

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

A STEP TOWARDS SUSTAINABLE ECONOMIC DEVELOPMENT
IN NEVADA

September 2011

Prepared for:



Prepared by:

DR. ALAN M. SCHLOTTMANN, PH.D.
PROFESSOR OF ECONOMICS-UNLV DEPARTMENT OF ECONOMICS

&

The logo for RCG Economics is enclosed in a thin black rectangular border. It features the letters "RCG" in a large, bold, green, sans-serif font, with the word "ECONOMICS" in a smaller, bold, green, sans-serif font directly below it.

**RCG
ECONOMICS**

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

TABLE OF CONTENTS

	PAGE
EXECUTIVE SUMMARY	<i>i</i>
I. BACKGROUND & INTRODUCTION: THE CURRENT ECONOMIC SITUATION	1
<i>a. Importance of Creating Sustainable Jobs</i>	<i>1</i>
<i>b. Driving Economic Development & Diversification in Nevada.....</i>	<i>2</i>
<i>c. Recent New Workforce Development Legislation</i>	<i>5</i>
II. TARGETING FUNDING FOR SOCIO-ECONOMIC INFRASTRUCTURE: THE ROLE OF CLUSTER DEVELOPMENT AND HIGHER EDUCATION	8
<i>a. Clusters and Economic Development of Southern Nevada</i>	<i>8</i>
<i>b. Opportunities for Higher Education</i>	<i>9</i>
III. LEVERAGING FEDERAL WORKFORCE TRAINING FUNDS TO ASSIST EMPLOYERS TO INCREASE HIRING	14
<i>a. What is the Workforce Investment Act ("WIA") – Traditional Funding Structure.....</i>	<i>14</i>
IV. A LESSON FOR SUCCESS – EXPANDED TRAINING PRACTICES	20
<i>a. Coordination in Pittsburgh: The Pennsylvania System</i>	<i>20</i>
<i>b. An Example in Southern Nevada: Healthcare</i>	<i>22</i>
V. CONCLUSIONS & OBSERVATIONS.....	24
APPENDIX A: EMPLOYMENT DATA	A-1

LIST OF ILLUSTRATIONS

APPENDIX A

	PAGE
CHART A-1: TOTAL NONFARM EMPLOYMENT, OVER-THE-YEAR PERCENT CHANGE, UNITED STATES AND NEVADA (SEASONALLY ADJUSTED DATA), MAY 2002-2011	A-2
CHART A-2: U.S. AND NEVADA EMPLOYMENT BY INDUSTRY (SEASONALLY ADJUSTED DATA), MAY 2011	A-3
CHART A-3: OVER-THE-YEAR PERCENT CHANGE IN EMPLOYMENT BY INDUSTRY, UNITED STATES AND NEVADA (SEASONALLY ADJUSTED DATA), MAY 2010 VS. MAY 2011	A-4
CHART A-4: NEVADA INDUSTRIES BY GROWTH RATE, NUMBER OF EMPLOYEES, AND AVERAGE ANNUAL WAGES, Q4 2005 – Q4 2010	A-5
CHART A-5: NEVADA LONG TERM INDUSTRIAL EMPLOYMENT AND PROJECTIONS, 2008-2018.....	A-6

“For businesses already operating in Nevada, we want you to know that our focus is on your growth. Roughly 80 percent of new jobs will be created by local businesses, & we need every one of them to put Nevadans back to work.”

*Governor Brian Sandoval
State of the State Address
January 24, 2011*

This white paper assesses the opportunities for the Nevada System of Higher Education (“NSHE”) to increase its participation as a strategic partner in Nevada’s workforce development, job training and placement efforts in order to help create occupations that lead to a sustainable Nevada economy.

The issues presented here are part of an emerging discussion in state economic development policy circles, namely the role of job training dollars to promote and improve “internal” job growth among existing state employers. Concurrently, there is also the question of what restructuring is possible at the local level to promote enhanced employment opportunities for current residents through improved training efficiencies.

This discussion is occurring at an opportune time for both the State and higher education given that the Nevada Governor’s Workforce Investment Board has recommended a sector (business clusters) strategy for training to promote economic diversification. The important links between higher education and economic diversification have been addressed in several recent reports.¹ Utilizing workforce training as part of these efforts broadens potential State strategies.

A focus on enhancing the skills of the work force at existing companies is a significant shift in traditional economic development policy and thinking. Historically, most economic development has been focused on “external” or “new” growth. That is, how does a state “capture” a company in another state through relocation by financial and other inducements? Developing existing businesses has, of course, always been recognized as a

¹ “Nevada’s New Workforce for Economic Prosperity: Strategic Planning Framework, 2010-2014.”, January 2010 Also see the two separate reports titled “Higher Education and Economic Development: The Necessary Foundation” and “Education and State Economic Growth: The Fundamental Linkage” at Office of the President, UNLV, <http://go.unlv.edu/budget/docs>.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

valuable concept in general terms, but the implementation of specific policies to promote this effort has lagged relative to traditional economic development strategies.

Thus, this white paper is focused on the notion of the “development” of existing companies in Nevada rather than economic growth per se (i.e., the relocation and attraction of out-of-state firms to Nevada). This distinction is more than semantics; it implies an attempt to utilize the strengths of the state’s business community and workforce as the basis for enhancing Nevada’s economic development potential.

An important shift for higher education in the new training paradigm of State workforce initiatives is the ability to use training funds within an expanded concept of on-the-job-training (“OJT”). Until now, state and federal training dollars have primarily focused on entry-level positions and basic job skills. Expanding OJT to include both technical skill enhancement and position upgrading through a “career ladder” allows higher education programs to be designed and funded as training programs directly for targeted business sectors. In general, training was traditionally in short-term training opportunities, such as basic skills required by, for example, the hospitality industry. Given the expansion of Nevada’s hospitality and construction sectors during boom times, these trainees could readily find a position. Now that an expanded concept of OJT is recognized as a “training activity”, it allows the conceptualization of new ways to use OJT for more technical and professional positions in support of targeted industry sectors to enhance the State’s economic development efforts. However, higher education needs to aggressively coordinate these new efforts with targeted business clusters.

Due to the current economic situation, employers are unable to invest in sophisticated training programs that provide the needed skills in engineering, health care, manufacturing techniques or management. With new avenues for OJT, higher education can now become more of an active partner in designing advanced training. Advanced skill training within an expanded OJT program is a vehicle to incentivize employers, not only to upgrade existing employees, but also to hire those individuals with skill gaps that can be trained in lieu of “experience”, knowing that they will receive subsidized wages to provide firm-specific skills with a breadth and depth that has not occurred in the past. Higher education can assist in designing these programs to assist with these initiatives. Rather than primarily investing in entry-level training opportunities which may not lead to a job, OJT, as a workforce

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

development strategy in conjunction with higher education, can lead to relatively high wage paying jobs.

More importantly, a worker who upgrades skills in engineering, health care, manufacturing techniques or management creates a “job opening” in the position that individual left. This allows another Nevada resident to fill the vacant position. In other words, training existing workers leads to a possible “two for one” employment opportunity for the State. Higher educations can assist in providing these opportunities in providing enhanced “training for jobs”. However, this will require the Nevada System of Higher Education (“NSHE”) to develop new proposals for State and federal funding in a coordinated and more involved effort with the Workforce Investment Board. In addition, NSHE efforts may well involve program offerings that are not necessarily degree granting or traditional credit courses but an expanded role in certification.

Employers, nationwide and regionally, are having difficult times filling certain technical occupations with workers with the required skills. Fields like health care, information technology and advanced manufacturing have available jobs and solid career paths that are often not taken by members of the existing local workforce due to a lack of the necessary skills and qualifications. This highlights a positive aspect of the emerging workforce concepts for Nevada residents. Even with high unemployment, there has always been a “Catch -22” where many people apply for jobs but without the required skills. This leads to a public policy paradox where State employers recruit new employees from out-of-state; not helping Nevada’s unemployment problems. Now a mechanism exists to directly tackle the skill mismatch.

Thus, access to both higher education and OJT has become even more critical for employees to obtain the required skills and for businesses to remain competitive.² Related to the above is the increasing interest by state public workforce agencies during the last decade in the use of cluster-based strategies for workforce development as a way to more efficiently focus their limited resources, especially during challenging economic times³.

² U.S. Department of Labor, Employment and Training Administration’s Five-Year Pilot, Demonstration and Evaluation Strategic Plan for 2007-2012.

³ Harper-Anderson, E. *Measuring the Connection Between Workforce Development and Economic Development: Examining the Role of Sectors for Local Outcomes*. *Economic Development Quarterly*, 22 (2). May 2008, 119-135.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

As noted, higher education has been shown to be integral to a general strategy of economic development, but it can also expand its educational role to address current workforce limitations through OJT. This will, of course, require coordination with industry leaders, as well as state development and workforce training agencies. Such coordination will likely involve and require NSHE to take a more direct and recognizable role with the targeted business clusters and the Workforce Investment Board.

As presented in this white paper, several cities and states have worked with existing local employers to use training dollars to upgrade local worker skills. These efforts have been of particular note in Utah and North Carolina. The implementation strategies are designed to attain the goal of creating quality job opportunities for existing members of the local labor force. Within the health care sector, some cities and regions have worked to utilize training dollars with existing employees to evolve nursing assistants into practical nurses, and then into enrollment in registered nursing degree programs at higher education institutions. This then allows the capture of the “two for one” employment change noted above.

These efforts are experimenting with new types of training to create strong linkages and interdependencies among industry and manufacturers, technical colleges and research institutions. In a general sense, this can be accomplished in four ways. Each requires an integrated State-industry-higher education partnership:

1. If an effective industry-higher education partnership can be established with well-defined programs for targeted economic clusters , providing increased dollars directly to higher education to design and implement programs in “hands-on” internship-based curricula can include training for traditional students and those “at work” in the industry.⁴
2. Industry sectors using training dollars to support employees with short-term educational courses developed in conjunction with higher education, or to utilize existing curriculum opportunities. Specifically, using “incumbent training waivers” for current employees allows the use of traditional training funds to provide skills for career advancement through career laddering for Nevadans in contrast to traditional

⁴ With a State program in-place and implementation strategy, developmental funds for aiding workforce development for high-growth clusters are available through DOL programs as the innovator accelerator program.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

training for primarily entry-level positions. This expanded OJT concept then creates new labor openings related to the vacated position.⁵

3. Leveraging workforce investment dollars with additional U.S. Department of Labor (“DOL”) grants designed to allow worker training. These include enrollment in degree programs or technical training at higher education institutions to avoid layoffs (for example, “layoff aversion”) due to increased job technical skill requirements.
4. Using specialized training to overcome lack of required work experience of new job entrants that provides specialized skills unique to specific work situations.⁶

However, all of these options require a level of stakeholder partnership and coordination that is generally much more integrated than traditional silo functions where stakeholders operated independently. That said, the current economic situation provides an impetus to move in these directions.

Currently, the Governor’s Workforce Investment Board supplies an overarching structure, particularly with respect to the strategic plan for Nevada. This Board interacts with other State agencies like the Nevada Commission on Economic Development. Thus, the Nevada focus on selected business clusters and its associated workforce are associated with these efforts.

The specifics of the strategic plan are then broadly implemented by the Nevada Department of Employment, Training, and Rehabilitation (“DETR”). The two major regional entities are the regional workforce investment boards in Southern Nevada and Northern Nevada. These are, respectively, known as Workforce Connections in Southern Nevada and Nevada Works in Northern Nevada.⁷ Nevada received allocated Workforce Investment Act (“WIA”) dollars

⁵ The incumbent training waiver is discussed in more detail at: http://www.detr.state.nv.us/workforce_investment_pages/Documents/RapidResponseWaiver.pdf and at DOL at http://webapps.dol.gov/search/AdvSearch.aspx?search_term=Incumbent+Training+Waiver&offset=0&agcoll=&agate=&agency_name=DOL&submit1.x=19&submit1.y=15.

⁶ There are a varied set of opportunities from DOL related to technical skills training. These include OJT, other training strategies and training for transitional jobs for enhanced opportunity. An example in Nevada is the work of the Southern Nevada Medical Coalition (SNMIC) which has provided innovative OJT training for specialized skills in nursing, such as operating room procedures and similar initiatives to avoid both layoffs of Nevada healthcare workers and to provide “experience” for Nevada job applicants.

⁷ More information on the two Nevada regional workforce investment boards is available at Workforce Connections (<http://www.mvworkforceconnections.org/>) and Nevada Works (<http://www.nevadaworks.com/>)

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

of approximately \$65 million over the last biennium with an ability to apply for additional DOL training dollars.

To illustrate the points of this white paper, with an example of a specific industry, Southern Nevada's health care sector is used as a "case study". Health care is an example of an existing Nevada industry and potential development cluster that, together with higher education, offers opportunities to create relatively well-paid occupations that support Nevada's sustained economic development goals rather than just overall economic growth.

In Nevada, the health care sector has utilized training dollars in two innovative ways: 1) in an ongoing partnership with NSHE; and 2) in a recent state pilot training-for-jobs program with the potential to be associated and expanded with NSHE into non-health care areas. The first is to offer higher education access to existing employees (for example, licensed practical nurses enrolling to become (degree) registered nurses). This also has the dual advantage of augmenting opportunity *and* also avoiding layoffs of those Nevada employees due to the need for increased skill requirements. The second way is to take current Nevada residents and workers, and use specialized training to overcome specialized requirements for work experience (for example, a new graduate registered nurse being trained for specialized operating room procedures rather than hiring a nurse out-of state with two years or three years' experience).⁸

The studies reviewed for this white paper demonstrate that policymakers are increasingly looking to higher education, hospitals and other health care providers as potential drivers of economic development in states and metropolitan areas, including central cities⁹. Higher education can assist in providing the educational platform to successfully implement the workforce requirements, not only of this specific sector, but for other sectors of the Nevada economy.

Currently, most traditional NSHE involvement in workforce training has been associated with a specific employer requesting assistance through the Community College system. Most of this is done via continuing education departments as they are able to design short-term

⁸ As noted by Doug Geinzer, Chief Executive Officer of SNMIC, plans are being formulated to create similar training initiatives in healthcare throughout the State based upon the successful training in Southern Nevada.

⁹ Timothy J. Bartik and George Erickcek. *The Local Economic Impact of "Eds & Meds": How Policies to Expand Universities and Hospitals Affect Metropolitan Economies*. Brookings, December 2008.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

training programs. For example, within healthcare, several hospitals have been involved with certification programs, such as Certified Nursing Assistant and Phlebotomy programs of 3-week to 7-week training duration. However, as a general statement, most of these efforts have not reflected a broad State effort in OJT at an industry level or related to business cluster development. This reflects the older traditional approach to training.

Moving forward, the expansion of Nevada's existing training programs to the four avenues identified above could include:

1. Implementation of the sector/business cluster strategy identified by the Governor's Workforce Investment Board, where higher education is included as an integrating function given the broader definition of OJT. This would allow information technology, healthcare and manufacturing, which includes selected renewable technologies, to utilize higher education as an upward "ladder" for existing employees with other Nevada residents filling in the prior position.
2. Development of higher education programs to expand in a formal manner plans for certified worker initiatives in manufacturing. These programs would implement in an aggressive manner the "Dream It, Do It" vision for Nevada manufacturing.¹⁰
3. Utilize the best of existing administrative and organizational programs that offer short elective courses to current employers or basic training seminars to develop both broad and formal training opportunities within higher education. Examples of existing programs include the work in health care of the College of Southern Nevada and the manufacturing industry connections of NIE (Nevada Industry Excellence) efforts.¹¹ These programs could potentially be integrated with degree programs at the State's research institutions.

¹⁰ As noted at the Nevada Commission on Economic Development website (www.diversifynevada.com), this envisions an Endorsed Manufacturing Skills Certification System recognized by both The Manufacturing Institute and the National Association of Manufacturers. As pointed out by Ray Bacon, Executive Director of the Nevada Manufacturers Association, the new Nevada emphasis on innovative training for manufacturing is welcome.

¹¹ The College of Southern Nevada, through its Division of Workforce and Economic Development, offers a wide range of certification and update courses within the health sector. The Division has responded to changing certification needs of the health sector on a timely basis. NIE currently offers a series of weekend seminars and related activities on modern business techniques as outlined at www.mapnv.com. In addition, the Career Enhancement Program assists entry and re-entry into the labor force on a limited basis, see <http://nvdetr.org/ESD%20Pages/cep%20for%20jobseekers.htm>

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

These opportunities represent a considerable amount of new ground with respect to required planning, implementation and coordination among economic development agencies, industry, and higher education in Nevada. However, these steps have the ability to move the Nevada workforce and its businesses forward into a better future. Accordingly, they warrant the effort. Such an effort is the explicit policy outlined in the Governor's Workforce Investment Board plan in *Nevada's New Workforce for Economic Prosperity: Strategic Plan Framework 2010-2014*.¹²

This new emphasis in Nevada on "internal" strategies reflects the national fact that the majority of job gains are "homegrown" and occur in locally headquartered businesses¹³. Research from the Public Policy Institute of California shows that, nationwide, job relocations at the state level accounted for only 1.9 percent of job gains and 2.0 percent of job losses (based on the 1992-2006 data). Thus, the main sources of job creation and job destruction (contraction of establishments) occur "locally". ■

¹² http://detr.state.nv.us/PDFS/StrategicPlanFramework_FINAL_052610.pdf

¹³ Kolko, J. "Business Relocation and Homegrown Jobs, 1992-2006". Public Policy Institute of California. September 2010.

I. BACKGROUND & INTRODUCTION: THE CURRENT ECONOMIC SITUATION

a. Importance of Creating Sustainable Jobs

There is increasing concern about Nevada's ability to maintain its long-term prosperity with a narrowly-based economy, one that is largely built on discretionary spending. To truly understand the importance of creating sustainable jobs in Nevada, we must examine the state's unique labor market.

Both the Governor's Workforce Investment Board and the Nevada Commission on Economic Development have endorsed the concept of targeted business clusters as a general strategy for Nevada's economic development and as a workforce development strategy for training. These strategies are designed, of course, to broaden the State's economic-base.

As general background information on the Nevada economy, current employment levels and its distribution are provided below (see the Appendix A). However, to put a simple summary of these results in perspective, along with the rationale behind a targeted sector focus and workforce development, it is important to note two facts.

Dominant Industry: Total nonfarm employment in Nevada stood at 1,115,200 in May 2011 (the latest data available), a loss of 7,100 jobs when compared to May 2010 (all data are seasonally adjusted) (see Chart 1 at the end of this paper). As of May 2011, 28.3 percent of the state's total nonfarm employees were employed in the Leisure and Hospitality industry compared to 10.1 percent nationally.

Emerging Industries: The largest year-over-year employment increases in Nevada in May 2011 were in the Healthcare and Education Services sector (5,000 new jobs, or a 5-percent rise over May 2010). In Healthcare and Education Services, Nevada's 5-percent rate of job growth was above the 2.3-percent gain seen nationally. On the other hand, Nevada's employment in the Healthcare and Education Services is only 9.4 percent of the total employment compared to 15.2 percent nationally. As presented below, until the new concept of OJT that allows specialized training to fill the gap of traditional "one or two year's experience" in healthcare, it was difficult to fill Nevada positions with new labor force entrants. Further, new innovative use of training dollars for existing workers to be trained

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

for new required skills has allowed employee training in Nevada to avoid layoffs (via displaced workers training and layoff aversion).

Although regional economic development policies often focus on encouraging businesses located elsewhere to relocate and/or open/expand local operations, the strong majority of job gains and losses are “homegrown” and occur in locally headquartered businesses¹⁴. As noted, the Public Policy Institute of California found that, nationally, state-wide job relocations accounted for just 1.9 percent of job gains and 2 percent of job losses (based on the 1992-2006 data). Approximately 98 percent of annual job gains and losses in an average state are due to the expansion of existing businesses or the birth of new establishments. Additionally, most business relocations occur *within* rather than *across* states. But even in the case of “cross-county” moves within a state, relocations account for only a small share of job gains and losses¹⁵. As mentioned above, the main sources of job creation and job destruction (contraction of establishments) occur both in locally owned businesses and through businesses headquartered elsewhere.

b. Driving Economic Development & Diversification in Nevada

Nevada led the nation in the cumulative rate of population and employment growth from 1980s through 2007. Therefore, there was significant net in-migration of workers and potential workers until the Great Recession started. The previous three periods of strong economic growth (late 1980s, mid-1990s and late-1990s through 2007) were driven by the construction of major resorts, and workers migrating from other states seeking thousands of new jobs in the gaming and construction industries. For example, the rapid expansion of the state’s economy in 2004-2005 saw record-setting residential construction and massive employment growth, approaching 20 percent per year, in the construction industry during the recent boom. Building contractors often had to import workers from out-of-state to meet demand, but this amount of in-migration is not quantifiable.

A similar situation occurred during the last wave of resort building in Las Vegas from 1998 through 2000. Near the end of the construction cycle, some resorts had to recruit workers (including housekeepers) from out-of-state since growth outpaced the available labor pool.

¹⁴ Kolko, J. “Business Relocation and Homegrown Jobs, 1992-2006”. Public Policy Institute of California. September 2010.

¹⁵ Kolko, J. “Business Relocation and Homegrown Jobs, 1992-2006”. Public Policy Institute of California. September 2010.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

The minimal out-migration that was reported was generally due to individual corporate decisions to consolidate facilities in other states or outsource to another country. There was no specific or predictable industry pattern to this activity¹⁶.

Today, Nevada faces a new reality; the State experienced one of the sharpest economic downturns in the nation as a result of the Great Recession. During the last five years, the state lost 14 percent of its employees, down from 1,296,900 in May 2007 to 1,115,200 in May 2011¹⁷. As of May 2011, the state has the highest unemployment rate in the nation (12.1 percent versus the national average of 9.1 percent)¹⁸. Nevada posted the nation's highest state foreclosure rate for the 53rd straight month in May 2011, with one in every 103 housing units receiving a foreclosure filing¹⁹ during the month. Las Vegas continued to post the nation's highest foreclosure rate among metropolitan areas with a population of 200,000 or more, with one in every 89 housing units receiving a foreclosure filing in May 2011 – more than six times the national average²⁰, an unfortunate sign of the current recession's toll.

According to a report released by The Center for Business and Economic Research ("CBER") at UNLV on June 20, 2011, job creation in Southern Nevada will remain weak for the remainder of 2011 and well into 2012. Although the local economy started showing some signs of modest recovery (as evidenced by gains in visitor volume, gaming revenues and personal income), "job growth will remain muted"²¹. CBER's report predicts that the jobless rate will average 11.9 percent for 2011 after surpassing 15 percent in 2010. The rate will decline to 10.6 percent for average in 2012, according to the study. The report also predicts that Southern Nevada will likely see fairly slow employment growth over the next few years.

Looking at the future trends, the Nevada Department of Employment, Training and Rehabilitation ("DETR") has identified industries and occupations that are projected to grow

¹⁶ *State of Nevada Strategic 2-Year Plan Modification for Title I of the Workforce Investment Act of 1998 And the Wagner-Peyser Act. For the Period of July 1, 2007 – June 30, 2009. May 30, 2007.*

¹⁷ *Source: Nevada Department of Employment, Training, and Rehabilitation.*

¹⁸ *Source: U.S. Department of Labor. Bureau of Labor Statistics.*

¹⁹ *Per RealtyTrac, foreclosure filings include default notices, scheduled auctions, and bank repossessions.*

²⁰ *Source: RealtyTrac. "Foreclosure Activity Continues Free-Fall in May". June 14, 2011.*

²¹ *Vegas, Inc. UNLV economic report forecasts modest recovery through 2012. June 20, 2011. Retrieved from <http://www.vegasinc.com/news/2011/jun/20/unlv-report-forecasts-modest-economic-recovery-thr/>*

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

and impact the State's economy in coming years. Growth will occur across both new and emerging industries and in existing firms.

Based on the 2008-2018 percent change, total employment in Nevada is projected to increase by 6.9 percent. Meanwhile, the Mining along with the Health Care and Social Assistance sectors are expected to see the largest growth over the forecast period, by 20.6 percent and 18.8 percent, respectively. In terms of actual new employees, the Retail Trade industry is projected to add the largest number of new employees by 2018 (18,492) followed by the Health Care and Social Assistance (18,099 employees), as well as Accommodation and Food Services (12,007 employees)

Among these sectors, the Governors Workforce Investment Board and the Nevada Commission on Economic Development have selected health care as a targeted business cluster. Importantly for NSHE, this cluster also satisfies the DOL definitions for training grants as a high-growth cluster and innovation acceleration. Over the mid-term, this sector appears to be a major potential target for higher education.

In this regard, it is important to note that the recently established Nevada Health Care Sector Council (mandated by SB239 as legislated in 2010) is now completing a 10-year strategic plan to grow Nevada's primary care workforce by up to 25 percent. The industry is moving to a more bachelor's degree prepared workforce, which will require more nursing graduates from UNLV and other NSHE institutions.

Similarly, the selected Nevada target of manufacturing, which includes renewables, suggests opportunities with respect to technical, management and logistic training. The Nevada Manufactures Institute has endorsed the Governor's and legislative calls for closer cooperation with higher education, as envisioned by the State's strategic plans of the Governors Workforce Investment Board and the Nevada Commission on Economic Development.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

c. Recent New Workforce Development Legislation

The State of Nevada's workforce system is organized in general terms as follows:

The Governor's Workforce Investment Board supplies the structure, particularly with respect to the strategic plan for Nevada. As noted, the Board interacts with other State agencies such as the Nevada Commission on Economic Development. Thus, the Nevada focus on selected business clusters and their associated workforces is associated with these efforts.

The specifics of the strategic plan are then broadly implemented by DETR. And there are two regional workforce investment boards; one in Southern Nevada (Workforce Connections, <http://nvworkforceconnections.org/>) and the other in Northern Nevada (Nevada Works, <http://wwwnevadaworks.com/>).

Historically, this scheme has always followed a general approach and served all industries. Because of the nature of the economy, especially in Southern Nevada, the system historically focused primarily on the Leisure and Hospitality, and Construction industries.

However, there has been a significant recent change in the system to provide a more focused approach on selected business sectors (clusters). The new framework is provided in a report published in January 2010 by the Governor's Workforce Investment Board, titled *Nevada's New Workforce for Economic Prosperity: Strategic Plan Framework 2010-2014* ("the Report").²²

According to the Report, its purpose is:

". . . two-fold; to guide statewide conversations on workforce and economic development toward shared goals; and, to serve as a conversation starter that mobilizes and aligns systemic change."

The Report also listed five "priorities":

1. Building Capacity and Champions

²² http://detr.state.nv.us/PDFS/StrategicPlanFramework_FINAL_052610.pdf See the discussion of targeted clusters and higher education requirements in "Southern Nevada Regional Economic Study", Alan Schlottmann et. al, prepared for the Southern Nevada Regional Planning Commission, November 15, 2006.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

2. Bust Silos
3. Develop and Implement Sector Strategies
4. Align Education and Training
5. Develop Nevada's Competitive Advantage

In our opinion, Priority #4, Align Education and Training, is the primary pillar of the strategy outlined in the Report. Accordingly, NSHE is uniquely positioned to provide leadership in bringing together these enhanced opportunities for the Nevada workforce and existing employers with concurrent broadening of the scope of OJT.

In the section titled *Education and Training: Establish and Maintain a Competitive Workforce*, the Report's primary recommendation states:

"Look closely at best practice workforce education and support educational and vocational training at universities, community colleges, trade schools, unions, secondary schools, and site based learning."

The report shares the common concern among many Nevadan's about the state's educational challenges. Specifically, it says:

"Nevada's underperformance In educating its young Population could limit the state's access to a competitive workforce and weaken its economy over time Moreover, as the well-educated baby boomer generation begins to retire, the diverse young population that will replace it does not appear prepared educationally to maintain or enhance the state's position in a global economy."

As noted in the section titled, *Sector Strategies: Diversify Nevada's Economy*, the Report recommends a focus on selected sectors/clusters or emerging markets for Nevada, including green and renewable energy, healthcare, manufacturing and mining.

The concepts above are significantly affected by the result of two relatively new legislative initiatives. The first is Senate Bill 239, which provides for "greater "coordination of Nevada's economic and workforce development goals." The bill was signed into law on June 2009 by Governor Jim Gibbons²³. The second bill was Senate Bill 152²⁴, which was a green jobs initiative. It was also signed into law in June 2009.

²³ <http://www.leg.state.nv.us/75th2009/Bills/SB/SB239.pdf>

²⁴ <http://www.leg.state.nv.us/Division/Legal/LawLibrary/NRS/NRS-701B.html#NRS701BSec924>.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

NRS 232.935 titled the "Governor's Workforce Investment Board: Appointment of members; duties; industry sector councils" has new provisions that directly impact the potential for expanded OJT efforts. These include:

- Identification of industry sectors (business clusters) essential to the State
- Targeted areas of economic development
- Labor force improvements in the existing workforce
- The need for integrated partnerships
- The integration of universities and community colleges into the system

Current selected targets for Nevada include clusters related to healthcare, manufacturing and renewable technologies. In a related area, Senate Bill 152 became NRS 701B.900, Green Jobs Initiative. It established a need to create new jobs in the fields of energy efficiency and renewable energy.

As discussed above, the two major local agencies tasked with implementing these policies are Workforce Connections and Nevada Works. As outlined in previous studies, all of these initiatives in healthcare and high-tech manufacturing require a significant workforce with higher education backgrounds or advanced technical training.²⁵ ■

²⁵ These education requirements are explicitly addressed in "Southern Nevada Regional Economic Study", Alan Schlottmann et. al, Southern Nevada Regional Planning Commission, November 15, 2006.

II. TARGETING FUNDING FOR SOCIO-ECONOMIC INFRASTRUCTURE: THE ROLE OF CLUSTER DEVELOPMENT AND HIGHER EDUCATION

a. Clusters and Economic Development of Southern Nevada

As stated several times, the Governor's Workforce Investment Board and the Nevada Commission on Economic Development have called for Nevada to focus particularly on selected business clusters and their associated workforce.

Nevada's new emphasis on cluster development is not surprising. Among various economic development strategies for regional growth, *cluster-based* economic development strategies have received special attention for a number of years. These strategies view the foundation of a regional economy as a group of clusters, not a collection of unrelated firms.

Clusters are defined as "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (e.g., universities, trade associations) in a particular field that compete but also cooperate"²⁶.

In this regard, it is important to note that all of the selected cluster targets in Nevada require a strong system of higher education and associated workforce. According to the report titled *Southern Nevada Regional Economic Study* by the Southern Nevada Regional Planning Coalition in 2006, eight target industry clusters were identified for Southern Nevada. Based on detailed inter-industry transactions data and what an economy could have (versus what it already has), the **Hospital and Health Related Cluster** topped the list of future target industry clusters for Southern Nevada that build upon existing strengths²⁷ and present significant growth opportunities. The **Education and Training Institutions Cluster** is another group that was found to have significant potential in Southern Nevada in the study. In addition, supporting **Manufacturing** both for existing firms in Nevada and promoting expansion in specialized equipment and energy-renewables manufacturing were identified. More importantly, the education cluster ties directly into all other clusters targeted for Nevada.

²⁶ Porter, M. E. *Location, Competition, and Economic Development: Local Clusters in a Global Economy*. *Economic Development Quarterly*, 14 (1), February 2000, pp. 15-34.

²⁷ "Southern Nevada Regional Economic Study", Alan Schlottmann et. al, Southern Nevada Regional Planning Commission, November 15, 2006.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

The study's Hospital and Health Related Cluster contains several sub-clusters in certain target sectors. This sector has been selected as a target for Nevada by both the Governor's Workforce Investment Board and the Nevada Commission on Economic Development. Importantly, it also represents a high-growth sector eligible for additional training funds from the DOL.

According to DETR's 2008-2018 employment projections for Nevada, Healthcare Practitioners and Technical Occupations and Healthcare Support Occupations are projected to increase by 20.0 percent and 23.7 percent, respectively, over the 10-year period, compared to an increase in all occupations of 6.9 percent over the same period of time.

The Education and Training Institutions Cluster also has significant potential in Southern Nevada since it allows the region to become more competitive with education and training institutions in Southern California. Indeed the mantra for most of the efforts to connect workforce development and economic development has been to better align workforce training activities with demands created by the "new economy". In simple terms, this requires increased education and training for the state's workforce.

b. Opportunities for Higher Education

Nevada's new sector strategy has the potential to redefine training. In the past, employers would generally contact a community college for direct help. As mentioned, the example within healthcare of several hospitals' involvement with Certified Nursing Assistant and Phlebotomy programs of 3-week to 7-week training illustrates this. However, there has not been a systematic integration of an "overall economy", wide spread effort tied directly into DOL programs, except for the industry-specific programs like those for the hospitality and construction industries.

Now for the first time, there is an opportunity for higher education to build a state-level, industry-higher education partnership that transcends individual firm or industry training needs. The State's targeted cluster goals require sophisticated training programs to provide needed skills in engineering, health care, sciences and manufacturing and management. As pointed out above, OJT is a vehicle to incentivize the employer to, not only upgrade existing employees, but to also hire those with skill gaps that can be trained in lieu of "experience", knowing that they will be reimbursed 50 percent of wages to provide those firm-specific

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

skills. Higher education can assist in designing programs to support these initiatives with a breadth and depth that has not occurred in the past. Rather than largely investing in entry-level training opportunities, which may not lead to a job, OJT as a workforce development strategy, together with higher education, can lead to a job paying high wages.

Nevada's economic competitiveness in the future will increasingly depend on the educational readiness of its workforce, so it's a mistake to think of continuing training of that workforce and higher education as two separate issues. Traditional higher education must have an intentional focus on, and commitment to, regional workforce development needs.²⁸

It's important to note that: "Clusters provide a vehicle to bring companies, government, and local institutions together in a constructive dialogue about upgrading, offering a new mechanism for business-government collaboration. Initiatives to organize cluster participants, assess cluster advantages and disadvantages, and catalyze public and private action have become numerous at the national, state, and city levels. Cluster initiatives provide a new way of organizing economic development efforts that go beyond traditional efforts to reduce the cost of doing business and enhance the overall business environment. By focusing on clusters, firms often are much more interested and engaged than they are in broad efforts that must necessarily gravitate to general issues such as tax policy and export promotion."²⁹

The nature of work is changing. For employees, preparing to be a part of, *and* to remain a part of, the workforce in this new environment is also changing. Today and into the foreseeable future, more job opportunities will require post-secondary education and degrees (and beyond). And college and lifelong learning are and will continue to be critical to increased lifetime earnings³⁰ for workers and for the evolution of the U.S. economy. This is even more critical for Nevada, because of the challenges the state faces.

²⁸ Mattes, B. Commentary: Higher Education Should Link Workforce Development to Economic Needs. Harrisburg University of Science and Technology. Huntington News. April 7, 2008.

²⁹ Porter, M. E. Location, Competition, and Economic Development: Local Clusters in a Global Economy. *Economic Development Quarterly*, 14 (1), February 2000, pp. 15-34.

³⁰ Mattes, B. Commentary: Higher Education Should Link Workforce Development to Economic Needs. Harrisburg University of Science and Technology. Huntington News. April 7, 2008.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

There are several examples that caught the attention of policy makers and practitioners across the country that demonstrate the importance of the symbiotic relationship between higher education and regional economic development:

One model is the organizational structure established in the State of Utah (as talked about extensively in the Nevada press and conferences as a potential model for our state). Utah established the Utah Science, Technology, and Research ("USTAR") economic development initiative to bolster Utah's research strengths and significantly increase technology commercialization to create many higher caliber jobs throughout the State. With strong commitment from the State, institutions can increase their external funding for research by 10 percent annually. Concurrently, with this State commitment to higher education and industry linkage, targeted industries in Utah have leveraged these dollars into a successful expansion of training dollars with DOL grants.³¹

A similar commitment by the State of Nevada and the Nevada System of Higher Education can form the basis for a more vibrant, diversified and export economy³². And this is an important part of Assembly Bill 449 passed recently by Nevada Legislature and signed into law by the Governor, which revises certain provisions relating to economic development in the state. This omnibus bill to restructure the state's economic development efforts was supported by the Governor, Lt. Governor and the entire legislative leadership in both parties. (See: <http://e-lobbyist.com/gaits/NV/AB449>). The larger DOL grants basically require a significant commitment by the State to integrate development and higher education.³³

Another example is North Carolina, which has taken concrete steps to coordinate knowledge-deepening and job-creation activities to influence who participates in and benefits from regional economic transformation. Through their efforts, state development agencies have established a model of workforce intermediation for guiding industry expansion. They have done so with the goal of creating quality job opportunities for displaced and less educated workers. The more interesting development is the state's ability

³¹ As discussed previously, with a State program in-place and implementation strategy, developmental funds for aiding workforce development for high-growth clusters are available through DOL programs as the innovator accelerator program.

³² Nevada System of Higher Education. *The State & the System: NSHE Plan for Nevada's Colleges and Universities. Combining Excellence and Austerity to Attain Success. September 2010, p. 6.*

³³ With a well-organized State plan, it is easier to meet DOL guidelines for implementation dollars that provide training for jobs in an expanded manner.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

to create strong linkages and interdependencies among manufacturers, technical colleges, and research institutions. To wit:

"This has been achieved by blurring the boundaries between companies and educational institutions, by encouraging firms to entrust colleges with greater training responsibilities, by incorporating industry executives into industry expansion efforts, and by using vocational training needs as a shared challenge around which to build industry consensus and, in turn, for identifying new targets for coordinated institutional support. Higher skilled positions in life sciences, namely those requiring advanced undergraduate and graduate degrees, have also been promoted through parallel initiatives that encourage the expansion of research-intensive laboratories and start-up enterprises. These efforts have helped to anchor manufacturing firms to the region by creating opportunities for greater coordination of research and production activities. At the same time, they are expanding opportunities for career advancement for lower skilled, entry-level workers and, thus, are helping to trigger the next wave of workforce intermediation"³⁴.

Both of these examples show how a dual economic development and workforce development strategy offers a viable channel for helping displaced workers elsewhere transition to the knowledge economy.

Economic development professionals are becoming aware of the important link between higher education and Nevada's economic sustainability. The bottom line is that strong economies are characterized by an abundance of well-paying jobs. Higher education (especially, in math, science and engineering) and a well-trained technical (vocational) workforce are determining factors in preparing workers with the skills needed to adapt to the rapidly changing job requirements of a rapidly changing global economy:

- Jobs that require higher education and significant levels of technical training have higher earnings and see lower unemployment rates.
- During the last 20 years, jobs that require technical certifications, a bachelor's degree or higher experienced the highest increase in earnings. On the contrary, earnings for jobs with less than a high school diploma declined over the same time period.
- The significantly lower unemployment rates among more educated members of the labor force put significantly less stress on state finances, especially in the areas

³⁴ Lowe, N. J. *Job Creation and the Knowledge Economy: Lessons From North Carolina's Life Science Manufacturing Initiative*. *Economic Development Quarterly*, 21 (4), November 2007, pp. 339-353.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

unemployment claims and other social services. This point is particularly noteworthy for Nevada given the high unemployment rate (as discussed above) the relatively unskilled labor force. ■

III. LEVERAGING FEDERAL WORKFORCE TRAINING FUNDS TO ASSIST EMPLOYERS TO
INCREASE HIRING

a. What is the Workforce Investment Act ("WIA") – Traditional Funding Structure

The specifics of Nevada's strategic plan for workforce development are implemented by the DETR through Workforce Connections in Southern Nevada and Nevada Works in Northern Nevada. The major source of funds is obtained through the WIA (WIA as administered by the Employment and Training Division of the US Department of Labor).

WIA provides various individual incentive grants between \$750,000 and \$3,000,000 to states that exceed established performance standards. WIA requires states to conduct ongoing evaluations of their workforce development system. States must periodically provide reports to their statewide workforce development boards and local area boards which participate in designing evaluation studies³⁵. Nevada has received in the range of \$65 million over the last biennium.

WIA also requires states and local areas to measure the success of WIA-authorized workforce development, adult education and literacy activities by using certain "core" *performance indicators*, which include (for adults and youth) the: number obtaining an unsubsidized job; number keeping a job for six months; amount of earnings after six months of working; and number (a) either obtaining a job or entering an educational or job training program and (b) receiving a professional license, certification, high school diploma, GED or any other official recognition of completing an educational or employment-related program³⁶.

It is important to note that: *"Nevada recognizes the need to train and retrain incumbent workers in order to keep pace with technological advances and changes in skill sets for high-demand occupations and industries. However, workforce development is more than training effectively for current job openings; it also must include planning for the workforce needs of tomorrow. A talented workforce is one that will bring new businesses and industries into*

³⁵ Jordan, L. *Workforce Investment Act's Performance Measurement Provisions*. February 15, 1999. Available online at <http://www.ctdol.state.ct.us/wia/wia-issues.htm#OLR> (Accessed on May 3, 2011).

³⁶ *Ibid.*

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

*some of Nevada's rural communities and ensure that the workforce of tomorrow is adequately trained and ready to meet future challenges and opportunities*³⁷.

Historically, many states developed workforce development without a strategic, or sophisticated, plan. The new workforce development structure in Nevada will allow the workforce system to expand the implementation of OJT in a more effective manner.

Traditionally, OJT was centered on an individual firm rather than utilizing an overall industry sector or overall targeted strategic business cluster for state economic growth. Thus, unless higher education did a "one-off" program with a firm or a similar limited service, its participation was relatively small.

In general, there were two basic approaches, which were largely focused on entry-level jobs or new entrants into the labor force. This focus tended to limit the role of higher education. First, OJT at the entry-level incentivized the employer with wage reimbursements to do the training with employer incentive dollars. Second, incumbent training programs were similar, allowing short-term training for vacancies at primarily the entry-level.

By contrast, Nevada now has in place a structure that encourages a broader definition of OJT across advanced skill levels, given that the Governor's Workforce Investment Board has recommended a sector strategy for training to promote economic development. As noted, the important links between higher education and economic diversification have been addressed in recent reports.³⁸ Utilizing workforce training as part of these efforts broadens potential State strategies.

An important opportunity for higher education is the ability to use training funds as on OJT for technical and advanced skills. This allows higher education programs to be funded as training programs directly with selected, high-wage business clusters. In the past, training was traditionally in short-term basic skills for specific industries. Now that OJT is recognized as an ongoing "training activity" it focuses on technical and professional positions to support targeted industry sectors.

³⁷ *State of Nevada Strategic 2-Year Plan Modification for Title I of the Workforce Investment Act of 1998 And the Wagner-Peyser Act. For the Period of July 1, 2007 – June 30, 2009. May 30, 2007.*

³⁸ *See the two separate reports titled "Higher Education and Economic Development: The Necessary Foundation" and "Education and State Economic Growth: The Fundamental Linkage" at <http://go.unlv.edu/budget/docs>.*

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

As noted above, employers are reluctant to invest in sophisticated training programs to provide the needed skills in engineering, health care, manufacturing techniques or management skills. OJT incentivizes employers to upgrade existing employees *and* to hire those with skill gaps that can be trained in lieu of “experience”, with the understanding that they will receive subsidized wages for firm specific skill attainment with a breadth and depth that has not occurred in the past. Higher education has an important role in this process.

More importantly, a worker who upgrades skills in engineering, health care, manufacturing techniques or management skills creates a “job opening” for those workers left behind in the company. This allows another Nevada resident to fill this vacant position. This leads to the possible “two for one” employment opportunity discussed previously. Higher education can assist with these opportunities by providing training for jobs.

Employers throughout the country are having a hard time filling certain technical occupations. Health care, information technology and advanced manufacturing have been especially affected by this. This is critical because these sectors have available jobs and solid occupations that remain unfilled due to a lack of the necessary skills and qualifications. This highlights a positive aspect of focusing on a workforce development/higher education “partnership” in Nevada.

Today, access to higher education and job training is even more critical for employees to obtain the required skills and for businesses to remain competitive.³⁹ Related to the above is the growing interest of state economic development and workforce development agencies to tie cluster-based strategies to workforce training as a way to more efficiently use limited resources, especially during challenging economic times.⁴⁰

As noted, higher education has been shown to be directly related to a general strategy of economic development. But it also can expand its educational role to address current workforce limitations through OJT. This will, of course, require coordination with industry leaders, as well as state development and workforce training agencies.

³⁹ U.S. Department of Labor, *Employment and Training Administration’s Five-Year Pilot, Demonstration and Evaluation Strategic Plan for 2007-2012*.

⁴⁰ Harper-Anderson, E. *Measuring the Connection Between Workforce Development and Economic Development: Examining the Role of Sectors for Local Outcomes*. *Economic Development Quarterly*, 22 (2). May 2008, 119-135.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

As noted previously, these efforts are potentially experimenting with new ground for training to create strong linkages and interdependencies among industry and manufacturers, technical colleges and research institutions. In a general sense, this can be accomplished in four ways but each requires an integrated State-industry-higher education partnership:

1. Directly investing monies in higher education to design and implement hands-on internship-based curricula in the context of target clusters. This can include training for both traditional students and those "at work" in the industry.⁴¹
2. Using training dollars to help employees with short-term educational courses developed with the help of higher education or to utilize existing curricula opportunities in the target clusters. For example, using "incumbent training waivers" to allow training through "career laddering", while creating new labor openings related to lower-tier vacated positions, for example.⁴²
3. Leveraging workforce dollars with other DOL grants designed to allow worker training. These can include enrollment in degree programs or technical training at higher education institutions to avoid layoffs (for example, "layoff aversion") resulting from increased job technical skill requirements.
4. Using specialized training to overcome a lack of required work experience of new job entrants by providing specialized skills that are unique to specific work situations.⁴³

However, all of these options require a level of stakeholder partnership and coordination that is generally much more integrated than traditional silo functions where stakeholders

⁴¹ With a State program in-place and implementation strategy, developmental funds for aiding workforce development for high-growth clusters are available through DOL programs as the innovator accelerator program.

⁴² The incumbent training waiver is discussed in more detail at: http://www.detr.state.nv.us/workforce_investment_pages/Documents/RapidResponseWaiver.pdf and at DOL at http://webapps.dol.gov/search/AdvSearch.aspx?search_term=Incumbent+Training+Waiver&offset=0&agcoll=&agate=&agency_name=DOL&submit1.x=19&submit1.y=15.

⁴³ There are a varied set of opportunities from DOL related to technical skills training. These include OJT, other training strategies, and training for transitional jobs for enhanced opportunity. An example in Nevada is the work of the Southern Nevada Medical Coalition (SNMIC), which has provided innovative OJT training for specialized skills in nursing such as operating room procedures and similar initiatives to avoid both layoffs of Nevada healthcare workers and to provide "experience" for Nevada job applicants.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

operated independently. However, the current economic situation provides an impetus to move in these directions.

Moving forward, the expansion of Nevada's existing training programs to the four avenues identified above could include:

1. Using an economic cluster strategy (as described by Governor's Workforce Investment Board) with a formal partnership in higher education given the broader definition of OJT. This would allow information technology, healthcare and manufacturing (including selected renewable technologies) to use higher education access to promote existing employees with other Nevada residents filling in the prior position.
2. Development of higher education programs to expand in a formal manner plans for certified worker initiatives in manufacturing. These programs would implement in an aggressive manner the "Dream It, Do It" vision for Nevada manufacturing.⁴⁴
4. Utilize the best of existing administrative and organizational programs that offer short elective courses to current employers or basic training seminars to develop both broad and formal training opportunities within higher education, e.g., College of Southern Nevada health care programs and the manufacturing industry connections of the Nevada Industry Excellence efforts.⁴⁵ These programs could be potentially integrated with college degree programs.

These opportunities require a significant amount of new ground regarding the required planning, implementation and coordination among economic development agencies, industry, and higher education in Nevada. However, these steps have the ability to move the Nevada workforce and its businesses forward into a better future and warrant the effort.

⁴⁴ As noted at the Nevada Commission on Economic Development (www.diversifynevada.com), this envisions an Endorsed Manufacturing Skills Certification System recognized by both The Manufacturing Institute and the National Association of Manufacturers.

⁴⁵ The College of Southern Nevada through its Division of Workforce and Economic Development offers a wide range of certification and update courses within the health sector. The Division has responded to changing certification needs of the health sector on a timely basis. NIE currently offers a series of weekend seminars and related activities on modern business techniques as outlined at www.mapnv.com. In addition, the Career Enhancement Program assists entry and re-entry into the labor force on a limited basis, see <http://nvdetr.org/ESD%20Pages/cep%20for%20jobseekers.htm>

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

Such an effort is the explicit policy outlined in the Governor's Workforce Investment Board plan in *Nevada's New Workforce for Economic Prosperity: Strategic Plan Framework 2010-2014*.⁴⁶ ■

⁴⁶ http://detr.state.nv.us/PDFS/StrategicPlanFramework_FINAL_052610.pdf

IV. A LESSON FOR SUCCESS – EXPANDED TRAINING PRACTICES

Until recently, most traditional workforce development in Nevada focused on pre-employment services along with job and basic skills training.⁴⁷ Historically, less attention was paid to long-term career training than to entry-level positions. However, the competitive nature of economic development in high-technology economic diversification and business cluster development suggests a rethinking of this position as recognized by both the Governors Workforce Investment Board and the Nevada Commission on Economic Development.

a. Coordination in Pittsburgh: The Pennsylvania System

The strategic plan for Nevada recognizes that a new training strategy is a must to include training members of the workforce who are keeping cutting-edge skills and acquiring further skill training.⁴⁸ As noted, such an expanded notion of OJT allows workers with upgraded skills in engineering, health care, manufacturing techniques or management to create a “job opening” for an additional worker, e.g., the “two for one” employment idea discussed above.

One of the better national models to study is that of Pittsburgh, Pennsylvania with its successful healthcare sector. The state of Pennsylvania (and its Workforce Investment Board) identified originally in 2004 a set of 11 industry clusters as the future focus of economic development.⁴⁹

It is important to note that this set of clusters closely parallels the set of eight clusters selected as targets for Nevada and Southern Nevada by the Southern Nevada Regional Planning commission in 2006.⁵⁰

⁴⁷ Historically in Nevada, much of the traditional activities in this area have been serviced by “Nevada Job Connect”. This is a statewide network that connects businesses with employees and provides workforce development services to employers and job seekers of Nevada. It operates under the two regional workforce investment boards in Southern Nevada and Northern Nevada.

⁴⁸ An overview of the PA efforts on workforce development and OJT training is available at http://www.paworkforce.state.pa.us/portal/server.pt/community/pa_workforce_development/12865

⁴⁹ Specifically, the emphasis on clusters such as healthcare, manufacturing and information technology.

⁵⁰ “Southern Nevada Regional Economic Study”, Alan Schlottmann et.al., Southern Nevada Regional Planning Commission, November 15, 2006.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

As in Nevada, health care was identified as a critical cluster in Pennsylvania. Much of the efforts in the resulting years have been in Pittsburgh. The success of the Pittsburgh region's economy has largely been attributed to the strength of its powerful education and medical sector. The "eds and meds" factor accounts for more than \$11 billion in local salaries, which is 22 percent of the total salaries in the region. Most powerful of the "eds and meds" are Carnegie Mellon University, the University of Pittsburgh and the University of Pittsburgh Medical Center ("UPMC"). The combination of two of the nation's important research universities and one of its largest and most respected medical complexes forms a dynamic economic engine that has driven the economy to new heights, bringing billions of dollars into the regional economy each year, including the employment of nearly 80,000⁵¹.

For our purposes in Nevada, what mechanisms are used for workforce development training to drive this engine of growth?

A major step was to create an industry partnership among multiple employers in the same industry (in this instance healthcare) to manage "common or overlapping human capital needs". More importantly, all such partnerships are directly tied into workforce development planning and funding in an explicit manner.

This partnership includes higher education which led to the popular terminology of "eds and meds". The healthcare partnership as part of workforce investment is specifically charged with aligning strong workforce development with education. This partnership eventually led to the creation of the PA Center for Health Careers under the auspices of Pennsylvania Workforce Development.

Paralleling the points discussed above for Nevada to consider with respect to both traditional and advanced concepts of worker development and OJT, funds are used for:

- Traditional OJT training with respect to certification and skill updates.
- Career advancement within the healthcare cluster.

⁵¹ <http://edsmespittsburgh.org/>.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

- Leveraging a strong State commitment and organizational structure to secure additional Federal training dollars (as last reported, an additional \$17 million for workforce development training through partnerships).⁵²

Higher education has now developed programs that adds strong management training into the mix. These include specialized graduate degree programs in health policy and management at both the University of Pittsburgh and Carnegie Mellon. These management programs augment traditional certification and skill update programs offered by higher education. In conjunction with the PA Center for Health Careers, there is a formal mechanism for career advancement within the healthcare cluster.

A similar set of positive results is associated with manufacturing, a targeted cluster in Nevada as well. The PA Center for Advanced Manufacturing Careers has secured funding to fill, for example, gaps in precision machining and industrial maintenance occupations. More importantly, this training is for local residents both already within the industry and as new careers. As discussed above, this concept for existing workers in the industry allows a “two for one” employment change as the newly trained worker’s older position becomes a new vacancy.

b. An Example in Southern Nevada: Healthcare

As pointed out earlier in this report, the example in Nevada, the Southern Nevada Medical Industry Coalition (“SNMIC”) is pertinent to this discussion. The SNMIC has recently implemented as set innovative OJT tactics via the Workforce Investment Board that are in directly related to the discussion above.

SNMIC was founded in 2002 as a non-profit and has grown over time to a non-profit 600-plus volunteer organization of healthcare professionals, consumers, citizens, local government representatives, educators and chamber of commerce representatives. SNMIC’s focus is on improving access and delivery of medical care in Southern Nevada.

As is well known, in 2001, a state-wide study demonstrated that Nevada nurse employers were creating approximately 800 new nursing jobs per year. Conversely, Nevada nursing schools graduated just 332 registered nurses in 2001, resulting in an acute shortage of

⁵² From publications library, planning and reports, *ibid.*

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

nurses to meet the burgeoning demand for nursing services. Over the next several years state-funded nursing programs doubled enrollment with a significant effort by higher education in Nevada.

However, two perplexing practical problems remain. First, acute care hospitals, with respect to operating rooms and specialized care, seek nurses with "one or two years' experience" with specific clinical competencies through previous employment experience. Second, the increased skill requirements related to nursing degrees threaten to displace existing healthcare workers such as license practical nurses into the category of adult displaced health workers. This is unfortunate given that many of these Nevada healthcare workers have extensive experience inpatient care.

First, in a pilot program instituted in 2010-2011, SNMIC utilized OJT funds from workforce development to provide new entrant nurses with practice programs that met or exceeded the National Council of State Boards of Nursing vision for transition into practice. This allowed 46 Nevada residents to meet "past experience" credentials. Currently, the College of Southern Nevada is formulating a practice operating room and similar aspects of "experience" certification to allow a formal expansion of such programs to occur. Higher education can build upon these concepts in the future.

Second, utilizing training grants for displaced workers and layoff aversion, SNMIC worked to provide access to (registered nurse) degree programs for licensed practical nurses already in the health care system. It is important to note these funds will train a Nevada workforce that will provide well-paid and needed health care services to Nevada's residents. This additional training track with established and successful workforce development plans in Pennsylvania that provides a career ladder as an explicit and effective goal of OJT training within a cluster that is a pillar of sustained economic development strategy. ■

The issues presented in this report are part of an emerging discussion in state economic development policy circles, namely the role of job training dollars to promote and improve “internal” job growth among existing state employers. Concurrently, there is also the question of what restructuring is possible at the local level to promote enhanced employment opportunities for current residents through improved training efficiencies.

This discussion is occurring at an opportune time for both the State and higher education given that the Governor’s Workforce Investment Board is focusing on cluster strategy for economic development. The important links between higher education and economic development have been addressed in recent reports. Utilizing workforce training and development as part of these efforts greatly enhances the State’s opportunity for success. The fundamental challenge is how to design a strong education infrastructure linked to workforce development and training that will enhance and expand existing businesses, and improve access to jobs for Nevada’s labor force.

With respect to broadening traditional concepts of OJT, there needs to be implementation strategies to promote and develop ongoing and sustained strategic partnerships that include business and industry, economic development agencies, public workforce training systems and the education system (K-12 and Higher Education). For example, the successful partnerships created in Pennsylvania regarding workforce development suggest possible implantation ideas. Coincidentally, these same strategies can provide a powerful tool to attract new business to Nevada.

In its 2010 report, NSHE stated that it “needs the State of Nevada to partner with the three research institutions to establish a model to coordinate and fund research initiatives designed to bring high tech, high wage businesses to Nevada in sectors which are consistent with the State goals for economic diversification”⁵³. According to the report, targets for research technology transfer areas that should be the focus for Nevada include green technologies and renewable energy, water and natural resources, and biotechnology and health care.

⁵³ Nevada System of Higher Education. *The State & the System: NSHE Plan for Nevada’s Colleges and Universities. Combining Excellence and Austerity to Attain Success. September 2010, p. 6.*

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

Many scholars and economists have argued that greater connectivity between workforce development and economic development efforts enhances the ability for successful economic diversification.⁵⁴ Based on the results of the studies reviewed for this paper, two important conclusions can be drawn: Workforce development agencies and economic development organizations around the country are moving closer together in local workforce areas; and cluster-based strategies are important for outcomes related to workforce and economic development.⁵⁵

As outlined in this report, new ways should be explored for training to create strong linkages and interdependencies among industry and manufacturers, technical colleges and research institutions. This report identified four ways to accomplish these goals but each requires an integrated State-industry-higher education partnership:

1. Provide increased dollars directly to higher education to design and implement hands-on internship based curriculum with designated development clusters. This can include training for both traditional students and those “at work” in the industry.
2. Use industry sectors training dollars to support employees with short-term educational courses developed with higher education or to utilize existing curriculum opportunities. Specifically, use “incumbent training waivers” to allow training that provides the needed skills for advancement via “career laddering”, and which creates new job openings at lower tiers.
3. Leverage workforce investment dollars with DOL grants that allow incumbent worker training. These include enrollment in degree programs or technical training at higher education institutions to avoid layoffs (for example, “layoff aversion”) due to heightened job technical skill requirements.
4. Use specialized training to overcome a lack of required work experience of new job entrants that provides specialized skills unique to specific target cluster needs.

⁵⁴ Harper-Anderson, E. *Measuring the Connection Between Workforce Development and Economic Development: Examining the Role of Sectors for Local Outcomes*. *Economic Development Quarterly*, 22 (2). May 2008, 119-135.

⁵⁵ Harper-Anderson, E. *Measuring the Connection Between Workforce Development and Economic Development: Examining the Role of Sectors for Local Outcomes*. *Economic Development Quarterly*, 22 (2). May 2008, 119-135.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

All of these options require a level of stakeholder partnership, coordination and cooperation that is much more integrated than traditional silo functions where stakeholders operated independently. The Great Recession's impact on Nevada provides the opportunity to move in an effective and focused direction for the State of Nevada. ■

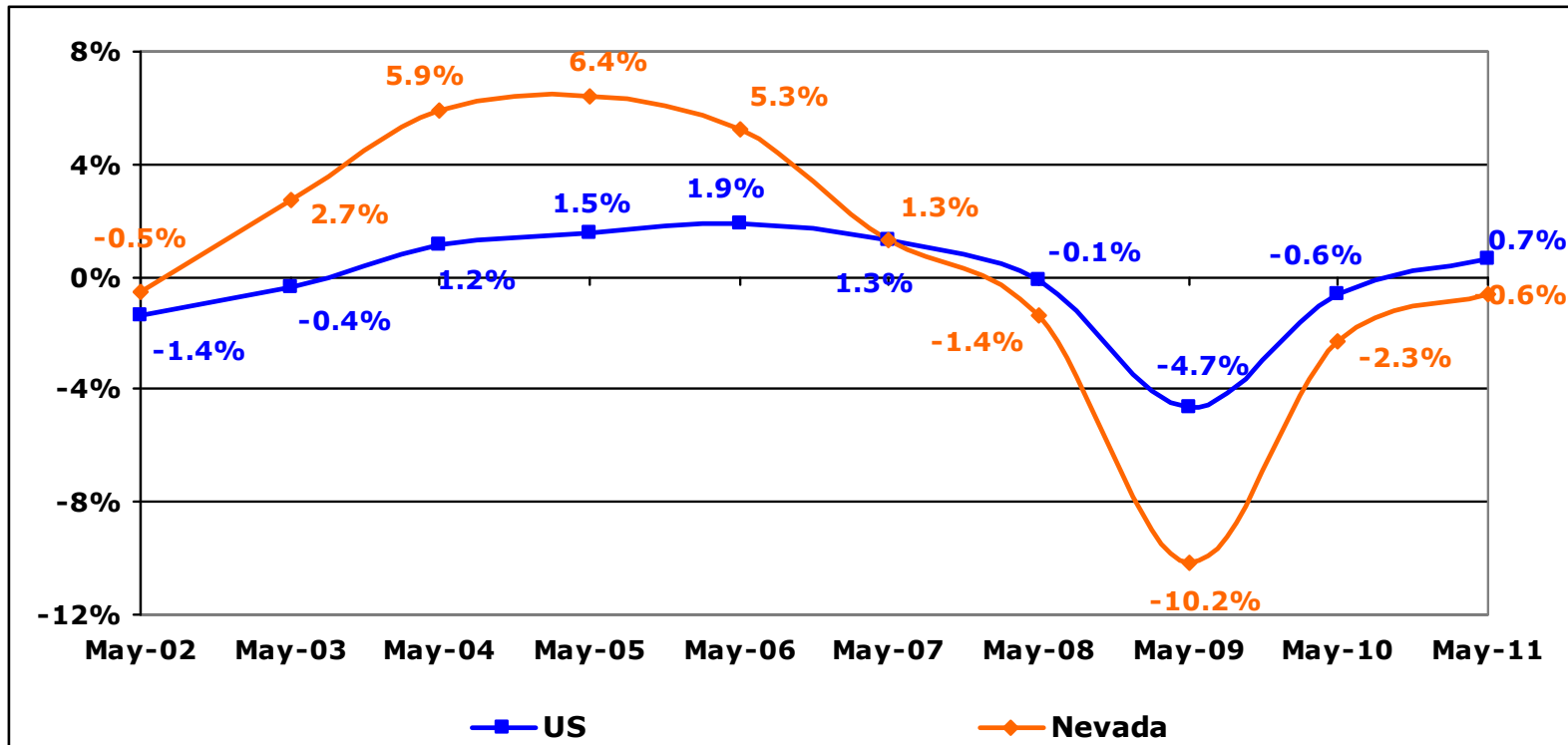
###

Appendix A

Employment Data

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

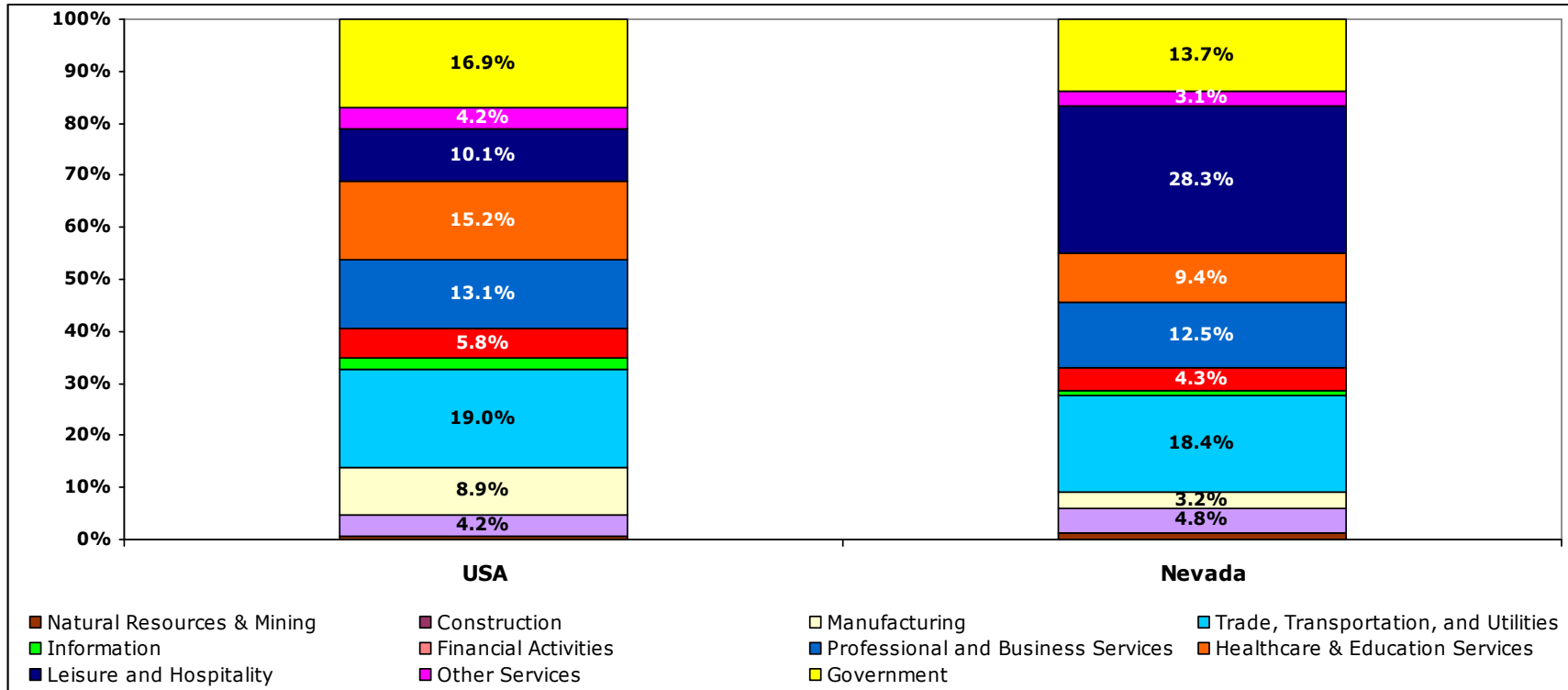
**CHART A-1: TOTAL NONFARM EMPLOYMENT, OVER-THE-YEAR PERCENT CHANGE
UNITED STATES AND NEVADA
(SEASONALLY ADJUSTED DATA)
MAY 2002-2011**



Source: U.S. Bureau of Labor Statistics. DETR.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

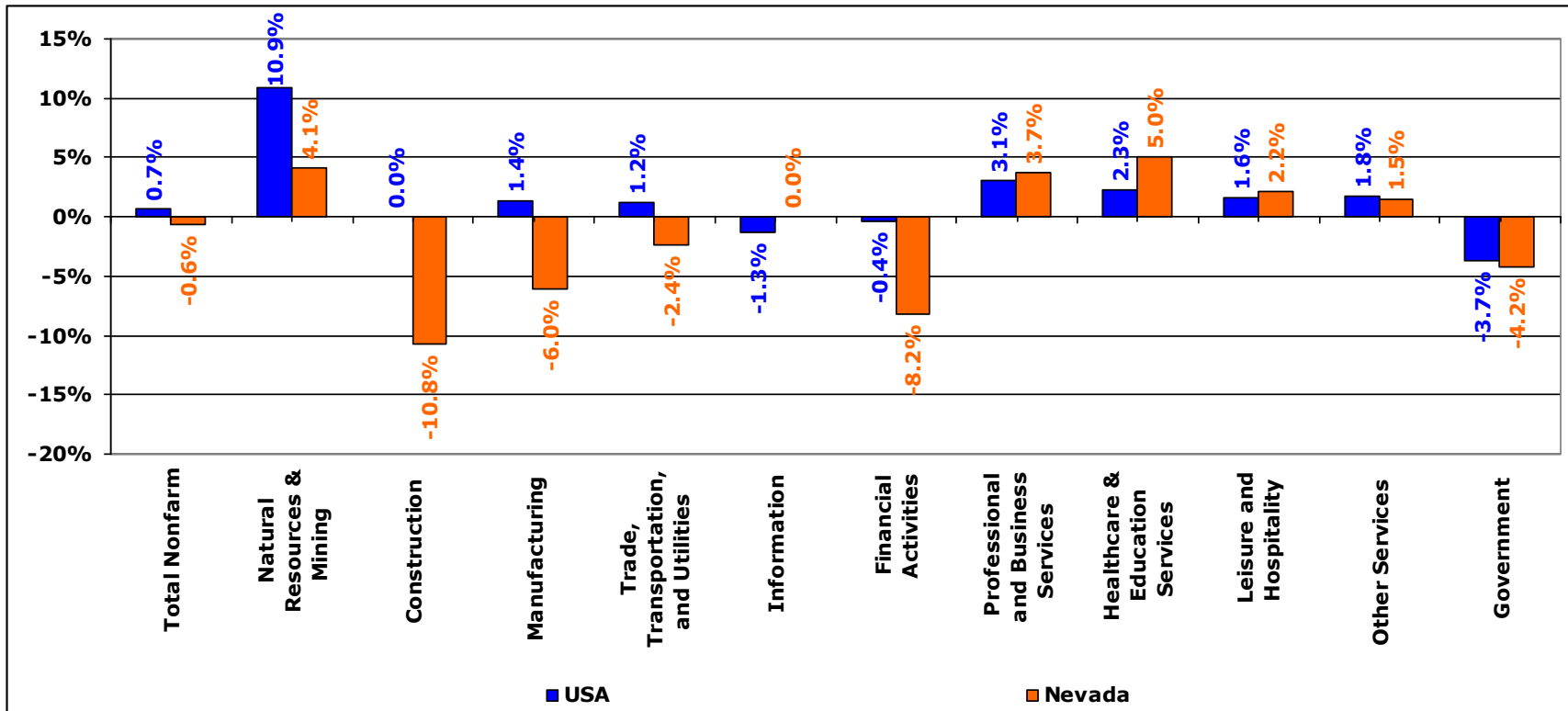
**CHART A-2: U.S. AND NEVADA EMPLOYMENT BY INDUSTRY
(SEASONALLY ADJUSTED DATA)
MAY 2011**



Source: U.S. Bureau of Labor Statistics. DETR.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

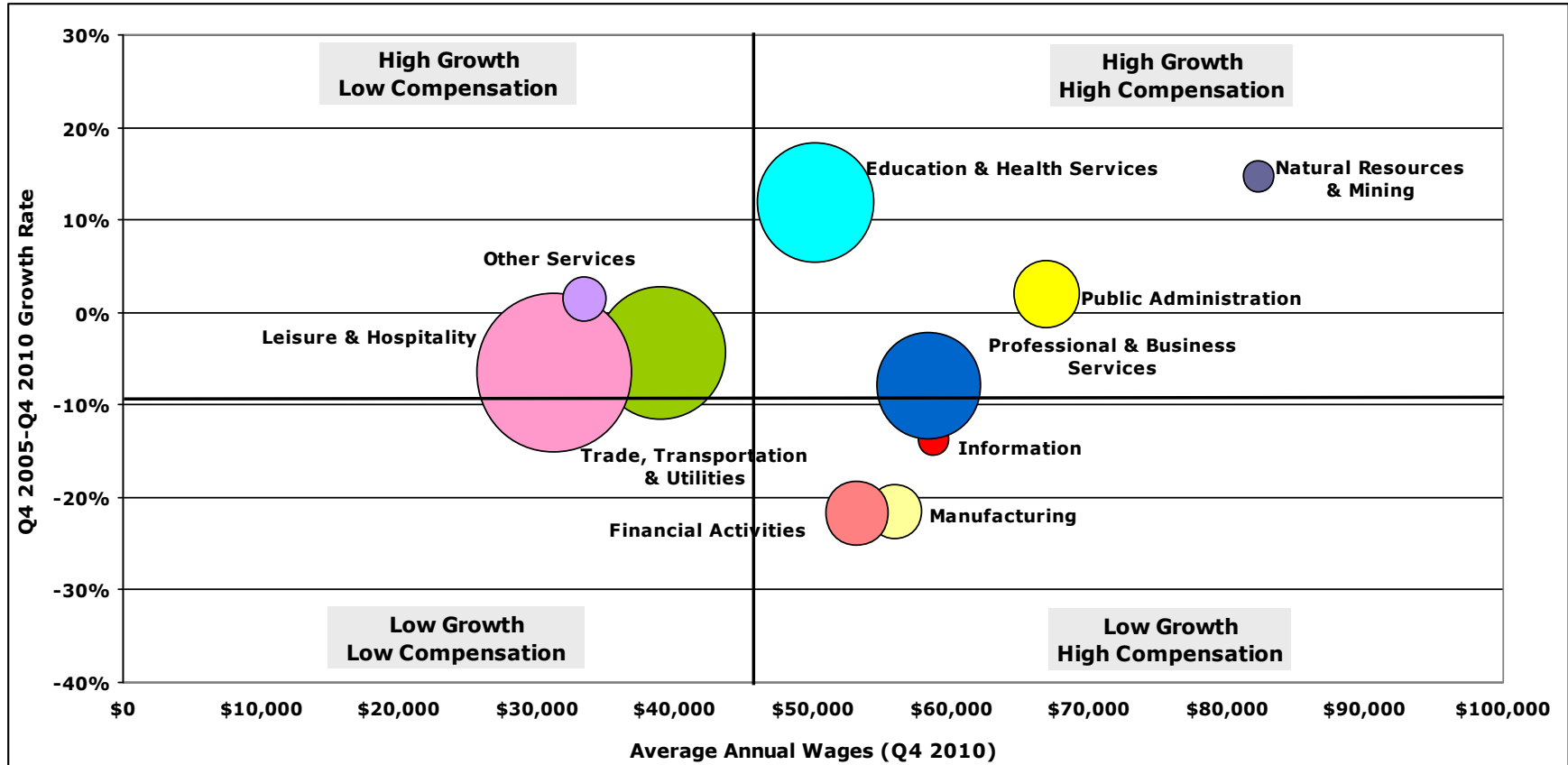
**CHART A-3: OVER-THE-YEAR PERCENT CHANGE IN EMPLOYMENT BY INDUSTRY
UNITED STATES AND NEVADA
(SEASONALLY ADJUSTED DATA)
MAY 2010 VS. MAY 2011**



Source: U.S. Bureau of Labor Statistics. DETR.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

**CHART A-4: NEVADA INDUSTRIES BY GROWTH RATE, NUMBER OF EMPLOYEES, AND AVERAGE ANNUAL WAGES
Q4 2005 – Q4 2010**



Source: DETR. RCG.

LINKING HIGHER EDUCATION & WORKFORCE DEVELOPMENT

CHART A-5: NEVADA LONG TERM INDUSTRIAL EMPLOYMENT AND PROJECTIONS 2008-2018

NAICS Industry Code	Industry Title Total Employment, All Jobs	2008	% of All	2018	% of All	2008-2018	2008-2018	Average
		Employment	Industries - Year 2008	Employment	Industries - Year 2018	Total Change	Percent Change	Annual Growth Rate
		1,353,942	100.0%	1,447,840	100.0%	93,898	6.9%	0.7%
21	Mining	12,116	0.9%	14,614	1.0%	2,498	20.6%	2.1%
62	Health Care and Social Assistance	96,115	7.1%	114,214	7.9%	18,099	18.8%	1.9%
42	Wholesale Trade	37,343	2.8%	43,128	3.0%	5,785	15.5%	1.5%
54	Professional, Scientific, and Technical Services	52,980	3.9%	60,101	4.2%	7,121	13.4%	1.3%
44	Retail Trade	138,316	10.2%	156,808	10.8%	18,492	13.4%	1.3%
31	Manufacturing	48,116	3.6%	54,184	3.7%	6,068	12.6%	1.3%
48	Transportation and Warehousing	49,322	3.6%	53,852	3.7%	4,530	9.2%	0.9%
11	Agriculture, Forestry, Fishing and Hunting	10,223	0.8%	11,010	0.8%	787	7.7%	0.8%
56	Administrative and Support and Waste Management and Remediation Services	78,508	5.8%	84,292	5.8%	5,784	7.4%	0.7%
81	Other Services (Except Government)	36,091	2.7%	38,564	2.7%	2,473	6.9%	0.7%
61	Educational Services	75,563	5.6%	79,613	5.5%	4,050	5.4%	0.5%
72	Accommodation and Food Services	303,459	22.4%	315,466	21.8%	12,007	4.0%	0.4%
55	Management of Companies and Enterprises	17,715	1.3%	18,199	1.3%	484	2.7%	0.3%
91	Total Federal Government Employment	15,104	1.1%	15,357	1.1%	253	1.7%	0.2%
53	Real Estate and Rental and Leasing	26,058	1.9%	26,294	1.8%	236	0.9%	0.1%
52	Finance and Insurance	35,134	2.6%	35,414	2.4%	280	0.8%	0.1%
71	Arts, Entertainment, and Recreation	29,060	2.1%	28,908	2.0%	-152	-0.5%	-0.1%
93	Local, Excluding Education and Hospitals	46,039	3.4%	45,728	40.0%	-311	-0.7%	-0.1%
23	Construction	115,929	8.6%	114,021	7.9%	-1,908	-1.6%	-0.2%
22	Utilities	4,584	0.3%	4,488	0.3%	-96	-2.1%	-0.2%
51	Information	14,919	1.1%	14,447	1.0%	-472	-3.2%	-0.3%
92	State, Excluding Education and Hospitals	18,870	1.4%	18,119	15.9%	-751	-4.0%	-0.4%