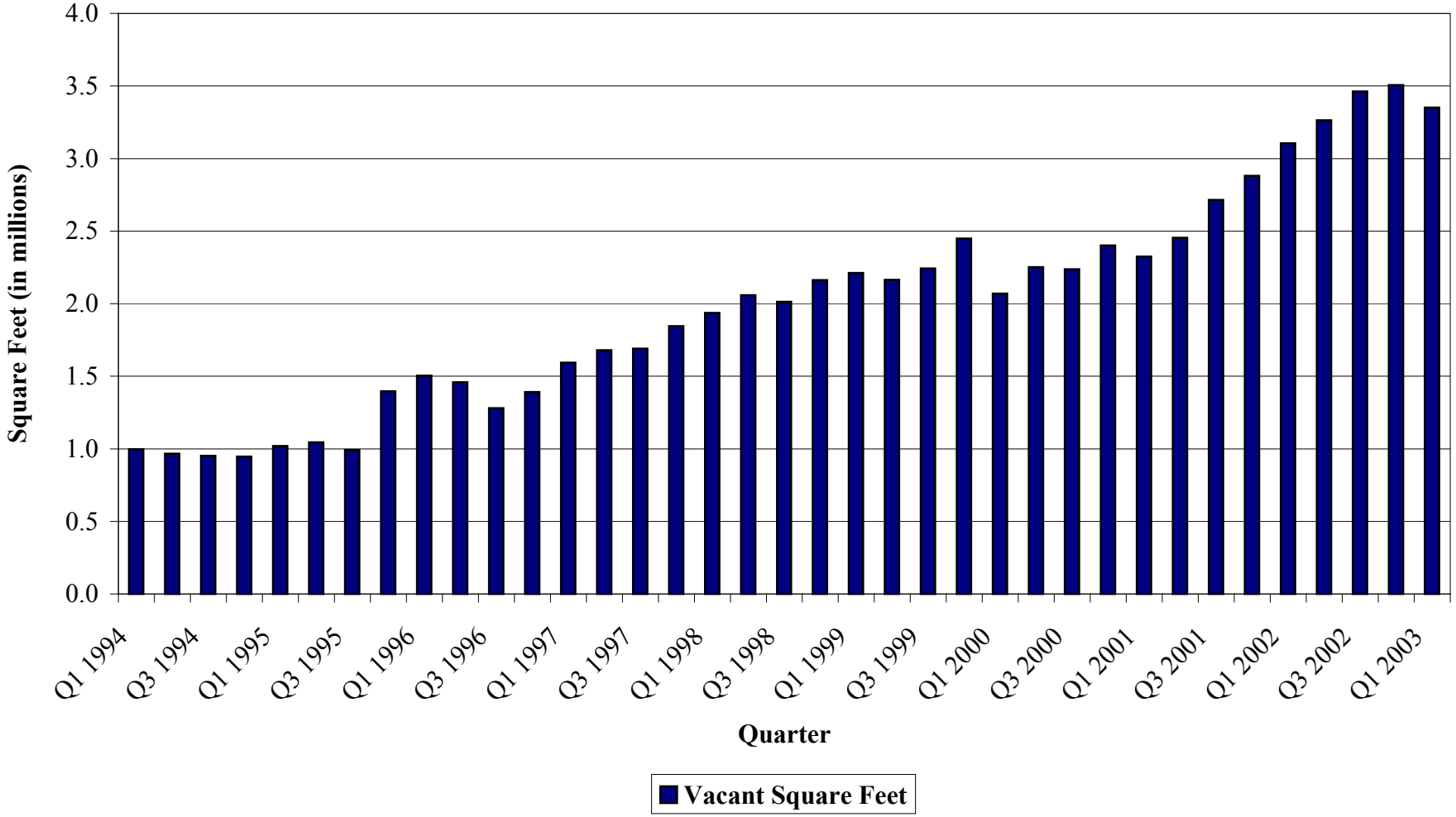
Appendix 1.1-AN
Las Vegas Office Market
Total Number of Office Buildings



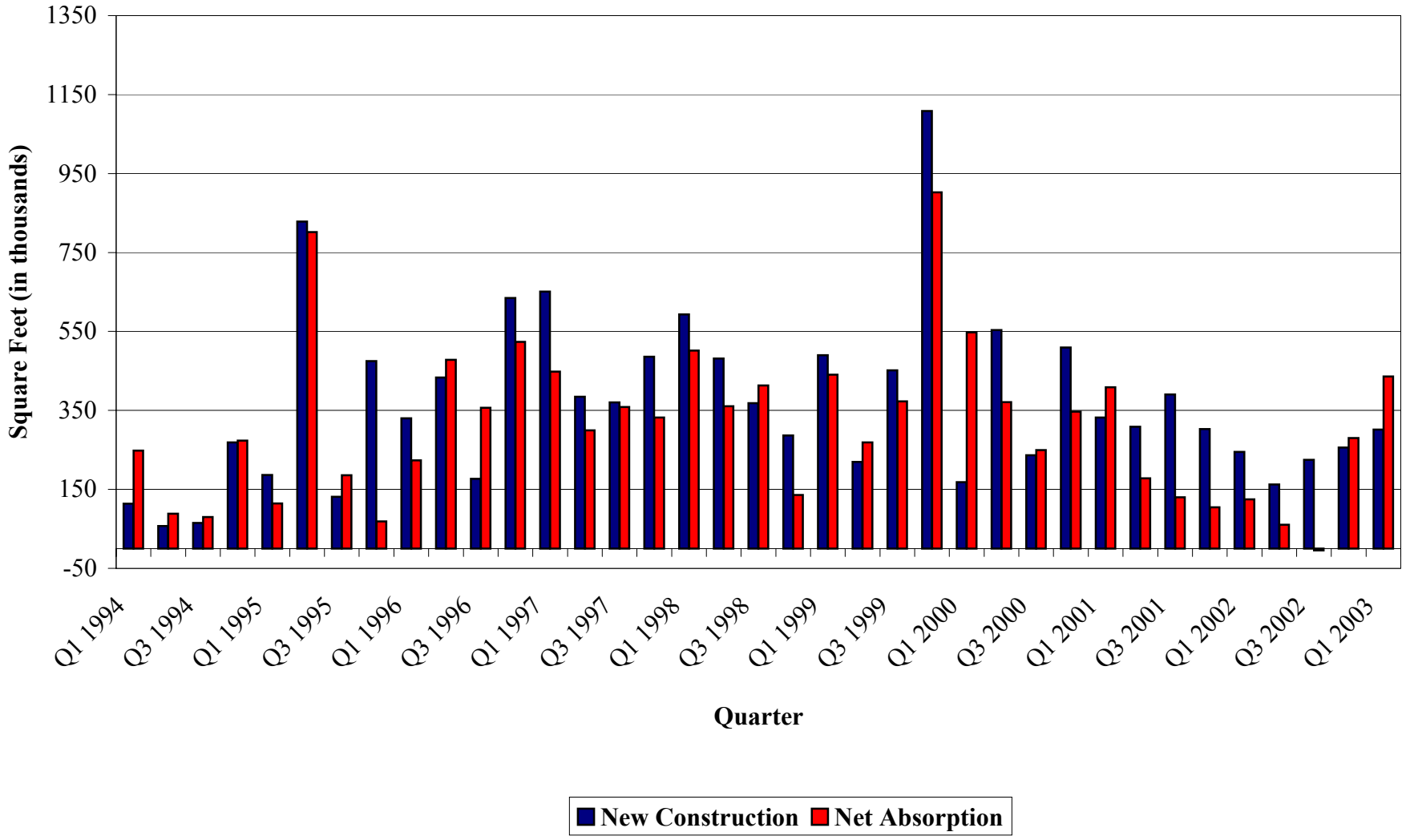
Appendix 1.1-AO
Las Vegas Office Market
Office Inventory and Average Vacancy



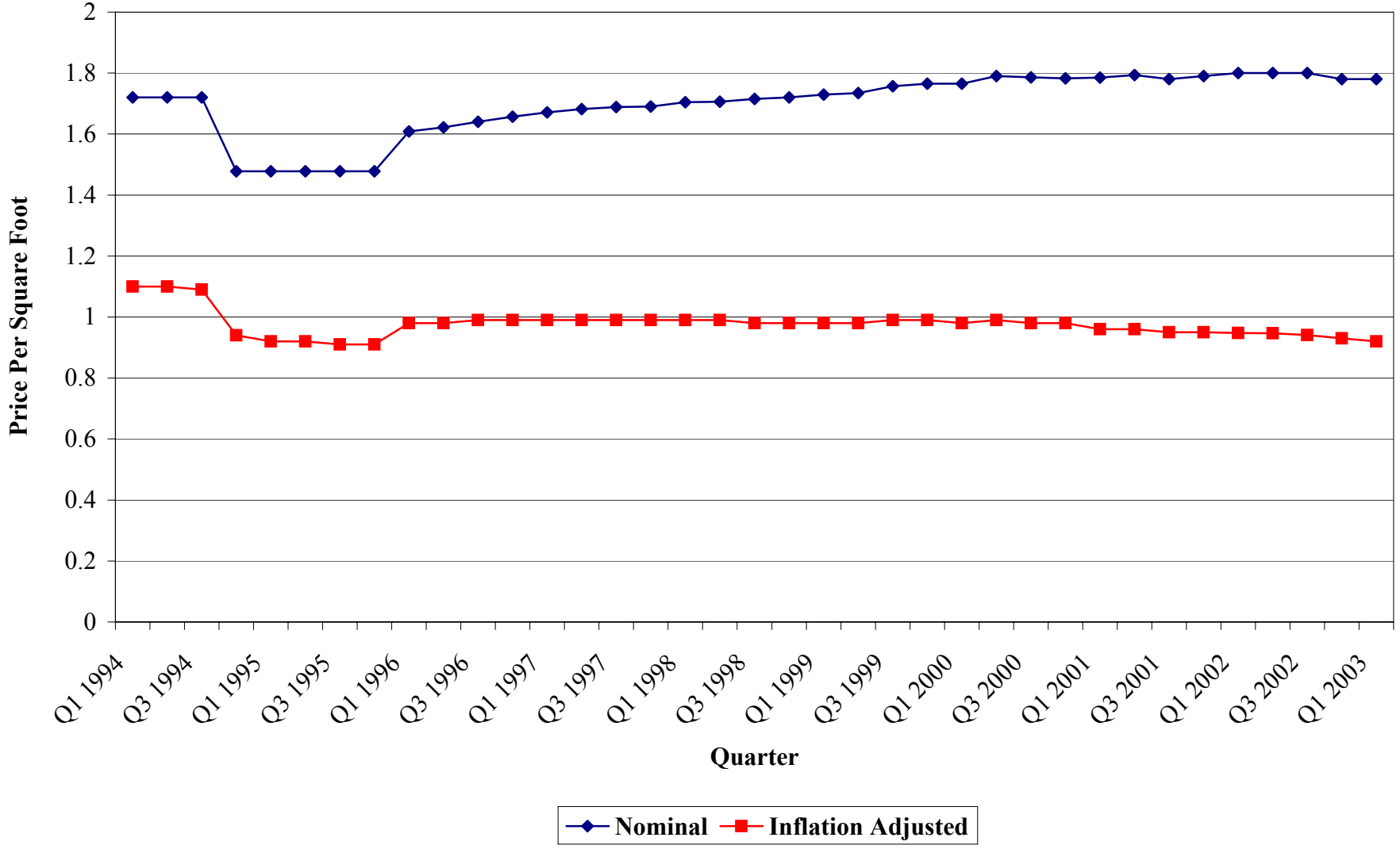
Appendix 1.1-AP
Las Vegas Office Market
Total Office Vacant Square Feet



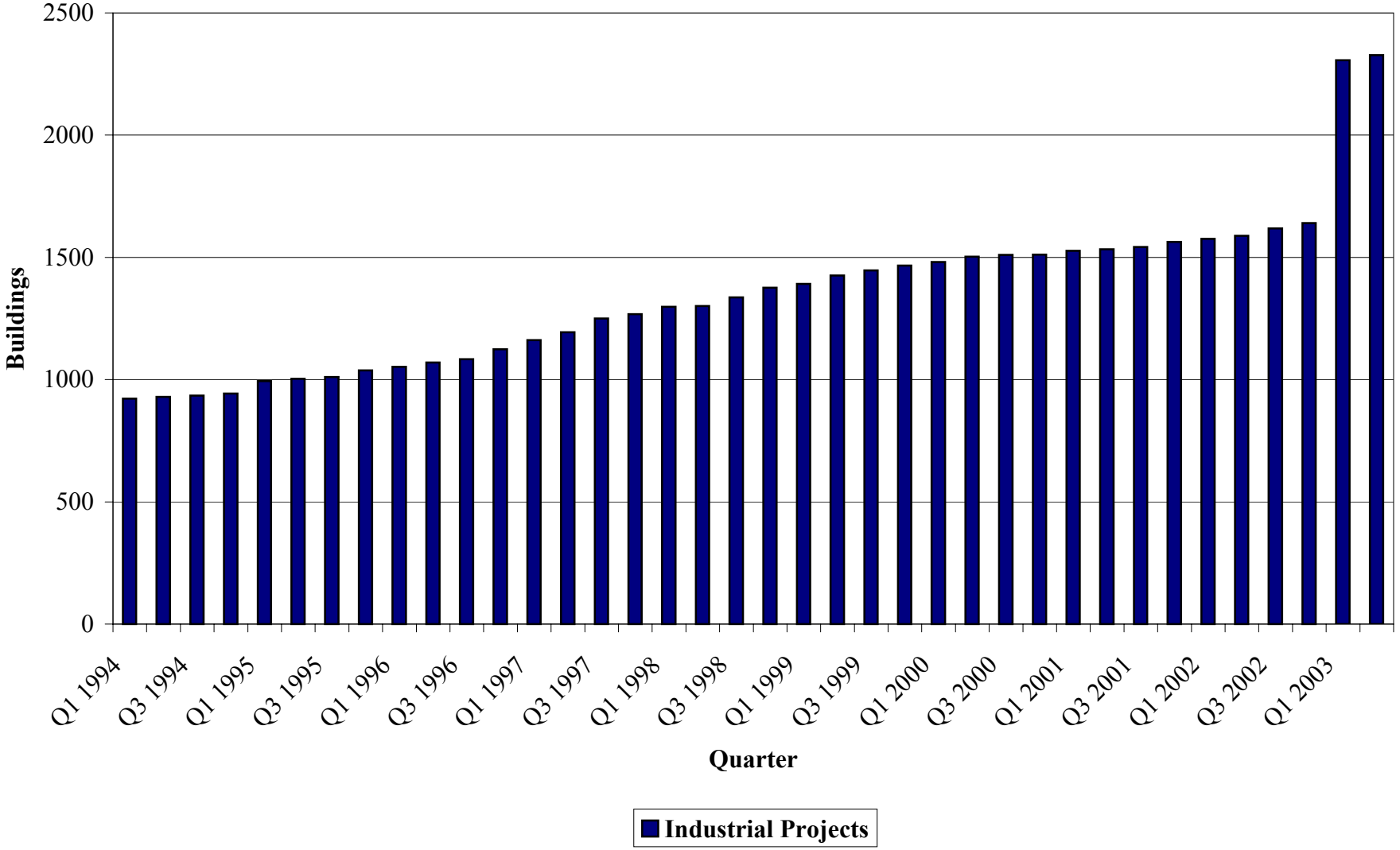
Appendix 1.1-AQ
Las Vegas Office Market
New Construction and Net Absorption



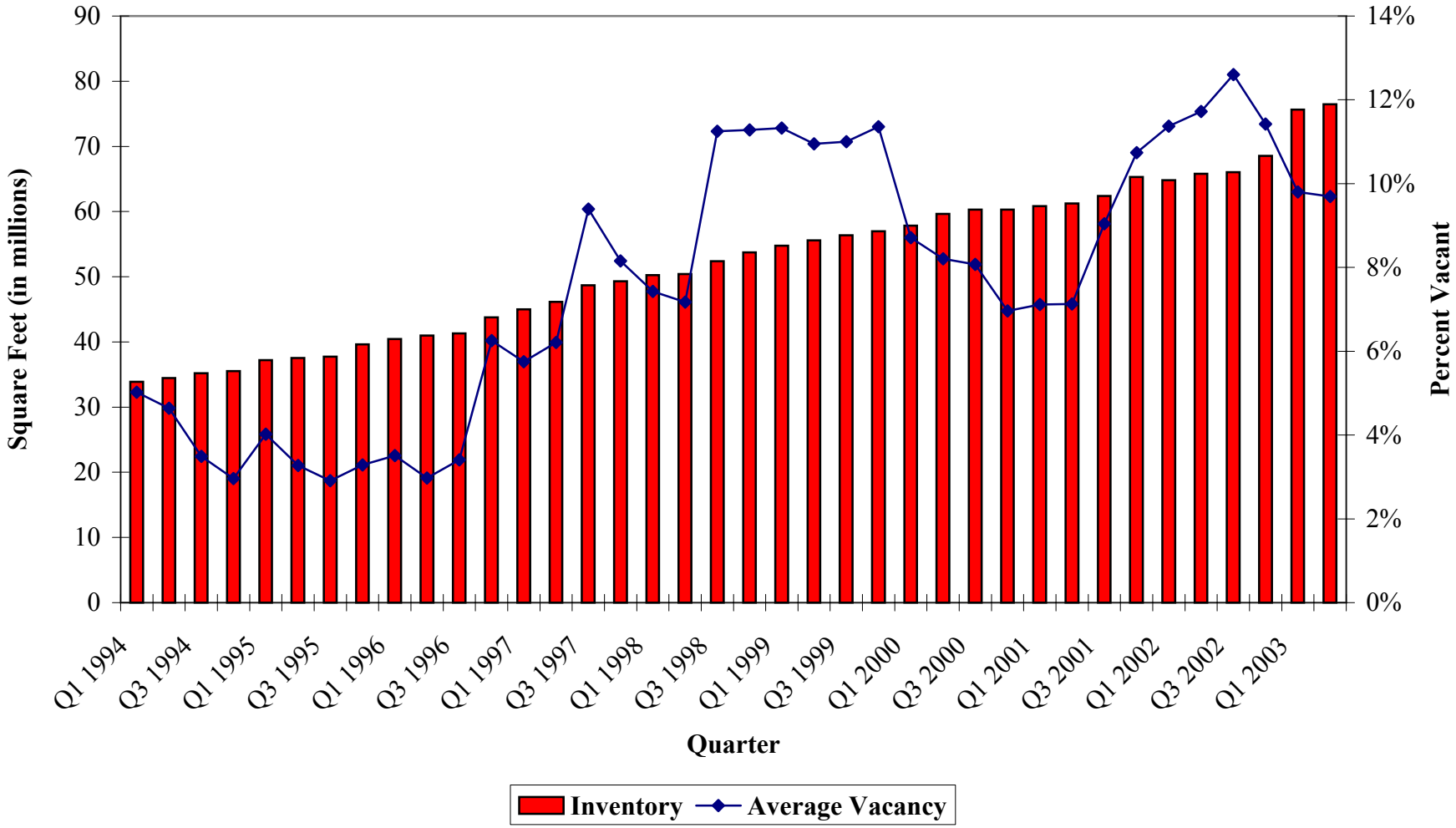
Appendix 1.1-AR
Las Vegas Office Market
Average Asking Rate for Office Space



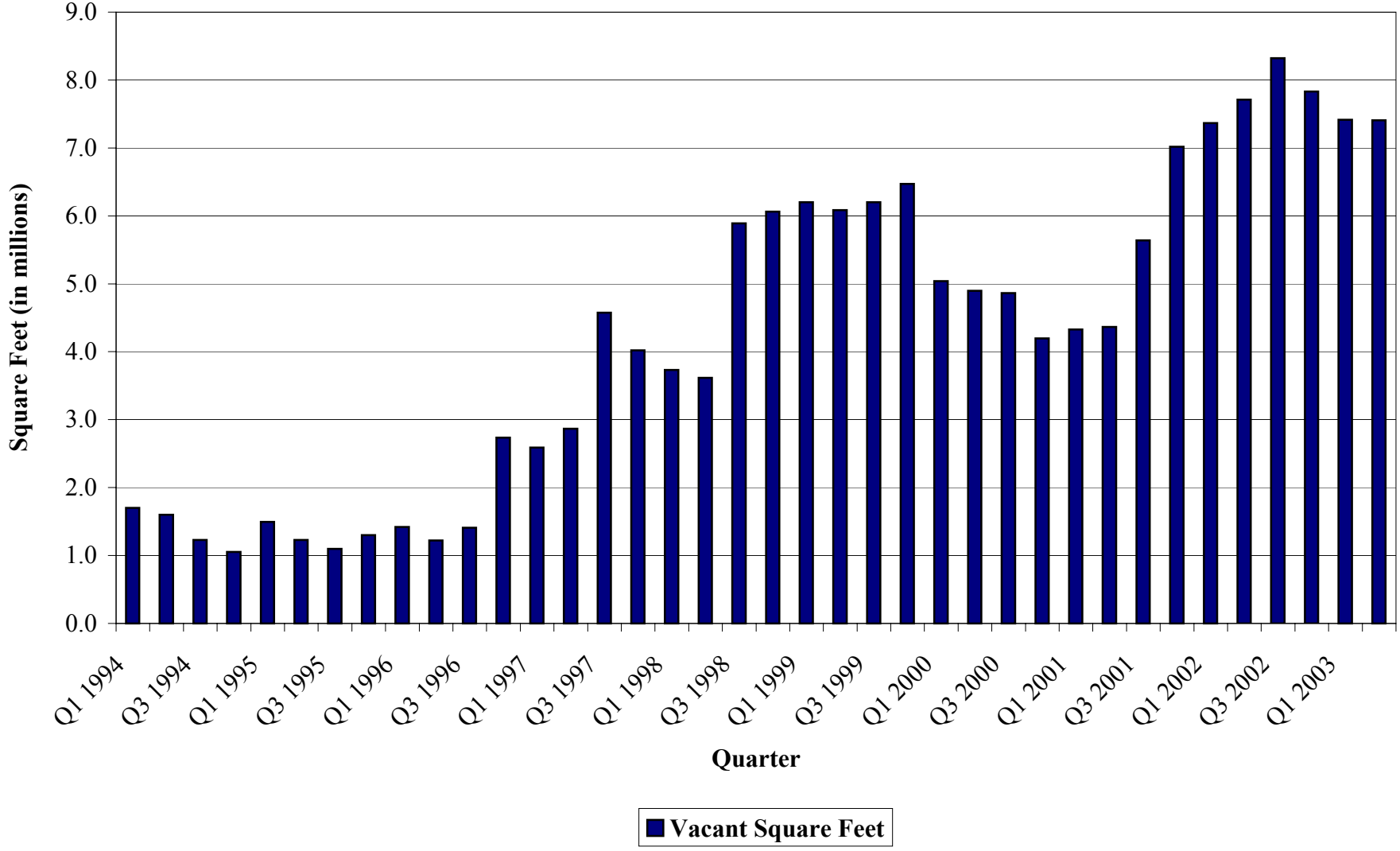
Appendix 1.1-AS
Las Vegas Industrial Market
Total Number of Industrial Projects



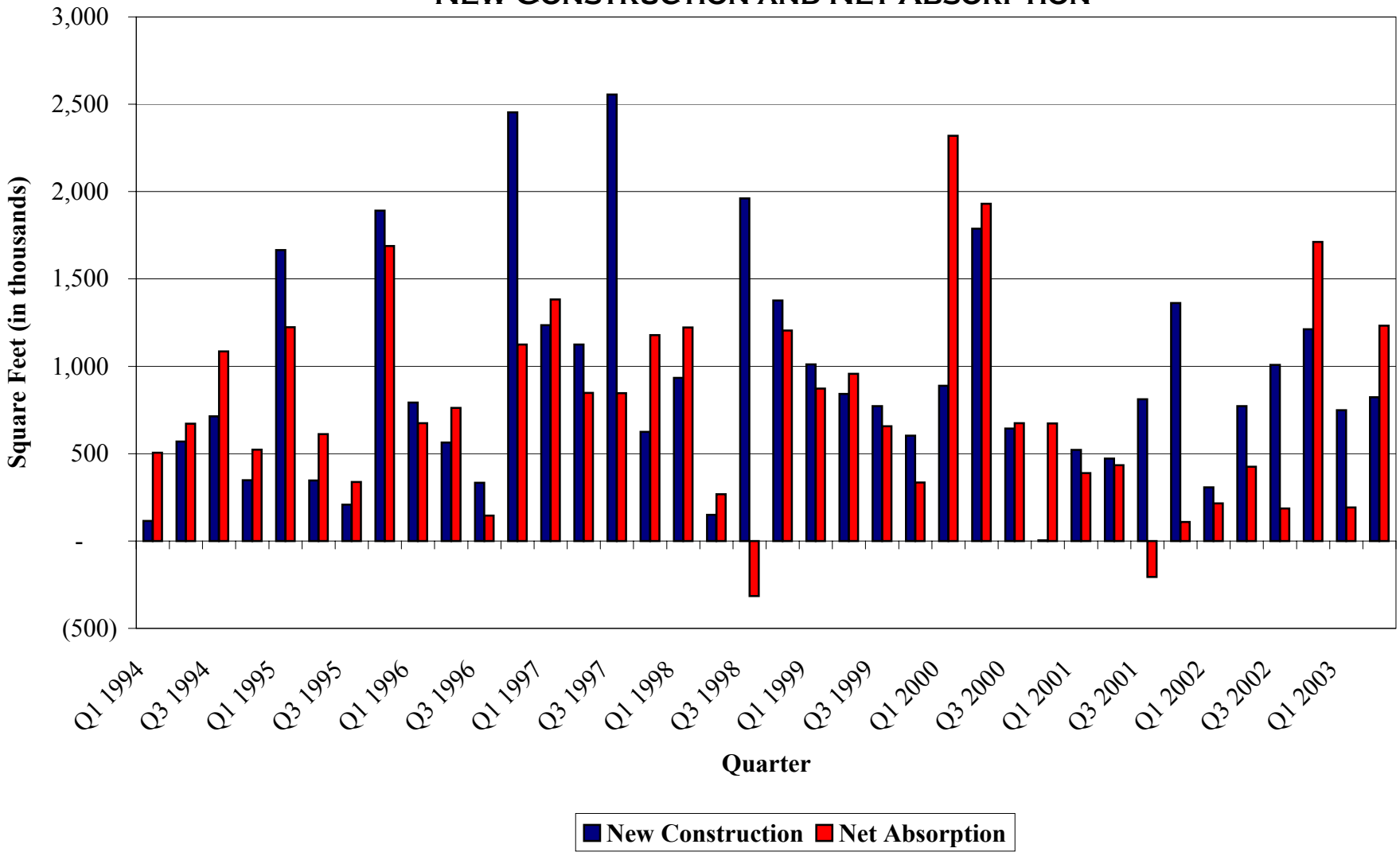
Appendix 1.1-AT
Las Vegas Industrial Market
Industrial Inventory and Average Vacancy



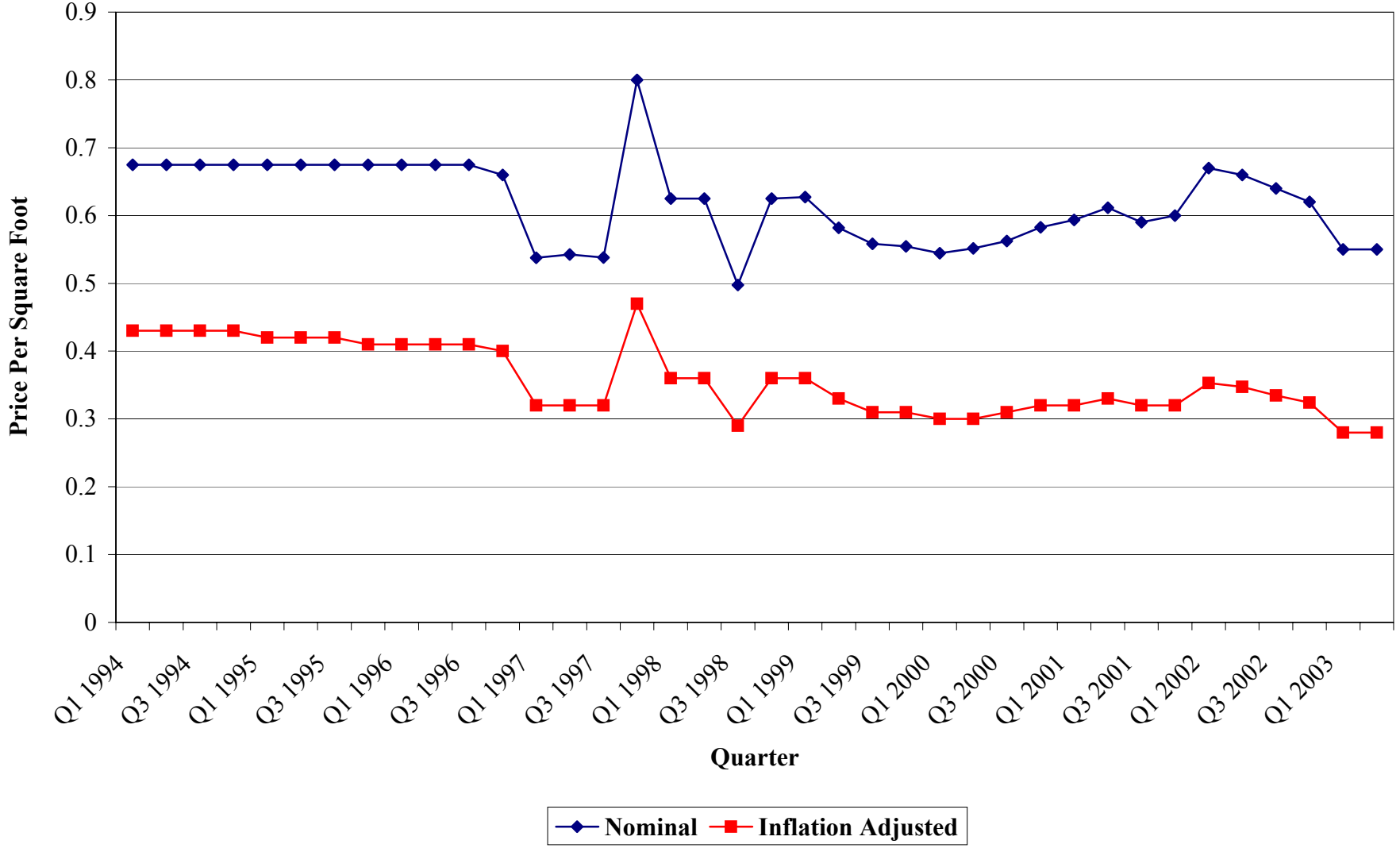
Appendix 1.1-AU
Las Vegas Industrial Market
Total Industrial Vacant Square Feet



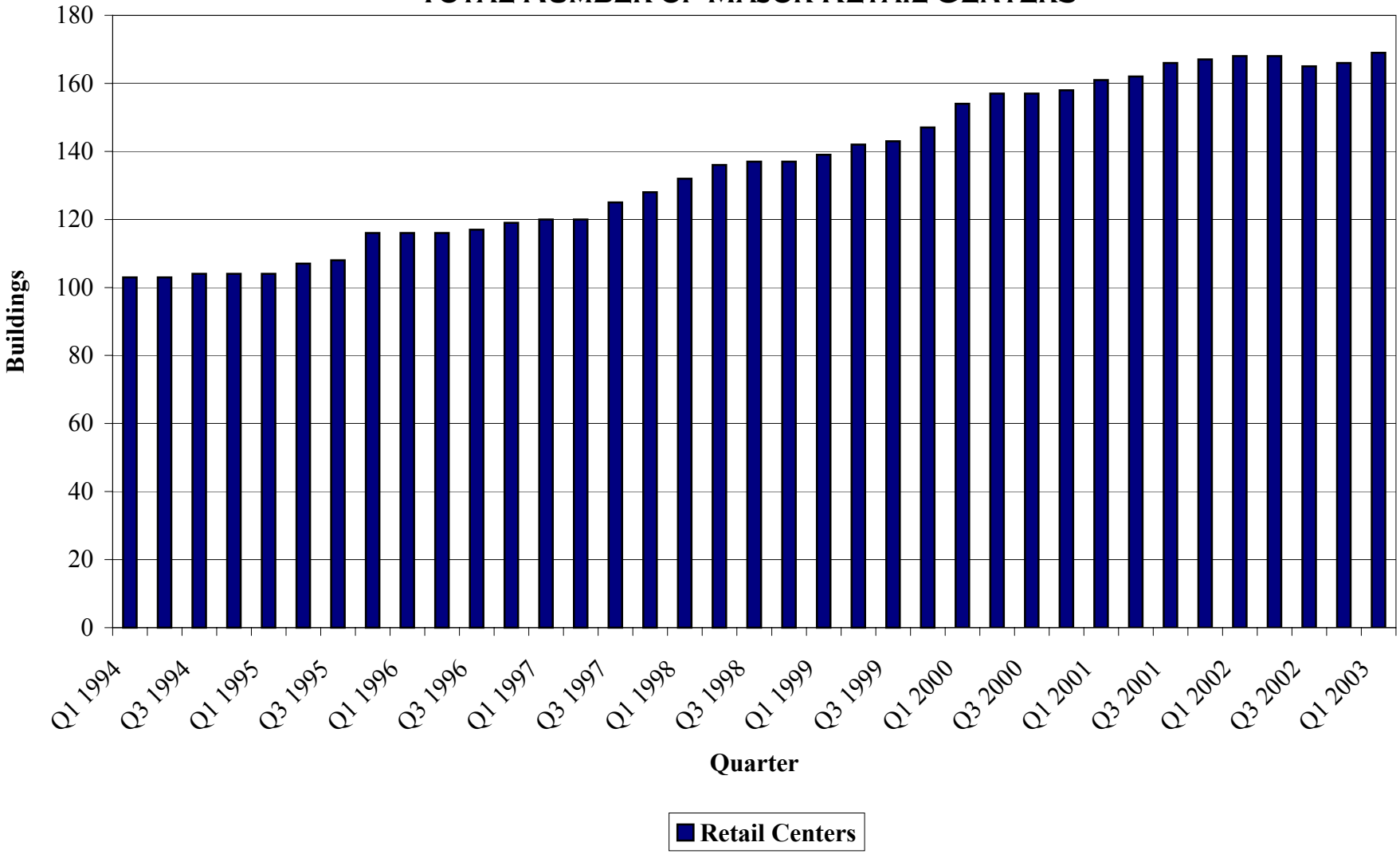
Appendix 1.1-AV
Las Vegas Industrial Market
New Construction and Net Absorption



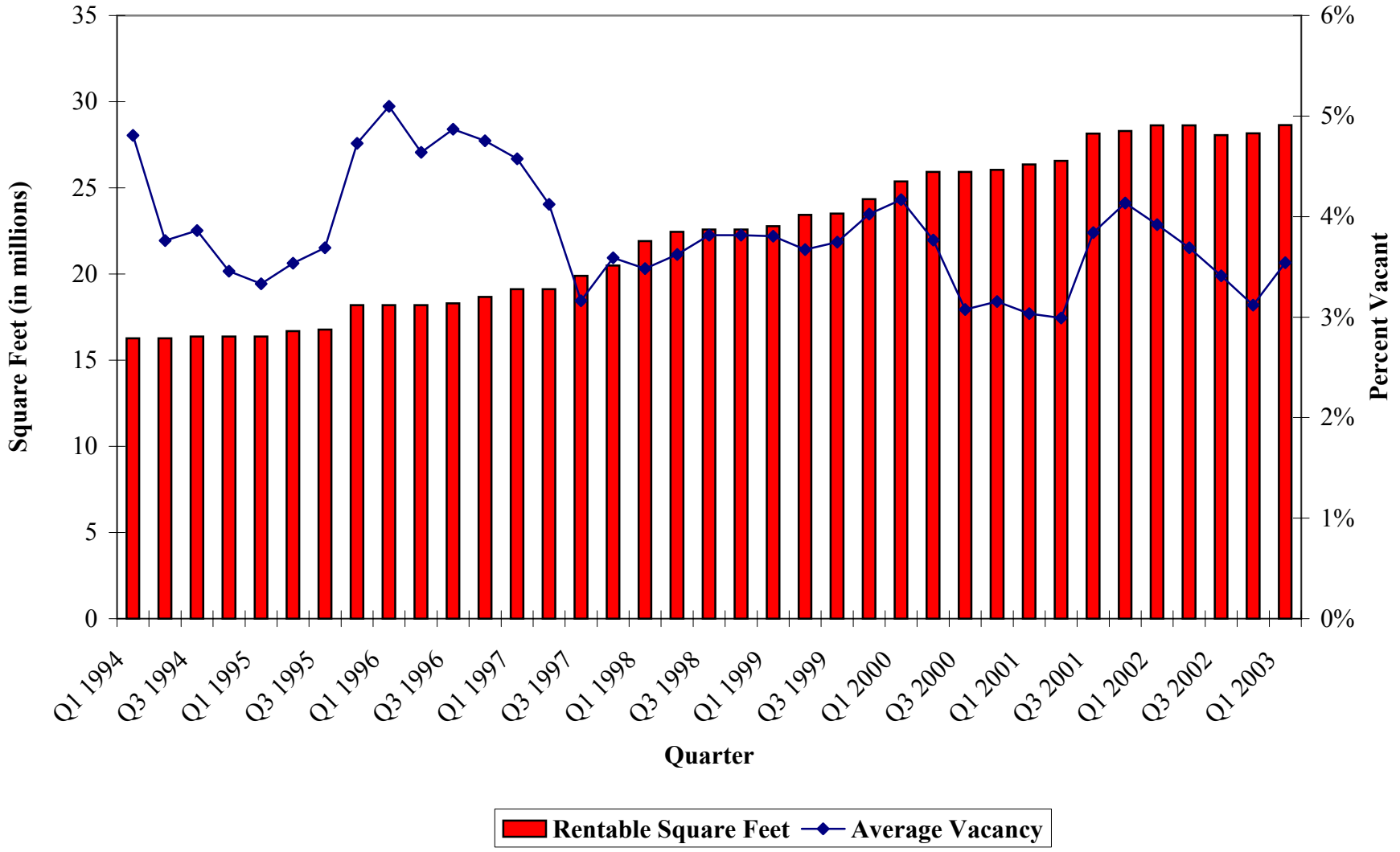
Appendix 1.1-AW
Las Vegas Industrial Market
Average Asking Rate for Industrial Space



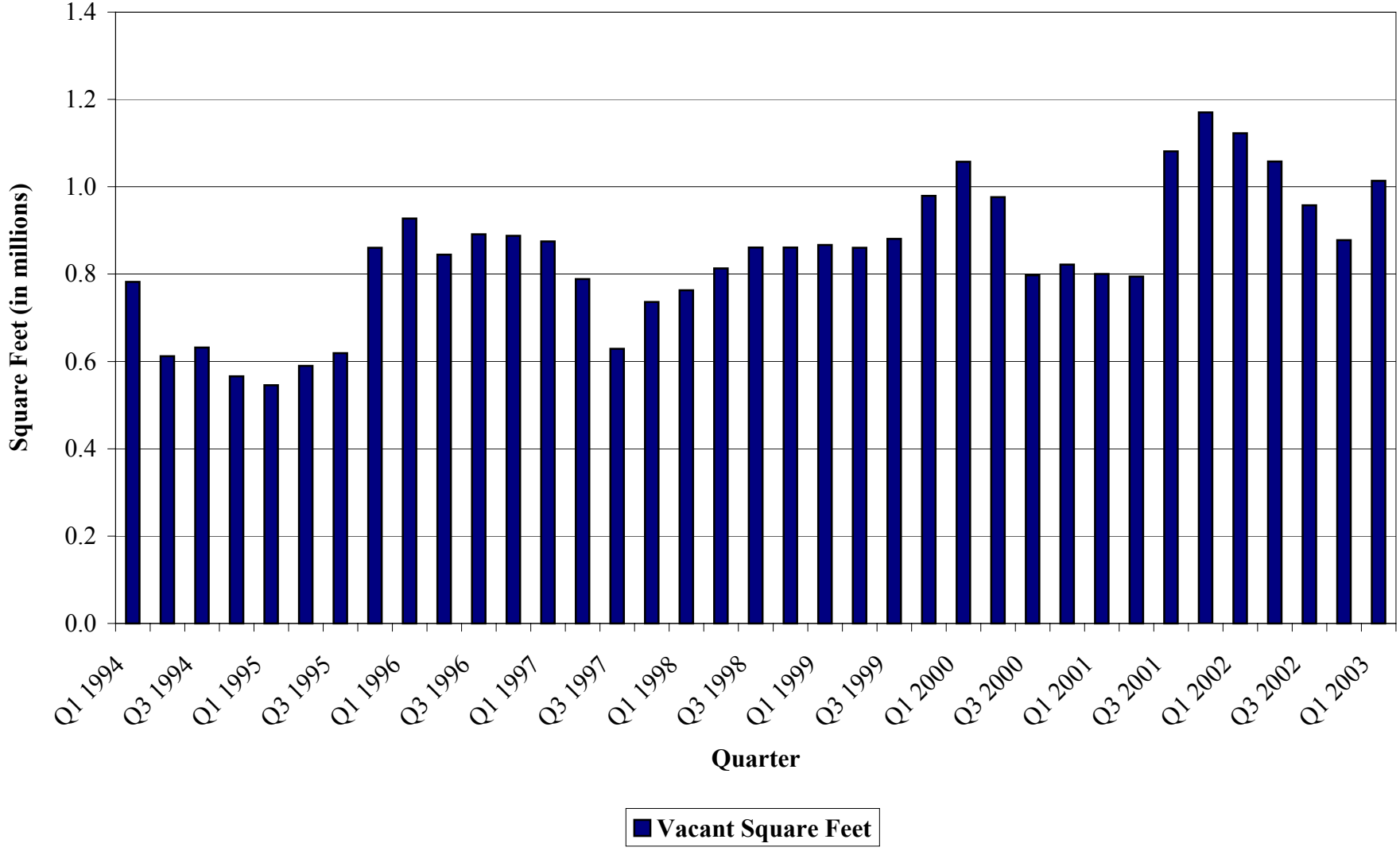
Appendix 1.1-AX
Las Vegas Retail Market
Total Number of Major Retail Centers



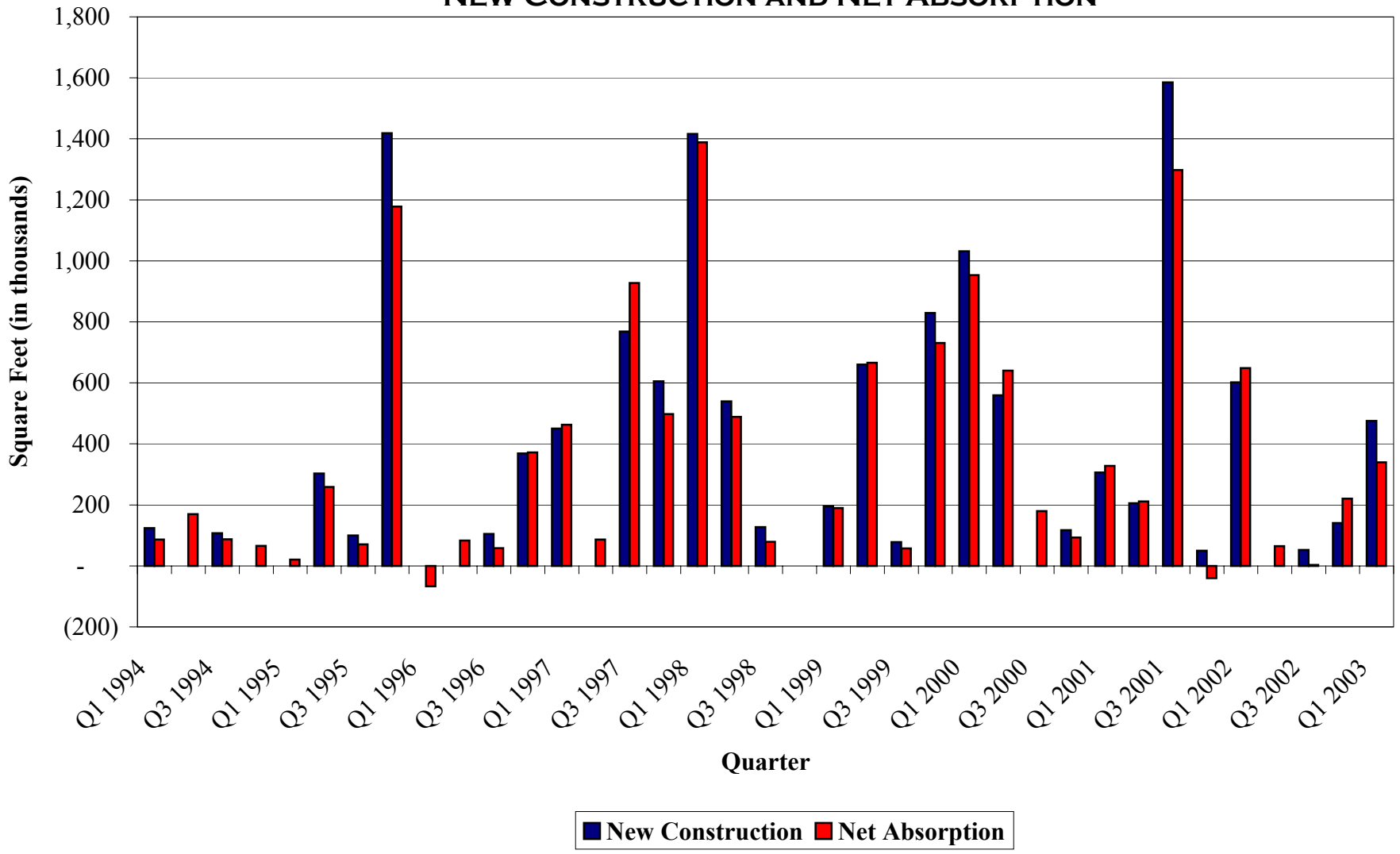
Appendix 1.1-AY
Las Vegas Retail Market
Retail Inventory and Average Vacancy



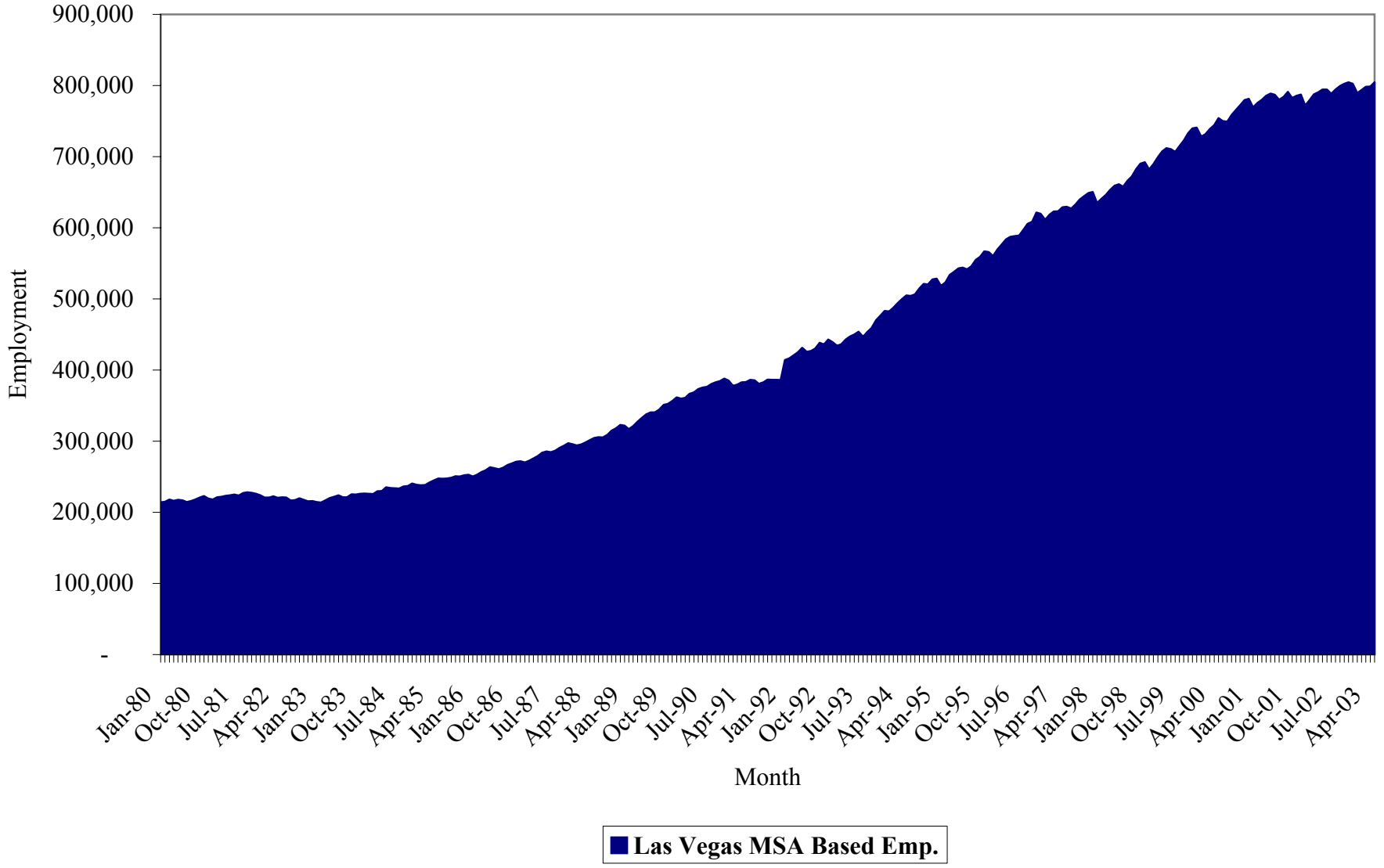
Appendix 1.1-AZ
Las Vegas Retail Market
Total Retail Vacant Square Feet



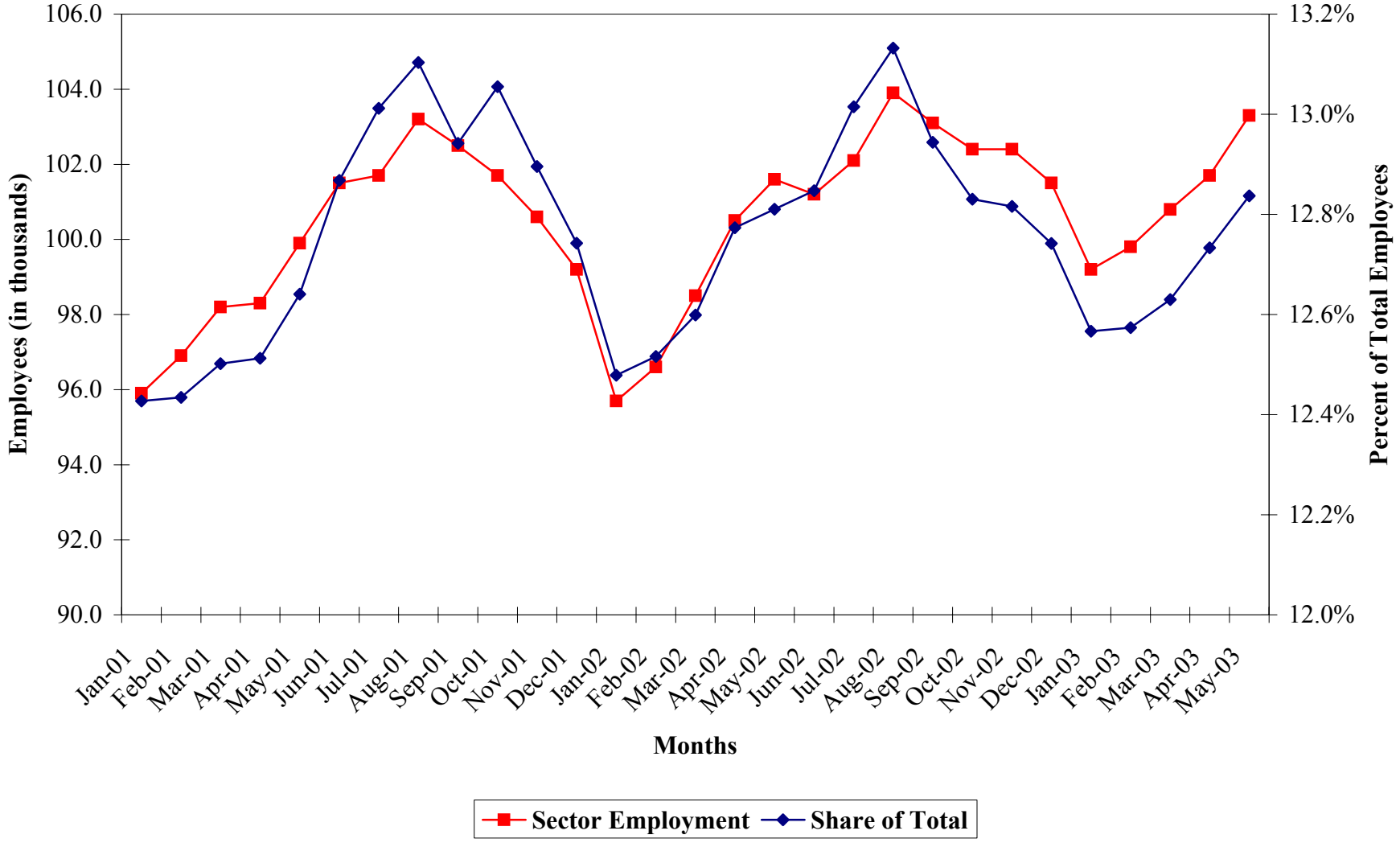
Appendix 1.1-BA
Las Vegas Retail Market
New Construction and Net Absorption



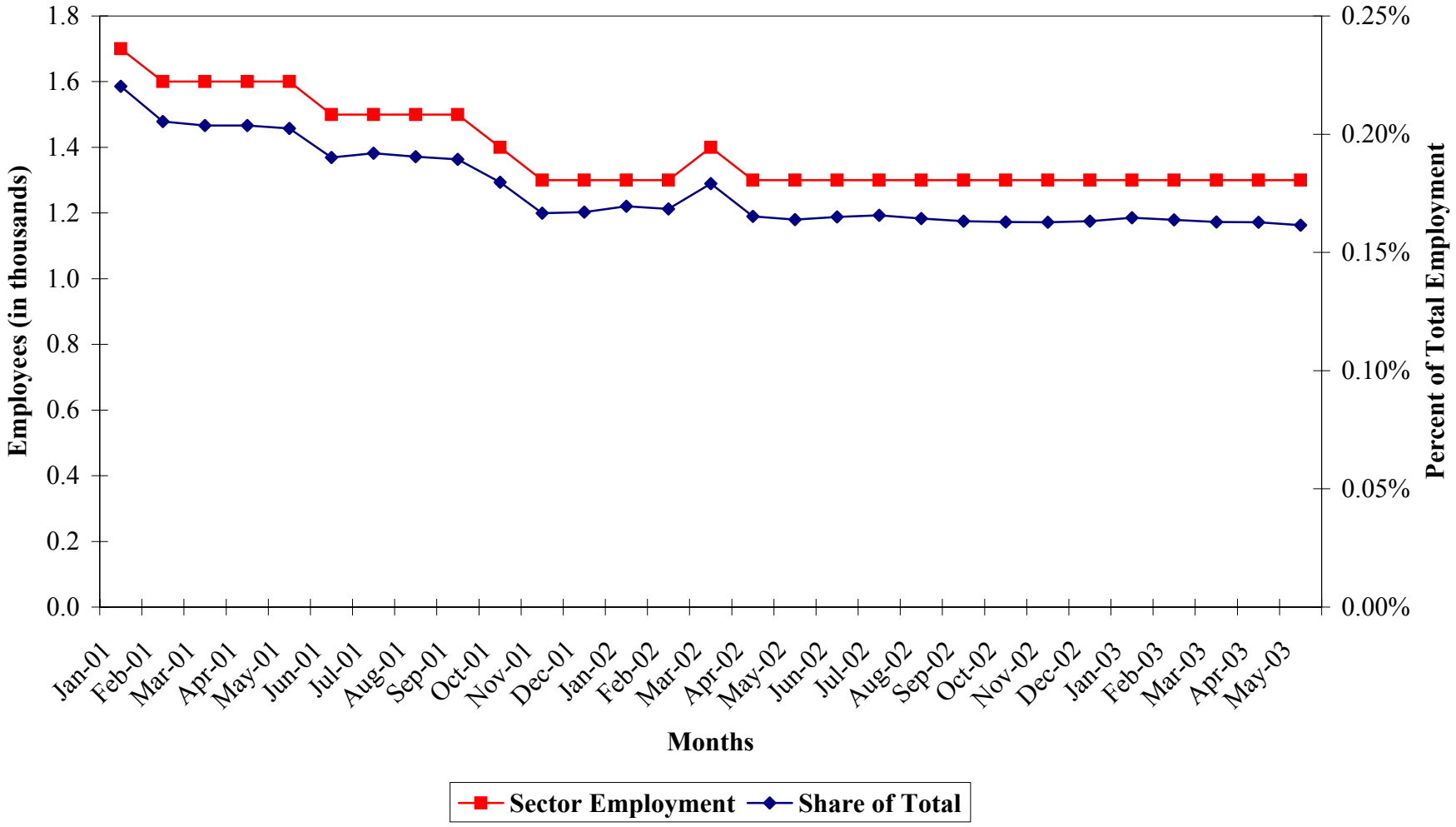
Appendix 1.1-BB
Las Vegas MSA Employment



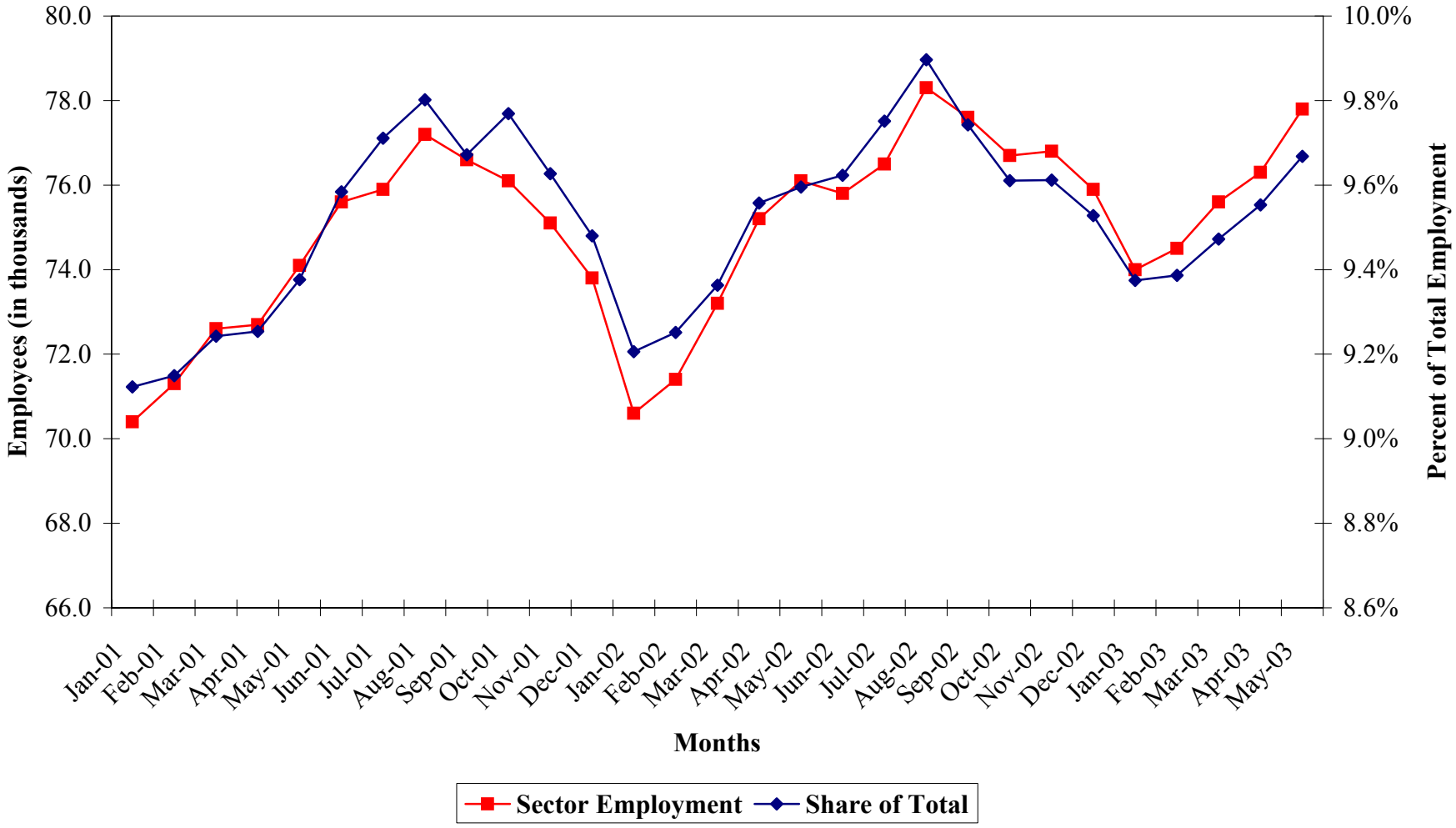
Appendix 1.1-BC
Goods Producing Employment
Sector Employment and Share of Total Employment



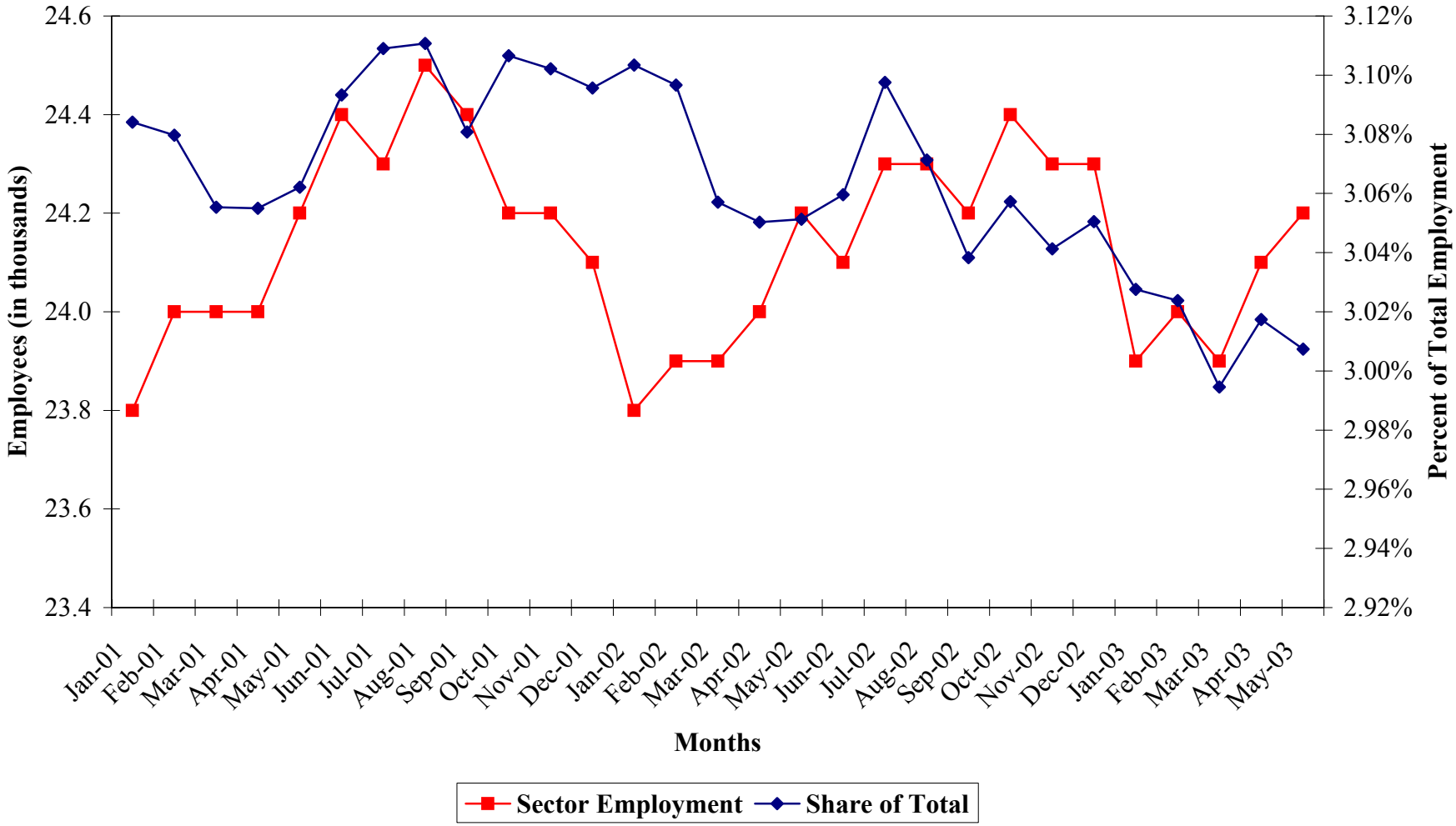
Appendix 1.1-BD
Natural Resources and Mining Employment
Sector Employment and Share of Total Employment



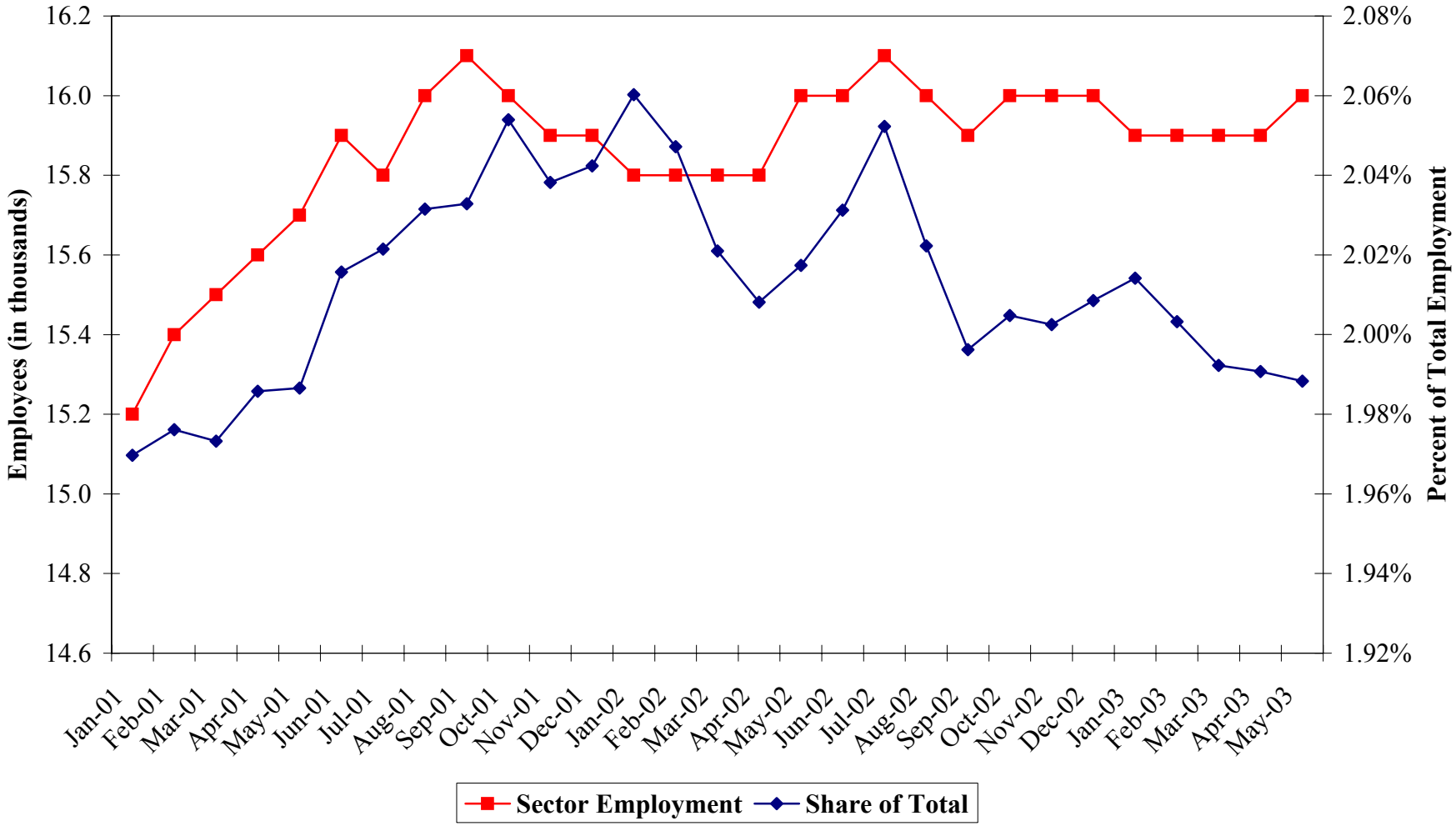
Appendix 1.1-BE
Construction Employment
Sector Employment and Share of Total Employment



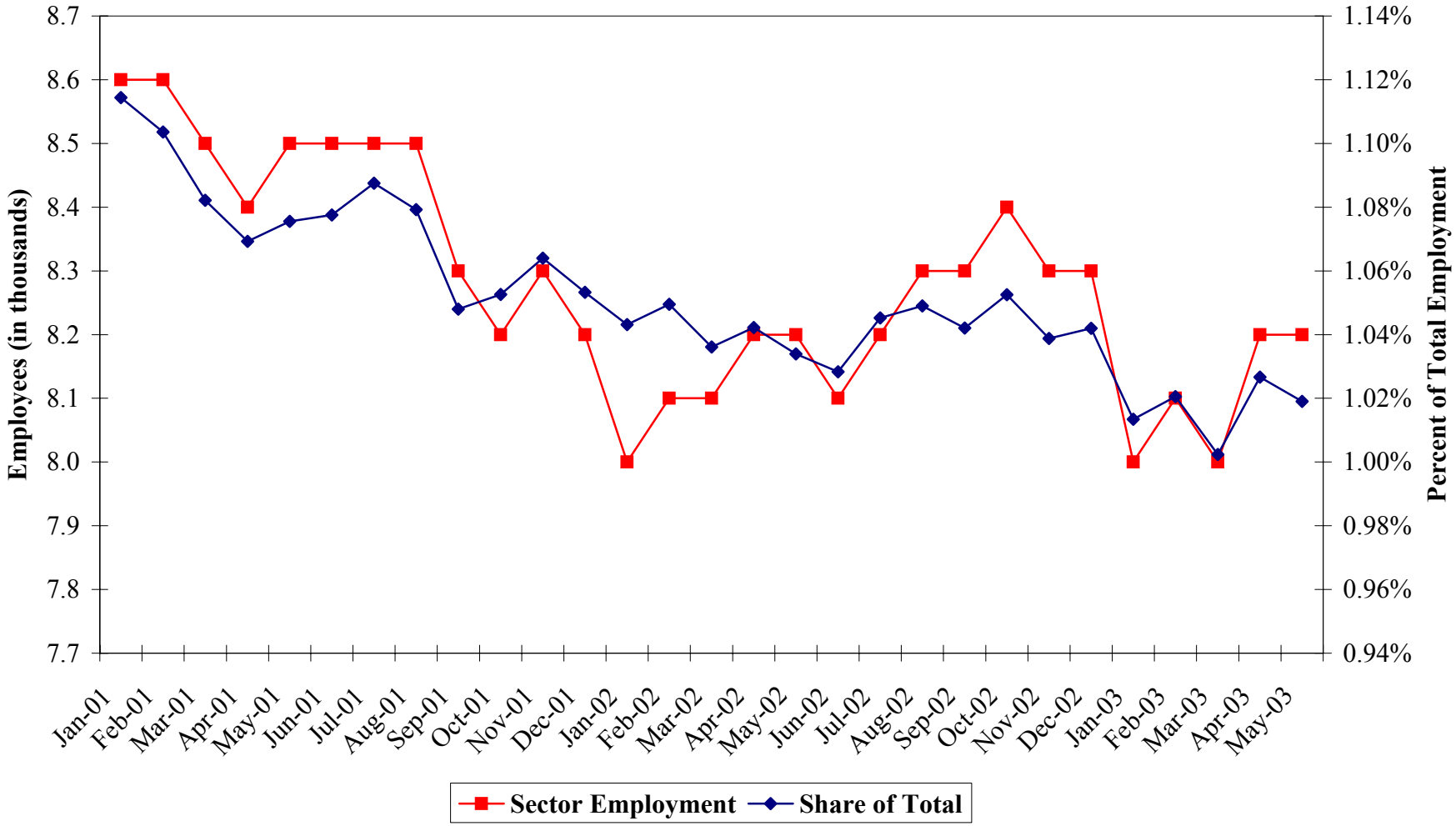
Appendix 1.1-BF
Manufacturing Employment
Sector Employment and Share of Total Employment



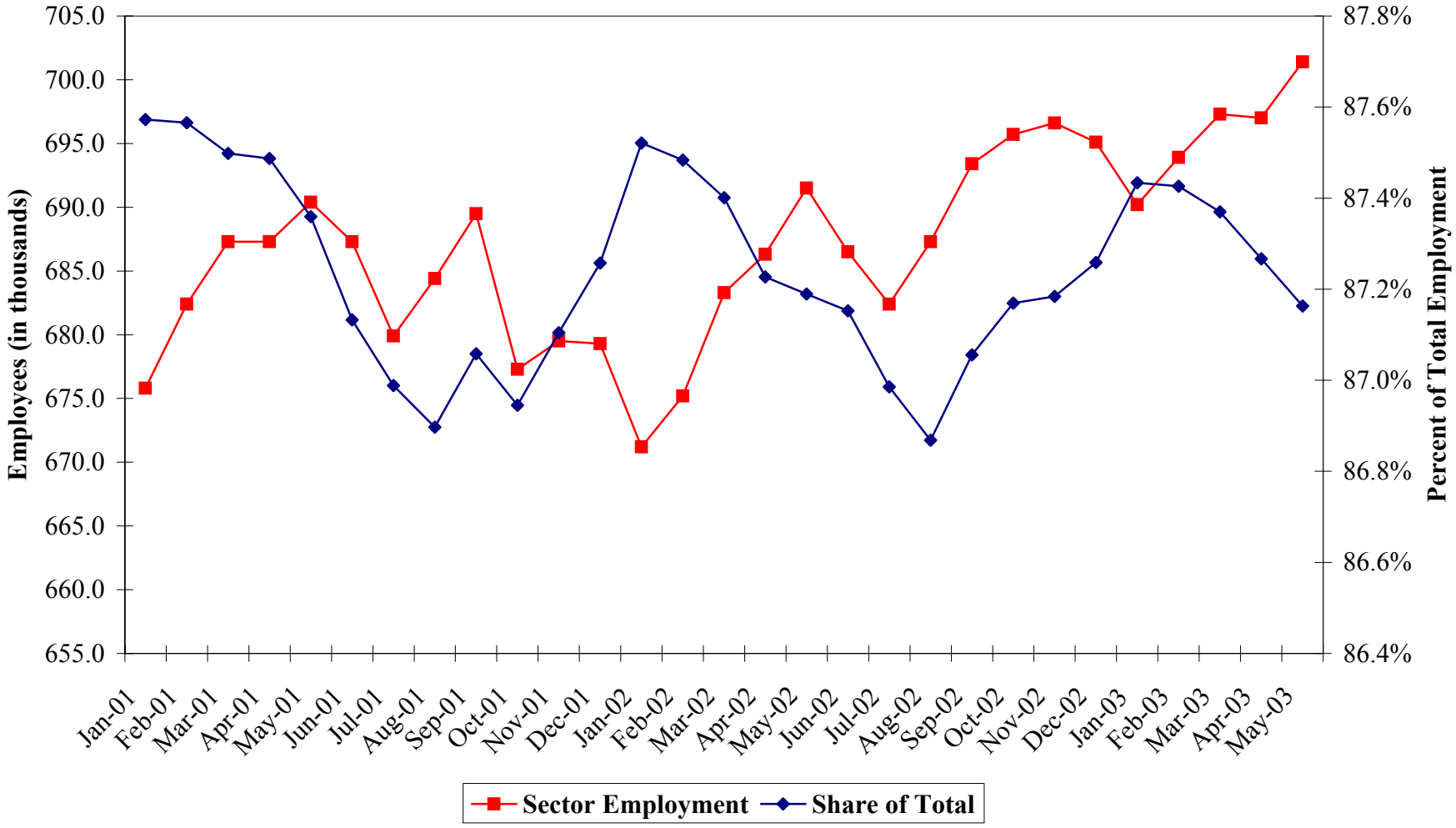
Appendix 1.1-BG
Manufacturing of Durable Goods Employment
Sector Employment and Share of Total Employment



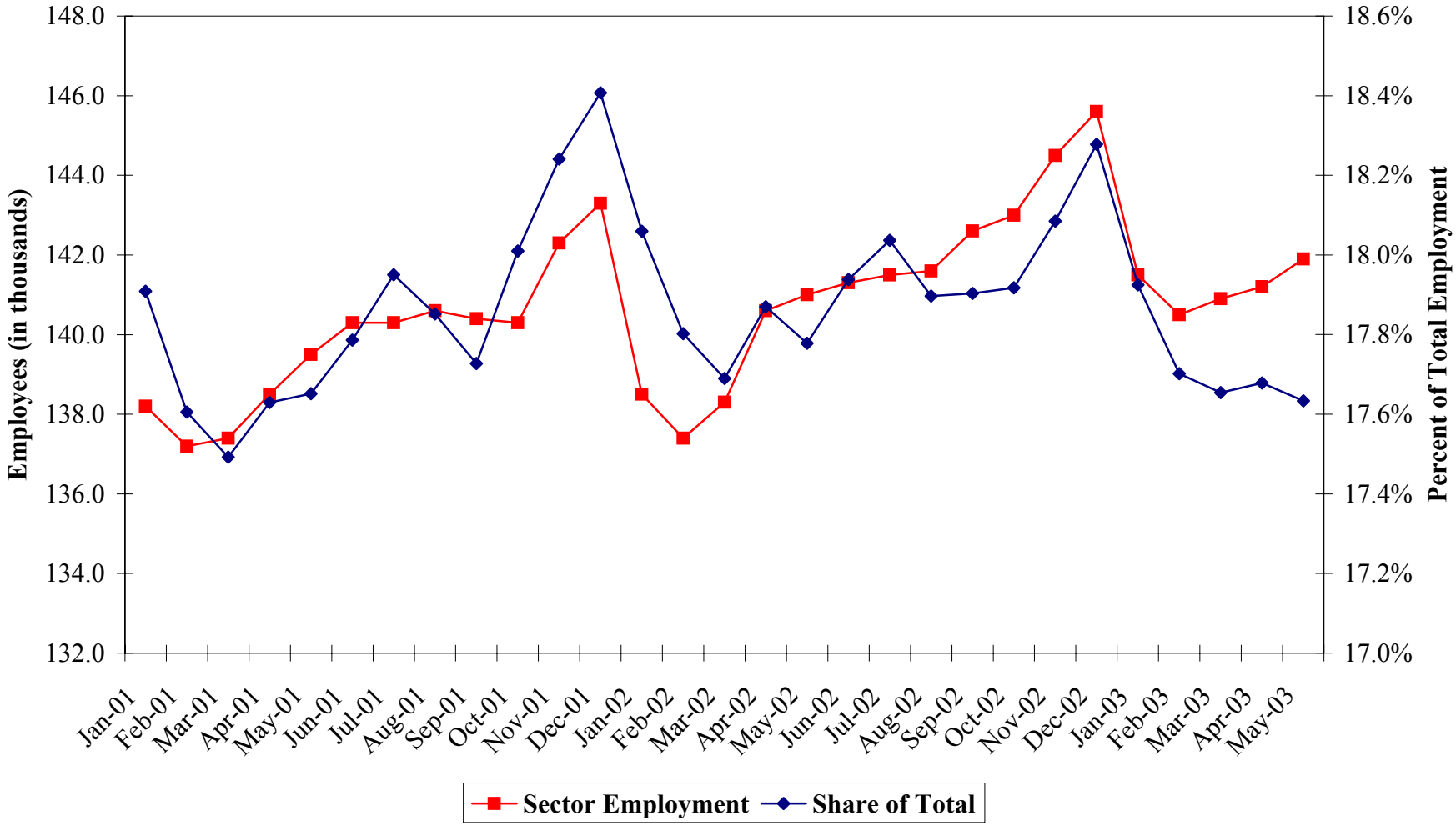
Appendix 1.1-BH
Manufacturing of NonDurable Goods Employment Sector
Employment and Share of Total Employment



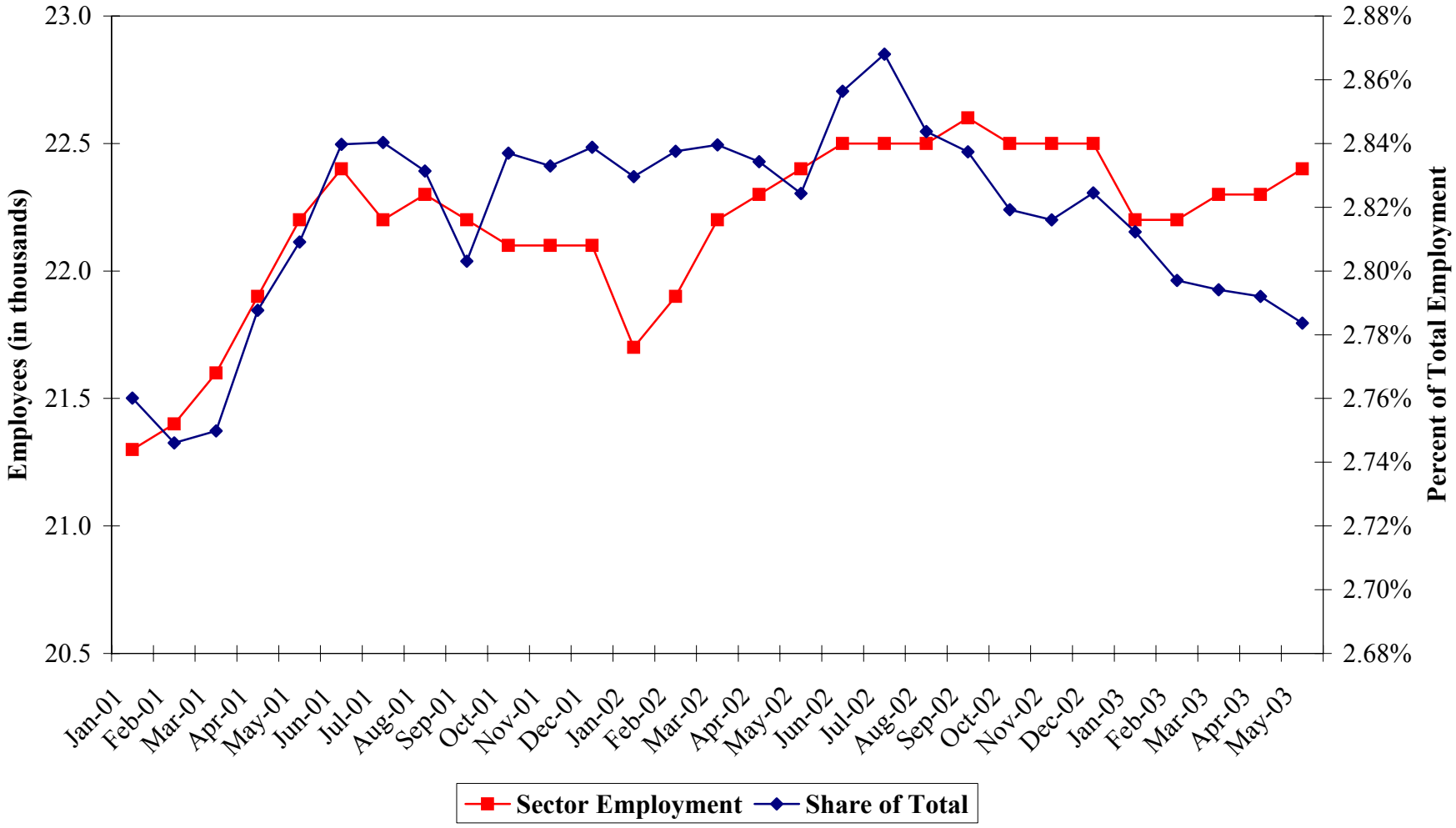
Appendix 1.1-BI
Services Producing Employment
Sector Employment and Share of Total Employment



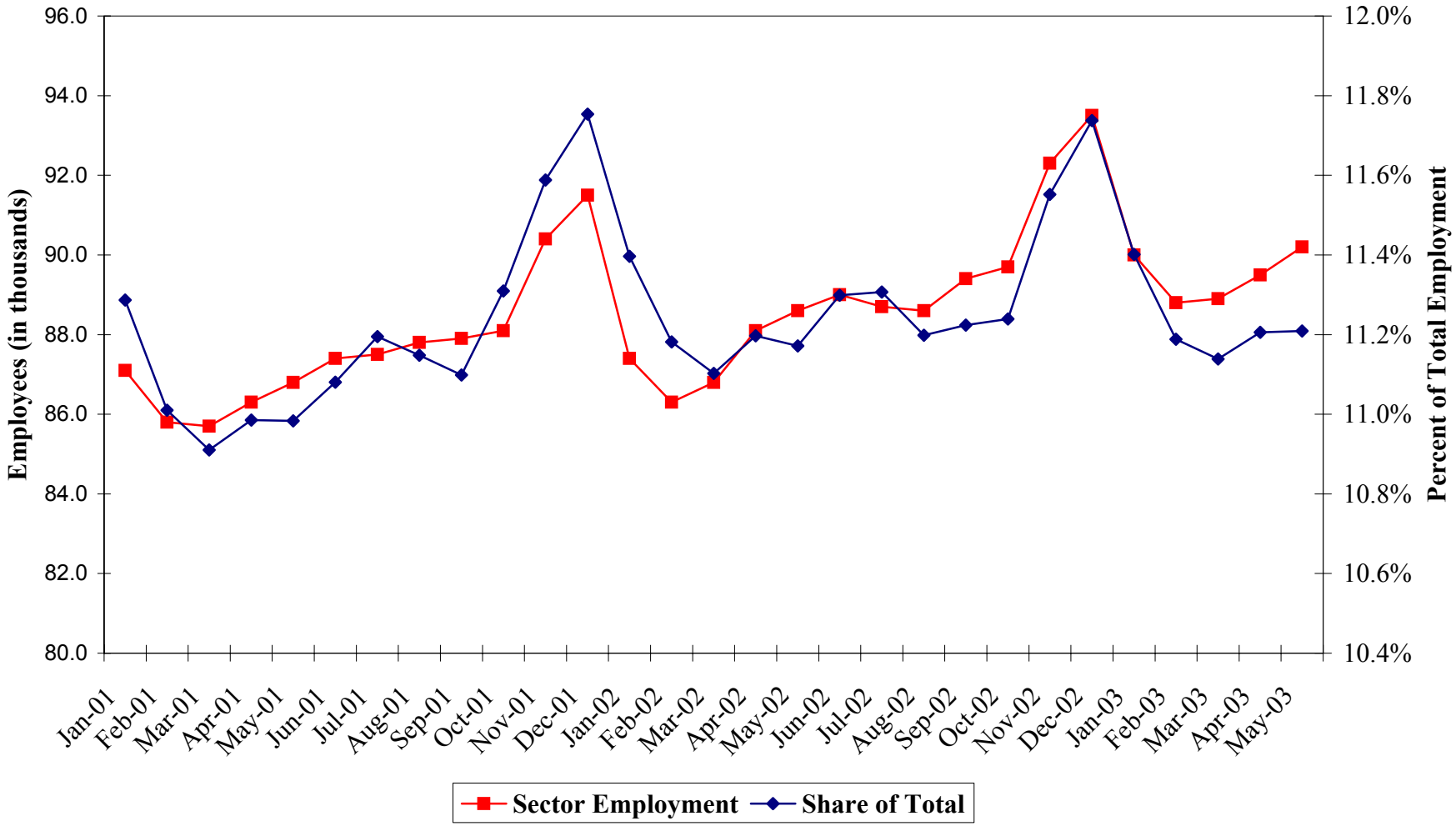
Appendix 1.1-BJ
Trade, Transportation, & Utilities Employment
Sector Employment and Share of Total Employment



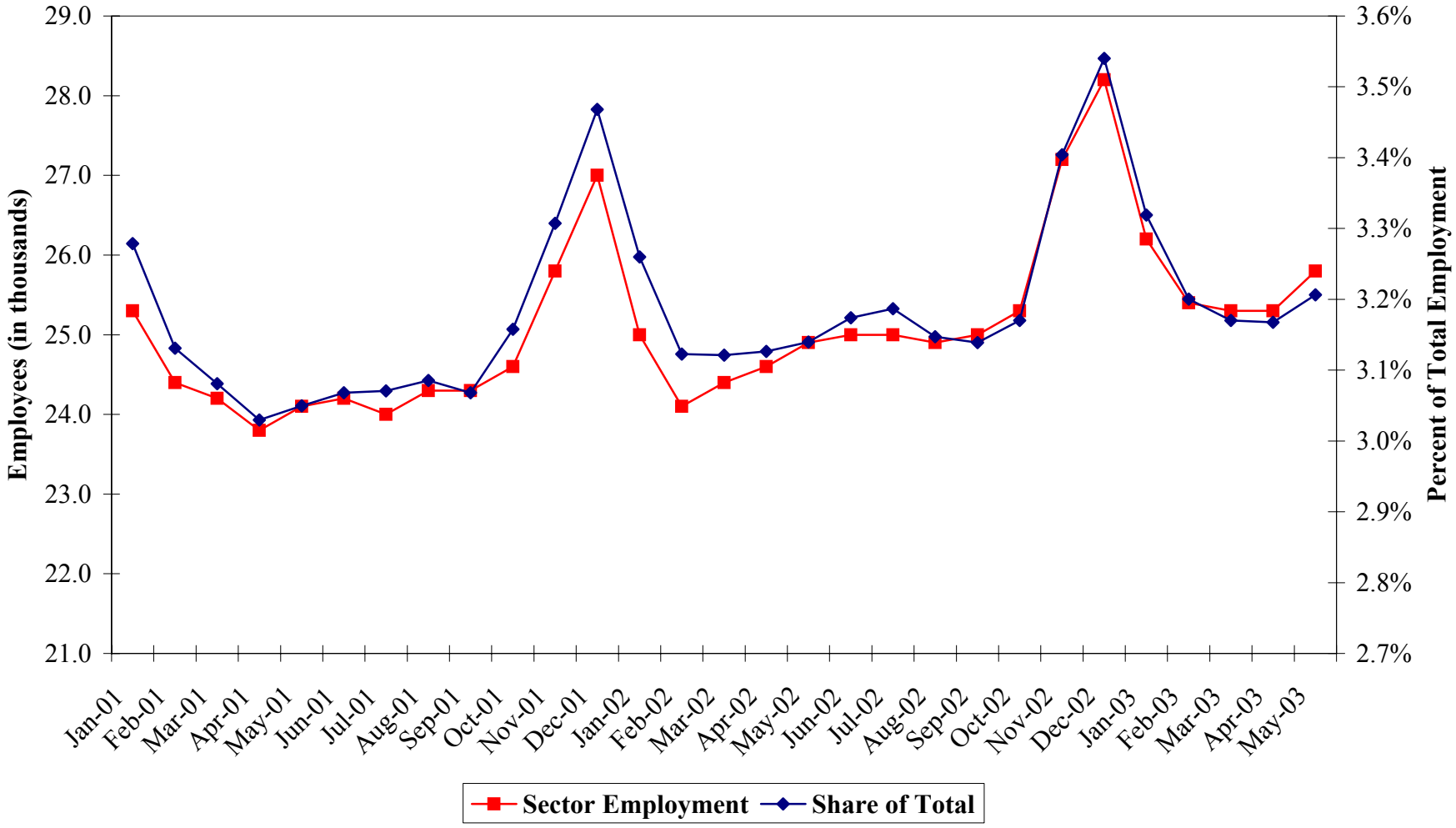
Appendix 1.1-BK
Wholesale Employment
Sector Employment and Share of Total Employment



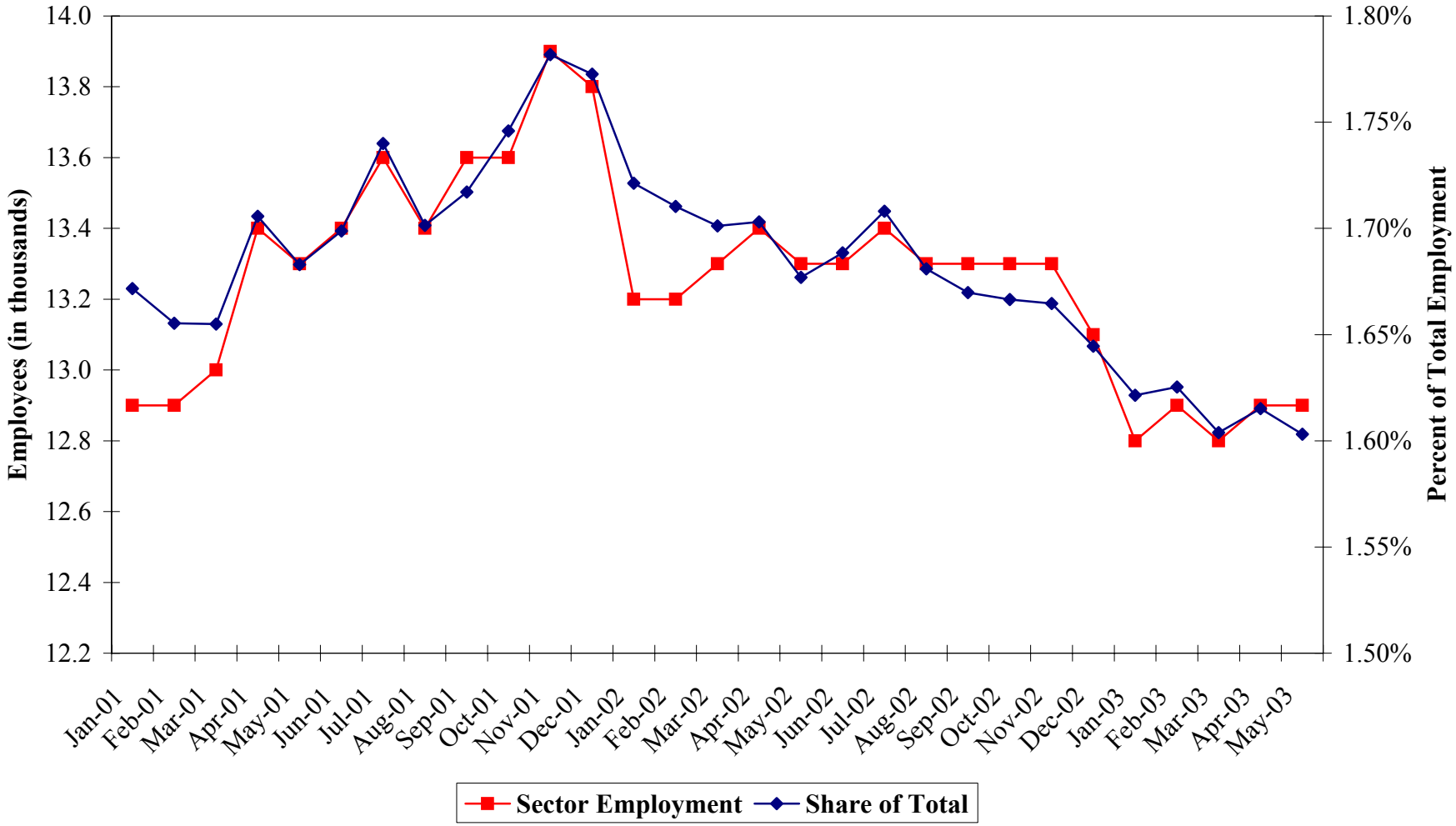
Appendix 1.1-BL
Retail Employment
Sector Employment and Share of Total Employment



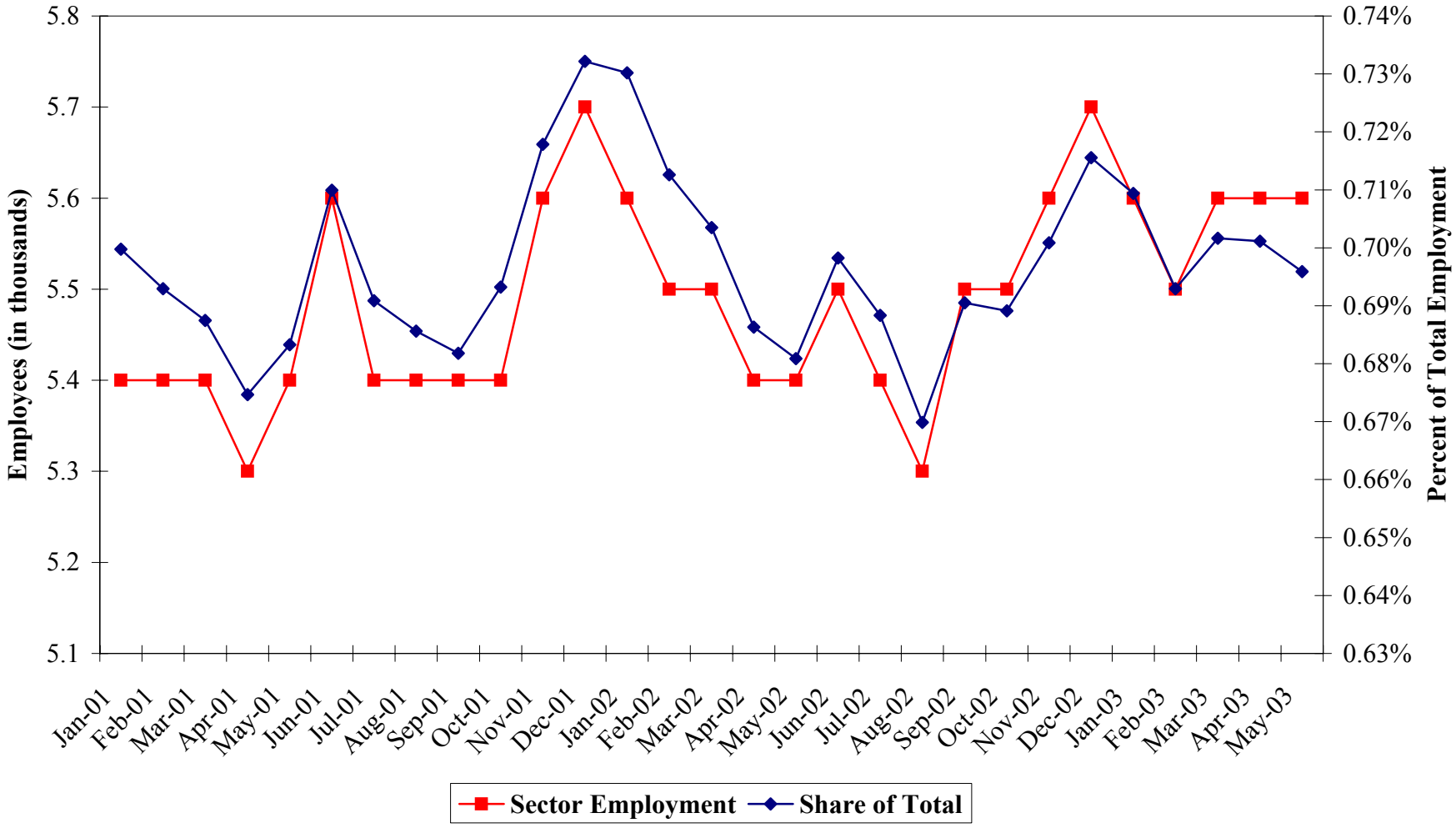
Appendix 1.1-BM
General Merchandise & Clothing Employment
Sector Employment and Share of Total Employment



Appendix 1.1-BN
Food & Beverage Stores Employment
Sector Employment and Share of Total Employment

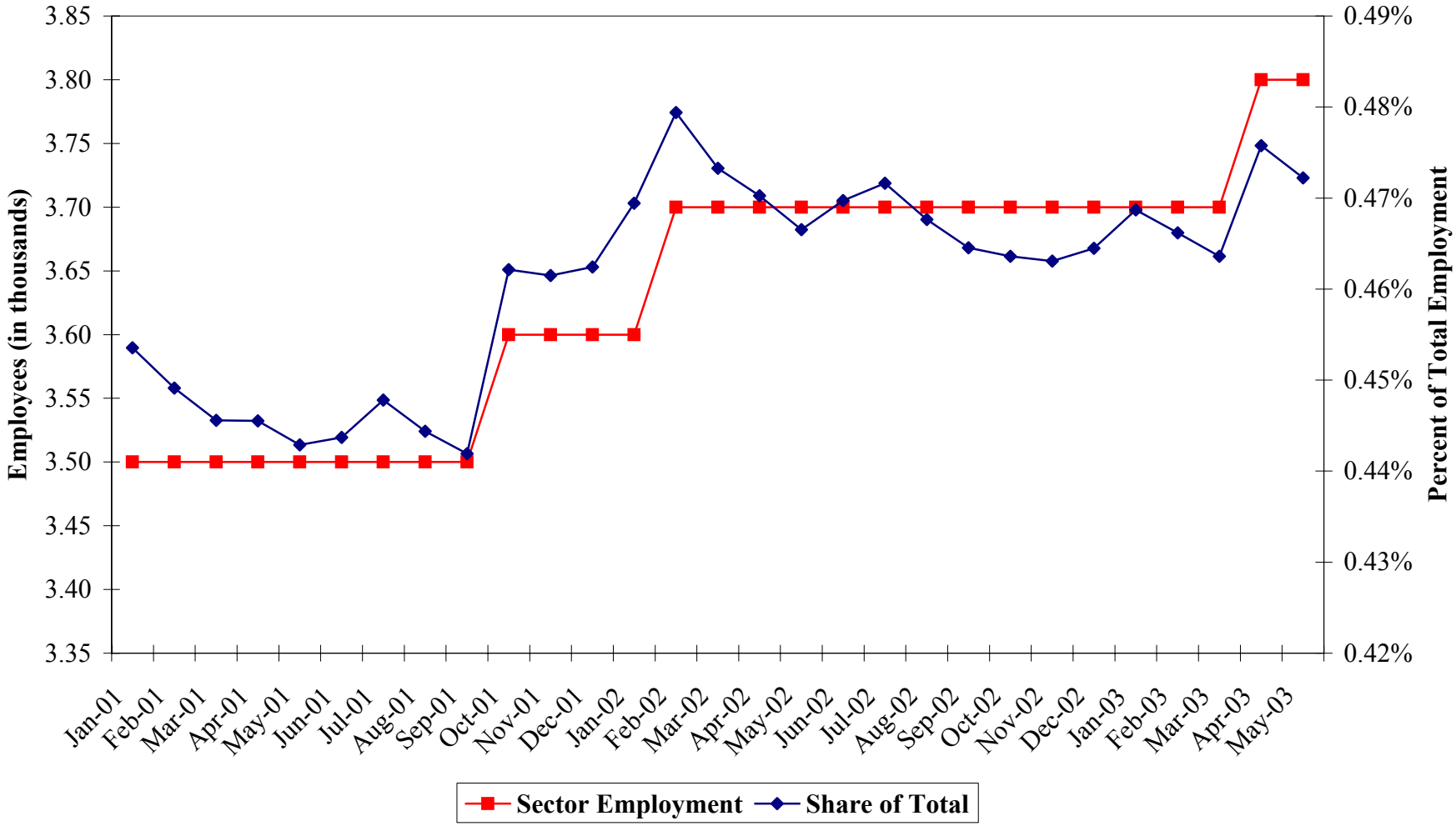


Appendix 1.1-BO
Health and Personal Care Stores Employment
Sector Employment and Share of Total Employment

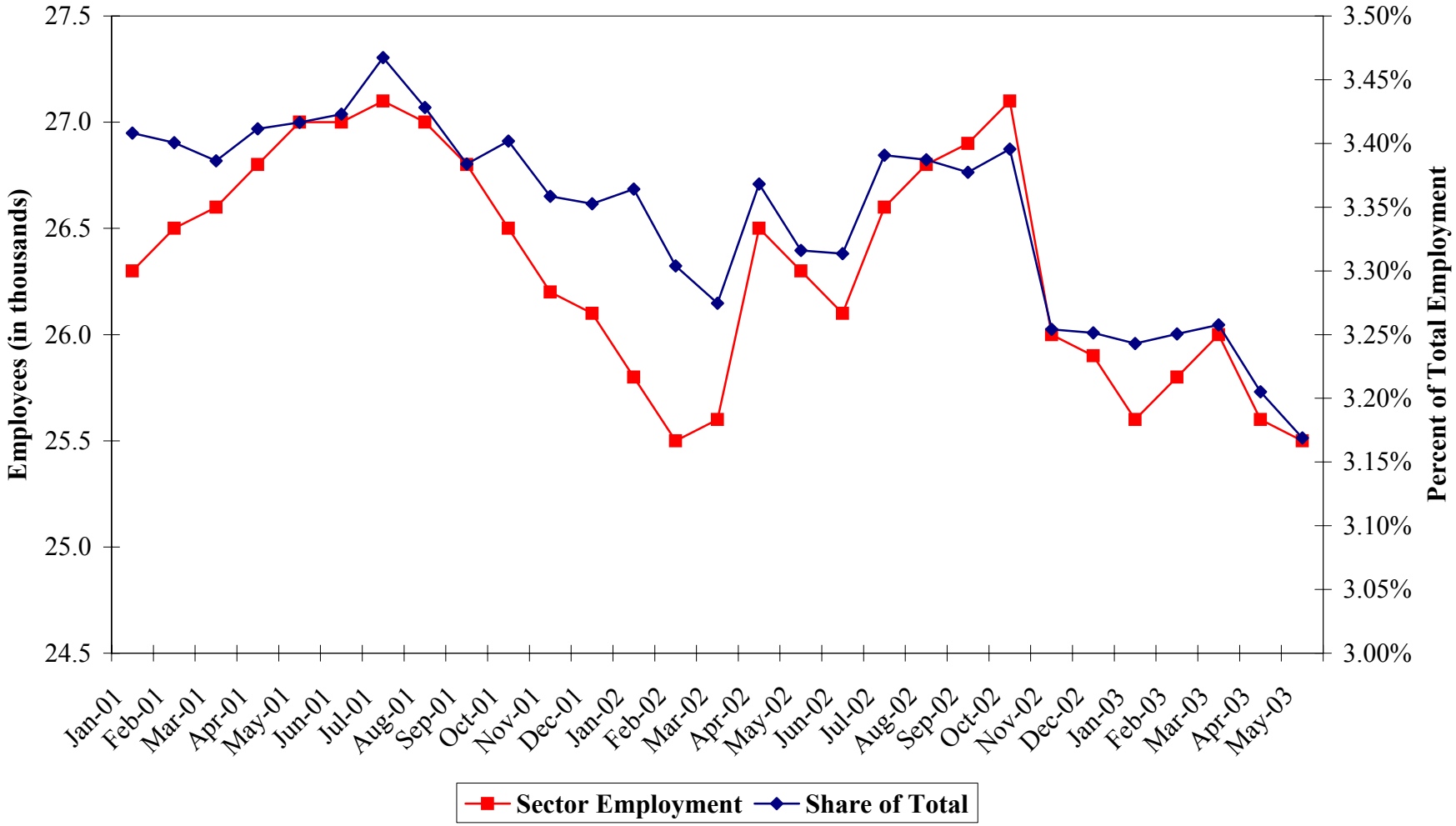


Appendix 1.1-BP
Trans, Warehousing, & Utilities Employment
Sector Employment and Share of Total Employment

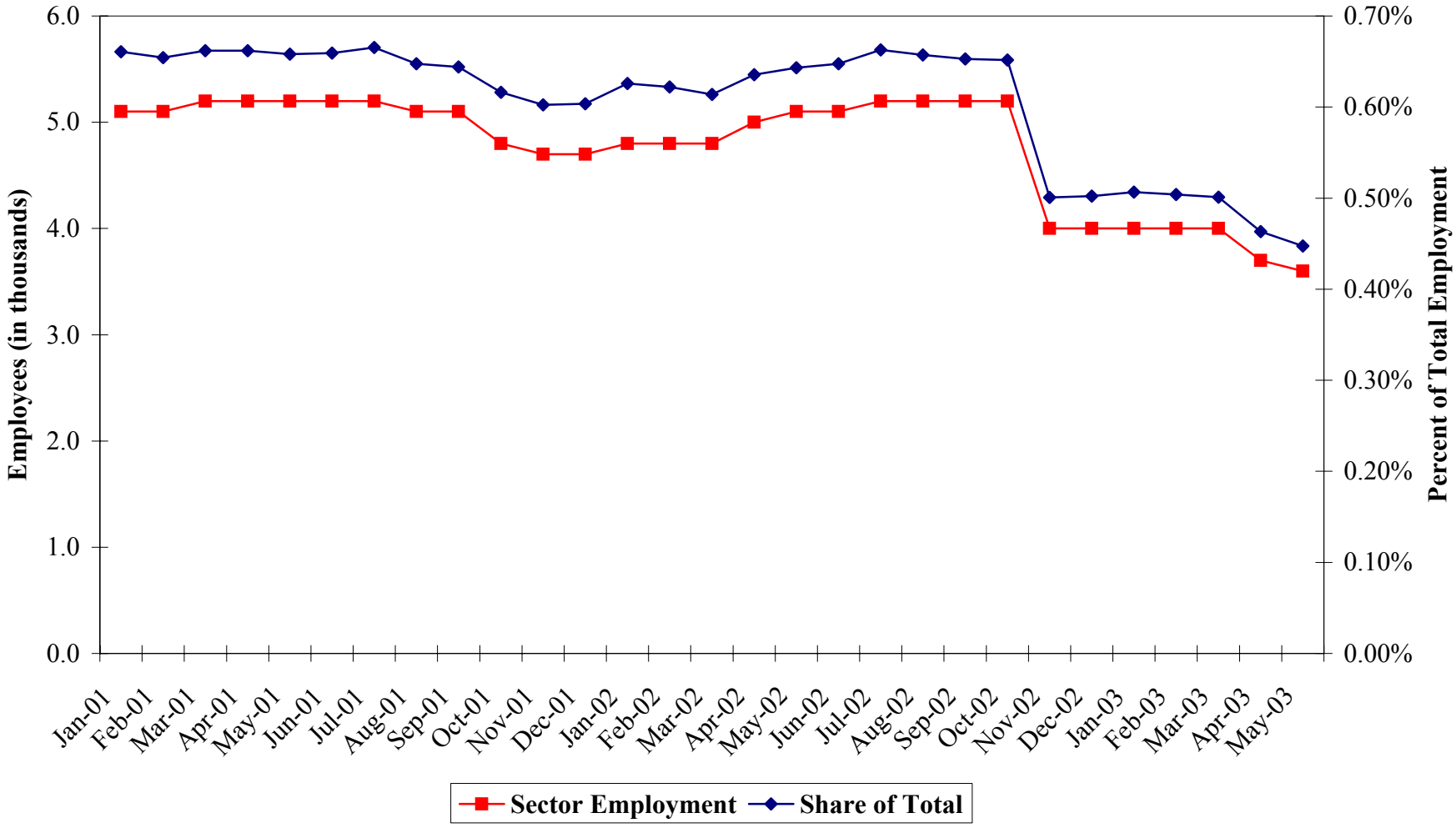
Appendix 1.1-BQ
Utilities Employment
Sector Employment and Share of Total Employment



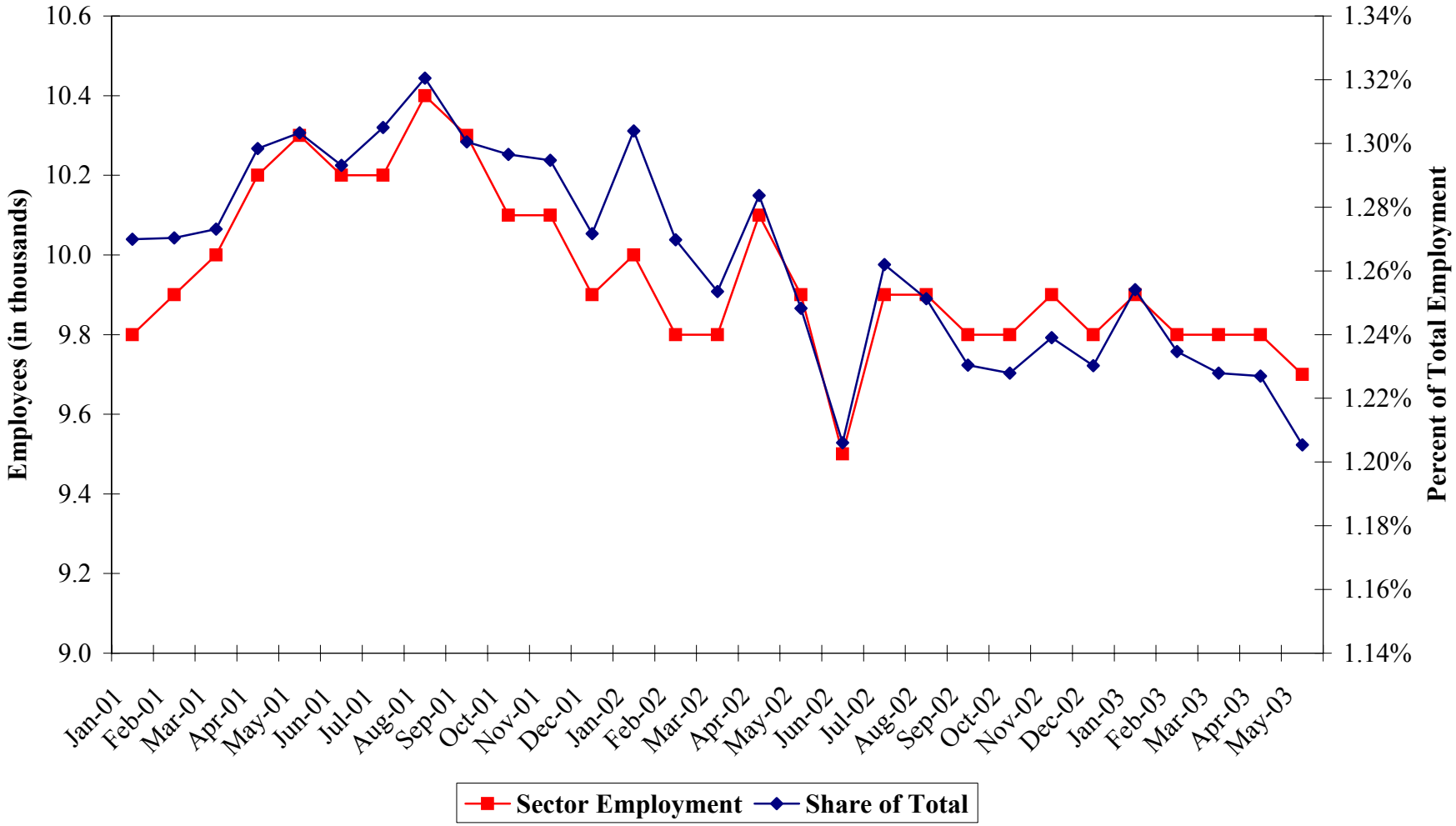
Appendix 1.1-BR
Transportation & Warehousing Employment
Sector Employment and Share of Total Employment



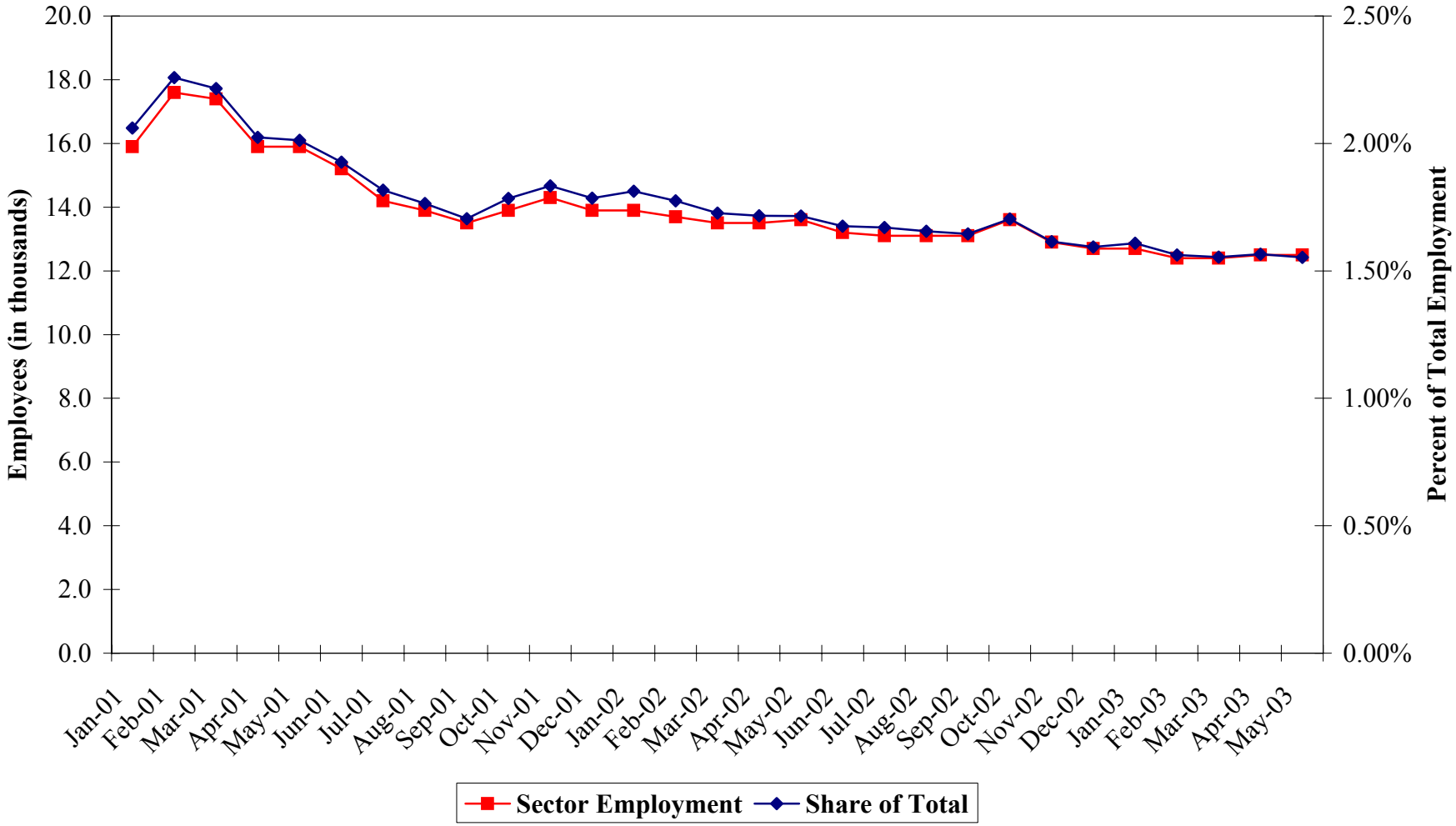
Appendix 1.1-BS
Air Employment
Sector Employment and Share of Total Employment



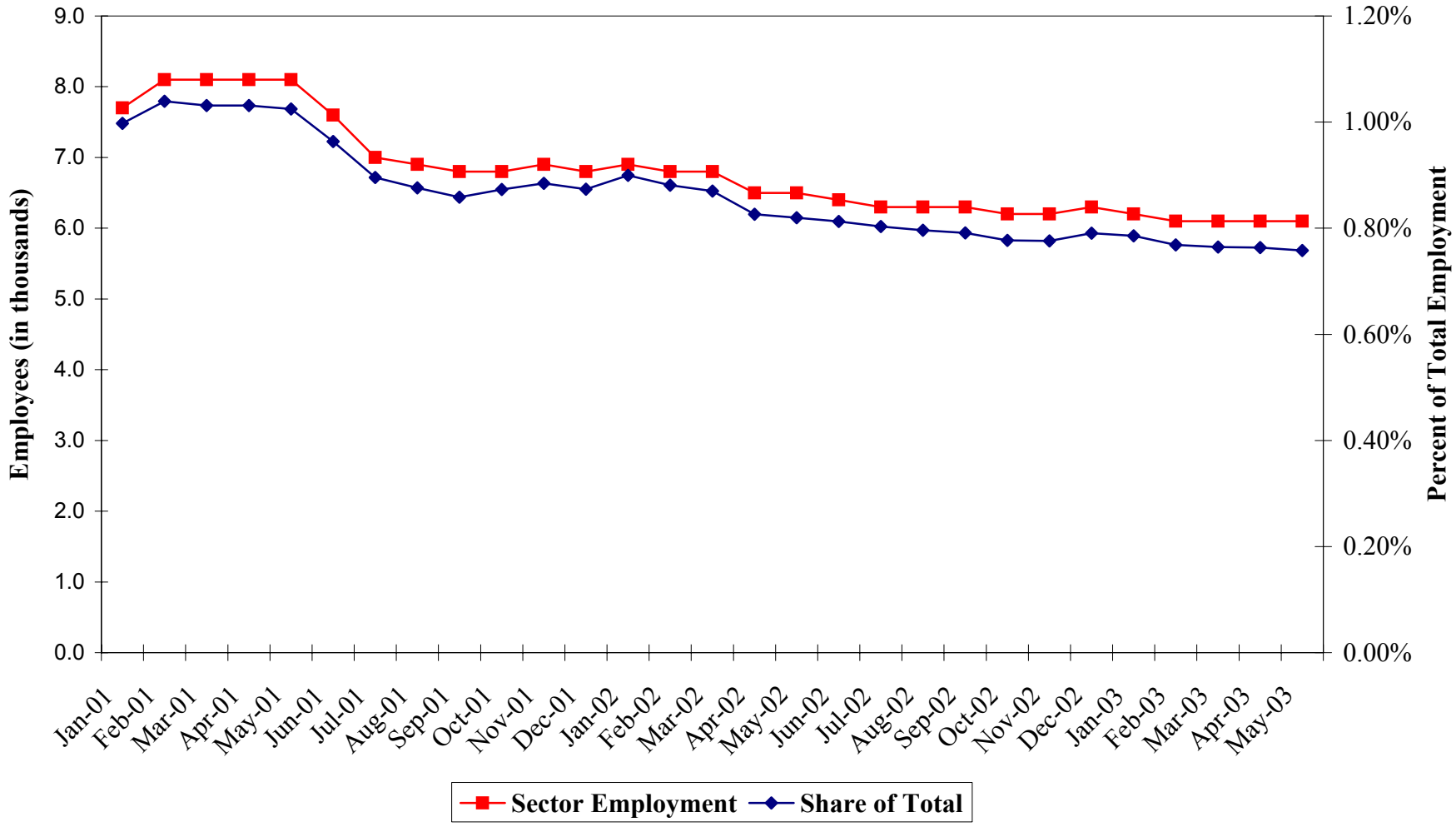
Appendix 1.1-BT
Transit and Ground Passengers Employment
Sector Employment and Share of Total Employment



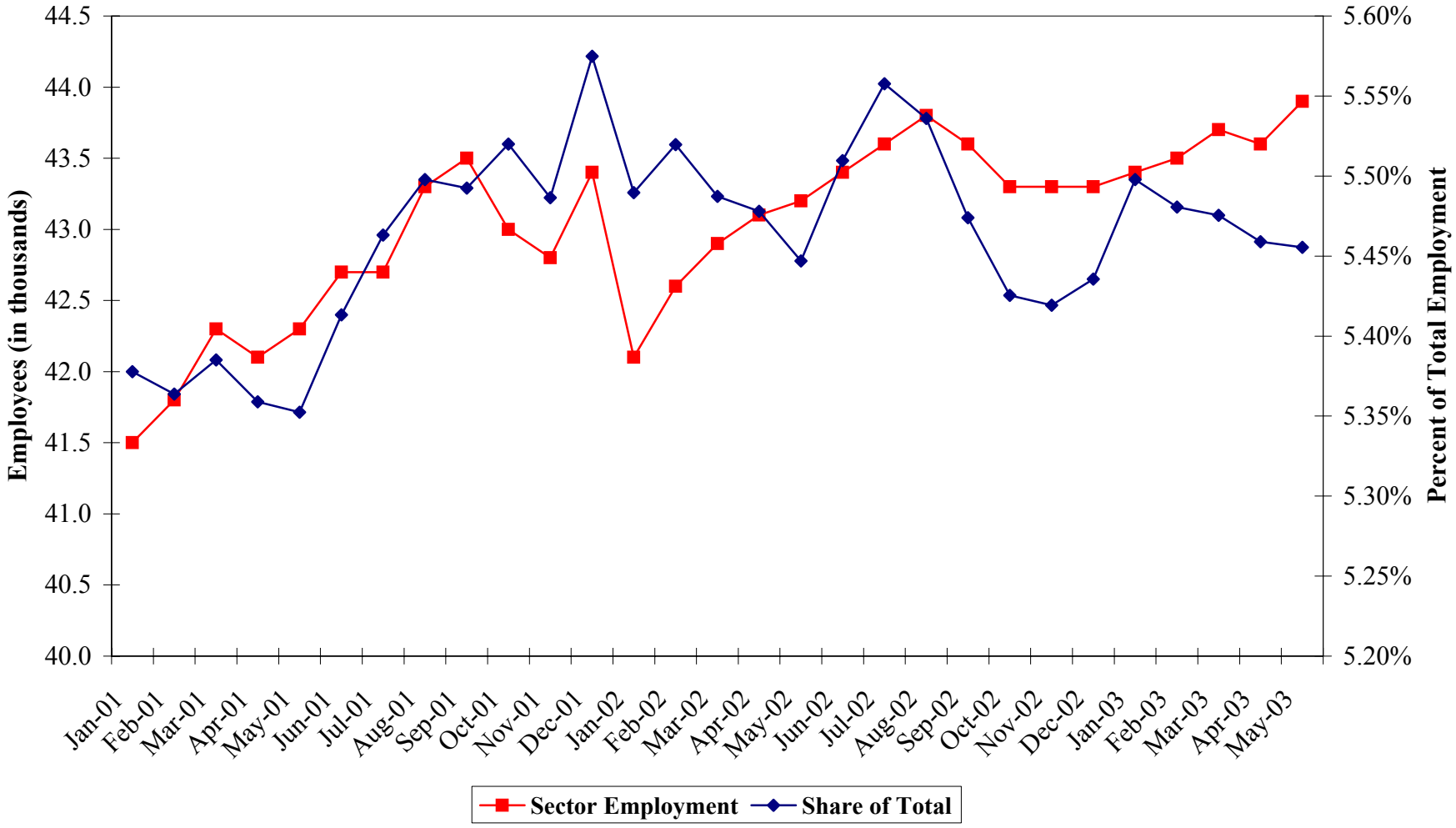
Appendix 1.1-BU
Information Employment
Sector Employment and Share of Total Employment



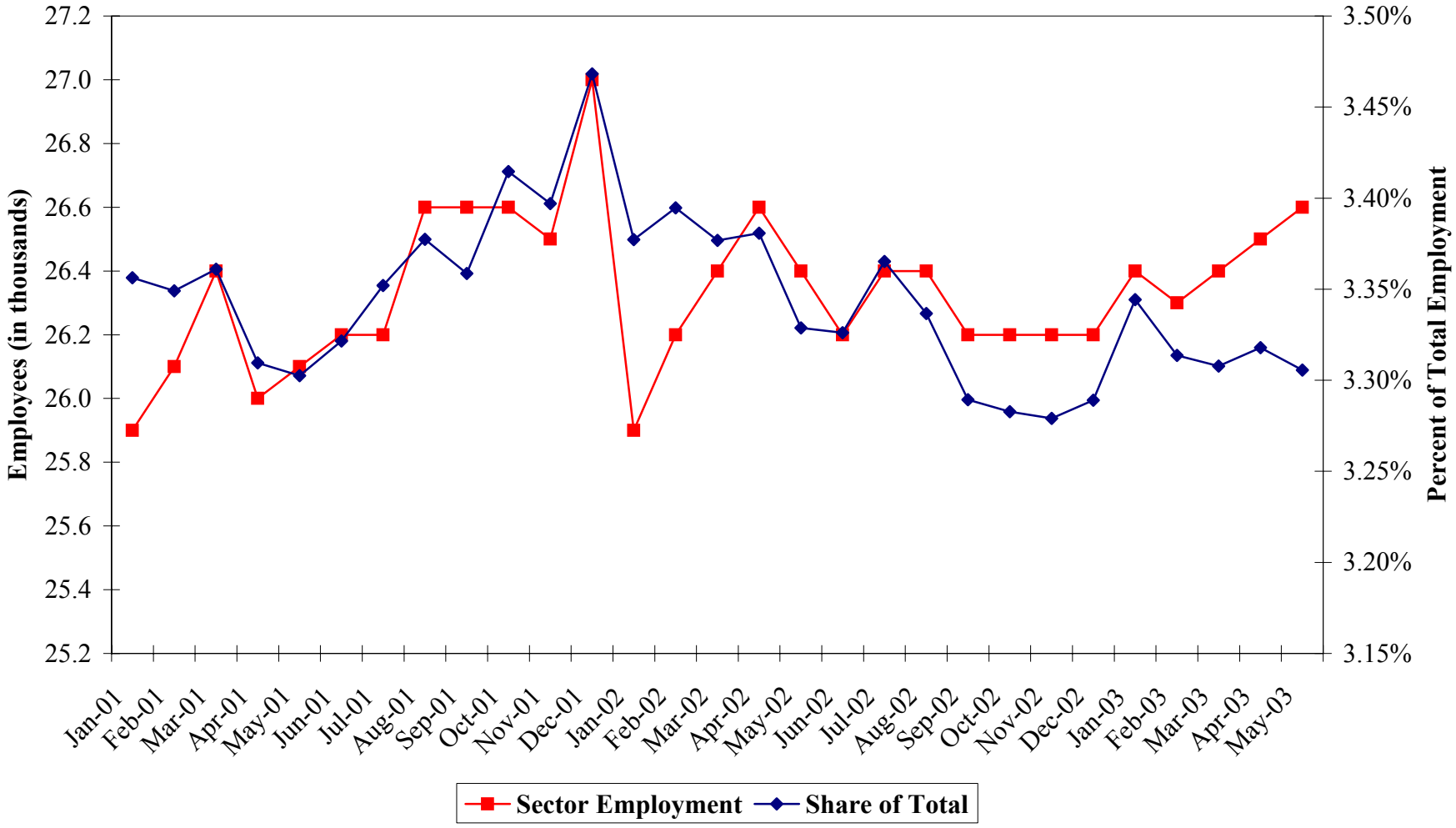
Appendix 1.1-BV
Telecommunications Employment
Sector Employment and Share of Total Employment



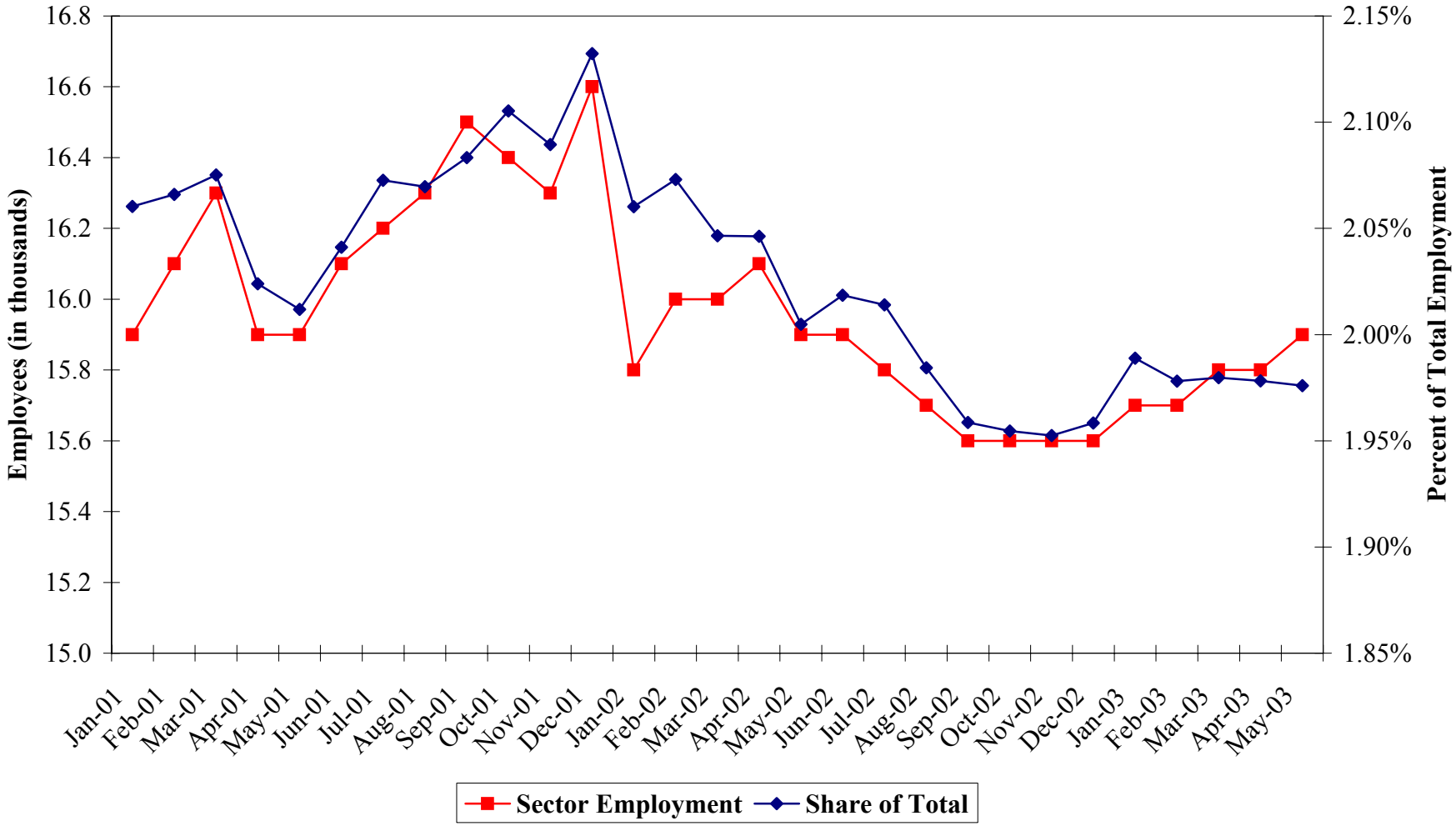
Appendix 1.1-BW
Financial Activities Employment
Sector Employment and Share of Total Employment



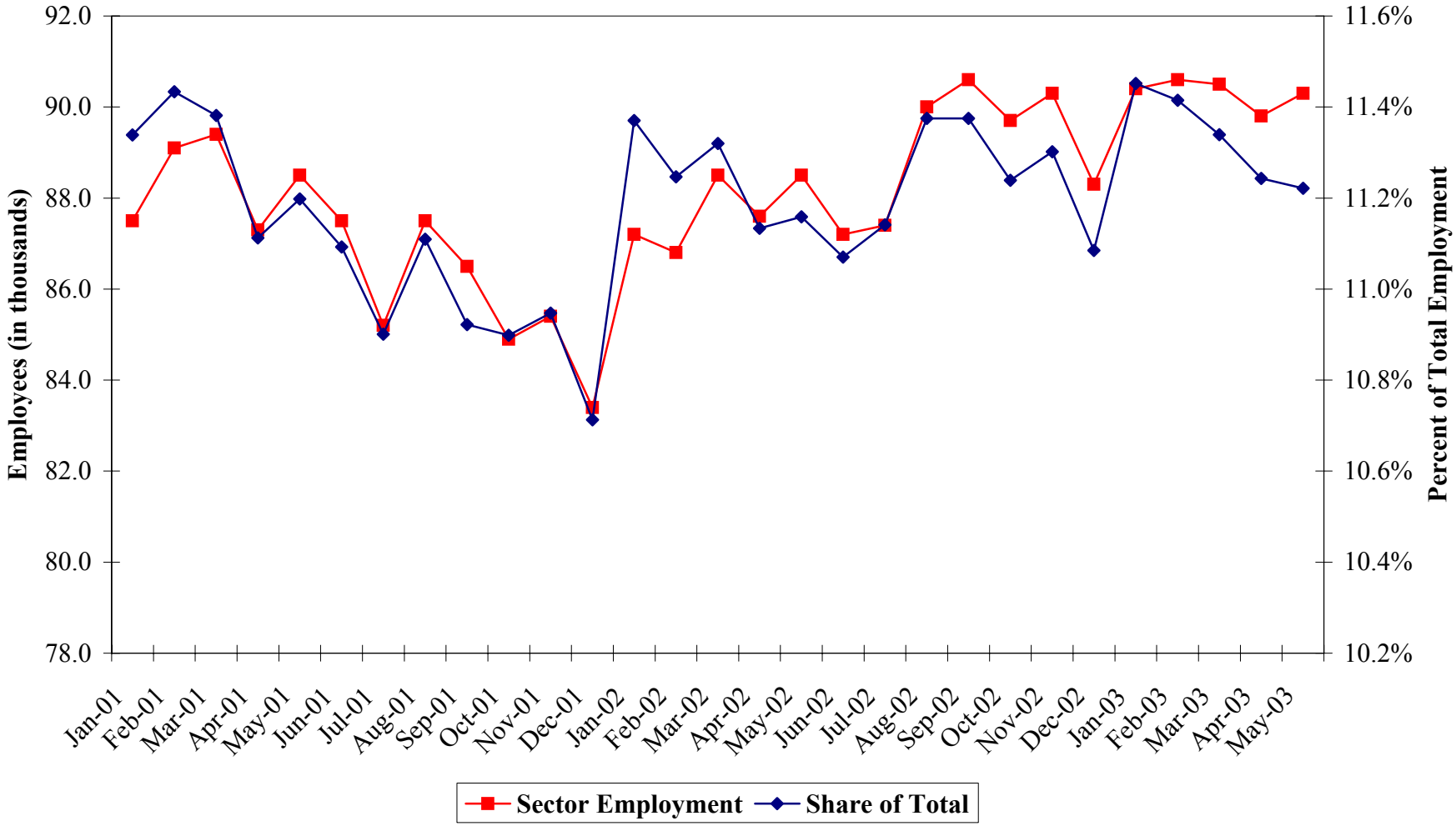
Appendix 1.1-BX
Finance and Insurance Employment
Sector Employment and Share of Total Employment



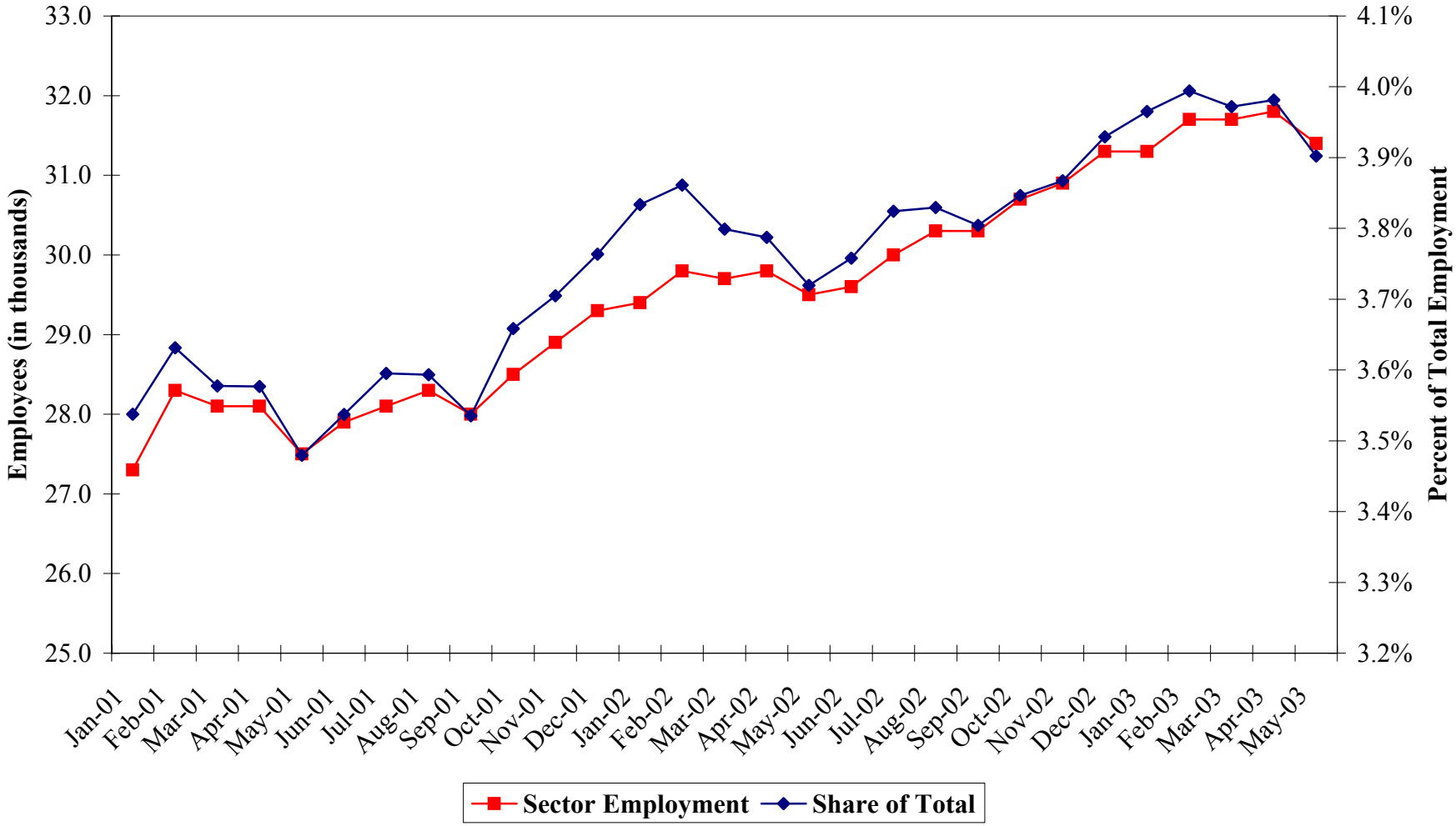
Appendix 1.1-BY
Credit Intermediation & Related Employment
Sector Employment and Share of Total Employment



Appendix 1.1-BZ
Professional & Business Services Employment
Sector Employment and Share of Total Employment



Appendix 1.1-CA
Professional, Scientific and Technical Employment
Sector Employment and Share of Total Employment

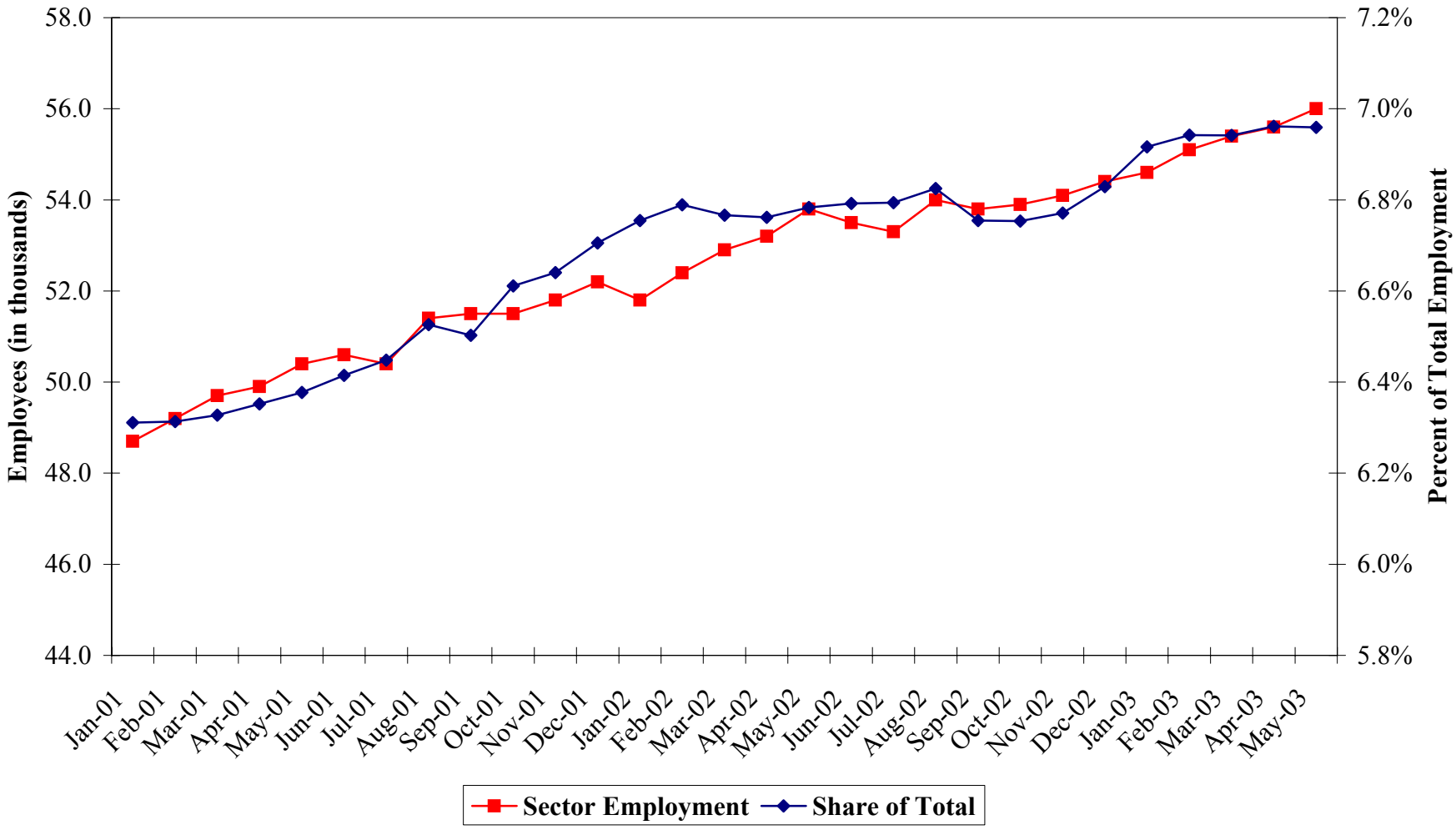


Appendix 1.1-CB
Management of Companies Employment
Sector Employment and Share of Total Employment

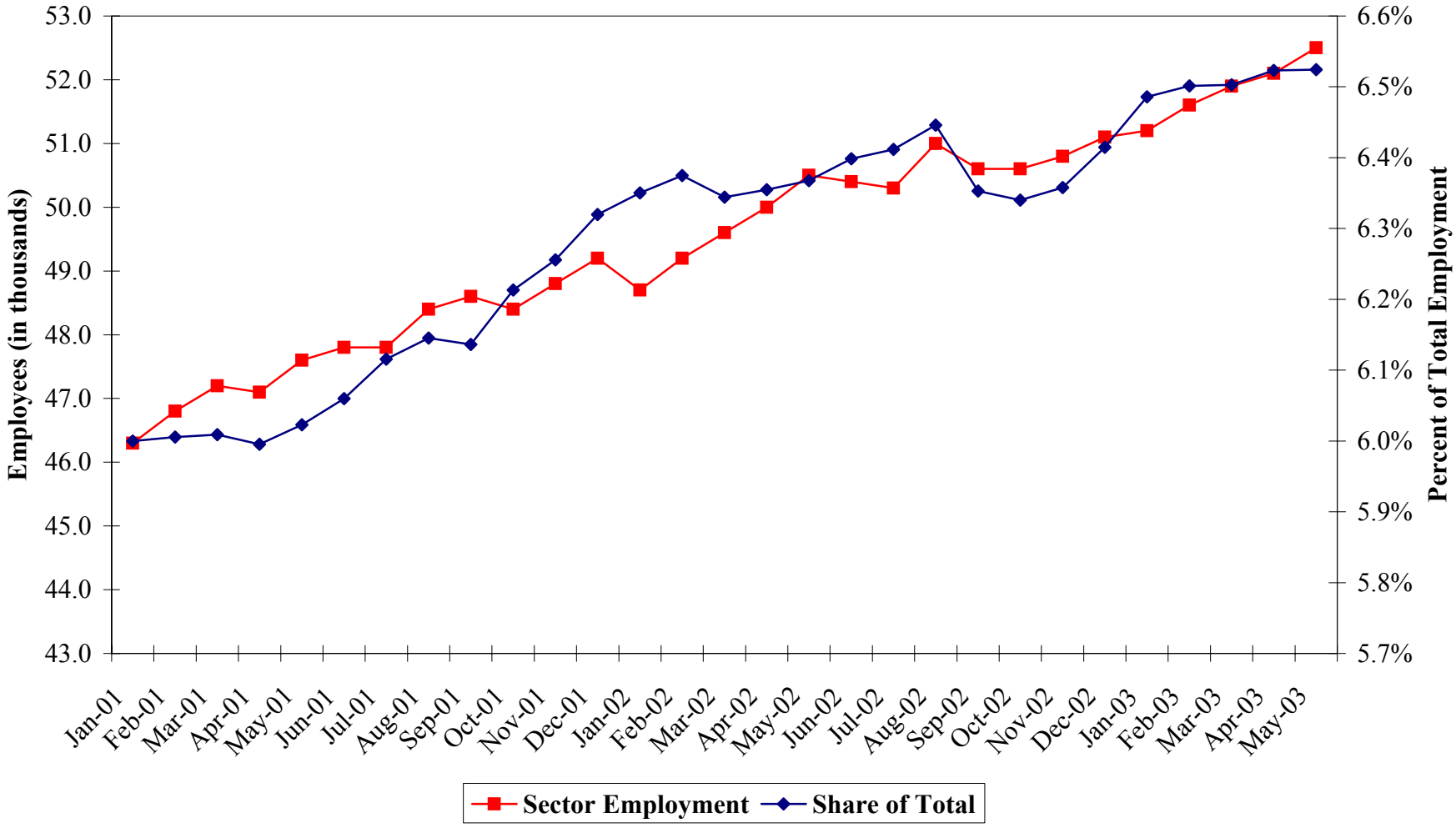
Appendix 1.1-CC
Administrative & Support and Waste Management Employment
Sector Employment and Share of Total Employment

Appendix 1.1-CD
Employment Services Employment
Sector Employment and Share of Total Employment

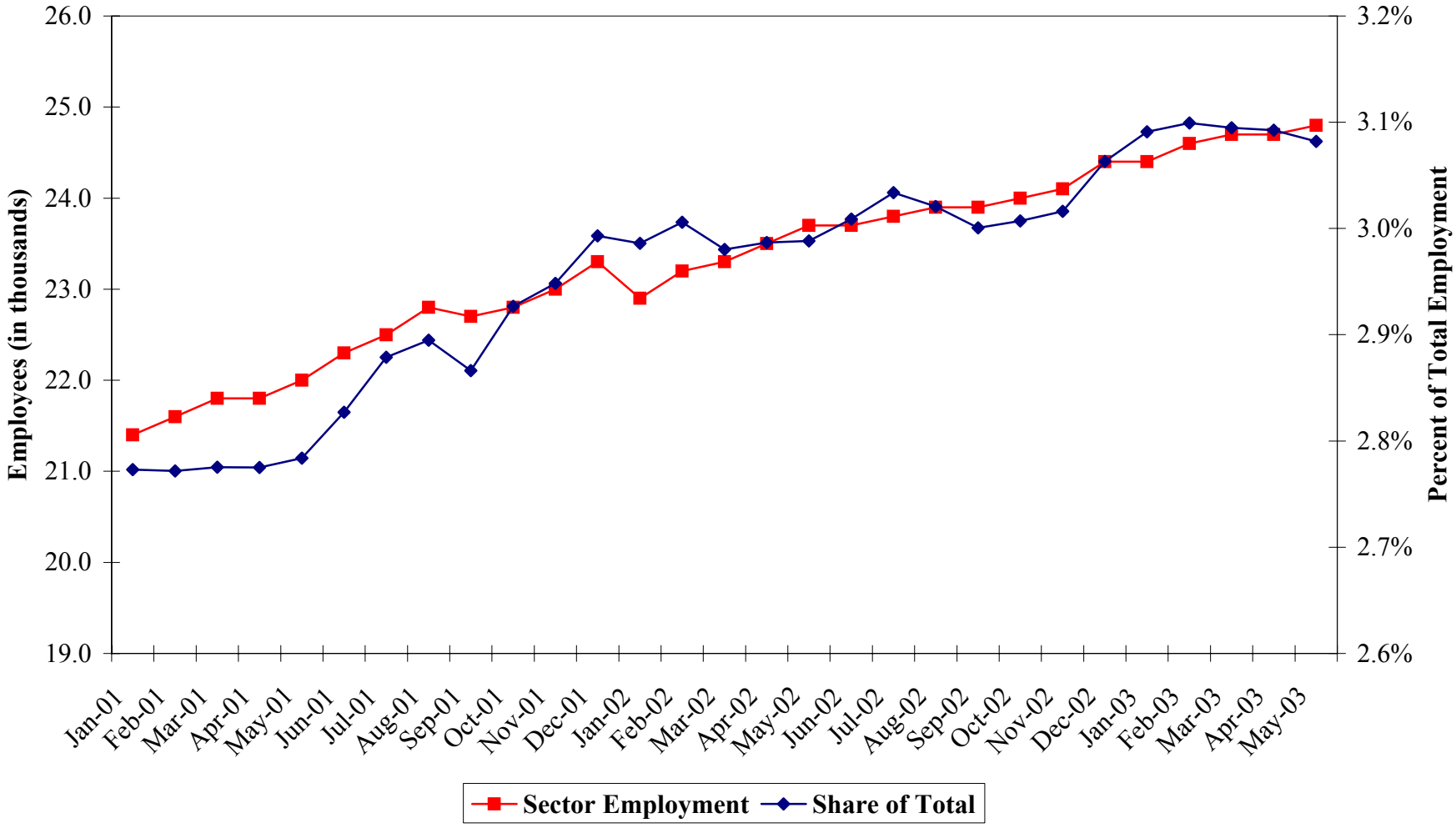
Appendix 1.1-CE
Education and Health Services Employment
Sector Employmeny and Share of Total Employment



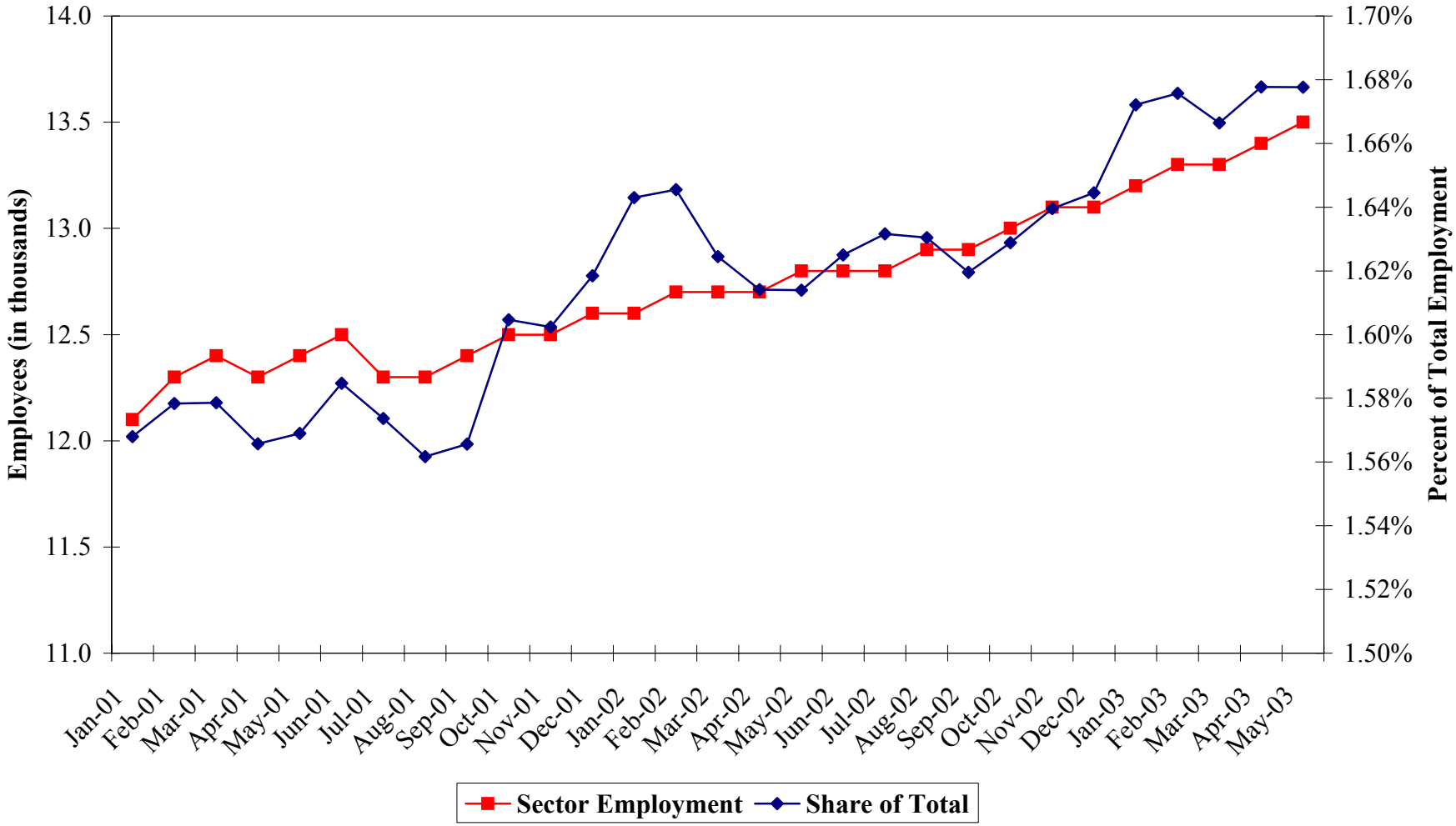
Appendix 1.1-CF
Health Care and Social Assistance Employment
Sector Employment and Share of Total Employment



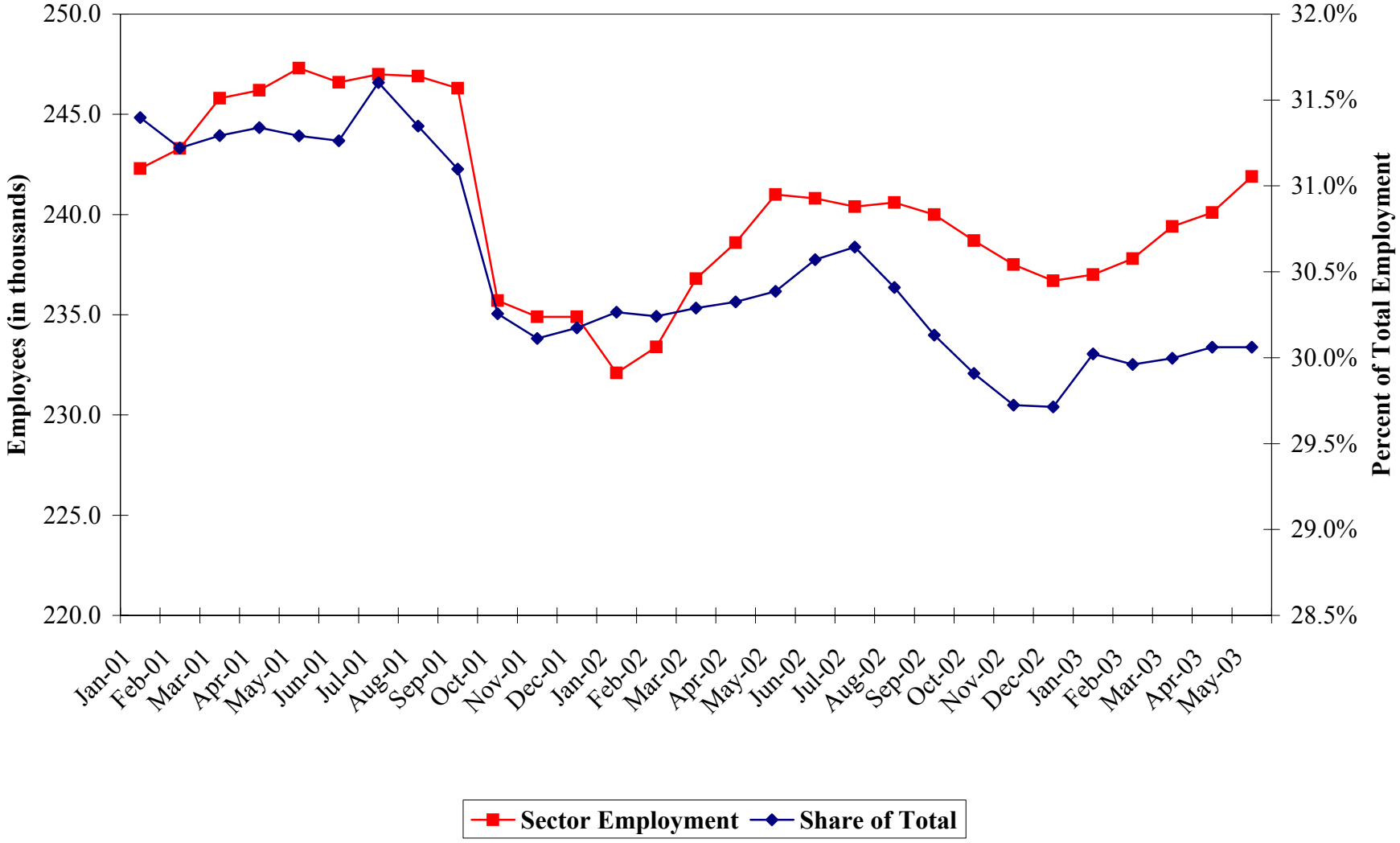
Appendix 1.1-CG
Ambulatory Health Care Services Employment
Sector Employment and Share of Total Employment



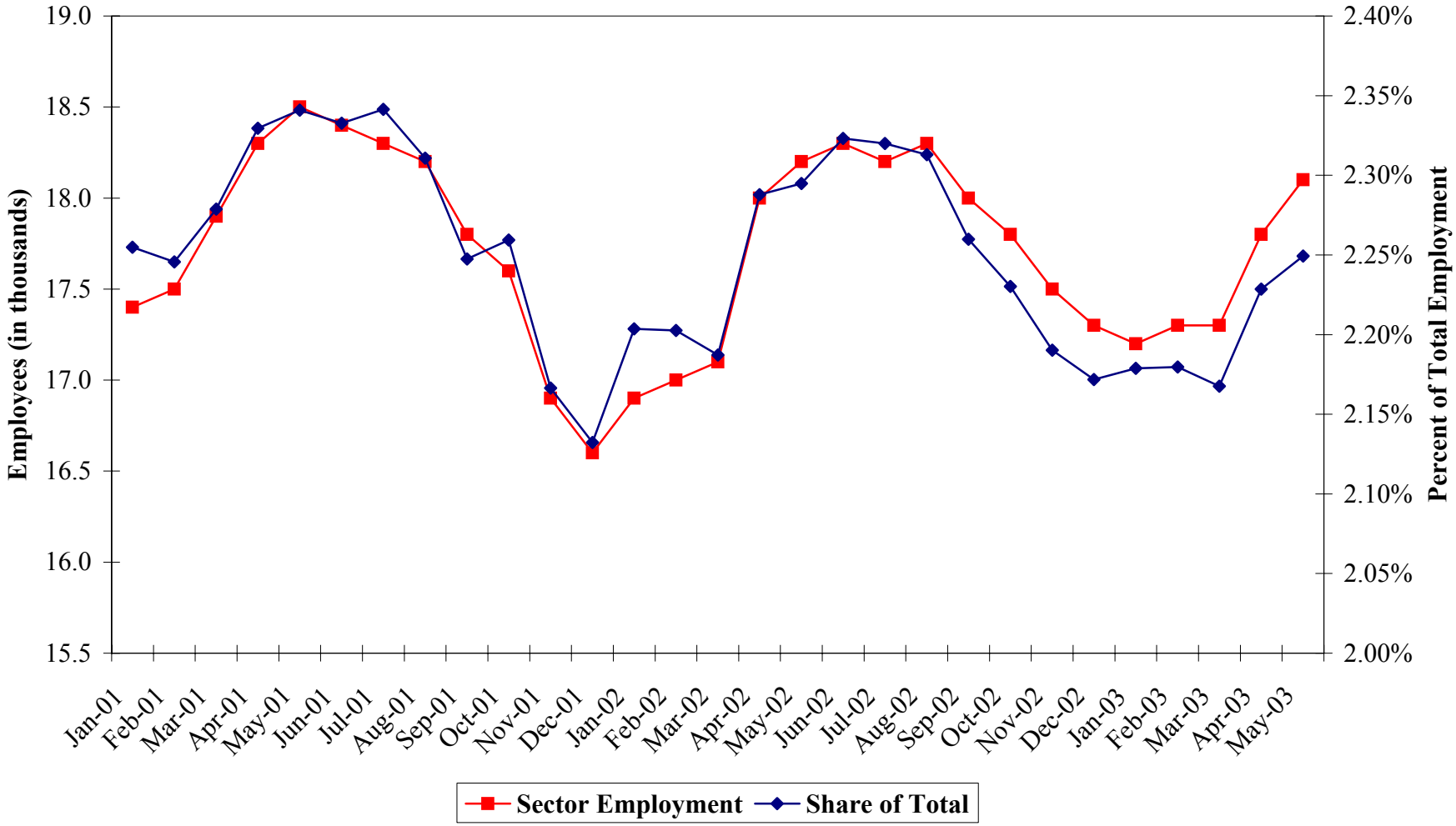
Appendix 1.1-CH
Hospitals Employment
Sector Employment and Share of Total Employment



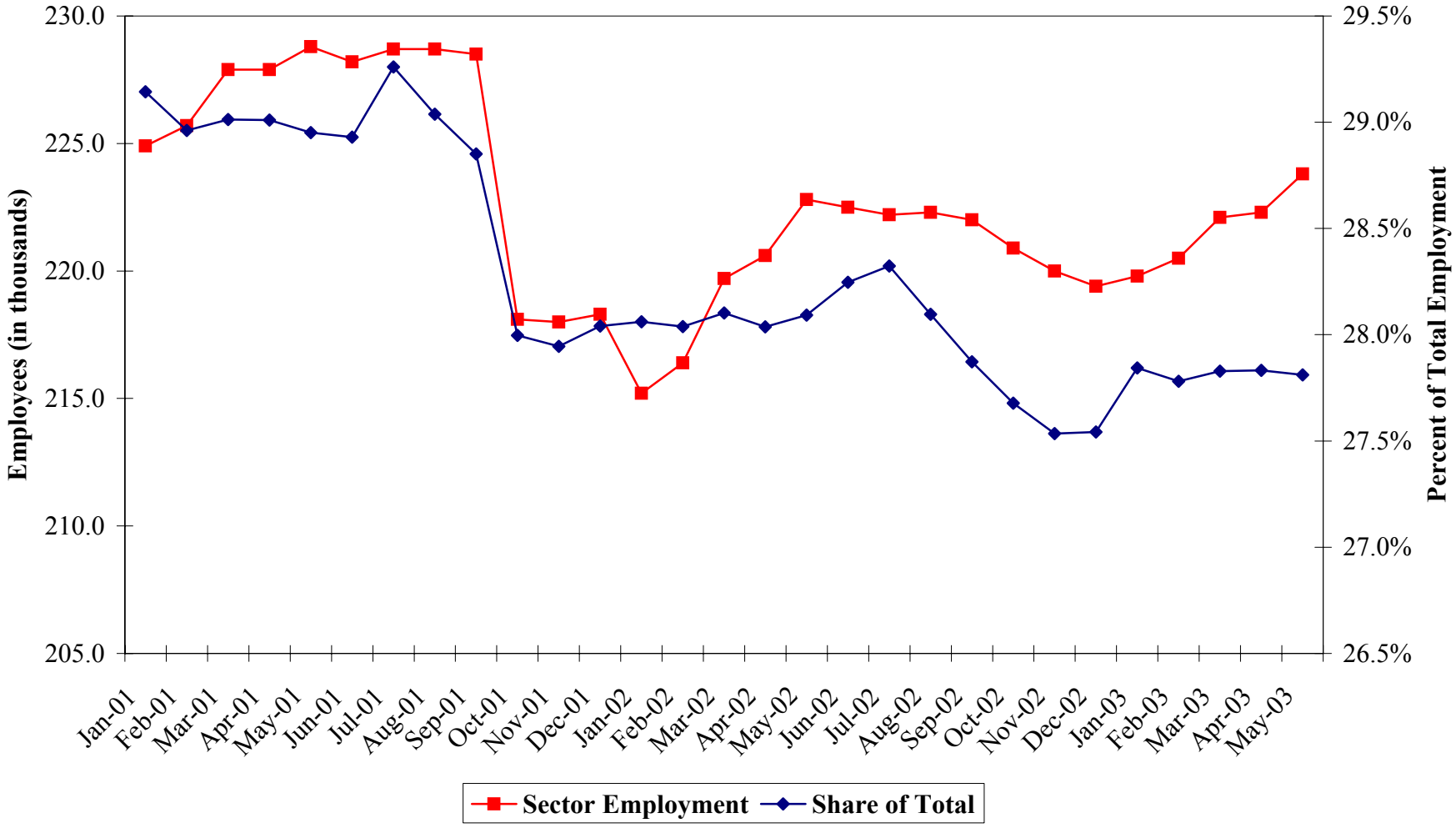
Appendix 1.1-CI
Leisure and Hospitality Employment
Sector Employment and Share of Total Employment



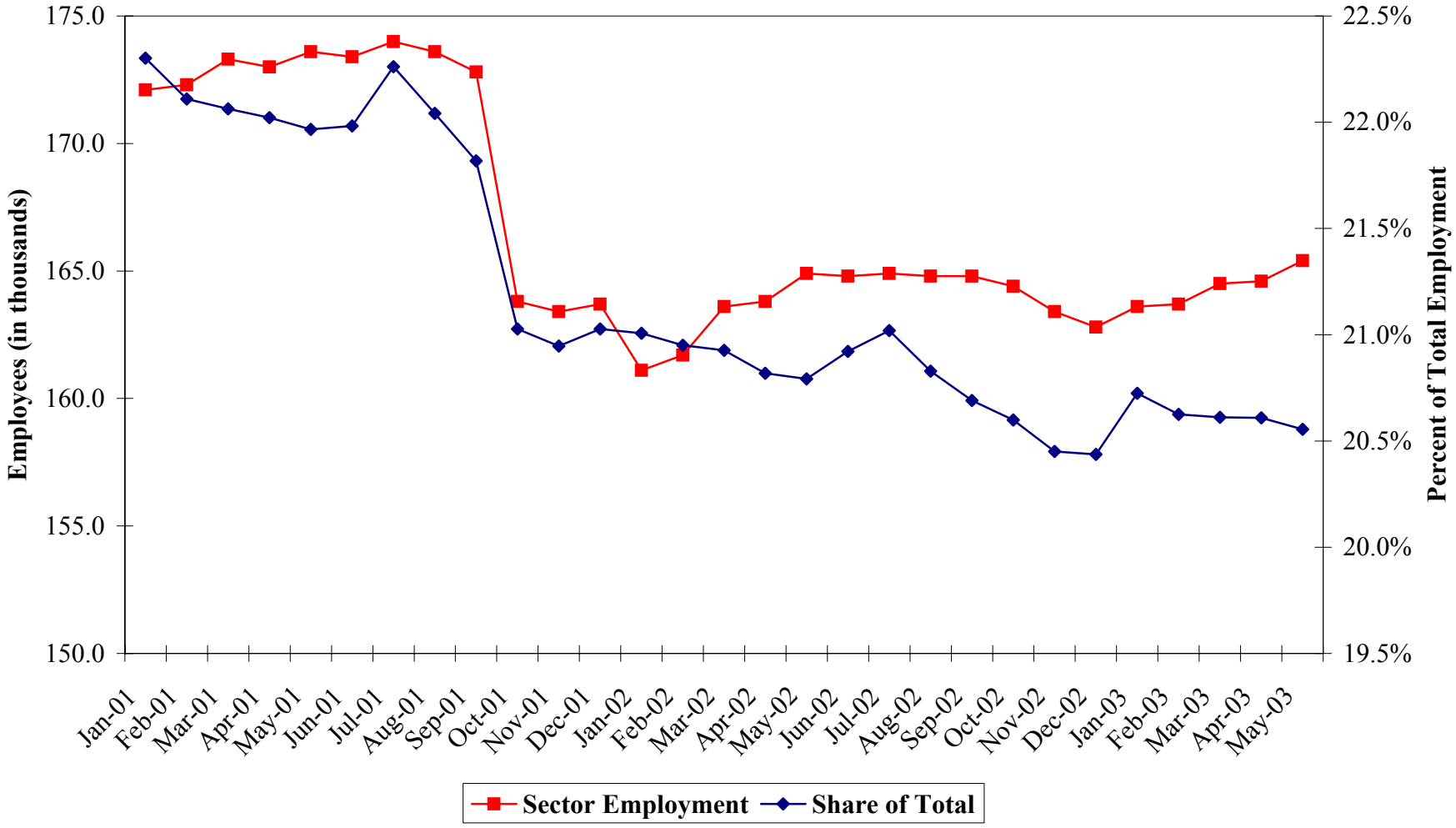
Appendix 1.1-CJ
Arts, Entertainment and Recreation Employment
Sector Employment and Share of Total Employment



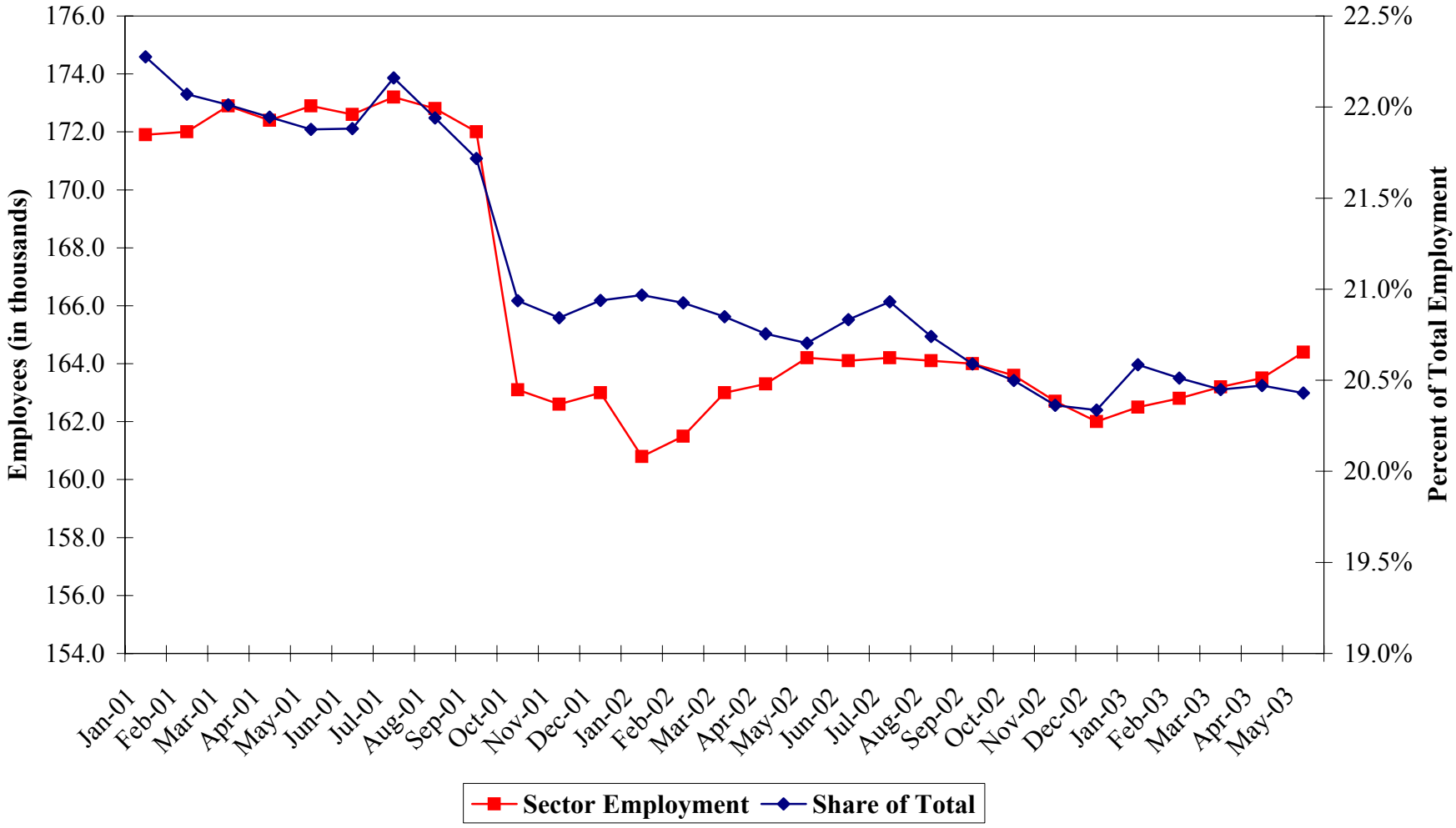
Appendix 1.1-CK
Accomodation and Food Service Employment
Sector Employment and Share of Total Employment



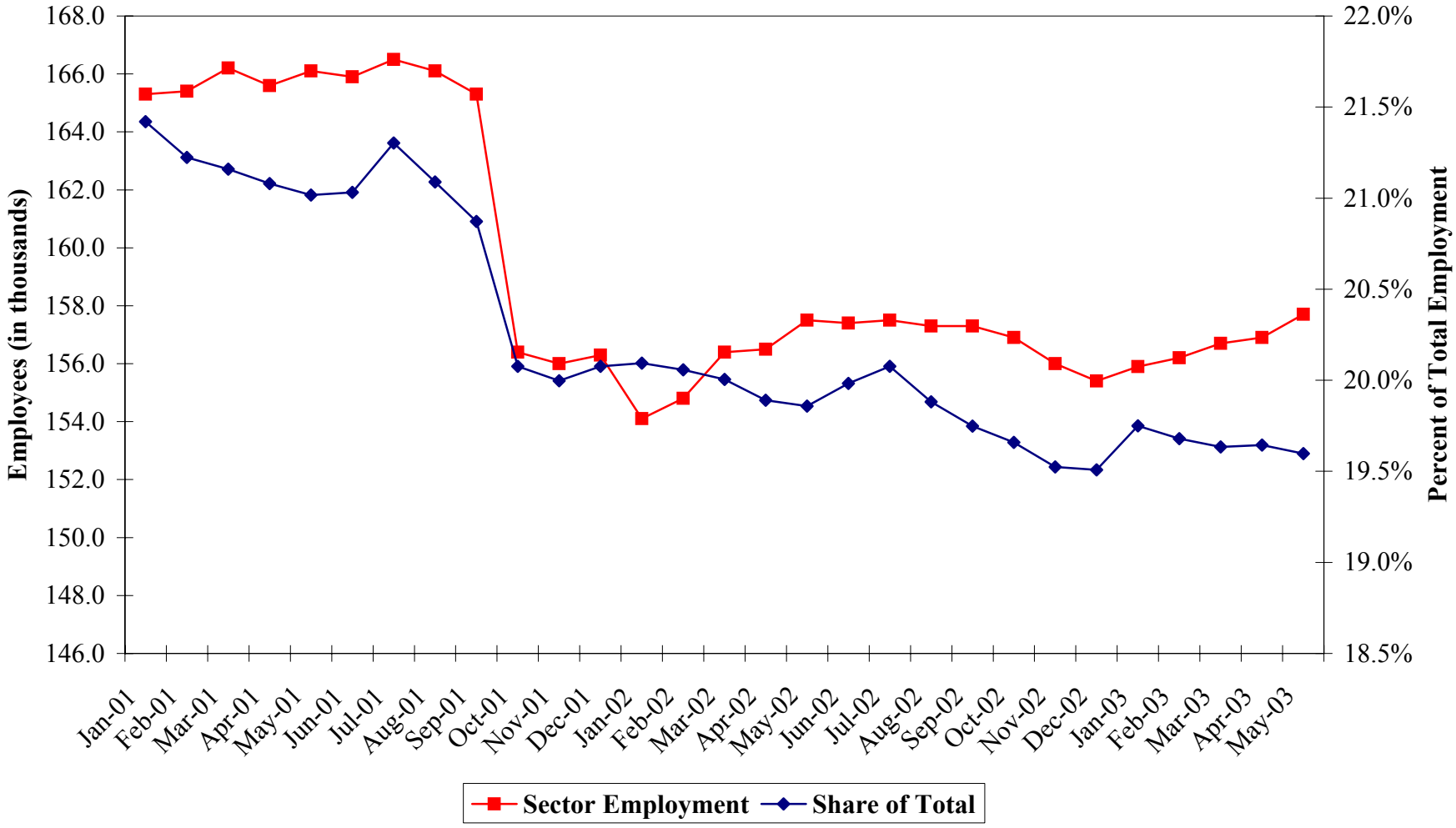
Appendix 1.1-CL
Accomodation Employment
Sector Employment and Share of Total Employment



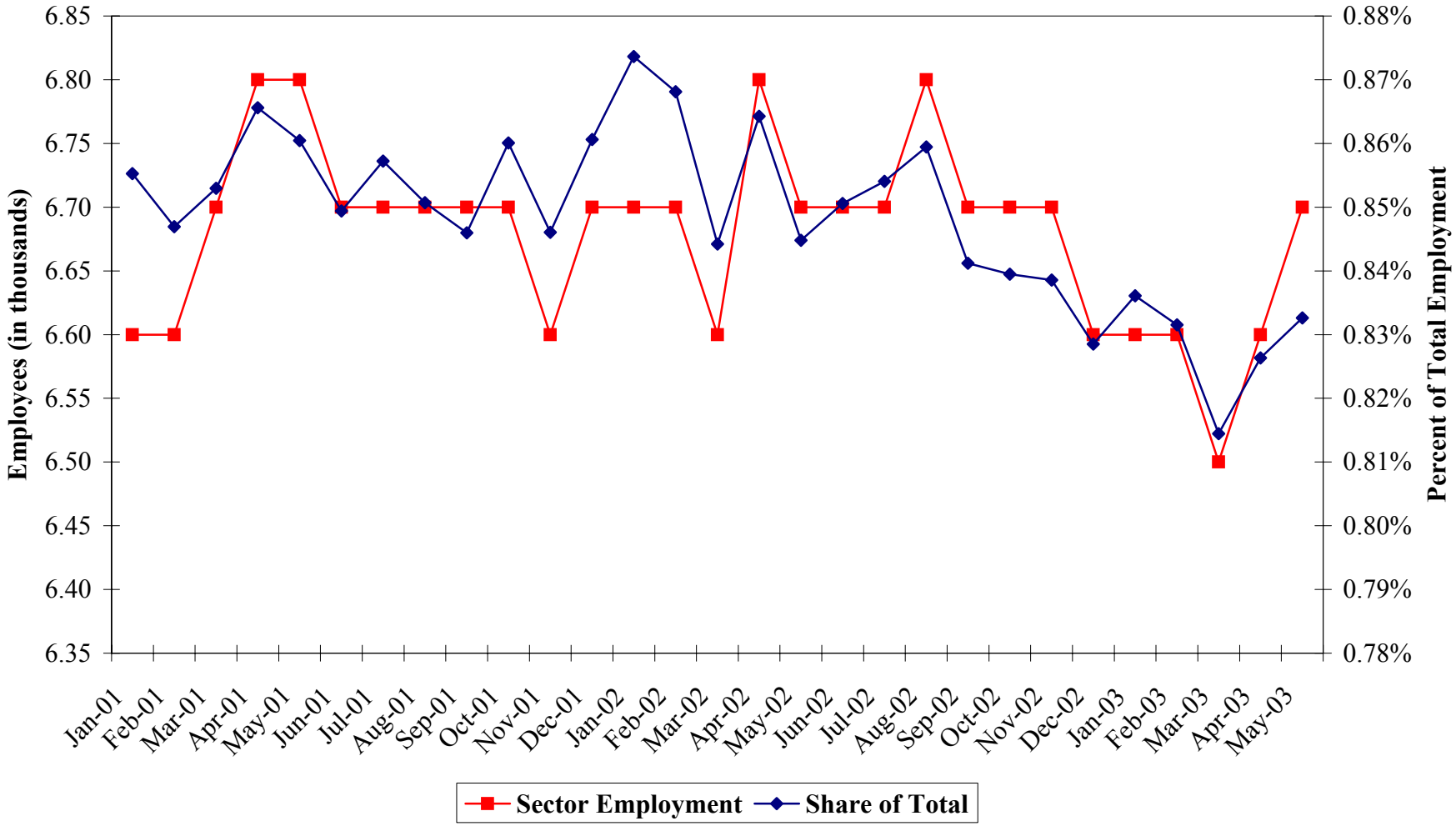
Appendix 1.1-CM
Casino Hotels and Gaming Employment
Sector Employment and Share of Total Employment



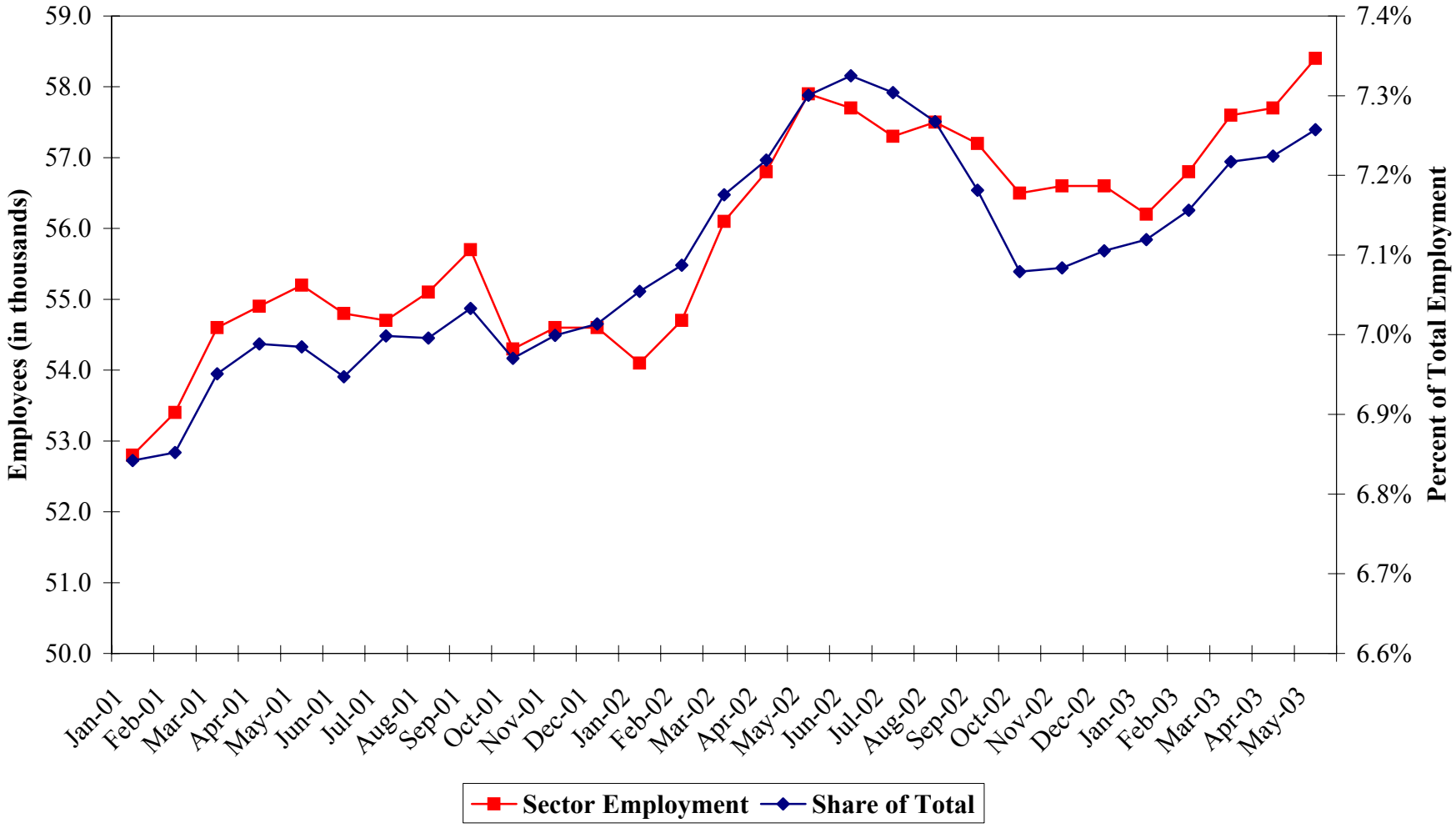
Appendix 1.1-CN
Casino Hotels Employment
Sector Employment and Share of Total Employment



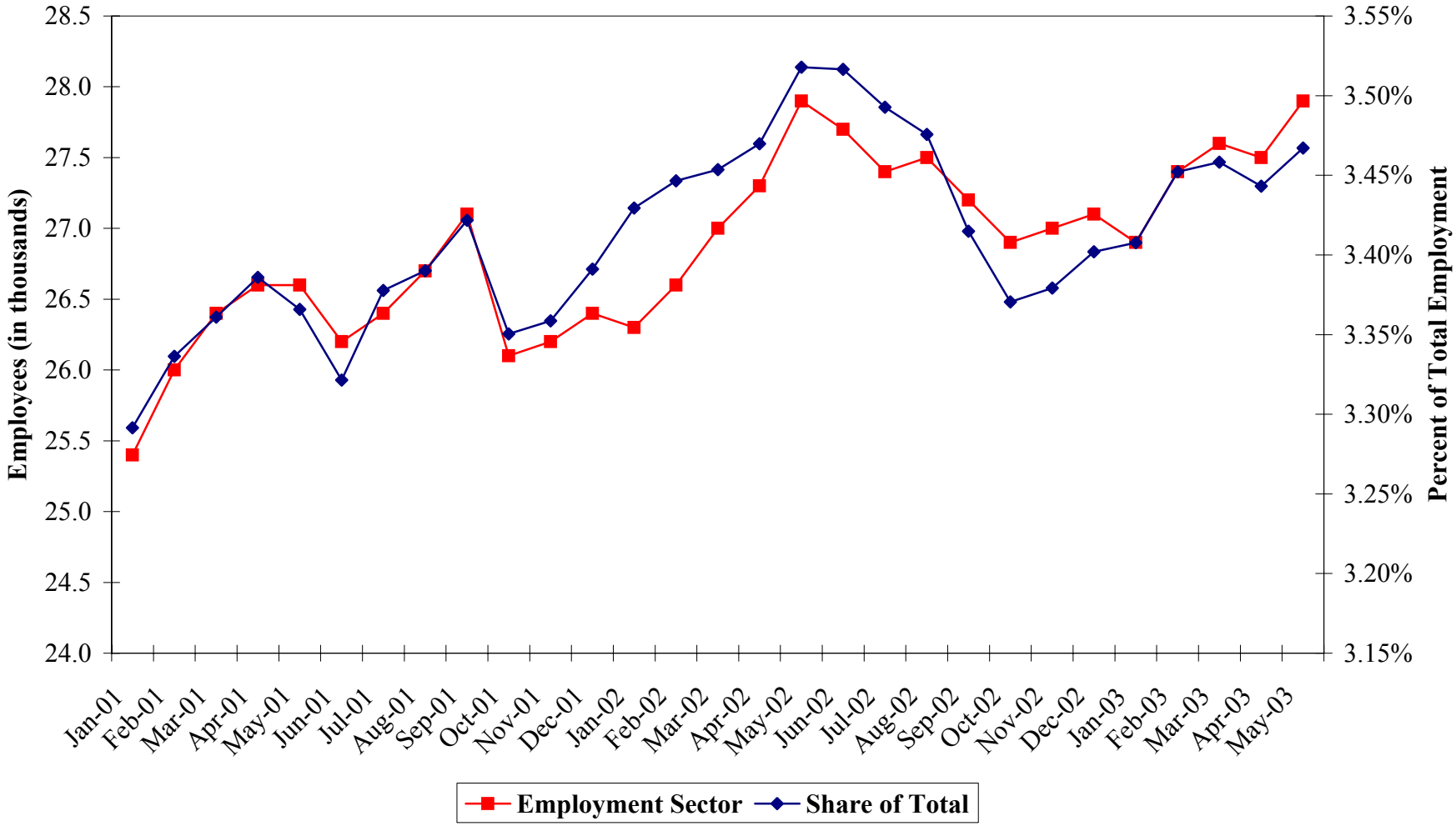
Appendix 1.1-CO
Gaming Industries Employment
Sector Employment and Share of Total Employment



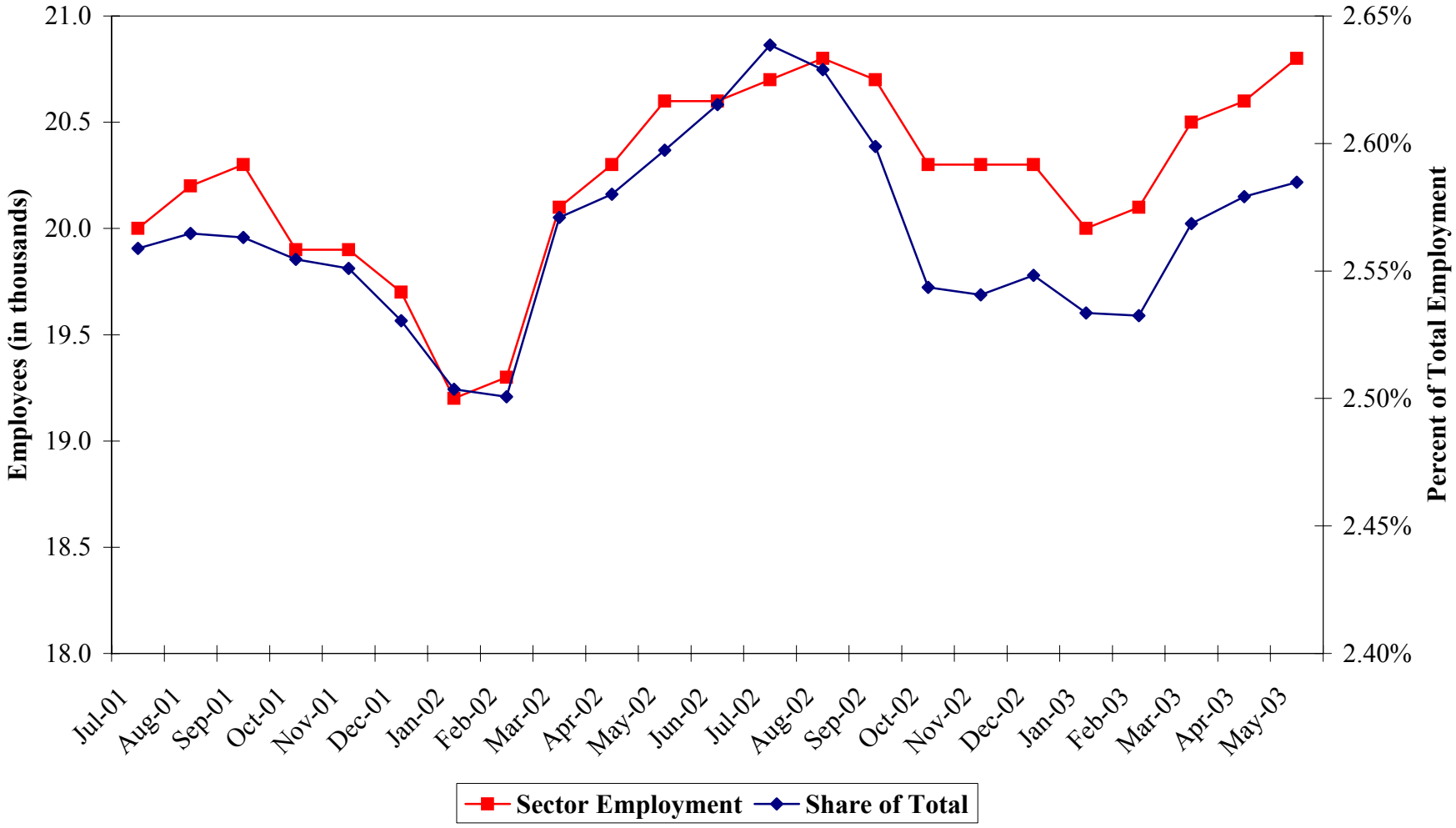
Appendix 1.1-CP
Food Services and Drinking Places Employment
Sector Employment and Share of Total Employment



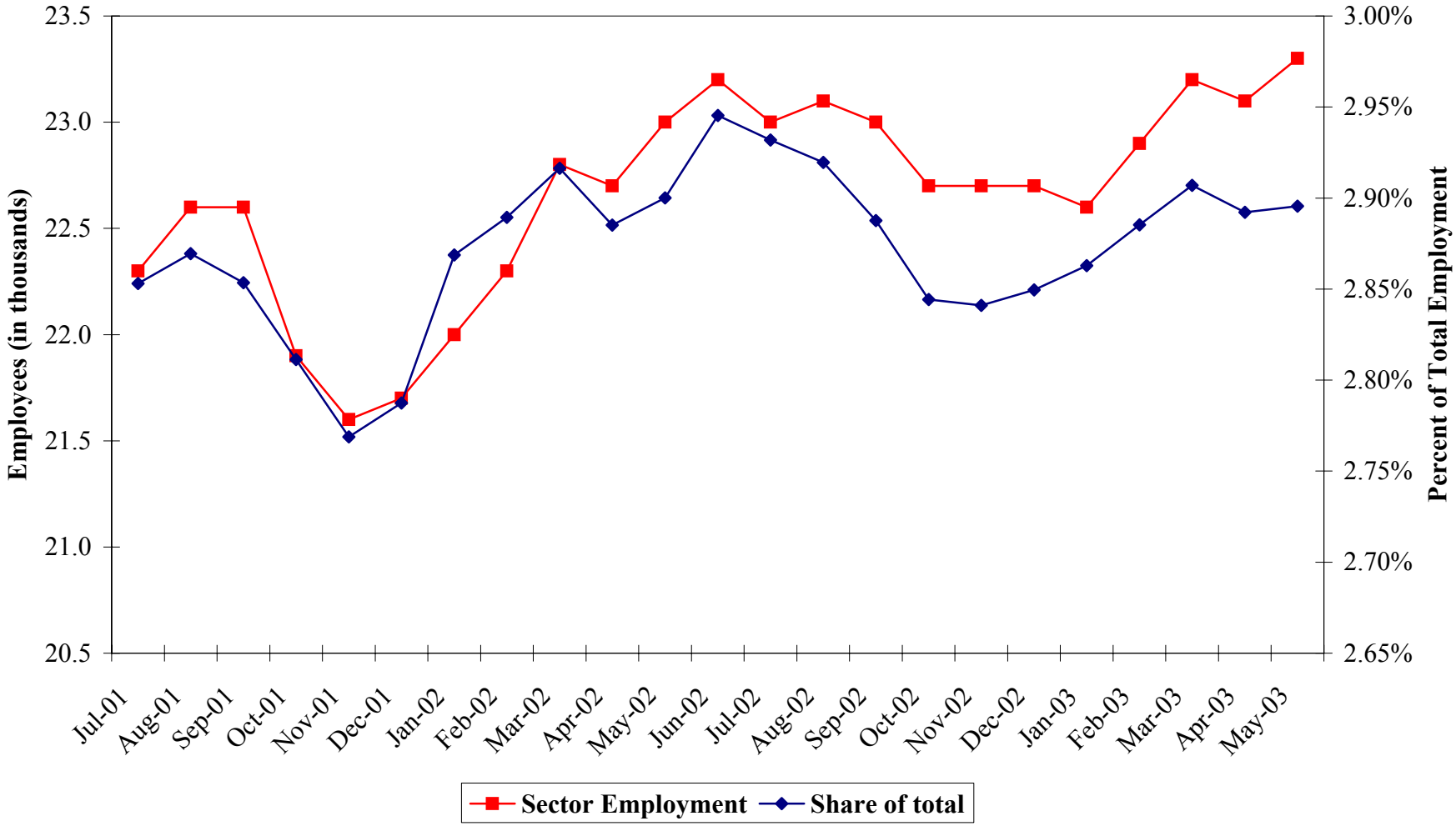
Appendix 1.1-CQ
Full-Service Restaurants Employment
Sector Employment and Share of Total Employment



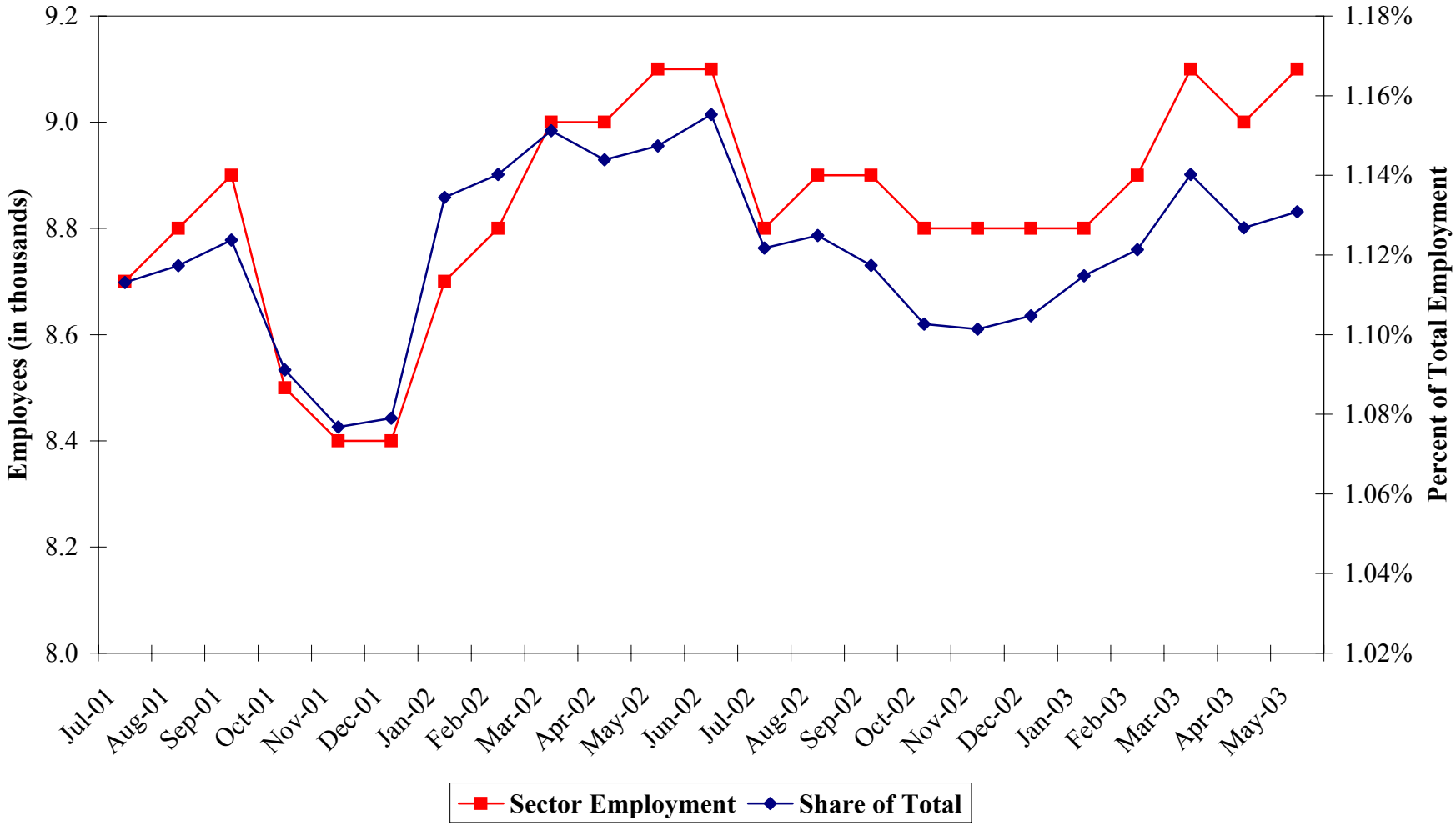
Appendix 1.1-CR
Limited-Service Restaurants Employment
Sector Employment and Share of Total Employment



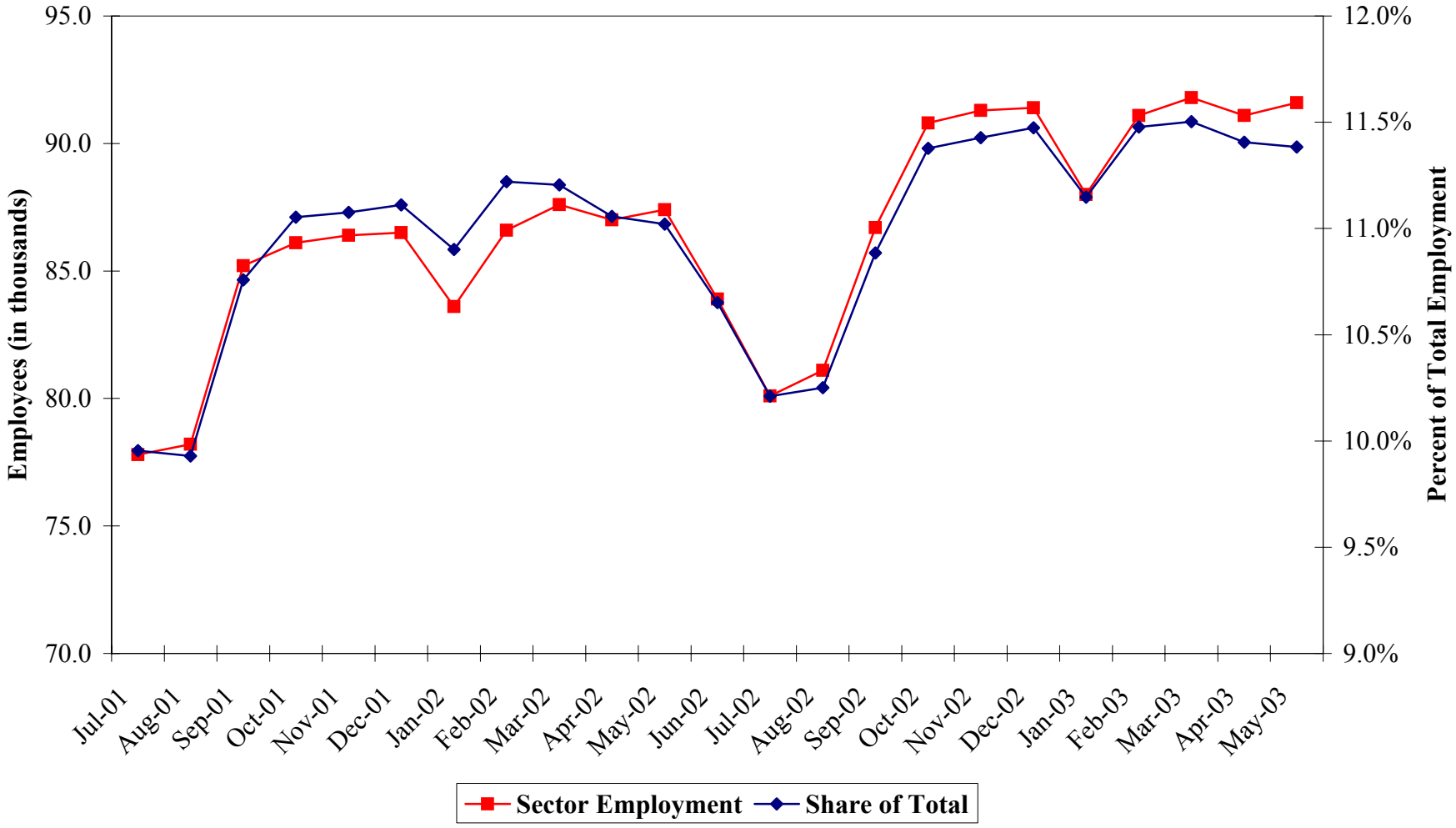
Appendix 1.1-CS
Other Services Employment
Sector Employment and Share of Total Employment



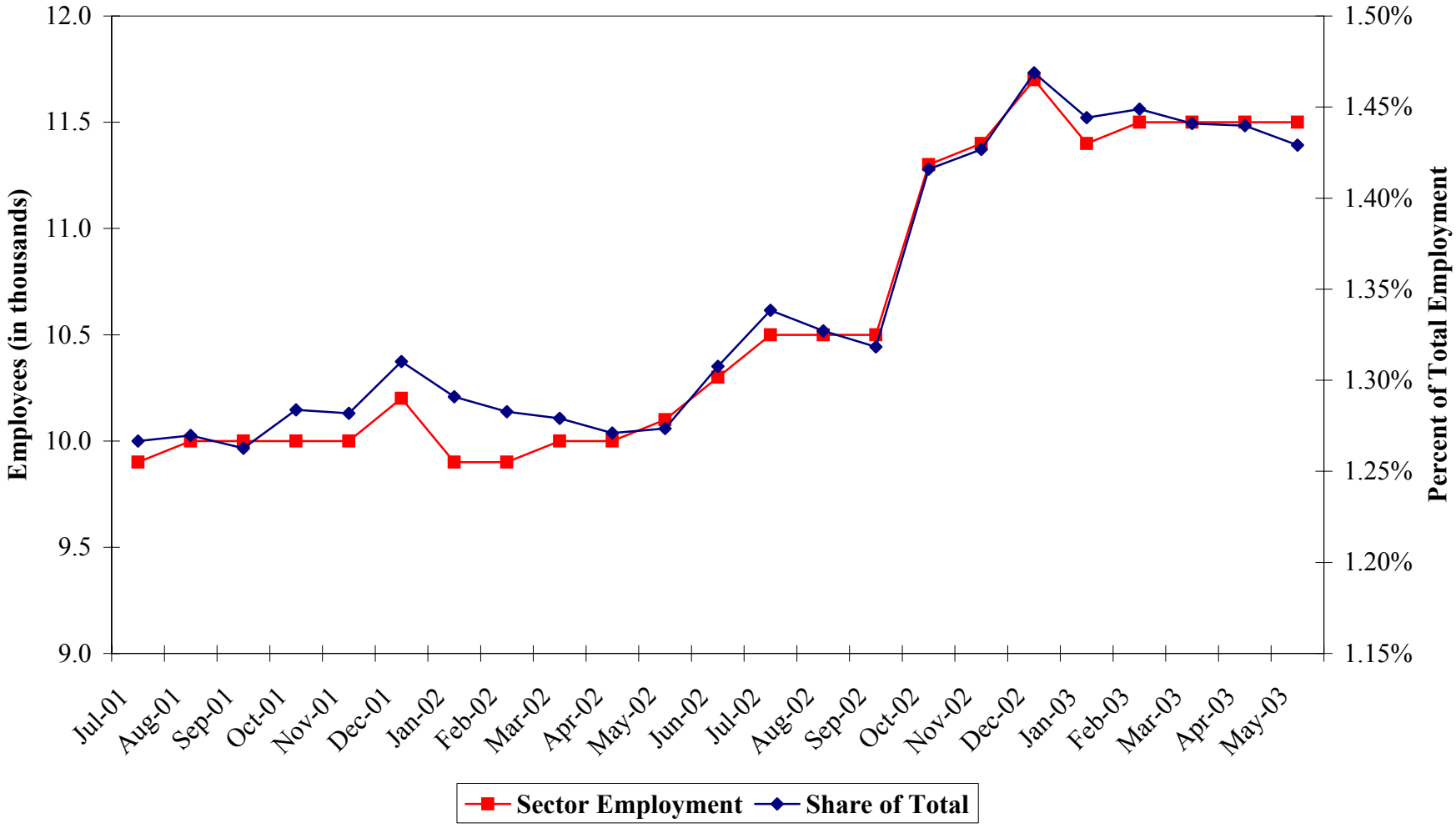
Appendix 1.1-CT
Personal and Laundry Services Employment
Sector Employment and Share of Total Employment



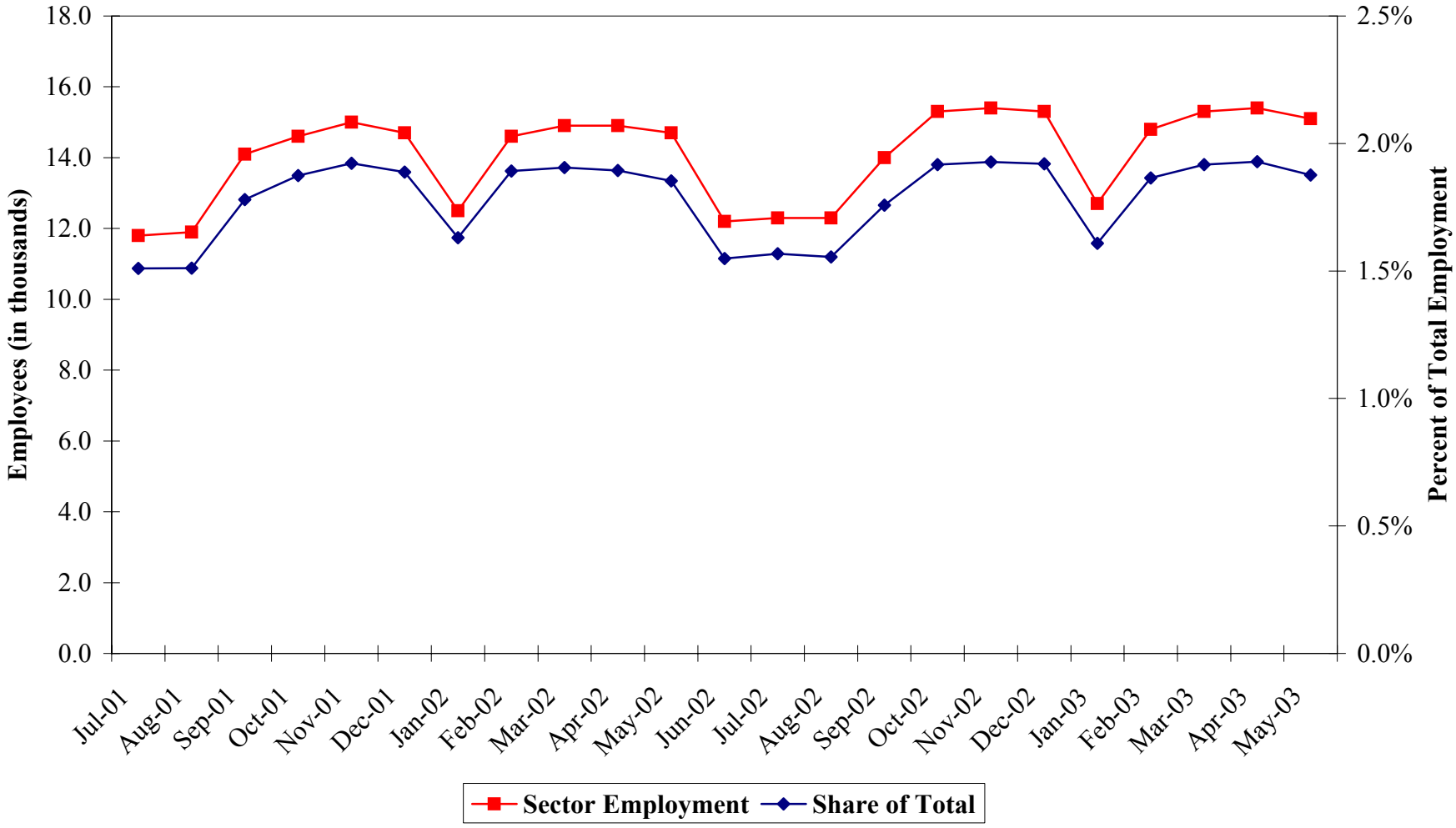
Appendix 1.1-CU
Government Employment
Sector Employment and Share of Total Employment



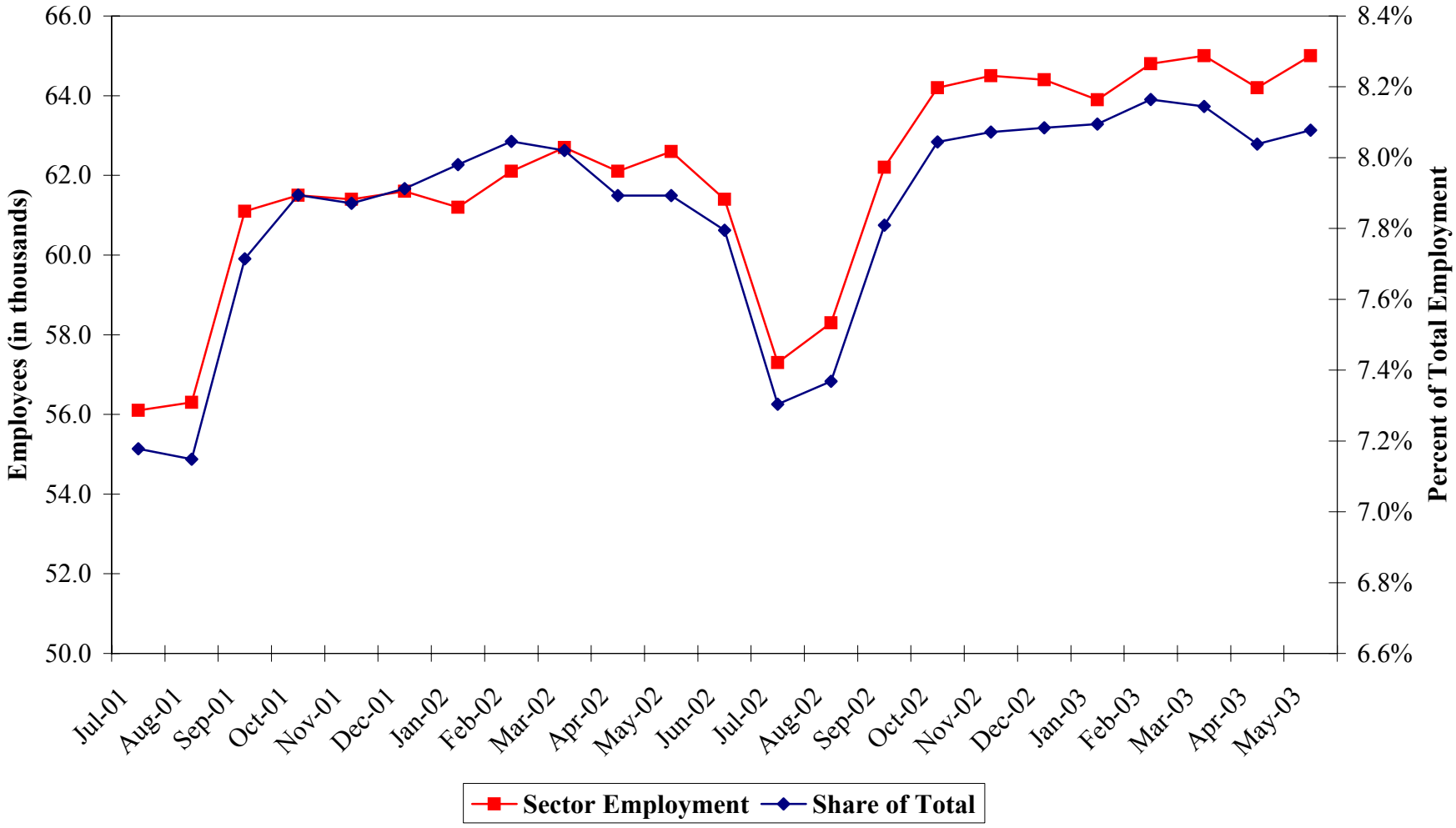
Appendix 1.1-CV
Federal Employment
Sector Employment and Share of Total Employment



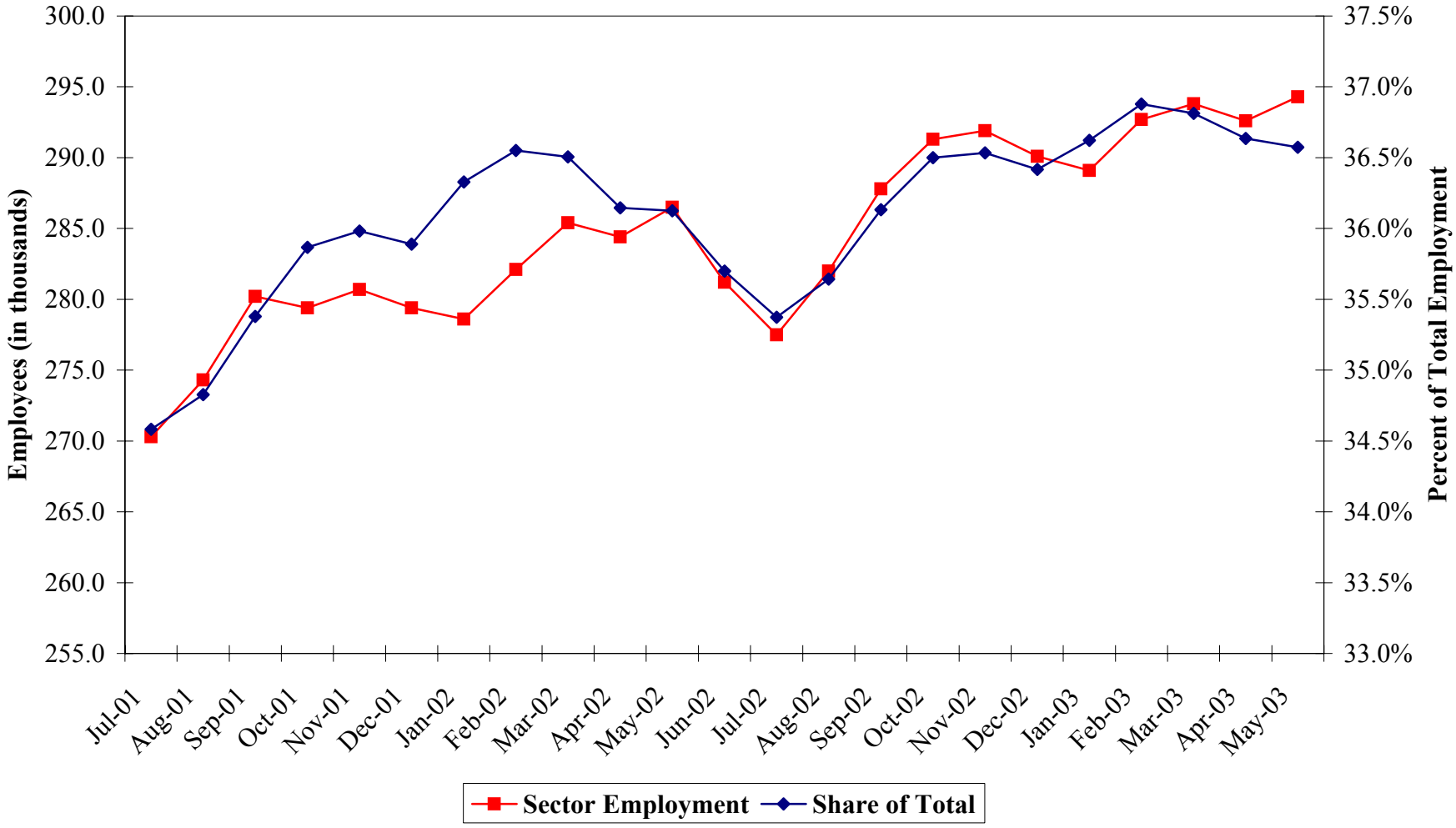
Appendix 1.1-CW
State Employment
Sector Employment and Share of Total Employment



Appendix 1.1-CX
Local Employment
Sector Employment and Share of Total Employment

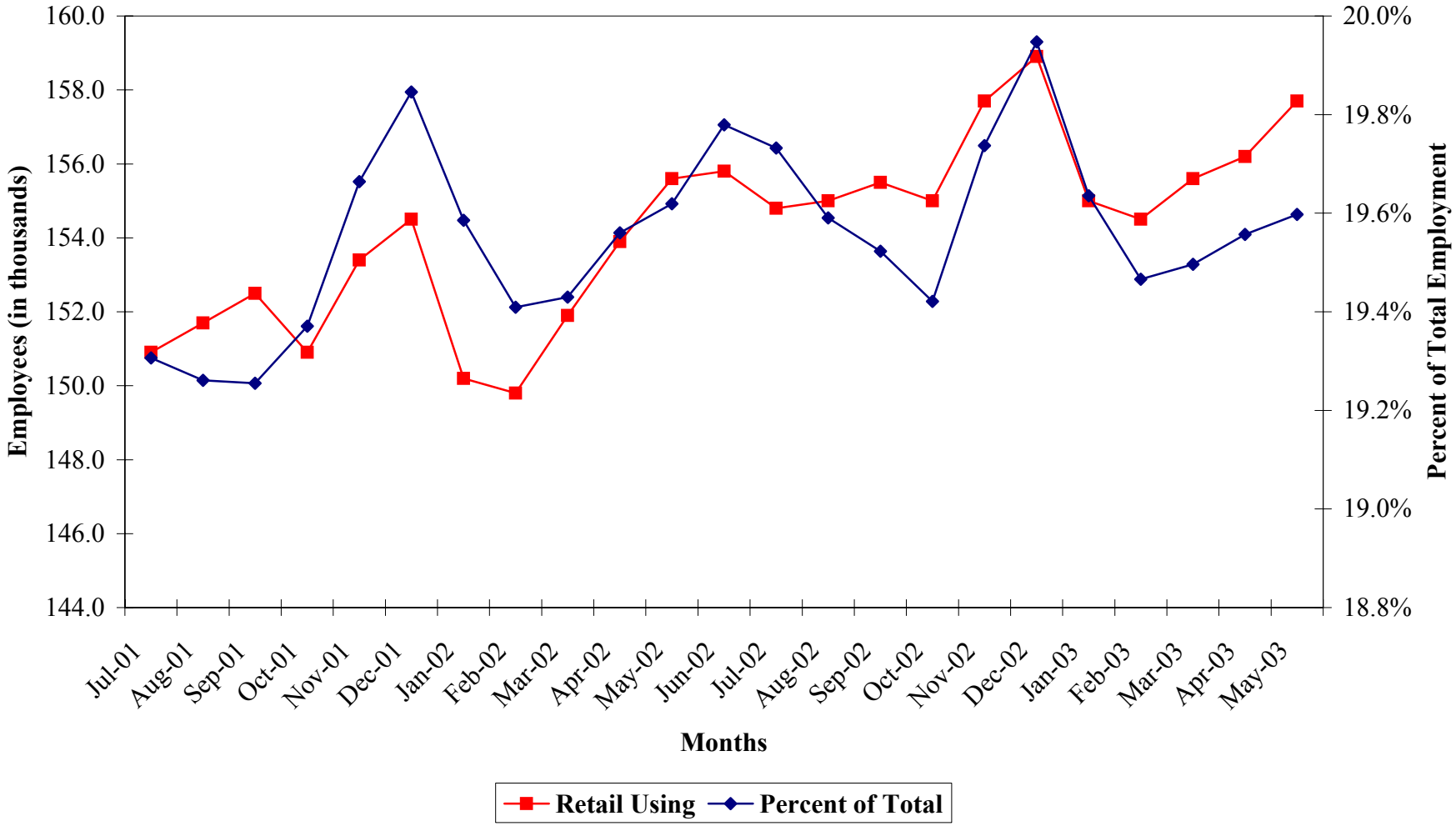


Appendix 1.1-CY
Office-Using Employment
Sector Employment and Share of Total Employment

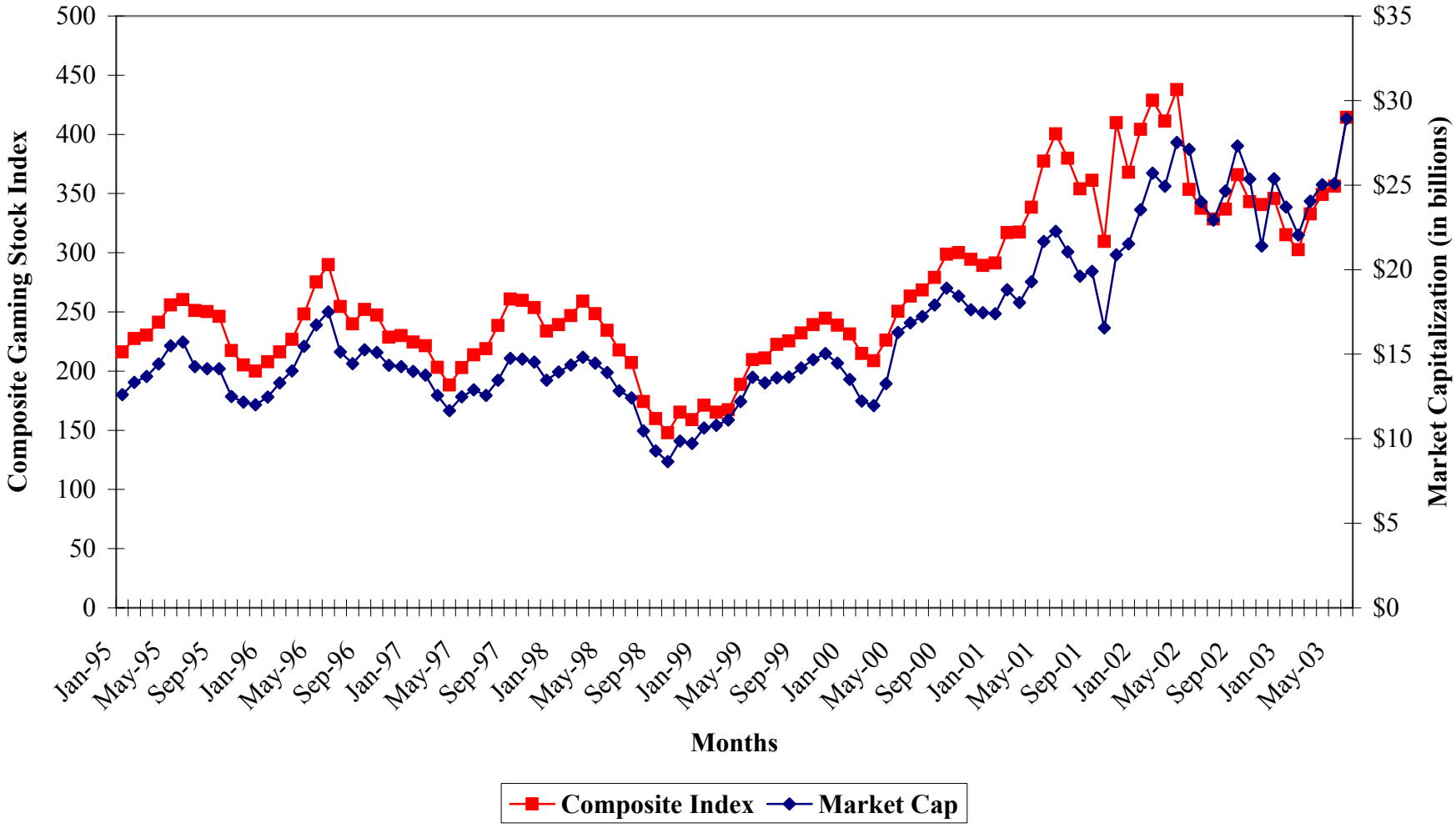


Appendix 1.1-CZ
Industrial-Using Employment
Sector Employment and Share of Total Employment

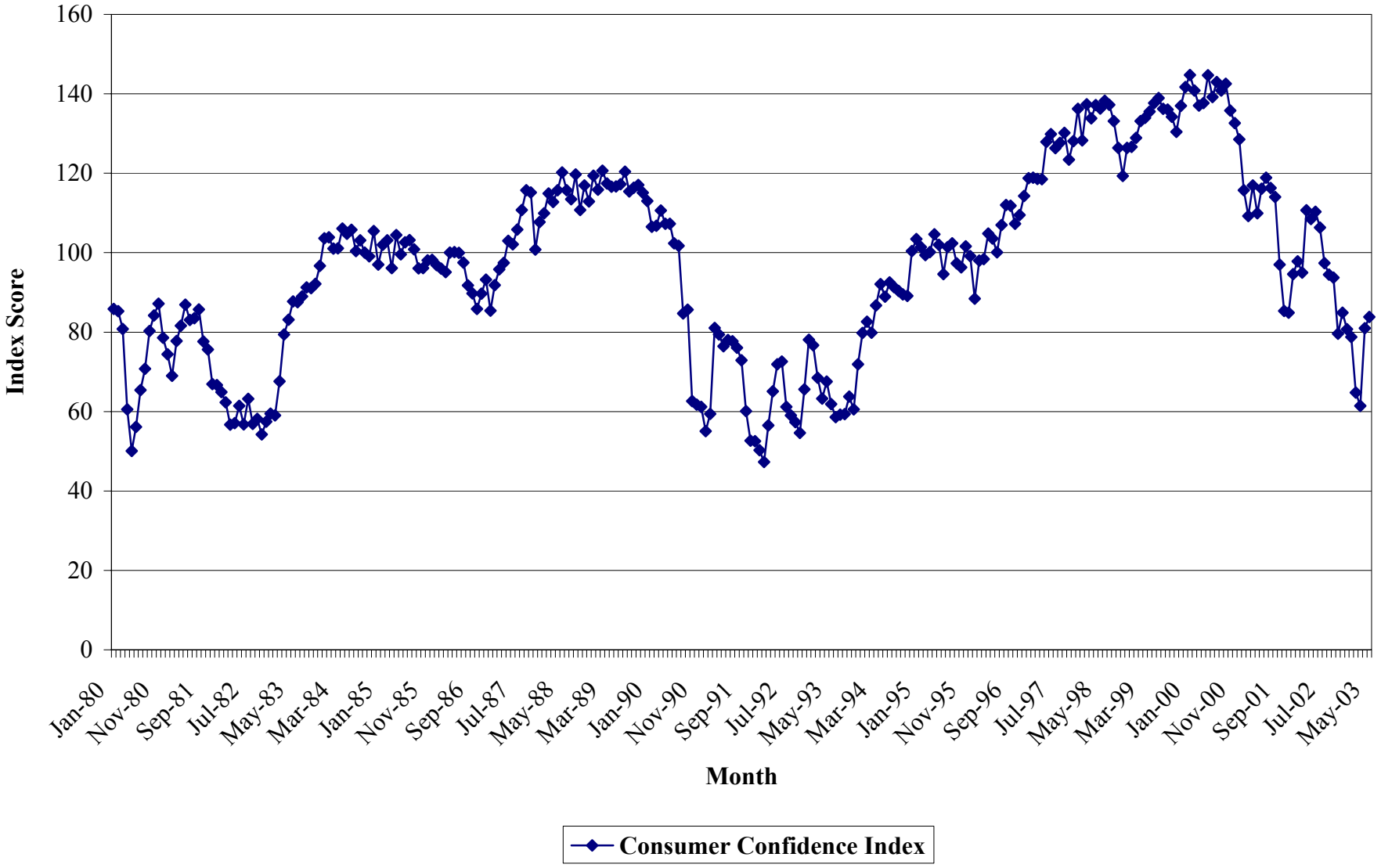
Appendix 1.1-DA
Retail-Using Employment
Sector Employment and Share of Total Employment



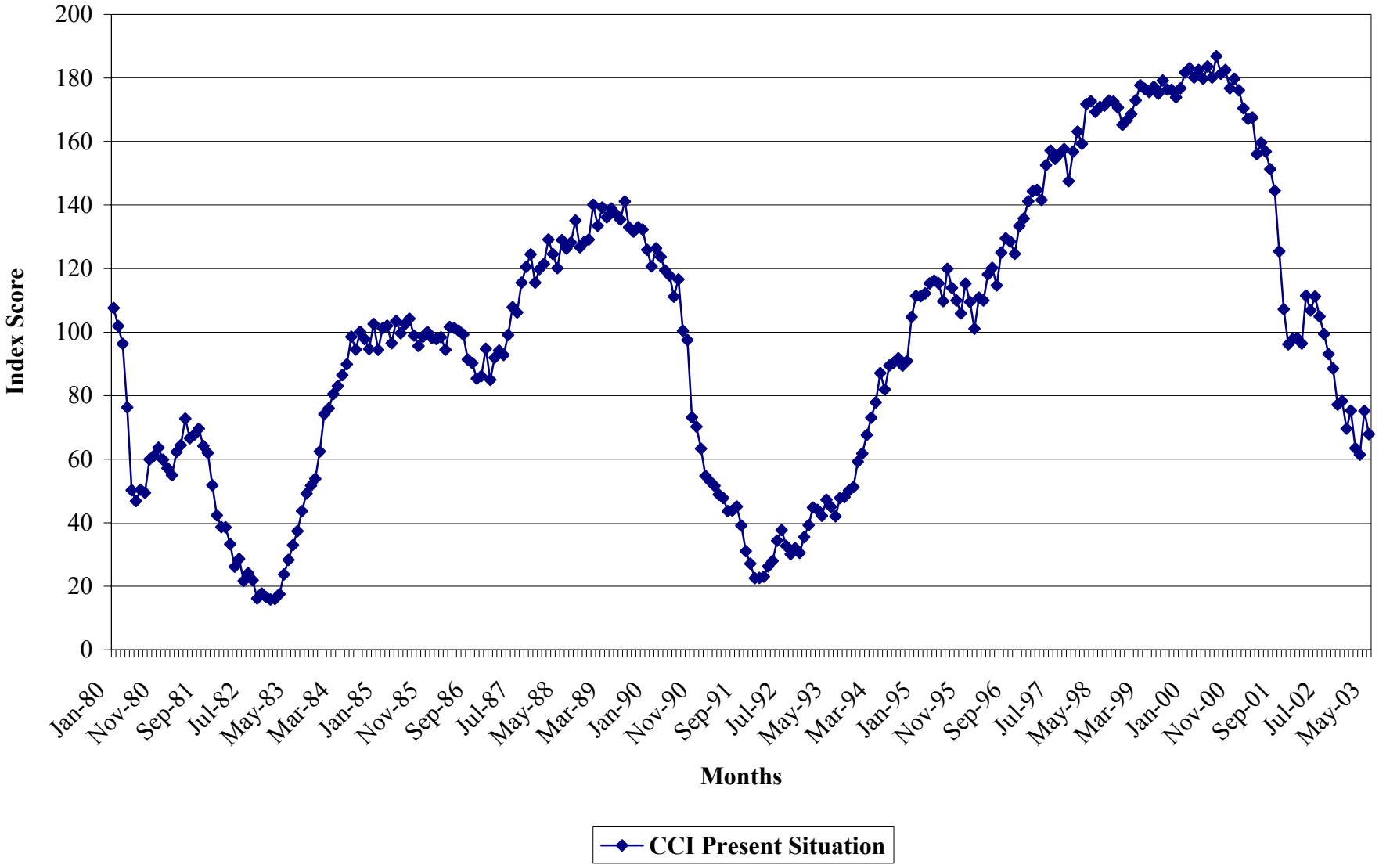
Appendix 1.1-DB
Performance of Publicly Held Gaming Companies
Composite Stock Index and Market Capitalization



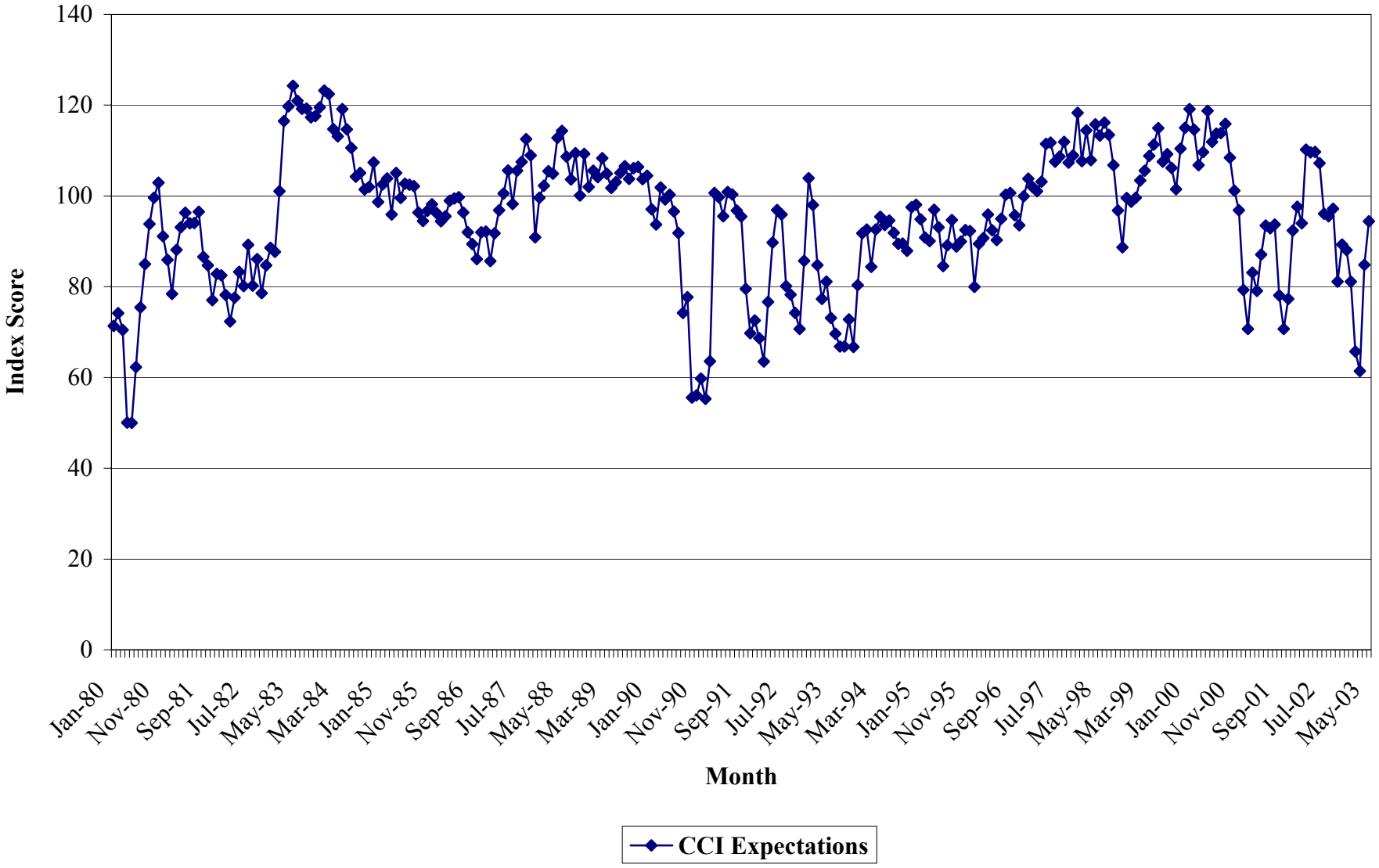
Appendix 1.1-DC
Consumer Confidence Index



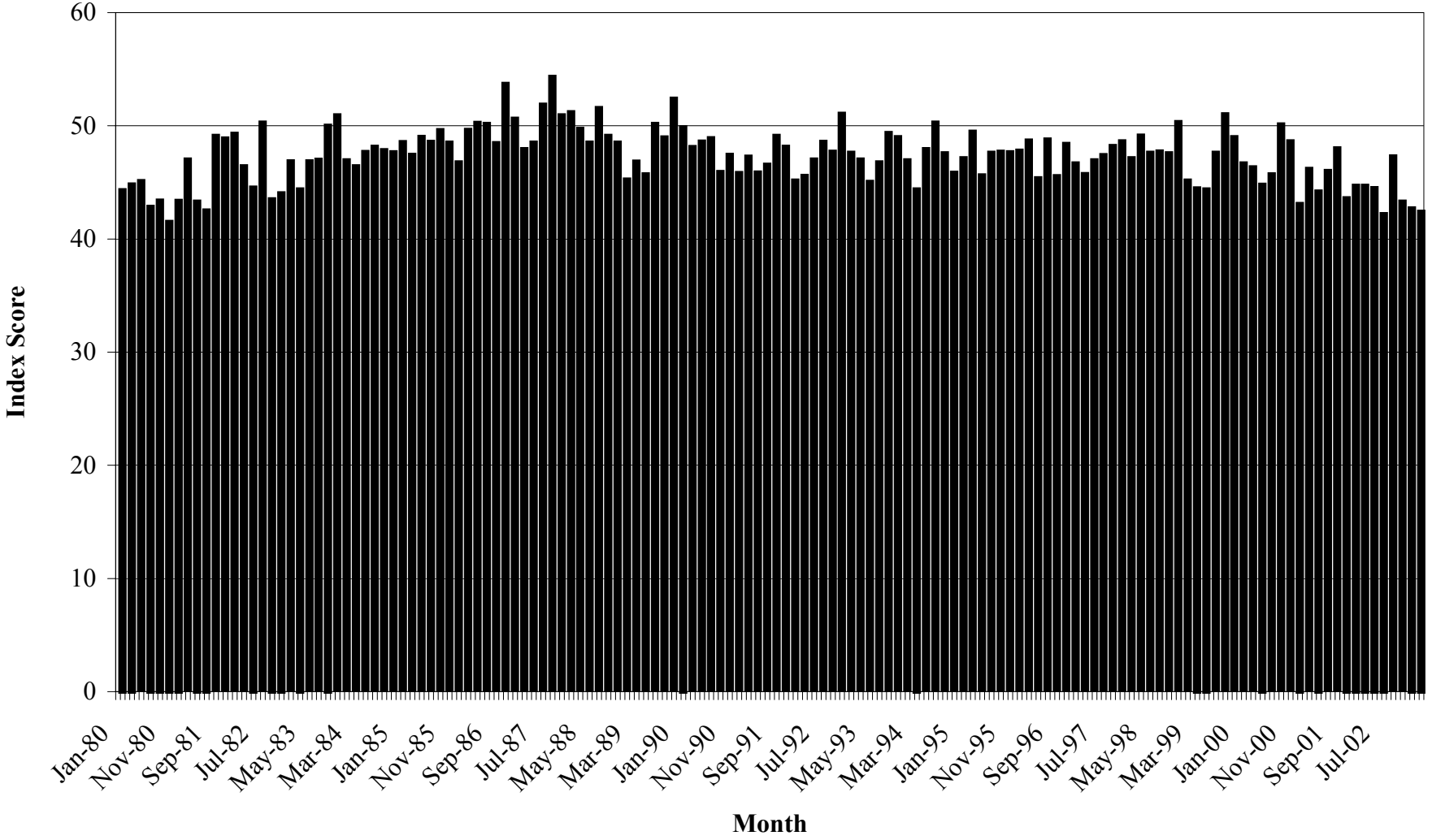
Appendix 1.1-DD
Consumer Confidence Index - Present Situation



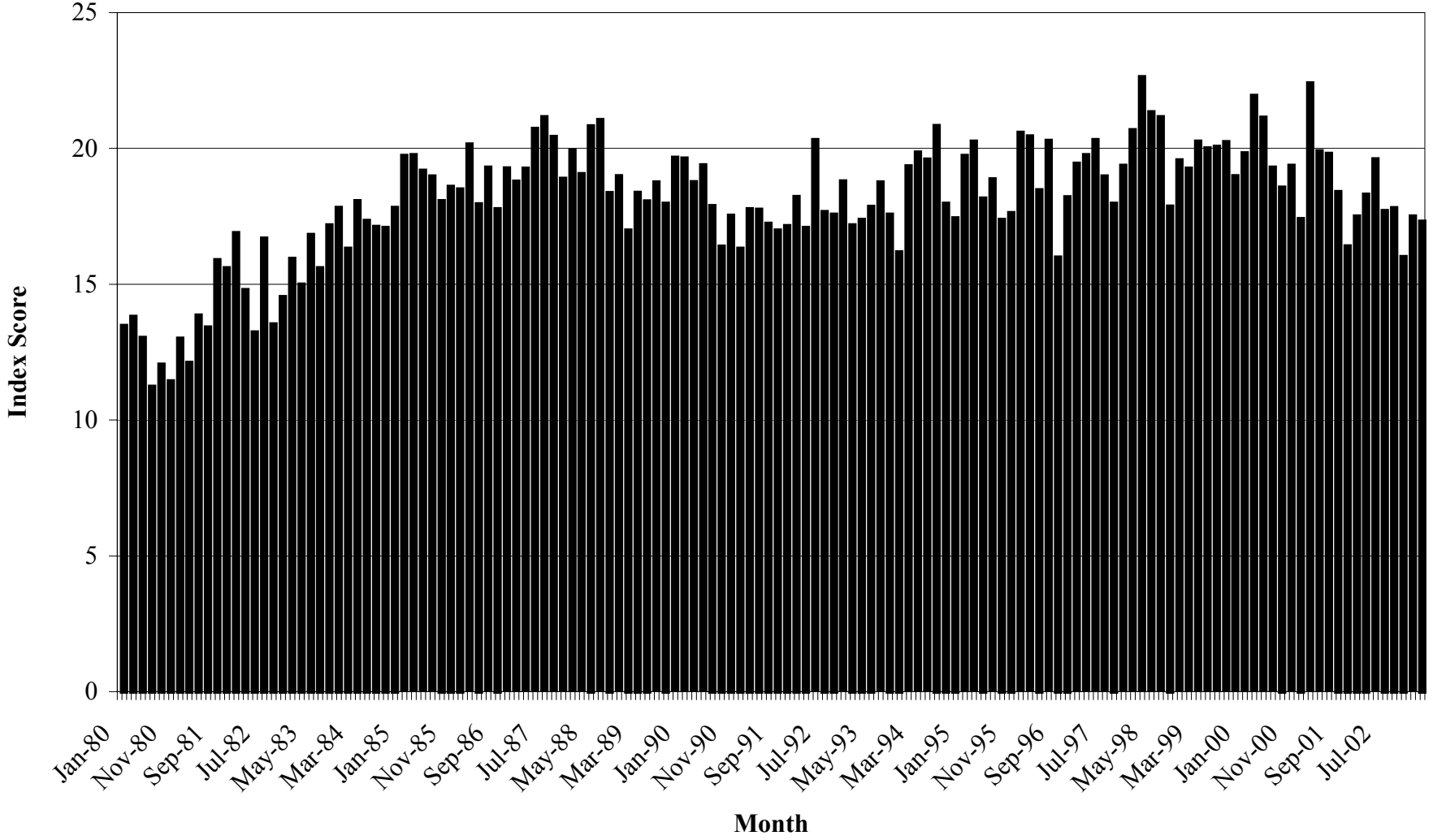
Appendix 1.1-DE
Consumer Confidence Index - Expectations



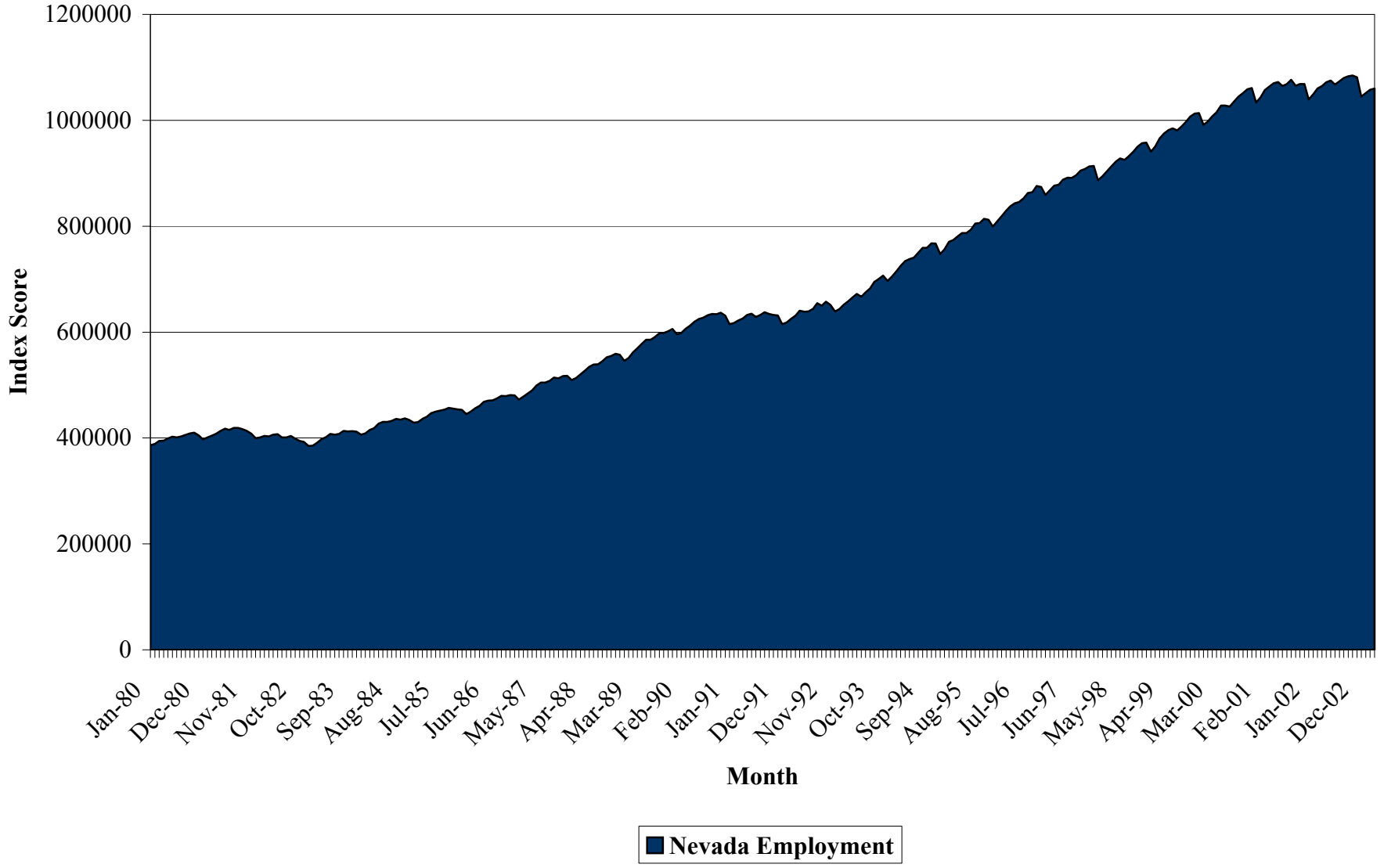
Appendix 1.1-DF
Consumer Confidence Index -
Intend to Vacation in the Next Six Months



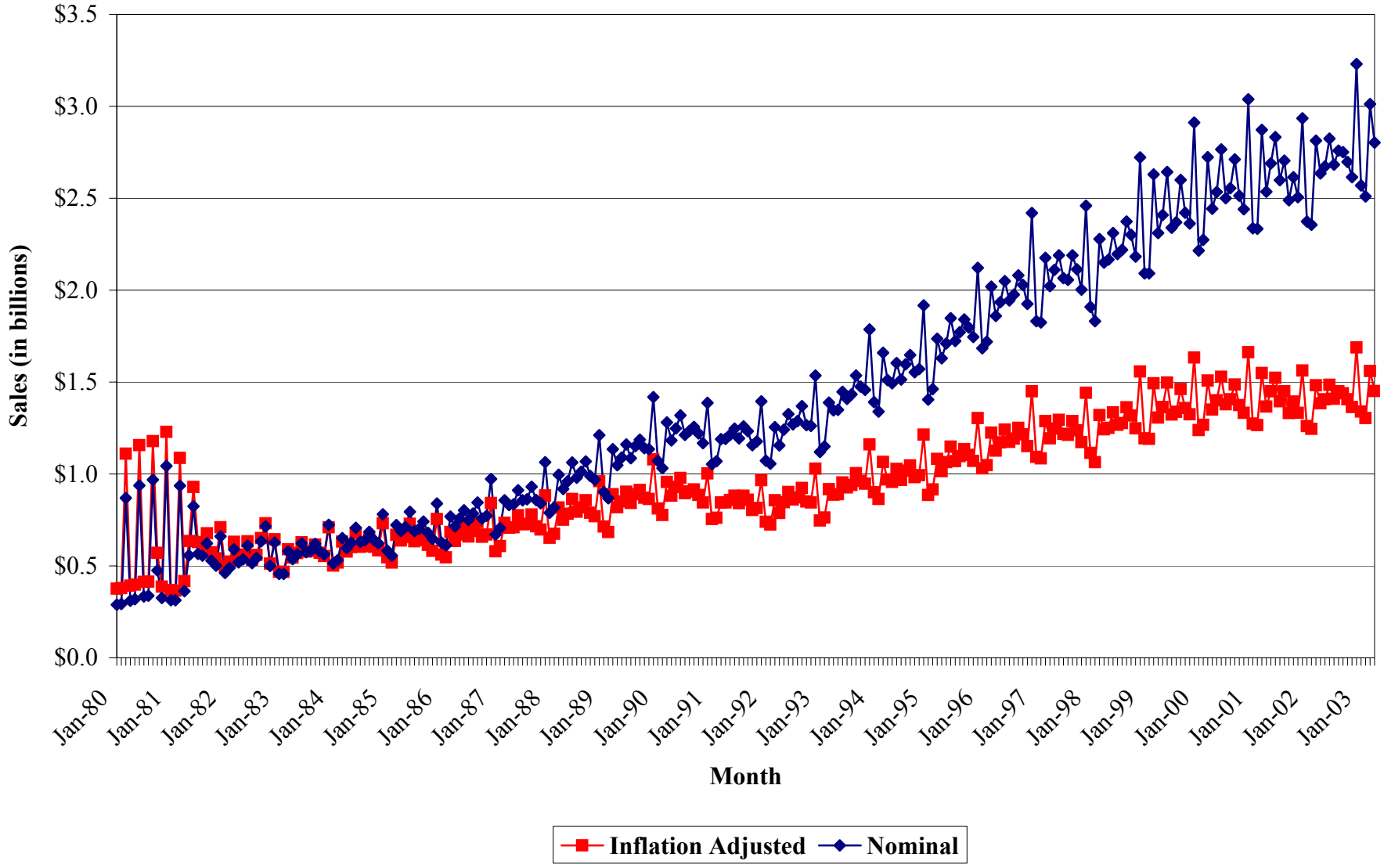
Appendix 1.1-DG
Consumer Confidence Index - Intend to Vacation Via Airplane



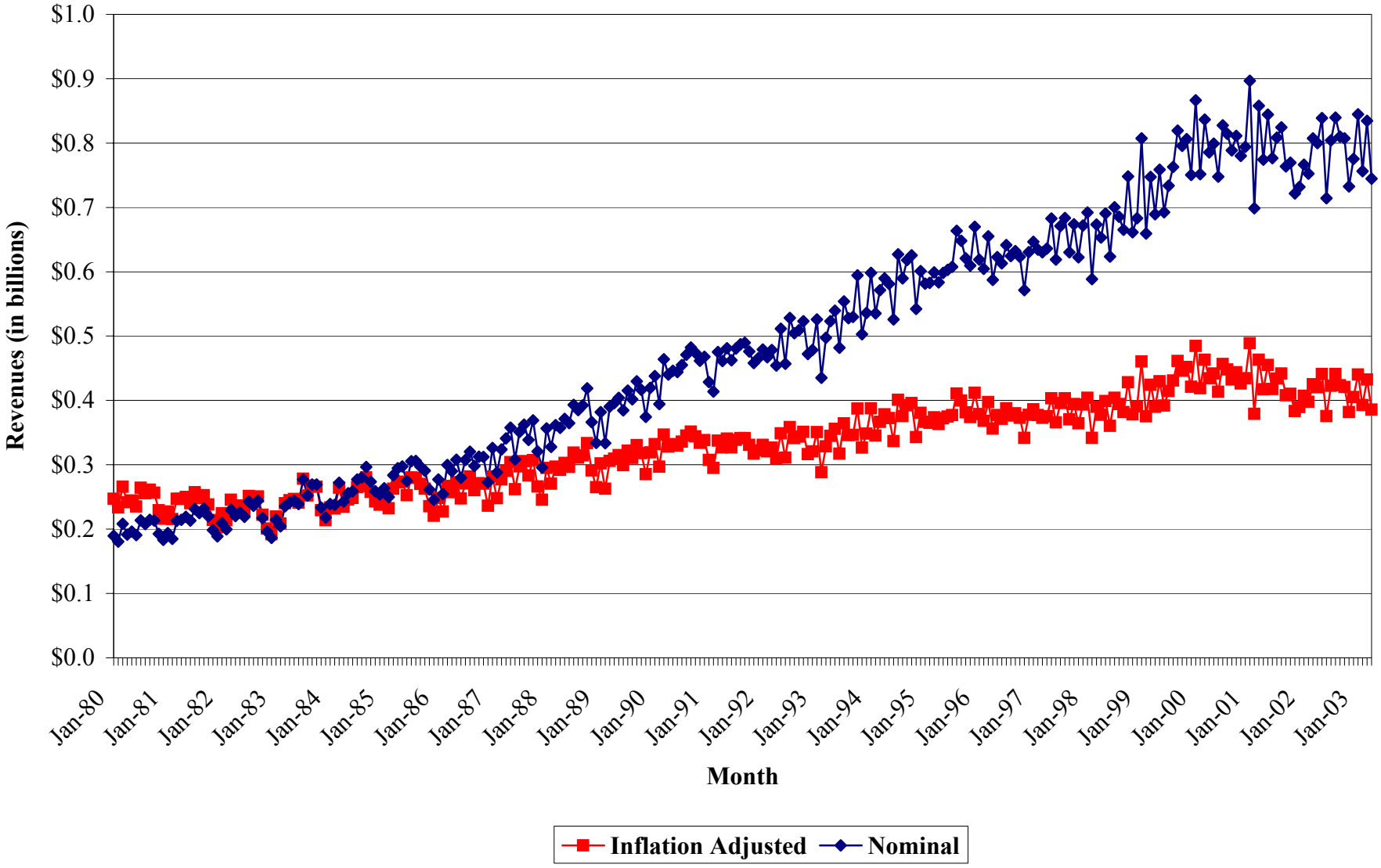
Appendix 1.1-DH
Nevada Establishment Based Employment



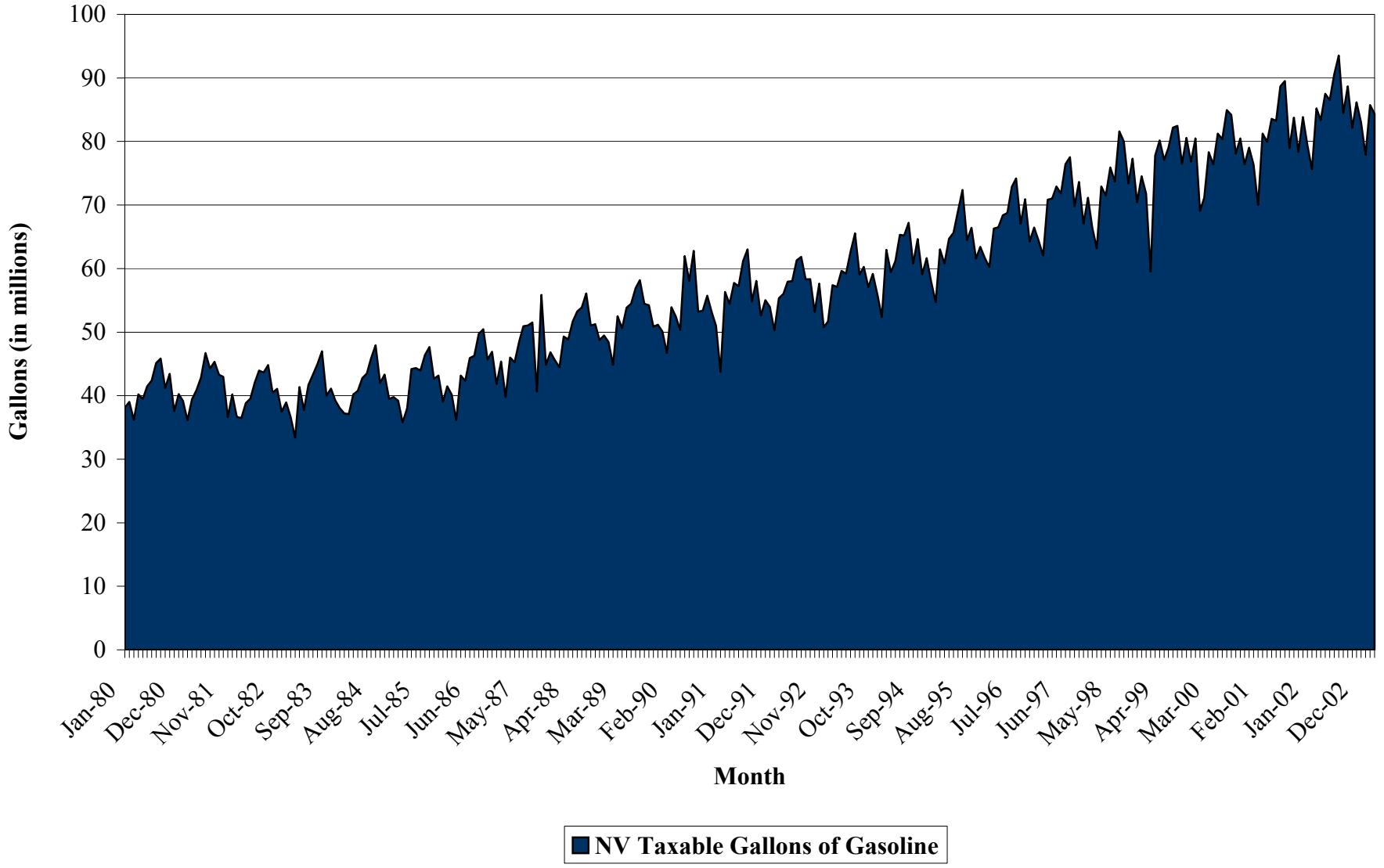
Appendix 1.1-DI
Nevada Taxable Retail Sales Activity



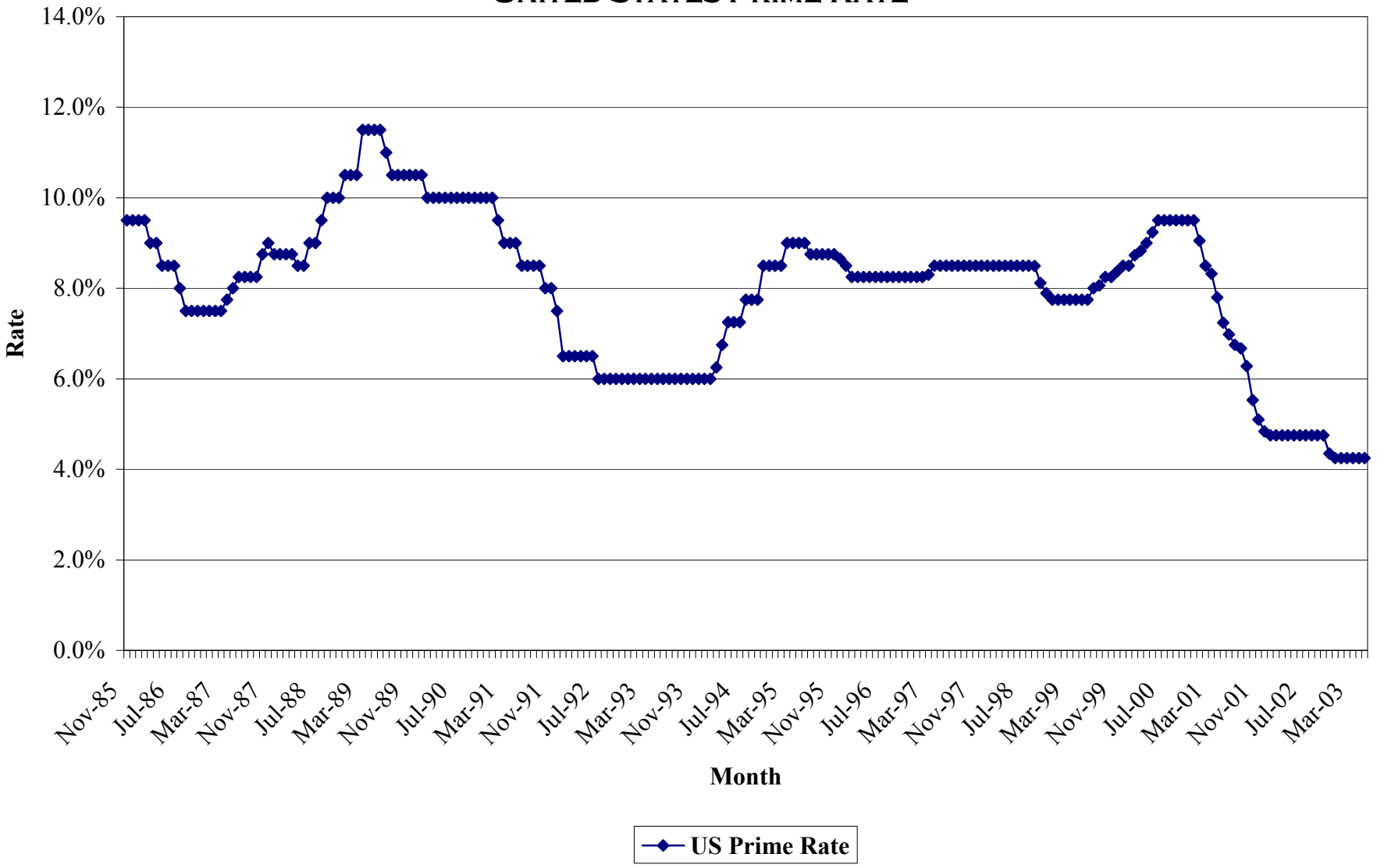
Appendix 1.1-DJ
Nevada Gross Gaming Revenue



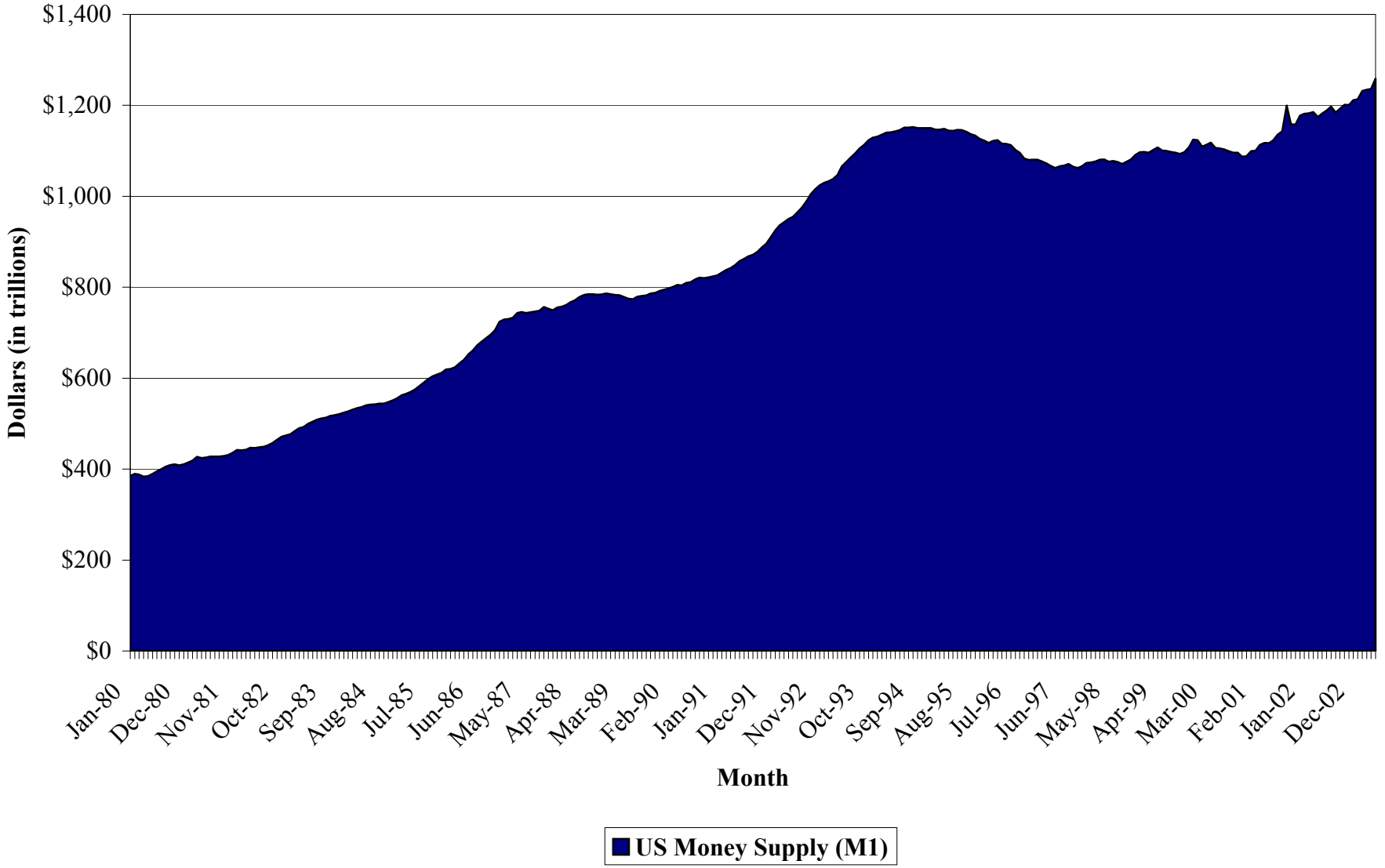
Appendix 1.1-DK
Nevada Taxable Gallons of Gasoline



Appendix 1.1-DY
United States Prime Rate



Appendix 1.1-DZ
United States Money Supply (M1)



Appendix 1.2-A
Historical Population Estimates
United States, Nevada, and Other Western States, 1960 - 2002

Area	1960	1970	1980	1990	2000	2001	2002
Nevada - US Census Bureau	285,000	488,738	800,493	1,201,833	1,998,257	2,097,722	2,173,491
Nevada - State Demographer (1)	285,000	488,738	800,493	1,236,130	2,023,378	2,132,498	2,206,022
United States	179,323,000	203,302,031	226,545,805	248,709,873	281,422,509	285,317,559	288,368,698
Western States	26,909,000	33,277,009	41,005,455	49,925,977	59,361,280	60,634,617	61,590,141
Arizona	1,302,000	1,775,399	2,718,215	3,665,228	5,130,632	5,306,966	5,456,453
California	15,717,000	19,971,069	23,667,902	29,760,021	33,871,648	34,600,463	35,116,033
Colorado	1,754,000	2,209,596	2,889,964	3,294,394	4,301,331	4,430,989	4,506,542
Idaho	667,000	713,015	943,935	1,006,749	1,293,953	1,320,585	1,341,131
Montana	675,000	694,409	786,690	799,065	902,195	905,382	909,453
New Mexico	951,000	1,017,055	1,302,894	1,515,069	1,819,046	1,830,935	1,855,059
Oregon	1,769,000	2,091,533	2,633,105	2,842,321	3,421,405	3,473,441	3,521,515
Utah	891,000	1,059,273	1,461,037	1,722,850	2,233,169	2,278,712	2,316,256
Washington	2,853,000	3,413,244	4,132,156	4,866,692	5,894,119	5,993,390	6,068,996
Wyoming	330,000	332,416	469,557	453,588	493,782	493,754	498,703

Sources: US Census Bureau Current Population Surveys; 1960 Census, 1970 Census, 1980 Census, 1990 Census, 2000 Census, Population Division, Nevada State Demographer's Office.

Notes:

(1) Nevada State Demographer's population estimates do not necessarily coincide with estimates generated by the US Census Bureau.

(2) Census estimates are for April of the respective year, interim estimates are for July of the respective year.

Appendix 1.2-B
Historical Population Estimates
United States, Nevada, and Other Western States, 1960 - 2002

Area	1960-1970	1970-1980	1980-1990	1990-2000	2000-2002	1960-2002
Nevada - US Census Bureau	5.54%	5.06%	4.15%	5.22%	4.29%	4.96%
Nevada - State Demographer (1)	5.54%	5.06%	4.44%	5.05%	4.42%	4.99%
United States	1.26%	1.09%	0.94%	1.24%	1.23%	1.14%
Western States	2.15%	2.11%	1.99%	1.75%	1.86%	1.99%
Arizona	3.15%	4.35%	3.03%	3.42%	3.13%	3.47%
California	2.42%	1.71%	2.32%	1.30%	1.82%	1.93%
Colorado	2.34%	2.72%	1.32%	2.70%	2.36%	2.27%
Idaho	0.67%	2.85%	0.65%	2.54%	1.81%	1.68%
Montana	0.28%	1.26%	0.16%	1.22%	0.40%	0.71%
New Mexico	0.67%	2.51%	1.52%	1.85%	0.99%	1.60%
Oregon	1.69%	2.33%	0.77%	1.87%	1.45%	1.65%
Utah	1.74%	3.27%	1.66%	2.63%	1.84%	2.30%
Washington	1.81%	1.93%	1.65%	1.93%	1.47%	1.81%
Wyoming	0.07%	3.51%	-0.35%	0.85%	0.50%	0.99%

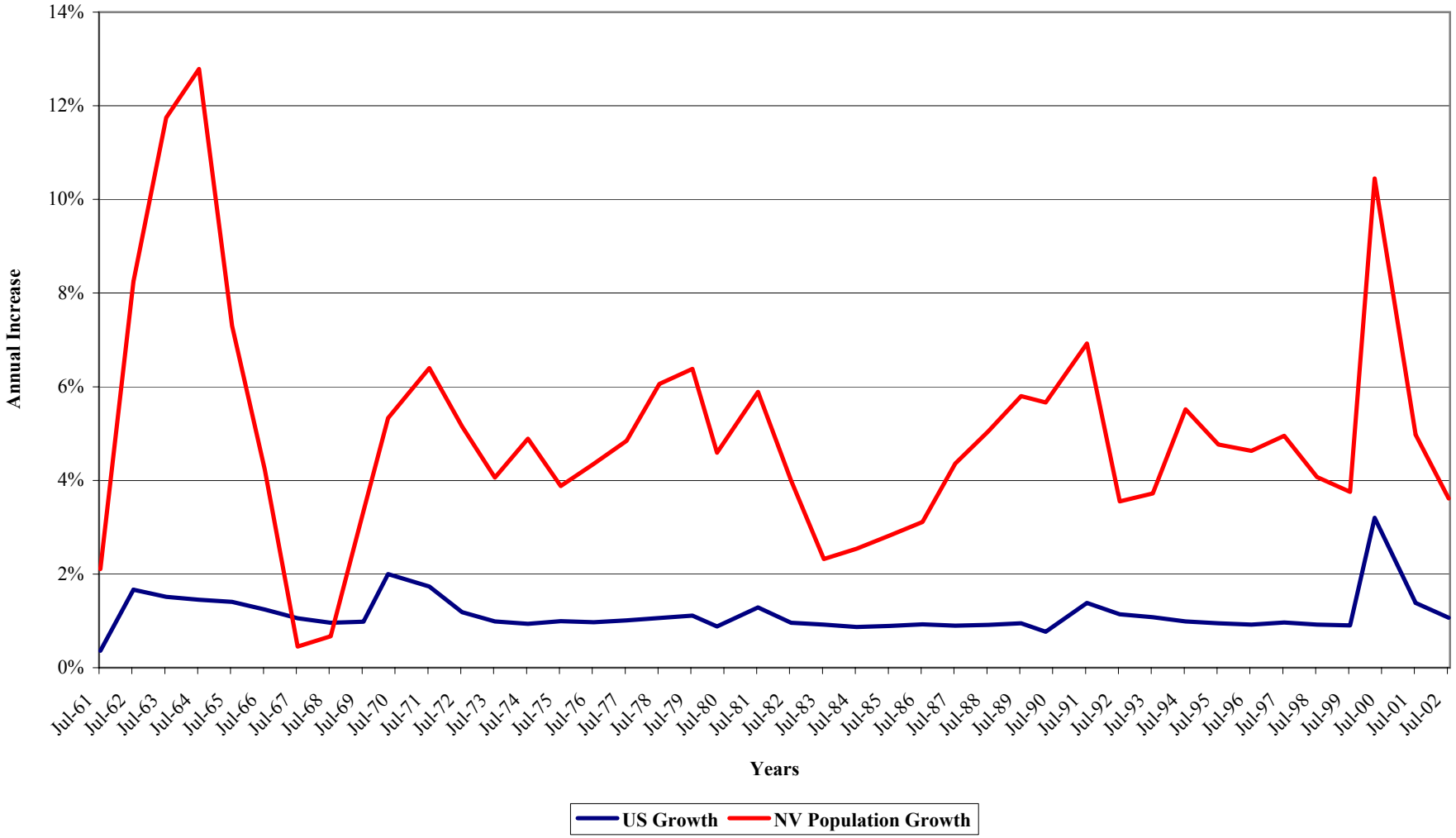
Sources: US Census Bureau Current Population Surveys; 1960 Census, 1970 Census, 1980 Census, 1990 Census, 2000 Census, Population Division, Nevada State Demographer's

Notes:

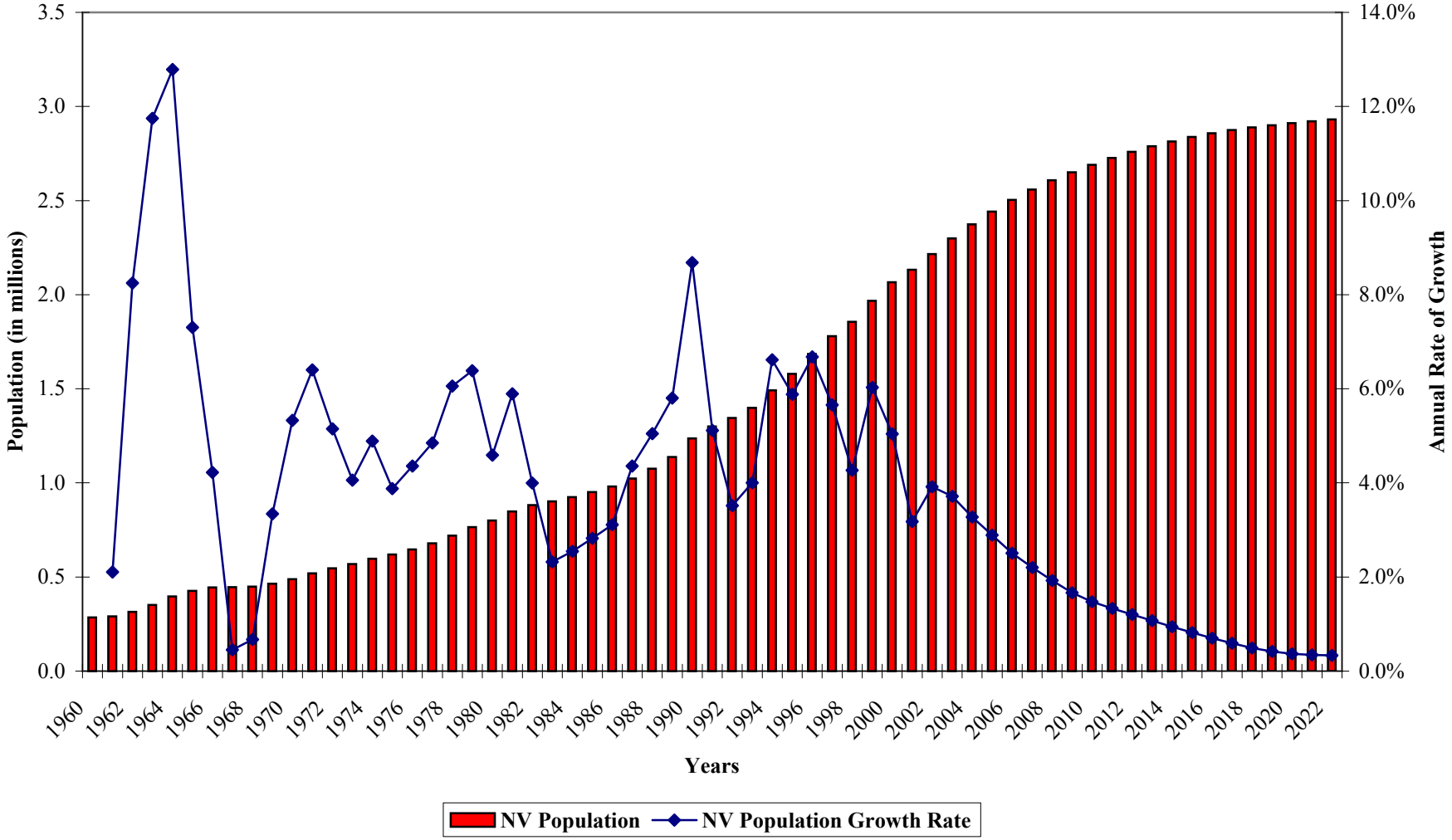
(1) Nevada State Demographer's population estimates do not necessarily coincide with estimates generated by the US Census Bureau.

(2) Census estimates are for April of the respective year, interim estimates are for July of the respective year.

Appendix 1.2-C
Population Growth Comparison
United States and Nevada, 1960 - 2002



Appendix 1.2-D
Historical and Projected Population
Nevada, 1960 - 2022

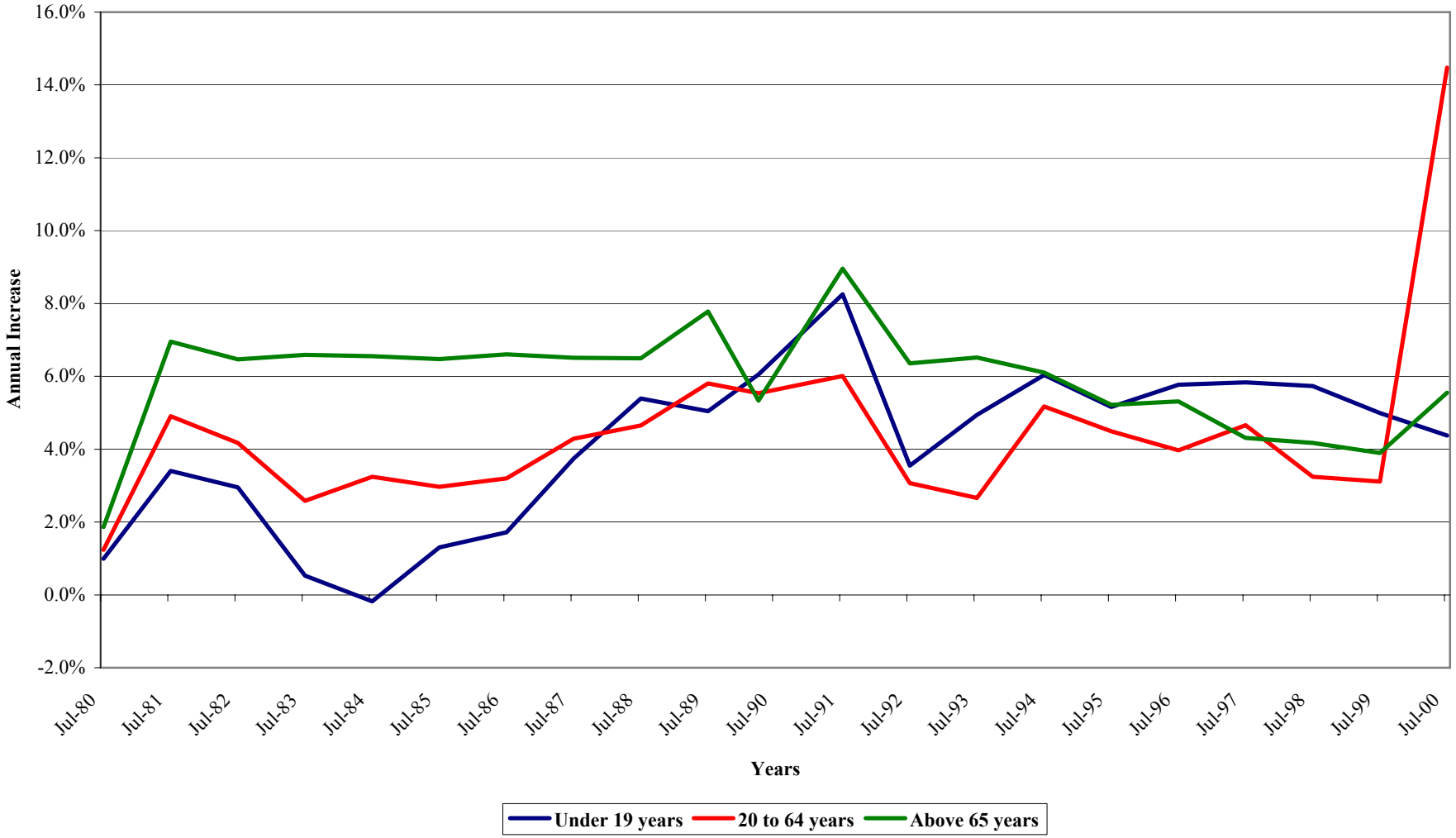


Appendix 1.2-E
Historical Population Estimates
United States and Nevada, 1980 - 2000

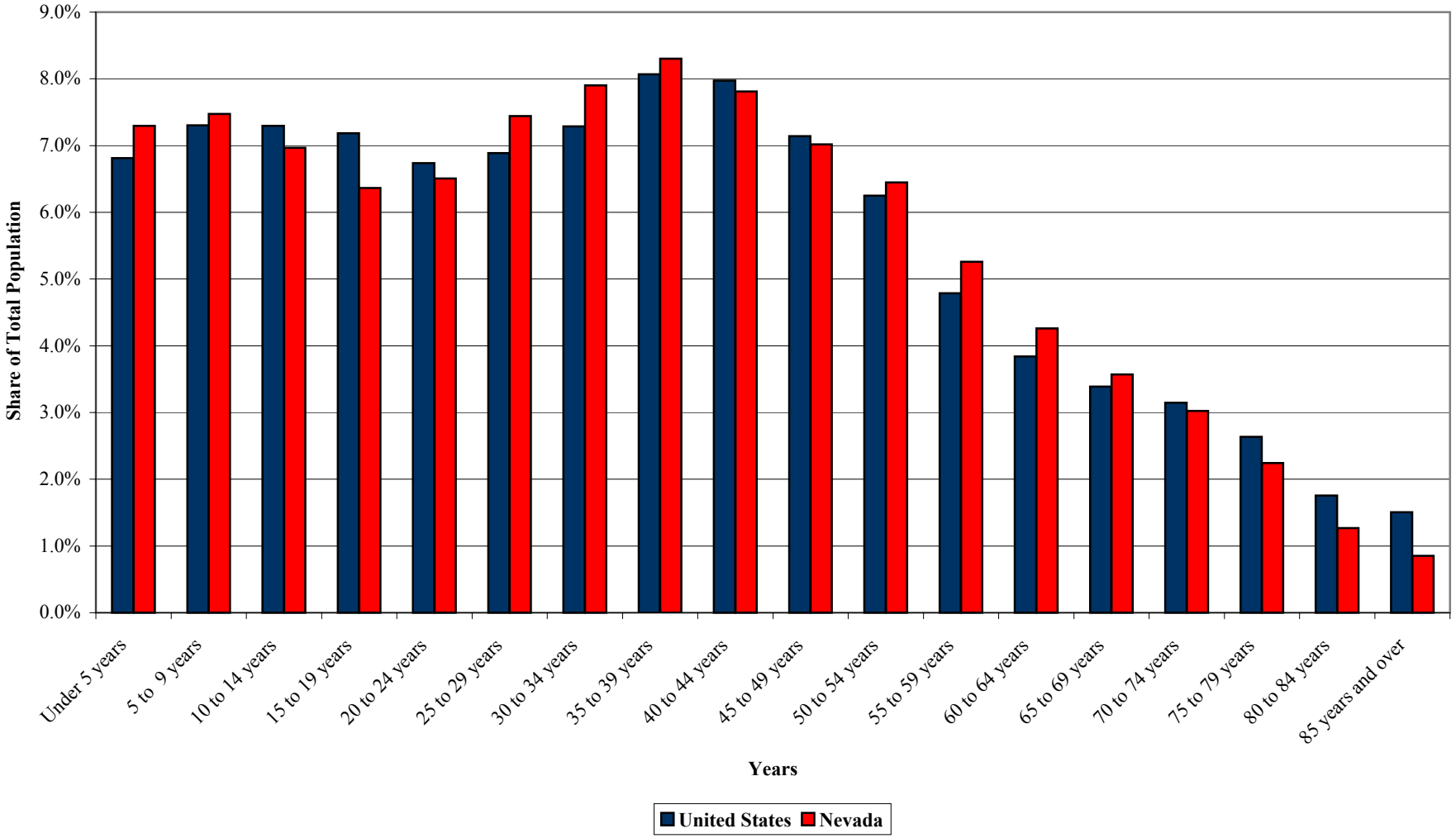
	Apr-80		Jul-85		Apr-90		Jul-95		Jul-99		Jul-00	
Age Range	**Nevada**	**United States**	**Nevada**	**United States**	**Nevada**	**United States**	**Nevada**	**United States**	**Nevada**	**United States**	**Nevada**	**United States**
Under 5 years	7.0%	7.2%	7.7%	7.5%	7.9%	7.5%	7.9%	7.4%	7.9%	6.9%	6.8%	7.3%
5 to 9 years	7.0%	7.4%	6.7%	7.0%	7.1%	7.3%	7.4%	7.3%	7.7%	7.3%	7.3%	7.5%
10 to 14 years	7.7%	8.1%	6.5%	7.2%	6.3%	6.9%	6.9%	7.2%	7.4%	7.2%	7.3%	7.0%
15 to 19 years	8.8%		7.1%	7.9%	6.2%	7.2%	6.2%	6.9%	6.7%	7.2%	7.2%	6.4%
20 to 24 years	9.7%	9.4%	8.4%	8.9%	7.4%	7.7%	6.1%	6.8%	6.0%	6.6%	6.7%	6.5%
25 to 29 years	9.5%	8.6%	10.1%	9.1%	9.2%	8.6%	7.4%	7.2%	6.3%	6.7%	6.9%	7.4%
30 to 34 years	8.6%	7.8%	9.6%	8.4%	9.3%	8.8%	9.2%	8.3%	7.4%	7.2%	7.3%	7.9%
35 to 39 years	7.1%	6.2%	8.0%	7.4%	8.4%	8.0%	8.7%	8.5%	8.4%	8.3%	8.1%	8.3%
40 to 44 years	6.0%	5.2%	6.6%	5.9%	7.6%	7.1%	7.7%	7.7%	8.0%	8.2%	8.0%	7.8%
45 to 49 years	5.4%	4.9%	5.5%	4.9%	6.1%	5.5%	6.9%	6.6%	7.1%	7.1%	7.1%	7.0%
50 to 54 years	5.3%	5.2%	4.8%	4.6%	5.1%	4.5%	5.6%	5.2%	6.3%	6.0%	6.2%	6.4%
55 to 59 years	5.3%	5.1%	4.7%	4.7%	4.5%	4.2%	4.6%	4.2%	5.1%	4.7%	4.8%	5.3%
60 to 64 years	4.4%	4.5%	4.6%	4.6%	4.4%	4.3%	4.0%	3.8%	4.2%	3.9%	3.8%	4.3%
65 to 69 years	3.5%	3.9%	4.0%	3.9%	4.1%	4.0%	4.0%	3.8%	3.7%	3.5%	3.4%	3.6%
70 to 74 years	2.3%	3.0%	2.7%	3.2%	2.9%	3.2%	3.3%	3.4%	3.2%	3.2%	3.1%	3.0%
75 to 79 years	1.3%	2.1%	1.6%	2.3%	1.9%	2.5%	2.2%	2.5%	2.4%	2.7%	2.6%	2.2%
80 to 84 years	0.7%	1.3%	0.8%	1.4%	1.0%	1.6%	1.2%	1.7%	1.3%	1.8%	1.8%	1.3%
85 years and over	0.5%	1.0%	0.6%	1.1%	0.6%	1.2%	0.8%	1.4%	0.9%	1.5%	1.5%	0.9%
Total	100.0%	90.7%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Special Categories												
Under 5 years	7.0%	7.2%	7.7%	7.5%	7.9%	7.5%	7.9%	7.4%	7.9%	6.9%	6.8%	7.3%
19 years and under	30.4%	22.6%	28.0%	29.5%	27.5%	28.8%	28.4%	28.8%	29.7%	28.7%	28.6%	28.1%
20 to 64 years	61.3%	56.7%	62.3%	58.5%	62.0%	58.7%	60.2%	58.4%	58.8%	58.7%	59.0%	60.9%
65 years and over	8.2%	11.3%	9.7%	11.9%	10.5%	12.5%	11.4%	12.8%	11.5%	12.7%	12.4%	11.0%

Source: US Census Bureau, Current Population Surveys; 1980 Census; 1990 Census.

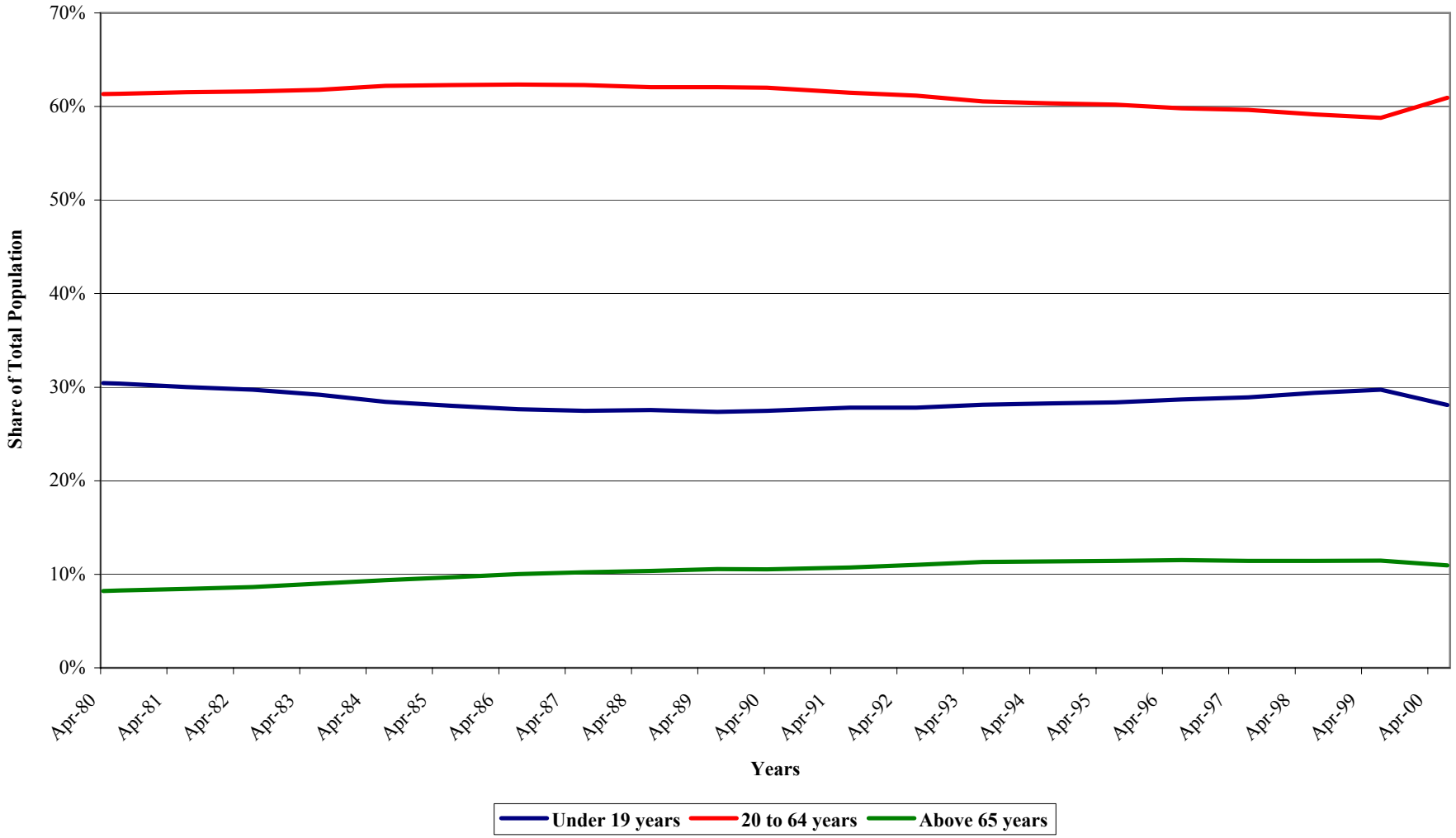
Appendix 1.2-F
Nevada Population Growth by Selected Age Groups
Under 20 years, 20 to 64 years, and 65 years and Over, 1980 - 2000



Appendix 1.2-G
Population Age Distribution Comparison
United States and Nevada, 2000



Appendix 1.2-H
Nevada Population Distribution by Selected Age Groups
Under 20 years, 20 to 64 years, and 65 years and Over, 1980 - 2000



Appendix 1.2-I
Population Migration Figures
Into and Out of the State of Nevada, Tax Years 1988-1989 through 1999-2000

Region	Tax Year Ending 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
State of California													
Into Nevada	25,825	32,397	35,962	32,564	38,587	46,619	45,900	42,335	42,744	38,355	37,280	40,930	**459,498**
Out of Nevada	15,483	15,253	14,905	15,681	13,466	12,493	14,910	15,591	17,121	19,231	19,884	20,467	**194,485**
Net		17,144	21,057	16,883	25,121	34,126	30,990	26,744	25,623	19,124	17,396	20,463	**254,671**
Share of Net Total	0.0%	41.3%	50.0%	68.2%	86.4%	68.9%	71.6%	63.1%	53.9%	49.6%	48.7%	54.5%	**54.5%**
New England States													
Into Nevada	1,080	1,365	1,851	1,602	1,362	1,544	1,500	5,076	1,567	1,533	1,516	1,537	**21,533**
Out of Nevada	766	742	548	728	741	756	805	837	877	941	989	1,119	**9,849**
Net	314	623	1,303	874	621	788	695	4,239	690	592	527	418	**11,684**
Share of Net Total	0.9%	1.5%	3.1%	3.5%	2.1%	1.6%	1.6%	10.0%	1.5%	1.5%	1.5%	1.1%	**2.5%**
Mid Atlantic States													
Into Nevada	3,562	4,584	4,846	4,559	4,478	5,360	5,612	2,363	6,917	6,201	5,887	6,015	**60,384**
Out of Nevada	1,628	1,854	1,620	1,772	1,937	1,831	1,850	1,990	1,972	2,314	2,406	2,682	**23,856**
Net	1,934	2,730	3,226	2,787	2,541	3,529	3,762	373	4,945	3,887	3,481	3,333	**36,528**
Share of Net Total	5.5%	6.6%	7.7%	11.3%	8.7%	7.1%	8.7%	0.9%	10.4%	10.1%	9.7%	8.9%	**7.8%**
East North Central States													
Into Nevada	6,169	6,580	7,258	6,441	6,643	7,621	7,952	3,937	9,541	9,537	9,214	9,099	**89,992**
Out of Nevada	3,384	3,449	3,429	3,988	4,349	3,922	4,457	4,286	4,284	4,501	4,894	5,242	**50,185**
Net	2,785	3,131	3,829	2,453	2,294	3,699	3,495	-349	5,257	5,036	4,320	3,857	**39,807**
Share of Net Total	8.0%	7.5%	9.1%	9.9%	7.9%	7.5%	8.1%	-0.8%	11.1%	13.1%	12.1%	10.3%	**8.5%**
West North Central States													
Into Nevada	4,074	4,131	4,122	3,582	3,323	3,773	3,891	4,767	4,767	5,105	4,562	4,393	**50,490**
Out of Nevada	2,298	2,653	2,767	3,290	3,818	3,286	3,556	3,640	3,581	3,494	3,573	3,449	**39,405**
Net	1,776	1,478	1,355	292	-495	487	335	1,127	1,186	1,611	989	944	**11,085**
Share of Net Total	5.1%	3.6%	3.2%	1.2%	-1.7%	1.0%	0.8%	2.7%	2.5%	4.2%	2.8%	2.5%	**2.4%**

Appendix 1.2-I
Population Migration Figures
Into and Out of the State of Nevada, Tax Years 1988-1989 through 1999-2000

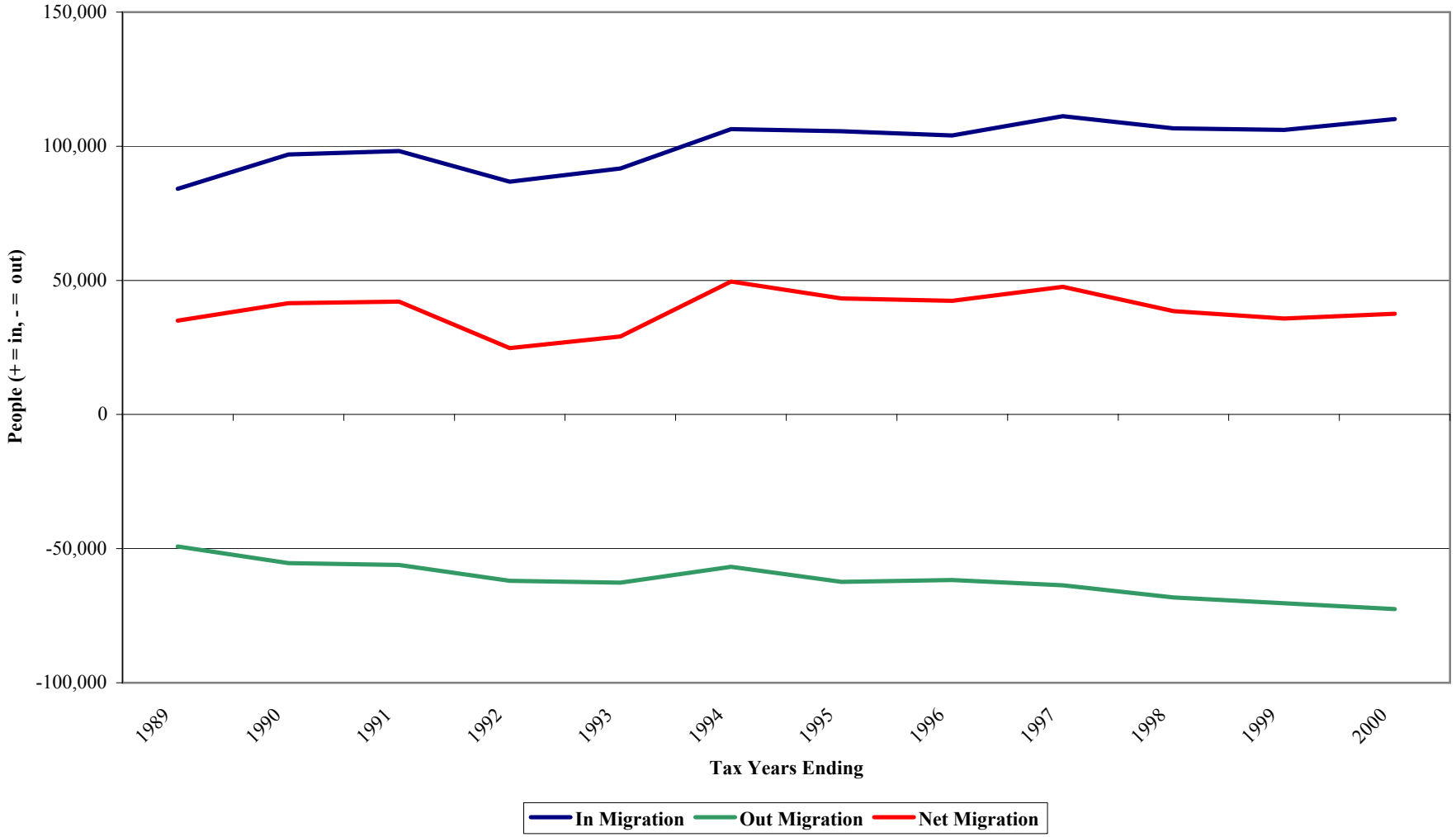
Region	Tax Year Ending 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Total
South Atlantic States													
Into Nevada	4,830	5,423	5,660	5,531	5,751	6,498	6,698	12,242	7,156	7,493	7,712	7,650	**82,644**
Out of Nevada	4,381	4,722	4,325	4,604	5,150	4,239	4,626	5,105	5,299	5,798	6,052	6,241	**60,542**
Net	449	701	1,335	927	601	2,259	2,072	7,137	1,857	1,695	1,660	1,409	**22,102**
Share of Net Total	1.3%	1.7%	3.2%	3.7%	2.1%	4.6%	4.8%	16.8%	3.9%	4.4%	4.6%	3.7%	**4.7%**
East South Central States													
Into Nevada	1,293	1,313	1,302	1,227	1,077	1,383	1,465	5,984	1,790	1,837	1,810	1,940	**22,421**
Out of Nevada	940	1,213	1,182	1,223	2,031	2,538	2,264	1,707	1,574	1,744	2,053	1,752	**20,221**
Net	353	100	120	4	-954	-1,155	-799	4,277	216	93	-243	188	**2,200**
Share of Net Total	1.0%	0.2%	0.3%	0.0%	-3.3%	-2.3%	-1.8%	10.1%	0.5%	0.2%	-0.7%	0.5%	**0.5%**
West South Central States													
Into Nevada	6,076	7,060	6,618	5,754	5,512	5,977	5,742	6,490	6,534	6,441	6,693	6,567	**75,464**
Out of Nevada	3,258	4,037	4,770	5,412	5,358	5,161	5,489	5,041	5,361	5,666	5,570	5,779	**60,902**
Net	2,818	3,023	1,848	342	154	816	253	1,449	1,173	775	1,123	788	**14,562**
Share of Net Total	8.1%	7.3%	4.4%	1.4%	0.5%	1.6%	0.6%	3.4%	2.5%	2.0%	3.1%	2.1%	**3.1%**
Mountain West States													
Into Nevada	23,068	25,409	21,008	16,086	15,660	16,897	16,747	16,183	19,175	18,679	18,954	18,647	**226,513**
Out of Nevada	9,915	12,476	15,045	17,516	18,055	15,701	16,392	15,561	15,530	16,217	16,722	17,418	**186,548**
Net	13,153	12,933	5,963	-1,430	-2,395	1,196	355	622	3,645	2,462	2,232	1,229	**39,965**
Share of Net Total	37.6%	31.2%	14.2%	-5.8%	-8.2%	2.4%	0.8%	1.5%	7.7%	6.4%	6.2%	3.3%	**8.6%**
Pacific West States													
Into Nevada	31,185	38,267	42,327	38,943	44,735	54,214	53,529	46,195	51,628	47,591	47,440	51,750	**547,804**
Out of Nevada	20,804	21,234	20,613	22,004	19,596	18,010	21,392	22,051	23,600	25,924	26,529	27,216	**268,973**
Net	10,381	17,033	21,714	16,939	25,139	36,204	32,137	24,144	28,028	21,667	20,911	24,534	**278,831**
Share of Net Total	29.7%	41.0%	51.6%	68.4%	86.5%	73.1%	74.3%	57.0%	58.9%	56.3%	58.5%	65.3%	**59.7%**

Appendix 1.2-I
Population Migration Figures
Into and Out of the State of Nevada, Tax Years 1988-1989 through 1999-2000

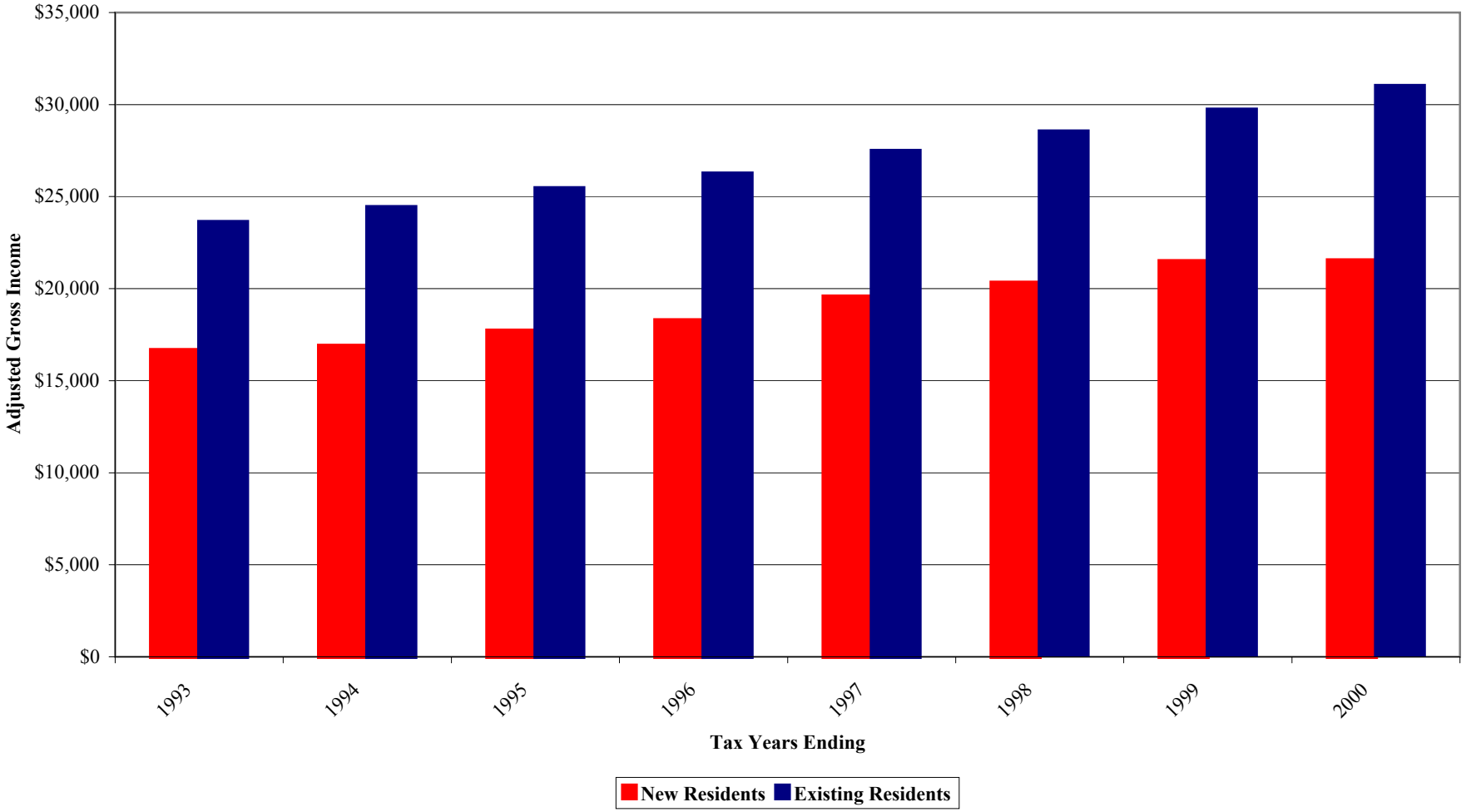
	Tax Year Ending												
Region	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**Total**
Foreign													
Into Nevada	2,784	2,765	3,175	3,060	3,181	3,079	2,488	805	2,170	2,262	2,284	2,477	**30,530**
Out of Nevada	1,778	3,016	1,780	1,495	1,615	1,352	1,540	1,462	1,613	1,562	1,540	1,596	**20,349**
Net	1,006	-251	1,395	1,565	1,566	1,727	948	-657	557	700	744	881	**10,181**
Share of Net Total	2.9%	-0.6%	3.3%	6.3%	5.4%	3.5%	2.2%	-1.6%	1.2%	1.8%	2.1%	2.3%	**2.2%**
Total Migration													
Into Nevada	84,121	96,897	98,167	86,785	91,722	106,346	105,624	104,042	111,245	106,679	106,072	110,075	**1,207,775**
Out of Nevada	49,152	55,396	56,079	62,032	62,650	56,796	62,371	61,680	63,691	68,161	70,328	72,494	**740,830**
Net	34,969	41,501	42,088	24,753	29,072	49,550	43,253	42,362	47,554	38,518	35,744	37,581	**466,945**
Share of Net Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	**100.0%**

Source: United State Internal Revenue Service, State Migration Data Files, 1988 through 2000.

Appendix 1.2-J
Migration in and out Of Nevada
Tax Years Ending, 1989 - 2000



Appendix 1.2-K
Nevada Average Adjusted Gross Income
New and Existing Residents of the State
Tax Years Ending, 1993 - 2000



Appendix 1.2-L
Historical Employment and Sector Share of Total Employment Comparison
Full-Time and Part Time Employment by Industry
Nevada and the United States, 1970 - 2001

NEVADA

	1970		1980		1990		1995		2000		2001	
Employment Sector	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**
Ag. services, forestry, fishing & other	820	0.3%	2,625	0.5%	6,229	0.8%	9,055	0.9%	13,554	1.1%	14,669	1.1%
Mining	4,443	1.7%	6,627	1.4%	15,820	2.1%	15,227	1.6%	12,867	1.0%	11,935	0.9%
Construction	14,250	5.6%	30,857	6.3%	57,954	7.6%	75,516	7.8%	103,180	8.1%	105,203	8.1%
Manufacturing	8,871	3.5%	20,170	4.1%	28,314	3.7%	39,571	4.1%	47,591	3.7%	49,478	3.8%
Transportation and public utilities	14,042	5.5%	25,543	5.2%	35,332	4.6%	44,674	4.6%	61,818	4.9%	63,647	4.9%
Wholesale trade	7,006	2.7%	13,973	2.9%	25,975	3.4%	33,263	3.4%	42,176	3.3%	42,398	3.2%
Retail trade	38,371	15.0%	76,840	15.7%	117,641	15.3%	150,929	15.6%	203,594	16.0%	210,233	16.1%
Finance, insurance, and real estate	15,991	6.2%	36,576	7.5%	52,392	6.8%	69,894	7.2%	122,021	9.6%	128,935	9.9%
Services	98,838	38.6%	199,909	40.8%	331,693	43.3%	417,663	43.1%	531,614	41.8%	538,212	41.2%
Hotels and other lodging places (1)	33,210	*13.0%*	65,204	*13.3%*	152,491	*19.9%*	187,752	*19.4%*	229,073	*18.0%*	238,587	*18.3%*
Government and government enterprises	48,909	19.1%	71,288	14.6%	90,133	11.8%	107,861	11.1%	129,021	10.1%	135,754	10.4%
Total employment	**256,144**	**100.0%**	**489,856**	**100.0%**	**766,744**	**100.0%**	**968,209**	**100.0%**	**1,272,928**	**100.0%**	**1,306,005**	**100.0%**

UNITED STATES

	1970		1980		1990		1995		2000		2001	
Employment Sector	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**
Ag. services, forestry, fishing & other	525,300	0.6%	909,000	0.8%	1,453,000	1.0%	1,789,300	1.2%	2,141,100	1.3%	2,195,900	1.3%
Mining	743,900	0.8%	1,277,600	1.1%	1,044,100	0.7%	883,900	0.6%	782,200	0.5%	810,200	0.5%
Construction	4,398,800	4.8%	5,654,200	4.9%	7,260,800	5.2%	7,731,500	5.2%	9,523,300	5.7%	9,596,400	5.7%
Manufacturing	19,687,400	21.6%	20,781,100	18.2%	19,697,200	14.1%	19,186,300	12.8%	19,107,800	11.4%	18,240,100	10.9%
Transportation and public utilities	4,865,500	5.3%	5,672,100	5.0%	6,568,600	4.7%	7,076,200	4.7%	8,262,400	4.9%	8,316,000	5.0%
Wholesale trade	4,172,700	4.6%	5,741,700	5.0%	6,711,500	4.8%	6,930,500	4.6%	7,582,100	4.5%	7,313,700	4.4%
Retail trade	13,698,800	15.0%	17,883,900	15.7%	22,920,500	16.4%	25,204,200	16.9%	27,387,300	16.4%	27,452,600	16.4%
Finance, insurance, and real estate	6,125,400	6.7%	8,756,000	7.7%	10,712,600	7.7%	11,037,800	7.4%	13,206,800	7.9%	13,645,800	8.1%
Services	17,029,800	18.7%	24,999,600	21.9%	38,709,600	27.8%	44,768,100	30.0%	53,440,800	31.9%	53,725,900	32.1%
Hotels and other lodging places (1)	986,500	*1.1%*	1,251,000	*1.1%*	1,819,500	*1.3%*	1,884,100	*1.3%*	2,124,600	*1.3%*	2,157,793	*1.3%*
Government and government enterprises	16,073,000	17.6%	18,758,000	16.4%	21,196,000	15.2%	21,645,000	14.5%	22,740,000	13.6%	23,164,000	13.8%
Total employment	**91,281,600**	**100.0%**	**114,231,200**	**100.0%**	**139,426,900**	**100.0%**	**149,358,800**	**100.0%**	**167,283,800**	**100.0%**	**167,535,600**	**100.0%**

Source: United States Bureau of Economic Analysis.

Notes: (1) Hotels and other lodging places for 2001 was not available.

Appendix 1.2-M
Compound Annual Employment Growth by Sector
Full-Time and Part Time Employment by Industry
Nevada and the United States, 1970 - 2001

NEVADA

Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	12.3%	9.0%	7.8%	8.4%	8.2%
Mining	4.1%	9.1%	-0.8%	-3.3%	-7.2%
Construction	8.0%	6.5%	5.4%	6.4%	2.0%
Manufacturing	8.6%	3.4%	6.9%	3.8%	4.0%
Transportation and public utilities	6.2%	3.3%	4.8%	6.7%	3.0%
Wholesale trade	7.1%	6.4%	5.1%	4.9%	0.5%
Retail trade	7.2%	4.4%	5.1%	6.2%	3.3%
Finance, insurance, and real estate	8.6%	3.7%	5.9%	11.8%	5.7%
Services	7.3%	5.2%	4.7%	4.9%	1.2%
Hotels and other lodging places (1)	7.0%	8.9%	4.2%	4.1%	4.2%
Government and government enterprises	3.8%	2.4%	3.7%	3.6%	5.2%
Total employment	**6.7%**	**4.6%**	**4.8%**	**5.6%**	**2.6%**

UNITED STATES

Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	5.6%	4.8%	4.3%	3.7%	2.6%
Mining	5.6%	-2.0%	-3.3%	-2.4%	3.6%
Construction	2.5%	2.5%	1.3%	4.3%	0.8%
Manufacturing	0.5%	-0.5%	-0.5%	-0.1%	-4.5%
Transportation and public utilities	1.5%	1.5%	1.5%	3.1%	0.6%
Wholesale trade	3.2%	1.6%	0.6%	1.8%	-3.5%
Retail trade	2.7%	2.5%	1.9%	1.7%	0.2%
Finance, insurance, and real estate	3.6%	2.0%	0.6%	3.7%	3.3%
Services	3.9%	4.5%	3.0%	3.6%	0.5%
Hotels and other lodging places (1)	2.4%	3.8%	0.7%	2.4%	1.6%
Government and government enterprises	1.6%	1.2%	0.4%	1.0%	1.9%
Total employment	**2.3%**	**2.0%**	**1.4%**	**2.3%**	**0.2%**

Source: United States Bureau of Economic Analysis.

Notes: (1) Hotels and other lodging places for 2001 was not available. Calculations are based on a historical compound annual growth rate.

Appendix 1.2-N
Historical Employment and Sector Share of Total Employment Comparison
Wage and Salary Employment by Industry
Nevada and the United States, 1970 - 2001

NEVADA

	1970		1980		1990		1995		2000		2001	
Employment Sector	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**
Ag. services, forestry, fishing & other	528	0.2%	1,528	0.4%	4,433	0.7%	6,466	0.8%	10,517	1.0%	11,633	1.1%
Mining	4,052	1.8%	6,172	1.4%	14,406	2.2%	13,280	1.6%	11,074	1.0%	10,143	0.9%
Construction	12,763	5.6%	27,520	6.3%	49,501	7.4%	65,509	7.9%	92,226	8.6%	94,045	8.5%
Manufacturing	8,459	3.7%	19,320	4.4%	26,494	4.0%	36,972	4.4%	44,827	4.2%	46,690	4.2%
Transportation and public utilities	13,679	6.0%	24,302	5.6%	32,642	4.9%	41,077	4.9%	56,831	5.3%	58,525	5.3%
Wholesale trade	6,454	2.8%	13,358	3.1%	24,069	3.6%	30,595	3.7%	39,292	3.6%	39,492	3.6%
Retail trade	33,528	14.8%	69,130	15.9%	103,566	15.6%	130,818	15.7%	180,383	16.7%	187,211	17.0%
Finance, insurance, and real estate	8,660	3.8%	19,604	4.5%	29,612	4.5%	37,341	4.5%	48,738	4.5%	51,069	4.6%
Services	87,833	38.7%	179,764	41.4%	287,480	43.2%	362,202	43.4%	461,465	42.8%	466,391	42.3%
Hotels and other lodging places (1)	31,984	*14.1%*	64,327	*14.8%*	151,608	*22.8%*	186,555	*22.4%*	227,825	*21.2%*	237,295	*21.5%*
Government and government enterprises	48,909	21.5%	71,288	16.4%	90,133	13.6%	107,861	12.9%	129,021	12.0%	135,754	12.3%
Total employment	**227,121**	**100.0%**	**434,484**	**100.0%**	**665,109**	**100.0%**	**833,758**	**100.0%**	**1,076,948**	**100.0%**	**1,103,576**	**100.0%**

UNITED STATES

	1970		1980		1990		1995		2000		2001	
Employment Sector	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**	**Employment**	**% of Total**
Ag. services, forestry, fishing & other	323,000	0.4%	570,000	0.6%	979,000	0.8%	1,161,000	0.9%	1,449,000	1.0%	1,491,000	1.1%
Mining	628,000	0.8%	1,040,000	1.1%	715,000	0.6%	587,000	0.5%	540,000	0.4%	568,000	0.4%
Construction	3,615,000	4.6%	4,493,000	4.6%	5,340,000	4.5%	5,385,000	4.3%	7,005,000	5.0%	7,040,000	5.1%
Manufacturing	19,442,000	24.7%	20,432,000	20.9%	19,206,000	16.3%	18,594,000	14.9%	18,566,000	13.3%	17,695,000	12.7%
Transportation and public utilities	4,525,000	5.7%	5,178,000	5.3%	5,820,000	4.9%	6,172,000	4.9%	7,108,000	5.1%	7,115,000	5.1%
Wholesale trade	3,825,000	4.9%	5,346,000	5.5%	6,294,000	5.4%	6,476,000	5.2%	7,102,000	5.1%	6,830,000	4.9%
Retail trade	11,598,000	14.7%	15,487,000	15.8%	20,214,000	17.2%	21,868,000	17.5%	24,047,000	17.2%	24,140,000	17.3%
Finance, insurance, and real estate	3,757,000	4.8%	5,363,000	5.5%	6,870,000	5.8%	6,929,000	5.5%	7,742,000	5.5%	7,857,000	5.6%
Services	13,767,000	17.5%	19,924,000	20.4%	30,086,000	25.6%	35,172,000	28.2%	42,338,000	30.3%	42,395,000	30.5%
Hotels and other lodging places (1)	847,000	*1.1%*	1,144,000	*1.2%*	1,730,000	*1.5%*	1,757,000	*1.4%*	1,981,000	*1.4%*	2,008,021	*1.4%*
Government and government enterprises	16,073,000	20.4%	18,758,000	19.2%	21,196,000	18.0%	21,645,000	17.3%	22,740,000	16.3%	23,164,000	16.6%
Total employment	**78,797,000**	**100.0%**	**97,894,000**	**100.0%**	**117,640,000**	**100.0%**	**124,857,000**	**100.0%**	**139,527,000**	**100.0%**	**139,165,000**	**100.0%**

Source: United States Bureau of Economic Analysis.

Notes: (1) Hotels and other lodging places for 2001 was not available.

Appendix 1.2-O
Compound Annual Employment Growth by Sector
Wage and Salary Employment by Industry
Nevada and the United States, 1970 - 2001

NEVADA

Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	11.2%	11.2%	7.8%	10.2%	10.6%
Mining	4.3%	8.8%	-1.6%	-3.6%	-8.4%
Construction	8.0%	6.0%	5.8%	7.1%	2.0%
Manufacturing	8.6%	3.2%	6.9%	3.9%	4.2%
Transportation and public utilities	5.9%	3.0%	4.7%	6.7%	3.0%
Wholesale trade	7.5%	6.1%	4.9%	5.1%	0.5%
Retail trade	7.5%	4.1%	4.8%	6.6%	3.8%
Finance, insurance, and real estate	8.5%	4.2%	4.7%	5.5%	4.8%
Services	7.4%	4.8%	4.7%	5.0%	1.1%
Hotels and other lodging places (1)	7.2%	9.0%	4.2%	4.1%	4.2%
Government and government enterprises	3.8%	2.4%	3.7%	3.6%	5.2%
Total employment	**6.7%**	**4.3%**	**4.6%**	**5.3%**	**2.5%**

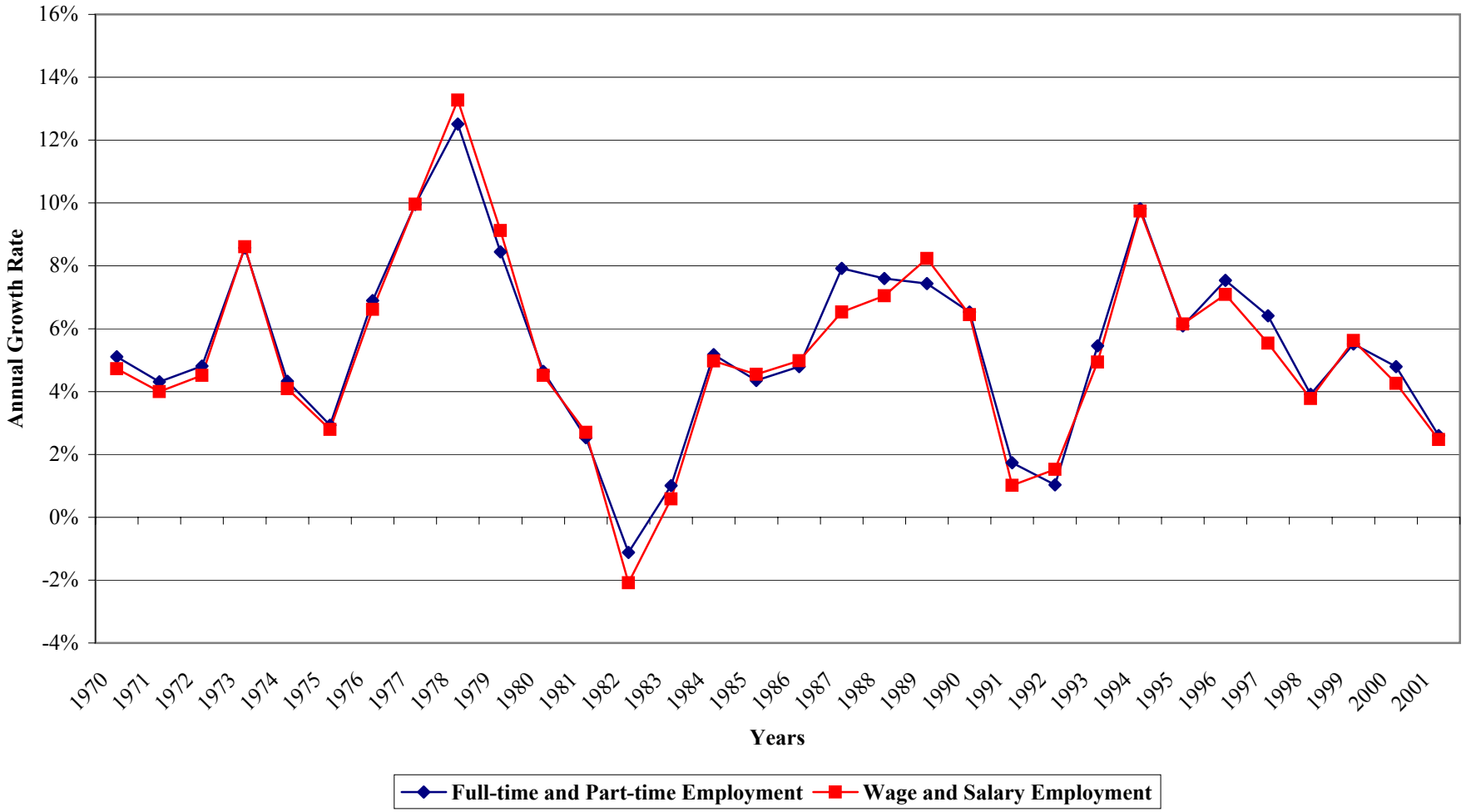
UNITED STATES

Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	5.8%	5.6%	3.5%	4.5%	2.9%
Mining	5.2%	-3.7%	-3.9%	-1.7%	5.2%
Construction	2.2%	1.7%	0.2%	5.4%	0.5%
Manufacturing	0.5%	-0.6%	-0.6%	0.0%	-4.7%
Transportation and public utilities	1.4%	1.2%	1.2%	2.9%	0.1%
Wholesale trade	3.4%	1.6%	0.6%	1.9%	-3.8%
Retail trade	2.9%	2.7%	1.6%	1.9%	0.4%
Finance, insurance, and real estate	3.6%	2.5%	0.2%	2.2%	1.5%
Services	3.8%	4.2%	3.2%	3.8%	0.1%
Hotels and other lodging places (1)	3.1%	4.2%	0.3%	2.4%	1.4%
Government and government enterprises	1.6%	1.2%	0.4%	1.0%	1.9%
Total employment	**2.2%**	**1.9%**	**1.2%**	**2.2%**	**-0.3%**

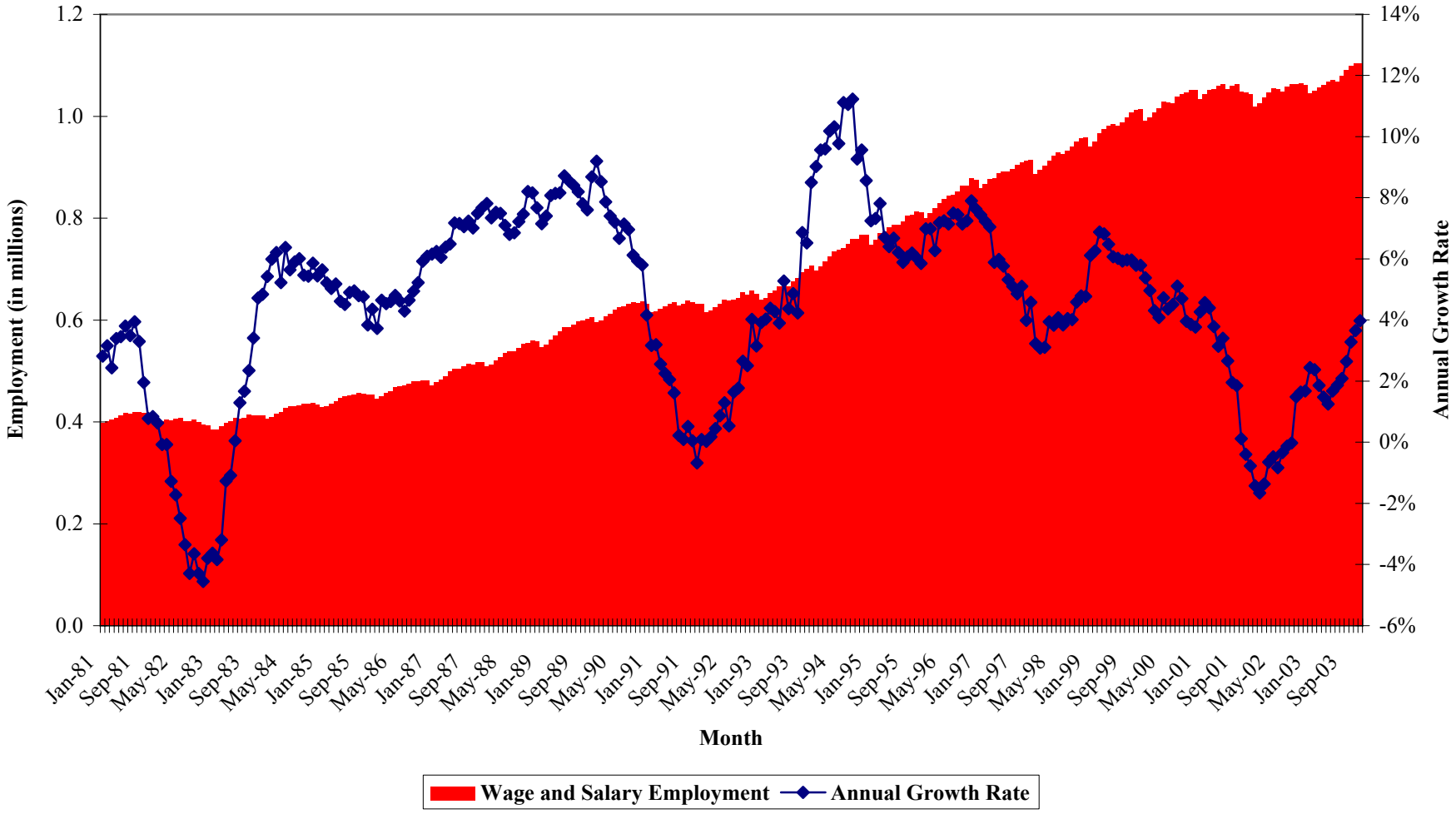
Source: United States Bureau of Economic Analysis.

Notes: (1) Hotels and other lodging places for 2001 was not available. Calculations are based on a historical compound annual growth rate.

Appendix 1.2-P
Annual Employment Growth
Full-Time and Part-Time Employment and Wage and Salary Employment
Nevada, 1970 - 2001



Appendix 1.2-Q
Nevada Wage and Salary Employment
Total Employment and Year-Over-Year Growth Rates
1981 - 2003



Appendix 1.2-R
Detailed Employment Share Comparison
Full-Time and Part-Time Employment by Industry
Nevada and the United States, 2000 (1)

Item	Nevada	% of Total	United States	% of Total
Total employment	**1,272,928**	**100.0%**	**167,283,800**	**100.0%**
By type				
Wage and salary employment	1,076,948	84.6%	139,527,000	83.4%
Proprietors' employment	195,980		27,756,800	16.6%
Farm proprietors' employment	2,918	0.2%	2,220,000	1.3%
Nonfarm proprietors' employment	193,062	15.2%	25,536,800	15.3%
By industry				
Farm employment	**5,492**	**0.4%**	**3,110,000**	**1.9%**
Nonfarm employment	**1,267,436**	**99.6%**	**164,173,800**	**98.1%**
Private employment	**1,138,415**	**89.4%**	**141,433,800**	**84.5%**
Ag. services, forestry, fishing & other	**13,554**	**1.1%**	**2,141,100**	**1.3%**
Agricultural services	13,170	1.0%	1,913,500	1.1%
Forestry, fishing, and other	384	0.0%	227600	0.1%
Forestry	124	0.0%	89800	0.1%
Fishing	260	0.0%	117800	0.1%
Other	0	0.0%	20000	0.0%
Mining	**12,867**	**1.0%**	**782,200**	**0.5%**
Metal mining	9,788	0.8%	45,000	0.0%
Coal mining	7	0.0%	80400	0.0%
Oil and gas extraction	1,277	0.1%	534,800	0.3%
Nonmetallic minerals, except fuels	1,795	0.1%	122,000	0.1%
Construction	**103,180**	**8.1%**	**9,523,300**	**5.7%**
General building contractors	19,644	1.5%	2,053,200	1.2%
Heavy construction contractors	11,482	0.9%	996,300	0.6%
Special trade contractors	72,054	5.7%	6,473,800	3.9%

Appendix 1.2-R
Detailed Employment Share Comparison
Full-Time and Part-Time Employment by Industry
Nevada and the United States, 2000 (1)

Item	Nevada	% of Total	United States	% of Total
Manufacturing	**47,591**	**3.7%**	**19,107,800**	**11.4%**
Durable goods	29,305	2.3%	11,527,300	6.9%
Lumber and wood products	2,548	0.2%	928,000	0.6%
Furniture and fixtures	1,150	0.1%	600,300	0.4%
Stone, clay, and glass products	4,037	0.3%	610,800	0.4%
Primary metal industries	1,167	0.1%	705,800	0.4%
Fabricated metal products	4,702	0.4%	1,592,000	1.0%
Industrial machinery and equipment	2,876	0.2%	2,147,700	1.3%
Electronic and other electric equipment	2,765	0.2%	1,744,900	1.0%
Motor vehicles and equipment	427	0.0%	1020200	0.6%
Other transportation equipment	713	0.1%	845500	0.5%
Instruments and related products	2,810	0.2%	842,800	0.5%
Miscellaneous manufacturing industries	6,110	0.5%	489,300	0.3%
Ordnance	n/a	n/a	n/a	n/a
Nondurable goods	18,286	1.4%	7,580,500	4.5%
Food and kindred products	3,741	0.3%	1,729,600	1.0%
Tobacco products	n/a	n/a	**35800**	0.0%
Textile mill products	n/a	n/a	**542500**	0.3%
Apparel and other textile products	1,284	0.1%	683,000	0.4%
Paper and allied products	679	0.1%	660800	0.4%
Printing and publishing	6,764	0.5%	1,654,100	1.0%
Chemicals and allied products	1,464	0.1%	1,054,800	0.6%
Petroleum and coal products	168	0.0%	127400	0.1%
Rubber and misc. plastics products	4,029	0.3%	1,018,500	0.6%
Leather and leather products	86	0.0%	74000	0.0%

Appendix 1.2-R
Detailed Employment Share Comparison
Full-Time and Part-Time Employment by Industry
Nevada and the United States, 2000 (1)

Item	Nevada	% of Total	United States	% of Total
Transportation and public utilities	**61,818**	**4.9%**	**8,262,400**	**4.9%**
Railroad transportation	778	0.1%	212000	0.1%
Trucking and warehousing	11,317	0.9%	2,621,000	1.6%
Water transportation	n/a	n/a	**201400**	0.1%
Other transportation	n/a	n/a	**2593600**	1.6%
Local and interurban passenger transit	11,900	0.9%	658,800	0.4%
Transportation by air	11,893	0.9%	1,318,100	0.8%
Pipelines, except natural gas	n/a	n/a	**13000**	0.0%
Transportation services	4,752	0.4%	603,700	0.4%
Communications	13,095	1.0%	1,756,400	1.0%
Electric, gas, and sanitary services	7,533	0.6%	878,000	0.5%
Wholesale trade	**42,176**	**3.3%**	**7,582,100**	**4.5%**
Retail trade	**203,594**	**16.0%**	**27,387,300**	**16.4%**
Building materials and garden equipment	7,691	0.6%	1,117,800	0.7%
General merchandise stores	20,356	1.6%	3,024,600	1.8%
Food stores	24,751	1.9%	3,736,300	2.2%
Automotive dealers and service stations	20,127	1.6%	2,699,600	1.6%
Apparel and accessory stores	10,158	0.8%	1,339,700	0.8%
Home furniture and furnishings stores	9,243	0.7%	1,283,600	0.8%
Eating and drinking places	67,961	5.3%	8,761,200	5.2%
Miscellaneous retail	43,307	3.4%	5,424,500	3.2%

Appendix 1.2-R
Detailed Employment Share Comparison
Full-Time and Part-Time Employment by Industry
Nevada and the United States, 2000 (1)

Item	Nevada	% of Total	United States	% of Total
Finance, insurance, and real estate	**122,021**	**9.6%**	**13,206,800**	**7.9%**
Depository and nondepository institutions	18,929	1.5%	2,801,500	1.7%
Other finance, insurance, and real estate	103,092	8.1%	10,405,300	6.2%
Security and commodity brokers	4,116	0.3%	956,500	0.6%
Insurance carriers	7,769	0.6%	1,585,000	0.9%
Insurance agents, brokers, and services	7,776	0.6%	1,350,300	0.8%
Real estate	48,896	3.8%	4,808,200	2.9%
Combined real estate, insurance, etc.	n/a	n/a	n/a	n/a
Holding and other investment offices	34,535	2.7%	1,705,300	1.0%
Services	**531,614**	**41.8%**	**53,440,800**	**31.9%**
Hotels and other lodging places	229,073	18.0%	2,124,600	1.3%
Personal services	23,159	1.8%	2,912,200	1.7%
Private households	4,966	0.4%	1,208,000	0.7%
Business services	77,410	6.1%	12,372,500	7.4%
Auto repair, services, and parking	13,541	1.1%	1,797,500	1.1%
Miscellaneous repair services	5,021	0.4%	796,800	0.5%
Amusement and recreation services	42,015	3.3%	3,271,400	2.0%
Motion pictures	4,227	0.3%	705,200	0.4%
Health services	56,803	4.5%	11,511,000	6.9%
Legal services	9,100	0.7%	1,596,200	1.0%
Educational services	5,906	0.5%	3,121,700	1.9%
Social services	11,113	0.9%	2,992,000	1.8%
Museums, botanical, zoological gardens	245	0.0%	106000	0.1%
Membership organizations	9,259	0.7%	2,589,000	1.5%
Engineering and management services	36,016	2.8%	5,361,300	3.2%

Appendix 1.2-R
Detailed Employment Share Comparison
Full-Time and Part-Time Employment by Industry
Nevada and the United States, 2000 (1)

Item	Nevada	% of Total	United States	% of Total
Government and government enterprises	**129,021**	**10.1%**	**22,740,000**	**13.6%**
Federal, civilian	15,357	1.2%	2,892,000	1.7%
Military	11,616	0.9%	2,074,000	1.2%
State and local	102,048	8.0%	17,774,000	10.6%
State	25,846	2.0%	4,949,000	3.0%
Local	76,202	6.0%	12,825,000	7.7%

Source: United States Bureau of Economic Analysis.
Notes: (1) Detailed data for 2001 was not available.

Appendix 1.2-S

Nevada Employment Shift-Share Analysis

National Growth, Industry Mix, and Regional Shift, 1990 - 2000

	Employment (1)				Employment Growth (2)		National	Standardized Employment (4)	
Employment Sector	**1990**	**% of Total**	**2000**	**% of Total**	**Net Growth**	**Percent**	**Growth Rate (3)**	**Net Growth**	**Total**
Ag. services, forestry, fishing & other	4,433	0.7%	10,517	1.0%	6,084	137.2%	48.0%	2,128	6,561
Mining	14,406	2.2%	11,074	1.0%	-3,332	-23.1%	-24.5%	-3,526	10,880
Construction	49,501	7.5%	92,226	8.4%	42,725	86.3%	31.2%	15,434	64,935
Manufacturing	26,494	4.0%	44,827	4.1%	18,333	69.2%	-3.3%	-883	25,611
Transportation and public utilities	32,642	4.9%	56,831	5.2%	24,189	74.1%	22.1%	7,224	39,866
Wholesale trade	24,069	3.6%	39,292	3.6%	15,223	63.2%	12.8%	3,090	27,159
Retail trade	103,566	15.6%	180,383	16.4%	76,817	74.2%	19.0%	19,638	123,204
Finance, insurance, and real estate	29,612	4.5%	48,738	4.4%	19,126	64.6%	12.7%	3,759	33,371
Hotels and other lodging places	151,608	22.9%	227,825	20.7%	76,217	50.3%	42.3%	64,164	215,772
Other Services	135,872	20.5%	233,640	21.2%	97,768	72.0%	14.5%	19,713	155,585
Government and government enterprises									
Federal, civilian	12,302	1.9%	15,357	1.4%	3,055	24.8%	-10.5%	-1,298	11,004
Military	13,271	2.0%	11,616	1.1%	-1,655	-12.5%	-23.7%	-3,144	10,127
State and local	64,560	9.7%	102,048	9.3%	37,488	58.1%	16.6%	10,710	75,270
TOTAL	**662,336**	**100.0%**	**1,074,374**	**97.6%**	**412,038**	**62.2%**	**20.7%**	**137,010**	**799,346**

Appendix 1.2-S

Nevada Employment Shift-Share Analysis

National Growth, Industry Mix, and Regional Shift, 1990 - 2000

	National Growth (5)		Industry Mix (6)		Regional Shift (7)		Total		
Employment Sector	**Percent**	**Net Change**	**Percent**	**Net Change**	**Percent**	**Net Change**	**Percent**	**Net Growth**	**Employment**
Ag. services, forestry, fishing & other	18.8%	833	29.2%	1,295	89.2%	3,956	137.2%	6,084	10,517
Mining	18.8%	2,708	-43.3%	-6,234	1.3%	194	-23.1%	-3,332	11,074
Construction	18.8%	9,306	12.4%	6,128	55.1%	27,291	86.3%	42,725	92,226
Manufacturing	18.8%	4,981	-22.1%	-5,864	72.5%	19,216	69.2%	18,333	44,827
Transportation and public utilities	18.8%	6,137	3.3%	1,087	52.0%	16,965	74.1%	24,189	56,831
Wholesale trade	18.8%	4,525	-6.0%	-1,435	50.4%	12,133	63.2%	15,223	39,292
Retail trade	18.8%	19,470	0.2%	168	55.2%	57,179	74.2%	76,817	180,383
Finance, insurance, and real estate	18.8%	5,567	-6.1%	-1,808	51.9%	15,367	64.6%	19,126	48,738
Hotels and other lodging places	18.8%	28,502	23.5%	35,662	7.9%	12,053	50.3%	76,217	227,825
Other Services	18.8%	25,544	-4.3%	-5,831	57.4%	78,055	72.0%	97,768	233,640
Government and government enterprises									
Federal, civilian	18.8%	2,313	-29.3%	-3,610	35.4%	4,353	24.8%	3,055	15,357
Military	18.8%	2,495	-42.5%	-5,639	11.2%	1,489	-12.5%	-1,655	11,616
State and local	18.8%	12,137	-2.2%	-1,427	41.5%	26,778	58.1%	37,488	102,048
TOTAL	**18.8%**	**124,519**	**1.9%**	**12,491**	**41.5%**	**275,028**	**62.2%**	**412,038**	**1,074,374**

Source: United States Bureau of Economic Analysis.

(1) State of Nevada wage and salary employment, 1990 and 2000.

(2) Change in employment by sector and percentage growth rate between 1990 and 2000.

(3) Rate of growth experienced by each sector nationally.

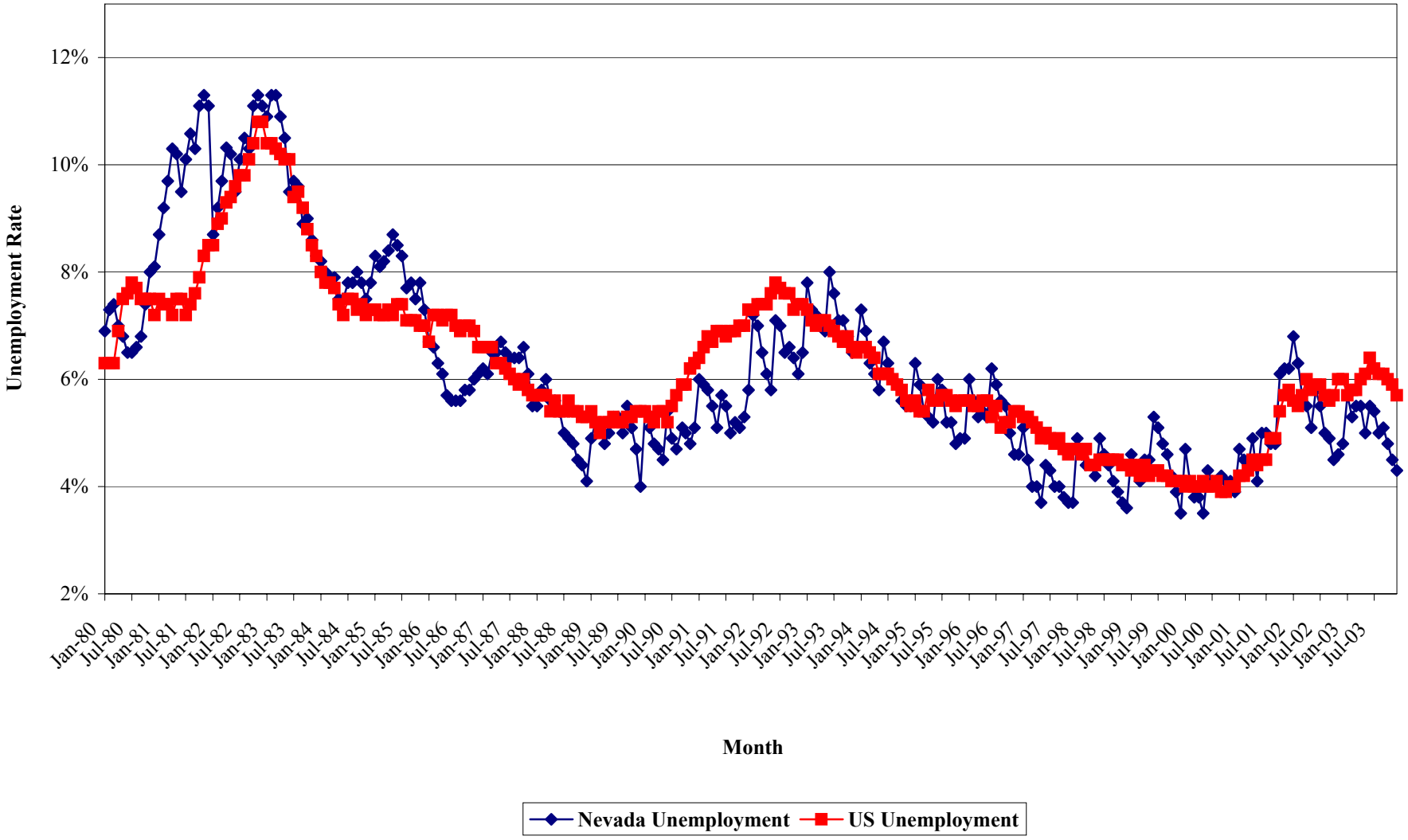
(4) Growth that would have occurred should Nevada's industries have grown at the same rate as their national counterparts.

(5) National Growth - Increase in employment that would have occurred if each industrial sector had grown at the national average.

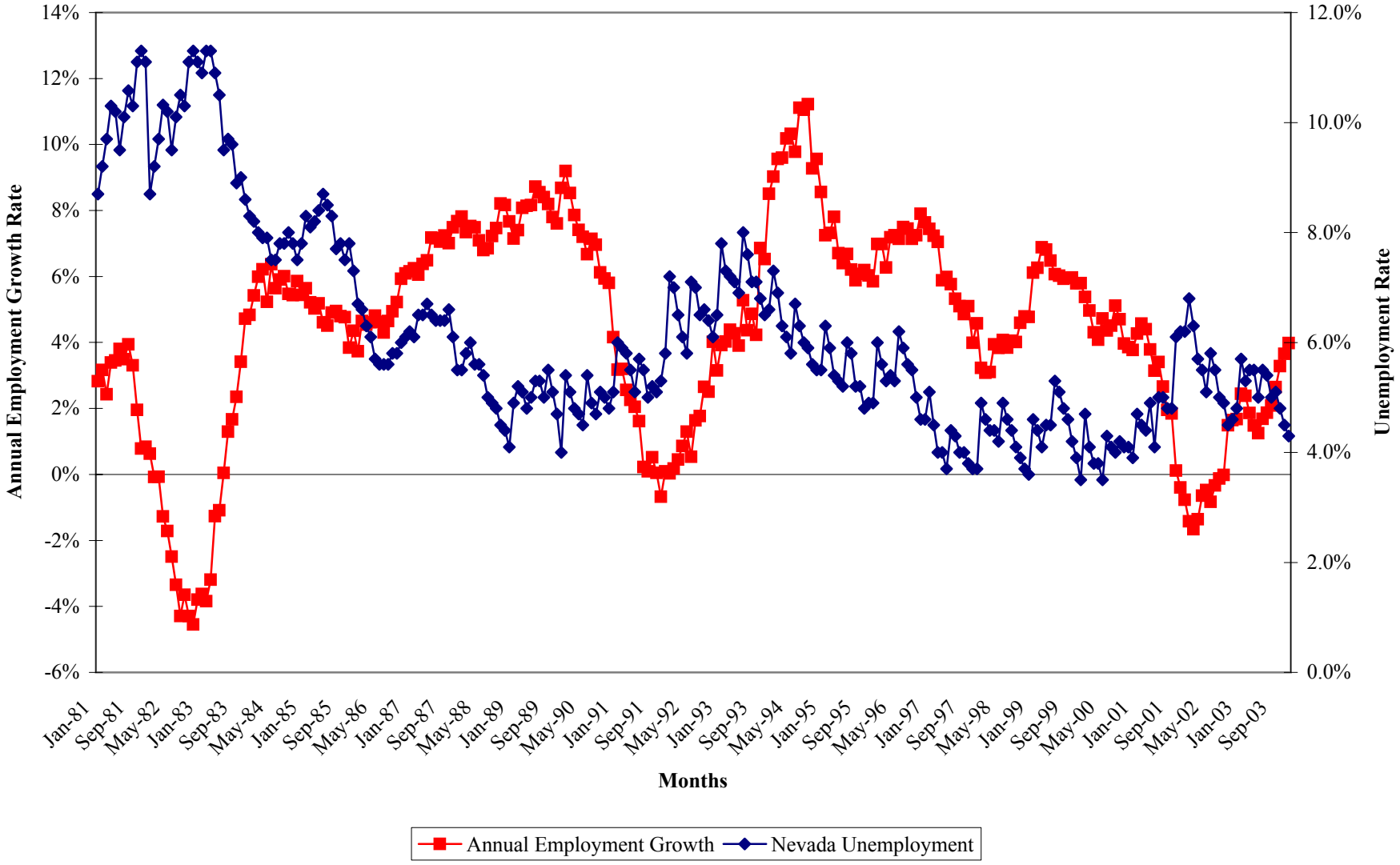
(6) Industry Mix - The additional gain or loss in each sector resulting form that sector's ability to exceed the national average for all sectors.

(7) Regional Shift or Industry Mix - The additional gain or loss resulting the each sector's ability to grow faster in Nevada versus the national average.

Appendix 1.2-T
Unemployment Rates
Nevada & United States, 1980 - 2003



Appendix 1.2-U
Employment Growth and Unemployment Rate Comparison
1981 - 2003



Appendix 1.2-V
Historical and Projected Nevada Employment
Non-farm Employment by Sector, 1970 - 2020

Employment Sector	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020
Total Non-Farm Employment	239,421	312,631	462,689	522,520	714,381	907,502	1,209,251	1,375,360	1,428,606	1,450,651	1,464,529
Average Annual Growth		6.1%	9.6%	2.6%	7.3%	5.4%	6.7%	2.7%	0.8%	0.3%	0.2%
Private Non-Farm Employment	191,936	257,640	395,035	449,095	628,712	802,777	1,083,986	1,169,815	1,200,466	1,215,801	1,225,687
Ag. services, forestry, fishing & other	753	1,325	2,399	3,383	5,310	8,510	12,848	13,701	14,396	15,797	17,067
Mining	4,360		5,096	7,319	15,060	14,196	13,904	10,419	8,675	7,501	6,654
Construction	13,463	18,002	32,221	28,329	55,583	68,909	104,797	100,938	95,659	91,821	90,840
Manufacturing	8,446	12,788	20,331	21,978	27,334	36,728	45,495	44,782	43,565	43,429	43,854
Transportation and public utilities	13,551	17,227	24,307	26,745	33,143	42,325	57,634	64,204	67,878	70,409	71,859
Wholesale trade	6,597	9,157	13,394	15,891	24,278	30,319	40,552	41,336	39,956	38,412	36,510
Retail trade	36,096	48,178	73,839	81,529	111,899	141,495	191,219	213,456	214,746	218,111	218,438
Finance, insurance, and real estate	14,121	22,424	34,817	38,518	49,202	60,029	110,719	104,177	103,452	100,086	96,040
Services	94,549	123,805	188,631	225,403	306,903	400,266	506,818	577,565	612,356	630,120	644,043
Government and government enterprises	47,485	54,991	67,654	73,425	85,669	104,725	125,265	145,528	151,162	153,495	154,963

Sources: United States Bureau of Labor Statistics; Nevada Department of Employment, Training and Rehabilitation, and Nevada State Demographer.

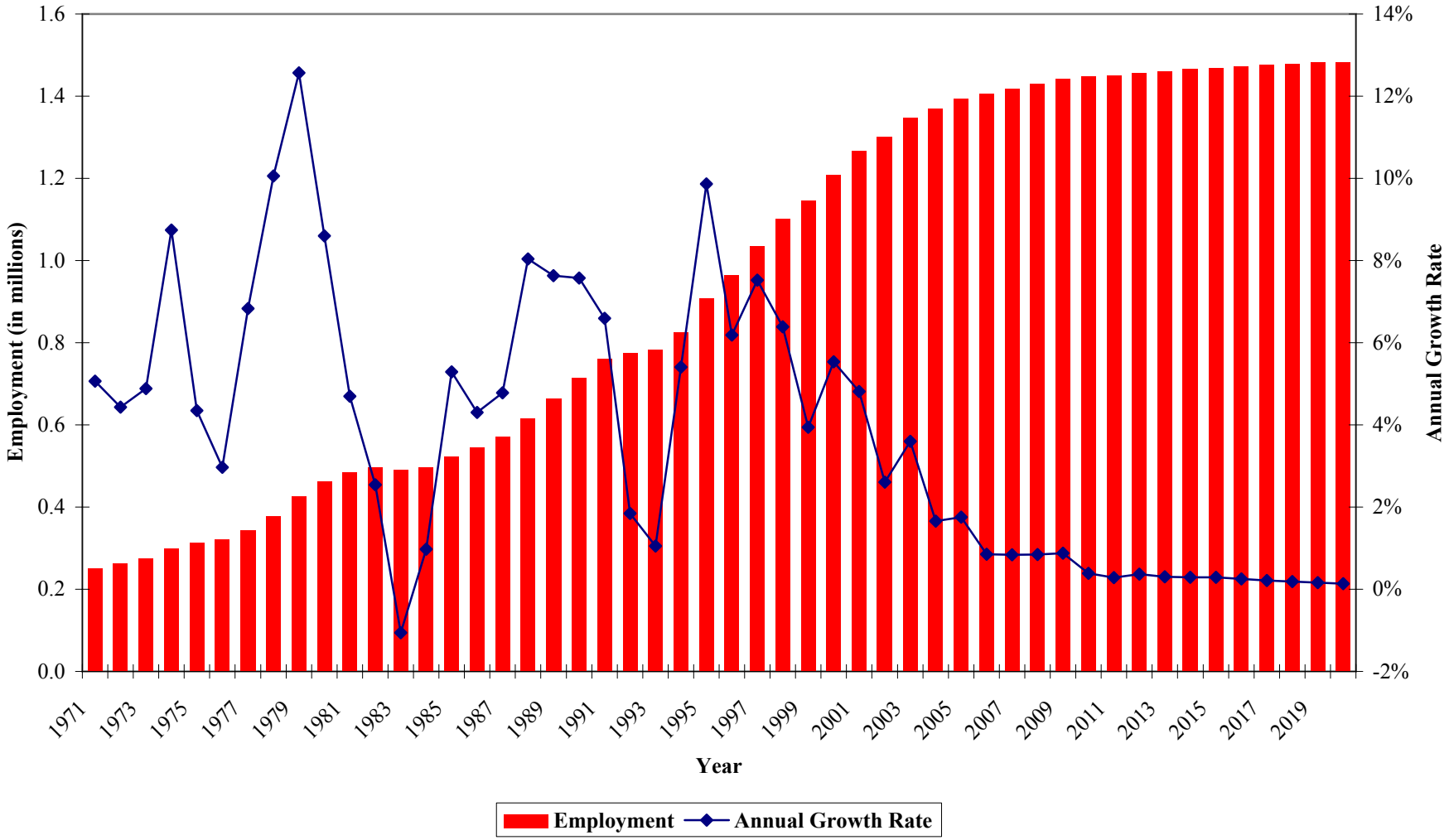
Notes:

(1) Totals may be greater than the sum of industries because it includes employment not allocated or not shown.

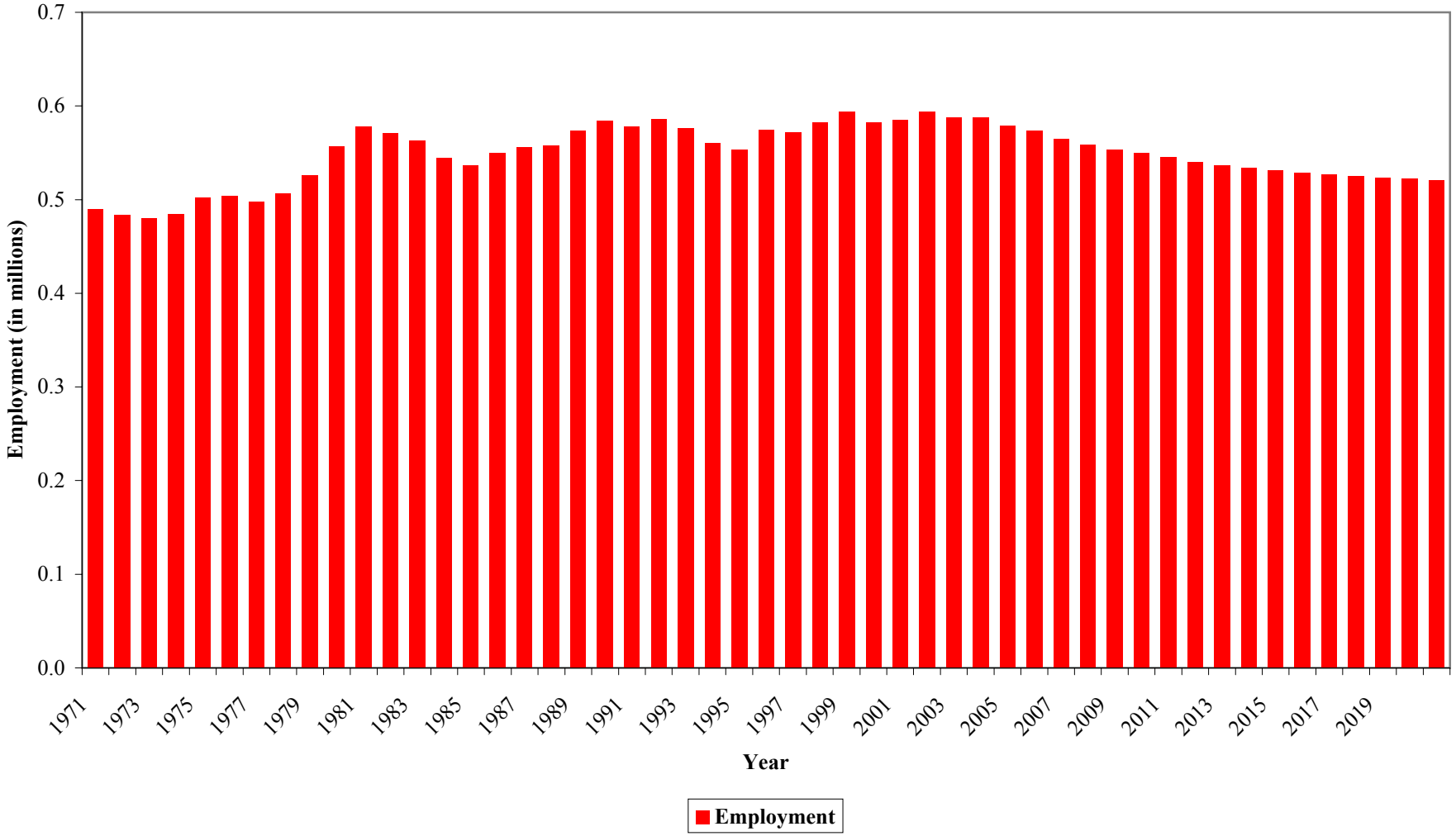
(2) Rounding errors may also cause some totals not to sum to 100 percent.

(3) In order to match projections with history, the years needed to be shifted. As such, estimates may not be consistent with previously reported data.

Appendix 1.2-W
Nevada Employment projections
Full-Time and Part Time Non-farm Employment, 1971 - 2020



Appendix 1.2-X
Nevada Employment-to-Population Ratio
1970 - 2020



Appendix 1.2-Y
Historical Per Capita Income Estimates
United States, Nevada, and Other Western States, 1960 - 2002

Area	1960	1970	1980	1990	2000	2001	2002
Nevada	$2,890	$4,946	$11,780	$20,639	$29,794	$30,128	$30,180
United States	2,276	4,095	10,183	19,572	29,760	30,413	30,941
Western States (1)	2,512	4,353	10,989	19,925	30,449	30,855	31,228
Arizona	2,059	3,843	9,590	17,187	25,361	25,878	26,183
California	2,823	4,815	12,029	21,882	32,363	32,655	32,996
Colorado	2,340	4,055	10,809	19,680	33,060	33,455	33,276
Idaho	1,898	3,558	8,735	15,858	23,987	24,506	25,057
Montana	2,075	3,625	9,143	15,516	22,961	24,044	25,020
New Mexico	1,884	3,197	8,402	14,944	21,788	23,081	23,941
Oregon	2,283	3,940	10,196	18,242	27,836	28,222	28,731
Utah	2,035	3,391	8,464	14,983	23,410	24,033	24,306
Washington	2,436	4,205	10,913	20,017	31,605	31,976	32,677
Wyoming	2,312	3,919	11,753	17,985	27,941	29,587	30,578

Sources: United States Bureau of Economic Analysis and United States Census Bureau.

Notes:

(1) Western States average is a weighted average reflecting the number of people in each of the other western states.

Appendix 1.2-Z
Historical Population Growth Estimates
United States, Nevada, and Other Western States, 1960 - 2002

Area	1960-1970	1970-1980	1980-1990	1990-2000	2000-2002	1960-2002
Nevada	5.52%	9.07%	5.77%	3.74%	0.65%	5.74%
United States	6.05%	9.54%	6.75%	4.28%	1.96%	6.41%
Western States	5.65%	9.70%	6.13%	4.33%	1.27%	
Arizona	6.44%	9.58%	6.01%	3.97%	1.61%	6.24%
California	5.48%	9.59%	6.17%	3.99%	0.97%	6.03%
Colorado	5.65%	10.30%	6.18%	5.32%	0.33%	6.52%
Idaho	6.49%	9.40%	6.14%	4.23%	2.21%	6.34%
Montana	5.74%	9.69%	5.43%	4.00%	4.39%	6.11%
New Mexico	5.43%	10.14%	5.93%	3.84%	4.82%	6.24%
Oregon	5.61%	9.97%	5.99%	4.32%	1.59%	6.22%
Utah	5.24%	9.58%	5.88%	4.56%	1.90%	6.08%
Washington	5.61%	10.01%	6.25%	4.67%	1.68%	6.38%
Wyoming	5.42%	11.61%	4.35%	4.50%	4.61%	6.34%

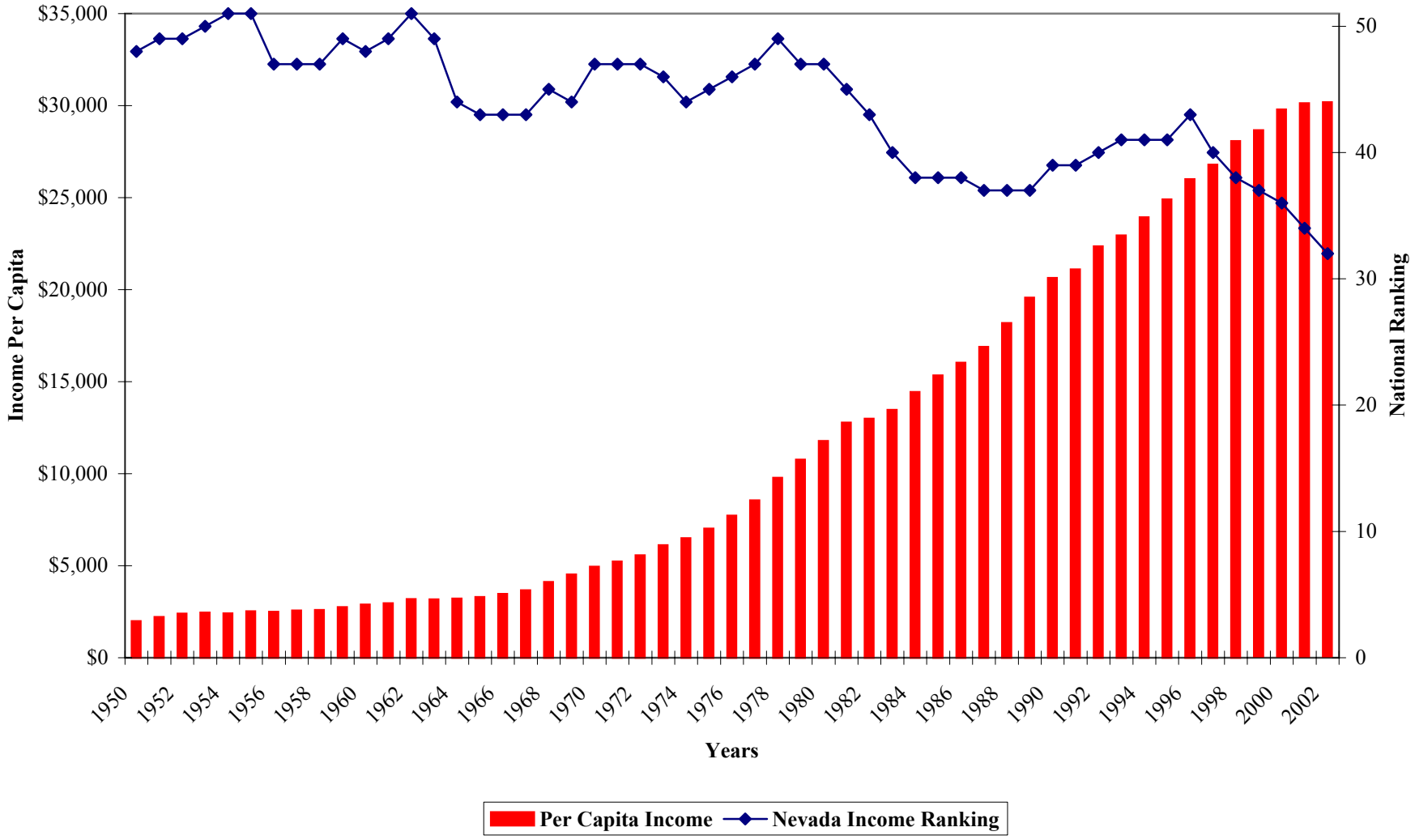
Sources: US Census Bureau Current Population Surveys; 1960 Census, 1970 Census, 1980 Census, 1990 Census, 2000 Census, Nevada State Demographer's Office.

Notes:

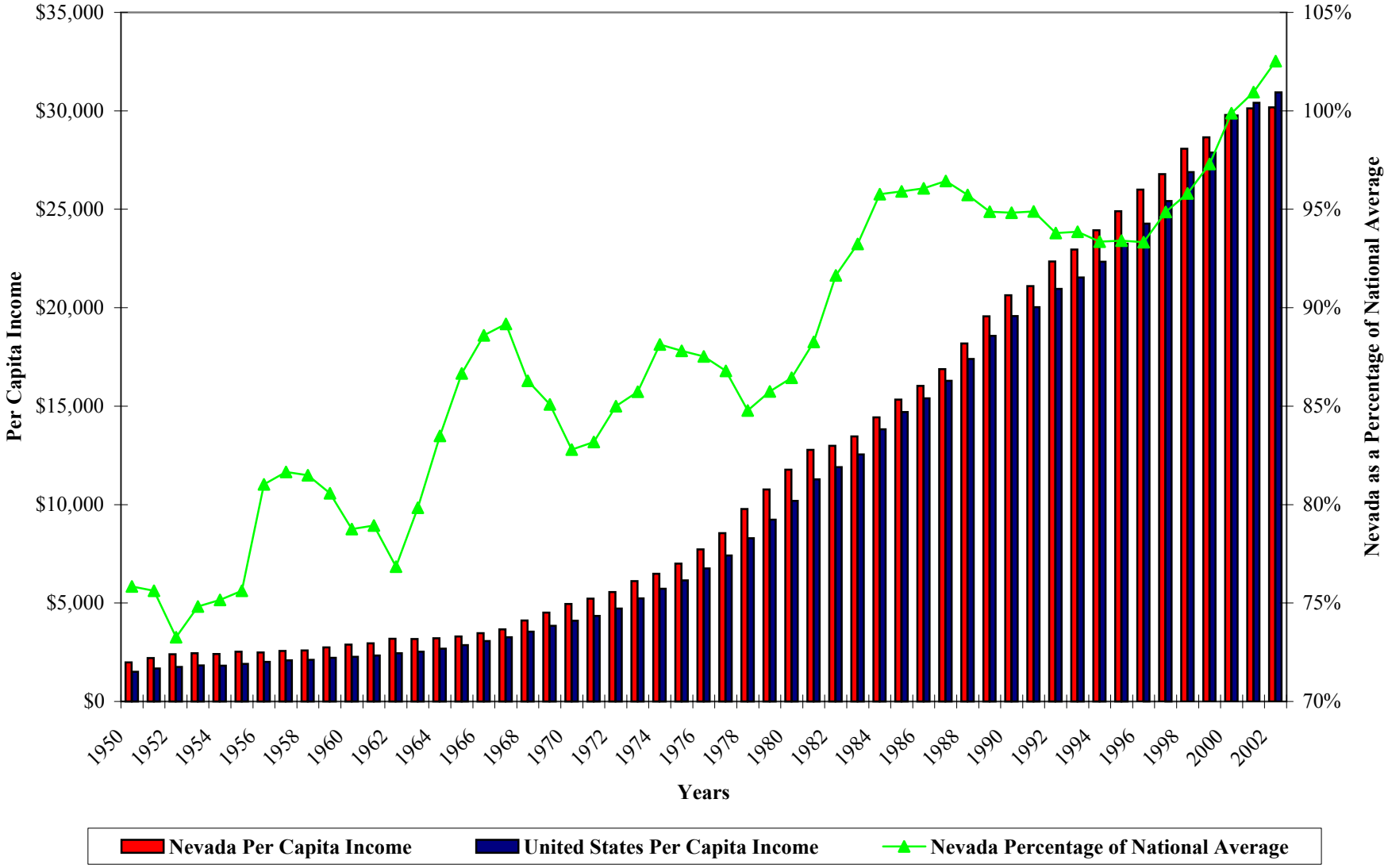
(1) Nevada State Demographer's population estimates do not necessarily coincide with estimates generated by the US Census Bureau.

(2) Census estimates are for April of the respective year, interim estimates are for July of the respective year.

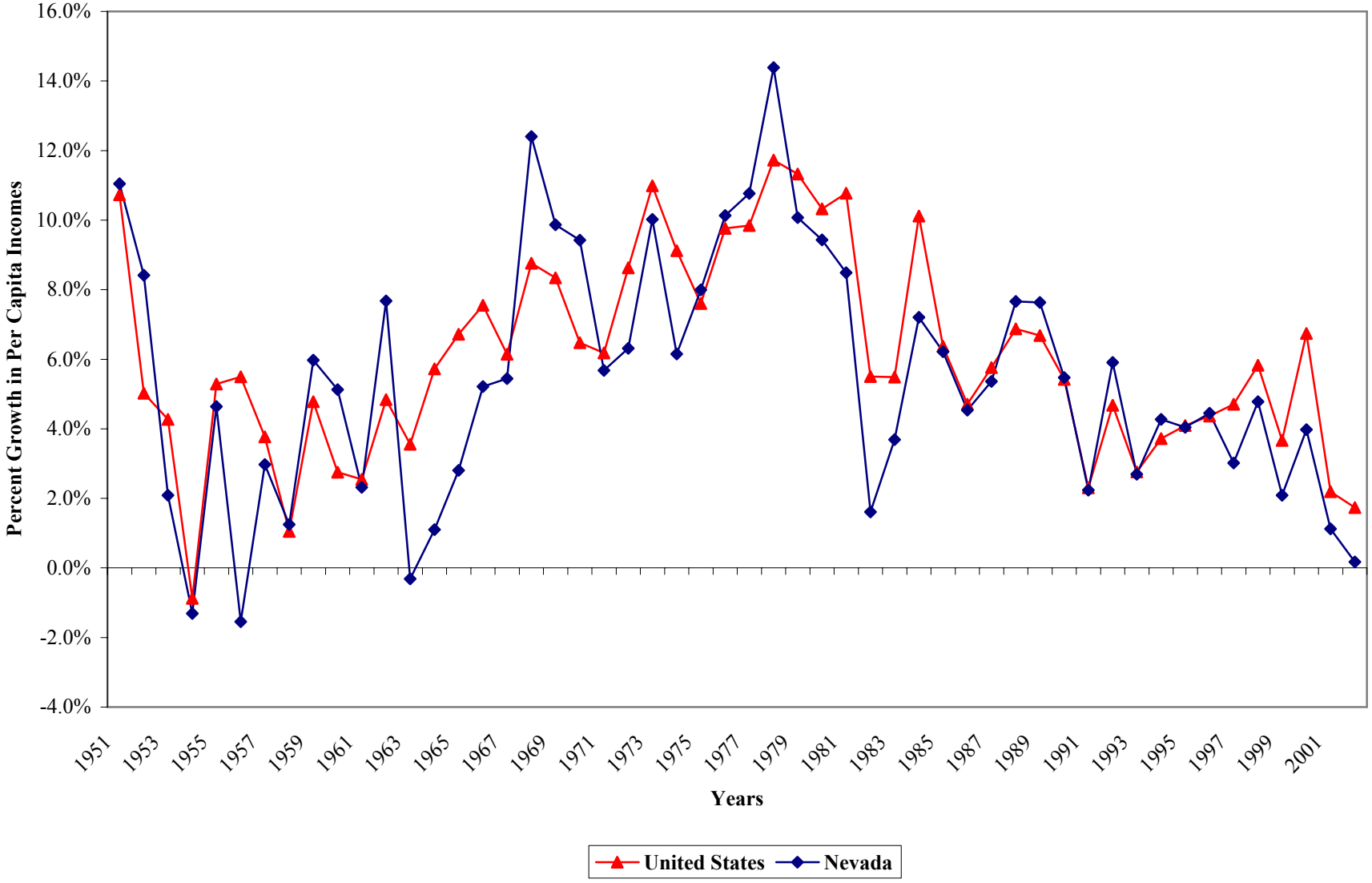
Appendix 1.2-AA
Nevada Per Capita Income
Average and National Ranking (50 States Plus District of Columbia)
1950 - 2002



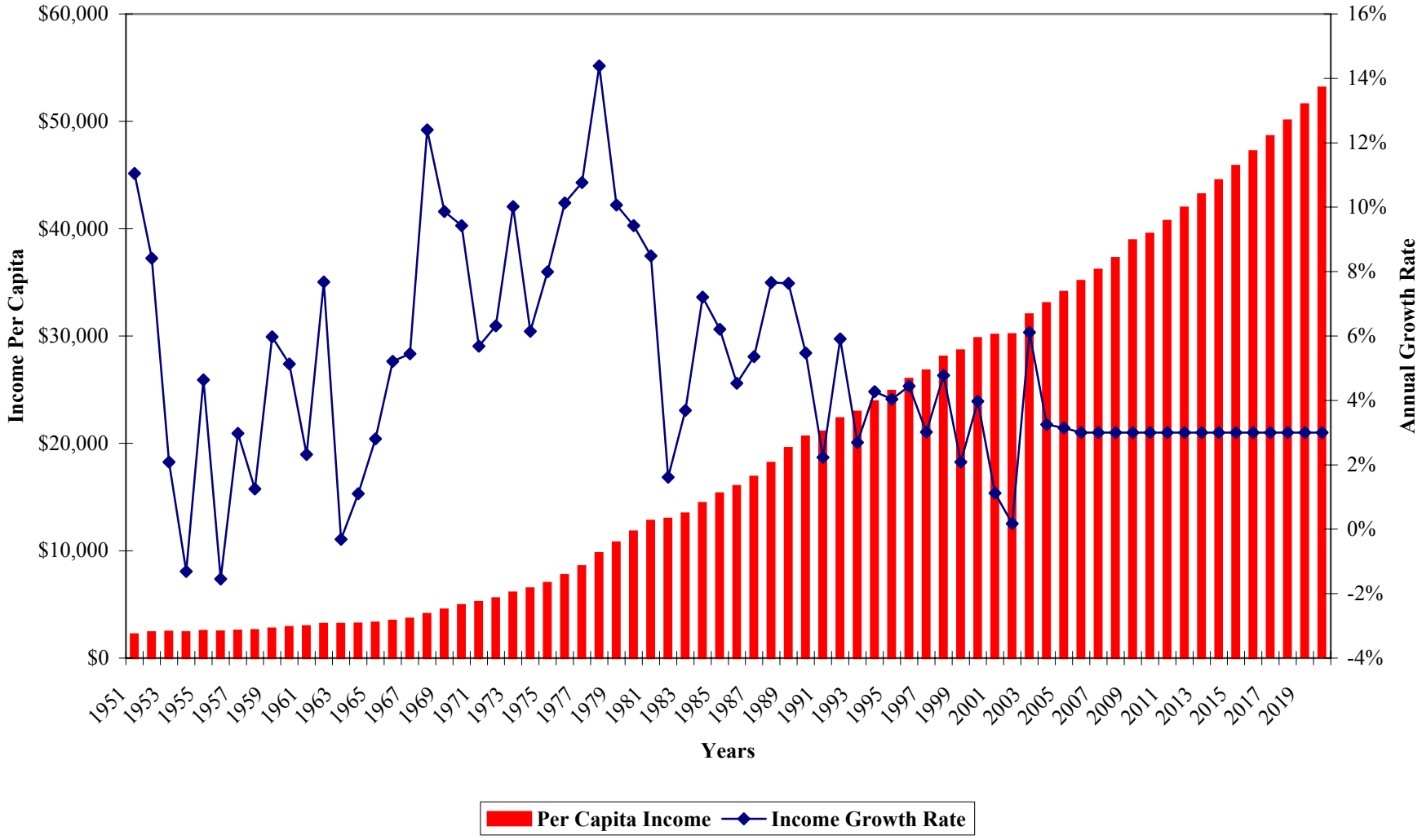
Appendix 1.2-AB
Per Capita Income Comparison
United States and Nevada, 1950 - 2002



Appendix 1.2-AC
Annual Per Capita Income Growth Comparison
United States and Nevada, 1951 - 2002



Appendix 1.2-AD
Historical and Projected Nevada Per Capita Income
Average and Annual Growth Rate, 1951 - 2020



Appendix 1.2-AE
Historical & Projected Population and Incomes
Nevada, 1960 - 2020

Year	Estimated Population	Total Rate of Growth	Per Capita Income	Compounded Annual Growth Rate	Total Personal Income (in 1,000s)	Compounded Annual Growth Rate
1960	285,000	n/a	$2,890	n/a	$823,650	n/a
1965	426,000	49.47%	3,299	2.68%	1,405,374	11.28%
1970	488,738	14.73%	4,946	8.44%	2,417,298	11.46%
1975	619,972	26.85%	7,009	7.22%	4,345,384	12.44%
1980	800,493	29.12%	11,780	10.94%	9,429,808	16.76%
1985	951,030	18.81%	15,332	5.41%	14,581,192	9.11%
1990	1,236,130	29.98%	20,639	6.13%	25,512,487	11.84%
1995	1,579,150	27.75%	24,897	3.82%	39,316,098	9.03%
2000	2,066,831	30.88%	29,794	3.66%	61,579,163	9.39%
2005	2,429,015	17.52%	34,109	2.74%	82,851,265	6.11%
2010	2,654,405	9.28%	39,542	3.00%	104,960,502	4.84%
2015	2,778,178	4.66%	45,839	3.00%	127,348,911	3.94%
2020	2,848,247	2.52%	53,141	3.00%	151,358,689	3.51%

Sources: United States Census Bureau; Nevada State Demographer's Office; United States Bureau of Economic Analysis.

Notes:

(1) Total personal incomes do not necessarily match those estimated by the United States Bureau of Economic Analysis. This is due to differences in timing and reporting differences among sources. The error in 2000 is approximately 2.4 percent between methodologies.

Appendix 1.2-AF
Historical Industry Wage Comparison
Wage and Salary Employment Distributions by Industry
Nevada and the United States, 1970 - 2001

NEVADA

	1970		1980		1990		1995		2000		2001	
Employment Sector	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**
Ag. services, forestry, fishing & other	5,140	66.7	13,697	94.4	16,310	71.9	18,244	67.4	23,377	71.5	23,531	70.1
Mining	9,046	117.4	20,459	141.1	36,361	160.4	45,531	168.2	55,624	170.2	57,775	172.2
Construction		0.0	22,237	153.3	27,683	122.1	31,592	116.7	38,910	119.1	39,200	116.8
Manufacturing	8,561	111.1	16,392	113.0	25,666	113.2	30,137	111.3	37,955	116.1	40,237	119.9
Transportation and public utilities	9,060	117.6	19,677	135.7	28,303	124.8	33,209	122.7	38,519	117.9	39,892	118.9
Wholesale trade	8,503	110.4	17,336	119.5	29,031	128.1	33,126	122.3	42,675	130.6	44,895	133.8
Retail trade	5,641	73.2	10,106	69.7	14,698	64.8	17,124	63.2	21,245	65.0	21,713	64.7
Finance, insurance, and real estate	7,400	96.1	14,041	96.8	24,231	106.9	30,966	114.4	41,086	125.7	42,250	125.9
Services	7,603	98.7	13,757	94.9	21,631	95.4	26,088	96.4	31,246	95.6	32,105	95.7
Hotels and other lodging places	7,383	95.8	13,822	95.3	19,627	86.6	25,080	92.6	30,414	93.1	31,649	94.3
Government and government enterprises	7,744	100.5	14,652	101.0	25,760	113.6	31,540	116.5	37,732	115.5	38,680	115.3
Total employment	**7,704**	**100.0**	**14,502**	**100.0**	**22,671**	**100.0**	**27,076**	**100.0**	**32,681**	**100.0**	**33,560**	**100.0**

Appendix 1.2-AF
Historical Industry Wage Comparison
Wage and Salary Employment Distributions by Industry
Nevada and the United States, 1970 - 2001

UNITED STATES

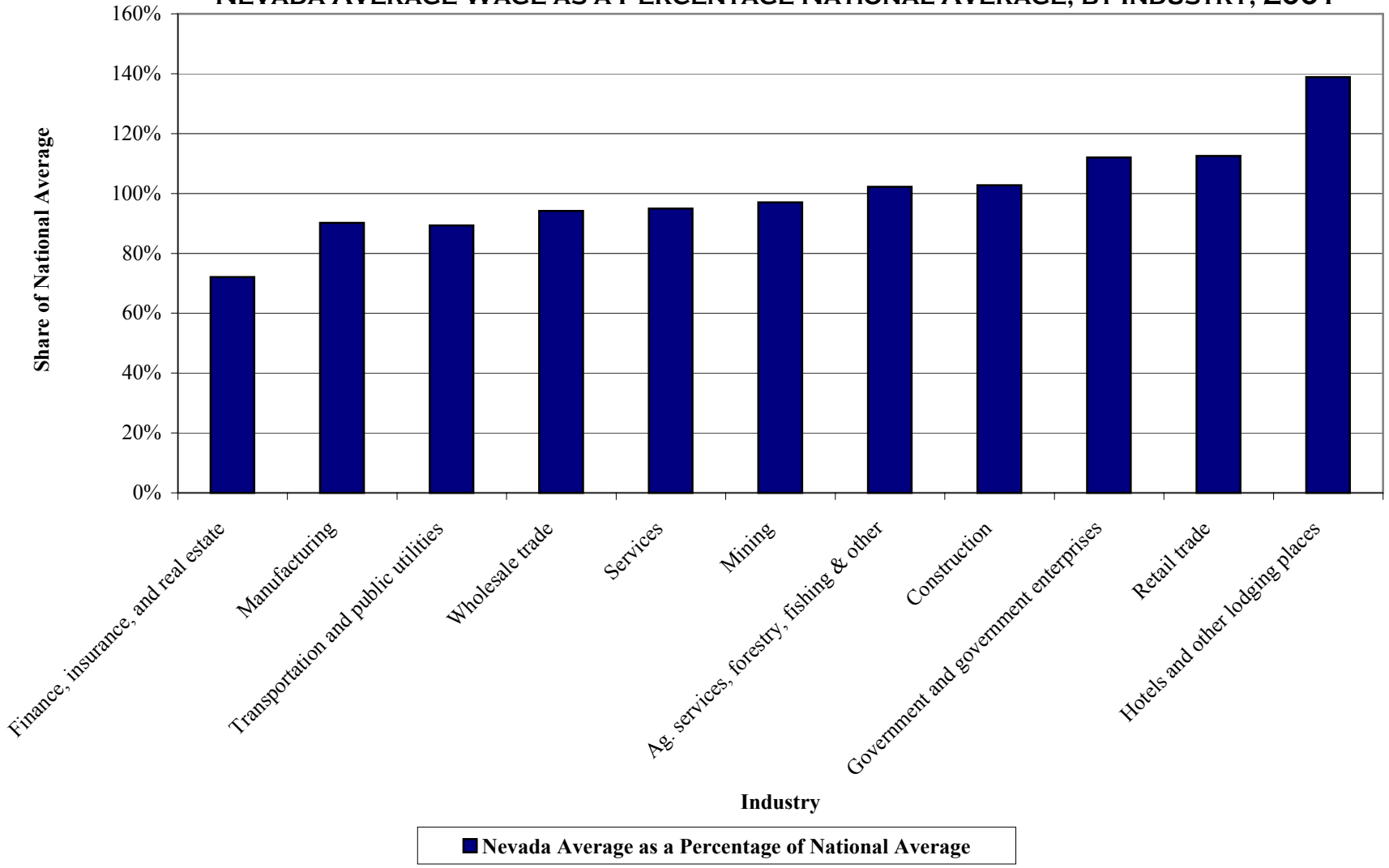
	1970		1980		1990		1995		2000		2001	
Employment Sector	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**	**Ave. Wage**	**Index (1)**
Ag. services, forestry, fishing & other	4,830	69.8	9,796	70.0	15,489	66.4	17,448	63.7	21,996	63.5	23,024	64.8
Mining	9,261	133.8	23,025	164.5	37,280	159.8	45,141	164.7	57,780	166.8	59,549	167.5
Construction	9,320	134.6	17,494	125.0	26,305	112.8	29,272	106.8	36,663	105.8	38,160	107.3
Manufacturing	8,147	117.7	17,432	124.5	29,230	125.3	34,823	127.1	44,674	128.9	44,605	125.5
Transportation and public utilities	8,956	129.4	20,135	143.9	30,823	132.2	35,630	130.0	44,030	127.1	44,646	125.6
Wholesale trade	8,883	128.3	18,001	128.6	30,092	129.0	36,011	131.4	46,796	135.1	47,657	134.1
Retail trade	4,890	70.6	8,794	62.8	13,099	56.2	15,044	54.9	18,693	54.0	19,289	54.3
Finance, insurance, and real estate	7,391	106.8	14,899	106.4	30,241	129.7	38,821	141.7	56,149	162.1	58,625	164.9
Services	5,234	75.6	11,410	81.5	21,420	91.8	25,356	92.5	32,596	94.1	33,808	95.1
Hotels and other lodging places	4,362	63.0	8,774	62.7	14,532	62.3	17,313	63.2	21,956	63.4	22,795	64.1
Government and government enterprises	6,905	99.8	13,528	96.7	23,704	101.6	28,321	103.4	33,369	96.3	34,543	97.2
Total employment	**6,922**	**100.0**	**13,997**	**100.0**	**23,322**	**100.0**	**27,400**	**100.0**	**34,647**	**100.0**	**35,550**	**100.0**

Source: United States Bureau of Economic Analysis.

Notes:

(1) Index illustrates performance relative to the state or national average, where 100 equal the average.

Appendix 1.2-AG
Wage Comparison
Nevada Average Wage as a Percentage National Average, by Industry, 2001



Appendix 1.2-AH
Industrial Wage Comparison
Average Wage, Share of Employment Base, Share of Wages Paid by Industry
Nevada and the United States, 2001

	Nevada				US			
Item	**Wage**	**Index (1)**	**% of Emp. Base**	**% of Wages Paid**	**Wage**	**Index (1)**	**% of Emp. Base**	**% of Wages Paid**
Wage and salary employment by place of work	$33,560	100.0	100.0%	100.0%	$35,550	100.0	100.0%	100.0%
Private employment	32,873	98.0	87.5%	85.7%	35,862	100.9	82.7%	83.5%
Ag. services, forestry, fishing & other	23,531	70.1	1.1%	0.7%	23,024	64.8	1.1%	0.7%
Mining	57,775	172.2	0.9%	1.6%	59,576	167.6	0.4%	0.7%
Construction	39,200	116.8	8.5%	10.0%	38,166	107.4	5.1%	5.4%
Manufacturing	40,237	119.9	4.2%	5.1%	44,612	125.5	12.7%	16.0%
Transportation and public utilities	39,892	118.9	5.3%	6.3%	44,639	125.6	5.1%	6.4%
Wholesale trade	44,895	133.8	3.6%	4.8%	47,649	134.0	4.9%	6.6%
Retail trade	21,713	64.7	17.0%	11.0%	19,287	54.3	17.4%	9.4%
Finance, insurance, and real estate	42,250	125.9	4.6%	5.8%	58,640	164.9	5.6%	9.3%
Services	32,105	95.7	42.3%	40.4%	33,808	95.1	30.5%	29.0%
Hotels and other lodging places	31,649	94.3	21.4%	20.2%	22,795	64.1	1.4%	0.9%
Government and government enterprises	38,680	115.3	12.3%	14.2%	34,542	97.2	16.6%	16.2%

Source: United States Bureau of Economic Analysis.

Notes:

(1) Index illustrates performance relative to the state or national average, where 100 equal the average.

Appendix 1.2-AI
Historical Industry Wage Growth Comparison
Wage and Salary Employment Wage Growth by Industry
Nevada and the United States, 1970 - 2001

NEVADA

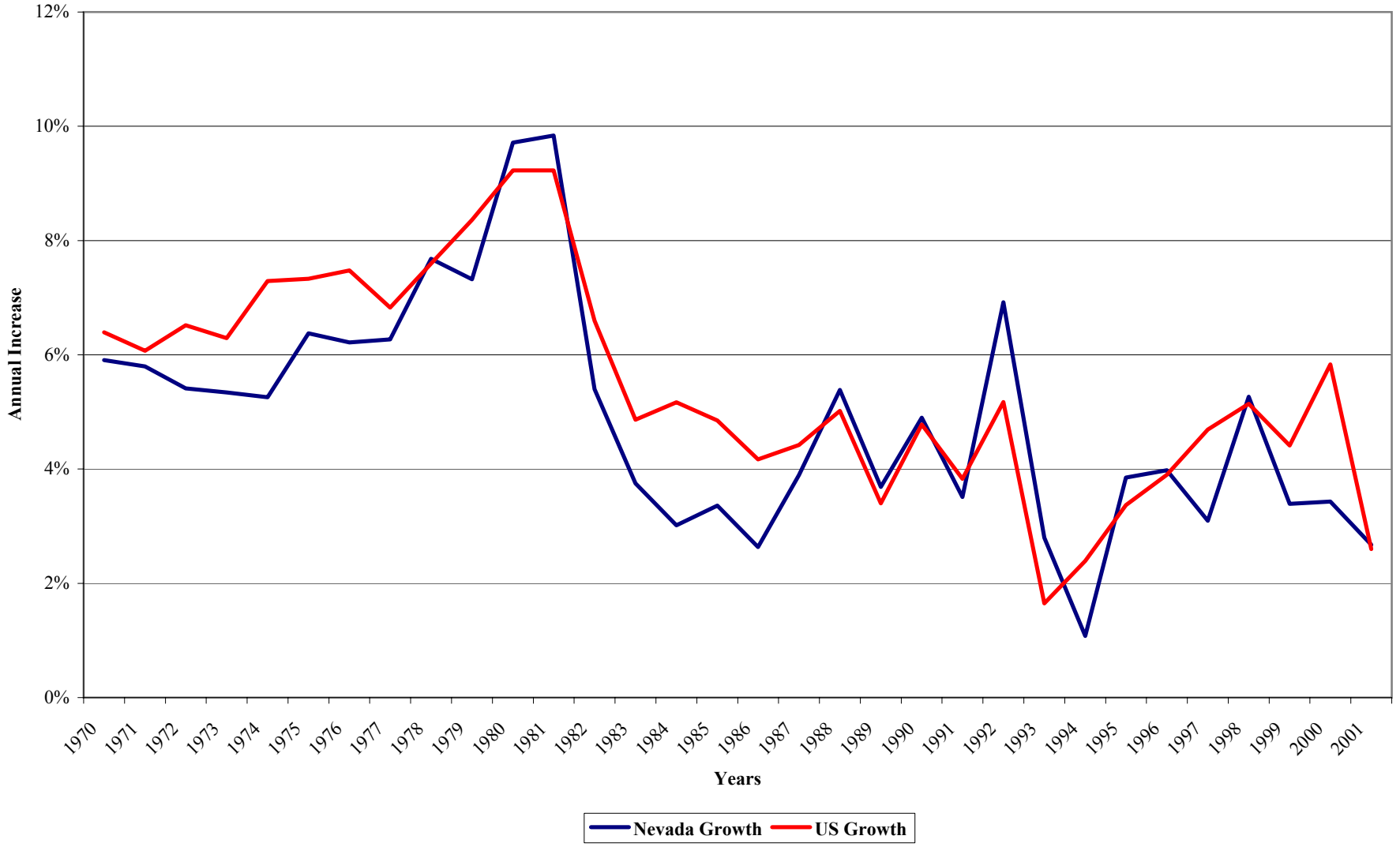
Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	10.3%	1.8%	2.3%	4.2%	0.6%
Mining	8.5%	5.9%	4.6%	4.1%	3.9%
Construction	6.8%	2.2%	2.7%	4.3%	0.7%
Manufacturing	6.7%	4.6%	3.3%	4.7%	6.0%
Transportation and public utilities	8.1%	3.7%	3.2%	3.1%	3.5%
Wholesale trade	7.4%	5.3%	2.7%	5.2%	5.2%
Retail trade	6.0%	3.8%	3.1%	4.4%	2.2%
Finance, insurance, and real estate	6.6%	5.6%	5.0%	5.8%	2.8%
Services	6.1%	4.6%	3.8%	3.7%	2.7%
Hotels and other lodging places	6.5%	3.6%	5.0%	3.8%	4.1%
Government and government enterprises	6.6%	5.8%	4.1%	3.6%	2.5%
Total employment	**6.5%**	**4.6%**	**3.6%**	**3.8%**	**2.7%**

UNITED STATES

Employment Sector	1970-1980	1980-1990	1990-1995	1995-2000	2000-2001
Ag. services, forestry, fishing & other	7.3%	4.7%	2.4%	4.1%	4.7%
Mining	9.5%	4.9%	3.9%	5.1%	3.1%
Construction	6.5%	4.2%	2.2%	4.6%	4.1%
Manufacturing	7.9%	5.3%	3.6%	5.1%	-0.1%
Transportation and public utilities	8.4%	4.4%	2.9%	4.3%	1.4%
Wholesale trade	7.3%	5.3%	3.7%	5.4%	1.8%
Retail trade	6.0%	4.1%	2.8%	4.4%	3.2%
Finance, insurance, and real estate	7.3%	7.3%	5.1%	7.5%	4.4%
Services	8.1%	6.5%	3.4%	5.2%	3.7%
Hotels and other lodging places	7.2%	5.2%	3.6%	4.8%	3.8%
Government and government enterprises	7.0%	5.8%	3.6%	3.3%	3.5%
Total employment	**7.3%**	**5.2%**	**3.3%**	**4.8%**	**2.6%**

Source: United States Bureau of Economic Analysis.

Appendix 1.2-AJ
Industrial Wage Growth Comparison
United States and Nevada, 1970 - 2001



Appendix 1.2-AK
Gross State Product Comparison, by Industry
Nevada and the United States, 1980 - 2001

NEVADA

	1980		1985		1990		1995		1999		2000		2001	
Industrial Sector	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**	**GSP (1)**	**% of Total**
Total Gross State Product	$12,052	100.0%	$18,425	100.0%	$31,643	100.0%	$49,377	100.0%	$69,534	100.0%	$75,533	100.0%	$79,220	100.0%
Private industries	10,595		16,121	87.5%	28,065	88.7%	44,133	89.4%	62,380	89.7%	67,778	89.7%	70,938	89.5%
Agriculture, forest., fish	159	1.3%	169	0.9%	276	0.9%	327	0.7%	514	0.7%	577	0.8%	629	0.8%
Mining	360	3.0%	472	2.6%	1,429	4.5%	1,532	3.1%	1,530	2.2%	1,493	2.0%	1,761	2.2%
Construction	941	7.8%	1,019	5.5%	2,323	7.3%	4,003	8.1%	7,286	10.5%	7,345	9.7%	7,523	9.5%
Manufacturing	608	5.0%	892	4.8%	1,286	4.1%	2,136	4.3%	2,774	4.0%	3,030	4.0%	3,070	3.9%
Transportation & utilities	1,080	9.0%	1,815	9.9%	2,723	8.6%	4,028	8.2%	2,369	3.4%	2,521	3.3%	2,254	2.8%
Wholesale trade	479	4.0%	805	4.4%	1,414	4.5%	2,238	4.5%	3,253	4.7%	3,493	4.6%	3,635	4.6%
Retail trade	1,176	9.8%	1,891	10.3%	2,962	9.4%	4,756	9.6%	7,201	10.4%	7,944	10.5%	8,502	10.7%
F.I.R.E.	1,757	14.6%	2,795	15.2%	5,083	16.1%	8,857	17.9%	12,198	17.5%	14,040	18.6%	14,860	18.8%
Services	4,035	33.5%	6,263	34.0%	10,569	33.4%	16,256	32.9%	22,209	31.9%	24,092	31.9%	25,210	31.8%
Hotels & lodging	1,404	11.6%	2,605	14.1%	4,502	14.2%	7,466	15.1%	10,219	14.7%	11,291	14.9%	11,336	14.3%
Amusement and recreation	1,215	10.1%	1,134	6.2%	1,279	4.0%	1,574	3.2%	2,006	2.9%	2,127	2.8%	2,322	2.9%
Government	1,457	12.1%	2,304	12.5%	3,578	11.3%	5,243	10.6%	7,153	10.3%	7,755	10.3%	8,282	10.5%

Appendix 1.2-AK
Gross State Product Comparison, by Industry
Nevada and the United States, 1980 - 2001

UNITED STATES

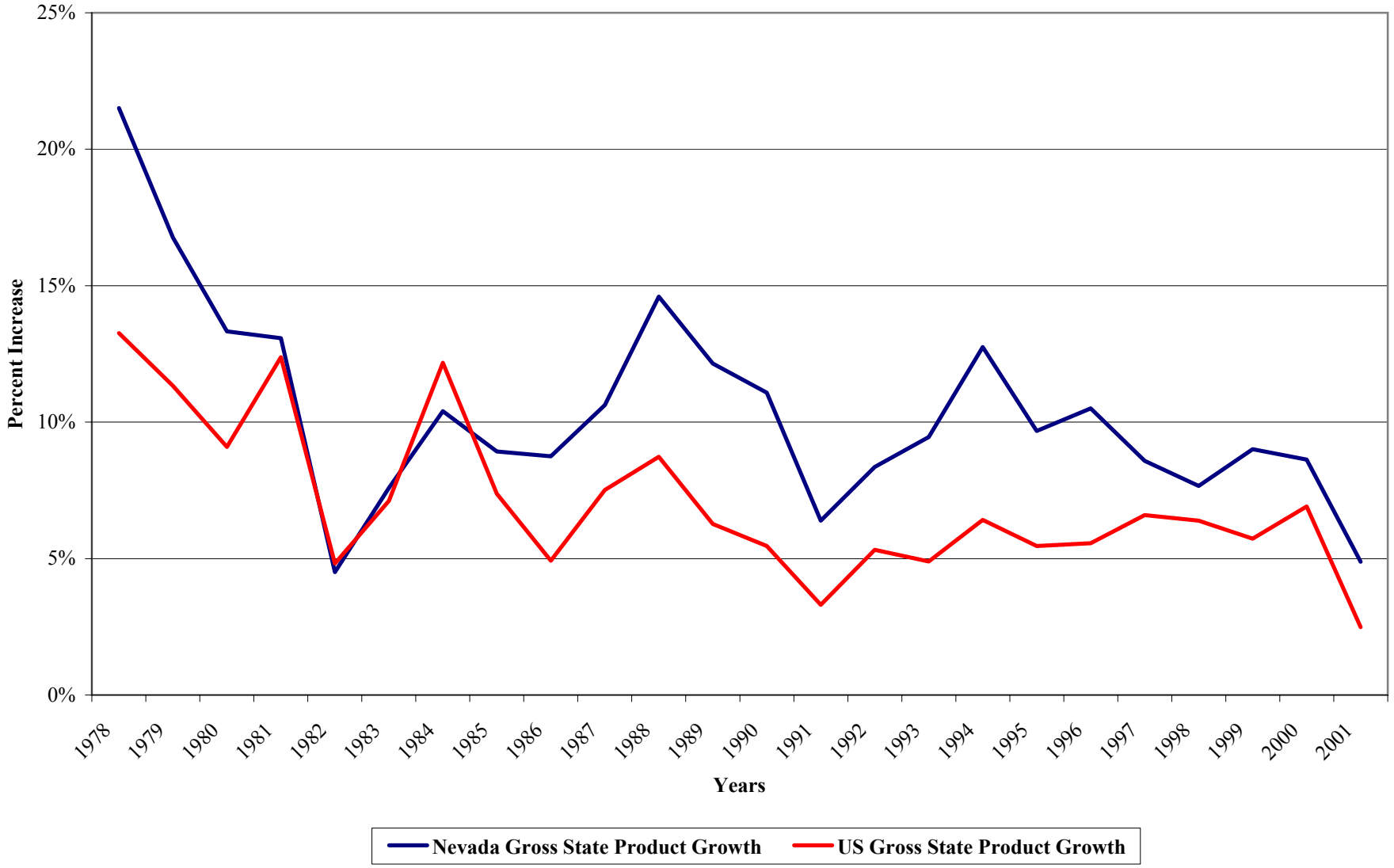
Industrial Sector	1980		1985		1990		1995		1999		2000		2001	
	GSP (1)	% of Total	GSP (1)	% of Total	GSP (1)	% of Total	GSP (1)	% of Total	GSP (1)	% of Total	GSP (1)	% of Total	GSP (1)	% of Total
Total Gross State Product	$2,731,618	100.0%	$4,151,449	100.0%	$5,706,658	100.0%	$7,309,516	100.0%	$9,251,541	100.0%	$9,891,187	100.0%	$10,137,190	100.0%
Private industries	2,376,865	87.0%	3,616,174	87.1%	4,966,099	87.0%	6,384,552	87.3%	8,161,822	88.2%	8,735,490	88.3%	8,918,169	88.0%
Agriculture, forest., fish	66,699	2.4%	84,716	2.0%	108,253	1.9%	109,843	1.5%	127,719	1.4%	134,280	1.4%	140,650	1.4%
Mining	113,084	4.1%	135,323	3.3%	111,875	2.0%	95,651	1.3%	104,147	1.1%	133,082	1.3%	139,040	1.4%
Construction	129,819	4.8%	186,317	4.5%	248,708	4.4%	290,308	4.0%	425,414	4.6%	461,308	4.7%	480,013	4.7%
Manufacturing	587,481	21.5%	804,377	19.4%	1,040,589	18.2%	1,289,069	17.6%	1,481,341	16.0%	1,520,263	15.4%	1,422,990	14.0%
Transportation & utilities	242,375	8.9%	379,038	9.1%	490,903	8.6%	642,586	8.8%	770,124	8.3%	809,251	8.2%	819,464	8.1%
Wholesale trade	196,861	7.2%	289,093	7.0%	376,144	6.6%	500,632	6.8%	645,341	7.0%	696,827	7.0%	680,683	6.7%
Retail trade	245,401	9.0%	394,353	9.5%	507,771	8.9%	646,802	8.8%	831,674	9.0%	887,281	9.0%	931,756	9.2%
F.I.R.E.	416,249	15.2%	686,501	16.5%	1,010,330	17.7%	1,347,233	18.4%	1,798,839	19.4%	1,976,768	20.0%	2,076,987	20.5%
Services	378,896	13.9%	656,456	15.8%	1,071,525	18.8%	1,462,428	20.0%	1,977,224	21.4%	2,116,430	21.4%	2,226,585	22.0%
Hotels & lodging	20,018	0.7%	31,790	0.8%	46,347	0.8%	61,742	0.8%	80,019	0.9%	87,380	0.9%	88,429	0.9%
Amusement and recreation	14,195	0.5%	22,644	0.5%	36,464	0.6%	53,529	0.7%	72,568	0.8%	76,558	0.8%	79,322	0.8%
Government	354,753	13.0%	535,275	12.9%	740,559	13.0%	924,964	12.7%	1,089,719	11.8%	1,155,698	11.7%	1,219,022	12.0%

Source: United States Bureau of Economic Analysis.

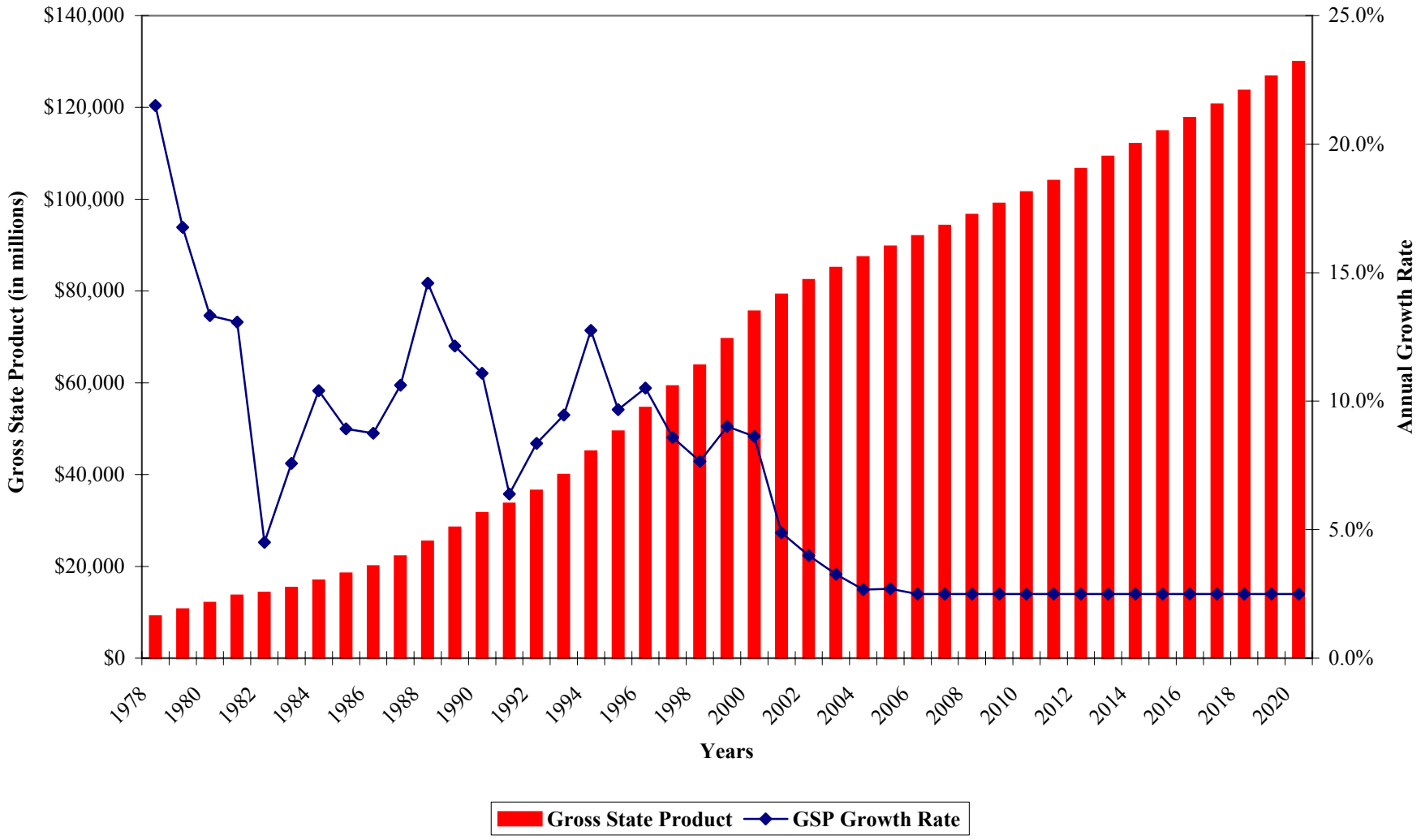
Notes:

(1) Gross state product is expressed in millions.

Appendix 1.2-AL
Gross State Product Comparison
United States and Nevada, 1978 - 2001



Appendix 1.2-AM
Nevada Gross State Product
Nominal Total and Annual Growth, 1978 - 2020



Appendix 1.2-AN
Exhibit 41: Nevada Business Activity by Sector
Employment, Sales, and Sales Per Employee, 1992, 1997, and 2000

	1992			1997			2000		
Employment Sector (1)	**Employment**	**Sales (in 000's)**	**Sales Per Emp.**	**Employment**	**Sales (in 000's)**	**Sales Per Emp.**	**Employment**	**Sales (in 000's)**	**Sales Per Emp.**
Mining	12,160	2,591,895	213,149	14,064	3,235,392	230,048	11,071	2,770,570	250,255
Construction (2)	41,031	5,321,223	129,688	68,283	9,963,176	145,910	92,220	14,637,756	158,726
Manufacturing	26,848	3,298,904	122,873	39,954	6,673,683	167,034	44,817	8,143,522	181,706
Transportation and public utilities	27,228	3,575,629	131,322	35,946	5,723,497	159,225	56,849	9,846,863	173,211
Wholesale trade	21,833		0	32,203	14,067,392	436,835	39,290	18,670,822	475,205
Retail trade	99,272	11,546,436	116,311	137,171	19,019,720	138,657	180,362	27,205,143	150,836
Finance, insurance, and real estate (2)	28,366	6,017,876	212,151	40,037	9,556,361	238,688	48,776	12,664,888	259,654
Services	256,062	16,585,314	64,771	351,412	25,459,043	72,448	460,939	36,327,299	78,812
Hotels and other lodging places	145,206	8,985,172	61,879	190,050	13,365,946	70,329	227,662	17,417,529	76,506
Total employment	**658,006**	**65,734,437**	**99,899**	**909,120**	**87,544,673**	**96,296**	**1,161,986**	**147,684,391**	**127,097**

Source: United States Census Bureau, 1992 and 1997 Economic Census, 1987 SIC Basis, Nevada subfile.

Notes:

(1) Employment data reported in the US Census does not necessarily reflect the wage and salary estimates produced by the United States Bureau of Economic Analysis cited herein.

(2) No data was available for construction or F.I.R.E sales for 1997. These data were estimated based on the 1992 per employee data adjusted for inflation. See Note 4.

(3) Data for 2000 was estimated by applying Nevada's wage and salary employment by sector to the inflation adjusted per employee estimates for 1997 or 1992, as appropriate. See

(4) The inflation factor used in this analysis was derived from the Consumer Price Index for All Western Urban Consumers.

Appendix 1.2-AO
Economic Characteristics of Major Industries
Employment, Earnings, Growth, Salaries, Business Receipts and
Taxable Income as a Percentage of Gross Receipts

Industry	Nevada					National Share of Taxable Income as a Percenage of Total Receipts 1998 (1)
	Employment Share 2000	Wages Share 2000	Growth Rate 1995-2000	Wage Index 2000	Share of Bus. Receipts 2000	
Private Non-farm enterprises						
Ag. services, forestry, fishing & other	1.0%	0.7%	10.3%	68.7	n/a	0.48%
Mining	1.0%		-3.6%	170.3	1.9%	0.83%
Construction	8.6%	10.2%	7.1%	119.1	9.9%	3.27%
Manufacturing	4.2%	4.8%	3.9%	116.2	5.5%	4.95%
Transportation and public utilities	5.3%	6.3%	6.7%	118.6	6.7%	4.91%
Wholesale trade	3.6%	4.8%	5.1%	130.6	12.6%	1.88%
Retail trade	16.8%	10.9%	6.6%	65.0	18.4%	1.88%
Finance, insurance, and real estate	4.5%	5.7%	5.5%	125.8	8.6%	11.50%
Services	42.8%	40.9%	4.9%	95.5	24.6%	4.37%
Hotels and other lodging places	21.1%	19.6%	4.1%	92.7	11.8%	2.54%
Government and government enterprises	12.0%	13.8%	3.6%	115.5	n/a	n/a
Wage and salary employment by place of work	100.0%	100.0%	5.2%	100.0	100.0%	4.84%

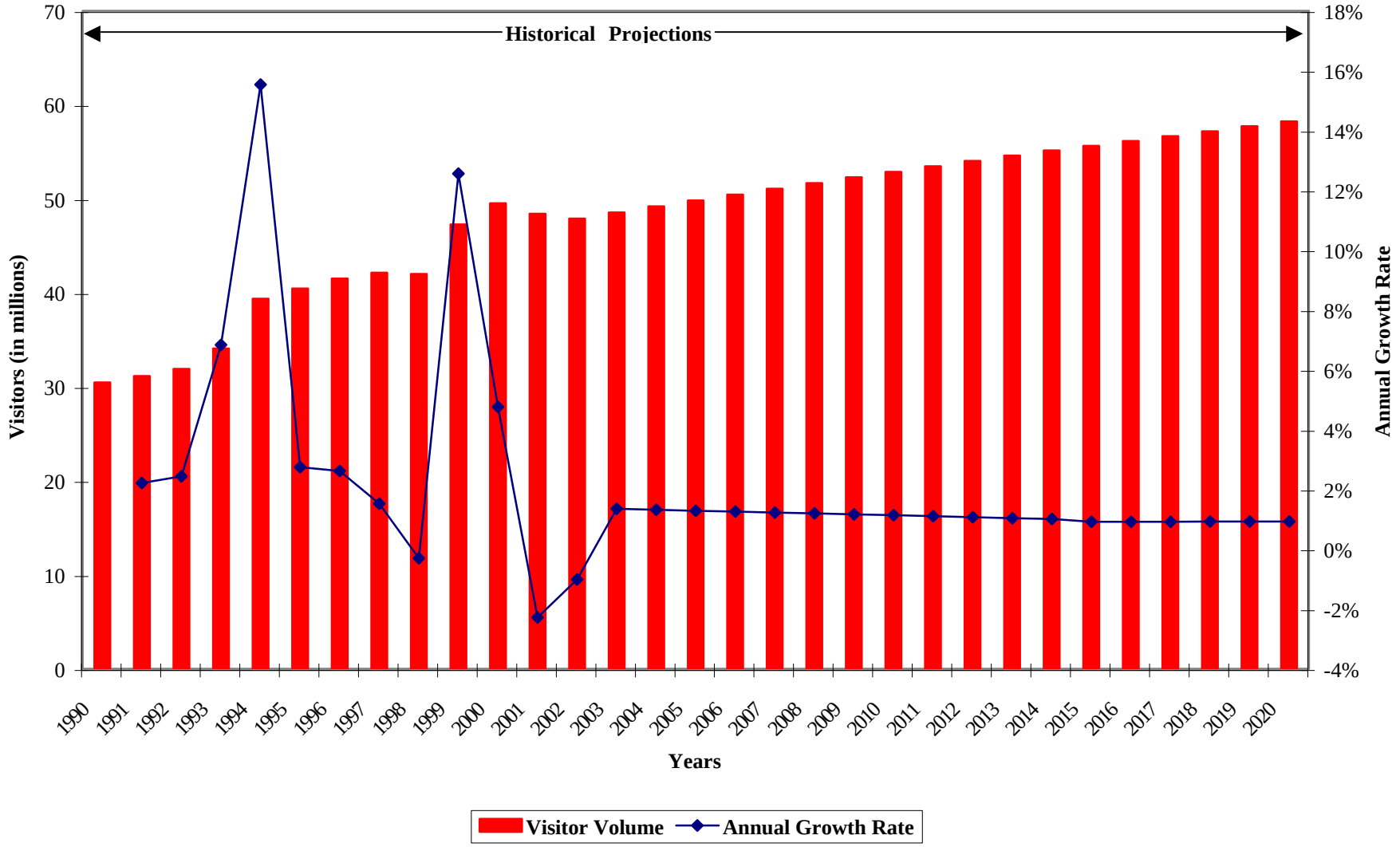
Source: United States Bureau of Economic Analysis; United States Internal Revenue Service; United States Census Bureau Economic Census.
Notes:
(1) Most recent national share of taxable income as a percentage of total receipts data was for 1998.

Appendix 1.2-AP
Exhibit 43: Person Nights Stayed in Nevada
Resident and Visitor Populations, 2002

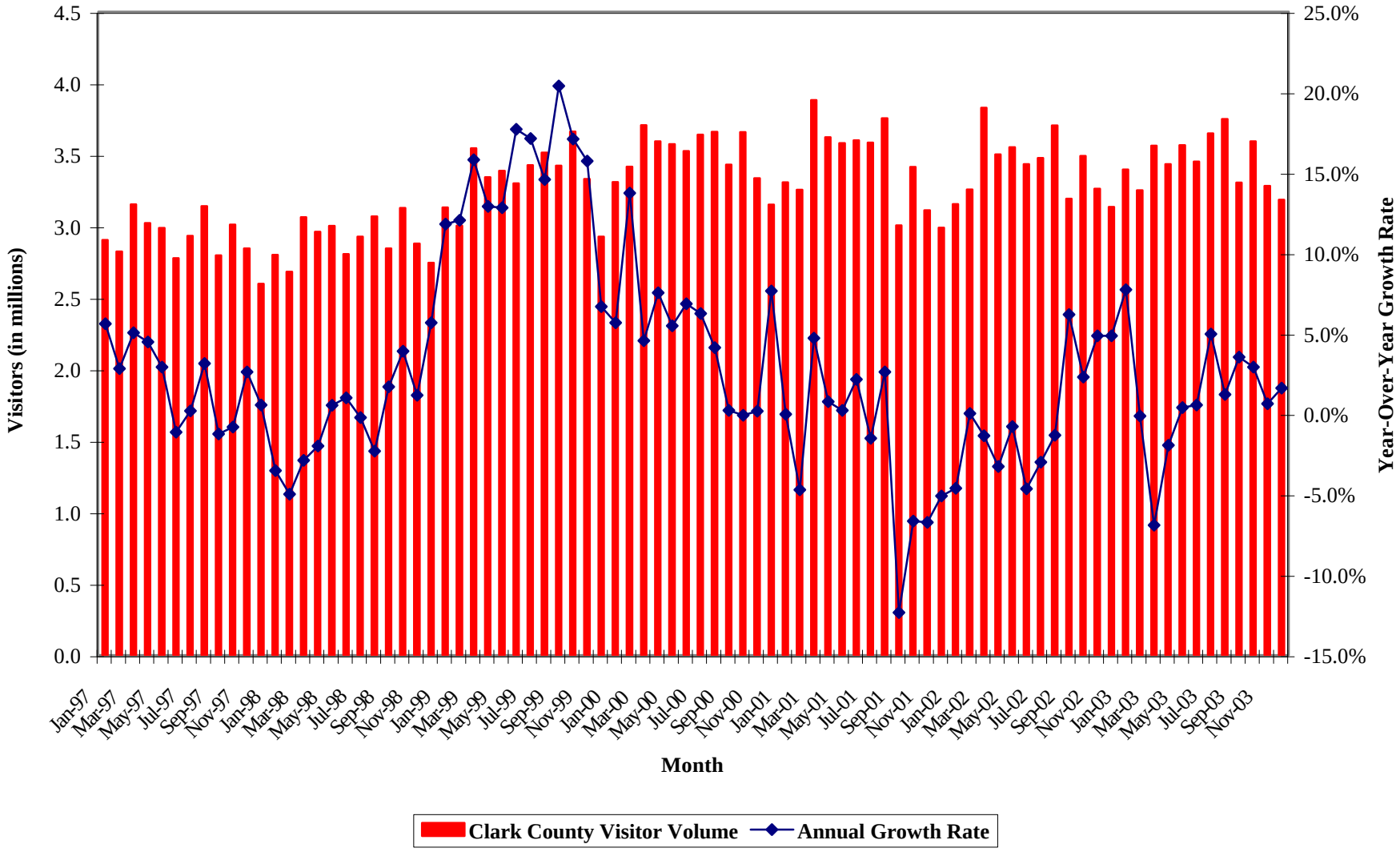
	Residents	Visitors
Total Base	2,206,022	47,909,258
Annual Nights Stayed in Nevada	365	3.5
Total Person Nights Stayed	805,198,030	167,682,403
Share of Total Person Nights Stayed	**82.8%**	**17.2%**

Sources: Nevada State Demographer's Office; Nevada Commission on Tourism; Las Vegas Convention and Visitors Authority; and Reno-Sparks Convention and Visitors Authority.

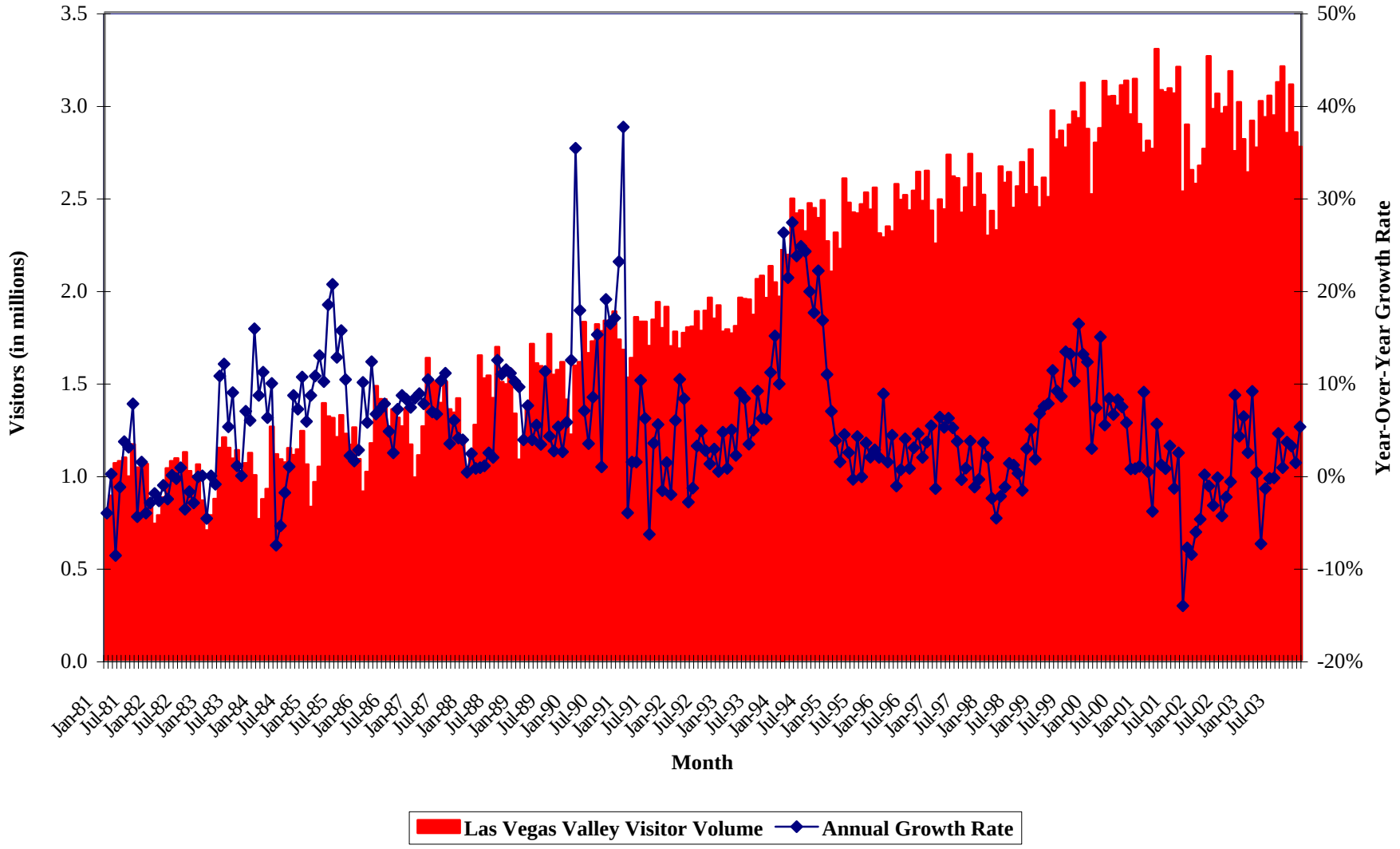
Appendix 1.2-AQ
Historical and Projected Nevada Visitor Volume
Total Visitors and Annual Rate of Growth, 1990 - 2020



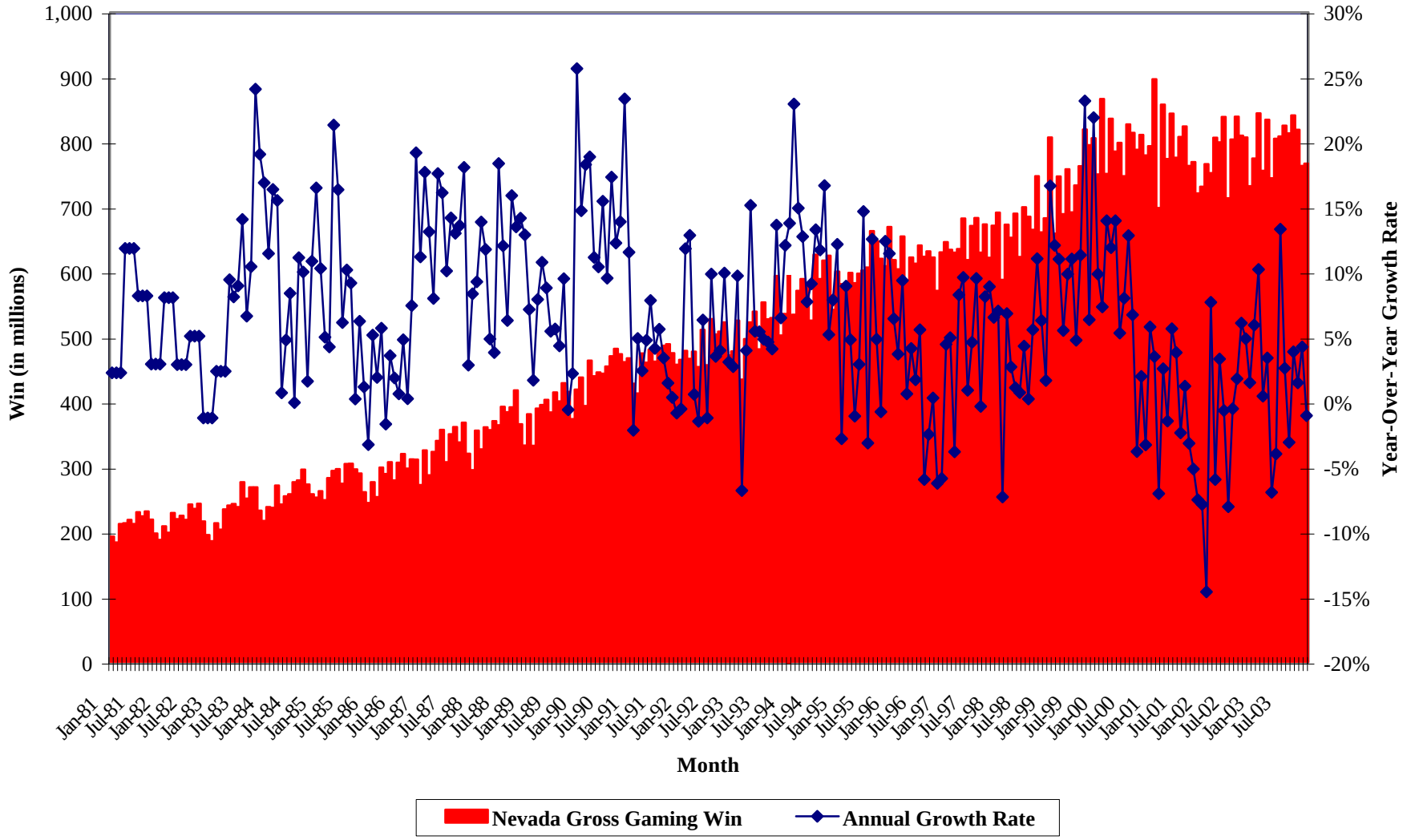
Appendix 1.2-AR
Clark County Visitor Volume
Total Visitors and Year-Over-Year Rate of Growth, 1997 - 2003



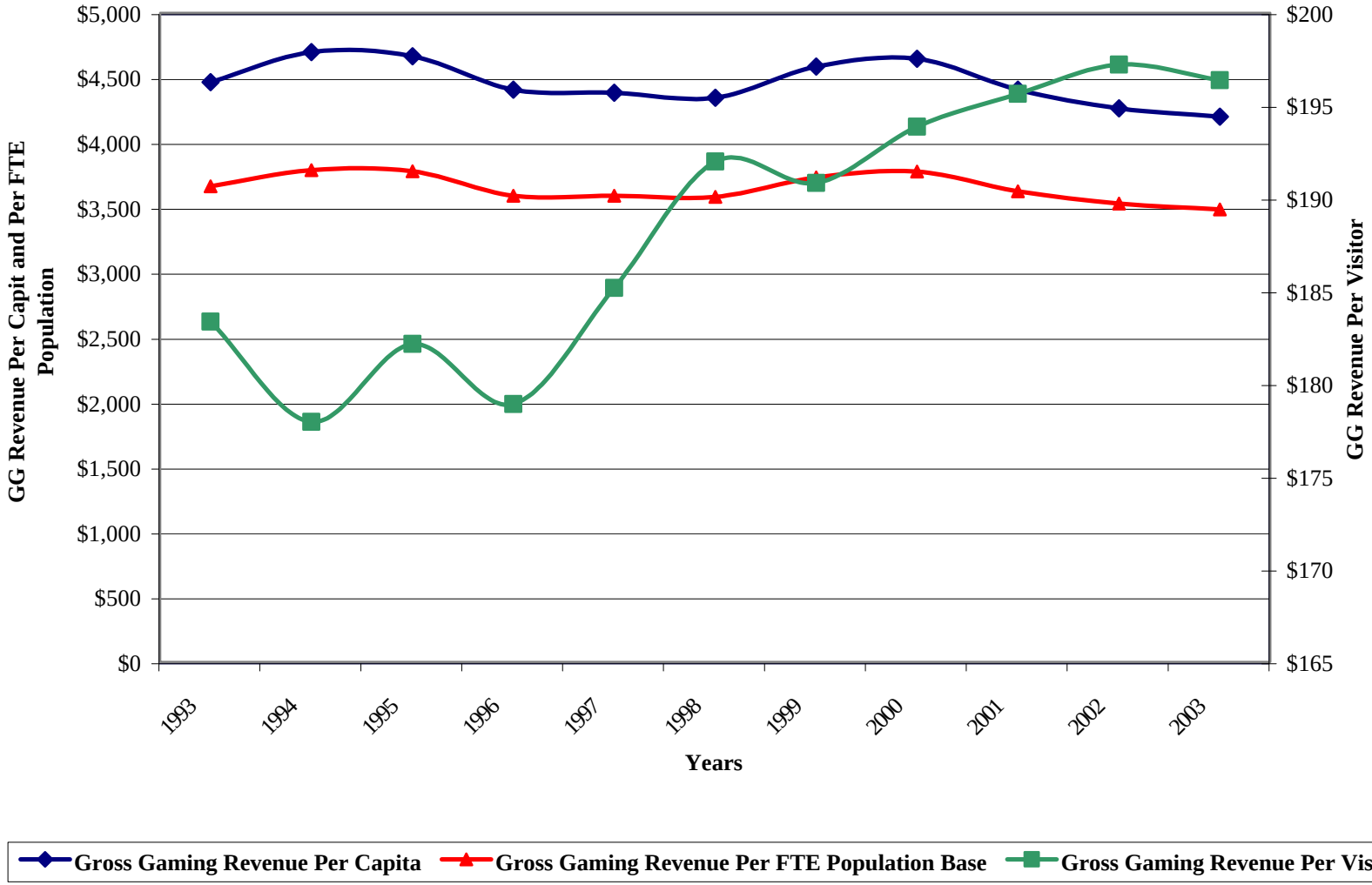
Appendix 1.2-AS
Las Vegas Valley Visitor Volume
Total Visitors and Year-Over-Year Rate of Growth, 1981 - 2003



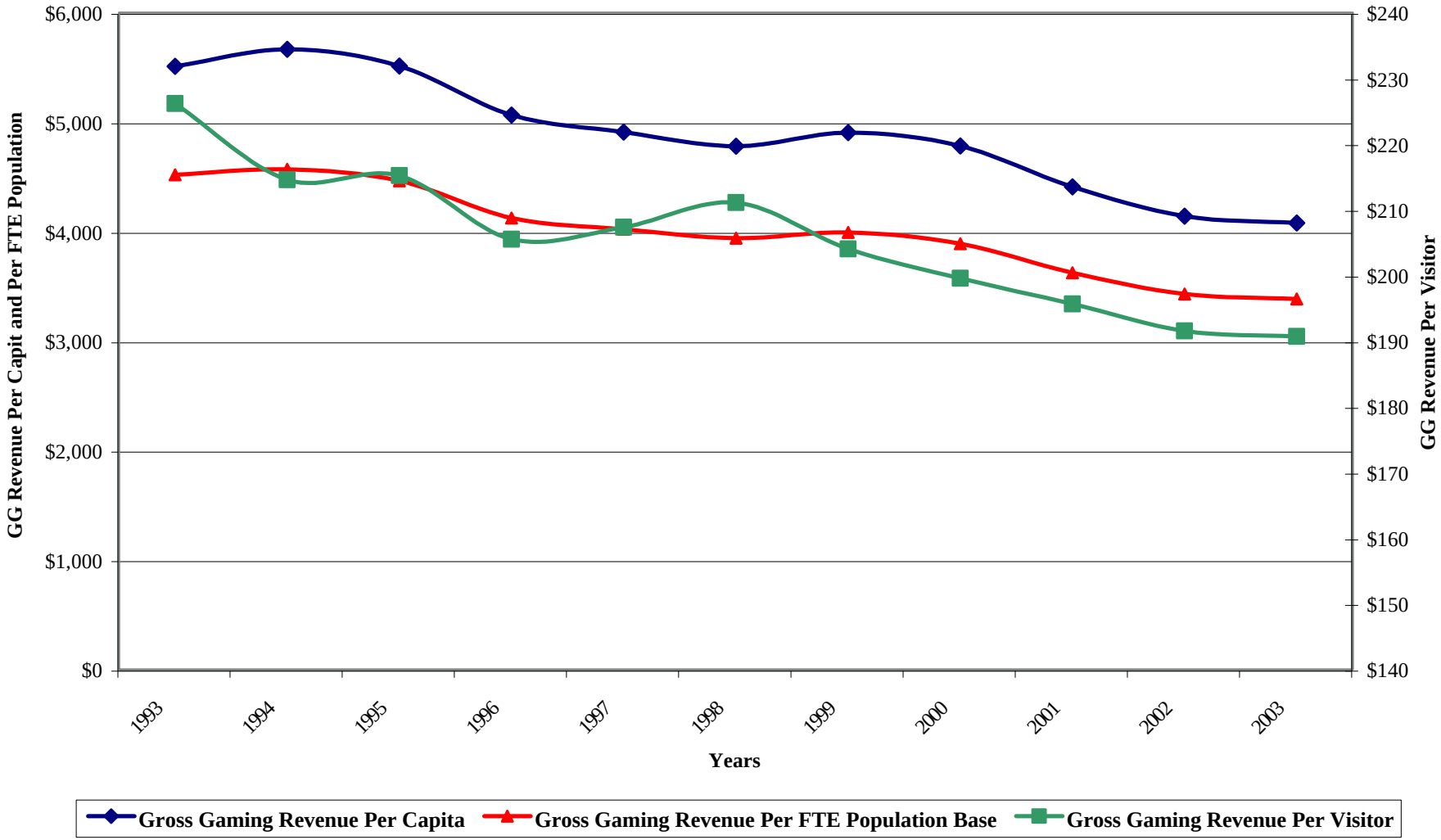
Appendix 1.2-AT
Nevada Gross Gaming Revenue
Total Visitors and Year-Over-Year Rate of Growth, 1981 - 2003



Appendix 1.2-AU
Nevada Gross Gaming Revenue Trend
Per Capita, Per FTE Population, and Per Visitor
Nominal Amounts, 1993 - 2003



Appendix 1.2-AV
Nevada Gross Gaming Revenue Trend
Per Capita, Per FTE Population, and Per Visitor
Inflation Adjusted Amounts (2001 = 100), 1993 - 2003



Appendix 1.2-AW
Historical and Projected Gross Gaming Revenue Trends
Nevada, 1995 - 2020

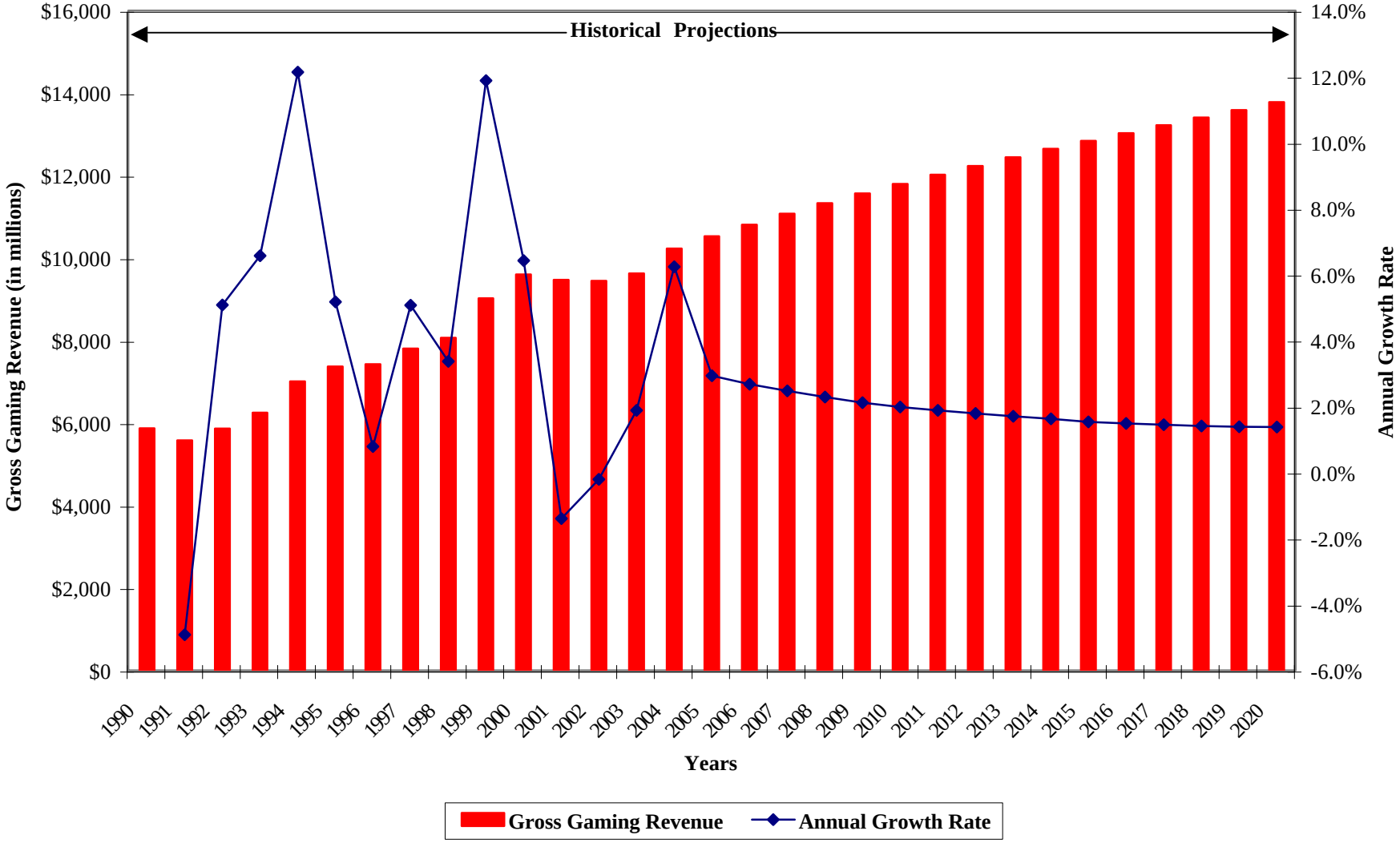
Year	Population	Tourists	FTE Population	Gross Gaming Revenue		GG Revenue Per Capita		GG Revenue Per Tourist		GG Revenue Per FTE Population	
				Nominal	Inflation Adj. (1)	Nominal	Inflation Adj. (1)	Nominal	Inflation Adj. (1)	Nominal	Inflation Adj. (1)
1995	1,579,150	40,451,269	1,950,043	$7,368,292,976	$8,705,377,897	$4,666	$5,513	$182	$215	$3,779	$4,464
2000	2,066,831	49,534,021	2,541,815	9,602,832,404	9,884,790,216	4,646	4,783	194	200	3,778	3,889
2005	2,429,015	50,298,969	2,911,334	10,525,944,767	9,363,069,258	4,185	3,917	200	184	3,476	3,203
2010	2,654,405	53,355,827	3,166,037	11,797,582,565	9,065,601,208	4,151	3,540	208	168	3,453	2,791
2015	2,778,178	56,133,488	3,316,445	12,839,362,933	8,523,019,791	4,117	3,200	216	153	3,430	2,432
2020	2,848,247	58,745,854	3,411,563	13,777,272,356	7,900,593,220	4,083	2,893	225	140	3,408	2,119

Sources: Nevada State Gaming Control Board; Nevada Comission on Tourism; Nevada State Demogrpaher's Office.

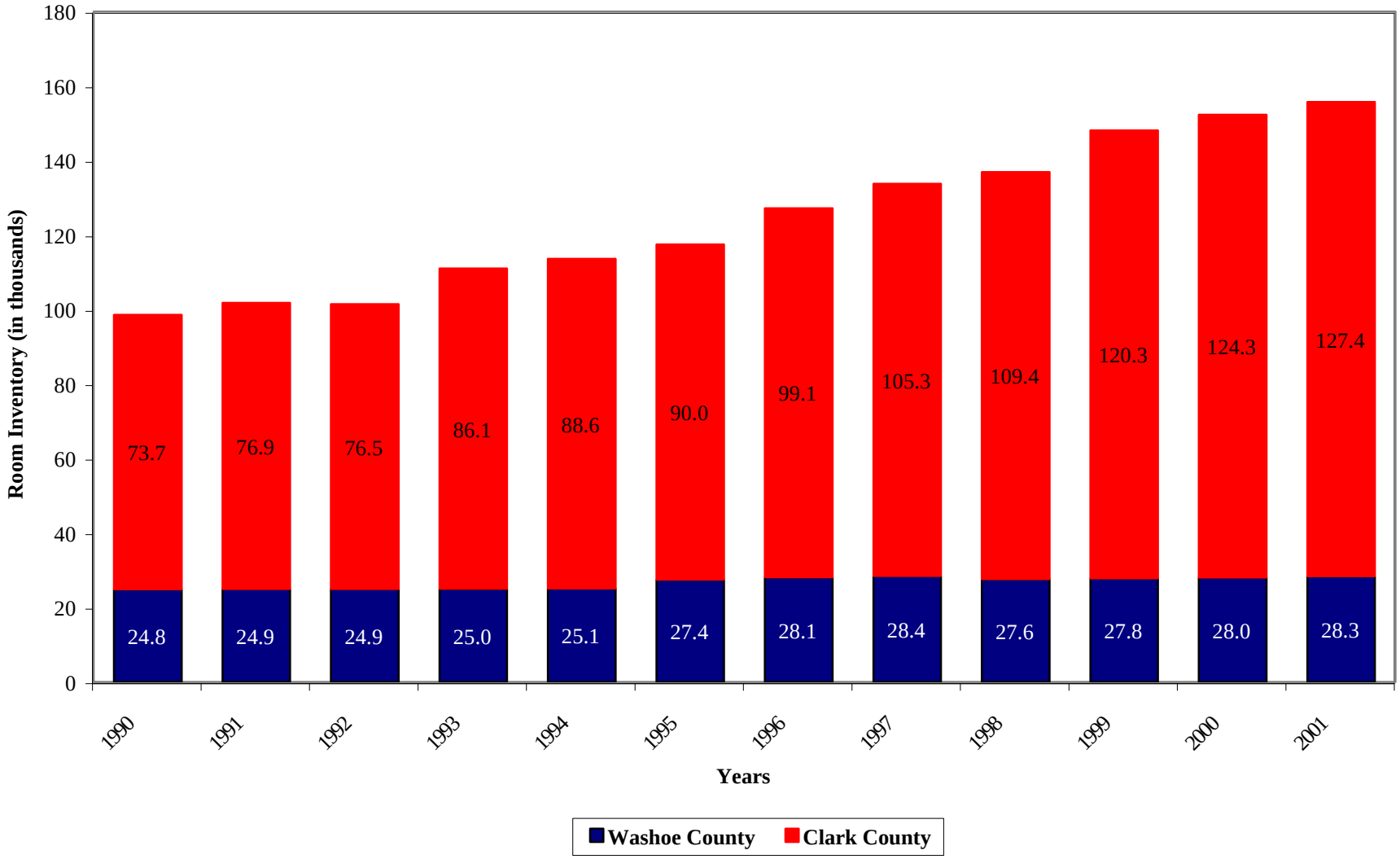
Notes:

(1) Inflation adjusted estimates are based on the Consumer Price Index for All Urban Western Consumer, where 2001 = 100. Projected inflation is estimated at 2.97 percent.

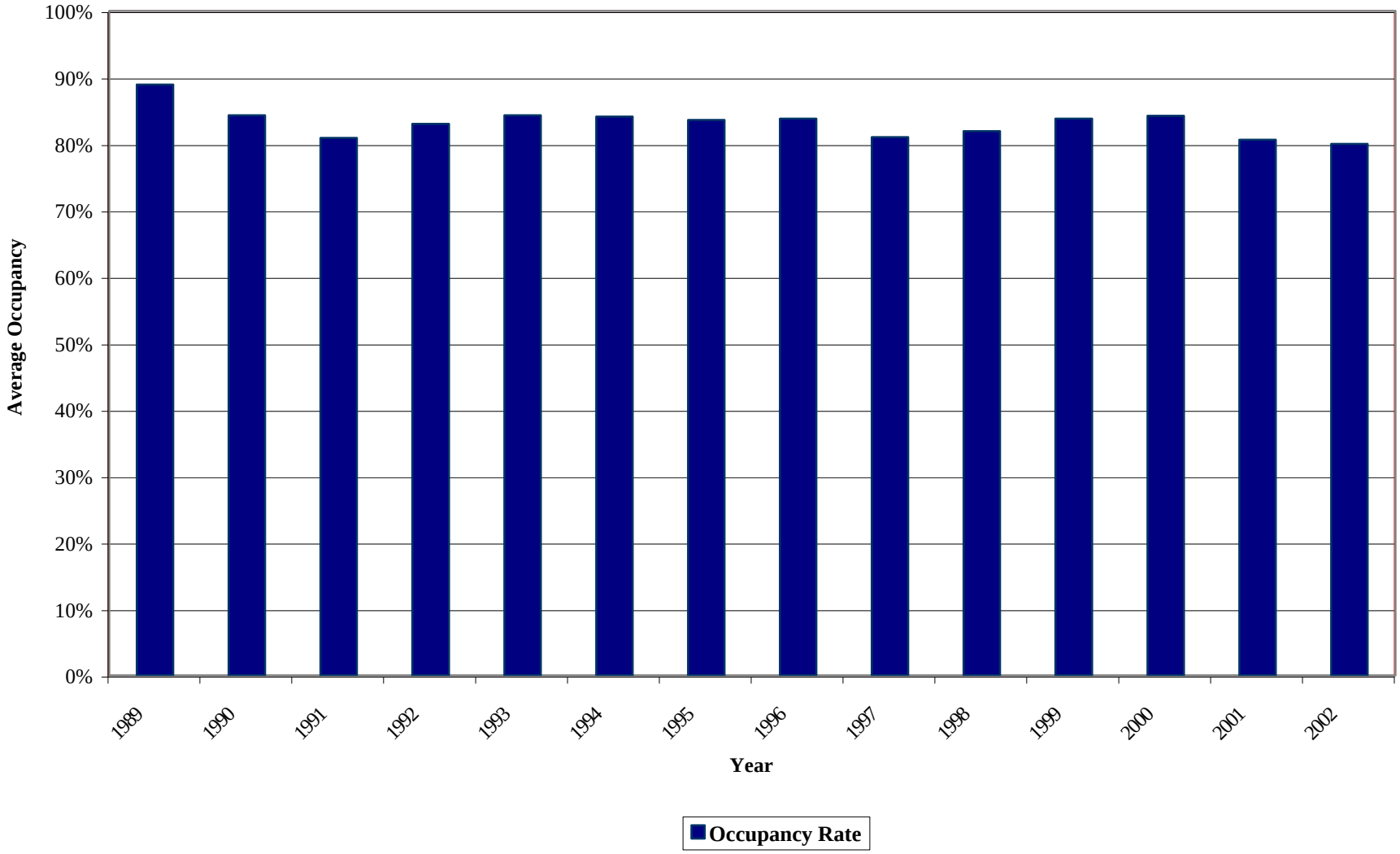
APPENDIX 1.2-AX
HISTORICAL AND PROJECTED NEVADA GROSS GAMING REVENUE
GROSS GAMING REVENUE AND ANNUAL RATE OF GROWTH, 1990 - 2020



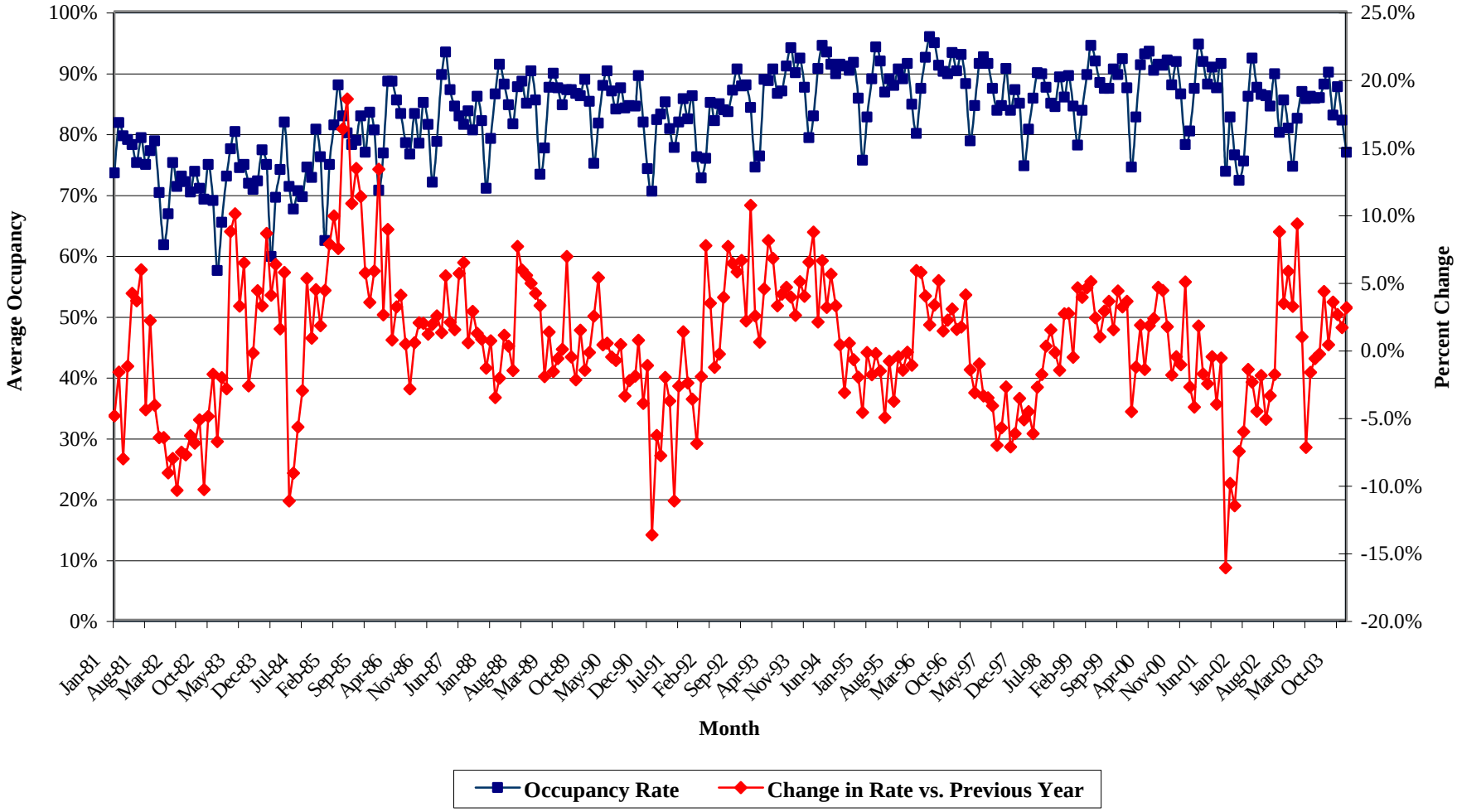
Appendix 1.2-AY
Room Inventory
Clark and Washoe Counties, 1990 - 2001



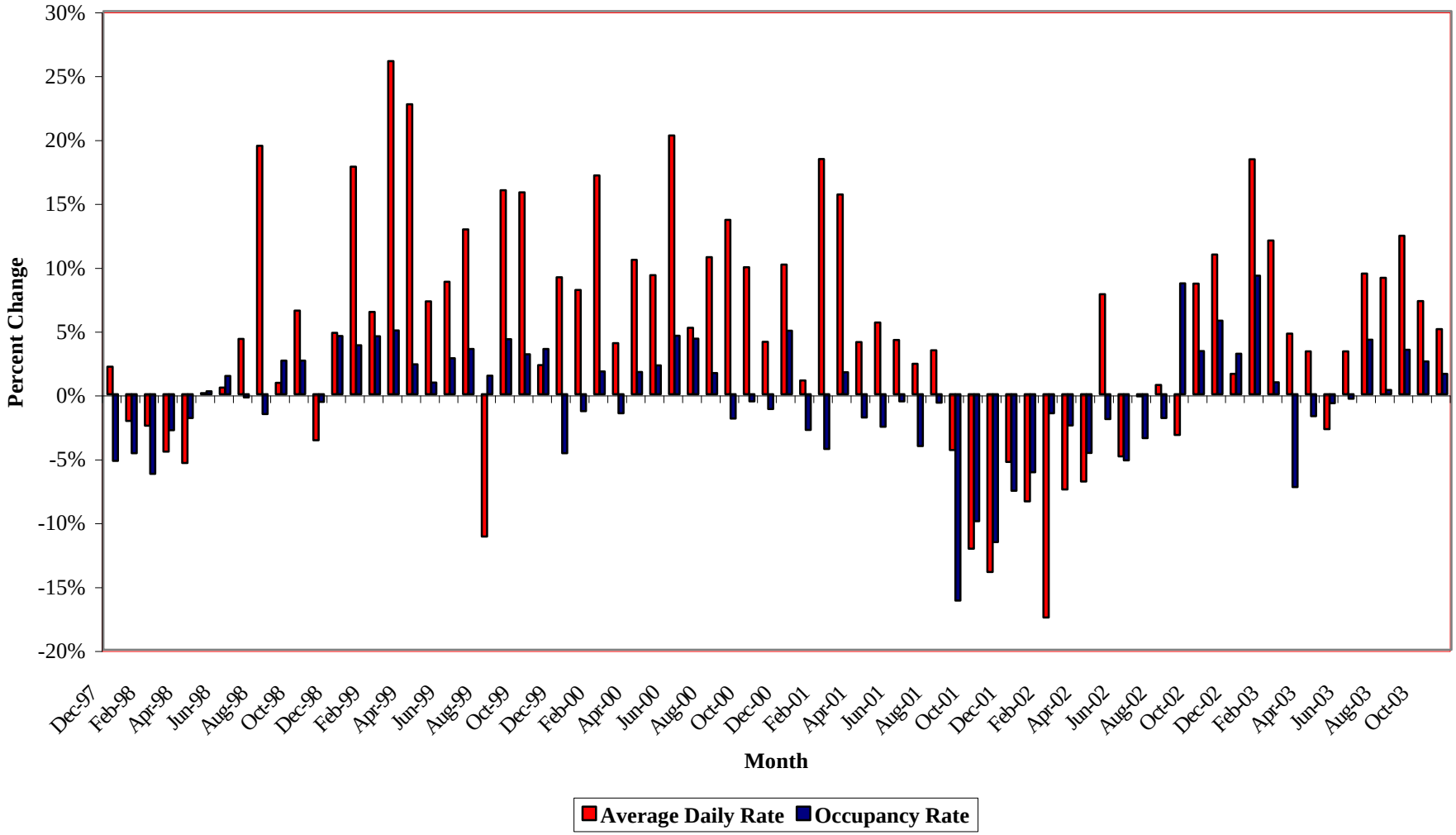
Appendix 1.2-AZ
Nevada Hotel/Motel Occupancy Rate
1989 - 2002



Appendix 1.2-BA
Las Vegas Hotel/Motel Occupancy
Average Monthly Occupancy and Change Versus Same Period of the Previous Year, 1981 - 2003



Appendix 1.2-BB
Occupancy Rate and Average Daily Room Rate Trend
Year-Over-Year Growth Comparison, 1997 - 2003 (Nov)



Appendix 1.2-BC
Legalized Gaming Activities by Jurisdiction
United States Jurisdictions, 2000

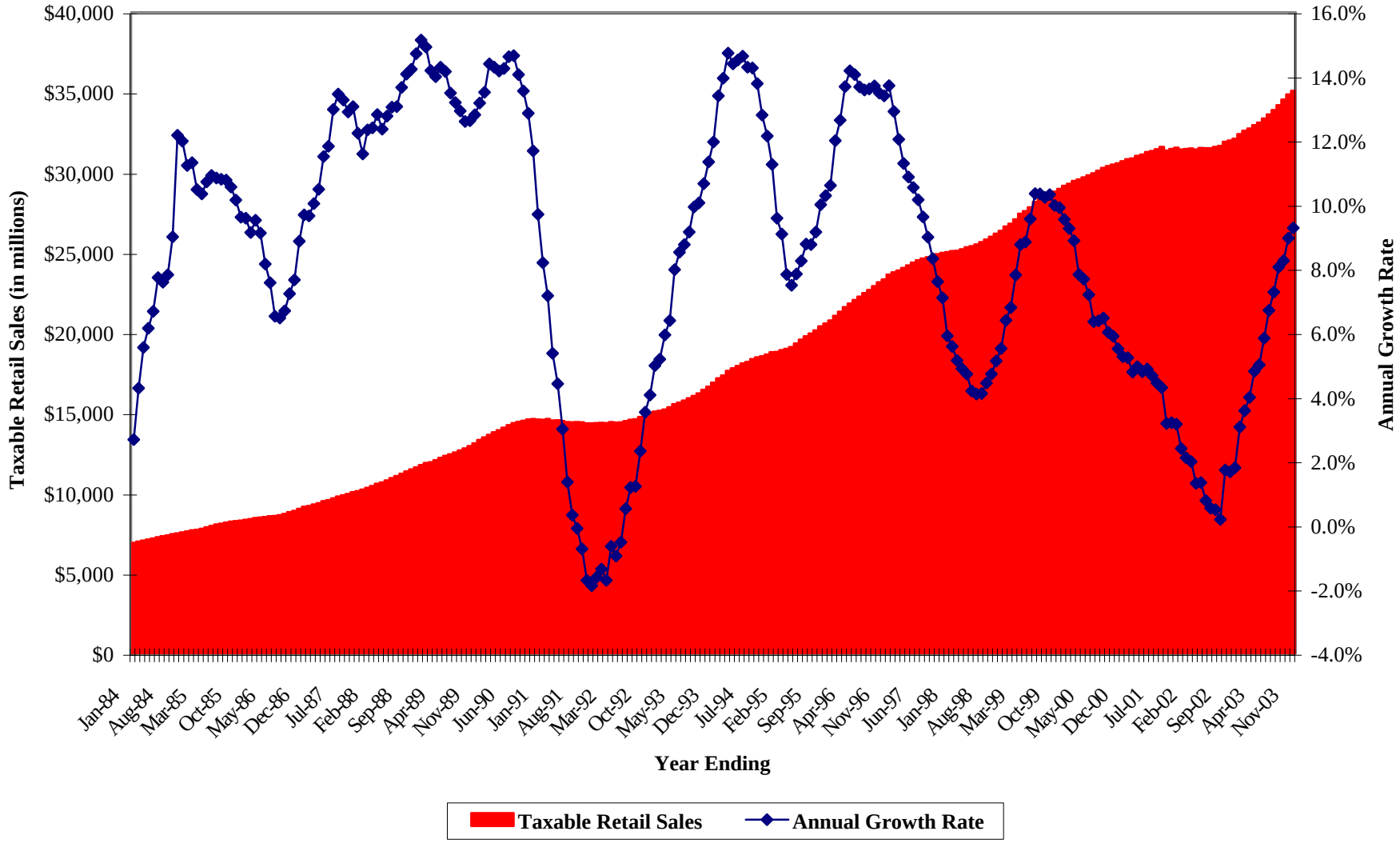
State	Land-based Casinos	Riverboat Casinos		Native Amer. Gaming	Limited Stakes	Card Rooms	Lottery	Pari-Mutuel	Bingo	None
		Dockside	Crusining							
Alabama								■	■	
Alaska									■	
Arizona				■			■	■	■	
Arkansas								■	■	
California				■		■	■	■	■	
Colorado				■	■		■	■	■	
Connecticut				■			■	■	■	
Delaware							■	■	■	
Florida				■			■	■	■	
Georgia							■		■	
Hawaii										■
Idaho				■			■	■	■	
Illinois		■					■	■	■	
Indiana			■				■	■	■	
Iowa			■	■			■	■	■	
Kansas				■			■	■	■	
Kentucky							■	■	■	
Louisiana	■	■		■			■	■	■	
Maine							■	■	■	
Maryland							■	■	■	
Massachusetts							■	■	■	
Michigan	■			■			■	■	■	
Minnesota				■			■	■	■	
Mississippi		■		■					■	
Missouri		■					■		■	
Montana				■			■	■	■	
Nebraska				■			■	■	■	
Nevada	■			■				■	■	
New Hampshire							■	■	■	
New Jersey	■						■	■	■	
New Mexico				■			■		■	
New York				■			■	■	■	
North Carolina				■			■		■	

Appendix 1.2-BC
Legalized Gaming Activities by Jurisdiction
United States Jurisdictions, 2000

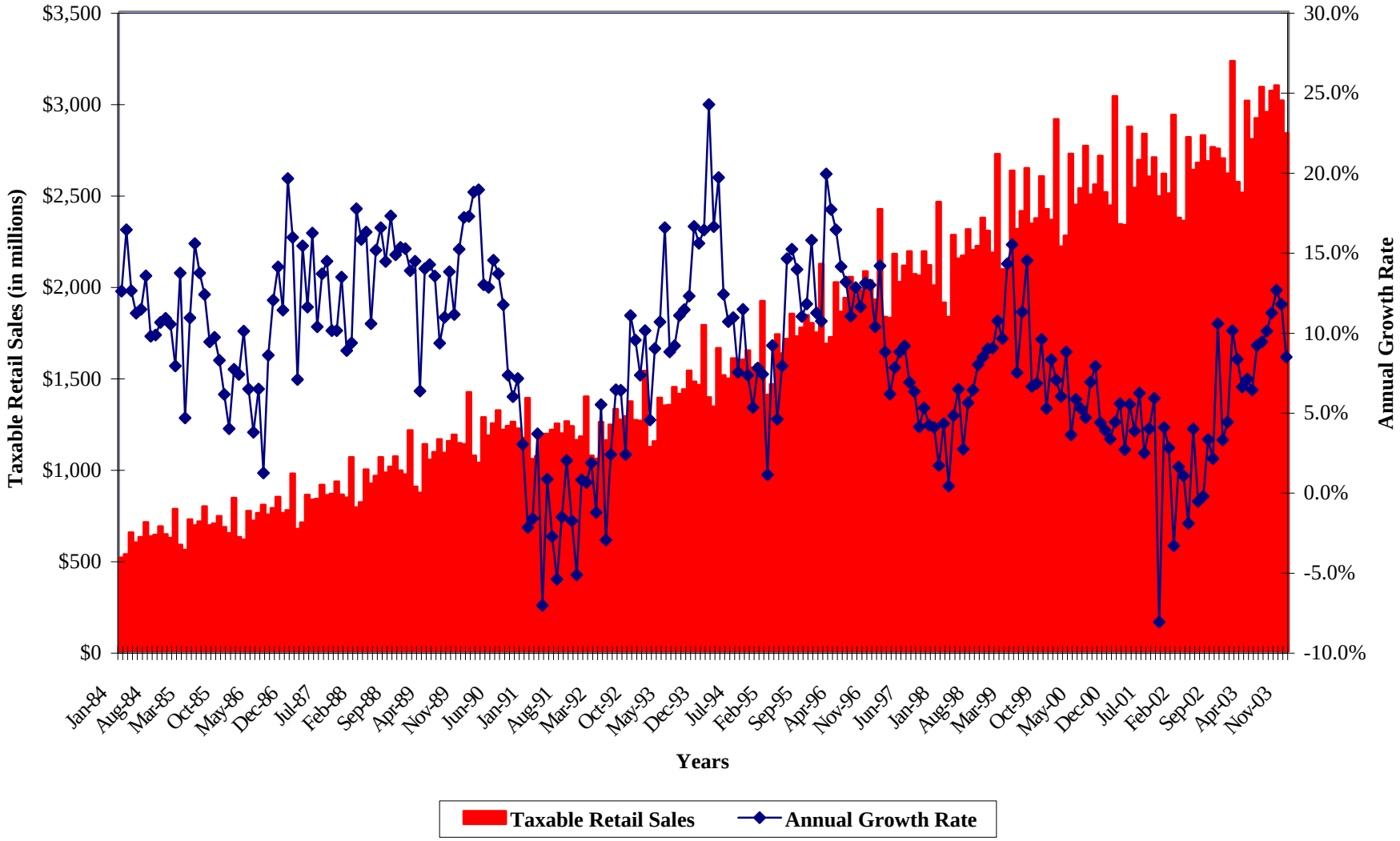
State	Land-based Casinos	Riverboat Casinos		Native Amer. Gaming	Limited Stakes	Card Rooms	Lottery	Pari-Mutuel	Bingo	None
		Dockside	Crusining							
North Dakota										
Ohio										
Oklahoma										
Oregon										
Pennsylvania										
Rhode Island										
South Carolina										
South Dakota										
Tennessee										
Texas										
Utah										
Vermont										
Virginia										
Washington										
West Virginia										
Wisconsin										
Wyoming										

Source: Bear Stearns, 2000.

Appendix 1.2-BD
Nevada Taxable Retail Sales
Annualized Totals and Annual Growth Rates, 1984 - 2003 (Nov)



Appendix 1.2-BE
Nevada Taxable Retail Sales
Monthly Totals and Year-over-Year Growth Rates, 1984 - 2003 (Nov)



Appendix 1.2-BF
Nevada Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002	2003
58 Eating and Drinking Places	$3,993,870,671	$4,040,019,694	$4,659,428,624	$5,422,969,689	$5,801,746,480	$5,860,512,676	$6,292,772,897
55 Automotive Dealers & Gasoline	$3,129,137,586	$3,248,584,624	$3,695,562,497	$4,059,274,076	$4,323,525,631	$4,700,605,722	$5,112,007,763
59 Miscellaneous Retail	$2,567,359,165	$2,663,825,905	$2,990,128,154	$3,277,086,595	$3,416,877,232	$3,311,483,800	$3,555,815,603
52 Building Materials, Hardware,	$1,917,620,560	$1,827,683,020	$1,924,308,405	$1,971,390,322	$2,044,530,165	$2,063,467,469	$2,132,959,444
50 Wholesale Trade - Durable Goods	$1,823,054,730	$1,809,619,629	$1,880,214,655	$1,913,728,144	$1,837,558,703	$1,741,864,751	$1,889,974,055
53 General Merchandise Stores	$1,762,829,623	$2,064,573,117	$2,354,403,803	$2,617,001,474	$2,833,352,048	$2,959,490,182	$3,138,065,634
57 Home Furniture, Furnishings &	$1,198,299,610	$1,330,364,920	$1,560,337,315	$1,648,644,618	$1,742,654,500	$1,743,770,584	$1,925,290,222
54 Food Stores	$1,125,682,314	$1,148,043,245	$1,214,598,847	$1,282,219,043	$1,331,160,918	$1,360,228,562	$1,365,796,756
73 Business Services	$1,008,540,015	$1,026,193,396	$1,062,853,858	$1,158,851,912	$1,242,595,769	$1,216,400,643	$1,197,795,832
56 Apparel and Accessory Stores	$859,568,470	$1,003,869,225	$1,106,384,344	$1,183,926,865	$1,276,651,687	$1,248,807,767	$1,384,761,881
17 Construction - Special Trade con	$761,937,299	$851,619,627	$842,417,944	$764,070,879	$709,446,423	$810,458,592	$812,228,747
75 Automotive Repair, Services &	$679,457,746	$767,842,862	$828,031,232	$885,078,347	$898,877,177	$948,175,054	$998,022,301
79 Amusement and Recreation Services	$497,996,328	$501,899,288	$529,906,166	$461,789,852	$543,129,557	$458,455,728	$439,196,045
35 Industrial and Commercial Mach	$290,687,951	$403,327,642	$409,828,100	$351,717,083	$438,996,417	$322,002,580	$321,759,754
51 Wholesale Trade - NonDurable Goods	$259,950,680	$230,496,413	$250,526,693	$268,269,922	$337,215,513	$378,016,747	$396,149,610
61 NonDepository Credit Institutions	$231,834,548	$220,647,638	$225,750,787	$218,215,093	$248,180,850	$260,998,649	$212,049,166
10 Metal Mining	$226,410,889	$165,744,702	$166,969,775	$152,218,975	$123,578,242	$120,385,950	$122,587,540
15 Building Construction - Gen Cont	$200,722,306	$170,452,130	$204,328,575	$187,796,963	$169,941,723	$141,149,911	$163,221,578
49 Electric, Gas & Sanitary Services	$196,881,467	$182,216,433	$237,110,585	$169,341,134	$195,966,886	$207,221,072	$234,470,120
48 Communications	$185,007,177	$239,664,087	$243,617,301	$240,900,796	$244,565,208	$184,619,089	$177,328,161
36 Electronic and Other Electrical	$151,826,887	$146,257,218	$152,440,577	$148,459,230	$155,528,395	$140,703,989	$152,999,626
76 Miscellaneous Repair Services	$139,091,216	$122,104,196	$129,653,452	$126,820,786	$134,731,255	$120,801,053	$123,490,053
16 Heavy Construction other than	$126,922,375	$117,625,312	$158,442,536	$113,251,220	$130,752,362	$152,909,162	$222,136,839
32 Stone, Clay, Glass and Concrt	$126,612,397	$129,861,064	$161,901,728	$131,512,033	$123,593,354	$116,893,386	$130,915,342
39 Misc. Manufacturing Industries	$124,253,521	$113,451,685	$122,221,322	$128,301,398	$129,565,264	$119,403,457	$130,512,555
28 Chemicals and Allied Products	$118,210,324	$98,376,942	$92,046,531	$73,305,009	$81,882,582	$83,082,358	$67,943,704
72 Personal Services	$102,757,864	$101,159,601	$104,296,248	$107,442,363	$103,400,503	$107,013,649	$116,090,474
34 Fabricated Metal Products, Ex	$59,951,697	$74,202,290	$97,057,574	$72,169,303	$48,264,970	$64,221,973	$51,709,446
80 Health Services	$56,186,356	$58,573,295	$58,615,651	$61,977,958	$67,021,492	$69,675,875	$70,647,471
78 Motion Pictures	$54,518,056	$52,675,677	$55,286,473	$64,106,833	$56,888,094	$52,400,595	$60,557,793
70 Hotels, Rooming Houses, Camps,	$45,520,460	$86,003,146	$89,197,398	$104,085,345	$114,876,513	$89,700,363	$85,791,938
27 Printing, Publishing, and Alli	$41,712,017	$45,801,239	$47,552,250	$49,214,813	$86,513,777	$54,413,300	$53,587,301
29 Petroleum Refining and Related	$36,940,117	$32,597,804	$31,577,256	$32,544,654	$35,160,791	$29,796,901	$31,138,914
24 Lumber and Wood Products, Exce	$36,324,567	$36,143,725	$36,728,066	$40,188,455	$39,388,441	$36,890,129	$47,721,600
99 Nonclassifiable Establishments	$33,547,512	$32,235,669	$33,130,697	$38,359,062	$68,959,711	$42,944,678	$51,033,629
25 Furniture and Fixtures	$31,223,112	$32,863,025	$50,284,313	$31,643,576	$29,598,753	$36,517,220	$33,392,029
07 Agricultural Services	$30,051,471	$32,212,338	$32,441,123	$32,489,507	$33,749,379	$36,766,834	$41,862,269
45 Transportation by Air	$25,425,532	$26,391,421	$21,651,187	$17,827,859	$18,869,988	$15,578,453	$14,412,275

Appendix 1.2-BF
Nevada Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002	2003
58 Eating and Drinking Places	$3,993,870,671	$4,040,019,694	$4,659,428,624	$5,422,969,689	$5,801,746,480	$5,860,512,676	$6,292,772,897
38 Meadings, Analyzing, and Contr	$23,090,627	$34,701,106	$24,108,488	$26,273,149	$28,693,303	$44,444,852	$46,422,317
20 Food and Kindred Products	$21,594,799	$22,282,347	$24,504,915	$20,516,014	$24,952,813	$28,116,131	$26,375,629
65 Real Estate	$21,222,615	$26,644,895	$22,770,969	$31,705,899	$42,131,935	$59,969,693	$49,060,023
37 Transportation Equipment	$20,152,527	$20,188,335	$18,296,571	$18,016,320	$16,540,682	$12,680,009	$21,597,743
86 Membership Organizations	$18,655,206	$14,082,735	$12,420,675	$4,275,400	$5,112,676	$5,235,104	$6,005,613
87 Engineering, Accounting, Research	$16,623,594	$23,764,684	$34,406,049	$22,282,544	$30,721,479	$71,944,885	$64,287,024
60 Depository Institutions	$16,043,179	$14,997,477	$30,277,089	$22,916,893	$18,294,480	$16,581,467	$20,410,244
13 Oil and Gas Extraction	$14,114,896	$11,743,971	$4,756,738	$4,129,271	$5,901,919	$5,908,884	$6,607,553
89 Miscellaneous Services	$13,573,574	$8,408,906	$13,177,564	$10,855,992	$6,040,280	$5,095,587	$5,181,401
33 Primary Metal Industries	$12,322,072	$12,486,384	$8,713,715	$17,217,926	$11,137,974	$17,281,564	$22,730,722
22 Textile Mill Products	$11,718,413	$10,830,479	$20,005,543	$11,795,660	$12,085,774	$12,788,041	$15,124,291
42 Motor FreightTransportation and	$11,352,345	$13,216,424	$13,563,558	$15,375,938	$16,213,980	$19,882,474	$23,752,502
47 Transportation Services	$11,054,717	$12,971,053	$13,380,741	$15,886,262	$18,883,470	$11,329,054	$9,122,954
14 Mining and Quarrying of NonMetal	$8,251,933	$7,817,331	$6,782,548	$6,085,905	$7,086,405	$6,779,271	$8,676,035
30 Rubber and Misc Plastic Products	$6,890,720	$8,157,457	$9,827,809	$9,583,224	$12,524,516	$10,922,940	$13,913,680
26 Paper and Allied Products	$5,692,472	$7,522,100	$7,370,443	$6,074,549	$4,173,618	$4,329,696	$10,244,405
01 Agricultural Production-Crops	$5,092,732	$4,297,993	$3,299,949	$3,333,145	$3,827,820	$5,110,291	$4,695,351
41 Local and Suburban Transit and	$4,945,049	$6,480,028	$7,462,582	$6,657,508	$5,540,061	$4,793,260	$14,496,724
82 Educational Services	$3,983,984	$3,214,942	$2,880,406	$2,971,107	$3,565,492	$3,534,408	$4,043,897
62 Security and Commodity Brokers	$3,273,632	$9,682,994	$5,402,372	$1,810,600	$1,794,082	$3,333,869	$4,347,506
02 Agricultural Production Livest	$2,848,290	$2,478,476	$3,158,489	$2,726,498	$2,956,792	$2,977,710	$2,977,253
44 Water Transportation	$2,051,869	$2,014,729	$2,075,882	$2,426,964	$2,524,733	$1,907,884	$2,664,871
81 Legal Services	$1,913,778	$2,955,211	$2,643,425	$3,160,445	$3,283,388	$3,377,957	$2,349,799
40 RailRoad Transportation	$1,846,726	$3,466,339	$4,337,496	$5,590,628	$9,788,699	$4,661,146	$7,996,622
43 United States Postal Services	$1,393,793	$273,632	$574,065	$35,437	$4,038	$640,675	$748,603
23 Apparel and other finished Product	$1,377,533	$1,540,414	$1,361,235	$2,349,689	$2,273,731	$2,248,371	$2,435,219
31 Leather and Leather Products	$1,169,649	$798,596	$562,479	$374,030	$411,056	$359,194	$535,052
46 Pipelines, Except Natural Gas	$1,026,198	$882,826	$781,380	$352,616	$223,490	$384,657	$487,960
64 Insurance Agents, Brokers	$914,607	$1,205,254	$1,346,872	$1,162,996	$1,323,104	$1,232,382	$1,996,598
63 Insurance Carriers	$871,283	$455,364	$992,428	$1,079,816	$1,479,025	$1,116,242	$512,869
21 Tobacco Products	$781,756	$1,481,099	$1,384,951	$1,181,507	$1,475,072	$1,295,209	$1,060,187
67 Holding & Other Invest Offices	$424,766	$825,652	$2,238,043	$2,934,707	$4,544,407	$5,470,662	$13,670,202
83 Social Services	$368,781	$503,882	$633,360	$637,083	$723,829	$838,171	$920,818
84 Museums, Art Galleries, and B	$319,816	$279,052	$433,900	$741,830	$687,982	$698,343	$738,372
08 Forestry	$318,602	$358,491	$442,240	$361,654	$284,149	$267,761	$221,676
95 Administration of Environmental	$282,376	$128,587	$147,363	$26,760	$140,634	$129,081	$86,134
09 Fishing, Hunting, and Trapping	$173,603	$4,434	$16,052	$0	$1,369	$932	$204

Appendix 1.2-BF
Nevada Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002	2003
58 Eating and Drinking Places	$3,993,870,671	$4,040,019,694	$4,659,428,624	$5,422,969,689	$5,801,746,480	$5,860,512,676	$6,292,772,897
12 Coal Mining	$67,830	$0	$0	$0	$0	$0	$0
94 Administration of Human Resources	$23,790	$26,535	$71,084	$67,937	$98,161	$102,000	$125,989
97 National Security and International	$10,359	$22,379	$808	$277	$405	$0	$1,188
88 Private Households	$4,149	$3,740	$17,246	$1,820	$5,332	$2,646	$225
92 Justice, Public Order & Safety	$1,560	$4,252	$6,168	$5,861	$0	$956	$0
91 Executive, Legislative and General	$0	$468,453	$381,258	$421,437	$371,109	$148,119	$0
93 Public Finance, Taxation, and	$0	$0	$0	$0	$0	$0	$0
96 Administration of Economic Productivity	$0	$34,050	$9,512	$36,078	$43,820	$39,462	$75,472
State Total	**$24,525,764,816**	**$25,528,926,332**	**$28,168,256,502**	**$29,891,630,562**	**$31,527,163,837**	**$31,785,789,943**	**$33,774,897,294**

Appendix 1.2-BG
Nevada Taxable Retail Sales Growth Rates
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002
58 Eating and Drinking Places	16.28%	15.83%	16.54%	18.14%	18.40%	18.44%
55 Automotive Dealers & Gasoline	12.76%	12.73%	13.12%	13.58%	13.71%	14.79%
59 Miscellaneous Retail	10.47%	10.43%	10.62%	10.96%	10.84%	10.42%
53 General Merchandise Stores	7.19%	8.09%	8.36%	6.60%	6.48%	6.49%
52 Building Materials, Hardware,	7.82%	7.16%	6.83%	6.40%	5.83%	5.48%
50 Wholesale Trade - Durable Goods	7.43%	7.09%	6.67%	8.75%	8.99%	9.31%
57 Home Furniture, Furnishings &	4.89%	5.21%	5.54%	5.52%	5.53%	5.49%
54 Food Stores	4.59%	4.50%	4.31%	4.29%	4.22%	4.28%
56 Apparel and Accessory Stores	3.50%	3.93%	3.93%	3.88%	3.94%	3.83%
73 Business Services	4.11%	4.02%	3.77%	3.96%	4.05%	3.93%
75 Automotive Repair, Services &	2.77%	3.01%	2.94%	2.56%	2.25%	2.55%
17 Construction - Special Trade con	3.11%	3.34%	2.99%	2.96%	2.85%	2.98%
79 Amusement and Recreation Services	2.03%	1.97%	1.88%	1.54%	1.72%	1.44%
35 Industrial and Commercial Mach	1.19%	1.58%	1.45%	1.18%	1.39%	1.01%
51 Wholesale Trade - NonDurable Goods	1.06%	0.90%	0.89%	0.90%	1.07%	1.19%
61 NonDepository Credit Institutions	0.95%	0.86%	0.80%	0.73%	0.79%	0.82%
48 Communications	0.75%	0.94%	0.86%	0.51%	0.39%	0.38%
49 Electric, Gas & Sanitary Services	0.80%	0.71%	0.84%	0.63%	0.54%	0.44%
15 Building Construction - Gen Cont	0.82%	0.67%	0.73%	0.57%	0.62%	0.65%
36 Electronic and Other Electrical	0.62%	0.57%	0.54%	0.81%	0.78%	0.58%
76 Miscellaneous Repair Services	0.57%	0.48%	0.46%	0.50%	0.49%	0.44%
16 Heavy Construction other than	0.52%	0.46%	0.56%	0.42%	0.43%	0.38%
39 Misc. Manufacturing Industries	0.51%	0.44%	0.43%	0.38%	0.41%	0.48%
32 Stone, Clay, Glass and Concrt	0.52%	0.51%	0.57%	0.44%	0.39%	0.37%
10 Metal Mining	0.92%	0.65%	0.59%	0.43%	0.41%	0.38%
70 Hotels, Rooming Houses, Camps,	0.19%	0.34%	0.32%	0.25%	0.26%	0.26%
72 Personal Services	0.42%	0.40%	0.37%	0.36%	0.33%	0.34%
27 Printing, Publishing, and Alli	0.17%	0.18%	0.17%	0.24%	0.15%	0.20%
28 Chemicals and Allied Products	0.48%	0.39%	0.33%	0.21%	0.21%	0.22%
99 Nonclassifiable Establishments	0.14%	0.13%	0.12%	0.21%	0.18%	0.16%
80 Health Services	0.23%	0.23%	0.21%	0.35%	0.36%	0.28%
78 Motion Pictures	0.22%	0.21%	0.20%	0.16%	0.27%	0.17%
34 Fabricated Metal Products, Ex	0.24%	0.29%	0.34%	0.11%	0.11%	0.09%
65 Real Estate	0.09%	0.10%	0.08%	0.13%	0.12%	0.12%
24 Lumber and Wood Products, Exce	0.15%	0.14%	0.13%	0.13%	0.22%	0.14%
29 Petroleum Refining and Related	0.15%	0.13%	0.11%	0.11%	0.09%	0.11%

Appendix 1.2-BG
Nevada Taxable Retail Sales Growth Rates
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002
07 Agricultural Services	0.12%	0.13%	0.12%	0.11%	0.11%	0.12%
87 Engineering, Accounting, Research	0.07%	0.09%	0.12%	0.06%	0.06%	0.05%
25 Furniture and Fixtures	0.13%	0.13%	0.18%	0.09%	0.09%	0.14%
38 Meadings, Analyzing, and Contr	0.09%	0.14%	0.09%	0.07%	0.08%	0.09%
20 Food and Kindred Products	0.09%	0.09%	0.09%	0.11%	0.13%	0.19%
47 Transportation Services	0.05%	0.05%	0.05%	0.06%	0.05%	0.04%
45 Transportation by Air	0.10%	0.10%	0.08%	0.01%	0.02%	0.02%
60 Depository Institutions	0.07%	0.06%	0.11%	0.07%	0.10%	0.23%
37 Transportation Equipment	0.08%	0.08%	0.06%	0.08%	0.06%	0.05%
42 Motor FreightTransportation and	0.05%	0.05%	0.05%	0.01%	0.02%	0.02%
30 Rubber and Misc Plastic Products	0.03%	0.03%	0.03%	0.04%	0.02%	0.02%
22 Textile Mill Products	0.05%	0.04%	0.07%	0.06%	0.04%	0.05%
33 Primary Metal Industries	0.05%	0.05%	0.03%	0.04%	0.04%	0.04%
40 RailRoad Transportation	0.01%	0.01%	0.02%	0.05%	0.05%	0.06%
14 Mining and Quarrying of NonMetal	0.03%	0.03%	0.02%	0.05%	0.06%	0.04%
89 Miscellaneous Services	0.06%	0.03%	0.05%	0.02%	0.02%	0.02%
13 Oil and Gas Extraction	0.06%	0.05%	0.02%	0.03%	0.04%	0.03%
41 Local and Suburban Transit and	0.02%	0.03%	0.03%	0.02%	0.01%	0.01%
86 Membership Organizations	0.08%	0.06%	0.04%	0.01%	0.01%	0.02%
67 Holding & Other Invest Offices	0.00%	0.00%	0.01%	0.02%	0.02%	0.02%
26 Paper and Allied Products	0.02%	0.03%	0.03%	0.01%	0.01%	0.01%
01 Agricultural Production-Crops	0.02%	0.02%	0.01%	0.01%	0.01%	0.01%
82 Educational Services	0.02%	0.01%	0.01%	0.01%	0.01%	0.01%
81 Legal Services	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
02 Agricultural Production Livest	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
44 Water Transportation	0.01%	0.01%	0.01%	0.02%	0.03%	0.01%
23 Apparel and other finished Product	0.01%	0.01%	0.00%	0.00%	0.00%	0.00%
62 Security and Commodity Brokers	0.01%	0.04%	0.02%	0.01%	0.01%	0.01%
63 Insurance Carriers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
21 Tobacco Products	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%
64 Insurance Agents, Brokers	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
83 Social Services	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
84 Museums, Art Galleries, and B	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
31 Leather and Leather Products	0.00%	0.00%	0.00%	0.01%	0.01%	0.02%
91 Executive, Legislative and General	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
08 Forestry	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Appendix 1.2-BG
Nevada Taxable Retail Sales Growth Rates
In-state Collections by Two-Digit Standard Industry Classification, 1997 - 2003

Business Code and Type	1997	1998	1999	2000	2001	2002
46 Pipelines, Except Natural Gas	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
95 Administration of Environmental	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
94 Administration of Human Resources	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
96 Administration of Economic Productivity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
88 Private Households	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
43 United States Postal Services	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%
09 Fishing, Hunting, and Trapping	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
97 National Security and International	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
12 Coal Mining	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
92 Justice, Public Order & Safety	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
93 Public Finance, Taxation, and	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
State Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Source: Nevada Department of Taxation.

Appendix 1.2-BH
Nevada Monthly Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, July 2003 - November 2003

Business Code and Type	July	% Change	August	% Change	September	% Change	October	% Change	November	% Change
58 Eating and Drinking Places	$566,546,991	9.4%	$575,276,474	6.3%	$545,387,267	9.8%	$570,771,262	10.9%	$522,977,418	6.7%
55 Automotive Dealers & Gasoline	$510,252,550	14.5%	$507,948,492	7.2%	$474,656,787	16.8%	$451,501,918	10.7%	$403,405,436	5.8%
59 Miscellaneous Retail	$286,468,154	9.6%	$296,311,222	9.2%	$313,232,937	9.8%	$301,138,673	6.5%	$300,843,821	8.3%
53 General Merchandise Stores	$242,020,047	8.3%	$269,066,893	10.3%	$242,262,435	2.3%	$258,460,925	7.9%	$324,729,962	12.9%
52 Building Materials, Hardware,	$204,774,180	9.7%	$186,530,932	9.9%	$204,694,509	23.7%	$217,274,707	17.7%	$182,086,639	17.2%
50 Wholesale Trade - Durable Goods	$181,414,624	23.3%	$168,380,765	10.8%	$197,093,111	29.2%	$191,438,879	22.4%	$156,498,762	13.3%
57 Home Furniture, Furnishings &	$158,948,110	11.1%	$162,236,244	11.4%	$189,558,501	22.1%	$168,926,067	19.0%	$163,262,106	2.1%
54 Food Stores	$120,635,421	3.2%	$117,020,873	4.0%	$125,912,446	14.0%	$115,261,911	3.4%	$111,256,146	5.6%
56 Apparel and Accessory Stores	$111,045,347	10.3%	$131,790,165	14.5%	$130,465,315	13.5%	$115,745,786	7.7%	$137,008,236	9.9%
73 Business Services	$94,777,282	-0.6%	$90,960,149	1.9%	$109,726,043	-6.3%	$101,459,093	-0.8%	$80,503,339	-11.3%
75 Automotive Repair, Services &	$93,553,804	-0.3%	$95,070,964	-1.6%	$87,655,032	1.5%	$97,716,408	12.2%	$76,721,746	0.0%
17 Construction - Special Trade con	$72,881,650	12.3%	$71,461,041	10.6%	$78,691,845	10.5%	$69,099,075	-3.9%	$64,119,612	4.8%
51 Wholesale Trade - NonDurable Goods	$32,727,848	7.2%	$33,916,780	7.2%	$35,868,032	-0.8%	$33,063,754	0.3%	$31,058,231	2.2%
79 Amusement and Recreation Services	$30,360,177	-7.8%	$42,991,635	26.9%	$61,134,720	44.2%	$44,768,001	52.8%	$35,389,732	-8.0%
35 Industrial and Commercial Mach	$25,388,198	-21.2%	$26,862,737	11.2%	$27,728,800	17.0%	$27,408,943	-4.9%	$25,524,700	9.6%
15 Building Construction - Gen Cont	$14,860,817	21.6%	$17,341,639	58.7%	$23,736,647	44.9%	$23,792,556	85.4%	$16,492,334	44.5%
61 NonDepository Credit Institutions	$14,456,232	-8.0%	$14,293,728	-5.1%	$14,873,066	-5.2%	$13,437,960	0.6%	$11,568,336	-22.9%
49 Electric, Gas & Sanitary Services	$13,939,626	-31.3%	$11,908,998	-51.6%	$16,664,829	-6.4%	$15,258,347	-11.1%	$15,191,964	22.4%
32 Stone, Clay, Glass and Concrt	$13,825,497	15.5%	$14,734,182	22.3%	$15,618,340	30.6%	$16,725,393	30.4%	$13,842,918	20.5%
16 Heavy Construction other than	$13,464,174	-16.1%	$14,470,267	-0.1%	$13,302,711	-37.0%	$10,881,800	-38.3%	$12,296,448	-16.1%
48 Communications	$13,311,775	51.9%	$12,524,777	14.6%	$19,441,179	-26.7%	$18,942,769	52.3%	$15,466,361	55.7%
36 Electronic and Other Electrical	$12,456,720	5.4%	$12,699,263	-1.5%	$15,631,025	4.3%	$14,054,908	11.7%	$14,296,663	7.2%
76 Miscellaneous Repair Services	$10,822,888	12.0%	$83,282,252	877.5%	$11,893,093	26.6%	$14,820,597	44.6%	$8,097,227	1.4%
39 Misc. Manufacturing Industries	$10,714,936	24.8%	$9,268,990	7.8%	$11,754,878	28.9%	$10,628,278	-0.7%	$9,335,905	12.4%
72 Personal Services	$8,948,621	15.7%	$9,653,533	20.7%	$11,316,917	12.5%	$10,476,476	3.1%	$9,507,933	3.3%
70 Hotels, Rooming Houses, Camps,	$8,475,203	22.9%	$7,470,373	0.4%	$7,424,180	9.8%	$7,555,980	7.6%	$5,554,555	13.3%
10 Metal Mining	$8,243,046	-23.7%	$9,939,339	2.2%	$10,416,702	25.0%	$11,169,971	20.1%	$9,460,455	12.9%
28 Chemicals and Allied Products	$6,560,453	17.8%	$6,668,341	16.8%	$7,764,303	43.2%	$6,681,053	23.8%	$6,635,606	31.0%
24 Lumber and Wood Products, Exce	$6,096,591	4.5%	$5,605,413	-1.4%	$7,139,885	19.3%	$6,560,178	18.1%	$5,360,268	-3.3%
78 Motion Pictures	$5,682,491	10.5%	$6,021,843	14.5%	$4,877,410	14.9%	$5,589,955	37.7%	$5,374,906	-1.7%
29 Petroleum Refining and Related	$4,604,490	56.3%	$2,961,475	-13.1%	$3,991,187	32.6%	$3,005,573	-3.2%	$2,234,257	10.5%
80 Health Services	$4,136,010	-10.1%	$4,537,709	8.0%	$11,655,183	51.6%	$4,658,161	6.9%	$4,382,293	-1.9%
27 Printing, Publishing, and Alli	$4,019,445	-13.9%	$5,139,277	3.9%	$4,953,351	-2.0%	$4,606,024	0.3%	$4,002,373	-3.6%
34 Fabricated Metal Products, Ex	$3,910,575	14.0%	$4,265,449	-5.5%	$6,006,728	17.5%	$5,179,090	12.6%	$6,342,489	81.2%
99 Nonclassifiable Establishments	$3,878,665	76.7%	$2,865,052	0.2%	$3,630,371	-12.4%	$3,640,322	24.2%	$4,582,684	7.0%
07 Agricultural Services	$3,578,437	7.4%	$3,406,645	4.5%	$5,202,286	29.4%	$3,554,244	5.3%	$3,384,683	31.0%
87 Engineering, Accounting, Research	$3,520,378	50.5%	$2,569,764	-6.0%	$5,064,389	-71.8%	$3,128,914	27.8%	$2,820,515	22.3%
25 Furniture and Fixtures	$3,045,337	16.0%	$3,181,670	17.2%	$3,536,405	40.9%	$2,860,915	1.0%	$2,664,434	-5.2%
38 Meadings, Analyzing, and Contr	$2,522,854	-5.1%	$3,472,849	-32.1%	$3,613,959	-13.1%	$2,424,648	-29.1%	$1,414,310	-46.7%
65 Real Estate	$2,480,401	-6.1%	$2,375,995	-19.3%	$3,638,125	1.9%	$3,549,174	7.4%	$4,726,339	47.3%
20 Food and Kindred Products	$2,097,401	-20.2%	$1,998,959	-19.5%	$2,644,644	19.1%	$2,063,561	4.8%	$1,784,489	2.6%
33 Primary Metal Industries	$1,850,875	47.8%	$1,160,173	-9.5%	$1,649,376	44.0%	$2,171,511	-15.6%	$1,319,911	-30.4%
42 Motor FreightTransportation and	$1,761,403	2.5%	$1,660,944	-9.1%	$2,274,230	-7.1%	$1,952,090	-27.9%	$2,074,228	-23.5%
37 Transportation Equipment	$1,752,857	40.8%	$1,531,628	14.3%	$1,795,774	-11.3%	$2,802,857	-4.2%	$2,694,290	20.7%
26 Paper and Allied Products	$1,437,665	353.8%	$1,477,787	284.8%	$2,136,980	397.7%	$1,588,706	270.5%	$1,509,751	131.8%
60 Depository Institutions	$1,270,420	-31.2%	$2,959,619	-6.4%	$3,008,358	-7.5%	$2,840,646	-20.4%	$2,800,758	-13.9%
30 Rubber and Misc Plastic Products	$1,205,177	-11.2%	$1,119,842	-29.0%	$1,281,731	3.5%	$1,210,282	-2.7%	$889,312	8.9%

Appendix 1.2-BH
Nevada Monthly Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, July 2003 - November 2003

Business Code and Type	July	% Change	August	% Change	September	% Change	October	% Change	November	% Change
67 Holding & Other Invest Offices	$1,144,534	11.2%	$1,318,884	18.3%	$1,272,222	26.6%	$1,099,712	4.5%	$1,070,802	-1.6%
22 Textile Mill Products	$1,029,258	-3.2%	$1,377,246	14.4%	$2,379,187	88.4%	$1,880,836	94.8%	$2,076,078	81.6%
14 Mining and Quarrying of NonMetal	$1,026,167	90.6%	$669,531	9.0%	$955,294	31.9%	$968,055	46.8%	$898,243	149.2%
40 RailRoad Transportation	$939,497	52.8%	$1,449,315	38.3%	$872,233	826.6%	$417,393	16.3%	$491,799	44.8%
45 Transportation by Air	$874,627	-50.9%	$1,133,739	-19.9%	$1,079,525	-14.0%	$820,196	-49.7%	$822,126	26.0%
13 Oil and Gas Extraction	$770,198	169.7%	$344,595	27.0%	$571,589	12.2%	$750,113	60.7%	$1,045,732	576.0%
86 Membership Organizations	$652,894	50.1%	$577,277	36.9%	$646,354	14.1%	$510,657	11.9%	$386,500	19.1%
47 Transportation Services	$509,248	-16.7%	$467,199	-19.5%	$636,712	-23.4%	$545,613	-30.2%	$440,312	-21.2%
82 Educational Services	$421,809	47.2%	$253,544	-33.2%	$1,031,424	214.8%	$742,944	61.2%	$288,527	-27.2%
01 Agricultural Production-Crops	$416,487	-11.1%	$374,197	-24.7%	$365,115	-19.6%	$259,746	-45.2%	$216,384	-27.1%
89 Miscellaneous Services	$410,875	-2.7%	$774,924	115.3%	$459,208	-5.8%	$402,295	-9.2%	$535,424	34.2%
62 Security and Commodity Brokers	$369,795	23.0%	$428,454	59.0%	$450,359	16.3%	$441,528	60.4%	$323,359	20.7%
41 Local and Suburban Transit and	$253,582	-0.6%	$433,985	99.4%	$1,167,936	131.1%	$325,994	15.7%	$301,876	-5.4%
44 Water Transportation	$234,952	-8.8%	$285,480	57.3%	$136,236	-31.3%	$103,712	-30.9%	$19,234	-80.9%
23 Apparel and other finished Product	$225,715	25.9%	$181,641	12.2%	$171,678	-22.1%	$283,179	46.1%	$252,672	31.9%
02 Agricultural Production Livest	$201,323	2.8%	$187,268	-1.6%	$377,090	7.3%	$281,258	14.6%	$476,527	179.7%
64 Insurance Agents, Brokers	$81,592	-19.2%	$1,243,807	2738.6%	$1,490,341	2097.3%	$1,282,076	2043.2%	$1,307,633	551.5%
84 Museums, Art Galleries, and B	$64,398	-5.9%	$60,021	-39.1%	$96,615	-17.4%	$67,879	-4.4%	$41,510	-43.7%
63 Insurance Carriers	$61,763	85.5%	$26,835	8.5%	$182,794	149.2%	$60,125	47.6%	$65,313	69.4%
21 Tobacco Products	$38,863	-49.2%	$51,345	-64.0%	$41,265	-50.2%	$42,363	-60.8%	$36,623	-52.9%
31 Leather and Leather Products	$33,258	29.2%	$26,616	8.5%	$33,225	17.2%	$18,477	-47.5%	$21,061	-24.9%
94 Administration of Human Resources	$21,712	21.9%	$26,792	20.5%	$25,784	24.2%	$5,156	-40.4%	$887	-71.1%
43 United States Postal Services	$18,186	-78.1%	$25,425	-64.0%	$28,572	-58.6%	$336,122	471.2%	$25,014	-60.5%
81 Legal Services	$16,136	-32.3%	$13,087	-58.9%	$170,531	-31.6%	$10,956	-64.7%	$16,206	-47.8%
08 Forestry	$4,766	-55.5%	$6,503	-17.4%	$53,921	203.1%	$13,952	19.2%	$11,025	29.3%
83 Social Services	$2,551	-96.5%	$111,340	71.8%	$122,755	-19.1%	$38,524	-29.4%	$52,361	20.0%
46 Pipelines, Except Natural Gas	$738	-94.5%	$3,287	-98.0%	$1,428	-95.4%	$7,460	-89.3%	$3,363	-80.0%
09 Fishing, Hunting, and Trapping	$0	0.0%	$0	0.0%	$83	-39.4%	$0	0.0%	$0	0.0%
12 Coal Mining	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
88 Private Households	$0	0.0%	$0	0.0%	$63	100.0%	$0	0.0%	$0	0.0%
91 Executive, Legislative and General	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
92 Justice, Public Order & Safety	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
93 Public Finance, Taxation, and	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
95 Administration of Environmental	$0	0.0%	$0	0.0%	$20,982	111.5%	$0	0.0%	$0	0.0%
96 Administration of Economic Productivity	$0	0.0%	$0	0.0%	$7,339	-19.4%	$0	0.0%	$0	0.0%
97 National Security and International	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
State Total	**$2,950,550,767**	9.3%	**$3,070,245,478**	10.3%	**$3,096,853,882**	12.0%	**$3,013,564,662**	10.8%	**$2,834,721,472**	7.5%

Source: Nevada Department of Taxation.

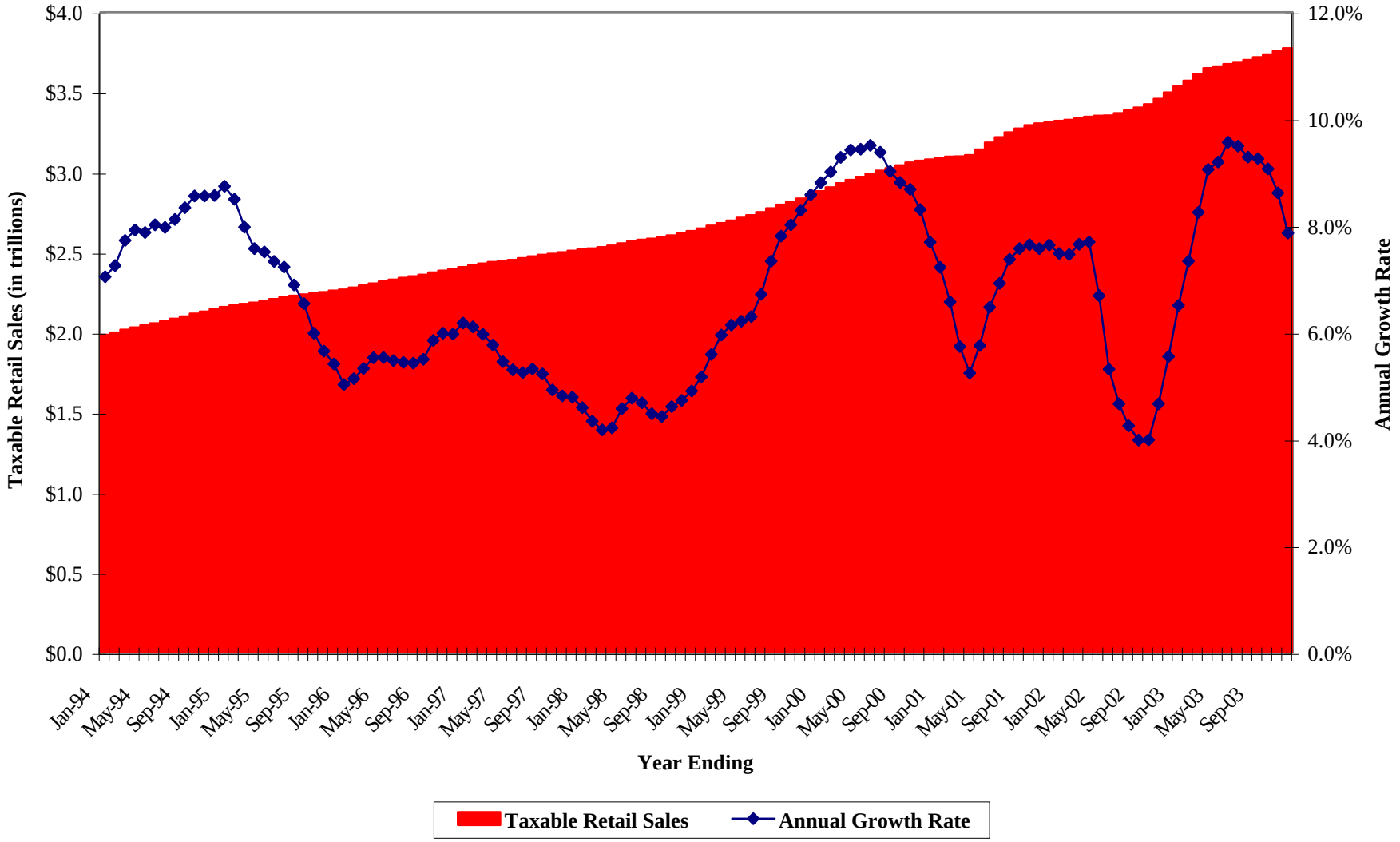
Appendix 1.2-BI
Nevada Fiscal Year-to-Date Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, July 2003 - November 2003

Business Code and Type	July	% Change	August	% Change	September	% Change	October	% Change	November	% Change
58 Eating and Drinking Places	$566,546,991	9.4%	$1,141,823,465	9.8%	$1,687,210,732	10.2%	$2,257,981,994	10.9%	$2,780,959,412	10.6%
55 Automotive Dealers & Gasoline	$510,252,550	14.5%	$1,018,201,042	11.0%	$1,492,857,829	12.7%	$1,944,359,747	12.1%	$2,347,765,183	11.0%
59 Miscellaneous Retail	$286,468,154	9.6%	$582,779,376	10.2%	$896,012,313	10.1%	$1,197,150,986	9.3%	$1,497,994,807	9.3%
53 General Merchandise Stores	$242,020,047	8.3%	$511,086,940	9.4%	$753,349,375	7.0%	$1,011,810,300	7.3%	$1,336,540,262	8.6%
52 Building Materials, Hardware,	$204,774,180	9.7%	$391,305,112	8.7%	$595,999,621	13.2%	$813,274,328	13.7%	$995,360,967	14.4%
50 Wholesale Trade - Durable Goods	$181,414,624	23.3%	$349,795,389	16.8%	$546,888,500	20.9%	$738,327,379	21.3%	$894,826,141	19.7%
57 Home Furniture, Furnishings &	$158,948,110	11.1%	$321,184,354	12.8%	$510,742,855	16.5%	$679,668,922	17.6%	$842,931,028	14.3%
54 Food Stores	$120,635,421	3.2%	$237,656,294	4.3%	$363,568,740	7.7%	$478,830,651	6.7%	$590,086,797	6.0%
56 Apparel and Accessory Stores	$111,045,347	10.3%	$242,835,512	14.7%	$373,300,827	15.1%	$489,046,613	13.5%	$626,054,849	13.2%
73 Business Services	$94,777,282	-0.6%	$185,737,431	1.1%	$295,463,474	-1.9%	$396,922,567	-1.4%	$477,425,906	-3.0%
75 Automotive Repair, Services &	$93,553,804	-0.3%	$188,624,768	6.4%	$276,279,800	7.2%	$373,996,208	10.4%	$450,717,954	10.1%
17 Construction - Special Trade con	$72,881,650	12.3%	$144,342,691	8.8%	$223,034,536	8.6%	$292,133,611	5.6%	$356,253,223	5.4%
51 Wholesale Trade - NonDurable Goods	$32,727,848	7.2%	$66,644,628	7.9%	$102,512,660	4.3%	$135,576,414	3.6%	$166,634,645	3.4%
79 Amusement and Recreation Services	$30,360,177	-7.8%	$73,351,812	11.9%	$134,486,532	25.0%	$179,254,533	31.5%	$214,644,265	23.3%
35 Industrial and Commercial Mach	$25,388,198	-21.2%	$52,250,935	-5.5%	$79,979,735	1.3%	$107,388,678	-0.2%	$132,913,378	1.7%
15 Building Construction - Gen Cont	$14,860,817	21.6%	$32,202,456	39.3%	$55,939,103	43.1%	$79,731,659	54.7%	$96,223,993	52.9%
61 NonDepository Credit Institutions	$14,456,232	-8.0%	$28,749,960	-27.4%	$43,623,026	-26.7%	$57,060,986	-25.9%	$68,629,322	-28.7%
49 Electric, Gas & Sanitary Services	$13,939,626	-31.3%	$25,848,624	-42.2%	$42,513,453	-31.9%	$57,771,800	-27.4%	$72,963,764	-20.5%
32 Stone, Clay, Glass and Concrt	$13,825,497	15.5%	$28,559,679	49.3%	$44,178,019	54.9%	$60,903,412	58.1%	$74,746,330	56.1%
16 Heavy Construction other than	$13,464,174	-16.1%	$27,934,441	-7.9%	$41,237,152	-19.5%	$52,118,952	-24.1%	$64,415,400	-22.5%
48 Communications	$13,311,775	51.9%	$25,836,552	34.9%	$45,277,731	-1.1%	$64,220,500	10.6%	$79,686,861	16.6%
36 Electronic and Other Electrical	$12,456,720	5.4%	$25,155,983	2.4%	$40,787,008	1.4%	$54,841,916	3.8%	$69,138,579	4.5%
76 Miscellaneous Repair Services	$10,822,888	12.0%	$94,105,140	424.0%	$105,998,233	287.3%	$120,818,830	221.4%	$128,916,057	184.4%
39 Misc. Manufacturing Industries	$10,714,936	24.8%	$19,983,926	15.3%	$31,738,804	19.4%	$42,367,082	13.2%	$51,702,987	12.4%
72 Personal Services	$8,948,621	15.7%	$18,602,154	18.2%	$29,919,071	15.2%	$40,395,547	11.5%	$49,903,480	9.5%
70 Hotels, Rooming Houses, Camps,	$8,475,203	22.9%	$15,945,576	-6.2%	$23,369,756	-5.0%	$30,925,736	-4.1%	$36,480,291	-6.8%
10 Metal Mining	$8,243,046	-23.7%	$18,182,385	-11.4%	$28,599,087	-0.9%	$39,769,058	4.3%	$49,229,513	5.8%
28 Chemicals and Allied Products	$6,560,453	17.8%	$13,228,794	19.5%	$20,993,097	27.6%	$27,674,150	26.9%	$34,309,756	27.9%
24 Lumber and Wood Products, Exce	$6,096,591	4.5%	$11,702,004	84.4%	$18,841,889	99.1%	$25,402,067	101.8%	$30,762,335	95.8%
78 Motion Pictures	$5,682,491	10.5%	$11,704,334	13.1%	$16,581,744	14.5%	$22,171,699	20.0%	$27,546,605	15.2%
29 Petroleum Refining and Related	$4,604,490	56.3%	$7,565,965	19.1%	$11,557,152	23.5%	$14,562,725	16.8%	$16,796,982	15.9%
80 Health Services	$4,136,010	-10.1%	$8,673,719	1.9%	$20,328,902	26.0%	$24,987,063	23.2%	$29,369,356	19.3%
27 Printing, Publishing, and Alli	$4,019,445	-13.9%	$9,158,722	2.6%	$14,112,073	3.7%	$18,718,097	4.9%	$22,720,470	4.8%
34 Fabricated Metal Products, Ex	$3,910,575	14.0%	$8,176,024	16.5%	$14,182,752	21.3%	$19,361,842	22.2%	$25,704,331	35.2%
99 Nonclassifiable Establishments	$3,878,665	76.7%	$6,743,717	26.0%	$10,374,088	-0.2%	$14,014,410	4.6%	$18,597,094	4.3%
07 Agricultural Services	$3,578,437	7.4%	$6,985,082	9.4%	$12,187,368	19.1%	$15,741,612	17.3%	$19,126,295	19.7%
87 Engineering, Accounting, Research	$3,520,378	50.5%	$6,090,142	24.6%	$11,154,531	-49.3%	$14,283,445	-41.3%	$17,103,960	-35.4%
25 Furniture and Fixtures	$3,045,337	16.0%	$6,227,007	11.6%	$9,763,412	14.1%	$12,624,327	10.3%	$15,288,761	7.1%
38 Meadings, Analyzing, and Contr	$2,522,854	-5.1%	$5,995,703	-23.1%	$9,609,662	-19.6%	$12,034,310	-21.7%	$13,448,620	-25.2%
65 Real Estate	$2,480,401	-6.1%	$4,856,396	-49.4%	$8,494,521	-43.0%	$12,043,695	-40.3%	$16,770,034	-34.2%
20 Food and Kindred Products	$2,097,401	-20.2%	$4,096,360	-19.6%	$6,741,004	-10.5%	$8,804,565	-7.2%	$10,589,054	-5.5%
33 Primary Metal Industries	$1,850,875	47.8%	$3,011,048	18.9%	$4,660,424	26.7%	$6,831,935	10.0%	$8,151,846	0.6%
42 Motor FreightTransportation and	$1,761,403	2.5%	$3,422,347	-2.1%	$5,696,577	-4.0%	$7,648,667	-11.4%	$9,722,895	-14.3%
37 Transportation Equipment	$1,752,857	40.8%	$3,284,485	35.7%	$5,080,259	15.8%	$7,883,116	35.5%	$10,577,406	52.8%
26 Paper and Allied Products	$1,437,665	353.8%	$2,915,452	346.3%	$5,052,432	349.8%	$6,641,138	318.8%	$8,150,889	251.8%
60 Depository Institutions	$1,270,420	-31.2%	$4,230,039	20.0%	$7,238,397	33.8%	$10,079,043	35.7%	$12,879,801	41.0%
30 Rubber and Misc Plastic Products	$1,205,177	-11.2%	$2,325,019	-20.6%	$3,606,750	-13.4%	$4,817,032	-11.1%	$5,706,344	-8.0%

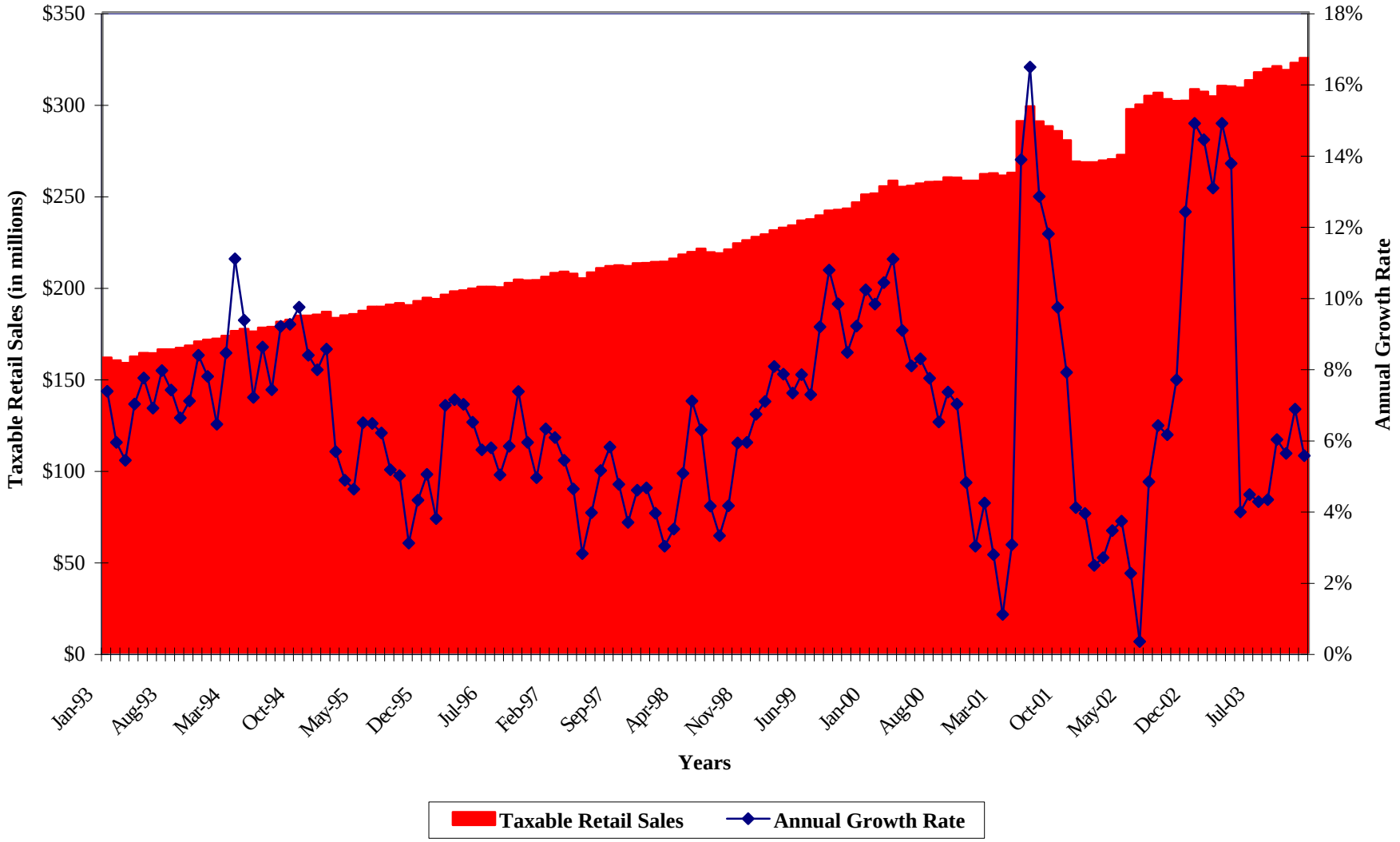
Appendix 1.2-BI
Nevada Fiscal Year-to-Date Taxable Retail Sales
In-state Collections by Two-Digit Standard Industry Classification, July 2003 - November 2003

Business Code and Type	July	% Change	August	% Change	September	% Change	October	% Change	November	% Change
67 Holding & Other Invest Offices	$1,144,534	11.2%	$2,463,418	18.2%	$3,735,640	21.5%	$4,835,352	17.3%	$5,906,154	13.7%
22 Textile Mill Products	$1,029,258	-3.2%	$2,406,504	6.5%	$4,785,691	36.1%	$6,666,527	48.8%	$8,742,605	60.5%
14 Mining and Quarrying of NonMetal	$1,026,167	90.6%	$1,695,698	60.7%	$2,650,992	51.8%	$3,619,047	53.8%	$4,517,290	70.9%
40 RailRoad Transportation	$939,497	52.8%	$2,388,812	43.7%	$3,261,045	85.6%	$3,678,438	73.9%	$4,170,237	69.8%
45 Transportation by Air	$874,627	-50.9%	$2,008,366	-36.0%	$3,087,891	-29.7%	$3,908,087	-34.5%	$4,730,213	-28.1%
13 Oil and Gas Extraction	$770,198	169.7%	$1,114,793	100.2%	$1,686,382	58.2%	$2,436,495	58.9%	$3,482,227	106.3%
86 Membership Organizations	$652,894	50.1%	$1,230,171	45.1%	$1,876,525	33.6%	$2,387,182	33.5%	$2,773,682	31.4%
47 Transportation Services	$509,248	-16.7%	$976,447	-18.4%	$1,613,159	-20.2%	$2,158,772	-22.6%	$2,599,084	-24.1%
82 Educational Services	$421,809	47.2%	$675,353	47.2%	$1,706,777	106.3%	$2,449,721	96.5%	$2,738,248	69.7%
01 Agricultural Production-Crops	$416,487	-11.1%	$790,684	-17.2%	$1,155,799	-17.9%	$1,415,545	-24.8%	$1,631,929	-25.1%
89 Miscellaneous Services	$410,875	-2.7%	$1,185,799	49.4%	$1,645,007	28.6%	$2,047,302	18.9%	$2,582,726	21.8%
62 Security and Commodity Brokers	$369,795	23.0%	$798,249	41.3%	$1,248,608	31.6%	$1,690,136	38.1%	$2,013,495	35.0%
41 Local and Suburban Transit and	$253,582	-0.6%	$687,567	46.0%	$1,855,503	90.1%	$2,181,497	87.5%	$2,483,373	67.9%
44 Water Transportation	$234,952	-8.8%	$520,432	18.5%	$656,668	3.0%	$760,380	-3.5%	$779,614	-12.3%
23 Apparel and other finished Product	$225,715	25.9%	$407,356	24.5%	$579,034	7.1%	$862,213	23.5%	$1,114,885	28.7%
02 Agricultural Production Livest	$201,323	2.8%	$388,591	1.7%	$765,681	4.6%	$1,046,939	7.1%	$1,523,466	32.8%
64 Insurance Agents, Brokers	$81,592	-19.2%	$1,325,399	826.0%	$2,815,740	1239.3%	$4,097,816	1454.2%	$5,405,449	1075.4%
84 Museums, Art Galleries, and B	$64,398	-5.9%	$124,419	-8.7%	$221,034	-12.7%	$288,913	-5.3%	$330,423	-8.6%
63 Insurance Carriers	$61,763	85.5%	$88,598	58.2%	$271,392	117.2%	$331,517	119.3%	$396,830	134.5%
21 Tobacco Products	$38,863	-49.2%	$90,208	-58.8%	$131,473	-56.4%	$173,836	-57.6%	$210,459	-56.8%
31 Leather and Leather Products	$33,258	29.2%	$59,874	19.1%	$93,099	18.4%	$111,576	-2.0%	$132,637	-6.5%
94 Administration of Human Resources	$21,712	21.9%	$48,504	21.1%	$74,288	22.1%	$79,444	14.4%	$80,331	10.7%
43 United States Postal Services	$18,186	-78.1%	$43,611	-71.6%	$72,183	-67.6%	$408,305	45.1%	$433,319	25.7%
81 Legal Services	$16,136	-32.3%	$29,223	-93.0%	$199,754	-75.8%	$210,710	-79.8%	$226,916	-82.3%
08 Forestry	$4,766	-55.5%	$11,269	-39.4%	$65,190	79.2%	$79,142	64.6%	$90,167	59.3%
83 Social Services	$2,551	-96.5%	$113,891	-16.9%	$236,646	-17.8%	$275,170	-19.7%	$327,531	-15.2%
46 Pipelines, Except Natural Gas	$738	-94.5%	$4,025	-97.8%	$5,453	-97.4%	$12,913	-95.4%	$16,276	-94.5%
09 Fishing, Hunting, and Trapping	$0	0.0%	$0	0.0%	$83	-39.4%	$83	-39.4%	$83	-39.4%
12 Coal Mining	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
88 Private Households	$0	0.0%	$0	0.0%	$63	100.0%	$63	100.0%	$63	100.0%
91 Executive, Legislative and General	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
92 Justice, Public Order & Safety	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
93 Public Finance, Taxation, and	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
95 Administration of Environmental	$0	0.0%	$0	0.0%	$20,982	111.5%	$20,982	111.5%	$20,982	111.5%
96 Administration of Economic Productivity	$0	0.0%	$0	0.0%	$7,339	-47.1%	$7,339	-47.1%	$7,339	-47.1%
97 National Security and International	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
State Total	**$2,950,550,767**	9.3%	**$6,020,796,245**	10.7%	**$9,117,650,127**	11.3%	**$12,131,214,789**	11.4%	**$14,965,936,261**	10.8%

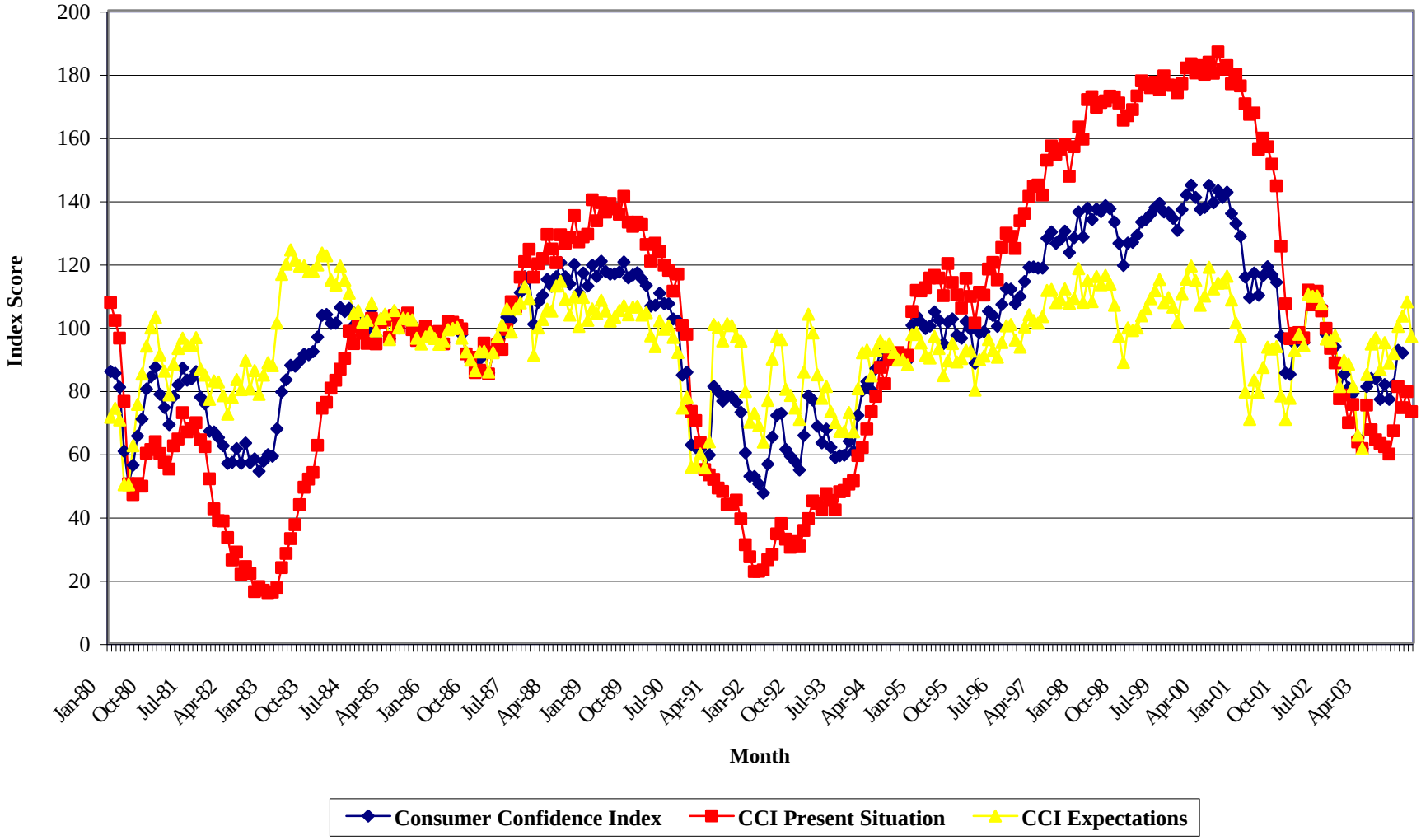
Appendix 1.2-BJ
US Taxable Retail Sales
Annualized Totals and Annual Growth Rates, 1994 - 2003



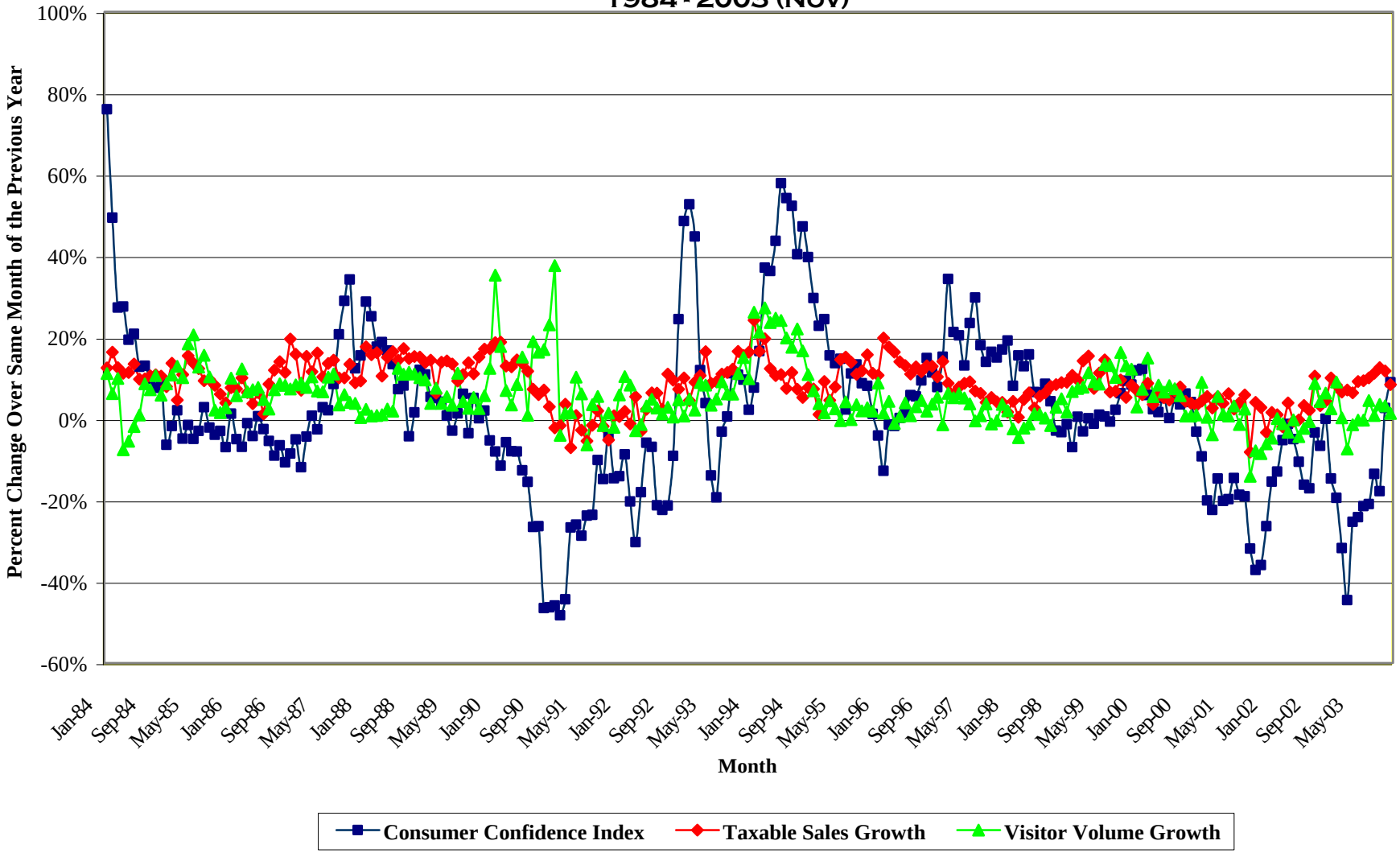
Appendix 1.2-BK
United States Taxable Retail Sales
Monthly Totals and Year-over-Year Growth Rates, 1993 - 2003



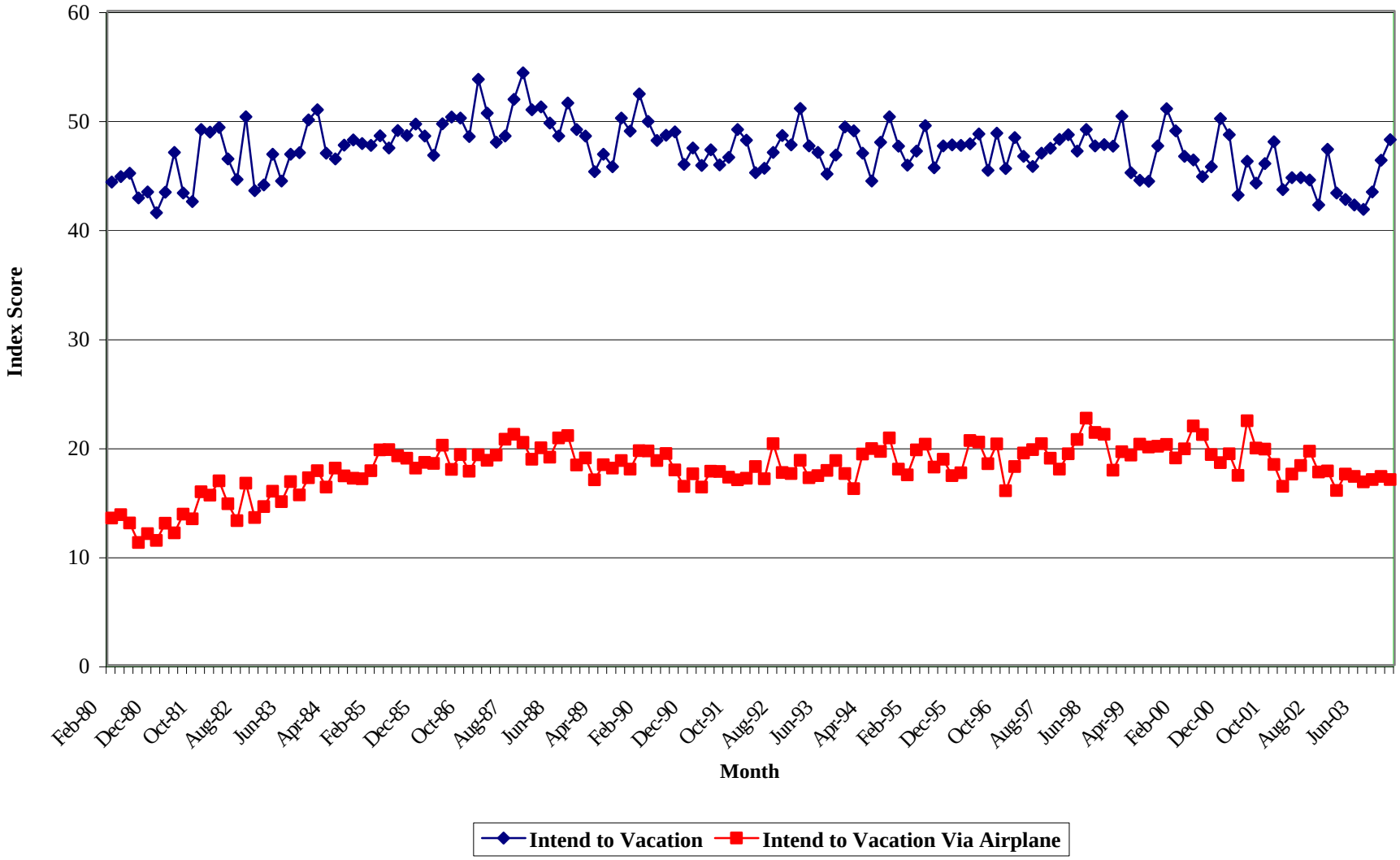
Appendix 1.2-BL
Consumer Confidence Indices
Consumer Confidence, Present Situation and Future Expectations
1980 - 2003



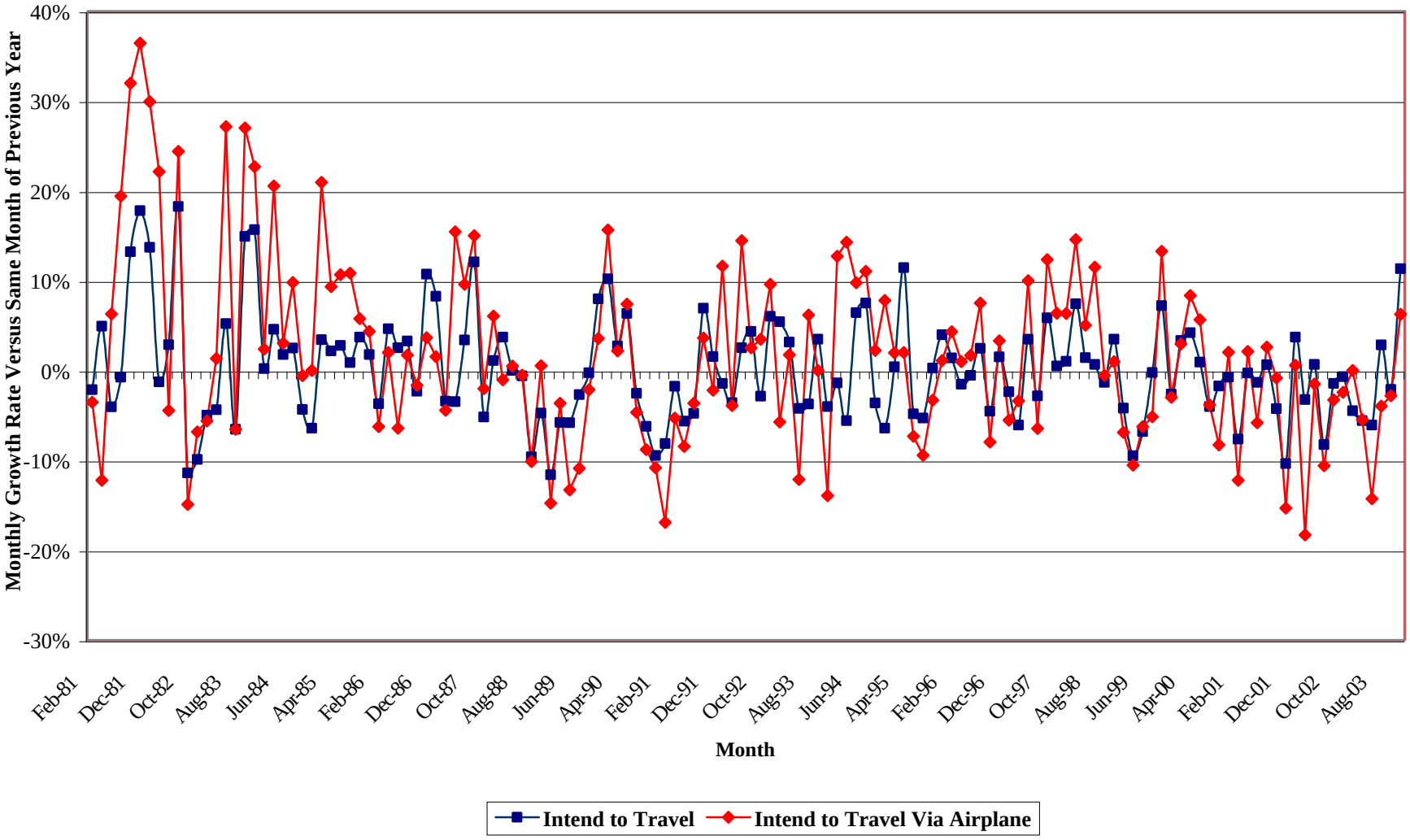
Appendix 1.2-BM
Growth Comparison
Consumer Confidence Index, Retail Sales, and Visitor Volume
1984 - 2003 (Nov)



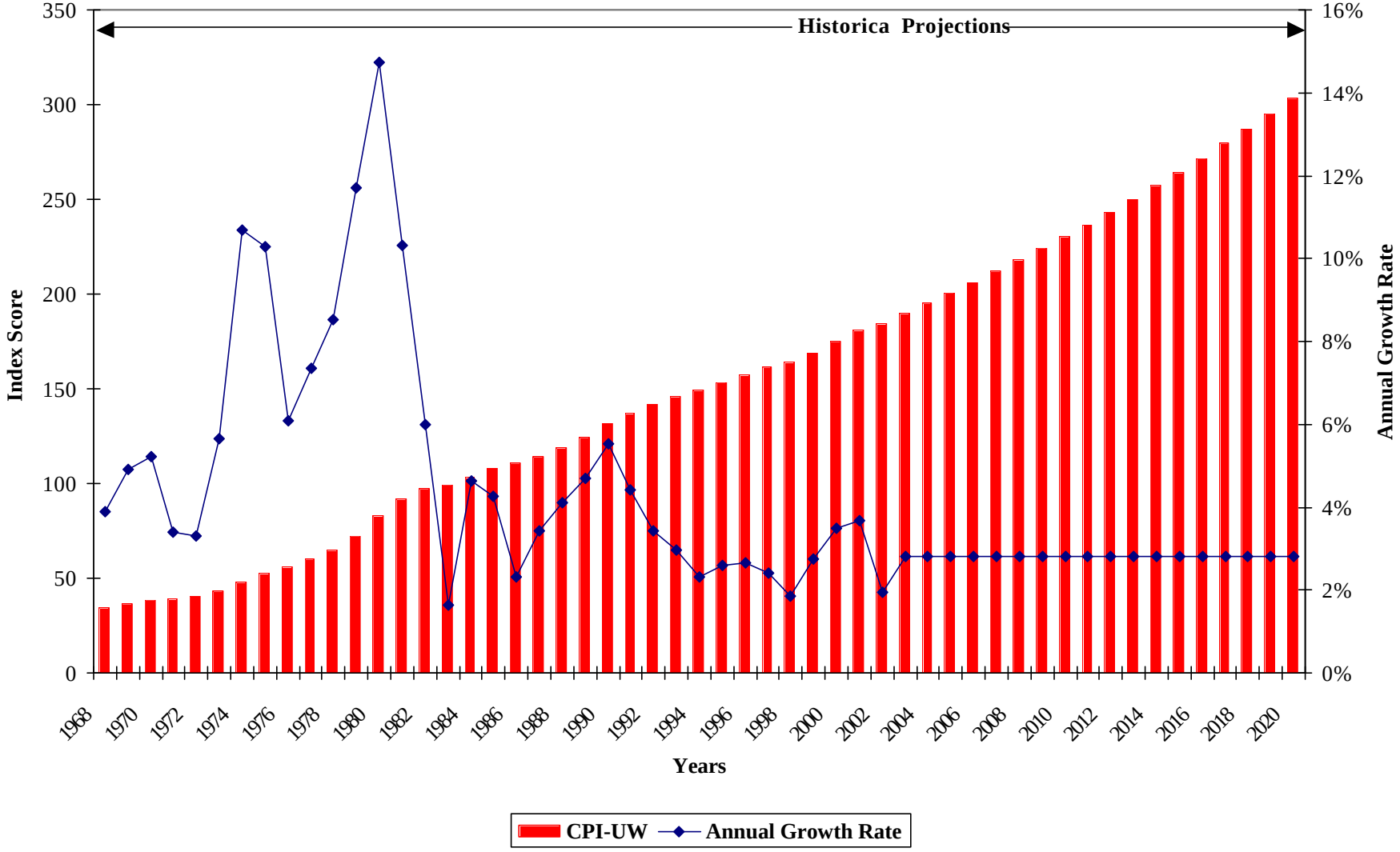
Appendix 1.2-BN
Consumer Confidence Indices
Intent to Travel and Intent to Travel Via Airplane, 1980 - 2003



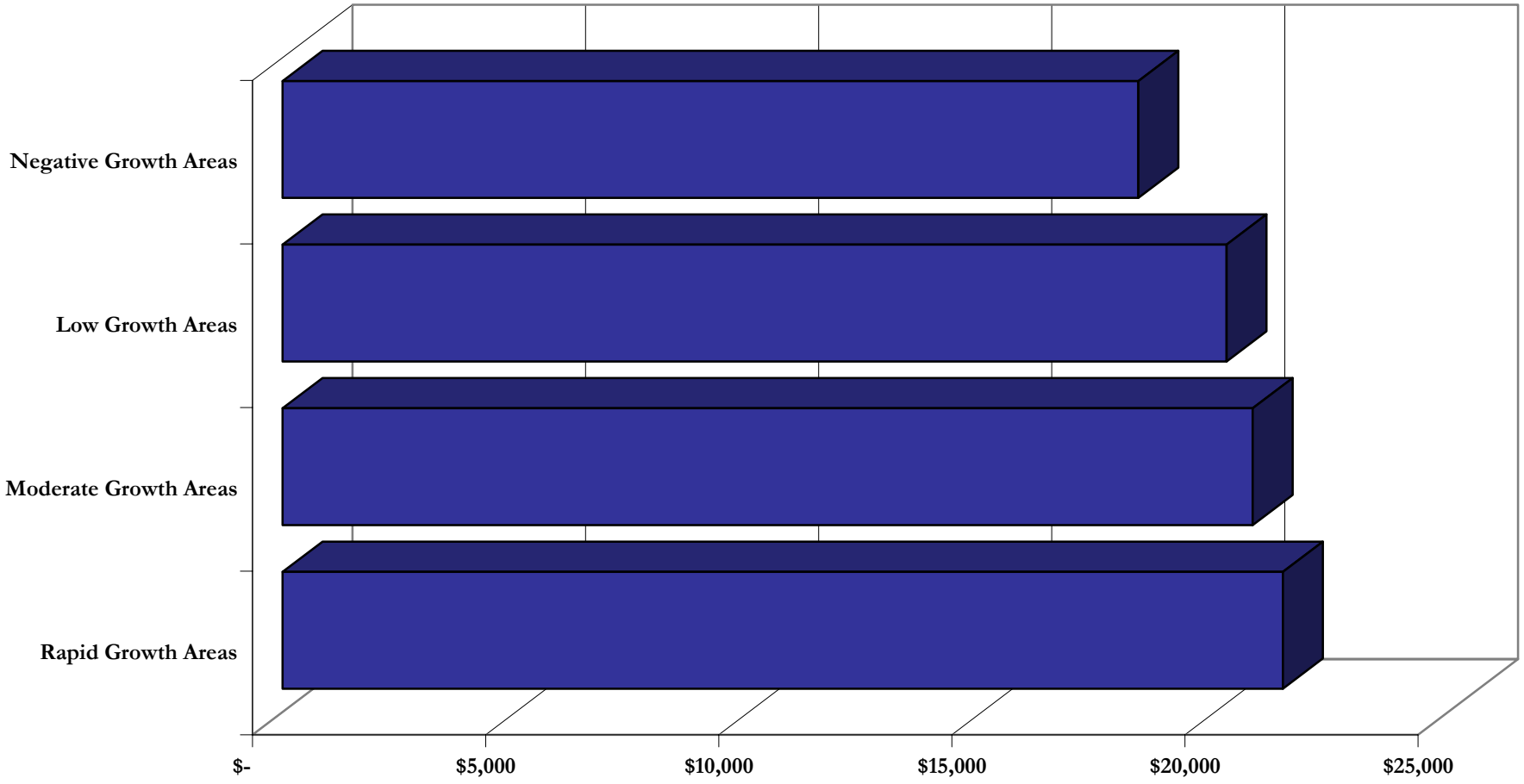
APPENDIX 1.2-BO
CONSUMER CONFIDENCE INDICES
CHANGE IN INTENT TO TRAVEL AND INTENT TO TRAVEL VIA AIRPLANE
1981 - 2003



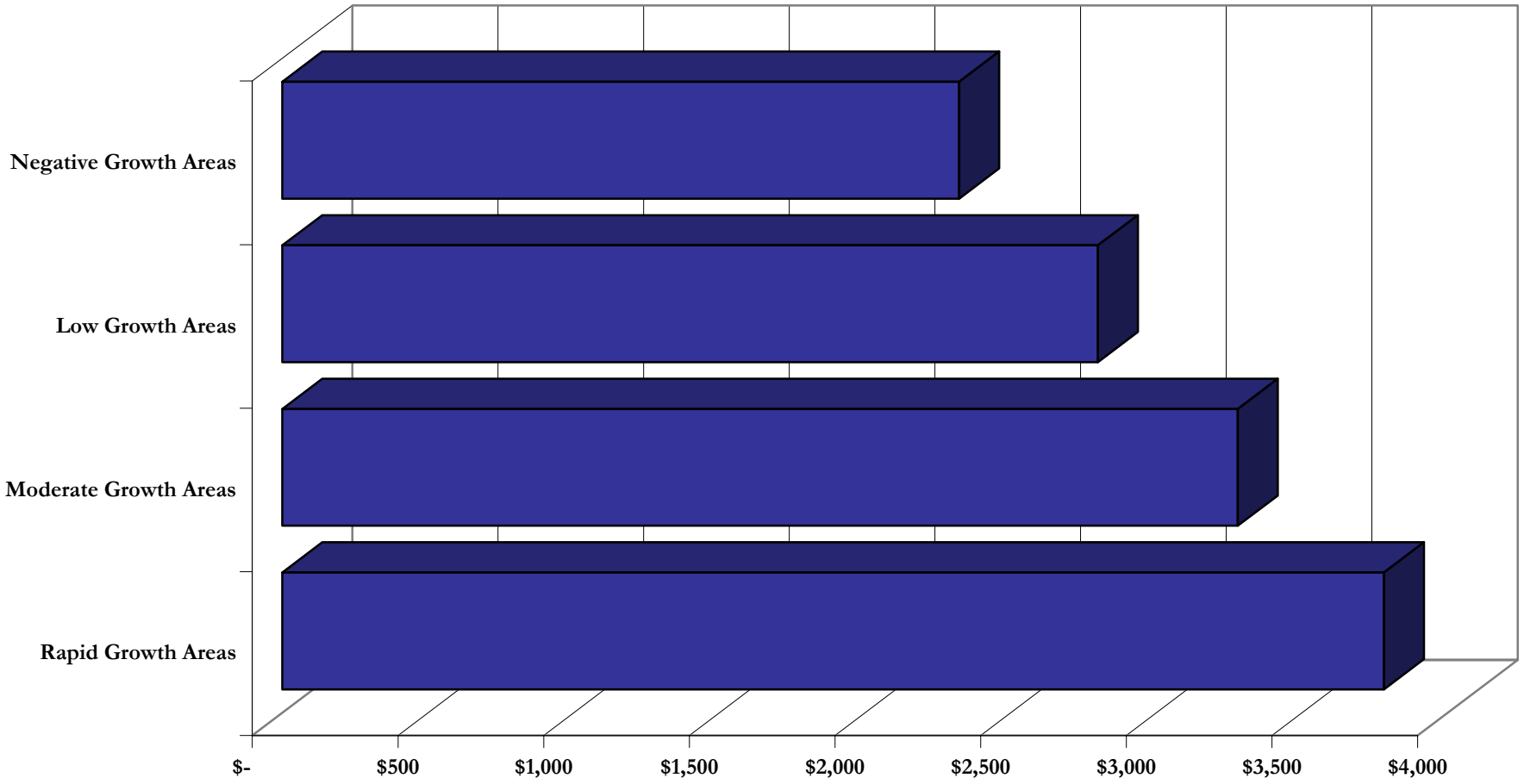
Appendix 1.2-BP
Price Inflation Index
Consumer Price Index and Annual Growth Rate for All Western Urban Consumers, 1968 - 2020



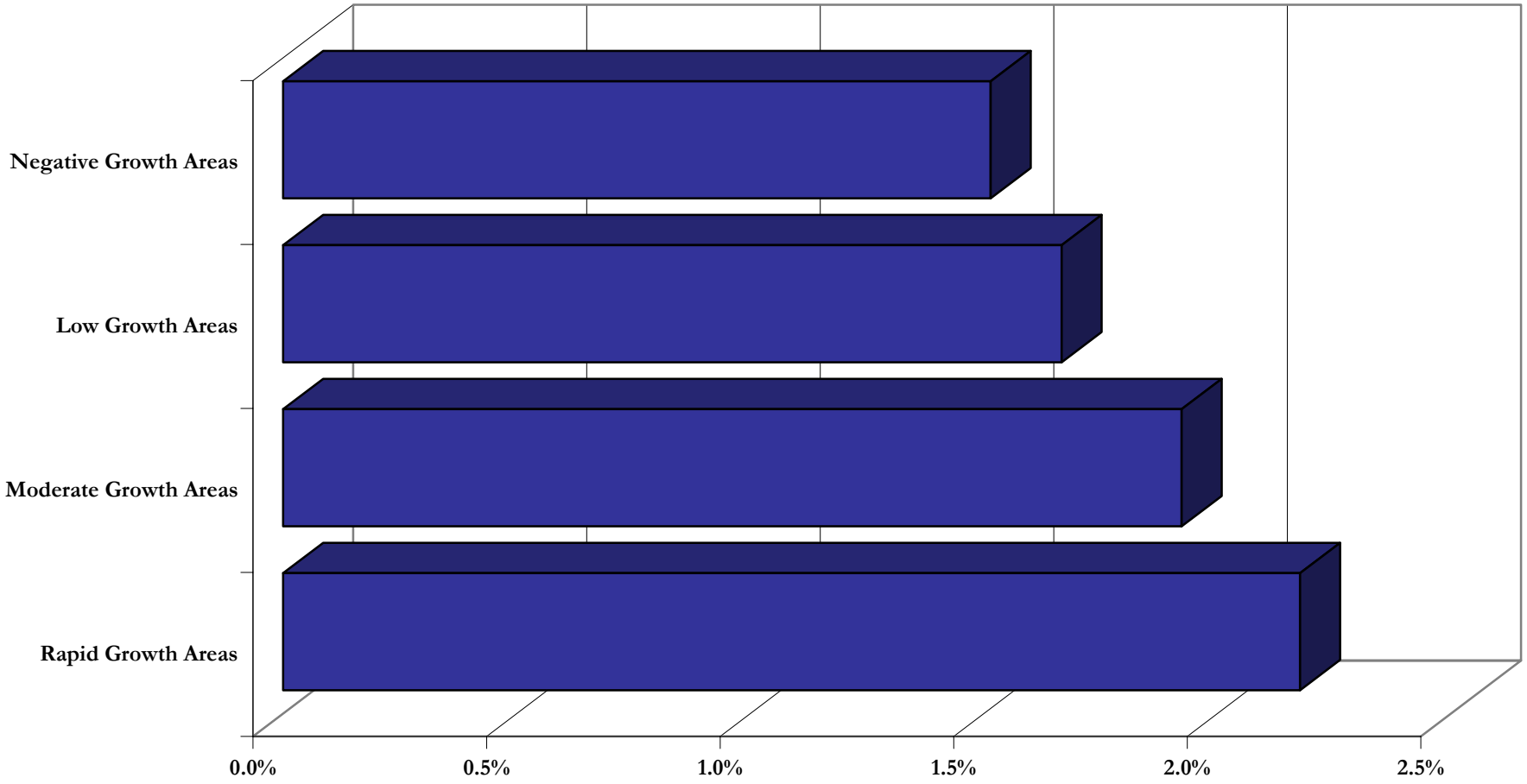
Appendix 3.1-A
Per Capita Income
By Population Growth Category, 1990 - 2000



Appendix 3.1-B
Change in Per Capita Income
By Population Growth Category, 1990 - 2000



Appendix 3.1-C
Percent Change in Per Capita Income
By Population Growth Category, 1990 - 2000



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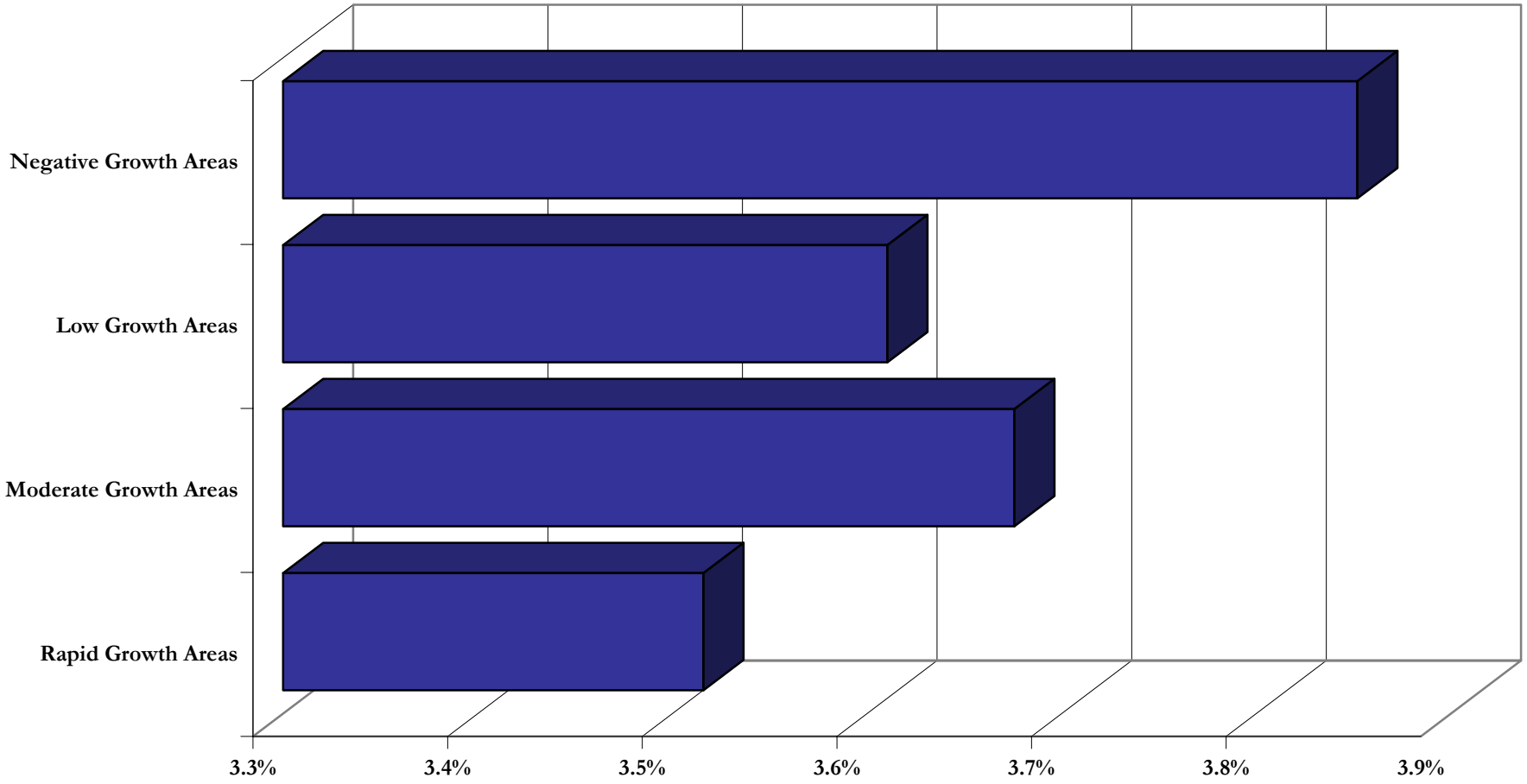
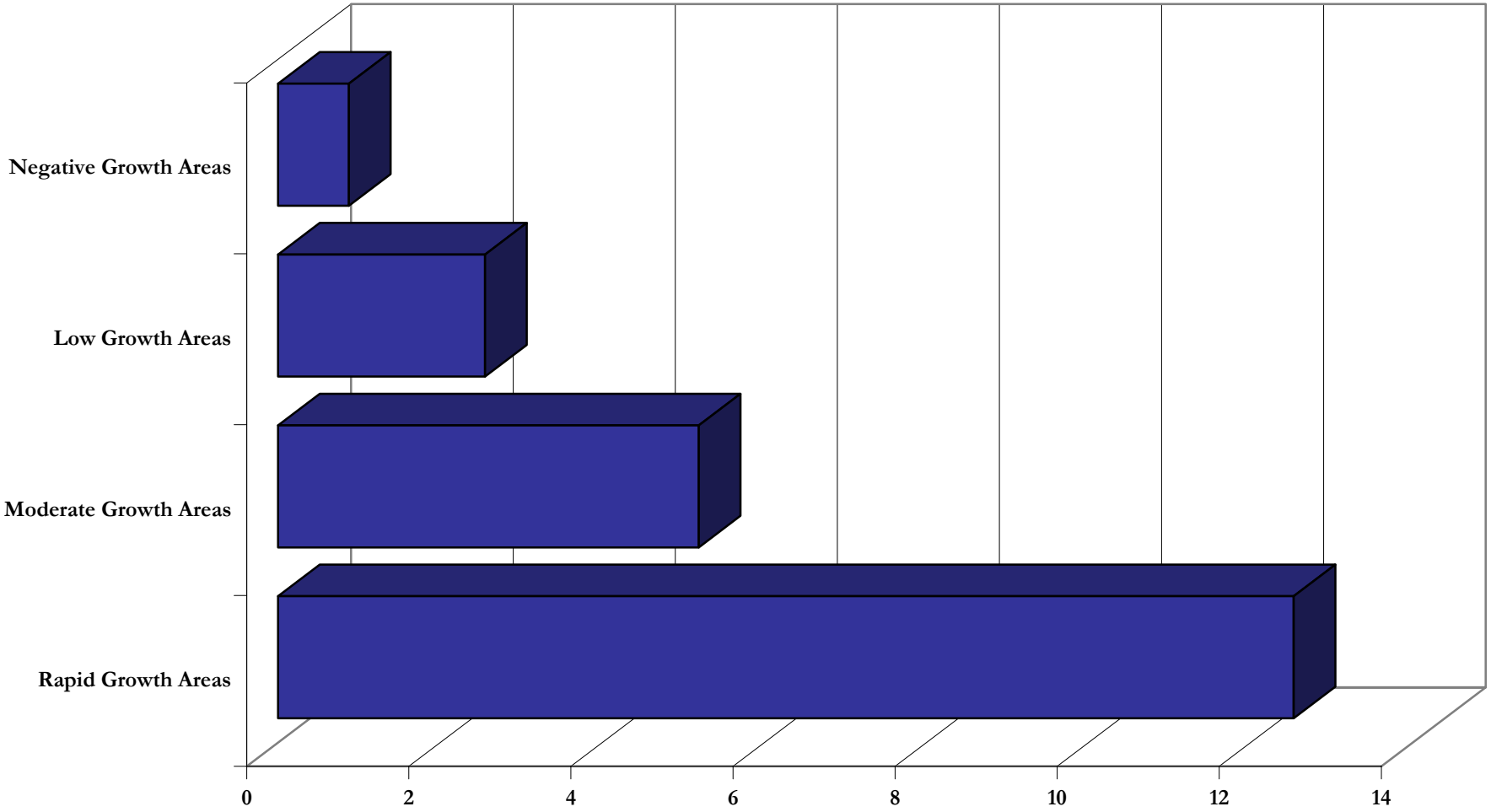
Appendix 3.1-D
Unemployment Rates
By Population Growth Category, 1990 - 2000



Appendix 3.1-E
Building Permits per 1,000 Population
By Population Growth Category, 1990 - 2000



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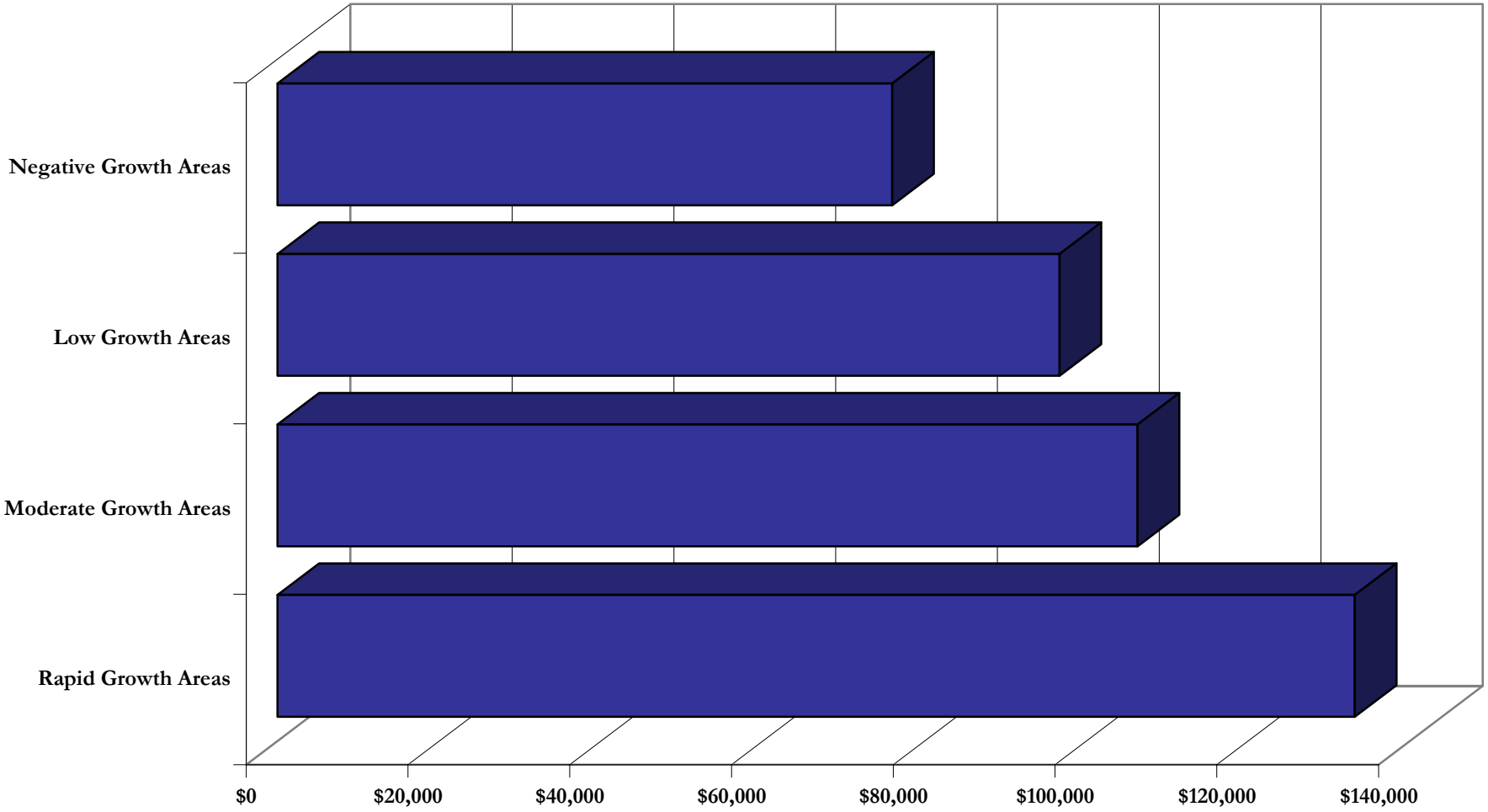
Appendix 3.1-F
Median Housing Value
By Population Growth Category, 1990 - 2000



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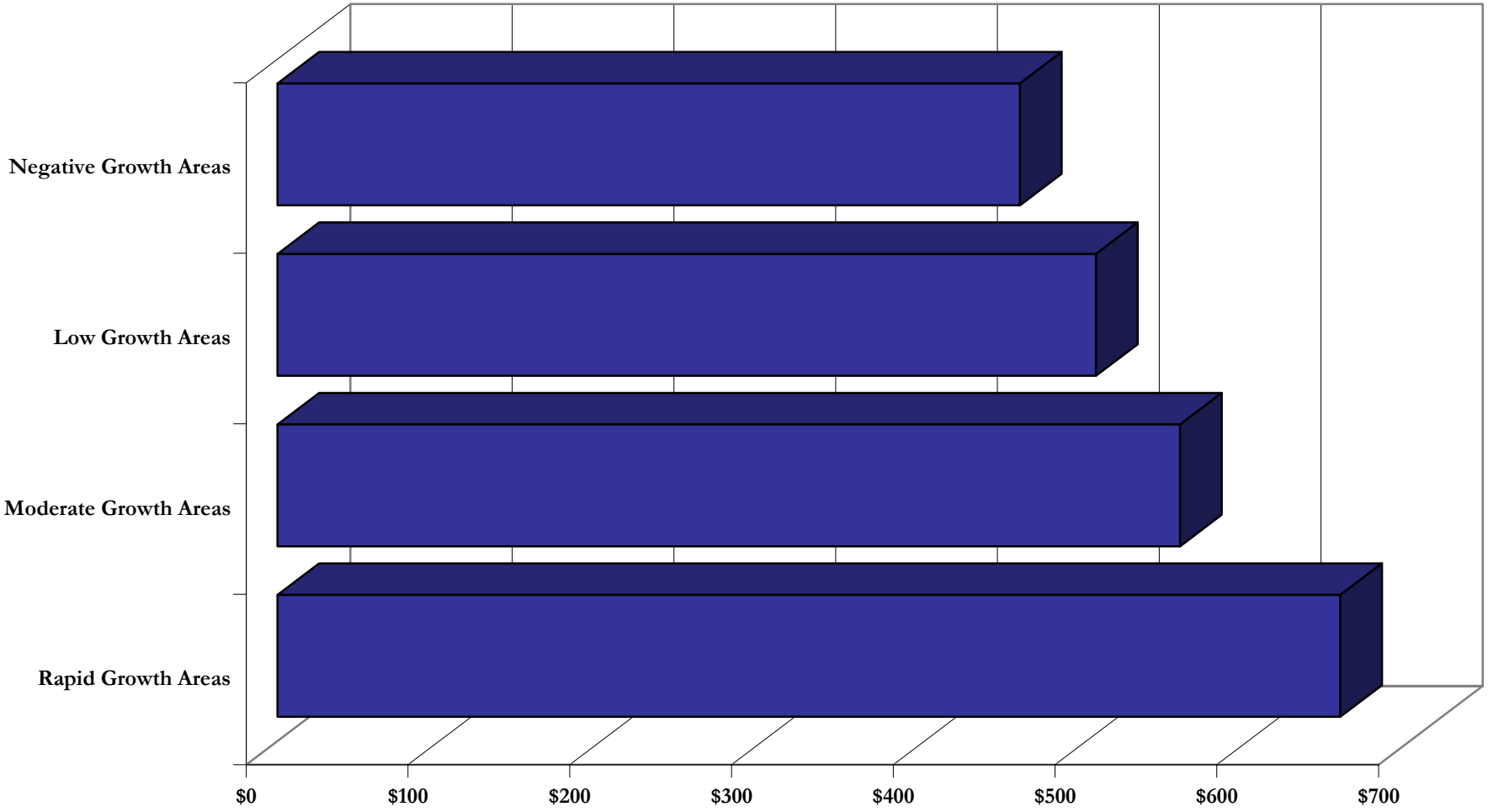
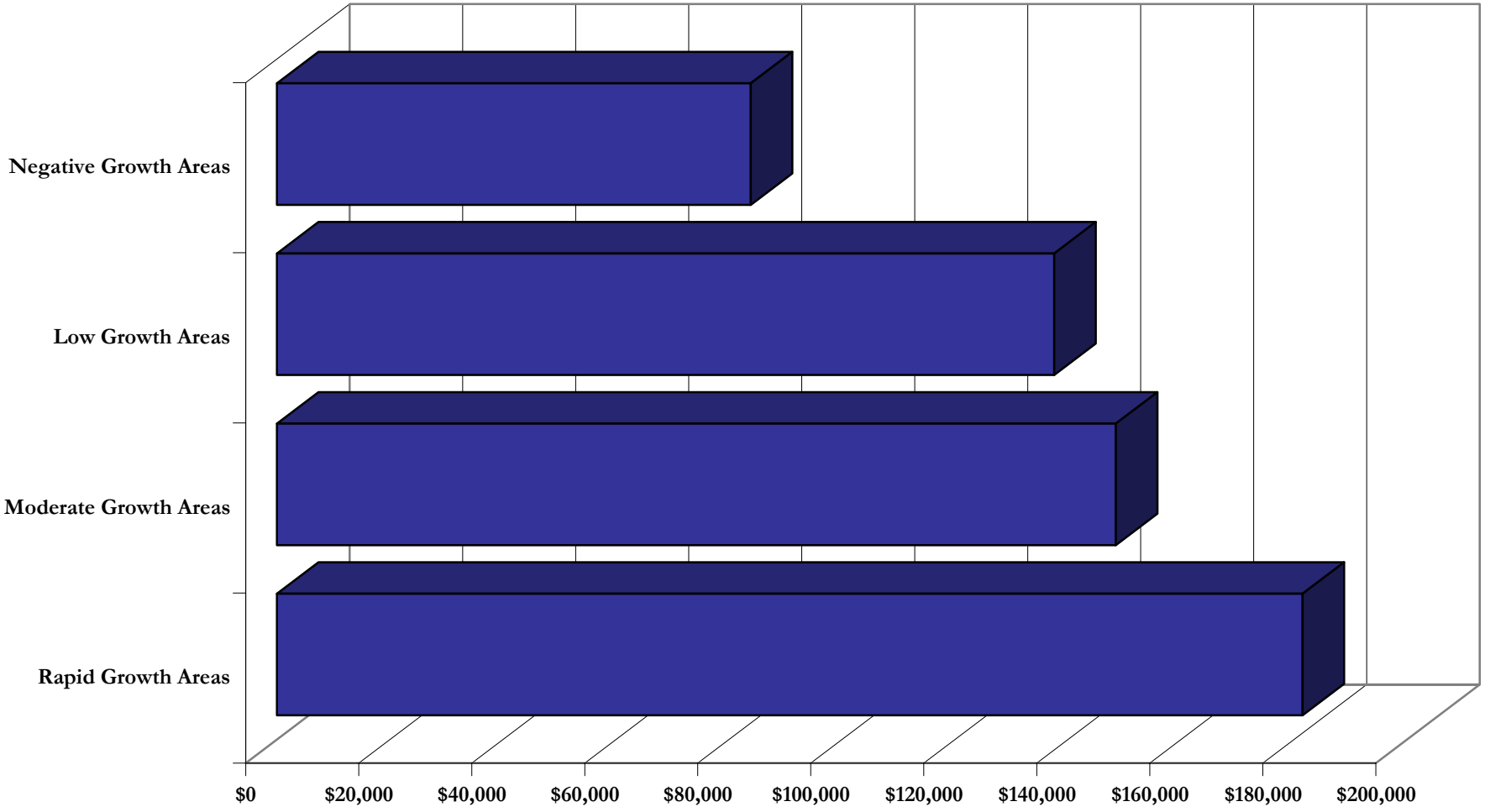
Appendix 3.1-G
Median Rent
By Population Growth Category, 1990 - 2000



Appendix 3.1-H
Average Real Estate Taxes
By Population Growth Category, 1990 - 2000



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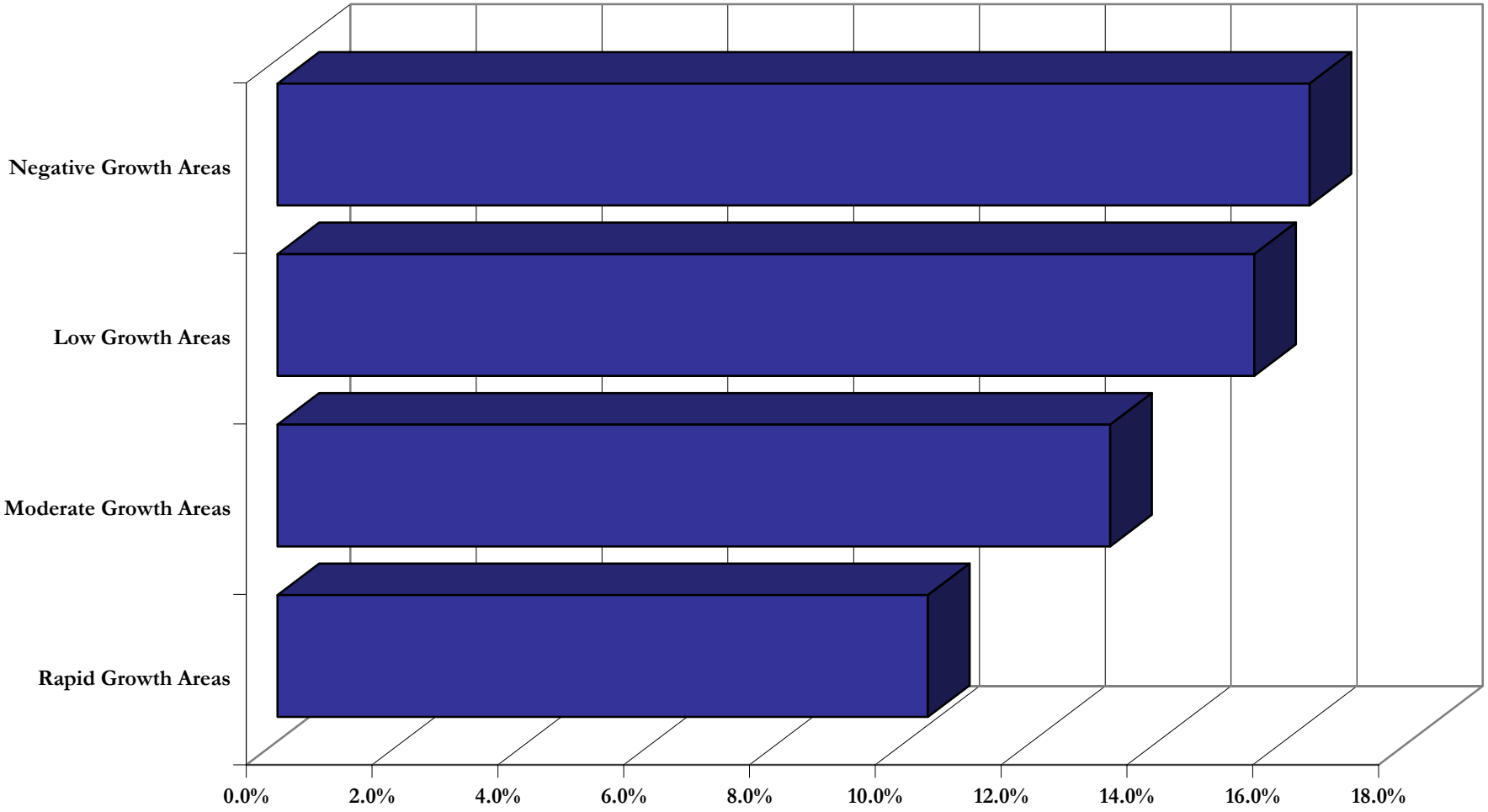
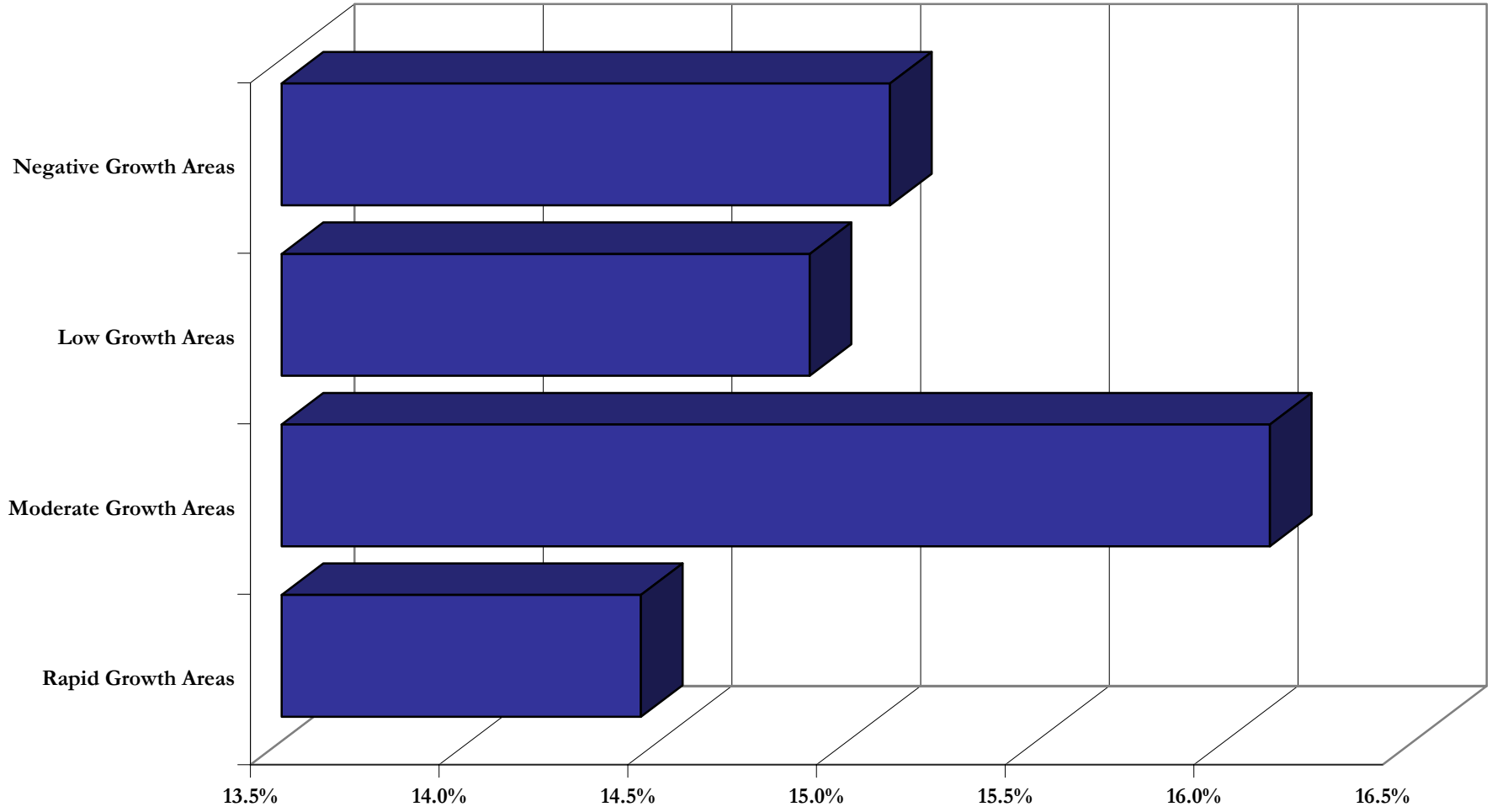
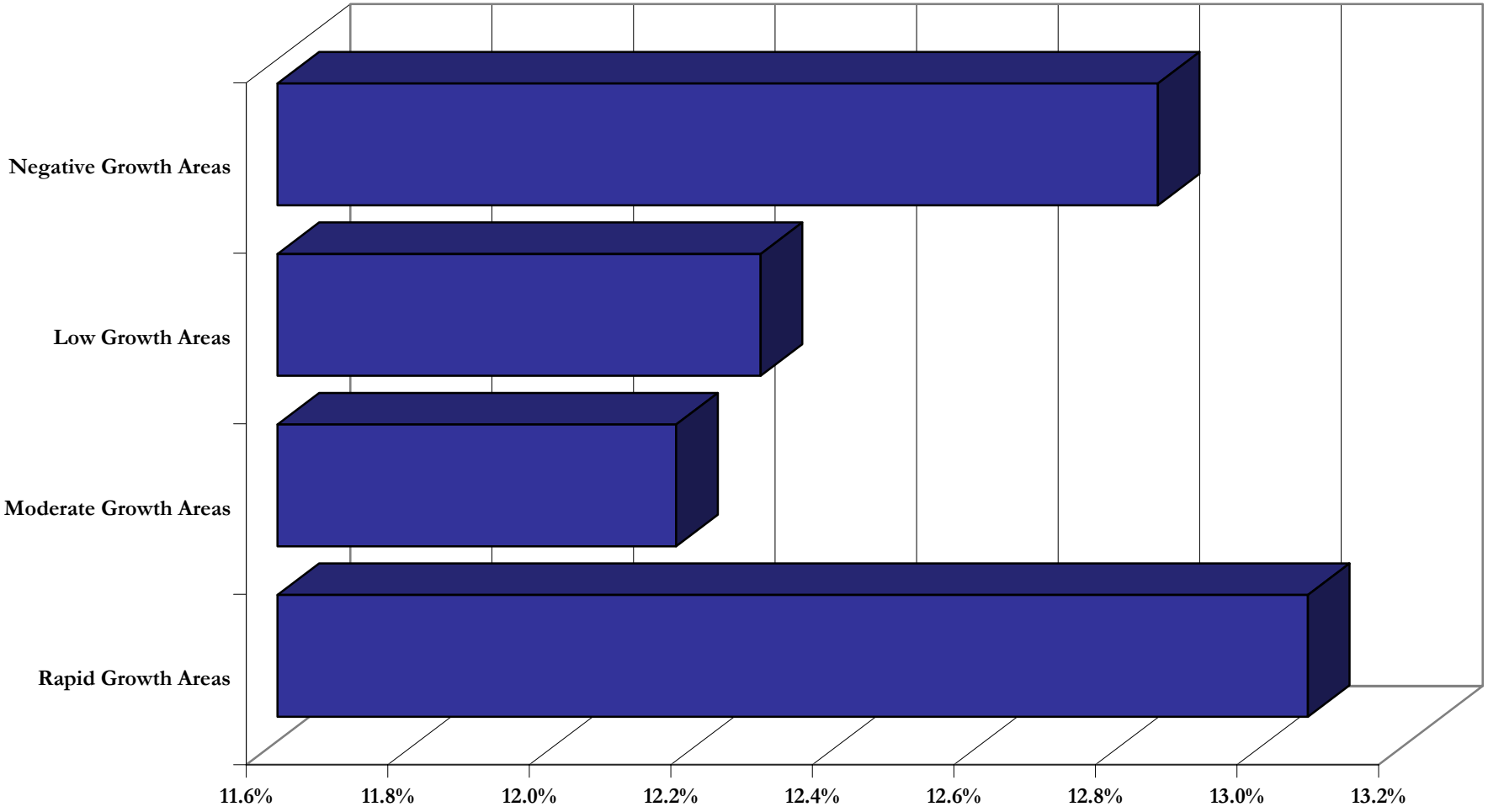
Appendix 3.1-I
Percent of Employment from Manufacturing
By Population Growth Category, 1990 - 2000



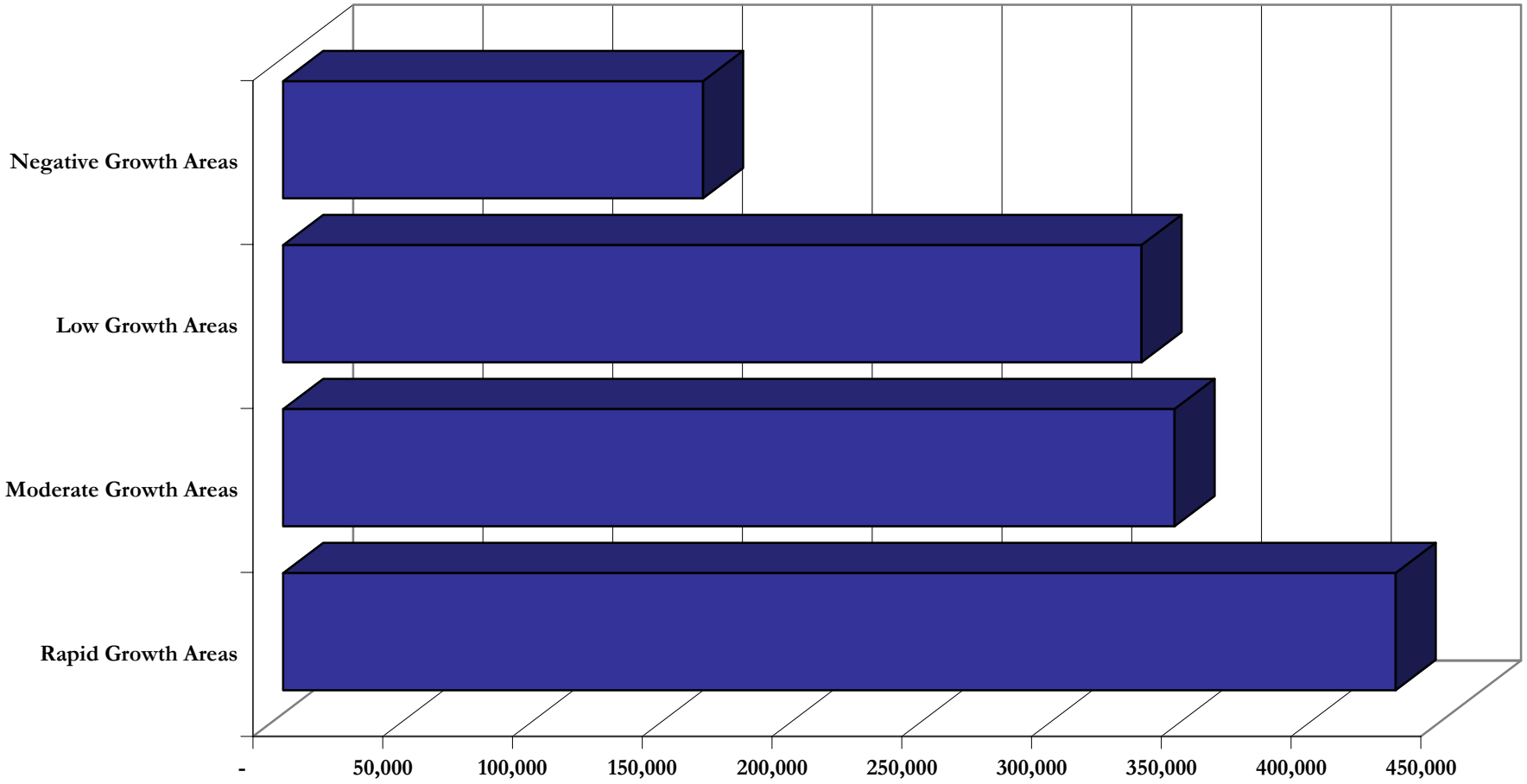
Appendix 3.1-J
Percent of Employment from Government
By Population Growth Category, 1990 - 2000



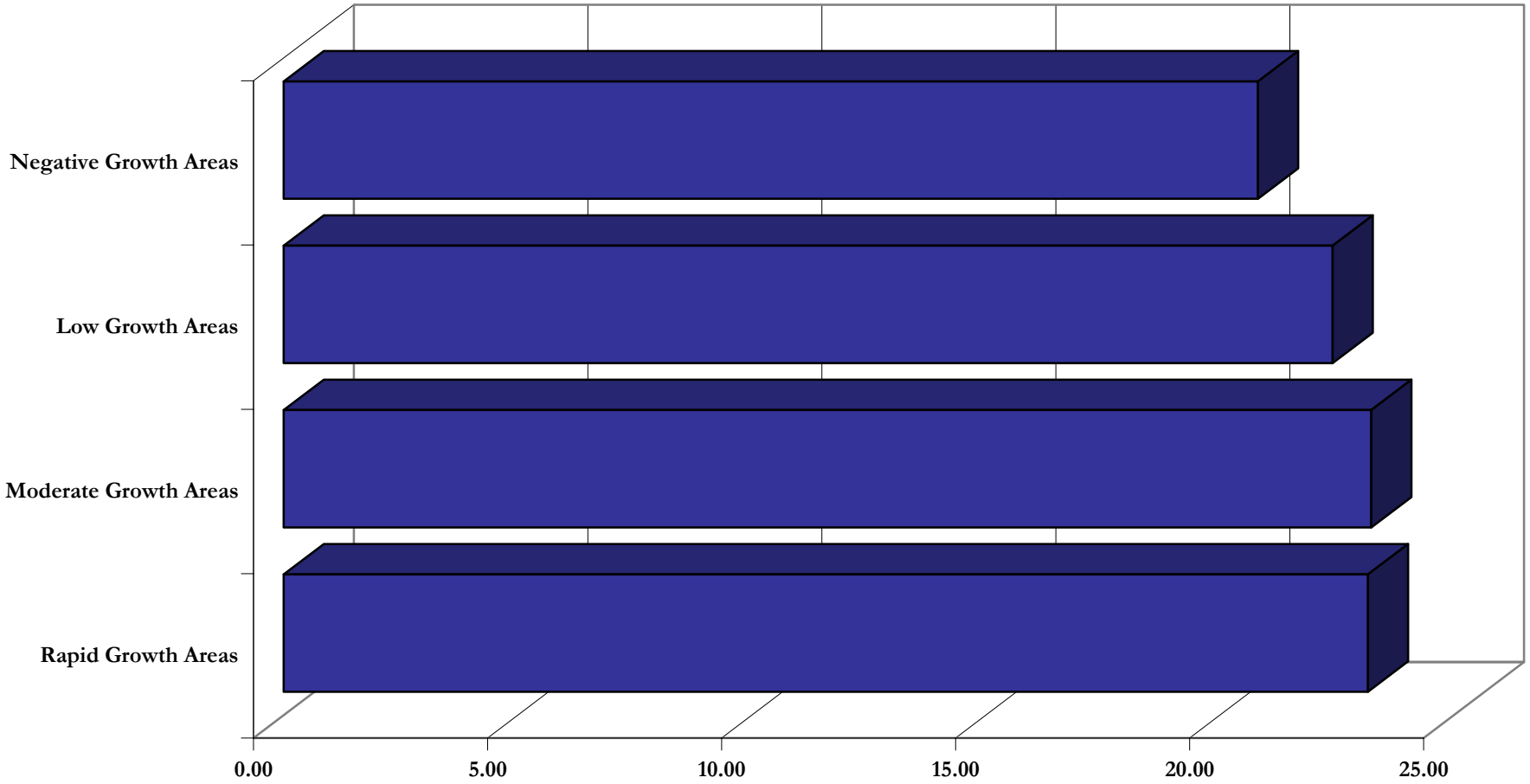
Appendix 3.1-K
Percent of Employment from Retail Industries
By Population Growth Category, 1990 - 2000



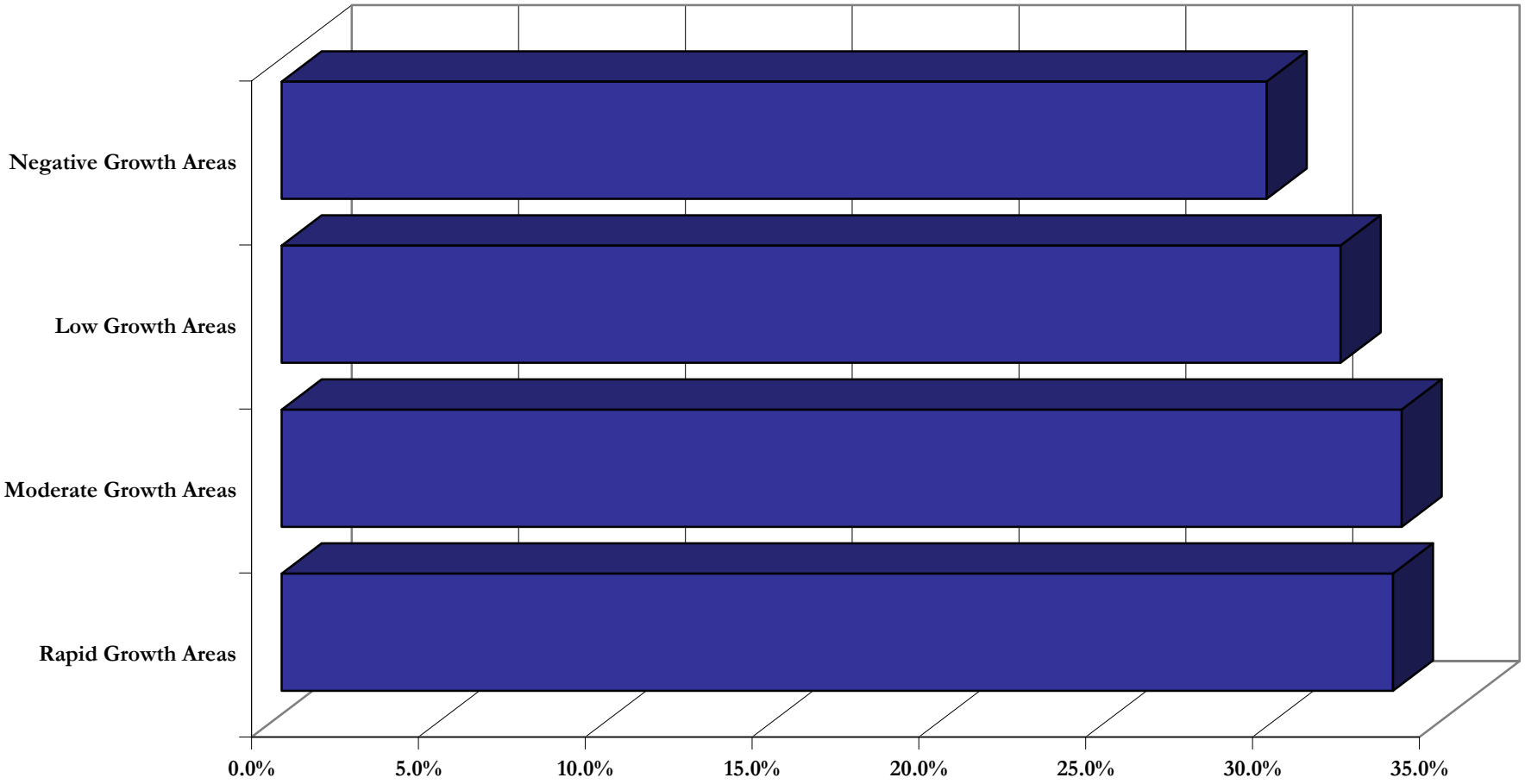
Appendix 3.1-L
Average Number of Workers Who Comute to Work
By Population Growth Category, 1990 - 2000



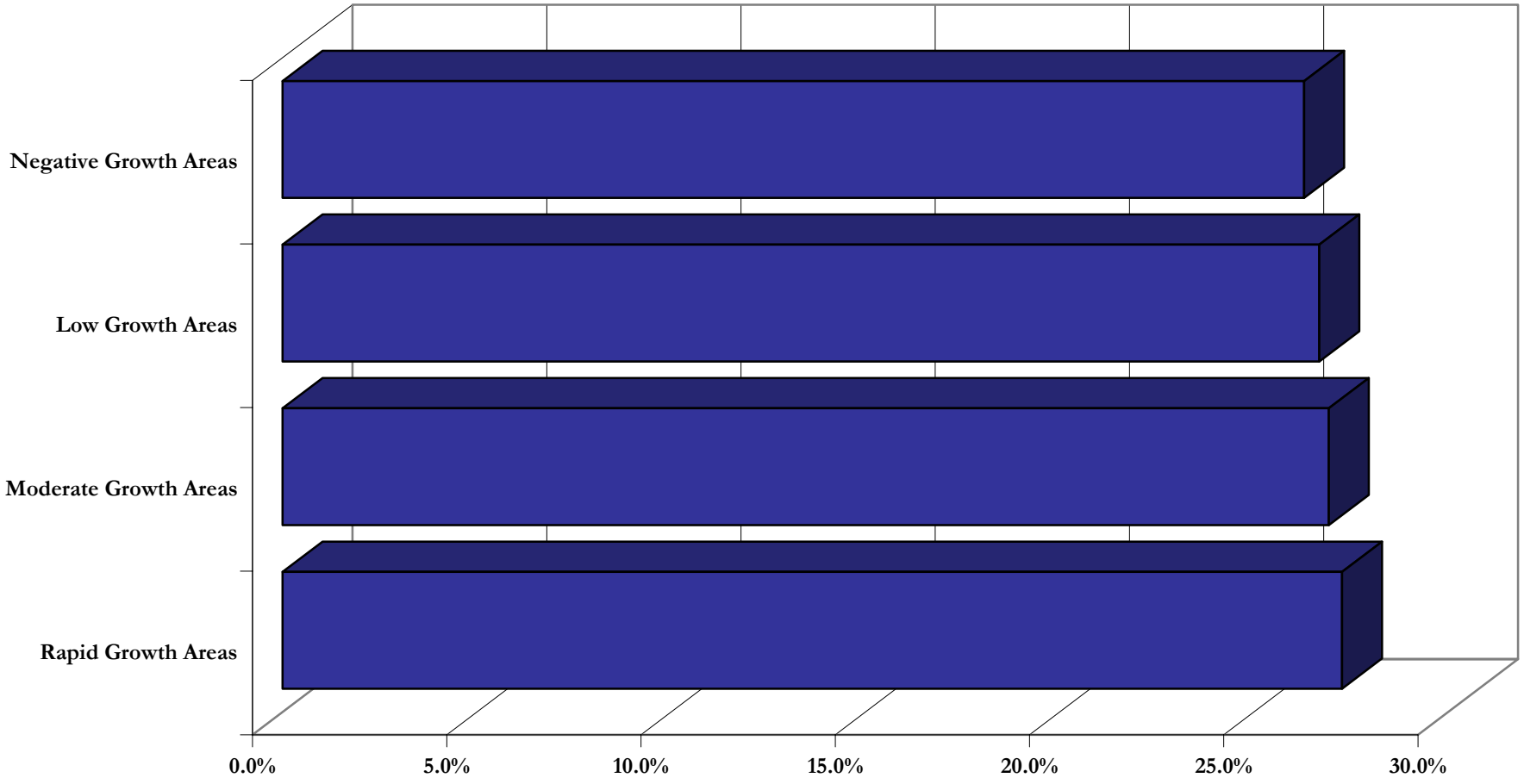
Appendix 3.1-M
Mean Travel Time to Work
By Population Growth Category, 1990 - 2000



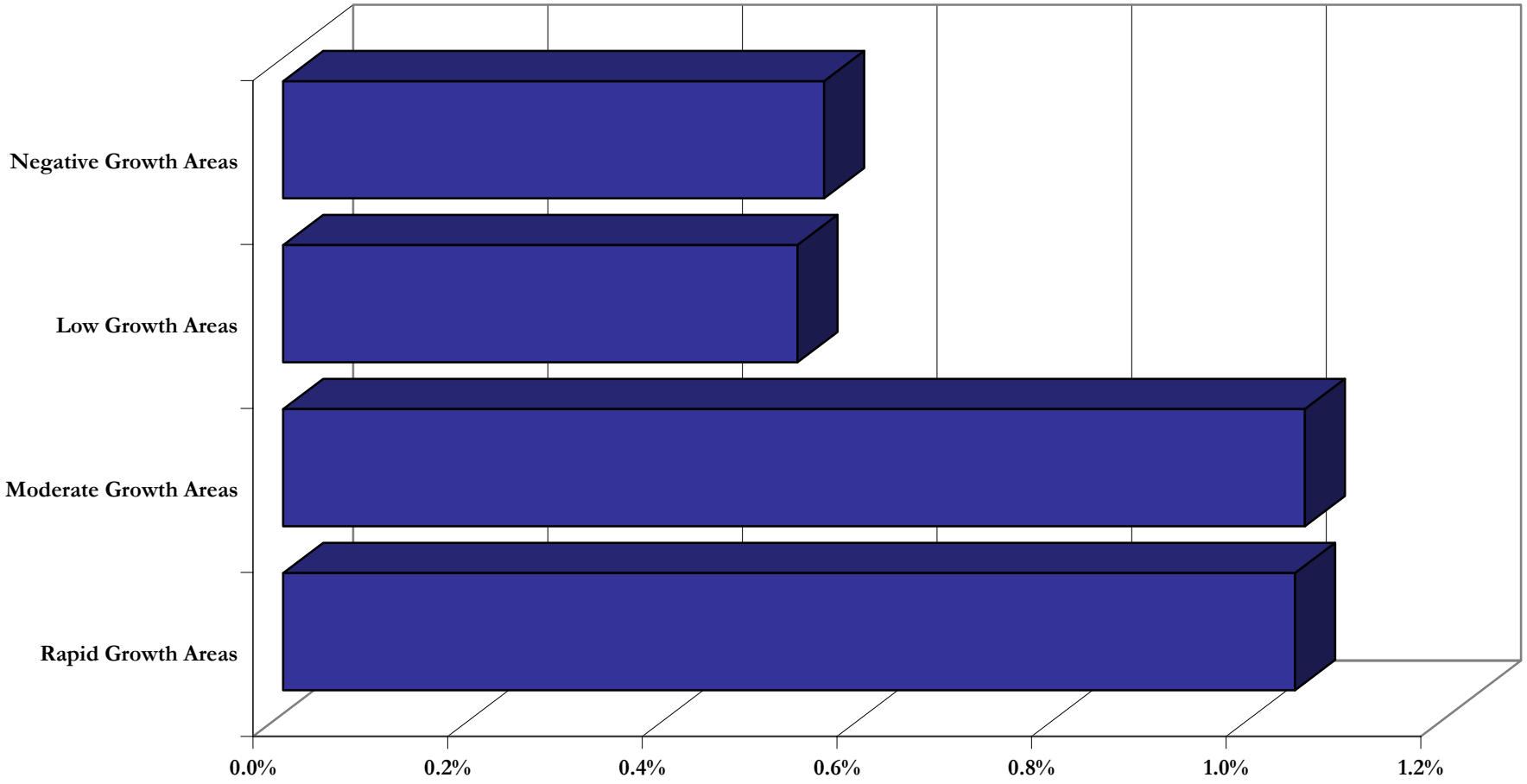
Appendix 3.1-N
Percent of Employment from Management, Professional & Related Occupations
By Population Growth Category, 1990 - 2000



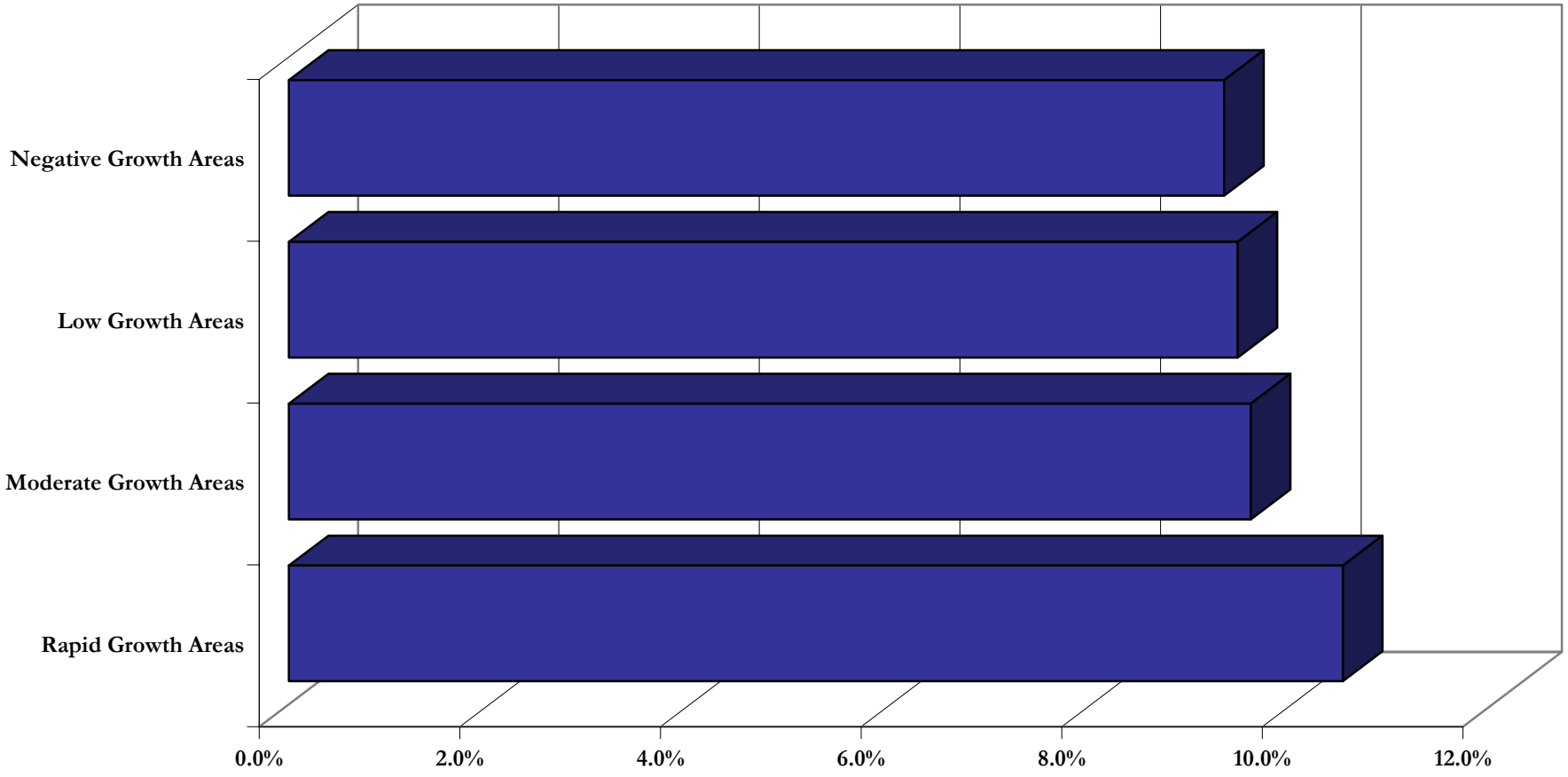
Appendix 3.1-O
Percent of Employment from Sales & Office
By Population Growth Category, 1990 - 2000



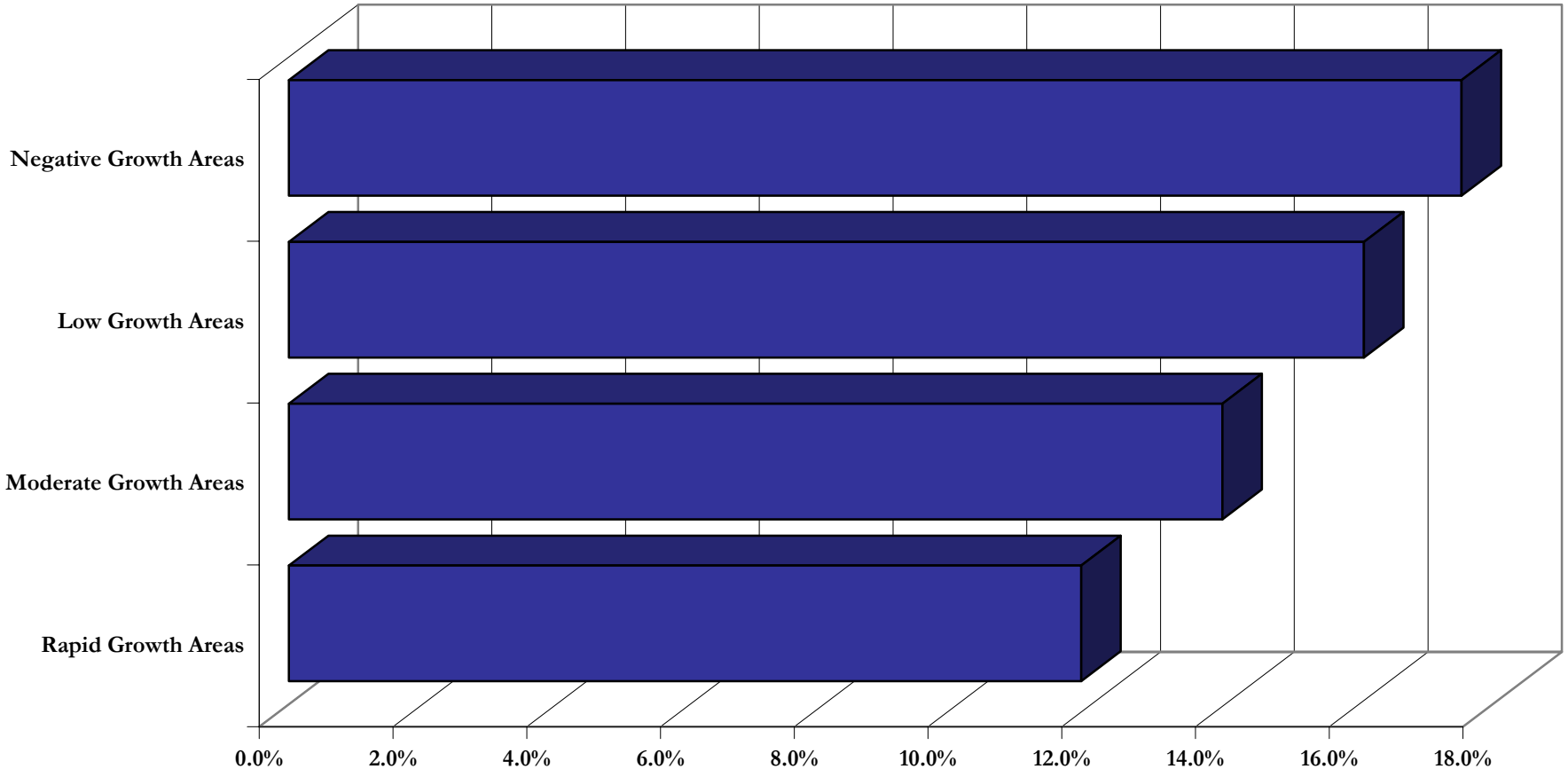
Appendix 3.1-P
Percent of Employment from Farming, Fishing & Forestry
By Population Growth Category, 1990 - 2000



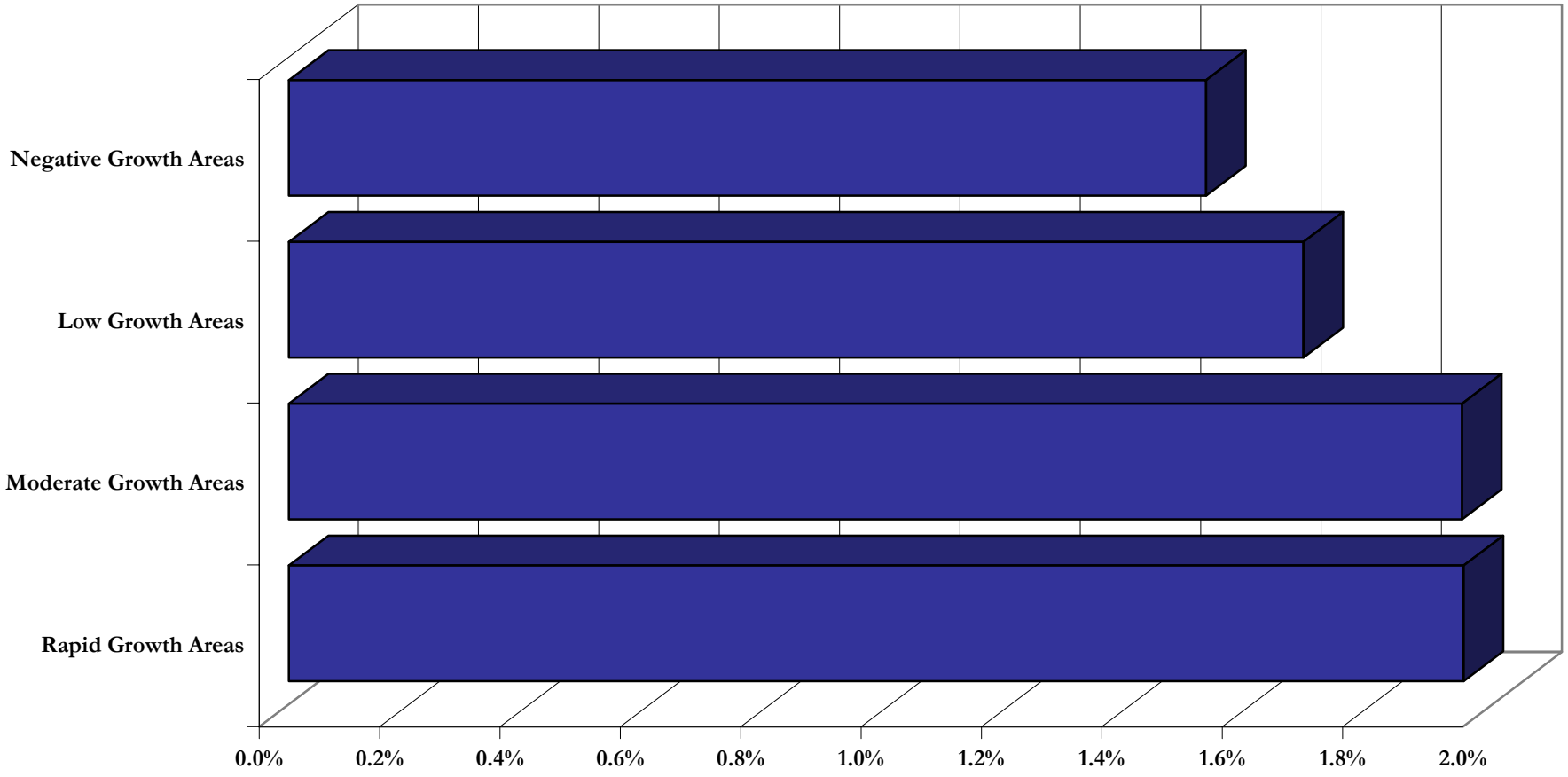
Appendix 3.1-Q
Percent of Employment from Construction, Extraction, & Maintenance
By Population Growth Category, 1990 - 2000



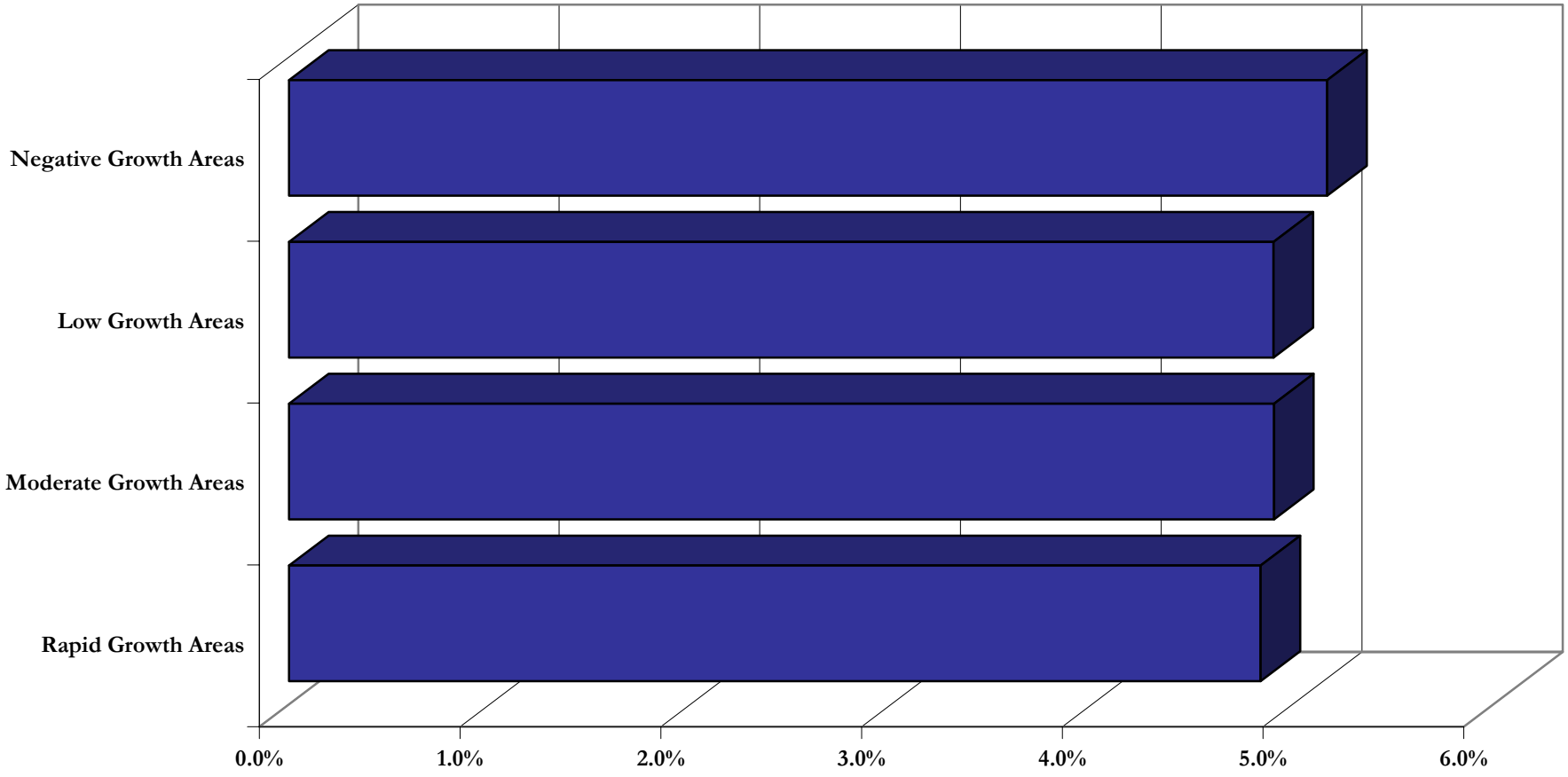
Appendix 3.1-R
Percent of Employment from Production, Transportation, & Material Moving Occupations
By Population Growth Category, 1990 - 2000



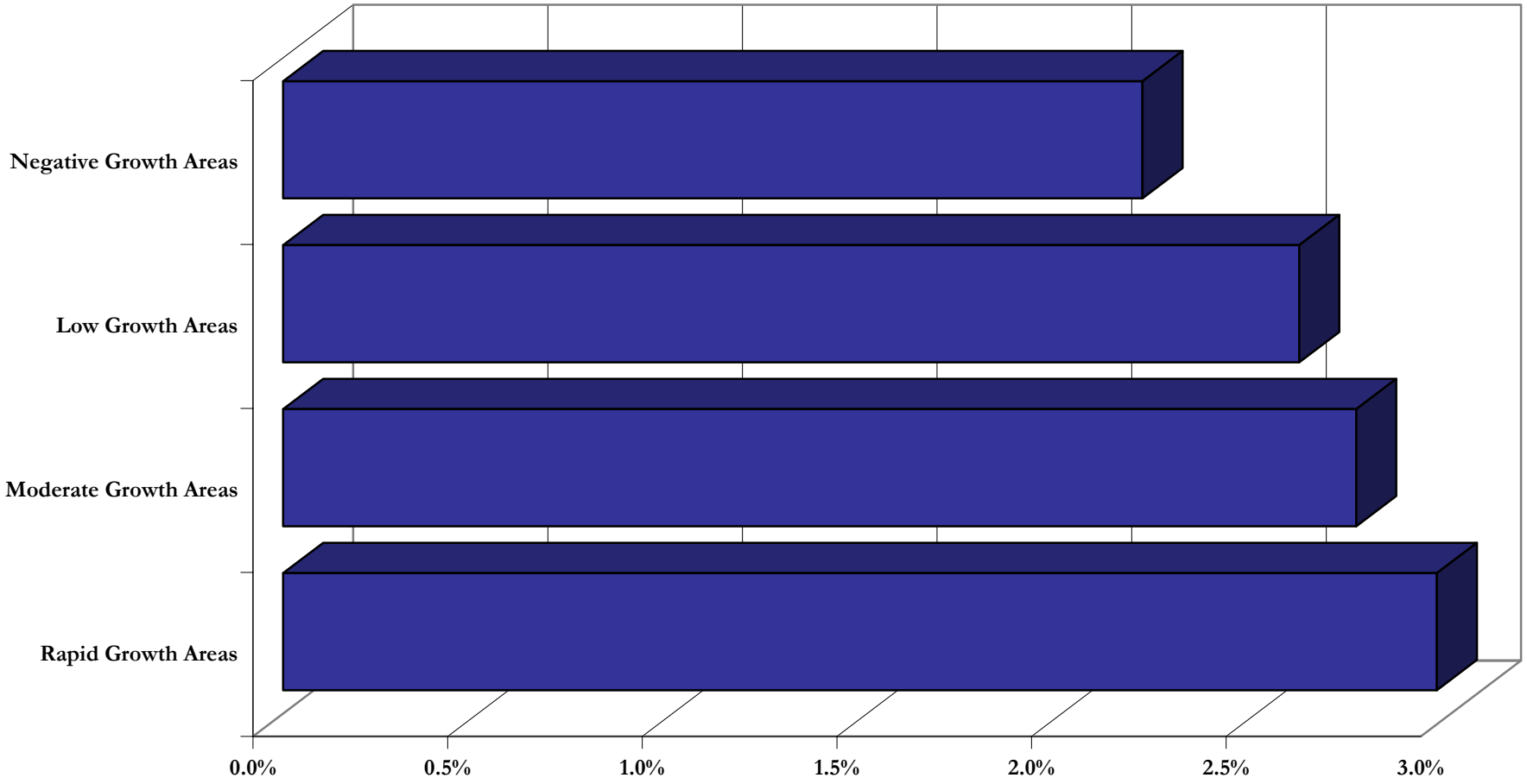
Appendix 3.1-S
Percent of Employment from Agriculture, Forestry, Fishing & Hunting, and Mining
By Population Growth Category, 1990 - 2000



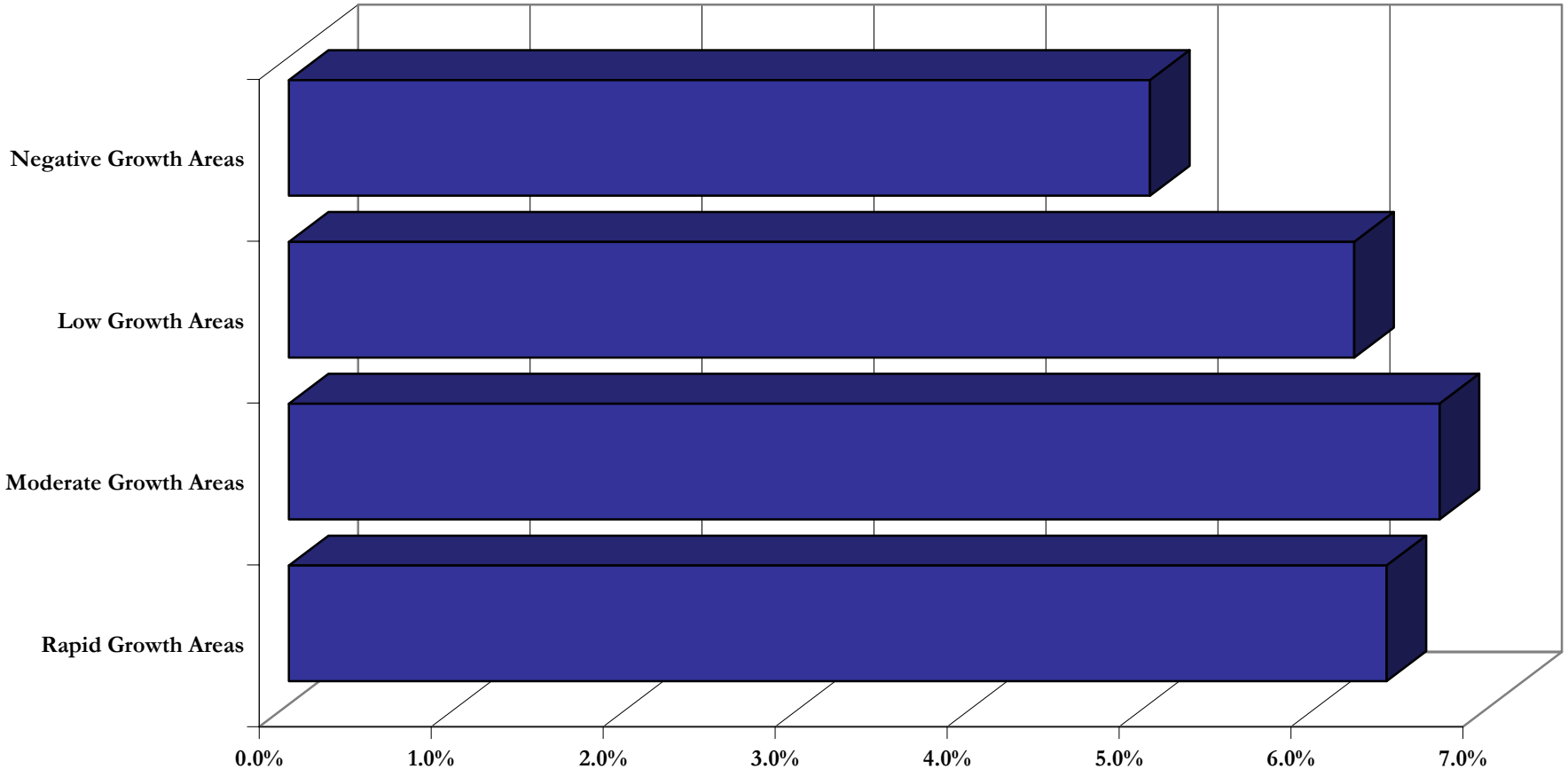
Appendix 3.1-T
Percent of Employment from Transportation & Warehousing, and Utilities
By Population Growth Category, 1990 - 2000



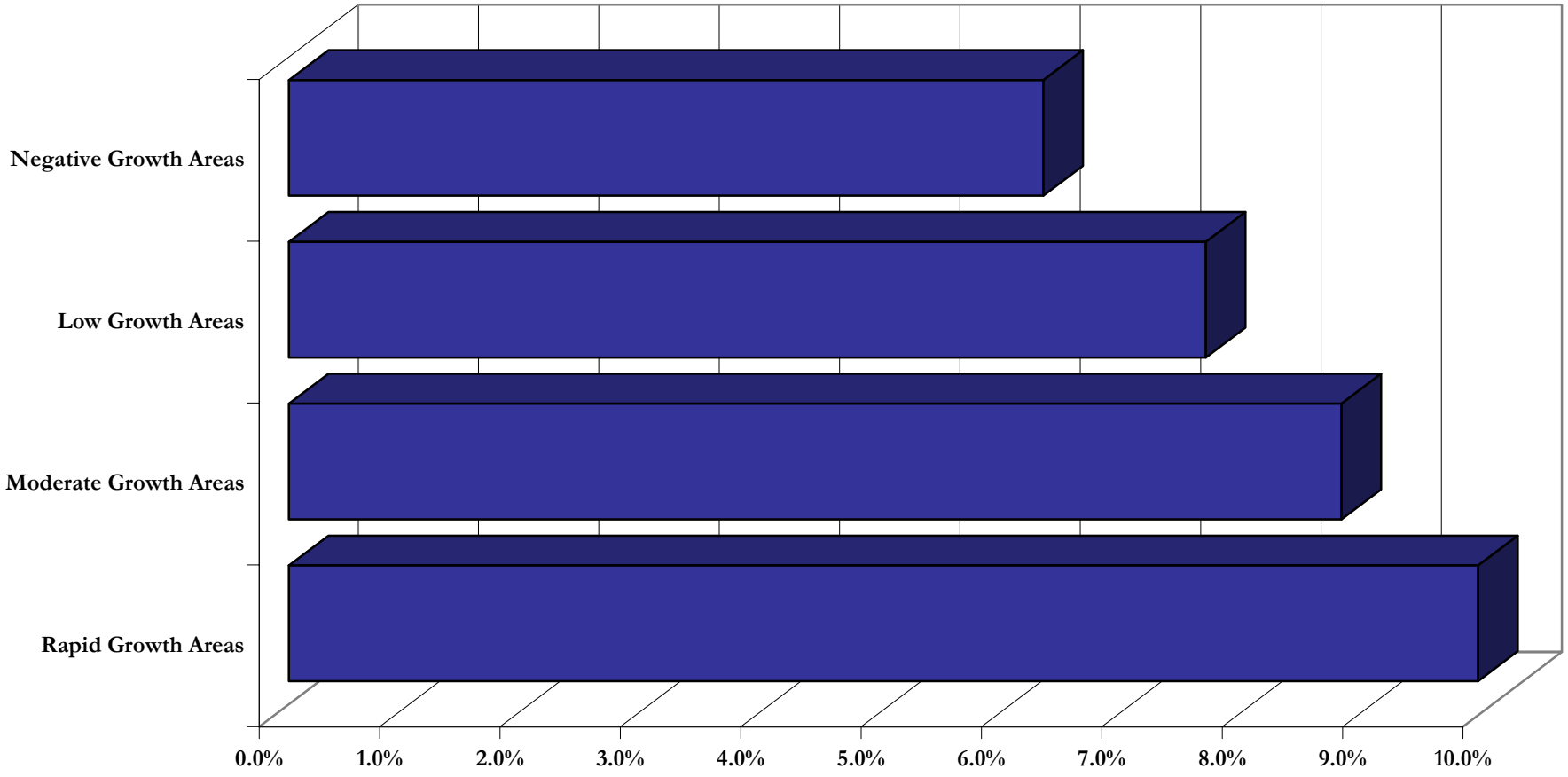
Appendix 3.1-U
Percent of Employment from Information
By Population Growth Category, 1990 - 2000



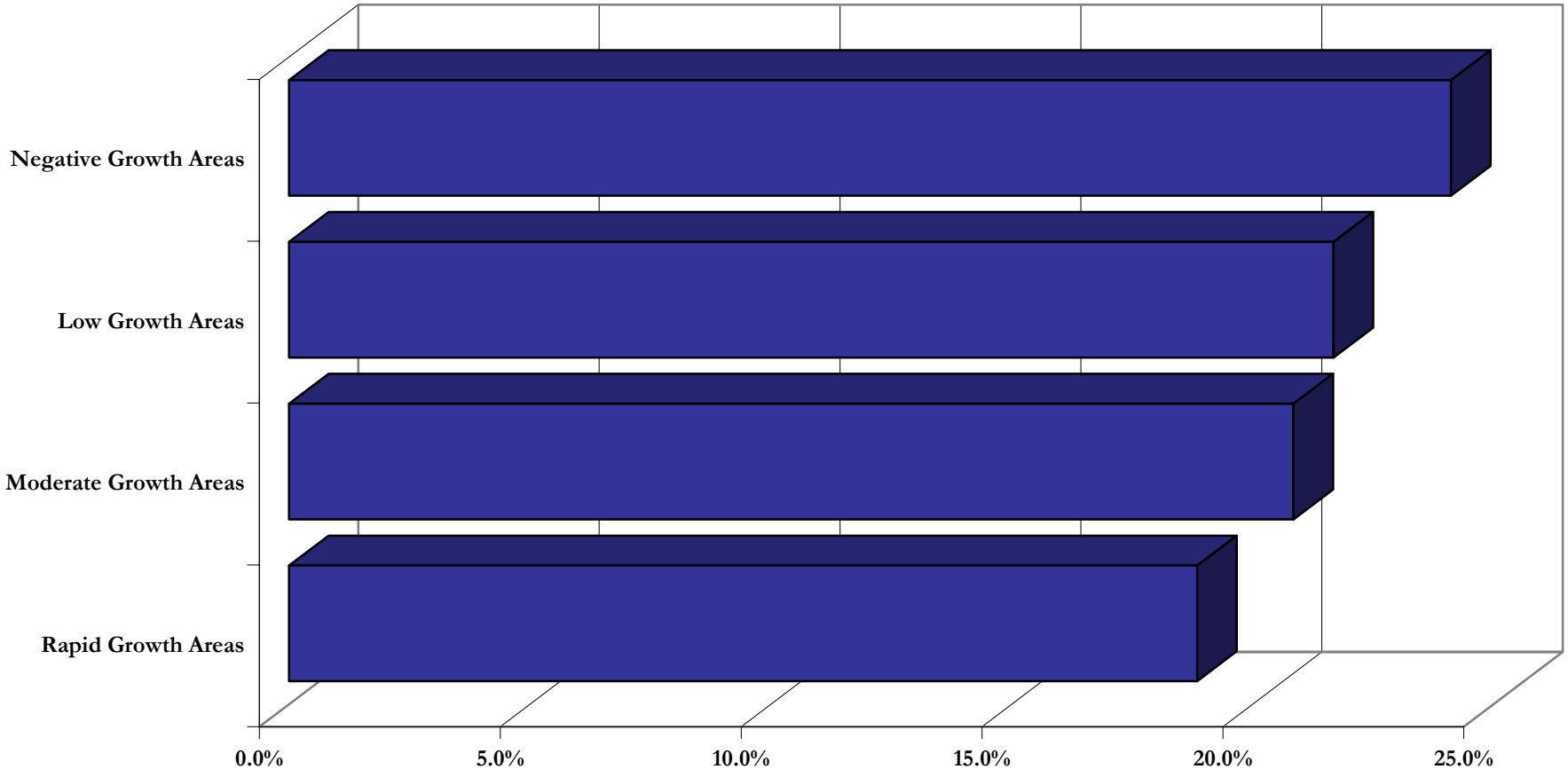
Appendix 3.1-V
Percent of Employment from Finance, Insurance, Real Estate, & Rental and Leasing
By Population Growth Category, 1990 - 2000



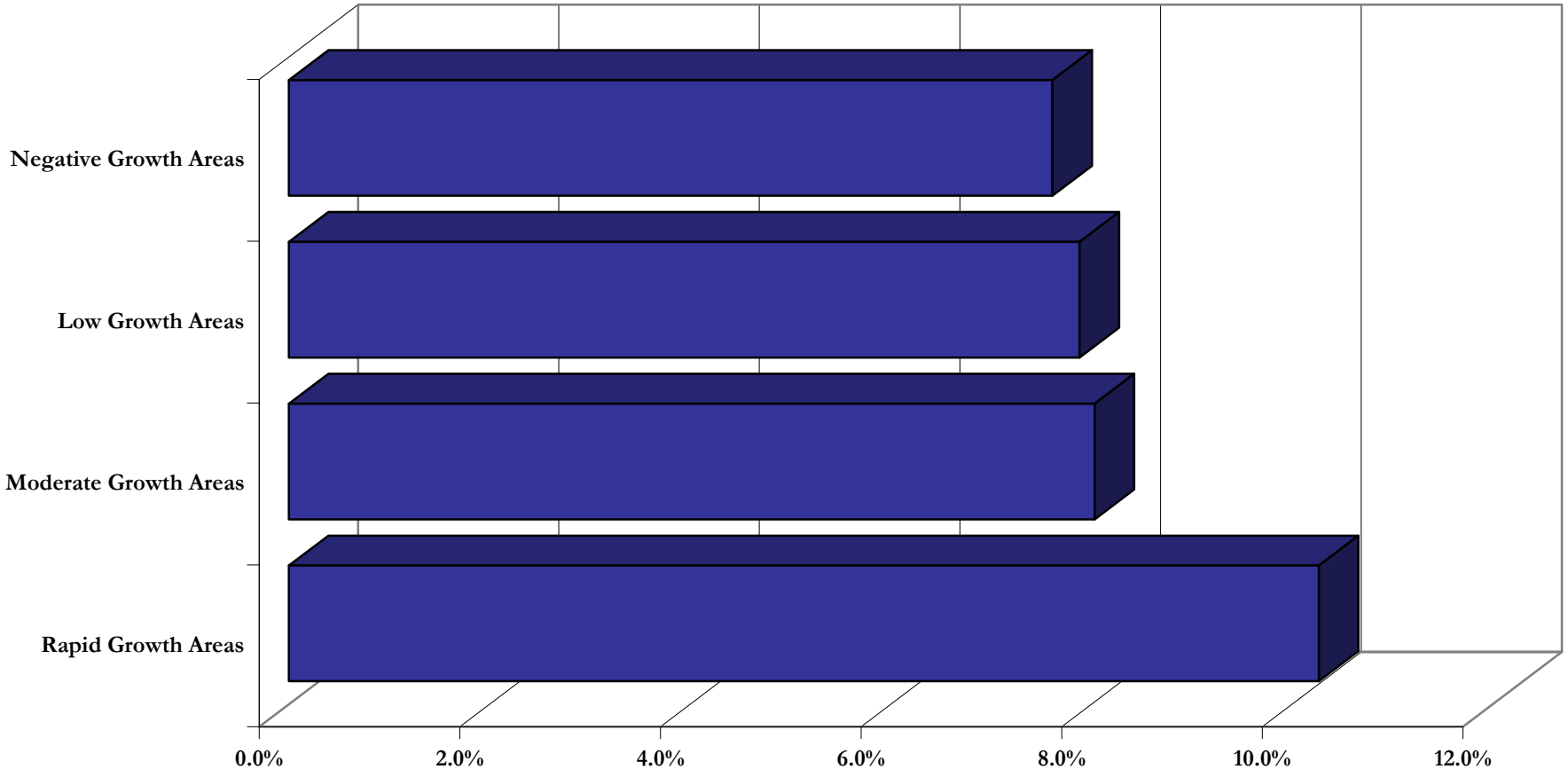
Appendix 3.1-W
Percent of Employment from Professional, Scientific, Management, Administrative, & Waste Management Services
By Population Growth Category, 1990 - 2000



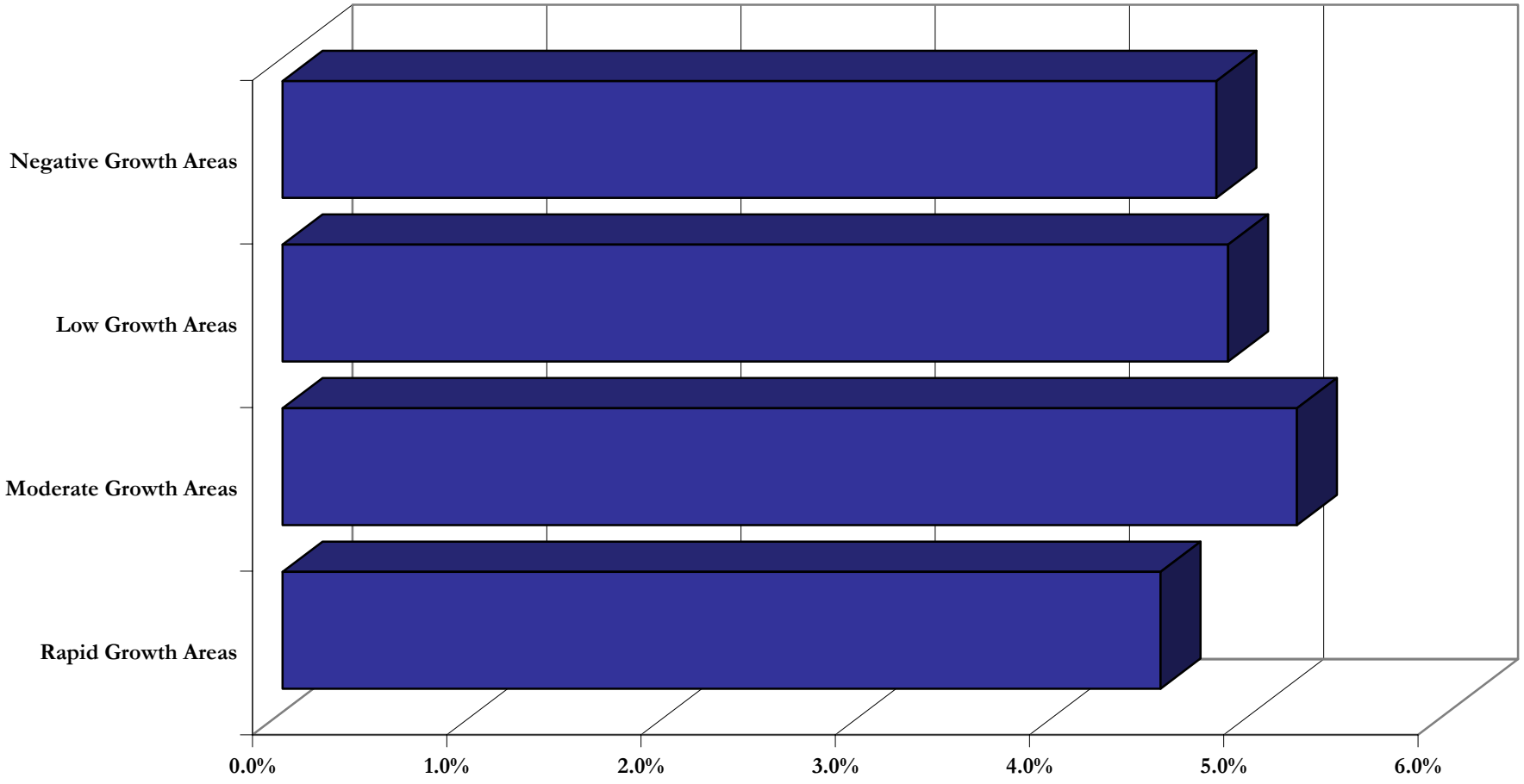
Appendix 3.1-X
Percent of Employment from Educational, Health & Social Services
By Population Growth Category, 1990 - 2000



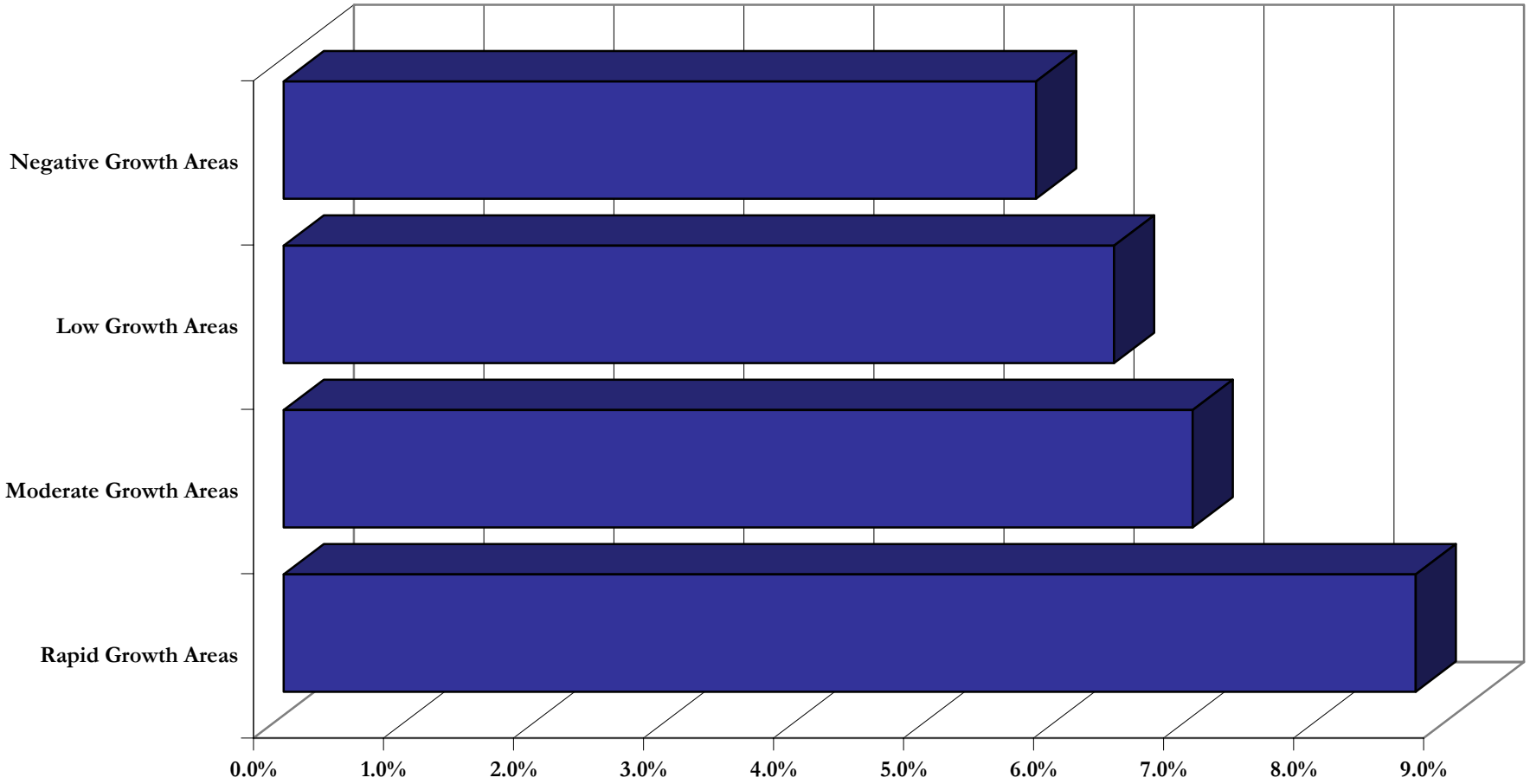
Appendix 3.1-Y
Percent of Employment from Arts, Entertainment, Recreation, Accommodation & Food Services
By Population Growth Category, 1990 - 2000



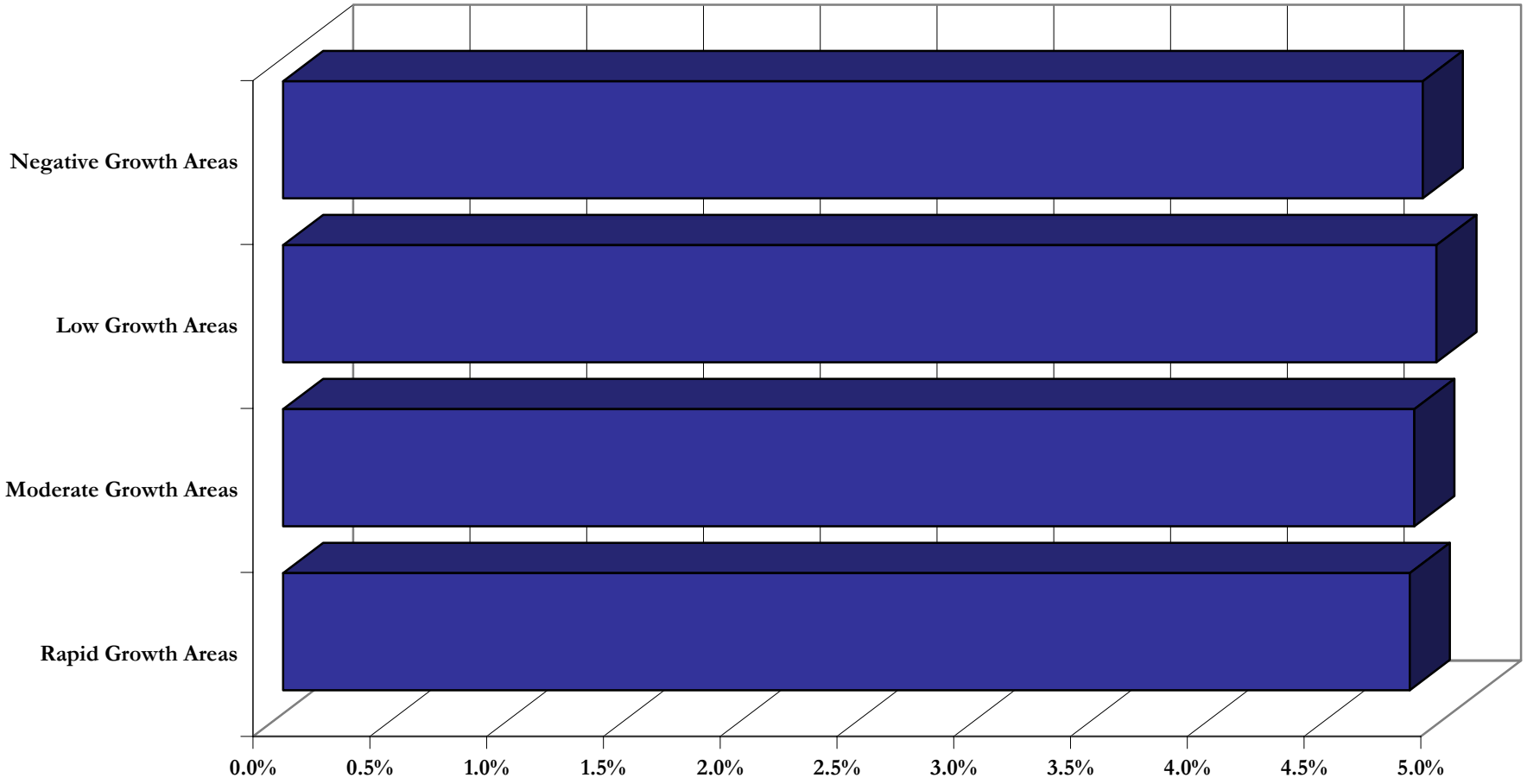
Appendix 3.1-Z
Percent of Employment from Public Administration
By Population Growth Category, 1990 - 2000



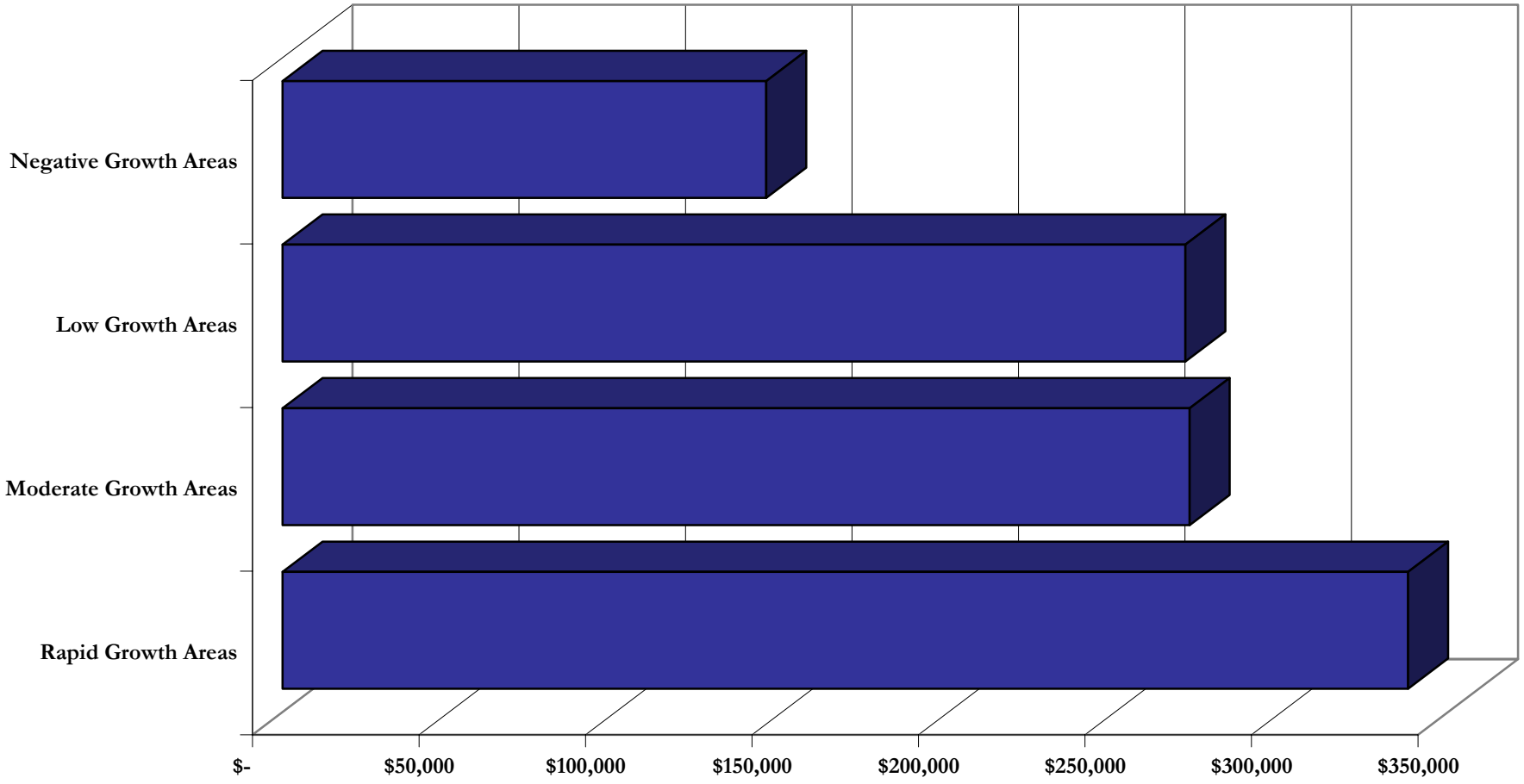
Appendix 3.1-AA
Percent of Employment from Construction
By Population Growth Category, 1990 - 2000



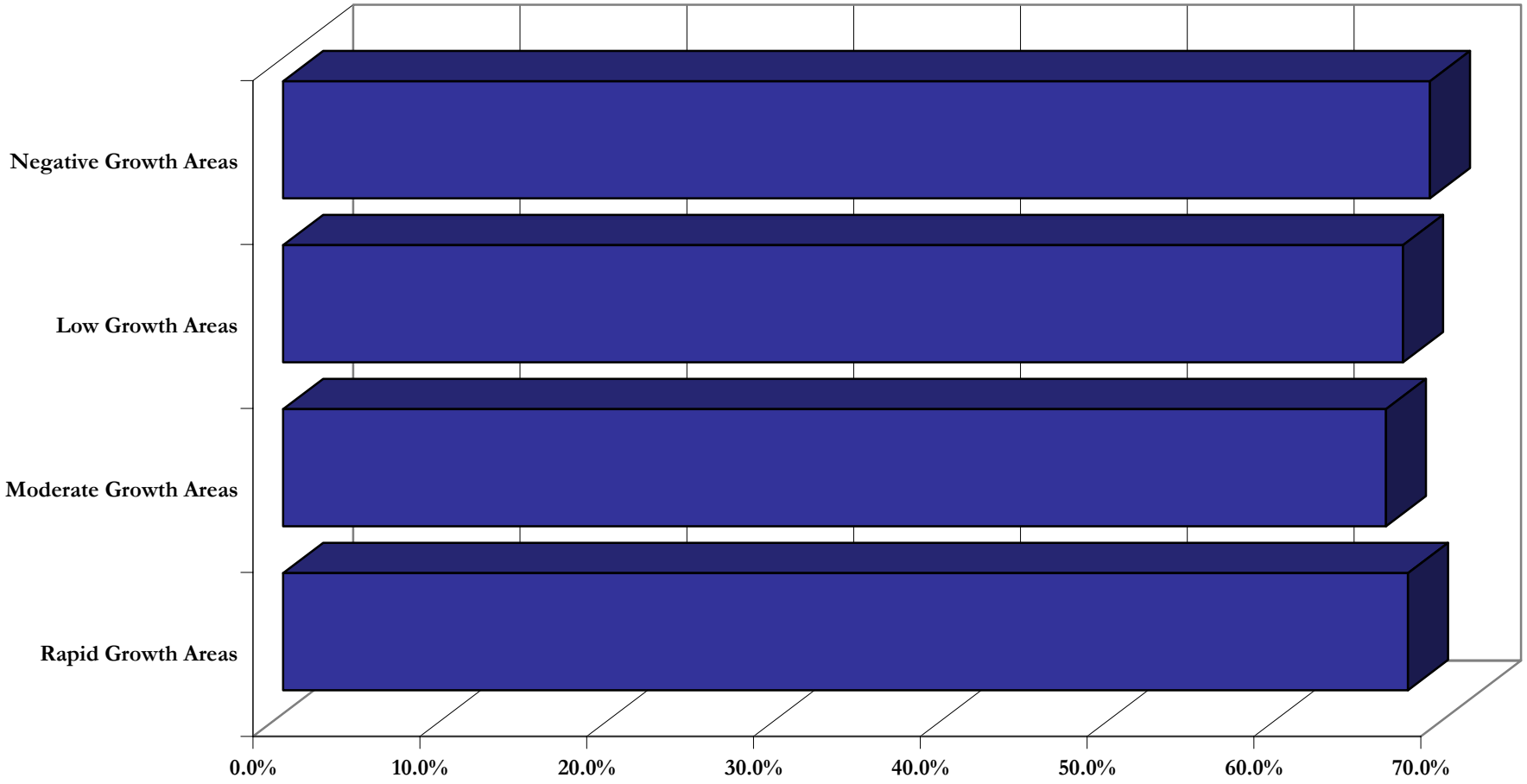
Appendix 3.1-AB
Percent of Employment from Other Service
By Population Growth Category, 1990 - 2000



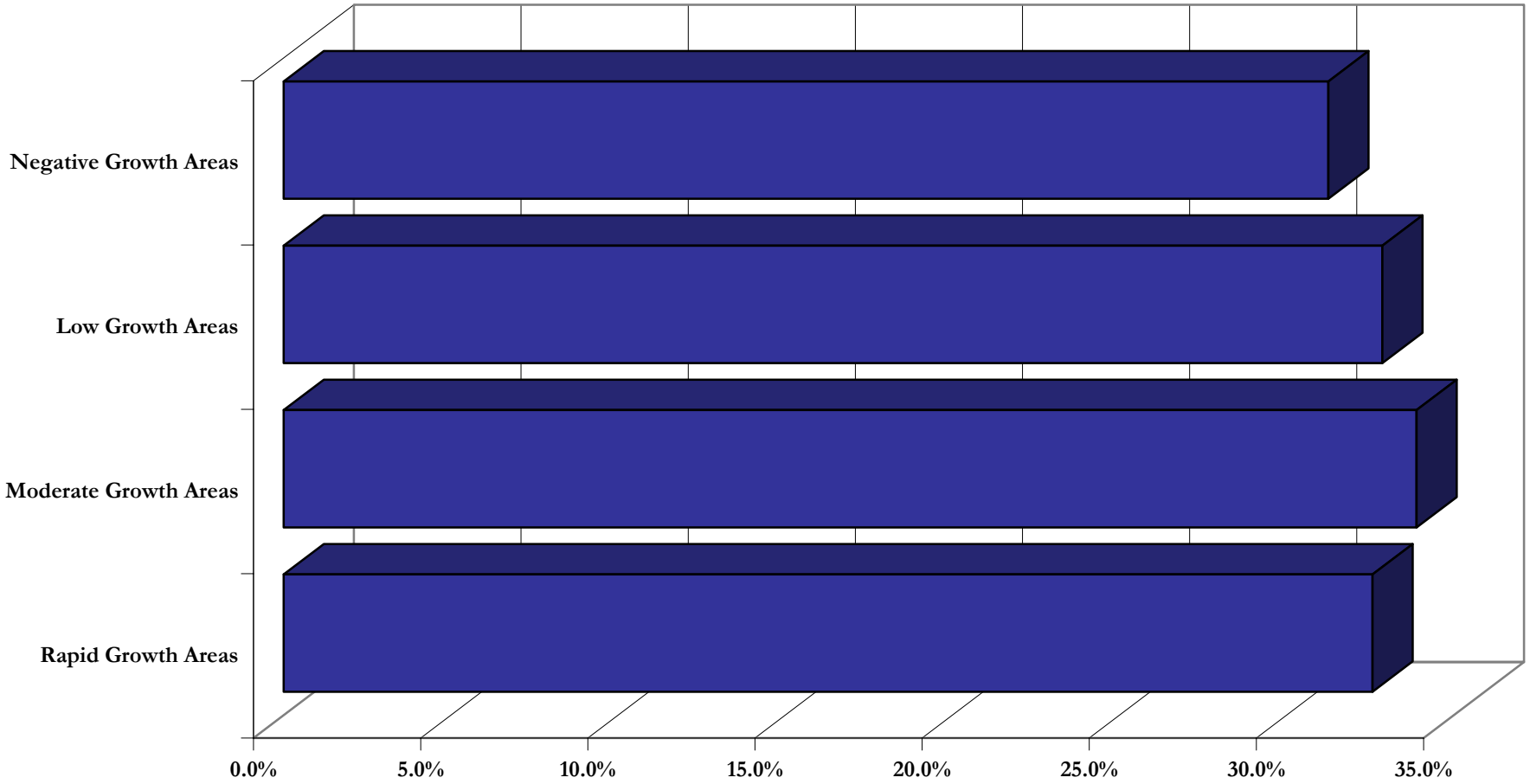
Appendix 3.1-AC
Household Income, 1999
By Population Growth Category, 1990 - 2000



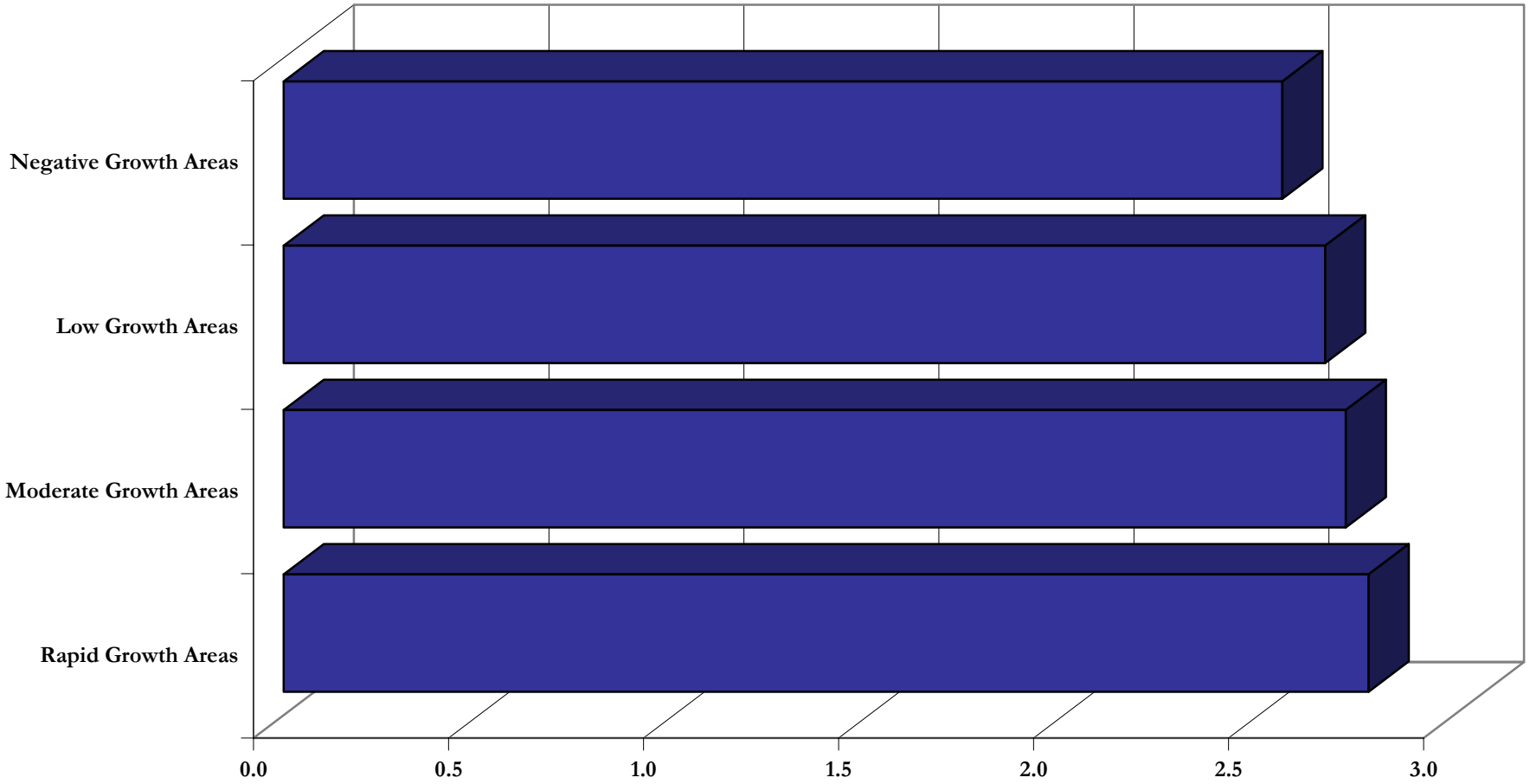
Appendix 3.1-AD
Percent of Owner-Occupied Housing Units
By Population Growth Category, 1990 - 2000



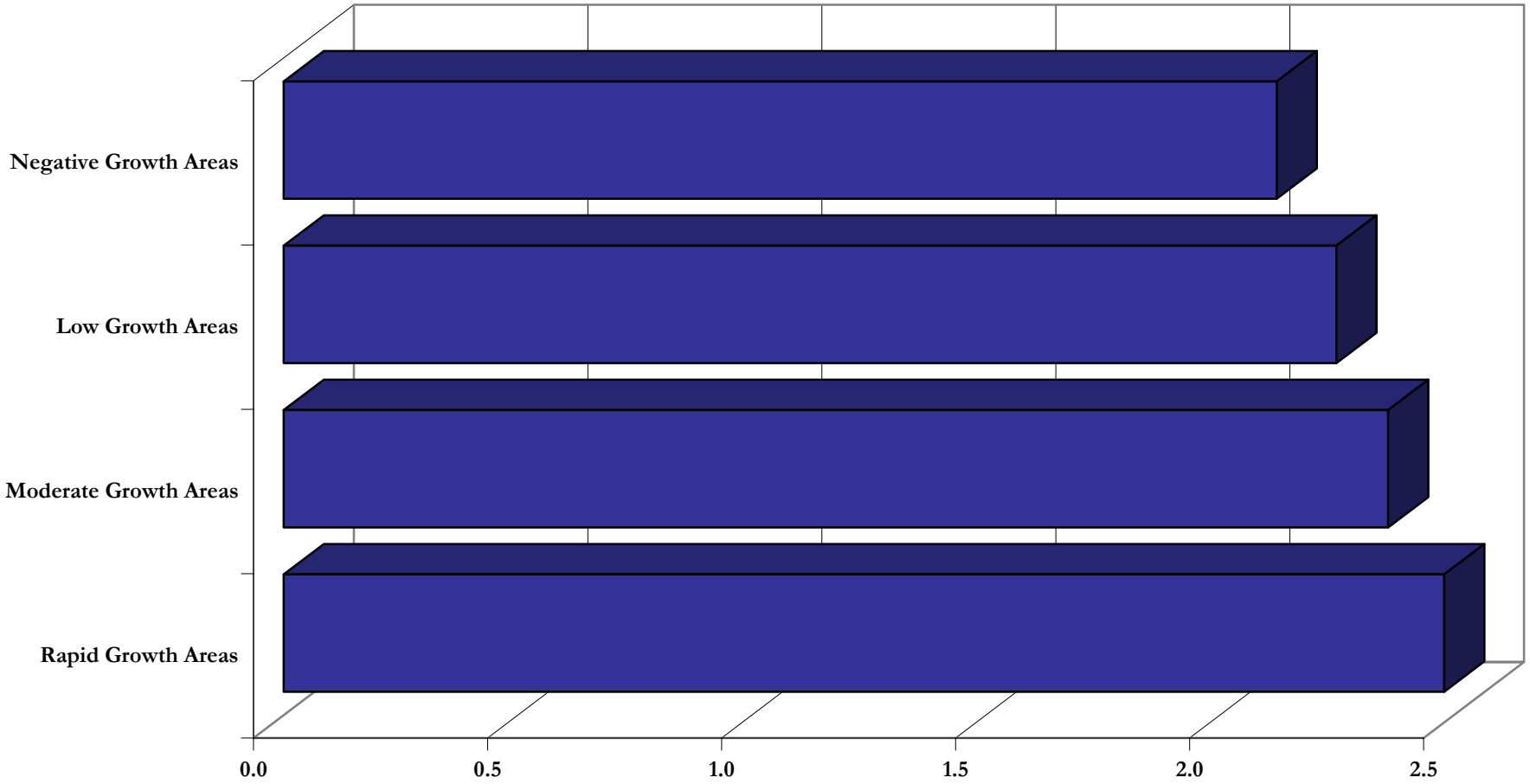
Appendix 3.1-AE
Percent of Renter-Occupied Housing Units
By Population Growth Category, 1990 - 2000



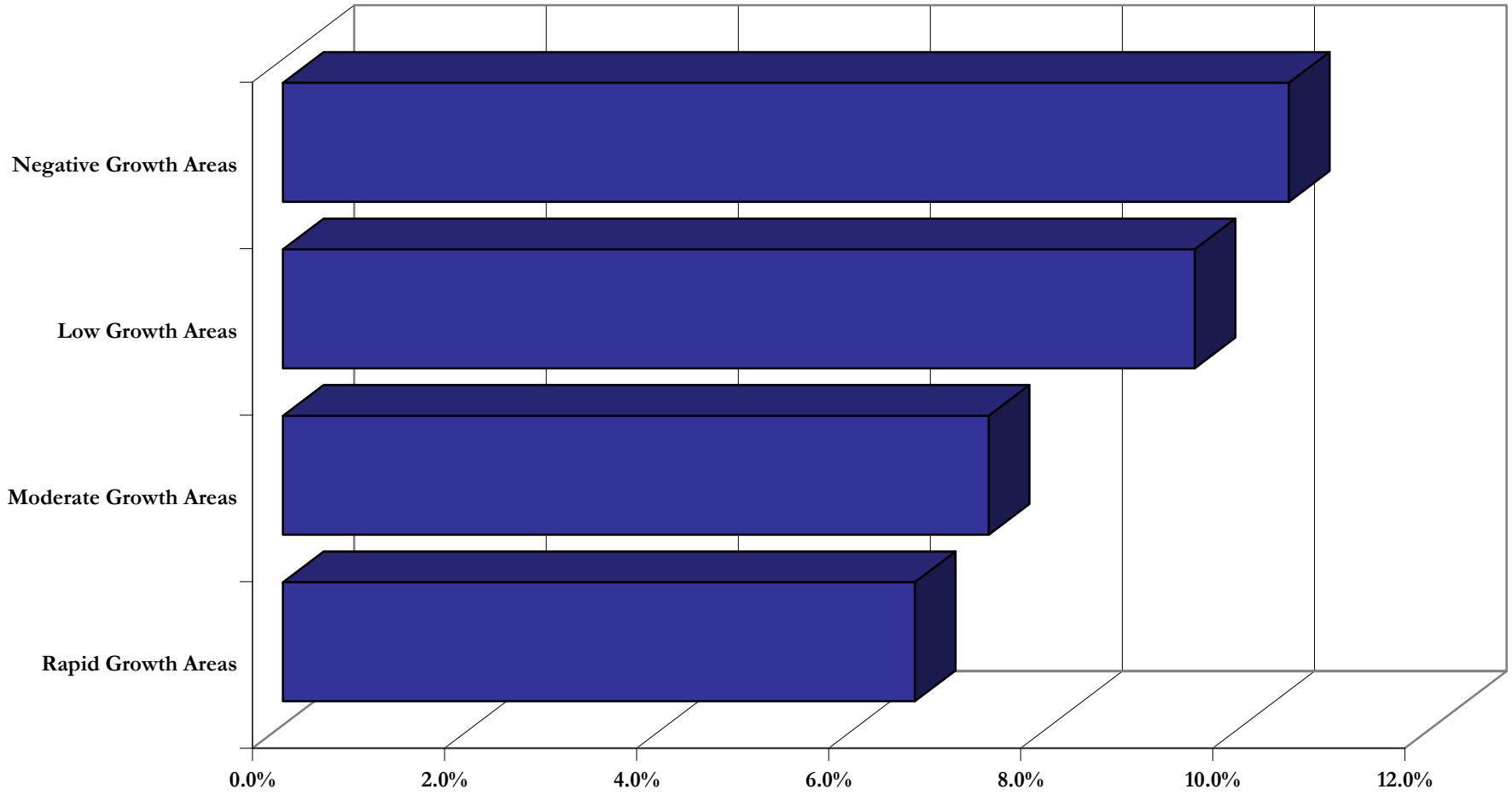
Appendix 3.1-AF
Average Household Size of Owner-Occupied Units
By Population Growth Category, 1990 - 2000



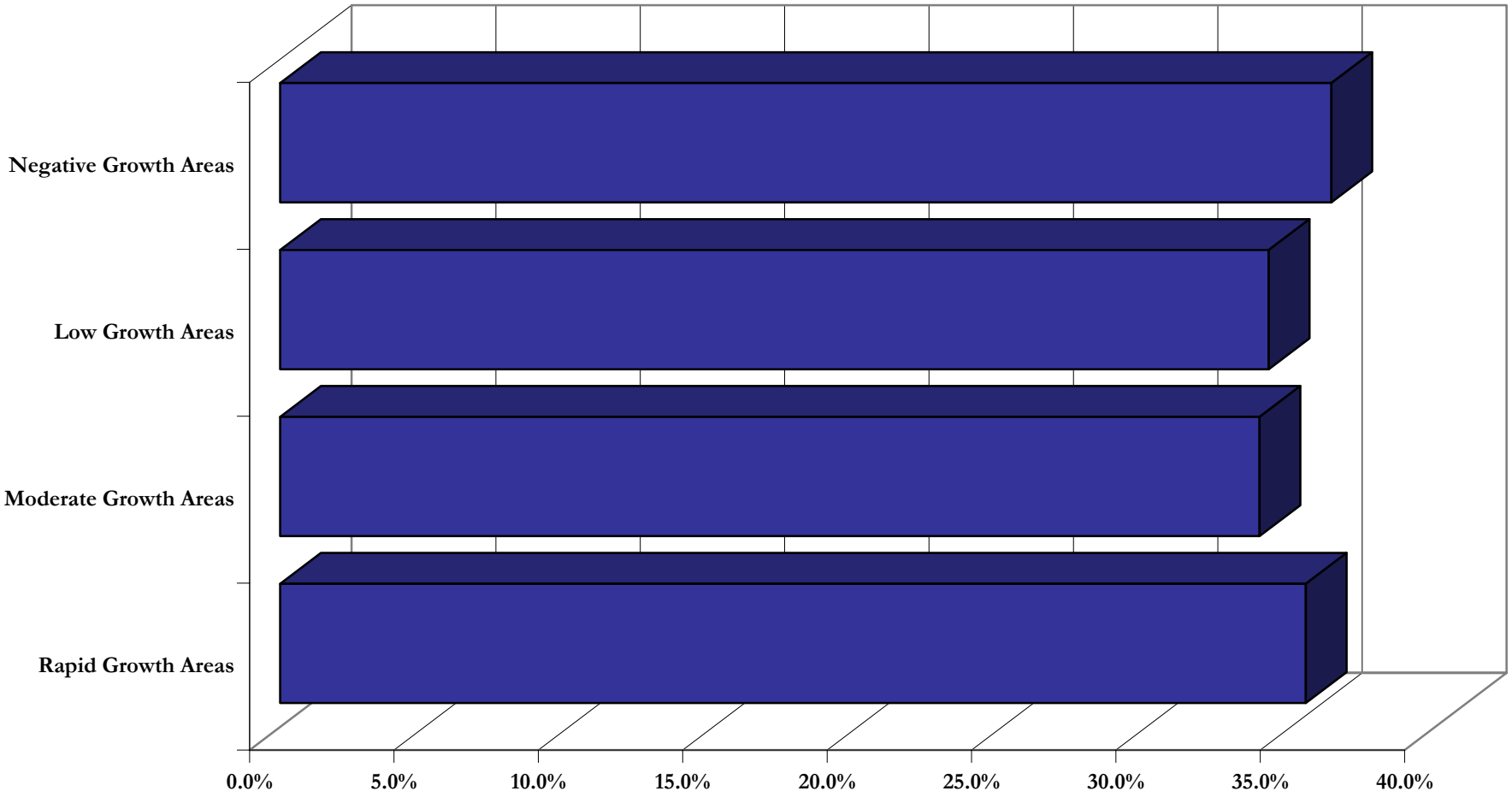
Appendix 3.1-AG
Average Household Size of Renter-Occupied Units
By Population Growth Category, 1990 - 2000



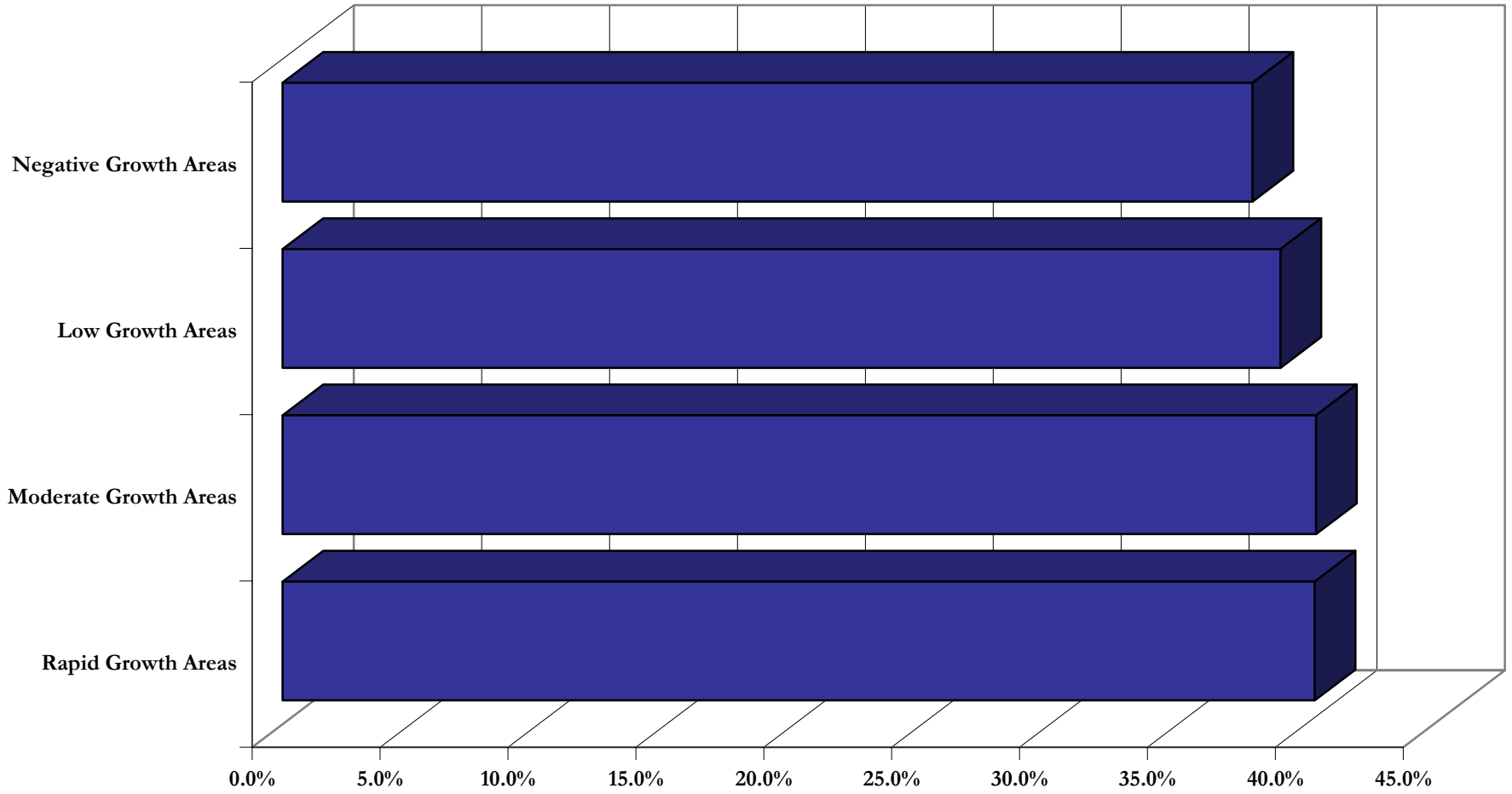
Appendix 3.1-AH
Percent of Home owners with Zero Vehicles
By Population Growth Category, 1990 - 2000



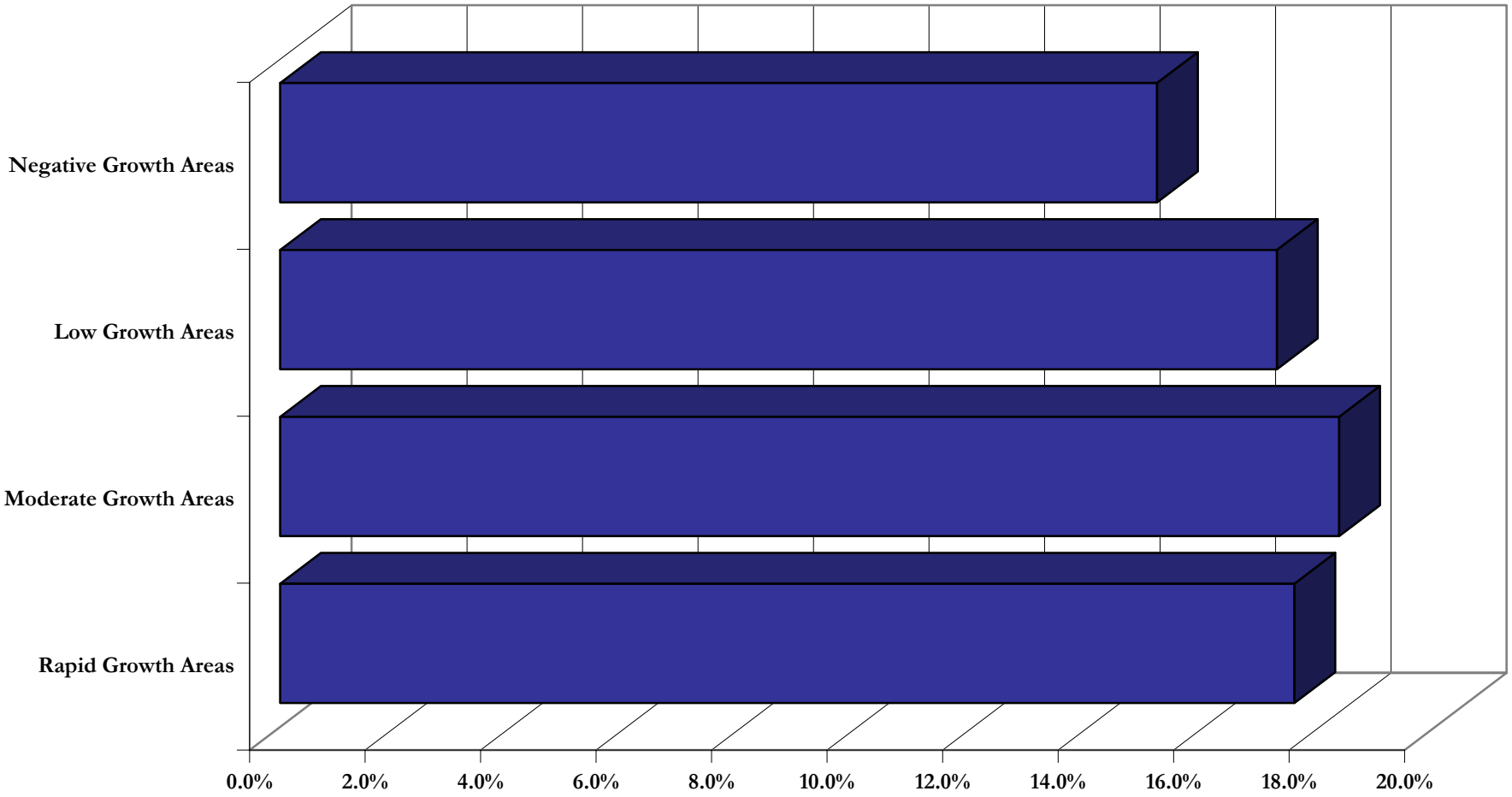
Appendix 3.1-AI
Percent of Home owners with One Vehicles
By Population Growth Category, 1990 - 2000



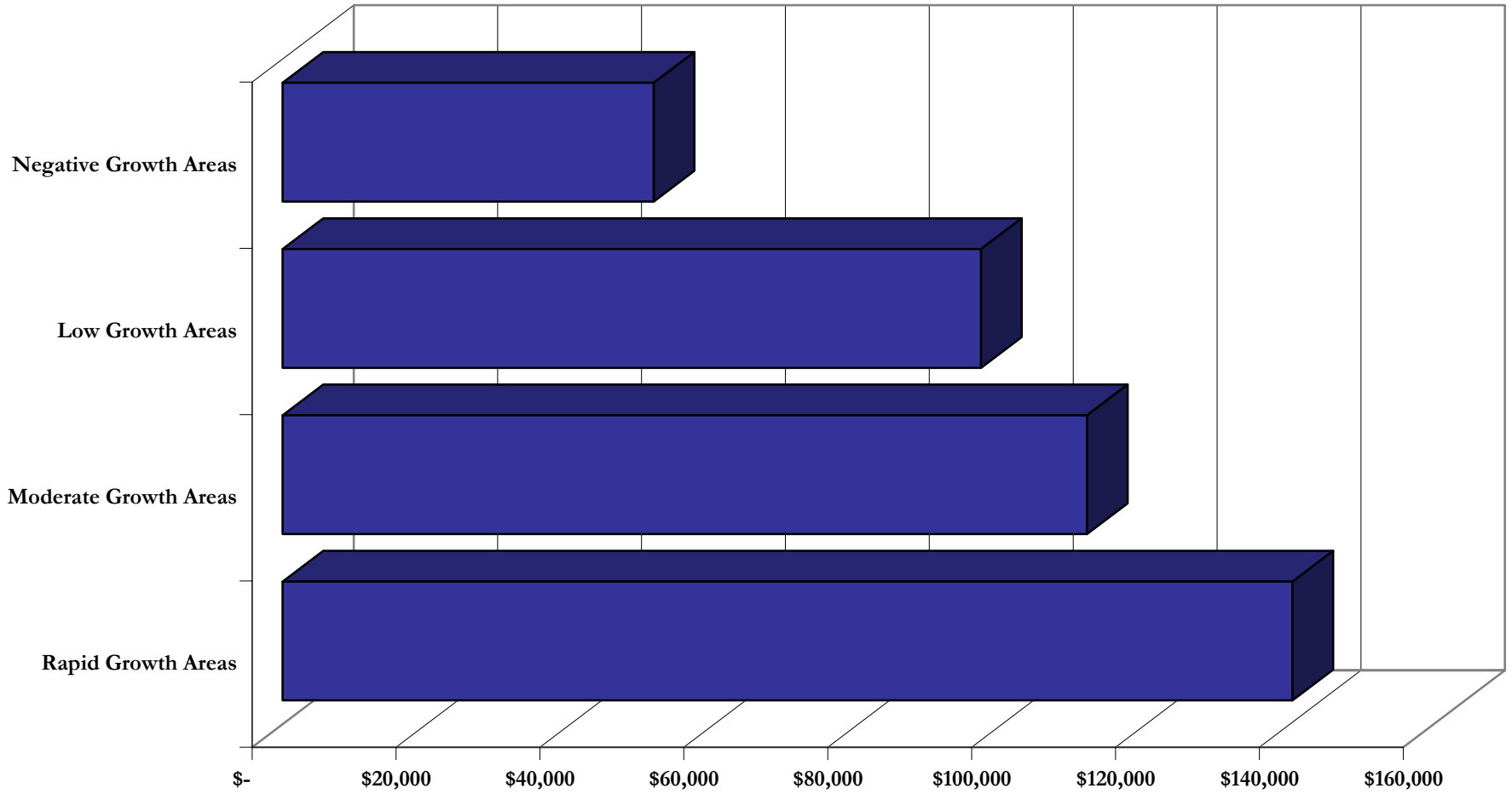
Appendix 3.1-AJ
Percent of Home owners with Two Vehicles
By Population Growth Category, 1990 - 2000



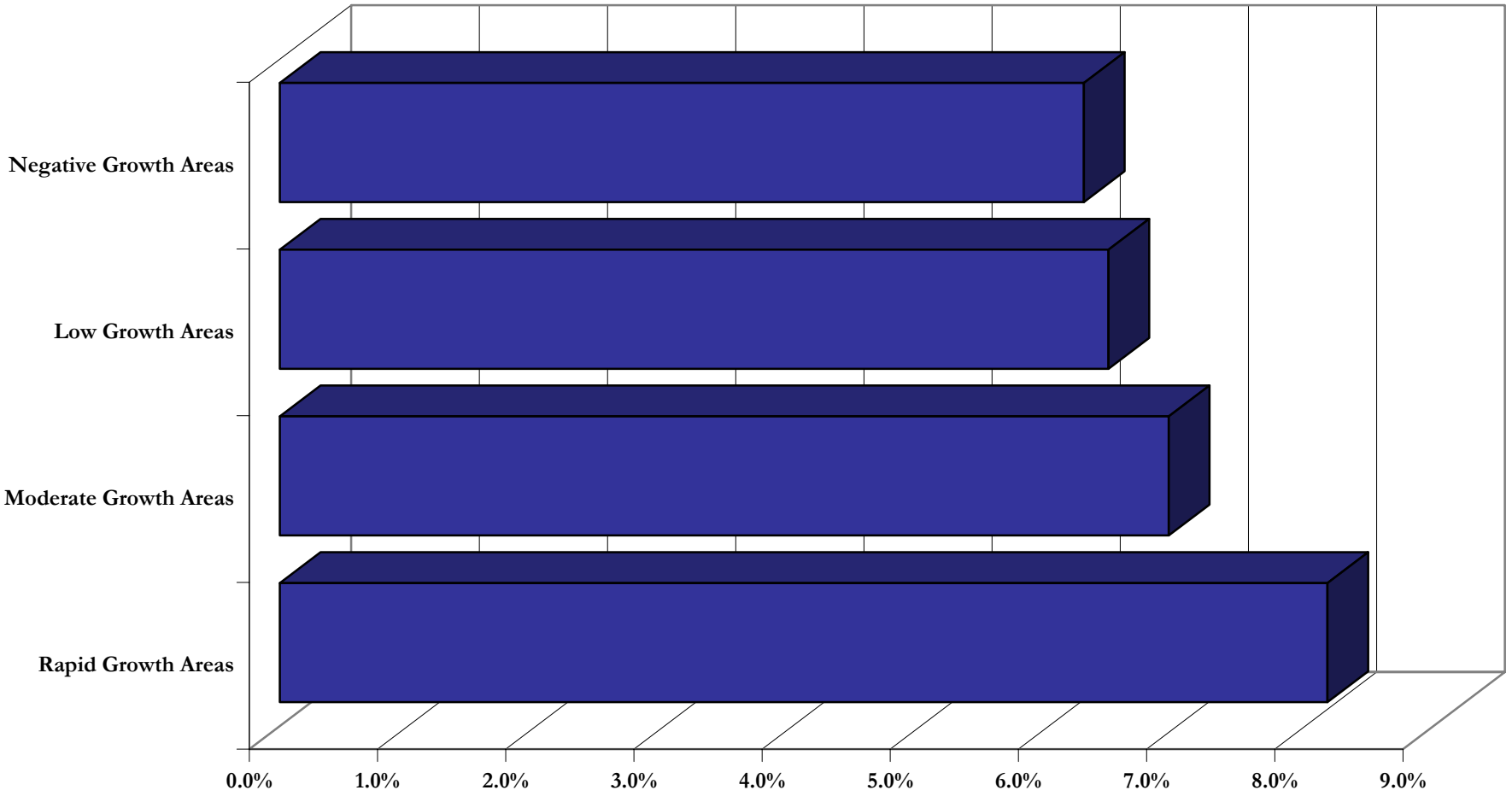
Appendix 3.1-AK
Percent of Home owners with Three or More Vehicles
By Population Growth Category, 1990 - 2000



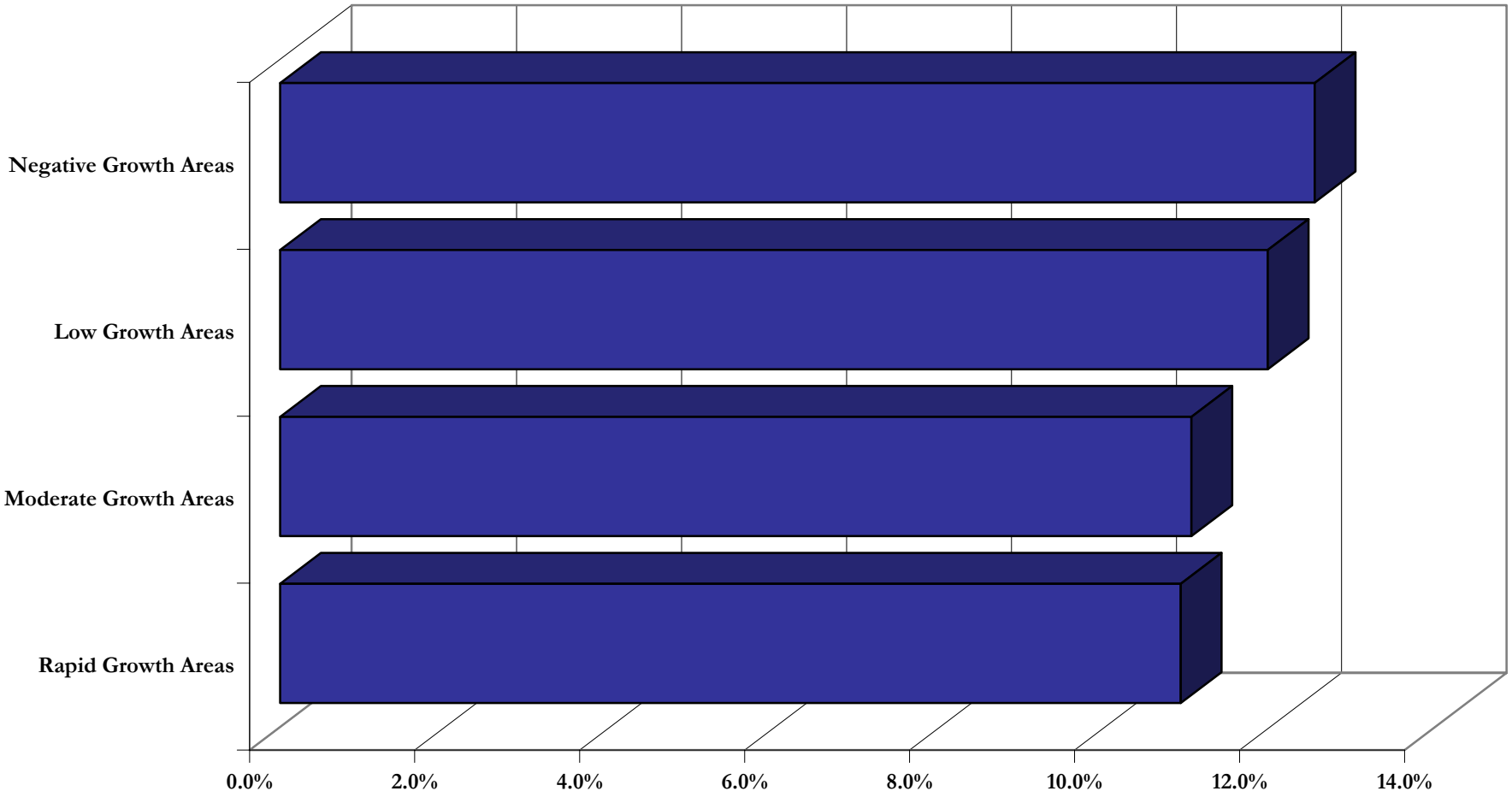
Appendix 3.1-AL
Average Monthly Mortgage & Monthly Costs
By Population Growth Category, 1990 - 2000



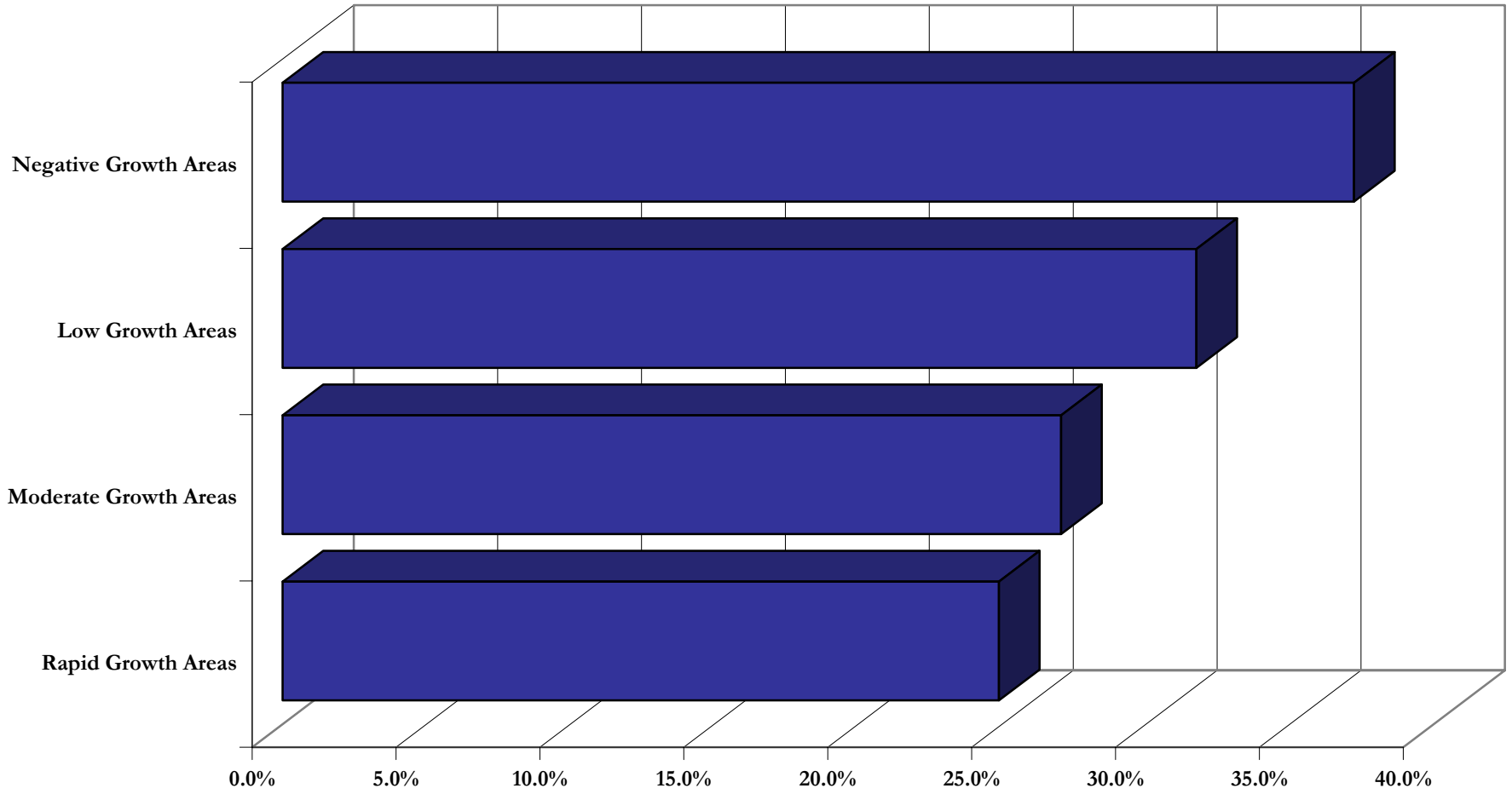
Appendix 3.1-AM
Education Attainment Less than 9th Grade (25+ yrs old)
By Population Growth Category, 1990 - 2000



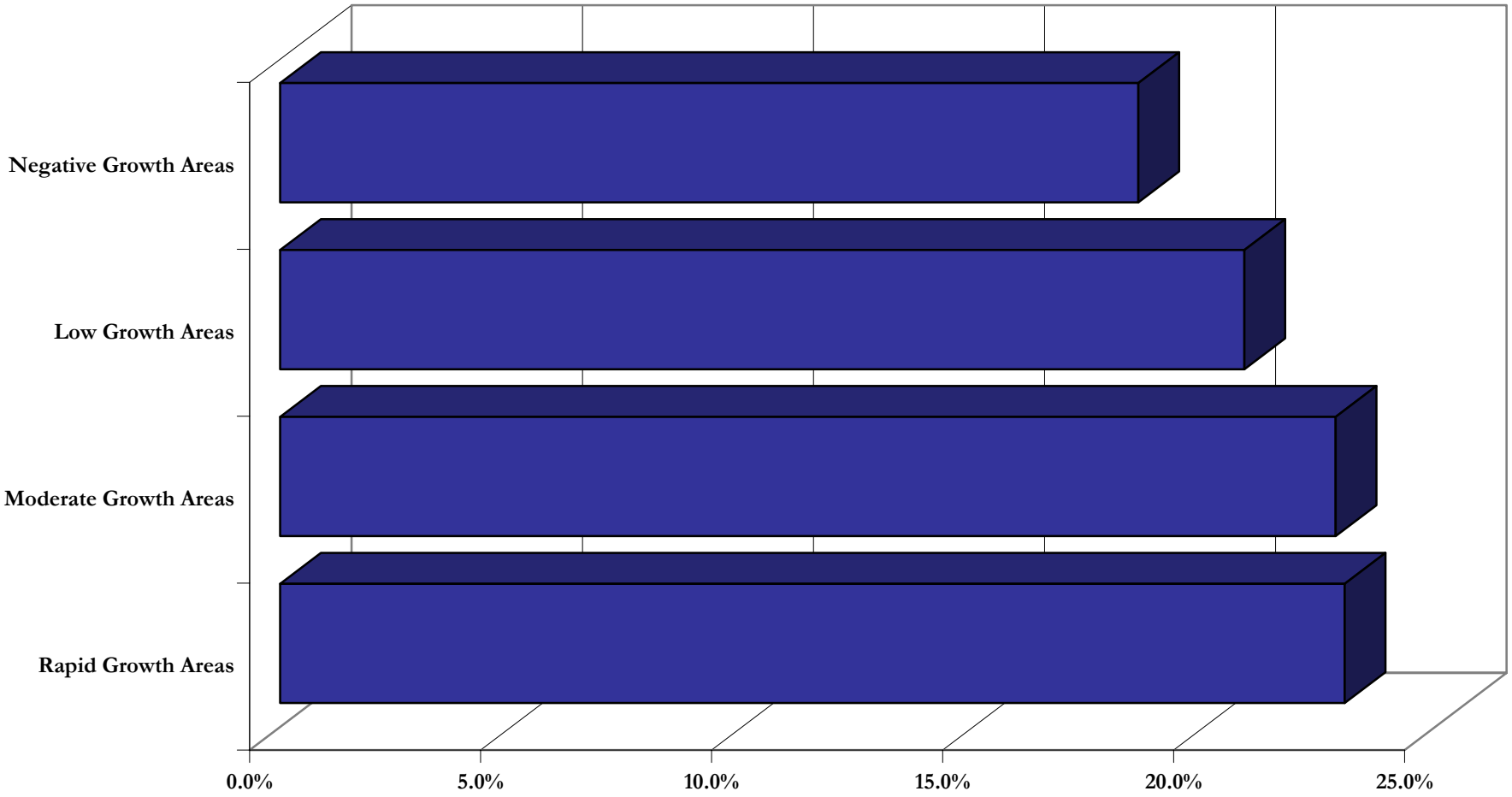
Appendix 3.1-AN
Education Attainment 9th - 12th Grade_No Diploma (25+ yrs old)
By Population Growth Category, 1990 - 2000



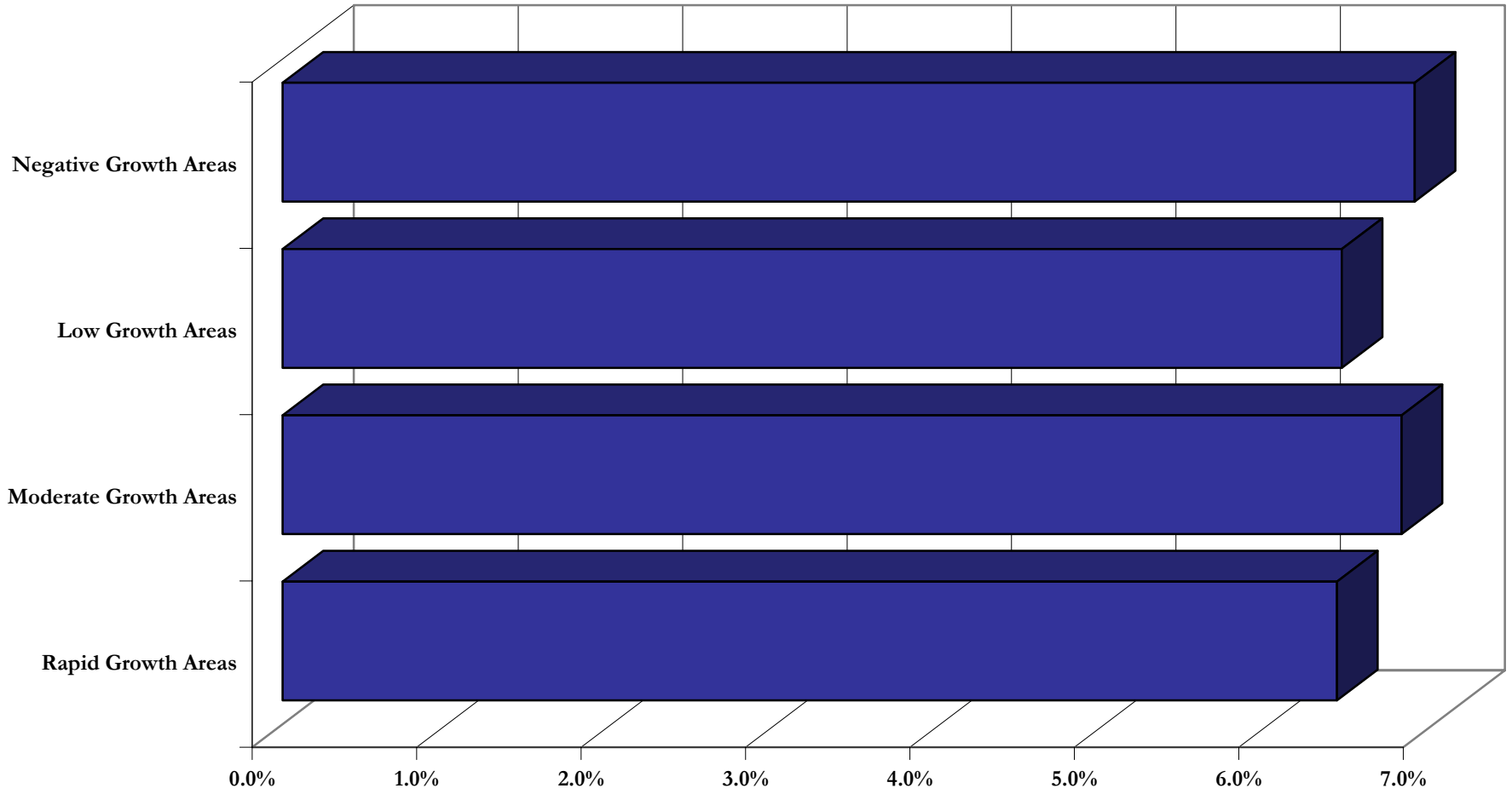
Appendix 3.1-AO
Education Attainment High School Graduate (25+ yrs old)
By Population Growth Category, 1990 - 2000



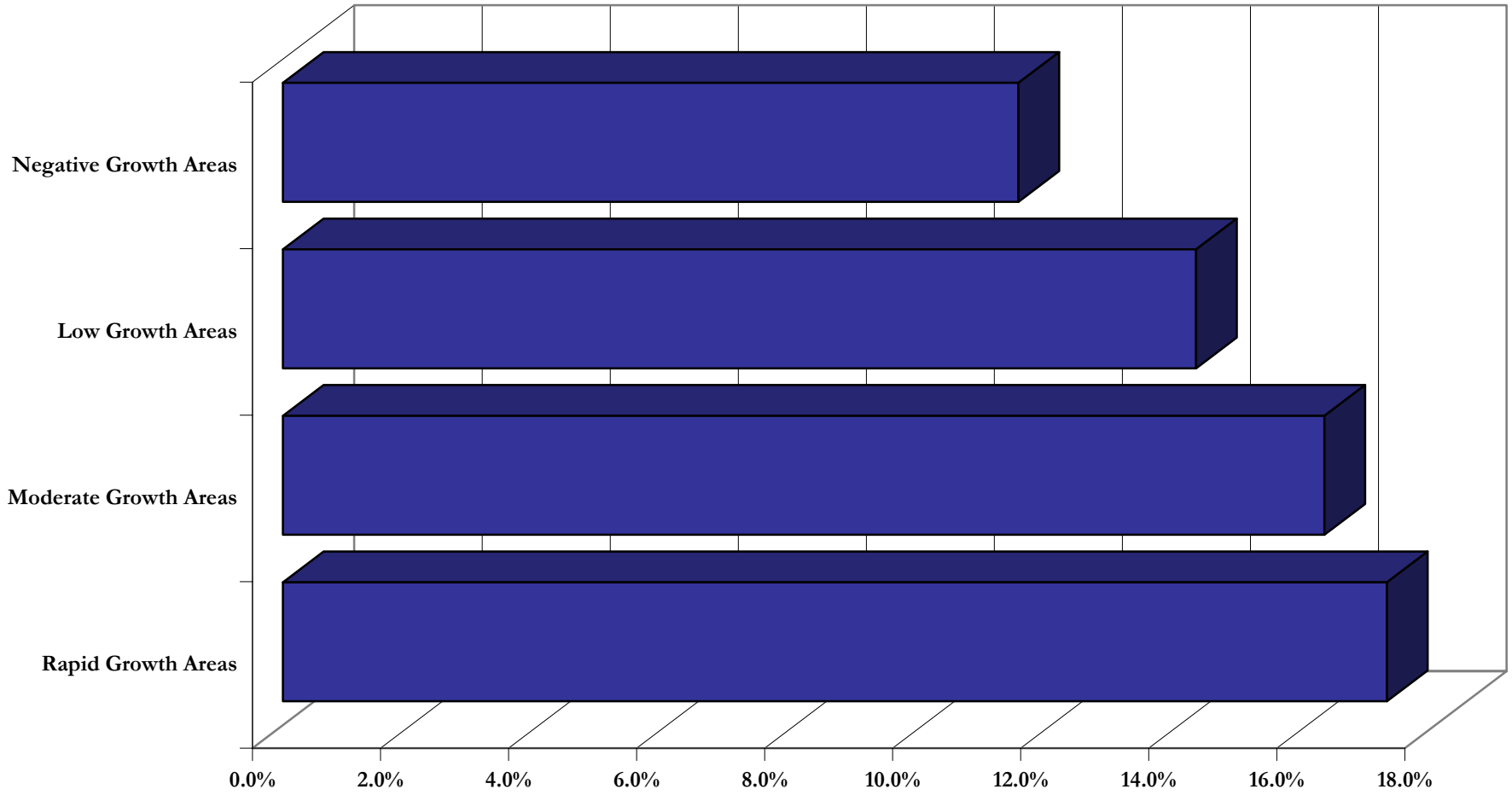
Appendix 3.1-AP
Education Attainment Some College_No Degree (25+ yrs old)
By Population Growth Category, 1990 - 2000



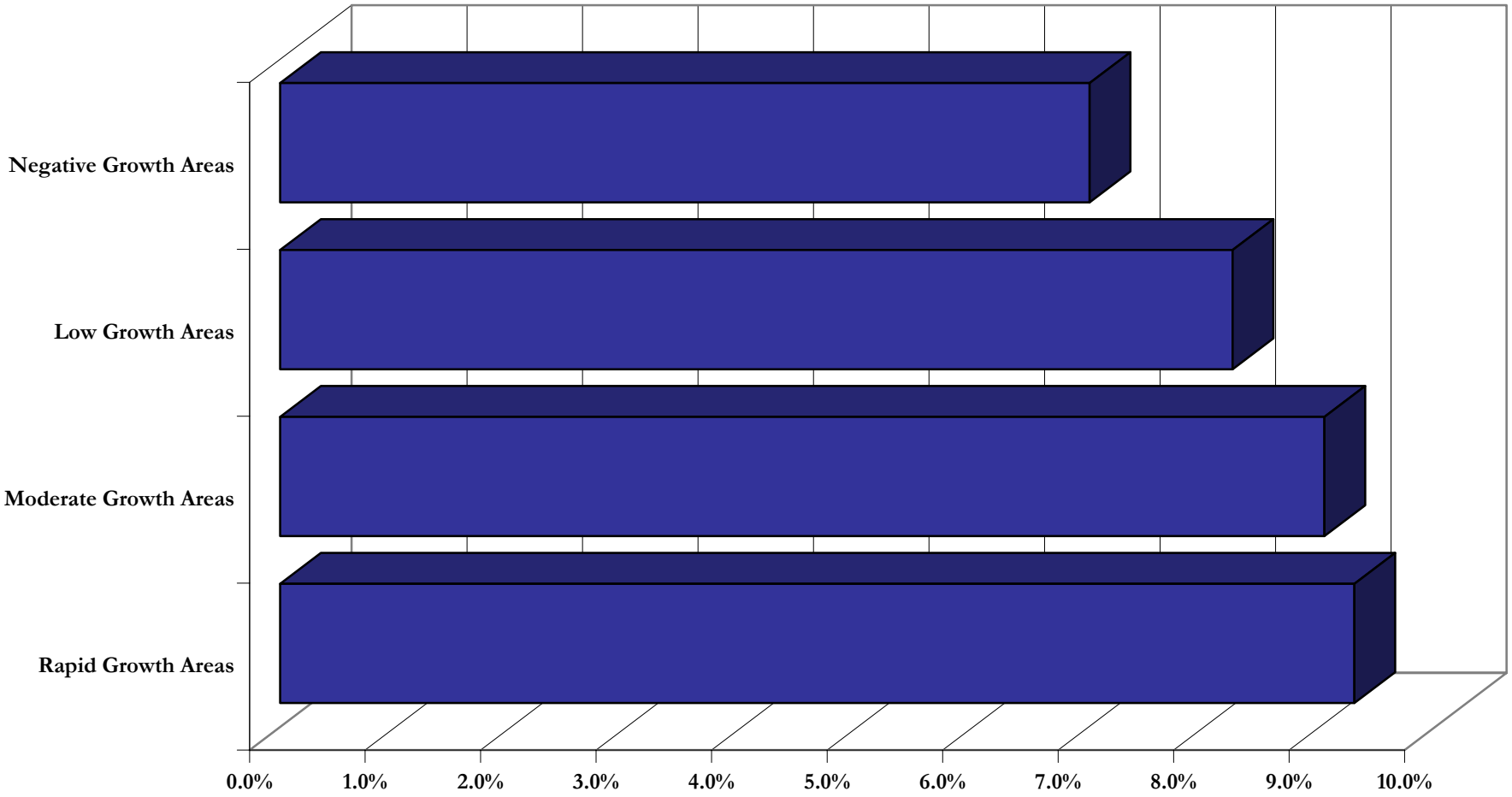
Appendix 3.1-AQ
Education Attainment Associate Degree (25+ yrs old)
By Population Growth Category, 1990 - 2000



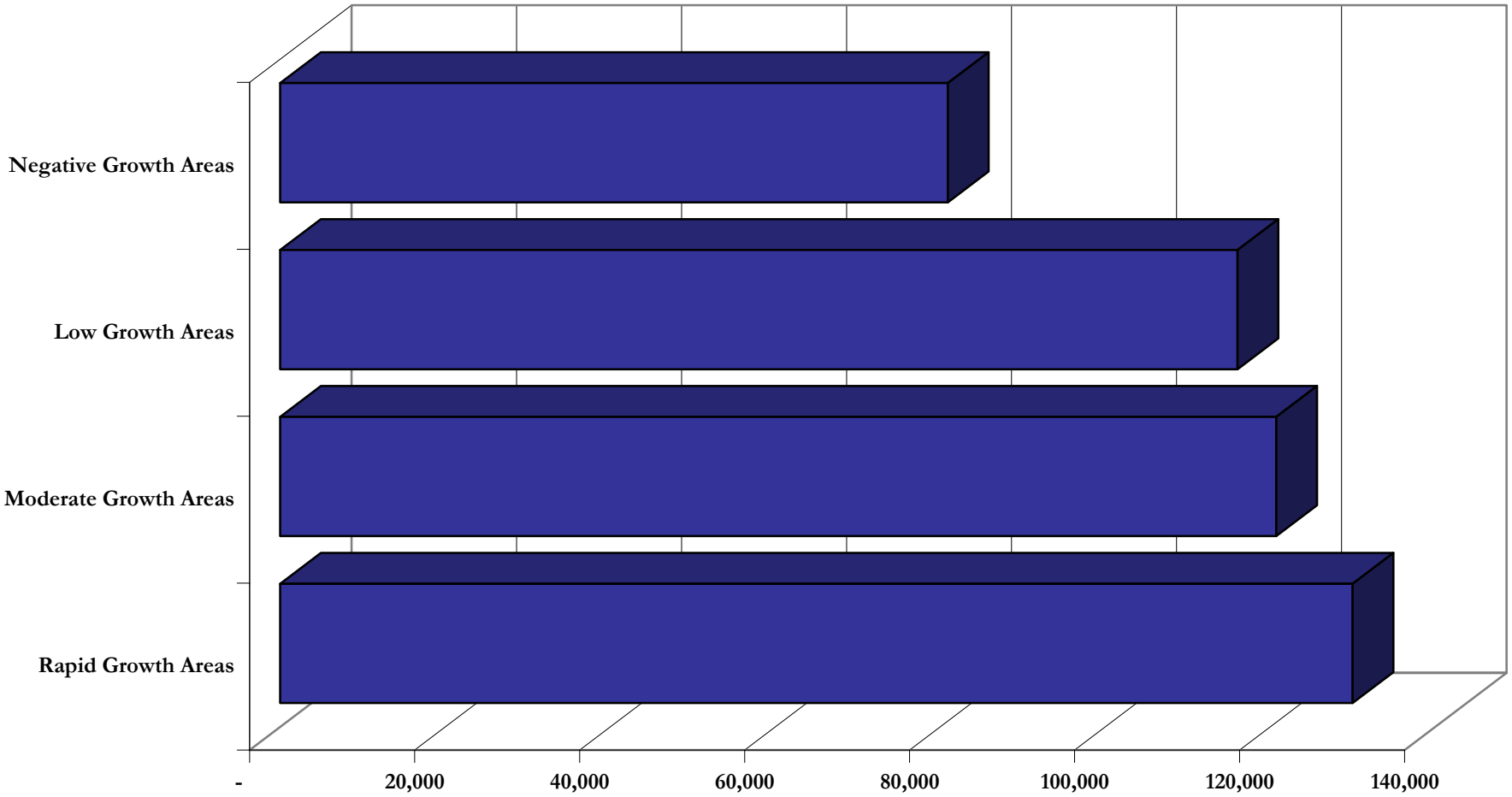
Appendix 3.1-AR
Education Attainment Bachelor's Degree (25+ yrs old)
By Population Growth Category, 1990 - 2000



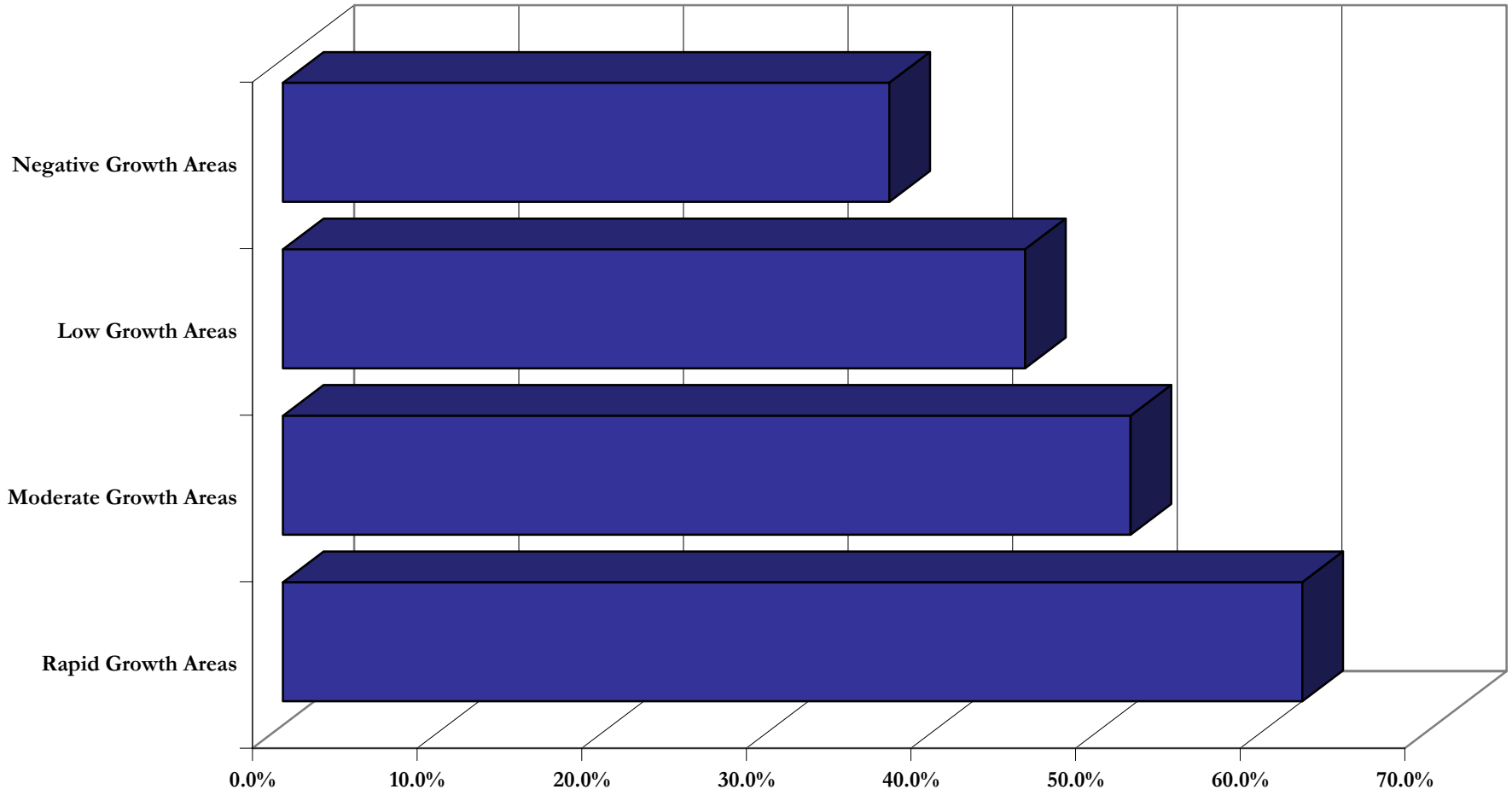
Appendix 3.1-AS
Education Attainment Graduate or Professional Degree (25+ yrs old)
By Population Growth Category, 1990 - 2000



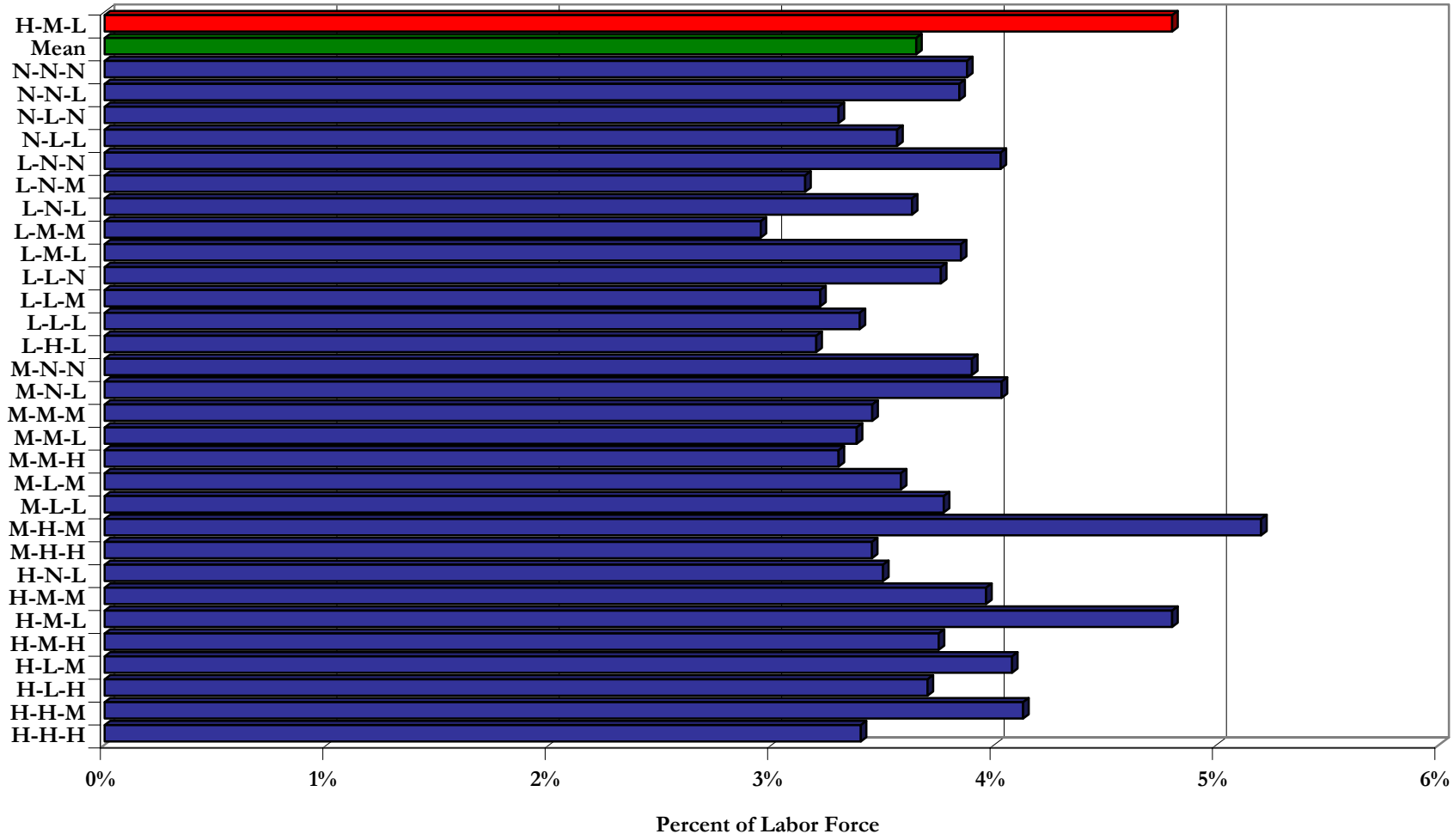
Appendix 3.1-AT
Average Median Housing Value
By Population Growth Category, 1990 - 2000



Appendix 3.1-AU
Percent Change in Average Median Housing Value 1990 - 2000
By Population Growth Category, 1990 - 2000



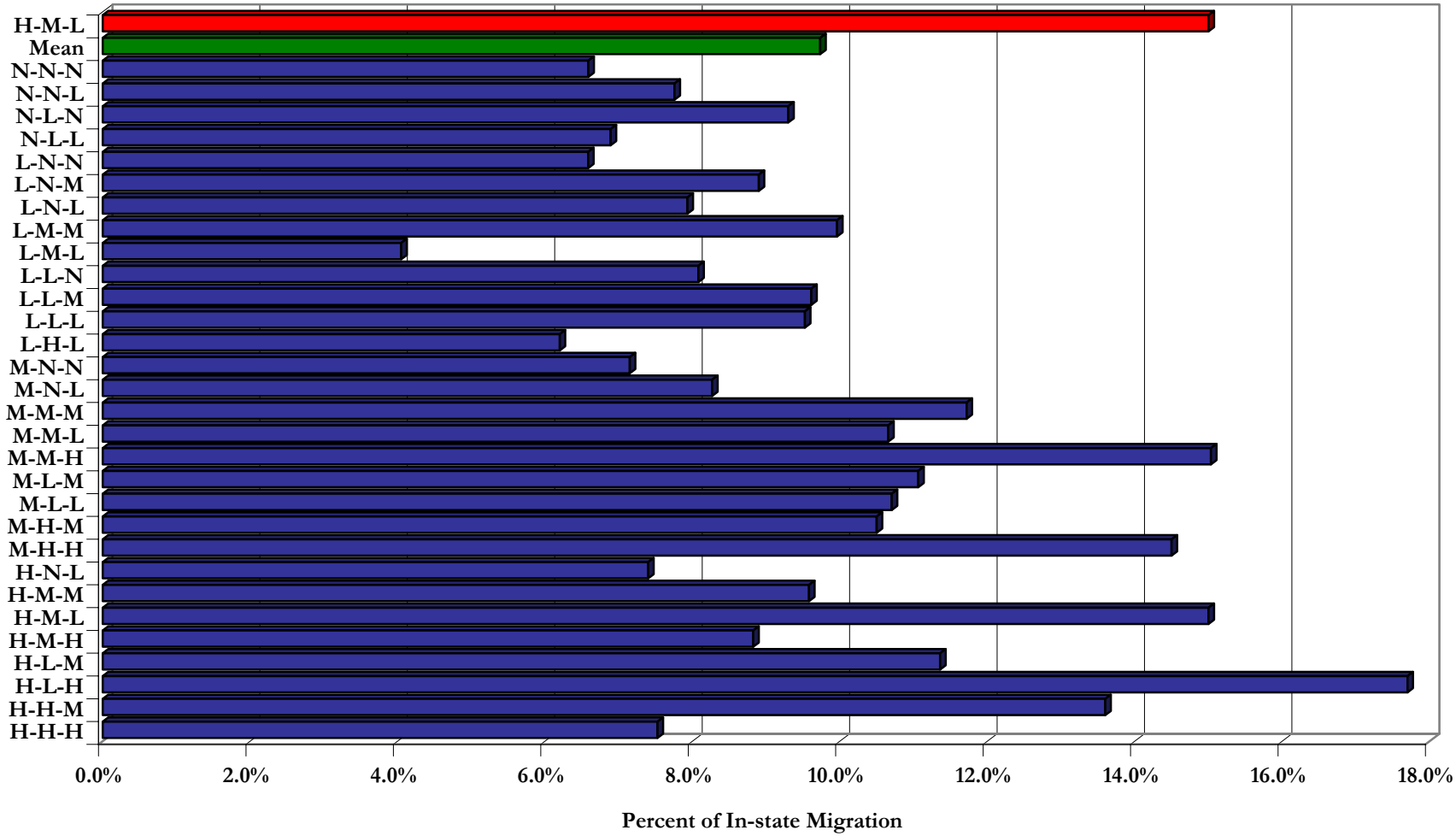
Appendix 3.2-A
Unemployment Rates
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

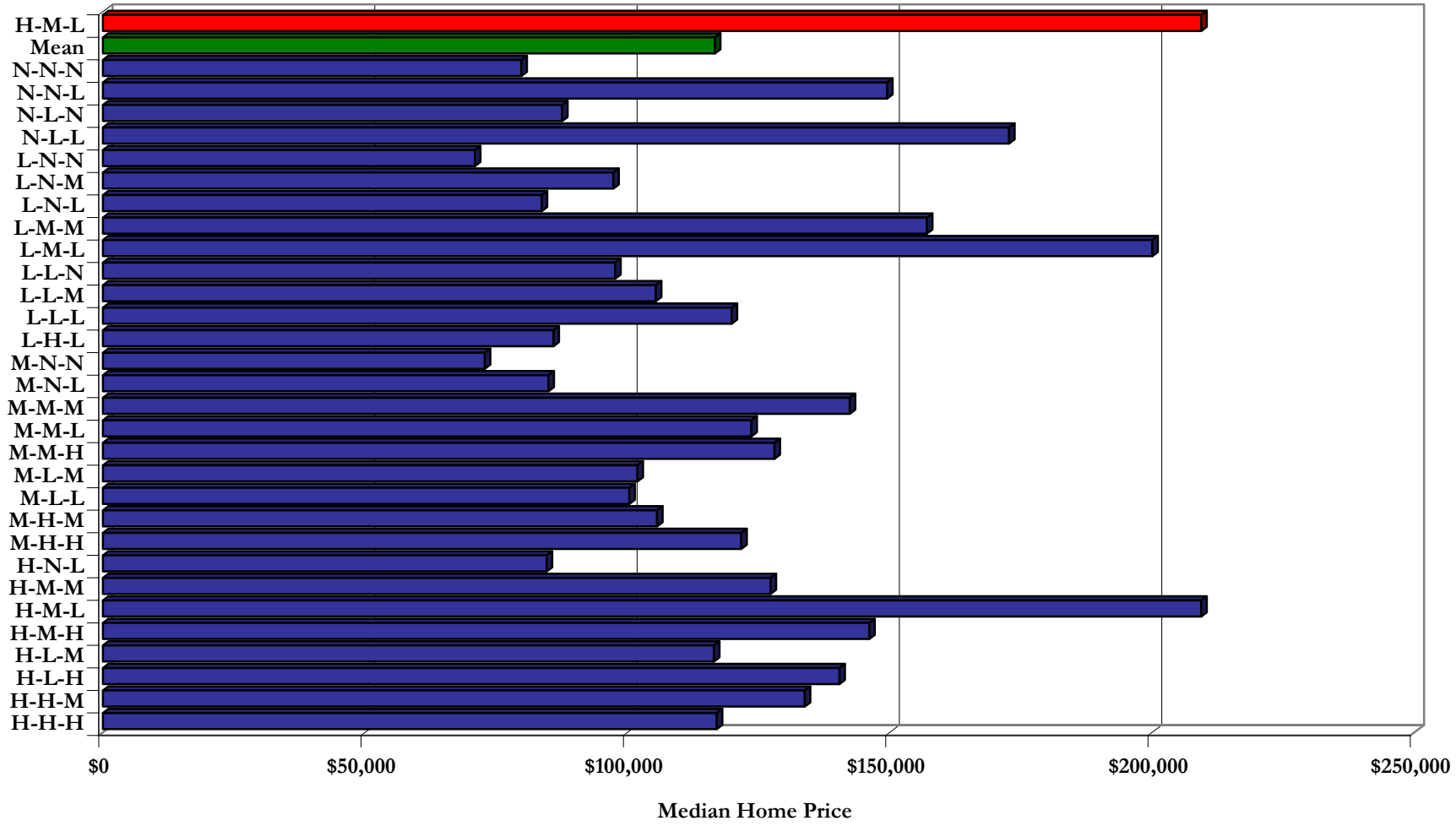
Appendix 3.2-B
Migration from In State
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

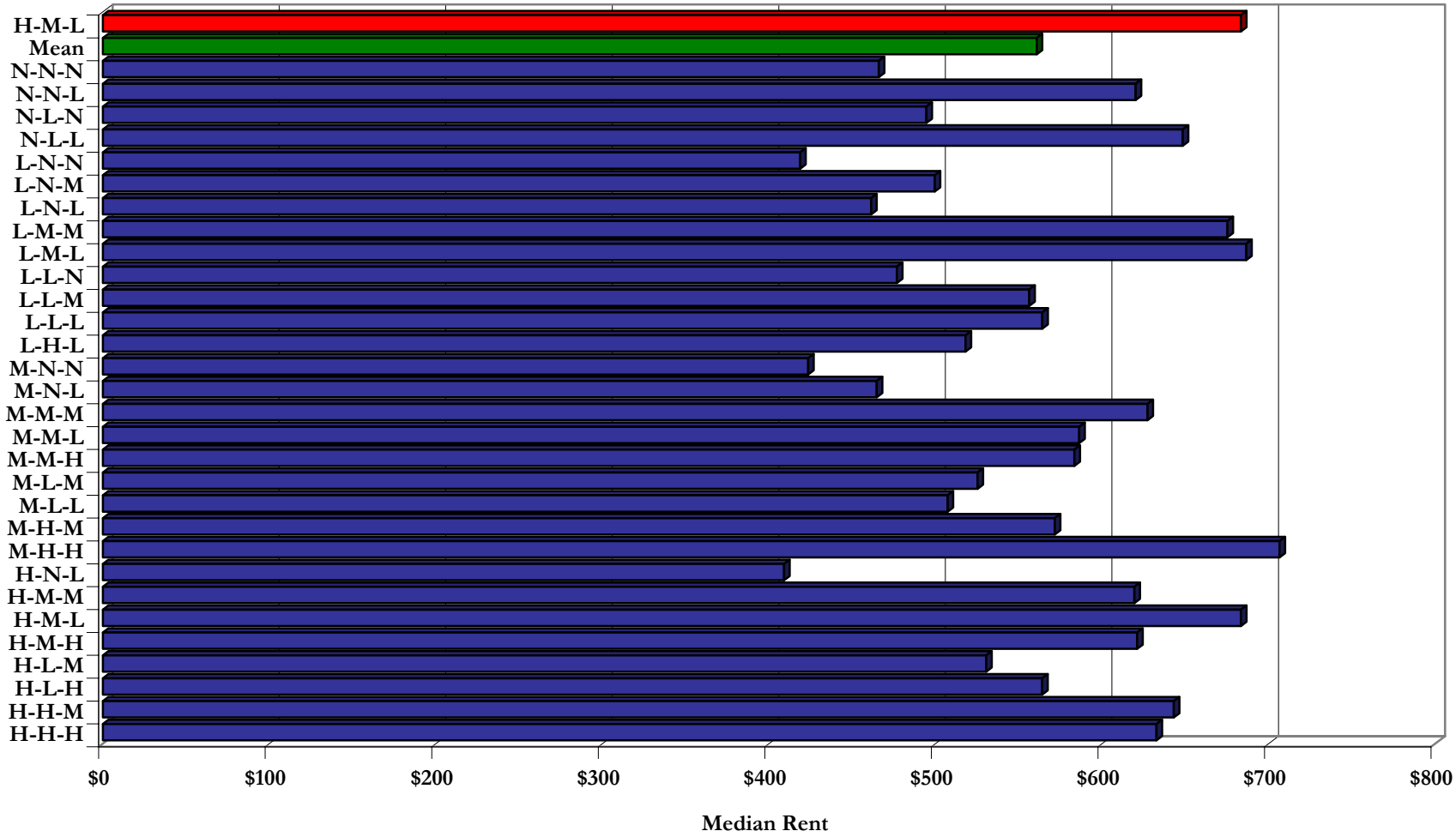
Appendix 3.2-C
Median Home Price
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

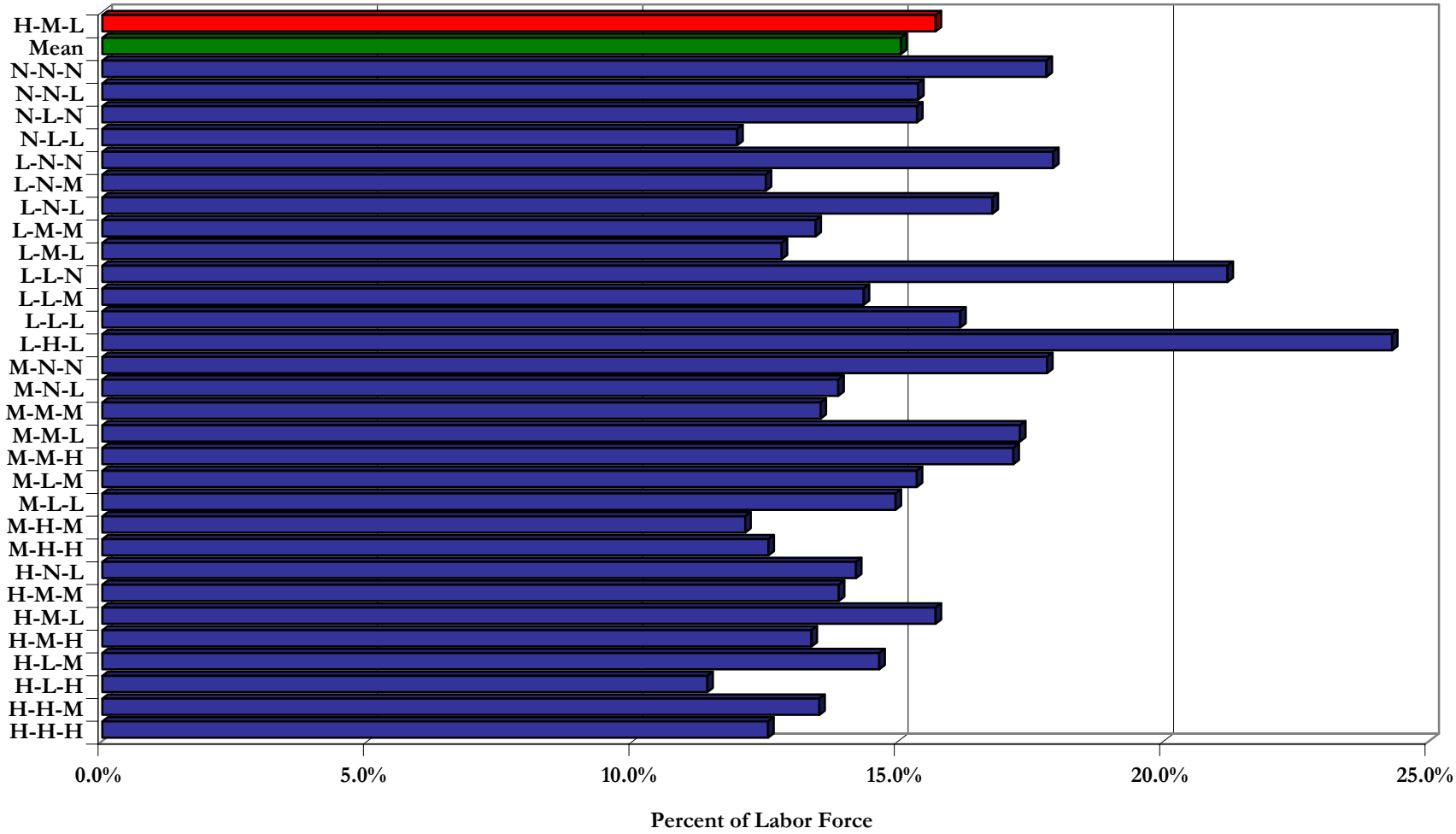
Appendix 3.2-D
Median Real Property Rent
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

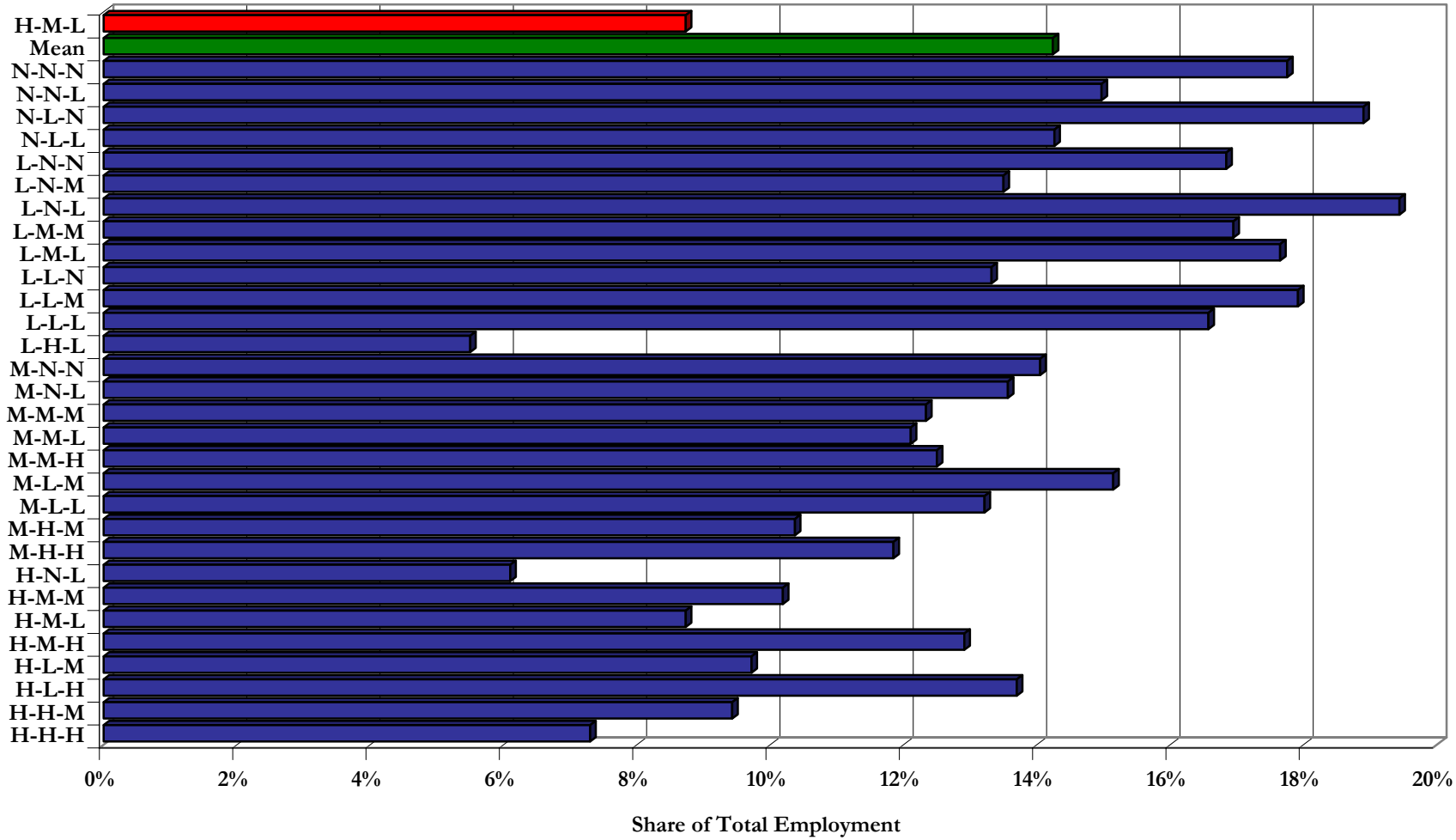
Appendix 3.2-E
Vacancy Rates
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

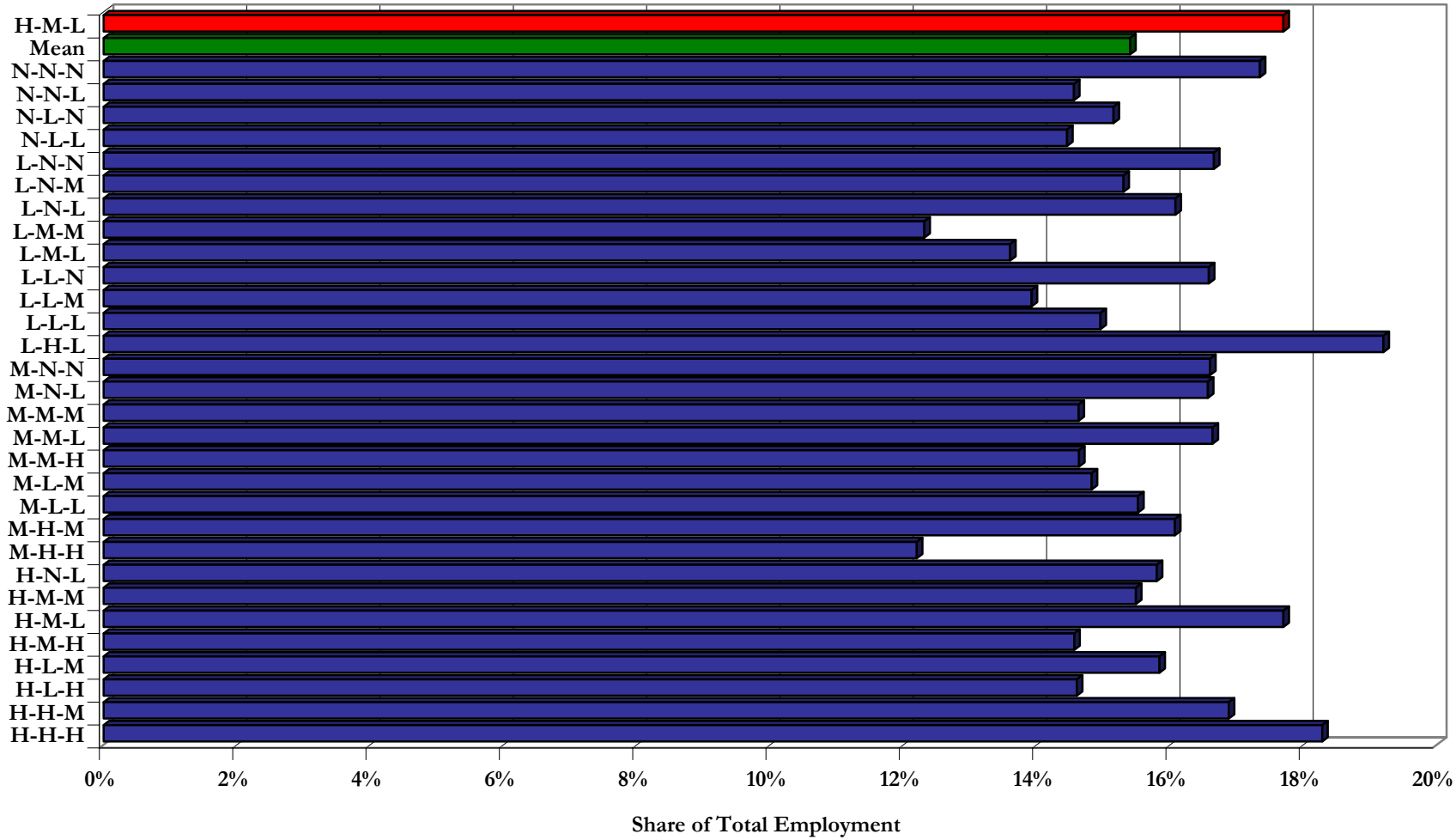
Appendix 3.2-F
Percent of Employment In Manufacturing Sector by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

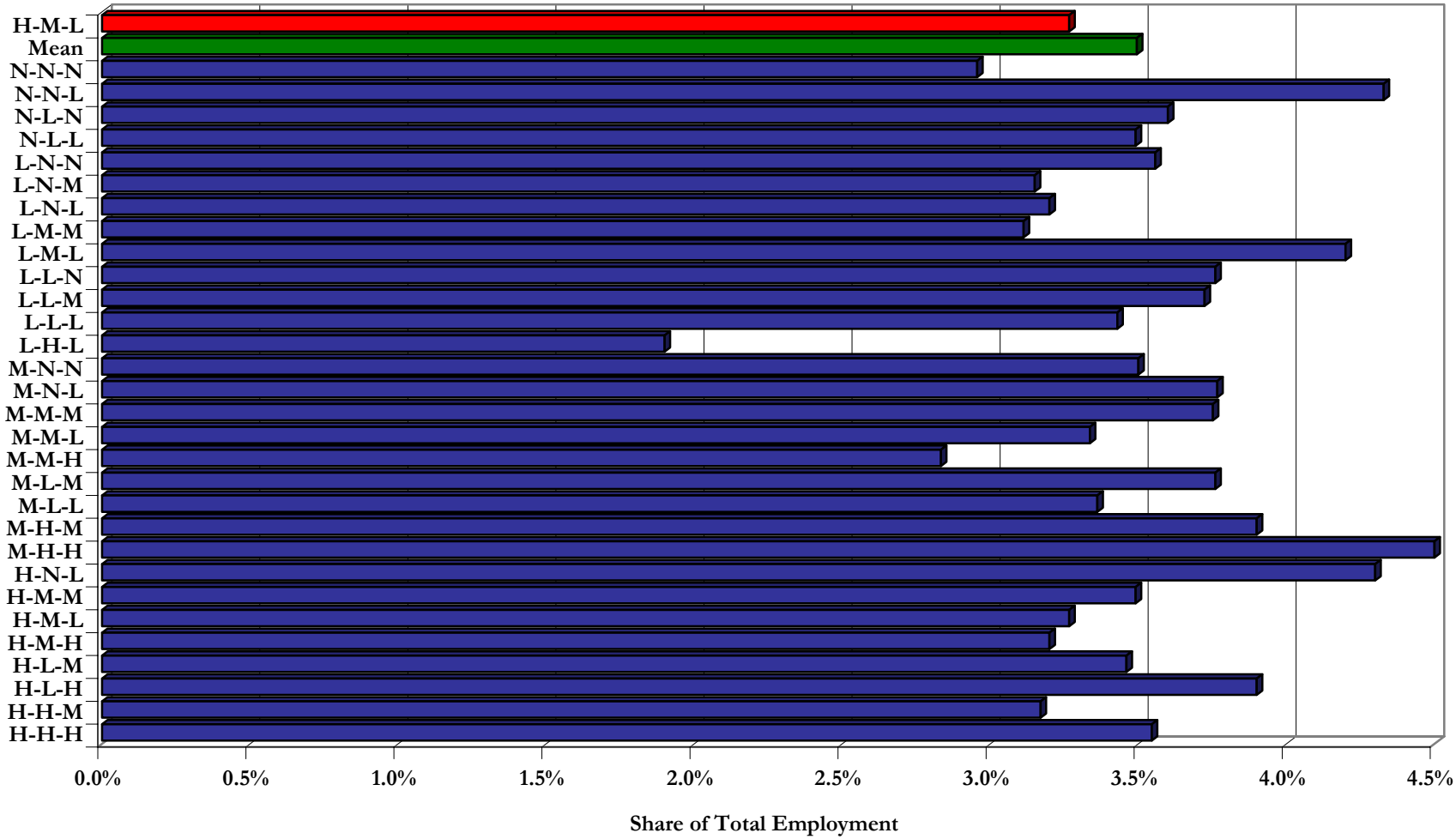
Appendix 3.2-G
Percent of Employment In Services Sector
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

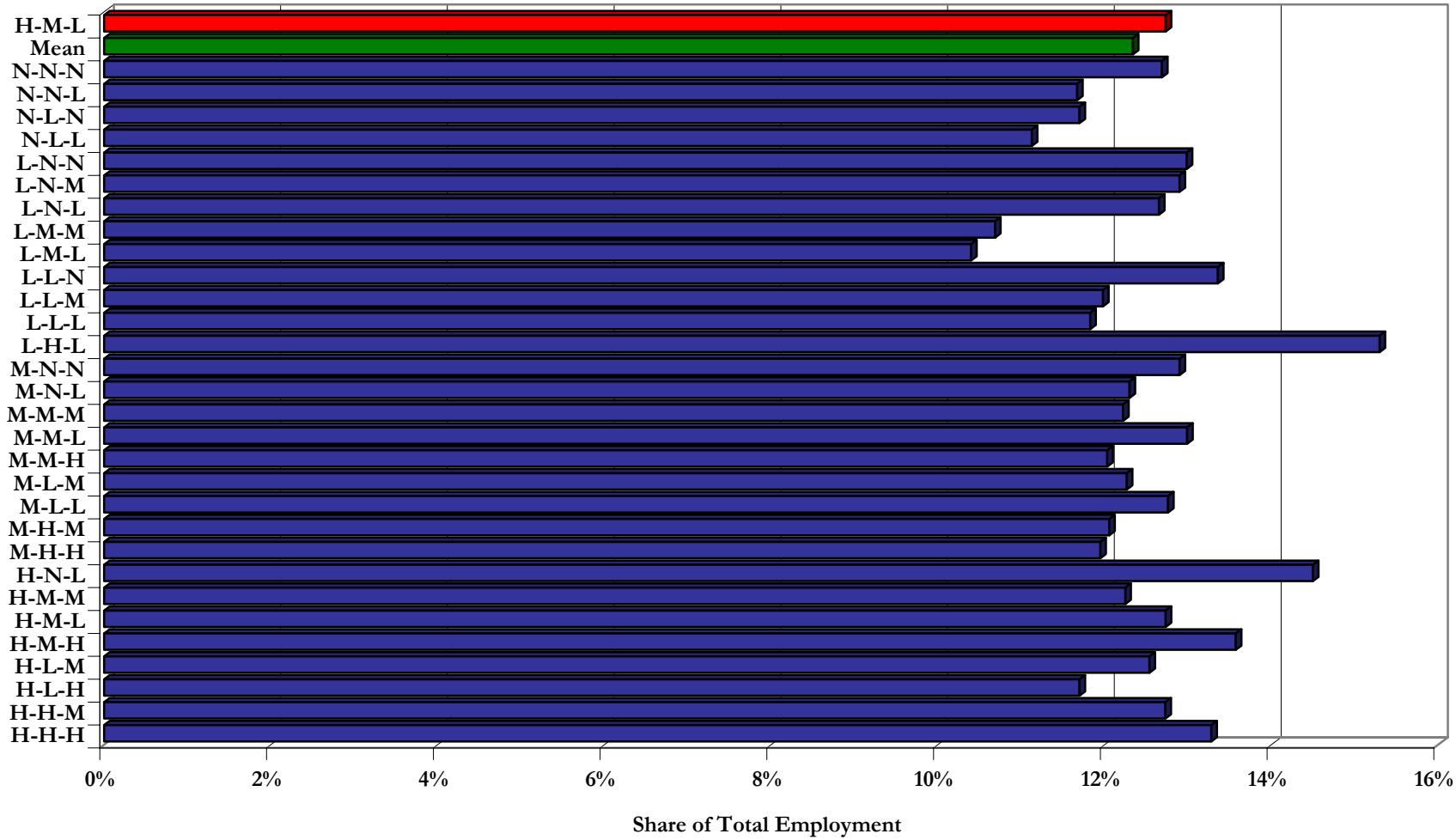
Appendix 3.2-H
Percent of Employment In Wholesale Trade Sector
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

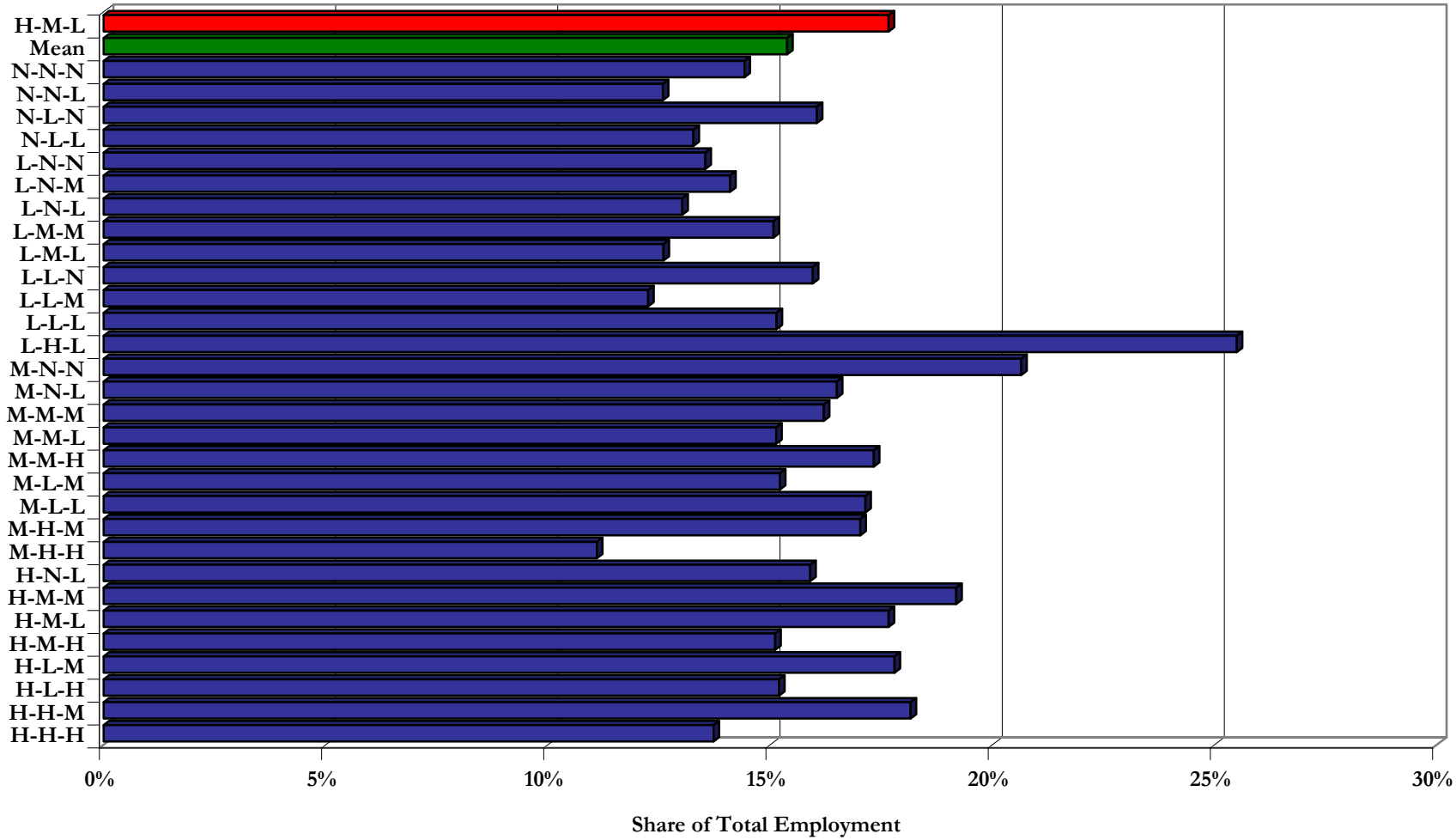
Appendix 3.2-I
Percent of Employment In Retail Trade Sector
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

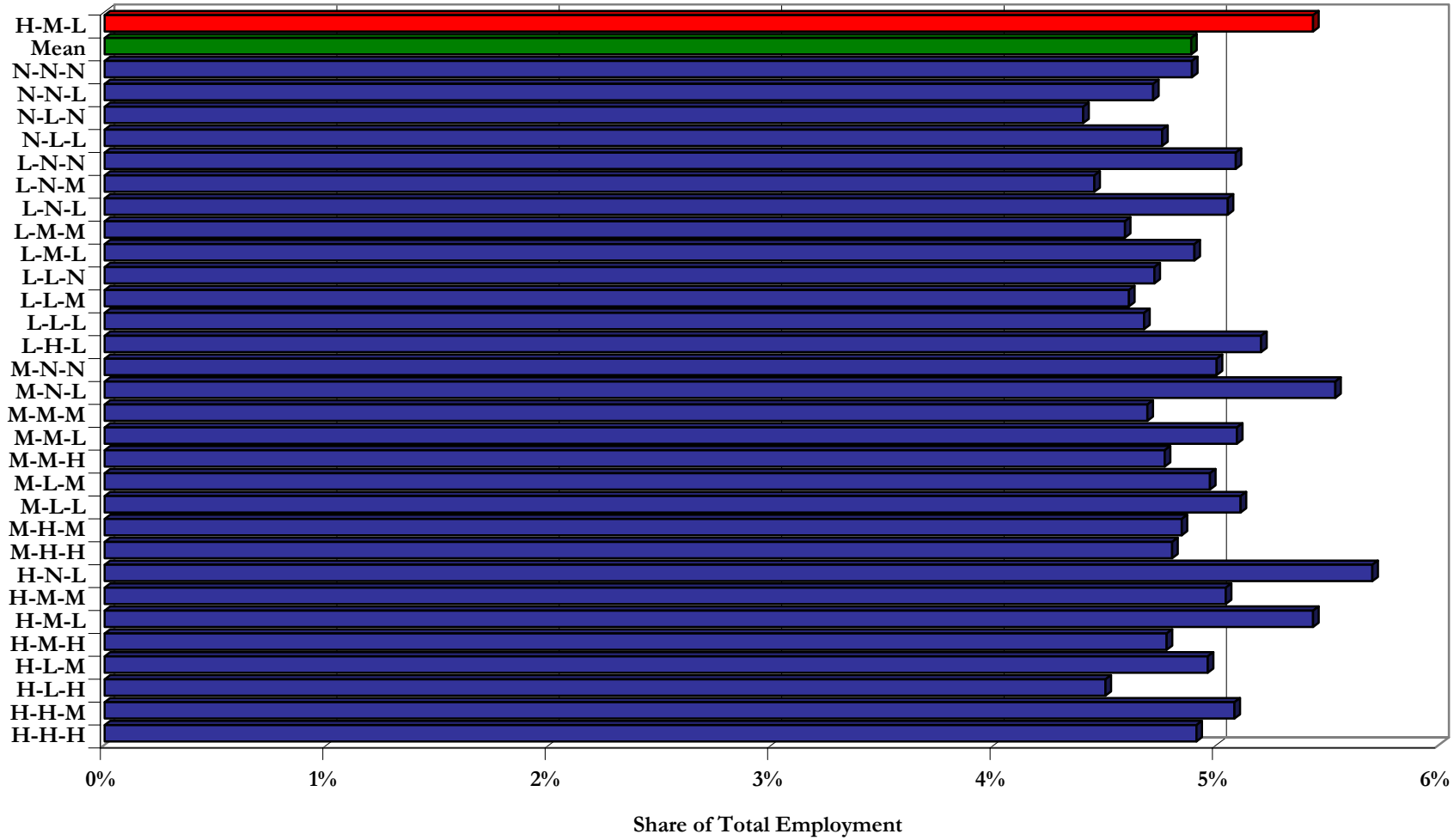
Appendix 3.2-J
Percent of Employment In Government (Public) Sector by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

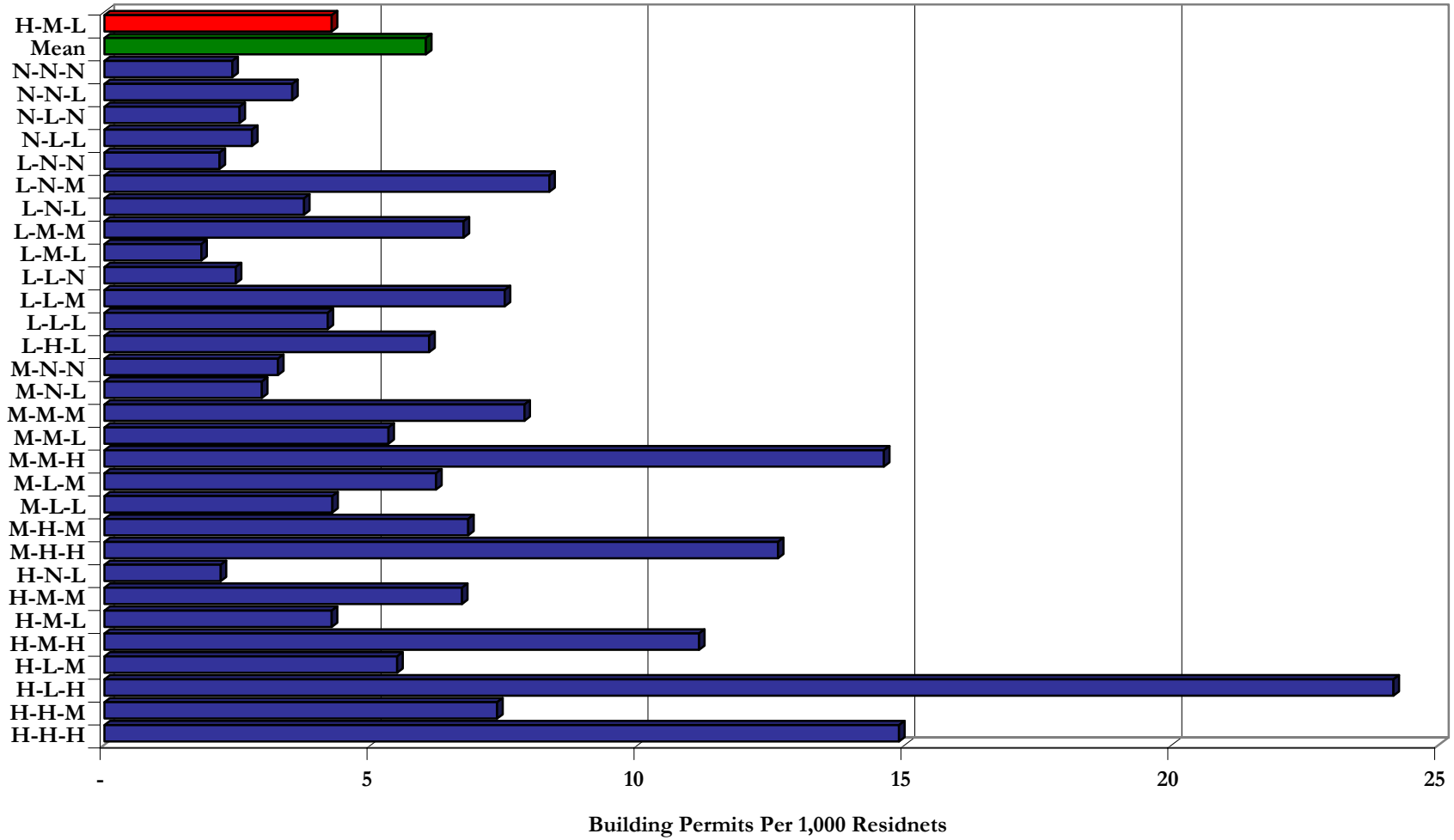
Appendix 3.2-K
Percent of Employment In Other Sectors
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

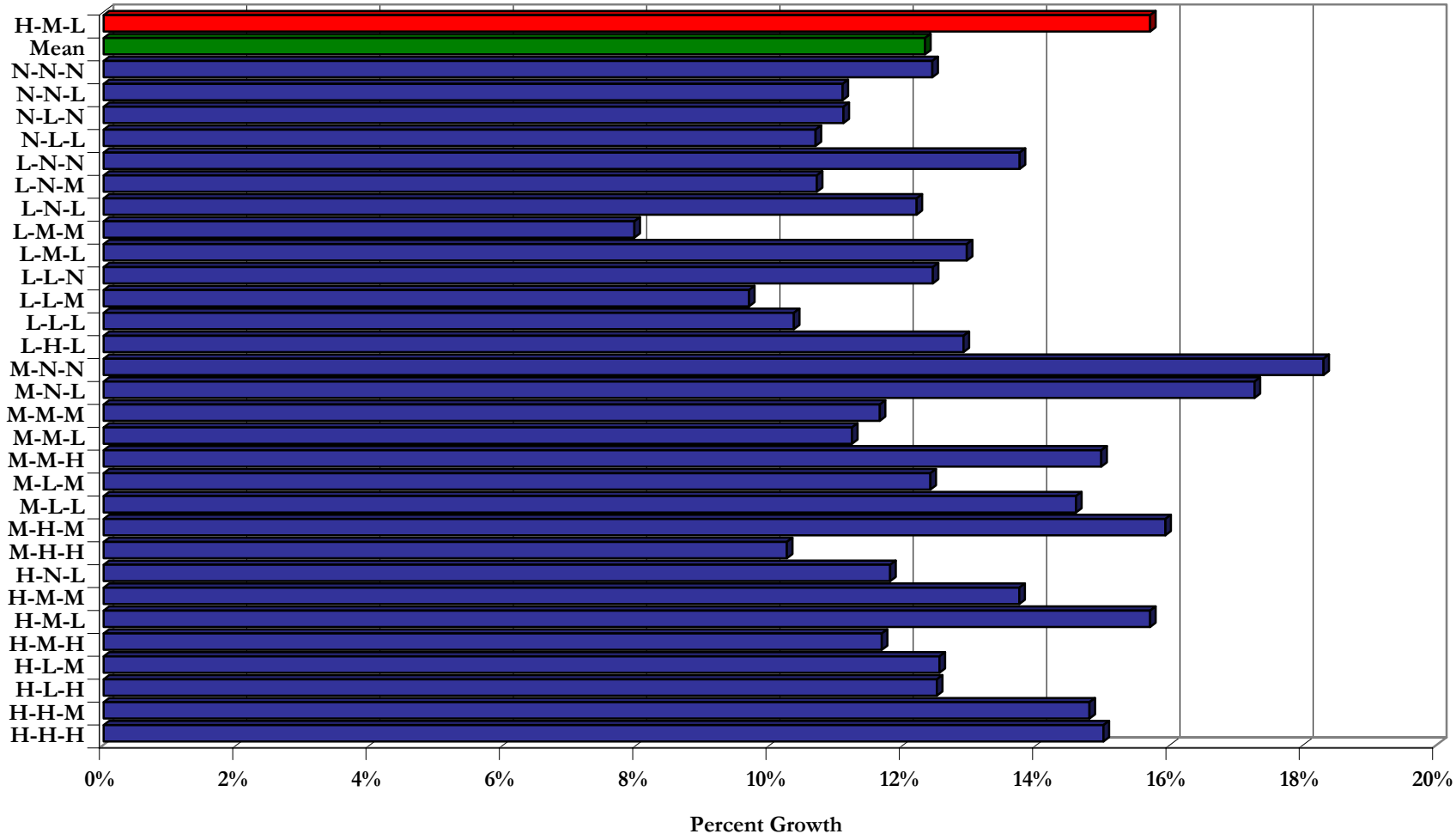
Appendix 3.2-L
Building Permits Per 1,000 Residents
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

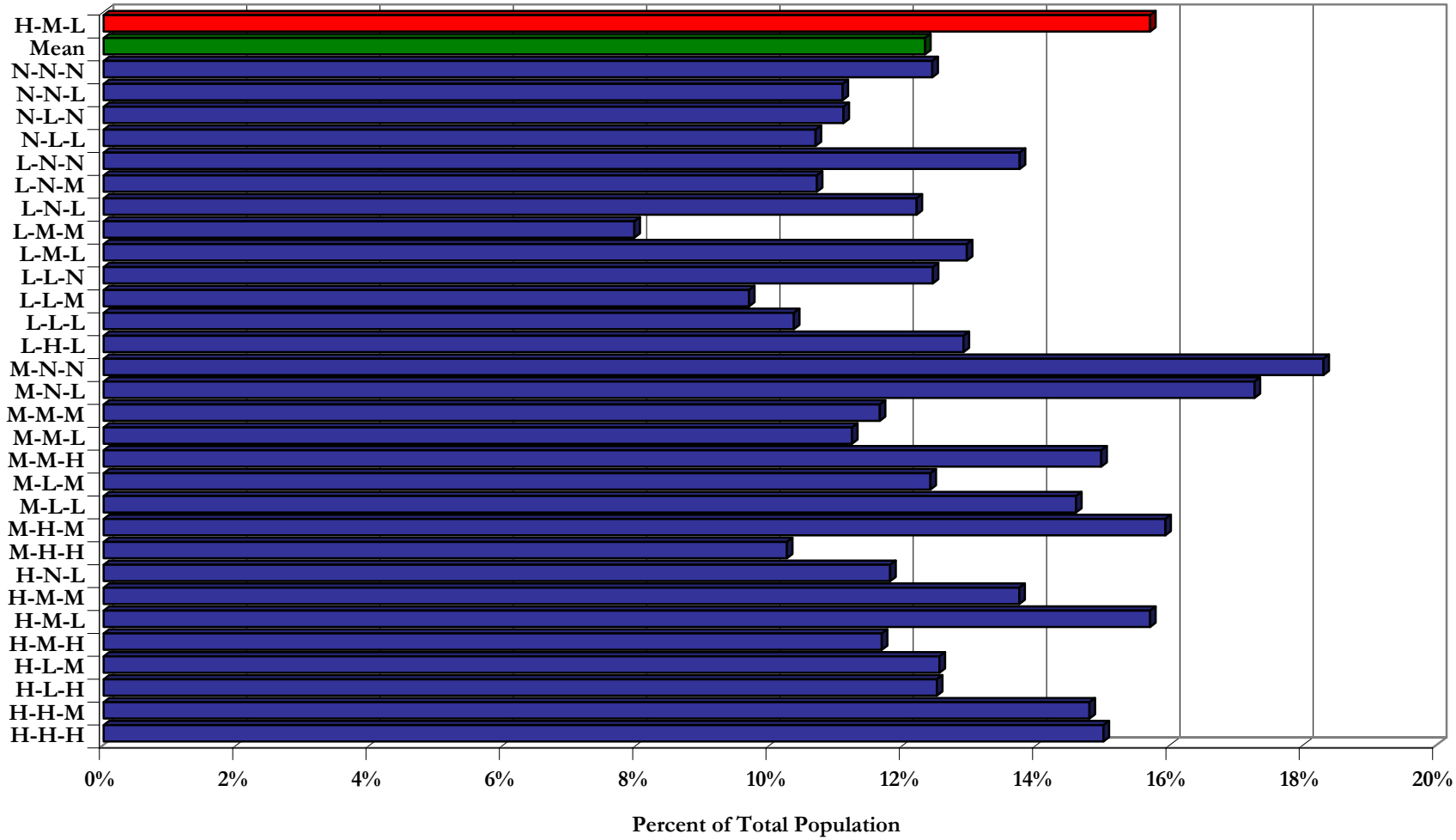
Appendix 3.2-M
Percent Change in Total Labor Force, 1990-2000
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

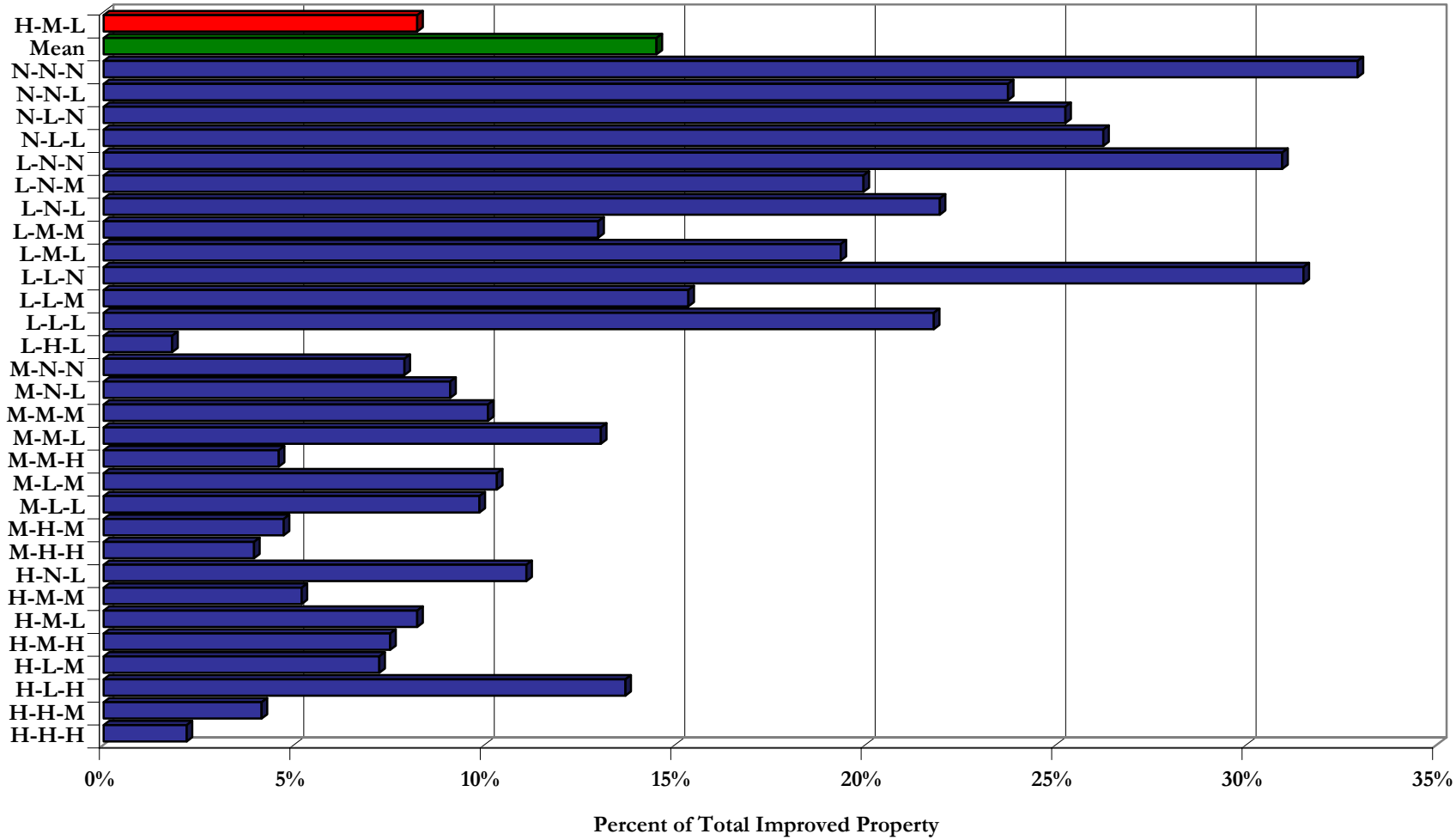
Appendix 3.2-N
Percent of Population Living in Poverty by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

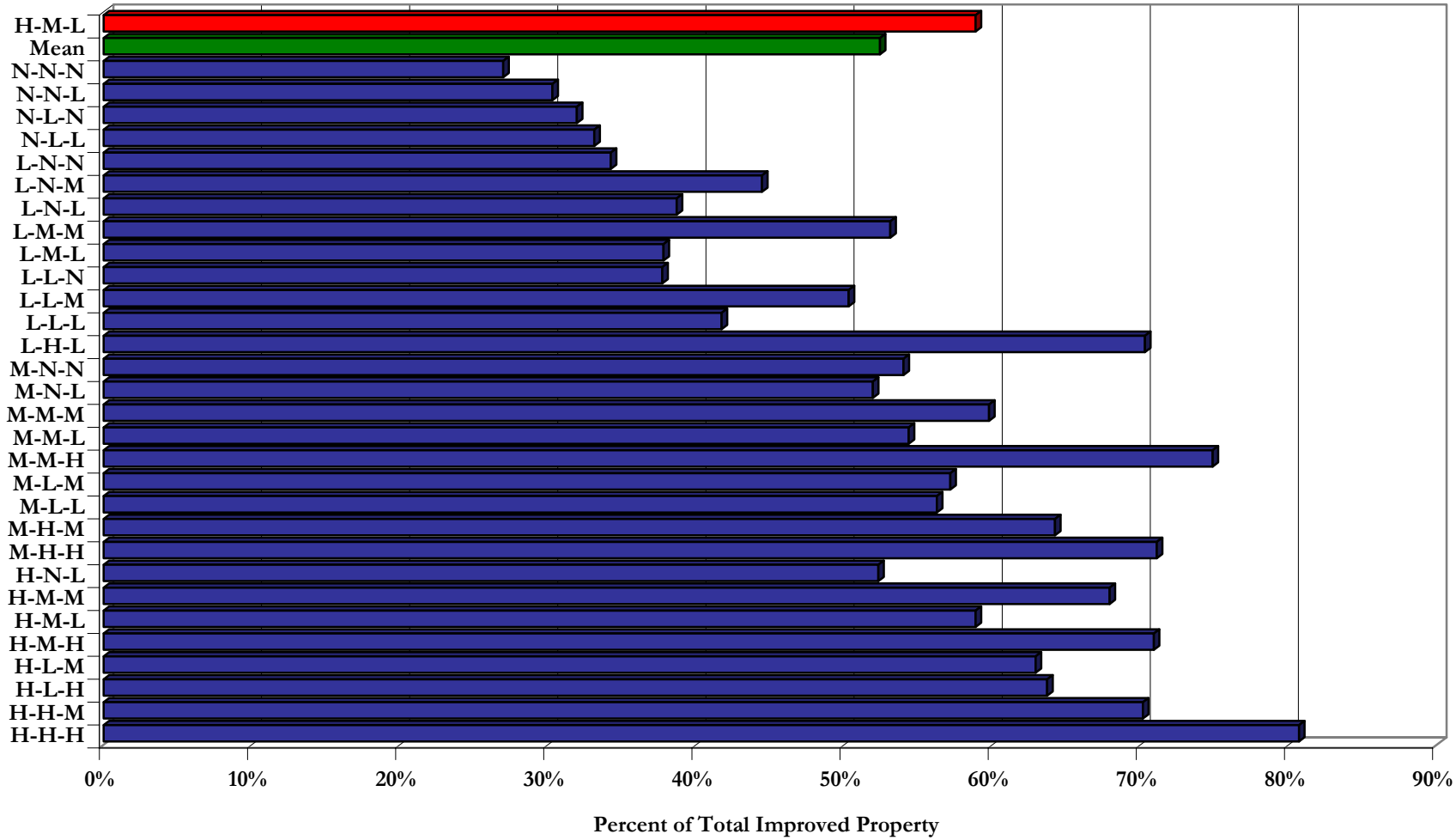
Appendix 3.2-O
Percent of Improved Property Build Before 1940
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

Appendix 3.2-P
Percent of Improved Property Build Before 1970
by Growth Trend, 1970 - 2000



Designations:
(H): High, (M): Moderate, (L): Low, (N): Negative

Ordering (1st-2nd-3rd):
1st: 1970-80, 2nd 1980-1990, 3rd 1990-2000

Appendix 4.1
General Fund Revenue
Year-To-Date Report
Fiscal Year 2002-03

G.L. NO.	DESCRIPTION	FY 02 1-Oct-02	Percent of Total Revenues
	TAXES		
	PROPERTY/MINE		
3064	Net Proceeds of Minerals (1.)	$9,364,000	0.53%
3241	Net Proceeds Penalty (1.)	43,728	0.00%
3245	Centrally Assessed Penalties	10,280	0.00%
	TOTAL PROPERTY/MINE TAX	9,418,008	0.54%
	SALES AND USE		
3001	Sales & Use Tax	642,726,771	36.69%
3002	1% Fee LSST (2.)	5,352,168	0.31%
3003	State Share - CCRT (2.)	1,189,477	0.07%
3004	State Share - Sup CCRT	4,162,827	0.24%
3005	State Share - PTT	1,637,237	0.09%
	TOTAL SALES AND USE	655,068,480	37.39%
	GAMING - STATE		
3032	Parimutuel Tax	2,912	0.00%
3181	Racing Fees	8,174	0.00%
3247	Racing Fines/Forfeitures	600	0.00%
3041	Percent Fees - Gross Revenue	554,639,216	31.66%
3042	Gaming Penalties	556,923	0.03%
3043	Flat Fees-Restricted Slots	6,719,870	0.38%
3044	Non-Restricted Slots	15,498,440	0.88%
3045	Quarterly Fees-Games	7,221,510	0.41%
3046	Advance License Fees	4,769,961	0.27%
3048	Slot Machine Route Operator	36,500	0.00%
3049	Gaming Info Systems Annual	12,000	0.00%
3033	Equipt Mfg License	167,000	0.01%
3034	Race Wire License	51,189	0.00%
3035	Annual Fees on Games	119,516	0.01%
	TOTAL GAMING - STATE	589,803,811	33.67%
3031	Casino Entertainment Tax	64,817,715	3.70%
	INSURANCE TAXES		
3061	Insurance Premium Tax	156,347,356	8.92%
3062	Insurance Retaliatory Tax	64,295	0.00%
3067	Captive Insurer Premium Tax	139,243	0.01%
	TOTAL INSURANCE TAXES	156,550,893	8.94%
3050	Liquor Tax	15,995,650	0.91%
3052	Cigarette Tax	41,843,892	2.39%
3053	Other Tobacco Tax	5,557,893	0.32%
3054	Jet Fuel Tax	0	0.00%
3058	Laetrile & Gerovital Mfg	0	0.00%
4862	HECC Transfer (3.)	5,000,000	0.29%
3113	Business License Fee	680,845	0.04%
3065	Business License Tax	78,394,651	4.47%
	TOTAL OTHER TAXES	147,472,932	8.42%
	TOTAL TAXES	**1,623,131,839**	**92.65%**
	LICENSES		
3101	Insurance Licenses	7,806,594	0.45%

Appendix 4.1
General Fund Revenue
Year-To-Date Report
Fiscal Year 2002-03

G.L. NO.	DESCRIPTION	FY 02 1-Oct-02	Percent of Total Revenues
3110	Banking Licenses	23,600	0.00%
3120	Marriage License	587,774	0.03%
	TOTAL	8,417,968	0.48%
	SECRETARY OF STATE		
3105	UCC	983,575	0.06%
3106	Las Vegas Commercial Filings	3,729,920	0.21%
3129	Notary Fees	460,623	0.03%
3130	Commercial Recordings	36,138,250	2.06%
3152	Securities	8,752,452	0.50%
	TOTAL SECRETARY OF STATE	50,064,820	2.86%
3172	Private School Licenses	181,009	0.01%
3173	Private Employment Agency	29,000	0.00%
	TOTAL	210,009	0.01%
	REAL ESTATE		
3143	Escrow Agent License	6,825	0.00%
3161	Real Estate License[d.]	1,680,049	0.10%
3162	Real Estate Fees	3,860	0.00%
	TOTAL REAL ESTATE	1,690,734	0.10%
	FINANCIAL INSTITUTIONS		
3100	Credit Union Fees	2,500	0.00%
3114	Check Cashing/Deferred Deposit Reg Fee	11,940	0.00%
3115	Trust Co License & Fees	7,500	0.00%
3116	Coll Agency Lic & Fees	19,960	0.00%
3135	Dev Corp License & Fees	500	0.00%
3163	Mortgage Co License & Fees	291,921	0.02%
3164	Debt Adjuster License	0	0.00%
3174	Small Loan Co License & Fees	147,313	0.01%
3175	Money Order Co Lic & Fee	7,800	0.00%
3177	Thrift Co License & Fee[s]	3,000	0.00%
3179	Financial Inst Fees	1,302,727	0.07%
	TOTAL FINANCIAL INSTITUTIONS	1,795,162	0.10%
3102	Athletic Commission Fees	1,706,730	0.10%
	TOTAL LICENSES	**63,885,422**	**3.65%**

Appendix 4.1
General Fund Revenue
Year-To-Date Report
Fiscal Year 2002-03

G.L. NO.	DESCRIPTION	FY 02 1-Oct-02	Percent of Total Revenues
	FEES AND FINES		
3200	Vital Statistics Fees	576,967	0.03%
3203	Divorce Fees	196,953	0.01%
3204	Civil Action Fees	1,250,147	0.07%
3242	Insurance Fines	719,183	0.04%
		2,743,251	0.16%
	REAL ESTATE FEES		
3165	Land Co Filing Fees	219,030	0.01%
3166	Land Co Reg Rep Filing Fees	31,570	0.00%
3167	Real Estate Adver Fees	13,220	0.00%
3169	Real Estate Reg Fees	30,685	0.00%
3171	CAM Certification Fee	6,189	0.00%
3178	Real Estate Accred Fees	25,270	0.00%
3248	Manufactured Housing	0	0.00%
3254	Real Estate Penalties	35,420	0.00%
3190	A.B. 165, Real Estate Inspectors	35,890	0.00%
	TOTAL REAL ESTATE FEES	397,274	0.02%
3066	Short Term Car Lease[c.]	19,662,998	1.12%
3103	Athletic Commission Licenses/Fines	122,908	0.01%
3180	Water Planning Fees**	0	0.00%
3205	State Engineer Sales	1,572,066	0.09%
3206	Supreme Court Fees	207,830	0.01%
3271	Misc Fines/Fort	172,541	0.01%
3722	Misc Fees (Sec of State)	0	0.00%
	TOTAL	21,738,343	1.24%
	TOTAL FEES AND FINES	**24,878,868**	**1.42%**
	CHARGES FOR SERVICES		
3251	Childrens Home - Carson	0	0.00%
3252	Childrens Home - Boulder	0	0.00%
3253	Youth Alternative Placement	0	0.00%
3260	Youth Training Center (Elko)	[1.]	
3270	Caliente Youth Center	[1.]	
3265	Child Support Enforcement	0	0.00%
3265	A.B. 401, Increase Child Support Disregard	0	0.00%
3207	Attorney General	0	0.00%
3201	Lahonton Special User	0	0.00%
	TOTAL CHARGES FOR SVCS	**0**	**0.00%**
	USE OF MONEY AND PROP		
4420	Lyon County Repayments		0.00%
	OTHER REPAYMENTS		0.00%
4401	Higher Education Tuitition Admin	25,000	0.00%
4404	B & G ~ SIIS Building, LV	50,000	0.00%
4404	B & G ~ Mtce Bldg, LV	26,318	0.00%
4404	B & G ~ Reno Warehouse	3,866	0.00%
4404	B & G ~ Reno Warehouse Addition	13,287	0.00%

Appendix 4.1
General Fund Revenue
Year-To-Date Report
Fiscal Year 2002-03

G.L. NO.	DESCRIPTION	FY 02 1-Oct-02	Percent of Total Revenues
4404	B & G ~ Reno Warehouse Renovation	3,950	0.00%
AB 619	CIP 95-C14, Mailroom Remodel	21,122	0.00%
4405	Prison Industry Repayment	5,000	0.00%
4407	Printing ~ Repayment	0	0.00%
4407	Printing ~ Plant	0	0.00%
4407	Printing ~ AB 787, 1993	0	0.00%
4407	Printing ~ 29" Color Press	0	0.00%
4407	Printing ~ Re-Roof	0	0.00%
4408	Comp/Fac Repayment	0	0.00%
4408	Comp/Fac - CIP 85-60	0	0.00%
4408	CIP 89-11 Computer Facility	0	0.00%
4408	CIP 95-M1, Security Alarm	0	0.00%
4408	CIP 95-M5, Facility Generator	0	0.00%
4408	CIP 95-S4F, Advance Planning	0	0.00%
4408	CIP 97-C26, Capitol Complex Conduit	0	0.00%
4408	CIP 97-S4H, Advance Planning Addition to Computer Facility	0	0.00%
4408	S.B. 201, 1997; PBX System	250,967	0.01%
4409	Motor Pool Repay - Carson	20,176	0.00%
4409	Motor Pool Repay - Reno	24,385	0.00%
4409	Motor Pool Repay - LV	6,638	0.00%
4409	Motor Pool Repay - Unknown	0	0.00%
4409	Motor Pool Repay-Underground Tank	0	0.00%
NEW	Equal Rights Repayment (SB 387)	0	0.00%
4410	Purchasing Repayment	0	0.00%
4410	Purchasing ~ Reno Warehouse	0	0.00%
4410	Purchasing ~ Reno Warehouse Addition	0	0.00%
4410	Purchasing ~ LV Warehouse	0	0.00%
4410	Purchasing ~ LV Warehouse Addition	0	0.00%
4410	Purchasing ~ Reno Warehouse Renovation	0	0.00%
4410	Purchasing ~ LV Warehouse, 91-C8	14,562	0.00%
	OTHER REPAYMENTS	465,271	0.03%
4729	Hazardous Materials Repayment	0	0.00%
4865	State Personnel IFS Repayment	466,667	0.03%
	TOTAL OTHER REPAYMENTS	931,938	0.05%
4406	Marlette Repayment	10,512	0.00%
4411	Colorado River Repayment	0	0.00%
4412	Forestry Repayment	0	0.00%
4421	Prison Dairy Repayment	0	0.00%
	INTEREST INCOME	10,512	0.00%
3290	Treasurer	12,489,649	0.71%
3291	Other	11,708	0.00%
4331	Bond Swap	0	0.00%
	TOTAL INTEREST INCOME	12,501,357	0.71%
	TOTAL USE OF MONEY & PROP	**13,443,807**	**0.77%**

Appendix 4.1
General Fund Revenue
Year-To-Date Report
Fiscal Year 2002-03

G.L. NO.	DESCRIPTION	FY 02 1-Oct-02	Percent of Total Revenues
	OTHER REVENUE		
3059	Hoover Dam Revenue	**300,000**	**0.02%**
	MISC SALES AND REFUNDS		
3107	Misc Fees	403,662	0.02%
3109	Court Admin Assessments		
3150	Telemarketing Fees	180,175	0.01%
3151	Deceptive Trade Settlement	4,400	0.00%
3168	Declar of Candidacy Filing Fee	56,256	0.00%
3202	Fees & Writs of Garnishments	2,025	0.00%
3209	Forensic Service Fees	0	0.00%
3220	Nevada Report Sales	28,185	0.00%
3221	G.F. Misc Sales and Refunds		0.00%
3222	Excess Property Sales	33,572	0.00%
3240	Sale of Trust Property	109,970	0.01%
3243	Insurance - Misc	453,027	0.03%
3244	Rental Income		0.00%
3250	Telemarketing Fines	16,915	0.00%
3272	Misc Refunds	55,438	0.00%
3273	Rebates		0.00%
3274	Misc Refunds	88,273	0.01%
3276	Cost Recovery Plan	5,006,463	0.29%
	TOTAL MISC SALES & REF	6,438,361	0.37%
3060	Petroleum Inspection Fees	550,736	0.03%
3255	Unclaimed Property[b.]	19,328,933	1.10%
	TOTAL	19,879,669	1.13%
	TOTAL OTHER REVENUE	**26,318,030**	**1.50%**
TOTAL GENERAL FUND REVENUE		**$1,751,957,966**	**100.00%**

[a.] **ECONOMIC FORUM MAY 1, 2003 ESTIMATE**

[b.] Total for FY 2002 includes amount generated from "one-time" acceleration; A.B. 77, 2001 (impact was estimated at $8,279,686).

Appendix 4.2
Clark County Local Government Units
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County SRFs and Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total	Percent of Total
Revenues										
Taxes:										
Ad Valorem Taxes	$165,876,053	$211,905,469		$95,015,759	24,373,474	$24,265,719	$47,069,035	$11,843,188	$580,348,697	26.5%
Room Tax		25,468,698		4,363,396	1,650,178				31,482,272	1.4%
Residential Construction Tax		9,132,730			6,696,548				15,829,278	0.7%
Total Taxes	165,876,053	246,506,897	0	99,379,155	32,720,200	24,265,719	47,069,035	11,843,188	627,660,247	28.7%
Licenses and Permits:										
New Development Fees		24,730,367	5,238,690						29,969,057	1.4%
Impact Fees		4,311,727							4,311,727	0.2%
Business Licenses	24,908,764			17,445,085					42,353,849	1.9%
Liquor Licenses	5,404,032	14,366,046		2,565,460					22,335,538	1.0%
County Gaming Licenses	30,844,554								30,844,554	1.4%
City Gaming Licenses				7,472,391					7,472,391	0.3%
Franchise Fees:										
Gas	3,780,788			7,964,896					11,745,684	0.5%
Electric	20,515,617			35,444,040					55,959,657	2.6%
Water				1,508,808					1,508,808	0.1%
Sewer				813,431					813,431	0.0%
Telephone				11,669,032					11,669,032	0.5%
Garbage				4,185,643					4,185,643	0.2%
Cable Television				4,636,097					4,636,097	0.2%
Ambulance				393,042					393,042	0.0%
Other	13,842,947			1,629,898					15,472,845	0.7%
Building Permits				5,223,838					5,223,838	0.2%
Off-site Permits				857,028					857,028	0.0%
Other Licenses and Permits	23,906,589	4,675,637							28,582,226	1.3%
Marriage Licenses	2,431,179								2,431,179	0.1%
Total Licenses and Permits	125,634,470	48,083,777	5,238,690	101,808,689	0	0	0	0	280,765,626	12.8%

Appendix 4.2
Clark County Local Government Units
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County SRFs and Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total	Percent of Total
Intergovernmental Revenue:										
Consolidated Tax	207,485,862	111,465,212		266,290,941		14,234,962			599,476,977	27.4%
Sales and Use Tax		113,105,811							113,105,811	5.2%
Governmental Services Tax (MVPT)		30,474,531							30,474,531	1.4%
Motor Vehicle Fuel Tax		31,611,494	56,764,989	3,690,258	2,265,679				94,332,420	4.3%
Aviation Fuel Tax		11,624,967							11,624,967	0.5%
Federal Grants	4,230,231	3,567,496	7,747,839	1,065,665	401,480	308,441		21,751	17,342,903	0.8%
Federal Payments in Lieu of Taxes	1,614,259								1,614,259	0.1%
State Grants	1,377,142	195,054	77,821	40,397					1,690,414	0.1%
State Gaming Licenses	158,864								158,864	0.0%
Reimbursements from other Local Govts.				1,181,261	1,426,783		54,592,730	5,934,278	63,135,052	2.9%
County Gaming License (city share)				5,955,279					5,955,279	0.3%
County Flood Control Distribution				196,859	1,258,145				1,455,004	0.1%
Interfund Administrative Charges				7,442,952					7,442,952	0.3%
Court Administrative Assessment	707,950								707,950	0.0%
Other	348,232		3,899,378	2,206,780	343,613	1,083,111			7,881,114	0.4%
Total Intergovernmental Revenue	215,922,540	302,044,565	68,490,027	288,070,392	5,695,700	15,626,514	54,592,730	5,956,029	956,398,497	43.7%
Charges for Services:										
General Government:										
Building and Zoning Fees	2,204,048								2,204,048	0.1%
Planning, zoning & Development Charges				598,492					598,492	0.0%
Special Inspectors Fees				296,011					296,011	0.0%
Assessment Districts				134,567					134,567	0.0%
Tuition										
Clerk's Fees	2,701,485								2,701,485	0.1%
Recorder's Fees	11,788,579								11,788,579	0.5%
Map Fees	193,343								193,343	0.0%
Assessor Commissions	7,853,897								7,853,897	0.4%
Business License Application Fees				180,559					180,559	0.0%
Room Tax Collection Commissions	4,945,927								4,945,927	0.2%
Administrative Fees	8,404,721								8,404,721	0.4%
Intracity Reimbursable Charges				3,615,130					3,615,130	0.2%
Other	4,540,633	122,571		841,732	837,731				6,342,667	0.3%
Judicial										
Clerk Fees	4,942,844			2,152,279					7,095,123	0.3%
Other	1,074,138			2,832,699					3,906,837	0.2%
Public Safety										
Fire Protection Services	5,669,032			44,358					5,713,390	0.3%
Other	1,763,180	16,813,514		24,011,642					42,588,336	1.9%
Public Works										

Appendix 4.2
Clark County Local Government Units
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County SRFs and Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total	Percent of Total
Engineering	5,449,848			2,279,273					7,729,121	0.4%
Other			30,169,122							
Health and Welfare										
Animal Control	103,541								103,541	0.0%
Economic Development and Assistance				83,948					83,948	0.0%
Transit Systems				550,664	223,410				774,074	0.0%
Culture and Recreation										
Other	302,334			8,770,524		369,071			9,441,929	0.4%
Total Charges for Services	61,937,550	16,936,085	30,169,122	46,391,878	1,061,141	369,071	0	0	156,864,847	7.2%
Fines and Forfeitures:										
Court Fines	4,478,626			18,054,328					22,532,954	1.0%
Court Forfeitures	6,691,381			181,134					6,872,515	0.3%
Other						898,602			898,602	0.0%
Total Fines and Forfeitures	11,170,007	0	0	18,235,462	0	898,602	0	0	30,304,071	1.4%
Interest	9,195,923	13,417,586	55,260,162	8,907,622	5,747,580	196,193	14,328,293	864,371	107,917,730	1.4%
Other	5,207,283	8,980,739	1,703,189	6,713,097	2,999,701	93,879	1,826,076	2,378,117	29,902,081	1.4%
Total Revenues	$594,943,826	$635,969,649	$160,861,190	$569,506,295	$48,224,322	$41,449,978	$117,816,134	$21,041,705	$2,189,813,099	100.0%
Other Financing Sources:										
Transfers from Other Funds	172,898,957									
Total Revenues and Other Financing Sources	$767,842,783	$635,969,649		$569,506,295	$48,224,322					

Appendix 4.3
Clark County Local Governments
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County Special Revenue, Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total
Revenues									
Taxes:									
Ad Valorem Taxes	28.6%	36.5%	0.0%	16.4%	4.2%	4.2%	8.1%	2.0%	100.0%
Room Tax	0.0%	80.9%	0.0%	13.9%	5.2%	0.0%	0.0%	0.0%	100.0%
Residential Construction Tax	0.0%	57.7%	0.0%	0.0%	42.3%	0.0%	0.0%	0.0%	100.0%
Total Taxes	26.4%	39.3%	0.0%	15.8%	5.2%	3.9%	7.5%	1.9%	100.0%
Licenses and Permits:									
New Development Fees	0.0%	82.5%	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Impact Fees	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Business Licenses	58.8%	0.0%	0.0%	41.2%	0.0%	0.0%	0.0%	0.0%	100.0%
Liquor Licenses	24.2%	64.3%	0.0%	11.5%	0.0%	0.0%	0.0%	0.0%	100.0%
County Gaming Licenses	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
City Gaming Licenses	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Franchise Fees:									
Gas	32.2%	0.0%	0.0%	67.8%	0.0%	0.0%	0.0%	0.0%	100.0%
Electric	36.7%	0.0%	0.0%	63.3%	0.0%	0.0%	0.0%	0.0%	100.0%
Water	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Sewer	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Telephone	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Garbage	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Cable Television	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Ambulance	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	89.5%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%	100.0%
Building Permits	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Off-site Permits	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Other Licenses and Permits	83.6%	16.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Marriage Licenses	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total Licenses and Permits	44.7%	17.1%	1.9%	36.3%	0.0%	0.0%	0.0%	0.0%	100.0%
Intergovernmental Revenue:									
Consolidated Tax	34.6%	18.6%	0.0%	44.4%	0.0%	2.4%	0.0%	0.0%	100.0%
Sales and Use Tax	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%

Appendix 4.3
Clark County Local Governments
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County Special Revenue, Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total
Governmental Services Tax (MVPT)	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Motor Vehicle Fuel Tax	0.0%	33.5%	60.2%	3.9%	2.4%	0.0%	0.0%	0.0%	100.0%
Aviation Fuel Tax	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Federal Grants	24.4%	20.6%	44.7%	6.1%	2.3%	1.8%	0.0%	0.1%	100.0%
Federal Payments in Lieu of Taxes	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
State Grants	81.5%	11.5%	4.6%	2.4%	0.0%	0.0%	0.0%	0.0%	100.0%
State Gaming Licenses	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Reimbursements from other Local Govts.	0.0%	0.0%	0.0%	1.9%	2.3%	0.0%	86.5%	9.4%	100.0%
County Gaming License (city share)	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
County Flood Control Distribution	0.0%	0.0%	0.0%	13.5%	86.5%	0.0%	0.0%	0.0%	100.0%
Interfund Administrative Charges	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Court Administrative Assessment	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	4.4%	0.0%	49.5%	28.0%	4.4%	13.7%	0.0%	0.0%	100.0%
Total Intergovernmental Revenue	22.6%	31.6%	7.2%	30.1%	0.6%	1.6%	5.7%	0.6%	100.0%
Charges for Services:									
General Government:									
Building and Zoning Fees	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Planning, zoning & Development Charges	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Special Inspectors Fees	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Assessment Districts	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Tuition									
Clerk's Fees	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Recorder's Fees	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Map Fees	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Assessor Commissions	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Business License Application Fees	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Room Tax Collection Commissions	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Administrative Fees	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Intracity Reimbursable Charges	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	71.6%	1.9%	0.0%	13.3%	13.2%	0.0%	0.0%	0.0%	100.0%

Appendix 4.3
Clark County Local Governments
Revenue Source Summary (partial)
FY 2001-02

	Clark County	County Special Revenue, Towns	County Capital	Cities	City Special Revs	Library Districts	Debt Service Funds	Redevelopment Districts	Total
Judicial									
Clerk Fees	69.7%	0.0%	0.0%	30.3%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	27.5%	0.0%	0.0%	72.5%	0.0%	0.0%	0.0%	0.0%	100.0%
Public Safety									
Fire Protection Services	99.2%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	4.1%	39.5%	0.0%	56.4%	0.0%	0.0%	0.0%	0.0%	100.0%
Public Works									
Engineering	70.5%	0.0%	0.0%	29.5%	0.0%	0.0%	0.0%	0.0%	100.0%
Health and Welfare									
Animal Control	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Economic Development and Assistance	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Transit Systems	0.0%	0.0%	0.0%	71.1%	28.9%	0.0%	0.0%	0.0%	100.0%
Culture and Recreation									
Other	3.2%	0.0%	0.0%	92.9%	0.0%	3.9%	0.0%	0.0%	100.0%
Total Charges for Services	39.5%	10.8%	19.2%	29.6%	0.7%	0.2%	0.0%	0.0%	100.0%
Fines and Forfeitures:									
Court Fines	19.9%	0.0%	0.0%	80.1%	0.0%	0.0%	0.0%	0.0%	100.0%
Court Forfeitures	97.4%	0.0%	0.0%	2.6%	0.0%	0.0%	0.0%	0.0%	100.0%
Other	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
Total Fines and Forfeitures	36.9%	0.0%	0.0%	60.2%	0.0%	3.0%	0.0%	0.0%	100.0%
Interest	8.5%	12.4%	51.2%	8.3%	5.3%	0.2%	13.3%	0.8%	100.0%
Other	17.4%	30.0%	5.7%	22.5%	10.0%	0.3%	6.1%	8.0%	100.0%
Total Revenues	27.2%	29.0%	7.3%	26.0%	2.2%	1.9%	5.4%	1.0%	100.0%
Other Financing Sources:									
Transfers from Other Funds		1034.2%							
Total Revenues and Other Financing Sources									

Appendix 4.4
Clark County School District

	General Fund	Special Education Fund	District Projects	Federal Projects	Bond Fund	Building and Sites Fund	Governmental Services Tax Fund	Extra. Maint. & Capital Replacement	Capital Projects Tax Fund	Debt Service Fund	Total	Percent of Total
Revenues												
Taxes												
Ad Valorem	$275,696,937									$204,109,119	$479,806,056	28.8%
Real Estate Transfer Tax					19,563,498						19,563,498	1.2%
Room Tax					42,108,241						42,108,241	2.5%
Intergovernmental												
Local School Support Tax	460,084,272										460,084,272	27.6%
Two Percent Franchise Tax	2,127,821										2,127,821	0.1%
Governmental Services Tax	38,165,758						17,865,613				56,031,371	3.4%
Other	1,019,364			3,474							1,022,838	0.1%
State Distributive Fund	334,435,276	40,632,758	7,429,444								382,497,478	22.9%
Other State Sources	5,031,189		102,565,159								107,596,348	6.5%
Federal Sources	591,255			67,940,127							68,531,382	4.1%
Charges for Services												
Tuition:												
Regular Day School	643,074		258,233								901,307	0.1%
Summer School	1,345,905										1,345,905	0.1%
Other			328,054									
Miscellaneous												
Interest	2,652,297		338,711		11,520,523	69,663	606,386	592,036	169,886	8,624,266	24,573,768	1.5%
Other	6,491,358	14,178	14,274,362		5,370	584,920					21,370,188	1.3%
												0.0%
Total Revenues	**$1,128,284,506**	**$40,646,936**	**$125,193,963**	**$67,943,601**	**$73,197,632**	**$654,583**	**$18,471,999**	**$592,036**	**$169,886**	**$212,733,385**	**$1,667,560,473**	**100.0%**

Appendix 4.4
Clark County School District

	General Fund	Special Education Fund	Bond Fund	Building and Sites Fund	Governmental Services Tax Fund	Extra. Maint. & Capital Replacement	Capital Projects Tax Fund	Debt Service Fund	Total
Revenues									
Taxes									
Ad Valorem	57.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	42.5%	100.0%
Real Estate Transfer Tax	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Room Tax	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Intergovernmental									
Local School Support Tax	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Two Percent Franchise Tax	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Governmental Services Tax	68.1%	0.0%	0.0%	0.0%	31.9%	0.0%	0.0%	0.0%	100.0%
Other	99.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	99.7%
State Distributive Fund	87.4%	10.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	98.1%
Other State Sources	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%
Federal Sources	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%
Charges for Services									
Tuition:									
Regular Day School	71.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	71.3%
Summer School	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Miscellaneous									
Interest	10.8%	0.0%	46.9%	0.3%	2.5%	2.4%	0.7%	35.1%	98.6%
Other	30.4%	0.1%	0.0%	2.7%	0.0%	0.0%	0.0%	0.0%	33.2%
Total Revenues	**67.7%**	**2.4%**	**4.4%**	**0.0%**	**1.1%**	**0.0%**	**0.0%**	**12.8%**	**88.4%**

Appendix 4.5
Enterprise Funds
Revenue Source Summary (partial)
Fiscal Year 2001-02

	Major Enterprise Funds	Minor Enterprise Funds	Total	% of Total
Operating Revenues				
Charges for Services:				
Electric Sales	$6,832,782		$6,832,782	0.4%
Water Sales/Fees	74,891,551	275,223,707	350,115,258	18.8%
Sewer Utility Fees	77,398,007	76,074,285	153,472,292	8.2%
Refuse/landfill	792,427		792,427	0.0%
Late Fees	1,008,496		1,008,496	0.1%
Regional Connection Fees	0		0	0.0%
Inspection Application Fees	0		0	0.0%
Wholesale Delivery Charges	86,276,227		86,276,227	4.6%
Groundwater Program Revenue	2,050,476		2,050,476	0.1%
Purveyor Administration Costs Billings	381,704		381,704	0.0%
Las Vegas Wash Revenues	753,000		753,000	0.0%
Building Fees and Permits	34,058,533		34,058,533	1.8%
Connection Fees	13,263,153		13,263,153	0.7%
Capacity Fees and other	41,474		41,474	0.0%
Developer Contributions	279,086		279,086	0.0%
Construction Fees	10,772,463		10,772,463	0.6%
New Development Fees	413,458		413,458	0.0%
Other	26,591,058		26,591,058	1.4%
Transit Fees	34,054,692		34,054,692	1.8%
Services to Patients		375,196,944	375,196,944	20.2%
Landing and Other Airport Fees		32,358,048	32,358,048	1.7%
Building and Land Rental		76,409,472	76,409,472	4.1%
Concession Fees		87,569,138	87,569,138	4.7%
Licenses and Permits	18,283,303		18,283,303	1.0%
Other	3,187,663	39,561,590	42,749,253	2.3%
Total Operating Revenues	391,329,553	962,393,184	1,353,722,737	72.7%
Nonoperating Revenues				
Interest Income	33,742,079	66,533,826	100,275,905	5.4%
Gain (loss) on sale of Assets	387,409		387,409	0.0%
Room Tax	832,611		832,611	0.0%
Consolidated Tax	46,928		46,928	0.0%
Ad Valorem Tax	14,248		14,248	0.0%
Contributions from other local governments	5,674,668		5,674,668	0.3%
Grants	263,398		263,398	0.0%
Sales and Use Tax	95,362,812	10,219,031	105,581,843	5.7%
Other	44,228,669	61,178,704	105,407,373	5.7%
Total Nonoperating Revenues	180,552,822	137,931,561	318,484,383	17.1%
Total Revenues	571,882,375	1,100,324,745	1,672,207,120	89.9%
Capital Contributions	188,680,471		188,680,471	10.1%
Total Revenues and Contributions	760,562,846	1,100,324,745	1,860,887,591	100.0%

Appendix 5.1-A
Conditional Impact Assessment Model
Population - 10% Initial Impact, Rapid Recovery

	Population					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,394,440		1,394,440			
2001	1,498,279	7.4%	1,498,279	7.4%	-	0.0%
2002	1,583,998	5.7%	1,583,998	5.7%	-	0.0%
2003	1,637,600	3.4%	1,637,600	3.4%	-	0.0%
2004	1,686,062	3.0%	1,686,062	3.0%	-	0.0%
2005	1,730,698	2.6%	1,730,698	2.6%	-	0.0%
2006	1,772,274	2.4%	1,772,274	2.4%	-	0.0%
2007	1,811,123	2.2%	1,811,123	2.2%	-	0.0%
2008	1,847,089	2.0%	1,847,089	2.0%	-	0.0%
2009	1,880,861	1.8%	1,880,861	1.8%	-	0.0%
2010	1,912,777	1.7%	1,912,777	1.7%	-	0.0%
2011	1,944,978	1.7%	1,944,978	1.7%	-	0.0%
2012	1,977,466	1.7%	1,977,466	1.7%	-	0.0%
2013	2,009,592	1.6%	2,009,592	1.6%	-	0.0%
2014	2,041,279	1.6%	2,041,279	1.6%	-	0.0%
2015	2,072,398	1.5%	2,072,398	1.5%	-	0.0%
2016	2,102,905	1.5%	2,102,905	1.5%	-	0.0%
2017	2,132,871	1.4%	2,132,871	1.4%	-	0.0%
2018	2,162,262	1.4%	2,162,262	1.4%	-	0.0%
2019	2,191,156	1.3%	2,191,156	1.3%	-	0.0%
2020	2,219,714	1.3%	2,219,714	1.3%	-	0.0%

Appendix 5.1-B
Conditional Impact Assessment Model
Employment - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	857,304		857,304			
2001	886,021	3.35%	886,021	3.35%	-	0.0%
2002	898,322	1.39%	898,322	1.39%	-	0.0%
2003	907,640	1.04%	907,640	1.04%	-	0.0%
2004	916,932	1.02%	913,607	0.66%	(3,325)	-0.4%
2005	925,797	0.97%	915,967	0.26%	(9,830)	-1.1%
2006	935,155	1.01%	922,228	0.68%	(12,927)	-1.4%
2007	944,502	1.00%	932,996	1.17%	(11,506)	-1.2%
2008	952,831	0.88%	942,702	1.04%	(10,129)	-1.1%
2009	957,819	0.52%	949,097	0.68%	(8,722)	-0.9%
2010	964,036	0.65%	956,685	0.80%	(7,351)	-0.8%
2011	976,457	1.29%	970,370	1.43%	(6,087)	-0.6%
2012	987,929	1.17%	983,091	1.31%	(4,838)	-0.5%
2013	999,100	1.13%	995,491	1.26%	(3,609)	-0.4%
2014	1,010,205	1.11%	1,007,809	1.24%	(2,396)	-0.2%
2015	1,021,164	1.08%	1,019,970	1.21%	(1,194)	-0.1%
2016	1,031,845	1.05%	1,031,845	1.16%	-	0.0%
2017	1,042,604	1.04%	1,042,604	1.04%	-	0.0%
2018	1,052,820	0.98%	1,052,820	0.98%	-	0.0%
2019	1,062,612	0.93%	1,062,612	0.93%	-	0.0%
2020	1,071,943	0.88%	1,071,943	0.88%	-	0.0%

Appendix 5.1-C
Conditional Impact Assessment Model
Employment (Agriculture) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	8,581		8,581			
2001	8,581	0.0%	8,581	0.0%	-	0.0%
2002	8,581	0.0%	8,581	0.0%	-	0.0%
2003	8,744	1.9%	8,744	1.9%	-	0.0%
2004	8,875	1.5%	8,851	1.2%	(24)	-0.3%
2005	8,991	1.3%	8,920	0.8%	(71)	-0.8%
2006	9,111	1.3%	9,017	1.1%	(94)	-1.0%
2007	9,229	1.3%	9,145	1.4%	(84)	-0.9%
2008	9,341	1.2%	9,267	1.3%	(74)	-0.8%
2009	9,445	1.1%	9,382	1.2%	(63)	-0.7%
2010	9,640	2.1%	9,587	2.2%	(53)	-0.6%
2011	9,880	2.5%	9,836	2.6%	(44)	-0.4%
2012	10,109	2.3%	10,074	2.4%	(35)	-0.3%
2013	10,335	2.2%	10,309	2.3%	(26)	-0.3%
2014	10,562	2.2%	10,545	2.3%	(17)	-0.2%
2015	10,787	2.1%	10,778	2.2%	(9)	-0.1%
2016	11,011	2.1%	11,011	2.2%	-	0.0%
2017	11,237	2.1%	11,237	2.1%	-	0.0%
2018	11,456	1.9%	11,456	1.9%	-	0.0%
2019	11,672	1.9%	11,672	1.9%	-	0.0%
2020	11,884	1.8%	11,884	1.8%	-	0.0%

Appendix 5.1-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	22,561		22,561			
2001	23,279	3.2%	23,279	3.2%	-	0.0%
2002	23,194	-0.4%	23,194	-0.4%	-	0.0%
2003	22,991	-0.9%	22,991	-0.9%	-	0.0%
2004	22,801	-0.8%	22,735	-1.1%	(66)	-0.3%
2005	22,549	-1.1%	22,354	-1.7%	(195)	-0.9%
2006	22,265	-1.3%	22,009	-1.5%	(256)	-1.1%
2007	21,961	-1.4%	21,733	-1.3%	(228)	-1.0%
2008	21,592	-1.7%	21,391	-1.6%	(201)	-0.9%
2009	21,439	-0.7%	21,266	-0.6%	(173)	-0.8%
2010	21,496	0.3%	21,350	0.4%	(146)	-0.7%
2011	21,650	0.7%	21,529	0.8%	(121)	-0.6%
2012	21,824	0.8%	21,728	0.9%	(96)	-0.4%
2013	22,020	0.9%	21,949	1.0%	(71)	-0.3%
2014	22,226	0.9%	22,179	1.0%	(47)	-0.2%
2015	22,445	1.0%	22,421	1.1%	(24)	-0.1%
2016	22,667	1.0%	22,667	1.1%	-	0.0%
2017	22,893	1.0%	22,893	1.0%	-	0.0%
2018	23,105	0.9%	23,105	0.9%	-	0.0%
2019	23,322	0.9%	23,322	0.9%	-	0.0%
2020	23,521	0.9%	23,521	0.9%	-	0.0%

Appendix 5.1-E
Conditional Impact Assessment Model
Employment (Mining) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,467		1,467			
2001	1,467	0.0%	1,467	0.0%	-	0.0%
2002	1,304	-11.1%	1,304	-11.1%	-	0.0%
2003	1,272	-2.5%	1,272	-2.5%	-	0.0%
2004	1,234	-3.0%	1,233	-3.1%	(1)	-0.1%
2005	1,196	-3.1%	1,192	-3.3%	(4)	-0.3%
2006	1,162	-2.8%	1,157	-2.9%	(5)	-0.4%
2007	1,127	-3.0%	1,123	-3.0%	(4)	-0.4%
2008	1,091	-3.2%	1,087	-3.2%	(4)	-0.3%
2009	1,090	-0.1%	1,087	0.0%	(3)	-0.3%
2010	1,069	-1.9%	1,066	-1.9%	(3)	-0.3%
2011	1,052	-1.6%	1,050	-1.5%	(2)	-0.2%
2012	1,040	-1.1%	1,038	-1.1%	(2)	-0.2%
2013	1,030	-1.0%	1,029	-0.9%	(1)	-0.1%
2014	1,022	-0.8%	1,021	-0.7%	(1)	-0.1%
2015	1,016	-0.6%	1,016	-0.5%	(0)	0.0%
2016	1,010	-0.6%	1,010	-0.5%	-	0.0%
2017	1,005	-0.5%	1,005	-0.5%	-	0.0%
2018	1,000	-0.5%	1,000	-0.5%	-	0.0%
2019	995	-0.5%	995	-0.5%	-	0.0%
2020	992	-0.3%	992	-0.3%	-	0.0%

Appendix 5.1-F
Conditional Impact Assessment Model
Employment (Construction) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,782		76,782			
2001	76,014	-1.0%	76,014	-1.0%	-	0.0%
2002	78,647	3.5%	78,647	3.5%	-	0.0%
2003	77,672	-1.2%	77,672	-1.2%	-	0.0%
2004	76,719	-1.2%	74,801	-3.7%	(1,918)	-2.5%
2005	75,593	-1.5%	69,924	-6.5%	(5,669)	-7.5%
2006	74,558	-1.4%	67,102	-4.0%	(7,456)	-10.0%
2007	73,736	-1.1%	67,100	0.0%	(6,636)	-9.0%
2008	73,024	-1.0%	67,182	0.1%	(5,842)	-8.0%
2009	71,864	-1.6%	66,834	-0.5%	(5,030)	-7.0%
2010	70,660	-1.7%	66,420	-0.6%	(4,240)	-6.0%
2011	70,211	-0.6%	66,700	0.4%	(3,511)	-5.0%
2012	69,761	-0.6%	66,971	0.4%	(2,790)	-4.0%
2013	69,390	-0.5%	67,308	0.5%	(2,082)	-3.0%
2014	69,096	-0.4%	67,714	0.6%	(1,382)	-2.0%
2015	68,856	-0.3%	68,167	0.7%	(689)	-1.0%
2016	68,654	-0.3%	68,654	0.7%	-	0.0%
2017	68,509	-0.2%	68,509	-0.2%	-	0.0%
2018	68,360	-0.2%	68,360	-0.2%	-	0.0%
2019	68,220	-0.2%	68,220	-0.2%	-	0.0%
2020	68,090	-0.2%	68,090	-0.2%	-	0.0%

Appendix 5.1-G
Conditional Impact Assessment Model
Employment (T.C.P.U.) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	44,647		44,647			
2001	48,528	8.7%	48,528	8.7%	-	0.0%
2002	50,471	4.0%	50,471	4.0%	-	0.0%
2003	50,975	1.0%	50,975	1.0%	-	0.0%
2004	51,539	1.1%	51,455	0.9%	(84)	-0.2%
2005	51,996	0.9%	51,747	0.6%	(249)	-0.5%
2006	52,429	0.8%	52,102	0.7%	(327)	-0.6%
2007	52,833	0.8%	52,542	0.8%	(291)	-0.6%
2008	53,175	0.6%	52,919	0.7%	(256)	-0.5%
2009	53,379	0.4%	53,158	0.5%	(221)	-0.4%
2010	53,599	0.4%	53,413	0.5%	(186)	-0.3%
2011	54,114	1.0%	53,960	1.0%	(154)	-0.3%
2012	54,581	0.9%	54,458	0.9%	(123)	-0.2%
2013	55,032	0.8%	54,941	0.9%	(91)	-0.2%
2014	55,462	0.8%	55,401	0.8%	(61)	-0.1%
2015	55,882	0.8%	55,852	0.8%	(30)	-0.1%
2016	56,275	0.7%	56,275	0.8%	-	0.0%
2017	56,658	0.7%	56,658	0.7%	-	0.0%
2018	57,008	0.6%	57,008	0.6%	-	0.0%
2019	57,319	0.5%	57,319	0.5%	-	0.0%
2020	57,591	0.5%	57,591	0.5%	-	0.0%

Notes:

[1] T.C.P.U. - Transporation, communications and public utilities.

Appendix 5.1-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,644		76,644			
2001	82,146	7.2%	82,146	7.2%	-	0.0%
2002	84,941	3.4%	84,941	3.4%	-	0.0%
2003	86,221	1.5%	86,221	1.5%	-	0.0%
2004	87,397	1.4%	87,303	1.3%	(94)	-0.1%
2005	88,405	1.2%	88,128	0.9%	(277)	-0.3%
2006	89,415	1.1%	89,051	1.0%	(364)	-0.4%
2007	90,343	1.0%	90,019	1.1%	(324)	-0.4%
2008	91,084	0.8%	90,799	0.9%	(285)	-0.3%
2009	90,468	-0.7%	90,223	-0.6%	(245)	-0.3%
2010	90,342	-0.1%	90,135	-0.1%	(207)	-0.2%
2011	90,695	0.4%	90,524	0.4%	(171)	-0.2%
2012	90,913	0.2%	90,777	0.3%	(136)	-0.1%
2013	91,058	0.2%	90,956	0.2%	(102)	-0.1%
2014	91,157	0.1%	91,090	0.1%	(67)	-0.1%
2015	91,217	0.1%	91,183	0.1%	(34)	0.0%
2016	91,227	0.0%	91,227	0.0%	-	0.0%
2017	91,217	0.0%	91,217	0.0%	-	0.0%
2018	91,143	-0.1%	91,143	-0.1%	-	0.0%
2019	90,997	-0.2%	90,997	-0.2%	-	0.0%
2020	90,819	-0.2%	90,819	-0.2%	-	0.0%

Notes:

[1] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.1-I
Conditional Impact Assessment Model
Employment (Retail) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	146,136		146,136			
2001	155,448	6.4%	155,448	6.4%	-	0.0%
2002	158,747	2.1%	158,747	2.1%	-	0.0%
2003	160,258	1.0%	160,258	1.0%	-	0.0%
2004	161,695	0.9%	161,223	0.6%	(472)	-0.3%
2005	162,954	0.8%	161,559	0.2%	(1,395)	-0.9%
2006	164,178	0.8%	162,344	0.5%	(1,834)	-1.1%
2007	165,468	0.8%	163,835	0.9%	(1,633)	-1.0%
2008	166,628	0.7%	165,191	0.8%	(1,437)	-0.9%
2009	166,768	0.1%	165,530	0.2%	(1,238)	-0.7%
2010	166,654	-0.1%	165,611	0.0%	(1,043)	-0.6%
2011	167,710	0.6%	166,846	0.7%	(864)	-0.5%
2012	168,454	0.4%	167,768	0.6%	(686)	-0.4%
2013	169,102	0.4%	168,590	0.5%	(512)	-0.3%
2014	169,706	0.4%	169,366	0.5%	(340)	-0.2%
2015	170,243	0.3%	170,074	0.4%	(169)	-0.1%
2016	170,707	0.3%	170,707	0.4%	-	0.0%
2017	171,182	0.3%	171,182	0.3%	-	0.0%
2018	171,529	0.2%	171,529	0.2%	-	0.0%
2019	171,773	0.1%	171,773	0.1%	-	0.0%
2020	171,932	0.1%	171,932	0.1%	-	0.0%

Appendix 5.1-J
Conditional Impact Assessment Model
Employment (Wholesale) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	25,064		25,064			
2001	25,064	0.0%	25,064	0.0%	-	0.0%
2002	25,279	0.9%	25,279	0.9%	-	0.0%
2003	25,028	-1.0%	25,028	-1.0%	-	0.0%
2004	24,932	-0.4%	24,802	-0.9%	(130)	-0.5%
2005	24,793	-0.6%	24,409	-1.6%	(384)	-1.5%
2006	24,612	-0.7%	24,107	-1.2%	(505)	-2.1%
2007	24,422	-0.8%	23,973	-0.6%	(449)	-1.8%
2008	24,191	-0.9%	23,796	-0.7%	(395)	-1.6%
2009	23,819	-1.5%	23,479	-1.3%	(340)	-1.4%
2010	23,726	-0.4%	23,439	-0.2%	(287)	-1.2%
2011	23,779	0.2%	23,541	0.4%	(238)	-1.0%
2012	23,802	0.1%	23,613	0.3%	(189)	-0.8%
2013	23,817	0.1%	23,676	0.3%	(141)	-0.6%
2014	23,822	0.0%	23,728	0.2%	(94)	-0.4%
2015	23,815	0.0%	23,768	0.2%	(47)	-0.2%
2016	23,794	-0.1%	23,794	0.1%	-	0.0%
2017	23,763	-0.1%	23,763	-0.1%	-	0.0%
2018	23,712	-0.2%	23,712	-0.2%	-	0.0%
2019	23,641	-0.3%	23,641	-0.3%	-	0.0%
2020	23,549	-0.4%	23,549	-0.4%	-	0.0%

Appendix 5.1-K
Conditional Impact Assessment Model
Employment (Services) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	382,767		382,767			
2001	390,161	1.9%	390,161	1.9%	-	0.0%
2002	391,825	0.4%	391,825	0.4%	-	0.0%
2003	397,220	1.4%	397,220	1.4%	-	0.0%
2004	402,664	1.4%	402,140	1.2%	(524)	-0.1%
2005	408,546	1.5%	406,997	1.2%	(1,549)	-0.4%
2006	415,020	1.6%	412,984	1.5%	(2,036)	-0.5%
2007	421,432	1.5%	419,619	1.6%	(1,813)	-0.4%
2008	427,324	1.4%	425,728	1.5%	(1,596)	-0.4%
2009	432,889	1.3%	431,515	1.4%	(1,374)	-0.3%
2010	439,032	1.4%	437,874	1.5%	(1,158)	-0.3%
2011	447,989	2.0%	447,030	2.1%	(959)	-0.2%
2012	456,686	1.9%	455,924	2.0%	(762)	-0.2%
2013	465,233	1.9%	464,664	1.9%	(569)	-0.1%
2014	473,784	1.8%	473,407	1.9%	(377)	-0.1%
2015	482,348	1.8%	482,160	1.8%	(188)	0.0%
2016	490,808	1.8%	490,808	1.8%	-	0.0%
2017	499,386	1.7%	499,386	1.7%	-	0.0%
2018	507,750	1.7%	507,750	1.7%	-	0.0%
2019	515,934	1.6%	515,934	1.6%	-	0.0%
2020	523,908	1.5%	523,908	1.5%	-	0.0%

Appendix 5.1-L
Conditional Impact Assessment Model
Employment (Government) - 10% Initial Impact, Rapid Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	72,655		72,655			
2001	75,333	3.7%	75,333	3.7%	-	0.0%
2002	75,333	0.0%	75,333	0.0%	-	0.0%
2003	77,259	2.6%	77,259	2.6%	-	0.0%
2004	79,076	2.4%	79,063	2.3%	(13)	0.0%
2005	80,774	2.1%	80,736	2.1%	(38)	0.0%
2006	82,405	2.0%	82,355	2.0%	(50)	-0.1%
2007	83,951	1.9%	83,906	1.9%	(45)	-0.1%
2008	85,381	1.7%	85,342	1.7%	(39)	0.0%
2009	86,658	1.5%	86,624	1.5%	(34)	0.0%
2010	87,818	1.3%	87,789	1.3%	(29)	0.0%
2011	89,377	1.8%	89,353	1.8%	(24)	0.0%
2012	90,759	1.5%	90,740	1.6%	(19)	0.0%
2013	92,083	1.5%	92,069	1.5%	(14)	0.0%
2014	93,368	1.4%	93,359	1.4%	(9)	0.0%
2015	94,555	1.3%	94,550	1.3%	(5)	0.0%
2016	95,692	1.2%	95,692	1.2%	-	0.0%
2017	96,754	1.1%	96,754	1.1%	-	0.0%
2018	97,757	1.0%	97,757	1.0%	-	0.0%
2019	98,739	1.0%	98,739	1.0%	-	0.0%
2020	99,657	0.9%	99,657	0.9%	-	0.0%

Appendix 5.1-M
Conditional Impact Assessment Model
Output[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	82,826		82,826			
2001	85,737	3.5%	85,737	3.5%	-	0.0%
2002	87,261	1.8%	87,261	1.8%	-	0.0%
2003	88,012	0.9%	88,012	0.9%	-	0.0%
2004	88,766	0.9%	88,361	0.4%	(405)	-0.5%
2005	89,445	0.8%	88,249	-0.1%	(1,196)	-1.3%
2006	90,165	0.8%	88,593	0.4%	(1,573)	-1.7%
2007	90,885	0.8%	89,485	1.0%	(1,400)	-1.5%
2008	91,503	0.7%	90,271	0.9%	(1,232)	-1.3%
2009	91,699	0.2%	90,638	0.4%	(1,061)	-1.2%
2010	92,081	0.4%	91,187	0.6%	(894)	-1.0%
2011	93,057	1.1%	92,316	1.2%	(741)	-0.8%
2012	93,950	1.0%	93,361	1.1%	(589)	-0.6%
2013	94,821	0.9%	94,382	1.1%	(439)	-0.5%
2014	95,687	0.9%	95,396	1.1%	(292)	-0.3%
2015	96,544	0.9%	96,399	1.1%	(145)	-0.2%
2016	97,376	0.9%	97,376	1.0%	-	0.0%
2017	98,216	0.9%	98,216	0.9%	-	0.0%
2018	99,006	0.8%	99,006	0.8%	-	0.0%
2019	99,754	0.8%	99,754	0.8%	-	0.0%
2020	100,461	0.7%	100,461	0.7%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-N
Conditional Impact Assessment Model
Output (Agriculture)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	333		333			
2001	333	0.0%	333	0.0%	-	0.0%
2002	333	0.0%	333	0.0%	-	0.0%
2003	339	1.9%	339	1.9%	-	0.0%
2004	345	1.5%	344	1.2%	(1)	-0.3%
2005	349	1.3%	346	0.8%	(3)	-0.8%
2006	354	1.3%	350	1.1%	(4)	-1.0%
2007	358	1.3%	355	1.4%	(3)	-0.9%
2008	363	1.2%	360	1.3%	(3)	-0.8%
2009	367	1.1%	364	1.2%	(2)	-0.7%
2010	374	2.1%	372	2.2%	(2)	-0.6%
2011	384	2.5%	382	2.6%	(2)	-0.4%
2012	392	2.3%	391	2.4%	(1)	-0.3%
2013	401	2.2%	400	2.3%	(1)	-0.3%
2014	410	2.2%	409	2.3%	(1)	-0.2%
2015	419	2.1%	418	2.2%	(0)	-0.1%
2016	427	2.1%	427	2.2%	-	0.0%
2017	436	2.1%	436	2.1%	-	0.0%
2018	445	1.9%	445	1.9%	-	0.0%
2019	453	1.9%	453	1.9%	-	0.0%
2020	461	1.8%	461	1.8%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-O
Conditional Impact Assessment Model
Output (Manufacturing)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,757		3,757			
2001	3,876	3.2%	3,876	3.2%	-	0.0%
2002	3,862	-0.4%	3,862	-0.4%	-	0.0%
2003	3,828	-0.9%	3,828	-0.9%	-	0.0%
2004	3,797	-0.8%	3,789	-1.0%	(8)	-0.2%
2005	3,755	-1.1%	3,732	-1.5%	(23)	-0.6%
2006	3,707	-1.3%	3,677	-1.5%	(30)	-0.8%
2007	3,657	-1.4%	3,630	-1.3%	(27)	-0.7%
2008	3,595	-1.7%	3,572	-1.6%	(24)	-0.7%
2009	3,570	-0.7%	3,550	-0.6%	(20)	-0.6%
2010	3,579	0.3%	3,562	0.4%	(17)	-0.5%
2011	3,605	0.7%	3,591	0.8%	(14)	-0.4%
2012	3,634	0.8%	3,623	0.9%	(11)	-0.3%
2013	3,667	0.9%	3,658	1.0%	(8)	-0.2%
2014	3,701	0.9%	3,695	1.0%	(6)	-0.2%
2015	3,737	1.0%	3,735	1.1%	(3)	-0.1%
2016	3,774	1.0%	3,774	1.1%	-	0.0%
2017	3,812	1.0%	3,812	1.0%	-	0.0%
2018	3,847	0.9%	3,847	0.9%	-	0.0%
2019	3,883	0.9%	3,883	0.9%	-	0.0%
2020	3,917	0.9%	3,917	0.9%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-P
Conditional Impact Assessment Model
Output (Mining)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	233		233			
2001	233	0.0%	233	0.0%	-	0.0%
2002	207	-11.1%	207	-11.1%	-	0.0%
2003	202	-2.5%	202	-2.5%	-	0.0%
2004	196	-3.0%	196	-3.1%	(0)	-0.1%
2005	190	-3.1%	190	-3.3%	(1)	-0.3%
2006	185	-2.8%	184	-2.9%	(1)	-0.4%
2007	179	-3.0%	179	-3.0%	(1)	-0.4%
2008	174	-3.2%	173	-3.2%	(1)	-0.3%
2009	173	-0.1%	173	0.0%	(1)	-0.3%
2010	170	-1.9%	170	-1.9%	(0)	-0.3%
2011	167	-1.6%	167	-1.6%	(0)	-0.2%
2012	165	-1.1%	165	-1.1%	(0)	-0.2%
2013	164	-1.0%	164	-0.9%	(0)	-0.1%
2014	163	-0.8%	162	-0.7%	(0)	-0.1%
2015	162	-0.6%	162	-0.5%	(0)	0.0%
2016	161	-0.6%	161	-0.5%	-	0.0%
2017	160	-0.5%	160	-0.5%	-	0.0%
2018	159	-0.5%	159	-0.5%	-	0.0%
2019	158	-0.5%	158	-0.5%	-	0.0%
2020	158	-0.3%	158	-0.3%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-Q
Conditional Impact Assessment Model
Output (Construction)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	11,492		11,492			
2001	11,377	-1.0%	11,377	-1.0%	-	0.0%
2002	11,771	3.5%	11,771	3.5%	-	0.0%
2003	11,625	-1.2%	11,625	-1.2%	-	0.0%
2004	11,483	-1.2%	11,196	-3.7%	(287)	-2.5%
2005	11,314	-1.5%	10,466	-6.5%	(849)	-7.5%
2006	11,159	-1.4%	10,043	-4.0%	(1,116)	-10.0%
2007	11,036	-1.1%	10,043	0.0%	(993)	-9.0%
2008	10,930	-1.0%	10,055	0.1%	(874)	-8.0%
2009	10,756	-1.6%	10,003	-0.5%	(753)	-7.0%
2010	10,576	-1.7%	9,941	-0.6%	(635)	-6.0%
2011	10,509	-0.6%	9,983	0.4%	(525)	-5.0%
2012	10,441	-0.6%	10,024	0.4%	(418)	-4.0%
2013	10,386	-0.5%	10,074	0.5%	(312)	-3.0%
2014	10,342	-0.4%	10,135	0.6%	(207)	-2.0%
2015	10,306	-0.3%	10,203	0.7%	(103)	-1.0%
2016	10,276	-0.3%	10,276	0.7%	-	0.0%
2017	10,254	-0.2%	10,254	-0.2%	-	0.0%
2018	10,232	-0.2%	10,232	-0.2%	-	0.0%
2019	10,211	-0.2%	10,211	-0.2%	-	0.0%
2020	10,191	-0.2%	10,191	-0.2%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-R
Conditional Impact Assessment Model
Output (T.C.P.U.)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	6,624		6,624			
2001	7,200	8.7%	7,200	8.7%	-	0.0%
2002	7,488	4.0%	7,488	4.0%	-	0.0%
2003	7,563	1.0%	7,563	1.0%	-	0.0%
2004	7,647	1.1%	7,633	0.9%	(13)	-0.2%
2005	7,714	0.9%	7,675	0.5%	(39)	-0.5%
2006	7,779	0.8%	7,727	0.7%	(52)	-0.7%
2007	7,839	0.8%	7,793	0.8%	(46)	-0.6%
2008	7,889	0.6%	7,849	0.7%	(41)	-0.5%
2009	7,920	0.4%	7,885	0.5%	(35)	-0.4%
2010	7,952	0.4%	7,923	0.5%	(29)	-0.4%
2011	8,029	1.0%	8,004	1.0%	(24)	-0.3%
2012	8,098	0.9%	8,079	0.9%	(19)	-0.2%
2013	8,165	0.8%	8,150	0.9%	(14)	-0.2%
2014	8,229	0.8%	8,219	0.8%	(10)	-0.1%
2015	8,291	0.8%	8,286	0.8%	(5)	-0.1%
2016	8,349	0.7%	8,349	0.8%	-	0.0%
2017	8,406	0.7%	8,406	0.7%	-	0.0%
2018	8,458	0.6%	8,458	0.6%	-	0.0%
2019	8,504	0.5%	8,504	0.5%	-	0.0%
2020	8,545	0.5%	8,545	0.5%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-S
Conditional Impact Assessment Model
Output (F.I.R.E.)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	15,413		15,413			
2001	16,519	7.2%	16,519	7.2%	-	0.0%
2002	17,082	3.4%	17,082	3.4%	-	0.0%
2003	17,339	1.5%	17,339	1.5%	-	0.0%
2004	17,575	1.4%	17,562	1.3%	(14)	-0.1%
2005	17,778	1.2%	17,737	1.0%	(41)	-0.2%
2006	17,981	1.1%	17,927	1.1%	(54)	-0.3%
2007	18,168	1.0%	18,120	1.1%	(48)	-0.3%
2008	18,317	0.8%	18,275	0.9%	(42)	-0.2%
2009	18,193	-0.7%	18,157	-0.6%	(36)	-0.2%
2010	18,168	-0.1%	18,137	-0.1%	(31)	-0.2%
2011	18,239	0.4%	18,213	0.4%	(25)	-0.1%
2012	18,283	0.2%	18,262	0.3%	(20)	-0.1%
2013	18,312	0.2%	18,297	0.2%	(15)	-0.1%
2014	18,332	0.1%	18,322	0.1%	(10)	-0.1%
2015	18,344	0.1%	18,339	0.1%	(5)	0.0%
2016	18,346	0.0%	18,346	0.0%	-	0.0%
2017	18,344	0.0%	18,344	0.0%	-	0.0%
2018	18,329	-0.1%	18,329	-0.1%	-	0.0%
2019	18,299	-0.2%	18,299	-0.2%	-	0.0%
2020	18,264	-0.2%	18,264	-0.2%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-T
Conditional Impact Assessment Model
Output (Retail)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	7,298		7,298			
2001	7,763	6.4%	7,763	6.4%	-	0.0%
2002	7,928	2.1%	7,928	2.1%	-	0.0%
2003	8,003	1.0%	8,003	1.0%	-	0.0%
2004	8,075	0.9%	8,048	0.6%	(26)	-0.3%
2005	8,138	0.8%	8,060	0.1%	(78)	-1.0%
2006	8,199	0.8%	8,096	0.5%	(103)	-1.3%
2007	8,263	0.8%	8,172	0.9%	(92)	-1.1%
2008	8,321	0.7%	8,241	0.8%	(81)	-1.0%
2009	8,328	0.1%	8,259	0.2%	(69)	-0.8%
2010	8,323	-0.1%	8,264	0.1%	(58)	-0.7%
2011	8,375	0.6%	8,327	0.8%	(48)	-0.6%
2012	8,412	0.4%	8,374	0.6%	(38)	-0.5%
2013	8,445	0.4%	8,416	0.5%	(29)	-0.3%
2014	8,475	0.4%	8,456	0.5%	(19)	-0.2%
2015	8,502	0.3%	8,492	0.4%	(9)	-0.1%
2016	8,525	0.3%	8,525	0.4%	-	0.0%
2017	8,549	0.3%	8,549	0.3%	-	0.0%
2018	8,566	0.2%	8,566	0.2%	-	0.0%
2019	8,578	0.1%	8,578	0.1%	-	0.0%
2020	8,586	0.1%	8,586	0.1%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-U
Conditional Impact Assessment Model
Output (Wholesale)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,896		2,896			
2001	2,896	0.0%	2,896	0.0%	-	0.0%
2002	2,921	0.9%	2,921	0.9%	-	0.0%
2003	2,892	-1.0%	2,892	-1.0%	-	0.0%
2004	2,881	-0.4%	2,866	-0.9%	(15)	-0.5%
2005	2,865	-0.6%	2,821	-1.6%	(44)	-1.5%
2006	2,844	-0.7%	2,786	-1.2%	(58)	-2.1%
2007	2,822	-0.8%	2,770	-0.6%	(52)	-1.8%
2008	2,796	-0.9%	2,750	-0.7%	(46)	-1.6%
2009	2,753	-1.5%	2,713	-1.3%	(39)	-1.4%
2010	2,742	-0.4%	2,709	-0.2%	(33)	-1.2%
2011	2,748	0.2%	2,721	0.4%	(27)	-1.0%
2012	2,751	0.1%	2,729	0.3%	(22)	-0.8%
2013	2,752	0.1%	2,736	0.3%	(16)	-0.6%
2014	2,753	0.0%	2,742	0.2%	(11)	-0.4%
2015	2,752	0.0%	2,747	0.2%	(5)	-0.2%
2016	2,750	-0.1%	2,750	0.1%	-	0.0%
2017	2,746	-0.1%	2,746	-0.1%	-	0.0%
2018	2,740	-0.2%	2,740	-0.2%	-	0.0%
2019	2,732	-0.3%	2,732	-0.3%	-	0.0%
2020	2,721	-0.4%	2,721	-0.4%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-V
Conditional Impact Assessment Model
Output (Services)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	29,834		29,834			
2001	30,411	1.9%	30,411	1.9%	-	0.0%
2002	30,540	0.4%	30,540	0.4%	-	0.0%
2003	30,961	1.4%	30,961	1.4%	-	0.0%
2004	31,385	1.4%	31,347	1.2%	(38)	-0.1%
2005	31,844	1.5%	31,731	1.2%	(113)	-0.4%
2006	32,348	1.6%	32,200	1.5%	(148)	-0.5%
2007	32,848	1.5%	32,716	1.6%	(132)	-0.4%
2008	33,307	1.4%	33,191	1.5%	(116)	-0.3%
2009	33,741	1.3%	33,641	1.4%	(100)	-0.3%
2010	34,220	1.4%	34,136	1.5%	(84)	-0.2%
2011	34,918	2.0%	34,848	2.1%	(70)	-0.2%
2012	35,596	1.9%	35,541	2.0%	(55)	-0.2%
2013	36,262	1.9%	36,221	1.9%	(41)	-0.1%
2014	36,929	1.8%	36,901	1.9%	(27)	-0.1%
2015	37,596	1.8%	37,583	1.8%	(14)	0.0%
2016	38,256	1.8%	38,256	1.8%	-	0.0%
2017	38,924	1.7%	38,924	1.7%	-	0.0%
2018	39,576	1.7%	39,576	1.7%	-	0.0%
2019	40,214	1.6%	40,214	1.6%	-	0.0%
2020	40,836	1.5%	40,836	1.5%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-W
Conditional Impact Assessment Model
Output (Government)[1] - 10% Initial Impact, Rapid Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	4,945		4,945			
2001	5,127	3.7%	5,127	3.7%	-	0.0%
2002	5,127	0.0%	5,127	0.0%	-	0.0%
2003	5,259	2.6%	5,259	2.6%	-	0.0%
2004	5,382	2.4%	5,380	2.3%	(2)	0.0%
2005	5,498	2.1%	5,492	2.1%	(6)	-0.1%
2006	5,609	2.0%	5,601	2.0%	(7)	-0.1%
2007	5,714	1.9%	5,708	1.9%	(7)	-0.1%
2008	5,811	1.7%	5,806	1.7%	(6)	-0.1%
2009	5,898	1.5%	5,893	1.5%	(5)	-0.1%
2010	5,977	1.3%	5,973	1.4%	(4)	-0.1%
2011	6,083	1.8%	6,080	1.8%	(3)	-0.1%
2012	6,177	1.5%	6,175	1.6%	(3)	0.0%
2013	6,268	1.5%	6,266	1.5%	(2)	0.0%
2014	6,355	1.4%	6,354	1.4%	(1)	0.0%
2015	6,436	1.3%	6,435	1.3%	(1)	0.0%
2016	6,513	1.2%	6,513	1.2%	-	0.0%
2017	6,585	1.1%	6,585	1.1%	-	0.0%
2018	6,654	1.0%	6,654	1.0%	-	0.0%
2019	6,721	1.0%	6,721	1.0%	-	0.0%
2020	6,783	0.9%	6,783	0.9%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-X
Conditional Impact Assessment Model
Total Labor Income[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	31,914		31,914			
2001	32,911	3.1%	32,911	3.1%	-	0.0%
2002	33,368	1.4%	33,368	1.4%	-	0.0%
2003	33,699	1.0%	33,699	1.0%	-	0.0%
2004	34,032	1.0%	33,890	0.6%	(142)	-0.4%
2005	34,345	0.9%	33,925	0.1%	(420)	-1.2%
2006	34,676	1.0%	34,123	0.6%	(553)	-1.6%
2007	35,006	1.0%	34,515	1.1%	(492)	-1.4%
2008	35,299	0.8%	34,866	1.0%	(433)	-1.2%
2009	35,474	0.5%	35,101	0.7%	(373)	-1.1%
2010	35,697	0.6%	35,383	0.8%	(314)	-0.9%
2011	36,150	1.3%	35,890	1.4%	(260)	-0.7%
2012	36,569	1.2%	36,362	1.3%	(207)	-0.6%
2013	36,979	1.1%	36,825	1.3%	(154)	-0.4%
2014	37,387	1.1%	37,284	1.2%	(102)	-0.3%
2015	37,789	1.1%	37,738	1.2%	(51)	-0.1%
2016	38,182	1.0%	38,182	1.2%	-	0.0%
2017	38,577	1.0%	38,577	1.0%	-	0.0%
2018	38,952	1.0%	38,952	1.0%	-	0.0%
2019	39,313	0.9%	39,313	0.9%	-	0.0%
2020	39,656	0.9%	39,656	0.9%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-Y
Conditional Impact Assessment Model
Labor Income (Agriculture)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	125		125			
2001	125	0.0%	125	0.0%	-	0.0%
2002	125	0.0%	125	0.0%	-	0.0%
2003	127	1.9%	127	1.9%	-	0.0%
2004	129	1.5%	129	1.2%	(0)	-0.3%
2005	131	1.3%	130	0.8%	(1)	-0.8%
2006	133	1.3%	131	1.1%	(1)	-1.0%
2007	134	1.3%	133	1.4%	(1)	-0.9%
2008	136	1.2%	135	1.3%	(1)	-0.8%
2009	137	1.1%	137	1.2%	(1)	-0.7%
2010	140	2.1%	139	2.2%	(1)	-0.6%
2011	144	2.5%	143	2.6%	(1)	-0.5%
2012	147	2.3%	147	2.4%	(1)	-0.4%
2013	150	2.2%	150	2.3%	(0)	-0.3%
2014	154	2.2%	153	2.3%	(0)	-0.2%
2015	157	2.1%	157	2.2%	(0)	-0.1%
2016	160	2.1%	160	2.2%	-	0.0%
2017	164	2.1%	164	2.1%	-	0.0%
2018	167	1.9%	167	1.9%	-	0.0%
2019	170	1.9%	170	1.9%	-	0.0%
2020	173	1.8%	173	1.8%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,001		1,001			
2001	1,033	3.2%	1,033	3.2%	-	0.0%
2002	1,029	-0.4%	1,029	-0.4%	-	0.0%
2003	1,020	-0.9%	1,020	-0.9%	-	0.0%
2004	1,011	-0.8%	1,009	-1.1%	(2)	-0.2%
2005	1,000	-1.1%	993	-1.6%	(7)	-0.7%
2006	988	-1.3%	978	-1.5%	(9)	-0.9%
2007	974	-1.4%	966	-1.3%	(8)	-0.8%
2008	958	-1.7%	950	-1.6%	(7)	-0.8%
2009	951	-0.7%	945	-0.6%	(6)	-0.7%
2010	953	0.3%	948	0.4%	(5)	-0.5%
2011	960	0.7%	956	0.8%	(4)	-0.5%
2012	968	0.8%	965	0.9%	(3)	-0.4%
2013	977	0.9%	974	1.0%	(3)	-0.3%
2014	986	0.9%	984	1.0%	(2)	-0.2%
2015	996	1.0%	995	1.1%	(1)	-0.1%
2016	1,005	1.0%	1,005	1.1%	-	0.0%
2017	1,015	1.0%	1,015	1.0%	-	0.0%
2018	1,025	0.9%	1,025	0.9%	-	0.0%
2019	1,034	0.9%	1,034	0.9%	-	0.0%
2020	1,043	0.9%	1,043	0.9%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AA
Conditional Impact Assessment Model
Labor Income (Mining)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	71		71			
2001	71	0.0%	71	0.0%	-	0.0%
2002	63	-11.1%	63	-11.1%	-	0.0%
2003	61	-2.5%	61	-2.5%	-	0.0%
2004	59	-3.0%	59	-3.1%	(0)	-0.1%
2005	58	-3.1%	57	-3.3%	(0)	-0.3%
2006	56	-2.8%	56	-2.9%	(0)	-0.4%
2007	54	-3.0%	54	-3.0%	(0)	-0.4%
2008	53	-3.2%	52	-3.2%	(0)	-0.3%
2009	52	-0.1%	52	0.0%	(0)	-0.3%
2010	51	-1.9%	51	-1.9%	(0)	-0.2%
2011	51	-1.6%	51	-1.6%	(0)	-0.2%
2012	50	-1.1%	50	-1.1%	(0)	-0.2%
2013	50	-1.0%	50	-0.9%	(0)	-0.1%
2014	49	-0.8%	49	-0.7%	(0)	-0.1%
2015	49	-0.6%	49	-0.5%	(0)	0.0%
2016	49	-0.6%	49	-0.5%	-	0.0%
2017	48	-0.5%	48	-0.5%	-	0.0%
2018	48	-0.5%	48	-0.5%	-	0.0%
2019	48	-0.5%	48	-0.5%	-	0.0%
2020	48	-0.3%	48	-0.3%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AB
Conditional Impact Assessment Model
Labor Income (Construction)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,722		3,722			
2001	3,684	-1.0%	3,684	-1.0%	-	0.0%
2002	3,812	3.5%	3,812	3.5%	-	0.0%
2003	3,765	-1.2%	3,765	-1.2%	-	0.0%
2004	3,718	-1.2%	3,626	-3.7%	(93)	-2.5%
2005	3,664	-1.5%	3,389	-6.5%	(275)	-7.5%
2006	3,614	-1.4%	3,252	-4.0%	(361)	-10.0%
2007	3,574	-1.1%	3,252	0.0%	(322)	-9.0%
2008	3,539	-1.0%	3,256	0.1%	(283)	-8.0%
2009	3,483	-1.6%	3,239	-0.5%	(244)	-7.0%
2010	3,425	-1.7%	3,219	-0.6%	(205)	-6.0%
2011	3,403	-0.6%	3,233	0.4%	(170)	-5.0%
2012	3,381	-0.6%	3,246	0.4%	(135)	-4.0%
2013	3,363	-0.5%	3,262	0.5%	(101)	-3.0%
2014	3,349	-0.4%	3,282	0.6%	(67)	-2.0%
2015	3,337	-0.3%	3,304	0.7%	(33)	-1.0%
2016	3,328	-0.3%	3,328	0.7%	-	0.0%
2017	3,321	-0.2%	3,321	-0.2%	-	0.0%
2018	3,313	-0.2%	3,313	-0.2%	-	0.0%
2019	3,307	-0.2%	3,307	-0.2%	-	0.0%
2020	3,300	-0.2%	3,300	-0.2%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,998		1,998			
2001	2,172	8.7%	2,172	8.7%	-	0.0%
2002	2,259	4.0%	2,259	4.0%	-	0.0%
2003	2,281	1.0%	2,281	1.0%	-	0.0%
2004	2,307	1.1%	2,303	0.9%	(4)	-0.2%
2005	2,327	0.9%	2,316	0.6%	(11)	-0.5%
2006	2,346	0.8%	2,332	0.7%	(15)	-0.6%
2007	2,364	0.8%	2,351	0.8%	(13)	-0.6%
2008	2,380	0.6%	2,368	0.7%	(12)	-0.5%
2009	2,389	0.4%	2,379	0.5%	(10)	-0.4%
2010	2,399	0.4%	2,390	0.5%	(8)	-0.3%
2011	2,422	1.0%	2,415	1.0%	(7)	-0.3%
2012	2,443	0.9%	2,437	0.9%	(6)	-0.2%
2013	2,463	0.8%	2,459	0.9%	(4)	-0.2%
2014	2,482	0.8%	2,479	0.8%	(3)	-0.1%
2015	2,501	0.8%	2,500	0.8%	(1)	-0.1%
2016	2,518	0.7%	2,518	0.8%	-	0.0%
2017	2,536	0.7%	2,536	0.7%	-	0.0%
2018	2,551	0.6%	2,551	0.6%	-	0.0%
2019	2,565	0.5%	2,565	0.5%	-	0.0%
2020	2,577	0.5%	2,577	0.5%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,958		2,958			
2001	3,171	7.2%	3,171	7.2%	-	0.0%
2002	3,279	3.4%	3,279	3.4%	-	0.0%
2003	3,328	1.5%	3,328	1.5%	-	0.0%
2004	3,373	1.4%	3,370	1.3%	(3)	-0.1%
2005	3,412	1.2%	3,403	1.0%	(10)	-0.3%
2006	3,451	1.1%	3,438	1.1%	(13)	-0.4%
2007	3,487	1.0%	3,476	1.1%	(12)	-0.3%
2008	3,516	0.8%	3,506	0.9%	(10)	-0.3%
2009	3,492	-0.7%	3,483	-0.6%	(9)	-0.3%
2010	3,487	-0.1%	3,480	-0.1%	(7)	-0.2%
2011	3,501	0.4%	3,495	0.4%	(6)	-0.2%
2012	3,509	0.2%	3,504	0.3%	(5)	-0.1%
2013	3,515	0.2%	3,511	0.2%	(4)	-0.1%
2014	3,519	0.1%	3,516	0.1%	(2)	-0.1%
2015	3,521	0.1%	3,520	0.1%	(1)	0.0%
2016	3,521	0.0%	3,521	0.0%	-	0.0%
2017	3,521	0.0%	3,521	0.0%	-	0.0%
2018	3,518	-0.1%	3,518	-0.1%	-	0.0%
2019	3,512	-0.2%	3,512	-0.2%	-	0.0%
2020	3,506	-0.2%	3,506	-0.2%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AE
Conditional Impact Assessment Model
Labor Income (Retail)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,368		3,368			
2001	3,583	6.4%	3,583	6.4%	-	0.0%
2002	3,659	2.1%	3,659	2.1%	-	0.0%
2003	3,694	1.0%	3,694	1.0%	-	0.0%
2004	3,727	0.9%	3,715	0.6%	(12)	-0.3%
2005	3,756	0.8%	3,719	0.1%	(37)	-1.0%
2006	3,784	0.8%	3,736	0.4%	(48)	-1.3%
2007	3,814	0.8%	3,771	0.9%	(43)	-1.1%
2008	3,841	0.7%	3,803	0.8%	(38)	-1.0%
2009	3,844	0.1%	3,811	0.2%	(33)	-0.8%
2010	3,841	-0.1%	3,814	0.1%	(27)	-0.7%
2011	3,866	0.6%	3,843	0.8%	(23)	-0.6%
2012	3,883	0.4%	3,865	0.6%	(18)	-0.5%
2013	3,898	0.4%	3,884	0.5%	(13)	-0.3%
2014	3,912	0.4%	3,903	0.5%	(9)	-0.2%
2015	3,924	0.3%	3,920	0.4%	(4)	-0.1%
2016	3,935	0.3%	3,935	0.4%	-	0.0%
2017	3,946	0.3%	3,946	0.3%	-	0.0%
2018	3,954	0.2%	3,954	0.2%	-	0.0%
2019	3,959	0.1%	3,959	0.1%	-	0.0%
2020	3,963	0.1%	3,963	0.1%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AF
Conditional Impact Assessment Model
Labor Income (Wholesale)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,213		1,213			
2001	1,213	0.0%	1,213	0.0%	-	0.0%
2002	1,223	0.9%	1,223	0.9%	-	0.0%
2003	1,211	-1.0%	1,211	-1.0%	-	0.0%
2004	1,206	-0.4%	1,200	-0.9%	(6)	-0.5%
2005	1,200	-0.6%	1,181	-1.6%	(19)	-1.5%
2006	1,191	-0.7%	1,166	-1.2%	(24)	-2.1%
2007	1,182	-0.8%	1,160	-0.6%	(22)	-1.8%
2008	1,170	-0.9%	1,151	-0.7%	(19)	-1.6%
2009	1,152	-1.5%	1,136	-1.3%	(16)	-1.4%
2010	1,148	-0.4%	1,134	-0.2%	(14)	-1.2%
2011	1,150	0.2%	1,139	0.4%	(11)	-1.0%
2012	1,152	0.1%	1,142	0.3%	(9)	-0.8%
2013	1,152	0.1%	1,145	0.3%	(7)	-0.6%
2014	1,153	0.0%	1,148	0.2%	(5)	-0.4%
2015	1,152	0.0%	1,150	0.2%	(2)	-0.2%
2016	1,151	-0.1%	1,151	0.1%	-	0.0%
2017	1,150	-0.1%	1,150	-0.1%	-	0.0%
2018	1,147	-0.2%	1,147	-0.2%	-	0.0%
2019	1,144	-0.3%	1,144	-0.3%	-	0.0%
2020	1,139	-0.4%	1,139	-0.4%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AG
Conditional Impact Assessment Model
Labor Income (Services)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	13,771		13,771			
2001	14,037	1.9%	14,037	1.9%	-	0.0%
2002	14,097	0.4%	14,097	0.4%	-	0.0%
2003	14,291	1.4%	14,291	1.4%	-	0.0%
2004	14,487	1.4%	14,467	1.2%	(20)	-0.1%
2005	14,698	1.5%	14,640	1.2%	(59)	-0.4%
2006	14,931	1.6%	14,854	1.5%	(77)	-0.5%
2007	15,162	1.5%	15,093	1.6%	(69)	-0.5%
2008	15,374	1.4%	15,313	1.5%	(60)	-0.4%
2009	15,574	1.3%	15,522	1.4%	(52)	-0.3%
2010	15,795	1.4%	15,751	1.5%	(44)	-0.3%
2011	16,117	2.0%	16,081	2.1%	(36)	-0.2%
2012	16,430	1.9%	16,401	2.0%	(29)	-0.2%
2013	16,738	1.9%	16,716	1.9%	(22)	-0.1%
2014	17,045	1.8%	17,031	1.9%	(14)	-0.1%
2015	17,353	1.8%	17,346	1.9%	(7)	0.0%
2016	17,658	1.8%	17,658	1.8%	-	0.0%
2017	17,966	1.7%	17,966	1.7%	-	0.0%
2018	18,267	1.7%	18,267	1.7%	-	0.0%
2019	18,562	1.6%	18,562	1.6%	-	0.0%
2020	18,849	1.5%	18,849	1.5%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AH
Conditional Impact Assessment Model
Labor Income (Government)[1] - 10% Initial Impact, Rapid Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,688		3,688			
2001	3,823	3.7%	3,823	3.7%	-	0.0%
2002	3,823	0.0%	3,823	0.0%	-	0.0%
2003	3,921	2.6%	3,921	2.6%	-	0.0%
2004	4,013	2.4%	4,013	2.3%	(1)	0.0%
2005	4,100	2.1%	4,097	2.1%	(2)	-0.1%
2006	4,182	2.0%	4,179	2.0%	(3)	-0.1%
2007	4,261	1.9%	4,258	1.9%	(3)	-0.1%
2008	4,333	1.7%	4,331	1.7%	(2)	-0.1%
2009	4,398	1.5%	4,396	1.5%	(2)	0.0%
2010	4,457	1.3%	4,455	1.3%	(2)	0.0%
2011	4,536	1.8%	4,535	1.8%	(1)	0.0%
2012	4,606	1.5%	4,605	1.6%	(1)	0.0%
2013	4,674	1.5%	4,673	1.5%	(1)	0.0%
2014	4,739	1.4%	4,738	1.4%	(1)	0.0%
2015	4,799	1.3%	4,799	1.3%	(0)	0.0%
2016	4,857	1.2%	4,857	1.2%	-	0.0%
2017	4,911	1.1%	4,911	1.1%	-	0.0%
2018	4,962	1.0%	4,962	1.0%	-	0.0%
2019	5,011	1.0%	5,011	1.0%	-	0.0%
2020	5,058	0.9%	5,058	0.9%	-	0.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.1-AI
Conditional Impact Assessment Model
Output Per Employee[1] - 10% Initial Impact, Rapid Recovery

	Output Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	96,613		96,613		-	0.0%
2001	96,766	0.2%	96,766	0.2%	-	0.0%
2002	97,137	0.4%	97,137	0.4%	-	0.0%
2003	96,968	-0.2%	96,968	-0.2%	-	0.0%
2004	96,808	-0.2%	96,717	-0.3%	(90)	-0.1%
2005	96,614	-0.2%	96,345	-0.4%	(269)	-0.3%
2006	96,418	-0.2%	96,064	-0.3%	(354)	-0.4%
2007	96,225	-0.2%	95,911	-0.2%	(314)	-0.3%
2008	96,033	-0.2%	95,757	-0.2%	(275)	-0.3%
2009	95,737	-0.3%	95,499	-0.3%	(238)	-0.2%
2010	95,516	-0.2%	95,315	-0.2%	(201)	-0.2%
2011	95,300	-0.2%	95,135	-0.2%	(165)	-0.2%
2012	95,098	-0.2%	94,967	-0.2%	(131)	-0.1%
2013	94,906	-0.2%	94,809	-0.2%	(97)	-0.1%
2014	94,721	-0.2%	94,656	-0.2%	(64)	-0.1%
2015	94,543	-0.2%	94,511	-0.2%	(32)	0.0%
2016	94,371	-0.2%	94,371	-0.1%	-	0.0%
2017	94,203	-0.2%	94,203	-0.2%	-	0.0%
2018	94,038	-0.2%	94,038	-0.2%	-	0.0%
2019	93,876	-0.2%	93,876	-0.2%	-	0.0%
2020	93,719	-0.2%	93,719	-0.2%	-	0.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.1-AJ
Conditional Impact Assessment Model
Labor Income Per Employee[1] - 10% Initial Impact, Rapid Recovery

	Labor Income Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	37,226		37,226			
2001	37,145	-0.2%	37,145	-0.2%	-	0.0%
2002	37,145	0.0%	37,145	0.0%	-	0.0%
2003	37,128	0.0%	37,128	0.0%	-	0.0%
2004	37,115	0.0%	37,094	-0.1%	(21)	-0.1%
2005	37,098	0.0%	37,037	-0.2%	(61)	-0.2%
2006	37,081	0.0%	37,001	-0.1%	(79)	-0.2%
2007	37,063	0.0%	36,993	0.0%	(70)	-0.2%
2008	37,047	0.0%	36,986	0.0%	(61)	-0.2%
2009	37,036	0.0%	36,983	0.0%	(53)	-0.1%
2010	37,029	0.0%	36,985	0.0%	(44)	-0.1%
2011	37,022	0.0%	36,986	0.0%	(36)	-0.1%
2012	37,016	0.0%	36,988	0.0%	(28)	-0.1%
2013	37,012	0.0%	36,991	0.0%	(21)	-0.1%
2014	37,009	0.0%	36,995	0.0%	(14)	0.0%
2015	37,006	0.0%	36,999	0.0%	(7)	0.0%
2016	37,004	0.0%	37,004	0.0%	-	0.0%
2017	37,000	0.0%	37,000	0.0%	-	0.0%
2018	36,998	0.0%	36,998	0.0%	-	0.0%
2019	36,996	0.0%	36,996	0.0%	-	0.0%
2020	36,995	0.0%	36,995	0.0%	-	0.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.1-AK
Conditional Impact Assessment Model
Tax Payment Summary[1] - 10% Initial Impact, Rapid Recovery

	2000	2005	2010	2015	2020
BASELINE					
Federal					
Corporate Profits Tax	139,313,718	137,156,389	128,205,925	124,932,736	123,542,901
Indirect Bus Tax: Custom Duty	166,615,210	164,035,107	153,330,608	149,415,969	147,753,766
Indirect Bus Tax: Excise Taxes	53,143,145	52,320,202	48,905,924	47,657,321	47,127,149
Indirect Bus Tax: Fed NonTaxes	16,345,658	16,092,539	15,042,382	14,658,339	14,495,270
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	731,195,864	683,479,949	666,030,220	658,620,856
Personal Tax: NonTaxes	6,236,173	6,139,604	5,738,949	5,592,430	5,530,216
Social Ins Tax- Employee Contribution	333,390,387	328,227,703	306,808,428	298,975,391	295,649,390
Social Ins Tax- Employer Contribution	307,291,922	302,533,383	282,790,852	275,571,000	272,505,365
Total	**1,765,033,035**	**1,737,700,792**	**1,624,303,017**	**1,582,833,407**	**1,565,224,914**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	2,897,174	2,708,112	2,638,972	2,609,614
Indirect Bus Tax: Other Taxes	41,477,737	40,835,438	38,170,625	37,196,101	36,782,307
Indirect Bus Tax: Property Tax	81,085,103	79,829,468	74,620,007	72,714,905	71,905,976
Indirect Bus Tax: NonTaxes	19,910,197	19,601,880	18,322,713	17,854,921	17,656,291
Indirect Bus Tax: Sales Tax	239,653,321	235,942,193	220,545,227	214,914,551	212,523,698
Indirect Bus Tax: Severance Tax	4,762,658	4,688,906	4,382,920	4,271,021	4,223,507
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	7,664,015	7,163,882	6,980,983	6,903,322
Personal Tax: NonTaxes	12,149,949	11,961,802	11,181,207	10,895,742	10,774,531
Personal Tax: Other Tax	143,307	141,088	131,881	128,514	127,085
Personal Tax: Property Taxes	1,857,270	1,828,509	1,709,185	1,665,549	1,647,020
Social Ins Tax- Employee Contribution	1,816,880	1,788,745	1,672,016	1,629,328	1,611,203
Social Ins Tax- Employer Contribution	6,980,643	6,872,545	6,424,061	6,260,050	6,190,409
Total	**420,564,371**	**414,051,763**	**387,031,836**	**377,150,638**	**372,954,963**
Total of All Pay Payments	**2,185,597,406**	**2,151,752,555**	**2,011,334,853**	**1,959,984,045**	**1,938,179,877**
CONDITIONAL					
Federal					
Corporate Profits Tax	139,313,718	126,869,660	120,513,569	123,683,409	123,542,901
Indirect Bus Tax: Custom Duty	166,615,210	151,732,474	144,130,772	147,921,809	147,753,766
Indirect Bus Tax: Excise Taxes	53,143,145	48,396,187	45,971,568	47,180,748	47,127,149
Indirect Bus Tax: Fed NonTaxes	16,345,658	14,885,598	14,139,839	14,511,756	14,495,270
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	676,356,175	642,471,152	659,369,918	658,620,856
Personal Tax: NonTaxes (Fines- Fees	6,236,173	5,679,133	5,394,612	5,536,506	5,530,216
Social Ins Tax- Employee Contribution	333,390,387	303,610,626	288,399,923	295,985,637	295,649,390
Social Ins Tax- Employer Contribution	307,291,922	279,843,380	265,823,401	272,815,290	272,505,365
Total	1,765,033,035	1,607,373,233	1,526,844,836	1,567,005,073	1,565,224,914
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	2,679,885	2,545,625	2,612,582	2,609,614
Indirect Bus Tax: Other Taxes	41,477,737	37,772,780	35,880,387	36,824,140	36,782,307
Indirect Bus Tax: Property Tax	81,085,103	73,842,258	70,142,807	71,987,756	71,905,976
Indirect Bus Tax: NonTaxes	19,910,197	18,131,739	17,223,350	17,676,372	17,656,291
Indirect Bus Tax: Sales Tax	239,653,321	218,246,529	207,312,514	212,765,405	212,523,698
Indirect Bus Tax: Severance Tax	4,762,658	4,337,238	4,119,945	4,228,311	4,223,507
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	7,089,214	6,734,049	6,911,173	6,903,322
Personal Tax: NonTaxes	12,149,949	11,064,667	10,510,334	10,786,785	10,774,531
Personal Tax: Other Tax	143,307	130,507	123,968	127,229	127,085
Personal Tax: Property Taxes	1,857,270	1,691,371	1,606,634	1,648,893	1,647,020
Social Ins Tax- Employee Contribution	1,816,880	1,654,589	1,571,695	1,613,035	1,611,203
Social Ins Tax- Employer Contribution	6,980,643	6,357,104	6,038,617	6,197,449	6,190,409
Total	**420,564,371**	**382,997,881**	**363,809,926**	**373,379,132**	**372,954,963**

Appendix 5.1-AK
Conditional Impact Assessment Model
Tax Payment Summary[1] - 10% Initial Impact, Rapid Recovery

	2000	2005	2010	2015	2020
Total of All Pay Payments	**2,185,597,406**	**1,990,371,113**	**1,890,654,762**	**1,940,384,205**	**1,938,179,877**
DIFFERENCE					
Federal					
Corporate Profits Tax	0	(10,286,729)	(7,692,355)	(1,249,327)	0
Indirect Bus Tax: Custom Duty	0	(12,302,633)	(9,199,836)	(1,494,160)	0
Indirect Bus Tax: Excise Taxes	0	(3,924,015)	(2,934,355)	(476,573)	0
Indirect Bus Tax: Fed NonTaxes	0	(1,206,940)	(902,543)	(146,583)	0
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	(54,839,690)	(41,008,797)	(6,660,302)	0
Personal Tax: NonTaxes	0	(460,470)	(344,337)	(55,924)	0
Social Ins Tax- Employee Contribution	0	(24,617,078)	(18,408,506)	(2,989,754)	0
Social Ins Tax- Employer Contribution	0	(22,690,004)	(16,967,451)	(2,755,710)	0
Total	**0**	**(130,327,559)**	**(97,458,181)**	**(15,828,334)**	**0**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	0	(217,288)	(162,487)	(26,390)	0
Indirect Bus Tax: Other Taxes	0	(3,062,658)	(2,290,237)	(371,961)	0
Indirect Bus Tax: Property Tax	0	(5,987,210)	(4,477,200)	(727,149)	0
Indirect Bus Tax: NonTaxes	0	(1,470,141)	(1,099,363)	(178,549)	0
Indirect Bus Tax: Sales Tax	0	(17,695,664)	(13,232,714)	(2,149,146)	0
Indirect Bus Tax: Severance Tax	0	(351,668)	(262,975)	(42,710)	0
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	0	(574,801)	(429,833)	(69,810)	0
Personal Tax: NonTaxes	0	(897,135)	(670,872)	(108,957)	0
Personal Tax: Other Tax	0	(10,582)	(7,913)	(1,285)	0
Personal Tax: Property Taxes	0	(137,138)	(102,551)	(16,655)	0
Social Ins Tax- Employee Contribution	0	(134,156)	(100,321)	(16,293)	0
Social Ins Tax- Employer Contribution	0	(515,441)	(385,444)	(62,600)	0
Total	**0**	**(31,053,882)**	**(23,221,910)**	**(3,771,506)**	**0**
Total of All Pay Payments	**0**	**(161,381,442)**	**(120,680,091)**	**(19,599,840)**	**0**

Notes:
[1] Expressed in constant 2000 dollars.

Appendix 5.1-AL
Conditional Impact Assessment Model
Total Tax Payments[1] - 10% Initial Impact, Rapid Recovery

	Total Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,185,597,406		2,185,597,406			
2001	2,163,736,308	-1.0%	2,163,736,308	-1.0%	-	0.0%
2002	2,238,684,577	3.5%	2,238,684,577	3.5%	-	0.0%
2003	2,210,931,230	-1.2%	2,210,931,230	-1.2%	-	0.0%
2004	2,183,804,112	-1.2%	2,129,209,010	-3.7%	(54,595,103)	-2.5%
2005	2,151,752,555	-1.5%	1,990,371,113	-6.5%	(161,381,442)	-7.5%
2006	2,122,291,310	-1.4%	1,910,062,179	-4.0%	(212,229,131)	-10.0%
2007	2,098,893,104	-1.1%	1,909,992,725	0.0%	(188,900,379)	-9.0%
2008	2,078,626,045	-1.0%	1,912,335,961	0.1%	(166,290,084)	-8.0%
2009	2,045,606,678	-1.6%	1,902,414,211	-0.5%	(143,192,467)	-7.0%
2010	2,011,334,853	-1.7%	1,890,654,762	-0.6%	(120,680,091)	-6.0%
2011	1,998,554,081	-0.6%	1,898,626,377	0.4%	(99,927,704)	-5.0%
2012	1,985,744,844	-0.6%	1,906,315,050	0.4%	(79,429,794)	-4.0%
2013	1,975,184,340	-0.5%	1,915,928,810	0.5%	(59,255,530)	-3.0%
2014	1,966,815,638	-0.4%	1,927,479,326	0.6%	(39,336,313)	-2.0%
2015	1,959,984,045	-0.3%	1,940,384,205	0.7%	(19,599,840)	-1.0%
2016	1,954,234,121	-0.3%	1,954,234,121	0.7%	-	0.0%
2017	1,950,106,700	-0.2%	1,950,106,700	-0.2%	-	0.0%
2018	1,945,865,420	-0.2%	1,945,865,420	-0.2%	-	0.0%
2019	1,941,880,324	-0.2%	1,941,880,324	-0.2%	-	0.0%
2020	1,938,179,877	-0.2%	1,938,179,877	-0.2%	-	0.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.1-AN
Conditional Impact Assessment Model
Total Federal Tax Payments[1] - 10% Initial Impact, Rapid Recovery

	Federal Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,765,033,035		1,765,033,035			
2001	1,747,378,567	-1.0%	1,747,378,567	-1.0%	-	0.0%
2002	1,807,904,888	3.5%	1,807,904,888	3.5%	-	0.0%
2003	1,785,491,989	-1.2%	1,785,491,989	-1.2%	-	0.0%
2004	1,763,584,817	-1.2%	1,719,495,196	-3.7%	(44,089,620)	-2.5%
2005	1,737,700,792	-1.5%	1,607,373,233	-6.5%	(130,327,559)	-7.5%
2006	1,713,908,638	-1.4%	1,542,517,774	-4.0%	(171,390,864)	-10.0%
2007	1,695,012,840	-1.1%	1,542,461,684	0.0%	(152,551,156)	-9.0%
2008	1,678,645,677	-1.0%	1,544,354,022	0.1%	(134,291,654)	-8.0%
2009	1,651,980,074	-1.6%	1,536,341,469	-0.5%	(115,638,605)	-7.0%
2010	1,624,303,017	-1.7%	1,526,844,836	-0.6%	(97,458,181)	-6.0%
2011	1,613,981,590	-0.6%	1,533,282,510	0.4%	(80,699,079)	-5.0%
2012	1,603,637,175	-0.6%	1,539,491,688	0.4%	(64,145,487)	-4.0%
2013	1,595,108,779	-0.5%	1,547,255,516	0.5%	(47,853,263)	-3.0%
2014	1,588,350,428	-0.4%	1,556,583,420	0.6%	(31,767,009)	-2.0%
2015	1,582,833,407	-0.3%	1,567,005,073	0.7%	(15,828,334)	-1.0%
2016	1,578,189,914	-0.3%	1,578,189,914	0.7%	-	0.0%
2017	1,574,856,714	-0.2%	1,574,856,714	-0.2%	-	0.0%
2018	1,571,431,563	-0.2%	1,571,431,563	-0.2%	-	0.0%
2019	1,568,213,300	-0.2%	1,568,213,300	-0.2%	-	0.0%
2020	1,565,224,914	-0.2%	1,565,224,914	-0.2%	-	0.0%

Notes:

[1] Expressed in constant 2000 dollars.

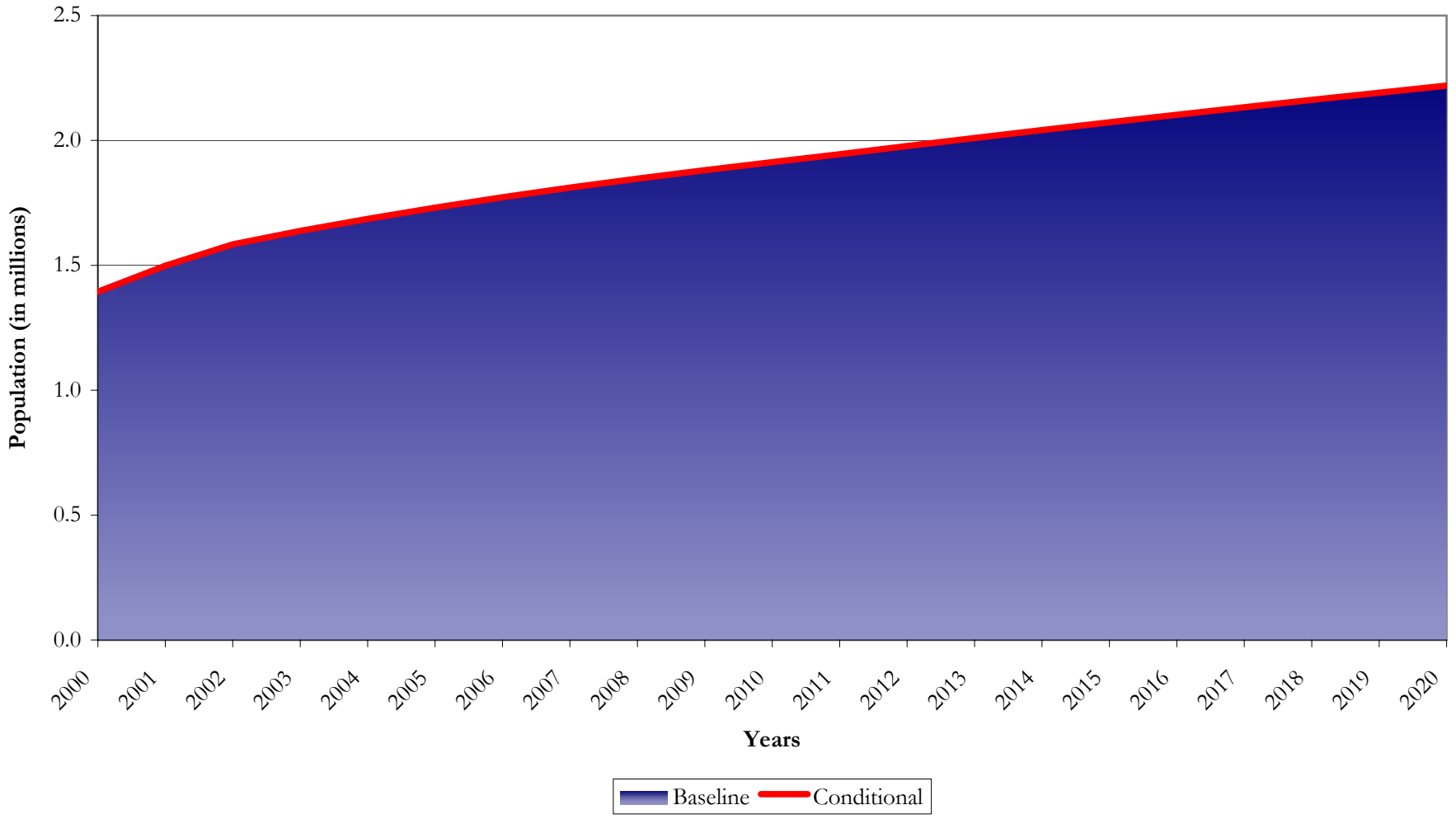
Appendix 5.1-AO
Conditional Impact Assessment Model
State and Local Tax Payments[1] - 10% Initial Impact, Rapid Recovery

	State and Local Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	420,564,371		420,564,371			
2001	416,357,741	-1.0%	416,357,741	-1.0%	-	0.0%
2002	430,779,689	3.5%	430,779,689	3.5%	-	0.0%
2003	425,439,241	-1.2%	425,439,241	-1.2%	-	0.0%
2004	420,219,296	-1.2%	409,713,813	-3.7%	(10,505,482)	-2.5%
2005	414,051,763	-1.5%	382,997,881	-6.5%	(31,053,882)	-7.5%
2006	408,382,672	-1.4%	367,544,405	-4.0%	(40,838,267)	-10.0%
2007	403,880,264	-1.1%	367,531,040	0.0%	(36,349,224)	-9.0%
2008	399,980,368	-1.0%	367,981,939	0.1%	(31,998,429)	-8.0%
2009	393,626,604	-1.6%	366,072,742	-0.5%	(27,553,862)	-7.0%
2010	387,031,836	-1.7%	363,809,926	-0.6%	(23,221,910)	-6.0%
2011	384,572,491	-0.6%	365,343,867	0.4%	(19,228,625)	-5.0%
2012	382,107,669	-0.6%	366,823,363	0.4%	(15,284,307)	-4.0%
2013	380,075,561	-0.5%	368,673,294	0.5%	(11,402,267)	-3.0%
2014	378,465,210	-0.4%	370,895,906	0.6%	(7,569,304)	-2.0%
2015	377,150,638	-0.3%	373,379,132	0.7%	(3,771,506)	-1.0%
2016	376,044,207	-0.3%	376,044,207	0.7%	-	0.0%
2017	375,249,987	-0.2%	375,249,987	-0.2%	-	0.0%
2018	374,433,857	-0.2%	374,433,857	-0.2%	-	0.0%
2019	373,667,023	-0.2%	373,667,023	-0.2%	-	0.0%
2020	372,954,963	-0.2%	372,954,963	-0.2%	-	0.0%

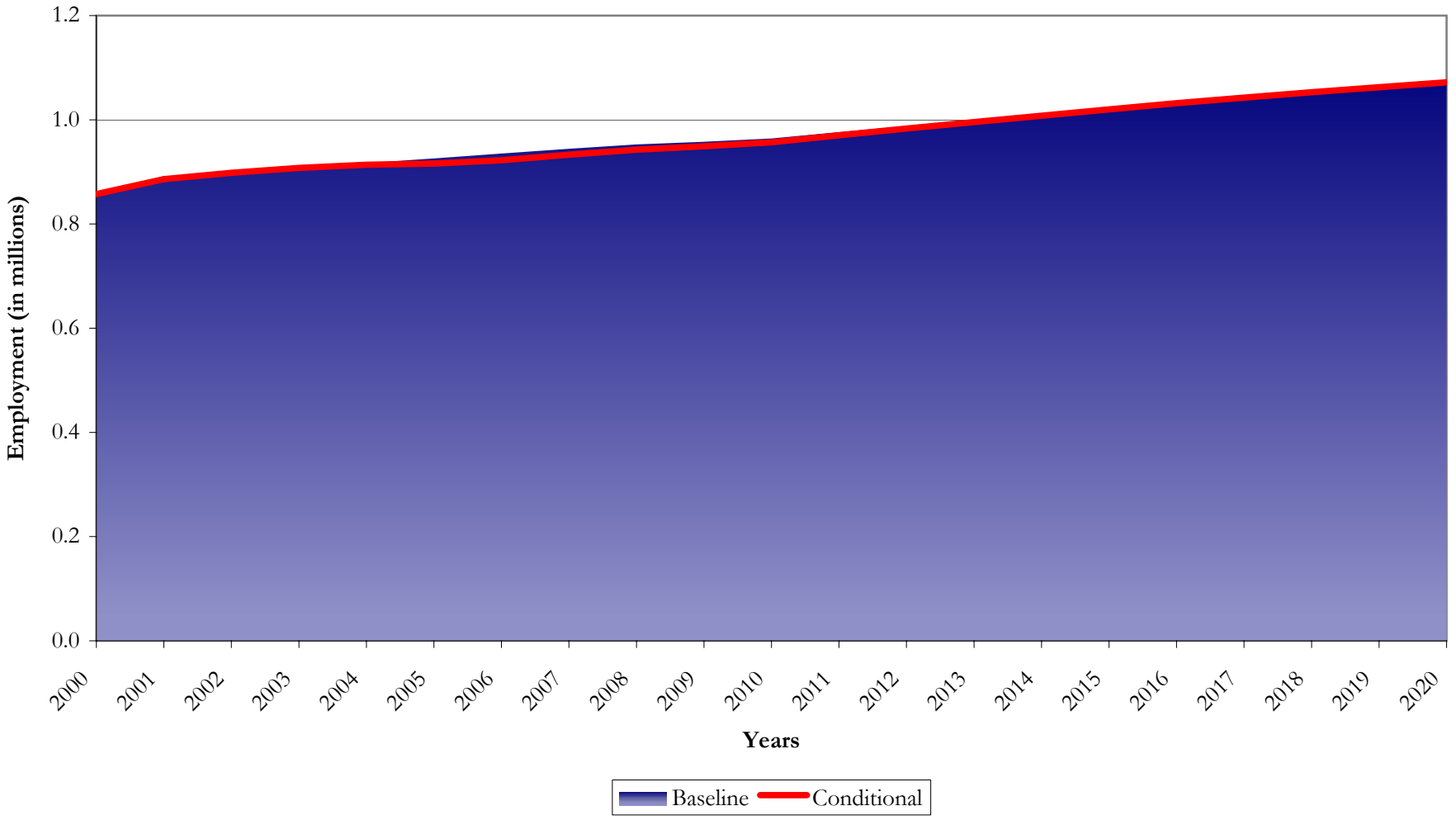
Notes:

[1] Expressed in constant 2000 dollars.

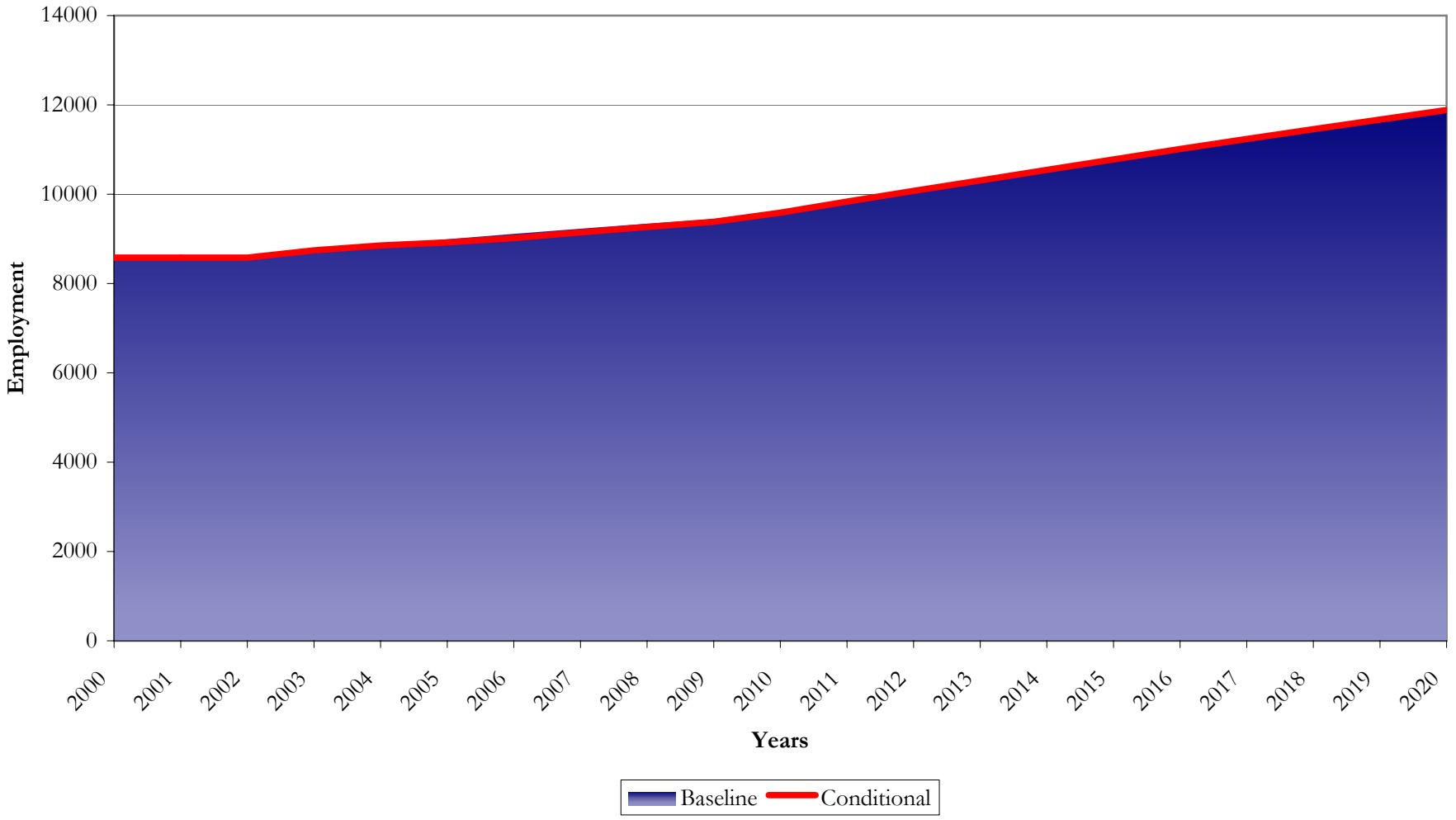
Appendix 5.2-A
Conditional Impact Assessment Model
Population - 10% Initial Impact, Rapid Recovery



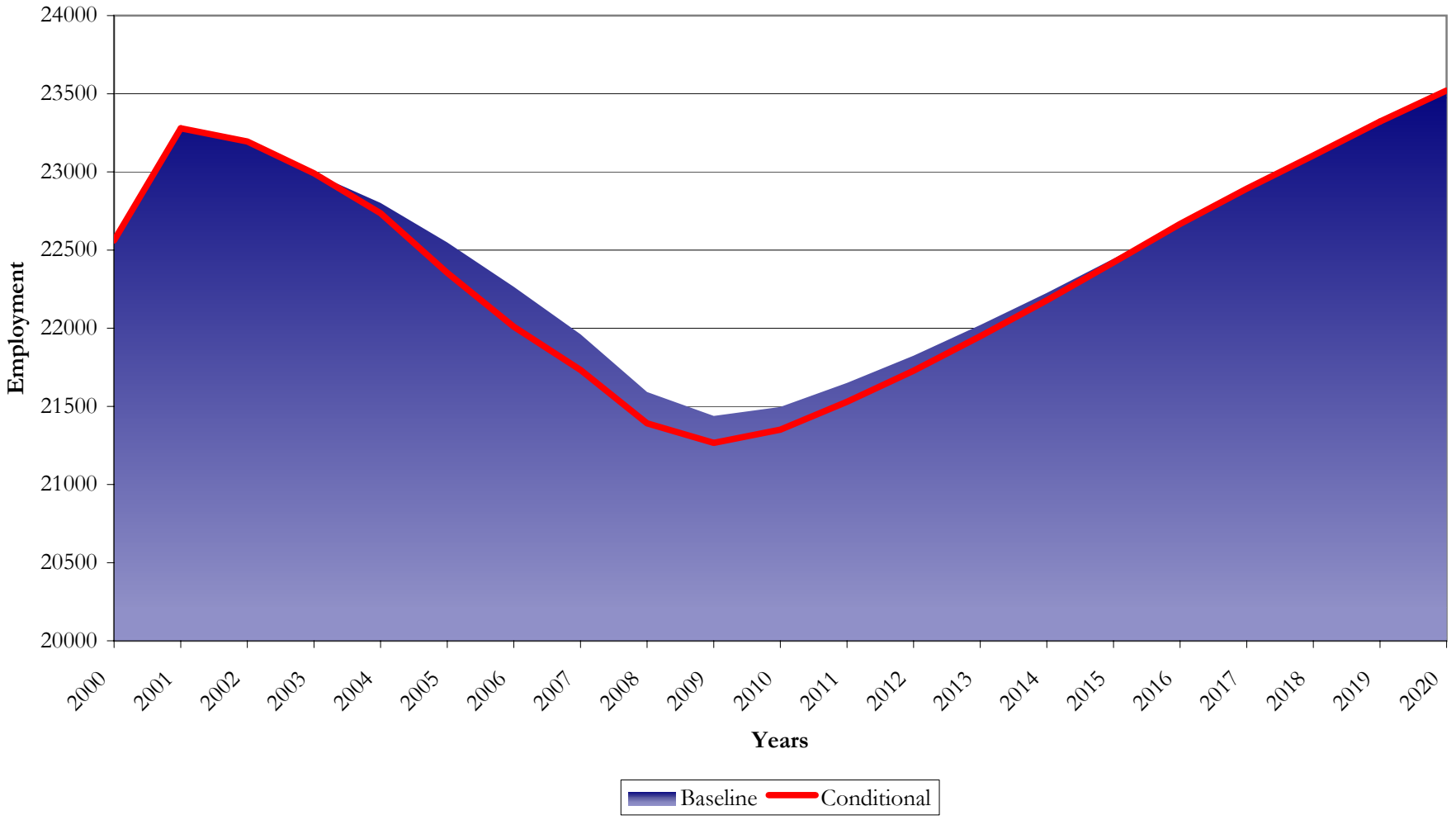
Appendix 5.2-B
Conditional Impact Assessment Model
Employment - 10% Initial Impact, Rapid Recovery



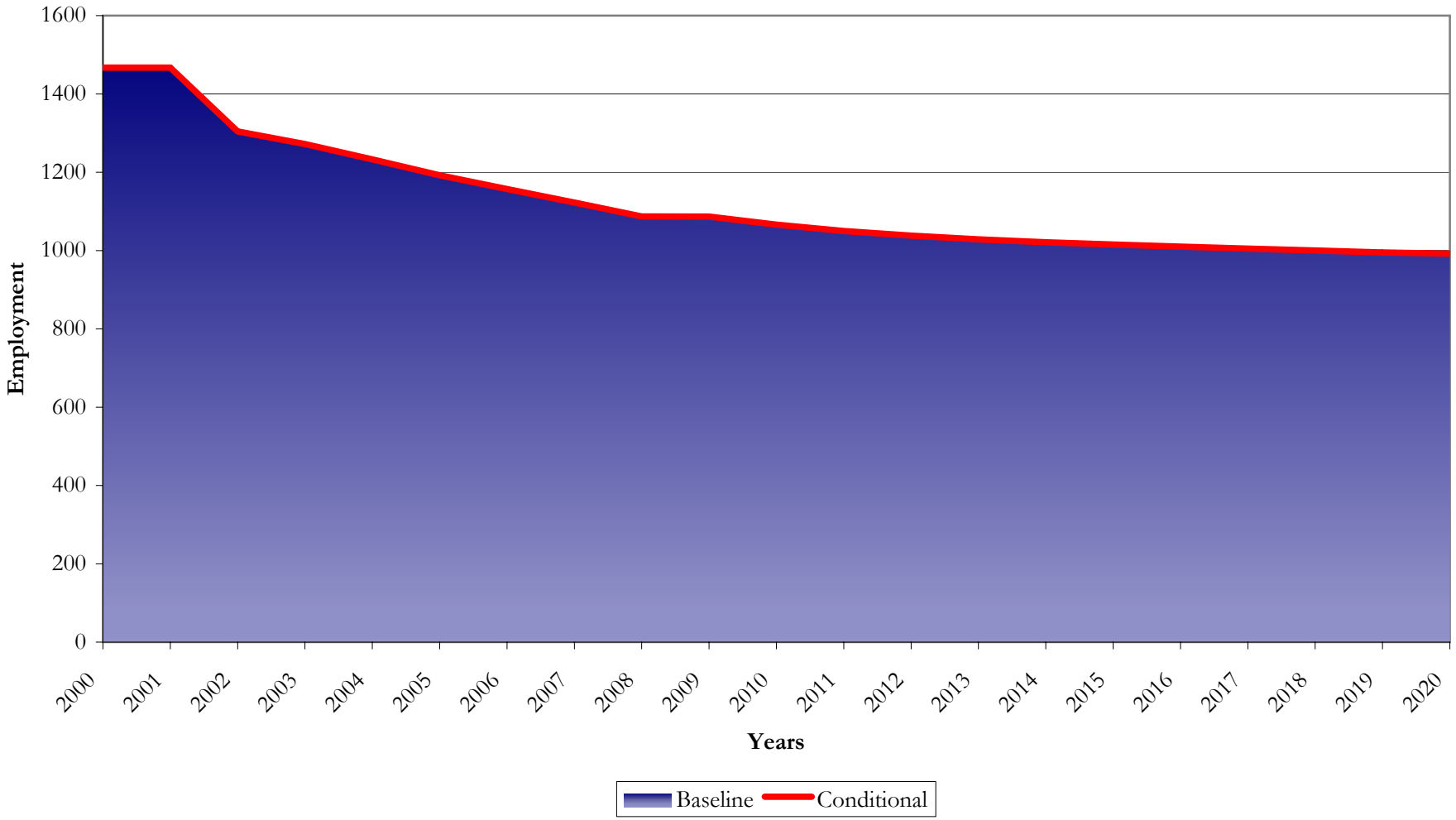
Appendix 5.2-C
Conditional Impact Assessment Model
Employment (Agriculture, Fishing and Forestry) - 10% Initial Impact, Rapid Recovery



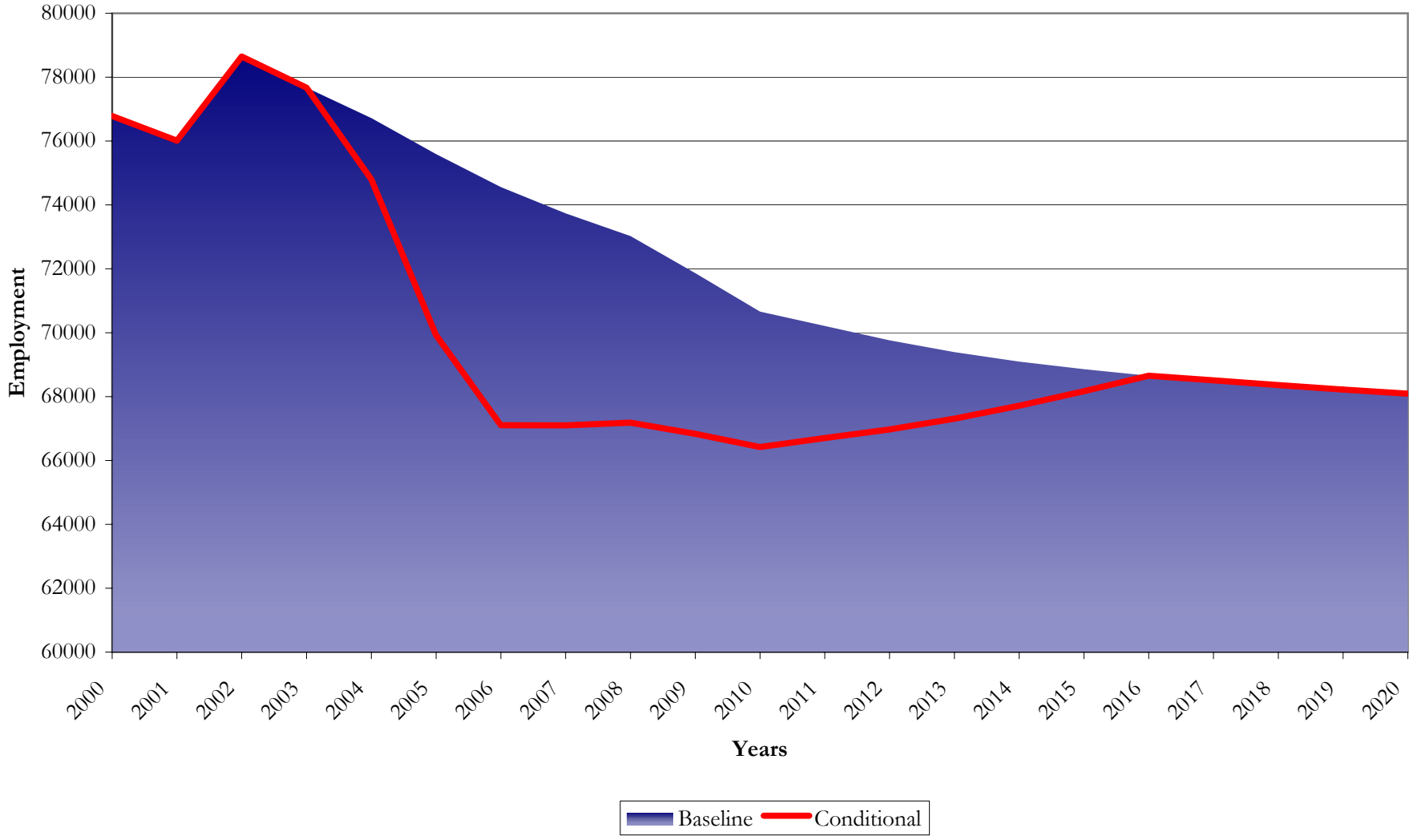
Appendix 5.2-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 10% Initial Impact, Rapid Recovery



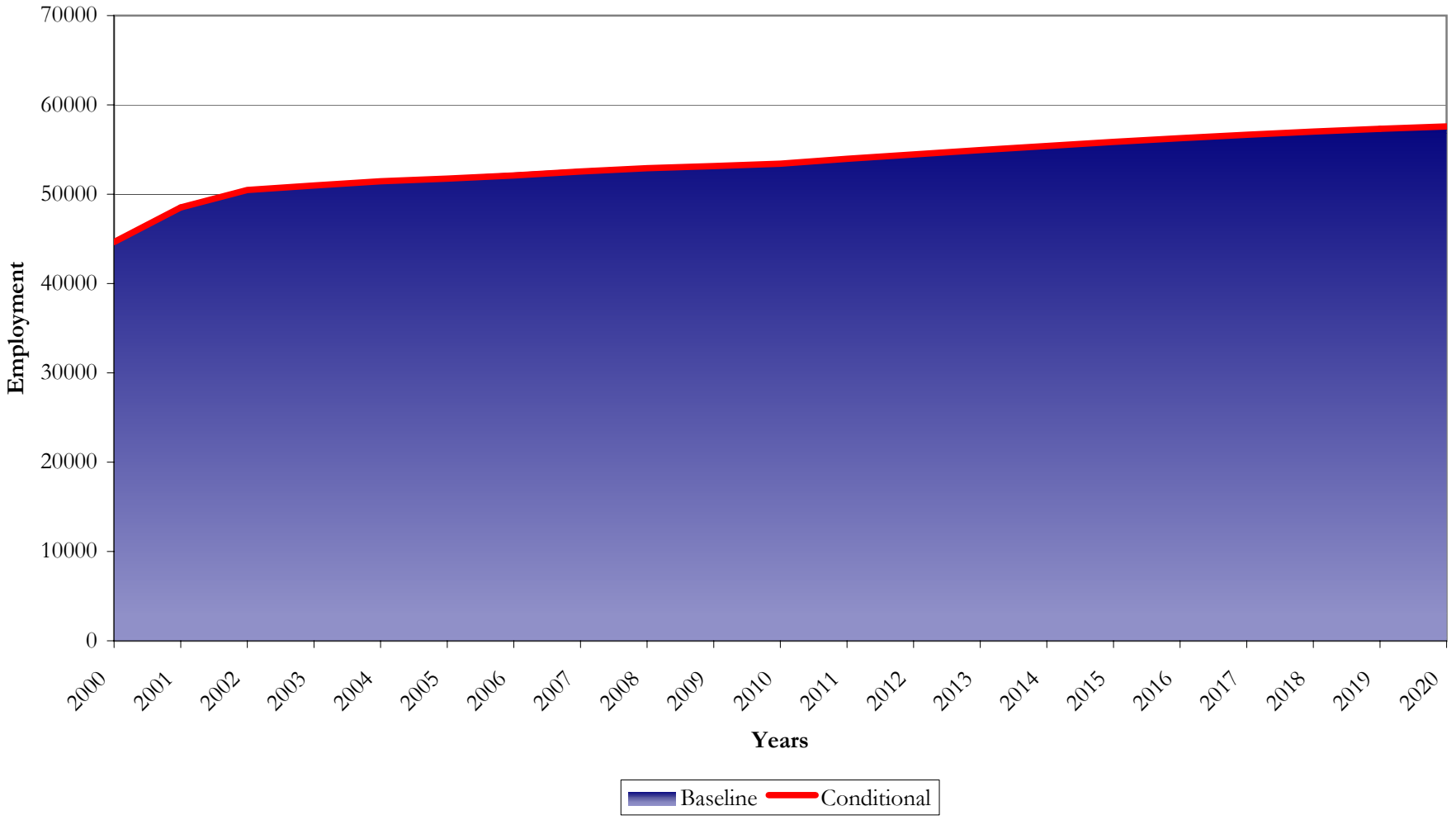
Appendix 5.2-E
Conditional Impact Assessment Model
Employment (Mining) - 10% Initial Impact, Rapid Recovery



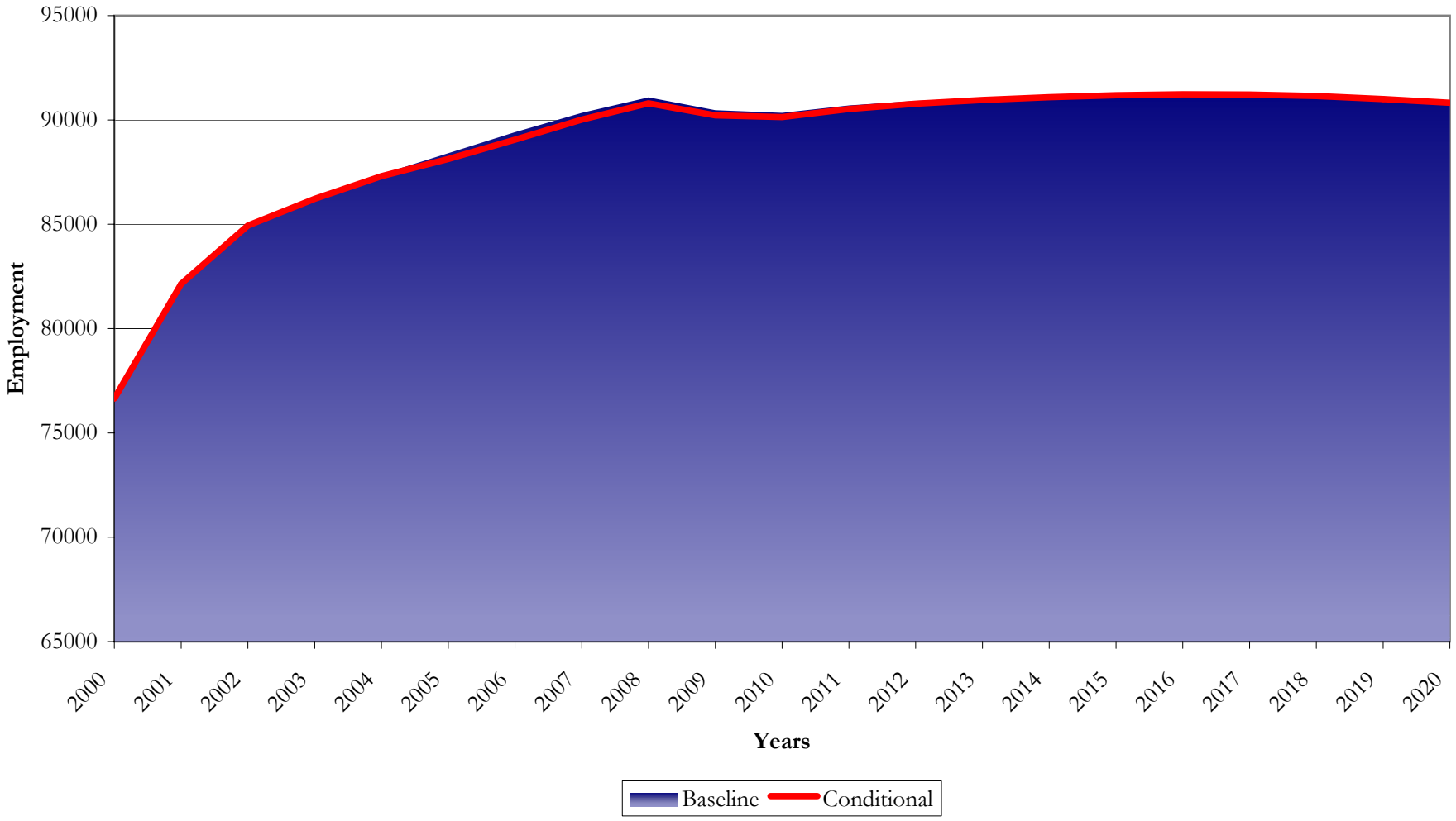
Appendix 5.2-F
Conditional Impact Assessment Model
Employment (Construction) - 10% Initial Impact, Rapid Recovery



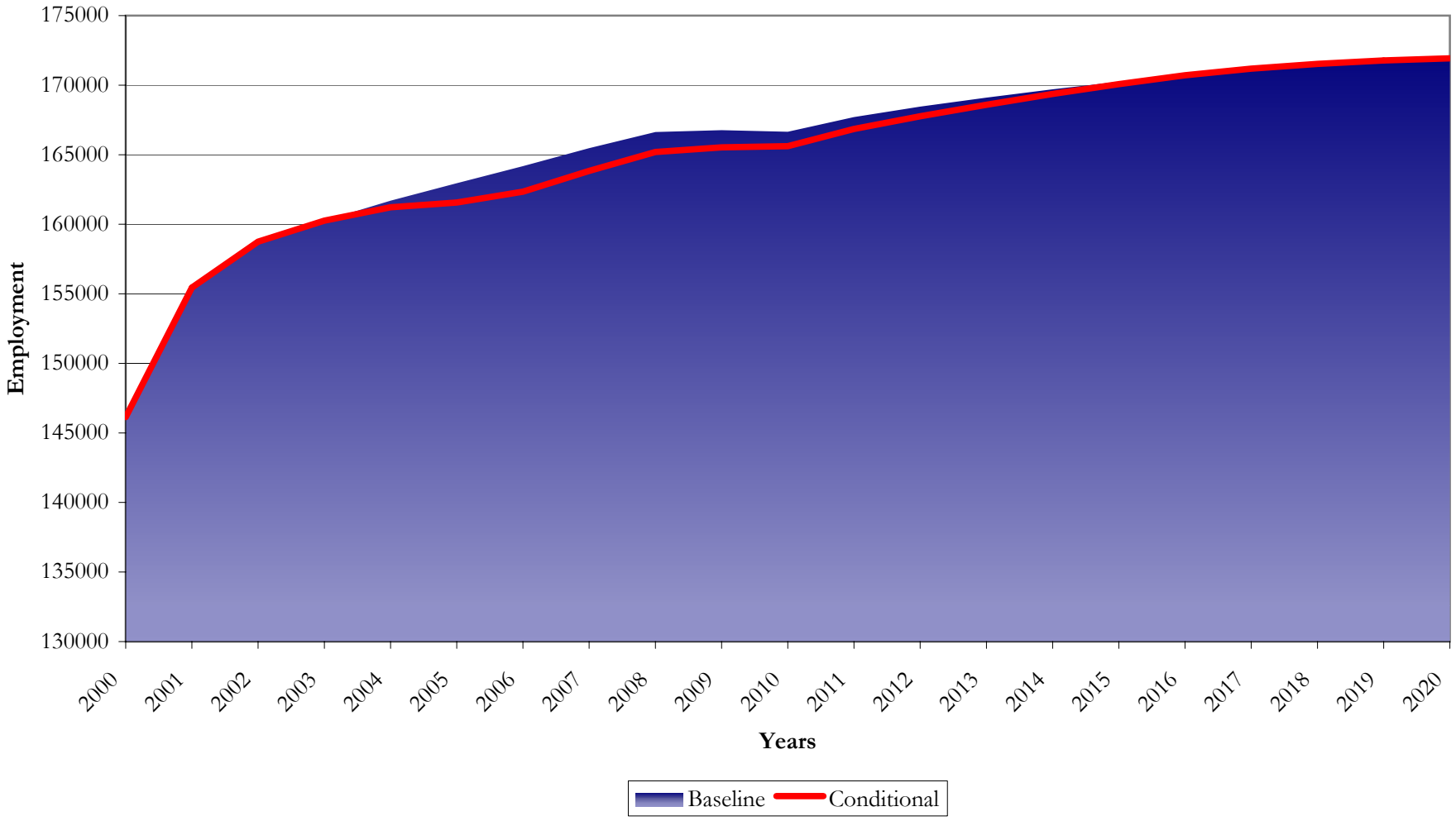
Appendix 5.2-G
Conditional Impact Assessment Model
Employment (T.C.P.U.) - 10% Initial Impact, Rapid Recovery



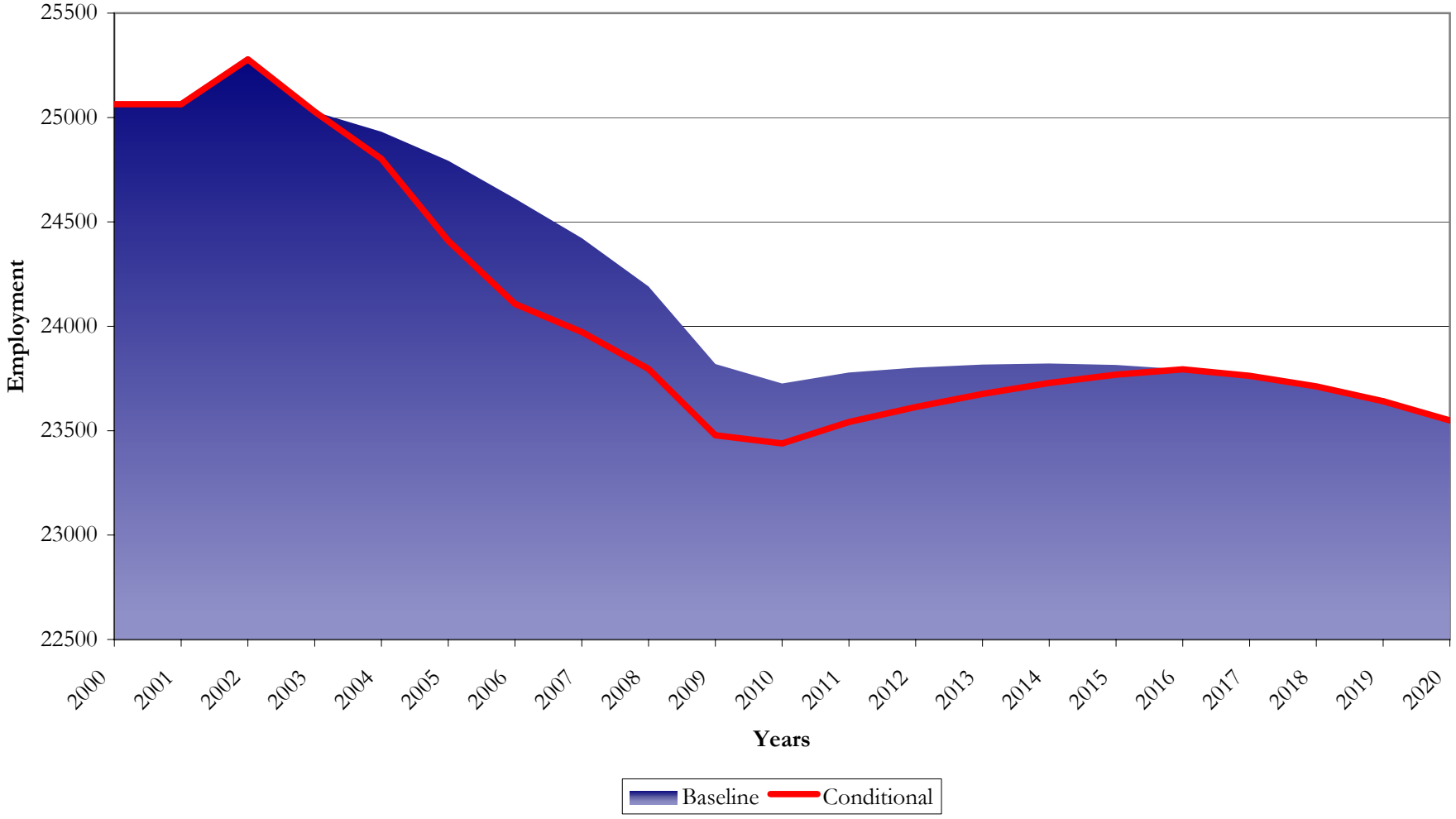
Appendix 5.2-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 10% Initial Impact, Rapid Recovery



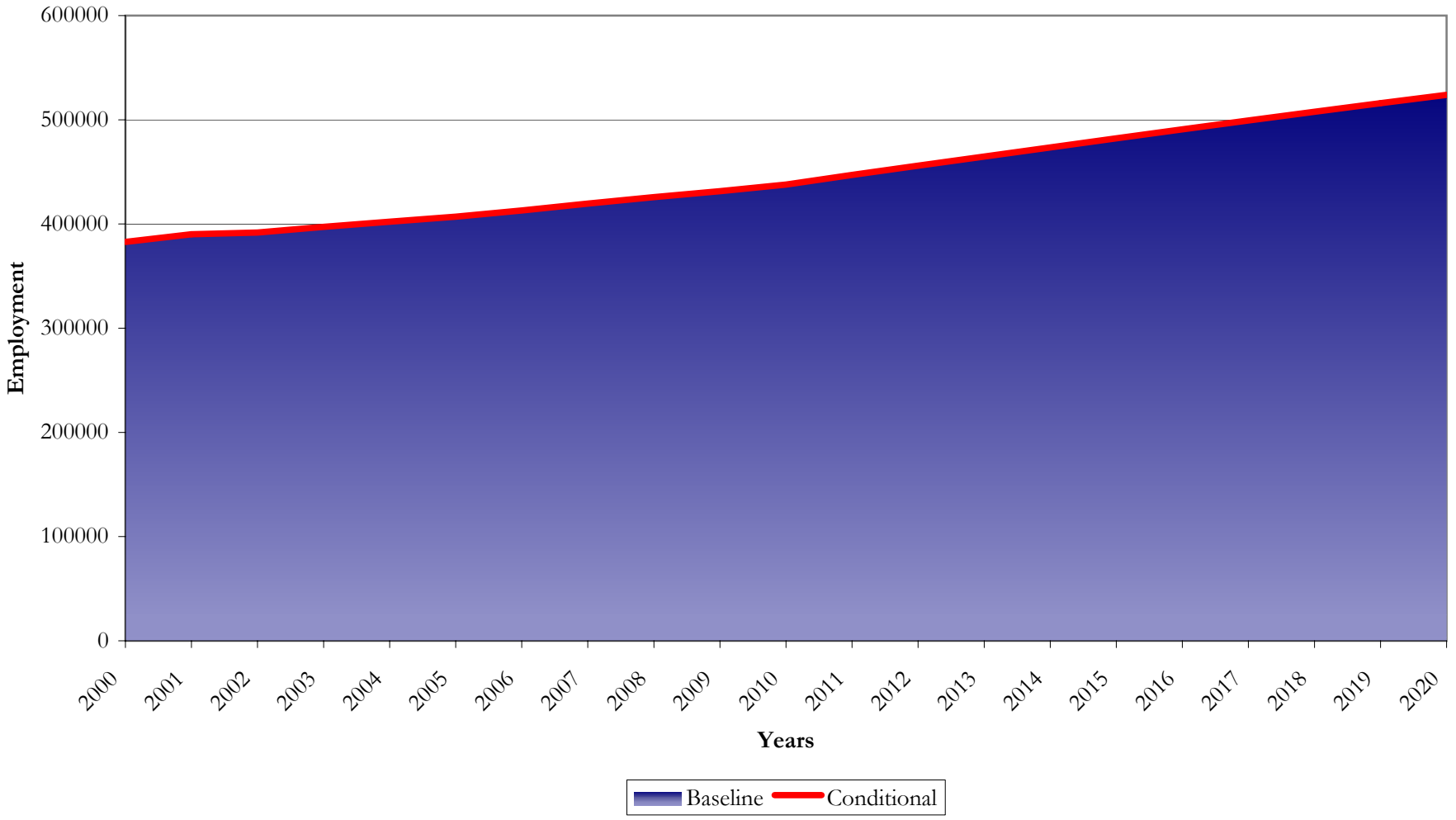
Appendix 5.2-I
Conditional Impact Assessment Model
Employment (Retail Trade) - 10% Initial Impact, Rapid Recovery



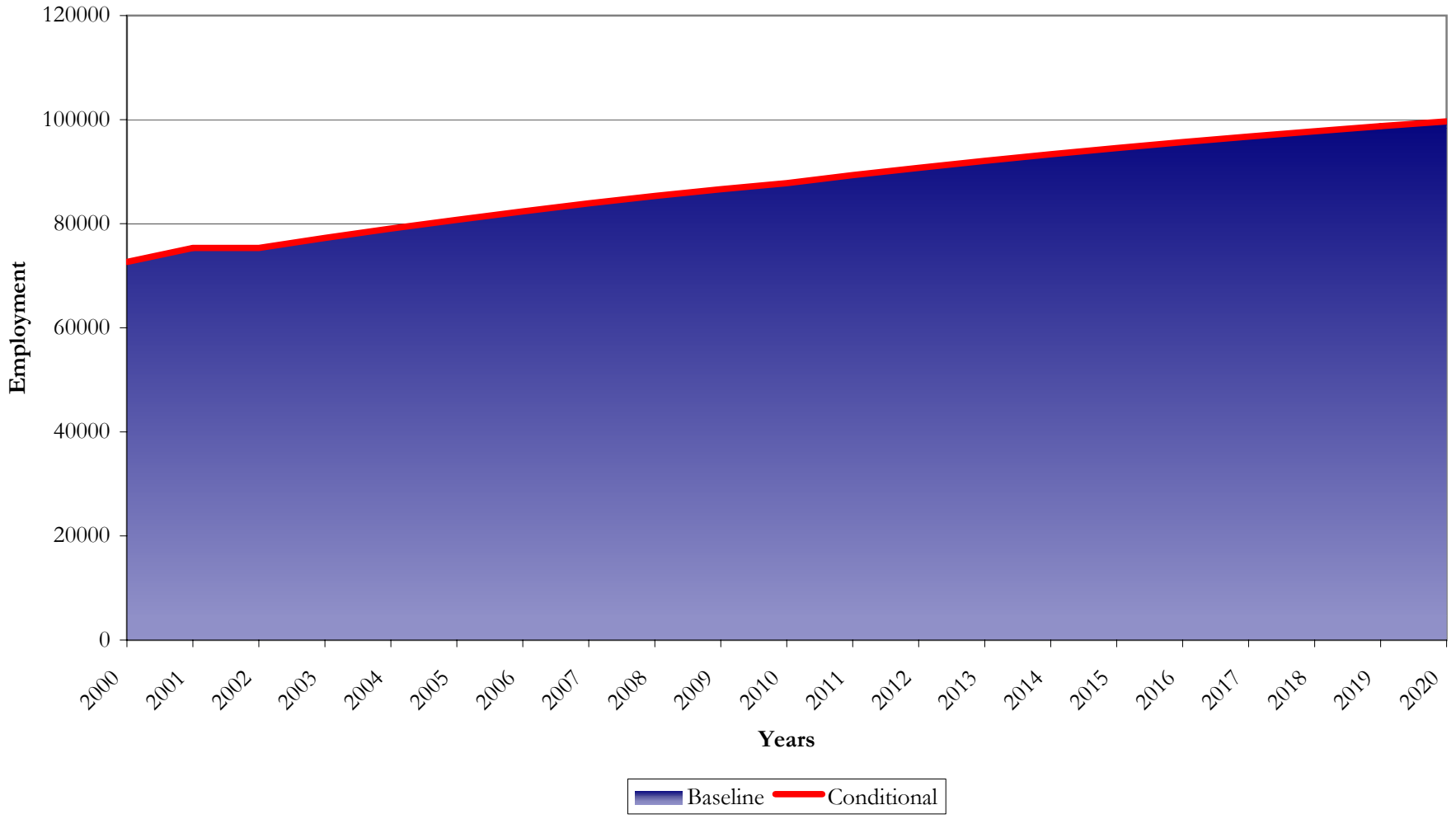
Appendix 5.2-J
Conditional Impact Assessment Model
Employment (Wholesale Trade) - 10% Initial Impact, Rapid Recovery



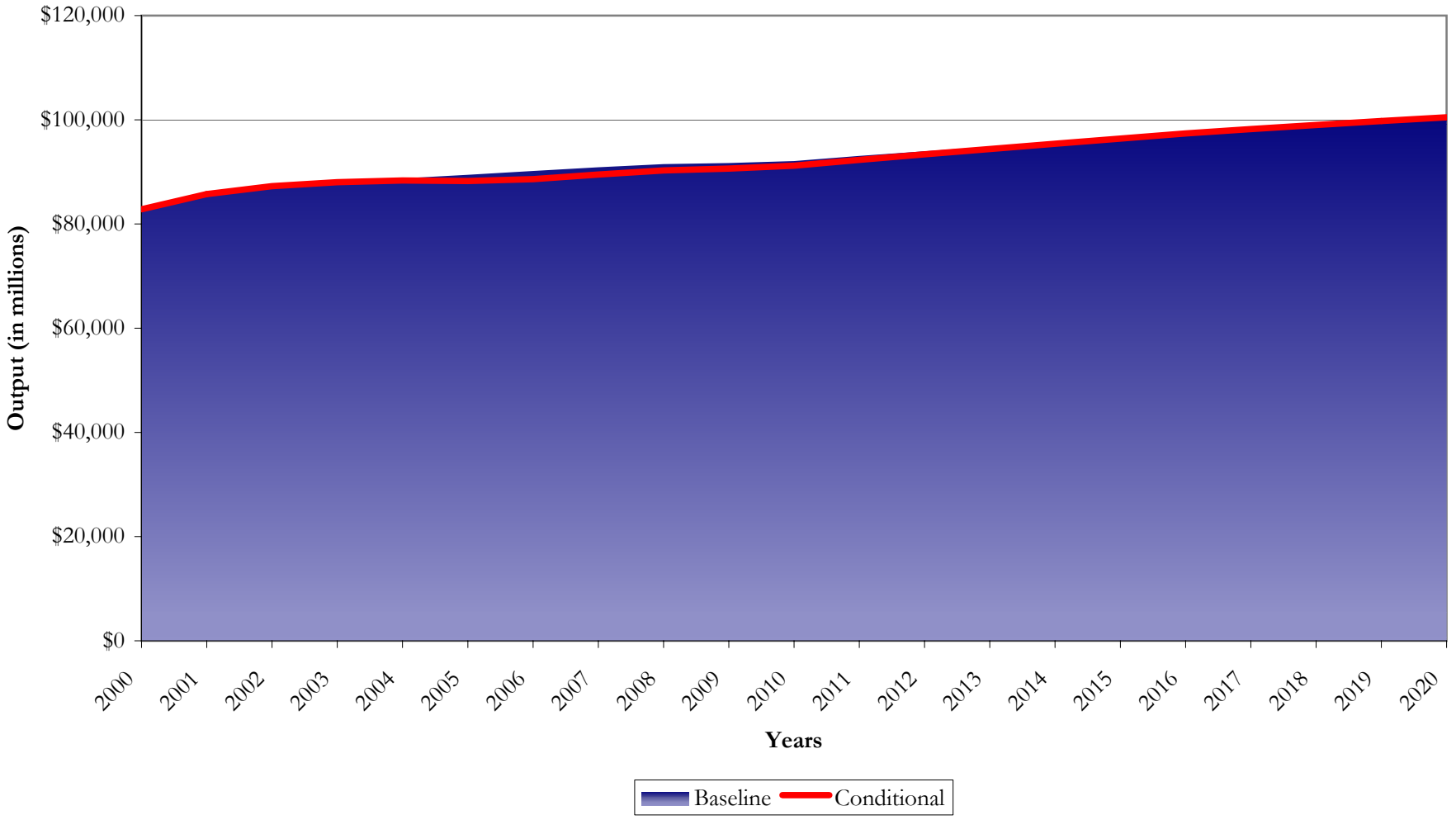
Appendix 5.2-K
Conditional Impact Assessment Model
Employment (Services) - 10% Initial Impact, Rapid Recovery



Appendix 5.2-L
Conditional Impact Assessment Model
Employment (Government) - 10% Initial Impact, Rapid Recovery

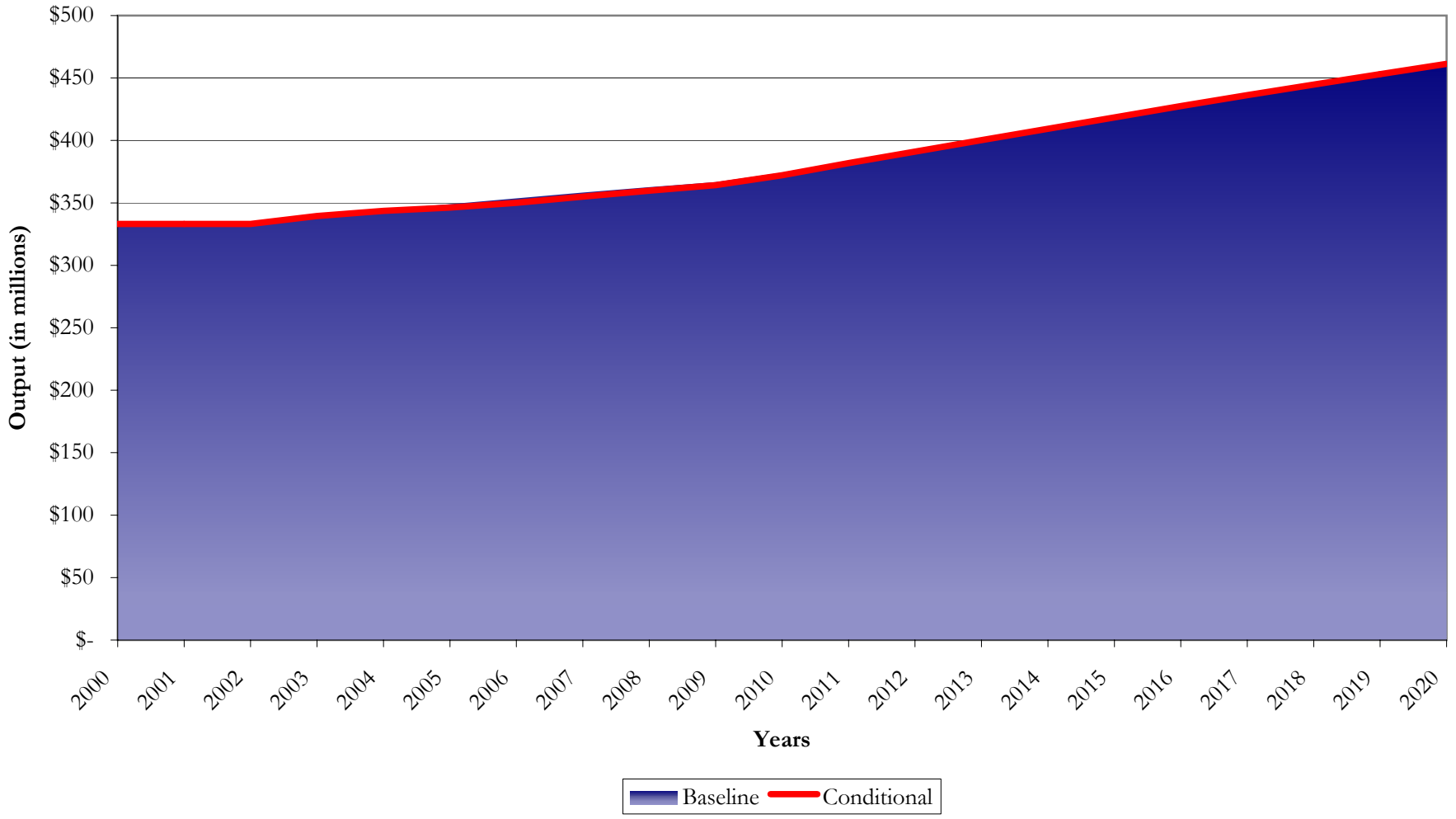


Appendix 5.2-M
Conditional Impact Assessment Model
Output - 10% Initial Impact, Rapid Recovery



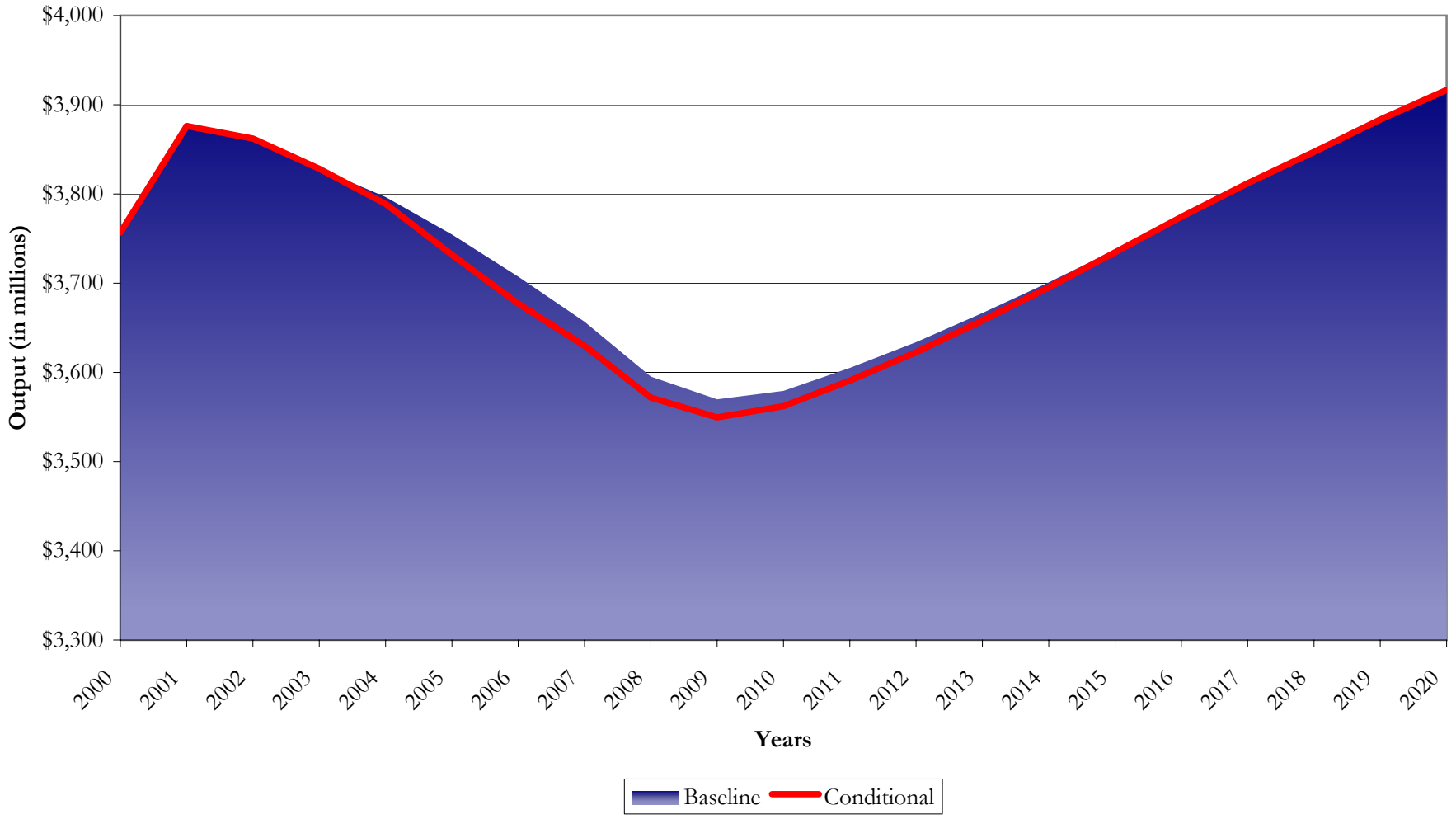
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-N
Conditional Impact Assessment Model
Output (Agriculture, Fishing and Forestry) - 10% Initial Impact, Rapid Recovery



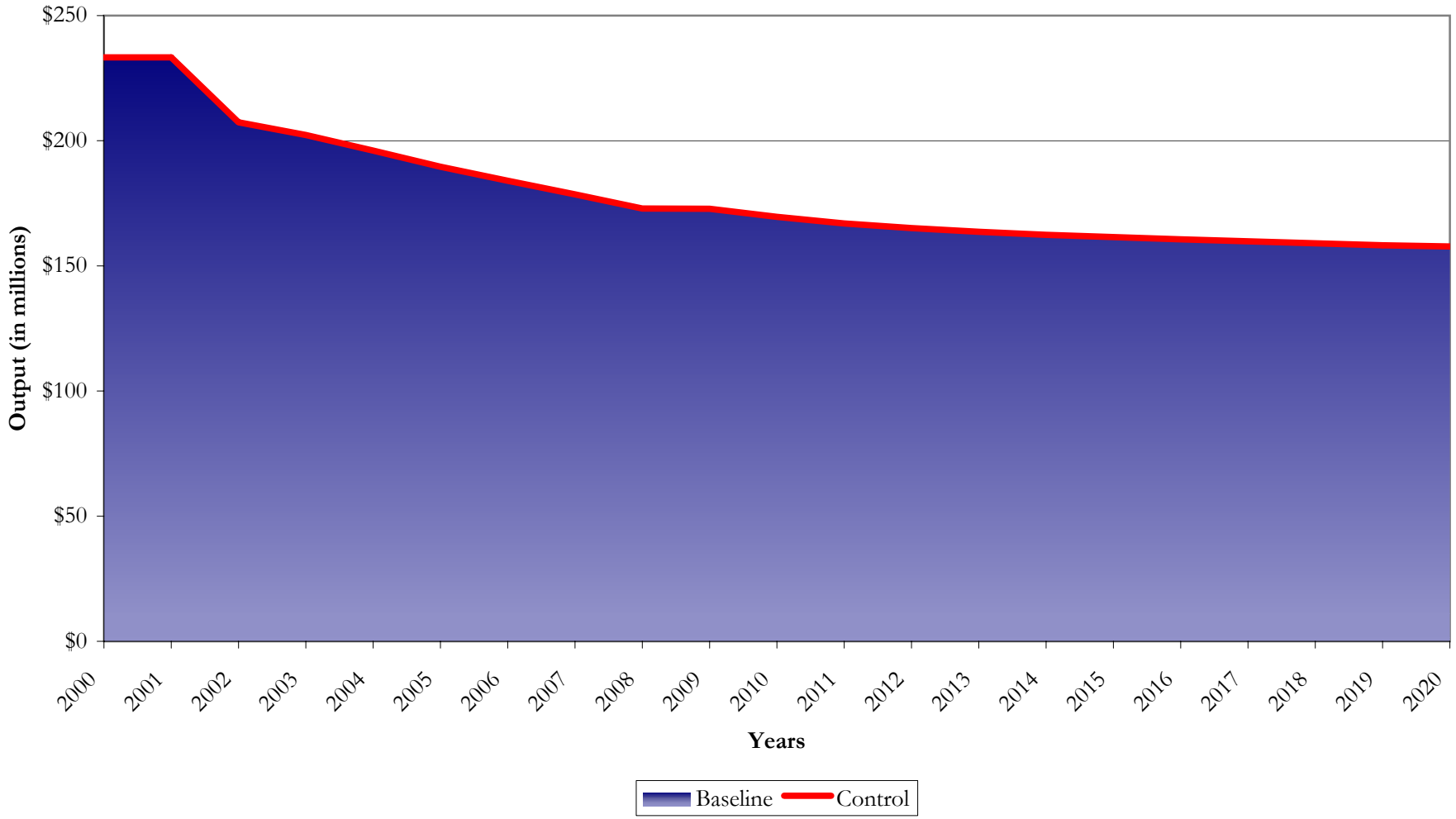
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-O
Conditional Impact Assessment Model
Output (Manufacturing) - 10% Initial Impact, Rapid Recovery



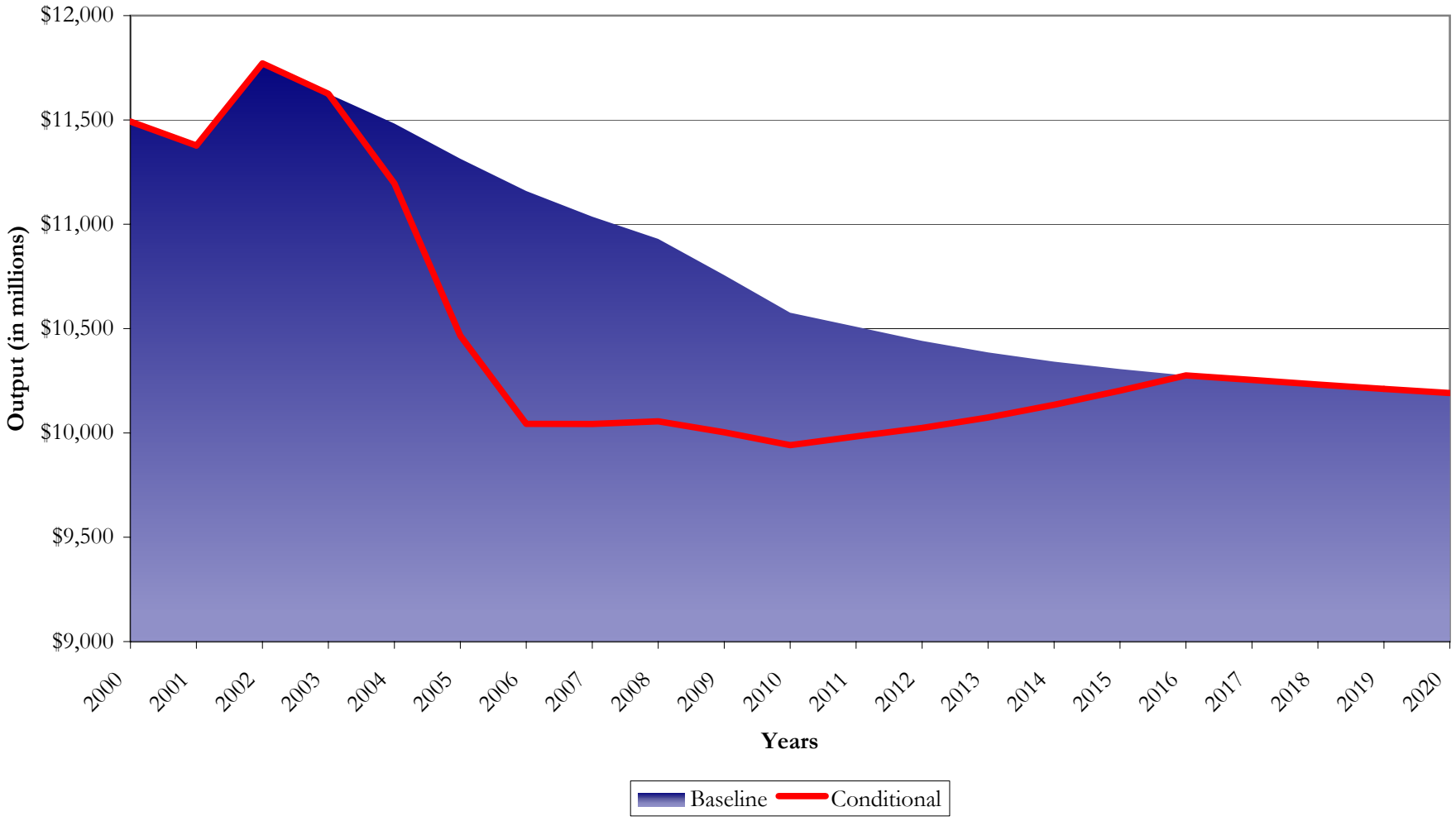
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-P
Conditional Impact Assessment Model
Output (Mining) - 10% Initial Impact, Rapid Recovery



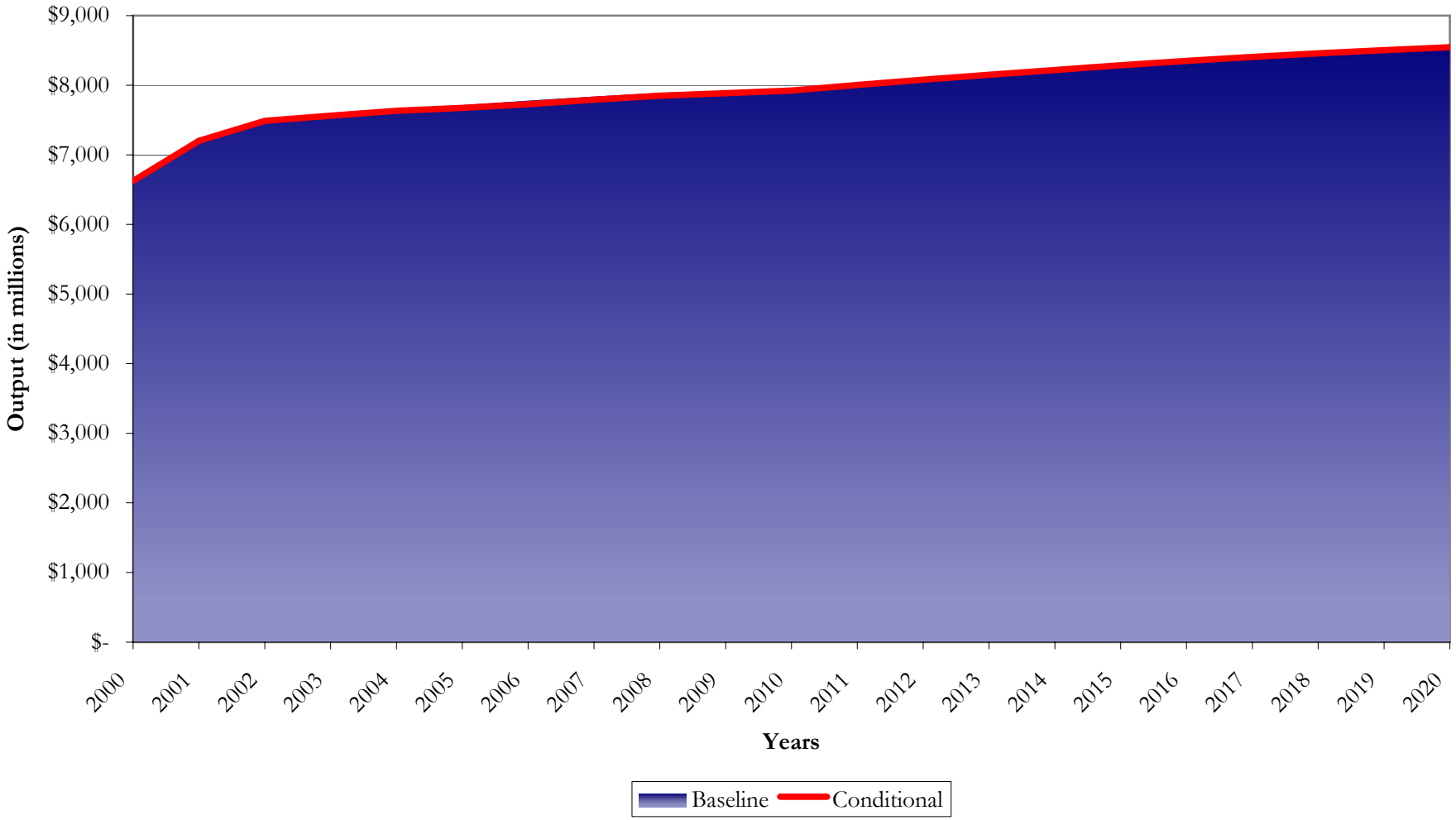
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-Q
Conditional Impact Assessment Model
Output (Construction) - 10% Initial Impact, Rapid Recovery



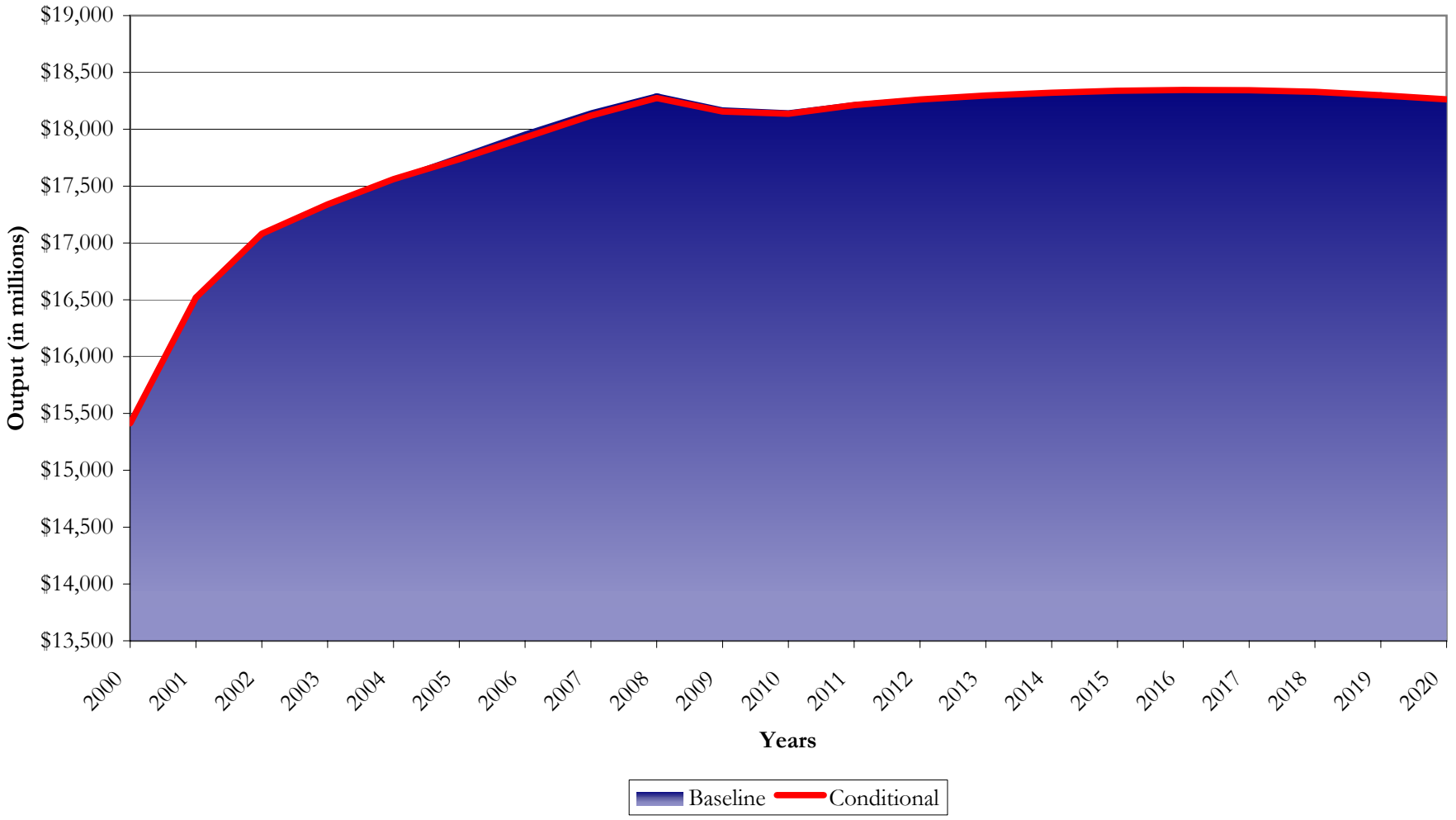
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-R
Conditional Impact Assessment Model
Output (T.C.P.U.) - 10% Initial Impact, Rapid Recovery



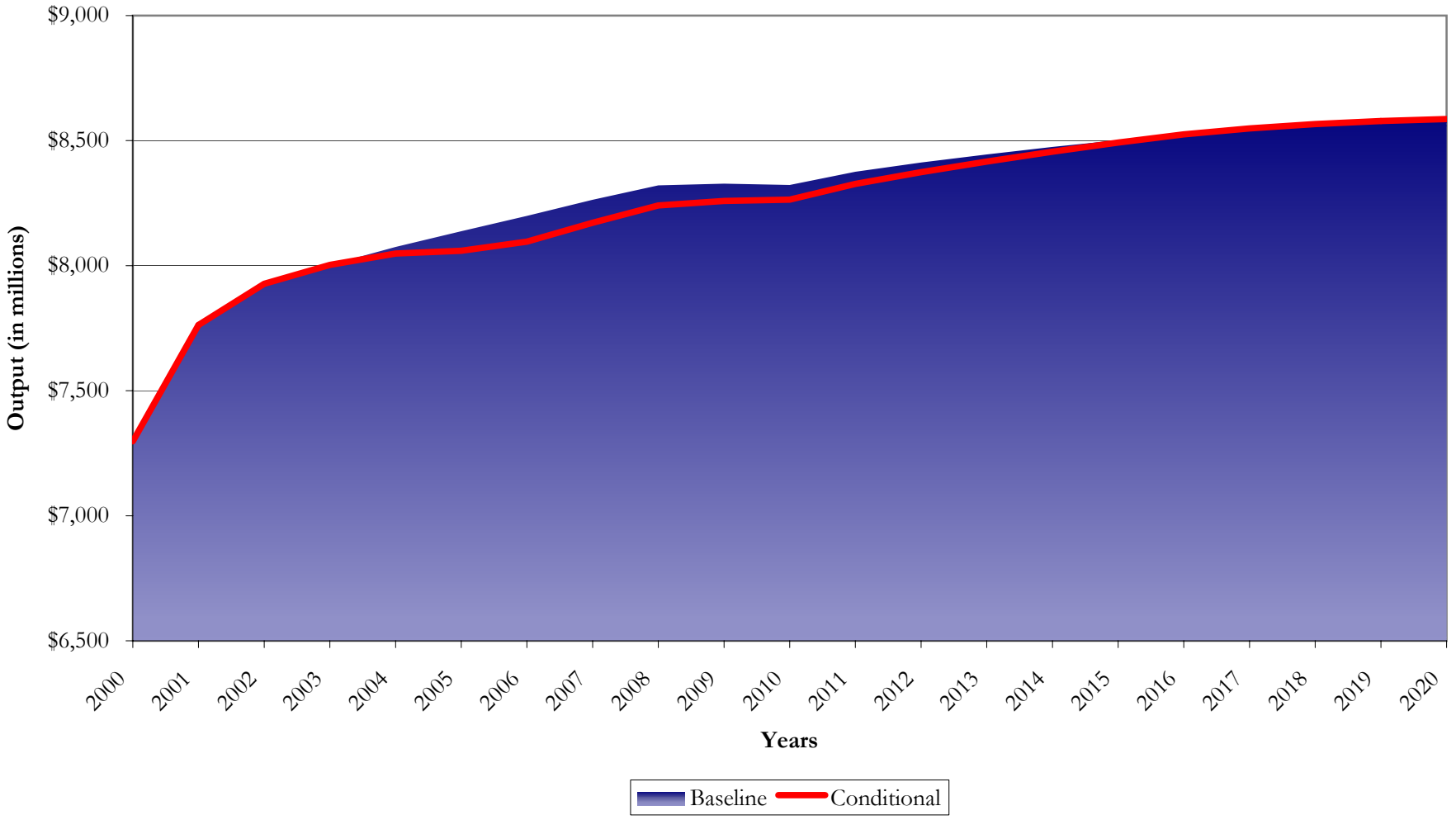
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-S
Conditional Impact Assessment Model
Output (F.I.R.E.) - 10% Initial Impact, Rapid Recovery



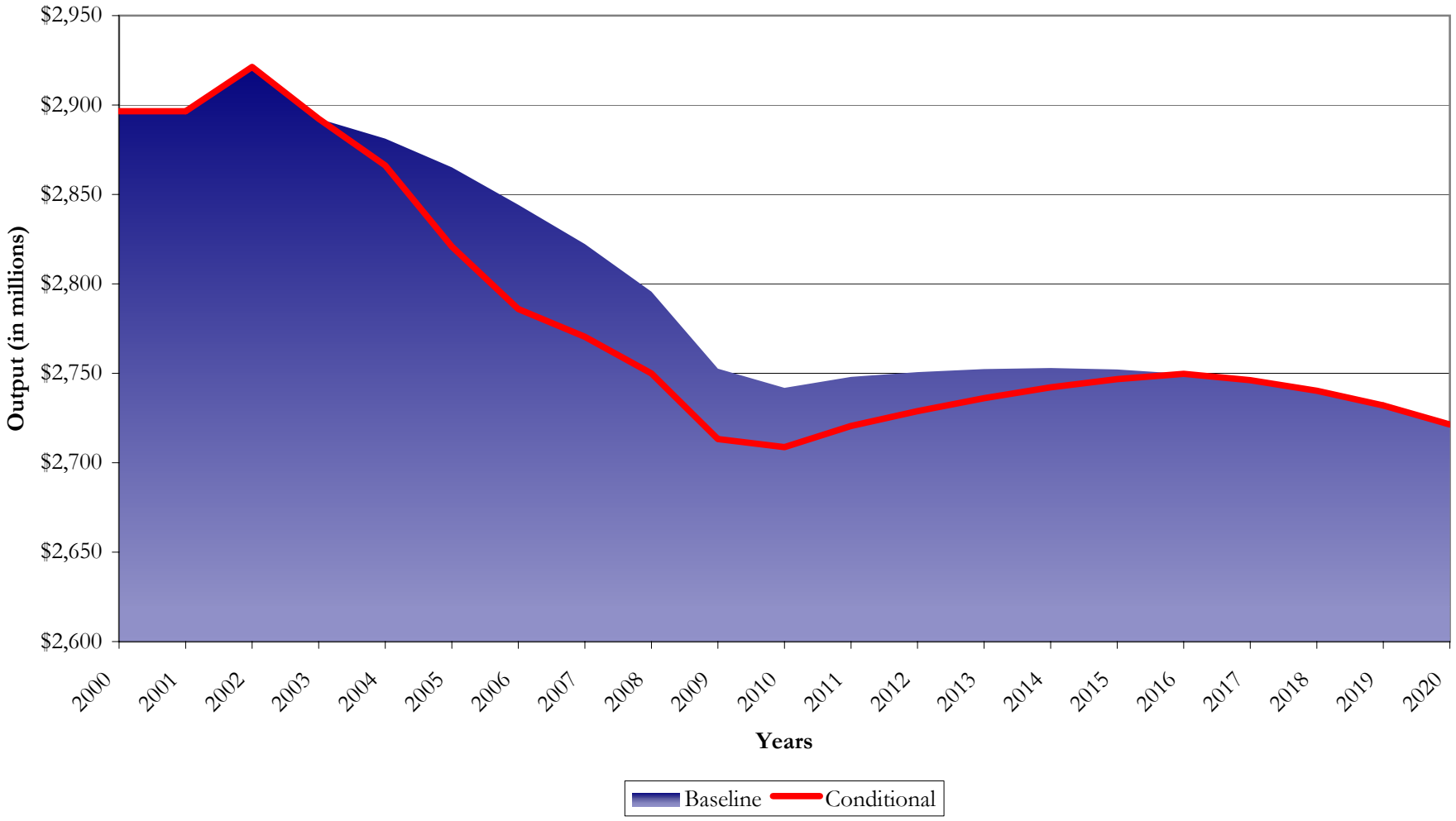
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-T
Conditional Impact Assessment Model
Output (Retail Trade) - 10% Initial Impact, Rapid Recovery



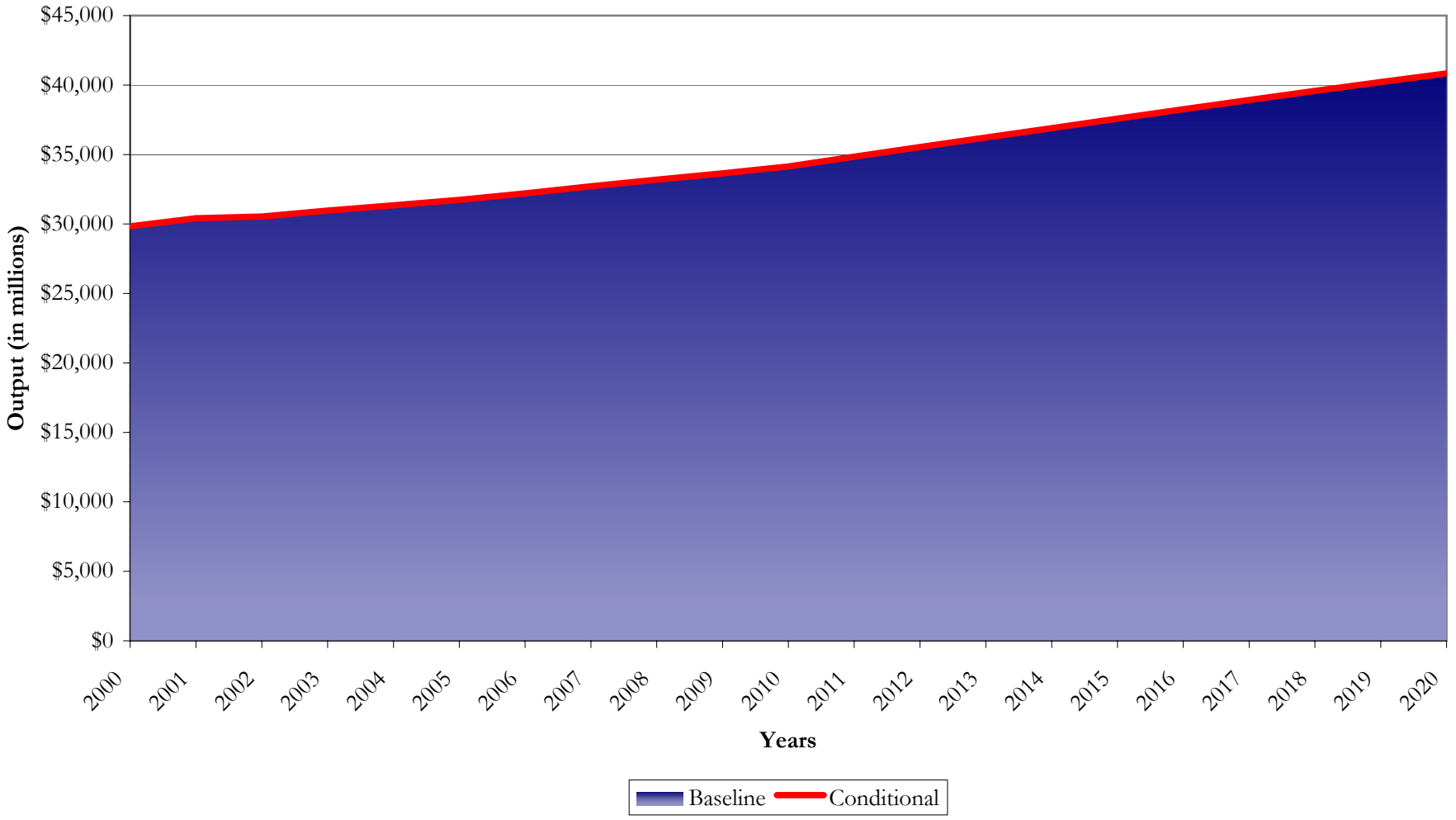
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-U
Conditional Impact Assessment Model
Output (Wholesale Trade) - 10% Initial Impact, Rapid Recovery



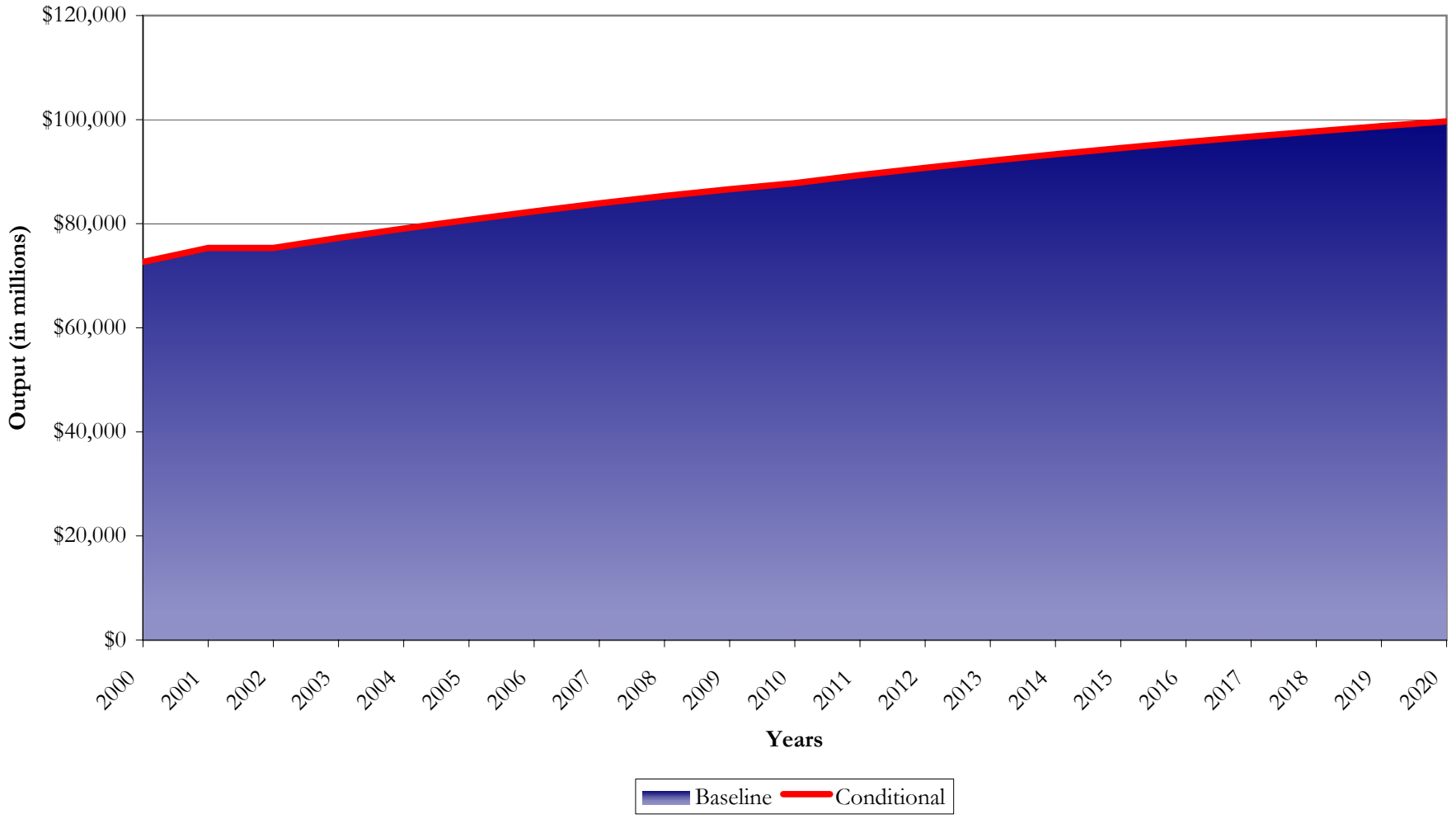
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-V
Conditional Impact Assessment Model
Output (Services) - 10% Initial Impact, Rapid Recovery



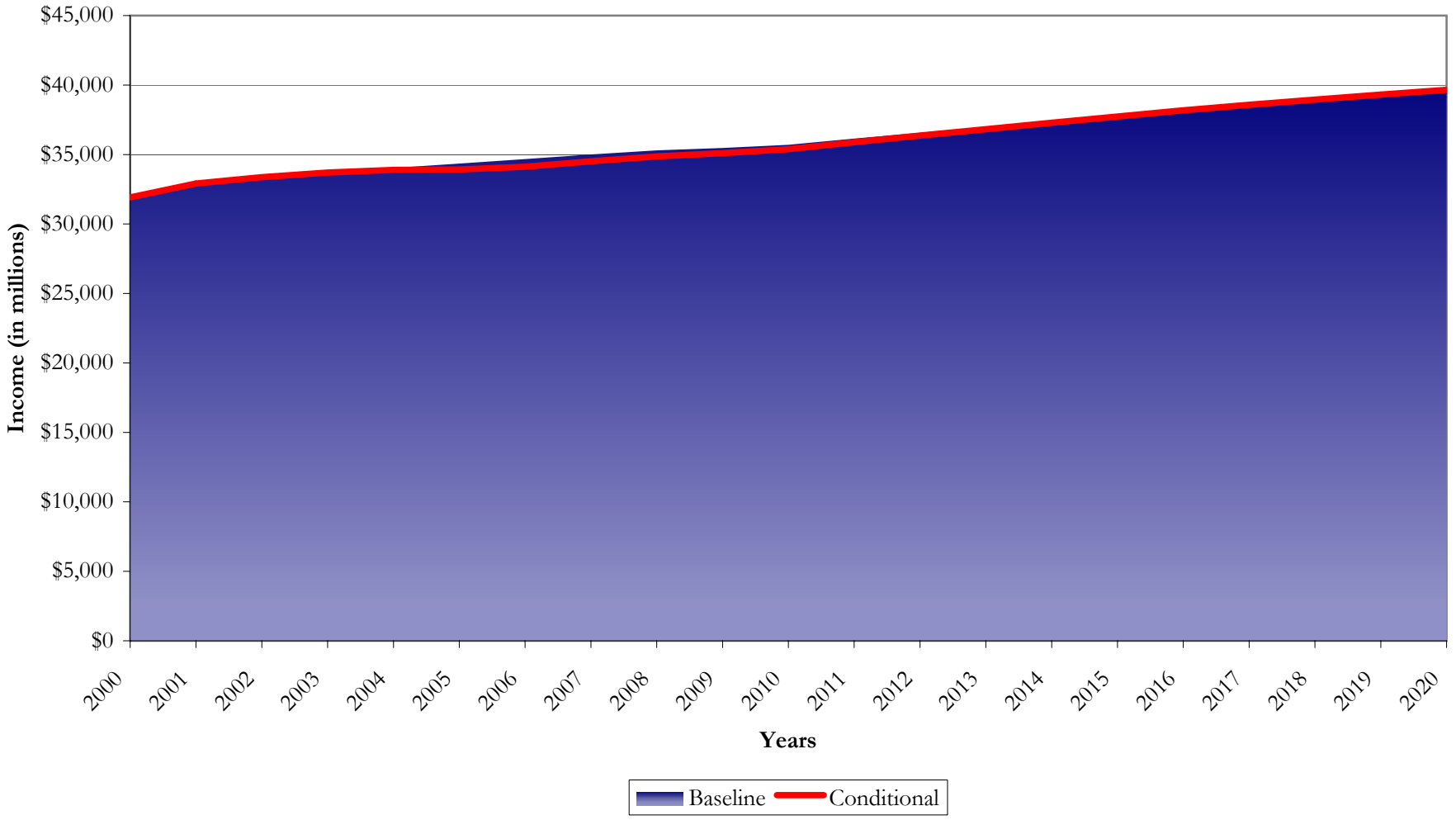
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-W
Conditional Impact Assessment Model
Output (Government) - 10% Initial Impact, Rapid Recovery



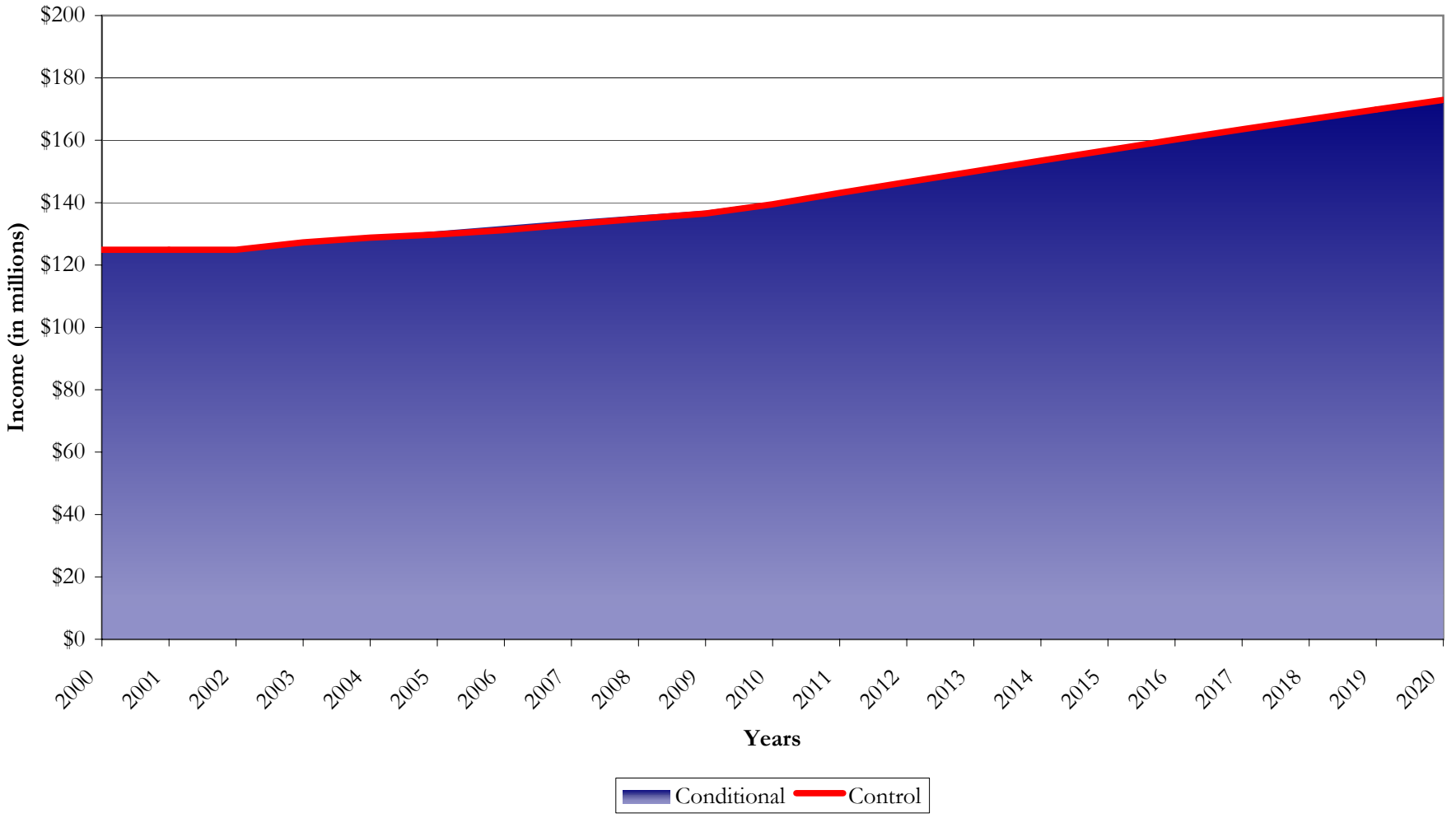
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-X
Conditional Impact Assessment Model
Labor Income - 10% Initial Impact, Rapid Recovery



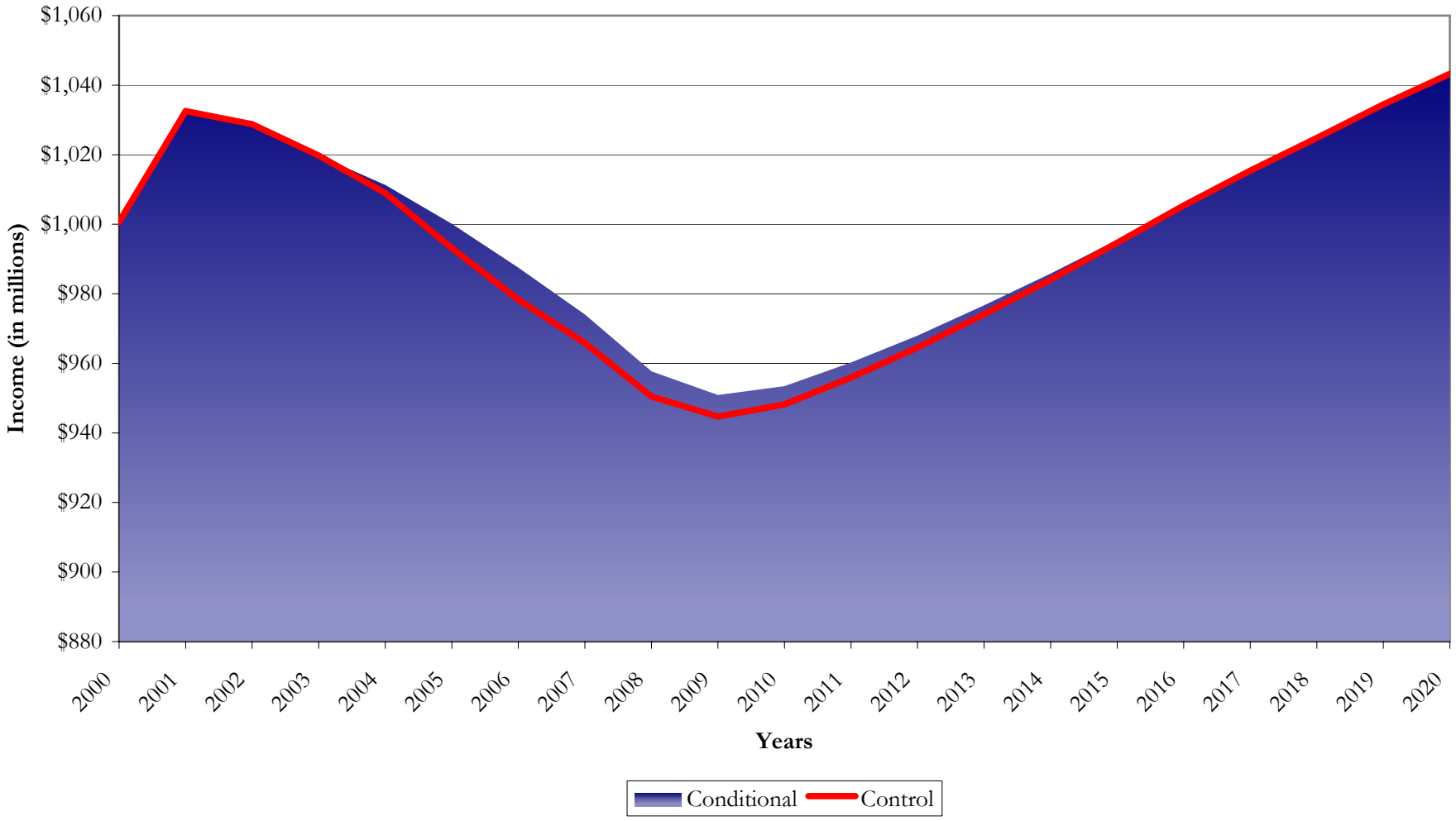
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-Y
Conditional Impact Assessment Model
Labor Income (Agriculture, Fishing and Forestry) - 10% Initial Impact, Rapid Recovery



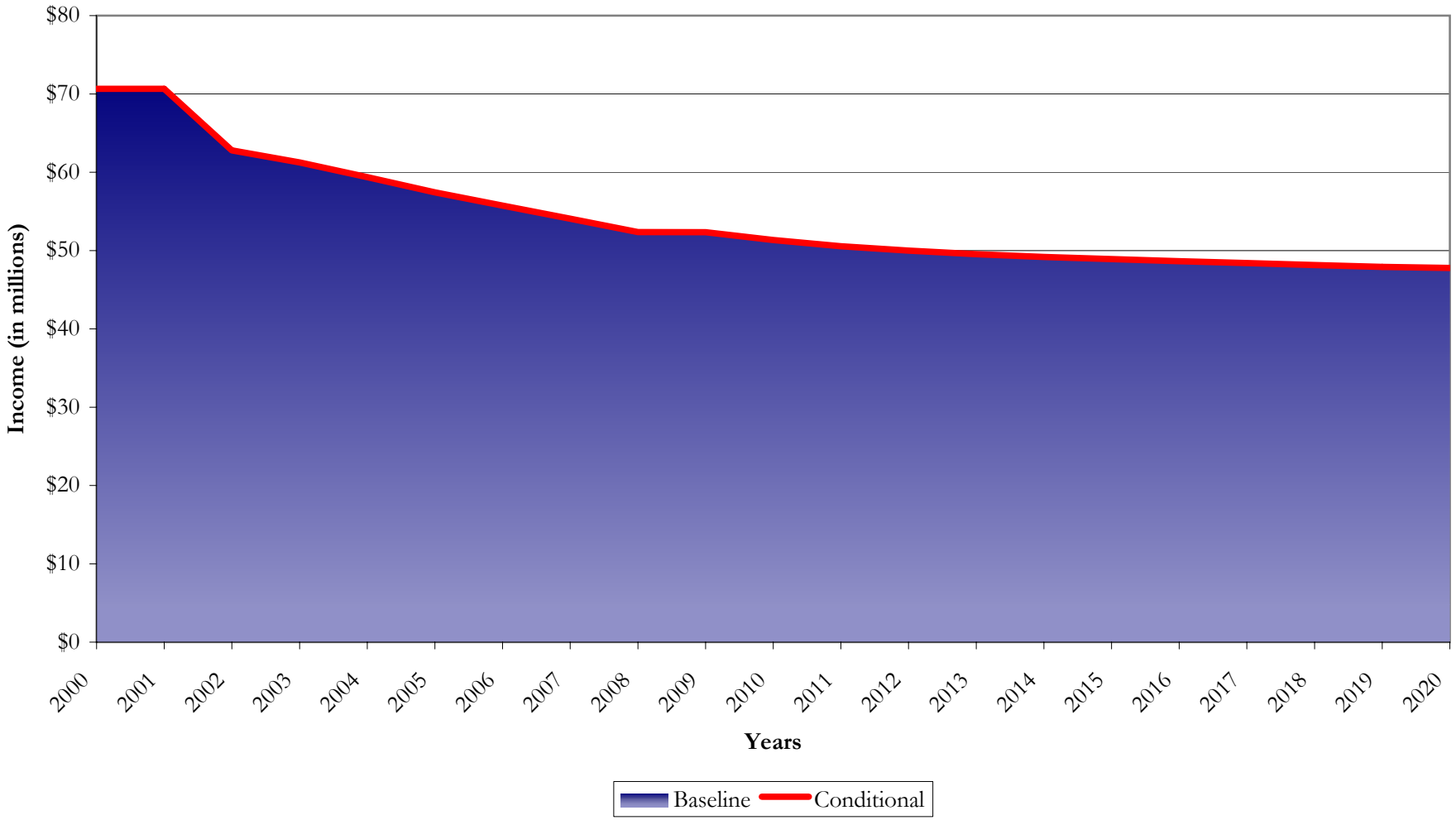
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing) - 10% Initial Impact, Rapid Recovery



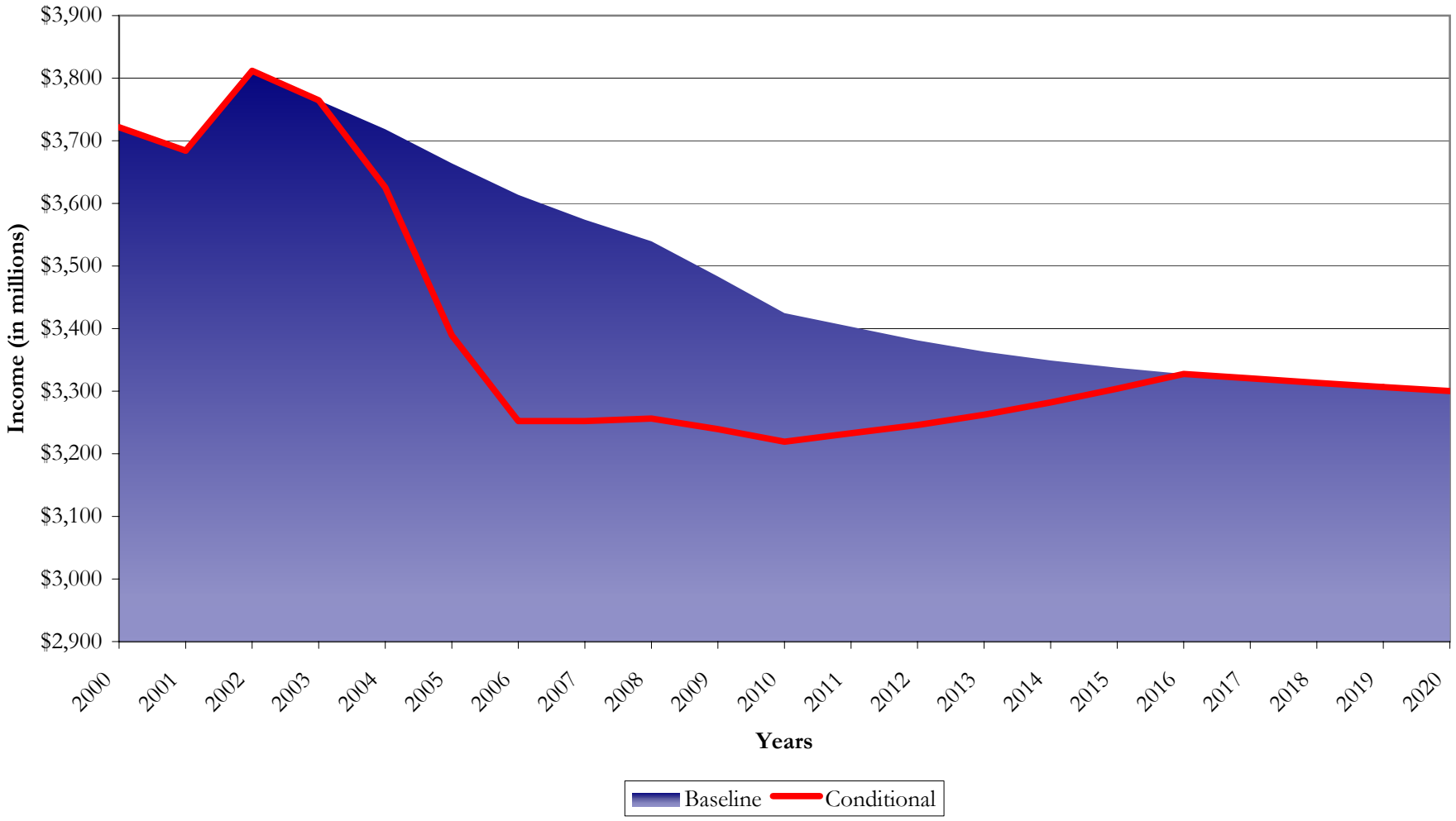
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AA
Conditional Impact Assessment Model
Labor Income (Mining) - 10% Initial Impact, Rapid Recovery



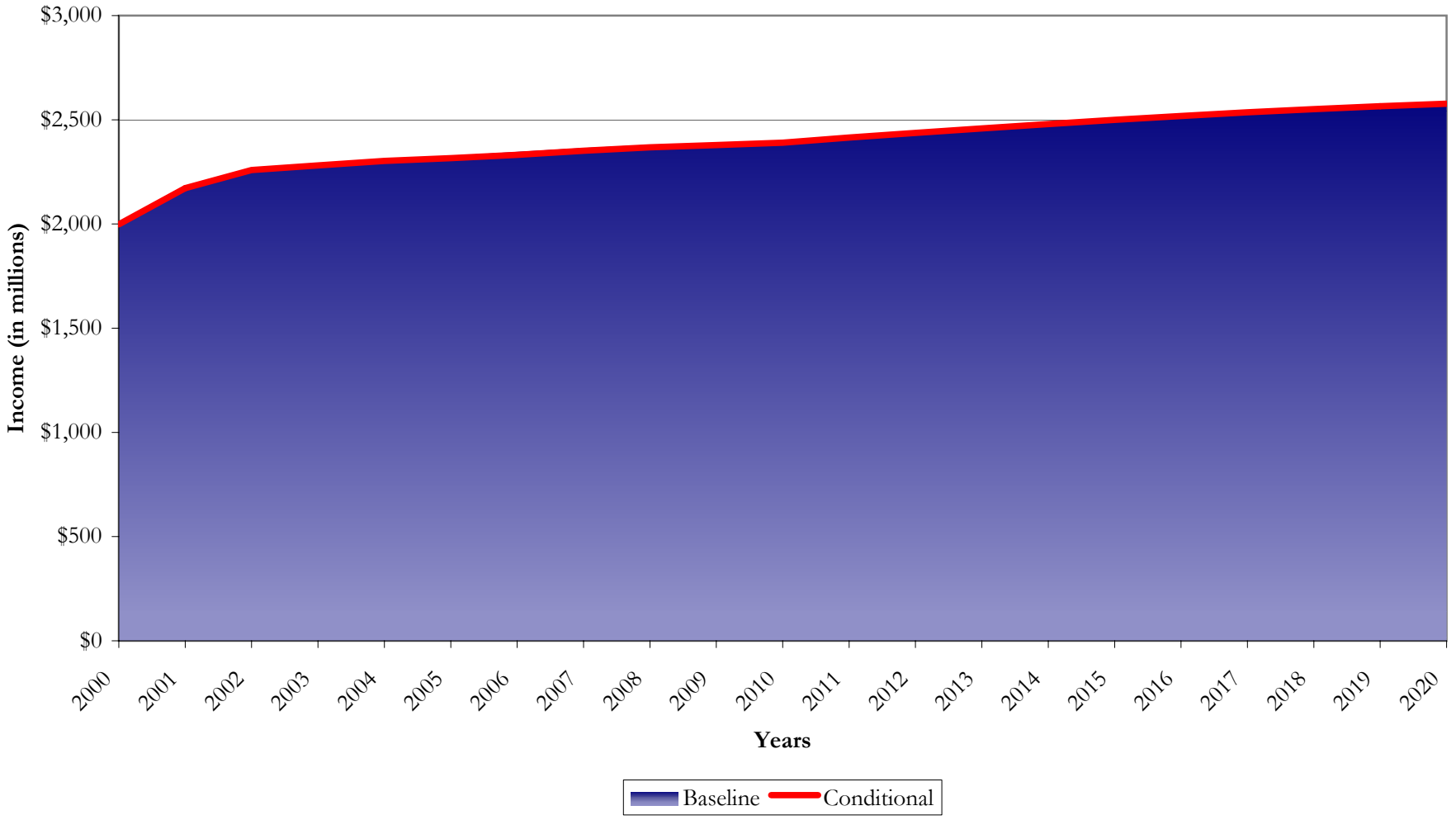
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AB
Conditional Impact Assessment Model
Labor Income (Construction) - 10% Initial Impact, Rapid Recovery



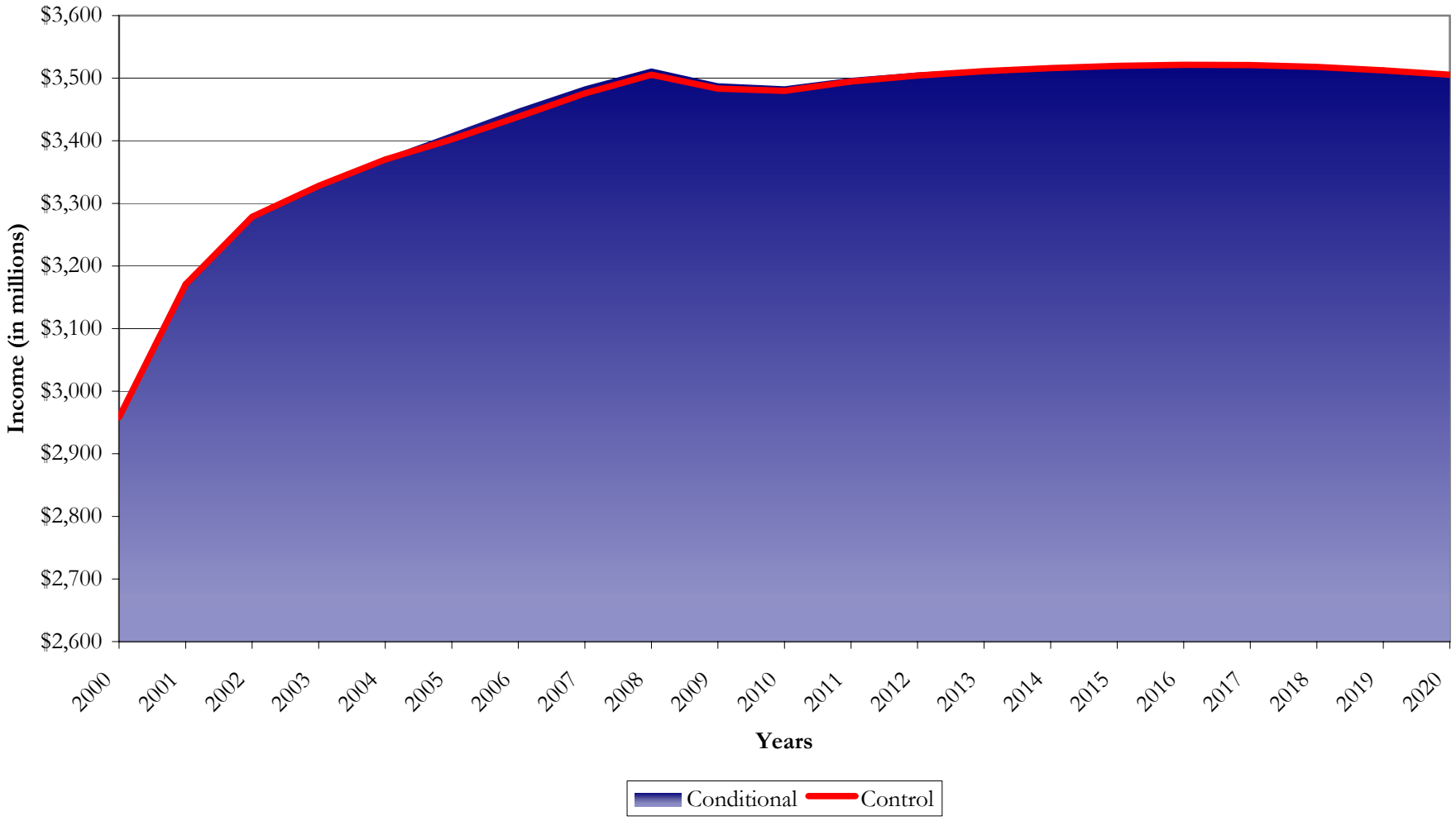
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.) - 10% Initial Impact, Rapid Recovery



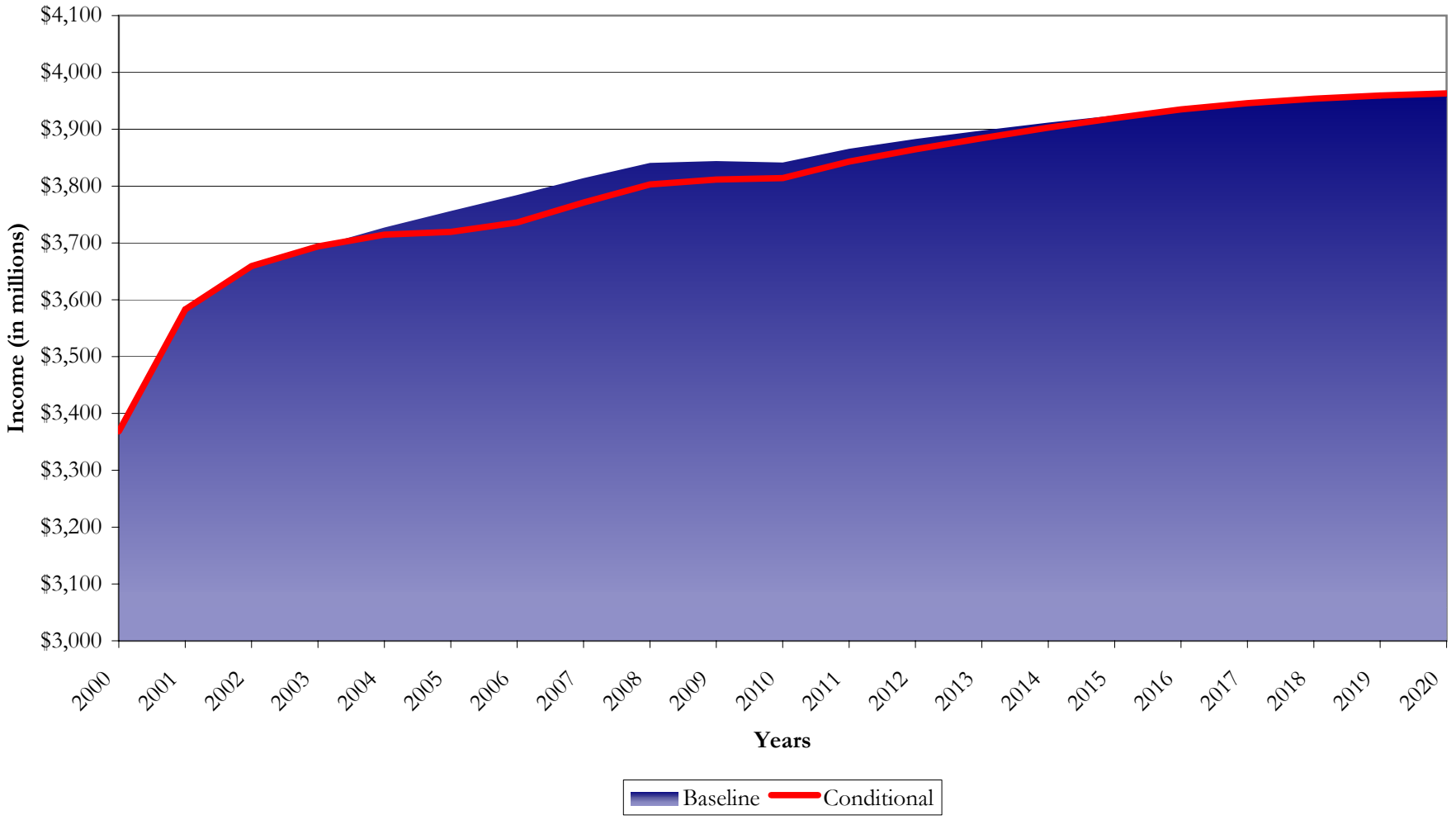
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.) - 10% Initial Impact, Rapid Recovery



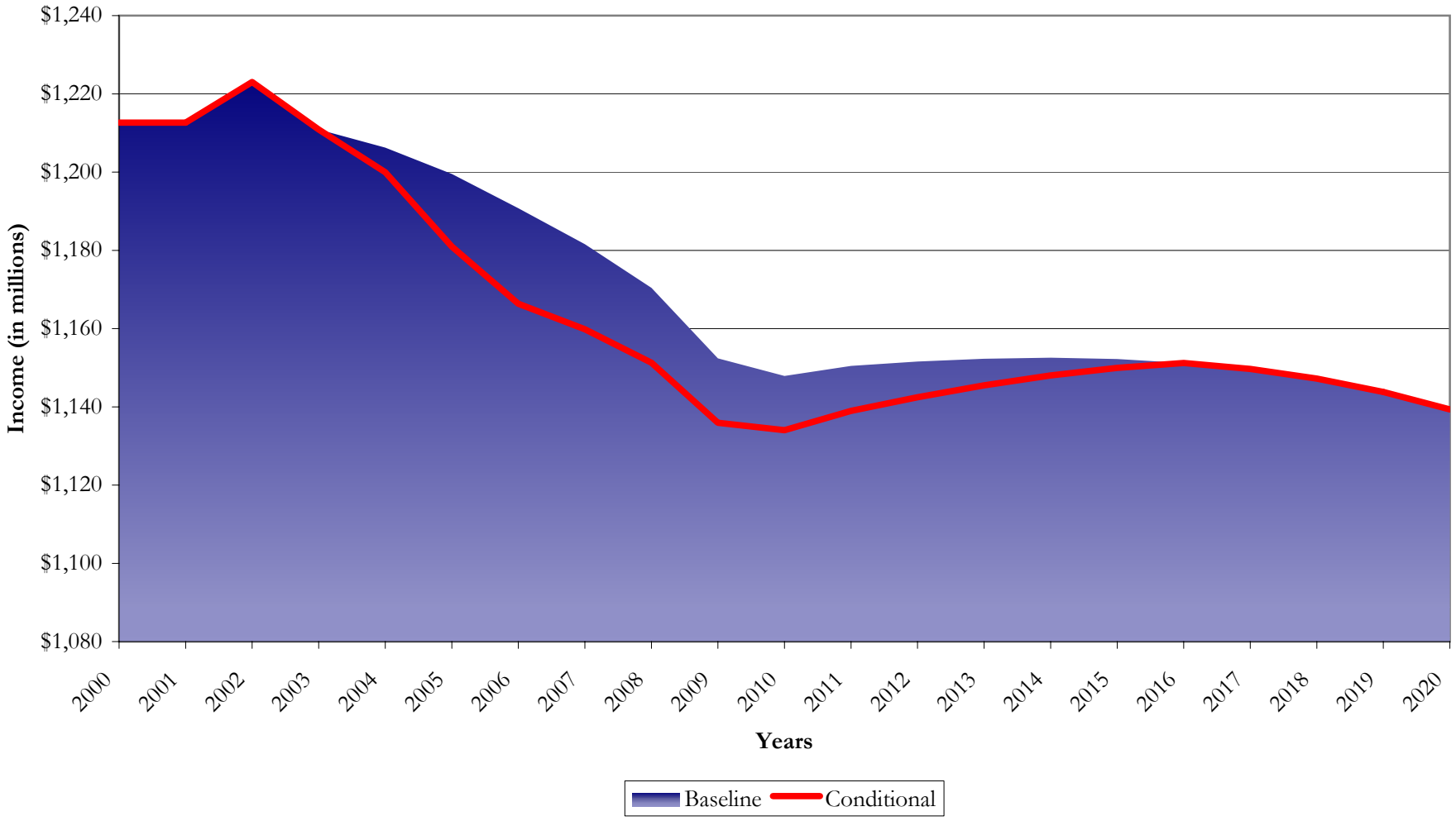
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AE
Conditional Impact Assessment Model
Labor Income (Retail Trade) - 10% Initial Impact, Rapid Recovery



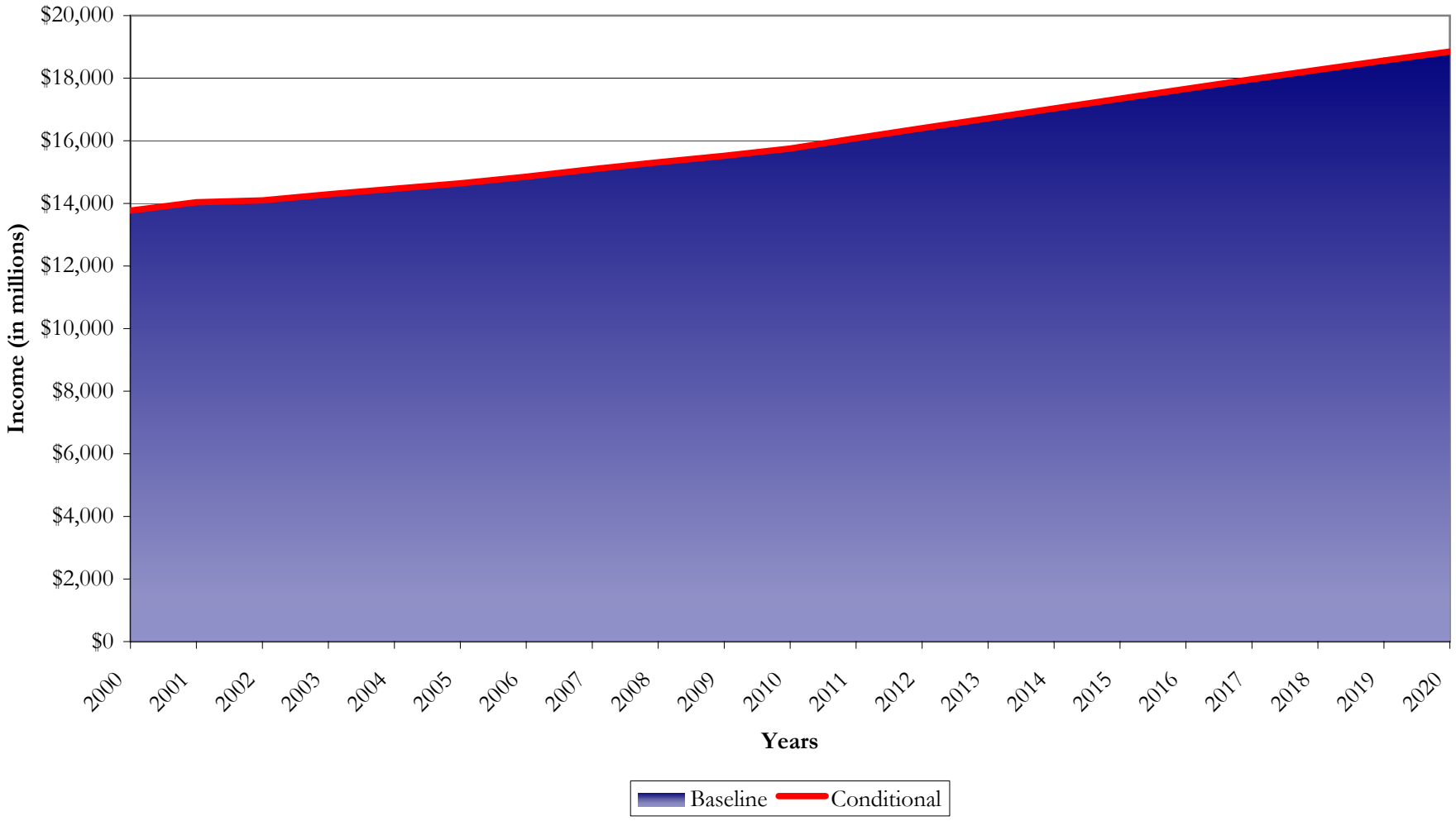
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AF
Conditional Impact Assessment Model
Labor Income (Wholesale Trade) - 10% Initial Impact, Rapid Recovery



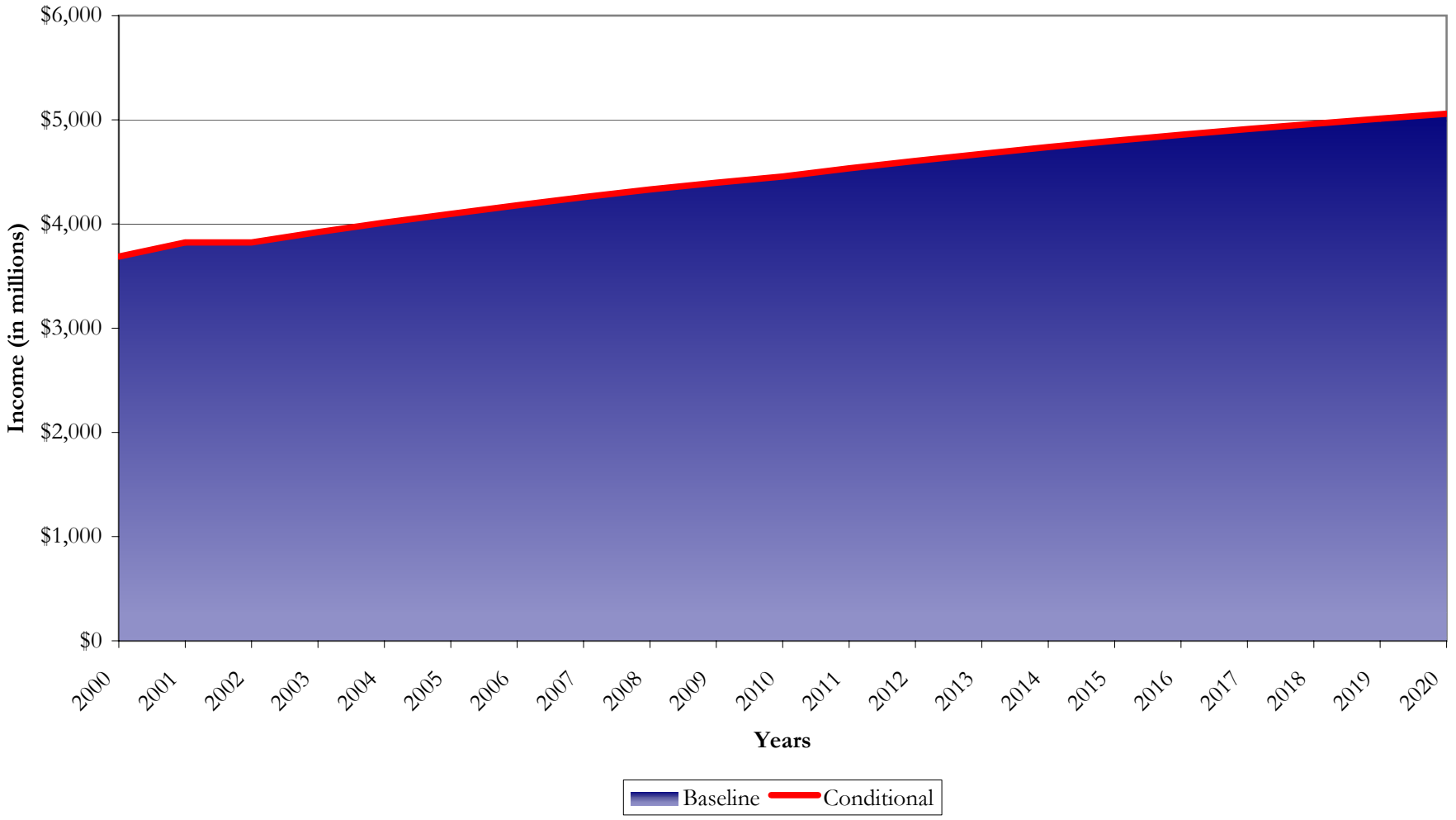
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AG
Conditional Impact Assessment Model
Labor Income (Services) - 10% Initial Impact, Rapid Recovery



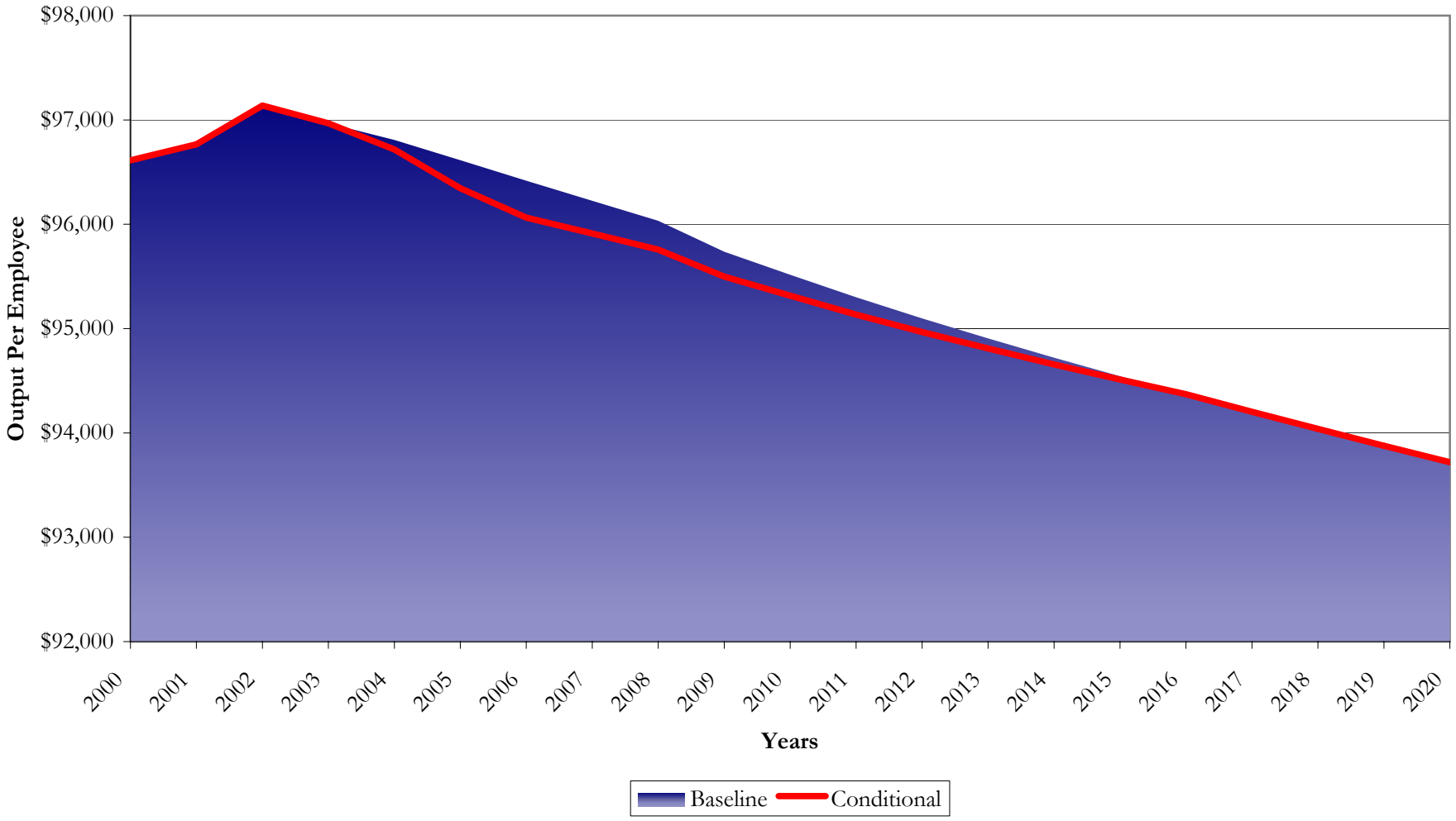
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AH
Conditional Impact Assessment Model
Labor Income (Government) -10% Initial Impact, Rapid Recovery



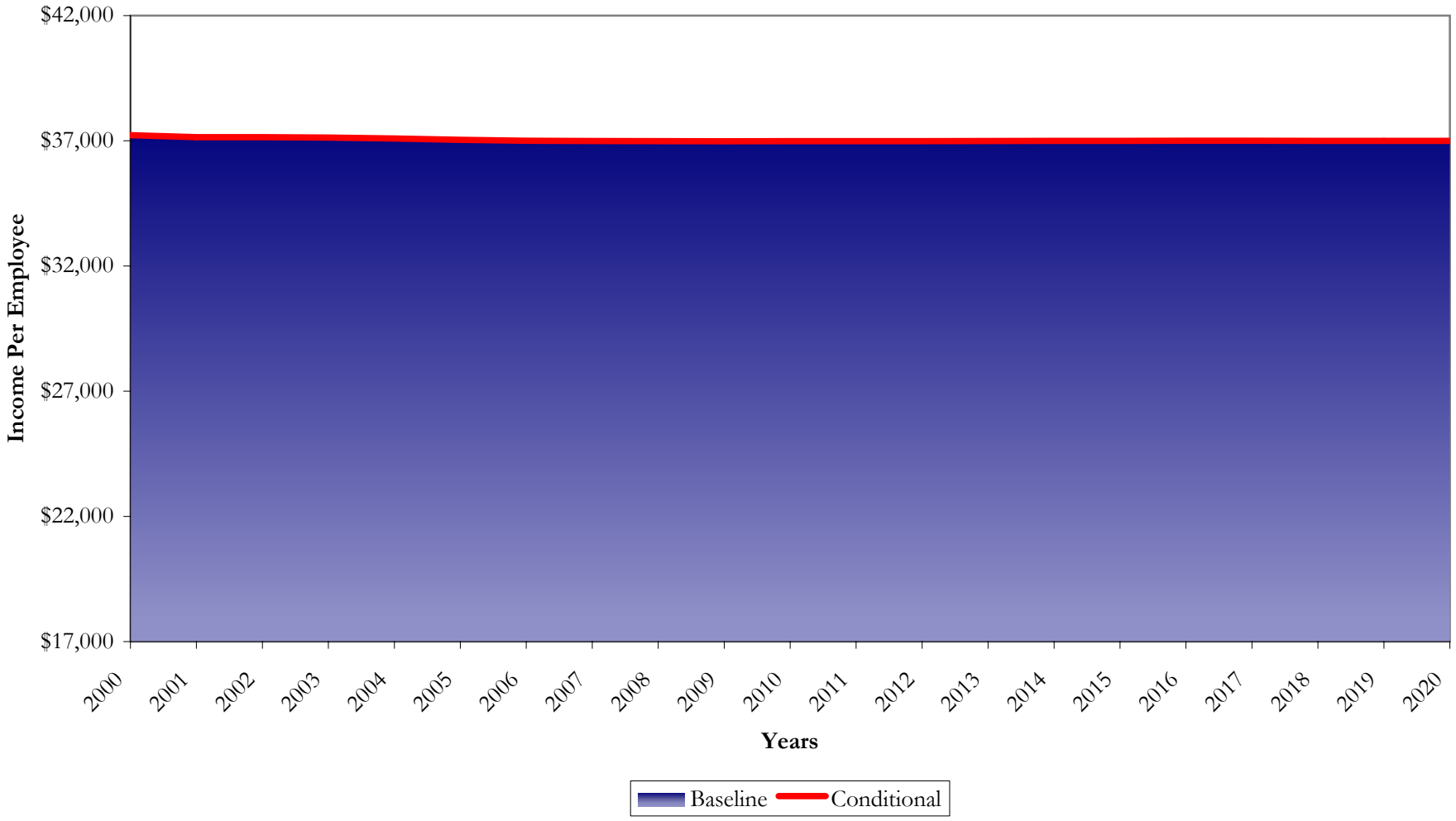
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AI
Conditional Impact Assessment Model
Output Per Employee - 10% Initial Impact, Rapid Recovery



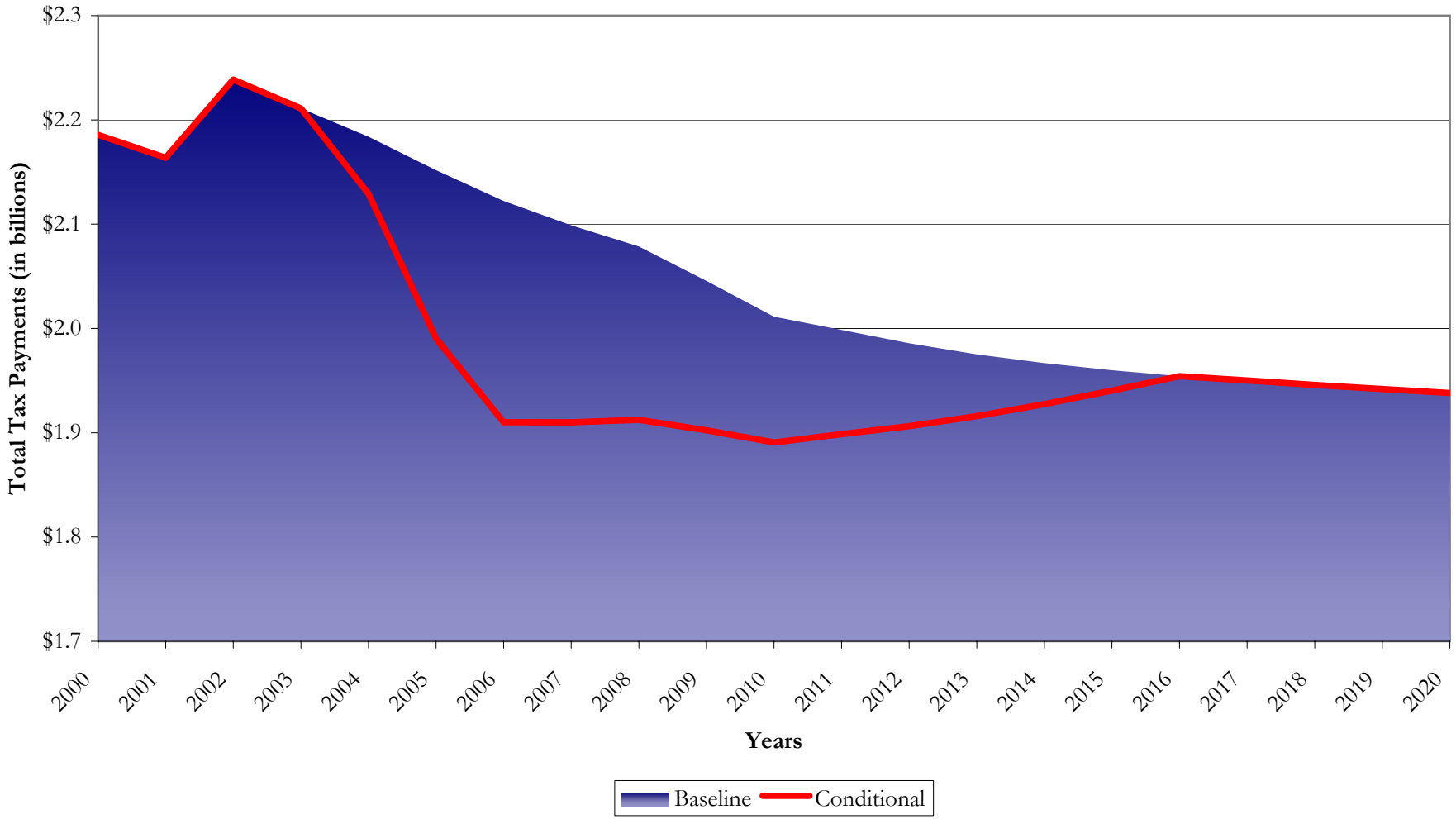
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AJ
Conditional Impact Assessment Model
Labor Income Per Employee - 10% Initial Impact, Rapid Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.2-AI
Conditional Impact Assessment Model
Total Construction-related Tax Payments - 10% Initial Impact, Rapid Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.3-A
Conditional Impact Assessment Model
Population - 65% Initial Impact, No Recovery

	Population					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,394,440		1,394,440			
2001	1,498,279	7.4%	1,498,279	7.4%	-	0.0%
2002	1,583,998	5.7%	1,583,998	5.7%	-	0.0%
2003	1,637,600	3.4%	1,637,600	3.4%	-	0.0%
2004	1,686,062	3.0%	1,643,373	0.4%	(42,689)	-2.5%
2005	1,730,698	2.6%	1,622,130	-1.3%	(108,568)	-6.3%
2006	1,772,274	2.4%	1,609,943	-0.8%	(162,331)	-9.2%
2007	1,811,123	2.2%	1,589,518	-1.3%	(221,605)	-12.2%
2008	1,847,089	2.0%	1,579,735	-0.6%	(267,354)	-14.5%
2009	1,880,861	1.8%	1,572,282	-0.5%	(308,579)	-16.4%
2010	1,912,777	1.7%	1,565,502	-0.4%	(347,275)	-18.2%
2011	1,944,978	1.7%	1,559,014	-0.4%	(385,964)	-19.8%
2012	1,977,466	1.7%	1,552,564	-0.4%	(424,902)	-21.5%
2013	2,009,592	1.6%	1,546,251	-0.4%	(463,341)	-23.1%
2014	2,041,279	1.6%	1,540,083	-0.4%	(501,196)	-24.6%
2015	2,072,398	1.5%	1,534,241	-0.4%	(538,157)	-26.0%
2016	2,102,905	1.5%	1,528,770	-0.4%	(574,135)	-27.3%
2017	2,132,871	1.4%	1,523,684	-0.3%	(609,187)	-28.6%
2018	2,162,262	1.4%	1,519,003	-0.3%	(643,259)	-29.7%
2019	2,191,156	1.3%	1,514,786	-0.3%	(676,370)	-30.9%
2020	2,219,714	1.3%	1,511,026	-0.2%	(708,688)	-31.9%

Appendix 5.3-B
Conditional Impact Assessment Model
Employment - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	857,304		857,304			
2001	886,021	3.35%	886,021	3.35%	-	0.0%
2002	898,322	1.39%	898,322	1.39%	-	0.0%
2003	907,640	1.04%	907,640	1.04%	-	0.0%
2004	916,932	1.02%	895,316	-1.36%	(21,616)	-2.4%
2005	925,797	0.97%	861,902	-3.73%	(63,895)	-6.9%
2006	935,155	1.01%	851,128	-1.25%	(84,027)	-9.0%
2007	944,502	1.00%	842,617	-1.00%	(101,885)	-10.8%
2008	952,831	0.88%	834,191	-1.00%	(118,640)	-12.5%
2009	957,819	0.52%	825,849	-1.00%	(131,970)	-13.8%
2010	964,036	0.65%	817,590	-1.00%	(146,446)	-15.2%
2011	976,457	1.29%	809,414	-1.00%	(167,043)	-17.1%
2012	987,929	1.17%	801,320	-1.00%	(186,609)	-18.9%
2013	999,100	1.13%	793,307	-1.00%	(205,793)	-20.6%
2014	1,010,205	1.11%	785,374	-1.00%	(224,831)	-22.3%
2015	1,021,164	1.08%	777,520	-1.00%	(243,644)	-23.9%
2016	1,031,845	1.05%	769,745	-1.00%	(262,100)	-25.4%
2017	1,042,604	1.04%	762,048	-1.00%	(280,556)	-26.9%
2018	1,052,820	0.98%	754,427	-1.00%	(298,393)	-28.3%
2019	1,062,612	0.93%	746,883	-1.00%	(315,729)	-29.7%
2020	1,071,943	0.88%	739,414	-1.00%	(332,529)	-31.0%

Appendix 5.3-C
Conditional Impact Assessment Model
Employment (Agriculture) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	8,581		8,581			
2001	8,581	0.0%	8,581	0.0%	-	0.0%
2002	8,581	0.0%	8,581	0.0%	-	0.0%
2003	8,744	1.9%	8,744	1.9%	-	0.0%
2004	8,875	1.5%	8,718	-0.3%	(157)	-1.8%
2005	8,991	1.3%	8,527	-2.2%	(464)	-5.2%
2006	9,111	1.3%	8,501	-0.3%	(610)	-6.7%
2007	9,229	1.3%	8,437	-0.7%	(792)	-8.6%
2008	9,341	1.2%	8,378	-0.7%	(963)	-10.3%
2009	9,445	1.1%	8,342	-0.4%	(1,103)	-11.7%
2010	9,640	2.1%	8,377	0.4%	(1,263)	-13.1%
2011	9,880	2.5%	8,394	0.2%	(1,486)	-15.0%
2012	10,109	2.3%	8,405	0.1%	(1,704)	-16.9%
2013	10,335	2.2%	8,414	0.1%	(1,921)	-18.6%
2014	10,562	2.2%	8,421	0.1%	(2,141)	-20.3%
2015	10,787	2.1%	8,424	0.0%	(2,363)	-21.9%
2016	11,011	2.1%	8,427	0.0%	(2,584)	-23.5%
2017	11,237	2.1%	8,427	0.0%	(2,810)	-25.0%
2018	11,456	1.9%	8,425	0.0%	(3,031)	-26.5%
2019	11,672	1.9%	8,421	0.0%	(3,251)	-27.9%
2020	11,884	1.8%	8,415	-0.1%	(3,469)	-29.2%

Appendix 5.3-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	22,561		22,561			
2001	23,279	3.2%	23,279	3.2%	-	0.0%
2002	23,194	-0.4%	23,194	-0.4%	-	0.0%
2003	22,991	-0.9%	22,991	-0.9%	-	0.0%
2004	22,801	-0.8%	22,373	-2.7%	(428)	-1.9%
2005	22,549	-1.1%	21,284	-4.9%	(1,265)	-5.6%
2006	22,265	-1.3%	20,601	-3.2%	(1,664)	-7.5%
2007	21,961	-1.4%	19,873	-3.5%	(2,088)	-9.5%
2008	21,592	-1.7%	19,129	-3.7%	(2,463)	-11.4%
2009	21,439	-0.7%	18,682	-2.3%	(2,757)	-12.9%
2010	21,496	0.3%	18,414	-1.4%	(3,082)	-14.3%
2011	21,650	0.7%	18,116	-1.6%	(3,534)	-16.3%
2012	21,824	0.8%	17,860	-1.4%	(3,964)	-18.2%
2013	22,020	0.9%	17,635	-1.3%	(4,385)	-19.9%
2014	22,226	0.9%	17,424	-1.2%	(4,802)	-21.6%
2015	22,445	1.0%	17,229	-1.1%	(5,216)	-23.2%
2016	22,667	1.0%	17,045	-1.1%	(5,622)	-24.8%
2017	22,893	1.0%	16,864	-1.1%	(6,029)	-26.3%
2018	23,105	0.9%	16,684	-1.1%	(6,421)	-27.8%
2019	23,322	0.9%	16,518	-1.0%	(6,804)	-29.2%
2020	23,521	0.9%	16,347	-1.0%	(7,174)	-30.5%

Appendix 5.3-E
Conditional Impact Assessment Model
Employment (Mining) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,467		1,467			
2001	1,467	0.0%	1,467	0.0%	-	0.0%
2002	1,304	-11.1%	1,304	-11.1%	-	0.0%
2003	1,272	-2.5%	1,272	-2.5%	-	0.0%
2004	1,234	-3.0%	1,226	-3.6%	(8)	-0.7%
2005	1,196	-3.1%	1,172	-4.4%	(24)	-2.0%
2006	1,162	-2.8%	1,131	-3.5%	(31)	-2.7%
2007	1,127	-3.0%	1,072	-5.2%	(55)	-4.9%
2008	1,091	-3.2%	1,016	-5.2%	(75)	-6.9%
2009	1,090	-0.1%	998	-1.8%	(92)	-8.4%
2010	1,069	-1.9%	961	-3.7%	(108)	-10.1%
2011	1,052	-1.6%	922	-4.0%	(130)	-12.3%
2012	1,040	-1.1%	891	-3.4%	(149)	-14.4%
2013	1,030	-1.0%	862	-3.2%	(168)	-16.3%
2014	1,022	-0.8%	836	-3.0%	(186)	-18.2%
2015	1,016	-0.6%	813	-2.8%	(203)	-20.0%
2016	1,010	-0.6%	791	-2.7%	(219)	-21.7%
2017	1,005	-0.5%	770	-2.6%	(235)	-23.3%
2018	1,000	-0.5%	751	-2.5%	(249)	-24.9%
2019	995	-0.5%	732	-2.5%	(263)	-26.4%
2020	992	-0.3%	716	-2.2%	(276)	-27.9%

Appendix 5.3-F
Conditional Impact Assessment Model
Employment (Construction) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,782		76,782			
2001	76,014	-1.0%	76,014	-1.0%	-	0.0%
2002	78,647	3.5%	78,647	3.5%	-	0.0%
2003	77,672	-1.2%	77,672	-1.2%	-	0.0%
2004	76,719	-1.2%	64,252	-17.3%	(12,467)	-16.3%
2005	75,593	-1.5%	38,741	-39.7%	(36,852)	-48.8%
2006	74,558	-1.4%	26,095	-32.6%	(48,463)	-65.0%
2007	73,736	-1.1%	25,245	-3.3%	(48,491)	-65.8%
2008	73,024	-1.0%	24,491	-3.0%	(48,533)	-66.5%
2009	71,864	-1.6%	23,690	-3.3%	(48,174)	-67.0%
2010	70,660	-1.7%	22,863	-3.5%	(47,797)	-67.6%
2011	70,211	-0.6%	22,166	-3.0%	(48,045)	-68.4%
2012	69,761	-0.6%	21,517	-2.9%	(48,244)	-69.2%
2013	69,390	-0.5%	20,922	-2.8%	(48,468)	-69.8%
2014	69,096	-0.4%	20,372	-2.6%	(48,724)	-70.5%
2015	68,856	-0.3%	19,859	-2.5%	(48,997)	-71.2%
2016	68,654	-0.3%	19,378	-2.4%	(49,276)	-71.8%
2017	68,509	-0.2%	18,927	-2.3%	(49,582)	-72.4%
2018	68,360	-0.2%	18,498	-2.3%	(49,862)	-72.9%
2019	68,220	-0.2%	18,092	-2.2%	(50,128)	-73.5%
2020	68,090	-0.2%	17,706	-2.1%	(50,384)	-74.0%

Appendix 5.3-G
Conditional Impact Assessment Model
Employment (T.C.P.U) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	44,647		44,647			
2001	48,528	8.7%	48,528	8.7%	-	0.0%
2002	50,471	4.0%	50,471	4.0%	-	0.0%
2003	50,975	1.0%	50,975	1.0%	-	0.0%
2004	51,539	1.1%	50,992	0.0%	(547)	-1.1%
2005	51,996	0.9%	50,378	-1.2%	(1,618)	-3.1%
2006	52,429	0.8%	50,301	-0.2%	(2,128)	-4.1%
2007	52,833	0.8%	49,623	-1.3%	(3,210)	-6.1%
2008	53,175	0.6%	48,958	-1.3%	(4,217)	-7.9%
2009	53,379	0.4%	48,344	-1.3%	(5,035)	-9.4%
2010	53,599	0.4%	47,686	-1.4%	(5,913)	-11.0%
2011	54,114	1.0%	47,005	-1.4%	(7,109)	-13.1%
2012	54,581	0.9%	46,345	-1.4%	(8,236)	-15.1%
2013	55,032	0.8%	45,702	-1.4%	(9,330)	-17.0%
2014	55,462	0.8%	45,059	-1.4%	(10,403)	-18.8%
2015	55,882	0.8%	44,429	-1.4%	(11,453)	-20.5%
2016	56,275	0.7%	43,804	-1.4%	(12,471)	-22.2%
2017	56,658	0.7%	43,181	-1.4%	(13,477)	-23.8%
2018	57,008	0.6%	42,568	-1.4%	(14,440)	-25.3%
2019	57,319	0.5%	41,955	-1.4%	(15,364)	-26.8%
2020	57,591	0.5%	41,345	-1.5%	(16,246)	-28.2%

Notes:

[1] T.C.P.U. - Transportation, communications and public utilities.

Appendix 5.3-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,644		76,644			
2001	82,146	7.2%	82,146	7.2%	-	0.0%
2002	84,941	3.4%	84,941	3.4%	-	0.0%
2003	86,221	1.5%	86,221	1.5%	-	0.0%
2004	87,397	1.4%	86,789	0.7%	(608)	-0.7%
2005	88,405	1.2%	86,607	-0.2%	(1,798)	-2.0%
2006	89,415	1.1%	87,050	0.5%	(2,365)	-2.6%
2007	90,343	1.0%	86,085	-1.1%	(4,258)	-4.7%
2008	91,084	0.8%	85,062	-1.2%	(6,022)	-6.6%
2009	90,468	-0.7%	83,061	-2.4%	(7,407)	-8.2%
2010	90,342	-0.1%	81,445	-1.9%	(8,897)	-9.8%
2011	90,695	0.4%	79,800	-2.0%	(10,895)	-12.0%
2012	90,913	0.2%	78,166	-2.0%	(12,747)	-14.0%
2013	91,058	0.2%	76,546	-2.1%	(14,512)	-15.9%
2014	91,157	0.1%	74,942	-2.1%	(16,215)	-17.8%
2015	91,217	0.1%	73,365	-2.1%	(17,852)	-19.6%
2016	91,227	0.0%	71,815	-2.1%	(19,412)	-21.3%
2017	91,217	0.0%	70,288	-2.1%	(20,929)	-22.9%
2018	91,143	-0.1%	68,791	-2.1%	(22,352)	-24.5%
2019	90,997	-0.2%	67,308	-2.2%	(23,689)	-26.0%
2020	90,819	-0.2%	65,872	-2.1%	(24,947)	-27.5%

Notes:

[1] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.3-I
Conditional Impact Assessment Model
Employment (Retail) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	146,136		146,136			
2001	155,448	6.4%	155,448	6.4%	-	0.0%
2002	158,747	2.1%	158,747	2.1%	-	0.0%
2003	160,258	1.0%	160,258	1.0%	-	0.0%
2004	161,695	0.9%	158,628	-1.0%	(3,067)	-1.9%
2005	162,954	0.8%	153,888	-3.0%	(9,066)	-5.6%
2006	164,178	0.8%	152,256	-1.1%	(11,922)	-7.3%
2007	165,468	0.8%	150,326	-1.3%	(15,142)	-9.2%
2008	166,628	0.7%	148,482	-1.2%	(18,146)	-10.9%
2009	166,768	0.1%	146,249	-1.5%	(20,519)	-12.3%
2010	166,654	-0.1%	143,619	-1.8%	(23,035)	-13.8%
2011	167,710	0.6%	141,152	-1.7%	(26,558)	-15.8%
2012	168,454	0.4%	138,618	-1.8%	(29,836)	-17.7%
2013	169,102	0.4%	136,114	-1.8%	(32,988)	-19.5%
2014	169,706	0.4%	133,649	-1.8%	(36,057)	-21.2%
2015	170,243	0.3%	131,212	-1.8%	(39,031)	-22.9%
2016	170,707	0.3%	128,815	-1.8%	(41,892)	-24.5%
2017	171,182	0.3%	126,477	-1.8%	(44,705)	-26.1%
2018	171,529	0.2%	124,167	-1.8%	(47,362)	-27.6%
2019	171,773	0.1%	121,886	-1.8%	(49,887)	-29.0%
2020	171,932	0.1%	119,652	-1.8%	(52,280)	-30.4%

Appendix 5.3-J
Conditional Impact Assessment Model
Employment (Wholesale) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	25,064		25,064			
2001	25,064	0.0%	25,064	0.0%	-	0.0%
2002	25,279	0.9%	25,279	0.9%	-	0.0%
2003	25,028	-1.0%	25,028	-1.0%	-	0.0%
2004	24,932	-0.4%	24,088	-3.8%	(844)	-3.4%
2005	24,793	-0.6%	22,299	-7.4%	(2,494)	-10.1%
2006	24,612	-0.7%	21,332	-4.3%	(3,280)	-13.3%
2007	24,422	-0.8%	20,716	-2.9%	(3,706)	-15.2%
2008	24,191	-0.9%	20,103	-3.0%	(4,088)	-16.9%
2009	23,819	-1.5%	19,456	-3.2%	(4,363)	-18.3%
2010	23,726	-0.4%	19,060	-2.0%	(4,666)	-19.7%
2011	23,779	0.2%	18,663	-2.1%	(5,116)	-21.5%
2012	23,802	0.1%	18,271	-2.1%	(5,531)	-23.2%
2013	23,817	0.1%	17,887	-2.1%	(5,930)	-24.9%
2014	23,822	0.0%	17,506	-2.1%	(6,316)	-26.5%
2015	23,815	0.0%	17,128	-2.2%	(6,687)	-28.1%
2016	23,794	-0.1%	16,753	-2.2%	(7,041)	-29.6%
2017	23,763	-0.1%	16,378	-2.2%	(7,385)	-31.1%
2018	23,712	-0.2%	16,008	-2.3%	(7,704)	-32.5%
2019	23,641	-0.3%	15,639	-2.3%	(8,002)	-33.8%
2020	23,549	-0.4%	15,271	-2.4%	(8,278)	-35.2%

Appendix 5.3-K
Conditional Impact Assessment Model
Employment (Services) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	382,767		382,767			
2001	390,161	1.9%	390,161	1.9%	-	0.0%
2002	391,825	0.4%	391,825	0.4%	-	0.0%
2003	397,220	1.4%	397,220	1.4%	-	0.0%
2004	402,664	1.4%	399,259	0.5%	(3,405)	-0.8%
2005	408,546	1.5%	398,481	-0.2%	(10,065)	-2.5%
2006	415,020	1.6%	401,783	0.8%	(13,237)	-3.2%
2007	421,432	1.5%	399,436	-0.6%	(21,996)	-5.2%
2008	427,324	1.4%	397,061	-0.6%	(30,263)	-7.1%
2009	432,889	1.3%	395,704	-0.3%	(37,185)	-8.6%
2010	439,032	1.4%	394,268	-0.4%	(44,764)	-10.2%
2011	447,989	2.0%	392,854	-0.4%	(55,135)	-12.3%
2012	456,686	1.9%	391,536	-0.3%	(65,150)	-14.3%
2013	465,233	1.9%	390,163	-0.4%	(75,070)	-16.1%
2014	473,784	1.8%	388,770	-0.4%	(85,014)	-17.9%
2015	482,348	1.8%	387,394	-0.4%	(94,954)	-19.7%
2016	490,808	1.8%	385,988	-0.4%	(104,820)	-21.4%
2017	499,386	1.7%	384,596	-0.4%	(114,790)	-23.0%
2018	507,750	1.7%	383,186	-0.4%	(124,564)	-24.5%
2019	515,934	1.6%	381,745	-0.4%	(134,189)	-26.0%
2020	523,908	1.5%	380,270	-0.4%	(143,638)	-27.4%

Appendix 5.3-L
Conditional Impact Assessment Model
Employment (Government) - 65% Initial Impact, No Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	72,655		72,655			
2001	75,333	3.7%	75,333	3.7%	-	0.0%
2002	75,333	0.0%	75,333	0.0%	-	0.0%
2003	77,259	2.6%	77,259	2.6%	-	0.0%
2004	79,076	2.4%	78,992	2.2%	(84)	-0.1%
2005	80,774	2.1%	80,525	1.9%	(249)	-0.3%
2006	82,405	2.0%	82,078	1.9%	(327)	-0.4%
2007	83,951	1.9%	81,804	-0.3%	(2,147)	-2.6%
2008	85,381	1.7%	81,510	-0.4%	(3,871)	-4.5%
2009	86,658	1.5%	81,323	-0.2%	(5,335)	-6.2%
2010	87,818	1.3%	80,897	-0.5%	(6,921)	-7.9%
2011	89,377	1.8%	80,343	-0.7%	(9,034)	-10.1%
2012	90,759	1.5%	79,711	-0.8%	(11,048)	-12.2%
2013	92,083	1.5%	79,063	-0.8%	(13,020)	-14.1%
2014	93,368	1.4%	78,396	-0.8%	(14,972)	-16.0%
2015	94,555	1.3%	77,667	-0.9%	(16,888)	-17.9%
2016	95,692	1.2%	76,929	-0.9%	(18,763)	-19.6%
2017	96,754	1.1%	76,137	-1.0%	(20,617)	-21.3%
2018	97,757	1.0%	75,349	-1.0%	(22,408)	-22.9%
2019	98,739	1.0%	74,588	-1.0%	(24,151)	-24.5%
2020	99,657	0.9%	73,821	-1.0%	(25,836)	-25.9%

Appendix 5.3-M
Conditional Impact Assessment Model
Total Output[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	82,826		82,826			
2001	85,737	3.5%	85,737	3.5%	-	0.0%
2002	87,261	1.8%	87,261	1.8%	-	0.0%
2003	88,012	0.9%	88,012	0.9%	-	0.0%
2004	88,766	0.9%	86,136	-2.1%	(2,630)	-3.0%
2005	89,445	0.8%	81,671	-5.2%	(7,774)	-8.7%
2006	90,165	0.8%	79,942	-2.1%	(10,224)	-11.3%
2007	90,885	0.8%	79,013	-1.2%	(11,872)	-13.1%
2008	91,503	0.7%	78,088	-1.2%	(13,415)	-14.7%
2009	91,699	0.2%	77,086	-1.3%	(14,613)	-15.9%
2010	92,081	0.4%	76,168	-1.2%	(15,913)	-17.3%
2011	93,057	1.1%	75,255	-1.2%	(17,801)	-19.1%
2012	93,950	1.0%	74,363	-1.2%	(19,587)	-20.8%
2013	94,821	0.9%	73,487	-1.2%	(21,334)	-22.5%
2014	95,687	0.9%	72,623	-1.2%	(23,064)	-24.1%
2015	96,544	0.9%	71,775	-1.2%	(24,770)	-25.7%
2016	97,376	0.9%	70,938	-1.2%	(26,438)	-27.2%
2017	98,216	0.9%	70,113	-1.2%	(28,103)	-28.6%
2018	99,006	0.8%	69,299	-1.2%	(29,706)	-30.0%
2019	99,754	0.8%	68,495	-1.2%	(31,259)	-31.3%
2020	100,461	0.7%	67,703	-1.2%	(32,758)	-32.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-N
Conditional Impact Assessment Model
Output (Agriculture)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	333		333			
2001	333	0.0%	333	0.0%	-	0.0%
2002	333	0.0%	333	0.0%	-	0.0%
2003	339	1.9%	339	1.9%	-	0.0%
2004	345	1.5%	338	-0.3%	(6)	-1.8%
2005	349	1.3%	331	-2.2%	(18)	-5.1%
2006	354	1.3%	330	-0.3%	(24)	-6.7%
2007	358	1.3%	328	-0.7%	(31)	-8.5%
2008	363	1.2%	325	-0.7%	(37)	-10.3%
2009	367	1.1%	324	-0.4%	(43)	-11.6%
2010	374	2.1%	325	0.4%	(49)	-13.1%
2011	384	2.5%	326	0.2%	(58)	-15.0%
2012	392	2.3%	326	0.1%	(66)	-16.8%
2013	401	2.2%	327	0.1%	(74)	-18.6%
2014	410	2.2%	327	0.1%	(83)	-20.2%
2015	419	2.1%	327	0.0%	(92)	-21.9%
2016	427	2.1%	327	0.0%	(100)	-23.4%
2017	436	2.1%	327	0.0%	(109)	-25.0%
2018	445	1.9%	327	0.0%	(118)	-26.4%
2019	453	1.9%	327	0.0%	(126)	-27.8%
2020	461	1.8%	327	-0.1%	(135)	-29.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-O
Conditional Impact Assessment Model
Output (Manufacturing)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,757		3,757			
2001	3,876	3.2%	3,876	3.2%	-	0.0%
2002	3,862	-0.4%	3,862	-0.4%	-	0.0%
2003	3,828	-0.9%	3,828	-0.9%	-	0.0%
2004	3,797	-0.8%	3,746	-2.1%	(50)	-1.3%
2005	3,755	-1.1%	3,606	-3.7%	(149)	-4.0%
2006	3,707	-1.3%	3,512	-2.6%	(196)	-5.3%
2007	3,657	-1.4%	3,388	-3.5%	(269)	-7.4%
2008	3,595	-1.7%	3,262	-3.7%	(334)	-9.3%
2009	3,570	-0.7%	3,185	-2.4%	(385)	-10.8%
2010	3,579	0.3%	3,137	-1.5%	(442)	-12.3%
2011	3,605	0.7%	3,086	-1.7%	(519)	-14.4%
2012	3,634	0.8%	3,041	-1.4%	(593)	-16.3%
2013	3,667	0.9%	3,002	-1.3%	(665)	-18.1%
2014	3,701	0.9%	2,965	-1.2%	(736)	-19.9%
2015	3,737	1.0%	2,931	-1.1%	(807)	-21.6%
2016	3,774	1.0%	2,899	-1.1%	(876)	-23.2%
2017	3,812	1.0%	2,867	-1.1%	(945)	-24.8%
2018	3,847	0.9%	2,836	-1.1%	(1,011)	-26.3%
2019	3,883	0.9%	2,807	-1.0%	(1,077)	-27.7%
2020	3,917	0.9%	2,777	-1.1%	(1,139)	-29.1%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-P
Conditional Impact Assessment Model
Output (Mining)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	233		233			
2001	233	0.0%	233	0.0%	-	0.0%
2002	207	-11.1%	207	-11.1%	-	0.0%
2003	202	-2.5%	202	-2.5%	-	0.0%
2004	196	-3.0%	195	-3.6%	(1)	-0.7%
2005	190	-3.1%	186	-4.4%	(4)	-2.0%
2006	185	-2.8%	180	-3.5%	(5)	-2.7%
2007	179	-3.0%	171	-5.2%	(9)	-4.9%
2008	174	-3.2%	162	-5.2%	(12)	-6.9%
2009	173	-0.1%	159	-1.8%	(15)	-8.4%
2010	170	-1.9%	153	-3.7%	(17)	-10.1%
2011	167	-1.6%	147	-4.0%	(21)	-12.3%
2012	165	-1.1%	142	-3.4%	(24)	-14.4%
2013	164	-1.0%	137	-3.2%	(27)	-16.3%
2014	163	-0.8%	133	-3.0%	(29)	-18.1%
2015	162	-0.6%	129	-2.8%	(32)	-19.9%
2016	161	-0.6%	126	-2.7%	(35)	-21.7%
2017	160	-0.5%	123	-2.6%	(37)	-23.3%
2018	159	-0.5%	119	-2.5%	(40)	-24.9%
2019	158	-0.5%	116	-2.5%	(42)	-26.4%
2020	158	-0.3%	114	-2.2%	(44)	-27.8%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-Q
Conditional Impact Assessment Model
Output (Construction)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	11,492		11,492			
2001	11,377	-1.0%	11,377	-1.0%	-	0.0%
2002	11,771	3.5%	11,771	3.5%	-	0.0%
2003	11,625	-1.2%	11,625	-1.2%	-	0.0%
2004	11,483	-1.2%	9,617	-17.3%	(1,866)	-16.3%
2005	11,314	-1.5%	5,799	-39.7%	(5,516)	-48.8%
2006	11,159	-1.4%	3,906	-32.6%	(7,254)	-65.0%
2007	11,036	-1.1%	3,778	-3.3%	(7,258)	-65.8%
2008	10,930	-1.0%	3,666	-3.0%	(7,264)	-66.5%
2009	10,756	-1.6%	3,546	-3.3%	(7,210)	-67.0%
2010	10,576	-1.7%	3,422	-3.5%	(7,154)	-67.6%
2011	10,509	-0.6%	3,318	-3.0%	(7,191)	-68.4%
2012	10,441	-0.6%	3,220	-2.9%	(7,221)	-69.2%
2013	10,386	-0.5%	3,131	-2.8%	(7,254)	-69.8%
2014	10,342	-0.4%	3,049	-2.6%	(7,293)	-70.5%
2015	10,306	-0.3%	2,972	-2.5%	(7,334)	-71.2%
2016	10,276	-0.3%	2,900	-2.4%	(7,375)	-71.8%
2017	10,254	-0.2%	2,833	-2.3%	(7,421)	-72.4%
2018	10,232	-0.2%	2,769	-2.3%	(7,463)	-72.9%
2019	10,211	-0.2%	2,708	-2.2%	(7,503)	-73.5%
2020	10,191	-0.2%	2,650	-2.1%	(7,541)	-74.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-R
Conditional Impact Assessment Model
Output (T.C.P.U.)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	6,624		6,624			
2001	7,200	8.7%	7,200	8.7%	-	0.0%
2002	7,488	4.0%	7,488	4.0%	-	0.0%
2003	7,563	1.0%	7,563	1.0%	-	0.0%
2004	7,647	1.1%	7,560	0.0%	(87)	-1.1%
2005	7,714	0.9%	7,459	-1.3%	(256)	-3.3%
2006	7,779	0.8%	7,442	-0.2%	(336)	-4.3%
2007	7,839	0.8%	7,342	-1.3%	(496)	-6.3%
2008	7,889	0.6%	7,244	-1.3%	(645)	-8.2%
2009	7,920	0.4%	7,154	-1.2%	(766)	-9.7%
2010	7,952	0.4%	7,057	-1.4%	(895)	-11.3%
2011	8,029	1.0%	6,956	-1.4%	(1,072)	-13.4%
2012	8,098	0.9%	6,859	-1.4%	(1,239)	-15.3%
2013	8,165	0.8%	6,764	-1.4%	(1,401)	-17.2%
2014	8,229	0.8%	6,669	-1.4%	(1,560)	-19.0%
2015	8,291	0.8%	6,576	-1.4%	(1,715)	-20.7%
2016	8,349	0.7%	6,484	-1.4%	(1,866)	-22.3%
2017	8,406	0.7%	6,392	-1.4%	(2,015)	-24.0%
2018	8,458	0.6%	6,301	-1.4%	(2,157)	-25.5%
2019	8,504	0.5%	6,210	-1.4%	(2,294)	-27.0%
2020	8,545	0.5%	6,120	-1.5%	(2,424)	-28.4%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] T.C.P.U. - Transportation, communications and public utilities.

Appendix 5.3-S
Conditional Impact Assessment Model
Output (F.I.R.E.)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	15,413		15,413			
2001	16,519	7.2%	16,519	7.2%	-	0.0%
2002	17,082	3.4%	17,082	3.4%	-	0.0%
2003	17,339	1.5%	17,339	1.5%	-	0.0%
2004	17,575	1.4%	17,485	0.8%	(90)	-0.5%
2005	17,778	1.2%	17,511	0.1%	(267)	-1.5%
2006	17,981	1.1%	17,630	0.7%	(351)	-2.0%
2007	18,168	1.0%	17,432	-1.1%	(736)	-4.1%
2008	18,317	0.8%	17,223	-1.2%	(1,094)	-6.0%
2009	18,193	-0.7%	16,817	-2.4%	(1,376)	-7.6%
2010	18,168	-0.1%	16,488	-2.0%	(1,680)	-9.2%
2011	18,239	0.4%	16,154	-2.0%	(2,085)	-11.4%
2012	18,283	0.2%	15,822	-2.1%	(2,461)	-13.5%
2013	18,312	0.2%	15,493	-2.1%	(2,819)	-15.4%
2014	18,332	0.1%	15,168	-2.1%	(3,164)	-17.3%
2015	18,344	0.1%	14,848	-2.1%	(3,495)	-19.1%
2016	18,346	0.0%	14,534	-2.1%	(3,811)	-20.8%
2017	18,344	0.0%	14,225	-2.1%	(4,118)	-22.5%
2018	18,329	-0.1%	13,922	-2.1%	(4,407)	-24.0%
2019	18,299	-0.2%	13,622	-2.2%	(4,677)	-25.6%
2020	18,264	-0.2%	13,331	-2.1%	(4,932)	-27.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.3-T
Conditional Impact Assessment Model
Output (Retail)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	7,298		7,298			
2001	7,763	6.4%	7,763	6.4%	-	0.0%
2002	7,928	2.1%	7,928	2.1%	-	0.0%
2003	8,003	1.0%	8,003	1.0%	-	0.0%
2004	8,075	0.9%	7,903	-1.3%	(172)	-2.1%
2005	8,138	0.8%	7,629	-3.5%	(508)	-6.2%
2006	8,199	0.8%	7,530	-1.3%	(669)	-8.2%
2007	8,263	0.8%	7,436	-1.2%	(827)	-10.0%
2008	8,321	0.7%	7,346	-1.2%	(975)	-11.7%
2009	8,328	0.1%	7,237	-1.5%	(1,091)	-13.1%
2010	8,323	-0.1%	7,108	-1.8%	(1,214)	-14.6%
2011	8,375	0.6%	6,987	-1.7%	(1,388)	-16.6%
2012	8,412	0.4%	6,862	-1.8%	(1,550)	-18.4%
2013	8,445	0.4%	6,739	-1.8%	(1,706)	-20.2%
2014	8,475	0.4%	6,617	-1.8%	(1,858)	-21.9%
2015	8,502	0.3%	6,497	-1.8%	(2,005)	-23.6%
2016	8,525	0.3%	6,379	-1.8%	(2,146)	-25.2%
2017	8,549	0.3%	6,263	-1.8%	(2,286)	-26.7%
2018	8,566	0.2%	6,149	-1.8%	(2,417)	-28.2%
2019	8,578	0.1%	6,036	-1.8%	(2,542)	-29.6%
2020	8,586	0.1%	5,926	-1.8%	(2,660)	-31.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-U
Conditional Impact Assessment Model
Output (Wholesale)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,896		2,896			
2001	2,896	0.0%	2,896	0.0%	-	0.0%
2002	2,921	0.9%	2,921	0.9%	-	0.0%
2003	2,892	-1.0%	2,892	-1.0%	-	0.0%
2004	2,881	-0.4%	2,784	-3.8%	(98)	-3.4%
2005	2,865	-0.6%	2,577	-7.4%	(288)	-10.1%
2006	2,844	-0.7%	2,465	-4.3%	(379)	-13.3%
2007	2,822	-0.8%	2,394	-2.9%	(428)	-15.2%
2008	2,796	-0.9%	2,323	-3.0%	(472)	-16.9%
2009	2,753	-1.5%	2,248	-3.2%	(504)	-18.3%
2010	2,742	-0.4%	2,203	-2.0%	(539)	-19.7%
2011	2,748	0.2%	2,157	-2.1%	(591)	-21.5%
2012	2,751	0.1%	2,111	-2.1%	(639)	-23.2%
2013	2,752	0.1%	2,067	-2.1%	(685)	-24.9%
2014	2,753	0.0%	2,023	-2.1%	(730)	-26.5%
2015	2,752	0.0%	1,979	-2.2%	(773)	-28.1%
2016	2,750	-0.1%	1,936	-2.2%	(814)	-29.6%
2017	2,746	-0.1%	1,893	-2.2%	(853)	-31.1%
2018	2,740	-0.2%	1,850	-2.3%	(890)	-32.5%
2019	2,732	-0.3%	1,807	-2.3%	(925)	-33.8%
2020	2,721	-0.4%	1,765	-2.4%	(957)	-35.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-V
Conditional Impact Assessment Model
Output (Services)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	29,834		29,834			
2001	30,411	1.9%	30,411	1.9%	-	0.0%
2002	30,540	0.4%	30,540	0.4%	-	0.0%
2003	30,961	1.4%	30,961	1.4%	-	0.0%
2004	31,385	1.4%	31,138	0.6%	(248)	-0.8%
2005	31,844	1.5%	31,111	-0.1%	(732)	-2.3%
2006	32,348	1.6%	31,385	0.9%	(963)	-3.0%
2007	32,848	1.5%	31,200	-0.6%	(1,648)	-5.0%
2008	33,307	1.4%	31,013	-0.6%	(2,294)	-6.9%
2009	33,741	1.3%	30,905	-0.3%	(2,836)	-8.4%
2010	34,220	1.4%	30,791	-0.4%	(3,429)	-10.0%
2011	34,918	2.0%	30,679	-0.4%	(4,239)	-12.1%
2012	35,596	1.9%	30,575	-0.3%	(5,021)	-14.1%
2013	36,262	1.9%	30,466	-0.4%	(5,796)	-16.0%
2014	36,929	1.8%	30,356	-0.4%	(6,573)	-17.8%
2015	37,596	1.8%	30,247	-0.4%	(7,349)	-19.5%
2016	38,256	1.8%	30,136	-0.4%	(8,119)	-21.2%
2017	38,924	1.7%	30,027	-0.4%	(8,897)	-22.9%
2018	39,576	1.7%	29,916	-0.4%	(9,660)	-24.4%
2019	40,214	1.6%	29,802	-0.4%	(10,412)	-25.9%
2020	40,836	1.5%	29,686	-0.4%	(11,149)	-27.3%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-W
Conditional Impact Assessment Model
Output (Government)[1] - 65% Initial Impact, No Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	4,945		4,945			
2001	5,127	3.7%	5,127	3.7%	-	0.0%
2002	5,127	0.0%	5,127	0.0%	-	0.0%
2003	5,259	2.6%	5,259	2.6%	-	0.0%
2004	5,382	2.4%	5,370	2.1%	(12)	-0.2%
2005	5,498	2.1%	5,462	1.7%	(36)	-0.7%
2006	5,609	2.0%	5,561	1.8%	(48)	-0.9%
2007	5,714	1.9%	5,543	-0.3%	(171)	-3.0%
2008	5,811	1.7%	5,524	-0.3%	(287)	-4.9%
2009	5,898	1.5%	5,512	-0.2%	(386)	-6.5%
2010	5,977	1.3%	5,484	-0.5%	(493)	-8.3%
2011	6,083	1.8%	5,447	-0.7%	(637)	-10.5%
2012	6,177	1.5%	5,404	-0.8%	(773)	-12.5%
2013	6,268	1.5%	5,361	-0.8%	(907)	-14.5%
2014	6,355	1.4%	5,316	-0.8%	(1,039)	-16.3%
2015	6,436	1.3%	5,267	-0.9%	(1,169)	-18.2%
2016	6,513	1.2%	5,217	-0.9%	(1,296)	-19.9%
2017	6,585	1.1%	5,164	-1.0%	(1,422)	-21.6%
2018	6,654	1.0%	5,111	-1.0%	(1,543)	-23.2%
2019	6,721	1.0%	5,059	-1.0%	(1,662)	-24.7%
2020	6,783	0.9%	5,007	-1.0%	(1,776)	-26.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-X
Conditional Impact Assessment Model
Total Labor Income[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	31,914		31,914			
2001	32,911	3.1%	32,911	3.1%	-	0.0%
2002	33,368	1.4%	33,368	1.4%	-	0.0%
2003	33,699	1.0%	33,699	1.0%	-	0.0%
2004	34,032	1.0%	33,108	-1.8%	(924)	-2.7%
2005	34,345	0.9%	31,614	-4.5%	(2,732)	-8.0%
2006	34,676	1.0%	31,084	-1.7%	(3,592)	-10.4%
2007	35,006	1.0%	30,768	-1.0%	(4,238)	-12.1%
2008	35,299	0.8%	30,454	-1.0%	(4,845)	-13.7%
2009	35,474	0.5%	30,150	-1.0%	(5,324)	-15.0%
2010	35,697	0.6%	29,853	-1.0%	(5,844)	-16.4%
2011	36,150	1.3%	29,557	-1.0%	(6,593)	-18.2%
2012	36,569	1.2%	29,264	-1.0%	(7,305)	-20.0%
2013	36,979	1.1%	28,975	-1.0%	(8,003)	-21.6%
2014	37,387	1.1%	28,689	-1.0%	(8,697)	-23.3%
2015	37,789	1.1%	28,406	-1.0%	(9,384)	-24.8%
2016	38,182	1.0%	28,125	-1.0%	(10,057)	-26.3%
2017	38,577	1.0%	27,846	-1.0%	(10,731)	-27.8%
2018	38,952	1.0%	27,570	-1.0%	(11,383)	-29.2%
2019	39,313	0.9%	27,297	-1.0%	(12,016)	-30.6%
2020	39,656	0.9%	27,026	-1.0%	(12,630)	-31.8%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-Y
Conditional Impact Assessment Model
Labor Income (Agriculture)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	125		125			
2001	125	0.0%	125	0.0%	-	0.0%
2002	125	0.0%	125	0.0%	-	0.0%
2003	127	1.9%	127	1.9%	-	0.0%
2004	129	1.5%	127	-0.3%	(2)	-1.8%
2005	131	1.3%	124	-2.2%	(7)	-5.2%
2006	133	1.3%	124	-0.3%	(9)	-6.8%
2007	134	1.3%	123	-0.7%	(12)	-8.7%
2008	136	1.2%	122	-0.7%	(14)	-10.4%
2009	137	1.1%	121	-0.4%	(16)	-11.8%
2010	140	2.1%	122	0.4%	(18)	-13.2%
2011	144	2.5%	122	0.2%	(22)	-15.1%
2012	147	2.3%	122	0.1%	(25)	-16.9%
2013	150	2.2%	122	0.1%	(28)	-18.7%
2014	154	2.2%	122	0.1%	(31)	-20.3%
2015	157	2.1%	122	0.0%	(34)	-22.0%
2016	160	2.1%	123	0.0%	(38)	-23.5%
2017	164	2.1%	123	0.0%	(41)	-25.1%
2018	167	1.9%	123	0.0%	(44)	-26.5%
2019	170	1.9%	122	0.0%	(47)	-27.9%
2020	173	1.8%	122	-0.1%	(51)	-29.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,001		1,001			
2001	1,033	3.2%	1,033	3.2%	-	0.0%
2002	1,029	-0.4%	1,029	-0.4%	-	0.0%
2003	1,020	-0.9%	1,020	-0.9%	-	0.0%
2004	1,011	-0.8%	996	-2.3%	(15)	-1.5%
2005	1,000	-1.1%	955	-4.1%	(46)	-4.6%
2006	988	-1.3%	928	-2.8%	(60)	-6.1%
2007	974	-1.4%	895	-3.5%	(79)	-8.1%
2008	958	-1.7%	862	-3.7%	(96)	-10.0%
2009	951	-0.7%	841	-2.4%	(110)	-11.5%
2010	953	0.3%	829	-1.5%	(124)	-13.1%
2011	960	0.7%	815	-1.6%	(145)	-15.1%
2012	968	0.8%	804	-1.4%	(164)	-17.0%
2013	977	0.9%	793	-1.3%	(183)	-18.8%
2014	986	0.9%	784	-1.2%	(202)	-20.5%
2015	996	1.0%	775	-1.1%	(221)	-22.2%
2016	1,005	1.0%	766	-1.1%	(239)	-23.8%
2017	1,015	1.0%	758	-1.1%	(257)	-25.3%
2018	1,025	0.9%	750	-1.1%	(275)	-26.8%
2019	1,034	0.9%	742	-1.0%	(292)	-28.2%
2020	1,043	0.9%	735	-1.0%	(309)	-29.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AA
Conditional Impact Assessment Model
Labor Income (Mining)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	71		71			
2001	71	0.0%	71	0.0%	-	0.0%
2002	63	-11.1%	63	-11.1%	-	0.0%
2003	61	-2.5%	61	-2.5%	-	0.0%
2004	59	-3.0%	59	-3.6%	(0)	-0.6%
2005	58	-3.1%	56	-4.3%	(1)	-1.9%
2006	56	-2.8%	55	-3.5%	(1)	-2.6%
2007	54	-3.0%	52	-5.2%	(3)	-4.8%
2008	53	-3.2%	49	-5.2%	(4)	-6.8%
2009	52	-0.1%	48	-1.8%	(4)	-8.3%
2010	51	-1.9%	46	-3.7%	(5)	-10.0%
2011	51	-1.6%	44	-4.0%	(6)	-12.2%
2012	50	-1.1%	43	-3.4%	(7)	-14.3%
2013	50	-1.0%	42	-3.2%	(8)	-16.2%
2014	49	-0.8%	40	-3.0%	(9)	-18.1%
2015	49	-0.6%	39	-2.8%	(10)	-19.9%
2016	49	-0.6%	38	-2.7%	(10)	-21.6%
2017	48	-0.5%	37	-2.6%	(11)	-23.2%
2018	48	-0.5%	36	-2.5%	(12)	-24.8%
2019	48	-0.5%	35	-2.5%	(13)	-26.3%
2020	48	-0.3%	35	-2.2%	(13)	-27.8%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AB
Conditional Impact Assessment Model
Labor Income (Construction)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,722		3,722			
2001	3,684	-1.0%	3,684	-1.0%	-	0.0%
2002	3,812	3.5%	3,812	3.5%	-	0.0%
2003	3,765	-1.2%	3,765	-1.2%	-	0.0%
2004	3,718	-1.2%	3,114	-17.3%	(604)	-16.3%
2005	3,664	-1.5%	1,878	-39.7%	(1,786)	-48.8%
2006	3,614	-1.4%	1,265	-32.6%	(2,349)	-65.0%
2007	3,574	-1.1%	1,224	-3.3%	(2,350)	-65.8%
2008	3,539	-1.0%	1,187	-3.0%	(2,352)	-66.5%
2009	3,483	-1.6%	1,148	-3.3%	(2,335)	-67.0%
2010	3,425	-1.7%	1,108	-3.5%	(2,317)	-67.6%
2011	3,403	-0.6%	1,074	-3.0%	(2,329)	-68.4%
2012	3,381	-0.6%	1,043	-2.9%	(2,338)	-69.2%
2013	3,363	-0.5%	1,014	-2.8%	(2,349)	-69.8%
2014	3,349	-0.4%	987	-2.6%	(2,362)	-70.5%
2015	3,337	-0.3%	963	-2.5%	(2,375)	-71.2%
2016	3,328	-0.3%	939	-2.4%	(2,388)	-71.8%
2017	3,321	-0.2%	917	-2.3%	(2,403)	-72.4%
2018	3,313	-0.2%	897	-2.3%	(2,417)	-72.9%
2019	3,307	-0.2%	877	-2.2%	(2,430)	-73.5%
2020	3,300	-0.2%	858	-2.1%	(2,442)	-74.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,998		1,998			
2001	2,172	8.7%	2,172	8.7%	-	0.0%
2002	2,259	4.0%	2,259	4.0%	-	0.0%
2003	2,281	1.0%	2,281	1.0%	-	0.0%
2004	2,307	1.1%	2,282	0.0%	(25)	-1.1%
2005	2,327	0.9%	2,254	-1.2%	(73)	-3.1%
2006	2,346	0.8%	2,251	-0.2%	(96)	-4.1%
2007	2,364	0.8%	2,220	-1.3%	(144)	-6.1%
2008	2,380	0.6%	2,191	-1.3%	(189)	-7.9%
2009	2,389	0.4%	2,163	-1.3%	(226)	-9.4%
2010	2,399	0.4%	2,134	-1.4%	(265)	-11.0%
2011	2,422	1.0%	2,103	-1.4%	(318)	-13.1%
2012	2,443	0.9%	2,074	-1.4%	(369)	-15.1%
2013	2,463	0.8%	2,045	-1.4%	(418)	-17.0%
2014	2,482	0.8%	2,016	-1.4%	(466)	-18.8%
2015	2,501	0.8%	1,988	-1.4%	(513)	-20.5%
2016	2,518	0.7%	1,960	-1.4%	(558)	-22.2%
2017	2,536	0.7%	1,932	-1.4%	(603)	-23.8%
2018	2,551	0.6%	1,905	-1.4%	(646)	-25.3%
2019	2,565	0.5%	1,877	-1.4%	(688)	-26.8%
2020	2,577	0.5%	1,850	-1.5%	(727)	-28.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] T.C.P.U. - Transportation, communications and public utilities.

Appendix 5.3-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,958		2,958			
2001	3,171	7.2%	3,171	7.2%	-	0.0%
2002	3,279	3.4%	3,279	3.4%	-	0.0%
2003	3,328	1.5%	3,328	1.5%	-	0.0%
2004	3,373	1.4%	3,352	0.7%	(22)	-0.6%
2005	3,412	1.2%	3,348	-0.1%	(64)	-1.9%
2006	3,451	1.1%	3,367	0.6%	(84)	-2.4%
2007	3,487	1.0%	3,330	-1.1%	(157)	-4.5%
2008	3,516	0.8%	3,290	-1.2%	(226)	-6.4%
2009	3,492	-0.7%	3,213	-2.4%	(279)	-8.0%
2010	3,487	-0.1%	3,150	-1.9%	(337)	-9.7%
2011	3,501	0.4%	3,086	-2.0%	(414)	-11.8%
2012	3,509	0.2%	3,023	-2.0%	(486)	-13.9%
2013	3,515	0.2%	2,960	-2.1%	(554)	-15.8%
2014	3,519	0.1%	2,898	-2.1%	(620)	-17.6%
2015	3,521	0.1%	2,837	-2.1%	(684)	-19.4%
2016	3,521	0.0%	2,777	-2.1%	(744)	-21.1%
2017	3,521	0.0%	2,718	-2.1%	(803)	-22.8%
2018	3,518	-0.1%	2,660	-2.1%	(858)	-24.4%
2019	3,512	-0.2%	2,603	-2.2%	(909)	-25.9%
2020	3,506	-0.2%	2,547	-2.1%	(958)	-27.3%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.3-AE
Conditional Impact Assessment Model
Labor Income (Retail)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,368		3,368			
2001	3,583	6.4%	3,583	6.4%	-	0.0%
2002	3,659	2.1%	3,659	2.1%	-	0.0%
2003	3,694	1.0%	3,694	1.0%	-	0.0%
2004	3,727	0.9%	3,646	-1.3%	(81)	-2.2%
2005	3,756	0.8%	3,518	-3.5%	(239)	-6.4%
2006	3,784	0.8%	3,471	-1.3%	(314)	-8.3%
2007	3,814	0.8%	3,427	-1.2%	(387)	-10.1%
2008	3,841	0.7%	3,386	-1.2%	(455)	-11.8%
2009	3,844	0.1%	3,336	-1.5%	(508)	-13.2%
2010	3,841	-0.1%	3,276	-1.8%	(565)	-14.7%
2011	3,866	0.6%	3,221	-1.7%	(645)	-16.7%
2012	3,883	0.4%	3,163	-1.8%	(720)	-18.5%
2013	3,898	0.4%	3,106	-1.8%	(792)	-20.3%
2014	3,912	0.4%	3,050	-1.8%	(862)	-22.0%
2015	3,924	0.3%	2,995	-1.8%	(929)	-23.7%
2016	3,935	0.3%	2,940	-1.8%	(995)	-25.3%
2017	3,946	0.3%	2,887	-1.8%	(1,059)	-26.8%
2018	3,954	0.2%	2,834	-1.8%	(1,119)	-28.3%
2019	3,959	0.1%	2,783	-1.8%	(1,177)	-29.7%
2020	3,963	0.1%	2,732	-1.8%	(1,231)	-31.1%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AF
Conditional Impact Assessment Model
Labor Income (Wholesale)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,213		1,213			
2001	1,213	0.0%	1,213	0.0%	-	0.0%
2002	1,223	0.9%	1,223	0.9%	-	0.0%
2003	1,211	-1.0%	1,211	-1.0%	-	0.0%
2004	1,206	-0.4%	1,165	-3.8%	(41)	-3.4%
2005	1,200	-0.6%	1,079	-7.4%	(121)	-10.1%
2006	1,191	-0.7%	1,032	-4.3%	(159)	-13.3%
2007	1,182	-0.8%	1,002	-2.9%	(179)	-15.2%
2008	1,170	-0.9%	973	-3.0%	(198)	-16.9%
2009	1,152	-1.5%	941	-3.2%	(211)	-18.3%
2010	1,148	-0.4%	922	-2.0%	(226)	-19.7%
2011	1,150	0.2%	903	-2.1%	(248)	-21.5%
2012	1,152	0.1%	884	-2.1%	(268)	-23.2%
2013	1,152	0.1%	865	-2.1%	(287)	-24.9%
2014	1,153	0.0%	847	-2.1%	(306)	-26.5%
2015	1,152	0.0%	829	-2.2%	(324)	-28.1%
2016	1,151	-0.1%	811	-2.2%	(341)	-29.6%
2017	1,150	-0.1%	792	-2.2%	(357)	-31.1%
2018	1,147	-0.2%	774	-2.3%	(373)	-32.5%
2019	1,144	-0.3%	757	-2.3%	(387)	-33.8%
2020	1,139	-0.4%	739	-2.4%	(401)	-35.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AG
Conditional Impact Assessment Model
Labor Income (Services)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	13,771		13,771			
2001	14,037	1.9%	14,037	1.9%	-	0.0%
2002	14,097	0.4%	14,097	0.4%	-	0.0%
2003	14,291	1.4%	14,291	1.4%	-	0.0%
2004	14,487	1.4%	14,358	0.5%	(129)	-0.9%
2005	14,698	1.5%	14,317	-0.3%	(381)	-2.6%
2006	14,931	1.6%	14,430	0.8%	(501)	-3.4%
2007	15,162	1.5%	14,347	-0.6%	(815)	-5.4%
2008	15,374	1.4%	14,262	-0.6%	(1,112)	-7.2%
2009	15,574	1.3%	14,214	-0.3%	(1,360)	-8.7%
2010	15,795	1.4%	14,163	-0.4%	(1,632)	-10.3%
2011	16,117	2.0%	14,113	-0.4%	(2,004)	-12.4%
2012	16,430	1.9%	14,066	-0.3%	(2,364)	-14.4%
2013	16,738	1.9%	14,017	-0.3%	(2,721)	-16.3%
2014	17,045	1.8%	13,967	-0.4%	(3,078)	-18.1%
2015	17,353	1.8%	13,918	-0.4%	(3,435)	-19.8%
2016	17,658	1.8%	13,868	-0.4%	(3,789)	-21.5%
2017	17,966	1.7%	13,819	-0.4%	(4,148)	-23.1%
2018	18,267	1.7%	13,768	-0.4%	(4,499)	-24.6%
2019	18,562	1.6%	13,717	-0.4%	(4,845)	-26.1%
2020	18,849	1.5%	13,664	-0.4%	(5,184)	-27.5%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AH
Conditional Impact Assessment Model
Labor Income (Government)[1] - 65% Initial Impact, No Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,688		3,688			
2001	3,823	3.7%	3,823	3.7%	-	0.0%
2002	3,823	0.0%	3,823	0.0%	-	0.0%
2003	3,921	2.6%	3,921	2.6%	-	0.0%
2004	4,013	2.4%	4,008	2.2%	(5)	-0.1%
2005	4,100	2.1%	4,084	1.9%	(15)	-0.4%
2006	4,182	2.0%	4,162	1.9%	(20)	-0.5%
2007	4,261	1.9%	4,149	-0.3%	(112)	-2.6%
2008	4,333	1.7%	4,134	-0.4%	(200)	-4.6%
2009	4,398	1.5%	4,124	-0.2%	(274)	-6.2%
2010	4,457	1.3%	4,103	-0.5%	(354)	-7.9%
2011	4,536	1.8%	4,075	-0.7%	(461)	-10.2%
2012	4,606	1.5%	4,043	-0.8%	(563)	-12.2%
2013	4,674	1.5%	4,010	-0.8%	(663)	-14.2%
2014	4,739	1.4%	3,976	-0.8%	(763)	-16.1%
2015	4,799	1.3%	3,939	-0.9%	(860)	-17.9%
2016	4,857	1.2%	3,902	-0.9%	(955)	-19.7%
2017	4,911	1.1%	3,862	-1.0%	(1,049)	-21.4%
2018	4,962	1.0%	3,822	-1.0%	(1,140)	-23.0%
2019	5,011	1.0%	3,783	-1.0%	(1,228)	-24.5%
2020	5,058	0.9%	3,744	-1.0%	(1,314)	-26.0%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.3-AI
Conditional Impact Assessment Model
Output Per Employee[1] - 65% Initial Impact, No Recovery

	Output Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	96,613		96,613		-	0.0%
2001	96,766	0.2%	96,766	0.2%	-	0.0%
2002	97,137	0.4%	97,137	0.4%	-	0.0%
2003	96,968	-0.2%	96,968	-0.2%	-	0.0%
2004	96,808	-0.2%	96,207	-0.8%	(600)	-0.6%
2005	96,614	-0.2%	94,757	-1.5%	(1,857)	-1.9%
2006	96,418	-0.2%	93,925	-0.9%	(2,493)	-2.6%
2007	96,225	-0.2%	93,770	-0.2%	(2,455)	-2.6%
2008	96,033	-0.2%	93,609	-0.2%	(2,424)	-2.5%
2009	95,737	-0.3%	93,342	-0.3%	(2,395)	-2.5%
2010	95,516	-0.2%	93,161	-0.2%	(2,355)	-2.5%
2011	95,300	-0.2%	92,975	-0.2%	(2,325)	-2.4%
2012	95,098	-0.2%	92,801	-0.2%	(2,298)	-2.4%
2013	94,906	-0.2%	92,633	-0.2%	(2,273)	-2.4%
2014	94,721	-0.2%	92,470	-0.2%	(2,251)	-2.4%
2015	94,543	-0.2%	92,312	-0.2%	(2,231)	-2.4%
2016	94,371	-0.2%	92,158	-0.2%	(2,213)	-2.3%
2017	94,203	-0.2%	92,006	-0.2%	(2,197)	-2.3%
2018	94,038	-0.2%	91,857	-0.2%	(2,182)	-2.3%
2019	93,876	-0.2%	91,708	-0.2%	(2,168)	-2.3%
2020	93,719	-0.2%	91,563	-0.2%	(2,155)	-2.3%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.3-AJ
Conditional Impact Assessment Model
Labor Income Per Employee[1] - 65% Initial Impact, No Recovery

	Labor Income Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	37,226		37,226			
2001	37,145	-0.2%	37,145	-0.2%	-	0.0%
2002	37,145	0.0%	37,145	0.0%	-	0.0%
2003	37,128	0.0%	37,128	0.0%	-	0.0%
2004	37,115	0.0%	36,979	-0.4%	(136)	-0.4%
2005	37,098	0.0%	36,679	-0.8%	(419)	-1.1%
2006	37,081	0.0%	36,521	-0.4%	(560)	-1.5%
2007	37,063	0.0%	36,515	0.0%	(549)	-1.5%
2008	37,047	0.0%	36,508	0.0%	(539)	-1.5%
2009	37,036	0.0%	36,508	0.0%	(528)	-1.4%
2010	37,029	0.0%	36,514	0.0%	(515)	-1.4%
2011	37,022	0.0%	36,516	0.0%	(505)	-1.4%
2012	37,016	0.0%	36,520	0.0%	(496)	-1.3%
2013	37,012	0.0%	36,525	0.0%	(487)	-1.3%
2014	37,009	0.0%	36,530	0.0%	(479)	-1.3%
2015	37,006	0.0%	36,534	0.0%	(472)	-1.3%
2016	37,004	0.0%	36,538	0.0%	(466)	-1.3%
2017	37,000	0.0%	36,541	0.0%	(460)	-1.2%
2018	36,998	0.0%	36,544	0.0%	(454)	-1.2%
2019	36,996	0.0%	36,547	0.0%	(449)	-1.2%
2020	36,995	0.0%	36,551	0.0%	(444)	-1.2%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.3-AK
Conditional Impact Assessment Model
Tax Payment Summary[1] - 65% Initial Impact, No Recovery

	2000	2005	2010	2015	2020
BASELINE					
Federal					
Corporate Profits Tax	139,313,718	137,156,389	128,205,925	124,932,736	123,542,901
Indirect Bus Tax: Custom Duty	166,615,210	164,035,107	153,330,608	149,415,969	147,753,766
Indirect Bus Tax: Excise Taxes	53,143,145	52,320,202	48,905,924	47,657,321	47,127,149
Indirect Bus Tax: Fed NonTaxes	16,345,658	16,092,539	15,042,382	14,658,339	14,495,270
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	731,195,864	683,479,949	666,030,220	658,620,856
Personal Tax: NonTaxes	6,236,173	6,139,604	5,738,949	5,592,430	5,530,216
Social Ins Tax- Employee Contribution	333,390,387	328,227,703	306,808,428	298,975,391	295,649,390
Social Ins Tax- Employer Contribution	307,291,922	302,533,383	282,790,852	275,571,000	272,505,365
Total	**1,765,033,035**	**1,737,700,792**	**1,624,303,017**	**1,582,833,407**	**1,565,224,914**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	2,897,174	2,708,112	2,638,972	2,609,614
Indirect Bus Tax: Other Taxes	41,477,737	40,835,438	38,170,625	37,196,101	36,782,307
Indirect Bus Tax: Property Tax	81,085,103	79,829,468	74,620,007	72,714,905	71,905,976
Indirect Bus Tax: NonTaxes	19,910,197	19,601,880	18,322,713	17,854,921	17,656,291
Indirect Bus Tax: Sales Tax	239,653,321	235,942,193	220,545,227	214,914,551	212,523,698
Indirect Bus Tax: Severance Tax	4,762,658	4,688,906	4,382,920	4,271,021	4,223,507
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	7,664,015	7,163,882	6,980,983	6,903,322
Personal Tax: NonTaxes	12,149,949	11,961,802	11,181,207	10,895,742	10,774,531
Personal Tax: Other Tax	143,307	141,088	131,881	128,514	127,085
Personal Tax: Property Taxes	1,857,270	1,828,509	1,709,185	1,665,549	1,647,020
Social Ins Tax- Employee Contribution	1,816,880	1,788,745	1,672,016	1,629,328	1,611,203
Social Ins Tax- Employer Contribution	6,980,643	6,872,545	6,424,061	6,260,050	6,190,409
Total	**420,564,371**	**414,051,763**	**387,031,836**	**377,150,638**	**372,954,963**
Total of All Pay Payments	**2,185,597,406**	**2,151,752,555**	**2,011,334,853**	**1,959,984,045**	**1,938,179,877**
CONDITIONAL					
Federal					
Corporate Profits Tax	139,313,718	70,292,650	41,482,226	36,031,717	32,126,300
Indirect Bus Tax: Custom Duty	166,615,210	84,067,992	49,611,553	43,092,899	38,422,133
Indirect Bus Tax: Excise Taxes	53,143,145	26,814,104	15,823,969	13,744,797	12,255,021
Indirect Bus Tax: Fed NonTaxes	16,345,658	8,247,426	4,867,103	4,227,596	3,769,374
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	374,737,880	221,146,332	192,089,062	171,268,853
Personal Tax: NonTaxes (Fines- Fees	6,236,173	3,146,547	1,856,891	1,612,907	1,438,086
Social Ins Tax- Employee Contribution	333,390,387	168,216,698	99,270,737	86,227,172	76,881,155
Social Ins Tax- Employer Contribution	307,291,922	155,048,359	91,499,626	79,477,137	70,862,744
Total	1,765,033,035	890,571,656	525,558,437	456,503,287	407,023,666
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	1,484,801	876,235	761,103	678,608
Indirect Bus Tax: Other Taxes	41,477,737	20,928,162	12,350,463	10,727,688	9,564,932
Indirect Bus Tax: Property Tax	81,085,103	40,912,602	24,144,001	20,971,628	18,698,549
Indirect Bus Tax: NonTaxes	19,910,197	10,045,964	5,928,485	5,149,519	4,591,371
Indirect Bus Tax: Sales Tax	239,653,321	120,920,374	71,359,472	61,983,275	55,265,013
Indirect Bus Tax: Severance Tax	4,762,658	2,403,064	1,418,135	1,231,801	1,098,288
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	3,927,808	2,317,941	2,013,378	1,795,151
Personal Tax: NonTaxes	12,149,949	6,130,424	3,617,784	3,142,429	2,801,827
Personal Tax: Other Tax	143,307	72,308	42,671	37,065	33,047
Personal Tax: Property Taxes	1,857,270	937,111	553,023	480,359	428,294
Social Ins Tax- Employee Contribution	1,816,880	916,732	540,996	469,913	418,980
Social Ins Tax- Employer Contribution	6,980,643	3,522,179	2,078,565	1,805,454	1,609,764
Total	**420,564,371**	**212,201,529**	**125,227,771**	**108,773,612**	**96,983,823**

Appendix 5.3-AK
Conditional Impact Assessment Model
Tax Payment Summary[1] - 65% Initial Impact, No Recovery

	2000	2005	2010	2015	2020
Total of All Pay Payments	**2,185,597,406**	**1,102,773,184**	**650,786,209**	**565,276,898**	**504,007,489**
DIFFERENCE					
Federal					
Corporate Profits Tax	0	(66,863,740)	(86,723,698)	(88,901,020)	(91,416,602)
Indirect Bus Tax: Custom Duty	0	(79,967,115)	(103,719,055)	(106,323,069)	(109,331,633)
Indirect Bus Tax: Excise Taxes	0	(25,506,099)	(33,081,955)	(33,912,524)	(34,872,128)
Indirect Bus Tax: Fed NonTaxes	0	(7,845,113)	(10,175,279)	(10,430,743)	(10,725,896)
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	(356,457,984)	(462,333,617)	(473,941,158)	(487,352,004)
Personal Tax: NonTaxes	0	(2,993,057)	(3,882,059)	(3,979,523)	(4,092,129)
Social Ins Tax- Employee Contribution	0	(160,011,005)	(207,537,691)	(212,748,219)	(218,768,235)
Social Ins Tax- Employer Contribution	0	(147,485,024)	(191,291,226)	(196,093,863)	(201,642,621)
Total	**0**	**(847,129,136)**	**(1,098,744,580)**	**(1,126,330,120)**	**(1,158,201,248)**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	0	(1,412,372)	(1,831,877)	(1,877,869)	(1,931,006)
Indirect Bus Tax: Other Taxes	0	(19,907,276)	(25,820,162)	(26,468,414)	(27,217,375)
Indirect Bus Tax: Property Tax	0	(38,916,866)	(50,476,006)	(51,743,278)	(53,207,428)
Indirect Bus Tax: NonTaxes	0	(9,555,917)	(12,394,228)	(12,705,402)	(13,064,920)
Indirect Bus Tax: Sales Tax	0	(115,021,819)	(149,185,756)	(152,931,276)	(157,258,686)
Indirect Bus Tax: Severance Tax	0	(2,285,842)	(2,964,785)	(3,039,221)	(3,125,220)
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	0	(3,736,207)	(4,845,941)	(4,967,605)	(5,108,171)
Personal Tax: NonTaxes	0	(5,831,379)	(7,563,423)	(7,753,313)	(7,972,704)
Personal Tax: Other Tax	0	(68,781)	(89,210)	(91,450)	(94,037)
Personal Tax: Property Taxes	0	(891,398)	(1,156,163)	(1,185,190)	(1,218,726)
Social Ins Tax- Employee Contribution	0	(872,013)	(1,131,020)	(1,159,415)	(1,192,223)
Social Ins Tax- Employer Contribution	0	(3,350,366)	(4,345,496)	(4,454,596)	(4,580,645)
Total	**0**	**(201,850,235)**	**(261,804,065)**	**(268,377,027)**	**(275,971,140)**
Total of All Pay Payments	**0**	**(1,048,979,371)**	**(1,360,548,644)**	**(1,394,707,147)**	**(1,434,172,388)**

Notes:
[1] Expressed in constant 2000 dollars.

Appendix 5.3-AL
Conditional Impact Assessment Model
Total Tax Payments[1] - 65% Initial Impact, No Recovery

	Total Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,185,597,406		2,185,597,406			
2001	2,163,736,308	-1.0%	2,163,736,308	-1.0%	-	0.0%
2002	2,238,684,577	3.5%	2,238,684,577	3.5%	-	0.0%
2003	2,210,931,230	-1.2%	2,210,931,230	-1.2%	-	0.0%
2004	2,183,804,112	-1.2%	1,828,935,944	-17.3%	(354,868,168)	-16.3%
2005	2,151,752,555	-1.5%	1,102,773,184	-39.7%	(1,048,979,371)	-48.8%
2006	2,122,291,310	-1.4%	742,801,959	-32.6%	(1,379,489,352)	-65.0%
2007	2,098,893,104	-1.1%	718,592,810	-3.3%	(1,380,300,294)	-65.8%
2008	2,078,626,045	-1.0%	697,147,265	-3.0%	(1,381,478,779)	-66.5%
2009	2,045,606,678	-1.6%	674,335,713	-3.3%	(1,371,270,965)	-67.0%
2010	2,011,334,853	-1.7%	650,786,209	-3.5%	(1,360,548,644)	-67.6%
2011	1,998,554,081	-0.6%	630,961,794	-3.0%	(1,367,592,287)	-68.4%
2012	1,985,744,844	-0.6%	612,472,251	-2.9%	(1,373,272,593)	-69.2%
2013	1,975,184,340	-0.5%	595,532,822	-2.8%	(1,379,651,518)	-69.8%
2014	1,966,815,638	-0.4%	579,878,173	-2.6%	(1,386,937,465)	-70.5%
2015	1,959,984,045	-0.3%	565,276,898	-2.5%	(1,394,707,147)	-71.2%
2016	1,954,234,121	-0.3%	551,605,205	-2.4%	(1,402,628,916)	-71.8%
2017	1,950,106,700	-0.2%	538,770,419	-2.3%	(1,411,336,281)	-72.4%
2018	1,945,865,420	-0.2%	526,558,918	-2.3%	(1,419,306,502)	-72.9%
2019	1,941,880,324	-0.2%	514,974,654	-2.2%	(1,426,905,669)	-73.5%
2020	1,938,179,877	-0.2%	504,007,489	-2.1%	(1,434,172,388)	-74.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.3-AN
Conditional Impact Assessment Model
Federal Tax Payments[1] - 65% Initial Impact, No Recovery

	Federal Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,765,033,035		1,765,033,035			
2001	1,747,378,567	-1.0%	1,747,378,567	-1.0%	-	0.0%
2002	1,807,904,888	3.5%	1,807,904,888	3.5%	-	0.0%
2003	1,785,491,989	-1.2%	1,785,491,989	-1.2%	-	0.0%
2004	1,763,584,817	-1.2%	1,477,002,284	-17.3%	(286,582,533)	-16.3%
2005	1,737,700,792	-1.5%	890,571,656	-39.7%	(847,129,136)	-48.8%
2006	1,713,908,638	-1.4%	599,868,023	-32.6%	(1,114,040,614)	-65.0%
2007	1,695,012,840	-1.1%	580,317,329	-3.3%	(1,114,695,511)	-65.8%
2008	1,678,645,677	-1.0%	562,998,451	-3.0%	(1,115,647,226)	-66.5%
2009	1,651,980,074	-1.6%	544,576,420	-3.3%	(1,107,403,654)	-67.0%
2010	1,624,303,017	-1.7%	525,558,437	-3.5%	(1,098,744,580)	-67.6%
2011	1,613,981,590	-0.6%	509,548,743	-3.0%	(1,104,432,847)	-68.4%
2012	1,603,637,175	-0.6%	494,617,056	-2.9%	(1,109,020,118)	-69.2%
2013	1,595,108,779	-0.5%	480,937,203	-2.8%	(1,114,171,576)	-69.8%
2014	1,588,350,428	-0.4%	468,294,906	-2.6%	(1,120,055,522)	-70.5%
2015	1,582,833,407	-0.3%	456,503,287	-2.5%	(1,126,330,120)	-71.2%
2016	1,578,189,914	-0.3%	445,462,374	-2.4%	(1,132,727,540)	-71.8%
2017	1,574,856,714	-0.2%	435,097,327	-2.3%	(1,139,759,387)	-72.4%
2018	1,571,431,563	-0.2%	425,235,627	-2.3%	(1,146,195,935)	-72.9%
2019	1,568,213,300	-0.2%	415,880,470	-2.2%	(1,152,332,830)	-73.5%
2020	1,565,224,914	-0.2%	407,023,666	-2.1%	(1,158,201,248)	-74.0%

Notes:

[1] Expressed in constant 2000 dollars.

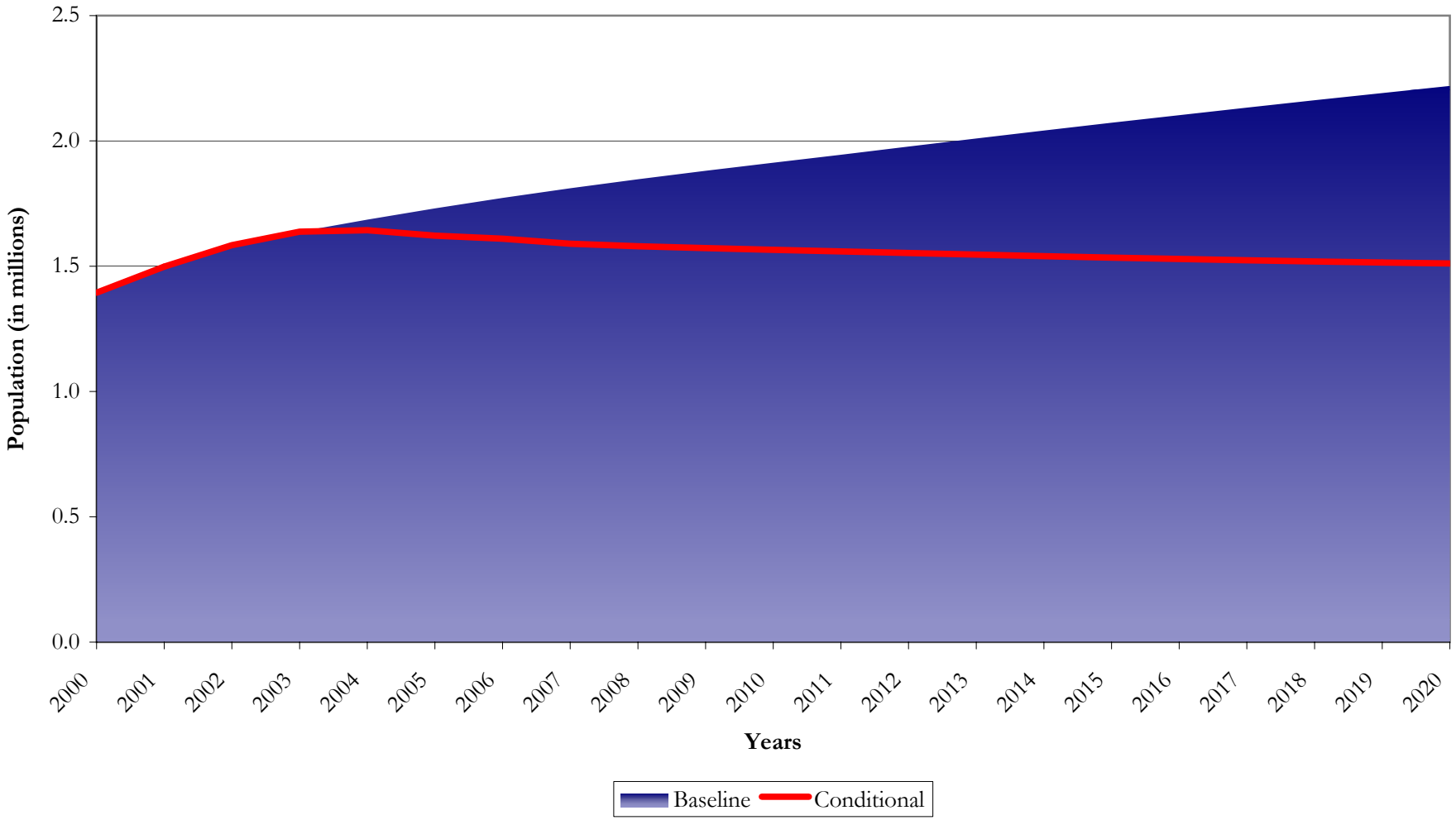
Appendix 5.3-AO
Conditional Impact Assessment Model
State and Local Tax Payments[1] - 65% Initial Impact, No Recovery

	State and Local Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	420,564,371		420,564,371			
2001	416,357,741	-1.0%	416,357,741	-1.0%	-	0.0%
2002	430,779,689	3.5%	430,779,689	3.5%	-	0.0%
2003	425,439,241	-1.2%	425,439,241	-1.2%	-	0.0%
2004	420,219,296	-1.2%	351,933,660	-17.3%	(68,285,636)	-16.3%
2005	414,051,763	-1.5%	212,201,529	-39.7%	(201,850,235)	-48.8%
2006	408,382,672	-1.4%	142,933,935	-32.6%	(265,448,737)	-65.0%
2007	403,880,264	-1.1%	138,275,481	-3.3%	(265,604,783)	-65.8%
2008	399,980,368	-1.0%	134,148,814	-3.0%	(265,831,553)	-66.5%
2009	393,626,604	-1.6%	129,759,293	-3.3%	(263,867,311)	-67.0%
2010	387,031,836	-1.7%	125,227,771	-3.5%	(261,804,065)	-67.6%
2011	384,572,491	-0.6%	121,413,051	-3.0%	(263,159,440)	-68.4%
2012	382,107,669	-0.6%	117,855,194	-2.9%	(264,252,475)	-69.2%
2013	380,075,561	-0.5%	114,595,618	-2.8%	(265,479,942)	-69.8%
2014	378,465,210	-0.4%	111,583,267	-2.6%	(266,881,943)	-70.5%
2015	377,150,638	-0.3%	108,773,612	-2.5%	(268,377,027)	-71.2%
2016	376,044,207	-0.3%	106,142,831	-2.4%	(269,901,376)	-71.8%
2017	375,249,987	-0.2%	103,673,093	-2.3%	(271,576,894)	-72.4%
2018	374,433,857	-0.2%	101,323,290	-2.3%	(273,110,567)	-72.9%
2019	373,667,023	-0.2%	99,094,184	-2.2%	(274,572,839)	-73.5%
2020	372,954,963	-0.2%	96,983,823	-2.1%	(275,971,140)	-74.0%

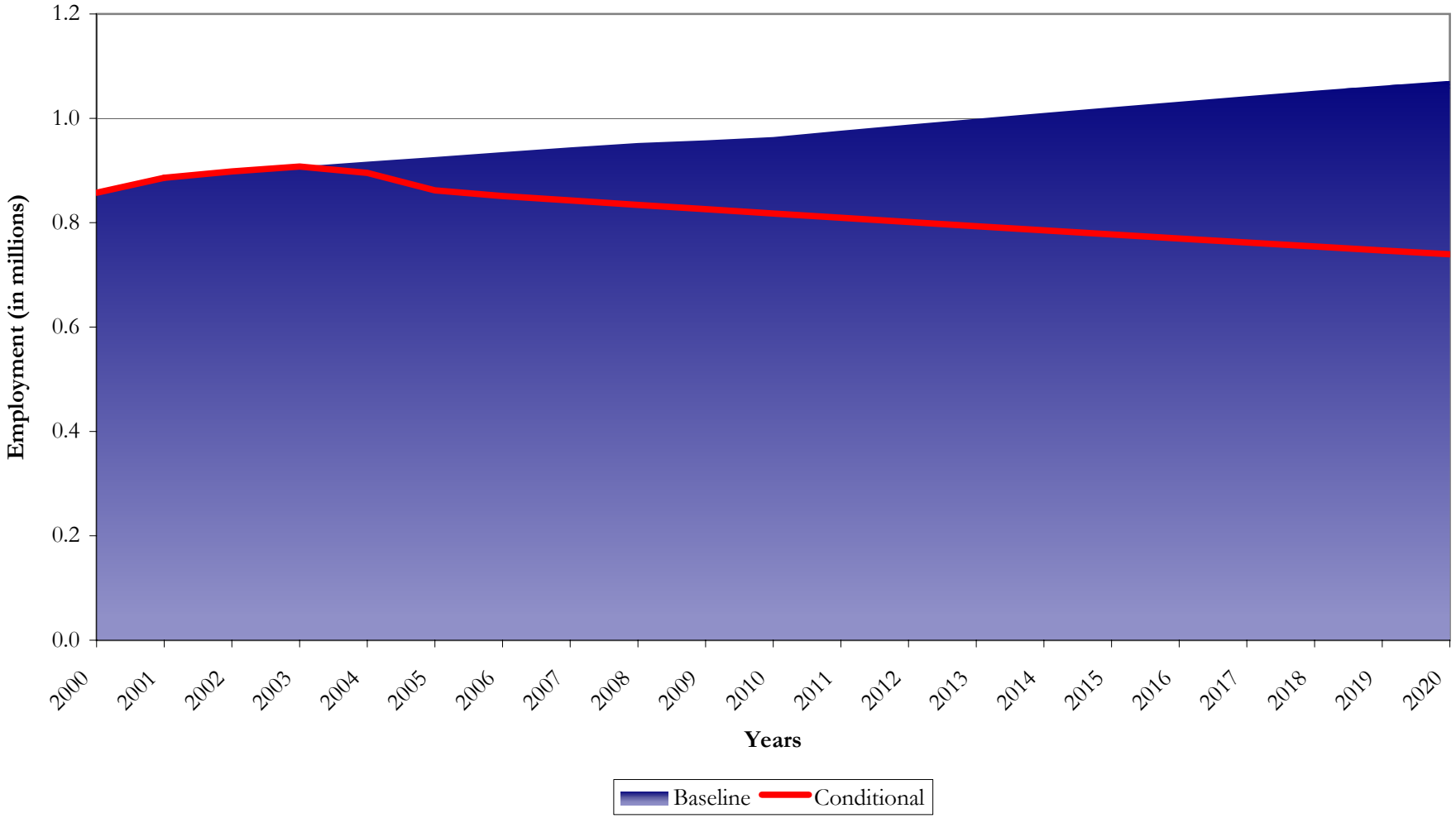
Notes:

[1] Expressed in constant 2000 dollars.

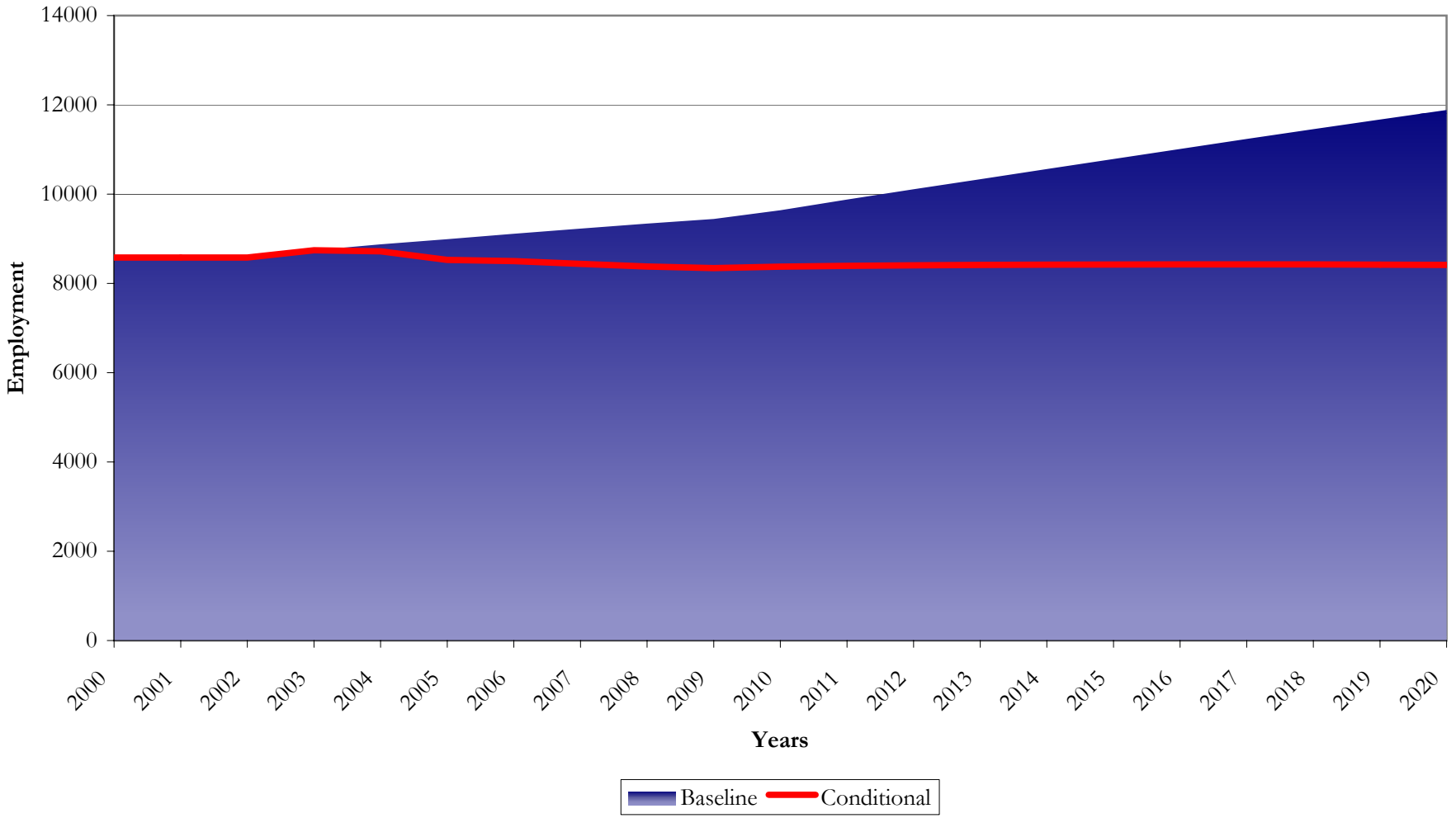
Appendix 5.4-A
Conditional Impact Assessment Model
Population - 65% Initial Impact, No Recovery



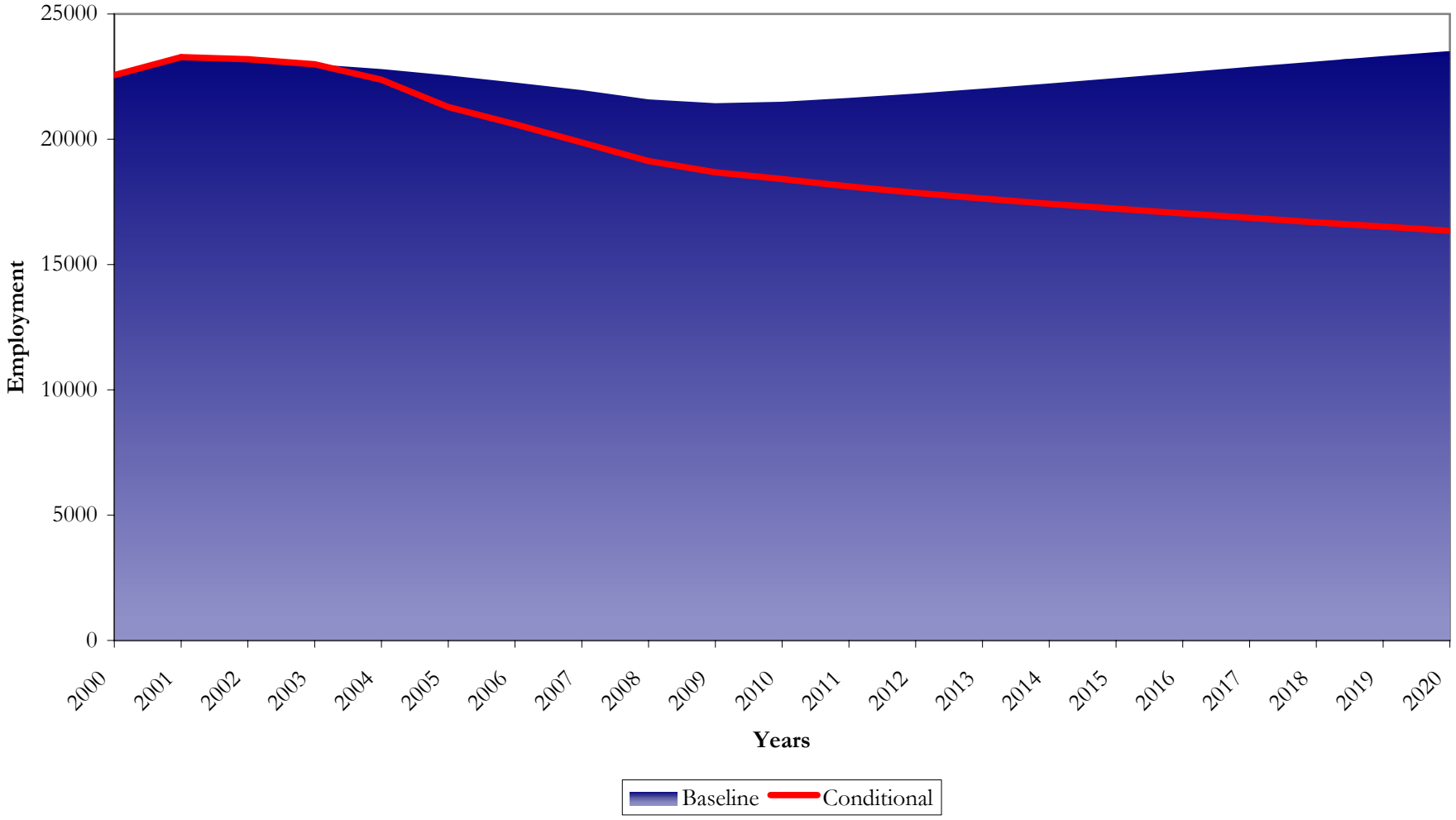
Appendix 5.4-B
Conditional Impact Assessment Model
Employment - 65% Initial Impact, No Recovery



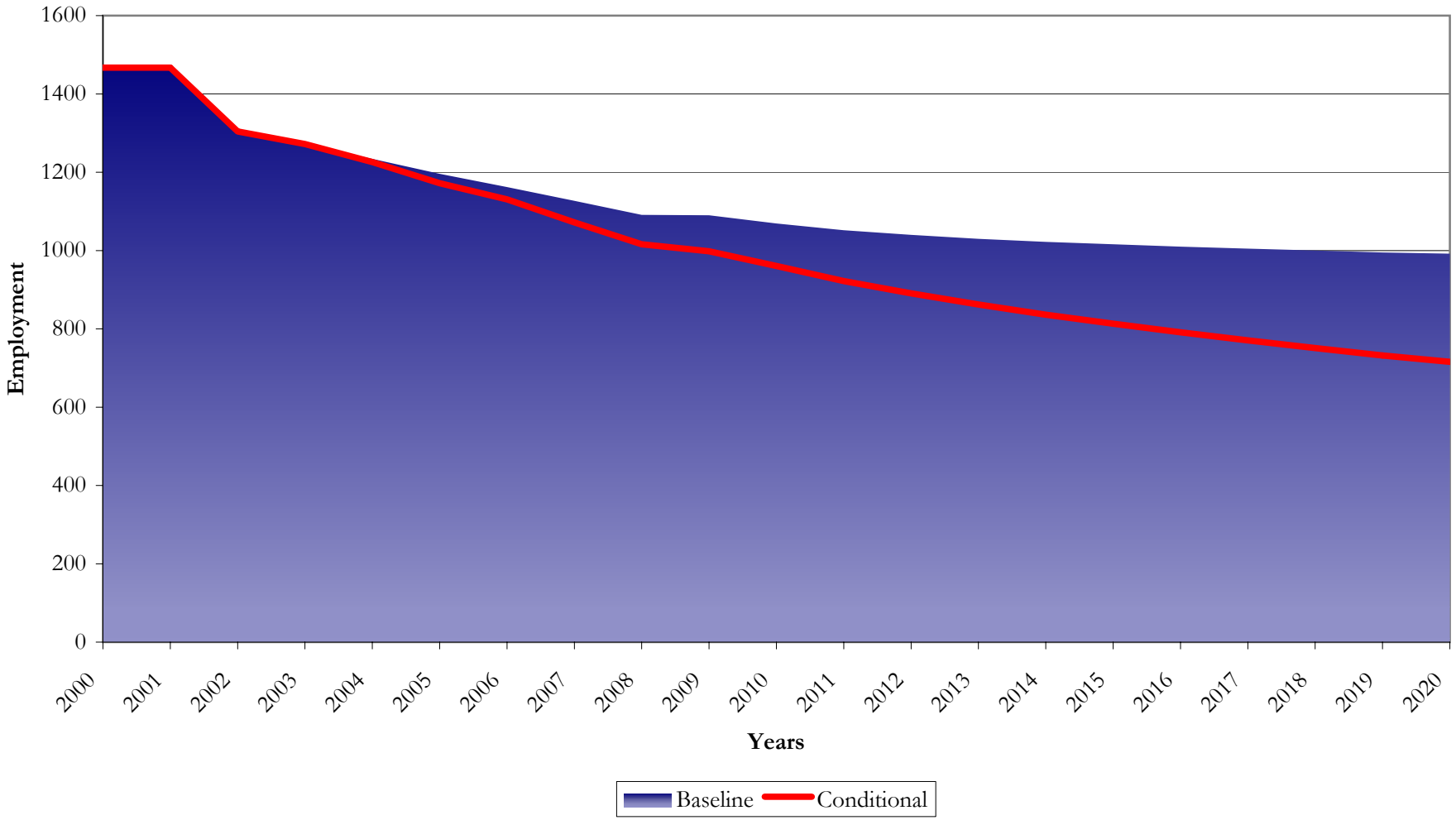
Appendix 5.4-C
Conditional Impact Assessment Model
Employment (Agriculture, Fishing and Forestry) - 65% Initial Impact, No Recovery



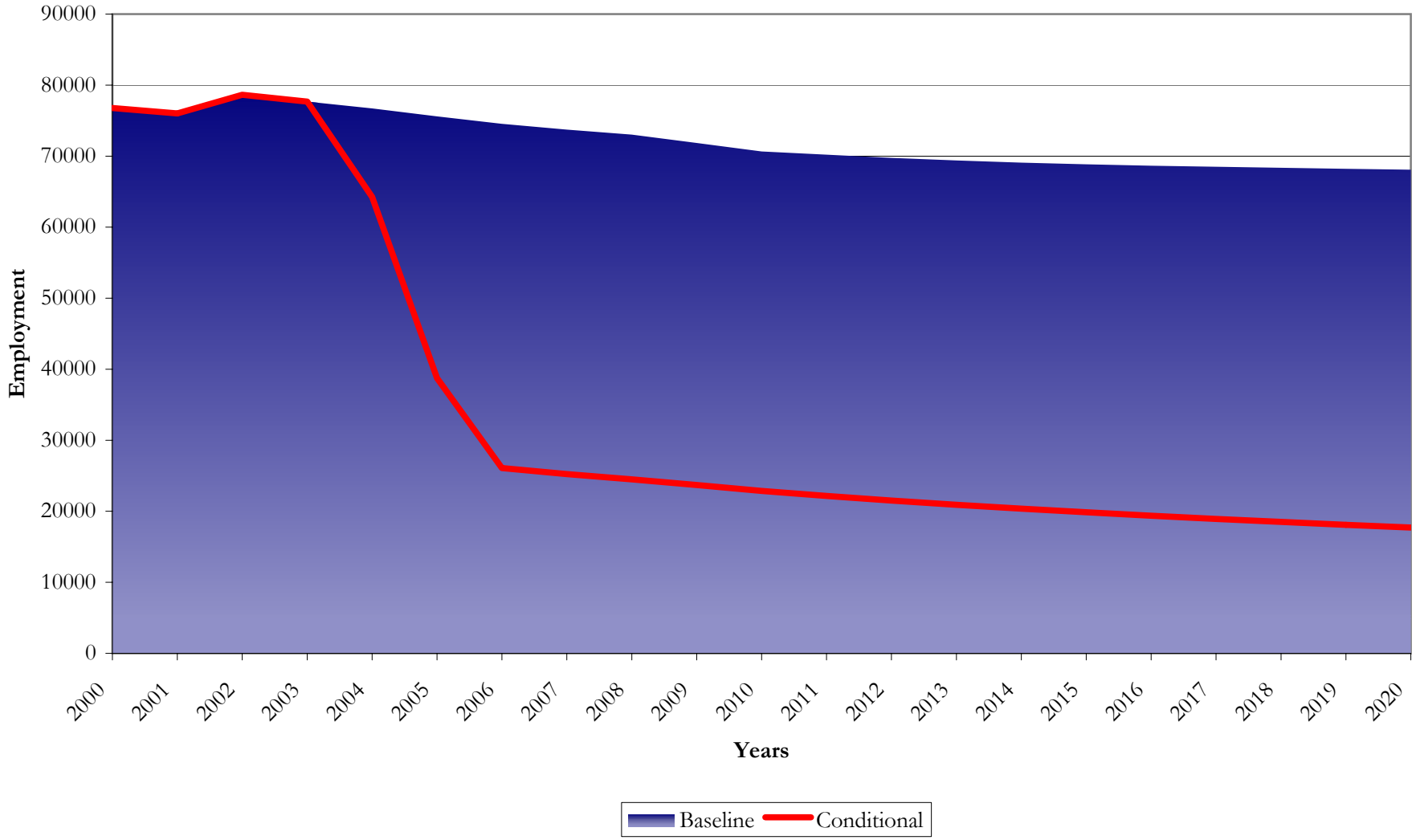
Appendix 5.4-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 65% Initial Impact, No Recovery



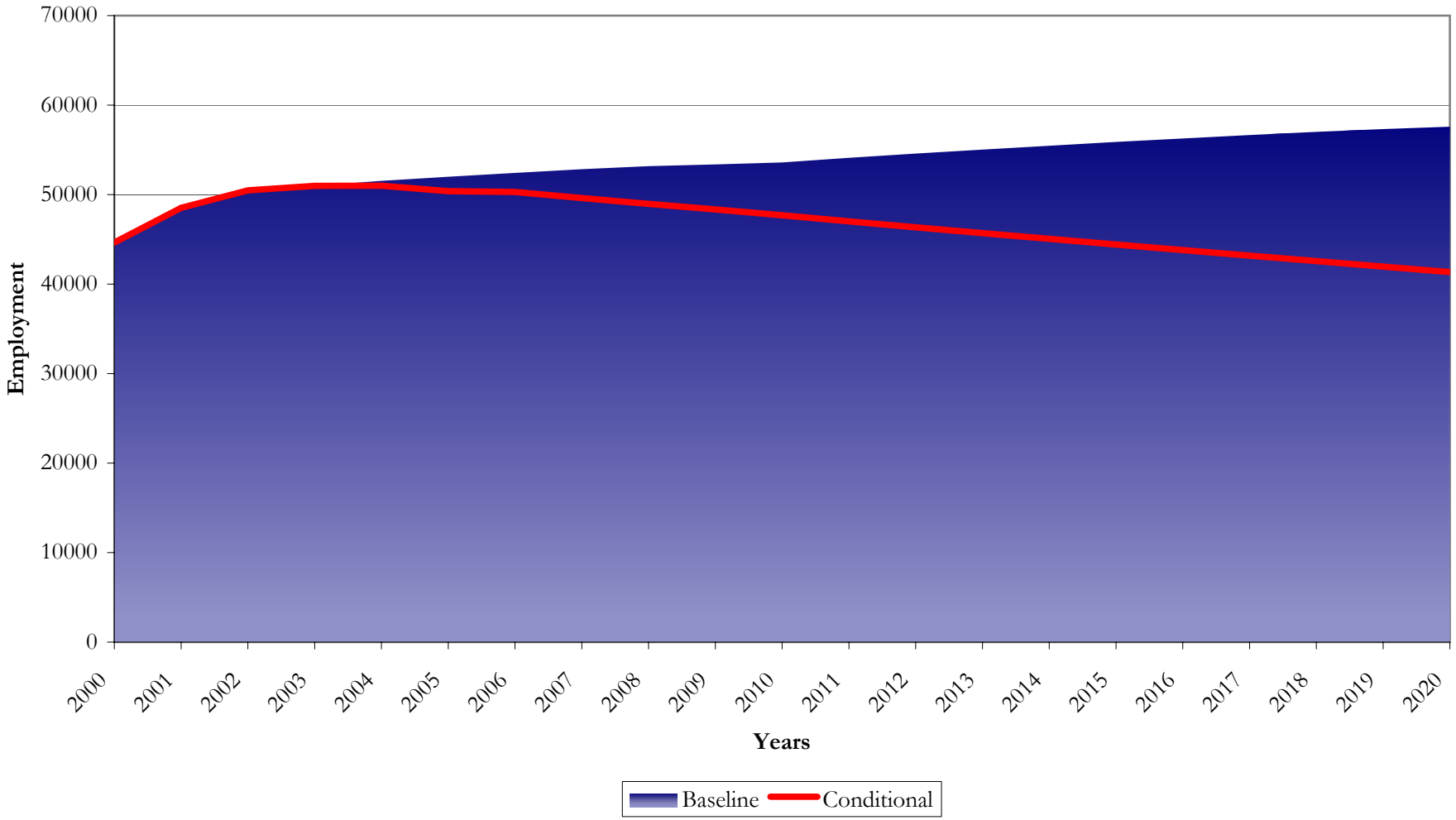
Appendix 5.4-E
Conditional Impact Assessment Model
Employment (Mining) - 65% Initial Impact, No Recovery



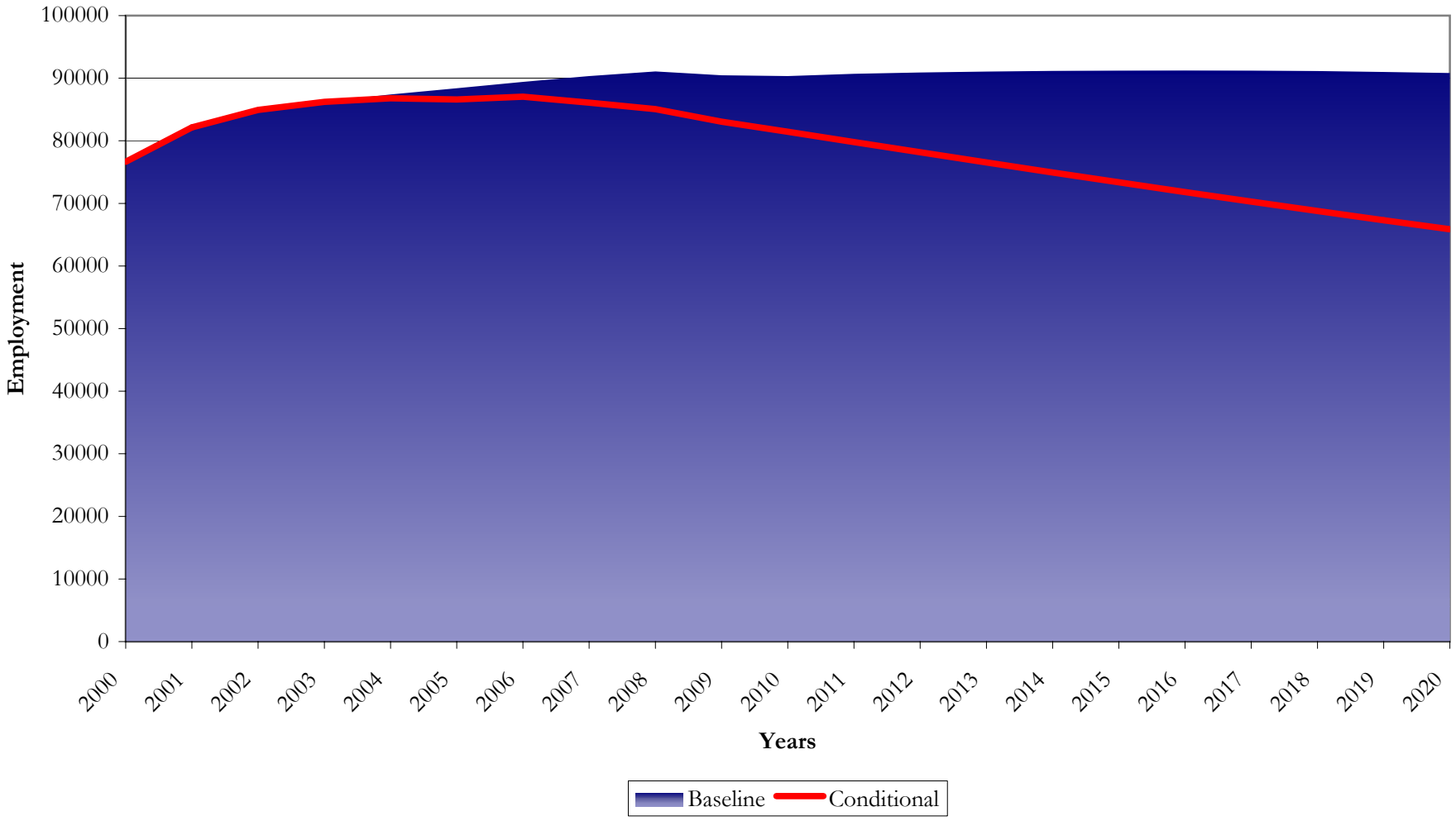
Appendix 5.4-F
Conditional Impact Assessment Model
Employment (Construction) - 65% Initial Impact, No Recovery



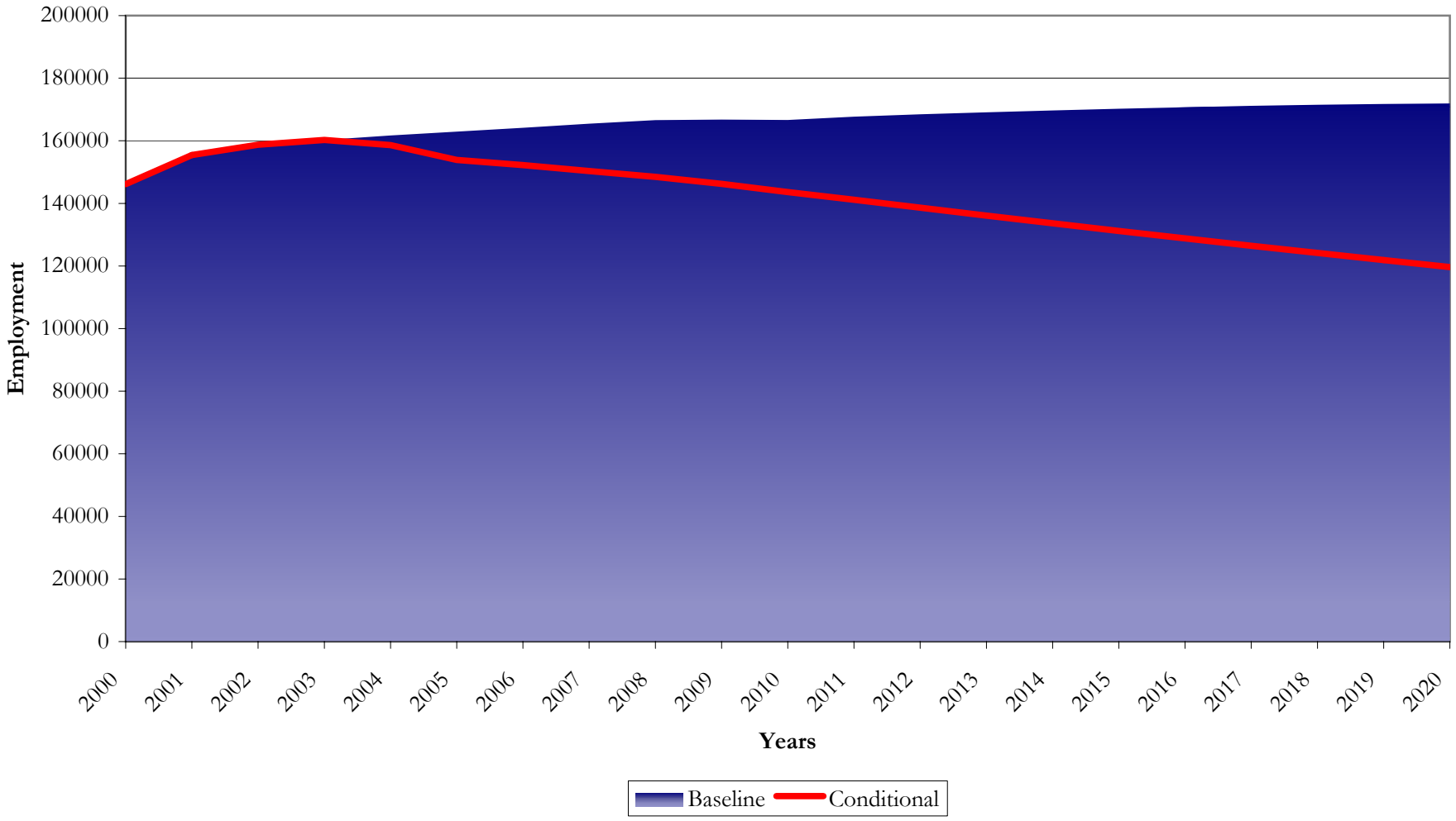
Appendix 5.4-G
Conditional Impact Assessment Model
Employment (T.C.P.U.) - 65% Initial Impact, No Recovery



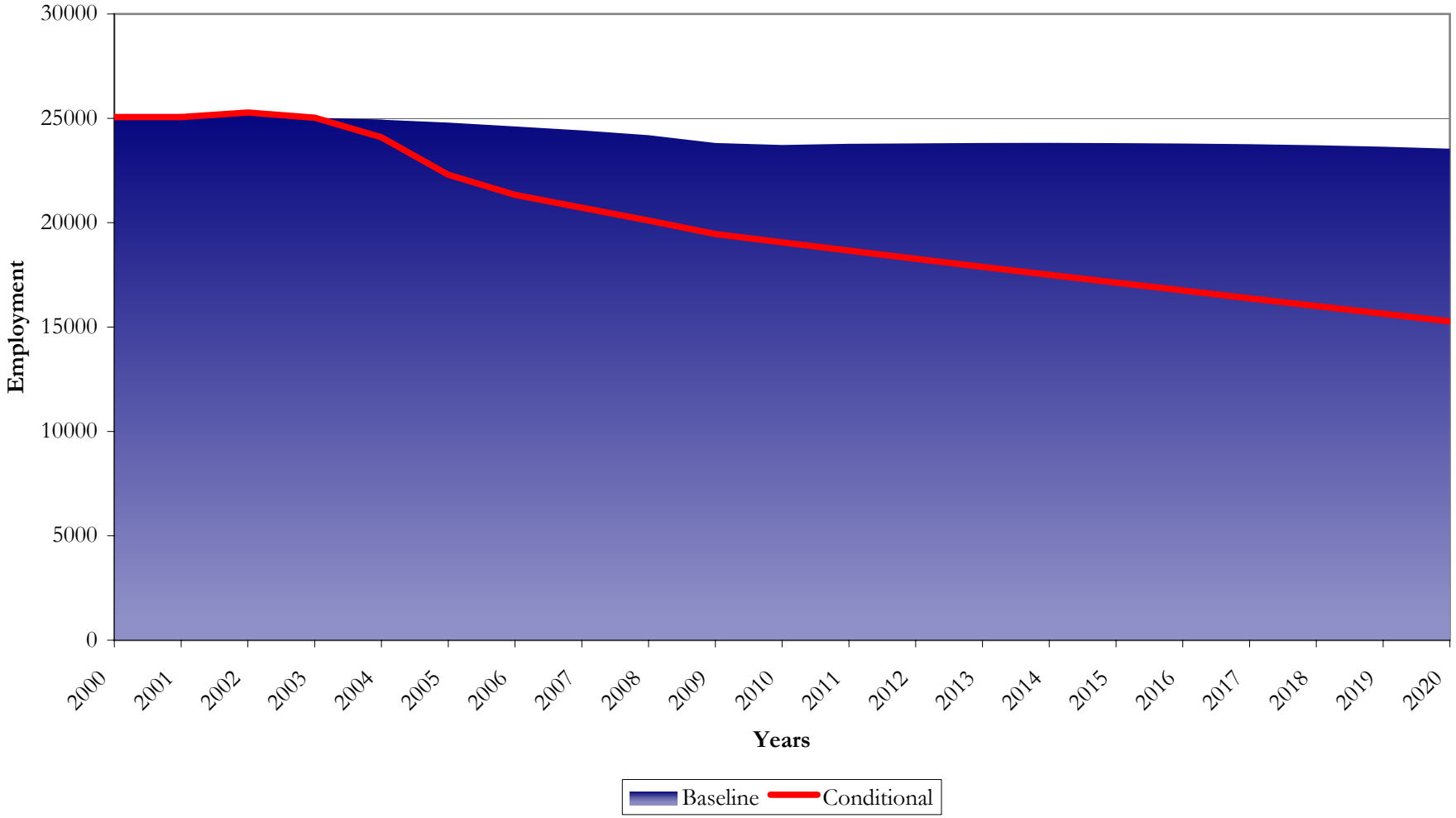
Appendix 5.4-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 65% Initial Impact, No Recovery



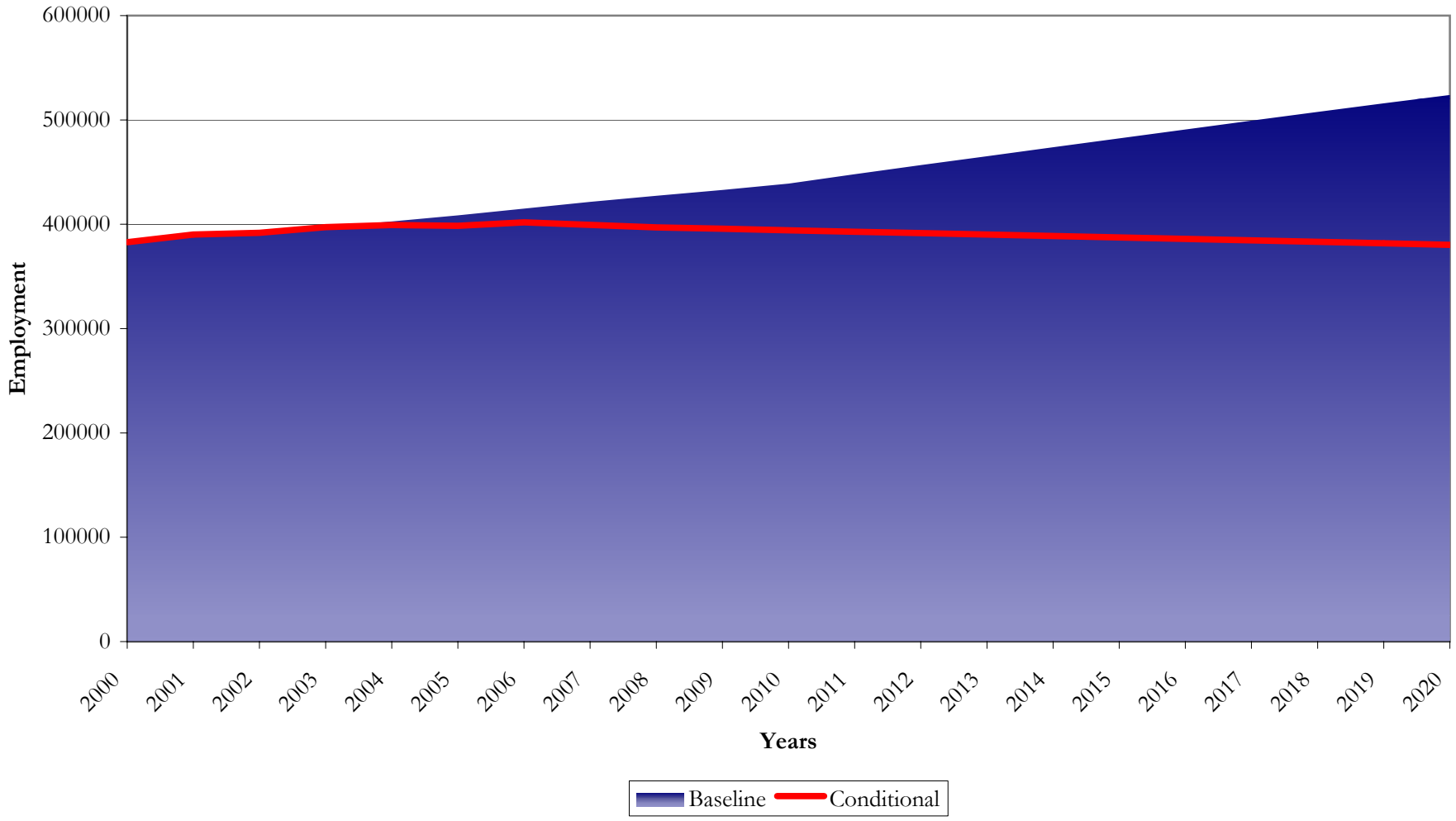
Appendix 5.4-I
Conditional Impact Assessment Model
Employment (Retail Trade) - 65% Initial Impact, No Recovery



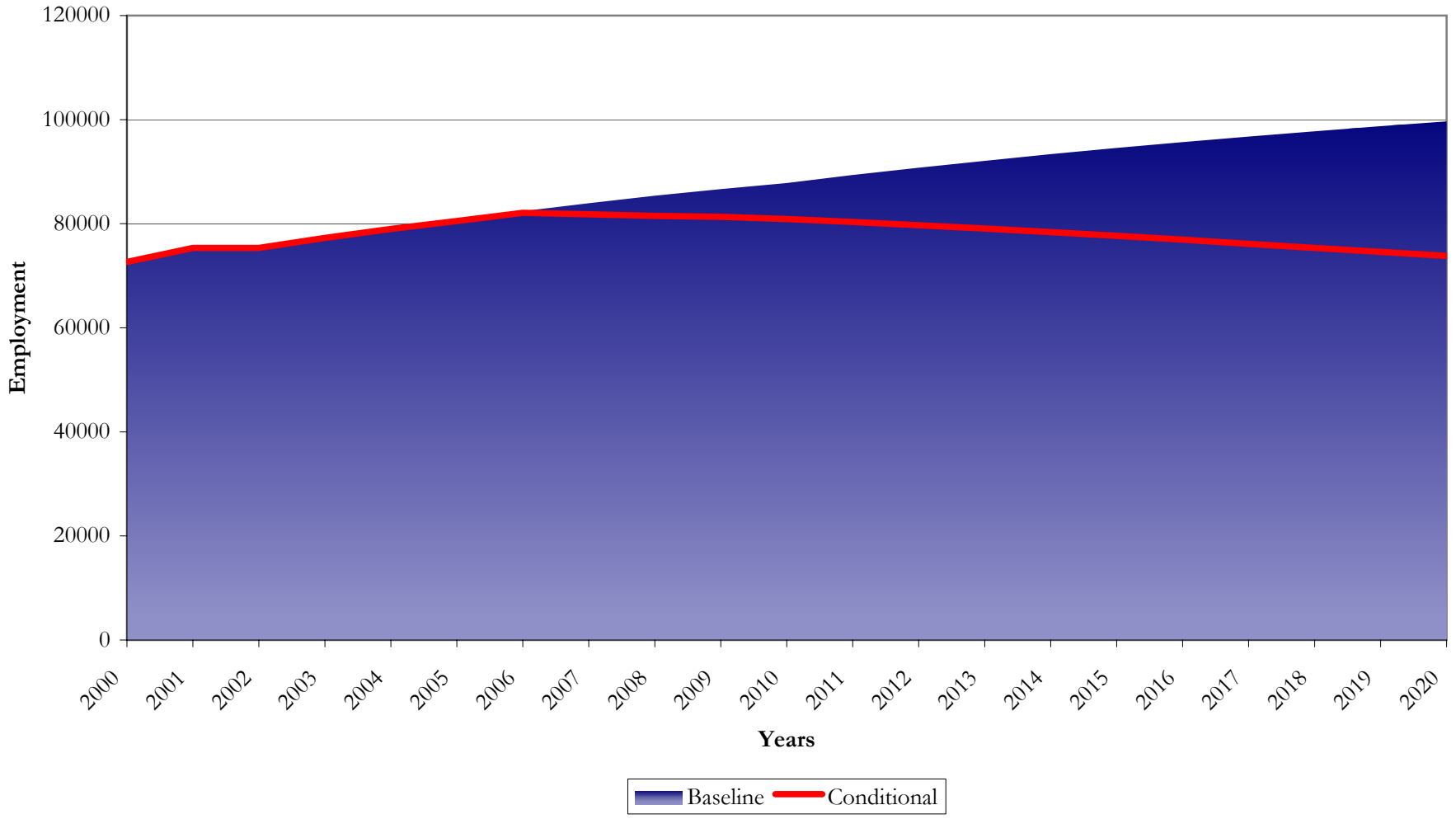
Appendix 5.4-J
Conditional Impact Assessment Model
Employment (Wholesale Trade) - 65% Initial Impact, No Recovery



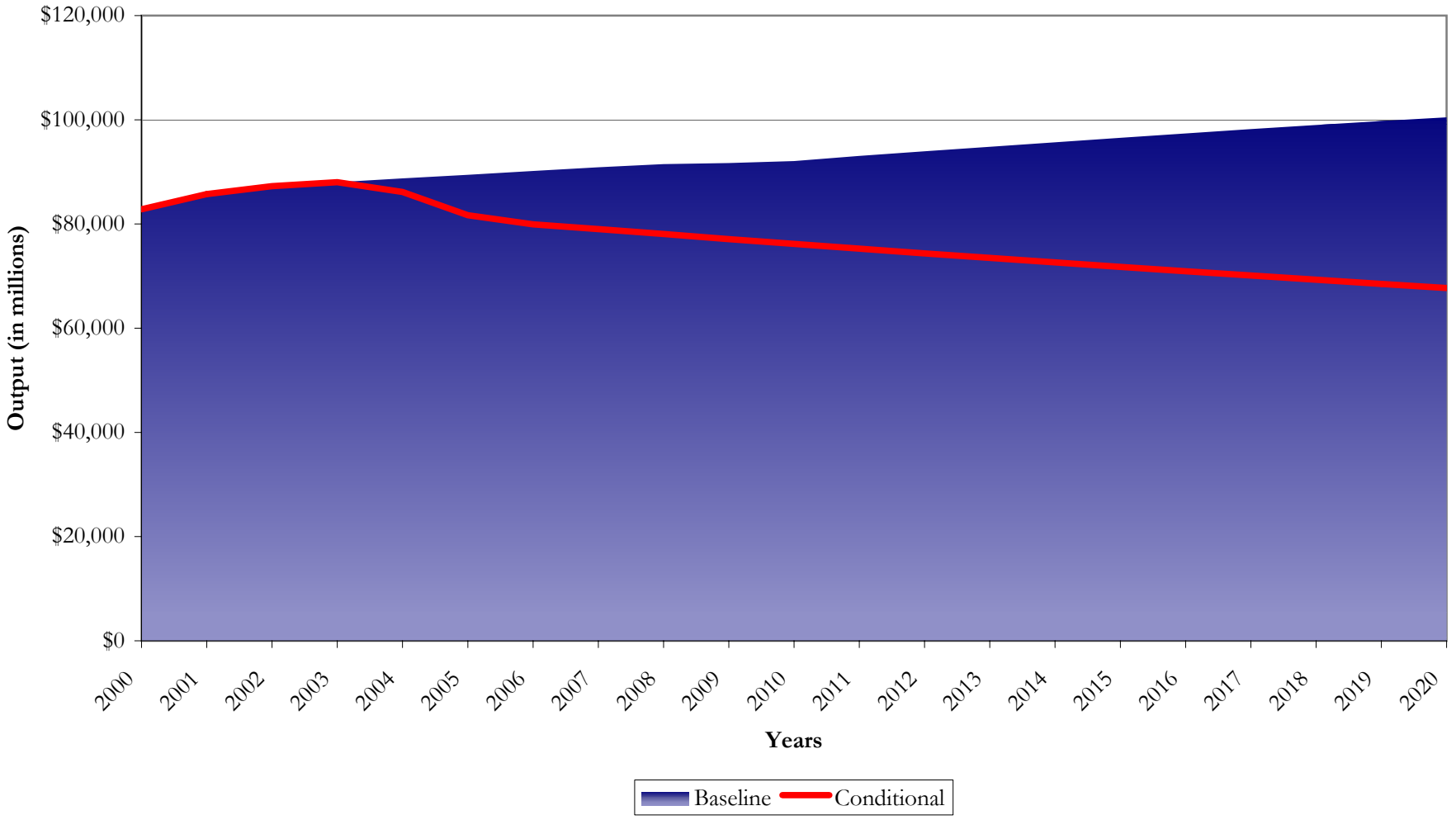
Appendix 5.4-K
Conditional Impact Assessment Model
Employment (Services) - 65% Initial Impact, No Recovery



Appendix 5.4-L
Conditional Impact Assessment Model
Employment (Government) - 65% Initial Impact, No Recovery

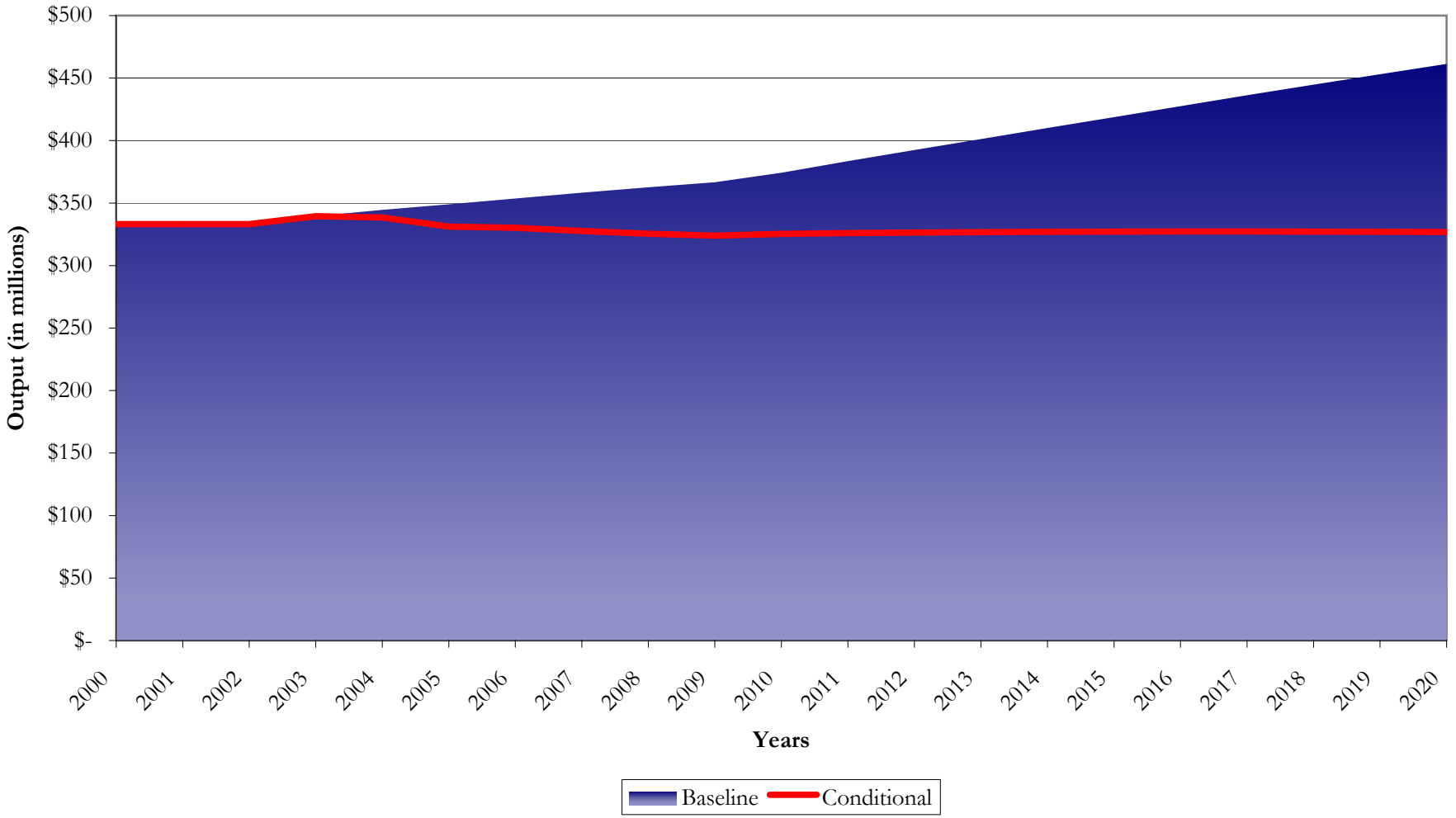


Appendix 5.4-M
Conditional Impact Assessment Model
Output - 65% Initial Impact, No Recovery



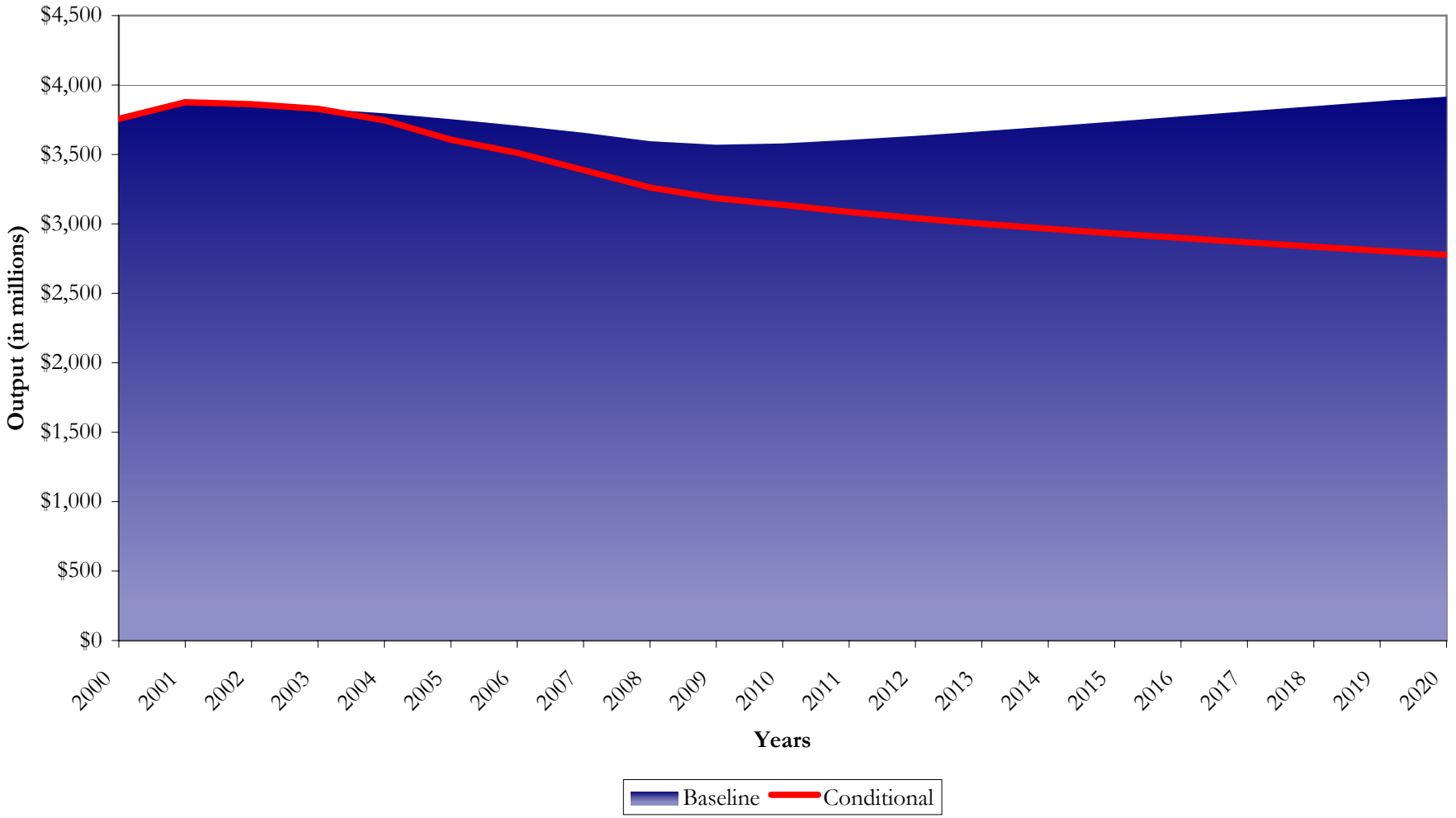
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-N
Conditional Impact Assessment Model
Output (Agriculture, Fishing and Forestry) - 65% Initial Impact, No Recovery



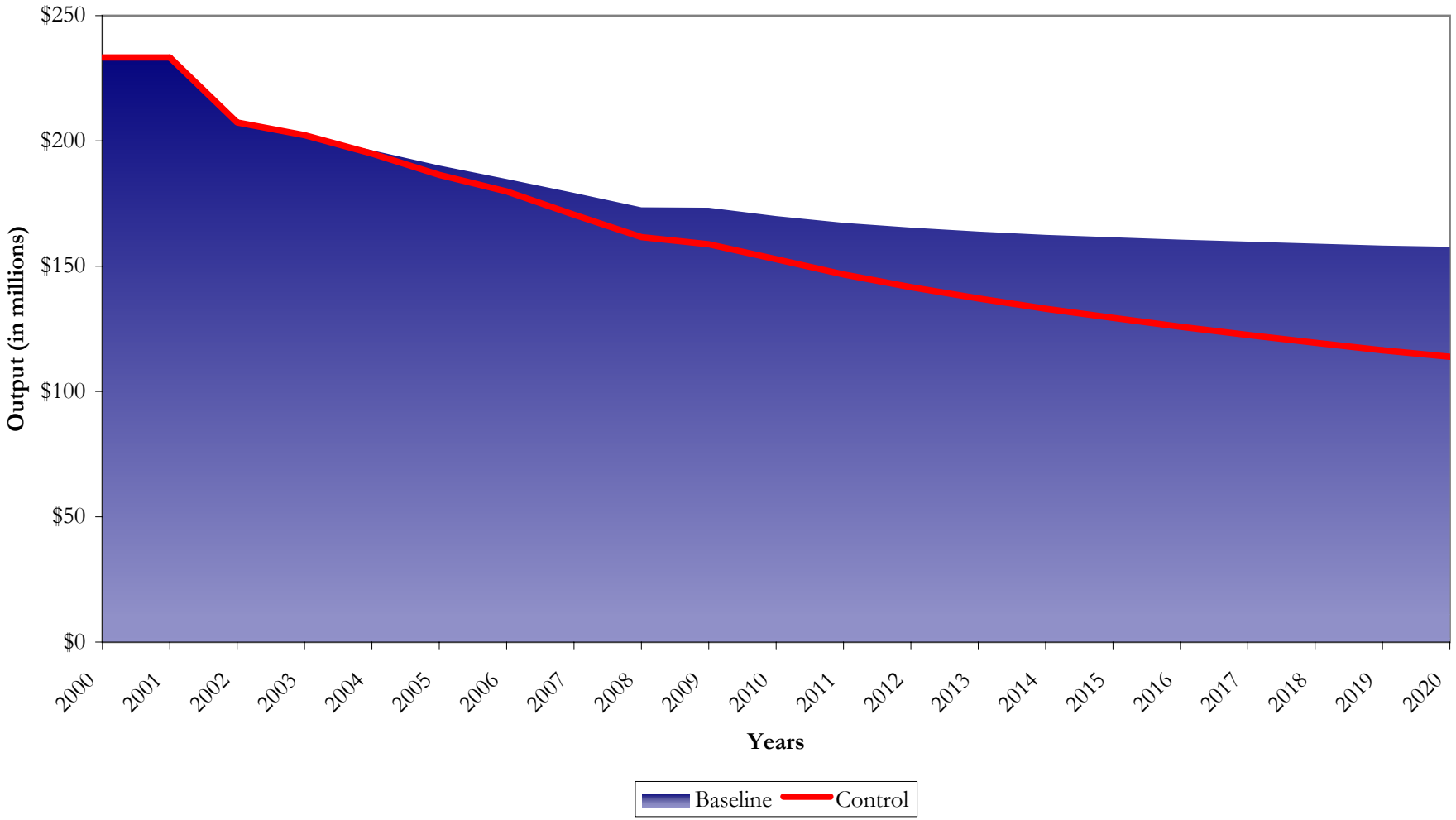
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-O
Conditional Impact Assessment Model
Output (Manufacturing) - 65% Initial Impact, No Recovery



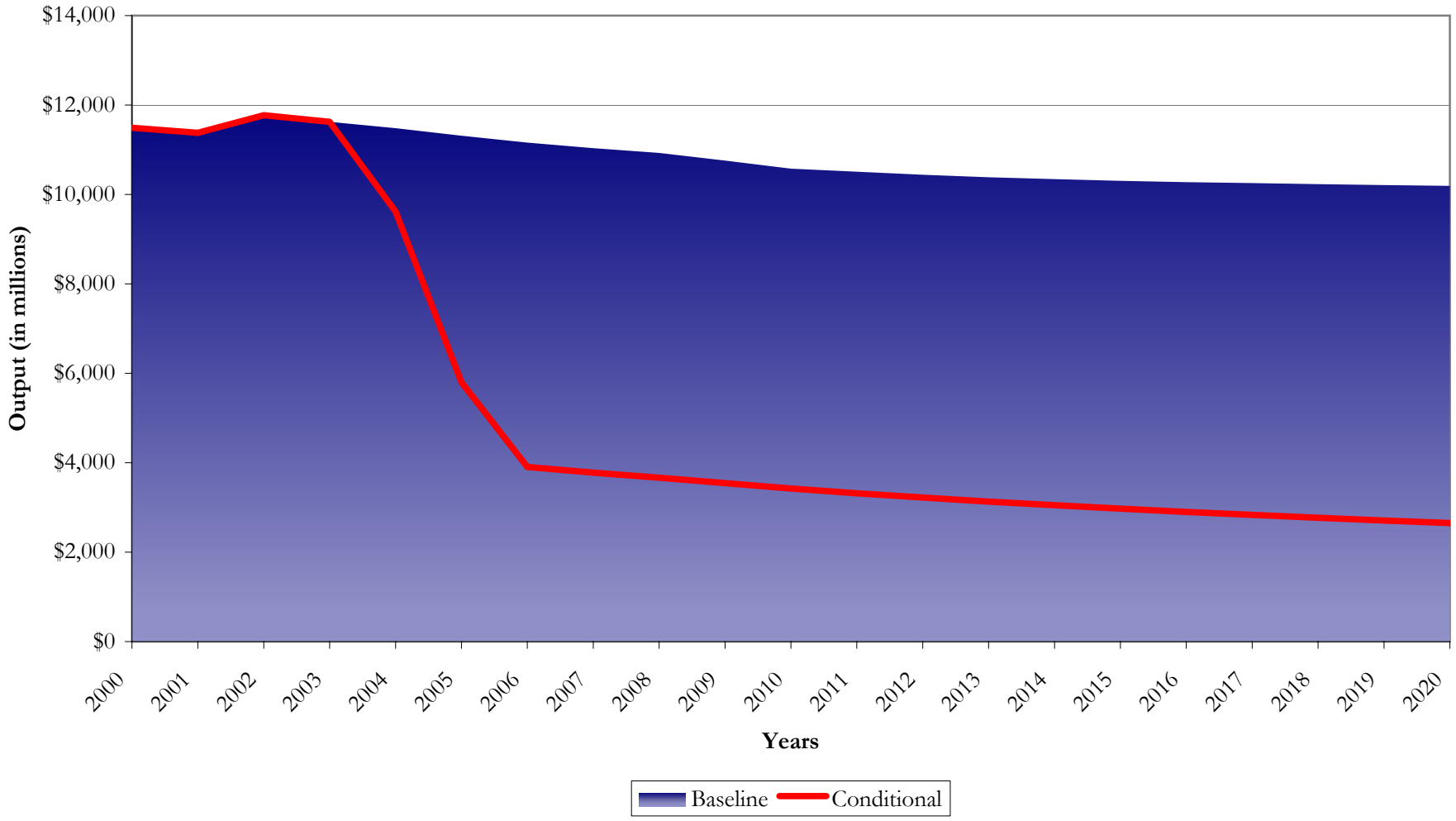
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-P
Conditional Impact Assessment Model
Output (Mining) - 65% Initial Impact, No Recovery



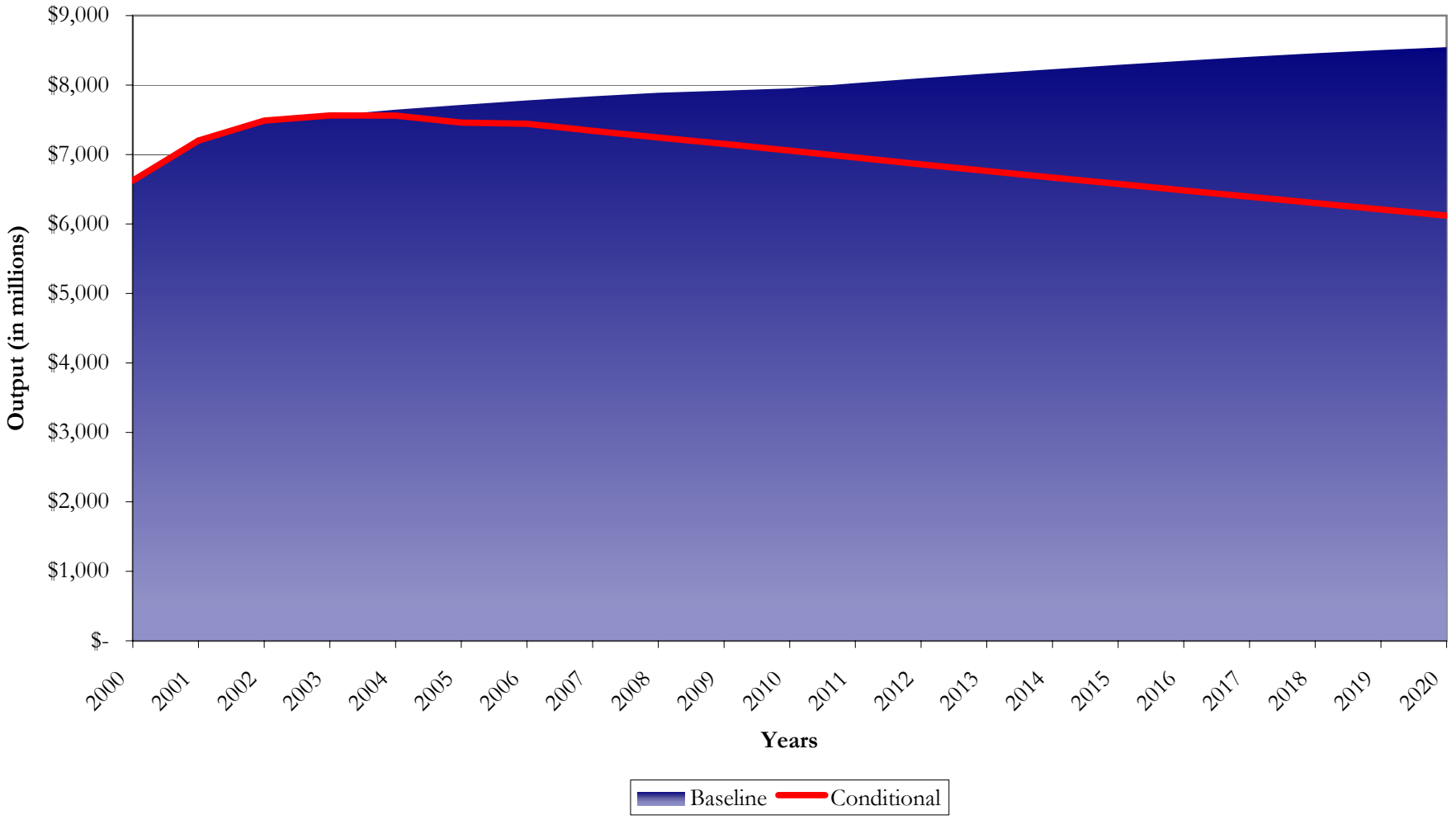
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-Q
Conditional Impact Assessment Model
Output (Construction) - 65% Initial Impact, No Recovery



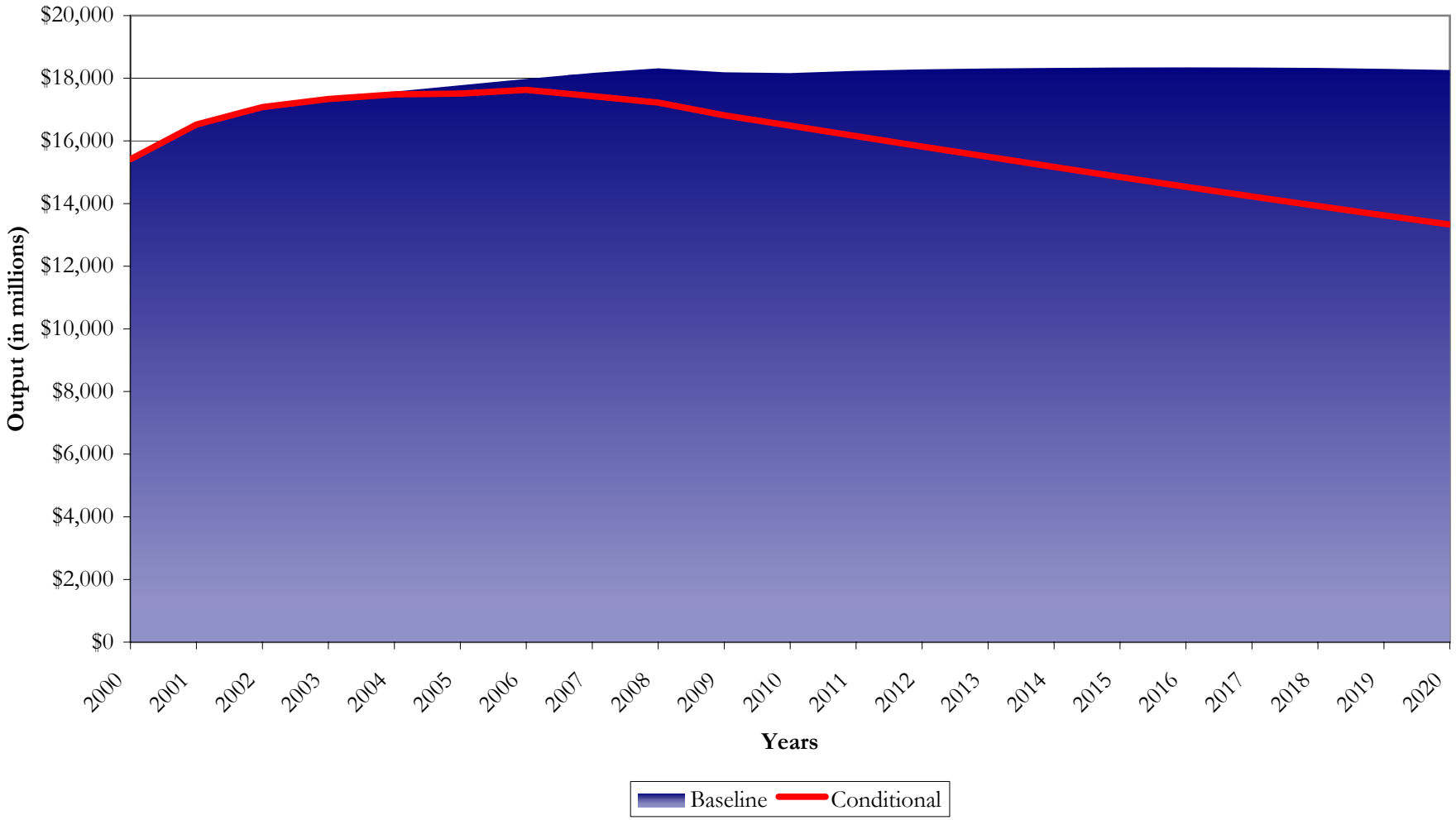
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-R
Conditional Impact Assessment Model
Output (T.C.P.U.) - 65% Initial Impact, No Recovery



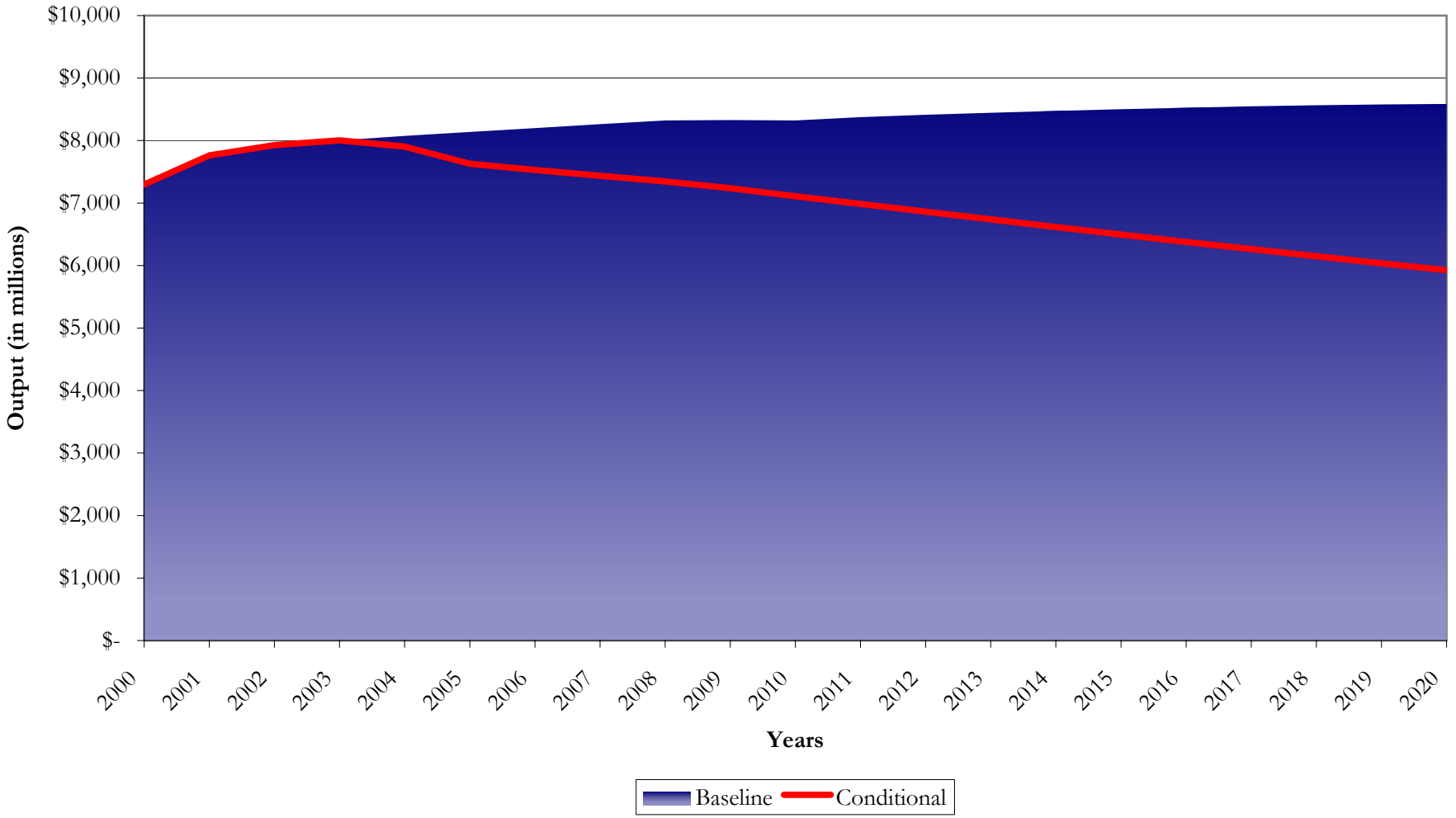
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-S
Conditional Impact Assessment Model
Output (F.I.R.E.) - 65% Initial Impact, No Recovery



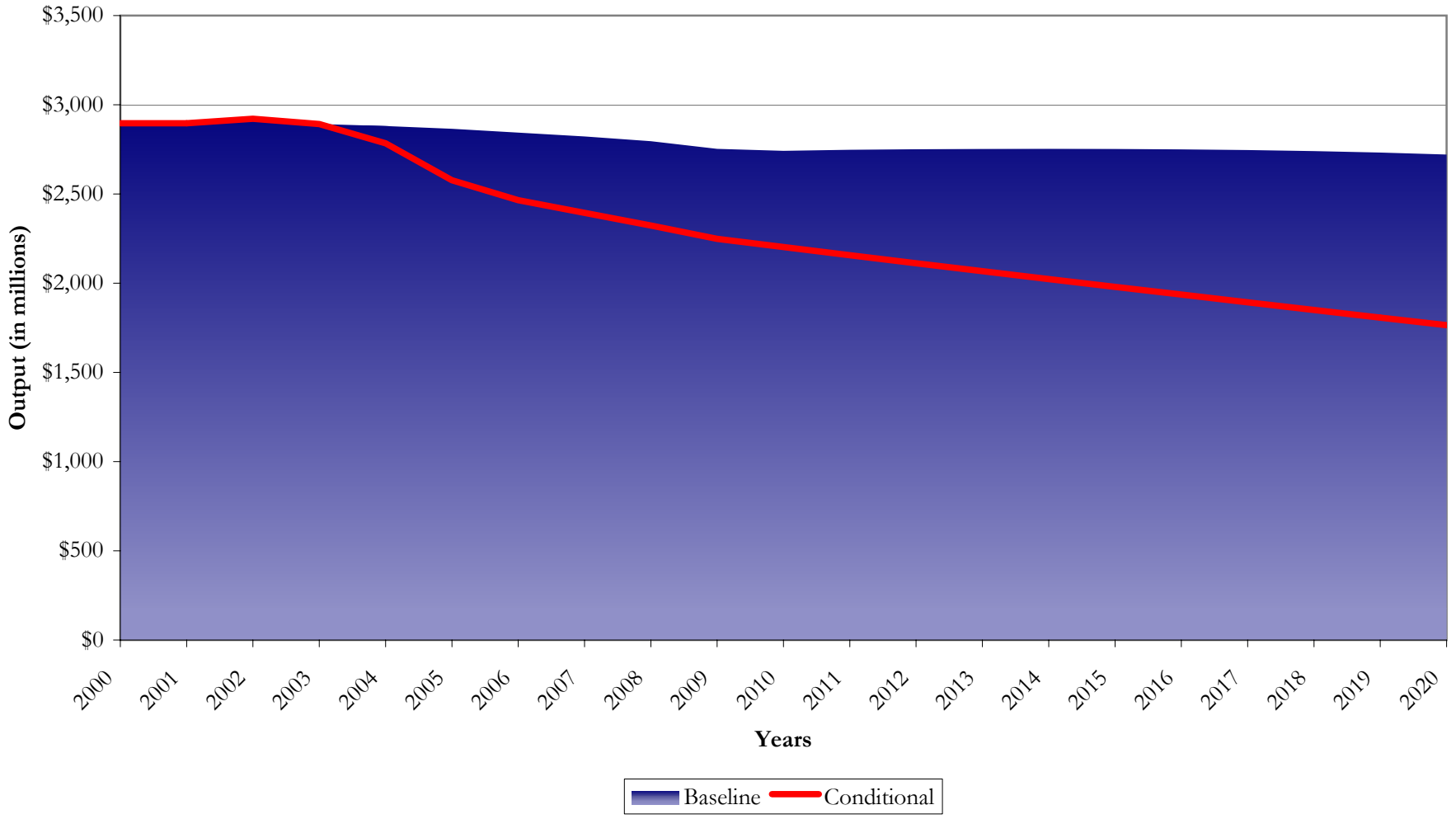
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-T
Conditional Impact Assessment Model
Output (Retail Trade) - 65% Initial Impact, No Recovery



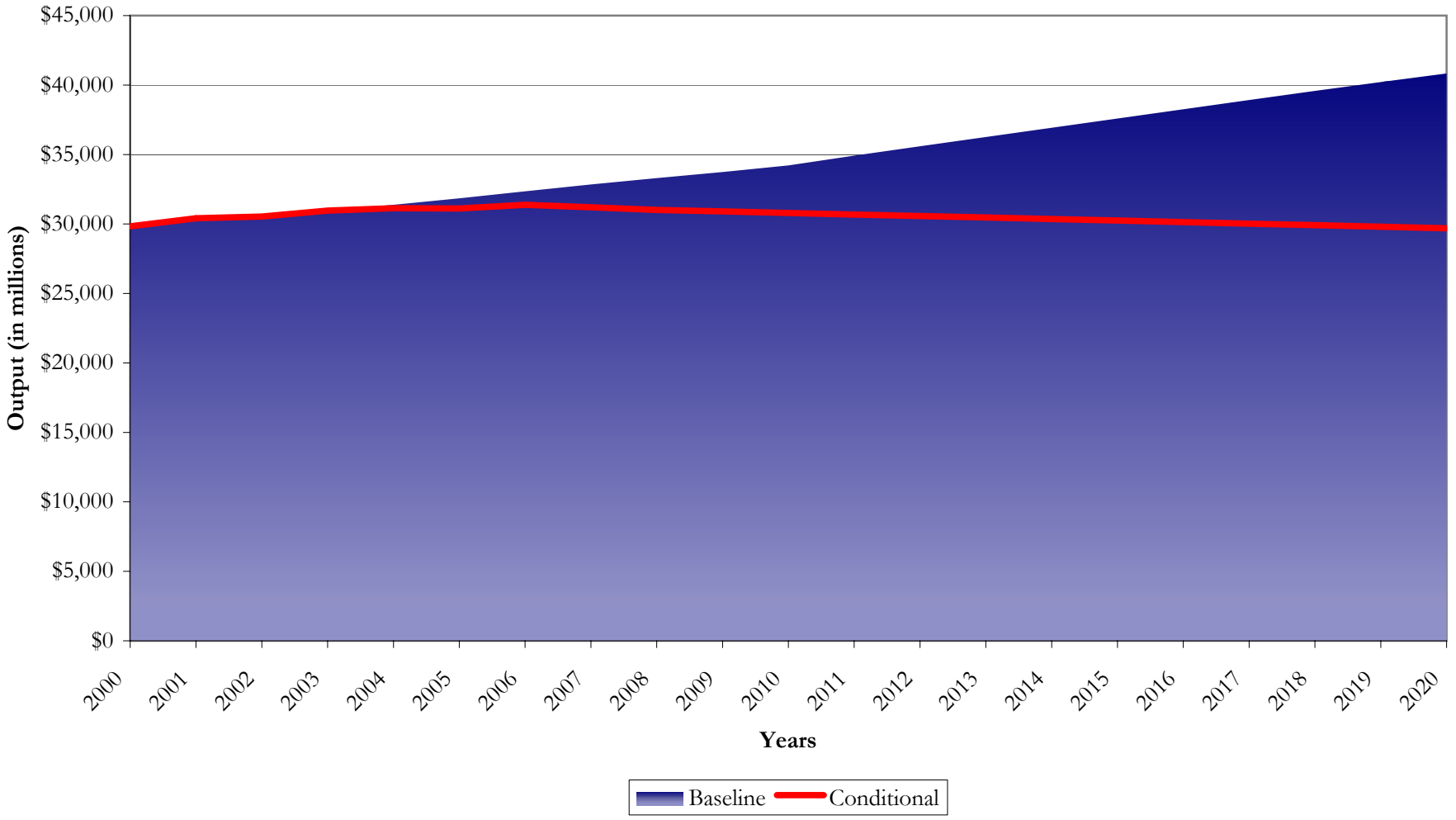
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-U
Conditional Impact Assessment Model
Output (Wholesale Trade) - 65% Initial Impact, No Recovery



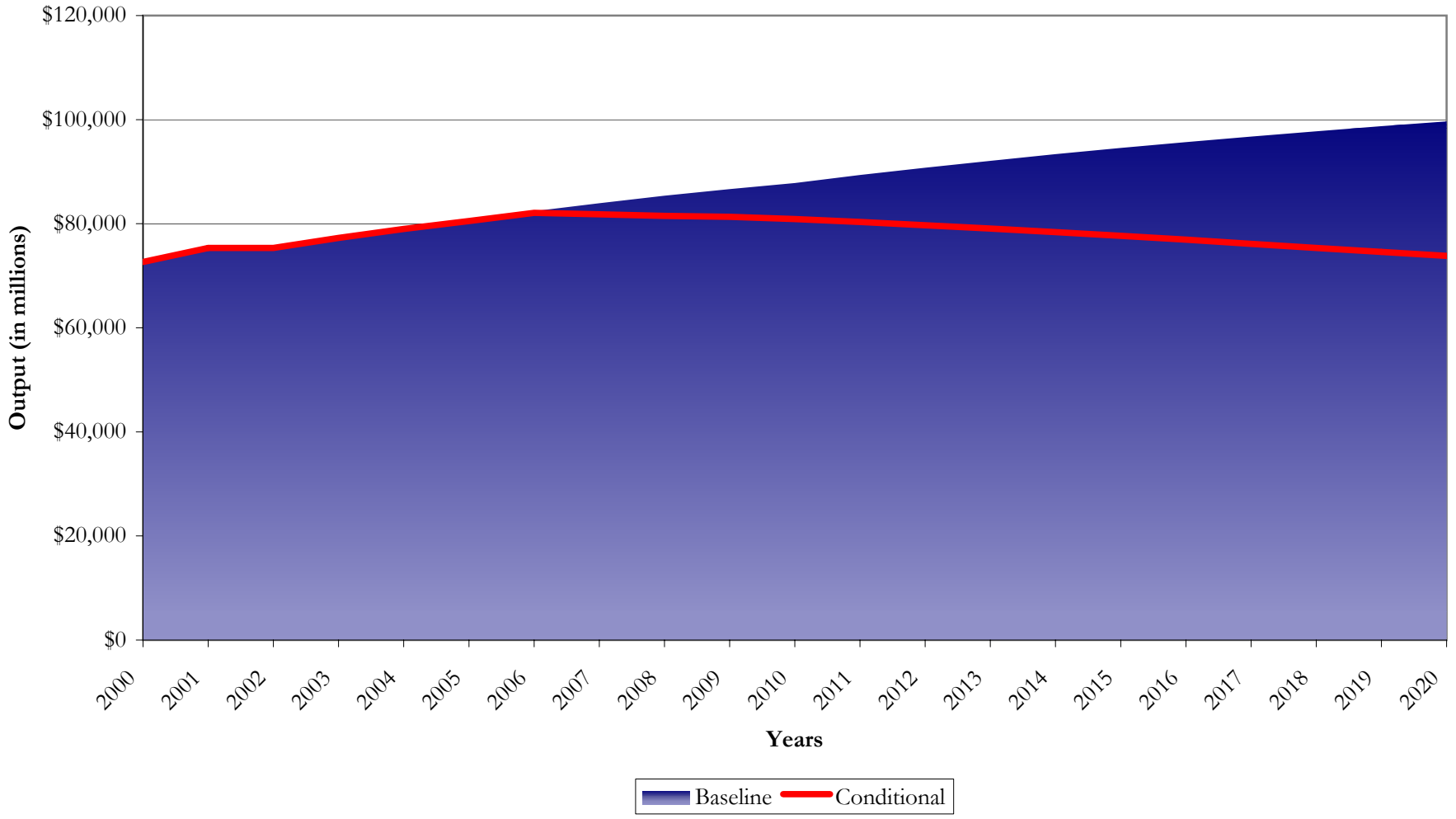
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-V
Conditional Impact Assessment Model
Output (Services) - 65% Initial Impact, No Recovery



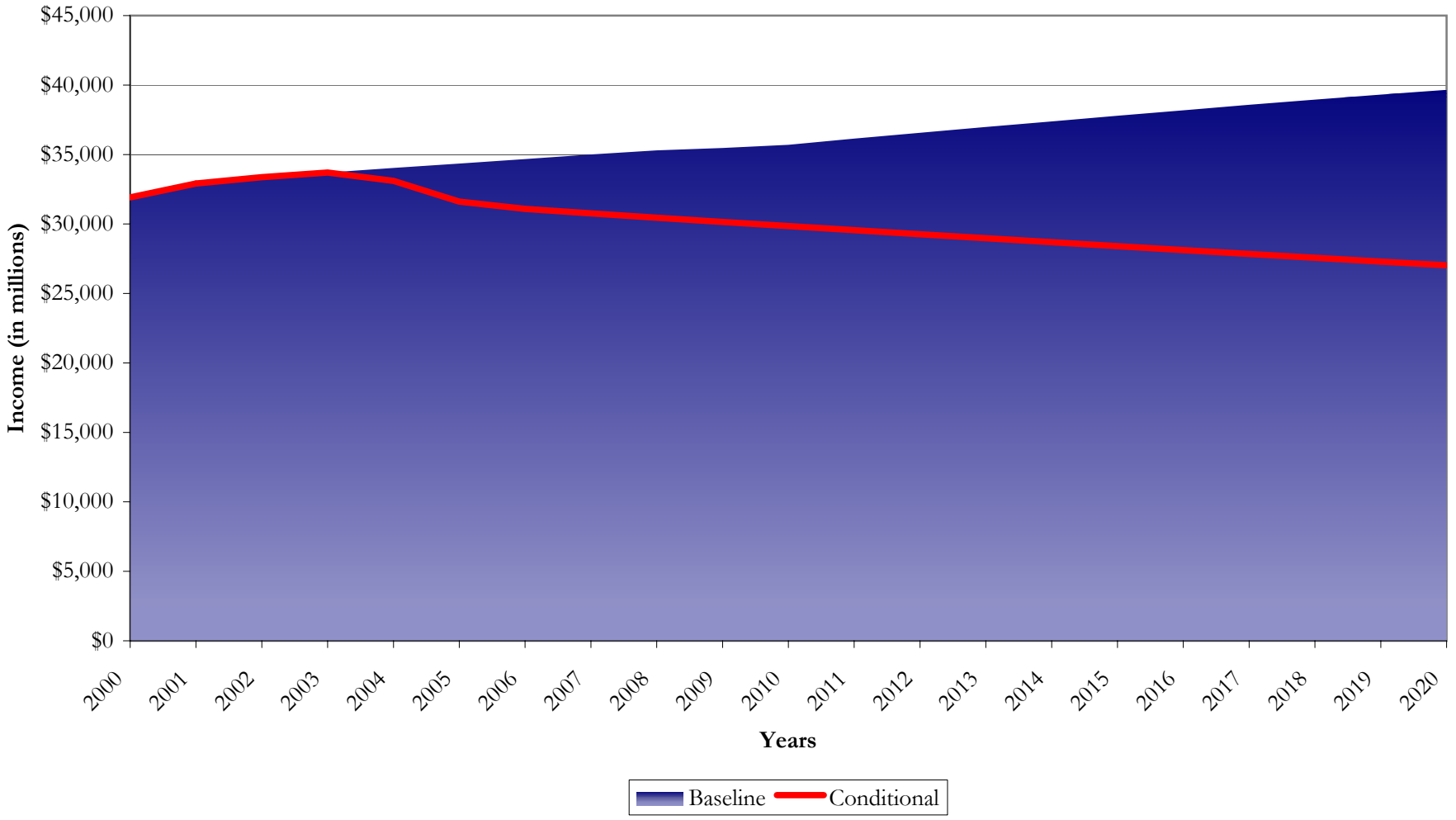
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-W
Conditional Impact Assessment Model
Output (Government) - 65% Initial Impact, No Recovery



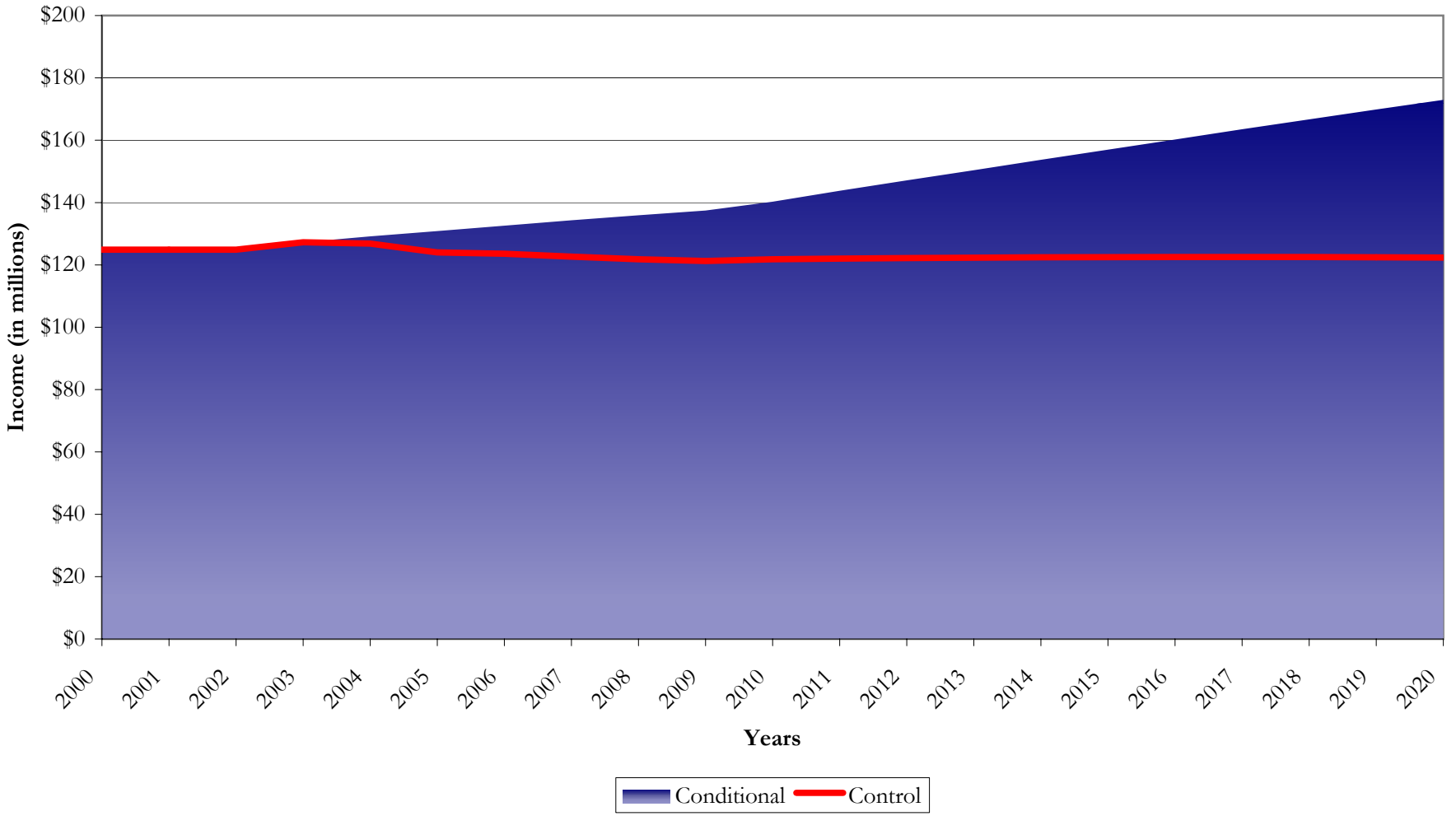
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-X
Conditional Impact Assessment Model
Labor Income - 65% Initial Impact, No Recovery



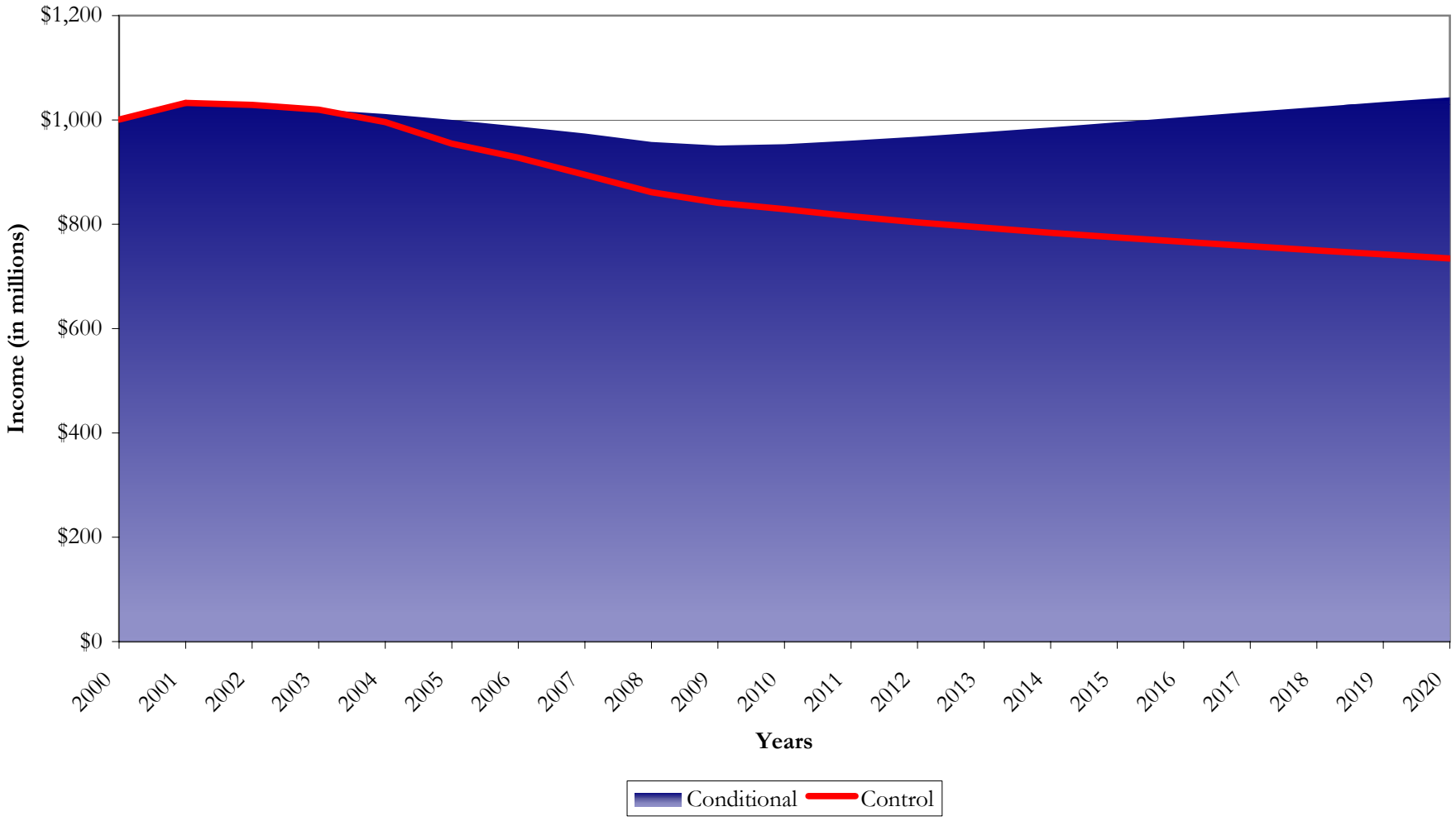
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-Y
Conditional Impact Assessment Model
Labor Income (Agriculture, Fishing and Forestry) - 65% Initial Impact, No Recovery



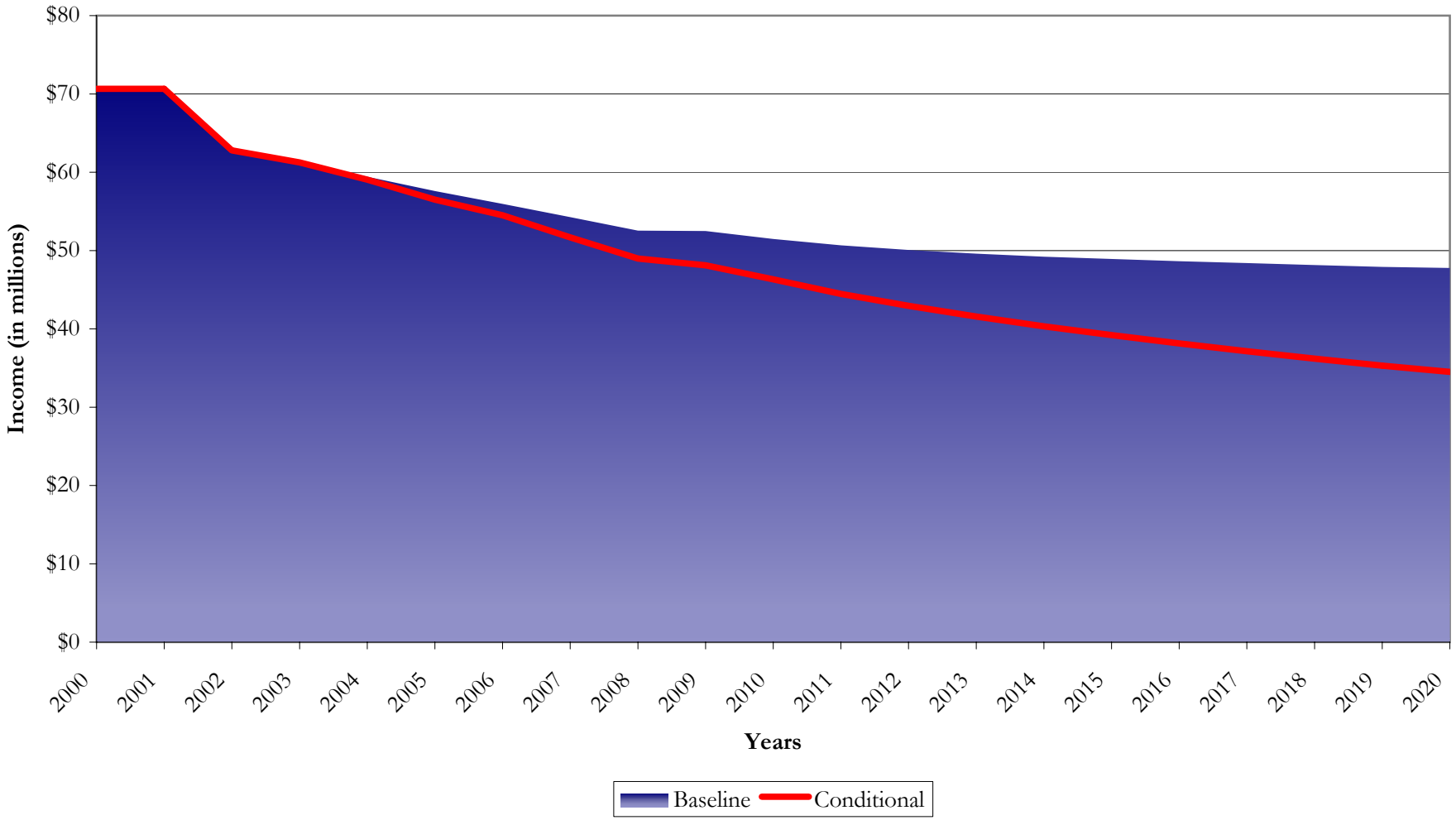
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing) - 65% Initial Impact, No Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AA
Conditional Impact Assessment Model
Labor Income (Mining) - 65% Initial Impact, No Recovery



Figures expressed in constant 2000 dollars
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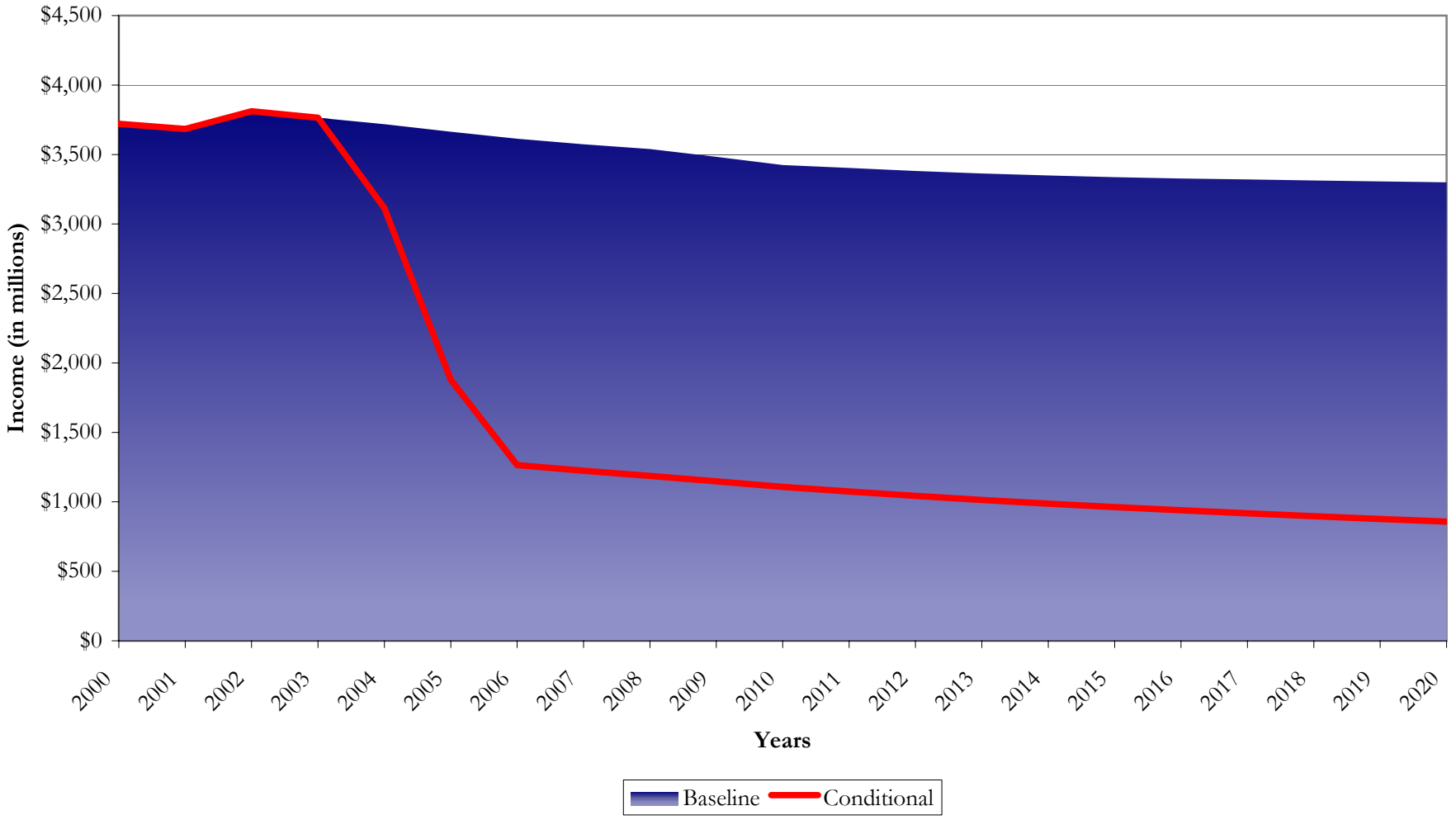
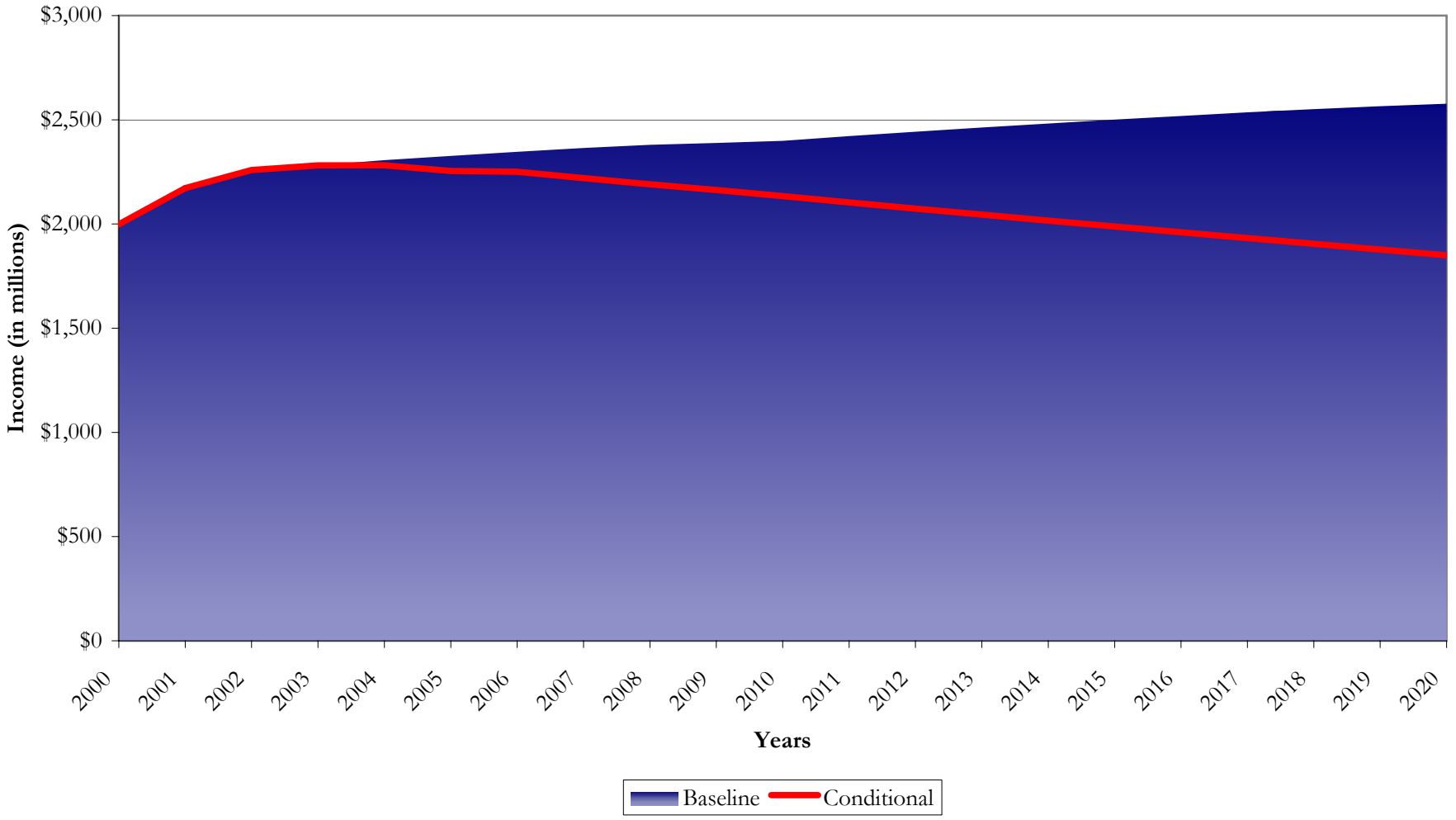
Appendix 5.4-AB
Conditional Impact Assessment Model
Labor Income (Construction) - 65% Initial Impact, No Recovery



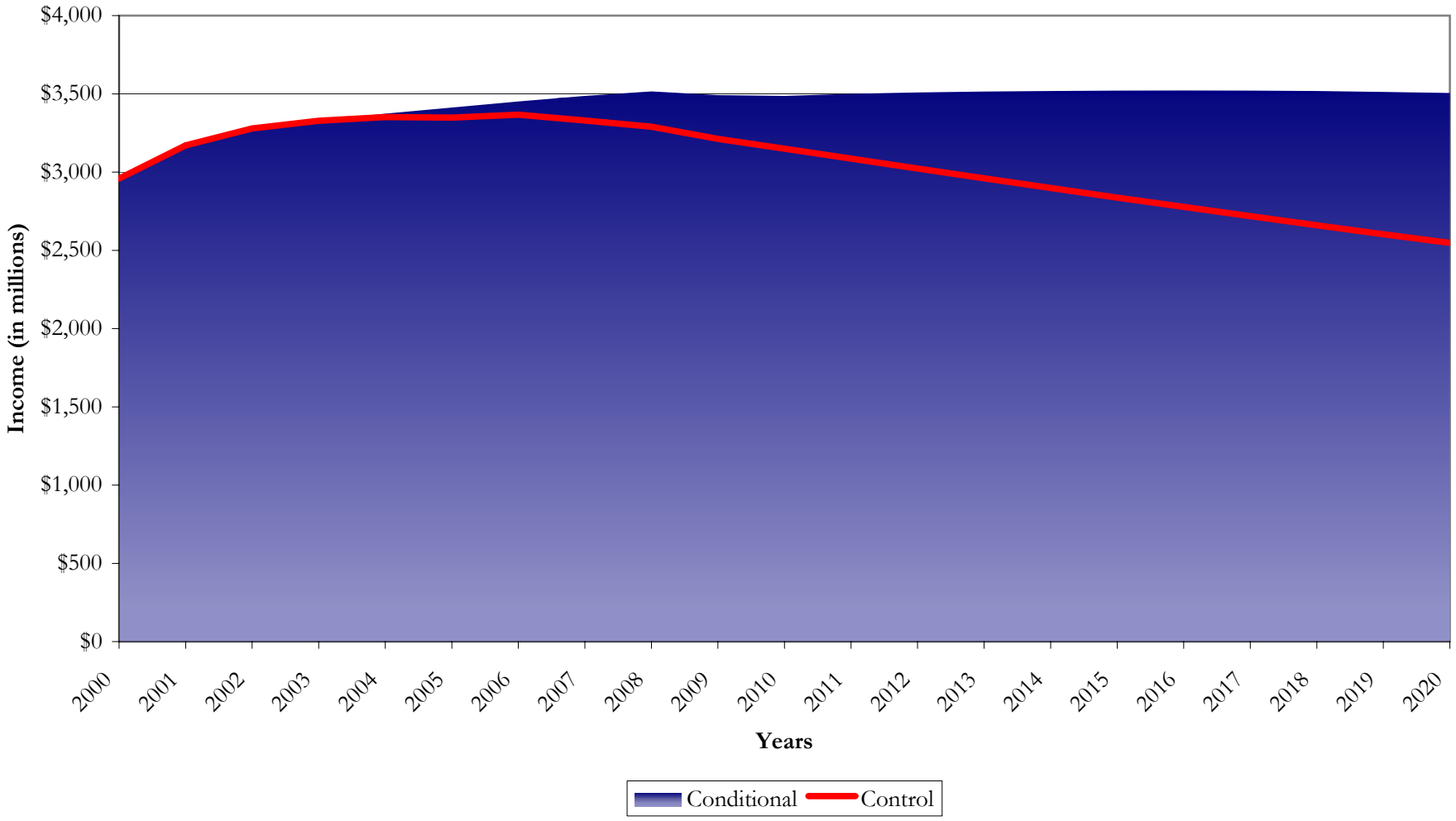
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.) - 65% Initial Impact, No Recovery



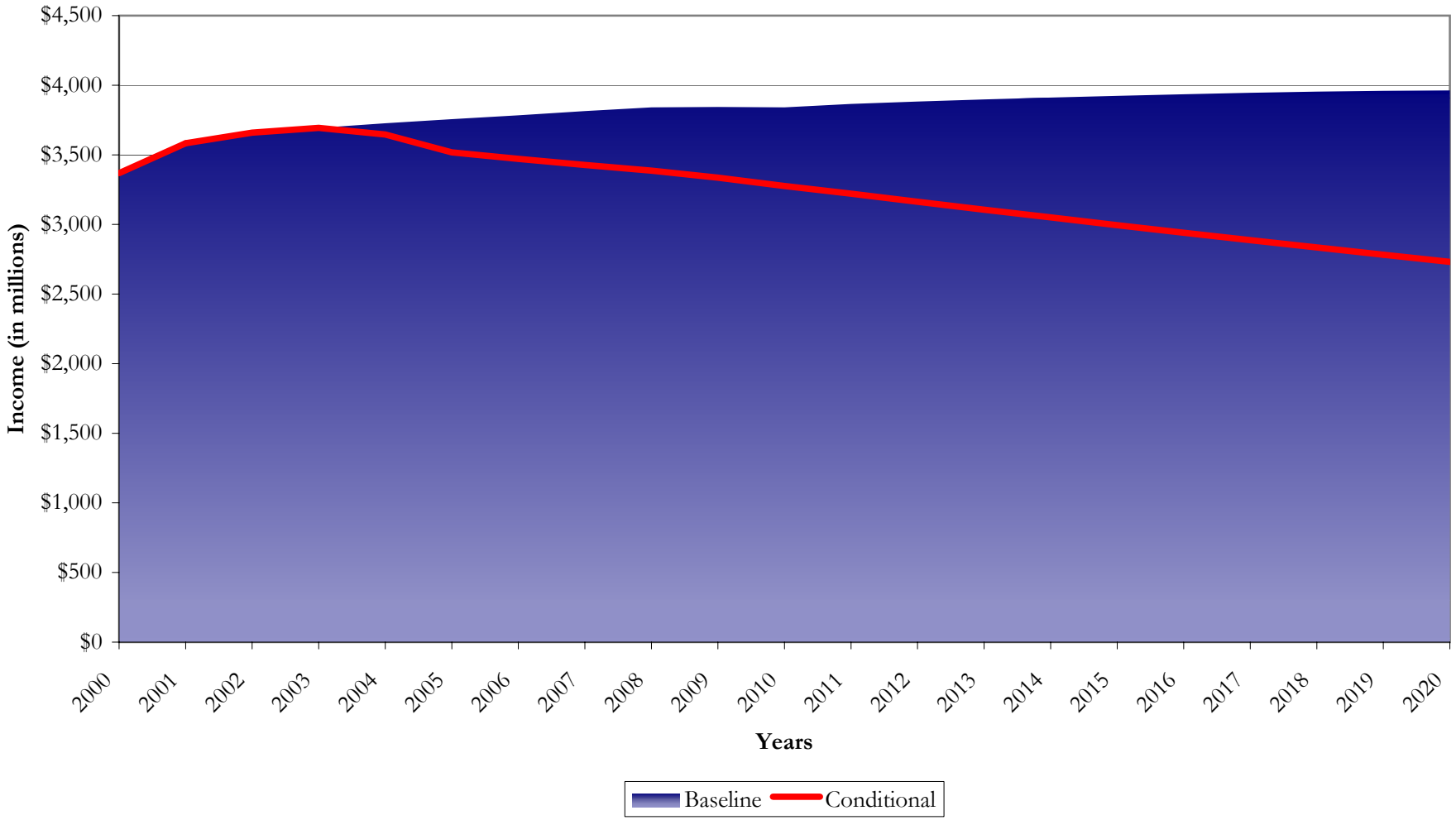
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.) - 65% Initial Impact, No Recovery



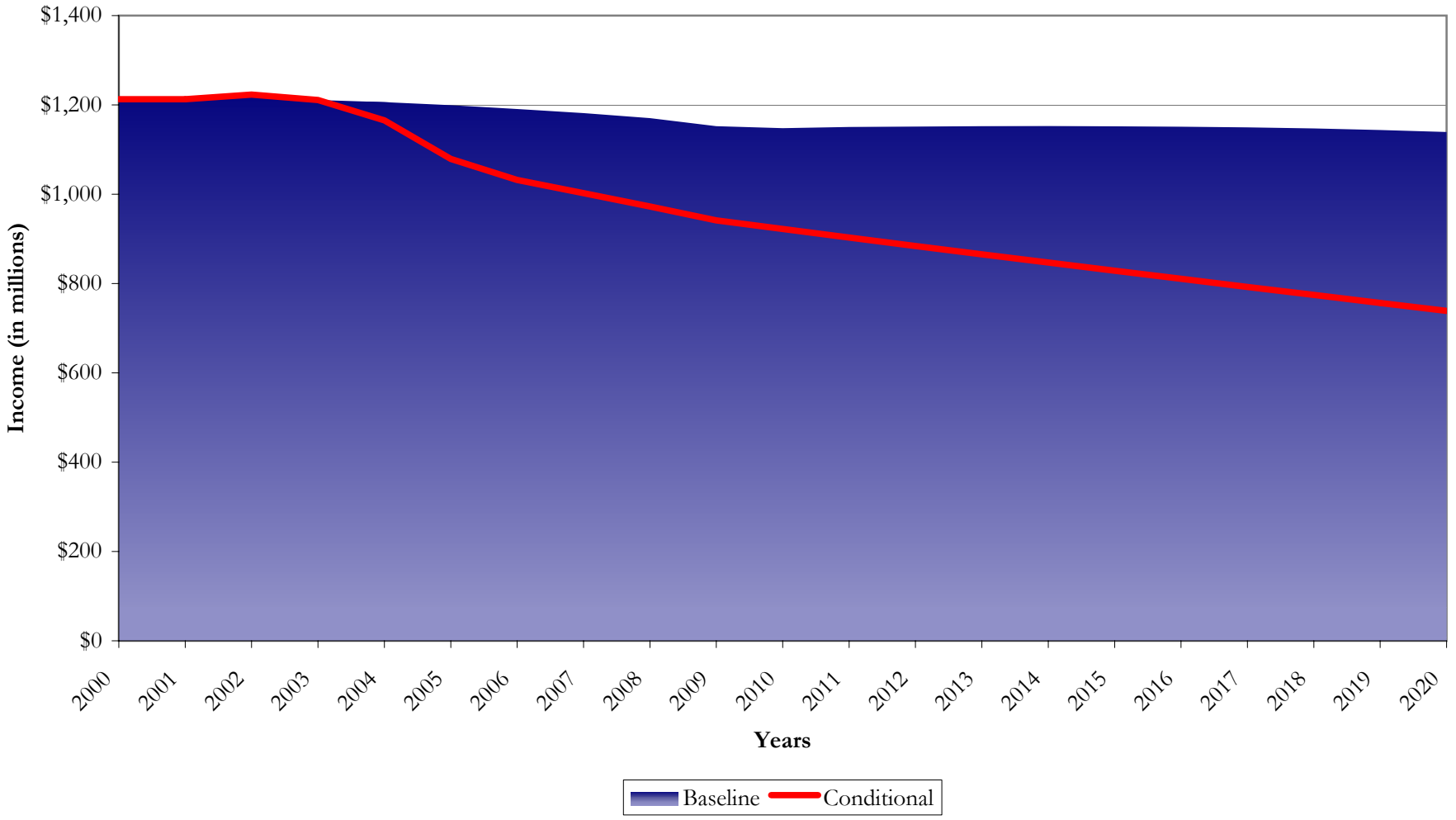
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AE
Conditional Impact Assessment Model
Labor Income (Retail Trade) - 65% Initial Impact, No Recovery



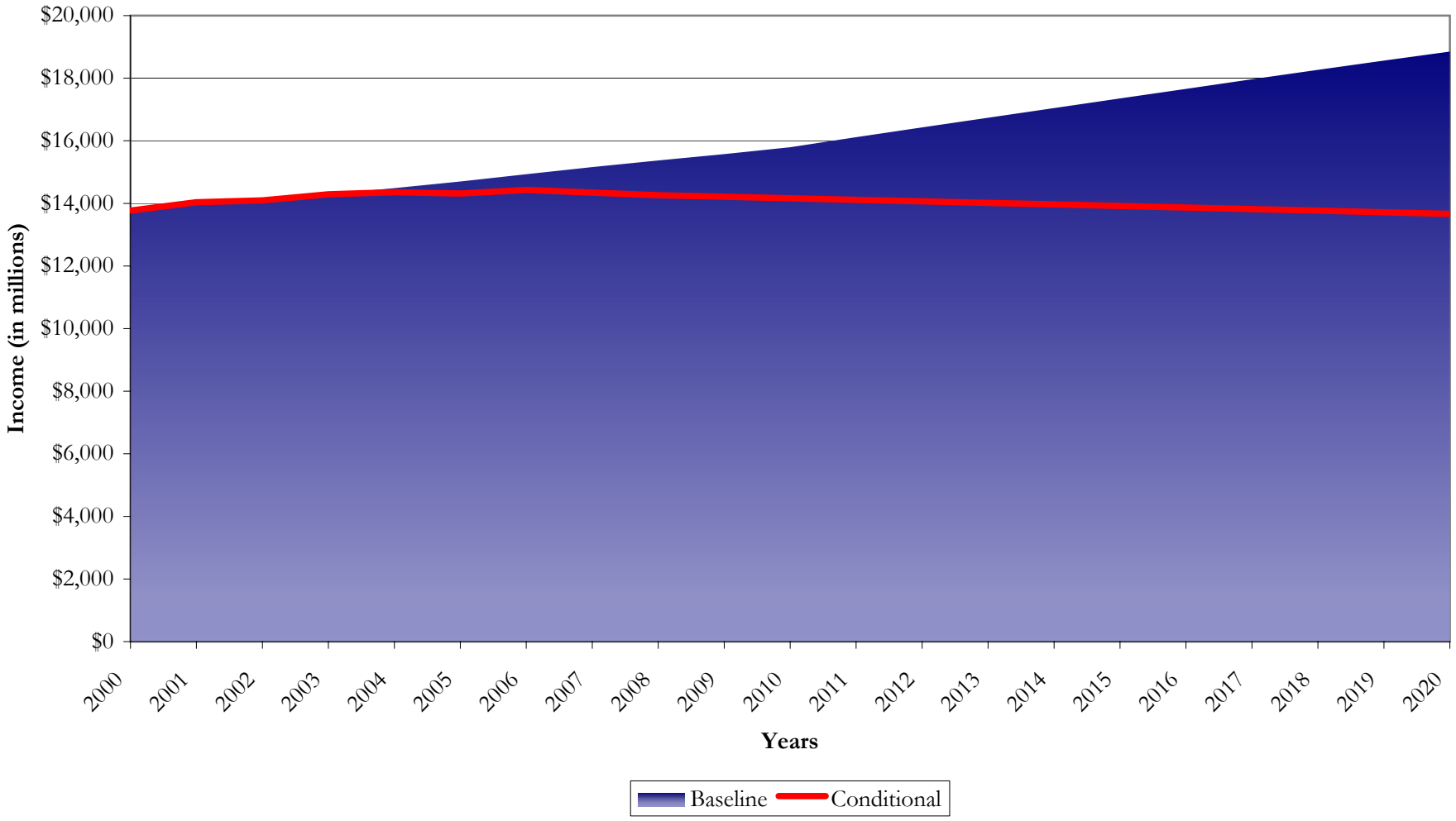
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AF
Conditional Impact Assessment Model
Labor Income (Wholesale Trade) - 65% Initial Impact, No Recovery



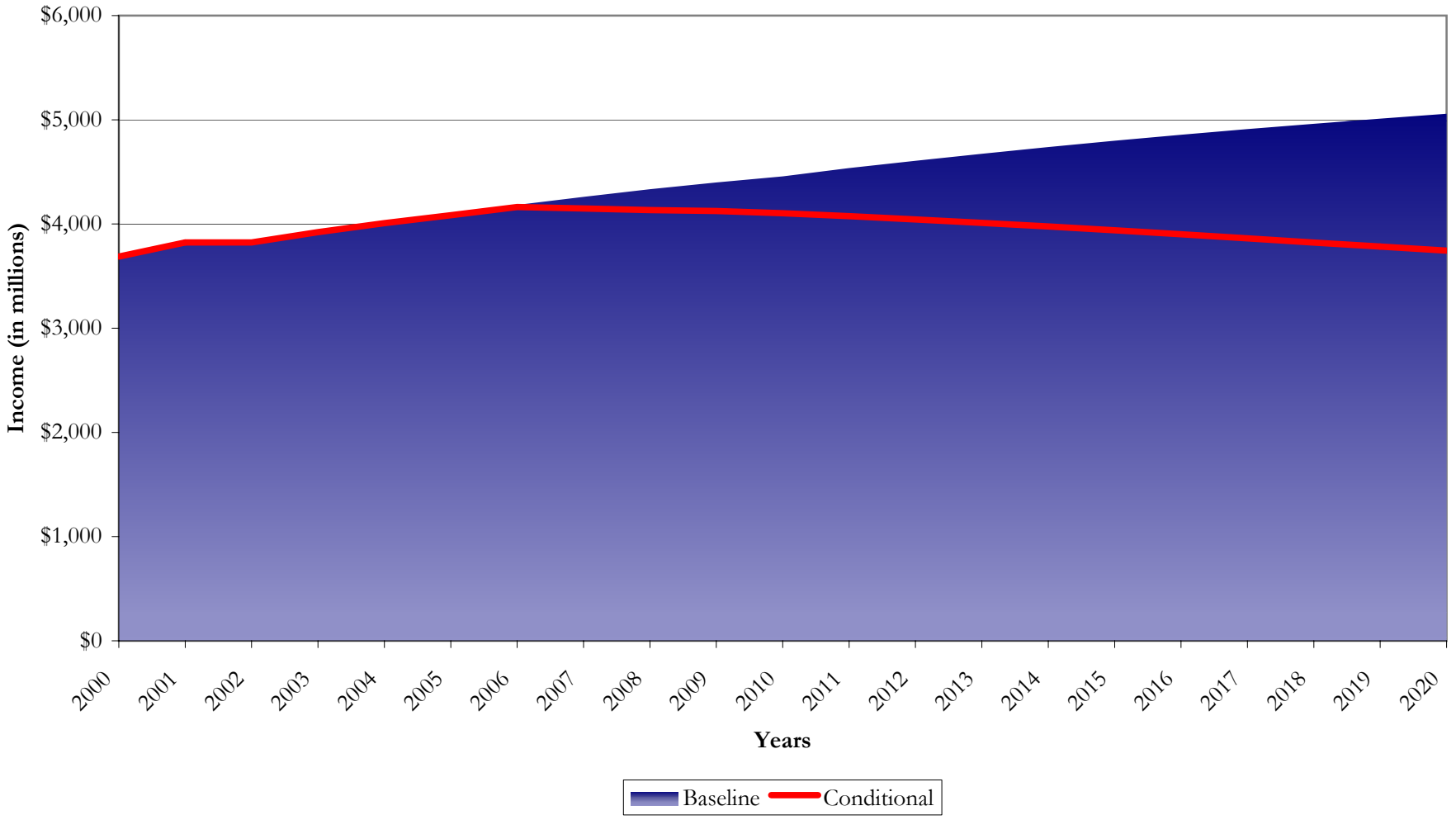
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AG
Conditional Impact Assessment Model
Labor Income (Services) - 65% Initial Impact, No Recovery



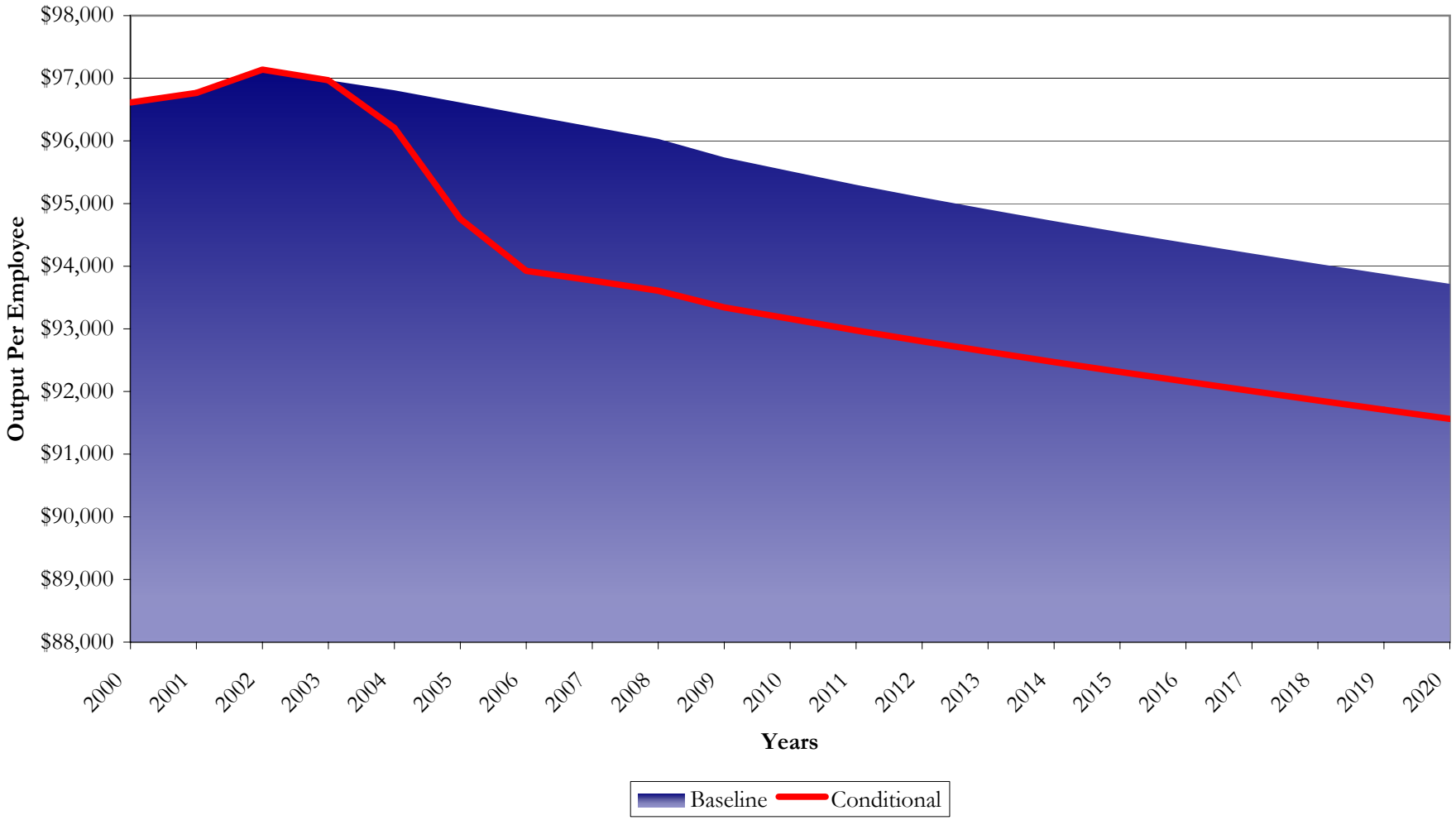
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AH
Conditional Impact Assessment Model
Labor Income (Government) - 65% Initial Impact, No Recovery



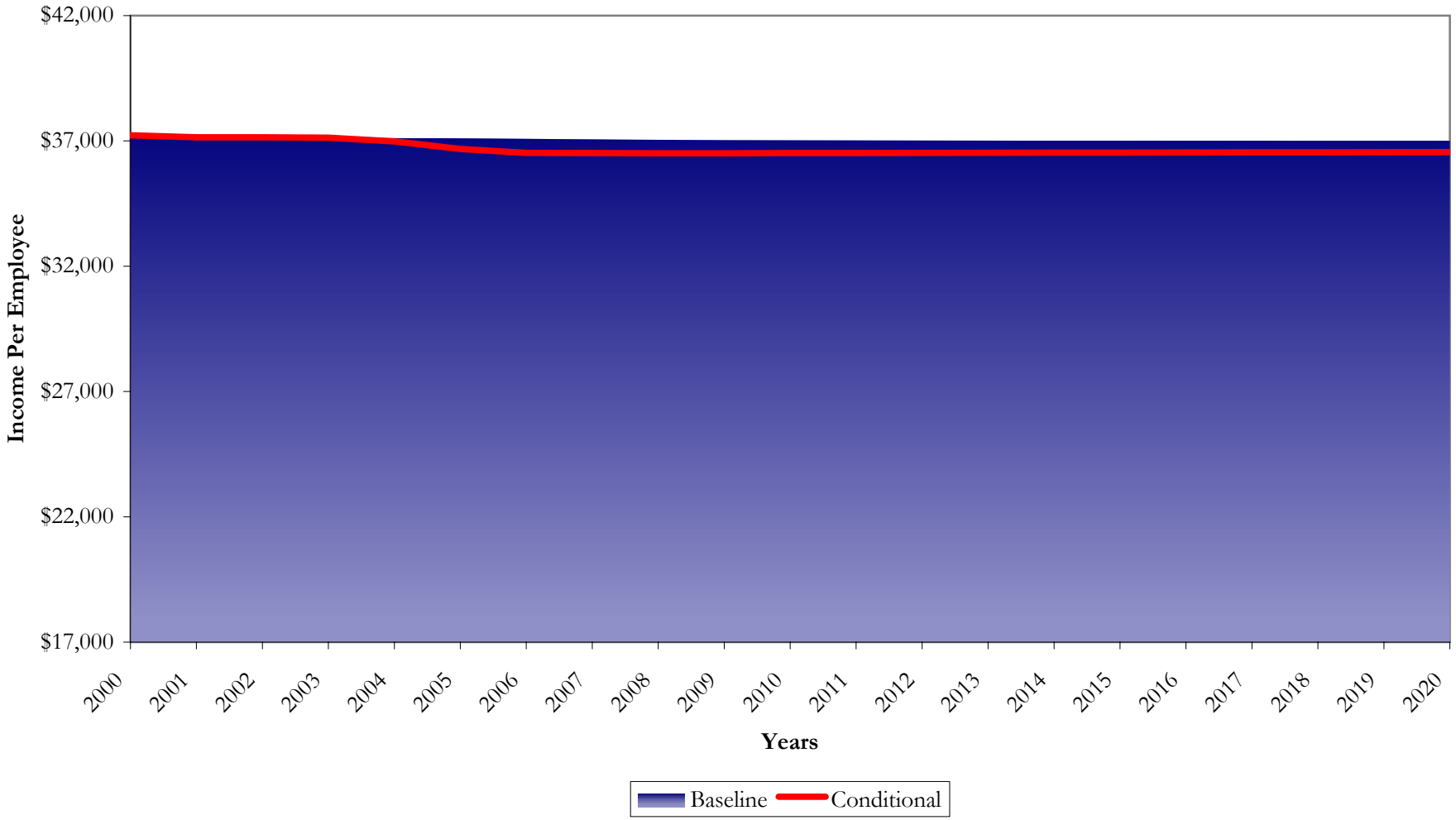
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AI
Conditional Impact Assessment Model
Output Per Employee - 65% Initial Impact, No Recovery



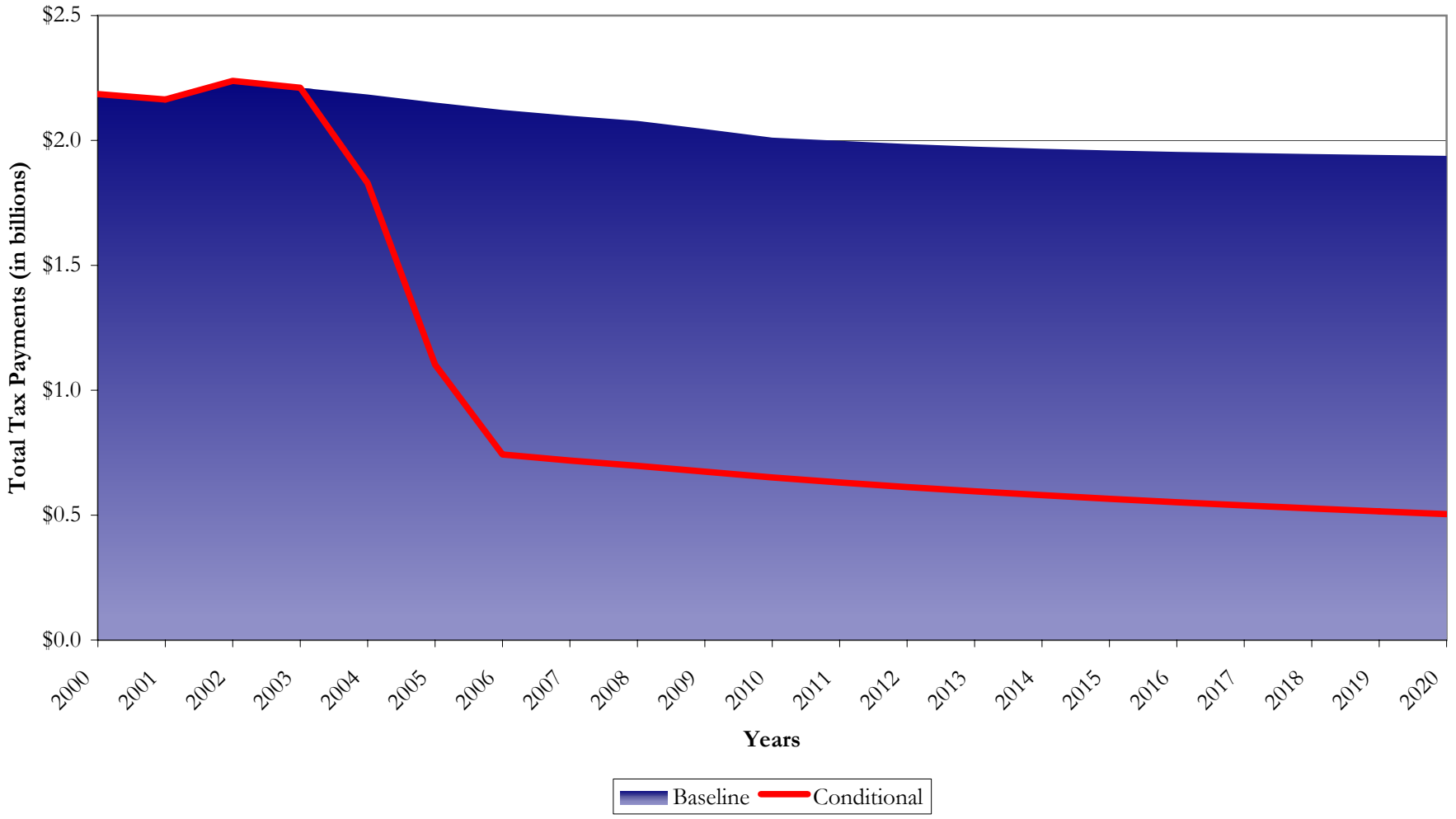
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AJ
Conditional Impact Assessment Model
Labor Income Per Employee - 65% Initial Impact, No Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.4-AI
Conditional Impact Assessment Model
Total Construction-related Tax Payments - 65% Initial Impact, No Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.5-A
Conditional Impact Assessment Model
Population - 65% Initial Impact, Moderate Recovery

	Population					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,394,440		1,394,440			
2001	1,498,279	7.4%	1,498,279	7.4%	-	0.0%
2002	1,583,998	5.7%	1,583,998	5.7%	-	0.0%
2003	1,637,600	3.4%	1,637,600	3.4%	-	0.0%
2004	1,686,062	3.0%	1,648,753	0.7%	(37,309)	-2.2%
2005	1,730,698	2.6%	1,633,829	-0.9%	(96,869)	-5.6%
2006	1,772,274	2.4%	1,628,707	-0.3%	(143,567)	-8.1%
2007	1,811,123	2.2%	1,634,255	0.3%	(176,868)	-9.8%
2008	1,847,089	2.0%	1,652,731	1.1%	(194,358)	-10.5%
2009	1,880,861	1.8%	1,671,565	1.1%	(209,296)	-11.1%
2010	1,912,777	1.7%	1,689,875	1.1%	(222,902)	-11.7%
2011	1,944,978	1.7%	1,708,139	1.1%	(236,839)	-12.2%
2012	1,977,466	1.7%	1,726,329	1.1%	(251,137)	-12.7%
2013	2,009,592	1.6%	1,745,885	1.1%	(263,707)	-13.1%
2014	2,041,279	1.6%	1,765,985	1.2%	(275,294)	-13.5%
2015	2,072,398	1.5%	1,787,309	1.2%	(285,089)	-13.8%
2016	2,102,905	1.5%	1,809,743	1.3%	(293,162)	-13.9%
2017	2,132,871	1.4%	1,835,532	1.4%	(297,339)	-13.9%
2018	2,162,262	1.4%	1,860,826	1.4%	(301,436)	-13.9%
2019	2,191,156	1.3%	1,885,692	1.3%	(305,464)	-13.9%
2020	2,219,714	1.3%	1,910,268	1.3%	(309,446)	-13.9%

Appendix 5.5-B
Conditional Impact Assessment Model
Employment - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	857,304		857,304			
2001	886,021	3.35%	886,021	3.35%	-	0.0%
2002	898,322	1.39%	898,322	1.39%	-	0.0%
2003	907,640	1.04%	907,640	1.04%	-	0.0%
2004	916,932	1.02%	895,316	-1.36%	(21,616)	-2.4%
2005	925,797	0.97%	861,902	-3.73%	(63,895)	-6.9%
2006	935,155	1.01%	851,128	-1.25%	(84,027)	-9.0%
2007	944,502	1.00%	851,979	0.10%	(92,523)	-9.8%
2008	952,831	0.88%	853,481	0.18%	(99,350)	-10.4%
2009	957,819	0.52%	854,822	0.16%	(102,997)	-10.8%
2010	964,036	0.65%	857,041	0.26%	(106,995)	-11.1%
2011	976,457	1.29%	862,562	0.64%	(113,895)	-11.7%
2012	987,929	1.17%	868,643	0.70%	(119,286)	-12.1%
2013	999,100	1.13%	875,518	0.79%	(123,582)	-12.4%
2014	1,010,205	1.11%	883,303	0.89%	(126,902)	-12.6%
2015	1,021,164	1.08%	891,927	0.98%	(129,237)	-12.7%
2016	1,031,845	1.05%	901,257	1.05%	(130,588)	-12.7%
2017	1,042,604	1.04%	910,654	1.04%	(131,950)	-12.7%
2018	1,052,820	0.98%	919,577	0.98%	(133,243)	-12.7%
2019	1,062,612	0.93%	928,130	0.93%	(134,482)	-12.7%
2020	1,071,943	0.88%	936,280	0.88%	(135,663)	-12.7%

Appendix 5.5-C
Conditional Impact Assessment Model
Employment (Agriculture) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	8,581		8,581			
2001	8,581	0.0%	8,581	0.0%	-	0.0%
2002	8,581	0.0%	8,581	0.0%	-	0.0%
2003	8,744	1.9%	8,744	1.9%	-	0.0%
2004	8,875	1.5%	8,718	-0.3%	(157)	-1.8%
2005	8,991	1.3%	8,527	-2.2%	(464)	-5.2%
2006	9,111	1.3%	8,501	-0.3%	(610)	-6.7%
2007	9,229	1.3%	8,527	0.3%	(702)	-7.6%
2008	9,341	1.2%	8,564	0.4%	(777)	-8.3%
2009	9,445	1.1%	8,624	0.7%	(821)	-8.7%
2010	9,640	2.1%	8,766	1.6%	(874)	-9.1%
2011	9,880	2.5%	8,927	1.8%	(953)	-9.6%
2012	10,109	2.3%	9,091	1.8%	(1,018)	-10.1%
2013	10,335	2.2%	9,262	1.9%	(1,073)	-10.4%
2014	10,562	2.2%	9,444	2.0%	(1,118)	-10.6%
2015	10,787	2.1%	9,634	2.0%	(1,153)	-10.7%
2016	11,011	2.1%	9,834	2.1%	(1,177)	-10.7%
2017	11,237	2.1%	10,037	2.1%	(1,200)	-10.7%
2018	11,456	1.9%	10,234	2.0%	(1,222)	-10.7%
2019	11,672	1.9%	10,429	1.9%	(1,243)	-10.7%
2020	11,884	1.8%	10,620	1.8%	(1,264)	-10.6%

Appendix 5.5-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	22,561		22,561			
2001	23,279	3.2%	23,279	3.2%	-	0.0%
2002	23,194	-0.4%	23,194	-0.4%	-	0.0%
2003	22,991	-0.9%	22,991	-0.9%	-	0.0%
2004	22,801	-0.8%	22,373	-2.7%	(428)	-1.9%
2005	22,549	-1.1%	21,284	-4.9%	(1,265)	-5.6%
2006	22,265	-1.3%	20,601	-3.2%	(1,664)	-7.5%
2007	21,961	-1.4%	20,087	-2.5%	(1,874)	-8.5%
2008	21,592	-1.7%	19,563	-2.6%	(2,029)	-9.4%
2009	21,439	-0.7%	19,327	-1.2%	(2,112)	-9.9%
2010	21,496	0.3%	19,289	-0.2%	(2,207)	-10.3%
2011	21,650	0.7%	19,290	0.0%	(2,360)	-10.9%
2012	21,824	0.8%	19,345	0.3%	(2,479)	-11.4%
2013	22,020	0.9%	19,446	0.5%	(2,574)	-11.7%
2014	22,226	0.9%	19,578	0.7%	(2,648)	-11.9%
2015	22,445	1.0%	19,745	0.9%	(2,700)	-12.0%
2016	22,667	1.0%	19,936	1.0%	(2,731)	-12.0%
2017	22,893	1.0%	20,132	1.0%	(2,761)	-12.1%
2018	23,105	0.9%	20,316	0.9%	(2,789)	-12.1%
2019	23,322	0.9%	20,505	0.9%	(2,817)	-12.1%
2020	23,521	0.9%	20,679	0.8%	(2,842)	-12.1%

Appendix 5.5-E
Conditional Impact Assessment Model
Employment (Mining) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,467		1,467			
2001	1,467	0.0%	1,467	0.0%	-	0.0%
2002	1,304	-11.1%	1,304	-11.1%	-	0.0%
2003	1,272	-2.5%	1,272	-2.5%	-	0.0%
2004	1,234	-3.0%	1,226	-3.6%	(8)	-0.7%
2005	1,196	-3.1%	1,172	-4.4%	(24)	-2.0%
2006	1,162	-2.8%	1,131	-3.5%	(31)	-2.7%
2007	1,127	-3.0%	1,082	-4.3%	(45)	-4.0%
2008	1,091	-3.2%	1,037	-4.2%	(54)	-4.9%
2009	1,090	-0.1%	1,030	-0.7%	(60)	-5.5%
2010	1,069	-1.9%	1,003	-2.6%	(66)	-6.2%
2011	1,052	-1.6%	978	-2.4%	(74)	-7.0%
2012	1,040	-1.1%	961	-1.8%	(79)	-7.6%
2013	1,030	-1.0%	946	-1.5%	(84)	-8.1%
2014	1,022	-0.8%	935	-1.2%	(87)	-8.5%
2015	1,016	-0.6%	927	-0.9%	(89)	-8.7%
2016	1,010	-0.6%	921	-0.7%	(89)	-8.9%
2017	1,005	-0.5%	915	-0.6%	(90)	-8.9%
2018	1,000	-0.5%	910	-0.6%	(90)	-9.0%
2019	995	-0.5%	904	-0.6%	(91)	-9.1%
2020	992	-0.3%	901	-0.4%	(91)	-9.2%

Appendix 5.5-F
Conditional Impact Assessment Model
Employment (Construction) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,782		76,782			
2001	76,014	-1.0%	76,014	-1.0%	-	0.0%
2002	78,647	3.5%	78,647	3.5%	-	0.0%
2003	77,672	-1.2%	77,672	-1.2%	-	0.0%
2004	76,719	-1.2%	64,252	-17.3%	(12,467)	-16.3%
2005	75,593	-1.5%	38,741	-39.7%	(36,852)	-48.8%
2006	74,558	-1.4%	26,095	-32.6%	(48,463)	-65.0%
2007	73,736	-1.1%	26,422	1.3%	(47,314)	-64.2%
2008	73,024	-1.0%	26,585	0.6%	(46,439)	-63.6%
2009	71,864	-1.6%	26,640	0.2%	(45,224)	-62.9%
2010	70,660	-1.7%	26,836	0.7%	(43,824)	-62.0%
2011	70,211	-0.6%	26,839	0.0%	(43,372)	-61.8%
2012	69,761	-0.6%	26,880	0.2%	(42,881)	-61.5%
2013	69,390	-0.5%	26,981	0.4%	(42,409)	-61.1%
2014	69,096	-0.4%	27,138	0.6%	(41,958)	-60.7%
2015	68,856	-0.3%	27,342	0.8%	(41,514)	-60.3%
2016	68,654	-0.3%	27,586	0.9%	(41,068)	-59.8%
2017	68,509	-0.2%	27,504	-0.3%	(41,005)	-59.9%
2018	68,360	-0.2%	27,421	-0.3%	(40,939)	-59.9%
2019	68,220	-0.2%	27,344	-0.3%	(40,876)	-59.9%
2020	68,090	-0.2%	27,272	-0.3%	(40,818)	-59.9%

Appendix 5.5-G
Conditional Impact Assessment Model
Employment (T.C.P.U.) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	44,647		44,647			
2001	48,528	8.7%	48,528	8.7%	-	0.0%
2002	50,471	4.0%	50,471	4.0%	-	0.0%
2003	50,975	1.0%	50,975	1.0%	-	0.0%
2004	51,539	1.1%	50,992	0.0%	(547)	-1.1%
2005	51,996	0.9%	50,378	-1.2%	(1,618)	-3.1%
2006	52,429	0.8%	50,301	-0.2%	(2,128)	-4.1%
2007	52,833	0.8%	50,119	-0.4%	(2,714)	-5.1%
2008	53,175	0.6%	49,997	-0.2%	(3,178)	-6.0%
2009	53,379	0.4%	49,912	-0.2%	(3,467)	-6.5%
2010	53,599	0.4%	49,814	-0.2%	(3,785)	-7.1%
2011	54,114	1.0%	49,900	0.2%	(4,214)	-7.8%
2012	54,581	0.9%	50,028	0.3%	(4,553)	-8.3%
2013	55,032	0.8%	50,209	0.4%	(4,823)	-8.8%
2014	55,462	0.8%	50,431	0.4%	(5,031)	-9.1%
2015	55,882	0.8%	50,703	0.5%	(5,179)	-9.3%
2016	56,275	0.7%	51,007	0.6%	(5,268)	-9.4%
2017	56,658	0.7%	51,324	0.6%	(5,334)	-9.4%
2018	57,008	0.6%	51,612	0.6%	(5,396)	-9.5%
2019	57,319	0.5%	51,865	0.5%	(5,454)	-9.5%
2020	57,591	0.5%	52,085	0.4%	(5,506)	-9.6%

Notes:

[1] T.C.P.U. - Transporation, communications and public utilities.

Appendix 5.5-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	76,644		76,644			
2001	82,146	7.2%	82,146	7.2%	-	0.0%
2002	84,941	3.4%	84,941	3.4%	-	0.0%
2003	86,221	1.5%	86,221	1.5%	-	0.0%
2004	87,397	1.4%	86,789	0.7%	(608)	-0.7%
2005	88,405	1.2%	86,607	-0.2%	(1,798)	-2.0%
2006	89,415	1.1%	87,050	0.5%	(2,365)	-2.6%
2007	90,343	1.0%	86,920	-0.1%	(3,423)	-3.8%
2008	91,084	0.8%	86,823	-0.1%	(4,261)	-4.7%
2009	90,468	-0.7%	85,695	-1.3%	(4,773)	-5.3%
2010	90,342	-0.1%	85,001	-0.8%	(5,341)	-5.9%
2011	90,695	0.4%	84,628	-0.4%	(6,067)	-6.7%
2012	90,913	0.2%	84,285	-0.4%	(6,628)	-7.3%
2013	91,058	0.2%	83,995	-0.3%	(7,063)	-7.8%
2014	91,157	0.1%	83,770	-0.3%	(7,387)	-8.1%
2015	91,217	0.1%	83,613	-0.2%	(7,604)	-8.3%
2016	91,227	0.0%	83,506	-0.1%	(7,721)	-8.5%
2017	91,217	0.0%	83,428	-0.1%	(7,789)	-8.5%
2018	91,143	-0.1%	83,294	-0.2%	(7,849)	-8.6%
2019	90,997	-0.2%	83,097	-0.2%	(7,900)	-8.7%
2020	90,819	-0.2%	82,875	-0.3%	(7,944)	-8.7%

Notes:

[1] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.5-I
Conditional Impact Assessment Model
Employment (Retail) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	146,136		146,136			
2001	155,448	6.4%	155,448	6.4%	-	0.0%
2002	158,747	2.1%	158,747	2.1%	-	0.0%
2003	160,258	1.0%	160,258	1.0%	-	0.0%
2004	161,695	0.9%	158,628	-1.0%	(3,067)	-1.9%
2005	162,954	0.8%	153,888	-3.0%	(9,066)	-5.6%
2006	164,178	0.8%	152,256	-1.1%	(11,922)	-7.3%
2007	165,468	0.8%	151,936	-0.2%	(13,532)	-8.2%
2008	166,628	0.7%	151,815	-0.1%	(14,813)	-8.9%
2009	166,768	0.1%	151,243	-0.4%	(15,525)	-9.3%
2010	166,654	-0.1%	150,372	-0.6%	(16,282)	-9.8%
2011	167,710	0.6%	150,230	-0.1%	(17,480)	-10.4%
2012	168,454	0.4%	150,063	-0.1%	(18,391)	-10.9%
2013	169,102	0.4%	150,010	0.0%	(19,092)	-11.3%
2014	169,706	0.4%	150,096	0.1%	(19,610)	-11.6%
2015	170,243	0.3%	150,296	0.1%	(19,947)	-11.7%
2016	170,707	0.3%	150,597	0.2%	(20,110)	-11.8%
2017	171,182	0.3%	150,929	0.2%	(20,253)	-11.8%
2018	171,529	0.2%	151,148	0.1%	(20,381)	-11.9%
2019	171,773	0.1%	151,277	0.1%	(20,496)	-11.9%
2020	171,932	0.1%	151,334	0.0%	(20,598)	-12.0%

Appendix 5.5-J
Conditional Impact Assessment Model
Employment (Wholesale) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	25,064		25,064			
2001	25,064	0.0%	25,064	0.0%	-	0.0%
2002	25,279	0.9%	25,279	0.9%	-	0.0%
2003	25,028	-1.0%	25,028	-1.0%	-	0.0%
2004	24,932	-0.4%	24,088	-3.8%	(844)	-3.4%
2005	24,793	-0.6%	22,299	-7.4%	(2,494)	-10.1%
2006	24,612	-0.7%	21,332	-4.3%	(3,280)	-13.3%
2007	24,422	-0.8%	20,970	-1.7%	(3,452)	-14.1%
2008	24,191	-0.9%	20,609	-1.7%	(3,582)	-14.8%
2009	23,819	-1.5%	20,199	-2.0%	(3,620)	-15.2%
2010	23,726	-0.4%	20,062	-0.7%	(3,664)	-15.4%
2011	23,779	0.2%	19,982	-0.4%	(3,797)	-16.0%
2012	23,802	0.1%	19,911	-0.4%	(3,891)	-16.3%
2013	23,817	0.1%	19,858	-0.3%	(3,959)	-16.6%
2014	23,822	0.0%	19,818	-0.2%	(4,004)	-16.8%
2015	23,815	0.0%	19,789	-0.1%	(4,026)	-16.9%
2016	23,794	-0.1%	19,769	-0.1%	(4,025)	-16.9%
2017	23,763	-0.1%	19,728	-0.2%	(4,035)	-17.0%
2018	23,712	-0.2%	19,669	-0.3%	(4,043)	-17.0%
2019	23,641	-0.3%	19,593	-0.4%	(4,048)	-17.1%
2020	23,549	-0.4%	19,498	-0.5%	(4,051)	-17.2%

Appendix 5.5-K
Conditional Impact Assessment Model
Employment (Services) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	382,767		382,767			
2001	390,161	1.9%	390,161	1.9%	-	0.0%
2002	391,825	0.4%	391,825	0.4%	-	0.0%
2003	397,220	1.4%	397,220	1.4%	-	0.0%
2004	402,664	1.4%	399,259	0.5%	(3,405)	-0.8%
2005	408,546	1.5%	398,481	-0.2%	(10,065)	-2.5%
2006	415,020	1.6%	401,783	0.8%	(13,237)	-3.2%
2007	421,432	1.5%	403,355	0.4%	(18,077)	-4.3%
2008	427,324	1.4%	405,355	0.5%	(21,969)	-5.1%
2009	432,889	1.3%	408,343	0.7%	(24,546)	-5.7%
2010	439,032	1.4%	411,595	0.8%	(27,437)	-6.2%
2011	447,989	2.0%	416,730	1.2%	(31,259)	-7.0%
2012	456,686	1.9%	422,290	1.3%	(34,396)	-7.5%
2013	465,233	1.9%	428,232	1.4%	(37,001)	-8.0%
2014	473,784	1.8%	434,657	1.5%	(39,127)	-8.3%
2015	482,348	1.8%	441,577	1.6%	(40,771)	-8.5%
2016	490,808	1.8%	448,881	1.7%	(41,927)	-8.5%
2017	499,386	1.7%	456,524	1.7%	(42,862)	-8.6%
2018	507,750	1.7%	463,976	1.6%	(43,774)	-8.6%
2019	515,934	1.6%	471,272	1.6%	(44,662)	-8.7%
2020	523,908	1.5%	478,384	1.5%	(45,524)	-8.7%

Appendix 5.5-L
Conditional Impact Assessment Model
Employment (Government) - 65% Initial Impact, Moderate Recovery

	Employment					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	72,655		72,655			
2001	75,333	3.7%	75,333	3.7%	-	0.0%
2002	75,333	0.0%	75,333	0.0%	-	0.0%
2003	77,259	2.6%	77,259	2.6%	-	0.0%
2004	79,076	2.4%	78,992	2.2%	(84)	-0.1%
2005	80,774	2.1%	80,525	1.9%	(249)	-0.3%
2006	82,405	2.0%	82,078	1.9%	(327)	-0.4%
2007	83,951	1.9%	82,560	0.6%	(1,391)	-1.7%
2008	85,381	1.7%	83,133	0.7%	(2,248)	-2.6%
2009	86,658	1.5%	83,810	0.8%	(2,848)	-3.3%
2010	87,818	1.3%	84,304	0.6%	(3,514)	-4.0%
2011	89,377	1.8%	85,060	0.9%	(4,317)	-4.8%
2012	90,759	1.5%	85,790	0.9%	(4,969)	-5.5%
2013	92,083	1.5%	86,579	0.9%	(5,504)	-6.0%
2014	93,368	1.4%	87,435	1.0%	(5,933)	-6.4%
2015	94,555	1.3%	88,301	1.0%	(6,254)	-6.6%
2016	95,692	1.2%	89,220	1.0%	(6,472)	-6.8%
2017	96,754	1.1%	90,135	1.0%	(6,619)	-6.8%
2018	97,757	1.0%	90,997	1.0%	(6,760)	-6.9%
2019	98,739	1.0%	91,843	0.9%	(6,896)	-7.0%
2020	99,657	0.9%	92,633	0.9%	(7,024)	-7.0%

Appendix 5.5-M
Conditional Impact Assessment Model
Output[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	82,826		82,826			
2001	85,737	3.5%	85,737	3.5%	-	0.0%
2002	87,261	1.8%	87,261	1.8%	-	0.0%
2003	88,012	0.9%	88,012	0.9%	-	0.0%
2004	88,766	0.9%	86,136	-2.1%	(2,630)	-3.0%
2005	89,445	0.8%	81,671	-5.2%	(7,774)	-8.7%
2006	90,165	0.8%	79,942	-2.1%	(10,224)	-11.3%
2007	90,885	0.8%	79,936	0.0%	(10,949)	-12.0%
2008	91,503	0.7%	79,972	0.0%	(11,531)	-12.6%
2009	91,699	0.2%	79,900	-0.1%	(11,799)	-12.9%
2010	92,081	0.4%	79,992	0.1%	(12,089)	-13.1%
2011	93,057	1.1%	80,365	0.5%	(12,692)	-13.6%
2012	93,950	1.0%	80,797	0.5%	(13,153)	-14.0%
2013	94,821	0.9%	81,308	0.6%	(13,513)	-14.3%
2014	95,687	0.9%	81,903	0.7%	(13,784)	-14.4%
2015	96,544	0.9%	82,579	0.8%	(13,965)	-14.5%
2016	97,376	0.9%	83,320	0.9%	(14,056)	-14.4%
2017	98,216	0.9%	84,048	0.9%	(14,168)	-14.4%
2018	99,006	0.8%	84,733	0.8%	(14,273)	-14.4%
2019	99,754	0.8%	85,381	0.8%	(14,373)	-14.4%
2020	100,461	0.7%	85,993	0.7%	(14,468)	-14.4%

Appendix 5.5-N
Conditional Impact Assessment Model
Output (Agriculture, Fishing and Forestry)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	333		333			
2001	333	0.0%	333	0.0%	-	0.0%
2002	333	0.0%	333	0.0%	-	0.0%
2003	339	1.9%	339	1.9%	-	0.0%
2004	345	1.5%	338	-0.3%	(6)	-1.8%
2005	349	1.3%	331	-2.2%	(18)	-5.1%
2006	354	1.3%	330	-0.3%	(24)	-6.7%
2007	358	1.3%	331	0.3%	(27)	-7.6%
2008	363	1.2%	333	0.4%	(30)	-8.3%
2009	367	1.1%	335	0.7%	(32)	-8.7%
2010	374	2.1%	340	1.6%	(34)	-9.0%
2011	384	2.5%	347	1.8%	(37)	-9.6%
2012	392	2.3%	353	1.8%	(39)	-10.0%
2013	401	2.2%	360	1.9%	(42)	-10.4%
2014	410	2.2%	367	2.0%	(43)	-10.6%
2015	419	2.1%	374	2.0%	(45)	-10.7%
2016	427	2.1%	382	2.1%	(46)	-10.7%
2017	436	2.1%	390	2.1%	(46)	-10.7%
2018	445	1.9%	397	2.0%	(47)	-10.6%
2019	453	1.9%	405	1.9%	(48)	-10.6%
2020	461	1.8%	412	1.8%	(49)	-10.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-O
Conditional Impact Assessment Model
Output (Manufacturing)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,757		3,757			
2001	3,876	3.2%	3,876	3.2%	-	0.0%
2002	3,862	-0.4%	3,862	-0.4%	-	0.0%
2003	3,828	-0.9%	3,828	-0.9%	-	0.0%
2004	3,797	-0.8%	3,746	-2.1%	(50)	-1.3%
2005	3,755	-1.1%	3,606	-3.7%	(149)	-4.0%
2006	3,707	-1.3%	3,512	-2.6%	(196)	-5.3%
2007	3,657	-1.4%	3,423	-2.5%	(234)	-6.4%
2008	3,595	-1.7%	3,333	-2.6%	(263)	-7.3%
2009	3,570	-0.7%	3,290	-1.3%	(279)	-7.8%
2010	3,579	0.3%	3,281	-0.3%	(298)	-8.3%
2011	3,605	0.7%	3,279	0.0%	(326)	-9.0%
2012	3,634	0.8%	3,287	0.2%	(347)	-9.5%
2013	3,667	0.9%	3,302	0.5%	(364)	-9.9%
2014	3,701	0.9%	3,323	0.6%	(378)	-10.2%
2015	3,737	1.0%	3,350	0.8%	(387)	-10.4%
2016	3,774	1.0%	3,381	0.9%	(393)	-10.4%
2017	3,812	1.0%	3,413	1.0%	(398)	-10.5%
2018	3,847	0.9%	3,444	0.9%	(403)	-10.5%
2019	3,883	0.9%	3,475	0.9%	(408)	-10.5%
2020	3,917	0.9%	3,504	0.8%	(413)	-10.5%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-P
Conditional Impact Assessment Model
Output (Mining)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	233		233			
2001	233	0.0%	233	0.0%	-	0.0%
2002	207	-11.1%	207	-11.1%	-	0.0%
2003	202	-2.5%	202	-2.5%	-	0.0%
2004	196	-3.0%	195	-3.6%	(1)	-0.7%
2005	190	-3.1%	186	-4.4%	(4)	-2.0%
2006	185	-2.8%	180	-3.5%	(5)	-2.7%
2007	179	-3.0%	172	-4.3%	(7)	-3.9%
2008	174	-3.2%	165	-4.2%	(9)	-4.9%
2009	173	-0.1%	164	-0.7%	(10)	-5.5%
2010	170	-1.9%	160	-2.6%	(10)	-6.2%
2011	167	-1.6%	156	-2.4%	(12)	-7.0%
2012	165	-1.1%	153	-1.8%	(13)	-7.6%
2013	164	-1.0%	151	-1.5%	(13)	-8.1%
2014	163	-0.8%	149	-1.2%	(14)	-8.5%
2015	162	-0.6%	148	-0.9%	(14)	-8.7%
2016	161	-0.6%	146	-0.7%	(14)	-8.8%
2017	160	-0.5%	146	-0.6%	(14)	-8.9%
2018	159	-0.5%	145	-0.6%	(14)	-9.0%
2019	158	-0.5%	144	-0.6%	(14)	-9.1%
2020	158	-0.3%	143	-0.4%	(14)	-9.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-Q
Conditional Impact Assessment Model
Output (Construction)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	11,492		11,492			
2001	11,377	-1.0%	11,377	-1.0%	-	0.0%
2002	11,771	3.5%	11,771	3.5%	-	0.0%
2003	11,625	-1.2%	11,625	-1.2%	-	0.0%
2004	11,483	-1.2%	9,617	-17.3%	(1,866)	-16.3%
2005	11,314	-1.5%	5,799	-39.7%	(5,516)	-48.8%
2006	11,159	-1.4%	3,906	-32.6%	(7,254)	-65.0%
2007	11,036	-1.1%	3,955	1.3%	(7,082)	-64.2%
2008	10,930	-1.0%	3,979	0.6%	(6,951)	-63.6%
2009	10,756	-1.6%	3,987	0.2%	(6,769)	-62.9%
2010	10,576	-1.7%	4,017	0.7%	(6,559)	-62.0%
2011	10,509	-0.6%	4,017	0.0%	(6,492)	-61.8%
2012	10,441	-0.6%	4,023	0.2%	(6,418)	-61.5%
2013	10,386	-0.5%	4,038	0.4%	(6,347)	-61.1%
2014	10,342	-0.4%	4,062	0.6%	(6,280)	-60.7%
2015	10,306	-0.3%	4,092	0.8%	(6,214)	-60.3%
2016	10,276	-0.3%	4,129	0.9%	(6,147)	-59.8%
2017	10,254	-0.2%	4,117	-0.3%	(6,137)	-59.9%
2018	10,232	-0.2%	4,104	-0.3%	(6,127)	-59.9%
2019	10,211	-0.2%	4,093	-0.3%	(6,118)	-59.9%
2020	10,191	-0.2%	4,082	-0.3%	(6,109)	-59.9%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-R
Conditional Impact Assessment Model
Output (T.C.P.U.)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	6,624		6,624			
2001	7,200	8.7%	7,200	8.7%	-	0.0%
2002	7,488	4.0%	7,488	4.0%	-	0.0%
2003	7,563	1.0%	7,563	1.0%	-	0.0%
2004	7,647	1.1%	7,560	0.0%	(87)	-1.1%
2005	7,714	0.9%	7,459	-1.3%	(256)	-3.3%
2006	7,779	0.8%	7,442	-0.2%	(336)	-4.3%
2007	7,839	0.8%	7,416	-0.4%	(422)	-5.4%
2008	7,889	0.6%	7,399	-0.2%	(491)	-6.2%
2009	7,920	0.4%	7,387	-0.2%	(533)	-6.7%
2010	7,952	0.4%	7,373	-0.2%	(579)	-7.3%
2011	8,029	1.0%	7,386	0.2%	(642)	-8.0%
2012	8,098	0.9%	7,406	0.3%	(692)	-8.5%
2013	8,165	0.8%	7,433	0.4%	(732)	-9.0%
2014	8,229	0.8%	7,466	0.4%	(762)	-9.3%
2015	8,291	0.8%	7,507	0.5%	(784)	-9.5%
2016	8,349	0.7%	7,552	0.6%	(797)	-9.5%
2017	8,406	0.7%	7,599	0.6%	(807)	-9.6%
2018	8,458	0.6%	7,642	0.6%	(816)	-9.6%
2019	8,504	0.5%	7,680	0.5%	(825)	-9.7%
2020	8,545	0.5%	7,712	0.4%	(832)	-9.7%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] T.C.P.U. - Transporation, communications and public utilities.

Appendix 5.5-S
Conditional Impact Assessment Model
Output (F.I.R.E.)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	15,413		15,413			
2001	16,519	7.2%	16,519	7.2%	-	0.0%
2002	17,082	3.4%	17,082	3.4%	-	0.0%
2003	17,339	1.5%	17,339	1.5%	-	0.0%
2004	17,575	1.4%	17,485	0.8%	(90)	-0.5%
2005	17,778	1.2%	17,511	0.1%	(267)	-1.5%
2006	17,981	1.1%	17,630	0.7%	(351)	-2.0%
2007	18,168	1.0%	17,599	-0.2%	(569)	-3.1%
2008	18,317	0.8%	17,575	-0.1%	(742)	-4.1%
2009	18,193	-0.7%	17,344	-1.3%	(849)	-4.7%
2010	18,168	-0.1%	17,200	-0.8%	(968)	-5.3%
2011	18,239	0.4%	17,122	-0.5%	(1,117)	-6.1%
2012	18,283	0.2%	17,050	-0.4%	(1,232)	-6.7%
2013	18,312	0.2%	16,990	-0.4%	(1,322)	-7.2%
2014	18,332	0.1%	16,943	-0.3%	(1,388)	-7.6%
2015	18,344	0.1%	16,910	-0.2%	(1,434)	-7.8%
2016	18,346	0.0%	16,887	-0.1%	(1,459)	-8.0%
2017	18,344	0.0%	16,871	-0.1%	(1,473)	-8.0%
2018	18,329	-0.1%	16,844	-0.2%	(1,485)	-8.1%
2019	18,299	-0.2%	16,804	-0.2%	(1,495)	-8.2%
2020	18,264	-0.2%	16,759	-0.3%	(1,505)	-8.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.5-T
Conditional Impact Assessment Model
Output (Retail)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	7,298		7,298			
2001	7,763	6.4%	7,763	6.4%	-	0.0%
2002	7,928	2.1%	7,928	2.1%	-	0.0%
2003	8,003	1.0%	8,003	1.0%	-	0.0%
2004	8,075	0.9%	7,903	-1.3%	(172)	-2.1%
2005	8,138	0.8%	7,629	-3.5%	(508)	-6.2%
2006	8,199	0.8%	7,530	-1.3%	(669)	-8.2%
2007	8,263	0.8%	7,518	-0.2%	(746)	-9.0%
2008	8,321	0.7%	7,514	0.0%	(807)	-9.7%
2009	8,328	0.1%	7,488	-0.3%	(840)	-10.1%
2010	8,323	-0.1%	7,447	-0.5%	(875)	-10.5%
2011	8,375	0.6%	7,442	-0.1%	(934)	-11.1%
2012	8,412	0.4%	7,435	-0.1%	(978)	-11.6%
2013	8,445	0.4%	7,433	0.0%	(1,012)	-12.0%
2014	8,475	0.4%	7,439	0.1%	(1,036)	-12.2%
2015	8,502	0.3%	7,450	0.1%	(1,052)	-12.4%
2016	8,525	0.3%	7,465	0.2%	(1,060)	-12.4%
2017	8,549	0.3%	7,482	0.2%	(1,067)	-12.5%
2018	8,566	0.2%	7,493	0.1%	(1,073)	-12.5%
2019	8,578	0.1%	7,500	0.1%	(1,078)	-12.6%
2020	8,586	0.1%	7,503	0.0%	(1,083)	-12.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-U
Conditional Impact Assessment Model
Output (Wholesale)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,896		2,896			
2001	2,896	0.0%	2,896	0.0%	-	0.0%
2002	2,921	0.9%	2,921	0.9%	-	0.0%
2003	2,892	-1.0%	2,892	-1.0%	-	0.0%
2004	2,881	-0.4%	2,784	-3.8%	(98)	-3.4%
2005	2,865	-0.6%	2,577	-7.4%	(288)	-10.1%
2006	2,844	-0.7%	2,465	-4.3%	(379)	-13.3%
2007	2,822	-0.8%	2,423	-1.7%	(399)	-14.1%
2008	2,796	-0.9%	2,382	-1.7%	(414)	-14.8%
2009	2,753	-1.5%	2,334	-2.0%	(418)	-15.2%
2010	2,742	-0.4%	2,318	-0.7%	(423)	-15.4%
2011	2,748	0.2%	2,309	-0.4%	(439)	-16.0%
2012	2,751	0.1%	2,301	-0.4%	(450)	-16.3%
2013	2,752	0.1%	2,295	-0.3%	(458)	-16.6%
2014	2,753	0.0%	2,290	-0.2%	(463)	-16.8%
2015	2,752	0.0%	2,287	-0.1%	(465)	-16.9%
2016	2,750	-0.1%	2,285	-0.1%	(465)	-16.9%
2017	2,746	-0.1%	2,280	-0.2%	(466)	-17.0%
2018	2,740	-0.2%	2,273	-0.3%	(467)	-17.0%
2019	2,732	-0.3%	2,264	-0.4%	(468)	-17.1%
2020	2,721	-0.4%	2,253	-0.5%	(468)	-17.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-V
Conditional Impact Assessment Model
Output (Services)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	29,834		29,834			
2001	30,411	1.9%	30,411	1.9%	-	0.0%
2002	30,540	0.4%	30,540	0.4%	-	0.0%
2003	30,961	1.4%	30,961	1.4%	-	0.0%
2004	31,385	1.4%	31,138	0.6%	(248)	-0.8%
2005	31,844	1.5%	31,111	-0.1%	(732)	-2.3%
2006	32,348	1.6%	31,385	0.9%	(963)	-3.0%
2007	32,848	1.5%	31,505	0.4%	(1,343)	-4.1%
2008	33,307	1.4%	31,658	0.5%	(1,649)	-5.0%
2009	33,741	1.3%	31,889	0.7%	(1,852)	-5.5%
2010	34,220	1.4%	32,140	0.8%	(2,080)	-6.1%
2011	34,918	2.0%	32,539	1.2%	(2,380)	-6.8%
2012	35,596	1.9%	32,971	1.3%	(2,625)	-7.4%
2013	36,262	1.9%	33,433	1.4%	(2,830)	-7.8%
2014	36,929	1.8%	33,932	1.5%	(2,996)	-8.1%
2015	37,596	1.8%	34,471	1.6%	(3,125)	-8.3%
2016	38,256	1.8%	35,040	1.6%	(3,216)	-8.4%
2017	38,924	1.7%	35,635	1.7%	(3,289)	-8.5%
2018	39,576	1.7%	36,216	1.6%	(3,360)	-8.5%
2019	40,214	1.6%	36,784	1.6%	(3,430)	-8.5%
2020	40,836	1.5%	37,338	1.5%	(3,497)	-8.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-W
Conditional Impact Assessment Model
Output (Government)[1] - 65% Initial Impact, Moderate Recovery

	Output					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	4,945		4,945			
2001	5,127	3.7%	5,127	3.7%	-	0.0%
2002	5,127	0.0%	5,127	0.0%	-	0.0%
2003	5,259	2.6%	5,259	2.6%	-	0.0%
2004	5,382	2.4%	5,370	2.1%	(12)	-0.2%
2005	5,498	2.1%	5,462	1.7%	(36)	-0.7%
2006	5,609	2.0%	5,561	1.8%	(48)	-0.9%
2007	5,714	1.9%	5,595	0.6%	(119)	-2.1%
2008	5,811	1.7%	5,635	0.7%	(177)	-3.0%
2009	5,898	1.5%	5,682	0.8%	(216)	-3.7%
2010	5,977	1.3%	5,716	0.6%	(261)	-4.4%
2011	6,083	1.8%	5,768	0.9%	(315)	-5.2%
2012	6,177	1.5%	5,819	0.9%	(359)	-5.8%
2013	6,268	1.5%	5,873	0.9%	(395)	-6.3%
2014	6,355	1.4%	5,931	1.0%	(424)	-6.7%
2015	6,436	1.3%	5,991	1.0%	(445)	-6.9%
2016	6,513	1.2%	6,053	1.0%	(460)	-7.1%
2017	6,585	1.1%	6,116	1.0%	(470)	-7.1%
2018	6,654	1.0%	6,175	1.0%	(479)	-7.2%
2019	6,721	1.0%	6,232	0.9%	(488)	-7.3%
2020	6,783	0.9%	6,286	0.9%	(497)	-7.3%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-X
Conditional Impact Assessment Model
Labor Income[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	31,914		31,914			
2001	32,911	3.1%	32,911	3.1%	-	0.0%
2002	33,368	1.4%	33,368	1.4%	-	0.0%
2003	33,699	1.0%	33,699	1.0%	-	0.0%
2004	34,032	1.0%	33,108	-1.8%	(924)	-2.7%
2005	34,345	0.9%	31,614	-4.5%	(2,732)	-8.0%
2006	34,676	1.0%	31,084	-1.7%	(3,592)	-10.4%
2007	35,006	1.0%	31,120	0.1%	(3,886)	-11.1%
2008	35,299	0.8%	31,176	0.2%	(4,123)	-11.7%
2009	35,474	0.5%	31,232	0.2%	(4,242)	-12.0%
2010	35,697	0.6%	31,326	0.3%	(4,371)	-12.2%
2011	36,150	1.3%	31,534	0.7%	(4,616)	-12.8%
2012	36,569	1.2%	31,763	0.7%	(4,806)	-13.1%
2013	36,979	1.1%	32,022	0.8%	(4,957)	-13.4%
2014	37,387	1.1%	32,314	0.9%	(5,072)	-13.6%
2015	37,789	1.1%	32,637	1.0%	(5,152)	-13.6%
2016	38,182	1.0%	32,985	1.1%	(5,197)	-13.6%
2017	38,577	1.0%	33,331	1.0%	(5,246)	-13.6%
2018	38,952	1.0%	33,660	1.0%	(5,293)	-13.6%
2019	39,313	0.9%	33,975	0.9%	(5,337)	-13.6%
2020	39,656	0.9%	34,276	0.9%	(5,380)	-13.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-Y
Conditional Impact Assessment Model
Labor Income (Agriculture)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	125		125			
2001	125	0.0%	125	0.0%	-	0.0%
2002	125	0.0%	125	0.0%	-	0.0%
2003	127	1.9%	127	1.9%	-	0.0%
2004	129	1.5%	127	-0.3%	(2)	-1.8%
2005	131	1.3%	124	-2.2%	(7)	-5.2%
2006	133	1.3%	124	-0.3%	(9)	-6.8%
2007	134	1.3%	124	0.3%	(10)	-7.7%
2008	136	1.2%	125	0.4%	(11)	-8.4%
2009	137	1.1%	125	0.7%	(12)	-8.8%
2010	140	2.1%	127	1.7%	(13)	-9.1%
2011	144	2.5%	130	1.8%	(14)	-9.7%
2012	147	2.3%	132	1.8%	(15)	-10.1%
2013	150	2.2%	135	1.9%	(16)	-10.4%
2014	154	2.2%	137	2.0%	(16)	-10.6%
2015	157	2.1%	140	2.0%	(17)	-10.7%
2016	160	2.1%	143	2.1%	(17)	-10.8%
2017	164	2.1%	146	2.1%	(18)	-10.7%
2018	167	1.9%	149	2.0%	(18)	-10.7%
2019	170	1.9%	152	1.9%	(18)	-10.7%
2020	173	1.8%	154	1.8%	(18)	-10.7%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,001		1,001			
2001	1,033	3.2%	1,033	3.2%	-	0.0%
2002	1,029	-0.4%	1,029	-0.4%	-	0.0%
2003	1,020	-0.9%	1,020	-0.9%	-	0.0%
2004	1,011	-0.8%	996	-2.3%	(15)	-1.5%
2005	1,000	-1.1%	955	-4.1%	(46)	-4.6%
2006	988	-1.3%	928	-2.8%	(60)	-6.1%
2007	974	-1.4%	904	-2.5%	(70)	-7.2%
2008	958	-1.7%	881	-2.6%	(77)	-8.1%
2009	951	-0.7%	870	-1.2%	(81)	-8.5%
2010	953	0.3%	867	-0.3%	(86)	-9.0%
2011	960	0.7%	867	0.0%	(93)	-9.7%
2012	968	0.8%	869	0.2%	(99)	-10.2%
2013	977	0.9%	874	0.5%	(103)	-10.6%
2014	986	0.9%	879	0.6%	(107)	-10.8%
2015	996	1.0%	886	0.8%	(109)	-11.0%
2016	1,005	1.0%	895	0.9%	(111)	-11.0%
2017	1,015	1.0%	903	1.0%	(112)	-11.0%
2018	1,025	0.9%	912	0.9%	(113)	-11.0%
2019	1,034	0.9%	920	0.9%	(114)	-11.1%
2020	1,043	0.9%	928	0.8%	(116)	-11.1%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AA
Conditional Impact Assessment Model
Labor Income (Mining)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	71		71			
2001	71	0.0%	71	0.0%	-	0.0%
2002	63	-11.1%	63	-11.1%	-	0.0%
2003	61	-2.5%	61	-2.5%	-	0.0%
2004	59	-3.0%	59	-3.6%	(0)	-0.6%
2005	58	-3.1%	56	-4.3%	(1)	-1.9%
2006	56	-2.8%	55	-3.5%	(1)	-2.6%
2007	54	-3.0%	52	-4.3%	(2)	-3.8%
2008	53	-3.2%	50	-4.2%	(3)	-4.8%
2009	52	-0.1%	50	-0.7%	(3)	-5.4%
2010	51	-1.9%	48	-2.6%	(3)	-6.1%
2011	51	-1.6%	47	-2.4%	(3)	-6.9%
2012	50	-1.1%	46	-1.8%	(4)	-7.5%
2013	50	-1.0%	46	-1.5%	(4)	-8.0%
2014	49	-0.8%	45	-1.2%	(4)	-8.4%
2015	49	-0.6%	45	-0.9%	(4)	-8.6%
2016	49	-0.6%	44	-0.7%	(4)	-8.8%
2017	48	-0.5%	44	-0.6%	(4)	-8.8%
2018	48	-0.5%	44	-0.6%	(4)	-8.9%
2019	48	-0.5%	44	-0.6%	(4)	-9.0%
2020	48	-0.3%	43	-0.4%	(4)	-9.1%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AB
Conditional Impact Assessment Model
Labor Income (Construction)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,722		3,722			
2001	3,684	-1.0%	3,684	-1.0%	-	0.0%
2002	3,812	3.5%	3,812	3.5%	-	0.0%
2003	3,765	-1.2%	3,765	-1.2%	-	0.0%
2004	3,718	-1.2%	3,114	-17.3%	(604)	-16.3%
2005	3,664	-1.5%	1,878	-39.7%	(1,786)	-48.8%
2006	3,614	-1.4%	1,265	-32.6%	(2,349)	-65.0%
2007	3,574	-1.1%	1,281	1.3%	(2,293)	-64.2%
2008	3,539	-1.0%	1,289	0.6%	(2,251)	-63.6%
2009	3,483	-1.6%	1,291	0.2%	(2,192)	-62.9%
2010	3,425	-1.7%	1,301	0.7%	(2,124)	-62.0%
2011	3,403	-0.6%	1,301	0.0%	(2,102)	-61.8%
2012	3,381	-0.6%	1,303	0.2%	(2,078)	-61.5%
2013	3,363	-0.5%	1,308	0.4%	(2,056)	-61.1%
2014	3,349	-0.4%	1,315	0.6%	(2,034)	-60.7%
2015	3,337	-0.3%	1,325	0.8%	(2,012)	-60.3%
2016	3,328	-0.3%	1,337	0.9%	(1,991)	-59.8%
2017	3,321	-0.2%	1,333	-0.3%	(1,987)	-59.9%
2018	3,313	-0.2%	1,329	-0.3%	(1,984)	-59.9%
2019	3,307	-0.2%	1,325	-0.3%	(1,981)	-59.9%
2020	3,300	-0.2%	1,322	-0.3%	(1,978)	-59.9%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,998		1,998			
2001	2,172	8.7%	2,172	8.7%	-	0.0%
2002	2,259	4.0%	2,259	4.0%	-	0.0%
2003	2,281	1.0%	2,281	1.0%	-	0.0%
2004	2,307	1.1%	2,282	0.0%	(25)	-1.1%
2005	2,327	0.9%	2,254	-1.2%	(73)	-3.1%
2006	2,346	0.8%	2,251	-0.2%	(96)	-4.1%
2007	2,364	0.8%	2,243	-0.4%	(122)	-5.2%
2008	2,380	0.6%	2,237	-0.2%	(143)	-6.0%
2009	2,389	0.4%	2,233	-0.2%	(155)	-6.5%
2010	2,399	0.4%	2,229	-0.2%	(170)	-7.1%
2011	2,422	1.0%	2,233	0.2%	(189)	-7.8%
2012	2,443	0.9%	2,239	0.3%	(204)	-8.4%
2013	2,463	0.8%	2,247	0.4%	(216)	-8.8%
2014	2,482	0.8%	2,257	0.4%	(225)	-9.1%
2015	2,501	0.8%	2,269	0.5%	(232)	-9.3%
2016	2,518	0.7%	2,282	0.6%	(236)	-9.4%
2017	2,536	0.7%	2,297	0.6%	(239)	-9.4%
2018	2,551	0.6%	2,310	0.6%	(242)	-9.5%
2019	2,565	0.5%	2,321	0.5%	(244)	-9.5%
2020	2,577	0.5%	2,331	0.4%	(247)	-9.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] T.C.P.U. - Transporation, communications and public utilities.

Appendix 5.5-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,958		2,958			
2001	3,171	7.2%	3,171	7.2%	-	0.0%
2002	3,279	3.4%	3,279	3.4%	-	0.0%
2003	3,328	1.5%	3,328	1.5%	-	0.0%
2004	3,373	1.4%	3,352	0.7%	(22)	-0.6%
2005	3,412	1.2%	3,348	-0.1%	(64)	-1.9%
2006	3,451	1.1%	3,367	0.6%	(84)	-2.4%
2007	3,487	1.0%	3,362	-0.2%	(125)	-3.6%
2008	3,516	0.8%	3,358	-0.1%	(158)	-4.5%
2009	3,492	-0.7%	3,314	-1.3%	(178)	-5.1%
2010	3,487	-0.1%	3,287	-0.8%	(200)	-5.7%
2011	3,501	0.4%	3,272	-0.4%	(228)	-6.5%
2012	3,509	0.2%	3,259	-0.4%	(250)	-7.1%
2013	3,515	0.2%	3,248	-0.3%	(267)	-7.6%
2014	3,519	0.1%	3,239	-0.3%	(280)	-7.9%
2015	3,521	0.1%	3,233	-0.2%	(288)	-8.2%
2016	3,521	0.0%	3,229	-0.1%	(293)	-8.3%
2017	3,521	0.0%	3,226	-0.1%	(295)	-8.4%
2018	3,518	-0.1%	3,220	-0.2%	(298)	-8.5%
2019	3,512	-0.2%	3,213	-0.2%	(300)	-8.5%
2020	3,506	-0.2%	3,204	-0.3%	(301)	-8.6%

Notes:

[1] In millions, expressed in constant 2000 dollars.

[2] F.I.R.E. - Finance, insurance and real estate.

Appendix 5.5-AE
Conditional Impact Assessment Model
Labor Income (Retail)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,368		3,368			
2001	3,583	6.4%	3,583	6.4%	-	0.0%
2002	3,659	2.1%	3,659	2.1%	-	0.0%
2003	3,694	1.0%	3,694	1.0%	-	0.0%
2004	3,727	0.9%	3,646	-1.3%	(81)	-2.2%
2005	3,756	0.8%	3,518	-3.5%	(239)	-6.4%
2006	3,784	0.8%	3,471	-1.3%	(314)	-8.3%
2007	3,814	0.8%	3,465	-0.2%	(349)	-9.2%
2008	3,841	0.7%	3,463	0.0%	(377)	-9.8%
2009	3,844	0.1%	3,452	-0.3%	(392)	-10.2%
2010	3,841	-0.1%	3,433	-0.5%	(408)	-10.6%
2011	3,866	0.6%	3,431	-0.1%	(435)	-11.3%
2012	3,883	0.4%	3,427	-0.1%	(455)	-11.7%
2013	3,898	0.4%	3,427	0.0%	(471)	-12.1%
2014	3,912	0.4%	3,429	0.1%	(482)	-12.3%
2015	3,924	0.3%	3,435	0.1%	(490)	-12.5%
2016	3,935	0.3%	3,442	0.2%	(493)	-12.5%
2017	3,946	0.3%	3,450	0.2%	(496)	-12.6%
2018	3,954	0.2%	3,455	0.1%	(499)	-12.6%
2019	3,959	0.1%	3,458	0.1%	(502)	-12.7%
2020	3,963	0.1%	3,459	0.0%	(504)	-12.7%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AF
Conditional Impact Assessment Model
Labor Income (Wholesale)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,213		1,213			
2001	1,213	0.0%	1,213	0.0%	-	0.0%
2002	1,223	0.9%	1,223	0.9%	-	0.0%
2003	1,211	-1.0%	1,211	-1.0%	-	0.0%
2004	1,206	-0.4%	1,165	-3.8%	(41)	-3.4%
2005	1,200	-0.6%	1,079	-7.4%	(121)	-10.1%
2006	1,191	-0.7%	1,032	-4.3%	(159)	-13.3%
2007	1,182	-0.8%	1,015	-1.7%	(167)	-14.1%
2008	1,170	-0.9%	997	-1.7%	(173)	-14.8%
2009	1,152	-1.5%	977	-2.0%	(175)	-15.2%
2010	1,148	-0.4%	971	-0.7%	(177)	-15.4%
2011	1,150	0.2%	967	-0.4%	(184)	-16.0%
2012	1,152	0.1%	963	-0.4%	(188)	-16.3%
2013	1,152	0.1%	961	-0.3%	(192)	-16.6%
2014	1,153	0.0%	959	-0.2%	(194)	-16.8%
2015	1,152	0.0%	957	-0.1%	(195)	-16.9%
2016	1,151	-0.1%	956	-0.1%	(195)	-16.9%
2017	1,150	-0.1%	954	-0.2%	(195)	-17.0%
2018	1,147	-0.2%	952	-0.3%	(196)	-17.0%
2019	1,144	-0.3%	948	-0.4%	(196)	-17.1%
2020	1,139	-0.4%	943	-0.5%	(196)	-17.2%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AG
Conditional Impact Assessment Model
Labor Income (Services)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	13,771		13,771			
2001	14,037	1.9%	14,037	1.9%	-	0.0%
2002	14,097	0.4%	14,097	0.4%	-	0.0%
2003	14,291	1.4%	14,291	1.4%	-	0.0%
2004	14,487	1.4%	14,358	0.5%	(129)	-0.9%
2005	14,698	1.5%	14,317	-0.3%	(381)	-2.6%
2006	14,931	1.6%	14,430	0.8%	(501)	-3.4%
2007	15,162	1.5%	14,488	0.4%	(674)	-4.4%
2008	15,374	1.4%	14,561	0.5%	(813)	-5.3%
2009	15,574	1.3%	14,669	0.7%	(905)	-5.8%
2010	15,795	1.4%	14,787	0.8%	(1,008)	-6.4%
2011	16,117	2.0%	14,972	1.3%	(1,145)	-7.1%
2012	16,430	1.9%	15,173	1.3%	(1,257)	-7.7%
2013	16,738	1.9%	15,387	1.4%	(1,351)	-8.1%
2014	17,045	1.8%	15,618	1.5%	(1,427)	-8.4%
2015	17,353	1.8%	15,868	1.6%	(1,486)	-8.6%
2016	17,658	1.8%	16,131	1.7%	(1,527)	-8.6%
2017	17,966	1.7%	16,406	1.7%	(1,561)	-8.7%
2018	18,267	1.7%	16,674	1.6%	(1,593)	-8.7%
2019	18,562	1.6%	16,936	1.6%	(1,625)	-8.8%
2020	18,849	1.5%	17,192	1.5%	(1,656)	-8.8%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AH
Conditional Impact Assessment Model
Labor Income (Government)[1] - 65% Initial Impact, Moderate Recovery

	Labor Income					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	3,688		3,688			
2001	3,823	3.7%	3,823	3.7%	-	0.0%
2002	3,823	0.0%	3,823	0.0%	-	0.0%
2003	3,921	2.6%	3,921	2.6%	-	0.0%
2004	4,013	2.4%	4,008	2.2%	(5)	-0.1%
2005	4,100	2.1%	4,084	1.9%	(15)	-0.4%
2006	4,182	2.0%	4,162	1.9%	(20)	-0.5%
2007	4,261	1.9%	4,187	0.6%	(74)	-1.7%
2008	4,333	1.7%	4,216	0.7%	(117)	-2.7%
2009	4,398	1.5%	4,251	0.8%	(147)	-3.4%
2010	4,457	1.3%	4,276	0.6%	(181)	-4.1%
2011	4,536	1.8%	4,314	0.9%	(222)	-4.9%
2012	4,606	1.5%	4,351	0.9%	(255)	-5.5%
2013	4,674	1.5%	4,392	0.9%	(282)	-6.0%
2014	4,739	1.4%	4,435	1.0%	(304)	-6.4%
2015	4,799	1.3%	4,479	1.0%	(320)	-6.7%
2016	4,857	1.2%	4,526	1.0%	(331)	-6.8%
2017	4,911	1.1%	4,572	1.0%	(338)	-6.9%
2018	4,962	1.0%	4,616	1.0%	(346)	-7.0%
2019	5,011	1.0%	4,659	0.9%	(352)	-7.0%
2020	5,058	0.9%	4,699	0.9%	(359)	-7.1%

Notes:

[1] In millions, expressed in constant 2000 dollars.

Appendix 5.5-AI
Conditional Impact Assessment Model
Output Per Employee[1] - 65% Initial Impact, Moderate Recovery

	Output Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	96,613		96,613		-	0.0%
2001	96,766	0.2%	96,766	0.2%	-	0.0%
2002	97,137	0.4%	97,137	0.4%	-	0.0%
2003	96,968	-0.2%	96,968	-0.2%	-	0.0%
2004	96,808	-0.2%	96,207	-0.8%	(600)	-0.6%
2005	96,614	-0.2%	94,757	-1.5%	(1,857)	-1.9%
2006	96,418	-0.2%	93,925	-0.9%	(2,493)	-2.6%
2007	96,225	-0.2%	93,824	-0.1%	(2,401)	-2.5%
2008	96,033	-0.2%	93,701	-0.1%	(2,332)	-2.4%
2009	95,737	-0.3%	93,470	-0.2%	(2,267)	-2.4%
2010	95,516	-0.2%	93,335	-0.1%	(2,181)	-2.3%
2011	95,300	-0.2%	93,170	-0.2%	(2,131)	-2.2%
2012	95,098	-0.2%	93,015	-0.2%	(2,083)	-2.2%
2013	94,906	-0.2%	92,868	-0.2%	(2,038)	-2.1%
2014	94,721	-0.2%	92,723	-0.2%	(1,997)	-2.1%
2015	94,543	-0.2%	92,585	-0.1%	(1,959)	-2.1%
2016	94,371	-0.2%	92,449	-0.1%	(1,922)	-2.0%
2017	94,203	-0.2%	92,294	-0.2%	(1,908)	-2.0%
2018	94,038	-0.2%	92,143	-0.2%	(1,896)	-2.0%
2019	93,876	-0.2%	91,992	-0.2%	(1,884)	-2.0%
2020	93,719	-0.2%	91,846	-0.2%	(1,873)	-2.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.5-AJ
Conditional Impact Assessment Model
Labor Income Per Employee[1] - 65% Initial Impact, Moderate Recovery

	Labor Income Per Employee					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	37,226		37,226			
2001	37,145	-0.2%	37,145	-0.2%	-	0.0%
2002	37,145	0.0%	37,145	0.0%	-	0.0%
2003	37,128	0.0%	37,128	0.0%	-	0.0%
2004	37,115	0.0%	36,979	-0.4%	(136)	-0.4%
2005	37,098	0.0%	36,679	-0.8%	(419)	-1.1%
2006	37,081	0.0%	36,521	-0.4%	(560)	-1.5%
2007	37,063	0.0%	36,527	0.0%	(537)	-1.4%
2008	37,047	0.0%	36,528	0.0%	(519)	-1.4%
2009	37,036	0.0%	36,536	0.0%	(500)	-1.3%
2010	37,029	0.0%	36,552	0.0%	(477)	-1.3%
2011	37,022	0.0%	36,559	0.0%	(463)	-1.3%
2012	37,016	0.0%	36,567	0.0%	(449)	-1.2%
2013	37,012	0.0%	36,575	0.0%	(437)	-1.2%
2014	37,009	0.0%	36,584	0.0%	(425)	-1.1%
2015	37,006	0.0%	36,591	0.0%	(415)	-1.1%
2016	37,004	0.0%	36,599	0.0%	(405)	-1.1%
2017	37,000	0.0%	36,601	0.0%	(399)	-1.1%
2018	36,998	0.0%	36,603	0.0%	(395)	-1.1%
2019	36,996	0.0%	36,606	0.0%	(390)	-1.1%
2020	36,995	0.0%	36,609	0.0%	(386)	-1.0%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.5-AK
Conditional Impact Assessment Model
Tax Payment Summary[1] - 65% Initial Impact, Moderate Recovery

	2000	2005	2010	2015	2020
BASELINE					
Federal					
Corporate Profits Tax	139,313,718	137,156,389	128,205,925	124,932,736	123,542,901
Indirect Bus Tax: Custom Duty	166,615,210	164,035,107	153,330,608	149,415,969	147,753,766
Indirect Bus Tax: Excise Taxes	53,143,145	52,320,202	48,905,924	47,657,321	47,127,149
Indirect Bus Tax: Fed NonTaxes	16,345,658	16,092,539	15,042,382	14,658,339	14,495,270
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	731,195,864	683,479,949	666,030,220	658,620,856
Personal Tax: NonTaxes	6,236,173	6,139,604	5,738,949	5,592,430	5,530,216
Social Ins Tax- Employee Contribution	333,390,387	328,227,703	306,808,428	298,975,391	295,649,390
Social Ins Tax- Employer Contribution	307,291,922	302,533,383	282,790,852	275,571,000	272,505,365
Total	**1,765,033,035**	**1,737,700,792**	**1,624,303,017**	**1,582,833,407**	**1,565,224,914**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	2,897,174	2,708,112	2,638,972	2,609,614
Indirect Bus Tax: Other Taxes	41,477,737	40,835,438	38,170,625	37,196,101	36,782,307
Indirect Bus Tax: Property Tax	81,085,103	79,829,468	74,620,007	72,714,905	71,905,976
Indirect Bus Tax: NonTaxes	19,910,197	19,601,880	18,322,713	17,854,921	17,656,291
Indirect Bus Tax: Sales Tax	239,653,321	235,942,193	220,545,227	214,914,551	212,523,698
Indirect Bus Tax: Severance Tax	4,762,658	4,688,906	4,382,920	4,271,021	4,223,507
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	7,664,015	7,163,882	6,980,983	6,903,322
Personal Tax: NonTaxes	12,149,949	11,961,802	11,181,207	10,895,742	10,774,531
Personal Tax: Other Tax	143,307	141,088	131,881	128,514	127,085
Personal Tax: Property Taxes	1,857,270	1,828,509	1,709,185	1,665,549	1,647,020
Social Ins Tax- Employee Contribution	1,816,880	1,788,745	1,672,016	1,629,328	1,611,203
Social Ins Tax- Employer Contribution	6,980,643	6,872,545	6,424,061	6,260,050	6,190,409
Total	**420,564,371**	**414,051,763**	**387,031,836**	**377,150,638**	**372,954,963**
Total of All Pay Payments	**2,185,597,406**	**2,151,752,555**	**2,011,334,853**	**1,959,984,045**	**1,938,179,877**
CONDITIONAL					
Federal					
Corporate Profits Tax	139,313,718	70,292,650	48,692,071	49,609,432	49,483,189
Indirect Bus Tax: Custom Duty	166,615,210	84,067,992	58,234,320	59,331,457	59,180,475
Indirect Bus Tax: Excise Taxes	53,143,145	26,814,104	18,574,264	18,924,204	18,876,047
Indirect Bus Tax: Fed NonTaxes	16,345,658	8,247,426	5,713,033	5,820,667	5,805,855
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	742,696,822	374,737,880	259,582,809	264,473,361	263,800,348
Personal Tax: NonTaxes (Fines- Fees	6,236,173	3,146,547	2,179,629	2,220,693	2,215,042
Social Ins Tax- Employee Contribution	333,390,387	168,216,698	116,524,550	118,719,878	118,417,768
Social Ins Tax- Employer Contribution	307,291,922	155,048,359	107,402,776	109,426,249	109,147,789
Total	1,765,033,035	890,571,656	616,903,452	628,525,942	626,926,512
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	2,942,743	1,484,801	1,028,529	1,047,907	1,045,240
Indirect Bus Tax: Other Taxes	41,477,737	20,928,162	14,497,043	14,770,168	14,732,581
Indirect Bus Tax: Property Tax	81,085,103	40,912,602	28,340,365	28,874,299	28,800,821
Indirect Bus Tax: NonTaxes	19,910,197	10,045,964	6,958,889	7,089,995	7,071,953
Indirect Bus Tax: Sales Tax	239,653,321	120,920,374	83,762,149	85,340,232	85,123,064
Indirect Bus Tax: Severance Tax	4,762,658	2,403,064	1,664,615	1,695,976	1,691,660
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	7,784,562	3,927,808	2,720,812	2,772,072	2,765,018
Personal Tax: NonTaxes	12,149,949	6,130,424	4,246,575	4,326,581	4,315,571
Personal Tax: Other Tax	143,307	72,308	50,088	51,032	50,902
Personal Tax: Property Taxes	1,857,270	937,111	649,141	661,371	659,688
Social Ins Tax- Employee Contribution	1,816,880	916,732	635,025	646,989	645,342
Social Ins Tax- Employer Contribution	6,980,643	3,522,179	2,439,831	2,485,798	2,479,472
Total	**420,564,371**	**212,201,529**	**146,993,063**	**149,762,419**	**149,381,314**

Appendix 5.5-AK

Conditional Impact Assessment Model

Tax Payment Summary[1] - 65% Initial Impact, Moderate Recovery

	2000	2005	2010	2015	2020
Total of All Pay Payments	**2,185,597,406**	**1,102,773,184**	**763,896,515**	**778,288,361**	**776,307,826**
DIFFERENCE					
Federal					
Corporate Profits Tax	0	(66,863,740)	(79,513,854)	(75,323,305)	(74,059,712)
Indirect Bus Tax: Custom Duty	0	(79,967,115)	(95,096,288)	(90,084,512)	(88,573,291)
Indirect Bus Tax: Excise Taxes	0	(25,506,099)	(30,331,660)	(28,733,117)	(28,251,102)
Indirect Bus Tax: Fed NonTaxes	0	(7,845,113)	(9,329,349)	(8,837,672)	(8,689,415)
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	(356,457,984)	(423,897,140)	(401,556,859)	(394,820,509)
Personal Tax: NonTaxes	0	(2,993,057)	(3,559,320)	(3,371,737)	(3,315,174)
Social Ins Tax- Employee Contribution	0	(160,011,005)	(190,283,878)	(180,255,513)	(177,231,622)
Social Ins Tax- Employer Contribution	0	(147,485,024)	(175,388,076)	(166,144,751)	(163,357,576)
Total	**0**	**(847,129,136)**	**(1,007,399,565)**	**(954,307,465)**	**(938,298,402)**
State and Local					
Indirect Bus Tax: Motor Vehicle Lic	0	(1,412,372)	(1,679,582)	(1,591,065)	(1,564,374)
Indirect Bus Tax: Other Taxes	0	(19,907,276)	(23,673,582)	(22,425,934)	(22,049,726)
Indirect Bus Tax: Property Tax	0	(38,916,866)	(46,279,642)	(43,840,607)	(43,105,155)
Indirect Bus Tax: NonTaxes	0	(9,555,917)	(11,363,824)	(10,764,926)	(10,584,338)
Indirect Bus Tax: Sales Tax	0	(115,021,819)	(136,783,078)	(129,574,319)	(127,400,634)
Indirect Bus Tax: Severance Tax	0	(2,285,842)	(2,718,306)	(2,575,045)	(2,531,847)
Personal Tax: Estate and Gift Tax	0	0	0	0	0
Personal Tax: Income Tax	0	0	0	0	0
Personal Tax: Motor Vehicle License	0	(3,736,207)	(4,443,070)	(4,208,910)	(4,138,304)
Personal Tax: NonTaxes	0	(5,831,379)	(6,934,631)	(6,569,162)	(6,458,960)
Personal Tax: Other Tax	0	(68,781)	(81,793)	(77,483)	(76,183)
Personal Tax: Property Taxes	0	(891,398)	(1,060,044)	(1,004,177)	(987,332)
Social Ins Tax- Employee Contribution	0	(872,013)	(1,036,991)	(982,340)	(965,860)
Social Ins Tax- Employer Contribution	0	(3,350,366)	(3,984,230)	(3,774,252)	(3,710,937)
Total	**0**	**(201,850,235)**	**(240,038,773)**	**(227,388,219)**	**(223,573,649)**
Total of All Pay Payments	**0**	**(1,048,979,371)**	**(1,247,438,338)**	**(1,181,695,684)**	**(1,161,872,051)**

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.5-AL
Conditional Impact Assessment Model
Total Tax Payments[1] - 65% Initial Impact, Moderate Recovery

	Total Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	2,185,597,406		2,185,597,406			
2001	2,163,736,308	-1.0%	2,163,736,308	-1.0%	-	0.0%
2002	2,238,684,577	3.5%	2,238,684,577	3.5%	-	0.0%
2003	2,210,931,230	-1.2%	2,210,931,230	-1.2%	-	0.0%
2004	2,183,804,112	-1.2%	1,828,935,944	-17.3%	(354,868,168)	-16.3%
2005	2,151,752,555	-1.5%	1,102,773,184	-39.7%	(1,048,979,371)	-48.8%
2006	2,122,291,310	-1.4%	742,801,959	-32.6%	(1,379,489,352)	-65.0%
2007	2,098,893,104	-1.1%	752,112,814	1.3%	(1,346,780,290)	-64.2%
2008	2,078,626,045	-1.0%	756,751,494	0.6%	(1,321,874,550)	-63.6%
2009	2,045,606,678	-1.6%	758,298,694	0.2%	(1,287,307,985)	-62.9%
2010	2,011,334,853	-1.7%	763,896,515	0.7%	(1,247,438,338)	-62.0%
2011	1,998,554,081	-0.6%	763,964,187	0.0%	(1,234,589,894)	-61.8%
2012	1,985,744,844	-0.6%	765,140,436	0.2%	(1,220,604,409)	-61.5%
2013	1,975,184,340	-0.5%	768,016,882	0.4%	(1,207,167,458)	-61.1%
2014	1,966,815,638	-0.4%	772,485,214	0.6%	(1,194,330,424)	-60.7%
2015	1,959,984,045	-0.3%	778,288,361	0.8%	(1,181,695,684)	-60.3%
2016	1,954,234,121	-0.3%	785,235,679	0.9%	(1,168,998,442)	-59.8%
2017	1,950,106,700	-0.2%	782,893,124	-0.3%	(1,167,213,577)	-59.9%
2018	1,945,865,420	-0.2%	780,547,362	-0.3%	(1,165,318,057)	-59.9%
2019	1,941,880,324	-0.2%	778,348,440	-0.3%	(1,163,531,884)	-59.9%
2020	1,938,179,877	-0.2%	776,307,826	-0.3%	(1,161,872,051)	-59.9%

Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.5-AN
Conditional Impact Assessment Model
Total Federal Tax Payments[1] - 65% Initial Impact, Moderate Recovery

	Federal Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	1,765,033,035		1,765,033,035			
2001	1,747,378,567	-1.0%	1,747,378,567	-1.0%	-	0.0%
2002	1,807,904,888	3.5%	1,807,904,888	3.5%	-	0.0%
2003	1,785,491,989	-1.2%	1,785,491,989	-1.2%	-	0.0%
2004	1,763,584,817	-1.2%	1,477,002,284	-17.3%	(286,582,533)	-16.3%
2005	1,737,700,792	-1.5%	890,571,656	-39.7%	(847,129,136)	-48.8%
2006	1,713,908,638	-1.4%	599,868,023	-32.6%	(1,114,040,614)	-65.0%
2007	1,695,012,840	-1.1%	607,387,234	1.3%	(1,087,625,606)	-64.2%
2008	1,678,645,677	-1.0%	611,133,314	0.6%	(1,067,512,362)	-63.6%
2009	1,651,980,074	-1.6%	612,382,793	0.2%	(1,039,597,280)	-62.9%
2010	1,624,303,017	-1.7%	616,903,452	0.7%	(1,007,399,565)	-62.0%
2011	1,613,981,590	-0.6%	616,958,102	0.0%	(997,023,487)	-61.8%
2012	1,603,637,175	-0.6%	617,908,011	0.2%	(985,729,164)	-61.5%
2013	1,595,108,779	-0.5%	620,230,956	0.4%	(974,877,823)	-61.1%
2014	1,588,350,428	-0.4%	623,839,467	0.6%	(964,510,961)	-60.7%
2015	1,582,833,407	-0.3%	628,525,942	0.8%	(954,307,465)	-60.3%
2016	1,578,189,914	-0.3%	634,136,420	0.9%	(944,053,494)	-59.8%
2017	1,574,856,714	-0.2%	632,244,631	-0.3%	(942,612,082)	-59.9%
2018	1,571,431,563	-0.2%	630,350,254	-0.3%	(941,081,309)	-59.9%
2019	1,568,213,300	-0.2%	628,574,460	-0.3%	(939,638,840)	-59.9%
2020	1,565,224,914	-0.2%	626,926,512	-0.3%	(938,298,402)	-59.9%

Notes:

[1] Expressed in constant 2000 dollars.

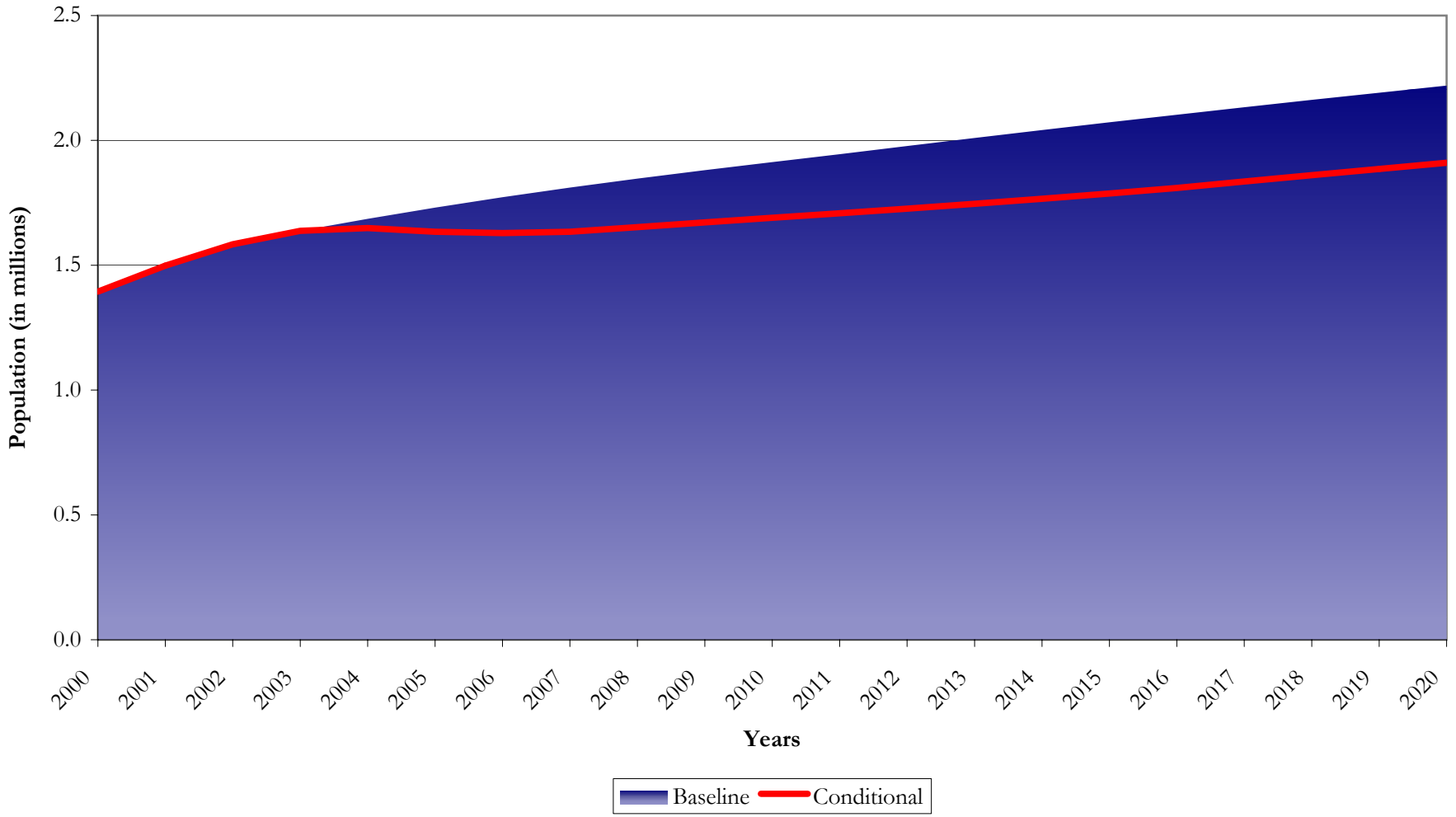
Appendix 5.5-AO
Conditional Impact Assessment Model
Total State and Local Tax Payments[1] - 65% Initial Impact, Moderate Recovery

	State and Local Tax Payments					
Year	Baseline	% Growth	Conditional	% Growth	Difference	% Difference
2000	420,564,371		420,564,371			
2001	416,357,741	-1.0%	416,357,741	-1.0%	-	0.0%
2002	430,779,689	3.5%	430,779,689	3.5%	-	0.0%
2003	425,439,241	-1.2%	425,439,241	-1.2%	-	0.0%
2004	420,219,296	-1.2%	351,933,660	-17.3%	(68,285,636)	-16.3%
2005	414,051,763	-1.5%	212,201,529	-39.7%	(201,850,235)	-48.8%
2006	408,382,672	-1.4%	142,933,935	-32.6%	(265,448,737)	-65.0%
2007	403,880,264	-1.1%	144,725,580	1.3%	(259,154,684)	-64.2%
2008	399,980,368	-1.0%	145,618,180	0.6%	(254,362,188)	-63.6%
2009	393,626,604	-1.6%	145,915,900	0.2%	(247,710,704)	-62.9%
2010	387,031,836	-1.7%	146,993,063	0.7%	(240,038,773)	-62.0%
2011	384,572,491	-0.6%	147,006,085	0.0%	(237,566,407)	-61.8%
2012	382,107,669	-0.6%	147,232,425	0.2%	(234,875,245)	-61.5%
2013	380,075,561	-0.5%	147,785,926	0.4%	(232,289,634)	-61.1%
2014	378,465,210	-0.4%	148,645,747	0.6%	(229,819,464)	-60.7%
2015	377,150,638	-0.3%	149,762,419	0.8%	(227,388,219)	-60.3%
2016	376,044,207	-0.3%	151,099,259	0.9%	(224,944,948)	-59.8%
2017	375,249,987	-0.2%	150,648,492	-0.3%	(224,601,494)	-59.9%
2018	374,433,857	-0.2%	150,197,108	-0.3%	(224,236,748)	-59.9%
2019	373,667,023	-0.2%	149,773,980	-0.3%	(223,893,043)	-59.9%
2020	372,954,963	-0.2%	149,381,314	-0.3%	(223,573,649)	-59.9%

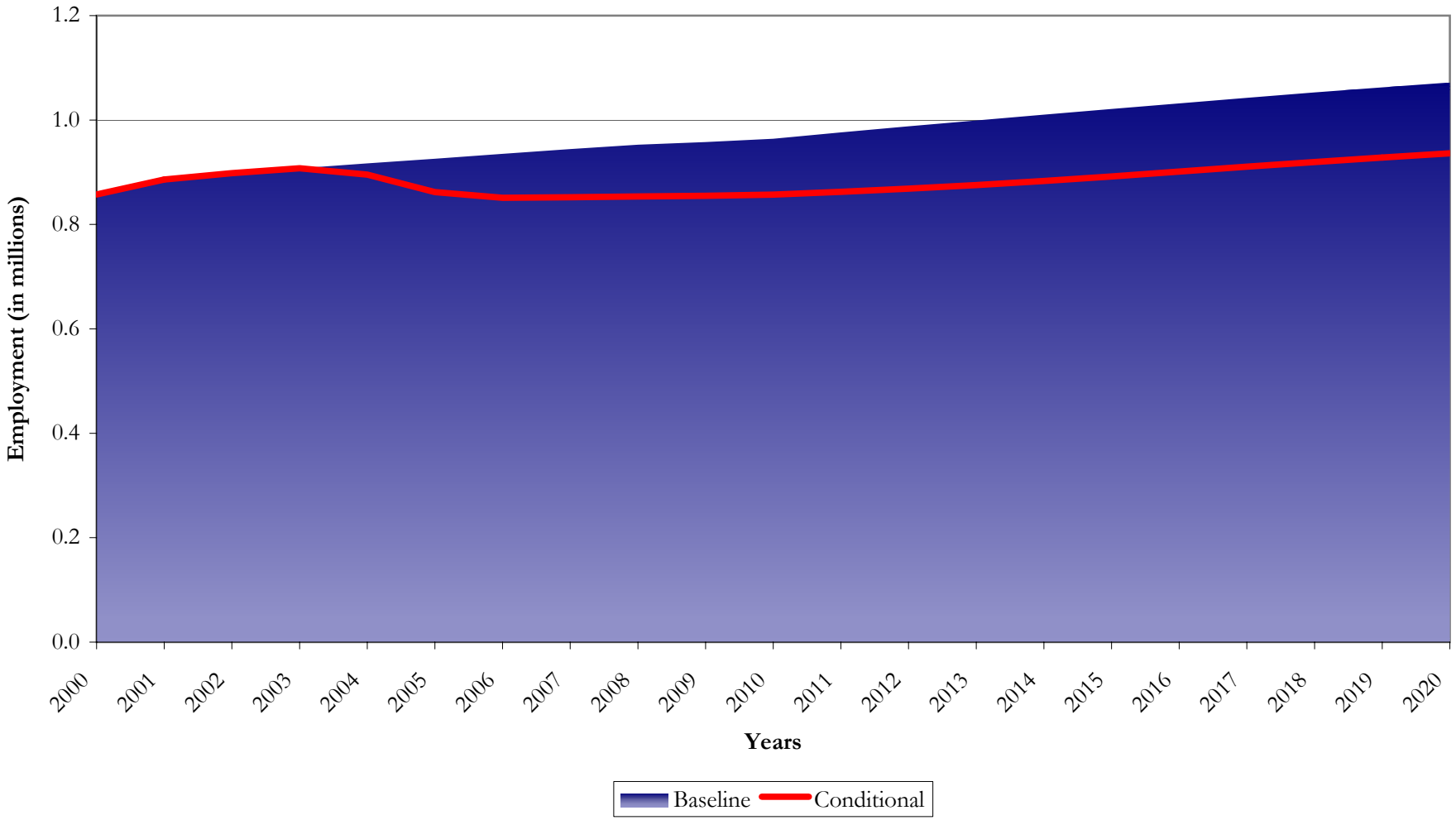
Notes:

[1] Expressed in constant 2000 dollars.

Appendix 5.6-A
Conditional Impact Assessment Model
Population - 65% Initial Impact, Moderate Recovery

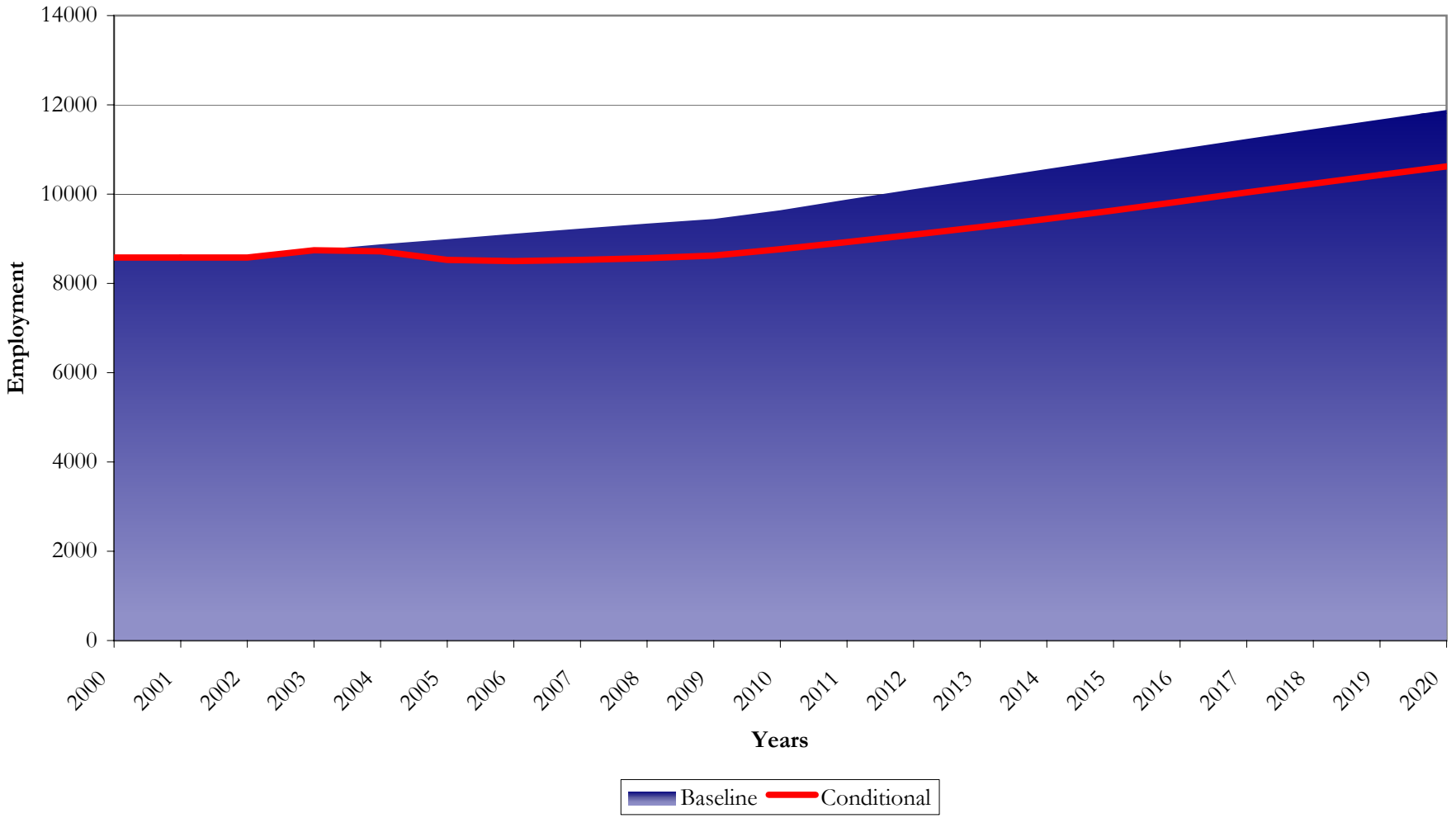


Appendix 5.6-B
Conditional Impact Assessment Model
Employment - 65% Initial Impact, Moderate Recovery

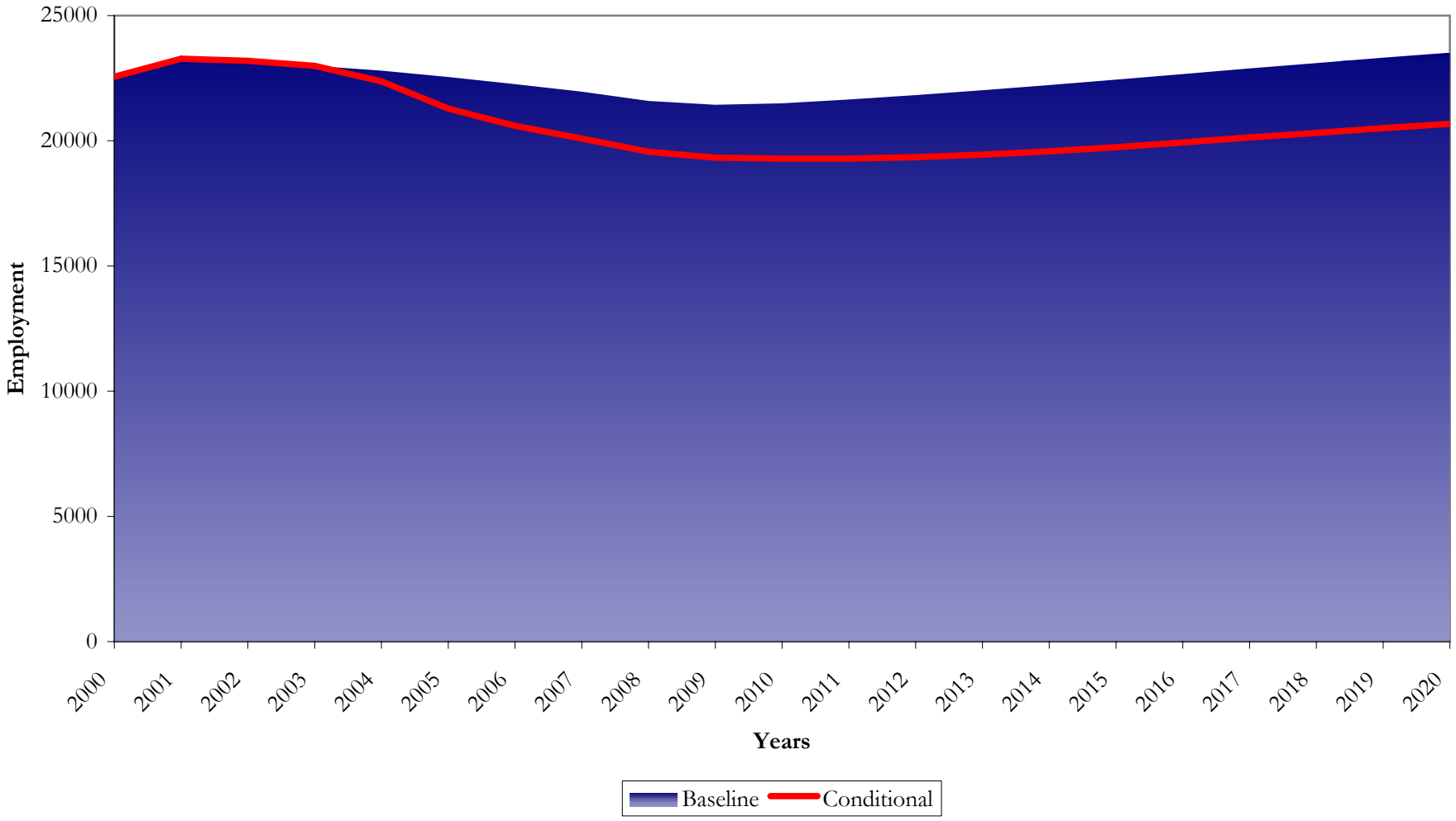


Appendix 5.6-C
Conditional Impact Assessment Model

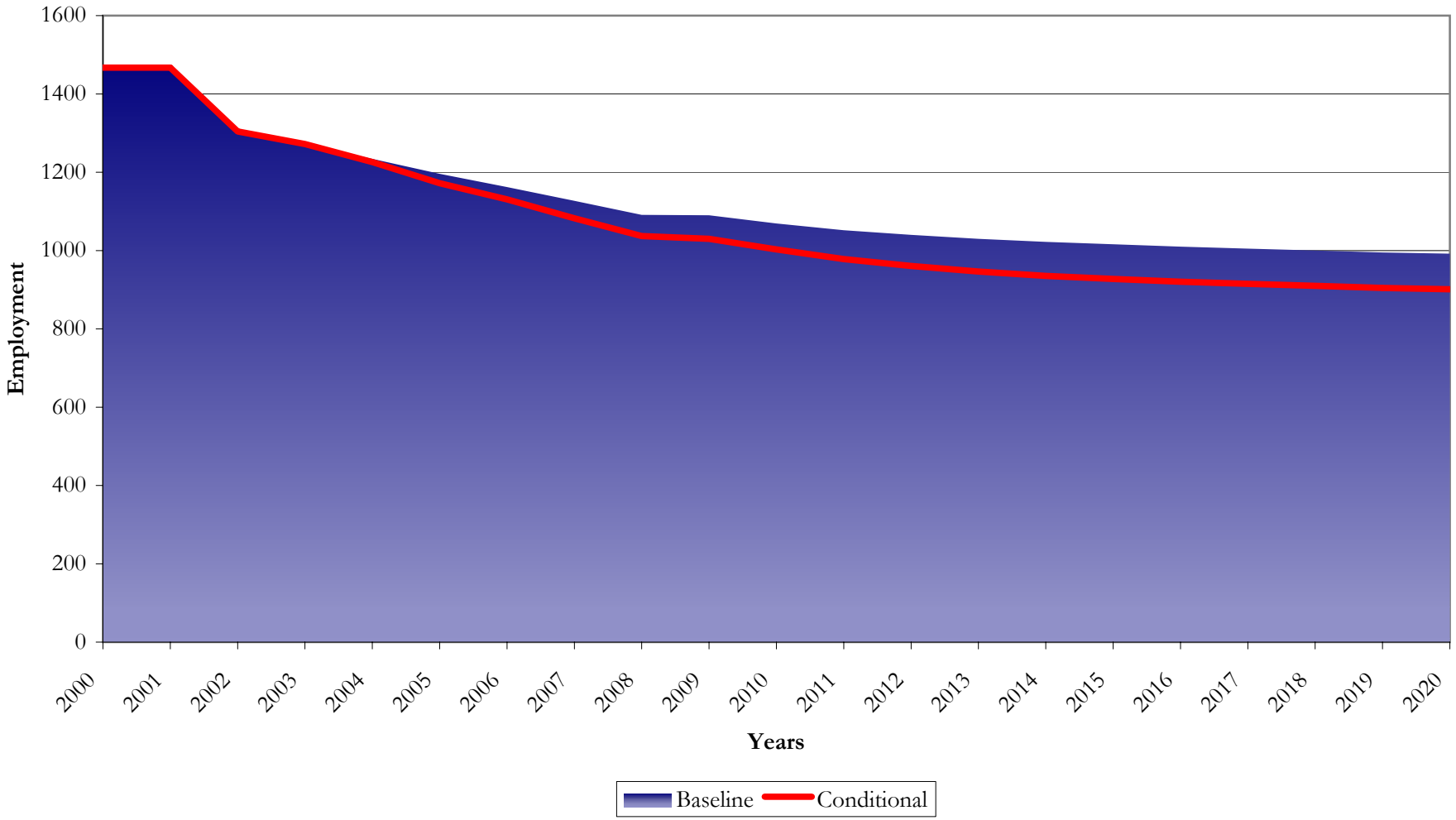
Employment (Agriculture, Fishing and Forestry) - 65% Initial Impact, Moderate Recovery



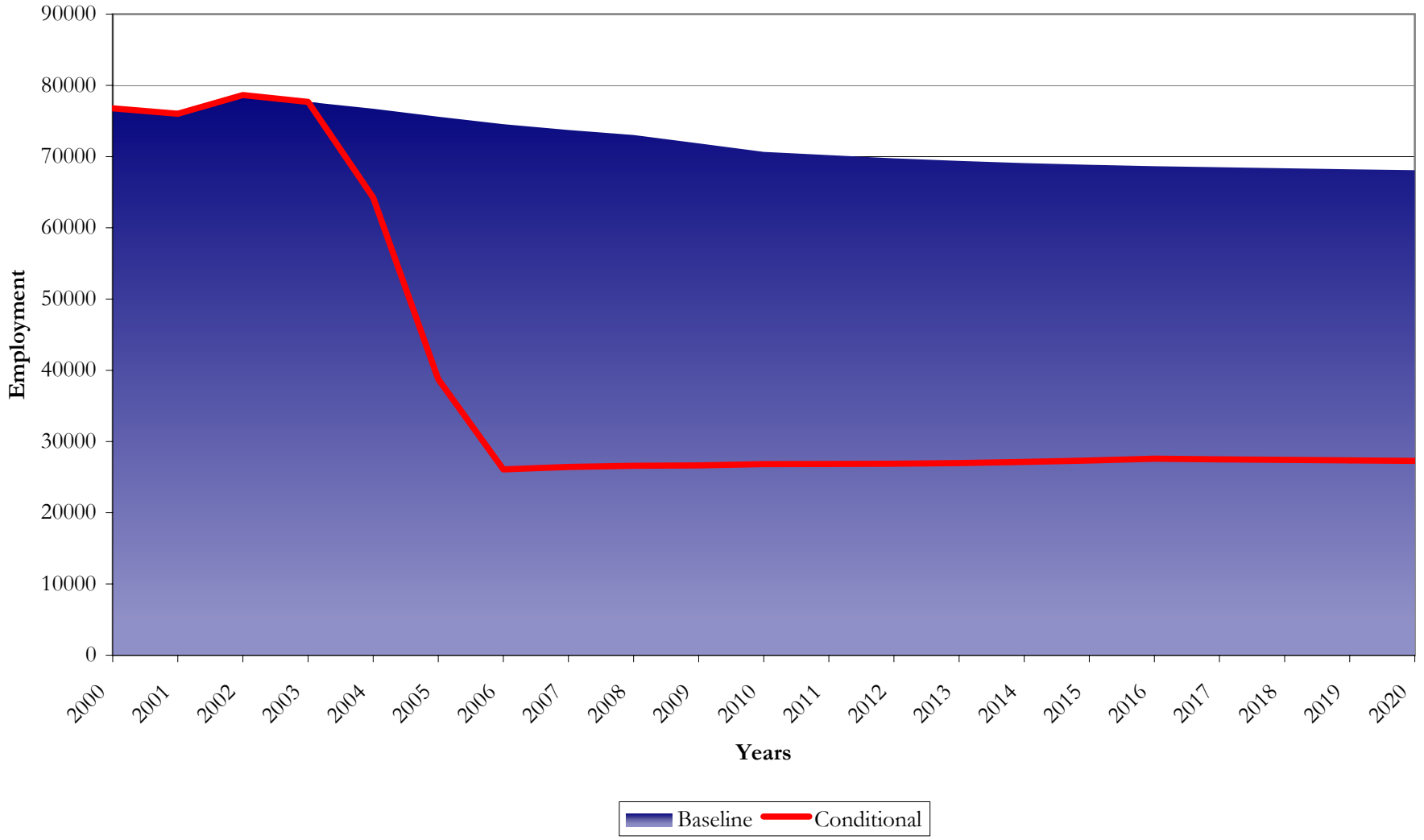
Appendix 5.6-D
Conditional Impact Assessment Model
Employment (Manufacturing) - 65% Initial Impact, Moderate Recovery



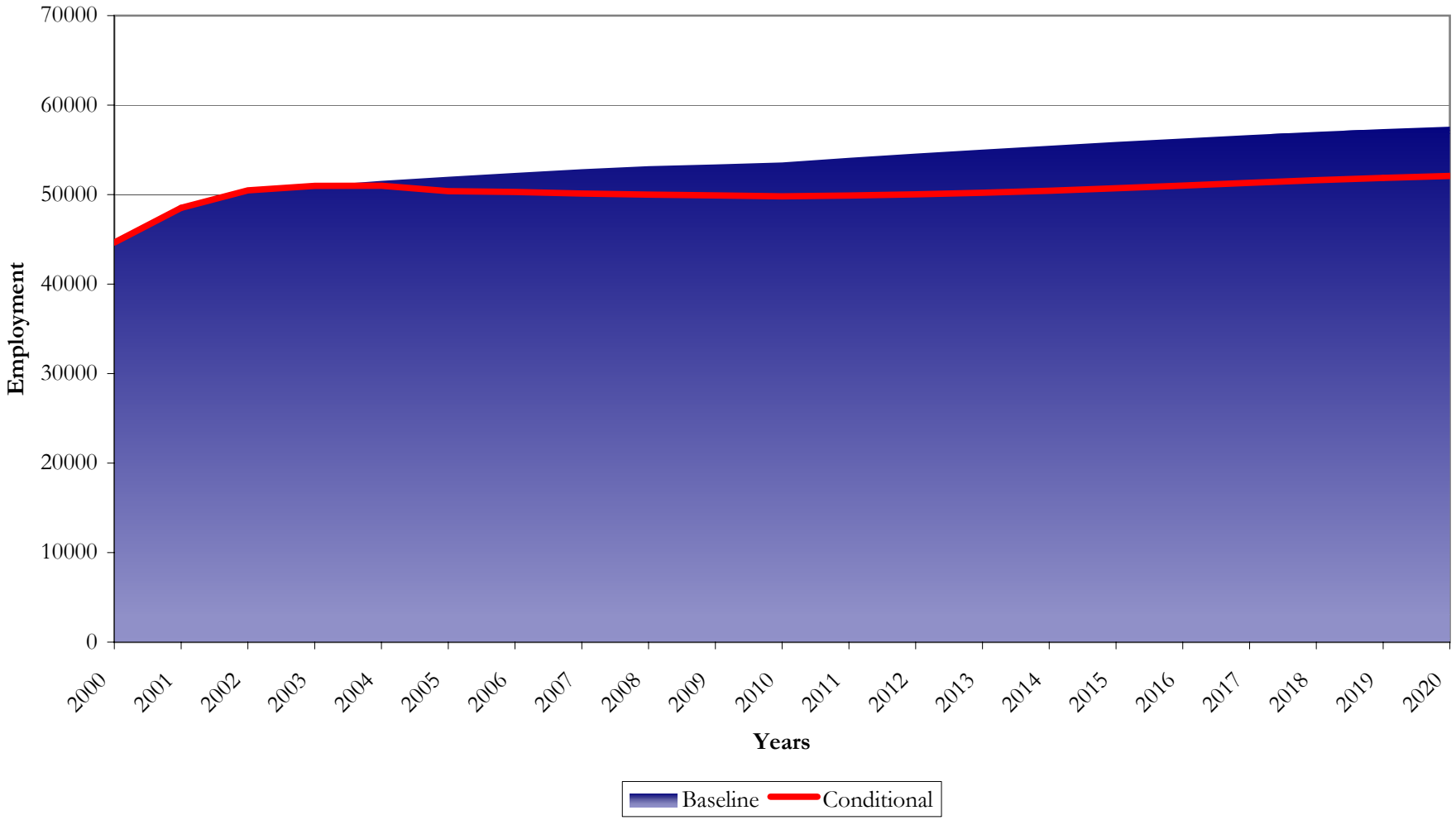
Appendix 5.6-E
Conditional Impact Assessment Model
Employment (Mining) - 65% Initial Impact, Moderate Recovery



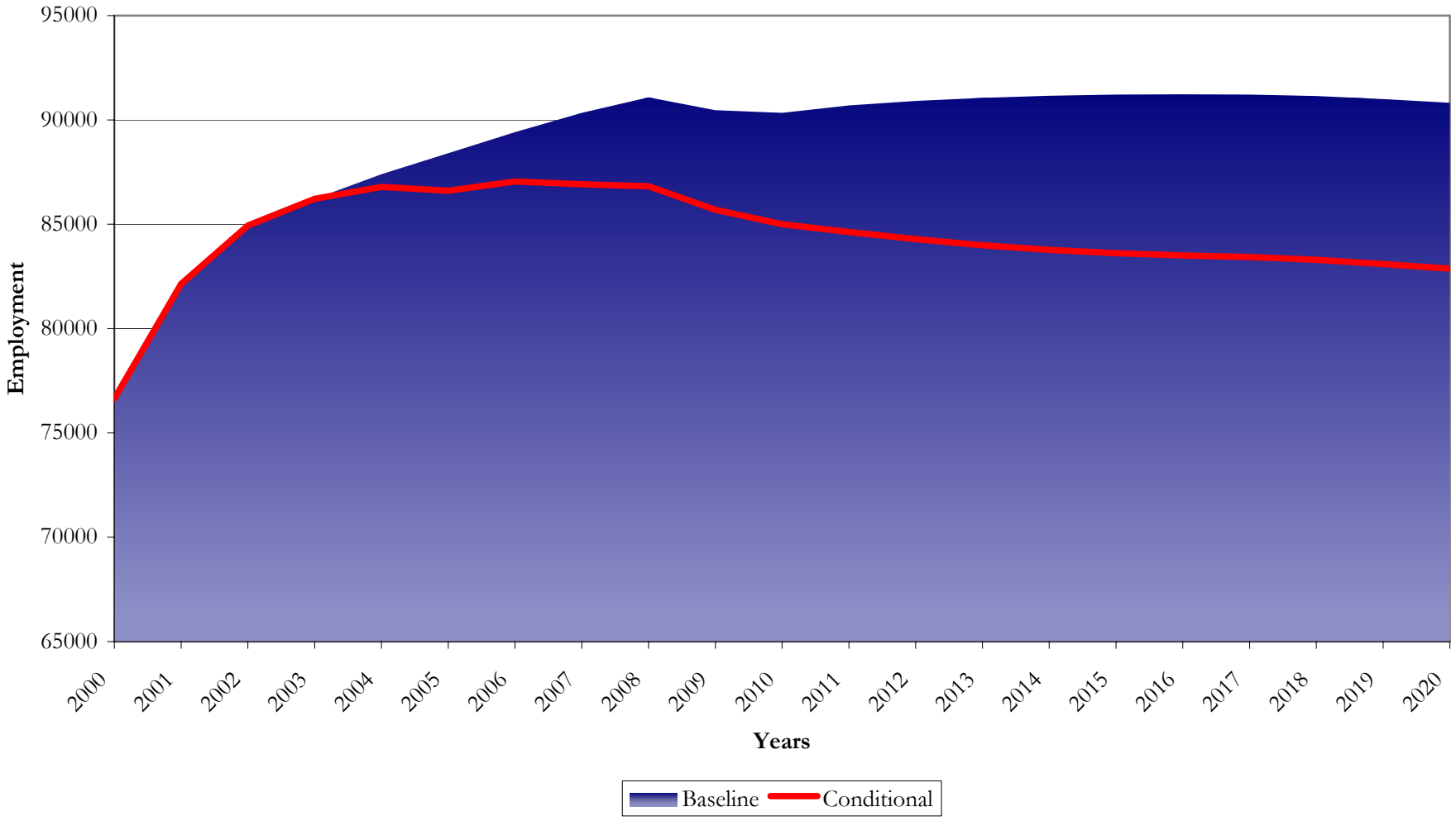
Appendix 5.6-F
Conditional Impact Assessment Model
Employment (Construction) - 65% Initial Impact, Moderate Recovery



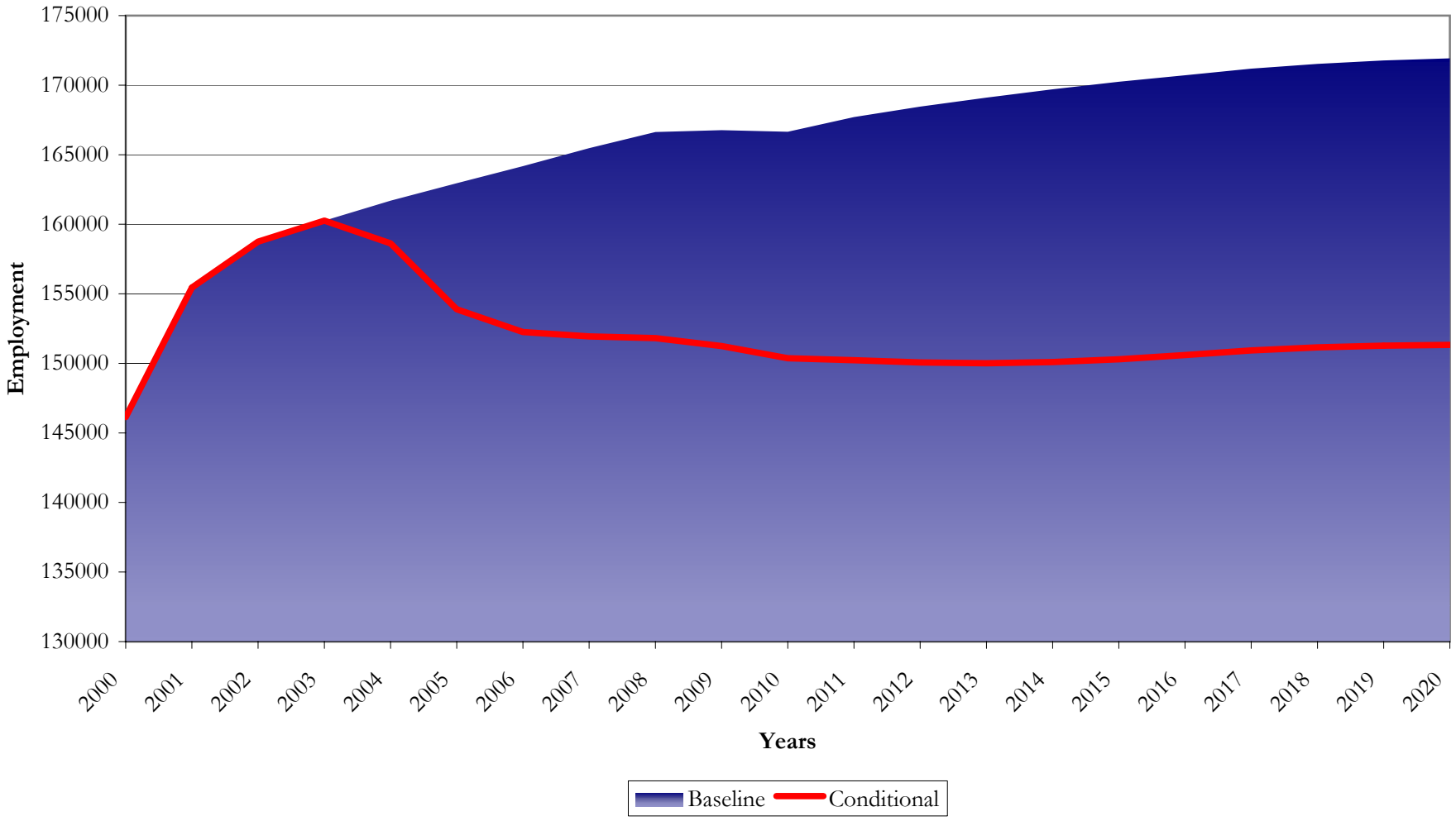
Appendix 5.6-G
Conditional Impact Assessment Model
Employment (T.C.P.U.) - 65% Initial Impact, Moderate Recovery



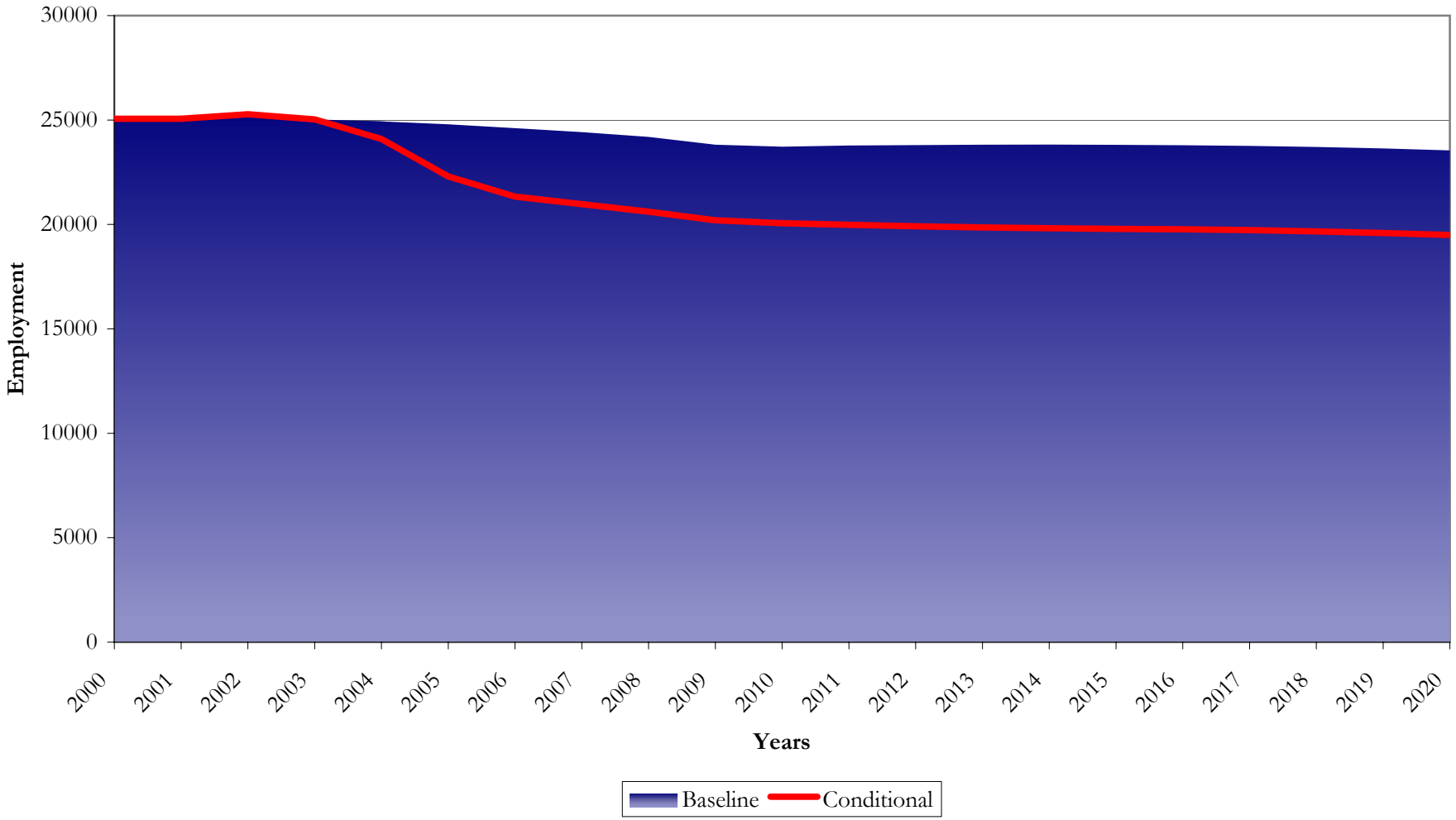
Appendix 5.6-H
Conditional Impact Assessment Model
Employment (F.I.R.E.) - 65% Initial Impact, Moderate Recovery



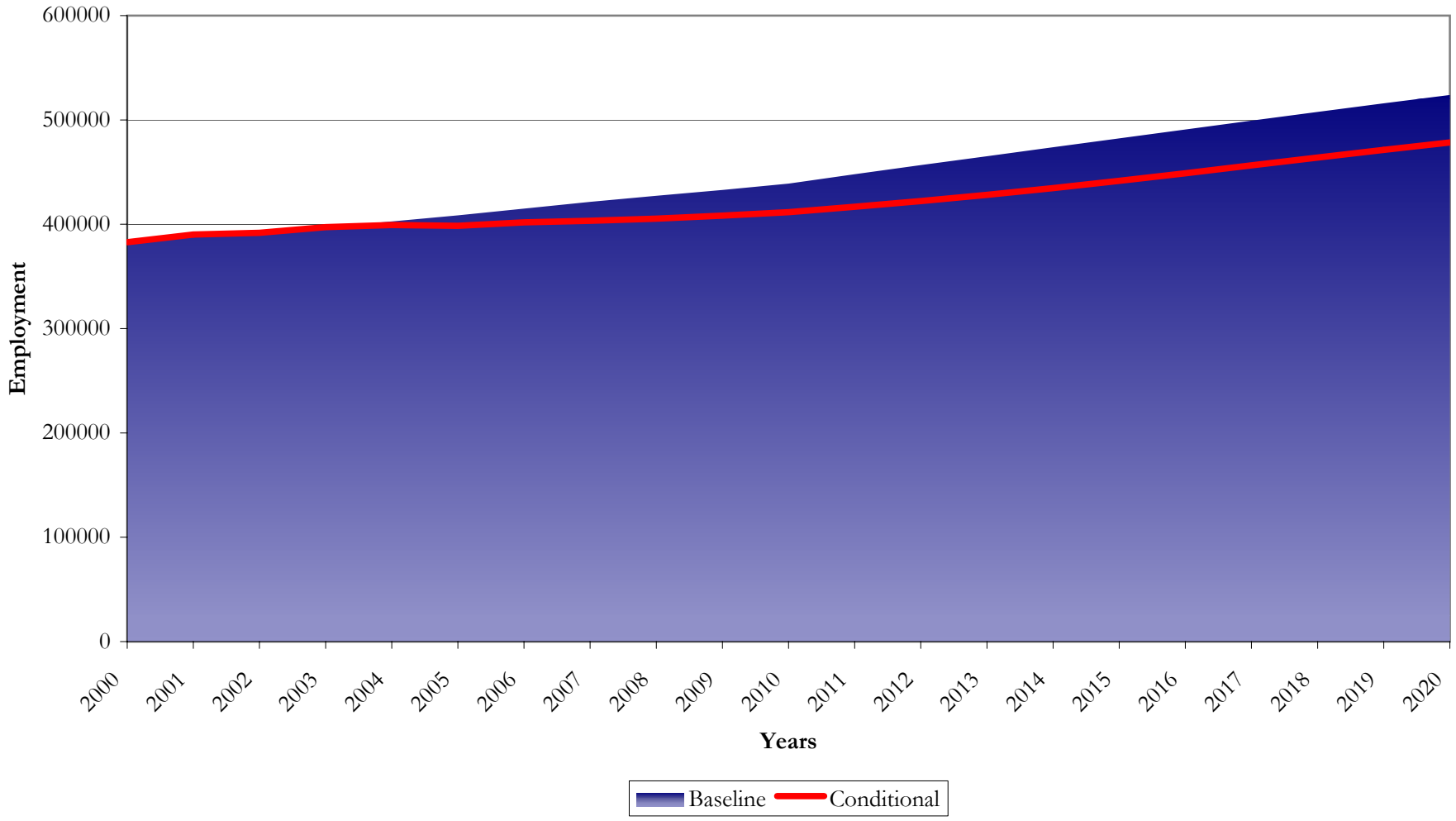
Appendix 5.6-I
Conditional Impact Assessment Model
Employment (Retail Trade) - 65% Initial Impact, Moderate Recovery



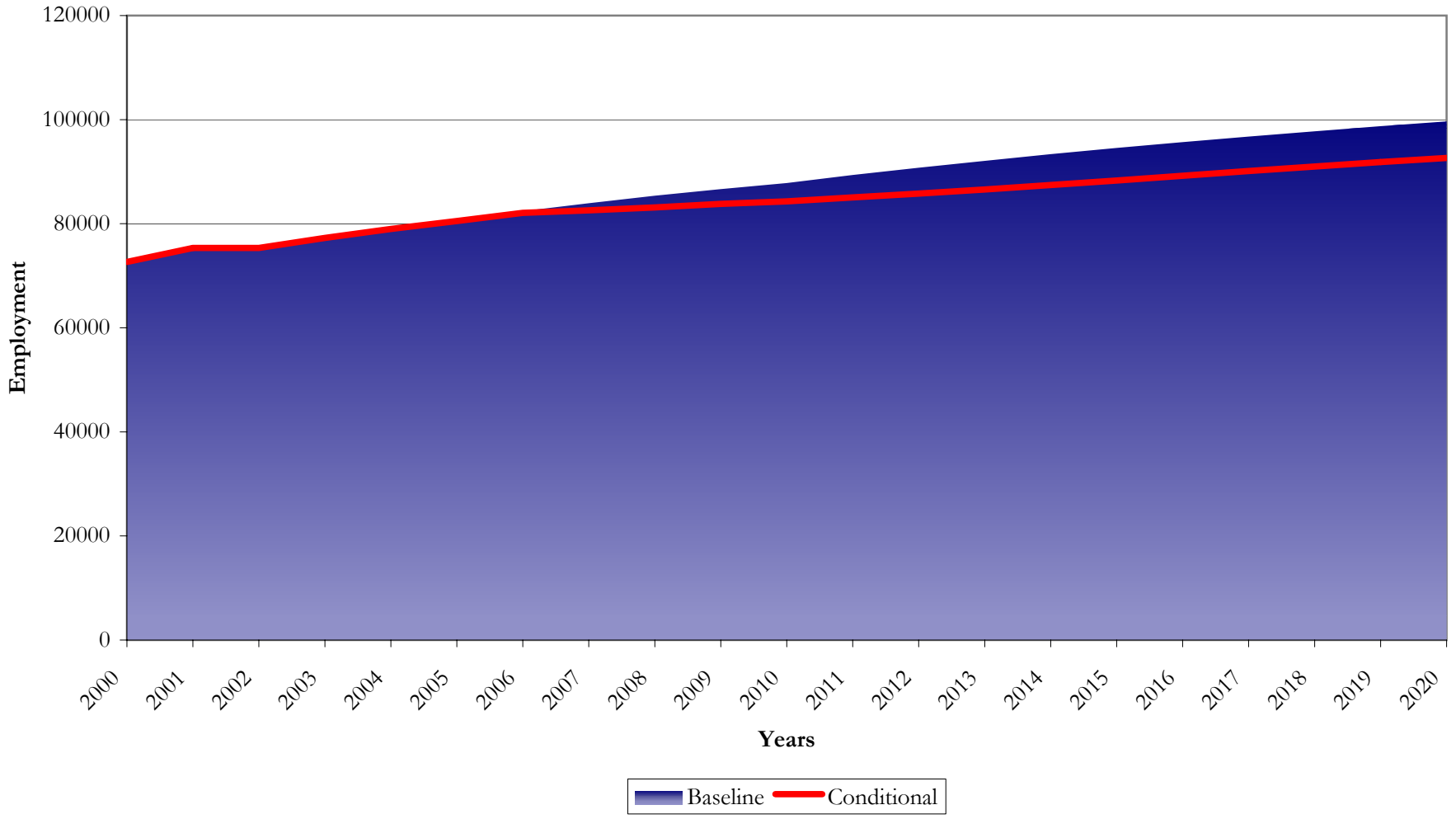
Appendix 5.6-J
Conditional Impact Assessment Model
Employment (Wholesale Trade) - 65% Initial Impact, Moderate Recovery



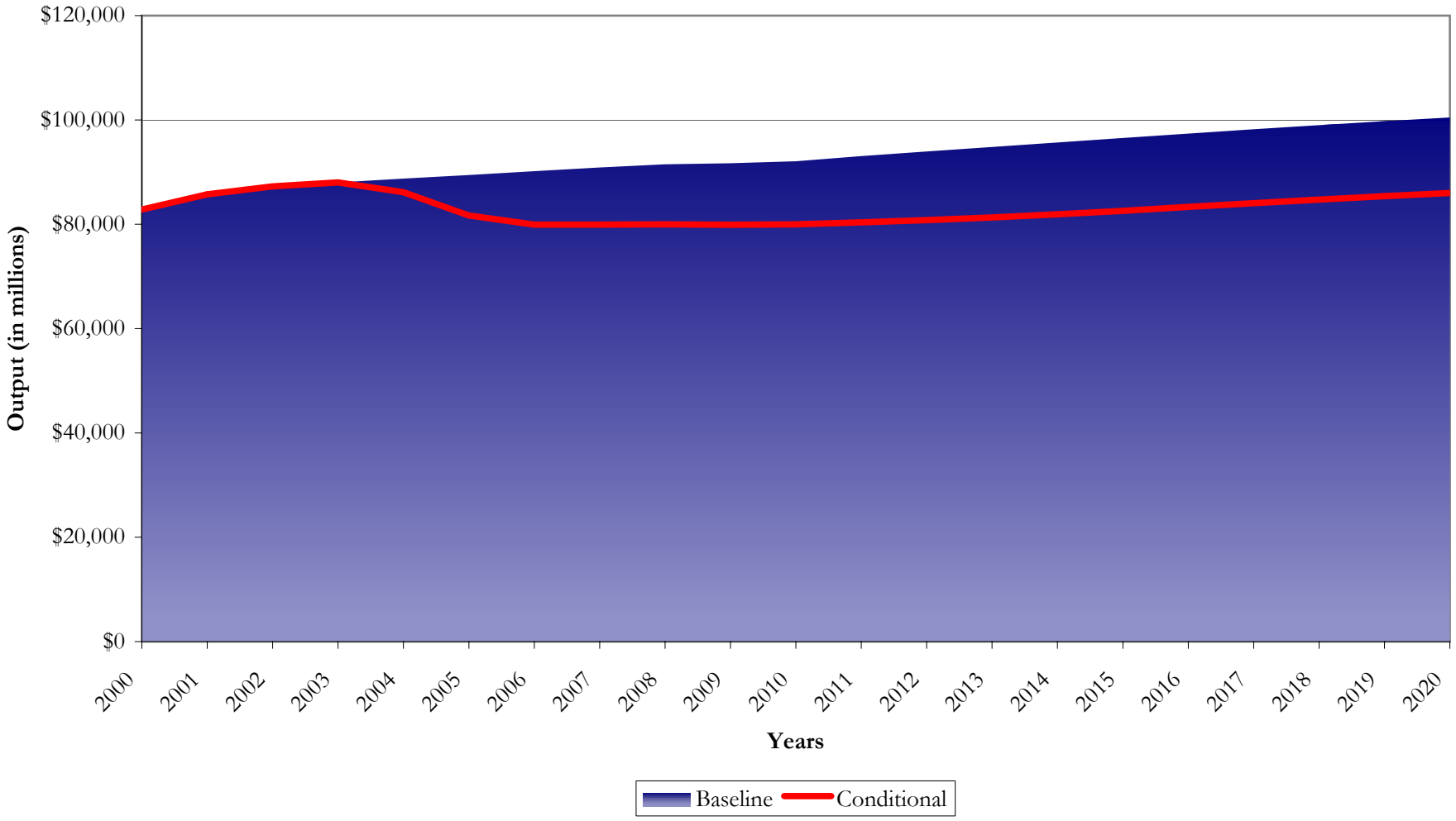
Appendix 5.6-K
Conditional Impact Assessment Model
Employment (Services) - 65% Initial Impact, Moderate Recovery



Appendix 5.6-L
Conditional Impact Assessment Model
Employment (Government) - 65% Initial Impact, Moderate Recovery

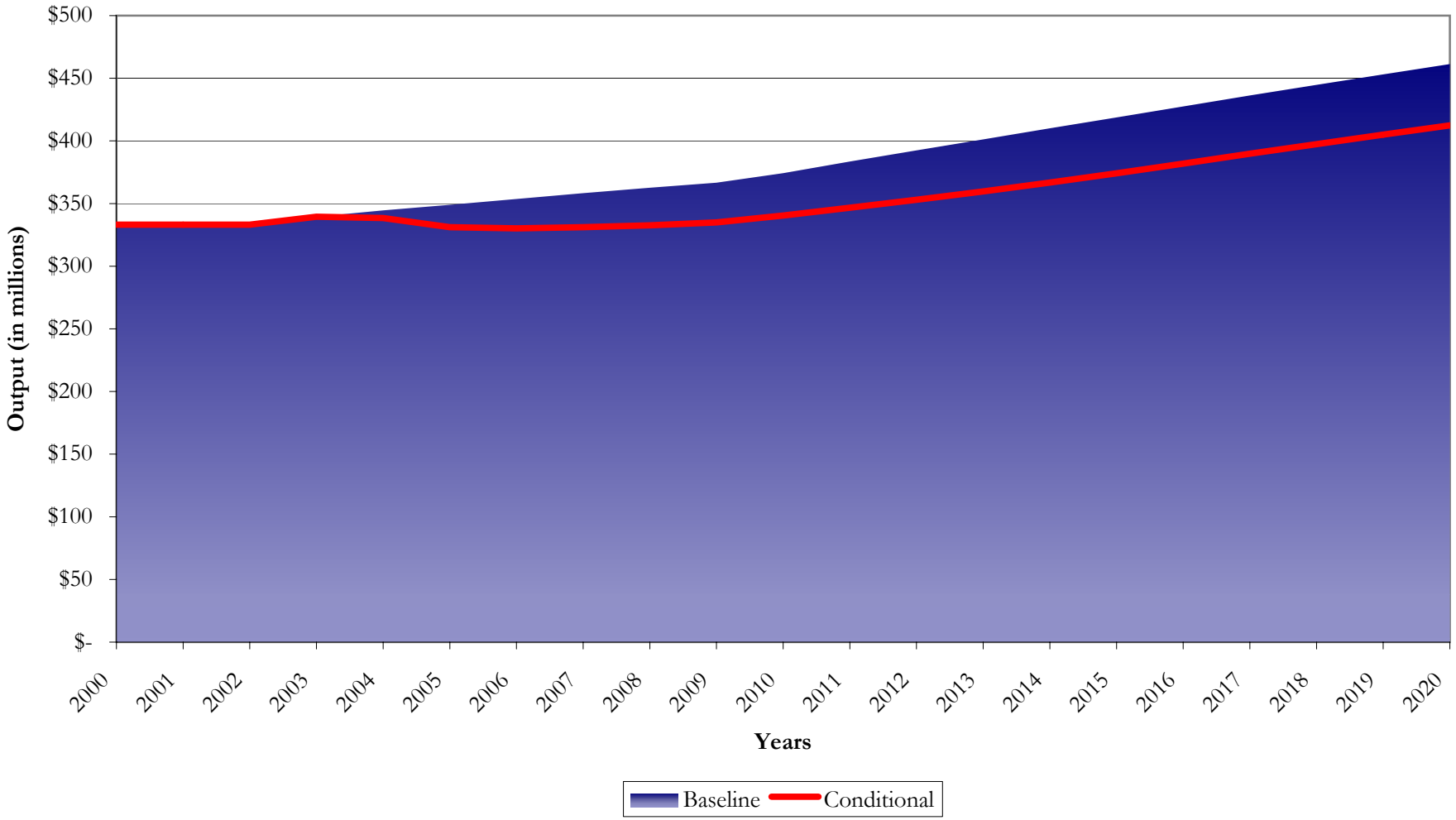


Appendix 5.6-M
Conditional Impact Assessment Model
Output - 65% Initial Impact, Moderate Recovery



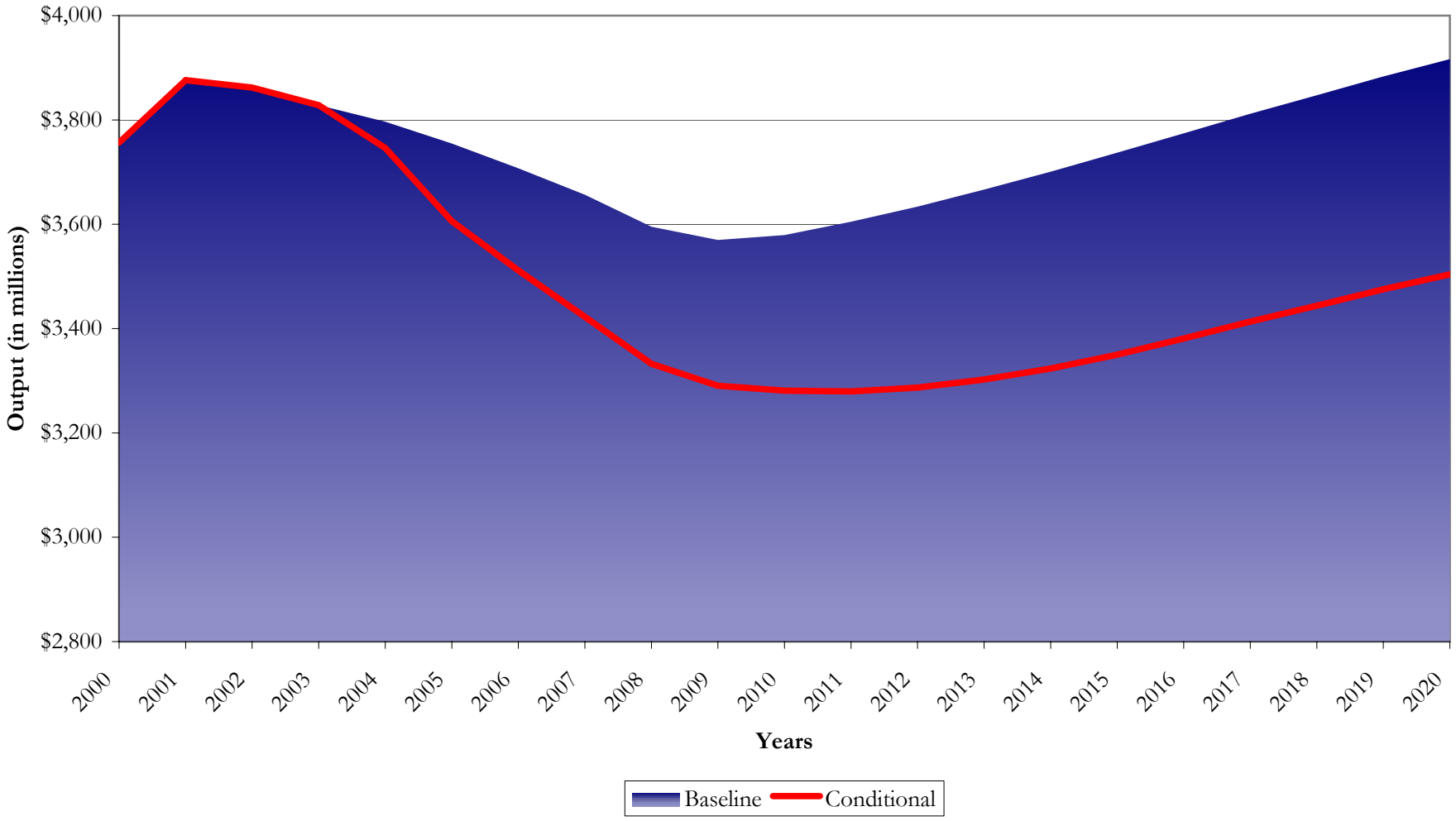
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-N
Conditional Impact Assessment Model
Output (Agriculture, Fishing and Forestry) - 65% Initial Impact, Moderate Recovery



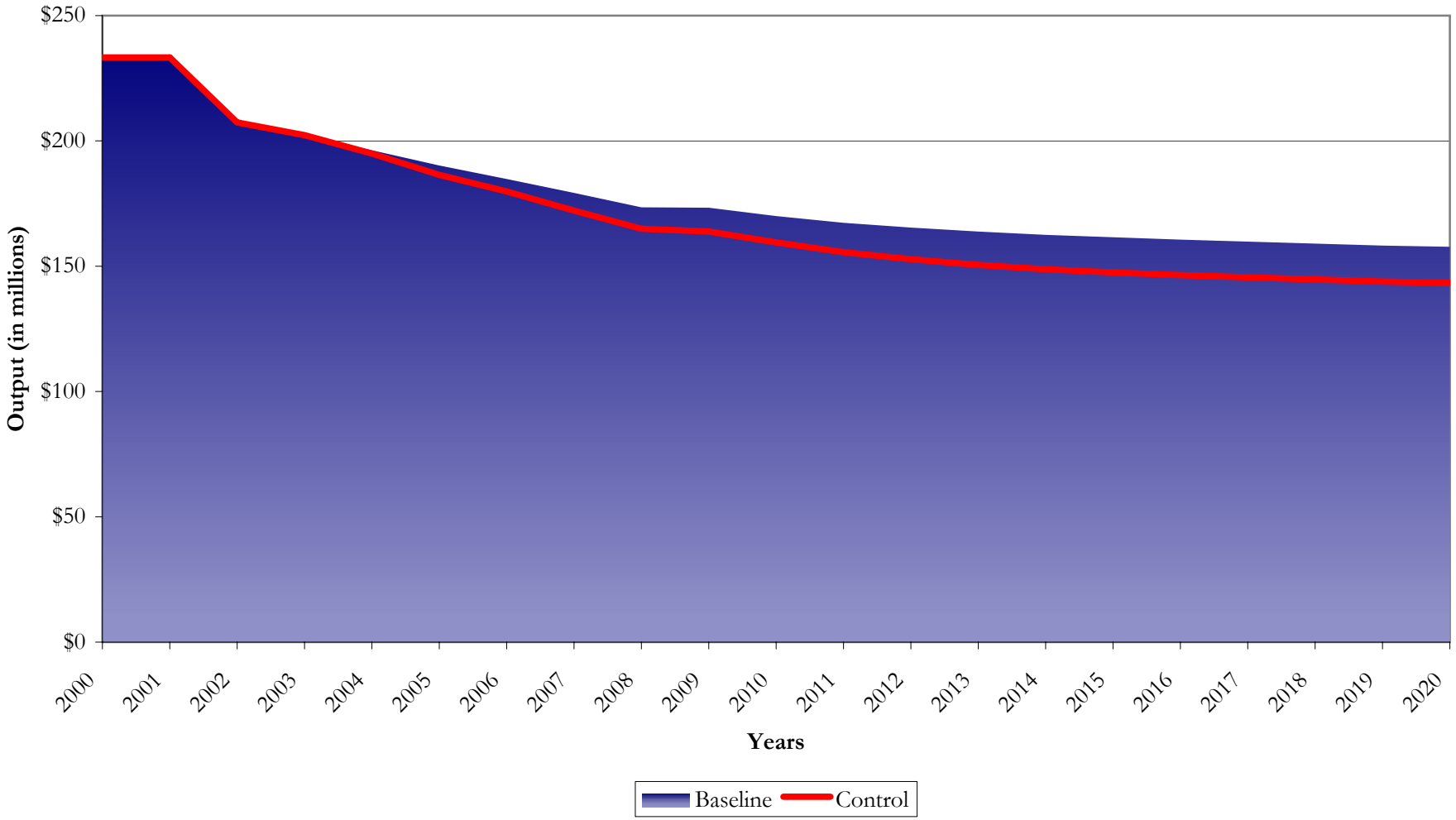
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-O
Conditional Impact Assessment Model
Output (Manufacturing) - 65% Initial Impact, Moderate Recovery



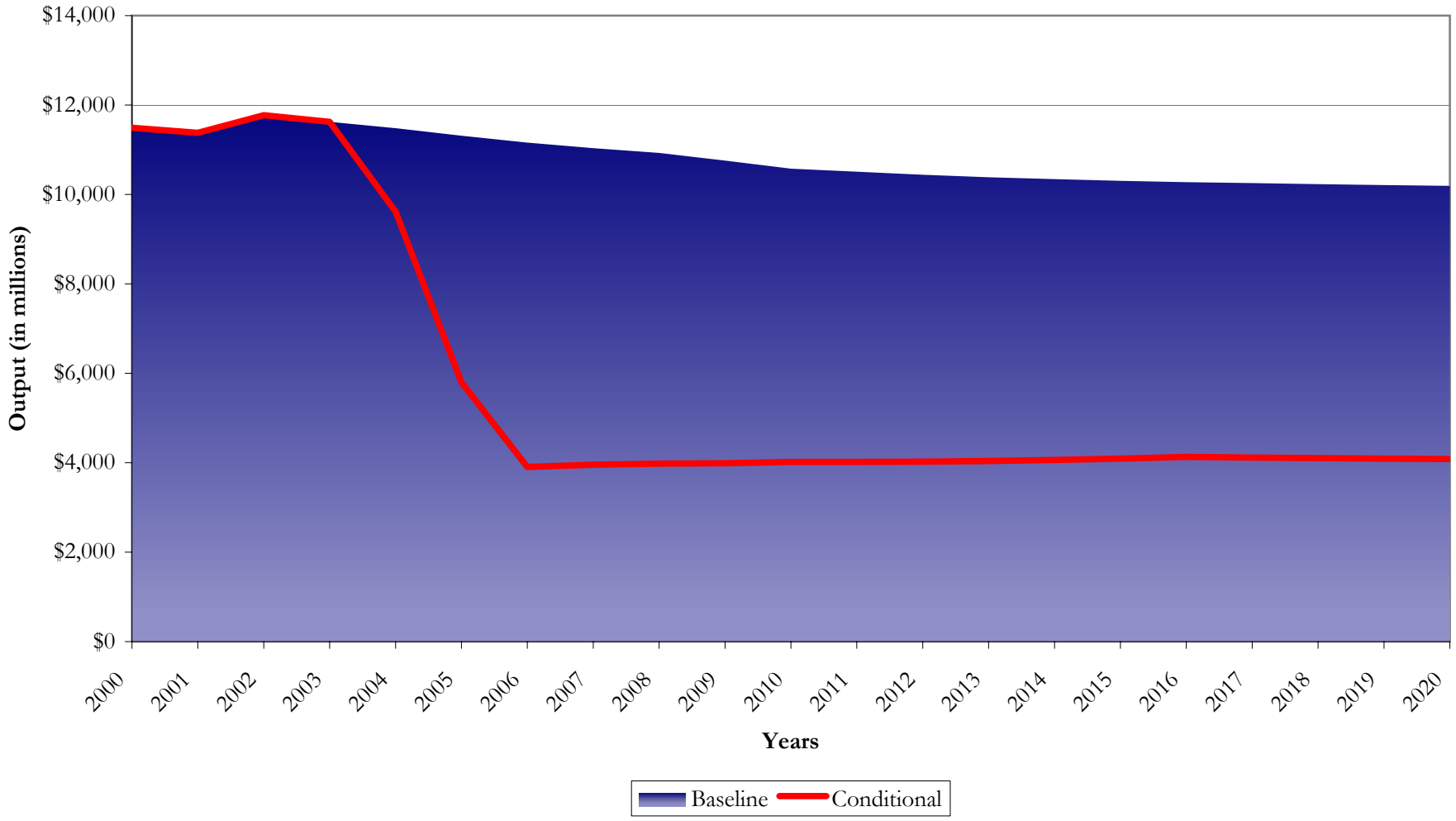
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-P
Conditional Impact Assessment Model
Output (Mining) - 65% Initial Impact, Moderate Recovery



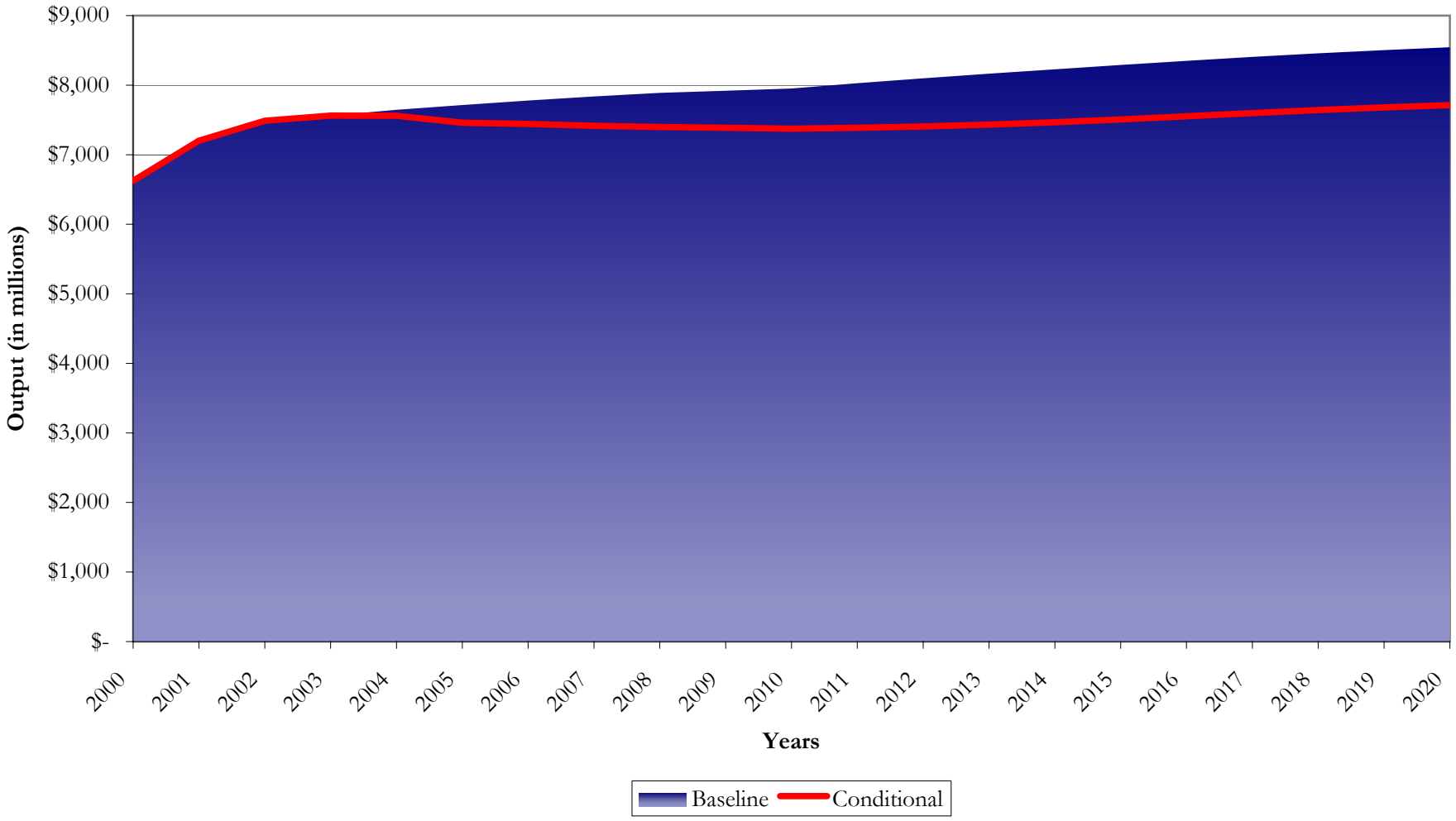
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-Q
Conditional Impact Assessment Model
Output (Construction) - 65% Initial Impact, Moderate Recovery



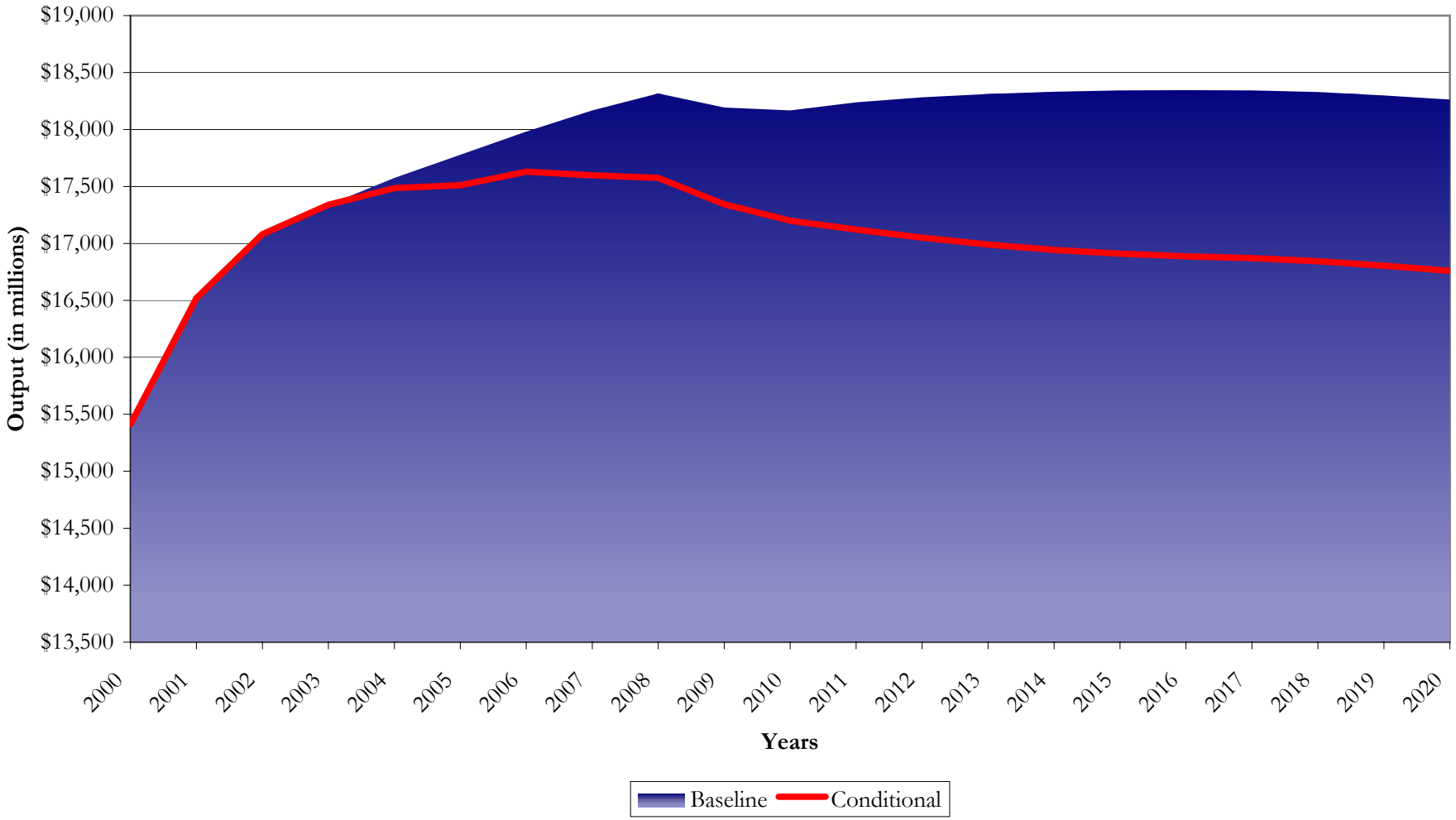
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-R
Conditional Impact Assessment Model
Output (T.C.P.U.) - 65% Initial Impact, Moderate Recovery



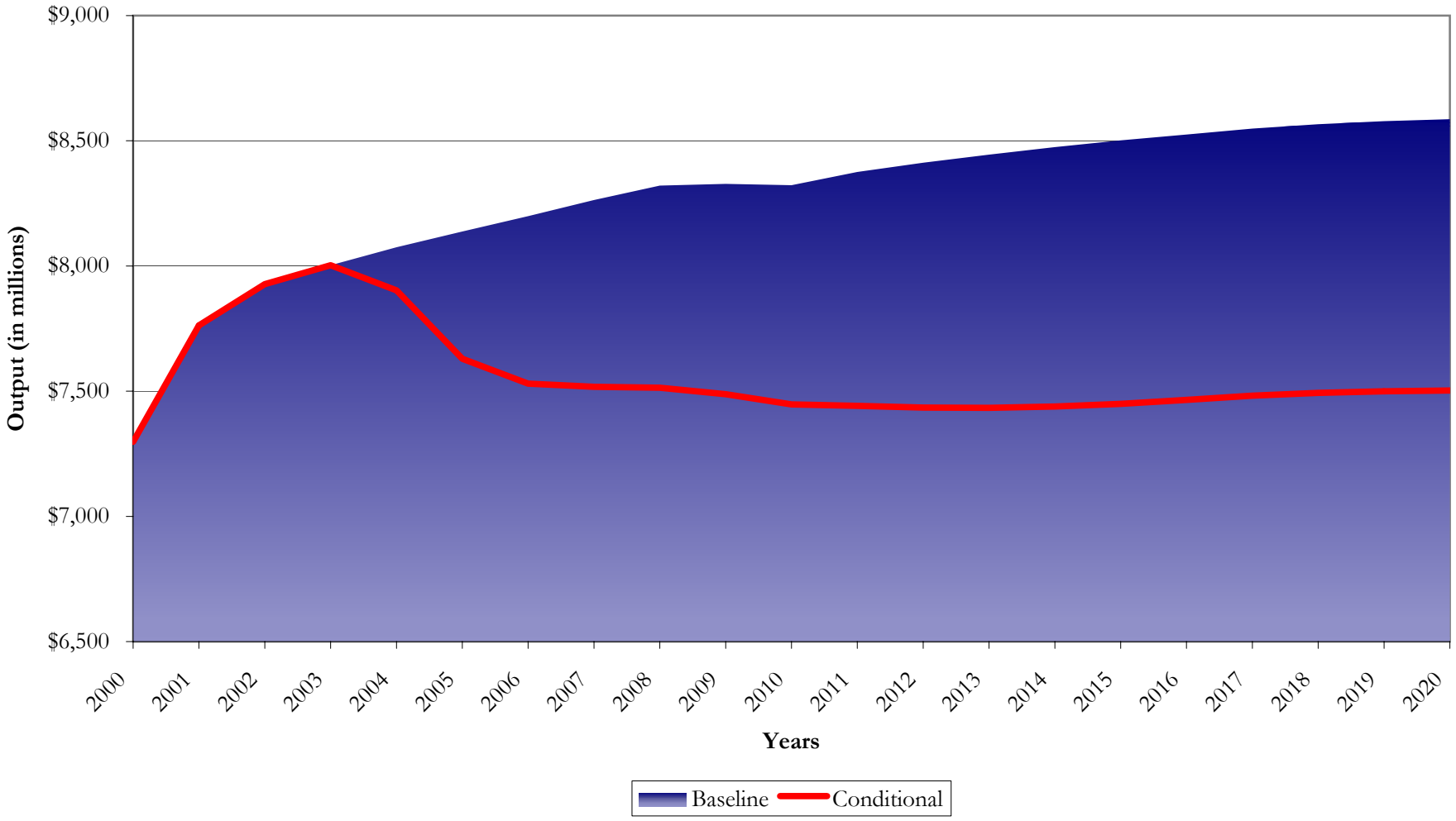
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-S
Conditional Impact Assessment Model
Output (F.I.R.E.) - 65% Initial Impact, Moderate Recovery



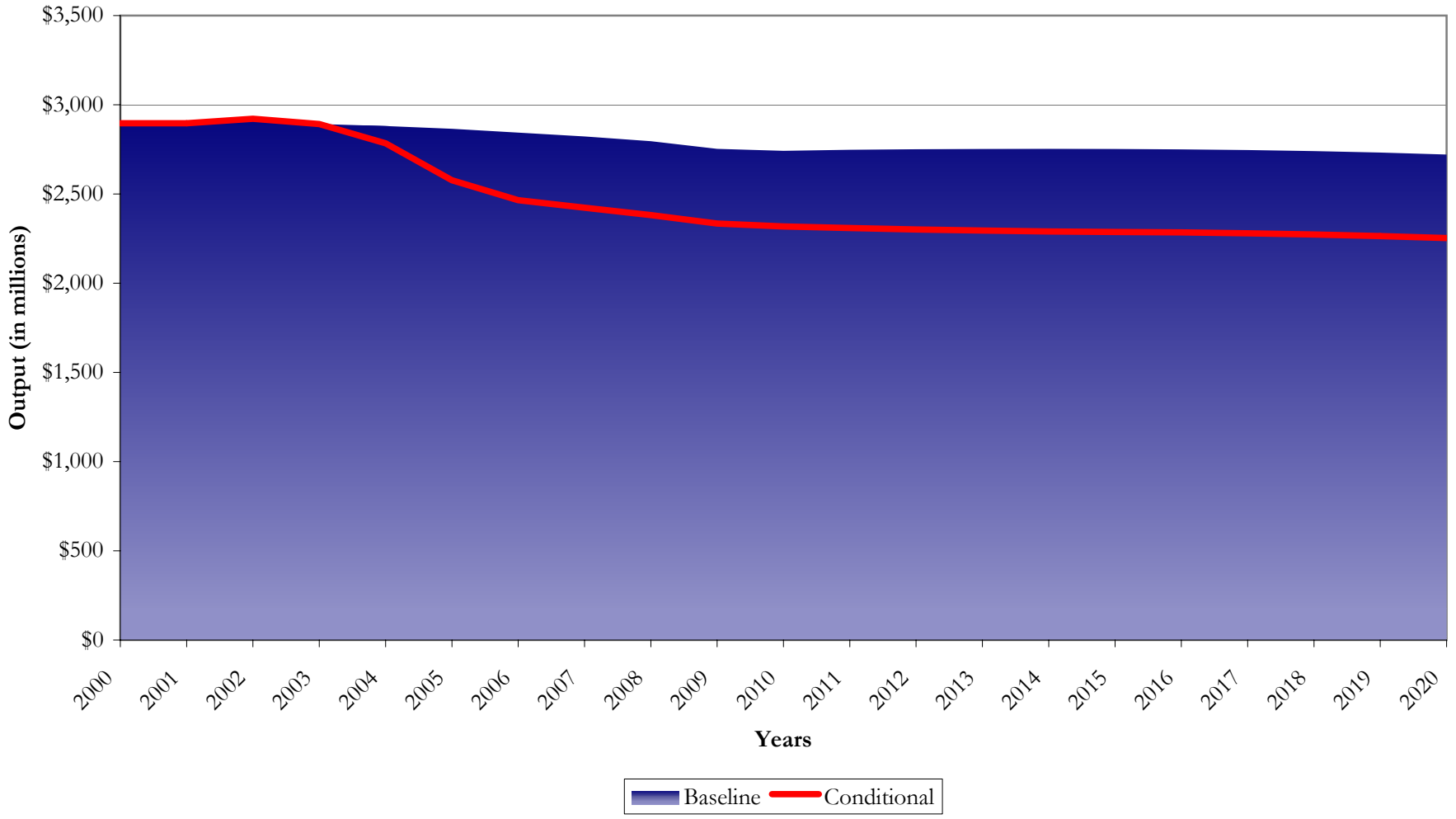
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-T
Conditional Impact Assessment Model
Output (Retail Trade) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-U
Conditional Impact Assessment Model
Output (Wholesale Trade) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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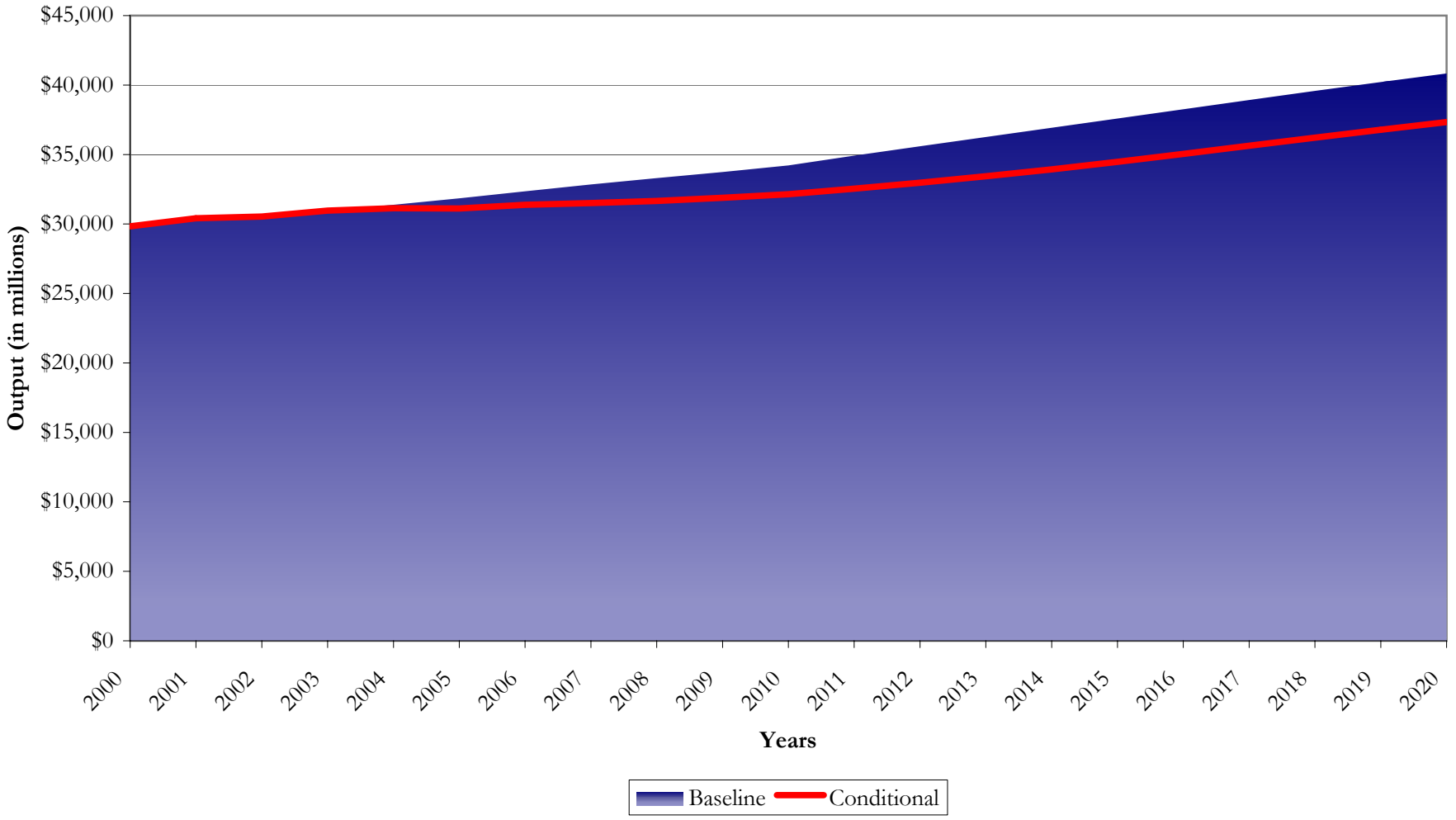
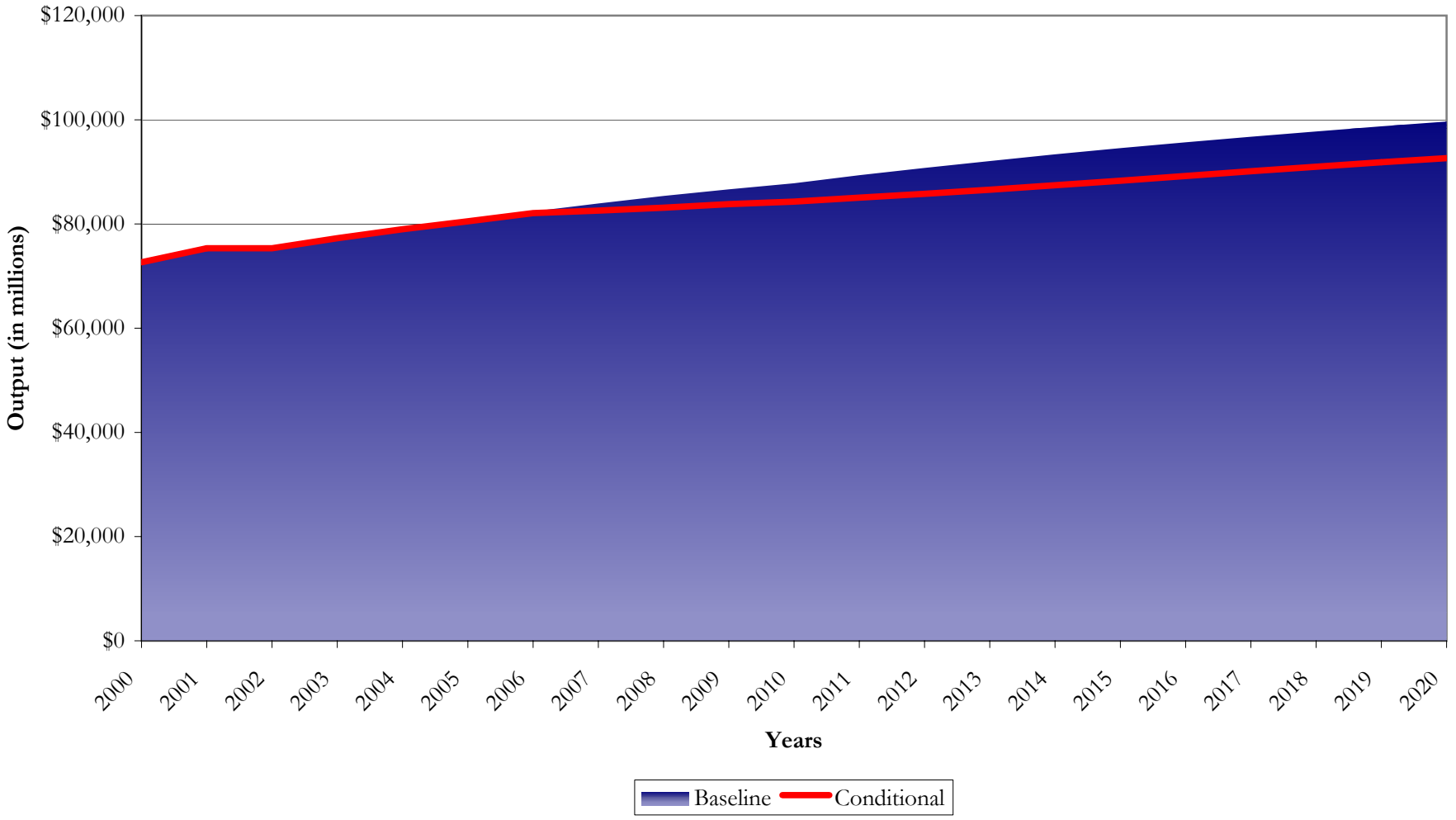
Appendix 5.6-V
Conditional Impact Assessment Model
Output (Services) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-W
Conditional Impact Assessment Model
Output (Government) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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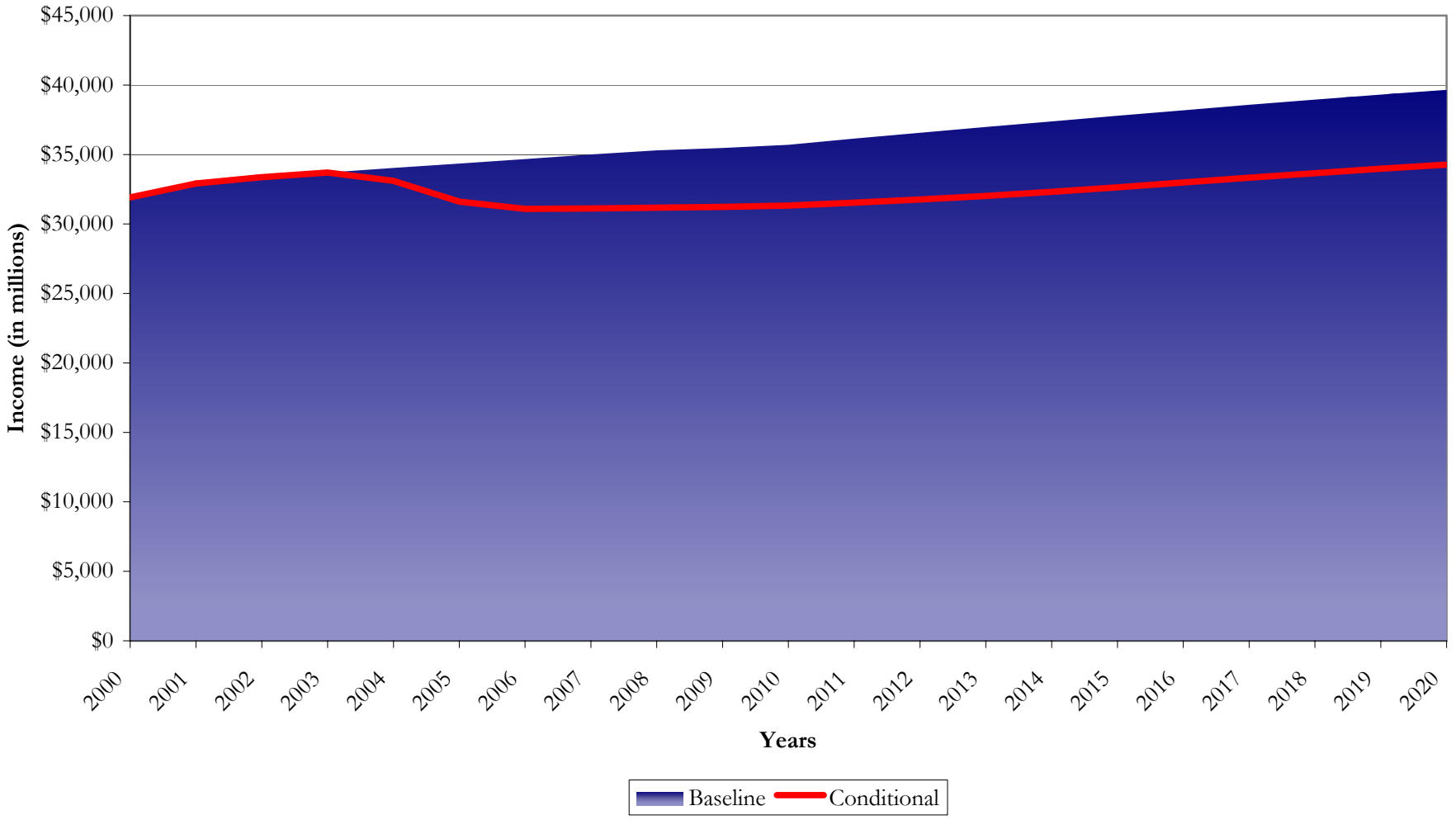
Appendix 5.6-X
Conditional Impact Assessment Model
Labor Income - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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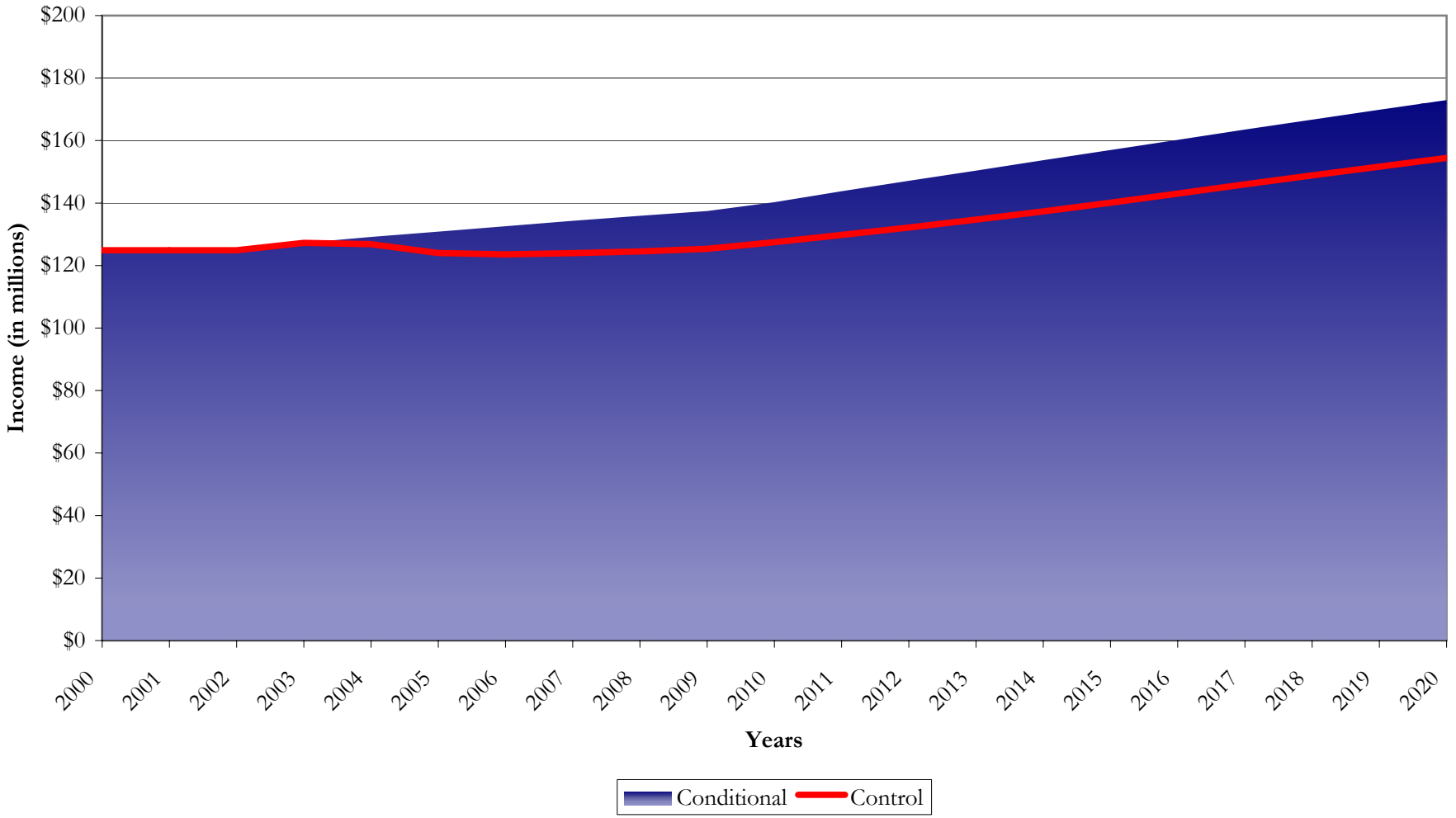
Appendix 5.6-Y
Conditional Impact Assessment Model
Labor Income (Agriculture, Fishing and Forestry) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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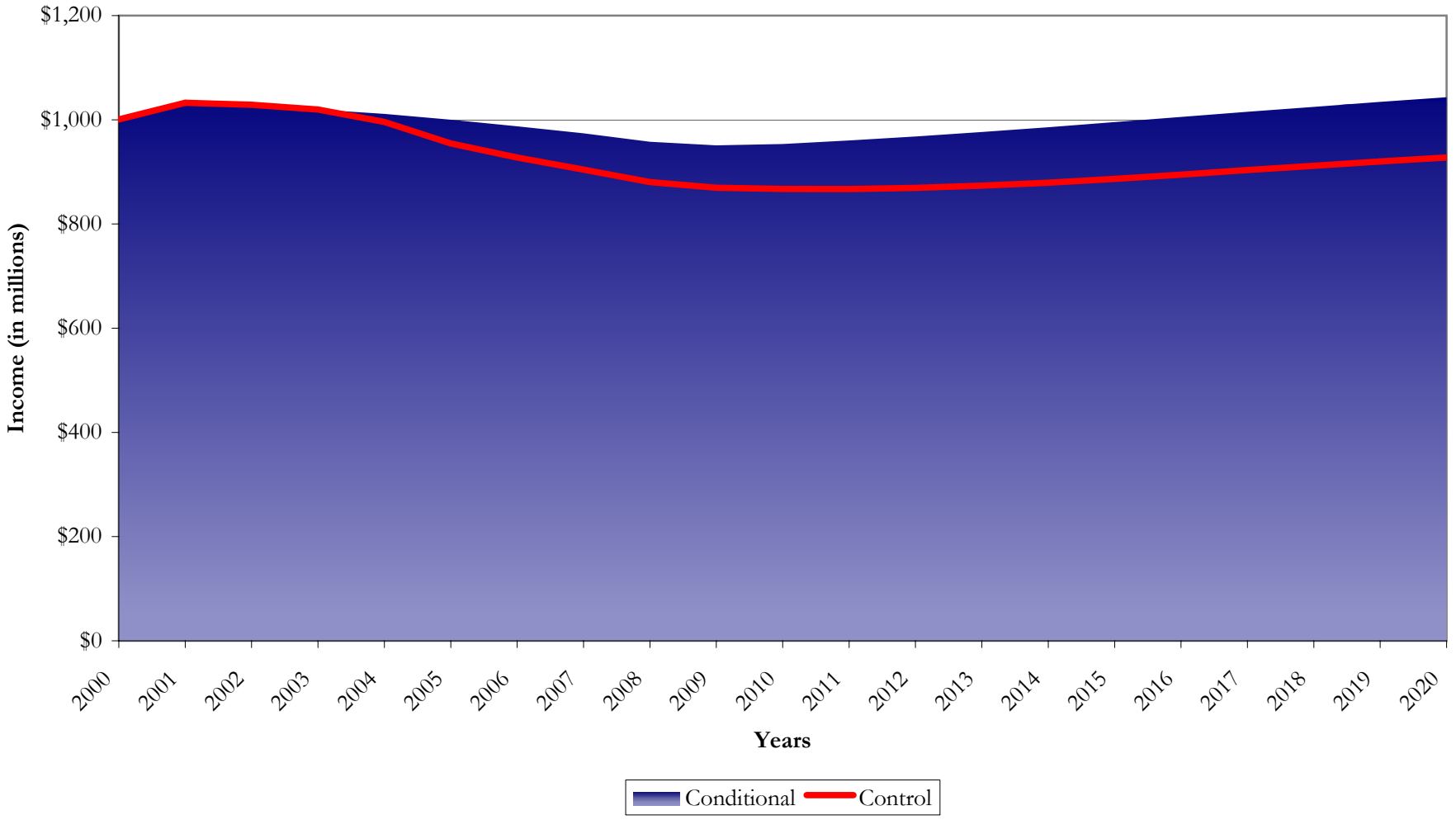
Appendix 5.6-Z
Conditional Impact Assessment Model
Labor Income (Manufacturing) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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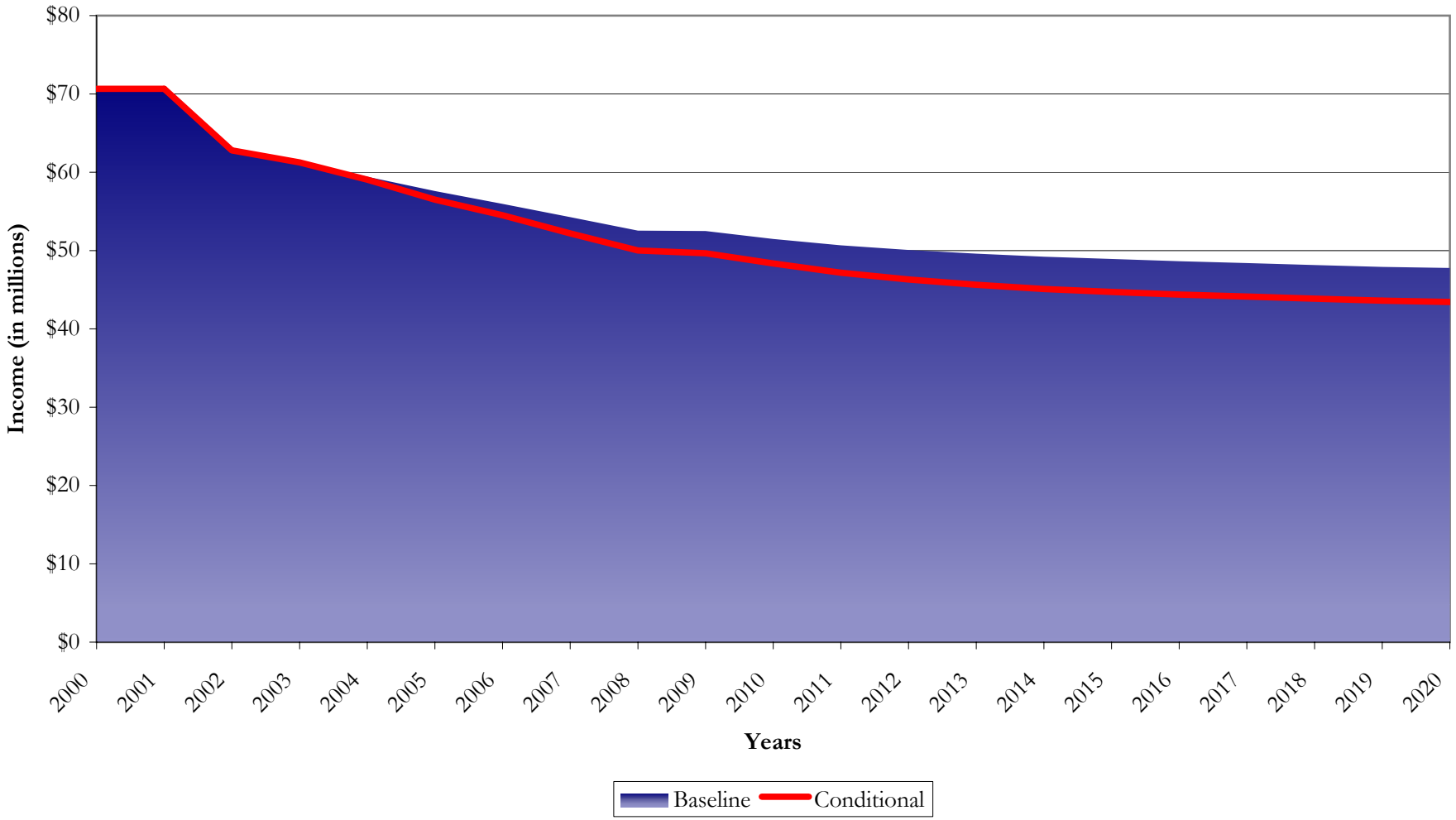
Appendix 5.6-AA
Conditional Impact Assessment Model
Labor Income (Mining) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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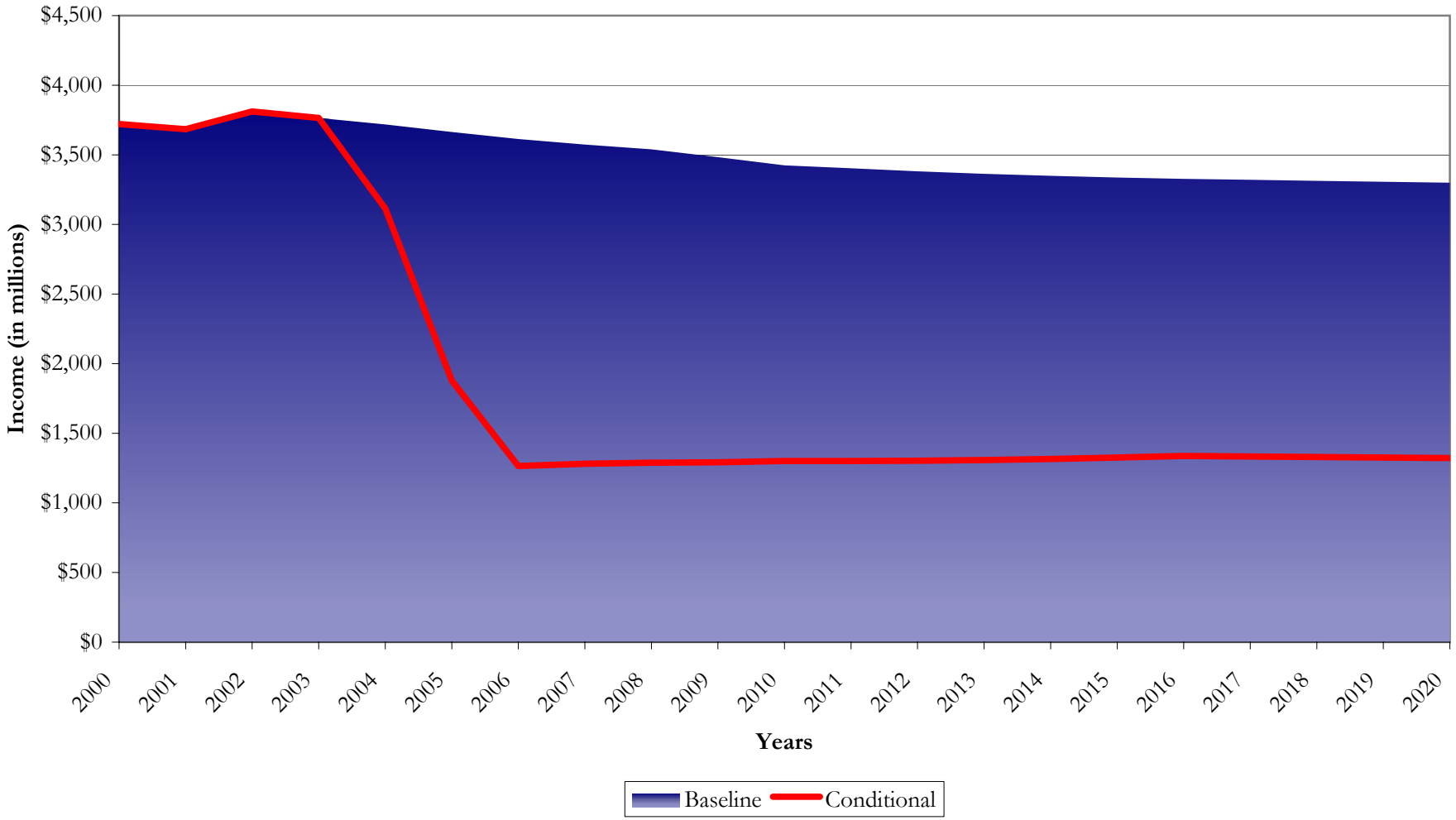
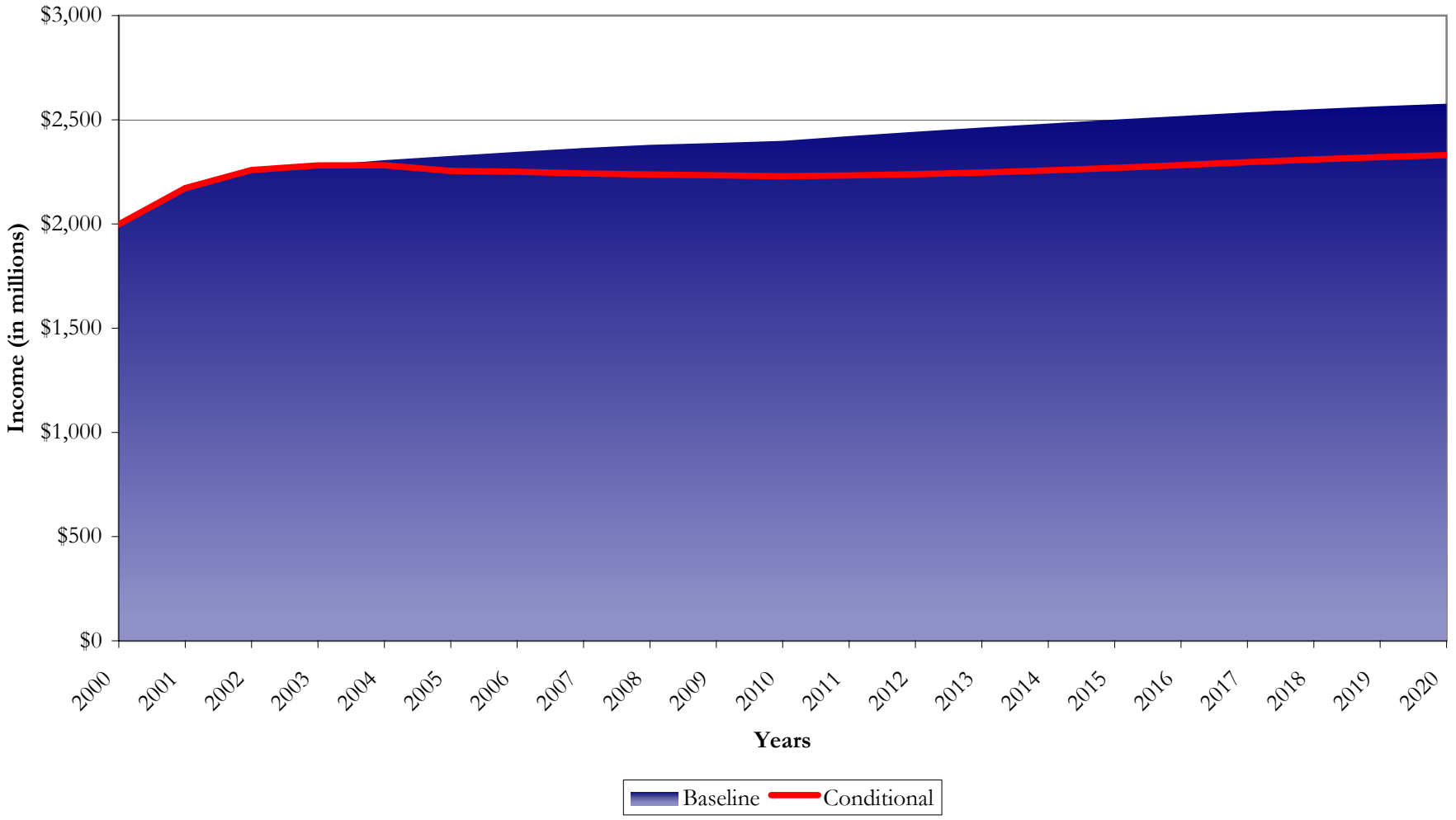
Appendix 5.6-AB
Conditional Impact Assessment Model
Labor Income (Construction) - 65% Initial Impact, Moderate Recovery



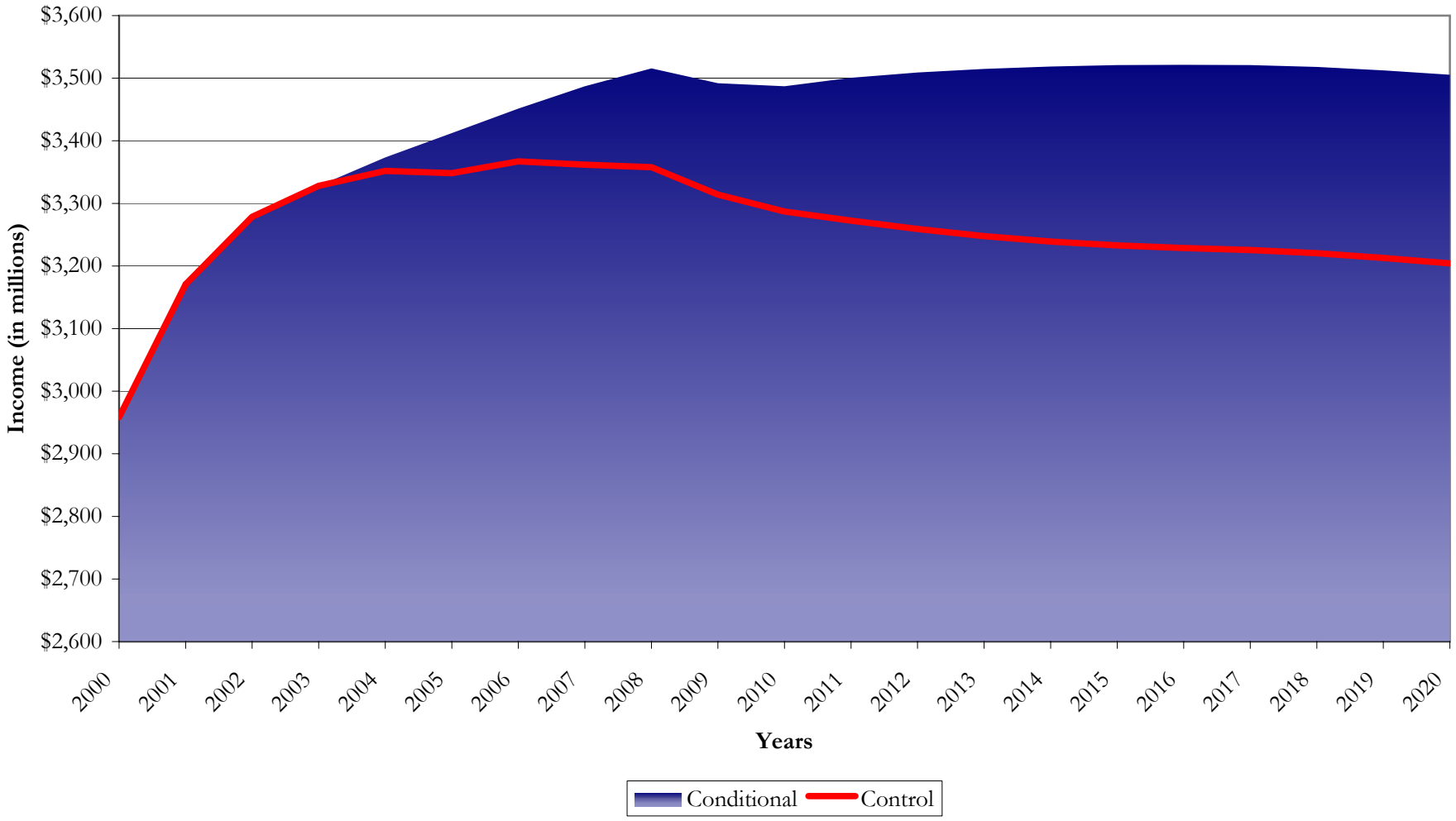
Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-AC
Conditional Impact Assessment Model
Labor Income (T.C.P.U.) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates

Appendix 5.6-AD
Conditional Impact Assessment Model
Labor Income (F.I.R.E.) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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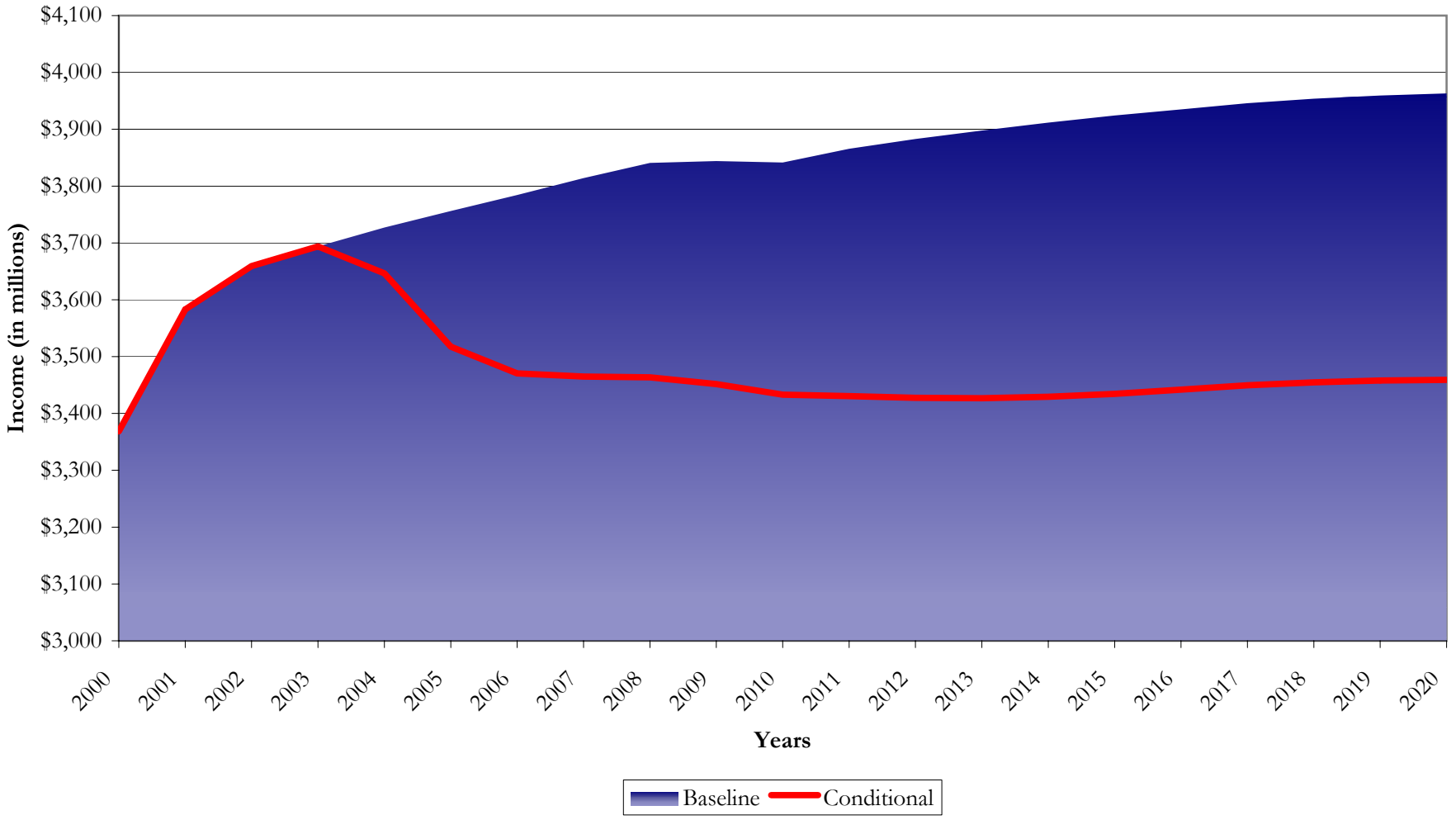
Appendix 5.6-AE
Conditional Impact Assessment Model
Labor Income (Retail Trade) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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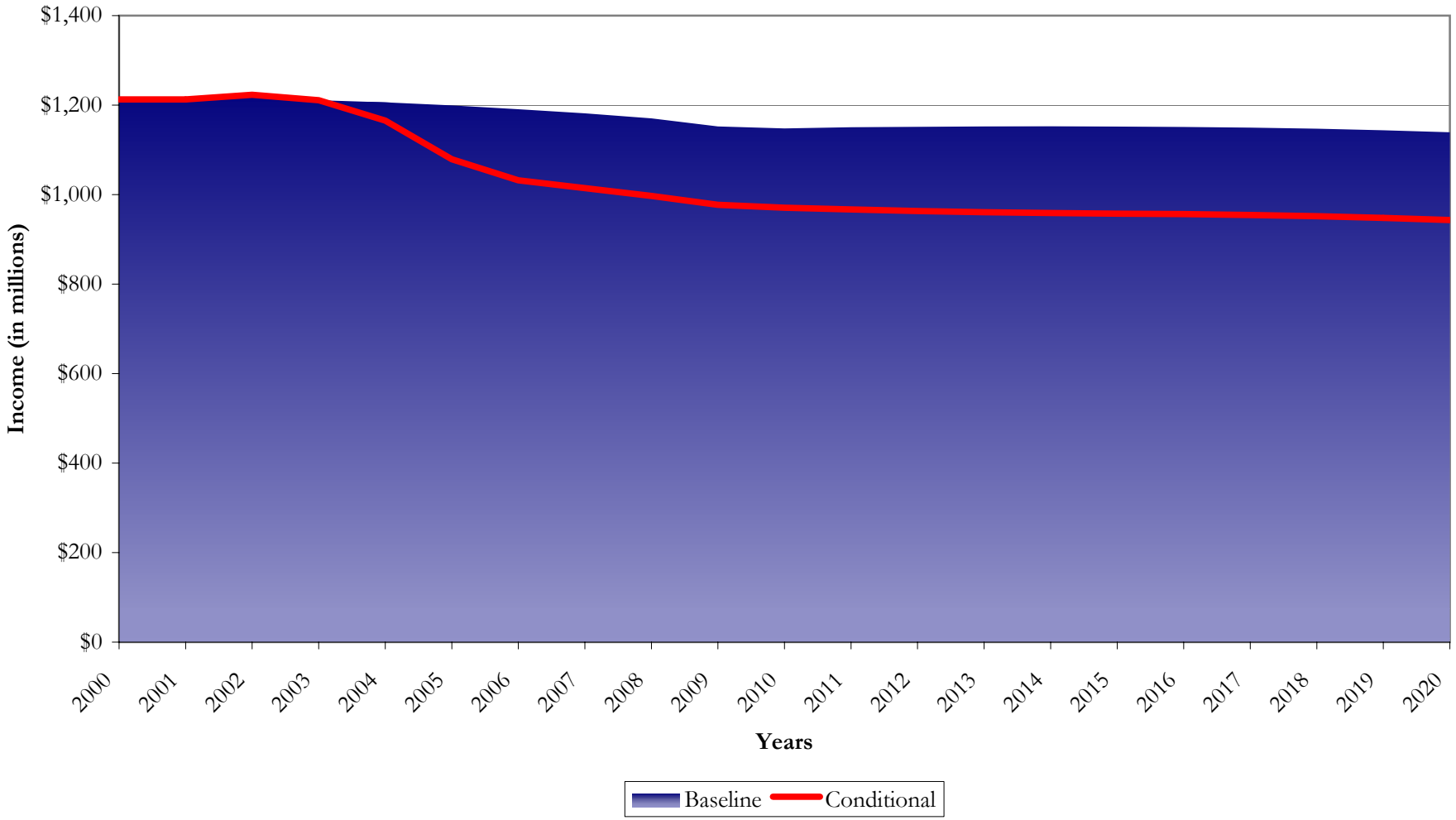
Appendix 5.6-AF
Conditional Impact Assessment Model
Labor Income (Wholesale Trade) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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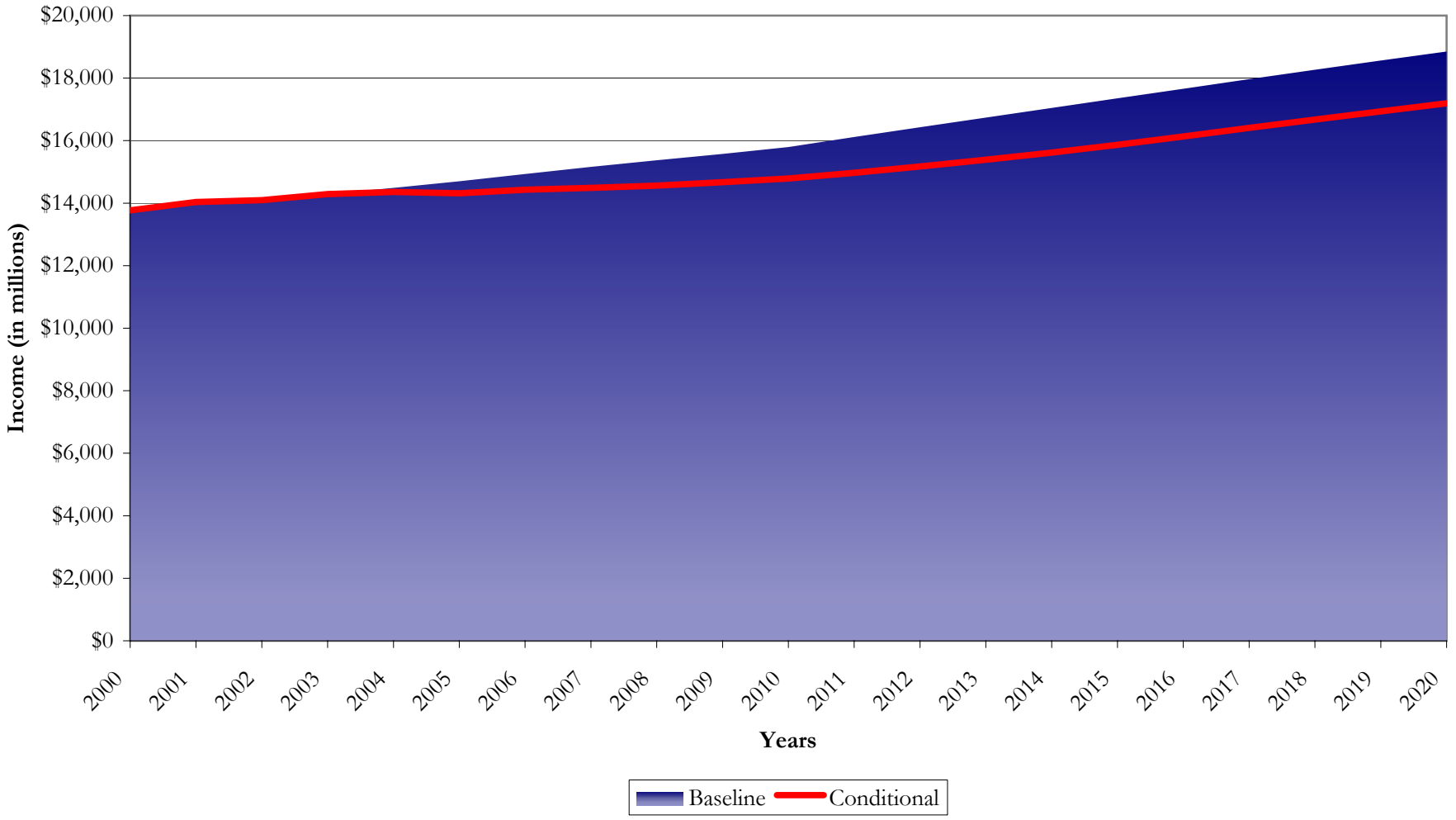
Appendix 5.6-AG
Conditional Impact Assessment Model
Labor Income (Services) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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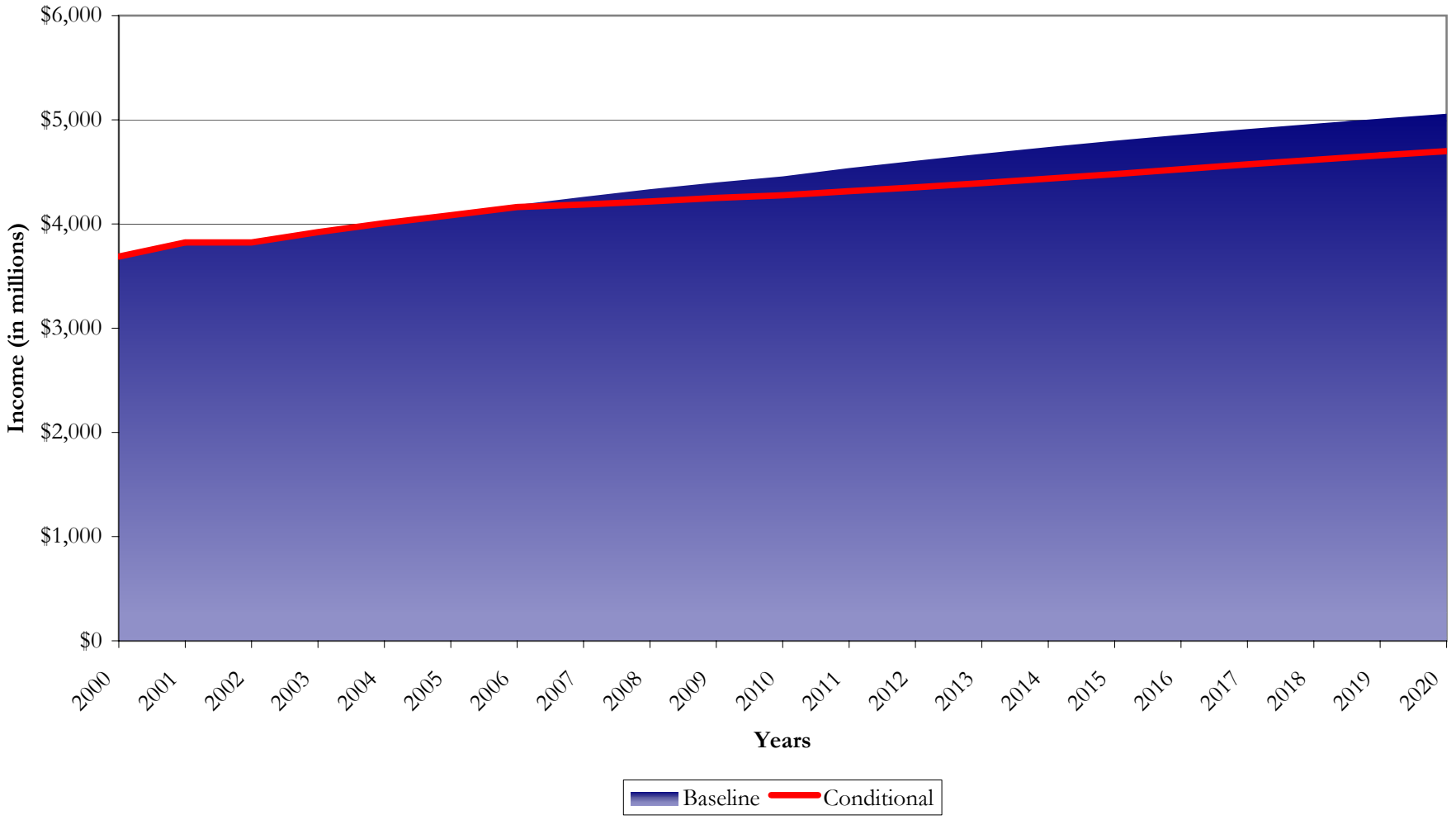
Appendix 5.6-AH
Conditional Impact Assessment Model
Labor Income (Government) - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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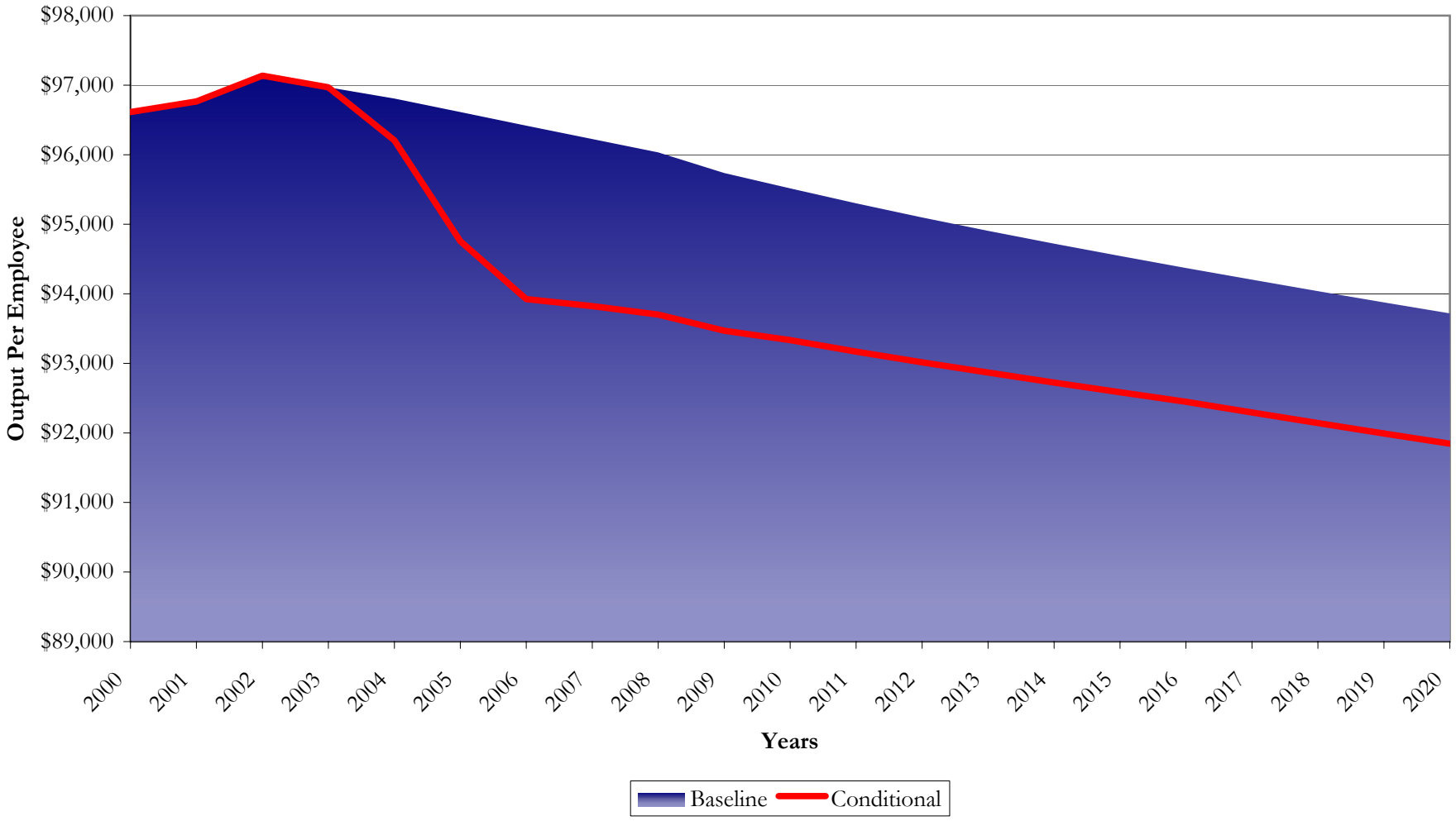
Appendix 5.6-AI
Conditional Impact Assessment Model
Output Per Employee - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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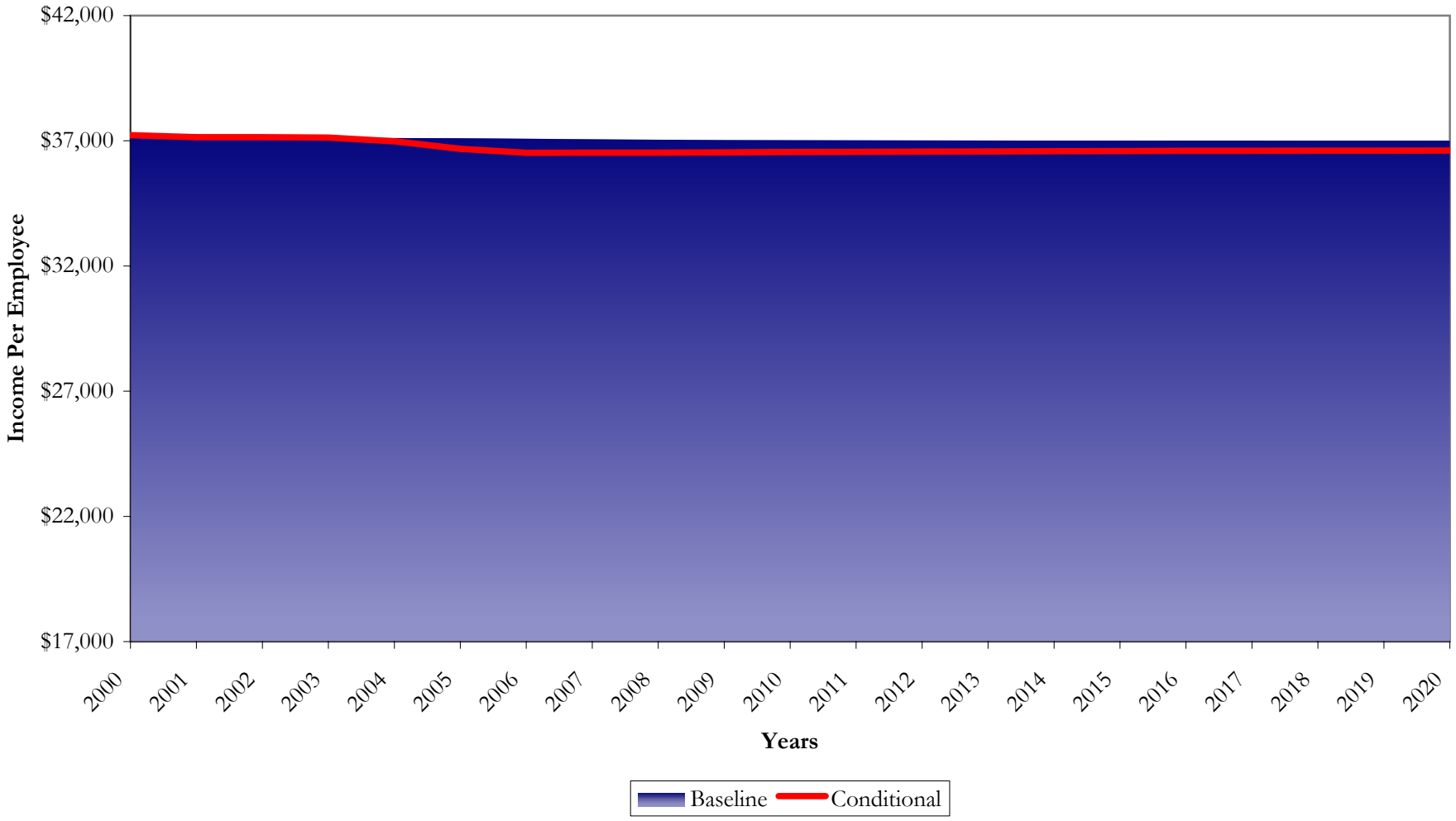
Appendix 5.6-AJ
Conditional Impact Assessment Model
Labor Income Per Employee - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
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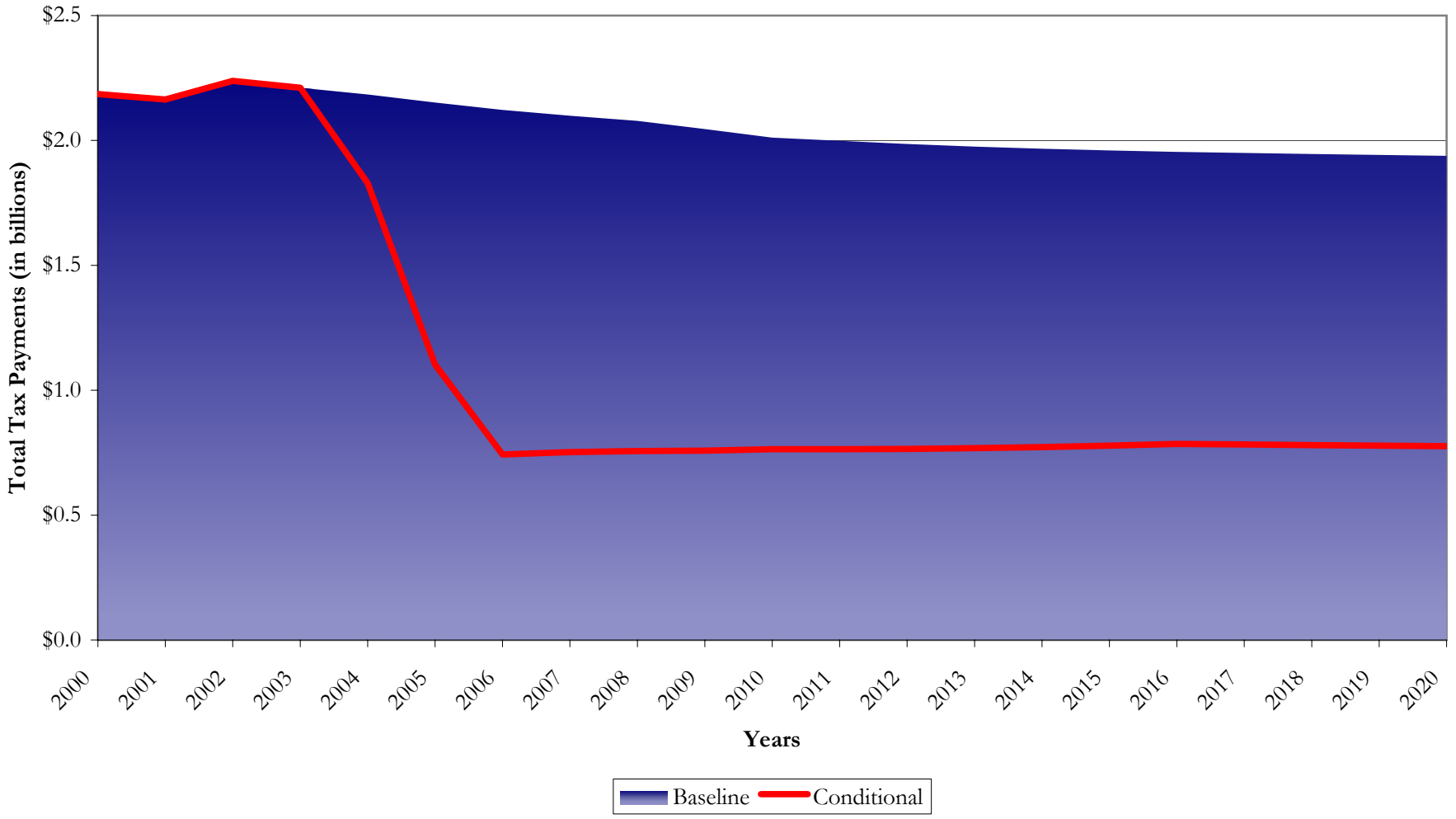
Appendix 5.6-AI
Conditional Impact Assessment Model
Total Construction-related Tax Payments - 65% Initial Impact, Moderate Recovery



Figures expressed in constant 2000 dollars
Hobbs, Ong & Associates