Reno 2020

What might the Reno area
look like ten years from now?

Center For Regional Studies
College of Business
University of Nevada, Reno

University of Nevada, Reno
Center for Economic Development

Bureau of Business & Economic Research
College of Business
University of Nevada, Reno

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Authors:

Dr. Glen Atkinson
Dick Bartholet
Brian Bonnenfant
Betsy Fadali
Jeff Hardcastle
Dr. Tom Harris
Brian Kaiser
Dr. John Packham
Dr. Mike Reed

Purpose

The Center for Regional Studies at UNR was asked by the Reno Gazette Journal to help with the development of scenarios for what northern Nevada might look like ten years hence – in the year 2020.

Methodology: To develop scenarios of how the region may evolve over the next decade, we decided to utilize an "outside in" approach – that is to first identify major underlying forces, including international and national forces, over which we have little or no control.

The next step is to identify state and local forces that are influencing our future. In some cases, decisions made at the state and/or local level may be able to influence some of these forces.

The final step is to bring together business and community leaders to discuss these forces and some of the choices which might cause different outcomes for our region and to flesh out what these futures may hold for our citizens, businesses, institutions and communities.

The UNR team has identified the following key trends, constraints and paradigm shifts occurring at the international, national, regional, state and local levels.

Introduction

As the citizens and the business and community leaders of northern Nevada contemplate what our future may be and how we might influence that future, it makes sense to consider the international, national, regional and state forces that are influencing our trajectory, which frames the decisions we make with certain realities. A number of the trends, constraints and paradigm shifts that comprise these forces are presented in the following document.

When we consider our competitive advantages and disadvantages, we must think internationally as well as nationally. The playing field has expanded, and it isn't a level playing field.

Many of the major corporations operating in Nevada have become global firms, with ownership interests scattered around the world. Investors and investment managers want short-term results. This means that management typically has no allegiance to any particular geographical location (country, state of city). Their allegiance is to bottom-line results, which will lead them to make decisions about how to best increase revenues and reduce costs, especially including labor which is one of their major costs. Note there are some reports that manufacturing is returning because of transportation costs, quality, and oversight. That I, these factors are offsetting lower labor costs on some goods. It is not certain how the drive to lower costs will impact the service sector. It may be useful to point out that Nevada's major market is California.

The current recession has been felt world-wide, but it has been especially deep and protracted in the U.S. compared to all other recessions since the Great Depression of the 1930's. It has been deeper and more protracted in Nevada than in any other state, not just because we had faster growth leading up the recession, but also because of our relatively narrow economic base that is so reliant on tourism and discretionary spending by tourists.

No one knows what the shape of the recovery will be in the United States ("V", "U", "W", "L", or square root). Whatever that national recovery looks like, it is highly likely that, unless some significant changes are made to alter Nevada's circumstances, the recovery here is likely to be longer and more painful that the national recovery, and the recovery in northern Nevada may be even slower and more painful than the state's recovery – mostly due to some of the underlying long-term trends that developed prior to the onset of the recession. We are all hopeful that things do not deteriorate too badly. While the following isn't a prediction, it presents one possible scenario of how a chain of events could develop over time:

- As the world economy recovers, increasing demand for energy and other natural resources causes price escalation, which somewhat dampens the U.S. recovery. Significant to northern Nevada, higher petroleum prices, reflected in higher gasoline prices could have a substantial negative impact on Nevada's tourism industry, especially with more California gamblers opting to make shorter trips to local tribal gaming properties rather than coming to Nevada.

- Due to high vacancy rates and excess inventory, local construction activity remains "at the bottom" while construction begins to pick up elsewhere, providing motivation for our construction workers to leave for greener pastures, with the accompanying drop in consumer spending, demand for housing, and tax revenues, and all of the ripple effects of more foreclosures, business failures, etc.

- The Nevada Legislature determines that the budget gap must be entirely covered by reduced spending, leading to significant cuts in education, higher education, and local government employment. Teachers, faculty, and government employees leave the state, with the accompanying loss in consumer spending and housing demand. Research dollars flowing into NSHE institutions declines, leading to more cuts in spending and economic impact. Some of these newly unemployed people are unable to sell their residences and simply “walk away”. The ripple effects cause a decline in the overall economy, with additional business closures, continued decline in real estate values, layoffs in retail and service businesses, and – of course – declining tax revenues, which then leads to another round of budget cuts.

- Companies considering relocation to Nevada and individuals considering starting new businesses opt for other locations to make their investments, both because the economy is better elsewhere, but also because they want a better education and support system for their families, and for their employees and their families. A few existing local firms decide to relocate for similar reasons, adding to the drag on the economy.

- Some of the budget cuts are made in such areas as health and human services. As one example of how these costs are simply redistributed, cutting mental health spending does not reduce the number of mentally ill, it simply redistributes the costs from lower cost service providers to emergency rooms and jails, which are significantly more expensive ways of dealing with mental health problems. Some of the cost is transferred to higher health care costs and insurance premiums rather than being paid with tax dollars.

- The spiral continues, with declining values of residential and commercial properties, business failures, bank failures, extensive and a prolonged exodus of people from Nevada. We become the western version of Detroit but without an Ann Arbor for research or a manufacturing base to redevelop.

The alternative is to make decisions that can alter our economy and our fiscal system in ways that accomplish both short-term improvements and long-term economic prosperity. What will Reno look like in ten years? That depends on the choices that we make over the course of the coming year. The near future promises to present some very difficult challenges, but if we make informed choices based on investing in our future we may avoid some of the worst possible outcomes and create a better community over time.

International / National / Regional

TREND:

The pace of technology innovation continues to accelerate, including disruptive technologies – those fundamentally changing business and social practices (long-term existing and continuing trend). See attachment for more details.

- The rules of the digital economy are not yet clearly developed and the social impacts, while profound, are still developing.
- Bio-technology innovations are and will continue to dramatically alter our lives, our economy and our society.
- Rates of innovation (creation and adoption) seem to be significant elements of economic success – for individuals, communities, regions and nations. Rules governing the creation of new technologies, encapsulated as intellectual property (IP), are seen in the issuance of patents, trademarks and copyrights.
- Some analysts have proclaimed the death of distance as digital/communications technologies allow business operations to spread rapidly around the globe, while other analysts have recognized the geographic concentration of industry clusters and IP creation.
- There is a huge disparity in our greater region in IP creation. For example:
  - U.S. Patents issued for years 2005-2009: nearly one quarter of U.S. patents were to firms and individuals in California (99,692 utility patents);
  - During the same time period, less than 1% of U.S utility patents were issued to firms and individuals in Nevada (1,849);
  - Between 1990-1999, in the San Francisco-Oakland-San Jose CMSA 9,405 utility patents were granted. Sacramento CMSA (Sacramento-Yolo), 398 utility patents were granted. Washoe County, NV, 96 utility patents were granted.

CONSEQUENCES / IMPLICATIONS:

- ➔ The new economy will continue highly dependent upon the creation and adoption of new technologies – and this has been an area where the U.S. has been able to maintain its competitive advantage – but the benefits are not evenly distributed geographically or demographically.
- ➔ Individuals selling their brains (with engineering and/or scientific expertise and higher levels of educational attainment) are more likely to be beneficiaries of the economic rewards than individuals selling their muscles.
- ➔ Localities containing quality universities with research centers and institutes seem to not only create the labor pools needed for technology innovation, but also seem to be at the center of industry clusters dependent upon innovation for their competitive advantage.
- ➔ Angel and venture capital funds develop around these industries clusters, with both the funding and technological expertise needed for vetting new technologies provided by individuals who have been key to the creation of new IP, and these funds help in the formation and expansion of new business entities organized to commercialize new technologies.
- ➔ Nevada, with its recent economic expansion significantly driven by gaming and construction, along with warehousing/distribution contributing to the growth, is not well positioned in terms of a labor force that contributes significantly to innovation, or is trained to be major participants in the economy of innovation.
- ➔ Nevada has seen the immigration of wealthy, perhaps not yet fully retired people who participated in the "new economy" to places like Incline Village, Montreaux, Arrow Creek, Somerset and Wingfield Springs in Washoe County and to Douglas County.

International / National

TREND:

Globalization and the rise of multi-national firms (long-term existing and continuing trend). Global production and trade linkages were largely determined by European empires for at least two centuries prior to World War II. As these empires disintegrated at the end of the war, production and trade linkages were transformed. Multi-national firms created new linkages.

CONSEQUENCES / IMPLICATIONS:

- ➔ Multi-national firms ignore political boundaries and locate their production in low cost regions. Supply chain management was developed to manage these far flung operations.
- ➔ This outsourcing of production is continuing today, without allegiance to individual nations. Business Week magazine (June 28 – July 4, 2010) reported that American car companies, bailed out by the government, plan to disproportionately build more production facilities in Mexico. These facilities are mainly assembly plants, where parts manufactured all around the world are shipped for assembly.
- ➔ This has fractured national production – consumption linkages. Henry Ford paid his production workers well so that they could afford to buy the automobiles they produced. Since WWII, American consumer spending has supported robust national and global economic growth. For the last several decades this consumer spending has been financed by consumer debt because it could not have been supported by stagnant wages.
- ➔ The major casino gambling firms that initially developed in Nevada have transitioned from “locally owned and operated” businesses into multi-national firms. With the legalization of gaming in other jurisdictions in the U.S. and world-wide, gaming companies based in Nevada quickly exported their operating expertise and leveraged their access to capital markets to expand in new jurisdictions. Some of these new operations are eroding Nevada’s traditional feeder markets.

International / National

TREND:

Sovereign Command Economies (Existing condition, and part of the dichotomy between operations of multi-national firms in many western nations versus nationally directed non-market economies in non-democratic nations).

- There are now 20 countries with sovereign wealth funds --- assets held by governments in other countries' currencies, usually dollars, Euros or yen. All countries need to hold foreign exchange assets for normal trading needs. Sovereign wealth funds are foreign liquid assets above those needed for normal transactions. The list of countries with sovereign wealth funds is expected to grow.
- Methods of accumulating funds: Two general conditions enable nations to be able to collect "excess" foreign currency reserves: a) artificial monopolies (i.e. OPEC) and b) currency exchange rate manipulation (i.e. China). Oil and gas exporting countries dominate this list with China being the key exchange-rate player. Five funds account for 70 percent of total assets.
- Most of these countries, such as Iran and China, are non-market, command economies. Some nations, such as Norway, have benefitted from the actions of the non-market command economies. Simon Johnson of the International Monetary Fund recently stated that we do not know much about these funds because these countries are not required to report data.
- So far there is little evidence that the funds have been de-stabilizing to other nations or the global economy. One concern is if the funds become too highly leveraged and they are unregulated. Another concern is if these funds continue to grow, could a country or set of countries (OPEC) cause problems for a country for strategic reasons.
- China seems to using its sovereign wealth fund and command economy to lock up control of natural resource supplies around the world, especially fossil fuels.

CONSEQUENCES / IMPLICATIONS:

- ➔ Most countries, including other western democracies, have some sort of policies to promote domestic manufacturing - except the U.S.
- ➔ The U.S trade deficit was $706.1 billion in 2008, generated by an $821 trade deficit in goods and an $80 billion trade surplus in high-end services (education, finance insurance services, telecommunications and all other business, professional and technical services). The U.S borrows approximately $2 billion a day from the Chinese.
- ➔ While the U.S. invented solar photovoltaic cells, about 90% of the solar cells we use are imported from China, and approximately 50 percent of windmills now are imported, mostly from China and Europe.
- ➔ Manufacturing has declined from 27% of U.S. GDP in 1950 to 11.5% today.
- ➔ There seems to be a growing "protectionist" response in the U.S. If protectionist policies are enacted by the U.S., the international economic impact could be harmful to worldwide GDP.
- ➔ Without a response by the U.S., American manufacturing may continue its downward trend.

International / National

TREND:

Increasing demand and competition for natural resources, especially petroleum (long-term existing and continuing trend). Modern economies are built upon relatively inexpensive energy provided primarily by fossil fuels, particularly petroleum.

- With worldwide economic growth, particularly in China, India and many other developing nations around the world, there has been a corresponding increase in the demand for natural resources.
- Whether or not one believes in peak oil and/or global warming, the increasing dependence of the U.S., most of Europe and Japan and now China on imported petroleum and other fossil fuels should be of concern.
- The increasing world population and the growth of the middle-class in developing countries (hundreds of millions of people) with improved "standards of living" including better diets, nicer homes, automobiles, and electronic goods is driving significantly increased demand of resources.

CONSEQUENCES / IMPLICATIONS:

- ➔ Some resources, such as petroleum, are becoming increasingly difficult and expensive to locate and extract, and there is increasing competition for these resources.
- ➔ Some nations not particularly friendly to the U.S. (or the "West") have the ability to disrupt the supply of certain key resources, especially oil, to achieve political objectives.
- ➔ The current recession has temporarily reduced the demand for resources, reducing the upward pressure on prices in the short term.
- ➔ There is a concern by some economists that as recovery from the current recession occurs, there might be price increases for key commodities, particularly petroleum, which could stifle long-term economic growth.
- ➔ Some political scientists have predicted that the major cause of conflicts in coming decades will be disputes over fresh water. Others predict that global warming may disrupt food production, and food shortages may be the source of future conflicts.
- ➔ As a result of both environmental and economic concerns, there is a growing movement for sustainability including efficient use of resources, renewable energy, and recycling.
- ➔ Many businesses are finding that sustainability makes good sense financially.
- ➔ Nuclear energy is regaining support as a viable source of electrical power.

National

TREND:

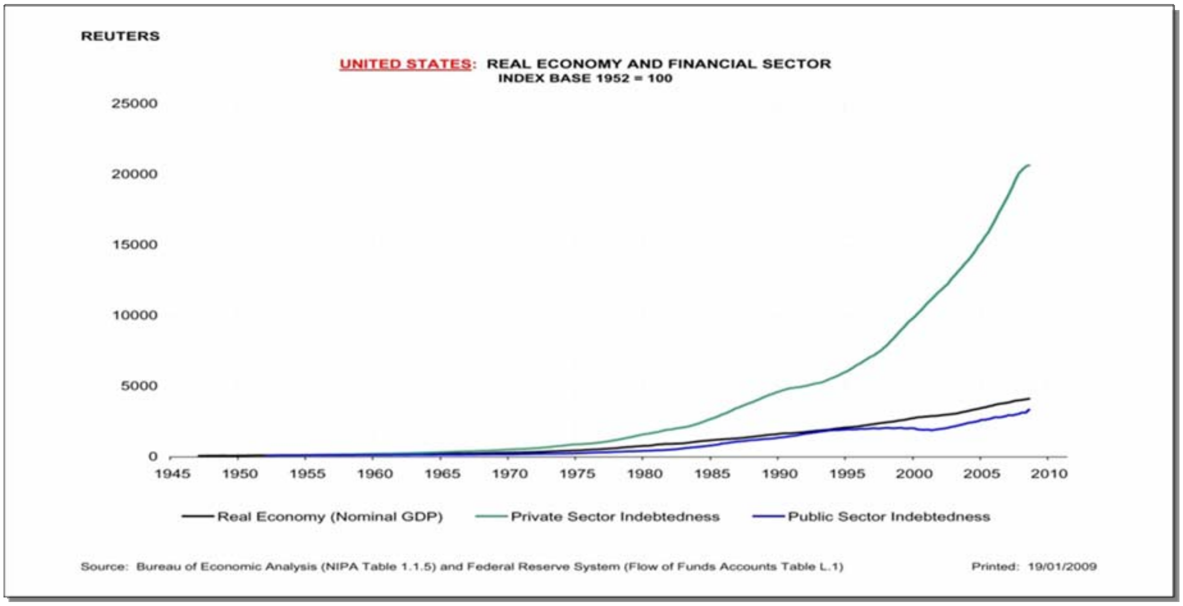
Financialization of the U.S. economy (long-term existing and continuing trend). Considerable evidence suggests that we have entered the stage of financial capitalism since the 1980s. By the mid 1990s financial services exceeded manufacturing as percent of Gross Domestic Product for the first time. Currently financial services earnings are about twice the value of manufacturing output and comprise more than one-fifth of GDP:

CONSEQUENCES / IMPLICATIONS:

- ➔ Mercantilism was the economic system that emphasized the accumulation of financial capital. Capitalism challenged this system by pursuing the increase in real, productive capital (i.e. plant and equipment, skilled labor, intellectual property).
- ➔ At various times since the sixteenth century Spain, The Netherlands and Britain lost their economic leadership as they emphasized financial activity over production. The United States has entered this stage as multi-national firms continue to outsource production and encourage the growth of financial innovation and services.
- ➔ Many traditional manufacturing firms have decreased their manufacturing divisions and expanded their financial business. Ford and General Electric provide a couple of examples.
- ➔ Financialization has contributed to the polarization of income and wealth. First, many manufacturing jobs that supported middle class families have disappeared with the loss of manufacturing and comparable paying jobs have not been created to offset the losses. Second, it takes money to make money. Therefore, earnings from financial investments flow to the wealthiest individuals and families. The share of personal income received by the top one percent of taxpayers increased from 9.96 % in 1979 to 23.5 % in 2007. The share of federal income taxes paid by the top one percent declined from 60 % in 1960 to 33.6 % in 2004.
- ➔ Many of the brightest young people in the U.S. have pursued careers in financial services rather than in science, engineering or other technical fields.
- ➔ Economic diversification advocates will need to take account of the types of jobs that have been eliminated and seek and build a niche that will create new jobs for the middle class. This is essential if we are to develop a healthy society and communities where we would want to live.
- ➔ Financial services have increasingly transitioned from “locally-provided” with local decision makers to nationally/internationally-provided with non-local decision makers.

TREND:

Increasing private debt, subsequent increasing public debt and economic recession (long-term trend leading to a paradigm shift). Since the 1950's, the amount of private debt relative to gross domestic product (GDP) continuously increased up through 2008 with private debt growing over four times greater than GDP and public debt (see below):



CONSEQUENCES / IMPLICATIONS:

- ➔ The increasing private debt was unsustainable. Residential real estate was a significant driver of this trend. Increases in real estate values outpaced average incomes needed to service the underlying debt. Eventually and predictably residential real estate values collapsed.
- ➔ Likewise, consumer credit for other asset purchases and/or consumption had been supported by increasing home equity values rather than by growing average incomes.
- ➔ Widespread unregulated and non-transparent use of new financial instruments and derivatives such as bundled debt obligations and credit default swaps led to insolvencies in the financial sector internationally.
- ➔ The response of the U.S. Federal Reserve and other central banks and governments was to rapidly increase public debt (national debt) to shore up financial institutions and accommodate the orderly deleveraging of private debt by "stimulating" the economy and shoring up banks and other entities. This stimulus has not been sufficient to avoid a recession, but rather prevented a calamitous collapse.
- ➔ The political will to continue increasing national debt is waning throughout much of the world, with much of Europe already set on a course of austerity.
- ➔ State and local revenues are falling, putting some municipal debt obligations in danger of default, while state and local spending is being significantly reduced across the country.
- ➔ Many economists believe that the most likely scenario for the U.S. economy is a long and very slow recovery while other economists predict a "double dip" recession.

International / National / Local

TREND:

International demographic trends affect both economic and political environments (long-term existing and continuing trends). The CIA World Factbook estimates the world's population growth rate for 2009 at 1.133%. This rate of growth is not evenly distributed among nations. There are some interesting "groupings" of growth rates as listed below. While these rates of growth are estimates for 2010, they are representative of rates over the past several decades in most cases. Growth rates are the result of the net difference between birth and mortality rates plus net migration. The U.S. has an estimated 2010 population growth rate of 0.977%.

- Many of the nations that comprised the former Soviet Union or in their sphere of influence actually have negative population growth rates estimated for 2010, driven primarily by lower life expectancy, low birth rates and out migration.

Belarus	-0.378%	Latvia	-0.614%
Bulgaria	-0.79%	Lithuania	-0.279%
Czech Republic	-0.094%	Poland	-0.047%
Estonia	-0.632%	Romania	-0.147%
Finland	0.098%	Russia	-0.467%
Georgia	-0.325%	Slovenia	-0.113%
Hungary	-0.257%	Ukraine	-0.632%

- Japan and many western European nations have estimated 2010 rates of population growth mostly well below the world's growth rate driven primarily by low birth rates and offset by increasing life expectancy and in migration in some cases.

Austria	0.052%	Japan	-0.191%
Belgium	0.094%	Luxembourg	1.172%
Denmark	0.28%	Netherlands	0.412%
France	0.549%	Norway	0.341%
Germany	-0.053%	Portugal	0.275%
Greece	0.127%	Spain	0.072%
Ireland	1.12%	Sweden	0.158%
Italy	-0.047%	Switzerland	0.276%

- Most countries with developing economies generally appear to have population growth rates higher than those of Japan and Western Europe driven by somewhat higher birth rates and increasing life expectancy.

Argentina	1.053%	Malaysia	1.723%
Brazil	1.199%	Mexico	1.13%
Chile	0.881%	Panama	1.503%
China	0.655%	Singapore	0.998%
India	1.407%	South Africa	0.281%
Indonesia	1.136%	Taiwan	0.227%
Iran	0.883%	Turkey	1.312%
Korea, South	0.266%	Vietnam	1.137%

- Countries with under-developed economies generally appear to have the highest rates of population growth, driven mostly by high birth rates combined with improvements in life expectancy.

Angola	2.095%	Ethiopia	3.208%
Belize	2.154%	Gaza Strip	3.349%
Burundi	3.688%	Iraq	2.506%
Cameroon	2.19%	Kenya	2.691%
Chad	2.069%	Liberia	2.665%
Congo, Dem. Rep.	3.208%	Rwanda	2.866%
Congo, Republic	2.754%	Somalia	2.815%
Egypt	2.033%	Yemen	2.786%

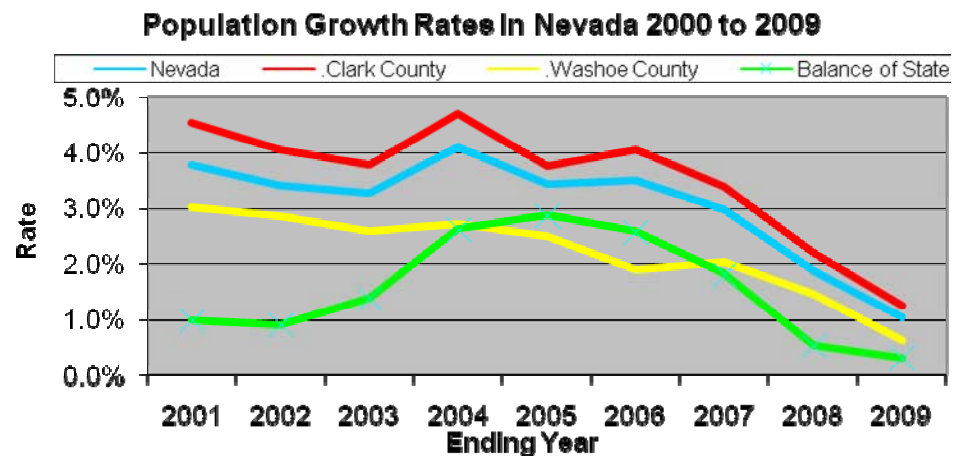
CONSEQUENCES / IMPLICATIONS:

- ➔ The countries with the greatest need for infrastructure improvements (e.g. schools, housing, medical facilities, transportation, water treatment and delivery systems) to support their growing populations appear to be those countries that can least afford these improvements.
- ➔ Developed countries still have need for new infrastructure as well as addressing deteriorating infrastructure.
- ➔ Many of the rapidly growing countries have high unemployment rates for their youngest workers, which can lead to radicalization and political instability within those countries.
- ➔ The pressures caused by rapid population growth may threaten neighboring countries in the region, or countries/cultures perceived as "denying" the growing countries their rightful share of prosperity.
- ➔ Countries with developing economies have an ever-expanding appetite for limited resources to enable their economic growth and thereby allow upward economic mobility of their citizens. This comes at a time when it is becoming increasingly difficult and expensive to find and extract certain key resources (i.e. oil).
- ➔ Many of the nations with developed economies would have lower growth rates were it not for migration to those countries from less developed nations to meet some of their labor requirements. The threats of terrorism and the current economic recession have begun to limit some of this migration.
- ➔ Many of the nations with developed economies and slow growth rates are also experiencing an "aging" of their populations - with a number of economic implications:
    a) Increasing health care costs as people live longer and medical advances prolongs life expectancy;
    b) A shrinking labor force, with problems filling key jobs; and
    c) An increasing retired population, financially supported by the shrinking labor force.
- ➔ For the U.S. and many other developed nations, while the population is again there is still a strong and continued demand for services for our youth. The youth dependency ratio is predicted to between 45-48% from 2010 to 2050 in the U.S compared to a range of 22-37% for the aging population (over 65).

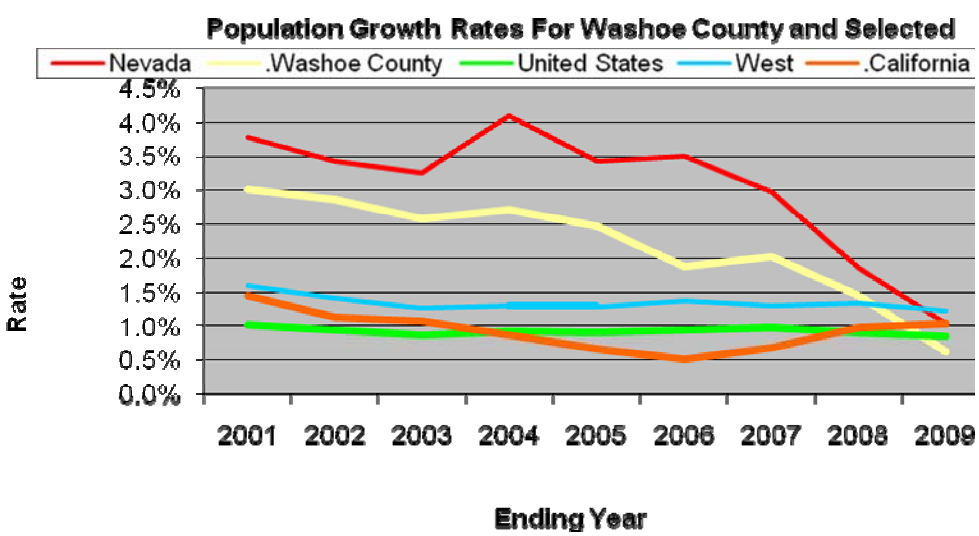
TRENDS:

U.S., state and local demographic trends have been significantly influenced by immigration (long-term existing and continuing trends).

- Immigration has contributed to the U.S. population growth rate both directly (net migration) and indirectly through an increase in birth rates to immigrants. The low point in U.S. birth rates was in the 1970's at 1.7 children per couple (the replacement birthrate is 2.1), but it grew to 2.11 in 2006 and 2007.
- In 2007, foreign-born workers accounted for 16 percent of the U.S. civilian work force and provided half of the growth in the workforce between 2006 and 2007.
- Foreign-born residents comprised 11.6% of Nevada's population and 14.6% of Washoe County's population in 2008.
- International immigrants can be here under any number of circumstances, as students, visitors or tourists of whatever duration, guest workers, permanent legal residents, refugees, asylees, or unauthorized immigrants. It is important to remember that it is estimated that around 60% of the unauthorized immigrant population came here legally. Immigration status can change for any number of reasons and the length of time one is in that status can vary from individual to individual.
- State and local growth rates have decreased significantly in recent years.



- Here is how those growth rates compare to the U.S. and to the region.



- The elements comprising Washoe County's population change have also been shifting.

Sources of Washoe County Population Change From 2000 to 2009					
			Natural Increase	Migration	
Periods	Births	Deaths		Domestic	Internat'l
2000 to 2001	5,050	2,554	2,496	5,546	2,372
2001 to 2002	5,259	2,678	2,581	5,384	2,371
2002 to 2003	5,054	2,889	2,165	4,962	1,978
2003 to 2004	5,278	2,901	2,377	5,255	1,901
2004 to 2005	5,258	2,987	2,271	5,479	1,599
2005 to 2006	5,696	3,058	2,638	2,122	1,826
2006 to 2007	5,904	3,119	2,785	3,507	1,633
2007 to 2008	6,016	3,193	2,823	1,481	1,364
2008 to 2009	5,993	3,242	2,751	-1,762	1,588
Average	5,501	2,958	2,543	3,553	1,848
Avg. 2000-2005	5,180	2,802	2,378	5,325	2,044
Avg. 2005-2009	5,902	3,153	2,749	1,337	1,603

CONSEQUENCES / IMPLICATIONS:

- ➔ Immigration has helped offset the aging of the U.S. population.
- ➔ Foreign-born workers contributed to the economic growth of Nevada during the last several decades.
- ➔ Depending on job creation in the US, Nevada, and Washoe County there may be push factors for people to return to their country of origin. As this occurs, it will have an impact on consumer spending, demand for housing units, etc.
- ➔ With a lower growth rate, construction will not comprise such a significant part of the state and local economies as in the past few decades.
- ➔ Lower migration (both in and out) rates may mean a less transient population than in the past.

National / Local

TRENDS:

Demographic trends in social and economic status are influencing our nation, state and region (long-term existing and continuing trends).

- Nationally, the black population has been the hardest hit by the recession followed by Hispanics, Whites and Asians.
- Unemployment has been 5 percent for those with a bachelor's degree and 14 percent for those without a high school diploma.
- The unemployment rate for workers 55 and older has been rising faster than that for younger workers.
- Poverty rates among working adults have increased from 11% in 2007 to 12% in 2008
- Over the next 50 years the U.S. labor force is expected to grow more slowly at 0.6% a year and this could impact economic growth.
- Female labor force participation has reaches a plateau but there is room for increasing participation by women with young children, women with no children, and women with adult children. These groups lag participation by women with children between the ages of 6 to 17.
- In 1968 the median age of the U.S. workforce was 35 and in 2008 it was 41. In 2000, 13% of the workforce was over 55 and in 2030 it is projected to be 23%.
- Since 1980 there has been a downward trend in U.S. manufacturing employment and it dropped to 10 percent by 2007. There has especially been a decline in low skill manufacturing jobs.
- Unemployment is higher among those whose firms went out of business, plants shut down, or positions were abolished. Only 30 percent of those who lost their jobs for these reasons between 2003 and 2005 were reemployed by 2006. Among those who have been reemployed, their earning are half of their previous level.
- In the US there is an increasing gap between middle-wage earners and chief executive officers. In 1965, on average CEO's earned 24 times the average worker's pay and in 2005 average CEO compensation was 262 times what the average worker earned.

CONSEQUENCES / IMPLICATIONS:

- ➔ The benefits accruing from U.S. economic growth over the last few decades have not been evenly distributed, nor have the burdens associated with the long-term loss of U.S. manufacturing jobs or with the current recession. If this history points us in a direction, it is the importance of educational attainment for our youth and life-long learning and training for our workforce.
- ➔ With the U.S. economy estimated to be 70% driven by consumer spending, the implications of both a shrinking middle class and the long-term impacts on displaced workers are significant. Long term shifts in consumer spending patterns and savings rates are very likely.
- ➔ Extended unemployment and reemployment at lower rates of pay are both accompanied by increased costs of providing basic services to the impacted population – either directly through government social programs or indirectly through the costs imposed by indigent people.
- ➔ Effective economic development requires creating new employment opportunities that will lead to an expanding and more prosperous middle class.

National / State

TREND:

Increasing relative value of intangible property and a "disconnect" with Nevada's tax system (long-term existing and continuing trend): Beginning with the Minnesota Railroad Rate case in 1890 the U.S. Supreme Court changed the legal definition of property from "use value" to "exchange value." In that decision the Court established exchange value as the legal basis for "intangible property." This decision provided the basis for protecting trademarks, patents and franchises as property. This protection is even more important in today's economy with software and information technology. The value of a business firm was no longer merely the cumulative value of separate tangible pieces such as buildings and equipment. The courts followed economic reality and established that value is the capitalized stream of income of a going concern (corporation) wherever it operates. Value became and remains *expected earning power.*

- This ruling recognized that regulation of prices by states could "take" their property while leaving their physical facilities intact. Because of this possibility the Court ruled that regulation by states would be subject to judicial review to ensure that such regulations are reasonable.
- Firms such as Google or Microsoft have little real, tangible property relative to their capitalized income compared to old industrial firms. These firms can have production facilities in many jurisdictions and they want legal protection by governments of their intangible property to safeguard their earning power. They also want to locate operations in low-tax jurisdictions. This leads to shifting the tax load to others, including residents of the taxing jurisdiction or low public services for those citizens.
- Building on the Minnesota case, the Supreme Court dealt with this issue in 1897 (Adams Express v. Ohio). Adams Express was a multi-state firm and Ohio assessed its value on Ohio's share of the capitalized value of the entire firm. The firm challenged the state because this valuation was many times greater than the worth of the tangible property in state. The Court rejected the claim because the value of the tangible property came from "unity in use" that resulted in property, "intangible though it may be which in value exceeds the aggregate value of the separate pieces of tangible property."
- Ninety years later Nevada took a step backward from this principle when it replaced assessment determined by market value with a replacement-cost-less-depreciation methodology. Replacement costs are limited to tangible property.

CONSEQUENCES / IMPLICATIONS:

- ➔ Nevada is missing out on its share of the value of multi-state firms operating in Nevada such as mines, hotel-casinos, retail franchises, and other multi-state and multi-national operations.
- ➔ If Nevada were to ever adopt a business income tax, it could apply the unit principle.
- ➔ Currently Nevadans shop at multi-state owned retail shops or travel on multi-state airlines and pay the same prices as consumers in states that have a business income tax and that have a property tax system based on market value (which implicitly includes going-concern value). In effect, we are paying a portion of other states' taxes. Our current tax laws have made our tax base much narrower than our already narrow economic base.
- ➔ The net result is that Nevada compensates for this narrow tax base by levying a heavy tax load on land and tangible improvements.
- ➔ The narrow tax base does not generate sufficient revenues to finance the types and level of public infrastructure and services that most high-tech companies need and want.
- ➔ Even if Nevada is successful in diversifying its economy, under the current tax system our tax base would remain narrower than our economic base because we would not be able to tax intangible property value, which is the largest component of value for many firms. Our 21st century economy would continue to be assessed by 19th century measures.

TREND:

Northwest Nevada is part of the northern California megapolitan region (long-term existing and continuing trend). See attachment (or appendix) for more details.

- The Northern California Megapolitan Region is one of ten megapolitan areas in the United States defined as an area that combines several metropolitan areas and is expected to be a predominant geographic area of growth in the future.
- Northern California Megapolitan Region contains twenty-two (22) counties in California, stretching from the Bay area to Lake Tahoe along the I-80 corridor, and extending into northwestern Nevada (Carson City, Douglas, Lyon, Storey and Washoe counties).
- Between 1960 and 2009, population growth rates in this region were higher inland than in the coastal counties. For example:

Percentage Change From Previous Census						
	1970 Census	**1980 Census**	**1990 Census**	**2000 Census**	**2009 Est.**	**Population Change from 1960**
California	27%	19%	26%	14%	9%	135%
Balance of State	27%	19%	25%	13%	9%	134%
Total California I -80/Lake Tahoe	26%	17%	28%	17%	10%	143%
Alameda	18%	3%	16%	13%	3%	64%
Contra Costa	36%	18%	22%	18%	10%	155%
Solano	28%	37%	45%	16%	3%	203%
Yolo	40%	24%	24%	20%	18%	203%
Sacramento	26%	19%	38%	18%	15%	179%
Eldorado	49%	96%	47%	24%	14%	507%
Nevada	26%	96%	52%	17%	6%	367%
Placer	36%	51%	47%	44%	40%	512%
Washoe County	43%	60%	32%	33%	22%	390%
Total I -80/Lake Tahoe	26%	18%	28%	18%	11%	152%

- Per capita income in 2008 for the Northern California Megapolitan Region is estimated to be $50,840. For comparison, per capita income for the United States in 2008 was estimated to be $40,166, while metropolitan U.S. per capita income in 2008 was estimated to be $41,930.
- Northern Nevada’s economic influence is east and west because of its membership in the Northern California Megapolitan Area. However, northern Nevada’s fiscal influences are north-south given Clark County’s location.
- Clark County is part of the megapolitan area designated as Southern California Megapolitan Area. Its geography runs from San Diego to Los Angeles to Las Vegas.
- Increasingly some of northern California’s “high tech” industries have been expanding to the east through Sacramento and into the Sierra Nevada foothills.

CONSEQUENCES / IMPLICATIONS:

➔ Northern Nevada’s economy has traditionally been greatly influenced by northern California, including the gaming industry, outdoor recreation, warehousing and distribution, higher education (California students attending UNR), use of the Reno-Tahoe International Airport, disposal of California solid waste in Nevada landfills, and some “export” retail (i.e. Cabela’s and Scheels).

- ➔ Future economic development in northern Nevada may be driven by economic forces from northern California – based on proximity plus relative quality of life, cost of living, regulatory environment, other costs of doing business, available infrastructure and public services.
- ➔ Challenges to Nevada benefitting even more from its inclusion in the megapolitan region include distance (we are at the eastern extremity of the region), geography (the Sierra Nevada mountains), highway infrastructure (I-80 capacity and conditions) and environmental impacts (development in the Tahoe Basin).
- ➔ Northern Nevada needs to determine how to better leverage our current "resources" as well as discover which "missing or inadequate" private and public components might enhance our ability to benefit from our inclusion in this megapolitan region. We already know, after about four decades as a national leader, that "low state and local taxes" alone has not been a sufficient driver to obtain the desired results.

State

TREND:

Casino-style gaming in Nevada is transitioning along the continuum from monopoly to commodity status (30-year trend with an ongoing paradigm shift).

- Until very recently the expansion of gaming to new jurisdictions seemed to benefit Las Vegas. With more people being exposed to casino-style gaming, many decided to come to the "gaming and entertainment capital of the world." The Las Vegas Strip expanded and put more focus on revenues from rooms, food and entertainment. An expectation of "over the top" spending by visitors continued though 2006.
- Macau has arguably stepped into the position of top gaming destination in the world. Gaming revenues there will probably exceed $20 billion this year, roughly three times the gaming revenues of Las Vegas.
- Las Vegas Strip gaming revenues and total revenues peaked in 2007. By 2009, Strip gaming revenues had declined nearly 18%, with total revenues declining nearly 13%.
- In the current recession, essentially all of Nevada's major gaming operators all found themselves overleveraged, with several construction projects halted mid-construction.
- The significant bump in tourism that traditionally accompanied the opening of new mega-casino projects didn't occur with the opening of Palazzo, Encore and CityCenter.
- From 1990 to 2007, the Lake Tahoe gaming industry experienced approximately a fifty percent (50%) decline. From 2007 until present, the Lake Tahoe gaming industry has experienced an additional thirty percent (30%) decline.
- Gaming expansions in Reno from 1970's until present generally resulted in "crowding out" some other aspect of the industry, beginning with conversions of motels into weekly rentals when gaming properties began building rooms and later leading to the closing of third-tier and second-tier gaming properties.
- Reno/Sparks maintained single-digit revenue growth from 1990 until 2000. The number of casinos in Reno/Sparks reporting at least $1 million in gaming revenues peaked at 38 locations in 1995, dropping to 31 locations by 2000 and 22 locations in 2009. Reno/Sparks gaming revenues peaked in 2007, decreasing nearly 18% by 2009.
- Reno has benefitted from the growth of gaming-device manufacturing and the "export" of gaming expertise and services to casino start-ups and expansions in other jurisdictions.
- Internet gaming already exists and may become legalized in the U.S. It is unknown what impact this may have on the hotel-casino business.
- The next generation may not be very excited about big casinos with little video-game gambling devices.

CONSEQUENCES / IMPLICATIONS:

- ➔ The southern Nevada economy has been dramatically impacted **by the change in the rate of growth**. The construction industry sector of the economy is reeling with a 57% decline in construction industry jobs (63,500 jobs lost) since the peak in June 2006.
- ➔ As economic recovery begins to take hold in other parts of the nation, construction workers may relocate from Nevada to these other regions.
- ➔ Without growth in hospitality industry employment and with the loss of construction industry jobs, demand for housing units will be significantly reduced, thereby lengthening the time needed for recovery of housing prices.
- ➔ Retail spending will remain weak as a result of flat to declining tourism and a depressed spending by locals.
- ➔ Fiscal impacts for the entire state will continue to be primarily dependent upon what happens in the Las Vegas economy, since the majority of Nevada's tax revenues are driven by gaming taxes and sales taxes generated on the Strip by tourists and off-strip by locals.
- ➔ While the northern Nevada economy has become less dependent upon gaming, the state's revenues structure is still highly dependent upon the gaming industry – even in the north.

- ➔ Southern Nevada continues to pay more than its share of the state's fiscal burden relative to northern Nevada, which may lead to some political backlash with fiscal consequences for the north.
- ➔ Due to Nevada's political system that allows very little "home rule" – with the State Legislature making key decisions affecting local government revenues and responsibilities (expenditures), it is difficult for any region of the state to "set its own course" apart from what the Legislature decides.

State / Local

TREND:

Nevada's economy hit hard by the current recession (current trend and paradigm shift):

- Nevada was hit harder than most states do to its tremendous growth in the years leading up to the crash.
- The collapse of the housing and construction industries sent shockwaves through Nevada's economy and caused the state's unemployment rate to skyrocket from one of the nation's lowest to the nation's highest – peaking at over 14% in mid-2010.
- When the real estate bubble burst in mid-2005, it started a chain reaction of events that has erased 10 years of appreciation in Nevada's housing market.
- Plummeting home values, record levels of unemployment, and the relatively high percentage of "investment" or second homes in Nevada – many of which were financed with subprime or adjustable rate mortgages – have each contributed to Nevada's home foreclosure rate leading the nation over the past few years.
- Nevada is reliant on sales tax, property tax, and gaming tax to fund state and local government. With such a steep drop in revenue from all these funding sources, Nevada governmental units have been forced to slash spending, with significant layoffs and other payroll reductions (i.e. furloughs).
- Personal bankruptcies have spiked in recent years – up 70% from October 2008 to October 2009 – as more people in the Silver State found themselves overextended in houses they could no longer afford.
- Bank failures – mostly tied to the meltdown of the housing and construction industries in the state – have caused several long-time Nevada financial institutions to go under, leaving residents less certain of Nevada's long-term health.

CONSEQUENCES / IMPLICATIONS:

- ➔ For decades, Nevada was able to post one of the nation's lowest unemployment rates as a result of a booming economy. In spite of gaming's flat performance over the past several years – for several decades in northern Nevada – businesses in other industries were relocating to Nevada and/or expanding to keep pace with the population growth at both ends of the state. The added diversity in the employment-base may help Nevada recover from this recession, even as tourism lags behind.
- ➔ Gaming represents discretionary spending for most people, and gaming expenditures are down across the nation – and throughout Nevada.
- ➔ With the current recession taking a huge bite out of Nevada's tax base, state and local government units are in serious financial straits with little room to maneuver. Steep cuts to services and staff have occurred and continue to be "on the table" in this tax-averse climate, reinforcing the recession.
- ➔ Nevada has posted some of the nation's highest increases in per-capita bankruptcy filings over the past few years, a phenomenon that is tied to Nevada's record-high home foreclosure rates and nation-leading unemployment rate. In an effort to keep from losing homes, people turned to credit cards to bridge the gap, only to end up having to file for bankruptcy protection once the house finally foreclosed.
- ➔ It will likely take Nevada longer to emerge from this recession than many other states with more diverse economies and less dependence on gaming and construction.
- ➔ Stabilizing employment is the most critical factor in Nevada's economic recovery. Once jobs begin to stabilize, home foreclosures should ease up, which will alleviate some of the downward pressure on home prices. Consumer confidence should begin to rise, consumer spending should increase, sales tax revenue should begin to increase, and the gaming industry may stabilize – depending upon the permanence of altered consumer savings and spending patterns.

Memorandum

DATE: September 2, 2010

TO: Dick Bartholet
UNR Center for Regional Studies

FROM: Tom Harris and Betsy Fadali
Department of Resource Economics

RE: Recession Comparisons

The Business Cycle Dating Committee of the National Bureau of Economic Research determines the beginning and ending dates of U.S. recessions. Table 1 shows the official lengths of the last four recessions.

Table 1 Length of Last Three National Recessions.

Dates of Recession		**Length of Recession (months)**
Beginning	**Ending**	
July 1981	November 1982	16
July 1990	March 1991	8
March 2001	November 2001	8
December 2007	?	?

Source: National Bureau of Economic Research. U.S. Bureau Cycle Expansion and contractions." Cambridge, MA, April 1, 2010.

The last two recessions in 1990/1991 and 2001 lasted eight months. The 1981 recession was the longest and deepest of recent recessions lasting 16 months. The current recession, often called "The Great Recession," started in December 2007 and has not been given an official ending date. Some have suggested that July 2009 was the ending of "The Great Recession," which would mean this recession lasted twenty (20) months.

Department of Resource Economics (204)
Reno, Nevada 89557-0204
(775) 784-6701

Some may ask just how bad the current recession has been and how quickly will the economy recover. Also some may ask how the current recession compares to the previous three recessions of 1981/1982, 1990/1991 and 2001. Figure 1 shows the percentage change in seasonally adjusted non-farm employment in Reno-Sparks MSA for each month from the start of each recession. As seen in Figure 1, the current recession has been more intense in Reno-Sparks MSA than the previous recessions of 1981/1982, 1990/1991 and 2001. Figure 1 also shows that during the previous three recessions, employment in Reno-Sparks MSA declined by as much as six percent (6%) from the start of the recession. However, during the current recession, employment in Reno-Sparks MSA has declined as much as sixteen percent (16%) from the start of the recession. Figure 1 also shows that the current recession or "Great Recession" has been longer and much more intense in job losses in Reno-Sparks MSA than the previous three recessions.

Figure 1

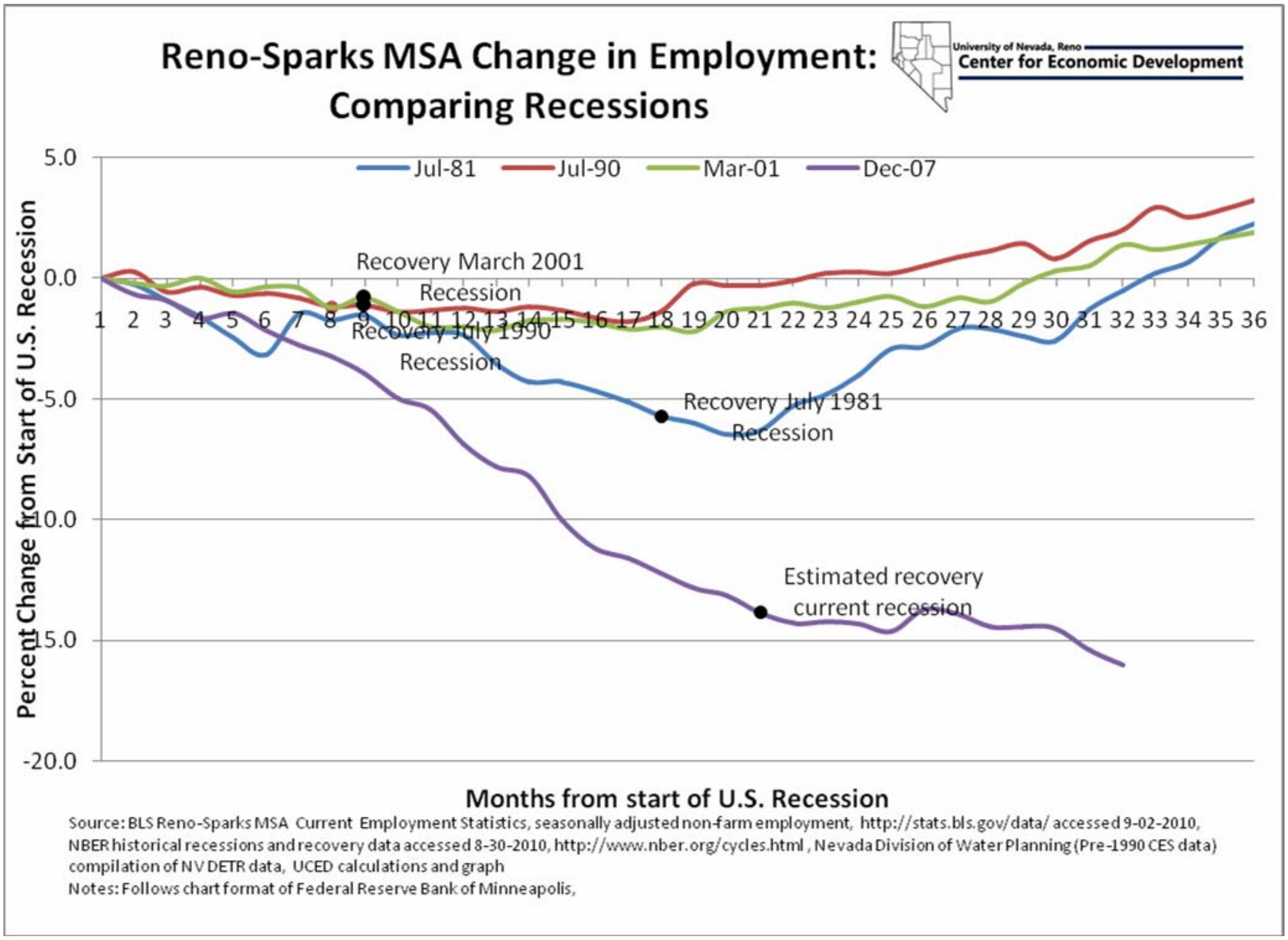
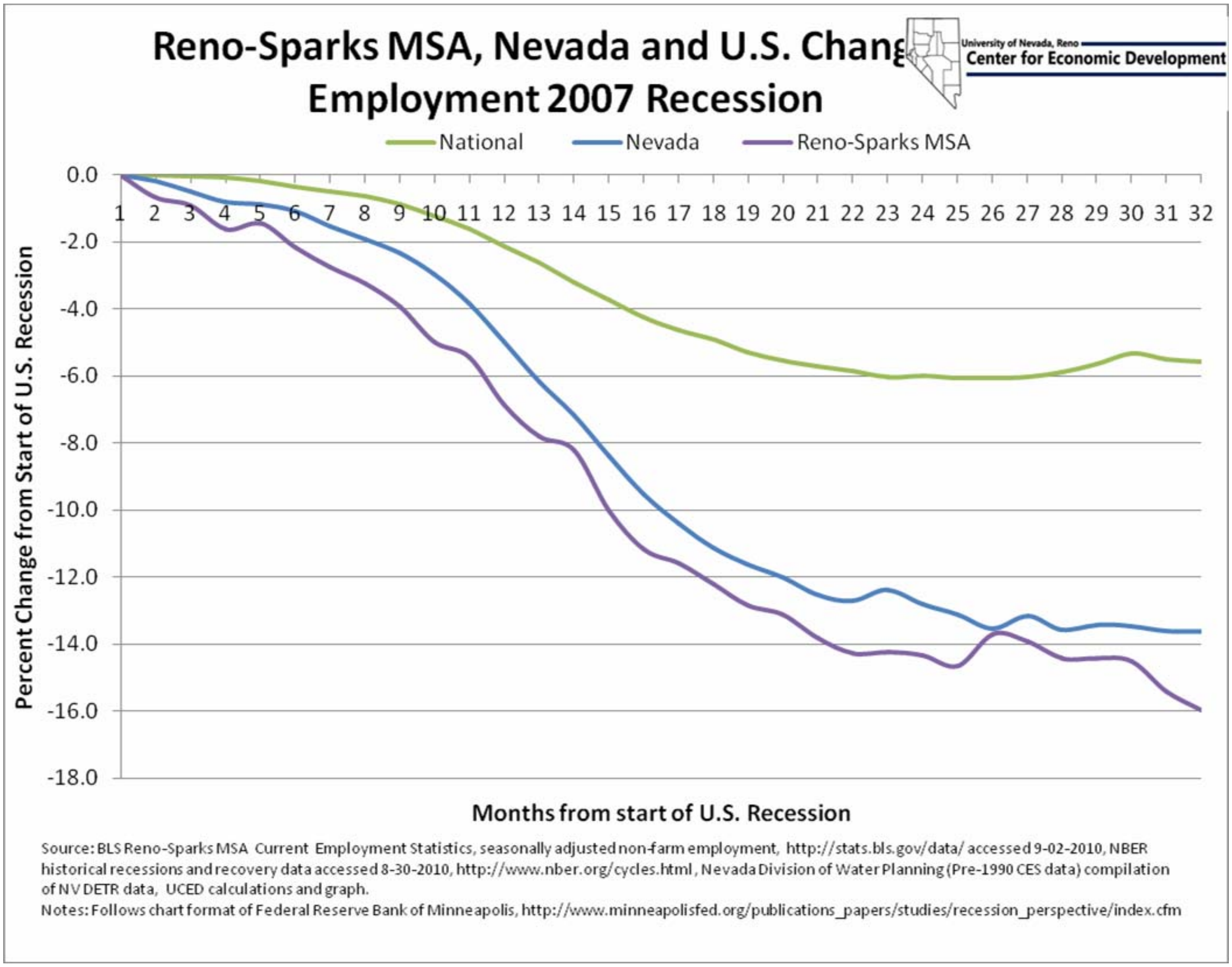


Figure 2 also gives perspective on the current recession as to its impact nationally, statewide, and to Reno-Sparks MSA. From Figure 2, the percentage decline in national employment from the start of the recession leveled out at around six percent (6%). However, the impact to the state of Nevada has been more severe, where the employment loss has been as much as fourteen percent (14%) from the employment levels at the start of the current recession. When one looks at Reno-Sparks MSA, the impact of "The Great Recession" is worse. After 32 months, seasonally adjusted employment for Reno-Sparks MSA has declined by as much as sixteen percent (16%) from employment levels when "The Great Recession" began. Additionally, the impact as to percentage of job loss from the initiation of "The Great Recession" has been more pronounced in the Reno-Sparks MSA than the state of Nevada or the nation.

Figure 2


Reno-Sparks MSA, Nevada and U.S. Change
Employment 2007 Recession
University of Nevada, Reno
Center for Economic Development
National
Nevada
Reno-Sparks MSA
Percent Change from Start of U.S. Recession
Months from start of U.S. Recession
0.0
-2.0
-4.0
-6.0
-8.0
-10.0
-12.0
-14.0
-16.0
-18.0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
Source: BLS Reno-Sparks MSA Current Employment Statistics, seasonally adjusted non-farm employment, http://stats.bls.gov/data/ accessed 9-02-2010, NBER historical recessions and recovery data accessed 8-30-2010, http://www.nber.org/cycles.html, Nevada Division of Water Planning (Pre-1990 CES data) compilation of NV DETR data, UCED calculations and graph.
Notes: Follows chart format of Federal Reserve Bank of Minneapolis, http://www.minneapolisfed.org/publications_papers/studies/recession_perspective/index.cfm

State

TREND/CONSTRAINT:
Nevada has a 19th-century fiscal system layered on top of a 21st-century economy with significant rigidities and complexities (long-term existing condition/constraint -- exacerbated by the recession).

- Many of the recommendations made by consultants (Zubrow-1960 and Price Waterhouse/Urban Institute-1988) hired by the Legislature over the last fifty years to study the State's fiscal system have been largely ignored.
- Short-term approaches for filling budget gaps and political expediency can no longer effectively substitute for long-range planning and development of a comprehensive fiscal system designed to fit our current and future economy.
- Areas to improve the fiscal system could be categorized in three major areas:

  - Improve the Spending Process. The spending process should not begin with developing a budget, which typically starts with "a look back" at past spending, trying to match expected revenues with expenditures and vice-versa, done in a compressed time frame. Two other analytical processes should precede: 1) development of a long-term spending plan with priorities determined through an understanding of linkages between various types of spending and "outcomes," accompanied by prioritization of outcomes framed by what Nevadans want the economy and communities to be like in the future; and 2) periodic efficiency studies at both the state and local levels to identify how to utilize public resources in the most efficient manner and eliminate waste.

  - Better match the revenue system to the underlying economy. When the revenue system does not match the underlying economy a number of "bad things" tend to happen. A tax base that is much narrower than the economic base puts undue burden (higher tax rates) on certain aspects of the economy - both distorting economic decisions and creating resistance to taxes by those bearing the burden. With a broader tax base, lower tax rates can achieve the same total revenue.

    Nevada's revenues are primarily derived from three sources: 1) property taxes, 2) sales and use taxes and 3) gaming taxes. When Nevada became a state, property taxes (including the net proceeds tax - mining's version of property tax) were the primary source of state and local revenues. Real estate comprised the vast majority of all property values. Since then other forms of property have increased tremendously in value but property taxes are levied on only a portion of the value of real estate. When the sales and use tax was instituted in Nevada in 1956, physical goods comprised the majority of sales in the economy. Now services and intangible property comprise the majority of sales, so the base for sales and use tax has become much narrower relative to the overall economy.

  - Fix rigidities and other "technical" problems with the revenue system.

    What are some of the rigidities? Below are three examples:

    - Tax provisions built into the constitution and/or requiring an initiative of referendum process to change (i.e. net proceeds tax, personal income tax, and sales & use tax). Changes take more time (two votes by the people) and are more difficult to make.

- Earmarked revenues. For example, only 2% of the sales and use tax goes into the general fund and the balance is "earmarked" for specific uses. Nevada has the highest percentage of earmarked revenues, depriving the Legislature of flexibility in addressing fiscal issues..

C) Super-majority voting requirements to make changes. Essentially a minority of the voters or of our elected officials can override the wishes of the majority.

What are some of the technical problems? Here are two examples:

A) Nevada is the only state in the U.S. where property tax assessments are not based on market value. Since 1988 Nevada has used "replacement cost less depreciation" in establishing taxable value. Nevada counties have lost multiple lawsuits because there are no standard rules and regulations promulgated for this approach to property valuation. Further, depreciation reductions favor older properties over newer properties – creating unequal tax treatment - which is prohibited in the Nevada Constitution. With the tax cap layered on top, when a property receives a lower valuation (through the application of an income approach or market value comparison), it will take years after the economy improves for tax revenues to "recover" to what they would be under a market-value tax basis.

B) Nevada's fiscal system, with idiosyncrasies such as guaranteed counties, is very complex and not understood by most citizens, many politicians and even some "fiscal experts." Moody's Analytics recently discovered that the Nevada revenue system was much more complex than they understood when they "under-anticipated" the time and costs needed to study and report on the state's tax system.

CONSEQUENCES / IMPLICATIONS:

- ➔ Economic decisions made by business owners may be distorted. For example, sales and use tax not only taxes consumption, but also investment (plant and equipment). New businesses, not yet profitable, are taxed on their investment in equipment, thereby requiring greater amounts of start-up capital. Businesses requiring frequent upgrades in high-tech facilities and equipment are assessed on this investment regardless of profitability. Sales tax rates could be lower if imposed on a broader base of the economy, resulting in less distortion of thee business decisions.
- ➔ Local governments make economic development (including redevelopment) decisions that concentrate on projects which generate property and sales taxes rather than on industries that create high-wage jobs.
- ➔ Voters become dissatisfied with political institutions and processes when they cannot make a connection between the taxes they pay and the benefits they receive.
- ➔ The "low tax" approach to economic development tends to attract businesses focused on a low-cost rather than on a high-value business strategy, often resulting in the attraction of low-wage industries.
- ➔ Long-term economic development can be enhanced by making certain targeted public investments. The North Carolina Research Triangle represents a classic recent example. Silicon Valley represents a slightly more mature example. The Toledo, Ohio economic development effort presents the early stages of an ongoing transformative effort. Growing the economy is not just about low taxes; it's also about public investment. Contrary to some popular opinion, tax revenues are not buried in the desert.
- ➔ Failure to transform the Nevada's fiscal system may contribute to a period of economic malaise extending far beyond the current recession.

Local

TREND:

Reno's self-image and outside image are evolving. (current and continuing trend with a paradigm shift):

- Past perceptions of Reno included: a) a suburb of Las Vegas; b) a dusty old cow-town, c) divorce capital, and d) a few tired casinos filled with gray-haired visitors. Many northern Nevada residents used to say "I never go downtown." Retail had abandoned downtown in favor of outlying malls. The river was a channel that ran through town behind buildings and occasionally flooded.
- An interesting transformation has been occurring. Reno's image across the nation, and perhaps even more importantly, Reno's self image have been undergoing a major evolution:
  - Downtown is again perceived the center of the region's arts, culture and entertainment - anchored by the Pioneer Center with new additions such as the Wingfield Park amphitheater, the Art Museum, the Discovery Museum (nearing completion), the Knitting Factory, a variety of top restaurants, the downtown convention center and the Reno Aces baseball park.
  - The Artown annual festival has been transformative, with many who first started participating in Artown as children still coming downtown as young adults. While targeted towards locals, Artown has been recognized and praised in many national publications.
  - Burning Man, while staged out in the Blackrock Desert, has brought international attention to the region, with "spillover" benefits for the Reno/Sparks area.
  - Downtown residential projects and adaptive reuse of former hotel-casinos into residential condominiums is helping transform downtown into a vibrant mixed-use region.
  - Special events and conventions are increasingly important to tourism, and the focus in tourism marketing has moved to the current theme of "different, unique and interesting."
  - The white water park attracts thousands of area residents and visitors into the heart of downtown - as well as upstream and downstream - to enjoy the river.
  - Reno has been designated as one of the "fittest" cities in the U.S. Events such as Tour de Nez, the Reno-Tahoe Odyssey, and Rock'n'River Marathon add to this image and attract thousands of participants, supporters and spectators.
  - Bicycle lanes have transformed the look and feel of city streets, with bicycle art an indication of the changing mindset of some Reno residents.
  - Reno has been nationally recognized for its efforts in becoming a "green" city focused on sustainability.
  - UNR continues to grow, has been designated as a "Tier 1" university, and many of its programs are nationally ranked.
  - Digital social media is playing a major role in communicating this transformation of Reno – locally, regionally, nationally and internationally.
- Many challenges persist – including continuing blight in the inner core, the struggling economy, local fiscal challenges, and homelessness.

CONSEQUENCES / IMPLICATIONS:

- ➔ With the spread of legalized gaming, the gambling stigma has been marginalized.
- ➔ Reno is becoming more attractive to young "creative class" entrepreneurs and employees.
- ➔ A few Fortune 1000 high-tech firms have established "back-office" operations in the region.
- ➔ A handful of Reno start-ups and/or young "transplant" businesses are gaining traction – with their owners, managers and employees having or establishing "roots" in the community.
- ➔ In spite of the recession, a number of area firms are actively looking for opportunities to grow and expand.

State / Local

TREND:
The industry sectors driving economic growth have significantly changed in the Reno area (current trend and paradigm shift). With the long-term decline in the relative importance of leisure and hospitality in northern Nevada, the question arises, “What has been powering our economic growth in the region, and which sectors hold the promise of economic recovery from the current recession. Industry graphs and comments are included on the following pages.

- Leisure and Hospitality in the Reno area has been, on average, losing 970 jobs per year since 2000.
- Construction boomed with the real estate bubble, but has lost 14,700 jobs in the region since it peaked in 2006, or an average of over 3,600 jobs per year during the last 4 years.
- Professional and Business Services has been one of the primary drivers of economic growth in the region. This category includes a portion of Advanced Logistics, Life Sciences, and Software – industries identified in the Target2010 study. Some of the businesses in this sector serve local clientele, but the growth of this sector at a rate greater than the growth in total employment leads to the conclusion that some of the businesses in this sector are primary industries – that is they “export” services and import money into the region. Over the past 20 years, this sector has, on average, created 670 jobs per year in the Reno MSA.
- Education and Health Services appears to have been another driver of economic growth in the region. To the extent that Reno serves as a regional hub for these types of services, this industry sector is a primary industry. From the overview data, it is difficult to tell to what extent employment growth in health services is driven by an aging population, the general increase in technology (and thus more services) in the field, and/or by exporting services to individuals residing outside the region. Education typically is mostly driven by local demand, but to the extent that this sector attracts students and/or research funds from outside the region, it is a primary industry. Both UNR and DRI receive significant and generally increasing amounts of research funding.
- Manufacturing generally is a primary industry. The northern Nevada region has fared better than most of the U.S. for manufacturing employment – with manufacturing employment slightly growing over the past 20 years until the current recession started. None-the-less, as a percentage of total employment, manufacturing has been declining in the region since 1998. Advanced manufacturing was one of the target industries identified in the Target2010 study.
- From the Target 2010 Study commissioned by EDAWN and completed by Angelou Economics, several observations are set forth below. The report is not paginated so sections are indicated where the quotes can be found.

    <u>Workforce Assessment</u>

    - “The three largest occupational categories in Northern Nevada are retail salespersons, maids and housekeeping cleaners and cashiers
    - Of the 30 largest occupational categories in Northern Nevada, the average wage is relatively low ($28,573) and only 15% of those jobs require a bachelor’s degree.
    - Although these top 30 occupations are fast growing, their low wages and educational requirements will not help the region attract a more skilled workforce. This will continue to put additional pressure on the workforce as cost of living rises.”

Educational Attainment

- “College does not seem to be an option that is widely promoted in the region – also evidenced by the low percentage of high school students that take the SAT.”

Business Climate

- Issue 3: Growing cost of living to push wages up, tempering tax advantages for businesses.

  “This increasing cost trend could actually translate into a positive impact if the region is more targeted on specific industries that are less susceptible to higher costs. These industries also tend to be those that are higher value added, higher growth, and support higher wage jobs. Because their profit margins are thicker, they tend to be less concerned about operating costs than they are about access to a high quality workforce, R&D assets, and high quality of life.”

- Issue 4: Local government over-reliance on sales tax revenue.

  “Nevada’s lack of taxing instruments (i.e. no corporate income tax, personal income tax, or inventory tax, etc.) has had the effect of increasing the reliance on sales tax revenue to local jurisdictions. While its pro-business tax climate has been an attractive selling point for Nevada, it has created a situation in which local jurisdictions place higher value on retail businesses because of their sales-tax generating ability. In interviews with local municipalities, it was revealed that attracting a large shopping center or retail business is more important because of the greater tax benefit than attracting traditional primary industries.”

Business Climate Summary

- “By positioning itself as a ‘low cost’ location, Northern Nevada runs the risk of losing its business base to a lower cost region in the United States or abroad.”

The full report can be found on the Internet at target2010. The State General Fund is in the same situation with its over-reliance on sales and gaming taxes. This wasn’t too bad, even though gaming is a low-tech, low wage industry, when gaming was a high growth industry. Both state and local governments are inclined to encourage high tax yielding growth at the expense of high wage industries that require an educated labor force. Unfortunately, the low wages generate low tax yields per person

- Our region faces employment challenges that could be broken into two segments: 1) short-term to intermediate term job creation for those individuals who have been or are being displaced in the construction and leisure and hospitality industries, as well as those losing jobs in other industries due to the ripple effects of the recession; and 2) long-term economic growth in industries that pay above-average wages and otherwise add value to the community.

CONSEQUENCES / IMPLICATIONS:

- ➔ In the long term, creating economic growth with high-value high-wage industries will follow the pathways demonstrated by those regions of the country which have experienced such growth over the past few decades. It requires investment in education, building linkages between local businesses and research elements in the institutions of higher education, and encouraging / supporting entrepreneurship. Unfortunately the results of these activities typically develop over an extended period of time, so --- if appropriate actions are taken for this kind of economic development -- it will not create jobs in the next few years to replace those being lost due as a result of long-term underlying trends and the current recession.
- ➔ Short-term to intermediate-term possible solutions to job creation:

  - Renewable energy: Many people are touting renewable energy as the key to economic recovery in the region. In the face of long-term trends regarding fossil fuels, renewable energy has promise. It offers the economic benefit of “import substitution.” Since Nevada produces very little fossil fuel, almost all of our energy consumption involves exporting money. To the extent that some of these dollars can be retained in Nevada and spent on other things, they represent the same type of impact that imported money (from base industries) would provide to the state. However, it terms of job creation, unless Nevada can be the location of facilities manufacturing components for renewable energy systems or assembling renewable energy systems for export, the job creation will mostly be the temporary employment associated with construction. For example, the combined statewide employment of all the geothermal firms with operations in Washoe County is under 500 employees – including management and operations. Wind farms don’t need many operational employees. Solar photovoltaic facilities don’t require many operational employees – just a little maintenance and someone to clean the glass occasionally.

  - Energy efficiency: While not as generating as much enthusiasm (or governmental subsidies) as renewable energy, energy efficiency represents a significant import-substitution opportunity. With the huge stock of residential and commercial buildings that could benefit from modest energy-efficiency improvements, the construction activity associated with implementation could last for years and years.

  - Opportunities for Nevada to have new “monopolistic circumstances”, as it enjoyed with gaming for so many years:
    - ➢ Nuclear waste reprocessing and storage: This is a highly controversial area. From an industry competitiveness perspective, if Nevada were to go down this path, it likely would have no competition in the U.S for the foreseeable future.
    - ➢ Municipal waste recycling and storage: Due to the difficulty in getting new landfills approved, the likelihood of any new landfills being approved in California is extremely low. Rather than becoming the destination of waste that cannot be economically recycled at this time, perhaps Nevada could structure its landfill policies and fee structure so that it received one-hundred percent of the municipal waste stream – providing employment for sorting, recycling and disposal. The recycled waste stream might cause some manufacturing industries to locate in Nevada to be near their material source.

  There may be other opportunities to either create monopolies or to leverage existing resources and circumstances to generate short-term economic prosperity. We need to make sure that our public policies are altered to match what we would like to accomplish, and this time, use our monopoly status to fund the investments required for long-term economic prosperity.

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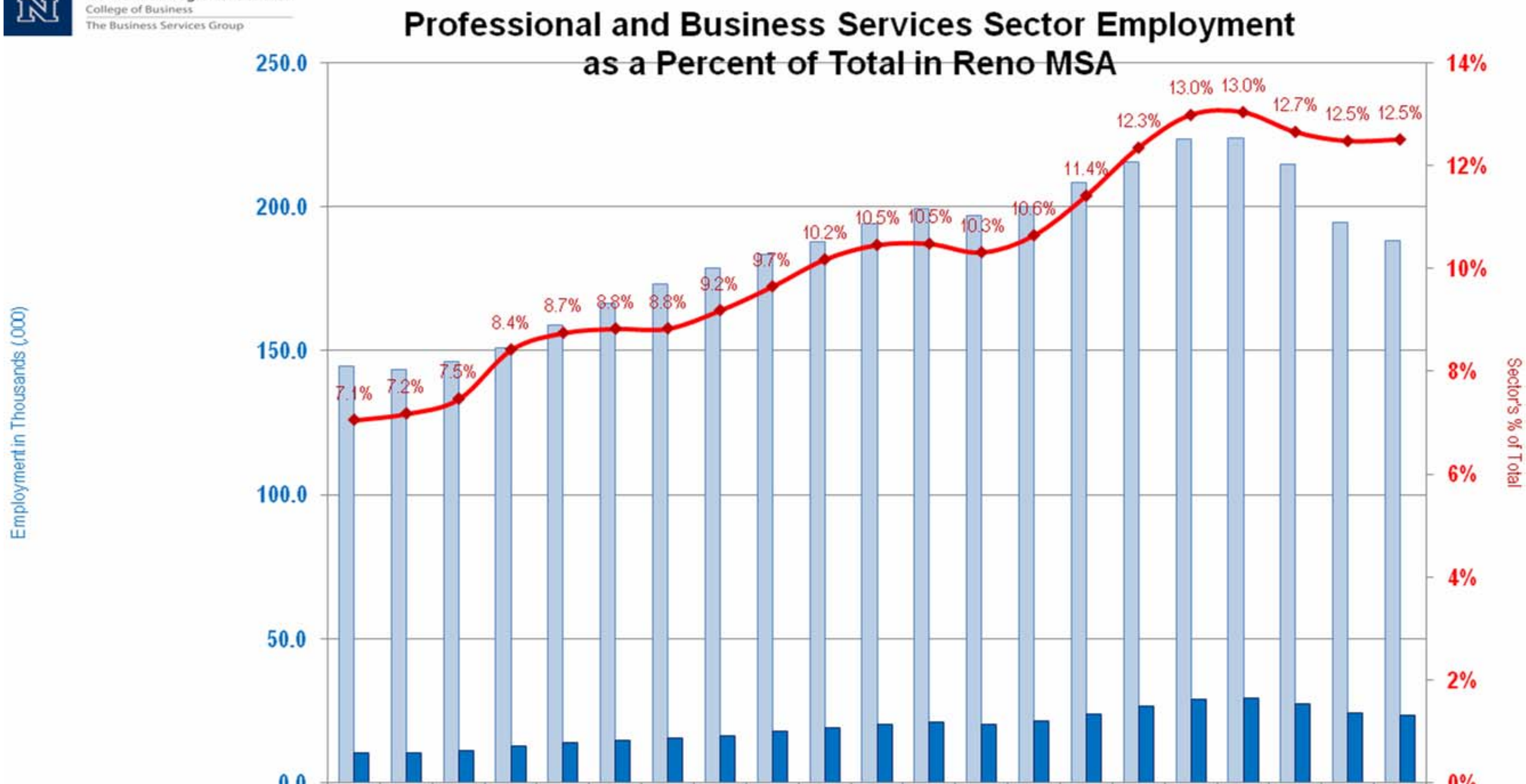

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total Employment - All Industries	144.6	143.5	146.0	150.8	158.9	166.5	173.2	178.5	183.4	187.7	194.1	199.4	196.8	200.1	208.5	215.4	223.3	223.9	214.9	194.7	188.3
Professional & Business Services	10.2	10.3	10.9	12.7	13.9	14.7	15.3	16.4	17.7	19.1	20.3	20.9	20.3	21.3	23.8	26.6	29.0	29.2	27.2	24.3	23.6
Percent of Total Employment	7.1%	7.2%	7.5%	8.4%	8.7%	8.8%	8.8%	9.2%	9.7%	10.2%	10.5%	10.5%	10.3%	10.6%	11.4%	12.3%	13.0%	13.0%	12.7%	12.5%	12.5%

Professional and Business Services has been one of the primary drivers of economic growth in the region, with its contribution to total employment nearly doubling from 7.1 % in 1990 to 13% in 2007. Since 2007, this sector has lost about 5,600 jobs, representing a 19% decrease – and thereby significantly contributing to the current recession locally. This may be due to losses in those professional and business services utilized by the construction and real estate industries. This category includes a portion of Advanced Logistics, Life Sciences, and Software – industries identified in the Target2010 study.

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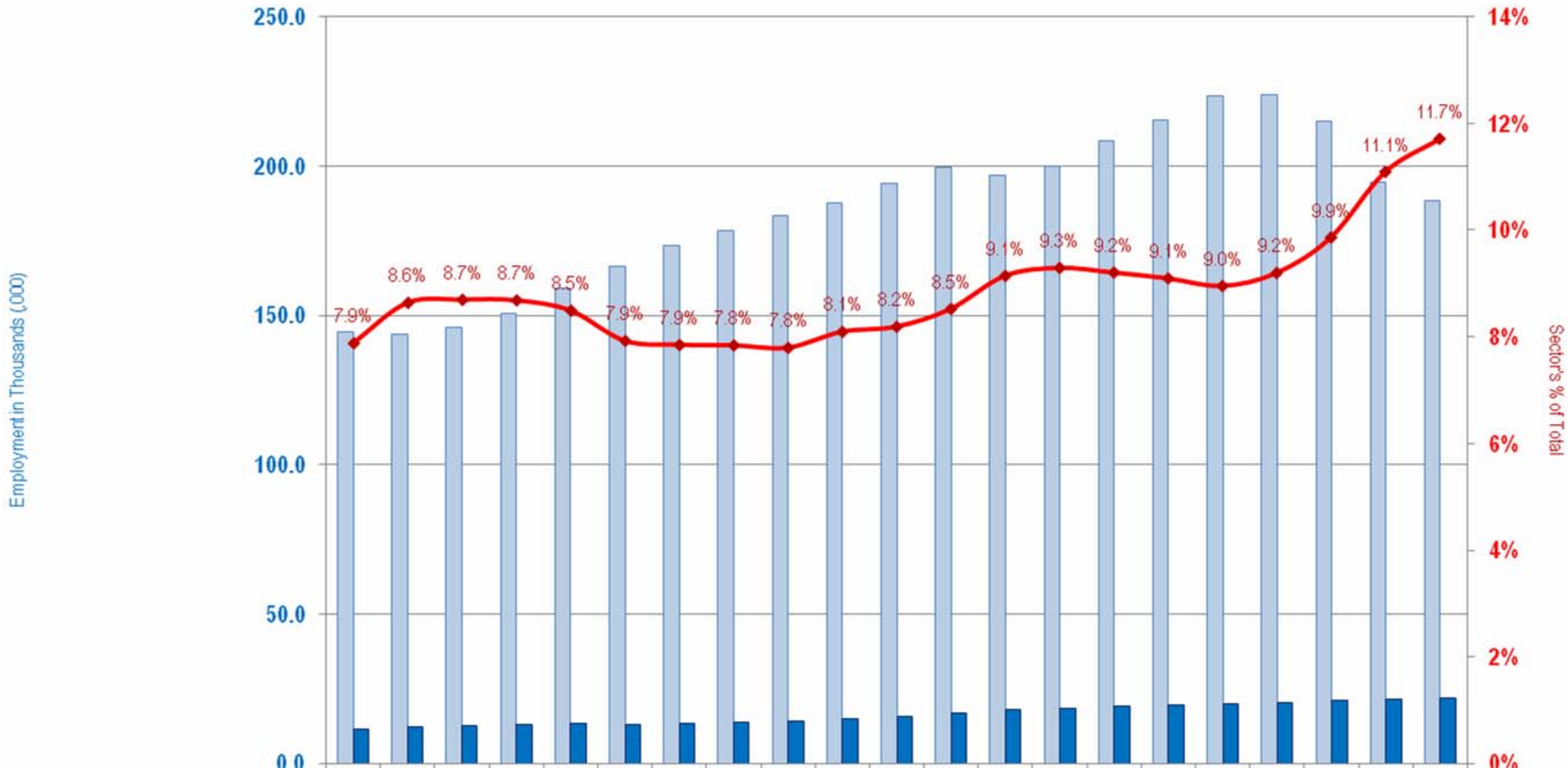
Education and Health Services Sector Employment as a Percent of Total in Reno MSA



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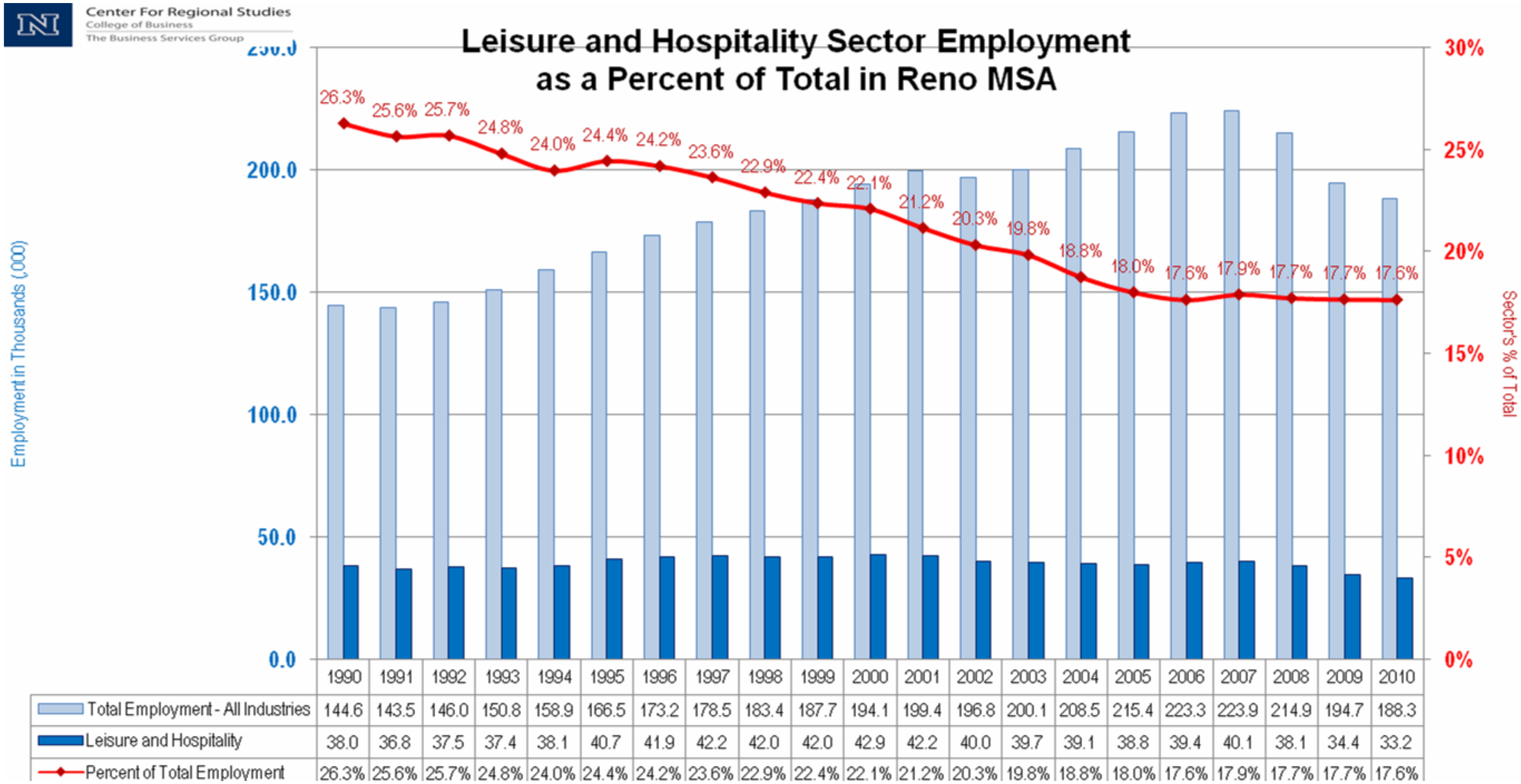
Education and Health Services	11.4	12.4	12.7	13.1	13.5	13.2	13.6	14.0	14.3	15.2	15.9	17.0	18.0	18.6	19.2	19.6	20.0	20.6	21.2	21.6	22.1
Percent of Total Employment	7.9%	8.6%	8.7%	8.7%	8.5%	7.9%	7.9%	7.8%	7.8%	8.1%	8.2%	8.5%	9.1%	9.3%	9.2%	9.1%	9.0%	9.2%	9.9%	11.1%	11.7%

Education and Health Services has been a driver of economic growth in the region. Employment has increased in this sector every year since 1990 with the exception of 1995, even during the current recession. Between 1991 and 2001the growth in this sector mostly matched the overall growth in the economy, representing 8.6% of total employment in 1991 and 8.5% of total employment in 2001. However, since 2001 this sector has increased its relative contribution to reach 11.7% of total employment in 2010.



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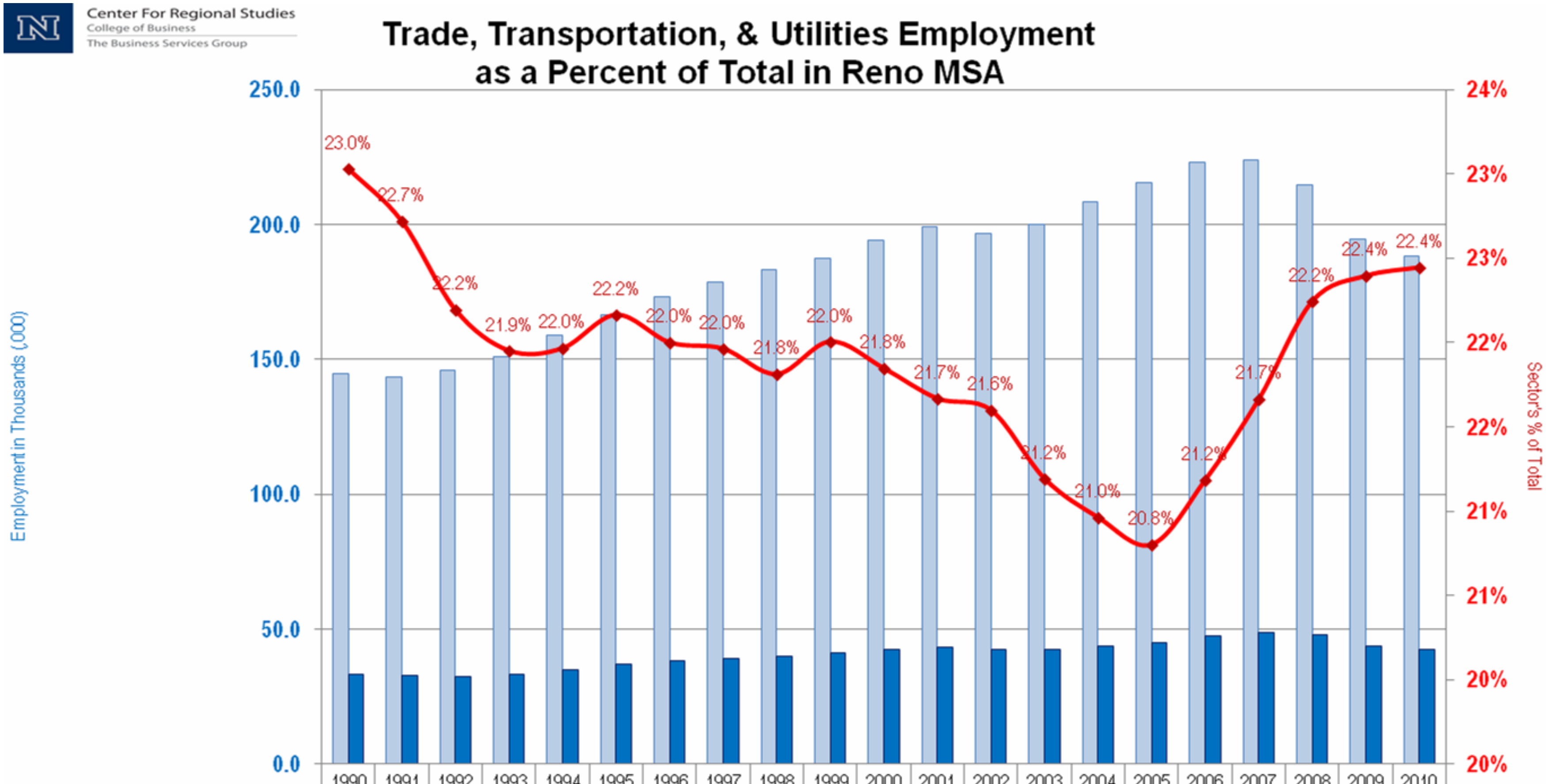
Leisure and Hospitality	38.0	36.8	37.5	37.4	38.1	40.7	41.9	42.2	42.0	42.0	42.9	42.2	40.0	39.7	39.1	38.8	39.4	40.1	38.1	34.4	33.2
Percent of Total Employment	26.3%	25.6%	25.7%	24.8%	24.0%	24.4%	24.2%	23.6%	22.9%	22.4%	22.1%	21.2%	20.3%	19.8%	18.8%	18.0%	17.6%	17.9%	17.7%	17.7%	17.6%

Leisure & Hospitality (L&W includes hotel-casinos) has declined in importance.

- For about 50 years the leisure and hospitality industry was the primary economic deriver in the Reno area, providing direct employment for over one out of every four workers (>26%) in 1990.
- After 1990 the growth rate for L&H dropped below the rate for overall economy so that by 2001, this industry provided employment for about one out of every five workers (~ 18%).
- Since 2001, L&H employment has decreased significantly, with total industry employment dropping back to 1990 levels in 2008. The decreases in L&H employment during the current recession essentially matches (and contributes to) the rate of contraction in total employment.



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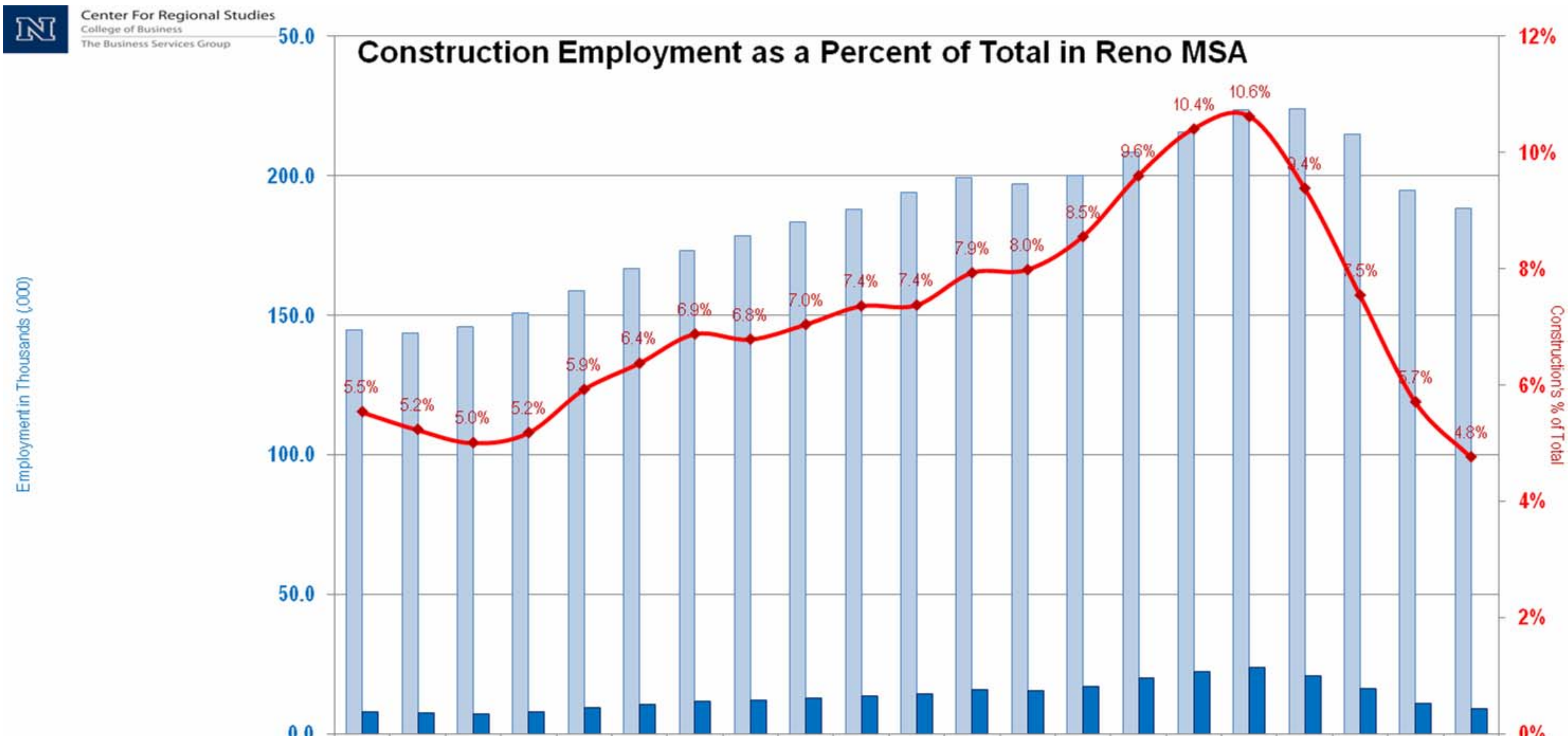
Trade, Transportion & Utilites	33.3	32.6	32.4	33.1	34.9	36.9	38.1	39.2	40.0	41.3	42.4	43.2	42.5	42.4	43.7	44.8	47.3	48.5	47.8	43.6	42.3
Percent of Total Employment	23.0%	22.7%	22.2%	21.9%	22.0%	22.2%	22.0%	22.0%	21.8%	22.0%	21.8%	21.7%	21.6%	21.2%	21.0%	20.8%	21.2%	21.7%	22.2%	22.4%	22.4%

Trade, Transportation & Utilities (TT&U) includes Wholesale, Retail, Transportation, Warehousing and Utilities and has generally been decreasing in its contribution to the overall economic growth of the region. Relative to total employment, this category has fluctuated from a high of 23% in 1990, to a low of 20.8% in 2005, and back to 22.4% in 2010 with the recent "resurgence" resulting from the higher rate of decrease in total employment compared to a slower rate of decrease in TT&U from 2006 to present. This category includes the generation of power using renewable energy, as well as some portion of the logistics industry (Clean Energy and Advance Logistics were two of the six Target2010 categories).



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Construction	8.0	7.5	7.3	7.8	9.4	10.6	11.9	12.1	12.9	13.8	14.3	15.8	15.7	17.1	20.0	22.4	23.7	21.0	16.2	11.1	9.0
Percent of Total Employment	5.5%	5.2%	5.0%	5.2%	5.9%	6.4%	6.9%	6.8%	7.0%	7.4%	7.4%	7.9%	8.0%	8.5%	9.6%	10.4%	10.6%	9.4%	7.5%	5.7%	4.8%

Construction generally is not a driver of long term economic growth in a region but represents a response to growth driven by primary industries and the ripple effect of those industries. To the extent that construction occurs on a speculative basis it can become a short-term driver of job creation, but this effect is of limited duration. The employment figures associated with the construction industry in the region emphatically demonstrate both the impact of high growth followed by a recession and the implosion of speculative construction.

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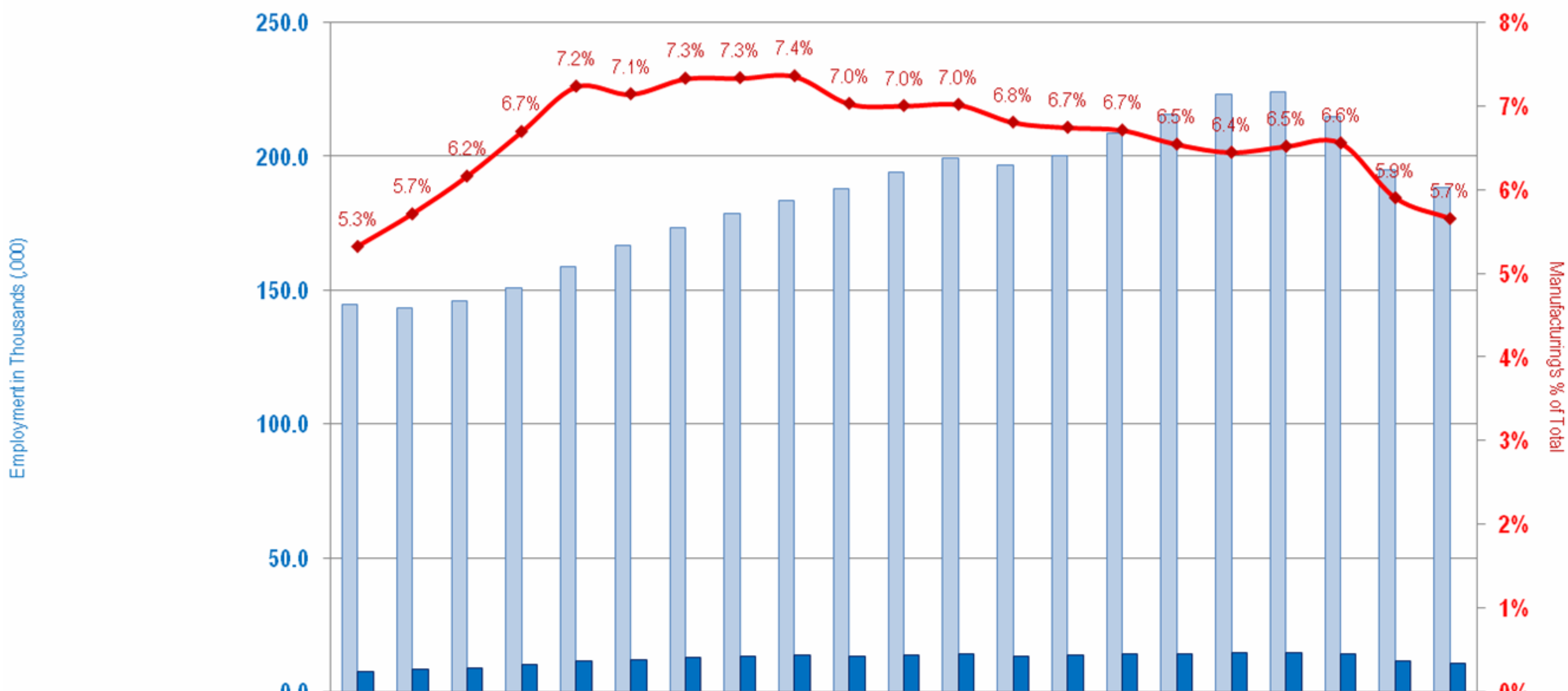
Manufacturing Employment as a Percent of Total in Reno MSA



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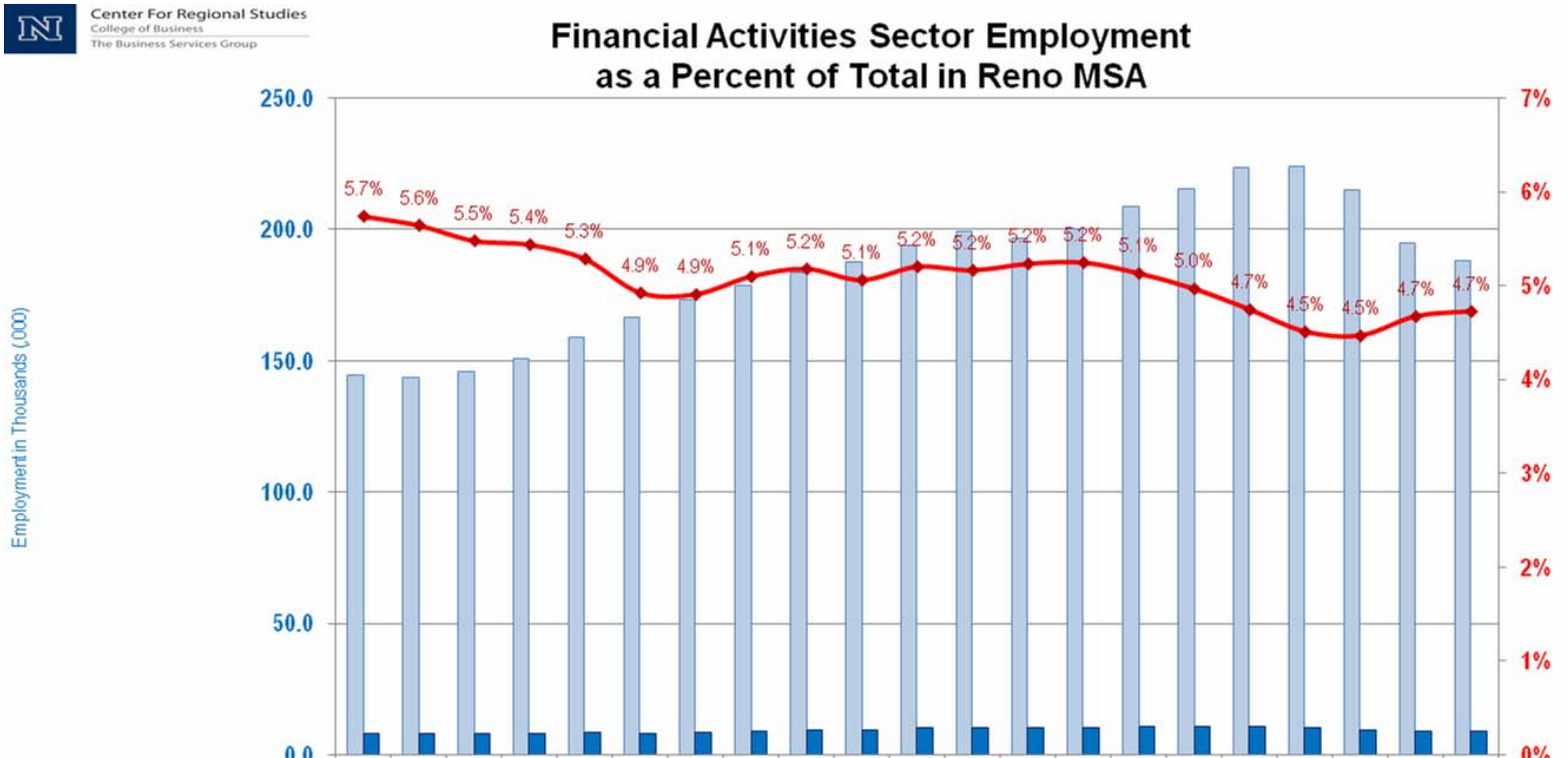
Manufacturing	7.7	8.2	9.0	10.1	11.5	11.9	12.7	13.1	13.5	13.2	13.6	14.0	13.4	13.5	14.0	14.1	14.4	14.6	14.1	11.5	10.7
Percent of Total Employment	5.3%	5.7%	6.2%	6.7%	7.2%	7.1%	7.3%	7.3%	7.4%	7.0%	7.0%	7.0%	6.8%	6.7%	6.7%	6.5%	6.4%	6.5%	6.6%	5.9%	5.7%

Manufacturing employment has been in a long-term decline in the U.S., with Nevada "bucking this trend" between 1990 and 2007 by increasing employment from7,700 jobs in 1990 to 14,600 jobs in 2007 – with its contribution to total employment fluctuating in a relatively tight range between 5.3% in 1990 to 7.4% in 1998, and to 6.5% in 2007. Since 2007 contraction in manufacturing employment has exceeded the overall rate of employment contraction, representing 5.7% of total employment in 2010. Advanced manufacturing was one of the target industries identified in the Target2010 study.



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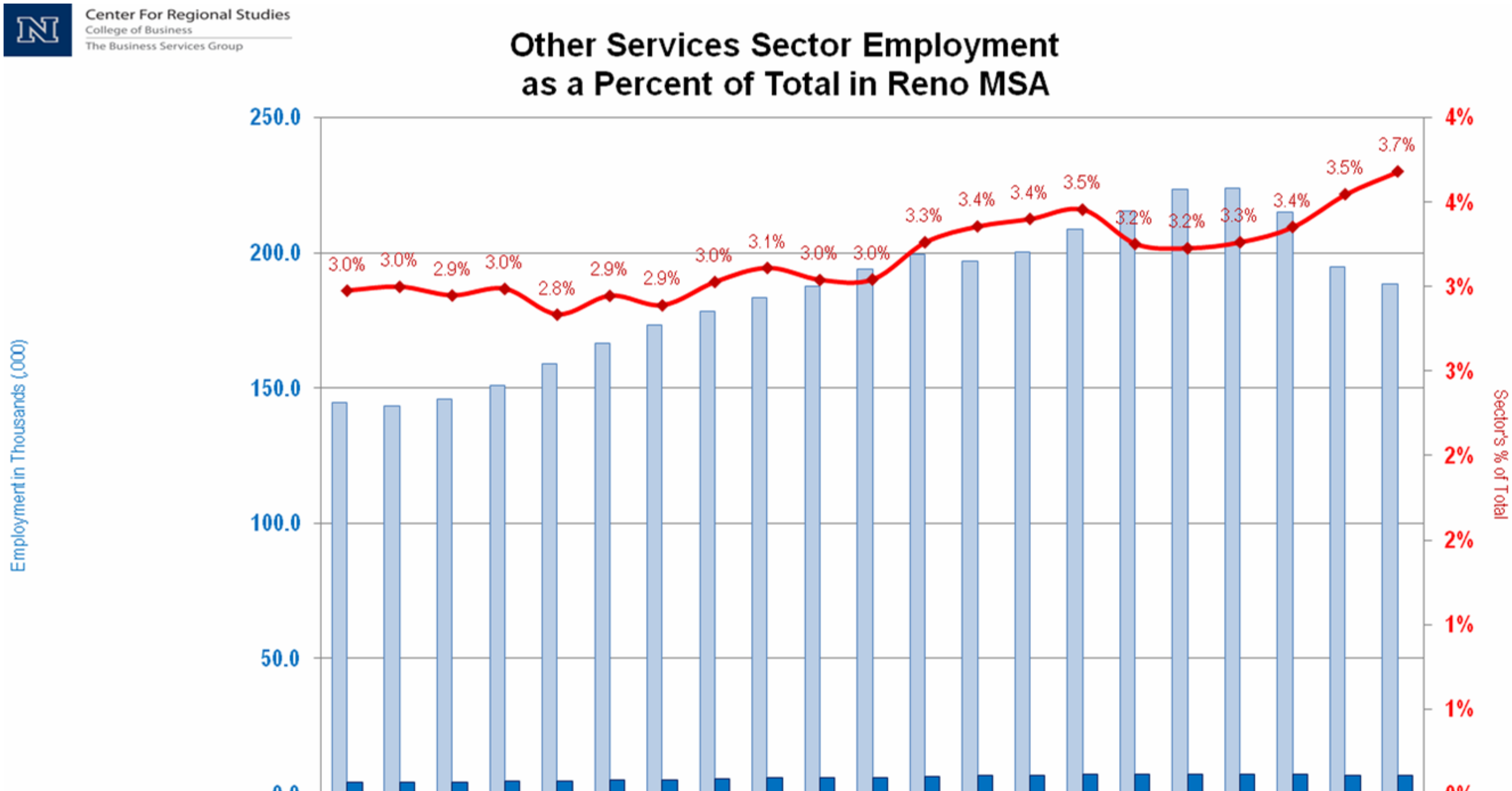
Financial Activites	8.3	8.1	8.0	8.2	8.4	8.2	8.5	9.1	9.5	9.5	10.1	10.3	10.3	10.5	10.7	10.7	10.6	10.1	9.6	9.1	8.9
Percent of Total Employment	5.7%	5.6%	5.5%	5.4%	5.3%	4.9%	4.9%	5.1%	5.2%	5.1%	5.2%	5.2%	5.2%	5.2%	5.1%	5.0%	4.7%	4.5%	4.5%	4.7%	4.7%

The Financial Activities sector has been on a long-term general decline in its relative importance to regional employment, decreasing from 5.7% in 1990 to 4.5% in 2006. A recent resurgence to 4.7% in the face of actual contraction (1,700 jobs lost) resulted by this sector declining at a slower rate than the overall economy. Financial Services was one of target the industries identified in Target 2010.



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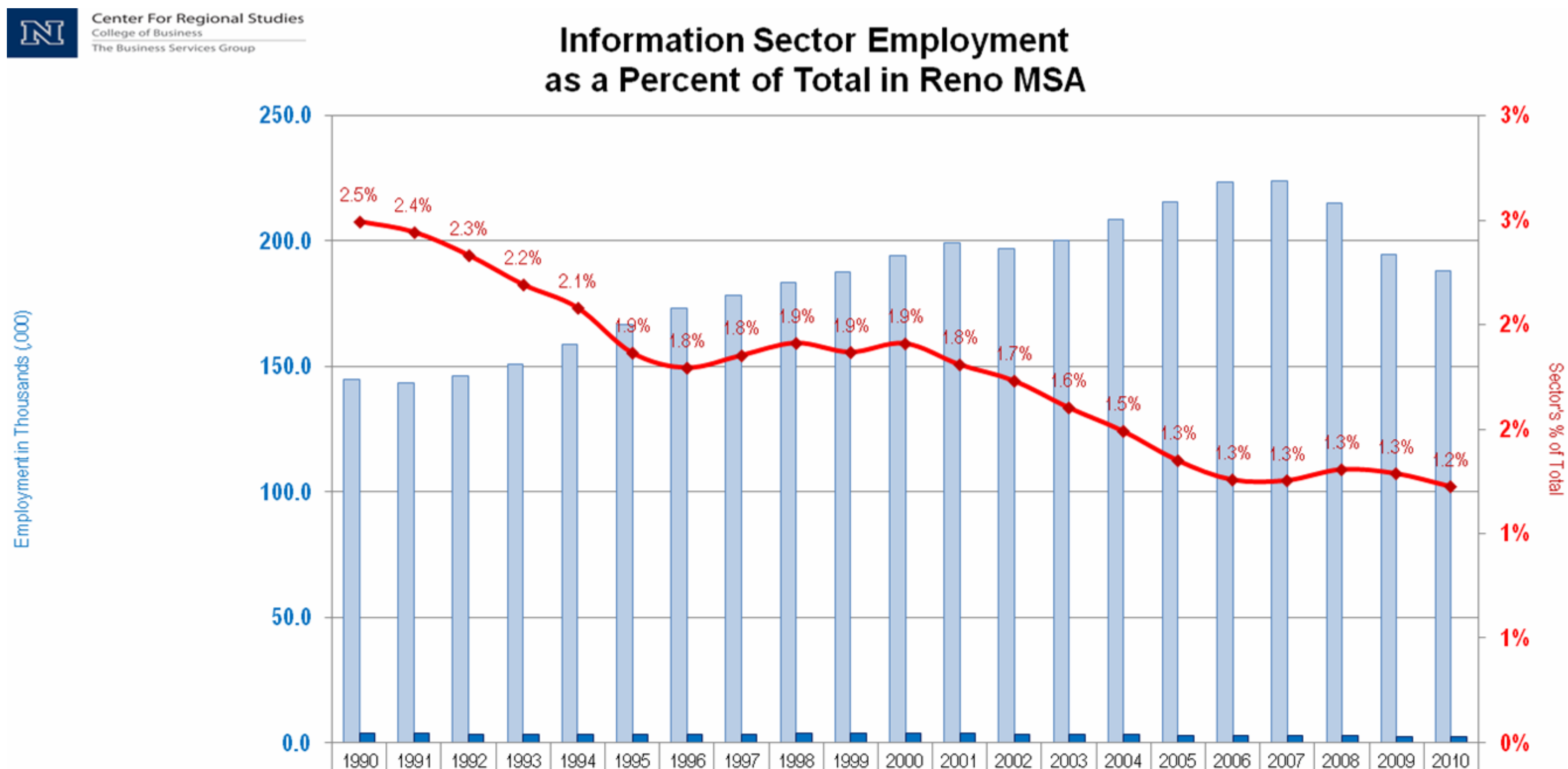
Other Services	4.3	4.3	4.3	4.5	4.5	4.9	5.0	5.4	5.7	5.7	5.9	6.5	6.6	6.8	7.2	7.0	7.2	7.3	7.2	6.9	6.9
Percent of Total Employment	3.0%	3.0%	2.9%	3.0%	2.8%	2.9%	2.9%	3.0%	3.1%	3.0%	3.0%	3.3%	3.4%	3.4%	3.5%	3.2%	3.2%	3.3%	3.4%	3.5%	3.7%

Other Services includes such occupations as auto repair, beauticians, dry cleaners, handyman, janitorial, pet care, religion, and cemeteries. This sector has been a moderate contributor to job growth in the region, matching the region's growth from 199o through 1999, and then slightly exceeding the rate of growth through 2004. Job losses since 2007 have been at a slower rate than the rate of decline in total employment.



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Information	3.6	3.5	3.4	3.3	3.3	3.1	3.1	3.3	3.5	3.5	3.7	3.6	3.4	3.2	3.1	2.9	2.8	2.8	2.8	2.5	2.3
Percent of Total Employment	2.5%	2.4%	2.3%	2.2%	2.1%	1.9%	1.8%	1.8%	1.9%	1.9%	1.9%	1.8%	1.7%	1.6%	1.5%	1.3%	1.3%	1.3%	1.3%	1.3%	1.2%

Information has been on a long term decline since 1990, dropping from 3,600 jobs in 1990 to 2,300 jobs in 2010. Software which was another of the Target2010 industries, is partially included in the Information sector (software publishing), partially included in Trade, Transportation and Utilities (licensing and channel sales), and partially included in professional services (programming).

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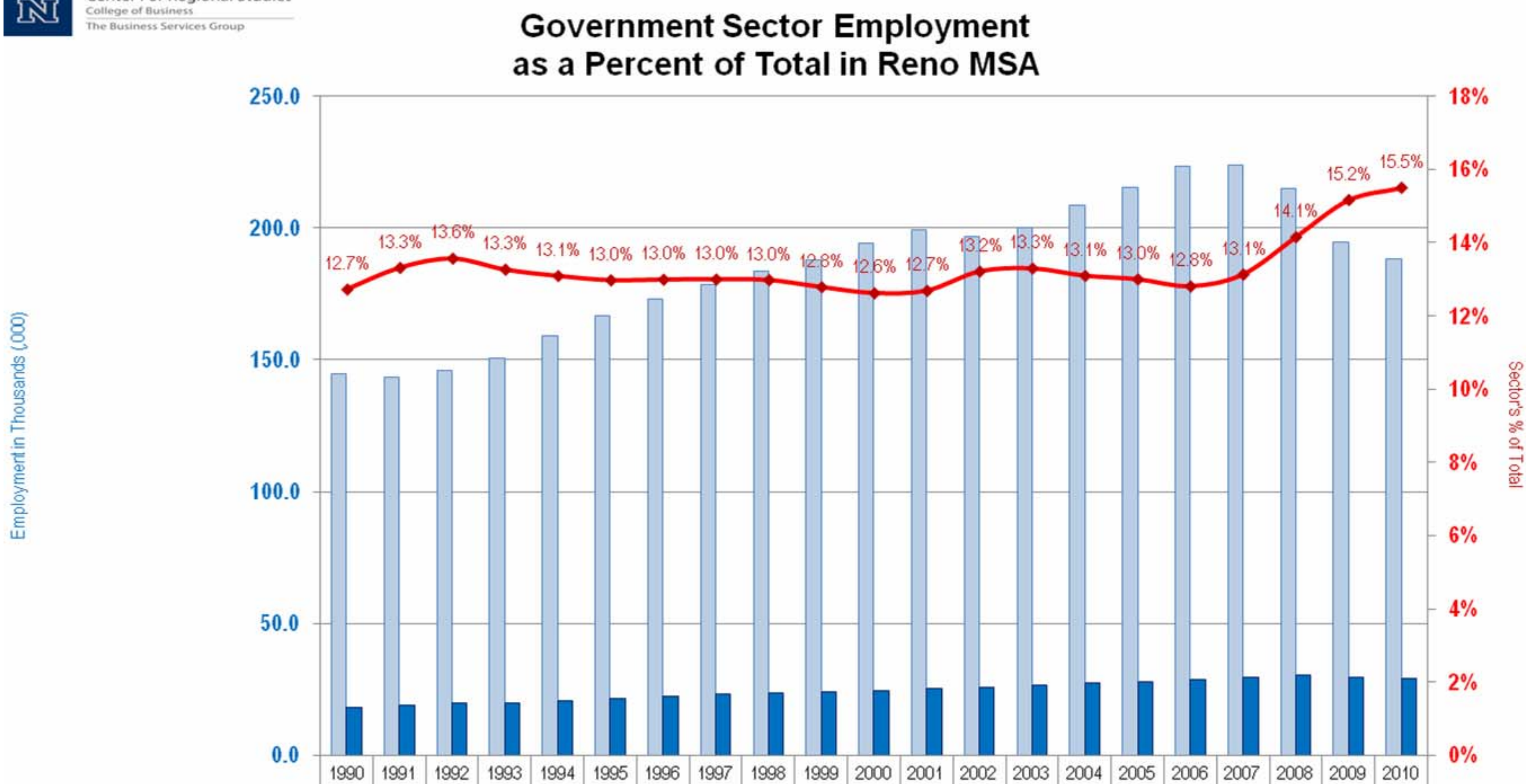

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Government	18.4	19.1	19.8	20.0	20.8	21.6	22.5	23.2	23.8	24.0	24.5	25.3	26.0	26.6	27.3	28.0	28.6	29.4	30.4	29.5	29.2
Percent of Total Employment	12.7%	13.3%	13.6%	13.3%	13.1%	13.0%	13.0%	13.0%	13.0%	12.8%	12.6%	12.7%	13.2%	13.3%	13.1%	13.0%	12.8%	13.1%	14.1%	15.2%	15.5%

Government employment has not been an economic engine in the region. Generally the state and local employment has closely tracked population growth. Demand for many government services tends to be counter-cyclical, with the greatest need occurring when the economy contracts, but funding for government services (tax revenues) follows the economic cycle with a little lag time. Total employment peaked in 2007, while both state and local government-sector employment peaked in 2008 and have been declining since (although not as quickly as total employment).