

Industrial Clusters in Jackson and Josephine Counties

Prepared for:
Darrell van Ness
Economic Development Administration



By:
Rebecca Reid, MS
Steve Schein, MA
Hart Wilson, MM
School of Business
Southern Oregon University
November 30, 2006



This Report was Prepared under an Award from the
U.S. Department of Commerce
Economic Development Administration
Grant #07 79 05761

Industrial Clusters in Jackson and Josephine Counties

Prepared for:
Darrell van Ness
Economic Development Administration

By:
Rebecca Reid, MS
Steve Schein MA
Hart Wilson, MM

With the Assistance of:
Rene Ordonez, PhD
Dan Rubenson, PhD
Donna Lane, PhD
Mark Siders, PhD
Charles Jaeger, PhD
Dennis Slattery, MBA

Under the Leadership of:
Provost Earl Potter, III, PhD
Interim Dean Sebastian Sanzberro, MS
Dean David Harris, JD

School of Business
Southern Oregon University
November 30, 2006

This Report was Prepared under an Award from the
U.S. Department of Commerce
Economic Development Administration
Grant #07 79 05761

This publication was prepared by Southern Oregon University.
The statements, conclusions, and recommendations are those of
the authors and do not necessarily reflect the views of
the Economic Development Administration.

Abstract

For more than a decade, a number of cities and regions have focused their strategies for economic development on promoting industrial clusters. Cluster development and enhancement has been identified as an effective method to boost employment and incomes. In Oregon, both public and private sectors have embraced a cluster-based strategy to advance economic development. With grant assistance from the U.S. Economic Development Administration (EDA), Southern Oregon University funded a team of faculty researchers from the School of Business and the Economics Department to undertake a study to identify existing and potential industrial clusters in Jackson and Josephine counties.

The research team used three approaches to gather data related to cluster characteristics of businesses in the region: a quantitative analysis of employment data, interviews conducted with business leaders, and a survey of targeted businesses. Each approach provides valuable information about the region's economy and suggests avenues for further research. The study report summarizes the findings of this cluster research and offers recommendations for ways in which the School of Business can support and strengthen the viability of the region's emerging industrial clusters.

Executive Summary

Since the early 1990's, many states and communities have focused their economic development strategies on supporting or developing industrial clusters in order to boost employment and incomes. Industrial clusters are geographically-concentrated groups of similar or related firms and associated institutions in a particular field that buy or sell to the same suppliers, share markets and are supported by a common infrastructure (Porter, 2001). Examples of industrial clusters include the wine industry in the Napa and Sonoma Valleys, the automobile industry in Detroit, and the entertainment industry in Los Angeles. Since cluster theory spotlights the economic advantages borne out of spatially-concentrated groupings of related firms and a location's physical, social, institutional and infrastructure attributes, it follows that "place matters" to the economic development of a region.

In Oregon, both public and private sectors have embraced a cluster-based strategy to promote economic development. Oregon's Economic and Community Development Department (OECDD) commissioned the study *Oregon Industry Cluster: A Statistical Analysis* (Cortright, 2003) to identify specific industrial clusters in Oregon. The report spotlighted eleven cluster opportunities including high technology/software, food processing, recreation, and biomedical industries.

One of the report's recommendations was to apply the cluster analysis to regional levels to identify clustered industries within specific regions. With grant assistance from the U.S. Economic Development Administration (EDA), Southern Oregon University funded a team of faculty researchers from the School of Business and the Economics Department to undertake a study to identify existing and potential industrial clusters in Jackson and Josephine counties.

The research team used three approaches to gather cluster-related data: a quantitative analysis of employment data, interviews conducted with business leaders, and a survey of targeted businesses in Jackson and Josephine counties. Each approach provides valuable information about the region's economy and suggested additional avenues for further research. The following report summarizes the findings of this cluster research and offers recommendations for positioning the School of Business to support and strengthen the viability of the region's emerging industrial clusters.

Eleven potential industrial clusters were identified through the quantitative analysis process (Table A).

Table A. Potential Industrial Clusters, Jackson and Josephine Counties

1. Food and Beverage Production, Manufacturing and Sales
2. Logging and Support Activities for Forestry
3. Wood Products
4. Metals Manufacturing
5. Wholesalers
6. Electronic Shopping
7. Freight Transport
8. Headquarters
9. Elder/Health Care
10. Creative
11. Tourism and Recreation

Two measures of potential industrial clusters are higher concentrations of employment and faster employment growth in the region compared to the nation. Four industries in the Rogue Valley region had particularly strong cluster indicators: kitchen cabinetry manufacturing, performing arts companies, electronic shopping, and management of companies and enterprises (company headquarters).

Industries in health/elder care and tourism (including recreation, entertainment, and creative industries) are notable among the industries identified as potential clusters due to the large number of people they employ. Each sector accounted for about 10% of regional employment in 2004.

Eight of the potential clusters pay wages above the region's overall average wage (\$29,321 in 2004). However, taken together, industries in the identified regional clusters pay 79% of the average wage levels in their respective industries nationwide. Wages below national levels may reflect the choice of regional companies to substitute lower skill, lower cost labor for higher skill labor using more physical or human capital (such as technical processes or specialized knowledge). These industries may increase their competitiveness and sustainability by increasing the skill levels of their workforce.

The qualitative analysis offered insight into the perception of engagement of Southern Oregon University's School of Business in the region's business community. Leaders in the private sector would like to see the School of Business become more engaged with the local economy. In Grants Pass, Central Point, White City, and in much of Medford, the School of Business is relatively unknown and few relationships between businesses and the School have been established. Most medium and large companies in the Rogue Valley region are receptive to expanding their relationship with the School of Business. Internships, student tours, research relevant to the region, and conferences focused on specific business issues are of great interest to CEO's and business owners. They also want Southern Oregon University to expand its role in the Rogue Valley region and become a center for entrepreneurship and leadership. There is significant interest in the School of Business offering an Executive MBA program.

Programs, classes, and workshops offered by the School of Business in the area of leadership should be greatly expanded. Those interviewed expressed interest in applied leadership training at the undergraduate level with an emphasis on interpersonal skills, team building, and conceptual thinking. Opportunities exist for SOU to form partnerships with major regional companies to develop and deliver leadership training.

Business leaders also expressed an interest in an expanded entrepreneurship program. Many leaders interviewed recognize entrepreneurialism as the backbone of our future economy and would like SOU to offer greater support to startups and existing small businesses.

The business survey provided additional data to augment the qualitative and quantitative findings. Survey questions solicited information regarding a range of cluster characteristics including workforce composition, collaboration, and innovation. Several questions related to workforce education and the availability of qualified workers. Nearly three quarters of the respondents (71%) identified the availability of skilled workers as an important, very important or critically important factor for their company's success. Only about one third (30%) of the

respondents found that the available pool of professional employees is adequate to meet their needs. While formal or informal relationships with educational institutions are features of many industrial clusters, businesses in the region tend not to consult with colleges and universities. More than three quarters of survey respondents said they had never consulted with Southern Oregon University or Rogue Community College.

Networking with related businesses is a hallmark of clusters. About half of the survey respondents (54%) said they participate in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems, though these connections may be with organizations outside the Rogue Valley region. Less than half (42%) agreed that their company benefits from sharing technology and information with other companies in the region. Most companies did not see formal or informal networks as important to their company's success: only 29% agreed that such networks with regional customers were important; 16% agreed that networks with regional suppliers were important, and 9% confirmed that networks with regional competitors were important.

Companies improve competitiveness through the use of technology. More than half of the survey respondents (57%) agreed that Internet technology is critical to their company's competitive advantage. Nearly two thirds of respondents (64%) also agreed that Internet technology helps them build stronger customer relationships. Less than half of the respondents (41%) indicated that they shared technology and information with other regional companies.

Recommendations to expand the role of the School of Business in the region's business community included developing relationships with industries identified in the cluster research to expand awareness of the opportunities and challenges faced by regional businesses. Industry involvement could include faculty members working on-site with host businesses through sabbaticals or other academic release time. The School of Business could also support industry clusters by facilitating the formation and support of regional industry networks.

Other suggestions for the School of Business include engaging in collaborative research activities with members of cluster industries and providing academic release time for conducting and overseeing research. In terms of curricular enhancements, the School of Business can support regional cluster industries by focusing additional efforts on the Headquarters Cluster, offering courses related to high-level skills such as management, planning and IT. Given the importance of Internet technology to businesses in the region, educational offerings need to support the evolving engagement of cluster industries in the online business environment. The School needs to integrate the regional economy more closely into program curriculum. Course content and case studies could be developed in part through collaboration with industry members.

Table of Contents

Quantitative Analysis

Introduction	1
Research Methodology	2
Industrial Clusters of Jackson and Josephine Counties	9
Findings of the Analysis of Regional Industrial Clusters	11
Food and Beverage Production, Manufacturing and Sales Cluster	11
Logging and Support for Forestry Activities Cluster	14
Wood Products Cluster	16
Metals Manufacturing Cluster	19
Wholesalers Cluster	22
Electronic Shopping Cluster	25
Freight Transport Cluster	27
Headquarters Cluster	30
Elder/Health Care Cluster	32
Creative Cluster.....	35
Tourism and Recreation Cluster	38
Conclusions	41
Recommendations for Further Research	43
Recommendations for the School of Business	43
Endnotes	45
Bibliography	46

Qualitative Analysis

Project Overview	49
Research Methodology	49
Findings: Major Themes	50
Perceptions of Cluster Theory	50
Workforce Development	51
Market Development	51
Public Policy	51
Infrastructure	51
Innovation	51
Supply Chain	52
Relationship with School of Business	52
Corporate Social Responsibility	52
Implications Derived from Research	53
Increased Local Involvement of SOU	53
Educational Program Opportunities	53
Corporate Social Responsibility and Sustainability	54
Medford Campus	54
Recommendations for Further Research	54

School of Business Cluster Survey Analysis

Introduction	58
Survey Methodology	58
Overview of Cluster Characteristics of Potential Industrial Clusters	58
Companies Share Specialized Inputs	58
Companies Use Informal or Formal Networks to Improve Business Operations	59
Companies Depend on Similar Raw Materials or Supplies	59
Companies Improve Competitiveness by Investing In and Using Technology	59
Companies Innovate	59
Companies Have Connections with Regional Educational and Governmental Institutions	59
Workforce Issues	60
Comparative Analysis of Cluster Industries vs. Non-Cluster Industries	60
Customers	60
Business Conditions and Connections	60
Employment, Education and Training	61
The Internet and Communications Technology	62
Factors Affecting Success	62
Short-Term Plans	63
Organizational Networking	63
Institutional Assistance	64
Locating in the Rogue Valley	64
Recommendations for Further Research	66

Appendices

Appendix A: Potential Industrial Clusters	67
Appendix B: Employment Summary, Jackson and Josephine Counties	73
Appendix C: Industry Detail (NAICS 4-Digit)	77
Appendix D: Non-Employer Statistics	96
Appendix E: National Employment Projections	98
Appendix F: Employment Projections by Industry, Oregon and Jackson and Josephine Counties	105
Appendix G: EDA Cluster Analysis Team	109
Appendix H: School of Business Cluster Survey	111
Appendix I: School of Business Cluster Survey Results	121

Table of Charts

Quantitative Study

Chart 1:	Four Quadrant Map of Employment Growth (DS) and Industry Concentration (LQ)	4
Chart 2:	Food and Beverage Production, Manufacturing and Sales Cluster	11
Chart 3:	Logging and Support Activities for Forestry Cluster	14
Chart 4:	Wood Products Cluster	16
Chart 5:	Metals Manufacturing Cluster	19
Chart 6:	Wholesalers Cluster	22
Chart 7:	Electronic Shopping Cluster	25
Chart 8:	Freight Transport Cluster	27
Chart 9:	Headquarters Cluster	30
Chart 10:	Elder/Health Care Cluster	32
Chart 11:	Creative Cluster	35
Chart 12:	Tourism and Recreation Cluster	38

Table of Tables

Quantitative Study

Table 1:	Small Business Measures	7
Table 2:	Rogue Valley Region Industry Counts by NAICS Levels, QCEW Data, 2004	8
Table 3:	Potential Industrial Clusters, Jackson and Josephine Counties	9
Table 4:	Cluster Indicator Ranges and Quadrant Strength Values	10
Table 5:	Key Characteristics of the Food and Beverage Production, Manufacturing and Sales Cluster	13
Table 6:	Key Characteristics of the Logging and Support Activities for Forestry Cluster	15
Table 7:	Key Characteristics of the Wood Products Cluster	18
Table 8:	Key Characteristics of the Metals Manufacturing Cluster	21
Table 9:	Key Characteristics of the Wholesalers Cluster	24
Table 10:	Key Characteristics of the Electronic Shopping Cluster	26
Table 11:	Key Characteristics of the Freight Transport Cluster	29
Table 12:	Key Characteristics of the Headquarters Cluster	31
Table 13:	Key Characteristics of the Elder/Health Care Cluster	34
Table 14:	Key Characteristics of the Creative Cluster	37
Table 15:	Key Characteristics of the Tourism and Recreation Cluster	40
Table 16:	Strengthening Cluster Areas	42

Qualitative Study

Table 17:	Business Leaders Interviewed	55
Table 18:	Grants Pass Focus Group Participants	56

School of Business Cluster Survey

Table 19:	Location of Customers	60
Table 20:	Business Conditions and Connections	61
Table 21:	Employment, Education and Training	61
Table 22:	Internet and Communications Technology	62
Table 23:	Factors Affecting My Company's Success	63
Table 24:	Future Plans	63
Table 25:	Institutional Assistance	64
Table 26:	Advantages and Disadvantages of Locating in the Rogue Valley	64

Industrial Clusters in Jackson and Josephine Counties

A Quantitative Analysis

**Submitted to the School of Business,
Southern Oregon University**

**By Rebecca L. Reid, MS, Lead Researcher
EDA Cluster Project**

Introduction

Economic development policies seeking to increase the wealth of regions have been in place at the federal, state and local levels for more than 40 years. Typically the goals of economic development policies are to increase jobs and incomes in a given area, with increases in business profits, the local tax base, property values and votes often serving as concurrent goals. Widely employed development programs include industrial recruitment (smokestack chasing), export promotion, small business development, and business retention and expansion programs.

Since the early 1990's, many states and communities have targeted their economic development strategies to support or develop industrial clusters as a means to bolster employment and incomes. Industrial clusters are geographically-concentrated groups of similar or related firms and associated institutions in a particular field that buy or sell to the same suppliers, share markets and are supported by a common infrastructure (Porter, 2001). Industrial clusters enhance an industry's competitiveness in several ways. Firms that locate in close proximity benefit from "localization economies" with ready access to specialized suppliers and labor, public infrastructure, and/or marketing networks that reduce business, information, and transactions costs.

Clusters facilitate collaboration and information-sharing in marketing efforts, new product development, and uses of new technology which reduce costs and foster innovation. Clusters also facilitate business start-ups, spin-offs or new product lines of existing businesses since many inputs, infrastructure, and labor skills are readily available. California's Silicon Valley is a prototypical example of an industrial cluster, where companies gain competitive advantages from the critical mass of numerous electronics firms, from close proximity to firms and labs developing new technologies, from the availability of a large pool of labor with specialized skills, and from research and training provided by numerous universities. Other examples of industrial clusters include the wine industry in the Napa and Sonoma Valleys, the automobile industry in Detroit, and the entertainment industry in Los Angeles. Since cluster theory spotlights the economic advantages borne out of spatially-concentrated groupings of related firms and a location's physical, social, institutional and infrastructure attributes, it follows that "place matters" to the economic development of a region.

In Oregon, both public and private sectors have embraced a cluster-based strategy to promote economic development. Oregon's Economic and Community Development Department (OECD) has undertaken several key cluster-related initiatives. The Department commissioned the study *Oregon Industry Cluster: A Statistical Analysis* (Cortright, 2003) to identify specific industrial clusters in Oregon. The report spotlighted eleven cluster opportunities including high technology/software, food processing, recreation, and biomedical industries. Additionally, the Department is developing policies to support and promote industrial clusters across the state. Joining this effort is the Oregon Business Plan, a private/public partnership of businesses, business associations, and public agencies. Since 2002 the Business Plan has facilitated collaboration between the public and private sectors to create incentives to support emerging and existing clusters. The website "OregonClusters.org" is an example of their efforts.

Regions and communities are beginning to incorporate cluster strategies into their economic development programs. Oregon's cluster report recommended that the study's analysis be extended to sub-state levels to identify clustered industries that may be more geographically concentrated within regions. With grant assistance from the U.S. Economic Development

Administration (EDA), Southern Oregon University funded a team of faculty researchers from the School of Business and the Economics Department to undertake qualitative and quantitative studies to identify existing and potential industrial clusters in Jackson and Josephine counties. This paper summarizes the findings of the quantitative portion of this cluster research.

The report is organized into three main sections. The first part spells out the methodology used to uncover industries in Jackson and Josephine counties that may be considered industrial clusters. The next section describes eleven industrial groupings that either meet the criteria of promising clusters, or are otherwise key sectors of the regional economy that merit discussion. The study concludes with suggestions for future research and recommendations of ways in which SOU's School of Business can support industrial clusters in Jackson and Josephine counties.

Research Methodology

Overview

The objective of this analysis is to identify industry clusters in Jackson and Josephine counties, referred to here also as the "Rogue Valley" or "Rogue Valley region." Economic theory holds that firms belonging to a cluster enjoy competitive advantages stemming from improved productivity or reduced costs because member firms access the same sources of specialized suppliers, labor, information and infrastructure and benefit from inter-firm collaboration and information-sharing, all of which is facilitated by their proximity.

As an initial step in identifying industrial clusters, this study focuses on three measures of industry's employment-based performance: location quotient (LQ), differential shift (DS), and average wages. Since these three criteria are also utilized in the State's analysis of industrial clusters (Cortright, 2003), findings of this work can be compared to statewide results to highlight the extent to which the industries in the Rogue Valley region participate in statewide industrial groupings. Additional quantitative evidence is considered to deepen the screening of industrial data for identifying clusters. Since a critical mass of economic activity is necessary to constitute a cluster, an industry's number of firms and employment levels is evaluated. Employment projections for potential industrial clusters point to sectors that are expected to grow strongly over the next ten years, strengthening existing clusters, or further stimulating the formation of emerging clusters.

An analysis of the quantitative evidence is a preliminary effort to identify industrial clusters in the Rogue Valley region. Important and complementary evidence of industrial clusters is more qualitative in nature. Firms in regional clusters are likely to participate in local business networks, collaborate and share information, or access services, technical know-how, and human capital and basic research housed in regional educational institutions. Firms in clusters draw from a common pool of labor with specialized skills. For example, members of a cluster of precision metal manufacturers employ semi-skilled and highly skilled workers in metal machining and engineering design. Firms in industrial clusters are likely to be part of a local value chain, selling raw materials and unfinished goods to local producers or selling final products to similar markets. To determine the extent of the inter-firm relationships of businesses in the Rogue Valley that are the hallmarks of clusters, the School of Business surveyed regional companies to measure some of these qualitative characteristics (refer to Appendix H for the survey instrument). Results of the survey are integrated into the discussion of the quantitative findings where evidence of clusters was found. Additional qualitative evidence for potential industrial clusters in Jackson and

Josephine counties is explored through interviews with regional business leaders and experts in this study's companion work *Industrial Clusters In Jackson and Josephine Counties: A Qualitative Analysis* (Schein, 2006).

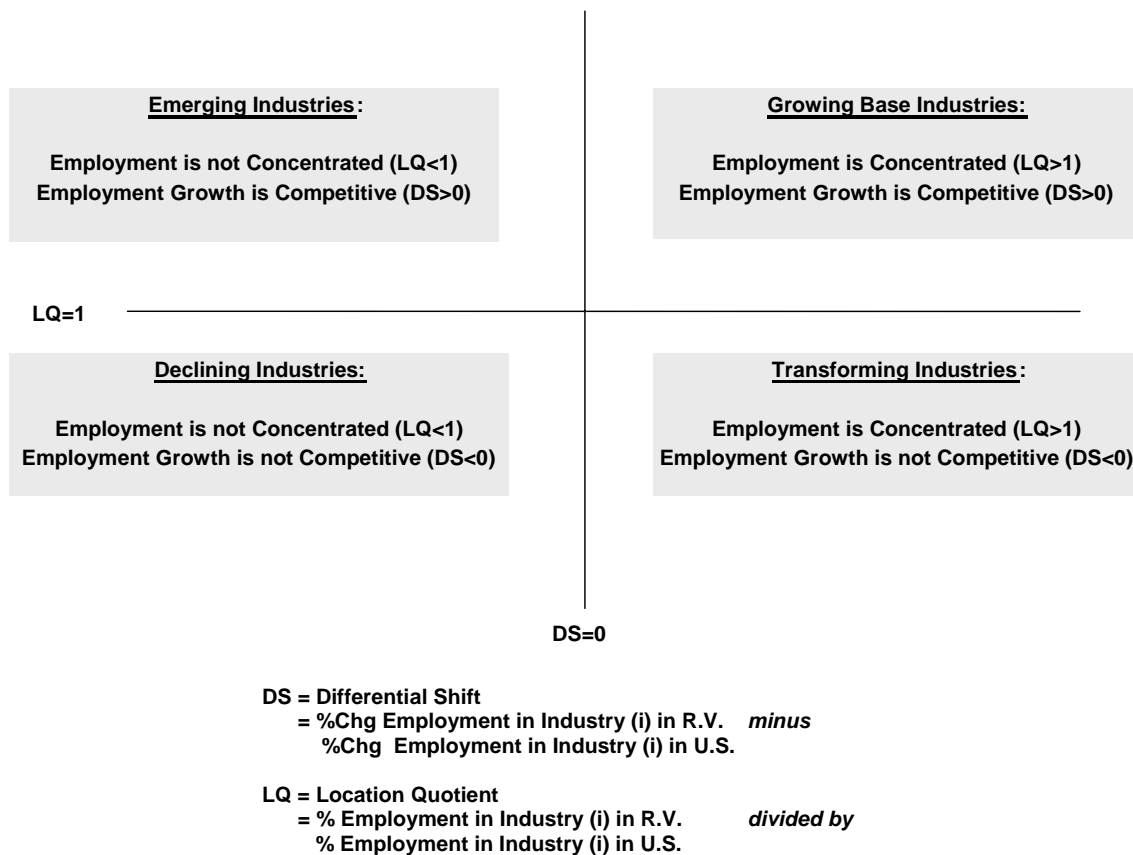
Screening Criteria

A region will specialize in industries in which it is more competitive, yielding concentrations of employment in those sectors. "Location Quotient" is the ratio of share of employment in a given industry for the region compared to that of the nation, and is a common measure of employment concentration or specialization. A location quotient (LQ) greater than one reflects an industry that is more concentrated and specialized regionally than nationally. An industry with a high LQ indicates that the region has been relatively successful attracting and nurturing employment in that industry and suggests that the industry "exports" all or part of its product out of the region, thereby adding economic stimulus and greater growth potential to the regional economy. Thus, industries with high LQ's may be part of an industrial cluster. The State's cluster study (Cortright, 2003), set an LQ threshold of 1.25, identifying sectors with 25% or more employment concentration than the national share. Since a region's economy is likely to be less specialized, regional industries are considered if their LQ is close to one or higher.

Under certain conditions, if an industry is more competitive regionally than nationally, then its employment will likely grow faster than the industry's national rate. A second measure of competitiveness compares changes in employment of regional industries with changes in national employment. The "Differential Shift" (DS) measures the difference in the percentage changes in employment over a given time period between the region and nation. In this study, employment changes are measured for 2001 to 2004. Industries with positive differential shifts show employment growing faster than that of the nation or declining less quickly. In the statewide study of industrial clusters (Cortright, 2003) the relative employment growth threshold was set at 10%, spotlighting sectors whose employment increased by 10% or more than jobs grew for the same sector nationally. In this regional study, industries with a positive DS value are considered for potential clusters.

Taken together, an industry's location quotient and its differential shift place it in one of four categories, or quadrants, on a graph (Chart 1). Industries in the "Growing Base" quadrant demonstrate evidence of relatively strong employment concentration ($LQ > 1$) and employment growth ($DS > 0$). Industries falling in the Growing Base quadrant are the most likely candidates for membership in clusters. "Emerging" industries have lower concentrations ($LQ < 1$) and strong employment growth ($DS > 0$), but may become Growing Base industries with continued growth. "Transforming" industries are regionally concentrated ($LQ > 1$) and may have been competitive in the past, but are losing employment at a greater rate than the national level ($DS < 0$). Firms in these industries may be relocating, downsizing, or closing. "Declining" industries are both losing employment ($DS < 0$), and have low employment concentrations ($LQ < 1$). Few Declining industries are considered for clusters in this study.

Chart 1. Four Quadrant Map of Employment Growth (DS) and Industry Concentration (LQ)



A third criterion for determining regional industrial clusters is how the regional sector's wages compare to their national counterparts. Average wages by industry within the region are compared to average wage levels nationally. If firms in industrial clusters have higher levels of productivity, they will likely pay higher wages than their less competitive counterparts. Additionally, some competitive industries may show lower concentrations of employment but pay higher average wages, reflecting employees' elevated skill levels or access to more or better capital that increase productivity. In the State's cluster study, industries met this cluster criterion if they paid average wages at least 10% higher than the industries paid nationally. Since the overall average wage in Jackson and Josephine counties is only 75% of the nation's overall average, this screening criterion is lowered to 80%. Industries are highlighted if their average wage is 80% or more of the national average.

Additional considerations are used to evaluate the region's industrial data. Industrial clusters not only have greater relative employment concentrations (reflected in higher LQ's), they must have a critical mass in order for the benefits of industrial clusters to be realized. Industries are considered for cluster potential if there are three or more firms in the sector employing at least 20 people in the two-county area. Similarly, candidates for clusters demonstrate strong employment growth (measured by DS) with rates of employment change well above those of the nation. While future growth potential may be suggested by an industry's strong relative past employment growth, industrial projections for a given industry offer alternative perspectives. The Bureau of Labor Statistics projects the nation's nonfarm employment will grow by 14% for the period 2004-

2014,ⁱ while the Oregon Employment Department points to a 15% increase statewide and a 19.5% increase in overall employment in Jackson and Josephine counties. Strong future growth is noted for industries whose employment is projected to increase by 20% or more over the same decade.ⁱⁱ

Assisting in the process of identifying potential industrial clusters in Jackson and Josephine counties, a team of Business and Economics professors lent their analytical expertise and used the following five indicators as screening criteria to identify clusters. Potential cluster industries that meet at least two of these criteria and industries that are expected to show marked increases in future employment are described in this report's main section that begins on page 8.

Summary of Screening Criteria

- **Industry Concentration:** Location Quotient (LQ) greater than .75 (1.25 in the Oregon cluster study).
- **Industry Competitiveness:** Differential Shift (DS) > 0 (DS>10% in the Oregon cluster study).
- **Average Wage:** 80% of U.S. level (110% in the Oregon cluster study).
- **Industry Size:** More than three firms and employment over 20.
- **Growth Potential:** Industrial projections for employment growth from 2004-2014 over 20%.

Sources of Data

As a measure of economic activity, the quantitative analysis relies on employment data from the Quarterly Census of Employment and Wages (QCEW, Oregon Employment Department, 2006), formerly referred to as ES-202 data. The School of Business acquired firm-level data from the Oregon Employment Department for Jackson and Josephine counties for 2001 and 2004, subject to confidentiality restrictions. The employment and wage data is reported by over 9,000 regional firms with employees in compliance with the State's unemployment insurance program. Firm-level data is aggregated to various levels of industrial detail in order to compare cluster indicators to national industry data.

The QCEW employment data has several advantages for economic analysis. Because employers nationwide are required to submit their company's employment and payroll information, the QCEW data for the region is comparable to data at the national level. This consistency is vital to analysis of industrial clusters since the key criteria focus on measures of the region relative to the nation: specialization or concentration measured by location quotient; performance measured by differences in employment growth (differential shift) and future employment projections; and occupational mix (average wage levels). For this study, national QCEW data was accessed through the Bureau of Labor Statistics website (BLS, 2006). A second advantage of the QCEW data is its relative consistency over time so that differences in employment growth between the region and the nation can be measured. The data set also includes detailed industrial classifications based on the 2002 North American Industrial Classification System codes (NAICS, U.S. Census Bureau, 2003) which permit a more informed and refined evaluation of regional industries. Employers report quarterly employment levels and wages by workers' place of work. This requirement assures that the place-based employment data is consistent with the place-based analysis of economic activity needed for identifying industrial clusters. Lastly, while the QCEW

data excludes some types of workers, such as self-employed workers (Oregon, 2004, p. 9), it nonetheless provides an excellent accounting of local economic activity, covering about 90% of regional employment.

Other sources of information about regional industries complement the confidential QCEW data. While the QCEW data reports employment levels for firms with employees, the U.S. Census Bureau's Non-Employer Statistics shows employment by industry for businesses without employees. For industries with many single-employee businesses in the Rogue Valley, such as those in the performing arts, non-employer data provides an important complement to the QCEW employer data. Additionally, specific industries and companies which are perceived to be part of potential regional clusters were noted by local business leaders and economic experts who were interviewed in the companion qualitative study on regional clusters (Schein, 2006). Many of these comments are included in the industry cluster analysis.

Throughout the report, specific Rogue Valley companies are mentioned to provide examples of cluster members or to highlight specific activities. Two sources provided company-specific information featured in this report. Southern Oregon Regional Economic Development, Inc. (SOREDI) lists company names, products, and employment levels for many of the region's major employers on its website (SOREDI, 2006). Additional firm-specific data was purchased from InfoUSA by the School of Business for current and future cluster-related research and programs. The InfoUSA data set features detailed industrial statistics classified by the Standard Industrial Classification (SIC) systems and NAICS, plus contact information for nearly 9,000 companies in Jackson and Josephine counties. Because this data set does not include employment levels, it is not used in the screening of industries to identify industrial clusters. However, because the data is publicly available for purchase, there are no confidentiality restrictions to limit the identification of specific companies. The findings section of this report lists examples of firms drawn from these other sources to provide a clearer understanding of the kinds of companies in the region's industrial clusters.

Limitations of the Data

There are several issues in the quantitative analysis of this sub-state cluster analysis that merit discussion. The industrial NAICS classification system provides many important benefits for economic analysis, but it also presents challenges. For one, firms are assigned to NAICS industrial categories in line with their major activity, though many firms produce multiple kinds of products or sell through a variety of channels. For example, some companies in the Rogue Valley region are involved primarily in food manufacturing, yet engage in retail and wholesale sales activities as well. For example, if more than half of a winery's employees are involved in wine producing activities, the company is assigned to a food manufacturing NAICS code despite the fact that it also has employees engaged in marketing and selling wine. Moreover, NAICS is a relatively new classification system. Oregon began reporting its employment data by NAICS in 2001. NAICS differs substantially from the former SIC system, to the point that the data between the two systems cannot be compared. Therefore, this analysis is constrained to compare the "oldest" NAICS data for 2001 with the most recent data for 2004.

A second potential issue stems from the study's reliance on employment data from the Quarterly Census of Employment and Wages (QCEW, Oregon Employment Department, 2006) to gauge economic activity and performance. Since the QCEW reports employment numbers and payroll data only for employees, earnings of company owners or sole proprietors are not included,

rendering an incomplete picture of overall earnings within an industry. This could pose a major problem in comparing the region's cluster indicators of employment concentration and earnings to national figures: if the region has a significantly higher percentage of small businesses whose owners are not counted, the comparison data could be skewed. The U.S. Census Bureau reports employment and establishment counts by employment size of the establishment for the nation, states and counties in its *County Business Patterns* (definition provided in Table 1). In 2004, the region's share of "small businesses," defined here as firms with fewer than 50 employees, is only slightly higher than the national share (96% regionally compared to 95% nationally), and its share of "smaller businesses" with under 10 employees is moderately higher than the nation (77% regionally versus 73% nationally). When the percentages of small business are evaluated by industry, the issue of omitting small business owners from the analysis further diminishes in importance. Not only are the percentages of small business by industry comparable at the regional and national levels, but the industries identified in this study have lower percentages of small businesses both regionally and nationally than the overall percentage of small businesses in the economy. Additionally, since *County Business Patterns* reports data by establishment, (a single place of business), rather than by enterprise, (one or more establishments under common ownership or control), this measure overstates the magnitude of small business where establishments are offices or branches of larger multi-establishment enterprises. Given these findings, it is unlikely that the comparative analysis of the regional and national economic data is affected in a major way by excluding business owners.

Table 1. Small Business Measures

	% Establishments with < 10 Employees	% Establishments with < 50 Employees
Jackson and Josephine Counties	76.7%	96.4%
Oregon	75.1%	95.7%
United States	73.4%	94.7%

Definition: An "establishment" is a single physical location at which business is conducted. It does not necessarily represent a single company or enterprise, and may serve as a branch location of a company that operates multiple establishments.

Source: U.S. Census Bureau, *County Business Patterns*, 2004

Analysis of a relatively small regional economy presents challenges related to its limited size and the limited depth and scope of economic activity. This analysis combines employment data for both Jackson and Josephine counties in order to have an adequate number of firms and employees to scrutinize across key industries. Combining employment data of both counties increases the sizes of industries and the likelihood of finding existing and potential clusters. This analysis also focuses on nearly 300 industries classified at the 4-digit NAICS level which balances the desirability of industrial detail with the need for an adequate number of firms and employment to constitute an industrial cluster. A more detailed 6-digit industrial classification renders a greater number of industries (Table 2), but many of those industries have few firms and low levels of employment.

Table 2. Rogue Valley Industry Counts by NAICS Levels, QCEW Data, 2004

NAICS Level	Count of Industries	Count of Private Industries	% Private Industries
2-Digit	48	25	52%
3-Digit	122	82	67%
4-Digit	299	249	83%
5-Digit	573	519	91%
6-Digit	736	679	92%

Source: Oregon Employment Department, Custom Tabulation, 2006

Finally, discussion of specific industries is constrained by confidentiality agreements between SOU and the Oregon Department of Employment. Industries may not be identified if 80% of the industry's employment is related to a single firm, or if there are fewer than three firms in the sector. These limitations protect information about specific firms and their employees. Throughout this report, in cases where an industry's confidentiality would be compromised by the detailed level of aggregation, industry data will either be noted with a "D" (for "Disclosure") or be aggregated to the 3-digit NAICS level. However, where specific regional companies are described in this report, the information presented is based on other sources, such as the SOREDI website listing the region's major employers, the qualitative interviews conducted in conjunction with this analysis, or on the InfoUSA database.

Key Points: Analysis of Employment Data

- Quarterly Census of Employment and Wages (QCEW) is analyzed for 2001 and 2004.
- The geographic unit of analysis is the two-county region of Jackson and Josephine counties.
- Industries are evaluated at the 4-digit NAICS level.
- Indicators of competitiveness and specialization compare the region to the nation.

Industrial Clusters of Jackson and Josephine Counties

This quantitative analysis identifies eleven potential industrial clusters in Jackson and Josephine counties for industry groupings whose indicators show strong concentration (location quotient or LQ) and/or strong relative employment growth (differential shift or DS) with moderate concentrations (Table 3). Many of the industrial clusters identified through the quantitative analysis are well-known economic forces in the Rogue Valley's economy, such as Food Manufacturing, Logging, Wood Products Manufacturing, Elder/Health Care, and Tourism. But other industries, often with fewer companies and employees, meet one or more quantitative measures of clusters: Metals Manufacturing, Wholesalers, Trucking and Freight, Electronic Shopping, Offices of Company Headquarters (separate administrative establishments of companies or regional headquarters), and Creative Industries (including performing arts companies). Together the industries spotlighted by this analysis employ 39% of the regional labor force and pay widely varying levels of average wages, from \$13,640 for Tourism and Recreation industries to \$52,569 for the Headquarters industry. Most of the industries in these clusters sell all or part of their products or services to out-of-area markets, or sell to customers, such as visitors and the elderly, who have earned their income out of the area but consume the product or service in the region. Such industries are often called "export base" or "traded" industries. While this study did not limit its analysis to traded industries, most of the industries which met concentration or employment growth criteria were, in fact, traded industries.

Table 3. Potential Industrial Clusters, Jackson and Josephine Counties

1. Food and Beverage Production, Manufacturing and Sales
2. Logging and Support Activities for Forestry
3. Wood Products
4. Metals Manufacturing
5. Wholesalers
6. Electronic Shopping
7. Freight Transport
8. Headquarters
9. Elder/Health Care
10. Creative
11. Tourism and Recreation

The following presentation of each of the eleven potential industrial clusters highlights key points about the group's industries, including notable characteristics such as size of industry, wage levels, and industrial growth in the past and projections for the future. Each section presents a chart, or cluster map, of the concentration (LQ) and competitiveness (DS) indicators of the cluster's industries and a table of quantitative details of industries within the cluster (these indicators are also listed in a summary table using measures of strength based on the ranges in values listed below in Table 4.) Most clusters have particularly vital industries, either by their employment size, concentration, or employment growth. These are highlighted in the "Cluster Components" narrative. Examples of the kinds of connections between firms that could be expected in a cluster or special conditions that provide further evidence that the industries are members of a cluster are presented in "Cluster Conditions." The description of several potential clusters incorporates results from the School of Business Cluster Survey (Appendix H) in cases where the findings support evidence of clusters within given industries.

It is important to note that not all industries at the more detailed 4-digit NAICS level are included in a given cluster because either there are few firms or employees in the sector, or because the industry's concentration is very low and/or its employment growth is lagging. For example, Industrial Machinery Manufacturing (NAICS 3332) is not listed in the Metals Manufacturing Cluster since it has 29 employees in five firms with an LQ=.3. Refer to Appendix C for employment and earnings data for all 4-digit industries in the two-county region, including each industry's strength of concentration and employment indices (LQ and DS, respectively) following the ranges outlined in Table 4.

Table 4. Cluster Indicator Ranges and Quadrant Strength Values

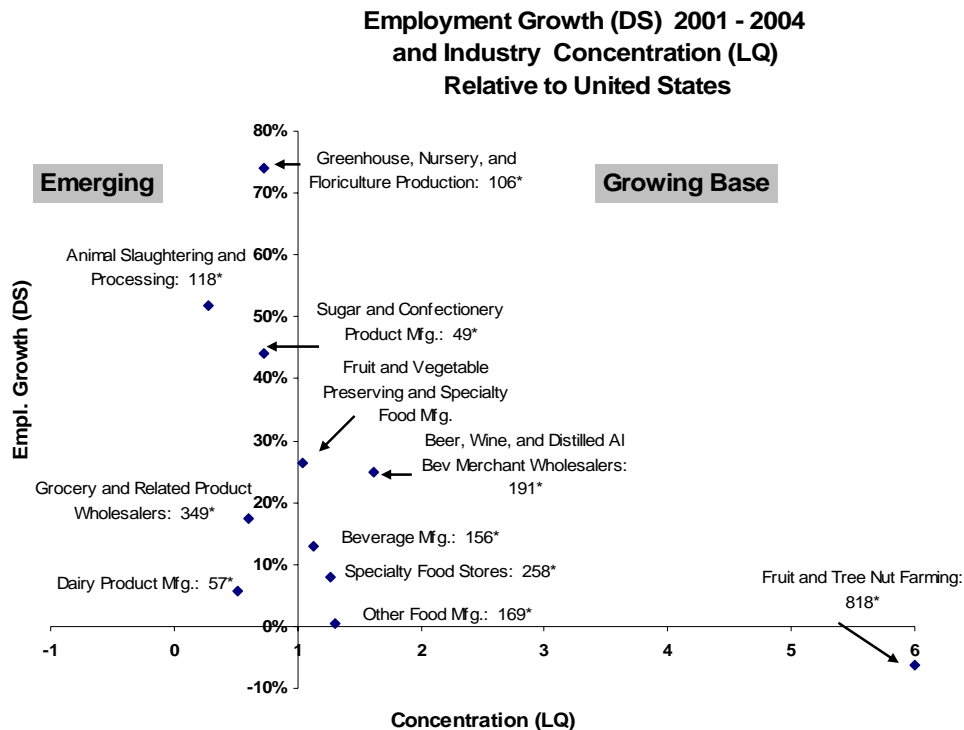
Relative Employment Concentration		Relative Employment Growth	
<u>LQ Range</u>	<u>LQ Strength</u>	<u>DS Range</u>	<u>DS Strength</u>
Less Than .25	LQ----	Less than -50%	DS---
.25 – .50	LQ---	-20% – -50%	DS--
.51 – .75	LQ--	-20% – -5%	DS-
.76 – 1.10	LQ1	-4% – 5%	DS0
1.11 – 1.75	LQ+	6% – 10%	DS+
1.76 – 3.00	LQ++	11% – 25%	DS++
Over 3.00	LQ+++	26% – 50%	DS+++

It is important to note that this quantitative analysis is a preliminary step in determining industrial clusters; its findings only point to industries that may be clusters. The process of identifying clusters is iterative. The preliminary results of the quantitative analysis can point to industries where qualitative research, such as interviews with companies or trade associations, might most efficiently be targeted. Further research can determine the extent to which companies within these industries benefit by co-locating in the Rogue Valley, or if they exhibit various hallmark features of clusters, such as having buyer-supplier relationships, a shared labor pool, specialized knowledge, cooperative or collaborative activities, similar markets or shared technology.

In summary, the objective of this analysis of the regional economy is to identify existing and emerging industrial clusters in Jackson and Josephine counties. The analysis depends on and is constrained by the NAICS classifications to determine concentrated, relatively fast-growing, and well-paying industries in the region. Because the goal is to uncover industrial clusters, unless they meet the screening criteria, the study does not focus on the region's major industrial sectors, such as Retail Trade (17% of employment according to the Oregon Employment Department, July 2005), nor industries whose projected employment is slated to grow quickly in absolute terms, such as Professional and Business Services (33% from 2004 to 2014ⁱⁱ). Summary and detailed tables of regional employment are provided in Appendix B and Appendix C, respectively.

Findings of the Analysis of Regional Industrial Clusters

Food and Beverage Production, Manufacturing and Sales Cluster



* Industry Employment, 2004

Chart 2. Food and Beverage Production, Manufacturing and Sales Cluster

- Industries in the Food Production, Manufacturing and Sales sector employ nearly 2,300 workers across 121 companies. The cluster includes food growers, such as fruit tree farmers; food and beverage manufacturers, such as vintners; grocery and beverage wholesalers; and specialty food retailers. Examples of companies in the cluster are Rising Sun Farms, Weisinger's of Ashland, and Harry and David Country Village.
- Most industries in this cluster fall into the "Growing Base" quadrant, having both high concentrations of employment and strong increases in employment compared to the nation.
- Employment grew more quickly regionally than nationally across most industries in this cluster.
- Average wage for the cluster, \$25,744, is 88% of the regional average wage of \$29,132 and 78% of wages across these industries nationwide.
- Employment in food manufacturing overall (NAICS 311) in Oregon is projected to lose more than 4% between 2004 and 2014ⁱⁱ, but expected to increase by over 4% nationally.ⁱ
- Retail sales, often through specialty food stores, are frequently part of business activity in this sector regionally, either through on site or Internet-based sales. In fact, several companies involved in food manufacturing are reported in the retail or wholesale industrial categories.

Cluster Components

- Fruit and Tree Nut Farming is highly concentrated in the region (LQ=6), with more than 800 employees. While employment remained unchanged nationwide between 2001 and 2004, the industry lost nearly 6% of its employees in the Rogue Valley. Regionally, firms are also leaving this industry: the number of companies in the industry declined by 22% between 2001 and 2004.
- Some sectors, such as Sugar and Confectionary Manufacturing and Dairy Product Manufacturing, have few firms and employees, yet may benefit particularly from cross-industry collaboration in areas such as manufacturing, distribution, and marketing.

Cluster Conditions

- Industries share a similar labor pool.
- The region has locational advantages related to its fruit-growing activities.
- Industries are linked by distribution and sales networks.
- Industries may employ similar processing technologies and share a need for innovation.
- Regional companies collaborate. Many firms in this cluster work with members of the Tourism cluster in joint marketing programs, such as THRIVE, Taste of Ashland, and regional wine and farm tours, which feature culinary or “agri-tourism.”
- State and regional programs market the cluster’s culinary specialties and enhance opportunities for its growth both in developing new niche products and in reaching more customers.

Findings from the School of Business Cluster Survey

- Seven companies from this cluster responded to the survey.
- 57% of respondents in the cluster agreed with the statement, “My company draws from the same specialized labor pool as other businesses in the region.”
- 57% said, “Formal or informal networks with regional *competitors*” were somewhat important to critically important to their company’s success. The same percentage of respondents said, “Formal or informal networks with regional *suppliers*” were somewhat important to critically important to their company’s success.
- 57% of respondents said they participated in formal or informal networks with other firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 5. Key Characteristics of the Food and Beverage Production, Manufacturing and Sales Cluster

NAICS Code	Food and Beverage Production, Manufacturing and Sales Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
1113	Fruit and Tree Nut Farming	Transforming	LQ+++ DS-	818	14	\$ 17,582
1114	Greenhouse, Nursery, and Floriculture Production	Emerging	LQ-- DS+++	107	9	\$ 19,718
3113	Sugar and Confectionery Product Manufacturing	Emerging	LQ-- DS+++	50	3	\$ 11,615
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	D***	D***	D***	D***	D***
3115	Dairy Product Manufacturing	Emerging	LQ-- DS+	58	3	\$ 32,272
3116	Animal Slaughtering and Processing	Emerging	LQ--- DS+++	118	8	\$ 19,711
3119	Other Food Manufacturing	Growing Base	LQ+ DS0	170	9	\$ 33,361
3121	Beverage Manufacturing, including wine	Growing Base	LQ+ DS++	157	16	\$ 25,841
4452	Specialty Food Stores	Growing Base	LQ+ DS+	259	24	\$ 21,285
4248	Beer, Wine, and Distilled Alcohol and Beverage Merchant Wholesalers	Growing Base	LQ+ DS++	192	4	\$ 35,092
4244	Grocery and Related Product Wholesalers	Emerging	LQ-- DS++	350	31	\$ 34,768
	Total			2,434	123	\$ 25,744
Related Industry:						
4541	Electronic Shopping and Mail-Order Houses	D***	D***	D***	D***	D***
<u>Examples of Companies</u>		<u>Location</u>				
Weisinger's of Ashland, Inc.		Ashland				
Harry and David Country Village		Medford				
Rising Sun Farms		Phoenix				
Herbs America		Murphy				

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Logging and Support Activities for Forestry Cluster

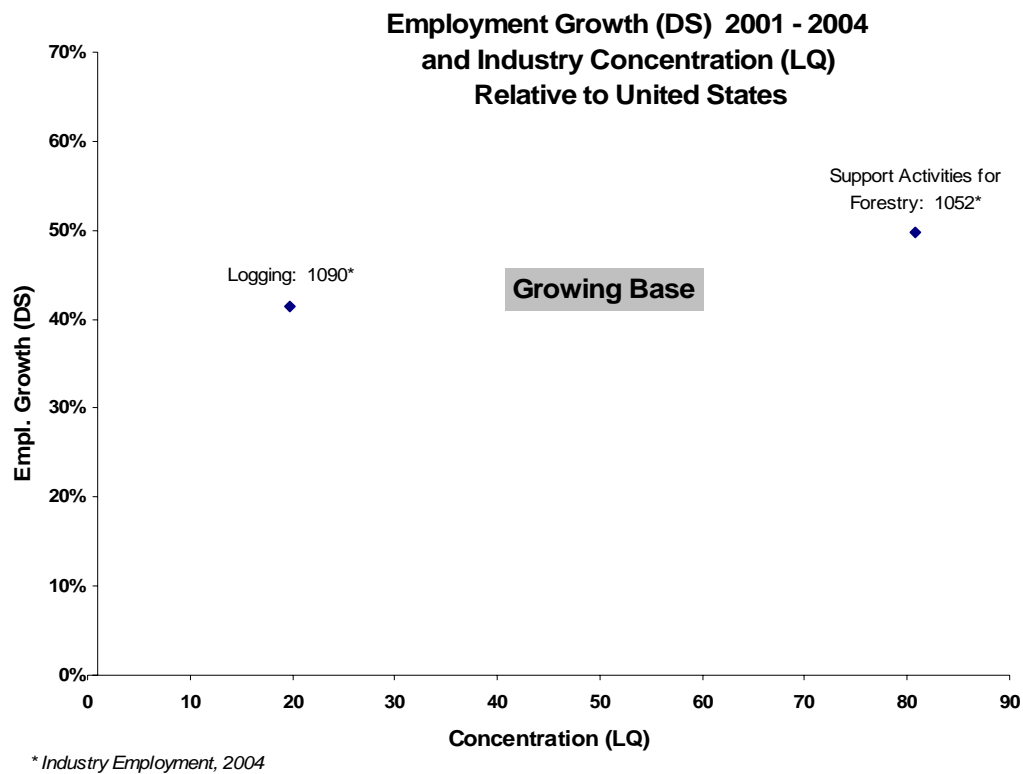


Chart 3. Logging and Support Activities for Forestry Cluster

- The Logging industry is made up of companies primarily engaged in cutting timber, transporting timber or producing wood chips in the field. Gyppo, Inc. of Grants Pass is an example of a regional company.
- Firms in the Support Activities for Forestry Industry, such as Grayback Forestry, are primarily engaged in activities related to timber production, wood technology, forestry economics and marketing, and forest management and protection. Activities of the sector include estimating timber, firefighting, pest control, and consulting on wood attributes and reforestation.
- Reflecting the region's rich timber resource base, these are two of its most concentrated industries, with employment concentrations more than 20 and 80 times the national levels for Logging and Support Activities for Forestry, respectively.
- Nearly 2,000 employees across 117 firms are evenly divided between the two sectors.
- U.S. Census Bureau Non-Employer data reports that 127 businesses without employees were involved in Support Activities for Forestry in Jackson County in 2001 (Census, 2001). The County had more than six times the share of non-employer businesses in this sector than the nation had in 2001.
- The average wage is relatively high for the regional Logging industry, 45% higher than the industry's pay nationally, but the average wage is very low for Support Activities for Forestry (63% of wages in the sector nationally).

- Employment grew strongly in this cluster, outpacing the national rate by 35% and 45% for Logging and Support Activities, respectively. However, projections for 2004-2014 point to losses for the Logging industry, by 6% in Oregonⁱⁱ and by 10% nationwide.ⁱ
- Several local firms have developed new kinds of industries out of the region's traditional logging activities. Erickson Air-Crane and other helicopter services manufacture specialty cargo transportation as an outgrowth of regional know-how in logging. Regional firefighting and reforestation companies are based in the region, but serve western states.
- Innovation and capital investment in the processing and use of small diameter wood will help to sustain the industry.

Cluster Conditions

- Companies draw from a common labor pool.
- Regional companies have specialized knowledge developed through decades of logging and forest management.
- Access to rich timber resources gives the sector locational advantages, though access to federal timber stands has been limited over the past 20 years.
- The industry adapts to the same regulatory environment.
- Companies have developed new technologies, such as small diameter wood processing and harvesting methods, as a result of changes in the characteristics of the regional timber supply.
- The industry and region may benefit from collaboration with:
 - Forestry research at universities both within and outside of Oregon.
 - Environmental educational programs at SOU and RCC.
 - Non-profit organizations focusing on sustainable forestry.
 - Environmental organizations.

Table 6. Key Characteristics of the Logging and Support Activities for Forestry Cluster

NAICS Code	Logging and Support Activities for Forestry Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
1133	Logging	Growing Base	LQ+++ DS+++	1,090	66	\$ 44,050
1153	Support Activities for Forestry	Growing Base	LQ+++ DS+++	1,052	51	\$ 18,443
Total				2,143	117	\$ 31,473

Examples of Companies

Gypco, Inc.	Grants Pass
Erickson Air-Crane Co.	Central Point
Grayback Forestry	Merlin

Location

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

Wood Products Cluster

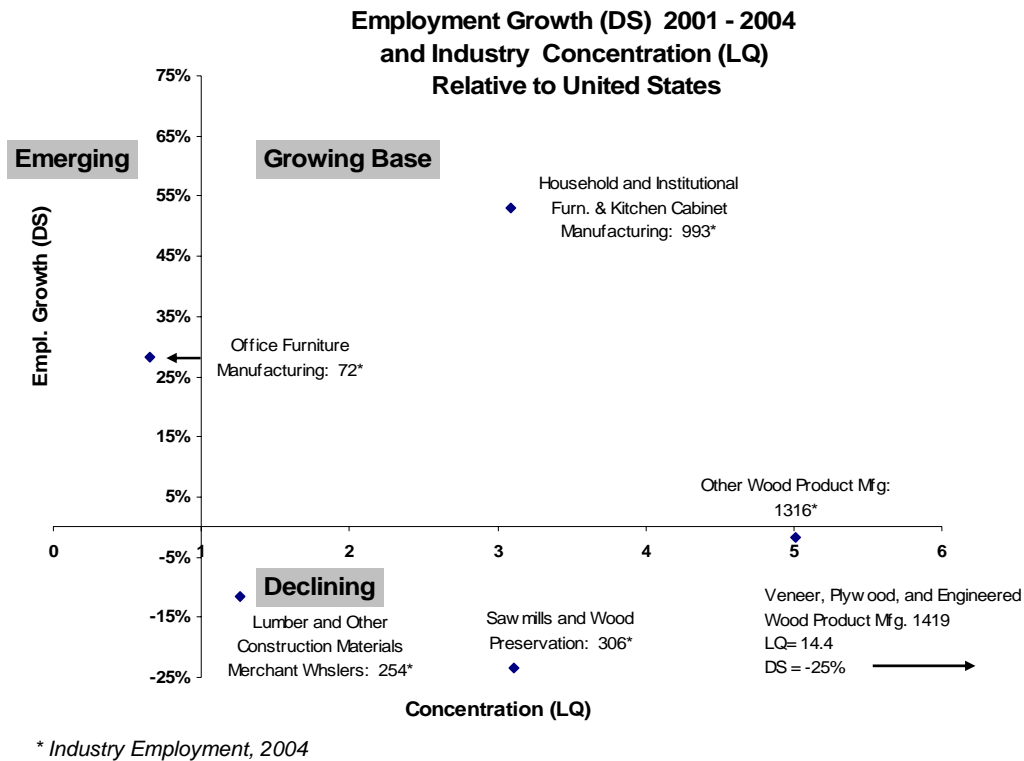


Chart 4. Wood Products Cluster

- The Wood Products Cluster includes industries involved in primary wood processing, such as sawmills and plywood mills, as well as secondary wood processors who manufacture value-added products such as kitchen cabinetry, wood moldings, and windows.
- 127 companies in the Wood Products Cluster employ over 4,300 workers in Jackson and Josephine counties.
- Most industries in the Wood Products Cluster show high employment concentration indicators, in spite of contractions in the industry over the past 20 years.
- Employment declines are evident for the primary wood products group (sawmills and plywood mills), but job opportunities have expanded in the region's secondary wood products industries.
- The outlook for sustaining employment in the Wood Products Manufacturing industry (NAICS 321) is guarded. Nationally, employment in the industry is expected to increase by 7%, but some sectors are predicted to contract, such as Sawmills and Wood Preservation (NAICS 3211) which is expected to shrink by 18%.ⁱ However, employment within the sector is projected to decline moderately in Oregon and the Rogue Valley region, falling by nearly 5% statewide and by 3% regionally.ⁱⁱ

Cluster Components

- Household and Institutional Furniture and Kitchen Cabinet Manufacturing (NAICS 3371) is the leading industry in this cluster, producing laminated wood kitchen cabinets, bathroom vanities, and countertops. Examples of companies in this sector are Master Brands Cabinets in Grants Pass and New Horizons Woodwork in Ashland.
 - Companies in the industry show hallmarks of a cluster: they draw from a similar semi-skilled to skilled labor pool, they may share common manufacturing processes, and possibly similar distribution channels and end-users.
 - The industry shows particularly strong cluster indicators for both employment concentration and employment growth.
 - The industry is a major regional employer: 41 companies employ nearly 1,000 workers.
 - The industry pays well: the average pay of \$31,568 is 4% above the industry's level nationally, and 8% above the regional average wage.
 - In spite of recent employment growth of 48% from 2001 to 2004, nationally the industry's future is tentative. This weakness may prove challenging for the future of this sector regionally. The U.S. had an 8% decline in employment between 2001 and 2004, and projects a further 2% fall in jobs for the 2004-2014 period.¹
- The Other Wood Products industry (NAICS 3219) includes a wide array of mainly secondary wood processing industries, such as Wood Window and Door Manufacturing and Prefabricated Wood Building Manufacturing. Examples of companies in this industry are Moulding Specialties in White City and Gazebo Works, Too in Central Point.
 - The sector employs 1,316 workers in 28 firms.
 - The region has a very high concentration of employment in the industry (LQ=5), but shows weakness in terms of employment growth. Employment in the industry declined by 2% more in the Rogue Valley than it did nationally, to fall by 7% between 2001 and 2004. Nationally, the industry is expected to fare better with a 17% increase in employment between 2004 and 2014.¹
 - The average wage for the Other Wood Products industry is 4% higher than the region's overall average wage and 96% of the average wage level for the industry nationally.
 - Like Household and Institutional Furniture and Kitchen Cabinet Manufacturing, the firms in this sub-sector access a shared semi-skilled labor force and may share some common processes and industry-specific knowledge.
- The employment data for the region's secondary wood products industries, which manufacture a wide array of wood products such as kitchen cabinetry, wood moldings, and windows, likely understate activity in this sub-sector. Several large wood manufacturing companies, such as Boise Cascade Corporation, are involved in processing both primary and secondary wood products, yet are counted in primary wood products manufacturing industries such as Sawmills or Softwood Veneer and Plywood and Manufacturing.

Cluster Conditions

- Industries share similar technologies and processes.
- Industries benefit from close proximity to timber resources, giving the region locational advantages in wood processing.
- Industries share a common labor pool for unskilled and semi-skilled workers.
- Industries share wholesale and end-user markets.
- Companies participate in similar organizations and associations.
- The sector is enriched by the region's creative sector and artisan woodworkers.
- The industry may be further stimulated by regional building and population growth, with some growth in high-end building.

Findings from the School of Business Cluster Survey

- Seven companies responded to the survey.
- 57% agreed that, "My company draws from the same specialized labor pool as other businesses in the region."
- 71% indicated that, "Formal or informal networks with regional suppliers" were somewhat important to critically important to their company's success.

Table 7. Key Characteristics of the Wood Products Cluster

NAICS Code	Wood Products Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
3211	Sawmills and Wood Preservation	Transforming	LQ+++ DS--	306	7	\$ 44,049
3212	Veneer, Plywood, and Engineered Wood Product Mfg	Transforming	LQ+++ DS--	1,419	23	\$ 36,766
3219	Other Wood Product Mfg	Transforming	LQ+++ DS0	1,316	28	\$ 30,272
3371	Household and Institutional Furniture. & Kitchen Cabinet Manufacturing	Growing Base	LQ+++ DS+++	993	41	\$ 31,568
3372	Office Furniture (including Fixtures) Manufacturing	Emerging	LQ-- DS+++	72	6	\$ 29,879
4233	Lumber and Other Construction Materials Merchant Wholesalers	Transforming	LQ+ DS-	255	22	\$ 39,182
	Total			4,361	127	\$ 34,160

Examples of Companies

Master Brand Cabinets
New Horizons Woodworks
Moulding Specialties
Gazebo Works, Too

Location

Grants Pass
Ashland
White City
Central Point

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

Metals Manufacturing Cluster

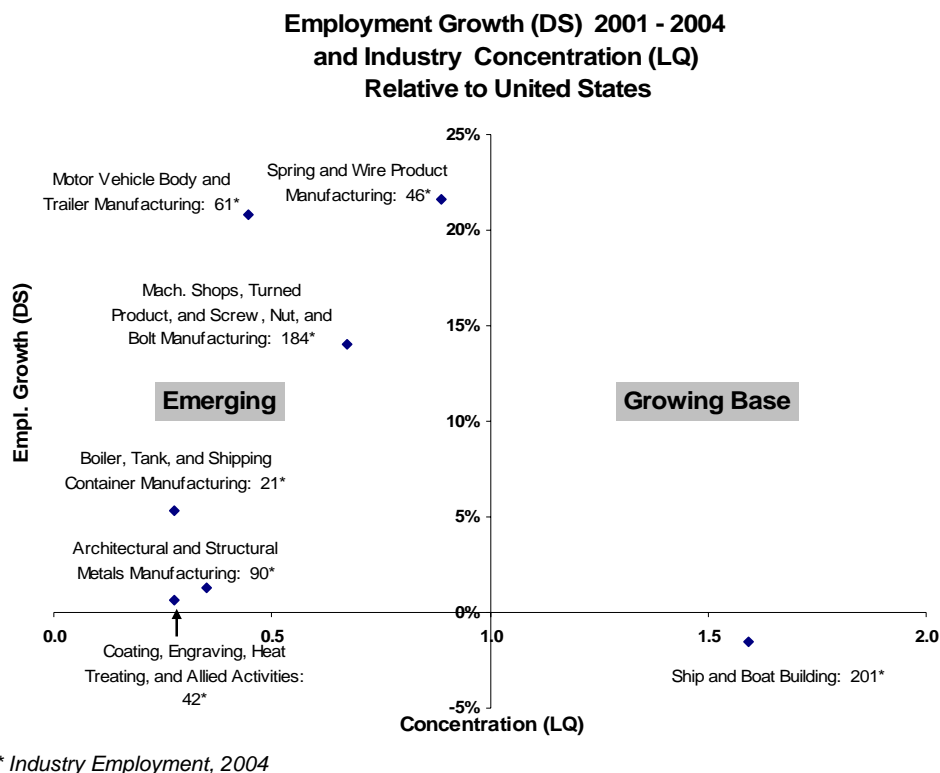


Chart 5. Metals Manufacturing Cluster

- The Metals Manufacturing Cluster features a wide cross-section of industries producing fabricated metal products (NAICS 332), machinery (NAICS 333), and transportation equipment (NAICS 336). Sub-industries at the 4-digit NAICS level that make up the Metals Manufacturing Cluster are sectors which show strong employment concentrations and/or employment growth that exceeds the nation. Other sub-industries, such as Navigational, Measuring, Electromedical, and Control Instruments Manufacturing (NAICS 3345), are not included in the Metals Manufacturing cluster because they either report poor employment growth, very low employment concentrations, or have less than three member firms.
- With the exception of Ship and Boat Building (NAICS 3366), all concentration indicators (LQ's) of the cluster's sub-sectors are less than one, showing employment concentrations below the national share. However, since the metals manufacturing industry, particularly motor vehicle production, is highly concentrated in a few locations nationally, relatively low concentration indicators may still point to regional industries whose employment levels are sufficient to be considered concentrated for the purposes of identifying potential industrial clusters.
- Most of the 99 companies within this cluster are small, employing fewer than 25 people. Taken together, Rogue Valley companies in the Metals Manufacturing cluster employ a total of 908 workers.
- The cluster's average wage of \$35,549 exceeds the regional average wage of \$29,132 by 22%, but wage levels across specific industries are 63% to 90% below the national average wages.

- At the national level, employment projections for fabricated metal products machinery, and transportation equipment foresee contractions or sluggish growth. Over the ten years between 2004 and 2014, the Bureau of Labor Statistics predicts that employment in the Fabricated Metals industries will contract by 2%, that Machine Manufacturing will decrease by 13%, and that the Transportation Manufacturing sector will post a 5% increase in employment.ⁱ However, projections for Oregon's industries are notably brighter: employment in Fabricated Metals industries is slated to increase by more than 13%, for Machine Manufacturing by nearly 7%, and for Transportation Manufacturing by nearly 14%.ⁱⁱ

Cluster Components

- Machine Shops; Turned Products; and Screw, Nut, and Bolt Manufacturing (NAICS 3327)
 - This sector includes a wide variety of activities related to machining metal parts on a job or order basis, machining precision-turned products or manufacturing metal bolts, nuts, screws, rivets, and other industrial fasteners.
 - Twenty-one companies employ 184 workers throughout the region.
 - The industry's average wages of \$30,931 are slightly above the overall regional average wage of \$29,132 and 75% of the average pay level for the industry nationally.
 - Compared to the nation, employment in the region showed strong gains in recent years. Between 2001 and 2004, the industry grew by over 8% at a time when the sector contracted by 5.5% nationally.
 - National employment projections point to a moderate 4% increase in jobs for the 2004-2014 period.ⁱ
- Ship and Boat Building (NAICS 3366)
 - Eleven regional companies that manufacture ships or boats for recreational or personal use employ more than 200 people and pay wages 20% higher than the overall regional wage.
 - The regional industry shows signs of expansion as two new firms joined the industry between 2001 and 2004.
 - Employment projections predict a strong 16% increase in employment nationwide.ⁱ In Oregon, employment in the larger Transportation Equipment Manufacturing sector (NAICS 336) is expected to rise by nearly 14%.ⁱⁱ
 - Companies in this cluster share specialized knowledge of boat design for river and fishing uses.

Cluster Conditions

- Industries share a common labor pool for semi-skilled and skilled workers.
- Some industries, such as Ship and Boat Building, have similar distribution and marketing conditions.
- Companies belong to similar trade or professional associations.
- Subsets, or *sub-clusters*, of industries within the Metals Manufacturing cluster employ similar manufacturing processes.

- Industries may have comparable places in a buyer-supplier chain.
- Industries within sub-clusters benefit from similar kinds of technological innovations.

Findings from the School of Business Cluster Survey

- Four of the six cluster member respondents agreed with the statement: “My company draws from the same specialized labor pool as other businesses in the region.”
- Half said that, “Formal or informal networks with regional *competitors*” were somewhat important to critically important to their businesses success. Five out of six respondents said that, “Formal or informal networks with regional *suppliers*” were somewhat important to critically important to their businesses’ success.
- Half of the respondents said, “Presence of industry and trade associations or consortia” was somewhat important to critically important to their businesses success. However, only two of the six companies reported that they participate in formal or informal networks of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 8. Key Characteristics of the Metals Manufacturing Cluster

NAICS Code	Metals Manufacturing Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
A. Fabricated Metal						
3323	Architectural and Structural Metals Manufacturing	Emerging	LQ--- DS0	90	13	\$ 29,398
3324	Boiler, Tank, and Shipping Container Manufacturing	D***	D***	D***	D***	\$ D***
3326	Spring and Wire Product Manufacturing	D***	D***	D***	D***	\$ D***
3327	Machine Shops; Turned Products; and Screw, Nut, and Bolt Manufacturing	Emerging	LQ-- DS++	184	21	\$ 30,931
3328	Coating, Engraving, Heat Treating, and Allied Activities	Emerging	LQ--- DS0	42	9	\$ 32,462
3329	Other Fabricated Metal Product Manufacturing	Declining	LQ-- DS-	168	18	\$ 33,354
	Fabricated Metals Subtotal			551	66	\$ 31,678
B. Machine Manufacturing						
3335	Metalworking Machinery Manufacturing	Declining	LQ-- DS-	94	9	\$ 35,514
3362	Motor Vehicle Body and Trailer Manufacturing	Emerging	LQ--- DS++	62	13	\$ 26,479
3366	Ship and Boat Building	Transforming	LQ+ DS0	201	11	\$ 35,410
	Machine Manufacturing Subtotal			357	33	\$ 33,892
	Metals Manufacturing Total			908	99	\$ 32,549

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Wholesalers Cluster

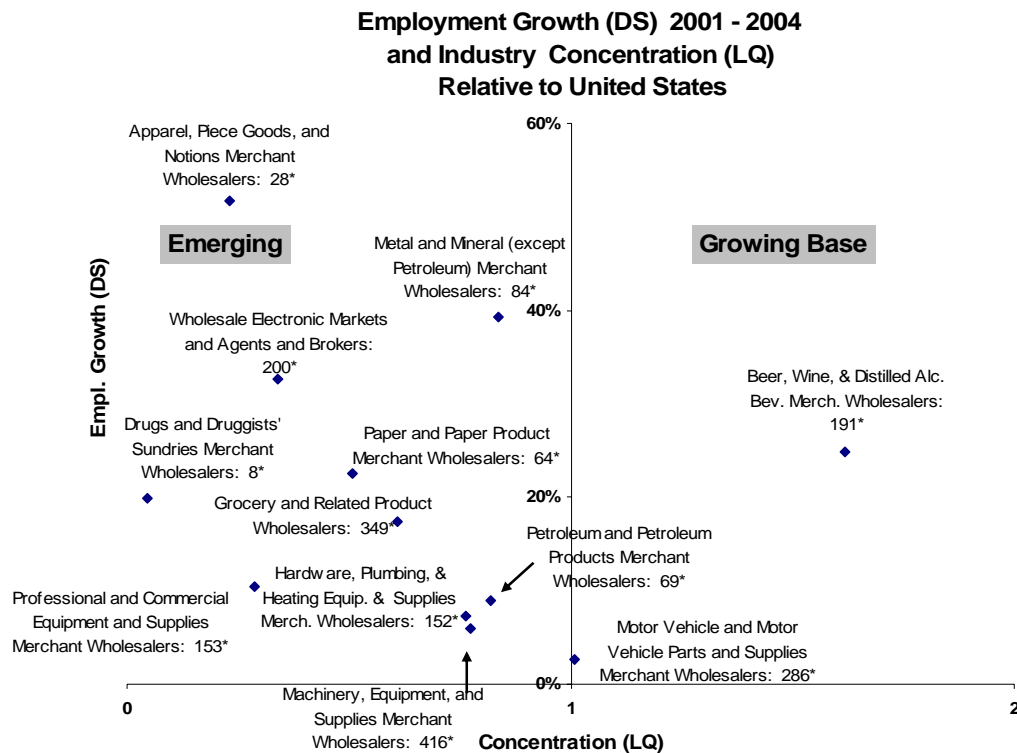


Chart 6. Wholesalers Cluster

- Rather than an industry that produces goods or services, wholesalers serve an intermediate step in the distribution of merchandise or raw and intermediate materials and supplies used in production. The industry is as varied as the products it brokers, from coffee to heavy machinery. The group is considered an emerging cluster because of its strong employment growth numbers and its buyer-supplier linkages to regional agricultural and manufacturing sectors. Additionally, many firms across the various wholesale industries likely share similar technologies, processes, know-how, and markets. High employment growth coupled with industry concentration less than that of the nation place most of the Wholesale sub-industries in the “Emerging” quadrant.
- The industry’s employment totals 2,841 workers in 350 firms. Average wages of \$35,064 for the sector are 20% above the regional average wage across all industries. In addition to posting strong job growth, most wholesale sub-sectors also experienced an increase in the number of firms in the industry between 2001 and 2004.
- Most wholesale subgroups grew substantially more than their national counterparts. Increased wholesale activity relates at least in part to population and business growth in the Rogue Valley where the population grew by 29% between 1990 and 2004.ⁱⁱⁱ Further research may confirm, however, that some of the increased activity relates to trade in the region’s goods-producing sectors, such as food manufacturing and secondary wood products.
- While most companies in this cluster sell business-to-business, many also serve end-user markets through direct or online sales.

- Supporting the likelihood of continued growth are the industry’s moderate-to-strong employment projections. Between 2004-2014, employment in the Wholesale industry is projected to increase by 8% nationallyⁱ and by 15% in Jackson and Josephine counties.ⁱⁱ

Cluster Conditions

- Industries throughout the cluster share expertise in buying and selling and/or in moving goods within the region and transferring goods into or out of the region.
- Industries may access a similar labor pool with similar specialized skills.
- Regional wholesalers work in similar markets, serving either regional consumers or out-of-area buyers.
- Strong employment, population, and regional economic growth will likely push this sector into the “Growing Base” quadrant in the coming years.

Findings from the School of Business Survey

- Eighteen companies responded to the survey.
- 50% agreed with the statement, “Companies in my industry have specialized infrastructure needs (in areas such as transportation, communications, waste disposal, and utilities).”
- 66% agreed with the statement, “My company draws from the same specialized labor pool as other businesses in the region.”
- 83% said, “Formal or informal networks with regional *competitors*” were somewhat important to critically important to their company’s success. 77% said, “Formal or informal networks with regional *suppliers*” were somewhat important to critically important to their company’s success.
- 77% indicated that, “Presence of industry and trade associations or consortia” was somewhat important to critically important to their company’s success.
- 60% of respondents participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 9. Key Characteristics of the Wholesalers Cluster

NAICS Code	Wholesalers Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
4233	Lumber and Other Construction Materials Merchant Wholesalers	Transforming	LQ+ DS-	255	22	\$ 39,182
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	Emerging	LQ--- DS++	154	15	\$ 32,049
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	Emerging	LQ1 DS+++	85	6	\$ 36,636
4236	Electrical and Electronic Goods Merchant Wholesalers	Emerging	LQ-- DS+++	168	19	\$ 42,609
4237	Hardware, Plumbing and Heating Equipment and Supplies Merchant Wholesalers	Emerging	LQ+ DS+	153	15	\$ 38,808
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	Emerging	LQ1 DS+	416	51	\$ 37,741
4239	Miscellaneous Durable Goods Merchant Wholesalers	Growing Base	LQ++ DS+++	413	20	\$ 25,225
4241	Paper and Paper Product Merchant Wholesalers	Emerging	LQ-- DS++	64	7	\$ 34,441
4242	Drugs and Druggists' Sundries Merchant Wholesalers	Emerging	LQ---- DS++	8	6	\$ 14,631
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	D***	D***	D***	D***	D***
4244	Grocery and Related Product Wholesalers	Emerging	LQ-- DS++	350	31	\$ 34,768
4247	Petroleum and Petroleum Products Merchant Wholesalers	D***	D***	D***	D***	D***
4248	Beer, Wine, and Distilled Al Beverage Merchant Wholesalers	Growing Base	LQ+ DS++	192	4	\$ 35,092
4251	Wholesale Electronic Markets and Agents and Brokers	Emerging	LQ--- DS+++	201	124	\$ 40,694
Total				2,841	350	\$ 35,064

Examples of Companies

Location

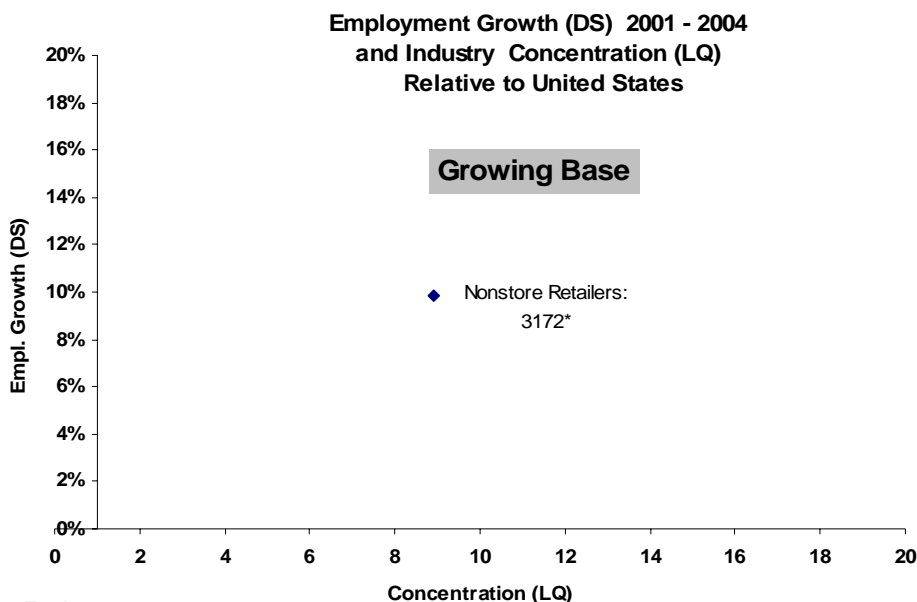
Reter Fruit Company	Medford
Mellelo Coffee	Medford
Acme Firefighting Devices	Medford
Rogue Rods	White City

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Electronic Shopping Cluster



* Industry Employment, 2004,
Includes Electronic Shopping 4541

Chart 7. Electronic Shopping Cluster

- The Electronic Shopping Cluster is made up of one 4-digit industry: Electronic Shopping and Mail-Order Houses (NAICS 4541). The industry is comprised of firms retailing all types of merchandise using non-store means, such as mail-order catalogs, toll-free telephone numbers, or electronic media, such as interactive television or computer. Examples of companies in the region include Musician's Friend and Raven Maps and Images.
- Confidentiality limits disclosure of employment levels and counts of firms. However, data is available for the larger industrial grouping of Non-Store Retailers (NAICS 454) which includes electronic and mail-order, vending machine operators, home delivery sales, door-to-door sales, and sales through portable stalls. In 2004, this industry employed 3,173 workers in 74 companies and paid an average wage of \$27,556.
- The Non-Store Retailers industry is highly concentrated in the Rogue Valley region, with an LQ of 8.9. Between 2001 and 2004, employment declined by 8% nationwide, but held steady in the Rogue Valley (DS=10%).
- The Non-Store Retailers industry is growing in terms of the number of regional firms in the sector: 17 new companies were established in the region between 2001 and 2004. These newcomers represented a 30% increase in the number of firms in the industry.
- Employment in the Non-Store Retailers Industry (NAICS 454) is expected to rise by 6% between 2004 and 2014 in Oregon.ⁱⁱ
- It is likely that non-store retailer activity is underrepresented:
 - In the QCEW data, companies are classified by their major industrial activity. Many producers, wholesalers, and retailers sell their products over the Internet, but because Internet-based sales are not the major source of their economic activity, these firms are classified by the goods and services they produce or by their retail sales category.

- Internet-based sales are often brokered by businesses without employees. Non-Employer Statistics (U.S. Census Bureau, 2001) reports businesses without employees for 2001. For Jackson County, there were 73 firms in the Electronic and Mail-Order Houses industry, which is twice the concentration of non-employee businesses in the industry relative to the nation.

Cluster Conditions

- Companies draw from similar labor markets.
- Companies share the need for ongoing adaptation to changing information technology conditions.
- Companies share technical know-how.
- Electronic shopping extends potential markets to anyone selling a product or service. Clusters may be defined based solely on this means of sales.
- New players in this cluster need technical training combined with sales and marketing expertise.

Table 10. Key Characteristics of the Electronic Shopping Cluster

NAICS Code	Electronic Shopping Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
4541	Electronic Shopping and Mail-Order Houses	Growing Base	LQ+++ DS+	D***	D***	D***
454	Non-store Retailers	Growing Base	LQ+++ DS+	3,173	74	\$ 27,559
<u>Examples of Companies</u>		<u>Location</u>				
Raven Maps and Images		Medford				
Musicians Friend		Medford				

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Freight Transport Cluster

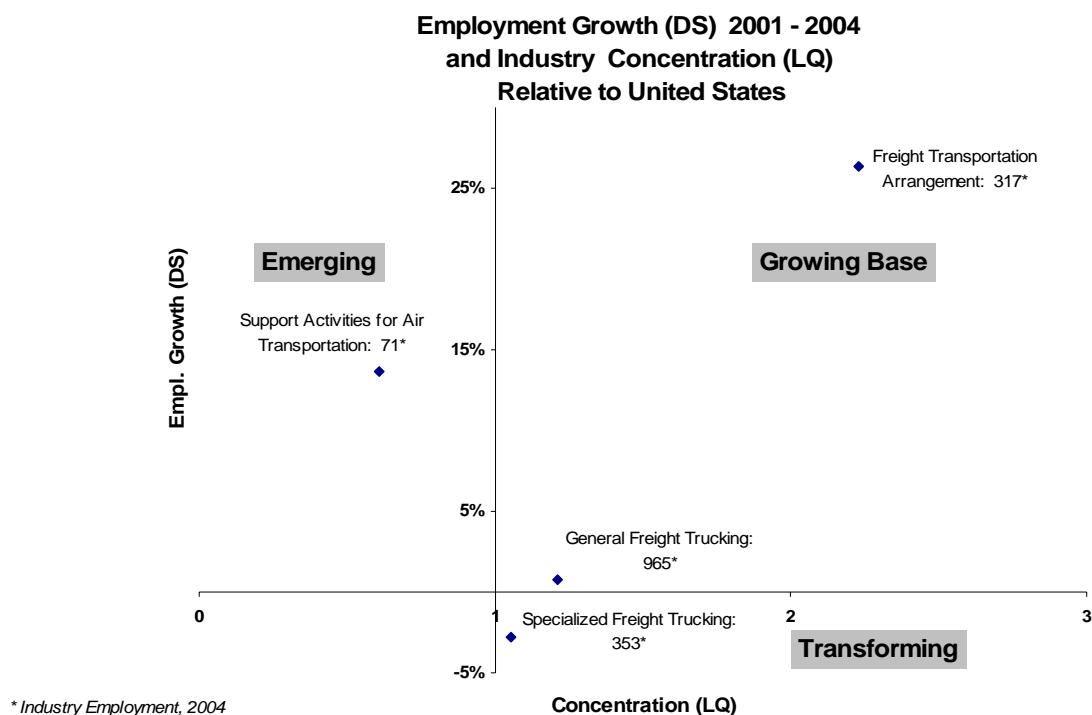


Chart 8. Freight Transport Cluster

- The Freight Transport Cluster is involved in moving cargo into or out of the region and encompasses the freight trucking, freight transportation arrangement, and support activities for air transportation industries. The cluster's industries fall into either the "Emerging" or "Growing Base" quadrants with 185 companies employing nearly 1,800 workers.
- The Oregon Employment Department projects a 16% increase in employment in the larger Transportation, Warehousing and Utilities sector (NAICS 48) for 2004-2014.ⁱⁱ
- Average wages throughout the cluster exceed the regional overall wage by 9% to 45%. The regional industry's average wage levels nearly match average wages for the industry nationally, ranging from 90% to 100% of the national rate.
- The concentration of freight-related industries derives, in part, from the location of the region's major cities along Interstate 5. Its proximity to the California-Oregon border makes it a logical transfer point. Northbound trucks may add a third tractor trailer while southbound trucks drop off a trailer to meet each state's restrictions on the number of trailers allowed.
- The trucking industry in the Rogue Valley has developed specialized knowledge and skills from its history of freight handling of natural resources, mainly wood products and logs.

Cluster Components

- The General Freight Trucking industry employs nearly 1,000 workers across 74 companies and pays 28% more than the region's overall average wage of \$29,132. While not highly concentrated in the region (LQ=1.2) nor growing particularly faster than the nation

(DS=.8%), the sector is slated to increase employment by 9% nationally.ⁱ Regionally, the sector can expect future growth stemming from regional population increases.

- The Freight Transportation Arrangement industry is made up of companies primarily engaged in coordinating the transportation of freight between shippers and carriers. Over 300 workers are employed by 35 companies throughout the region. The industry is highly concentrated regionally (LQ=2.2) and has strong employment growth relative to the nation (DS=26%). The industry's average wage is 45% higher than the regional wage overall and 91% of the industry's national average. Over the next ten years, jobs in the industry are slated to grow by a moderate 7% nationally.ⁱ
- The Freight Cluster is related to the growing Wholesalers Cluster.

Cluster Conditions

- The industries share specialized knowledge of freight transport.
- The region provides locational advantages to the industry with its proximity to the California-Oregon border and with Interstate 5 crossing through it.
- Companies in the cluster access a similar semi-skilled and skilled labor pool.
- Industries in the cluster share similar transportation infrastructure needs and challenges.

Findings of the School of Business Cluster Survey

- Half of the ten respondents agreed with the statement, "The network of highways and roads in the Rogue Valley region meets the needs of my company."
- 60% agreed with the statement, "Companies in my industry have specialized infrastructure needs (in areas such as transportation, communications, waste disposal, and utilities)."
- 70% agreed with the statement, "The majority of suppliers of my company's materials, machinery, and services are available within the region."
- 50% agreed with the statement, "My company draws from the same specialized labor pool as other businesses in the region."
- 50% said, "Formal or informal networks with regional *competitors*" were somewhat important to critically important to their company's success. 70% said "Formal or informal networks with regional *suppliers*" were somewhat important to critically important to their company's success.
- 50% said, "Presence of industry and trade associations or consortia" was somewhat important to critically important to their company's success, and 50% participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 11. Key Characteristics of the Freight Transport Cluster

NAICS Code	Freight Transport Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
4841	General Freight Trucking	Growing Base	LQ+ DS0	965	74	\$ 37,254
4842	Specialized Freight Trucking	Transforming	LQ1 DS0	354	54	\$ 31,823
4881	Support Activities for Air Transportation	Emerging	LQ-- DS++	71	12	\$ 29,059
4885	Freight Transportation Arrangement	Growing Base	LQ++ DS+++	317	35	\$ 42,321
4931	Warehousing and Storage	Declining	LQ---- DS0	85	10	\$ 34,534
	Total			1,708	175	\$ 36,727

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

Headquarters Cluster

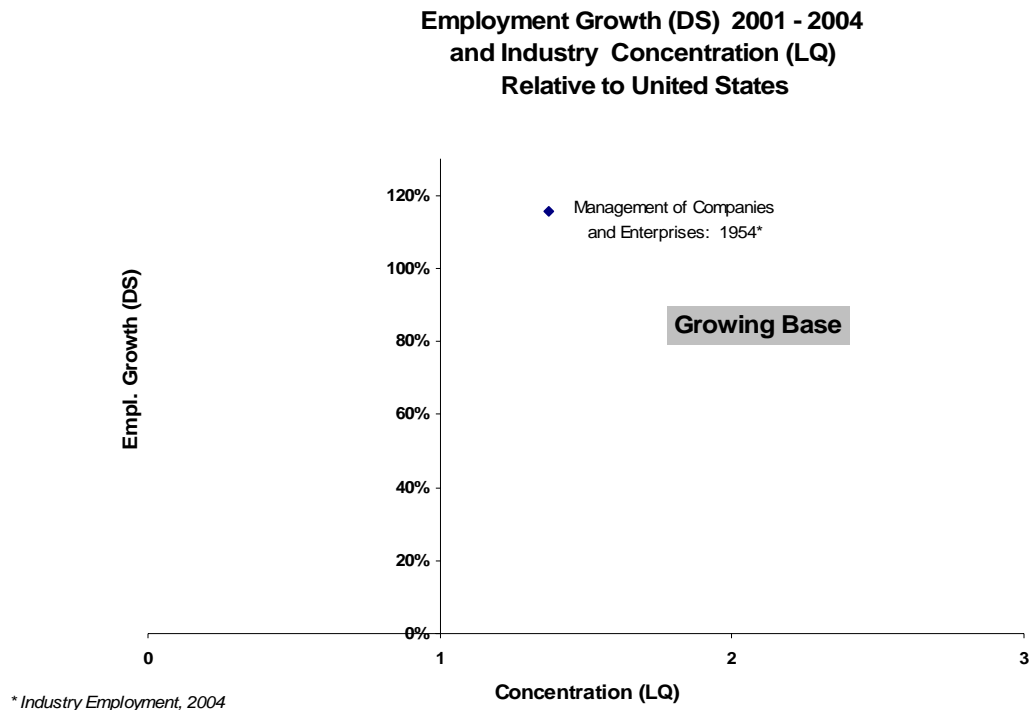


Chart 9. Headquarters Cluster

- The QCEW data reports employment by place of work. In cases where firms have multiple offices performing different activities, each office or establishment is assigned an industry code consistent with its activity. Offices of companies that oversee and manage satellite establishments and undertake a strategic, organizational planning, decision-making role for the company or enterprise make up the Management of Companies and Enterprises industry (NAICS 5511).
- In Jackson and Josephine counties nearly 2,000 people are employed in the Management of Companies and Enterprises sector, referred to here as the Headquarters Cluster. Inspection of the QCEW data for the region shows that most of the firms listed are the regional headquarters for multi-site businesses, such as a restaurant chain, or the administrative or planning office of a large business, such as a hospital.
- The Headquarters Cluster has very high employment growth, increasing at more than twice the rate of the sector nationally (115%). The relatively strong employment growth parallels the 38% increase in the number of establishments in this sector. This growth signals an increasing role for the region as an attractive location for company headquarters.
- Management and administrative functions require professional skills. In line with high skills is the sector's average wage of \$52,569, which is 30% higher than the regional average wage. In Jackson and Josephine counties, however, the sector pays just 66% of the industry's national average.
- Statewide projections point to continued job increases in this high-skill sector, with a ten-year increase of 11% between 2004 and 2014.ⁱⁱ

Cluster Conditions

- In general, the cluster employs people with similar professional skills in areas such as management, law, and accounting.
- Businesses may have similar training needs for their employees or benefit from inter-industry collaboration or networking.
- Employees may participate in similar regional or statewide professional organizations.
- The Rogue Valley serves as a growing service, commercial, and industrial center for the greater southern Oregon and northern California region. This role, coupled with the area's desirable quality of life, will lead to more companies establishing regional headquarters in Jackson and Josephine counties.

Table 12. Key Characteristics of the Headquarters Cluster

NAICS Code	Headquarters Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
5511	Management of Companies and Enterprises	Growing Base	LQ+ DS+++	1,954	61	\$ 52,569
	<u>Examples of Companies</u>	Location				
	Dutch Brothers (Managing Office)	Medford				
	Lithia Motors (Managing Office)	Medford				
	Asante Health System (Managing Office)	Medford				

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

Elder/Health Care Cluster

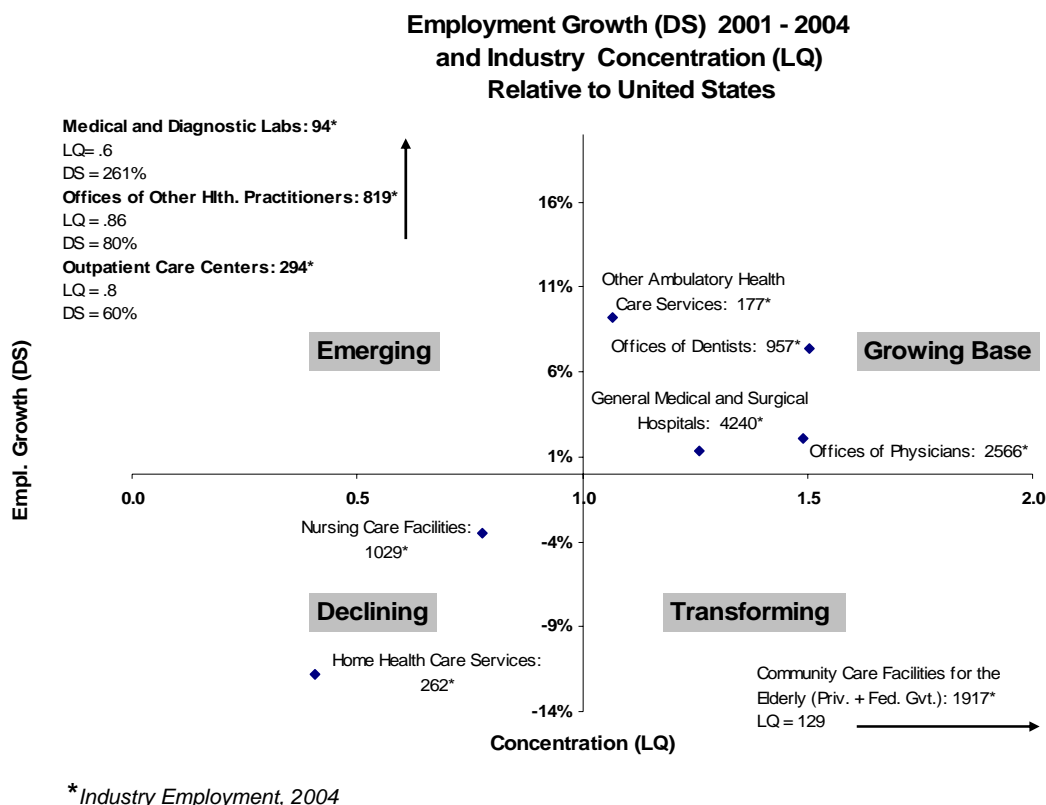


Chart 10. Elder/Health Care Cluster

Elder Care

- More than 3,000 people are employed in companies directly caring for the region's elderly either at home, in nursing facilities, or in residential facilities.
- The most concentrated industry in this cluster is Community Care Facilities for the Elderly (NAICS 6233), which includes both public and private residential facilities.
 - Included in the Community Care Facilities for the Elderly are large retirement residences as well as senior foster homes.
 - Industry concentration is significantly high (LQ=129) in the Rogue Valley, but employment growth is slower than growth in the sector nationally. Between 2001 and 2004, employment in the regional industry increased by 11% while nationally jobs increased by 17% (DS=-6%).
 - Average wages are 128% of the industry at the national level and 89% of the regional overall wage.
 - Employment is projected to increase by 12% nationwide over the next ten years, signaling promising and continued growth for this cluster regionally.ⁱ
- Other elder care service industries, such as Home Health Care Services, Nursing Care Facilities, and Death Care Services, have relatively low concentrations of employment, declines in employment, and lower wages compared to the nation (78%, 89%, and 95% respectively). Weakness in these industries is a surprising result given the importance of

elder care facilities and the relatively high share of the senior population in Jackson and Josephine counties.

- Over the past quarter century, the region's population grew significantly. Between 1990 and 2000 the two-county region's population increased by 23%. The in-migration of retirees led to sharp increases in the percentage of residents over 65. In 2004, 17% of the region's population, or 45,434 people, were 65 years or older compared to the state share of 12.7% (Portland State University, 2005). The region's population is expected to increase by 16% between 2004 and 2014.ⁱⁱⁱ This increase, coupled with the continued attraction of seniors to the region and the aging of the baby boom generation, suggests continued increases in the region's senior population. The demand for elder care services will expand with the needs of current and future senior residents.

Health Care

- Industries in Health Care are included with the Elder Care Cluster because the sector's size is directly related to the size and growth of the regional population, particularly the elderly population.
- The Health Care sector is one of largest employers in the region. It accounts for 8% of employment (over 9,000 employees) and pays 150% of the regional overall average wage.
- Employment is growing at a faster pace regionally throughout the health care sector, which includes Hospitals, Offices of Health Care Practitioners, Outpatient Care Centers and Laboratories. However, employment concentration is moderate for many of the health care industries, placing them at the low end of the "Growing Base" quadrant and the high end for the "Emerging" quadrant.
- Projections point to vigorous job increases in health care nationally, with employment in Ambulatory Health Care Services increasing by 37% and Hospitals rising by 28%.ⁱ

Cluster Conditions

- Sub-cluster industries share a common labor pool of semi-skilled, skilled, and professional workers.
- Companies in the cluster are related by the customers they serve and by their customers' unique needs.
- Industries are impacted similarly by the aging of the population and in-migration of retirees.
- Medicare policy and reimbursement rates affect most industries in this cluster.
- The elder care industry may benefit from collaboration with:
 - Educational and recreation-related organizations that cater to retirees.
 - Workforce and small business training providers to offer mentoring services drawn from retirees' skills and experience.

Findings from the School of Business Cluster Survey

- Eight companies responded to the survey: three from the Health Care industry and five from the Elder Care industry.

- 88% agreed with the statement, “My company participates in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems.”
- 75% agreed with the statement, “My company draws from the same specialized labor pool as other businesses in the region.”
- 88% said, “Formal or informal networks with regional *competitors*” were somewhat important to critically important to their company’s success. 63% said, “Formal or informal networks with regional *suppliers*” were somewhat important to critically important to their company’s success.
- 63% said, “Presence of industry and trade associations or consortia” was somewhat important to critically important to their company’s success. 88% participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 13. Key Characteristics of the Elder/Health Care Cluster

NAICS Code	Elder/Health Care Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
Elder Care Cluster (4-Digit)						
6216	Home Health Care Services	Declining	LQ-- DS-	263	13	\$ 17,551
6231	Nursing Care Facilities	Declining	LQ1 DS0	1,029	13	\$ 21,753
6233	Community Care Facilities for the Elderly (Private + Federal Government)	Transforming	LQ+++ DS--	1,918	113	\$ 25,963
8122	Death Care Services	Declining	LQ-- DS-	74	17	\$ 28,308
Total				2,775	155	\$ 18,967
Health Care Cluster (4-Digit)						
6221	General Medical and Surgical Hospitals	Growing Base	LQ+ DS0	4,240	5	\$ 41,473
6211	Offices of Physicians	Growing Base	LQ+ DS0	2,566	200	\$ 55,957
6212	Offices of Dentists	Growing Base	LQ+ DS+	958	135	\$ 35,368
6213	Offices of Other Health Practitioners	Growing Base	LQ++ DS+++	819	154	\$ 28,001
6214	Outpatient Care Centers	Emerging	LQ1 DS+++	294	13	\$ 32,366
6215	Medical and Diagnostic Laboratories	Emerging	LQ-- DS+++	94	8	\$ 75,952
6219	Other Ambulatory Health Care Services	Growing Base	LQ1 DS+	178	5	\$ 35,373
Total				9,149	520	\$ 43,634

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

Creative Cluster

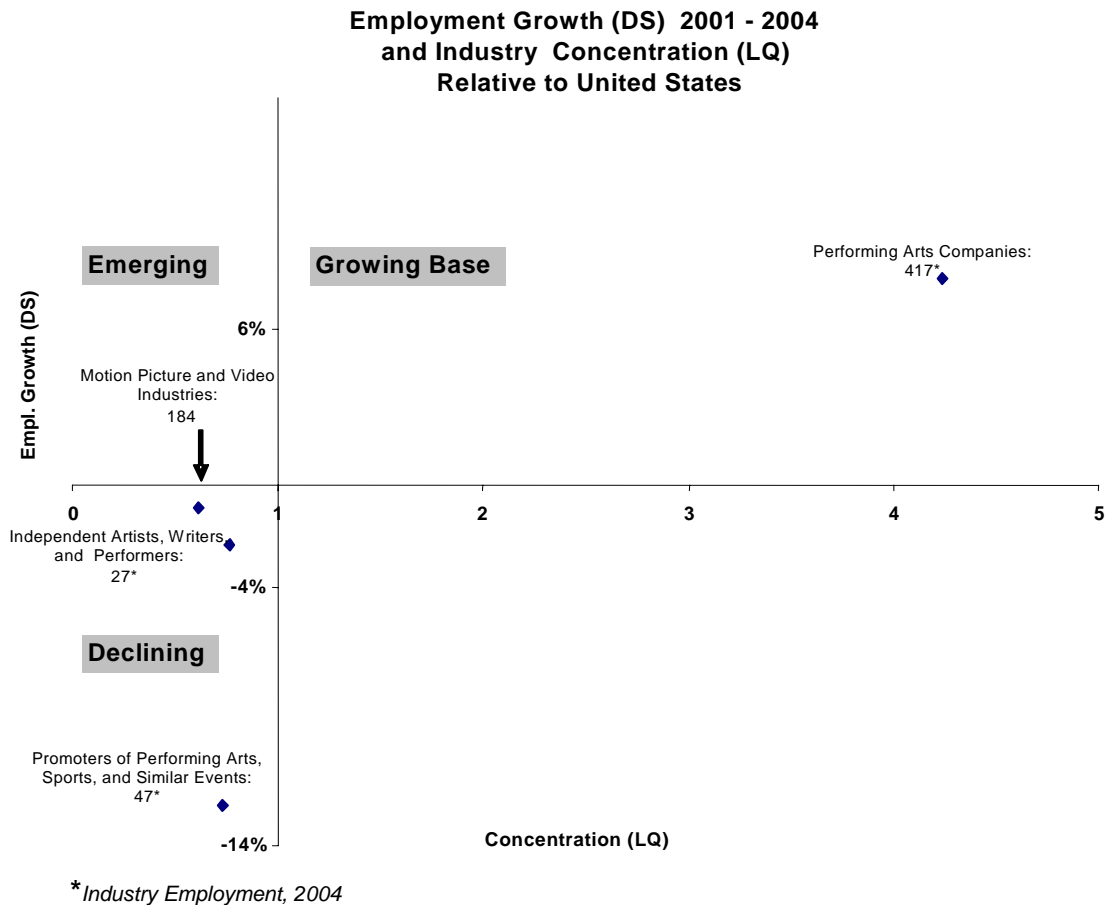


Chart 11. Creative Cluster

- The Creative Cluster includes a range of industries that reflect the region's artistic and cultural activities. Dominant, both in terms of concentration and employment, is the Performing Arts Companies industry. Other creative activities include the glass and clay products industries and event promoters.
- More than 800 people work in one of the 59 firms in the Creative Cluster. However, the cluster's employment picture is significantly incomplete since many people who work in creative industries are independent artists and writers and are not represented in the QCEW data. Complementing the employer data is the Non-Employer Statistics data (U.S. Census Bureau, 2001) which reports businesses without employees for 2001. In Jackson County, there were 579 additional non-employee firms in the performing arts, spectator sports, and related industries. These firms reflect 36 times the concentration of non-employee businesses in the industry relative to the nation, and magnify the already high relative concentration of employees in this sector evident in the QCEW data.
- Average wages vary within the Creative Cluster from \$20,240 in the Motion Pictures and Video Industries (73% of the regional overall wage), to \$45,911 for Independent Artist, Writers and Performers (one and a half times the region's average wage). Both of these sectors pay around 40% of the national average wages for these industries.

- With the exception of Performing Arts Companies and Motion Picture and Video Industries, the Creative Industries Cluster has relatively few firms across diverse sub-clusters.
- Employment in the Arts and Entertainment industry (NAICS 71) is projected to grow by 26% over the next ten years nationally. Jobs in the Motion Picture, Video, and Sound Recording industry (NAICS 512) are expected to post a more moderate increase in employment of 16%.ⁱ

Cluster Components: Performing Arts Companies

- Employing more than 400 people across 12 companies, this cluster lends the region part of its unique identity.
- The number of companies joining the industry increased three-fold between 2001 and 2004, while employment remained unchanged. National projections for the industry estimate a 17% employment increase between 2004 and 2014.ⁱ
- Average pay is 90% of the national level and 6% higher than the overall regional average wage.
- The Independent Artist, Writers and Performers Industry (NAICS 7115) provides jobs for 28 people in 18 companies, many of whom are performers.

Cluster Conditions

- The sub-clusters in the Creative Cluster are related to one another by sharing a similar customer base and specialized knowledge.
- Industries in sub-clusters share a common labor pool and technical knowledge.
- Industries and individuals benefit from linkages with the regional educational institutions, tourism organizations, and professional organizations.
- Industries benefit from collaboration with all levels of educational institutions and other supporting organizations.

Findings from the School of Business Cluster Survey

- Three out of the five respondents said they participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 14. Key Characteristics of the Creative Cluster

NAICS Code	Creative Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
3271	Clay Product and Refractory Manufacturing	D***	D***	D***	D***	D***
3272	Glass and Glass Product Manufacturing	D***	D***	D***	D***	D***
7115	Independent Artists, Writers, and Performers	Declining	LQ1 DS0	28	18	\$ 45,911
7111	Performing Arts Companies	Growing Base	LQ+++ DS+	417	12	\$ 30,821
5121	Motion Picture and Video Industries	Declining	LQ-- DS0	185	17	\$ 20,240
7113	Promoters of Performing Arts, Sports, and Similar Events	Declining	LQ-- DS-	47	3	\$ 20,472
	Total			817	59	\$ 27,502

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Tourism and Recreation Cluster

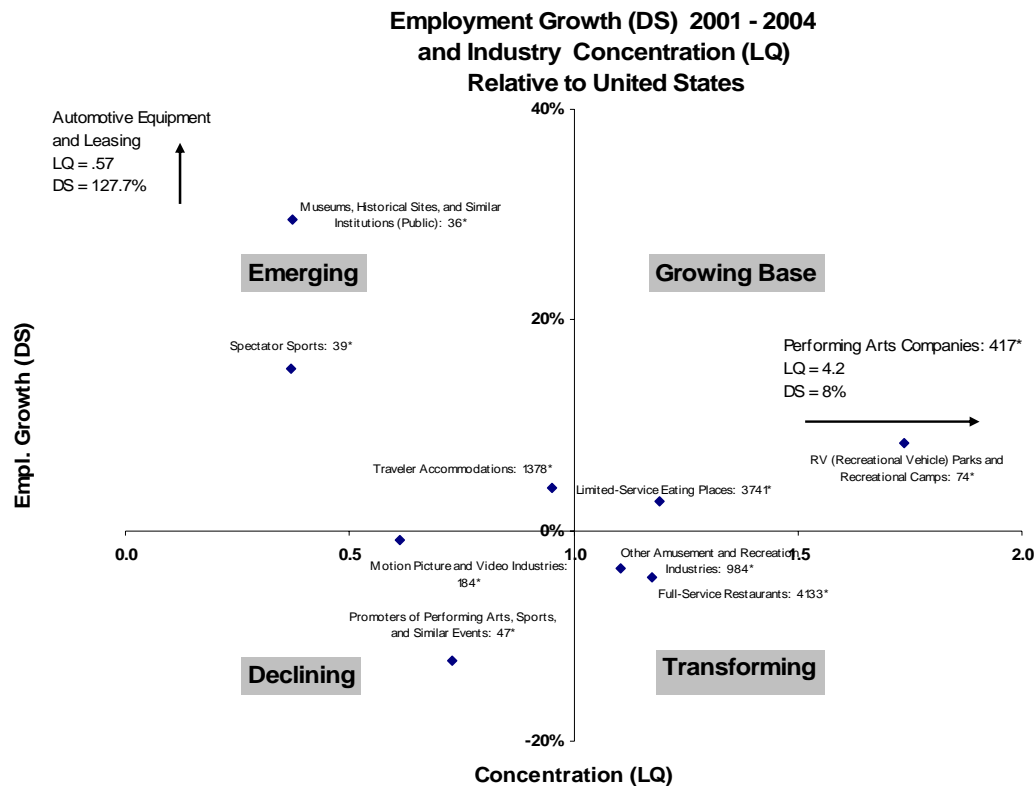


Chart 12. Tourism and Recreation Cluster

- The Tourism and Recreation Cluster encompasses industries that serve out-of-area consumers, from how they travel (Car Rental), to where they sleep (Accommodations), to where they eat (Restaurants), to what they do in the area (Recreation and Entertainment). Most industries also serve residents of the region, such as the Restaurant, Performing Arts Companies, and Entertainment and Recreation industries.
- Industries are included in the Tourism and Recreation Cluster if some or all of their business activities involve significant sales to visitors. Overall, the regional industries do not meet most of the various criteria for clusters: concentration, relative employment growth, or high wages. However, the sector is highlighted here because it is a large employer, its market is not limited to the region, and future employment growth is high.
- Concentration indicators (LQ) for the cluster's industries suggest that the industry is not particularly concentrated in the Rogue Valley relative to the nation, as is widely perceived. However, it is likely that there are areas within the region, such as Jacksonville and Ashland, where relative employment concentration values are high in visitor-related industries. Also, the economic activity in the Tourism and Recreation Cluster is underrepresented by the QCEW data since many companies in the industry do not have employees. Information on non-employer businesses (Bureau of Census, 2001) indicates that in 2001, Jackson County compared to the nation had 36 times the share of employment in businesses without employees (579 workers) in the Performing Arts and Spectator

Sports industries, and twice the percentage in the Traveler's Accommodations and RV Parks industries (59 workers combined).

- The industries with the largest employment levels, Restaurants and Accommodations, have lackluster relative employment growth, but industries in recreation and entertainment display stronger employment performance. Jobs in Automotive Equipment Rental and Leasing doubled between 2001 and 2004 to total 245, and the number of companies in the industry increased by 40%.
- The average wage for the cluster as a whole is \$13,640, less than half the overall regional wage. Many of the industry's jobs are low-skilled to semi-skilled and/or part-time entry level positions. Wage levels vary across industries in the cluster from a low of \$11,061 for Limited Service Eating Places to a high of \$30,821 for employees in Performing Arts Companies. Paying close to national wages (90-100%) are the RV Parks, Restaurants, and Performing Arts Companies. The remaining industries in the cluster pay 50%-75% of the national average wage levels in their industries.
- Most industries within the cluster are expected to increase employment in the ten years between 2004 and 2014. Nationwide, employment in Museums and Historical sites is expected to rise by 20%, in Performing Arts Companies by 17%, and in Accommodations and Restaurants by 17% and 16%, respectively.ⁱ The Oregon Employment Department projects a 24% increase in jobs in Jackson and Josephine counties for the Accommodations and Restaurant industries over the same period.ⁱⁱ

Cluster Conditions

- Firms in the Tourism Cluster share similar markets to varying degrees; sub-clusters often serve the same consumers with high artistic standards, either locals, visitors, or consumers at the national level.
- Industries in sub-clusters share a common labor pool and technical knowledge.
- The cluster enjoys benefits from the region's easy accessibility to urban centers via Interstate 5, its proximity to natural beauty, and its wealth of recreational opportunities and cultural amenities.
- All of the cluster's industries have a stake in the cultural and natural attractions of the region.
- The cluster is well-defined by participation in regional tourism organizations, such as the Southern Oregon Visitor's Association (SOVA) and local Visitors and Convention Bureaus.
- Industries in the cluster cooperate and collaborate on marketing and promotional initiatives, usually through visitor industry associations or visitors and convention bureaus.

Findings from the School of Business Cluster Survey

- Nineteen companies responded to the survey.
- 63% agreed with the statement, "The majority of suppliers of my company's materials, machinery, and services are available within the region."
- 73% agreed with the statement, "My company participates in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems."

- 53% agreed with the statement, “My company draws from the same specialized labor pool as other businesses in the region.”
- 89% said, “Formal or informal networks with regional *competitors*” were somewhat important to very important to the success of their company. 53% said “Formal or informal networks with regional *suppliers*” were somewhat important to very important to the success of their company.”
- 68% said, “Presence of industry and trade associations or consortia” was somewhat important to very important to the success of their company.” 79% participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems.

Table 15. Key Characteristics of the Tourism and Recreation Cluster

NAICS Code	Tourism and Recreation Cluster (4-Digit)	Cluster Map Quadrant*	Quadrant Strength**	Employment	Firms	Average Wage
A. Accommodations						
7211	Traveler Accommodations	Emerging	LQ1 DS0	1,378	109	\$ 14,594
7212	RV (Recreational Vehicle) Parks and Recreational Camps	Growing Base	LQ+ DS+	74	19	\$ 17,525
	Accommodations Total			1,453	128	\$ 14,744
B. Restaurants						
7221	Full-Service Restaurants	Transforming	LQ+ DS0	4,133	257	\$ 13,242
7222	Limited-Service Eating Places	Growing Base	LQ+ DS0	3,742	292	\$ 11,061
	Restaurants Total			7,875	549	\$ 12,206
C. Performing Arts Companies						
7111	Motion Picture and Video Industries	Declining	LQ-- DS0	185	17	\$ 20,240
5121	Promoters of Performing Arts, Sports, and Similar Events	Declining	LQ-- DS-	47	3	\$ 20,472
7113	Performing Arts Total			649	32	\$ 27,057
D. Entertainment / Activities						
7112	Spectator Sports	Emerging	LQ--- DS++	39	3	\$ 5,335
7121	Museums, Historical Sites, and Similar Institutions (Private)	Emerging	LQ+ DS++	37	14	\$ 15,671
	Museums, Historical Sites, and Similar Institutions (Public)	D***	D***	D***	D***	D***
4872	Scenic and Sightseeing Transportation, Water	D***	D***	D***	D***	D***
7139	Other Amusement and Recreation Industries	Transforming	LQ-- DS0	985	89	\$ 12,561
5321	Automotive Equipment Rental and Leasing	Growing Base	LQ+ DS+++	245	14	\$ 19,264
	Entertainment / Activities Total			1,367	125	\$ 14,354
	Tourism and Recreation Total			11,344	834	\$ 13,640

* Refer to Chart 1 for detail on quadrant characteristics.

** Refer to Table 4 for detail on indicator ranges.

*** Confidentiality restrictions do not permit disclosure of industry data.

Conclusions

The basic concept of an industrial cluster is that groups of related companies which operate in close proximity to each other realize economic benefits from their co-location. One source of benefits stems from localization economies, where clustered industries' costs are lower because of greater availability of specialized inputs, pool of labor, or infrastructure. Some industries realize cost savings by locating close to other industries participating in a supply chain. Some industries enhance their competitiveness through inter-firm cooperation and collaboration in areas such as marketing, technological innovation, and new product development.

This analysis focuses on basic quantitative indicators of industrial clusters. If companies or industries gain economic benefits by co-locating, then a concentration of similar kinds of activities would be predicted. This concentration is expressed as location quotient (LQ). Regional industries with high percentages of employment relative to the nation are Logging, Wood Products Manufacturing, particularly Furniture and Cabinet Manufacturing, and Performing Arts.

Regional industries in clusters are likely to be competitive companies, outpacing their industry counterparts nationally. Competitiveness is measured by differential shift (DS), the difference in employment growth between the region and the nation. Industries in Jackson and Josephine counties which grew substantially faster in percentage terms than industries nationally were the Logging, Wholesalers, Headquarters, and parts of the Wood Products Manufacturing industries. Based on nationalⁱ or state employment projections,ⁱⁱ employment growth between 2004 and 2014 is expected to exceed 10% for the Other Wood Products Manufacturing, Fabricated Metal Manufacturing, Wholesalers, Elder and Health Care and Arts, Entertainment and Recreation industries.

Another feature of clusters is that their member industries access the same or similar labor pool, often characterized by workers with specialized skills and technical know-how. Most of the companies within industries or sub-industries within the Rogue Valley's potential clusters need employees with the same skills and training as their regional counterparts. In fact, the School of Business Cluster Survey found that a higher share of companies in the Metals, Food, and Wood Products Manufacturing industries, Health Care, and the Tourism and Recreation industries responded that they draw from the same labor pool as other businesses in the region. A major challenge for regional industries, even those which are currently competitive, is to increase their productivity and the skills of their employees through investments in human and physical capital. Industries that pursue these investments will increase their chances for success in the increasingly global economy.

There are a number of other characteristics of industrial clusters. Industries may be related in clusters because they serve similar markets and benefit from cooperation and collaboration focused on extending their market reach or developing new products. Regional economic sectors which share similar customer markets are the Food Manufacturing, Elder/Health Care and Tourism and Recreation industries. Industries in clusters are often linked through a product's supply chain. Industrial clusters, such as the Food Manufacturing, Logging and Wood Products, Metals, Trucking and Freight and Wholesalers sectors, have the potential to increase their markets and reduce costs by coordinating more closely with other regional companies in a given supply chain. All industrial clusters identified in this analysis could benefit from networking with other regional

companies to take advantage of complementary activities, expand markets, integrate activities, or to pool resources or knowledge. In fact, the Cluster Survey reported that higher percentages of respondents in the Logging, Wholesalers, Elder/Health Care, and Tourism and Recreation industries were engaged with other firms or organizations to improve business operations, aid innovation, or solve business problems.

Over the coming years, the region and its industries will continue to grow. Population increases will support the expansion of the region's industrial clusters along with industries serving local markets. Companies and retirees will be particularly attracted to the area's valued quality of life. The major challenge for the regional economy in general, and for industries within clusters, is to improve the skill levels of the region's labor force and use of technology across most industrial operations, particularly information technology. Increased productivity and reduced costs can be achieved for businesses that strengthen their cluster connections by forging relationships with regional competitors, customers and suppliers, as well as with educational institutions, industry organizations and government. Table 16 summarizes four areas in which specific industry clusters in the Rogue Valley region may most effectively concentrate their efforts to enhance their economic viability.

Table 16. Strengthening Cluster Areas

Approach	Target Clusters
Increase the availability of skilled School of Business graduates and access to School of Business faculty expertise and programs	<ul style="list-style-type: none"> • Wood Products (particularly secondary wood processors) • Food Manufacturing • Electronic Shopping • Headquarters (across all industries) • Freight Transport • Elder Care • Performing Arts
Strengthen partnerships with educational institutions and workforce training programs to increase employee skill levels for industries accessing the same or similar labor pool, characterized by workers with specialized skills and technical know-how	<ul style="list-style-type: none"> • Metals Manufacturing • Food Manufacturing • Wood Products Manufacturing • Headquarters • Elder/Health Care • Creative • Tourism and Recreation (sub-clusters of lodging, restaurants, entertainment, recreation)
Improve inter-industry cooperation and collaboration to extend market reach or develop new products for industries sharing similar markets for their products or services	<ul style="list-style-type: none"> • Food Manufacturing • Freight Transport • Elder/Health Care • Tourism
Encourage and support collaboration between regional companies to increase market size and reduce costs for industries linked through their products' regional supply chain	<ul style="list-style-type: none"> • Logging/Wood Products • Food Manufacturing • Metals Manufacturing • Freight Transport/Wholesalers

Recommendations for Further Research

This quantitative analysis is an initial step in identifying industrial clusters in Jackson and Josephine counties. Additional research will likely uncover companies linked across industries that are not apparent because of rigid industrial classifications or other limitations of the data. Recommendations for future research on industrial clusters include the following:

- Interviews with specific firms within the identified clusters will render a better understanding of the extent of connections between firms and the potential for increasing those linkages. Interviews should focus on special infrastructure, labor and marketing needs of the industry, as well as determine gaps in supply and marketing chains.
- Some clusters may be lost in the regional data, but exist within cities, such as Tourism and Recreation. An analysis of the employment data by clustered industry's location will spotlight the cities with higher concentrations of specific industries.
- The study is constrained by evaluating data at two points in time. Alternative clusters may be uncovered by revisiting the analysis with updated employment data. Considering a longer time period may point out industries with improving cluster indicators.
- Linkages between industries can be explored using an input-output economic model such as IMPLAN to reveal regional industries in a given supply chain.
- Incorporating studies of commodity flow studies performed by Oregon Department of Transportation will highlight the volume of products leaving the area and may lend supporting evidence to the clusters identified in this study or suggest other industries that should be considered industrial clusters. Additionally, the studies offer a different and useful perspective on the Freight and Trucking industry.
- Increasingly, cluster-related strategies are being adopted by local, state and national economic development organizations, educational institutions and government. A practical follow-up to this research would be to learn from the experience of these entities by identifying specific strategies currently in place that support and strengthen industrial clusters. This review could offer program and policy options to regional economic development organizations and the School of Business.

Recommendations for the School of Business

Relationship Building

- Develop relationships with industries identified in the cluster research to expand awareness of the opportunities and challenges faced by regional businesses. Industry involvement could include faculty members working on-site with host businesses through sabbaticals or other academic release time.
- Consider focusing research, internships, or other academic and curricular activities on a single industrial cluster.
- Participate actively in existing Business Retention and Expansion activities in Grants Pass and Ashland, and programs sponsored by the Small Business Development Centers (SBDC) in Grants Pass and in Medford.

Facilitation

- Facilitate the formation and/or support of regional industry networks.
- Host round table discussions and sponsor workshops or symposia featuring experts and innovators focused on specific topics or designed to meet the needs of specific industries.

Research

- Engage in collaborative research activities with members of cluster industries. Consider providing academic release time for conducting and overseeing research.

Curriculum

- Focus efforts on Headquarters Cluster, offering courses related to high level skills such as management, planning, and IT.
- Integrate the regional economy more closely into program curriculum. Course content and case studies could be developed in part through collaboration with industry members.
- Enhance and maintain programs that establish credentials for mid-level and senior managers.
- Ensure that internships connect the School of Business to businesses in cluster member industries. Internships and practicum opportunities provide students with access to the business community that they will enter upon graduation and allow them to interact more closely with businesses throughout their studies.

Endnotes

- ⁱ United States Bureau of Labor Statistics. *Employment and Output by Detailed Industry*. [last modified 12/7/05; accessed May 23, 2006]. Available from <http://www.bls.gov/emp/empinddetail.htm>.
- ⁱⁱ Oregon Employment Department. *Employment Projections by Industry: 2004-2014*, July 2005. Oregon and Regional Summary. Available from <http://www.qualityinfo.org/pubs/indprj/htm/industry.html>.
- ⁱⁱⁱ Oregon Office of Economic Analysis. *Forecasts of Oregon's County Populations and Components of Change, 2000-2040*, April 2004. Available from http://www.oregon.gov/DAS/OEA/docs/demographic/pop_components.xls.

Bibliography

- Barkley, David. *Employment Generation Strategies for Small Towns: An Overview of Alternatives*, 2001. Available from http://cherokee.agecon.clemson.edu/redrl_rpt2.pdf.
- Barkley, David and Mark Henry. *Targeting Industry Clusters for Regional Economic Development: An Overview of the REDRL Approach*, 2005. Available from http://cherokee.agecon.clemson.edu/redrl_rpt15.pdf.
- Cortright, Joseph. *Oregon Industry Clusters: A Statistical Analysis*, 2003. Available from <http://www.econ.state.or.us/cluster.pdf>.
- InfoUSA database, custom tabulation for Jackson and Josephine Counties, 2006. Available from <http://www.infousa.com/>.
- Oregon Employment Department. *2004 Oregon Covered Employment and Wages; By Industry & County*, 2005. Available from <http://www.qualityinfo.org/pubs/cew/htm/04/cew2004.html>.
- Oregon Employment Department. *Employment Projections by Industry: 2004 - 2014 Oregon and Regional Summary*, July 2005. Available from <http://www.qualityinfo.org/pubs/indprj/htm/industry.html>.
- Oregon Office of Economic Analysis. *Forecasts of Oregon's County Populations and Components of Change, 2000 – 2040*, April 2004. Available from http://www.oregon.gov/DAS/OEA/docs/demographic/pop_components.xls.
- Paytas, Jerry, Robert Gradeck and Lena Andrews. Carnegie Mellon University. *Universities and the Development of Cluster Industries*. Available from http://www.eda.gov/ImageCache/EDAPublic/documents/pdfdocs/ucluster2004_2epdf/v1/ucluster2004.pdf.
- Population Research Center, Portland State University. *2004 Oregon Population Report*, 2005. Available from <http://www.pdx.edu/prc/annualorpopulation.html>.
- Porter, Michael. *Cluster of Innovation: Regional Foundations of U.S. Competitiveness*. Washington, DC: Council of Competitiveness, 2001.
- Porter, Michael et al. *Competitiveness in Rural U.S. Regions: Learning and Research Agenda*, 2004. Available from http://www.eda.gov/ImageCache/EDAPublic/documentspdfdocs/eda_5frural_5regions_2epdf/v1/eda_5frural_5regions.pdf.
- Schein, Steve. *Industrial Clusters in Jackson and Josephine Counties, A Qualitative Analysis*. Ashland, OR: Southern Oregon University, 2006.
- SORED. *Jackson and Josephine Counties Major Employers*. Available from <http://www.soredi.org/Page.asp?NavID=33>.

United States Bureau of Labor Statistics. *Employment and Output by Detailed Industry*. [Projections]. [Modified 12/7/05. Accessed May 23, 2006]. Available from <http://www.bls.gov/emp/empinddetail.htm>.

United States Bureau of Labor Statistics. *State and County Employment and Wages from the Quarterly Census of Employment and Wages* (2001 forward). [ftp file for Oregon and US accessed 3/31/06]. Available from <http://www.bls.gov/data/home.htm>.

United States Census Bureau. *County Business Patterns*, 2004. Available from <http://censtats.census.gov/cbpnaic/cbpnaic.shtml>.

United States Census Bureau. *NAICS Codes and Titles*, November 2003. Available from <http://www.census.gov/epcd/naics02/naicod02.htm>.

United States Census Bureau. *Non-Employer Statistics*, 2001. Available from <http://www.census.gov/epcd/nonemployer/>.

**Industrial Clusters in
Jackson and Josephine Counties**

A Qualitative Analysis

**Submitted to the School of Business,
Southern Oregon University**

**By Steve Schein, MA
EDA Cluster Project Researcher**

Project Overview

This analysis represents one of three components of the School of Business's cluster research project. Funded by the Economic Development Administration, the project's main goals are to identify industrial clusters in Jackson and Josephine counties, to incorporate cluster-related activities into the School's curriculum and programs, and to lay the groundwork for a Center of Excellence for Regional Engagement. Through interviews with regional business leaders, the qualitative study provides an opportunity to learn about the companies they manage and to deepen our understanding of their perspectives on the regional economy, both in the present and into the future. The study's ultimate goal is to generate findings that the School of Business can integrate into strategies to better support the regional business community.

The format of this study offers unique opportunities to identify effective ways in which the School of Business and Southern Oregon University can collaborate with and serve regional businesses. The interview process improved the School's understanding of the regional economic climate and allowed the project team to develop new relationships and strengthen existing connections with individual business owners, senior executives, and economic development leaders.

As described in this study's companion piece, industrial clusters are groups of similar or related firms in a defined geographic area linked by various factors including shared similar markets; employment of a workforce with similar skills and training; compliance with certain regulations and public policies; or reliance on a common supply chain, technologies, or infrastructure. Basing an economic development strategy on strengthening industrial clusters can lead to effective approaches to increasing the productivity of regional businesses and improving their competitiveness in national and international economies.

Research Methodology

The project team developed a list of potential business leaders to interview. Several criteria guided the selection process: the diversity of industries represented; the role of specific industries or companies in the regional economy; companies' relationships with the School of Business; and the individual leader's level of involvement in economic development, either as a business owner or an economic development professional. Those selected for interviews were primarily CEO's, presidents, and owners of for-profit companies located throughout Jackson and Josephine counties that represent a broad cross-section of industrial clusters.

Interviewees were contacted by phone to request their participation in the study and one-on-one interviews were held at their places of business. During the interviews, participants sometimes suggested additional individuals to include in the qualitative research. Several of these referrals were subsequently interviewed. Approximately forty interviews were conducted during the spring of 2006. Another ten people were interviewed at a focus group session in Grants Pass that was sponsored by the School of Business. Several interviews were audiotaped, including the focus group session, for later review by the project team and other members of the School of Business. In addition to being analyzed by the project team, individual interview reports were reviewed electronically to identify recurring themes using NVivo™ software.

Interview Structure

Each interview followed a standard format and lasted approximately one hour. The interviews began with a brief discussion of the purpose of the research followed by an explanation of the general characteristics of industrial clusters and a description of the advantages of implementing cluster-based economic development strategies. A description of the role of the School of Business in conducting the study concluded the introduction to the interview.

Once the background of the project was clear, each interviewee was engaged in a discussion guided by the characteristics of cluster relationships described at the beginning of the interview (markets, workforce issues, etc.). Participants were asked to relate their business to an industrial cluster and to identify other industries that they perceived as clusters in the regional economy. Narrative summaries of the interviews made it possible to identify themes and responses related to industrial cluster characteristics.

Findings: Major Themes

Overview

Several major themes surfaced over the course of the interviews. The following compilation of recurring themes is highly subjective and is intended to serve as a starting point for further discussion and analysis. These themes can help to guide future strategies of the School of Business and its engagement with the regional economy, influencing decisions regarding faculty selection, curriculum development, and future programs. In addition, these qualitative themes may be used by both the private and public sector to design future economic development strategies based on cluster characteristics.

The reader should note that these themes have not been identified through formal statistical analysis or validated by additional research. In many cases they are based on the opinions and observations of the interviewees as interpreted by the interviewer. For the purposes of this analysis, “Rogue Valley region” and “southern Oregon” are used synonymously to represent Jackson and Josephine counties.

Perceptions of Cluster Theory

- There is a major gap between industrial cluster theory and actual practice and perception. Few CEO’s and business owners expressed interest in economic cluster theory and could not see many ways it might apply to their circumstances.
- For the most part businesses do not collaborate within industries or clusters, with the exception of the Health Care and Food and Beverage Production/Tourism clusters.
- The majority of interviewees indicated that their companies are located in the Rogue Valley because the owners want to live here, not because of any geographic, technological, infrastructure, market, supply chain, or workforce advantages that the region offers their business. In fact, most business owners perceive that other cities such as Reno, Portland, or San Francisco offer greater advantages.
- Generally speaking, business owners from the cities of Grants Pass, Medford, and Ashland see themselves as belonging to separate and distinct communities culturally, politically, and to some extent, economically.

Workforce Development

- Staffing is a dominant workforce challenge due to rising housing prices and a shortage of qualified candidates. There are many current vacancies at regional companies in such areas as information technology, senior management, marketing, and health care.
- Retirees are seen as the primary demographic driving force in the Rogue Valley economy. As a result, there is concern about a declining share of regional residents in the workforce.

Market Development

- There is significant interest in having the School of Business participate in various types of market research with companies in the region. Numerous CEO's expressed support for more research involvement from the School, either through internships or in cooperation with faculty.

Public Policy

- In general, Medford and Grants Pass are perceived to be more business-friendly than the city of Ashland.
- Almost every business leader mentioned concerns with land use regulations and Measure 37. In particular, executives and entrepreneurs in agriculture, real estate development and construction would like to see Southern Oregon University sponsor more conferences and research on these topics.
- The emerging health care crisis is a major concern to all business owners and executives. While they understand that there is a large federal component to solving this crisis, most expressed the opinion that the State of Oregon needs to do a better job of addressing this problem for the uninsured residents of the Rogue Valley region, as well as for the employers facing ever-rising costs of providing health insurance.
- There was some interest voiced in exploring the idea of Rogue Valley businesses sharing rights for wastewater treatment permits in order to expand future production capacity. Such collaboration would be based on seasonality of usage.
- Some interviewees expressed frustration with the extensive paperwork required by the Patriot Act, as well as with expanding state and federal labor laws.

Infrastructure

- Several CEO's talked about the high cost of transportation, both for shipping and receiving products and materials, and for passenger air transportation. Also mentioned was the need for a rail line in and out of the Rogue Valley with container loading capacity to enable regional companies to remain competitive within their industries.

Innovation

- Few interviewees indicated that their firms collaborate with other companies in the Rogue Valley region to share innovation or new technologies. Several of the fastest growing firms, however, were investing significant capital to install new software and hardware systems from out-of-state vendors in order to expand their production, customer service, and communication capacities.

Supply Chain

- Many Rogue Valley companies perceived themselves to be independent and appeared to have a strategy of maximum vertical integration to reduce their dependence on other firms. Exceptions included certain companies in the software industry that outsource development, research, and installation services to suppliers in other states and overseas.

Relationship with the School of Business

- The SOU School of Business and its faculty are, for the most part, not as involved in the regional economy as businesses would like. In Grants Pass, Central Point, White City, and in much of Medford, the School is relatively unknown and few relationships have been established.
- Most medium and large companies in the Rogue Valley are receptive to expanding their relationship with the School of Business. Internships, student tours, research relevant to the region, and conferences focused on specific business issues are all of great interest to business leaders. In addition, they also want the School of Business to expand its role in the Rogue Valley region and become more of a center for entrepreneurship and leadership.
- There is significant interest in Southern Oregon University offering an Executive MBA program.

Corporate Social Responsibility

- There is a considerable sense of social responsibility, stewardship, and sustainability among the members of the region's business community. The high number of nonprofit organizations in southern Oregon (approximately 1,200) further supports this attribute.

Implications Derived from Research

At the heart of the Rogue Valley's future economic development is a vibrant system of higher education with a deep and ongoing connection to the regional business community. The interviews conducted for this study provided invaluable insight into the attitudes and perspectives of some of the region's foremost business leaders. Based on the feedback provided by the interviewees, a number of potential strategies deserve consideration.

Increased Regional Involvement of the School of Business

Leaders interviewed from the private sector throughout the Rogue Valley region would like the School of Business to become more engaged with the regional economy. This engagement may take many forms: expanding internship programs; hosting conferences focused on specific issues such as land use planning or regional transportation; sponsoring more applied research; developing new curriculum; hiring new faculty; and offering workshops presented by University faculty throughout the region. Many believe that Southern Oregon University is in a unique position to convene leaders within the region to discuss issues affecting its economic future. While the local Chambers of Commerce unite leaders from their respective communities, the University can involve businesses from the region encompassing southern Oregon and northern California.

Educational Program Opportunities

Many opportunities exist for the School of Business to become a major force in the somewhat fragmented clusters that include tourism and specialty food production. Reinvesting in and reformulating the Hospitality and Tourism Management program should be a primary strategic goal. These clusters will likely continue to experience growth, drawing strength from a well-established history built around the worldwide reputation of the Oregon Shakespeare Festival and the region's outdoor recreation opportunities. New developments accelerating growth in this cluster include significant expansion of the wine and gourmet food industry, the opening of the Lithia Amphitheatre at the Jackson County Fairgrounds, and the increase in premiere destination golf courses such as Centennial, Eagle Point, and Stone Ridge. Smaller communities such as Central Point and Talent are also showing above average growth with numerous new companies in the gourmet food sector.

For all cluster industries, programs, classes, and workshops focused on leadership should be greatly expanded. Those interviewed expressed interest in more applied leadership training at the undergraduate level with an emphasis on interpersonal skills, team building, and critical thinking. Opportunities exist for the University to work with dynamic or large companies such as Lithia Motors, Asante, Pacific Retirement Services, and Fire Mountain Gems, to develop and deliver leadership training. Several business leaders expressed great interest in the School of Business offering an Executive MBA program.

The entrepreneurship program should be expanded. Many leaders interviewed recognize entrepreneurialism as the backbone of our future economy and would like the School of Business to offer greater support to startups and existing small businesses. With more than 90% of firms in the Rogue Valley region employing fewer than 50 workers, this is a critical role the University should play in partnership with local public sector entities such as SOREDI and SOHPEC. Activities might include sponsoring a student club for aspiring entrepreneurs, organizing a

business incubator, or hosting an annual venture conference allowing entrepreneurs access to capital.

Corporate Social Responsibility and Sustainability

A common thread of community, stewardship, sustainability, and social responsibility unites the southern Oregon region. Nearly all of the interview participants live in the Rogue Valley region because they choose to, not because it is the best location for their businesses. Many have grown up here and intend to remain in the area for the rest of their lives. As a result, they are committed to maintaining the quality of life in the region. Numerous business leaders expressed concern for the area's natural environment and noted growing interest in "green building," "renewable energy," and "sustainability." The School of Business, in conjunction perhaps with the School of Sciences, has an opportunity to explore the latest developments in this area and create related educational offerings for the region.

Within certain communities of the Rogue Valley, including Ashland and parts of Grants Pass and Medford, there is considerable interest in what might best be called "integral business." This expanding field applies the concepts of social responsibility, sustainability, innovative human resource practices, and human development studies to business practices. With so many nationally known authors and speakers in this field calling the region their home, the University has the opportunity to invite these individuals to join in its educational and business development activities.

Medford Campus

The campus that Southern Oregon University and Rogue Community College will open in Medford in 2008 represents a major opportunity to act on many of these recommendations. The University could also extend its services to businesses by joining the recent partnership between Oregon Institute of Technology and Rogue Community College to provide expanded technical training in the region.

Recommendations for Further Research

The interviews conducted for this qualitative study provided an opportunity to augment and complement the findings of a quantitative analysis to identify potential industrial clusters in Jackson and Josephine counties. Meeting with business leaders allowed the School of Business to learn about the companies they manage and gain a deeper understanding of their perspectives on the regional economy. Additional research in this area should include interviews with executives representing potential industrial clusters that were underrepresented in the initial round conducted for this study.

Table 17. Business Leaders Interviewed

Name	Title	Organization
Roy Vinyard	CEO	Asante Healthcare System
Al Moltari	Exec. V.P.	Bear Creek Corporation
Craig Black	CEO	Blackstone Audio
Suzanne Simmons	Principal	Centerpoint Consulting
Sam Baldoni	President	China New Media
Charlie Mitchell	Economic Dev. Coordinator	City of Grants Pass
Nancy Morgan	President	DreamSacks, Inc.
Travis Boersma	CEO	Dutch Bros. Coffee
Dennis Becklin	CEO	ECS Composites
Ann Root	President	Eden Valley Vineyards
Bob Maynard	CEO	Energy Outfitters
Stuart Friedman	CEO	Fire Mountain Gems
Howard Milgrem	Director of Marketing	Herb Pharm, Inc.
Lee Lanphier	President	Lanphier and Associates
Jim Williams	President	Letters and Arts, Inc.
Alex Pawlowskii	V.P.	Liberty Bank
Sid DeBoer	CEO	Lithia Motors
Steve Loftesness	General Manager	Master Brand Cabinets
Bill Thorndike	CEO	Medford Fabrication
Mike Lynch	Managing Partner	Moss Adams, LLP
Don Becklin	CEO	Motorcycles USA
Mike Naumes	President	Naumes, Inc.
Guy Tauer	Regional Economist	Oregon Employment Dept.
Robert MacLellan	CEO	Pacific Coast Restaurants
Tom Becker	CEO	Pacific Retirement Services
Jorge Yant	CEO	Plexis Software
Jim Teece	CEO	Project A
Hank O'Dougherty	CEO	Pro-Tool
Gene Pelham	Exec. V.P.	Rogue Federal Credit Union
Jim Root	President	Sabroso, Inc.
Cynthia Scherr	President	Scherr Consulting
Gary Zukav	Author	Seat of the Soul Institute
Margaret Smith	Principal	Smith Consulting
Gordon Safley	Executive Director	SORED!
Alison Koenig	Instructor	SOU
Dennis Slattery	Associate Professor	SOU
Wendy Siporen	Executive Director	THRIVE
John Weisinger	President	Weisingers Winery
Jamie Johnson	Education Director	Wildlife Images

Table 18. Grants Pass Focus Group Participants

Name	Title	Organization
Charlie Mitchell	Economic Dev. Coordinator	City of Grants Pass
Stacey Huntington	Agent	Farmers Insurance
Sally Bunnell	Quality Assurance Lead	Herb Pharm, Inc.
Georgia Moulton	Human Resource Manager	Herb Pharm, Inc.
Kerry Smith	Owner	Lee's Quality Doors
Shelly Panzica	Personal Banker	Liberty Bank
Steve Roe	President	Roe Motors
Roger Harding	Instructor	Rogue Community College
Sara Moye	Human Resource Coordinator	SOASTIC
Colleen Padilla	Business Development Mgr.	SORED!, Inc.
Mary Hambleton	Principal	Soul Canyon
Delynn Scharpen	Office Manager	State Farm Insurance
Lisa Solomon	Practice Manager	Women's Health Center

**Industrial Clusters in
Jackson and Josephine Counties
School of Business Survey Analysis**

**Submitted to the School of Business,
Southern Oregon University**

**By Hart Wilson, MM
EDA Cluster Project Manager**

Introduction

In March 2006, Southern Oregon University's School of Business conducted a survey of targeted businesses in Jackson and Josephine counties. This survey was undertaken to complement research into industrial clusters funded by a grant from the U.S. Economic Development Administration. Survey questions were designed not only to augment the qualitative and quantitative studies on industrial clusters, but also to identify key training and other business development issues in the Rogue Valley region that might be relevant to the School of Business.

Survey Methodology

The project team acquired access to a database of nearly 8,900 enterprises in the region and surveys were mailed to about 2,350 businesses who sell some or all of their products or services outside the Rogue Valley region, industries often referred to as being in the "traded sector." Survey respondents returned completed questionnaires by mail or participated in the survey using a web-based data entry screen. The survey was posted online for the convenience of respondents and for data entry purposes.

Respondents were asked to report the name of their business so that company data could be linked to data from State Employment Department records. This matching provided the opportunity to tie the survey information to employment characteristics data and to compare survey results between businesses in potential clusters with those not in clusters. The project team conducted a follow-up telephone campaign to solicit responses from companies in industries which were underrepresented by returned surveys.

A total of 257 completed surveys were received. Of those, over one-third (91 or 36%) came from members of potential industrial clusters identified in the quantitative study and nearly two thirds (165 or 64%) were submitted by businesses from traded sector industries which were not identified as clusters. To a great extent, responses from both groups were similar, however there were distinct differences in some areas. The following discussion highlights survey findings regarding common characteristics of industrial clusters. A copy of the survey instrument and a summary of the responses received are provided in Appendix A.

Overview of Cluster Characteristics of Potential Industrial Clusters

In many cases, survey respondents did not indicate strong agreement with statements directly linked to the cluster characteristics described in depth in the quantitative analysis portion of this report. These findings support the conclusion of both the quantitative and qualitative studies that industries identified as belonging to potential industrial clusters do not, for the most part, demonstrate cluster characteristics. The following section details how respondents representing potential cluster industries answered questions directly related to cluster characteristics.

Companies Share Specialized Inputs

Only 39% of cluster member respondents agreed that their business requires specialized infrastructure in areas such as transportation, communications, waste disposal, and utilities. More than half (56%) agreed that they share a specialized labor pool with their competitors, while less

than half (46%) felt that access to specialized services, labor or infrastructure was important to their company's success.

Companies Use Informal or Formal Networks to Improve Business Operations

Less than half of the respondents (41%) said they shared technology and information with other companies in the region, while a little more than half of the respondents (53%) indicated that they use formal and informal networks to enhance their operations. Nearly half (48%) felt that networking with customers is important to their company's success, but less than a third agreed that working with regional competitors (30%) or suppliers (31%) is important to their success.

Companies Depend on Similar Raw Materials or Supplies

Only 40% of respondents agreed that most of their company's suppliers are available in the region, and the same percentage indicated that proximity to raw material, components or supplies was important to business success.

Companies Improve Competitiveness by Investing In and Using Technology

More than half of respondents (57%) agreed that Internet technology is critical to their competitive advantage and 64% indicated that the online environment helps their company build stronger customer relationships. Approximately three quarters of respondents (77%) rated the availability of fast and reliable Internet connections as important to their business, and nearly as many (73%) felt that the quality of telecommunications infrastructure is important to business success. Sharing technology and expertise with other regional companies is another marker of industrial clusters, but less than half of respondents (41%) indicated that they did so. More than half (54%) reported having invested in a new plant or equipment in the past three years, and 64% said they would likely be making such an investment in the next three years.

Companies Innovate

Just over half of the respondents (53%) indicated that they participate in networks to improve business operations, aid innovation or solve business problems, while less than half (48%) agreed that their company's ability to develop new products or services is improved by its location in the Rogue Valley region. More respondents (53%) plan to develop new products or services in the next three years than did so in the past three years (44%).

Companies Have Connections with Regional Educational and Governmental Institutions

When asked if their company had sought assistance from institutions and organizations for new product/service development, commercialization, distribution, and/or marketing, nearly three quarters of respondents (73%) reported that they turn to industry and trade associations for assistance. Almost half (48%) seek help from local Chambers of Commerce, while a third consult research institutions other than universities. Less than one third of respondents indicated that they had looked to Southern Oregon University (22%), Rogue Community College (30%), other universities in Oregon (22%) or Small Business Development Centers (27%) for aid in growing their business.

Workforce Issues

Respondents from companies representing potential industrial clusters were largely in agreement on questions regarding the regional workforce. Nearly two thirds (61%) reported difficulty in recruiting workers within the Rogue Valley, and only 28% agreed that the availability of skilled workers meets the needs of their company. The available pool of professional employees ranked marginally higher (33% agreement), while 44% of respondents rated the availability of unskilled workers as adequately meeting their company’s needs. These figures gain importance when tied to the relative value of each labor pool to business success: three quarters of the respondents reported that the availability of skilled workers is important to their success, 49% said that a pool of professional employees is important and 40% indicated that access to unskilled workers is important to success. The importance of the availability of workers is underscored by more than half of respondents (57%) who reported that they had increased employment in the past three years and nearly the same percentage (55%) anticipates hiring additional employees in the next three years.

Comparative Analysis of Cluster Industries vs. Non-Cluster Industries

The following section summarizes the survey findings based on a comparison of 91 responses from traded sector businesses that belong to the potential industrial clusters identified in the quantitative study with 164 responses from non-cluster industries. It is important to note that the non-cluster industries are not representative of the rest of the economy of the region: all of the businesses that received the survey belonged to industries representing the traded sector. More research would be required to allow for a comparison of cluster industries versus all other regional industries. Rather than emphasize the differences between the responses of each group, these comparisons are provided to point out subtle differences between the two traded sector groups.

Customers

As reflected in Table 19, cluster industries reported having more customers located outside of the Rogue Valley region than other businesses, lending support to their identification as clusters. Cluster members reported a significantly higher level of out-of-state sales, but neither group had many international customers.

Table 19. Location of Customers

	Within the Rogue Valley Region	Outside the Rogue Valley, but within Oregon	Outside Oregon, but within the United States	Outside the United States
Cluster Industries	43%	10%	46%	1%
Non-Cluster Industries	58%	8%	33%	1%

Business Conditions and Connections

In general, responses to questions related to business conditions and connections between businesses (Table 20) supported the conclusions reached in the qualitative study: cluster members in the Rogue Valley region do not see themselves as belonging to economic clusters. A smaller share of cluster businesses agreed that they network informally or share technology and expertise

than would be expected by cluster theory. However, more businesses in cluster industries acknowledged that they had specialized infrastructure needs than did non-cluster businesses.

Nearly all respondents disagreed with the statement that the cost of doing business in the region is low. Both groups responded in the negative when asked if being located in the Rogue Valley improved their ability to develop new products and services. Taken together, these responses suggest that regional businesses do not show evidence of belonging to industrial clusters and point to the challenges of developing clusters in the region.

Table 20. Business Conditions and Connections

	Cluster Agree or Strongly Agree	Non-Cluster Agree or Strongly Agree
My company participates in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems.	54%	57%
My company benefits from sharing technology and information with other companies in the region.	42%	36%
Companies in my industry have specialized infrastructure needs (in areas such as transportation, communications, waste disposal, and utilities).	40%	26%
The overall cost of doing business in the Rogue Valley region is low (costs of land, labor, utilities, etc.).	26%	24%
My company's ability to develop new products and services is improved by its location in the Rogue Valley region.	14%	16%

Employment, Education and Training

Questions in this section of the survey addressed recruiting, training and workforce development issues. Again, responses from both groups were similar. Most respondents agreed that the quality of life in the region supported their ability to recruit and retain employees (Table 21). While responses were positive about the adequacy of training opportunities in computer and Internet technology, fewer companies were agreed that K-12 education improves their ability to recruit and retain workers. In addition, most respondents from both groups disagreed with the statement that the pools of professional and skilled employees in the region are adequate to meet their needs.

Table 21. Employment, Education and Training

	Cluster Agree or Strongly Agree	Non-Cluster Agree or Strongly Agree
The overall quality of life in the Rogue Valley region (e.g., climate, cultural and recreational opportunities) supports my company's ability to recruit and retain employees.	68%	62%
Training in computer and Internet technology that is provided in the Rogue Valley region meets the needs of my company.	45%	37%
The available pool of professional employees in the Rogue Valley region is sufficient to meet the needs of my company.	33%	29%
The available pool of skilled workers in the Rogue Valley region is sufficient to meet the needs of my company.	29%	27%
The quality of K-12 education improves my company's ability to recruit and retain employees.	24%	24%

The Internet and Communications Technology

A series of questions related to how respondents incorporate the Internet into their business operations (Table 22). Interestingly, businesses in cluster industries identified themselves as less engaged in the online environment than other regional businesses. In particular, respondents from non-cluster industries reported significantly greater agreement that online technology is critical to their company's competitive advantage and allowed them to extend their reach to both suppliers and distributors. The strength of the responses from both groups related to reaching customers and markets suggests that regional businesses might benefit from assistance in enhancing their web-related strategies and operations.

Table 22. Internet and Communications Technology

	Cluster	Non-Cluster
	Agree or Strongly Agree	
The Internet helps my company build stronger customer relationships.	65%	70%
The Internet helps extend my company's reach to new, more distant customer markets.	63%	71%
Internet technology is critical to my company's competitive advantage.	57%	71%
The Internet helps extend my company's reach to new, more distant suppliers.	52%	66%
The Internet helps my company build stronger supplier relationships.	43%	53%
The Internet helps extend my company's reach to new, more distant distributors.	34%	47%
The Internet helps my company build stronger distribution relationships.	31%	38%

Factors Affecting Success

The survey offered a range of questions related to factors that influenced a company's success (Table 23). Responses in this section also suggest that there is limited evidence that regional businesses demonstrate key characteristics of industrial clusters. For example, a higher percentage of cluster members would be expected to indicate that networking with customers, suppliers or others engaged in similar endeavors is important to their business success. However, a lower share of cluster respondents compared to non-cluster businesses agreed that these activities were important. They did, however, indicate less resistance to the practice of networking with regional competitors than non-cluster businesses, but neither group agreed that such networking might contribute to the success of their enterprises.

There was no statistical difference in the responses given by the two groups of respondents for factors that affect the success of their businesses. Cluster theory predicts that higher percentages of companies from cluster than non-cluster industries would rank proximity to customers and the availability of specialized services, labor or infrastructure as important, if not very important, to business success. In this case, however, the percentages of businesses relying on these cluster-related elements were comparable across the two groups.

A decisive majority of respondents from both groups acknowledged the importance of fast and reliable Internet connections to their success, along with the quality of telecommunications infrastructure. Not surprisingly, more non-cluster businesses were concerned about web access than cluster members, which is consistent with differences in the two groups' responses about the role of the Internet and communications technology in their business.

Table 23. Factors Affecting My Company's Success

	Cluster	Non-Cluster
	Very or Critically Important	
Availability of fast and reliable Internet connections	57%	60%
Quality of telecommunications infrastructure	53%	51%
Proximity to customers	38%	48%
Formal or informal networks with regional customers	29%	29%
Access to specialized services, labor, or infrastructure	29%	23%
Formal or informal networks with regional suppliers	16%	19%
Presence of industry and trade associations or consortia	13%	13%
Formal or informal networks with regional competitors	9%	9%

Short-Term Plans

The survey asked businesses to indicate their plans for growth in the next three years. In this section, as well, the responses did not vary a great deal between cluster members and non-cluster members (Table 24). The majority of companies from both groups reported that it is somewhat likely they will expand their market reach and distribution in the next few years, as well as increase their employment. Despite the range between responses recorded in Table 6, there is no statistical difference between the responses expressed on the likelihood of investing in a new plant or equipment or plans to develop new products or services in the next three years. Both groups consider it unlikely that they will relocate outside the region or close down their operation in the near future.

Table 24. Future Plans (Next 3 Years)

	Cluster	Non-Cluster
	Likely or Very Likely	
Expand market reach and distribution	66%	68%
Invest in new plant and equipment	64%	51%
Increase employment	55%	59%
Develop new products or services	53%	69%
Expand physically	45%	37%
Sell or divest business	14%	16%
Relocate outside the Rogue Valley region	9%	9%
Close business	5%	6%
Decrease employment	2%	8%

Organizational Networking

While members of clusters would be expected to participate in formal or informal organizations to improve operations, aid innovation, reach new markets or solve business problems, not many of the cluster respondents indicated that they participated in such groups on a regional level. National and regional trade organizations were specifically cited such as the National Truck Equipment Association, National Association of Home Builders, American Orthotic and Prosthetic Association, American Trucking Association, Pear Bureau Northwest, and Oregon Trucking Association. Several respondents indicated they were members of chambers of commerce. Several regional groups were named that support the specialty food and tourism

cluster: Southern Oregon Visitors Association, Southern Oregon Winery Association, and Oregon Wine and Farm Tour. The Small Woodlands Association that serves forestry- related clusters was also mentioned.

Institutional Assistance

According to cluster theory, research and educational institutions play a significant role in supporting the development of economic clusters. The majority of survey respondents representing clusters reported that they have not sought assistance from such institutions over the past three years, although most of them have looked to industry and trade associations for help (Table 25). More respondents turn to Rogue Community College than to universities, and they seem to rely as much on other Oregon universities as they do on SOU. Oregon Institute of Technology is not considered as a resource by most survey respondents, despite its specialized nature and its relative proximity to the Rogue Valley region.

Table 25. Institutional Assistance (Past 3 Years – Cluster Respondents Only)

How many times has your company sought assistance from the following institutions and organizations for new product/service development, commercialization, distribution, and/or marketing?	Never	1 to 4 Times	5 to 9 Times	> 9 Times
Industry and trade associations or consortia	27%	39%	18%	16%
Local Chambers of Commerce	52%	33%	7%	8%
Public or private research institutions (other than universities)	67%	26%	5%	2%
Rogue Community College (RCC)	70%	27%	2%	1%
Small Business Development Centers	73%	19%	7%	1%
Southern Oregon University (SOU)	78%	16%	6%	1%
Other Oregon universities or colleges (UO, OSU, PSU, other)	78%	16%	5%	1%
SORED (Southern Oregon Economic Development, Inc.)	82%	16%	0%	2%
Other development agencies	88%	6%	5%	1%
Universities or colleges outside of Oregon	91%	8%	1%	0%
Oregon Institute of Technology (OIT)	93%	6%	0%	1%

Locating in the Rogue Valley

The survey asked respondents to list three major advantages and three major disadvantages to having their business located in the Rogue Valley. The responses of the cluster members were grouped into three themes: quality of life, proximity factors, and competitive factors (Table 26).

Table 26. Advantages and Disadvantages of Locating in the Rogue Valley

	Quality of Life	Proximity Factors	Competitive Factors	Other
Advantages	58%	20%	15%	8%
Disadvantages	25%	22%	42%	10%

Advantages

Like the results of the interviews conducted for the qualitative study, quality of life themes were seen as the primary advantage of being located in the Rogue Valley. Respondents cited “quality of life” most often, closely followed by climate-related factors. “Beautiful place to live” and opportunities for recreation were other frequent responses. Culture and the presence of tourist attractions figured most often in the advantages mentioned by respondents from the tourism cluster, with the Oregon Shakespeare Festival singled out several times. Others mentioned the friendliness and small town feel of the region, while several felt that the cost of living was an advantage.

Among the proximity factors listed as advantages, the majority of responses were related to the Rogue Valley’s relationship to Interstate 5 and its location midway between San Francisco and Portland. The next frequent mention was proximity to markets or customers, and proximity to manufacturers or resources represented the remainder of the factors in this category.

A number of competitive factors were reported as advantages of doing business in the region, chief among them was the low cost of doing business or low wages. The next most common responses were the availability of labor, and limited competition. Some companies indicated that their product enjoyed an established reputation in the region or that they had a unique product. A few respondents reported that low rent or low utility costs represented a competitive advantage for their firm.

Other advantages mentioned by respondents included growth in the region, diversity, demographic mix, property values, and Internet and communications technology.

Disadvantages

Quality of life factors were not all positive. More than half of the responses grouped in this theme said that the cost of living for employees and housing costs posed major challenges to doing business in the region. Other disadvantages included weather (heat and rain) and diminished quality of life due to an increasing population and its concomitant traffic woes and development pressures. Several respondents listed a range of social and political attitudes as disadvantages: environmental extremism, good old boy networks, anti-tax sentiments, and urban-rural conflicts. Air and water quality issues were mentioned, along with an unfriendly business climate.

The high cost of transportation and the lack of affordable and convenient air service were the most frequently cited proximity-related disadvantages. Nearly as many respondents listed challenges with market-related factors, such as an inadequate local customer base, seasonality of visitors, and distance to markets. Some respondents felt that their access to manufacturers or resources was a disadvantage of being located in the area.

A number of competitive factors were listed as disadvantages in the region. Policy issues were the predominant concern: regulations, zoning, expensive business development fees, high taxes, high insurance costs, and economic development policies. Issues related to the regional labor pool were the next greatest problem. Respondents indicated that the skilled and professional labor pools are not adequate to meet the needs of their companies. Many reported that the quality of the regional labor pool was poor. Several respondents noted specific labor issues including methamphetamine and alcohol abuse, and bad check passing. One respondent cited workers’

unrealistic wage expectations as part of the challenge of doing business in the Rogue Valley, while another wrote that there is a lack of social opportunities for 22 to 32-year-old employees. Other disadvantages listed were building and expansion issues due to lack of industrial space and cost of land. Other responses were wide ranging and included cost of materials, lack of suppliers, the lack of industry in the area, distance to metropolitan areas, lack of diversity, and under the table workers.

Recommendations for Further Research

The survey was a preliminary effort to measure the extent to which regional companies in the traded sector demonstrate various attributes of industrial clusters, and to gain a better understanding of their workforce and business development issues. Further research targeting regional industrial clusters could address the following areas:

- The Cluster Survey was executed concurrently with the work on the quantitative and qualitative analyses. A survey focused on companies in the eleven industrial clusters identified by the quantitative analysis would provide more, or less, evidence that these industries, in fact, demonstrate characteristics of industrial clusters.
- Additional research could identify the ways in which businesses participate in informal regional networks, share technology, and relate to regional institutions and how the School of Business could most effectively facilitate increased collaboration between businesses.
- Most businesses cited concerns and challenges with the regional workforce. A survey of one or multiple cluster industries could concentrate on these labor issues and flesh out ways in which education and the private and public sectors could work together to effectively address these problems. Presentation of findings could be part of a regional conference addressing workforce issues in the Rogue Valley region.
- Industrial clusters have been identified and analyzed throughout the country using approaches similar to those employed in this survey. Their findings could lend valuable perspective to the body of research on clusters in the Rogue Valley.

Appendix A

Potential Industrial Clusters Jackson and Josephine Counties

Potential Industrial Clusters Jackson and Josephine Counties

Industry Definition (NAICS 4-Digit)	Employment 2004	Firms 2004	Average Wage 2004
12. Food and Beverage Production, Manufacturing and Sales	2,276	121	\$24,311
13. Logging and Support Activities for Forestry	2,143	117	\$31,473
14. Wood Products	4,361	127	\$34,160
15. Metals Manufacturing	1,421	154	\$29,858
16. Wholesalers	2,841	350	\$35,064
17. Electronic Shopping	3,079	42	\$27,723
18. Freight Transport	1,793	185	\$36,624
19. Headquarters	1,955	61	\$52,569
20. Elder/Health Care Overall Total	12,432	676	\$38,455
9A. Elder Care	3,283	156	\$24,023
9B. Health Care	9,149	520	\$43,634
21. Creative	817	59	\$27,502
22. Tourism and Recreation Overall Total	11,344	834	\$13,640
11A. Accommodations Sub-Cluster	1,453	128	\$14,744
11B. Restaurants Sub-Cluster	7,875	549	\$12,206
11C. Creative Sub-Cluster	649	32	\$27,057
11D. Entertainment/Activities Sub-Cluster	1,367	125	\$14,354
Total for Industrial Clusters	42,506	2,665	\$31,121
Total Jackson and Josephine Counties	108,496	9,009	\$29,321
Cluster % of Jackson and Josephine Counties	39%	30%	106%

**Potential Industrial Clusters
Jackson and Josephine Counties, 2004**

<u>NAICS</u>	<u>Industry Definition (NAICS 4-Digit)</u>	<u>Cluster Map Quadrant**</u>	<u>Quadrant Strength**</u>	<u>Employment</u> 2004	<u>Firms</u> 2004	<u>Ave. Wage</u> 2004	<u>LQ**</u>	<u>DS**</u>	<u>Ave. Pay</u> JJ/JUS
1. Food Production, Manufacturing and Sales Cluster									
1113	Fruit and Tree Nut Farming	Transforming	LQ+++ DS-	818	14	\$ 17,582	6.00	-6.2%	1.00
1114	Greenhouse, Nursery, and Floriculture Production	Emerging	LQ-- DS+++	107	9	\$ 19,718	0.73	74.0%	0.83
3113	Sugar and Confectionery Product Mfg.	Emerging	LQ-- DS+++	50	3	\$ 11,615	0.73	44.1%	0.30
3115	Dairy Product Mfg.	Emerging	LQ-- DS+	58	3	\$ 32,272	0.52	5.8%	0.75
3116	Animal Slaughtering and Processing	Emerging	LQ--- DS+++	118	8	\$ 19,711	0.28	51.8%	0.70
3119	Other Food Mfg.	Growing Base	LQ+ DS0	170	9	\$ 33,361	1.31	0.6%	0.76
3121	Beverage Mfg.	Growing Base	LQ+ DS++	157	16	\$ 25,841	1.12	12.9%	0.56
4452	Specialty Food Stores	Growing Base	LQ+ DS+	259	24	\$ 21,285	1.27	7.9%	0.96
4248	Beer, Wine, and Distilled Al Bev Merchant Wholesalers	Growing Base	LQ+ DS++	192	4	\$ 35,092	1.62	24.9%	0.68
4244	Grocery and Related Product Wholesalers	D*	D*	D*	D*	D*	D*	D*	D*
3114	Fruit and Vegetable Preserving and Specialty Food Mfg.	D*	D*	D*	D*	D*	D*	D*	D*
Total				2,434	123	\$ 25,744			0.73
2. Logging and Support Activities for Forestry Cluster									
1133	Logging	Growing Base	LQ+++ DS+++	1,090	66	\$ 44,050	19.67	41.5%	1.45
1153	Support Activities for Forestry	Growing Base	LQ+++ DS+++	1,052	51	\$ 18,443	80.72	49.7%	0.63
Total				2,143	117	\$ 31,473			
3. Wood Products Manufacturing Cluster									
3211	Sawmills and Wood Preservation	Transforming	LQ+++ DS--	306	7	\$ 44,049	3.11	-23.3%	1.28
3212	Veneer, Plywood, and Engineered Wood Product Mfg	Transforming	LQ+++ DS--	1,419	23	\$ 36,766	14.38	-24.8%	1.04
3219	Other Wood Product Mfg	Transforming	LQ+++ DS0	1,316	28	\$ 30,272	5.01	-1.8%	0.96
3371	Household and Institutional Furn. & Kitchen Cabinet Manufacturing	Growing Base	LQ+++ DS+++	993	41	\$ 31,568	3.09	52.9%	1.04
3372	Office Furniture Manufacturing	Emerging	LQ-- DS+++	72	6	\$ 29,879	0.65	28.3%	0.81
4233	Lumber and Other Construction Materials Merchant Whslers	Transforming	LQ+ DS-	255	22	\$ 39,182	1.26	-11.7%	0.84
Total				4,361	127	\$ 34,160			

* Confidentiality restrictions do not permit disclosure of industry data.
 ** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

**Potential Industrial Clusters
Jackson and Josephine Counties, 2004**

<u>NAICS</u>	<u>Industry Definition (NAICS 4-Digit)</u>	<u>Cluster Map Quadrant**</u>	<u>Quadrant Strength**</u>	<u>Employment</u> 2004	<u>Firms</u> 2004	<u>Ave. Wage</u> 2004	<u>LQ**</u>	<u>DS**</u>	<u>Ave. Pay</u> JJ/US
4. Metals Manufacturing Cluster									
4A. Fabricated Metal									
3323	Architectural and Structural Metals Manufacturing	Emerging	LQ--- DS0	90	13	\$ 29,398	0.28	0.7%	0.77
3324	Boiler, Tank, and Shipping Container Manufacturing	D*	D*	D*	D*	D*	D*	D*	D*
3326	Spring and Wire Product Manufacturing	D*	D*	D*	D*	D*	D*	D*	D*
3327	Mach. Shops, Turned Product, and Screw, Nut, and Bolt Manufacturi	Emerging	LQ-- DS++	184	21	\$ 30,931	0.67	14.1%	0.76
3328	Coating, Engraving, Heat Treating, and Allied Activities	Emerging	LQ--- DS0	42	9	\$ 32,462	0.35	1.3%	0.90
3329	Other Fabricated Metal Product Manufacturing	Declining	LQ-- DS-	168	18	\$ 33,354	0.72	-12.0%	0.73
Total									
4B. Machine Manufacturing									
3335	Metalworking Machinery Manufacturing	Declining	LQ-- DS-	94	9	\$ 35,514	0.56	-6.7%	
3362	Motor Vehicle Body and Trailer Manufacturing	Emerging	LQ--- DS++	62	13	\$ 26,479	0.45	20.8%	0.69
3366	Ship and Boat Building	Transforming	LQ+ DS0	201	11	\$ 35,410	1.59	-1.5%	0.85
Total									
5. Wholesalers Cluster									
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Whol	Growing Base	LQ1 DS0	287	24	\$ 31,397	1.01	2.6%	0.76
4233	Lumber and Other Construction Materials Merchant Wholesalers	Transforming	LQ+ DS-	255	22	\$ 39,182	1.26	-11.7%	0.84
4234	Professional and Commercial Equipment and Supplies Merchant Wh	Emerging	LQ--- DS++	154	15	\$ 32,049	0.29	10.4%	0.44
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	Emerging	LQ1 DS+++	85	6	\$ 36,636	0.84	39.2%	0.66
4236	Electrical and Electronic Goods Merchant Wholesalers	Emerging	LQ-- DS+++	168	19	\$ 42,609	0.59	63.2%	0.66
4237	Hardware, Plumbing, & Heating Equip. & Supplies Merch. Wholesal	Emerging	LQ1 DS+	153	15	\$ 38,808	0.78	5.9%	0.80
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	Emerging	LQ1 DS+	416	51	\$ 37,741	0.76	7.2%	0.77
4239	Miscellaneous Durable Goods Merchant Wholesalers	Growing Base	LQ++ DS+++	413	20	\$ 25,225	1.82	92.1%	0.59
4241	Paper and Paper Product Merchant Wholesalers	Emerging	LQ-- DS++	64	7	\$ 34,441	0.51	22.6%	0.72
4242	Drugs and Druggists' Sundries Merchant Wholesalers	Emerging	LQ---- DS++	8	6	\$ 14,631	0.04	19.9%	0.19
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	D*	D*	D*	D*	D*	D*	D*	D*
4244	Grocery and Related Product Wholesalers	Emerging	LQ-- DS++	350	31	\$ 34,768	0.61	17.4%	0.81
4247	Petroleum and Petroleum Products Merchant Wholesalers	D*	D*	D*	D*	D*	D*	D*	D*
4248	Beer, Wine, & Distilled Alc. Bev. Merch. Wholesalers	Growing Base	LQ+ DS++	192	4	\$ 35,092	1.62	24.9%	0.68
4251	Wholesale Electronic Markets and Agents and Brokers	Emerging	LQ--- DS+++	201	124	\$ 40,694	0.34	32.7%	0.65
Total									

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

**Potential Industrial Clusters
Jackson and Josephine Counties, 2004**

<u>NAICS</u>	<u>Industry Definition (NAICS 4-Digit)</u>	<u>Cluster Map Quadrant**</u>	<u>Quadrant Strength**</u>	<u>Employment 2004</u>	<u>Firms 2004</u>	<u>Ave. Wage 2004</u>	<u>LQ**</u>	<u>DS**</u>	<u>Ave. Pay JJJUS</u>
6. Electronic Shopping Cluster									
4541	Electronic Shopping and Mail-Order Houses	D*	D*	D*	D*	D*	D*	D*	D*
7. Freight Transport Cluster									
4841	General Freight Trucking	Growing Base	LQ+ DS0	965	74	\$ 37,254	1.21	0.8%	0.96
4842	Specialized Freight Trucking	Transforming	LQ1 DS0	354	54	\$ 31,823	1.05	-2.8%	0.93
4881	Support Activities for Air Transportation	Emerging	LQ-- DS++	71	12	\$ 29,059	0.61	13.6%	0.82
4885	Freight Transportation Arrangement	Growing Base	LQ++ DS+++	317	35	\$ 42,321	2.23	26.3%	0.91
	Total			1,708	175	\$ 36,727			
8. Headquarters Cluster									
5511	Management of Companies and Enterprises	Growing Base	LQ+DS+++	1,955	61	\$ 52,569	1.37	115.4%	0.66
9. Elder / Health Care Cluster									
9A. Elder Care Cluster									
6216	Home Health Care Services	Declining	LQ--- DS-	263	13	\$ 17,551	0.41	-11.8%	0.78
6231	Nursing Care Facilities	Declining	LQ1 DS0	1,029	13	\$ 21,753	0.78	-3.5%	0.89
6233	Community Care Facilities for the Elderly (Public: VA Dom)	D*	D*	D*	D*	D*	D*	D*	D*
6233	Community Care Facilities for the Elderly (Private)	D*	D*	D*	D*	D*	D*	D*	D*
8122	Death Care Services	Declining	LQ-- DS-	74	17	\$ 28,308	0.64	-0.15	0.95
	Total			3,283	156	\$ 24,023			
9B. Health Care Cluster									
6221	General Medical and Surgical Hospitals	Growing Base	LQ+ DS0	4,240	5	\$ 41,473	1.26	1.3%	0.98
6211	Offices of Physicians	Growing Base	LQ+ DS0	2,566	200	\$ 55,957	1.49	2.1%	0.87
6212	Offices of Dentists	Growing Base	LQ+ DS+	958	135	\$ 35,368	1.51	7.4%	0.90
6213	Offices of Other Health Practitioners	Growing Base	LQ++ DS+++	819	154	\$ 28,001	1.86	79.7%	0.89
6214	Outpatient Care Centers	Emerging	LQ1 DS+++	294	13	\$ 32,366	0.79	60.0%	0.79
6215	Medical and Diagnostic Laboratories	Emerging	LQ-- DS+++	94	8	\$ 75,952	0.60	261.4%	1.57
6219	Other Ambulatory Health Care Services	Growing Base	LQ1 DS+	178	5	\$ 35,373	1.07	9.2%	1.10
	Total			9,149	520	\$ 43,634			
	Elder Care and Health Care Total			12,432	676	\$ 38,455			

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

**Potential Industrial Clusters
Jackson and Josephine Counties, 2004**

NAICS	Industry Definition (NAICS 4-Digit)	Cluster Map Quadrant**	Quadrant Strength**	Employment 2004	Firms 2004	Ave. Wage 2004	LQ**	DS**	Ave. Pay JJ/US
10. Creative Cluster									
3271	Clay Product and Refractory Manufacturing	D*	D*	D*	D*	D*	D*	D*	D*
3272	Glass and Glass Product Manufacturing	D*	D*	D*	D*	D*	D*	D*	D*
7115	Independent Artists, Writers, and Performers	Declining	LQ1 DS0	28	18	\$ 45,911	0.76	-2.3%	0.40
7111	Performing Arts Companies	Growing Base	LQ+++ DS+	417	12	\$ 30,821	4.23	8.0%	0.90
5121	Motion Picture and Video Industries	Declining	LQ-- DS0	185	17	\$ 20,240	0.61	-0.9%	0.41
7113	Promoters of Performing Arts, Sports, and Similar Events	Declining	LQ-- DS-	47	3	\$ 20,472	0.73	-12.4%	0.68
	Total			817	59	\$ 27,502			
11. Tourism and Recreation Cluster									
11A. Accommodations Sub-Cluster									
7211	Traveler Accommodations	Emerging	LQ1 DS0	1,378	109	\$ 14,594	0.95	4.1%	0.64
7212	RV (Recreational Vehicle) Parks and Recreational Camps	Growing Base	LQ+ DS+	74	19	\$ 17,525	1.74	8.3%	0.99
	Total			1,453	128	\$ 14,744			
11B. Restaurants Sub-Cluster									
7221	Full-Service Restaurants	Transforming	LQ+ DS0	4,133	257	\$ 13,242	1.17	-4.5%	0.94
7222	Limited-Service Eating Places	Growing Base	LQ+ DS0	3,742	292	\$ 11,061	1.19	2.7%	0.96
	Total			7,875	549	\$ 12,206			
11C. Creative Sub-Cluster									
7111	Performing Arts Companies	Growing Base	LQ+++ DS+	417	12	\$ 30,821	4.23	8.0%	0.90
5121	Motion Picture and Video Industries	Declining	LQ-- DS0	185	17	\$ 20,240	0.61	-0.9%	0.41
7113	Promoters of Performing Arts, Sports, and Similar Events	Declining	LQ-- DS-	47	3	\$ 20,472	0.73	-12.4%	0.68
	Total			649	32	\$ 27,057			
11D. Entertainment / Recreation Sub-Cluster									
7112	Spectator Sports	Emerging	LQ-- DS++	39	3	\$ 5,335	0.37	15.4%	0.06
7121	Museums, Historical Sites, and Similar Institutions (Public)	D*	D*	D*	D*	D*	D*	D*	D*
7121	Museums, Historical Sites, and Similar Institutions (Private)	D*	D*	D*	D*	D*	D*	D*	D*
4872	Scenic and Sightseeing Transportation, Water	D*	D*	D*	D*	D*	D*	D*	D*
7139	Other Amusement and Recreation Industries	D*	D*	D*	D*	D*	D*	D*	D*
5321	Automotive Equipment Rental and Leasing	Growing Base	LQ+ DS+++	245	14	\$ 19,264	1.50	127.7%	0.57
	Total			1,367	125	\$ 14,354			
	Tourism and Recreation Total			11,344	834	\$ 13,640			

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Appendix B

Employment Summary Jackson and Josephine Counties

Source:
Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

Jackson and Josephine Counties Employment, 2004

<u>NAICS</u>	<u>Industry</u>	2004 <u>Units</u>	2004 <u>Employment</u>	2004 <u>Payroll</u>	2004 <u>Average Pay</u>	% of Total <u>Employment</u>
-	Total All Ownerships	8,234	102,676	\$2,996,847,727	\$	100%
-	Total Private Coverage	7,956	88,964	\$2,491,427,000	\$	87%
-	Natural Resources & Mining	198	3,527	\$97,163,359	\$	3.4%
-	Agriculture, Forestry, Fish., Hunting	188	3,334	\$90,416,440	\$	3.2%
111	Crop production	31	963	\$17,165,721	\$	0.9%
113	Forestry and logging	70	1,118	\$49,461,191	\$	1.1%
-	Mining	10	193	\$6,746,919	\$	0.2%
-	Construction	1,124	6,107	\$185,874,241	\$	5.9%
236	Construction of buildings	367	1,625	\$47,674,724	\$	1.6%
237	Heavy and civil engineering construction	74	671	\$25,326,697	\$	0.7%
238	Specialty trade contractors	683	3,812	\$112,872,820	\$	3.7%
-	Manufacturing	468	9,807	\$332,627,794	\$	9.6%
311	Food manufacturing	38	649	\$18,781,436	\$	0.6%
312	Beverage and tobacco product manufacturing	14	157	\$4,044,113	\$	0.2%
314	Textile product mills	13	78	\$1,933,923	\$	0.1%
321	Wood product manufacturing	52	3,041	\$105,498,939	\$	3.0%
323	Printing and related support activities	35	501	\$15,322,018	\$	0.5%
326	Plastics and rubber products manufacturi	15	347	\$10,702,175	\$	0.3%
327	Nonmetallic mineral product manufacturing	20	646	\$25,285,158	\$	0.6%
332	Fabricated metal product manufacturing	68	605	\$18,897,191	\$	0.6%
334	Computer and electronic product manufact	16	655	\$22,856,602	\$	0.6%
336	Transportation equipment manufacturing	32	365	\$13,129,961	\$	0.4%
339	Miscellaneous manufacturing	64	567	\$14,615,541	\$	0.6%
999	Other Manufacturing	30	272	\$8,958,606	\$	0.3%
-	Trade, Transportation. & Utilities	1,663	23,536	\$626,909,835	\$	22.9%
-	Utilities	14	331	\$21,391,106	\$	0.3%
-	Wholesale	357	3,189	\$108,701,160	\$	3.1%
423	Merchant wholesalers, durable goods	171	1,941	\$66,607,295	\$	1.9%
424	Merchant wholesalers, nondurable goods	82	1,046	\$33,820,463	\$	1.0%
425	Electronic markets and agents and broker	104	202	\$8,273,402	\$	0.2%
-	Retail	1,069	17,319	\$411,720,066	\$	16.9%
441	Motor vehicle and parts dealers	147	2,309	\$82,985,843	\$	2.2%
442	Furniture and home furnishings stores	63	482	\$13,721,448	\$	0.5%
443	Electronics and appliance stores	50	413	\$9,711,593	\$	0.4%
444	Building material and garden supply stores	88	1,050	\$27,678,280	\$	1.0%
445	Food and beverage stores	126	2,953	\$59,646,228	\$	2.9%
446	Health and personal care stores	51	430	\$10,229,499	\$	0.4%

Source: Oregon Employment Department, Source: Oregon Employment Department, at <http://www.qualityinfo.org/olmisi/CEP>

Jackson and Josephine Counties Employment, 2004

<u>NAICS</u>	<u>Industry</u>	2004 <u>Units</u>	2004 <u>Employment</u>	2004 <u>Payroll</u>	2004 <u>Average Pay</u>	% of Total <u>Employment</u>
447	Gasoline stations	86	987	\$14,371,468	\$	14,561
448	Clothing and clothing accessories stores	114	904	\$13,383,143	\$	14,804
451	Sporting goods, hobby, book and music stores	91	676	\$9,829,985	\$	14,541
452	General merchandise stores	44	3,137	\$67,794,788	\$	21,611
453	Miscellaneous store retailers	145	805	\$14,931,974	\$	18,549
999	Other Retail	75	3,301	\$91,761,020	\$	27,798
-	Transportation, Warehousing & Utilities	225	2,698	\$85,097,503	\$	31,541
484	Truck transportation	114	1,319	\$47,225,204	\$	35,804
488	Support activities for transportation	51	483	\$17,982,230	\$	37,230
999	Other Transportation & Warehousing	30	286	\$7,510,282	\$	26,260
-	Information	152	2,144	\$78,251,745	\$	36,498
511	Publishing industries, except Internet	54	615	\$23,152,520	\$	37,646
517	Telecommunications	39	838	\$34,670,708	\$	41,373
518	ISPs, search portals, and data processing	17	83	\$2,480,228	\$	29,882
-	Financial Activities	788	4,649	\$158,065,918	\$	34,000
-	Finance & Insurance	418	2,958	\$121,311,553	\$	41,011
522	Credit intermediation and related activities	192	1,671	\$64,802,032	\$	38,780
523	Securities, commodity contracts, investm	65	259	\$17,920,000	\$	69,189
524	Insurance carriers and related activitie	161	1,026	\$37,736,165	\$	36,780
999	Other Finance & Insurance	29	164	\$6,105,068	\$	37,226
-	Real Estate Rental & Leasing	370	1,691	\$36,754,365	\$	21,735
531	Real estate	303	956	\$20,179,363	\$	21,108
532	Rental and leasing services	62	731	\$16,285,284	\$	22,278
-	Professional & Business Services	1,048	9,109	\$284,658,026	\$	31,250
-	Professional, Scientific & Technical Svcs	591	2,447	\$79,447,883	\$	32,467
-	Management of Companies	58	1,955	\$102,745,175	\$	52,555
-	Admin. & Support, Waste Mgmt & Remediation Svcs	398	4,707	\$102,464,968	\$	21,769
561	Administrative and support services	382	4,407	\$91,807,489	\$	20,832
562	Waste management and remediation service	16	301	\$10,657,479	\$	35,407
-	Education & Health Services	864	14,606	\$500,810,849	\$	34,288
-	Education	74	700	\$12,984,440	\$	18,549
-	Health & Social Assistance	790	13,905	\$487,826,409	\$	35,083
621	Ambulatory health care services	500	5,172	\$227,953,825	\$	44,075
623	Nursing and residential care facilities	148	3,036	\$58,180,751	\$	19,164

Source: Oregon Employment Department, Source: Oregon Employment Department, at <http://www.qualityinfo.org/olmisi/CEP>

Jackson and Josephine Counties Employment, 2004

<u>NAICS</u>	<u>Industry</u>	<u>2004</u> <u>Units</u>	<u>2004</u> <u>Employment</u>	<u>2004</u> <u>Payroll</u>	<u>2004</u> <u>Average Pay</u>	<u>% of Total</u> <u>Employment</u>
-	Leisure & Hospitality	819	11,494	\$152,535,864	\$ 13,271	11.2%
-	Arts, Entertainment & Recreation	133	1,630	\$29,276,708	\$ 17,961	1.6%
713	Amusements, gambling, and recreation	89	1,063	\$13,407,906	\$ 12,613	1.0%
999	Other Arts, Entertainment & Recreation	52	673	\$20,113,560	\$ 29,886	0.7%
-	Accommodations & Food Services	686	9,864	\$123,259,156	\$ 12,496	9.6%
721	Accommodation	120	1,452	\$21,415,440	\$ 14,749	1.4%
722	Food services and drinking places	566	8,411	\$101,843,716	\$ 12,108	8.2%
-	Other Services	812	3,961	\$73,917,808	\$ 18,661	3.9%
811	Repair and maintenance	230	1,032	\$25,602,787	\$ 24,809	1.0%
812	Personal and laundry services	109	810	\$15,196,952	\$ 18,762	0.8%
813	Membership associations and organization	297	1,825	\$29,483,280	\$ 16,155	1.8%
814	Private households	176	294	\$3,634,789	\$ 12,363	0.3%
-	Private Non-Classified	22	23	\$611,561	\$ 26,590	0.0%
-	Total All Government	279	13,713	\$505,420,727	\$ 36,857	13.4%
-	Total Federal Government	64	2,015	\$105,174,105	\$ 52,196	2.0%
-	Total State Government	56	2,041	\$72,507,970	\$ 35,526	2.0%
-	Total Local Government	159	9,657	\$327,738,652	\$ 33,938	9.4%

Source: Oregon Employment Department, Source: Oregon Employment Department, at <http://www.qualityinfo.org/olmisj/CEP>

Appendix C

Industry Detail (NAICS 4-Digit)
Jackson and Josephine Counties, 2004

Source:
Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

<u>NAICS4</u>	<u>Industry (4-Digit Definition)</u>	<u>Cluster Quadrant**</u>	<u>Quadrant Strength**</u>	<u>2004 Employment</u>	<u>2004 Firms</u>	<u>2004 Average Pay</u>
-	Total All Ownerships			102,676	8,234	\$29,187
-	Total Private Coverage			88,964	7,956	\$28,005
1112	Vegetable and Melon Farming	D*	D*	D*	D*	D*
1113	Fruit and Tree Nut Farming	Transforming	LQ+++ DS-	818	14	\$17,582
1114	Greenhouse, Nursery, and Floriculture Production	Emerging	LQ-- DS+++	107	9	\$19,718
1119	Other Crop Farming	Emerging	LQ--- DS0	30	7	\$19,389
1121	Cattle Ranching and Farming	Transforming	LQ+ DS-	111	19	\$22,395
1123	Poultry and Egg Production	D*	D*	D*	D*	D*
1124	Sheep and Goat Farming	D*	D*	D*	D*	D*
1129	Other Animal Production	Growing Base	LQ++ DS+++	30	6	\$19,467
1131	Timber Tract Operations (Fed. Gvt.)	Transforming	LQ+++ DS-	358	8	\$50,513
1131	Timber Tract Operations	Growing Base	LQ+++ DS++	15	4	\$51,282
1132	Forest Nurseries and Gathering of Forest Products	D*	D*	D*	D*	D*
1133	Logging	Growing Base	LQ+++ DS+++	1,090	66	\$44,050
1141	Fishing	D*	D*	D*	D*	D*
1151	Support Activities for Crop Production	Declining	LQ---- DS--	11	3	\$19,808
1152	Support Activities for Animal Production	Growing Base	LQ+ DS+++	28	11	\$15,583
1153	Support Activities for Forestry	Growing Base	LQ+++ DS+++	1,052	51	\$18,443
2123	Nonmetallic Mineral Mining and Quarrying	Transforming	LQ++ DS-	192	10	\$34,998
2211	Electric Power Generation, Transmission and Distribution	Emerging	LQ-- DS++	254	8	\$68,928
2212	Natural Gas Distribution	D*	D*	D*	D*	D*
2213	Water, Sewage and Other Systems (Loc. Gvt.)	Transforming	LQ1 DS0	135	9	\$38,168
2213	Water, Sewage and Other Systems	Emerging	LQ---- DS+++	9	4	\$12,567
2361	Residential Building Construction	Growing Base	LQ+ DS+++	1,160	380	\$25,508
2362	Nonresidential Building Construction	Emerging	LQ1 DS++	465	40	\$38,903
2371	Utility System Construction	Growing Base	LQ+ DS++	358	30	\$36,491
2372	Land Subdivision	Emerging	LQ-- DS++	45	24	\$60,579
2373	Highway, Street, and Bridge Construction (State Gvt.)		N/A	151	4	\$39,778
2373	Highway, Street, and Bridge Construction	Declining	LQ1 DS0	261	19	\$35,360
2379	Other Heavy and Civil Engineering Construction	Emerging	LQ--- DS++	8	6	\$45,013
2381	Foundation, Structure, and Building Exterior Contractors	Emerging	LQ1 DS+++	799	179	\$24,741
2382	Building Equipment Contractors	Emerging	LQ1 DS++	1,546	232	\$34,816
2383	Building Finishing Contractors	Growing Base	LQ+ DS+++	890	227	\$26,532
2389	Other Specialty Trade Contractors	Growing Base	LQ+ DS+++	577	120	\$27,166
3112	Grain and Oilseed Milling	D*	D*	D*	D*	D*
3113	Sugar and Confectionery Product Manufacturing	Emerging	LQ-- DS+++	50	3	\$11,615
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	D*	D*	D*	D*	D*

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmsij/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

<u>NAICS4</u>	<u>Industry (4-Digit Definition)</u>	<u>Cluster</u>	<u>Quadrant**</u>	<u>2004</u> <u>Quadrant Strength**</u>	<u>2004</u> <u>Employment</u>	<u>2004</u> <u>Firms</u>	<u>2004</u> <u>Average Pay</u>
3115	Dairy Product Manufacturing	Emerging	LQ-- DS+	58	3		\$32,272
3116	Animal Slaughtering and Processing	Emerging	LQ--- DS+++	118	8		\$19,711
3118	Bakeries and Tortilla Manufacturing	Emerging	LQ--- DS0	89	16		\$10,649
3119	Other Food Manufacturing	Growing Base	LQ+ DS0	170	9		\$33,361
3121	Beverage Manufacturing	Growing Base	LQ+ DS++	157	16		\$25,841
3141	Textile Furnishings Mills	D*	D*	D*	D*		D*
3149	Other Textile Product Mills	Growing Base	LQ+ DS++	77	12		\$25,140
3152	Cut and Sew Apparel Manufacturing	Emerging	LQ---- DS+++	40	7		\$20,236
3159	Apparel Accessories and Other Apparel Manufacturing	D*	D*	D*	D*		D*
3169	Other Leather and Allied Product Manufacturing	D*	D*	D*	D*		D*
3211	Sawmills and Wood Preservation	Transforming	LQ+++ DS--	306	7		\$44,049
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	Transforming	LQ+++ DS--	1,419	23		\$36,766
3219	Other Wood Product Manufacturing	Transforming	LQ+++ DS0	1,316	28		\$30,272
3231	Printing and Related Support Activities	Emerging	LQ1 DS0	500	36		\$30,624
3241	Petroleum and Coal Products Manufacturing	D*	D*	D*	D*		D*
3251	Basic Chemical Manufacturing	D*	D*	D*	D*		D*
3254	Pharmaceutical and Medicine Manufacturing	Emerging	LQ--- DS+++	85	4		\$35,091
3255	Paint, Coating, and Adhesive Manufacturing	D*	D*	42	D*		D*
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	Emerging	LQ---- DS+++	19	4		\$24,549
3259	Other Chemical Product and Preparation Manufacturing	D*	D*	D*	D*		D*
3261	Plastics Product Manufacturing	Emerging	LQ-- DS++	293	13		\$30,462
3262	Rubber Product Manufacturing	D*	D*	D*	D*		D*
3271	Clay Product and Refractory Manufacturing	D*	D*	D*	D*		D*
3272	Glass and Glass Product Manufacturing	D*	D*	D*	D*		D*
3273	Cement and Concrete Product Manufacturing	Growing Base	LQ++ DS+	490	9		\$43,176
3279	Other Nonmetallic Mineral Product Manufacturing	D*	D*	D*	D*		D*
3315	Foundries	D*	D*	D*	D*		D*
3321	Forging and Stamping	D*	D*	D*	D*		D*
3322	Cutlery and Handtool Manufacturing	D*	D*	D*	D*		D*
3323	Architectural and Structural Metals Manufacturing	Emerging	LQ--- DS0	90	13		\$29,398
3324	Boiler, Tank, and Shipping Container Manufacturing	Emerging	LQ--- DS+	21	3		\$29,256
3325	Hardware Manufacturing	D*	D*	D*	D*		D*
3326	Spring and Wire Product Manufacturing	D*	D*	D*	D*		D*
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	Emerging	LQ-- DS++	184	21		\$30,931
3328	Coating, Engraving, Heat Treating, and Allied Activities	Emerging	LQ--- DS0	42	9		\$32,462

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmsj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster	Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
3329	Other Fabricated Metal Product Manufacturing	Declining		LQ-- DS-	168	18	\$33,354
3331	Agriculture, Construction, and Mining Machinery Manufacturing	Emerging		LQ---- DS+++	13	3	\$18,598
3332	Industrial Machinery Manufacturing	Declining		LQ--- DS---	29	5	\$33,640
3333	Commercial and Service Industry Machinery Manufacturing	D*		D*	D*	D*	D*
3335	Metalworking Machinery Manufacturing	Declining		LQ-- DS-	94	9	\$35,514
3336	Manufacturing	D*		D*	D*	D*	D*
3339	Other General Purpose Machinery Manufacturing	Emerging		LQ-- DS+++	165	7	\$37,858
3341	Computer and Peripheral Equipment Manufacturing	D*		D*	D*	D*	D*
3342	Communications Equipment Manufacturing	D*		D*	D*	D*	D*
3344	Semiconductor and Other Electronic Component Manufacturing	Declining		LQ-- DS-	282	6	\$26,138
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	Declining		LQ-- DS-	264	7	\$44,180
3351	Electric Lighting Equipment Manufacturing	D*		D*	D*	D*	D*
3353	Electrical Equipment Manufacturing	Emerging		LQ1 DS++	128	3	\$31,802
3362	Motor Vehicle Body and Trailer Manufacturing	Emerging		LQ--- DS++	62	13	\$26,479
3363	Motor Vehicle Parts Manufacturing	Declining		LQ---- DS0	51	6	\$31,224
3364	Aerospace Product and Parts Manufacturing	D*		D*	D*	D*	D*
3366	Ship and Boat Building	Transforming		LQ+ DS0	201	11	\$35,410
3369	Other Transportation Equipment Manufacturing	Growing Base		LQ+ DS0	51	5	\$54,794
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing	Growing Base		LQ+++ DS+++	993	41	\$31,568
3372	Office Furniture (including Fixtures) Manufacturing	Emerging		LQ-- DS+++	72	6	\$29,879
3391	Medical Equipment and Supplies Manufacturing	Emerging		LQ-- DS+	146	22	\$28,095
3399	Other Miscellaneous Manufacturing	Growing Base		LQ+ DS++	422	46	\$24,962
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers	Growing Base		LQ1 DS0	287	24	\$31,397
4232	Furniture and Home Furnishing Merchant Wholesalers	Declining		LQ---- DS--	11	3	\$36,797
4233	Lumber and Other Construction Materials Merchant Wholesalers	Transforming		LQ+ DS-	255	22	\$39,182
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	Emerging		LQ--- DS++	154	15	\$32,049
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	Emerging		LQ1 DS+++	85	6	\$36,636
4236	Electrical and Electronic Goods Merchant Wholesalers	Emerging		LQ-- DS+++	168	19	\$42,609
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	Emerging		LQ1 DS+	153	15	\$38,808
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	Emerging		LQ1 DS+	416	51	\$37,741
4239	Miscellaneous Durable Goods Merchant Wholesalers	Growing Base		LQ++ DS+++	413	20	\$25,225

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
http://www.qualityinfo.org/olmsj/CEP

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
4241	Paper and Paper Product Merchant Wholesalers	Emerging	LQ-- DS++	64	7	\$34,441
4242	Drugs and Druggists' Sundries Merchant Wholesalers	Emerging	LQ---- DS++	8	6	\$14,631
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	D*	D*	D*	D*	D*
4244	Grocery and Related Product Wholesalers	Emerging	LQ-- DS++	350	31	\$34,768
4245	Farm Product Raw Material Merchant Wholesalers	D*	D*	D*	D*	D*
4246	Chemical and Allied Products Merchant Wholesalers	D*	D*	D*	D*	D*
4247	Petroleum and Petroleum Products Merchant Wholesalers	Emerging	LQ1 DS+	69	4	\$41,843
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	Growing Base	LQ+ DS++	192	4	\$35,092
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	Transforming	LQ1 DS0	325	31	\$26,044
4251	Wholesale Electronic Markets and Agents and Brokers	Emerging	LQ--- DS+++	201	124	\$40,694
4411	Automobile Dealers	Transforming	LQ+ DS0	1,416	65	\$38,306
4412	Other Motor Vehicle Dealers	Growing Base	LQ+ DS++	363	28	\$37,863
4413	Automotive Parts, Accessories, and Tire Stores	Growing Base	LQ+ DS+	531	67	\$28,285
4421	Furniture Stores	Emerging	LQ1 DS++	230	28	\$29,493
4422	Home Furnishings Stores	Transforming	LQ+ DS-	252	44	\$27,504
4431	Electronics and Appliance Stores	Emerging	LQ1 DS++	413	56	\$23,510
4441	Building Material and Supplies Dealers	Growing Base	LQ1 DS++	940	76	\$27,475
4442	Lawn and Garden Equipment and Supplies Stores	Emerging	LQ1 DS++	118	19	\$19,116
4451	Grocery Stores	Growing Base	LQ+ DS+	2,665	106	\$20,156
4452	Specialty Food Stores	Growing Base	LQ+ DS+	259	24	\$21,285
4453	Beer, Wine, and Liquor Stores	Emerging	LQ--- DS0	29	8	\$14,591
4461	Health and Personal Care Stores	Emerging	LQ-- DS0	430	56	\$23,776
4471	Gasoline Stations	Transforming	LQ+ DS0	987	89	\$14,566
4481	Clothing Stores	Emerging	LQ1 DS+	654	76	\$12,919
4482	Shoe Stores	Emerging	LQ-- DS++	99	22	\$18,631
4483	Jewelry, Luggage, and Leather Goods Stores	Growing Base	LQ1 DS+++	151	21	\$20,476
4511	Sporting Goods, Hobby, and Musical Instrument Stores	Growing Base	LQ+ DS++	499	65	\$14,652
4512	Book, Periodical, and Music Stores	Growing Base	LQ1 DS++	177	29	\$14,208
4521	Department Stores	Growing Base	LQ+ DS++	1,947	15	\$19,334
4529	Other General Merchandise Stores	Transforming	LQ+ DS-	1,191	32	\$25,329
4531	Florists	Transforming	LQ+ DS0	102	13	\$11,776
4532	Office Supplies, Stationery, and Gift Stores	Declining	LQ1 DS-	313	55	\$17,939
4533	Used Merchandise Stores	Declining	LQ1 DS-	88	28	\$12,325
4539	Other Miscellaneous Store Retailers	Transforming	LQ+ DS-	301	62	\$23,328
4541	Electronic Shopping and Mail-Order Houses	D*	D*	D*	D*	D*

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
http://www.qualityinfo.org/olmisi/CEP

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
4542	Vending Machine Operators	Emerging	LQ-- DS+	26	5	\$22,659
4543	Direct Selling Establishments	Declining	LQ-- DS-	68	27	\$22,014
4811	Scheduled Air Transportation	Emerging	LQ--- DS+++	111	3	\$16,193
4812	Nonscheduled Air Transportation	D*	D*	D*	D*	D*
4841	General Freight Trucking	Growing Base	LQ+ DS0	965	74	\$37,254
4842	Specialized Freight Trucking	Transforming	LQ1 DS0	354	54	\$31,823
4851	Urban Transit Systems (Loc. Gvt.)	D*	D*	D*	D*	D*
4853	Taxi and Limousine Service	Emerging	LQ-- DS++	40	9	\$15,714
4854	School and Employee Bus Transportation	Transforming	LQ+ DS--	204	4	\$11,658
4855	Charter Bus Industry	D*	D*	D*	D*	D*
4859	Other Transit and Ground Passenger Transportation	Growing Base	LQ+ DS+++	55	12	\$11,285
4872	Scenic and Sightseeing Transportation, Water	D*	D*	D*	D*	D*
4881	Support Activities for Air Transportation	Emerging	LQ-- DS++	71	12	\$29,059
4882	Support Activities for Rail Transportation	D*	D*	D*	D*	D*
4884	Support Activities for Road Transportation	Growing Base	LQ+ DS++	91	9	\$25,840
4885	Freight Transportation Arrangement	Growing Base	LQ++ DS+++	317	35	\$42,321
4911	Postal Service (Fed. Gvt.)	Emerging	LQ1 DS+	503	21	\$51,467
4921	Couriers	Emerging	LQ-- DS+++	256	7	\$33,201
4922	Local Messengers and Local Delivery	Growing Base	LQ++ DS+++	84	11	\$14,248
4931	Warehousing and Storage	Declining	LQ---- DS0	85	10	\$34,534
5111	Newspaper, Periodical, Book, and Directory Publishers	Emerging	LQ1 DS0	458	35	\$32,930
5112	Software Publishers	Emerging	LQ1 DS+++	156	24	\$51,618
5121	Motion Picture and Video Industries	Declining	LQ-- DS0	185	17	\$20,240
5122	Sound Recording Industries	D*	D*	D*	D*	D*
5151	Radio and Television Broadcasting	Growing Base	LQ++ DS0	407	17	\$33,134
5161	Internet Publishing and Broadcasting	Emerging	LQ-- DS+	15	10	\$45,924
5171	Wired Telecommunications Carriers	Emerging	LQ1 DS++	427	19	\$45,261
5172	Wireless Telecommunications Carriers (except Satellite)	Growing Base	LQ++ DS0	303	16	\$34,531
5175	Cable and Other Program Distribution	Declining	LQ1 DS-	102	6	\$46,709
5181	Internet Service Providers and Web Search Portals	Declining	LQ-- DS0	68	9	\$21,424
5182	Data Processing, Hosting, and Related Services	Declining	LQ---- DS--	15	10	\$68,488
5221	Depository Credit Intermediation	Emerging	LQ1 DS+	1,225	112	\$36,194
5222	Nondepository Credit Intermediation	Emerging	LQ-- DS+++	250	53	\$47,186
5222	Nondepository Credit Intermediation (Fed. Gvt.)	D*	D*	D*	D*	D*
5223	Activities Related to Credit Intermediation	Emerging	LQ1 DS++	196	50	\$44,298
5231	Securities and Commodity Contracts Intermediation and Brokerage	Emerging	LQ--- DS++	194	46	\$81,172
5239	Other Financial Investment Activities	Emerging	LQ--- DS+++	65	29	\$34,120

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisi/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
5241	Insurance Carriers	Emerging	LQ--- DS+++	515	30	\$36,982
5242	Agencies, Brokerages, and Other Insurance Related Activities	Declining	LQ-- DS-	511	144	\$36,576
5242	Agencies, Brokerages, and Other Insurance Related Activities (Loc. Gvt.)	D*	D*	D*	D*	D*
5251	Insurance and Employee Benefit Funds	D*	D*	D*	D*	D*
5259	Other Investment Pools and Funds	D*	D*	D*	D*	D*
5311	Lessors of Real Estate	Emerging	LQ1 DS+++	407	152	\$16,110
5311	Lessors of Real Estate (Loc. Gvt.)	D*	D*	D*	D*	D*
5312	Offices of Real Estate Agents and Brokers	Emerging	LQ1 DS++	274	93	\$26,782
5313	Activities Related to Real Estate	Declining	LQ-- DS-	275	90	\$22,894
5321	Automotive Equipment Rental and Leasing	Growing Base	LQ+ DS+++	245	14	\$19,264
5322	Consumer Goods Rental	Growing Base	LQ++ DS+++	440	44	\$23,441
5323	General Rental Centers	Emerging	LQ1 DS+++	44	6	\$20,449
5324	Leasing	Declining	LQ-- DS-	61	8	\$37,685
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	Declining	LQ--- DS--	5	5	\$58,926
5411	Legal Services	Declining	LQ-- DS0	545	128	\$43,547
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	Emerging	LQ-- DS++	458	137	\$26,506
5413	Architectural, Engineering, and Related Services	Emerging	LQ-- DS++	399	99	\$37,089
5414	Specialized Design Services	Declining	LQ--- DS---	26	18	\$21,347
5415	Computer Systems Design and Related Services	Declining	LQ--- DS--	97	60	\$43,415
5416	Management, Scientific, and Technical Consulting Services	Declining	LQ--- DS-	119	77	\$42,547
5417	Scientific Research and Development Services	Declining	LQ--- DS--	111	23	\$47,920
5418	Advertising and Related Services	Declining	LQ1 DS-	289	31	\$18,538
5419	Other Professional, Scientific, and Technical Services	Emerging	LQ1 DS0	405	65	\$20,568
5511	Management of Companies and Enterprises	Growing Base	LQ+ DS+++	1,955	61	\$52,569
5611	Office Administrative Services	Declining	LQ--- DS---	83	14	\$39,504
5612	Facilities Support Services	D*	D*	D*	D*	D*
5613	Employment Services	Emerging	LQ-- DS++	1,719	29	\$17,095
5614	Business Support Services	Growing Base	LQ+ DS++	893	64	\$28,877
5615	Travel Arrangement and Reservation Services	Declining	LQ--- DS-	95	21	\$24,943
5616	Investigation and Security Services	Declining	LQ--- DS0	211	28	\$22,821
5617	Services to Buildings and Dwellings	Emerging	LQ1 DS++	1,211	236	\$18,316
5617	Services to Buildings and Dwellings (Loc. Gvt.)	Growing Base	LQ++ DS+++	44	3	\$33,821
5617	Services to Buildings and Dwellings (Loc. Gvt.)	Growing Base	LQ++ DS+++	44	3	\$33,821
5619	Other Support Services	Declining	LQ1 DS0	191	33	\$19,409
5621	Waste Collection	Declining	LQ-- DS0	52	4	\$28,457

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
http://www.qualityinfo.org/olmisi/CEP

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
5622	Waste Treatment and Disposal	Growing Base	LQ++ DS++	177	3	\$40,900
5629	Remediation and Other Waste Management Services	Emerging	LQ1 DS+++	71	9	\$27,131
6111	Elementary and Secondary Schools (Loc. Gvt.)	Declining	LQ1 DS-	4,661	117	\$31,708
6111	Elementary and Secondary Schools	Declining	LQ1 DS--	471	26	\$19,405
6112	Junior Colleges (Loc. Gvt.)	D*	D*	D*	D*	D*
6113	Colleges, Universities, and Professional Schools (State Gvt.)	D*	D*	D*	D*	D*
6113	Colleges, Universities, and Professional Schools	D*	D*	D*	D*	D*
6114	Business Schools and Computer and Management Training	Emerging	LQ-- DS+++	37	13	\$28,171
6115	Technical and Trade Schools	Emerging	LQ1 DS+++	71	11	\$16,787
6116	Other Schools and Instruction	Emerging	LQ-- DS++	116	24	\$12,372
6117	Educational Support Services	Declining	LQ--- DS--	6	6	\$28,376
6211	Offices of Physicians	Growing Base	LQ+ DS0	2,566	200	\$55,957
6212	Offices of Dentists	Growing Base	LQ+ DS+	958	135	\$35,368
6213	Offices of Other Health Practitioners	Growing Base	LQ++ DS+++	819	154	\$28,001
6214	Outpatient Care Centers	Emerging	LQ1 DS+++	294	13	\$32,366
6215	Medical and Diagnostic Laboratories	Emerging	LQ-- DS+++	94	8	\$75,952
6216	Home Health Care Services	Declining	LQ--- DS-	263	13	\$17,551
6219	Other Ambulatory Health Care Services	Growing Base	LQ1 DS+	178	5	\$35,373
6221	General Medical and Surgical Hospitals	Growing Base	LQ+ DS0	4,240	5	\$41,473
6231	Nursing Care Facilities	Declining	LQ1 DS0	1,029	13	\$21,753
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	Transforming	LQ+ DS--	479	34	\$21,306
6233	Community Care Facilities for the Elderly (Fed. Gvt.)	D*	D*	D*	D*	D*
6233	Community Care Facilities for the Elderly	D*	D*	D*	D*	D*
6239	Other Residential Care Facilities	Emerging	LQ1 DS++	119	7	\$17,235
6241	Individual and Family Services	Declining	LQ-- DS-	508	46	\$20,127
6241	Individual and Family Services (State Gvt.)	Growing Base	LQ+++ DS+++	356	9	\$35,023
6242	Community Food and Housing, and Emergency and Other Relief Services	Growing Base	LQ1 DS0	111	13	\$17,449
6242	Community Food and Housing, and Emergency and Other Relief Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6242	Community Food and Housing, and Emergency and Other Relief Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6243	Vocational Rehabilitation Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6243	Vocational Rehabilitation Services	D*	D*	D*	D*	D*
6244	Child Day Care Services	Emerging	LQ-- DS+	439	57	\$15,237

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
http://www.qualityinfo.org/olmsi/CEP

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
7111	Performing Arts Companies	Growing Base	LQ+++ DS+	417	12	\$30,821
7112	Spectator Sports	Emerging	LQ--- DS++	39	3	\$5,335
7113	Promoters of Performing Arts, Sports, and Similar Events	Declining	LQ-- DS-	47	3	\$20,472
7115	Independent Artists, Writers, and Performers	Declining	LQ1 DS0	28	18	\$45,911
7121	Museums, Historical Sites, and Similar Institutions (Fed. Gvt.)	D*	D*	D*	D*	D*
7121	Museums, Historical Sites, and Similar Institutions	Emerging	LQ--- DS+++	37	14	\$15,671
7121	Museums, Historical Sites, and Similar Institutions (State Gvt.)	D*	D*	D*	D*	D*
7121	Museums, Historical Sites, and Similar Institutions (Loc. Gvt.)	D*	D*	D*	D*	D*
7131	Amusement Parks and Arcades	Emerging	LQ--- DS+++	45	4	\$15,981
7132	Gambling Industries	Declining	LQ--- DS-	33	4	\$9,773
7139	Other Amusement and Recreation Industries (Loc. Gvt.)	D*	D*	D*	D*	D*
7139	Other Amusement and Recreation Industries	D*	D*	D*	D*	D*
7211	Traveler Accommodation	Emerging	LQ1 DS0	1,378	109	\$14,594
7212	RV (Recreational Vehicle) Parks and Recreational Camps	Growing Base	LQ+ DS+	74	19	\$17,525
7221	Full-Service Restaurants	Transforming	LQ+ DS0	4,133	257	\$13,242
7222	Limited-Service Eating Places	Growing Base	LQ+ DS0	3,742	292	\$11,061
7223	Special Food Services	Emerging	LQ-- DS+++	230	19	\$9,701
7224	Drinking Places (Alcoholic Beverages)	Declining	LQ1 DS-	306	47	\$11,406
8111	Automotive Repair and Maintenance	Growing Base	LQ+ DS+	898	203	\$24,874
8112	Electronic and Precision Equipment Repair and Maintenance	Declining	LQ--- DS--	22	11	\$22,984
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	Emerging	LQ--- DS+	57	18	\$28,014
8114	Personal and Household Goods Repair and Maintenance	Declining	LQ1 DS--	54	21	\$21,400
8121	Personal Care Services	Declining	LQ-- DS0	303	58	\$13,760
8122	Death Care Services	Declining	LQ-- DS-	74	17	\$28,308
8123	Drycleaning and Laundry Services	Growing Base	LQ+ DS0	323	32	\$22,354
8129	Other Personal Services	Declining	LQ-- DS---	111	19	\$15,435
8131	Religious Organizations	Transforming	LQ+++ DS0	1,030	195	\$16,829
8132	Grantmaking and Giving Services	Emerging	LQ--- DS+	32	21	\$28,550
8133	Social Advocacy Organizations	Growing Base	LQ+ DS++	166	31	\$18,981
8134	Civic and Social Organizations	Growing Base	LQ+ DS+++	480	25	\$9,969
8139	Business, Professional, Labor, Political, and Similar Organizations	Declining	LQ--- DS-	118	36	\$28,136
8141	Private Households	Emerging	LQ-- DS+++	294	221	\$12,360

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmsj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	Cluster Quadrant**	2004 Quadrant Strength**	2004 Employment	2004 Firms	2004 Average Pay
9211	Executive, Legislative, and Other General Government Support (Loc. Gvt.)	Growing Base	LQ+ DS0	3,071	15	\$39,203
9211	Executive, Legislative, and Other General Government Support (Fed. Gvt.)	Declining	LQ---- DS-	20	3	\$63,603
9211	Executive, Legislative, and Other General Government Support (State Gvt.)	D*	D*	D*	D*	D*
9221	Justice, Public Order, and Safety Activities (Loc. Gvt.)	Emerging	LQ---- DS+	145	14	\$52,421
9221	Justice, Public Order, and Safety Activities (Fed. Gvt.)	D*	D*	D*	D*	D*
9221	Justice, Public Order, and Safety Activities (State Gvt.)	Declining	LQ-- DS0	349	8	\$40,370
9231	Administration of Human Resource Programs (Fed. Gvt.)	D*	D*	D*	D*	D*
9231	Administration of Human Resource Programs (State Gvt.)	Declining	LQ--- DS--	126	6	\$36,060
9231	Administration of Human Resource Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9241	Administration of Environmental Quality Programs (Fed. Gvt.)	Transforming	LQ+++ DS0	354	6	\$53,012
9241	Administration of Environmental Quality Programs (State Gvt.)	Transforming	LQ+ DS-	137	10	\$35,778
9241	Administration of Environmental Quality Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9251	Administration of Housing Programs, Urban Planning, and Community Development (Loc. Gvt.)	D*	D*	D*	D*	D*
9251	Administration of Housing Programs, Urban Planning, and Community Development (State Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (Fed. Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (State Gvt.)	D*	D*	D*	D*	D*
9281	National Security and International Affairs (State Gvt.)	D*	D*	D*	D*	D*
9999	Unclassified	Declining	LQ---- DS-	23	29	\$26,686

* Confidentiality restrictions do not permit disclosure of industry data.

** Refer to quadrant map on p. 4 and definition of ranges on p. 10.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004		2004		2001-2004		2004		2004	
		Employment	Change	Loc. Quotient	LQ	Diff. Shift	DS	JkJo Ave. Pay	US Ave. Pay	Industry Pay/ JkJo Ave. Pay	2004
-	Total All Ownerships										
-	Total Private Coverage										
1112	Vegetable and Melon Farming	D*	-5.8%	D*		D*		D*		D*	
1113	Fruit and Tree Nut Farming		73.7%	6.00		-6.2%		1.00			0.60
1114	Greenhouse, Nursery, and Floriculture Production			0.73		74.0%		0.83			0.68
1119	Other Crop Farming		-10.9%	0.41		3.7%		0.91			0.67
1121	Cattle Ranching and Farming		2.2%	1.14		-5.2%		0.93			0.77
1123	Poultry and Egg Production	D*		D*		D*		D*		D*	
1124	Sheep and Goat Farming	D*		D*		D*		D*		D*	
1129	Other Animal Production		51.7%	1.84		55.3%		0.75			0.67
1131	Timber Tract Operations (Fed. Gvt.)		-20.0%	100.61		-10.9%		1.06			1.73
1131	Timber Tract Operations		3.4%	5.06		12.5%		1.11			1.76
1132	Forest Nurseries and Gathering of Forest Products	D*		D*		D*		D*		D*	
1133	Logging		34.4%	19.67		41.5%		1.45			1.51
1141	Fishing	D*		D*		D*		D*		D*	
1151	Support Activities for Crop Production		-46.4%	0.05		-44.0%		1.05			0.68
1152	Support Activities for Animal Production		124.0%	1.30		122.0%		0.59			0.53
1153	Support Activities for Forestry		44.9%	80.72		49.7%		0.63			0.63
2123	Nonmetallic Mineral Mining and Quarrying		-19.4%	2.15		-14.3%		0.76			1.20
2211	Electric Power Generation, Transmission and Distribution		4.5%	0.74		10.8%		0.90			2.36
2212	Natural Gas Distribution	D*		D*		D*		D*		D*	
2213	Water, Sewage and Other Systems (Loc. Gvt.)		-0.5%	1.04		-4.5%		0.85			1.31
2213	Water, Sewage and Other Systems		53.7%	N/A		N/A		0.31			0.43
2361	Residential Building Construction		77.6%	1.55		62.1%		0.62			0.88
2362	Nonresidential Building Construction		5.7%	0.77		14.4%		0.79			1.33
2371	Utility System Construction		16.1%	1.14		22.2%		0.82			1.25
2372	Land Subdivision		16.1%	0.61		18.9%		1.02			2.08
2373	Highway, Street, and Bridge Construction (State Gvt.)		-3.2%	N/A		N/A		N/A			1.36
2373	Highway, Street, and Bridge Construction		-7.3%	0.93		-4.9%		0.76			1.21
2379	Other Heavy and Civil Engineering Construction		-3.2%	0.09		14.2%		0.96			1.54
2381	Foundation, Structure, and Building Exterior Contractors		59.2%	0.95		50.4%		0.75			0.85
2382	Building Equipment Contractors		19.7%	1.00		21.8%		0.82			1.19
2383	Building Finishing Contractors		47.3%	1.14		40.6%		0.79			0.91
2389	Other Specialty Trade Contractors		33.5%	1.11		25.2%		0.74			0.93
3112	Grain and Oilseed Milling	D*		D*		D*		D*		D*	
3113	Sugar and Confectionery Product Manufacturing		33.2%	0.73		44.1%		0.30			0.40
3114	Fruit and Vegetable Preserving and Specialty Food Manufacturing	D*		D*		D*		D*		D*	

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisi/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004	2004	2001-2004	2004	2004	2004
		Employment Change	Loc. Quotient LQ	Diff. Shift DS	JkJo Ave. Pay/ US Ave. Pay	Industry Pay/ JkJo Ave. Pay	
3115	Dairy Product Manufacturing	2.8%	0.52	5.8%	0.75	1.11	
3116	Animal Slaughtering and Processing	50.1%	0.28	51.8%	0.70	0.68	
3118	Bakeries and Tortilla Manufacturing	-3.5%	0.37	2.4%	0.35	0.37	
3119	Other Food Manufacturing	2.9%	1.31	0.6%	0.76	1.14	
3121	Beverage Manufacturing	7.5%	1.12	12.9%	0.56	0.89	
3141	Textile Furnishings Mills	D*	D*	D*	D*	D*	
3149	Other Textile Product Mills	15.3%	1.21	24.4%	0.86	0.86	
3152	Cut and Sew Apparel Manufacturing	55.9%	0.21	90.0%	0.73	0.69	
3159	Apparel Accessories and Other Apparel Manufacturing	D*	D*	D*	D*	D*	
3169	Other Leather and Allied Product Manufacturing	D*	D*	D*	D*	D*	
3211	Sawmills and Wood Preservation	-29.1%	3.11	-23.3%	1.28	1.51	
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	-24.0%	14.38	-24.8%	1.04	1.26	
3219	Other Wood Product Manufacturing	-6.7%	5.01	-1.8%	0.96	1.04	
3231	Printing and Related Support Activities	-9.8%	0.91	4.1%	0.77	1.05	
3241	Petroleum and Coal Products Manufacturing	D*	D*	D*	D*	D*	
3251	Basic Chemical Manufacturing	D*	D*	D*	D*	D*	
3254	Pharmaceutical and Medicine Manufacturing	326.5%	0.35	324.1%	0.43	1.20	
3255	Paint, Coating, and Adhesive Manufacturing	D*	D*	D*	D*	D*	
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	17.2%	0.19	26.2%	0.46	0.84	
3259	Other Chemical Product and Preparation Manufacturing	D*	D*	D*	D*	D*	
3261	Plastics Product Manufacturing	13.5%	0.55	22.6%	0.80	1.05	
3262	Rubber Product Manufacturing	D*	D*	D*	D*	D*	
3271	Clay Product and Refractory Manufacturing	D*	D*	D*	D*	D*	
3272	Glass and Glass Product Manufacturing	D*	D*	D*	D*	D*	
3273	Cement and Concrete Product Manufacturing	6.3%	2.54	8.9%	1.02	1.48	
3279	Other Nonmetallic Mineral Product Manufacturing	D*	D*	D*	D*	D*	
3315	Foundries	D*	D*	D*	D*	D*	
3321	Forging and Stamping	D*	D*	D*	D*	D*	
3322	Cutlery and Handtool Manufacturing	D*	D*	D*	D*	D*	
3323	Architectural and Structural Metals Manufacturing	-6.9%	0.28	0.7%	0.77	1.01	
3324	Boiler, Tank, and Shipping Container Manufacturing	-6.3%	0.28	5.4%	0.63	1.00	
3325	Hardware Manufacturing	D*	D*	D*	D*	D*	
3326	Spring and Wire Product Manufacturing	D*	D*	D*	D*	D*	
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	8.6%	0.67	14.1%	0.76	1.06	
3328	Coating, Engraving, Heat Treating, and Allied Activities	-11.6%	0.35	1.3%	0.90	1.11	

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmsj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004		2004		2001-2004		2004		2004	
		Employment	Change	Loc. Quotient	LO	Diff. Shift	DS	JkJo Ave. Pay	US Ave. Pay	JkJo Ave. Pay	Industry Pay/ JkJo Ave. Pay
3329	Other Fabricated Metal Product Manufacturing		-26.0%		0.72	-12.0%		0.73		1.14	
3331	Agriculture, Construction, and Mining Machinery Manufacturing		127.3%		0.08	137.7%		0.36		0.64	
3332	Industrial Machinery Manufacturing		-73.5%		0.29	-53.7%		0.58		1.15	
3333	Commercial and Service Industry Machinery Manufacturing	D*		D*		D*		D*		D*	
3335	Metalworking Machinery Manufacturing		-26.0%		0.56	-6.7%		0.75		1.22	
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	D*		D*		D*		D*		D*	
3339	Other General Purpose Machinery Manufacturing		11.3%		0.74	28.6%		0.76		1.30	
3341	Computer and Peripheral Equipment Manufacturing	D*		D*		D*		D*		D*	
3342	Communications Equipment Manufacturing	D*		D*		D*		D*		D*	
3344	Semiconductor and Other Electronic Component Manufacturing		-49.6%		0.75	-19.5%		0.39		0.90	
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing		-28.3%		0.73	-19.4%		0.62		1.52	
3351	Electric Lighting Equipment Manufacturing	D*		D*		D*		D*		D*	
3353	Electrical Equipment Manufacturing		-4.1%		0.99	17.3%		0.66		1.09	
3362	Motor Vehicle Body and Trailer Manufacturing		24.5%		0.45	20.8%		0.69		0.91	
3363	Motor Vehicle Parts Manufacturing		-14.1%		0.09	-4.0%		0.61		1.07	
3364	Aerospace Product and Parts Manufacturing	D*		D*		D*		D*		D*	
3366	Ship and Boat Building		1.3%		1.59	-1.5%		0.85		1.21	
3369	Other Transportation Equipment Manufacturing		-1.9%	N/A		N/A		1.01		1.88	
3371	Household and Institutional Furniture and Kitchen Cabinet Manufacturing		44.7%		3.09	52.9%		1.04		1.08	
3372	Office Furniture (including Fixtures) Manufacturing		6.2%		0.65	28.3%		0.81		1.03	
3391	Medical Equipment and Supplies Manufacturing		4.9%		0.57	7.9%		0.55		0.96	
3399	Other Miscellaneous Manufacturing		11.5%		1.43	24.1%		0.66		0.86	
4231	Motor Vehicle and Motor Vehicle Parts and Supplies Merchant Wholesalers		0.6%		1.01	2.6%		0.76		1.08	
4232	Furniture and Home Furnishing Merchant Wholesalers		-45.9%		0.12	-46.6%		0.81		1.26	
4233	Lumber and Other Construction Materials Merchant Wholesalers		-1.6%		1.26	-11.7%		0.84		1.34	
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers		2.6%		0.29	10.4%		0.44		1.10	
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers		29.6%		0.84	39.2%		0.66		1.26	
4236	Electrical and Electronic Goods Merchant Wholesalers		47.7%		0.59	63.2%		0.66		1.46	
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers		4.7%		0.78	5.9%		0.80		1.33	
4238	Machinery, Equipment, and Supplies Merchant Wholesalers		0.2%		0.76	7.2%		0.77		1.29	
4239	Miscellaneous Durable Goods Merchant Wholesalers		91.9%		1.82	92.1%		0.59		0.87	

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004		2004		2001-2004		2004		2004	
		Employment	Change	Loc. Quotient	LQ	Diff. Shift	DS	JKJo Ave. Pay	US Ave. Pay	Industry Pay/ JKJo Ave. Pay	Industry Pay/ JKJo Ave. Pay
4241	Paper and Paper Product Merchant Wholesalers	12.8%		0.51		22.6%		0.72		1.18	
4242	Drugs and Druggists' Sundries Merchant Wholesalers	27.6%		0.04		19.9%		0.19		0.50	
4243	Apparel, Piece Goods, and Notions Merchant Wholesalers	D*		D*		D*		D*		D*	
4244	Grocery and Related Product Wholesalers	18.8%		0.61		17.4%		0.81		1.19	
4245	Farm Product Raw Material Merchant Wholesalers	D*		D*		D*		D*		D*	
4246	Chemical and Allied Products Merchant Wholesalers	D*		D*		D*		D*		D*	
4247	Petroleum and Petroleum Products Merchant Wholesalers	-1.5%		0.82		8.9%		0.85		1.44	
4248	Beer, Wine, and Distilled Alcoholic Beverage Merchant Wholesalers	33.9%		1.62		24.9%		0.68		1.20	
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	-2.7%		1.08		-0.2%		0.68		0.89	
4251	Wholesale Electronic Markets and Agents and Brokers	48.2%		0.34		32.7%		0.65		1.40	
4411	Automobile Dealers	-0.6%		1.34		-3.1%		0.88		1.31	
4412	Other Motor Vehicle Dealers	37.4%		2.70		20.0%		1.09		1.30	
4413	Automotive Parts, Accessories, and Tire Stores	5.7%		1.31		7.4%		1.03		0.97	
4421	Furniture Stores	15.6%		0.94		12.0%		0.96		1.01	
4422	Home Furnishings Stores	-11.0%		1.11		-17.2%		1.02		0.94	
4431	Electronics and Appliance Stores	9.7%		0.94		15.9%		0.67		0.81	
4441	Building Material and Supplies Dealers	32.0%		1.03		21.8%		0.94		0.94	
4442	Lawn and Garden Equipment and Supplies Stores	6.6%		0.94		10.7%		0.79		0.66	
4451	Grocery Stores	1.7%		1.30		5.4%		1.01		0.69	
4452	Specialty Food Stores	-0.5%		1.27		7.9%		0.96		0.73	
4453	Beer, Wine, and Liquor Stores	-0.6%		0.25		2.5%		0.68		0.50	
4461	Health and Personal Care Stores	2.7%		0.54		2.5%		0.82		0.82	
4471	Gasoline Stations	-6.3%		1.35		-1.2%		0.87		0.50	
4481	Clothing Stores	15.7%		0.76		9.5%		0.74		0.44	
4482	Shoe Stores	17.1%		0.66		22.9%		0.99		0.64	
4483	Jewelry, Luggage, and Leather Goods Stores	26.8%		1.06		29.8%		0.75		0.70	
4511	Sporting Goods, Hobby, and Musical Instrument Stores	19.2%		1.36		20.0%		0.81		0.50	
4512	Book, Periodical, and Music Stores	0.5%		1.02		14.1%		0.83		0.49	
4521	Department Stores	8.8%		1.44		17.3%		1.03		0.66	
4529	Other General Merchandise Stores	4.6%		1.15		-12.5%		1.33		0.87	
4531	Florists	-17.6%		1.15		-2.7%		0.77		0.40	
4532	Office Supplies, Stationery, and Gift Stores	-28.8%		0.92		-17.6%		0.83		0.62	
4533	Used Merchandise Stores	-2.9%		0.95		-7.1%		0.72		0.42	
4539	Other Miscellaneous Store Retailers	-13.1%		1.21		-10.9%		0.97		0.80	
4541	Electronic Shopping and Mail-Order Houses	D*		D*		D*		D*		D*	

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004 Employment Change	2004 Loc. Quotient LQ	2001-2004 Diff. Shift DS	2004 JkJo Ave. Pay/ US Ave. Pay	2004 Industry Pay/ JkJo Ave. Pay
4542	Vending Machine Operators	-11.2%	0.58	8.8%	0.87	0.78
4543	Direct Selling Establishments	-21.0%	0.54	-9.2%	0.60	0.76
4811	Scheduled Air Transportation	103.5%	0.28	120.9%	0.30	0.56
4812	Nonscheduled Air Transportation	D*	D*	D*	D*	D*
4841	General Freight Trucking	-2.9%	1.21	0.8%	0.96	1.28
4842	Specialized Freight Trucking	-1.8%	1.05	-2.8%	0.93	1.09
4851	Urban Transit Systems (Loc. Gvt.)	D*	D*	D*	D*	D*
4853	Taxi and Limousine Service	11.0%	0.72	18.7%	0.71	0.54
4854	School and Employee Bus Transportation	-11.5%	1.46	-20.3%	0.64	0.40
4855	Charter Bus Industry	D*	D*	D*	D*	D*
4859	Other Transit and Ground Passenger Transportation	137.3%	1.13	124.3%	0.51	0.39
4872	Scenic and Sightseeing Transportation, Water	D*	D*	D*	D*	D*
4881	Support Activities for Air Transportation	13.1%	0.61	13.6%	0.82	1.00
4882	Support Activities for Rail Transportation	D*	D*	D*	D*	D*
4884	Support Activities for Road Transportation	26.6%	1.40	11.4%	0.93	0.89
4885	Freight Transportation Arrangement	21.6%	2.23	26.3%	0.91	1.45
4911	Postal Service (Fed. Gvt.)	-4.5%	0.76	5.2%	1.04	1.77
4921	Couriers	31.7%	0.60	37.9%	0.87	1.14
4922	Local Messengers and Local Delivery	95.2%	2.11	105.7%	0.57	0.49
4931	Warehousing and Storage	4.2%	0.18	-4.6%	0.98	1.18
5111	Newspaper, Periodical, Book, and Directory Publishers	-6.8%	0.81	2.7%	0.70	1.13
5112	Software Publishers	50.9%	0.79	64.2%	0.54	1.77
5121	Motion Picture and Video Industries	5.4%	0.61	-0.9%	0.41	0.69
5122	Sound Recording Industries	D*	D*	D*	D*	D*
5151	Radio and Television Broadcasting	-0.1%	2.04	3.9%	0.59	1.14
5161	Internet Publishing and Broadcasting	-23.0%	0.62	9.9%	0.64	1.58
5171	Wired Telecommunications Carriers	-8.1%	0.95	17.8%	0.66	1.55
5172	Wireless Telecommunications Carriers (except Satellite)	-5.3%	1.92	1.2%	0.56	1.18
5175	Cable and Other Program Distribution	-6.4%	0.94	-9.7%	0.98	1.60
5181	Internet Service Providers and Web Search Portals	-34.2%	0.69	-3.0%	0.25	0.74
5182	Data Processing, Hosting, and Related Services	-54.6%	0.07	-38.5%	1.11	2.35
5221	Depository Credit Intermediation	10.6%	0.83	7.6%	0.76	1.24
5222	Nondepository Credit Intermediation	42.9%	0.39	28.6%	0.70	1.62
5222	Nondepository Credit Intermediation (Fed. Gvt.)	D*	D*	D*	D*	D*
5223	Activities Related to Credit Intermediation	47.3%	0.76	15.5%	0.78	1.52
5231	Securities and Commodity Contracts Intermediation and Brokerage	1.6%	0.48	16.4%	0.48	2.78
5239	Other Financial Investment Activities	33.3%	0.28	26.8%	0.24	1.17

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmisj/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004 Employment Change	2004 Loc. Quotient LQ	2001-2004 Diff. Shift DS	2004 JkJo Ave. Pay/ US Ave. Pay	2004 Industry Pay/ JkJo Ave. Pay
5241	Insurance Carriers	117.2%	0.48	119.7%	0.58	1.27
5242	Agencies, Brokerages, and Other Insurance Related Activities	-13.1%	0.71	-19.7%	0.68	1.25
5242	Agencies, Brokerages, and Other Insurance Related Activities (Loc. Gvt.)	D*	D*	D*	D*	D*
5251	Insurance and Employee Benefit Funds	D*	D*	D*	D*	D*
5259	Other Investment Pools and Funds	D*	D*	D*	D*	D*
5311	Lessors of Real Estate	27.5%	0.81	28.8%	0.49	0.55
5311	Lessors of Real Estate (Loc. Gvt.)	D*	D*	D*	D*	D*
5312	Offices of Real Estate Agents and Brokers	30.0%	0.99	17.4%	0.53	0.92
5313	Activities Related to Real Estate	-5.4%	0.68	-15.7%	0.58	0.79
5321	Automotive Equipment Rental and Leasing	121.8%	1.50	127.7%	0.57	0.66
5322	Consumer Goods Rental	23.1%	1.87	27.6%	1.09	0.80
5323	General Rental Centers	28.6%	0.84	35.1%	0.55	0.70
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	-10.8%	0.70	-11.3%	0.75	1.29
5331	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)	-32.2%	0.22	-20.7%	0.77	2.02
5411	Legal Services	2.9%	0.56	-3.7%	0.65	1.49
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	9.1%	0.66	15.1%	0.56	0.91
5413	Architectural, Engineering, and Related Services	15.6%	0.38	16.6%	0.60	1.27
5414	Specialized Design Services	-57.5%	0.25	-51.9%	0.45	0.73
5415	Computer Systems Design and Related Services	-44.1%	0.10	-33.3%	0.56	1.49
5416	Management, Scientific, and Technical Consulting Services	-1.7%	0.18	-6.4%	0.63	1.46
5417	Scientific Research and Development Services	-24.5%	0.24	-27.0%	0.62	1.64
5418	Advertising and Related Services	-15.6%	0.80	-6.1%	0.33	0.64
5419	Other Professional, Scientific, and Technical Services	10.8%	0.95	3.8%	0.67	0.71
5511	Management of Companies and Enterprises	114.3%	1.37	115.4%	0.66	1.80
5611	Office Administrative Services	-42.1%	0.30	-65.1%	0.64	1.36
5612	Facilities Support Services	D*	D*	D*	D*	D*
5613	Employment Services	14.8%	0.60	15.1%	0.73	0.59
5614	Business Support Services	8.1%	1.42	10.9%	0.94	0.99
5615	Travel Arrangement and Reservation Services	-31.2%	0.50	-11.6%	0.66	0.86
5616	Investigation and Security Services	2.1%	0.35	0.0%	0.95	0.78
5617	Services to Buildings and Dwellings	22.2%	0.86	18.0%	0.88	0.63
5617	Services to Buildings and Dwellings (Loc. Gvt.)	476.1%	2.58	462.3%	1.06	1.16
5617	Services to Buildings and Dwellings (Loc. Gvt.)	476.1%	2.58	462.3%	1.06	1.16
5619	Other Support Services	1.2%	0.77	-3.0%	0.55	0.67
5621	Waste Collection	14.6%	0.52	-3.5%	0.71	0.98

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
http://www.qualityinfo.org/olmisj/CEP

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004 Employment Change	2004 Loc. Quotient LQ	2001-2004 Diff. Shift DS	2004 JkJo Ave. Pay/ US Ave. Pay	2004 Industry Pay/ JkJo Ave. Pay
5622	Waste Treatment and Disposal	2.3%	2.00	13.3%	0.77	1.40
5629	Remediation and Other Waste Management Services	43.4%	0.83	37.8%	0.64	0.93
6111	Elementary and Secondary Schools (Loc. Gvt.)	-12.0%	0.79	-15.4%	0.90	1.09
6111	Elementary and Secondary Schools	-10.3%	0.98	-21.4%	0.67	0.67
6112	Junior Colleges (Loc. Gvt.)	D*	D*	D*	D*	D*
6113	Colleges, Universities, and Professional Schools (State Gvt.)	D*	D*	D*	D*	D*
6113	Colleges, Universities, and Professional Schools	D*	D*	D*	D*	D*
6114	Business Schools and Computer and Management Training	48.8%	0.57	60.4%	0.62	0.97
6115	Technical and Trade Schools	48.8%	0.85	43.0%	0.49	0.58
6116	Other Schools and Instruction	29.8%	0.60	12.2%	0.70	0.42
6117	Educational Support Services	24.5%	0.10	-20.8%	0.86	0.97
6211	Offices of Physicians	9.5%	1.49	2.1%	0.87	1.92
6212	Offices of Dentists	15.1%	1.51	7.4%	0.90	1.21
6213	Offices of Other Health Practitioners	94.6%	1.86	79.7%	0.89	0.96
6214	Outpatient Care Centers	71.3%	0.79	60.0%	0.79	1.11
6215	Medical and Diagnostic Laboratories	272.9%	0.60	261.4%	1.57	2.61
6216	Home Health Care Services	9.5%	0.41	-11.8%	0.78	0.60
6219	Other Ambulatory Health Care Services	20.6%	1.07	9.2%	1.10	1.21
6221	General Medical and Surgical Hospitals	7.0%	1.26	1.3%	0.98	1.42
6231	Nursing Care Facilities	-1.3%	0.78	-3.5%	0.89	0.75
6232	Residential Mental Retardation, Mental Health and Substance Abuse Facilities	-20.9%	1.17	-28.0%	0.95	0.73
6233	Community Care Facilities for the Elderly (Fed. Gvt.)	D*	D*	D*	D*	D*
6233	Community Care Facilities for the Elderly	D*	D*	D*	D*	D*
6239	Other Residential Care Facilities	11.9%	0.86	10.6%	0.69	0.59
6241	Individual and Family Services	3.6%	0.71	-15.0%	0.92	0.69
6241	Individual and Family Services (State Gvt.)	35.0%	4.55	38.9%	0.96	1.20
6242	Community Food and Housing, and Emergency and Other Relief Services	6.2%	1.03	1.9%	0.68	0.60
6242	Community Food and Housing, and Emergency and Other Relief Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6242	Community Food and Housing, and Emergency and Other Relief Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6243	Vocational Rehabilitation Services (Loc. Gvt.)	D*	D*	D*	D*	D*
6243	Vocational Rehabilitation Services	D*	D*	D*	D*	D*
6244	Child Day Care Services	10.7%	0.73	8.0%	0.94	0.52

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmis/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004 Employment Change	2004 Loc. Quotient LQ	2001-2004 Diff. Shift DS	2004 JkJo Ave. Pay/ US Ave. Pay	2004 Industry Pay/ JkJo Ave. Pay
7111	Performing Arts Companies	0.5%	4.23	8.0%	0.90	1.06
7112	Spectator Sports	11.8%	0.37	15.4%	0.06	0.18
7113	Promoters of Performing Arts, Sports, and Similar Events	3.5%	0.73	-12.4%	0.68	0.70
7115	Independent Artists, Writers, and Performers	13.8%	0.76	-2.3%	0.40	1.58
7121	Museums, Historical Sites, and Similar Institutions (Fed. Gvt.)	D*	D*	D*	D*	D*
7121	Museums, Historical Sites, and Similar Institutions	31.3%	0.37	29.5%	0.60	0.54
7121	Museums, Historical Sites, and Similar Institutions (State Gvt.)	D*	D*	D*	D*	D*
7121	Museums, Historical Sites, and Similar Institutions (Loc. Gvt.)	D*	D*	D*	D*	D*
7131	Amusement Parks and Arcades	31.7%	0.35	35.0%	0.76	0.55
7132	Gambling Industries	-11.4%	0.28	-11.8%	0.38	0.34
7139	Other Amusement and Recreation Industries (Loc. Gvt.)	D*	D*	D*	D*	D*
7139	Other Amusement and Recreation Industries	D*	D*	D*	D*	D*
7211	Traveler Accommodation	1.7%	0.95	4.1%	0.64	0.50
7212	RV (Recreational Vehicle) Parks and Recreational Camps	8.5%	1.74	8.3%	0.99	0.60
7221	Full-Service Restaurants	3.7%	1.17	-4.5%	0.94	0.45
7222	Limited-Service Eating Places	9.7%	1.19	2.7%	0.96	0.38
7223	Special Food Services	131.7%	0.52	126.9%	0.56	0.33
7224	Drinking Places (Alcoholic Beverages)	-13.0%	1.00	-6.1%	0.98	0.39
8111	Automotive Repair and Maintenance	8.3%	1.21	9.9%	0.89	0.85
8112	Electronic and Precision Equipment Repair and Maintenance	-52.0%	0.26	-46.6%	0.51	0.79
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	5.9%	0.43	6.7%	0.70	0.96
8114	Personal and Household Goods Repair and Maintenance	-30.9%	0.83	-23.6%	0.76	0.73
8121	Personal Care Services	9.8%	0.64	-1.1%	0.79	0.47
8122	Death Care Services	-17.4%	0.64	-14.7%	0.95	0.97
8123	Dyeing and Laundry Services	-5.2%	1.10	2.1%	1.07	0.77
8129	Other Personal Services	-54.9%	0.60	-51.4%	0.73	0.53
8131	Religious Organizations	8.5%	7.01	-1.5%	0.79	0.58
8132	Grantmaking and Giving Services	1.1%	0.32	5.9%	0.70	0.98
8133	Social Advocacy Organizations	28.1%	1.21	21.7%	0.64	0.65
8134	Civic and Social Organizations	27.6%	1.39	27.5%	0.67	0.34
8139	Business, Professional, Labor, Political, and Similar Organizations	-6.9%	0.33	-7.8%	0.71	0.97
8141	Private Households	66.3%	0.70	50.4%	0.80	0.42

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/blmisi/CEP>

4-Digit Industries in Jackson and Josephine Counties, 2004

NAICS4	Industry (4-Digit Definition)	2001-2004 Employment Change	2004 Loc. Quotient LQ	2001-2004 Diff. Shift DS	2004 JKJo Ave. Pay/ US Ave. Pay	2004 Industry Pay/ JKJo Ave. Pay
9211	Executive, Legislative, and Other General Government Support (Loc. Gvt.)	1.4%	1.38	0.3%	1.07	1.34
9211	Executive, Legislative, and Other General Government Support (Fed. Gvt.)	-32.8%	0.13	-18.5%	1.09	2.18
9211	Executive, Legislative, and Other General Government Support (State Gvt.)	D*	D*	D*	D*	D*
9221	Justice, Public Order, and Safety Activities (Loc. Gvt.)	12.4%	0.20	7.1%	1.04	1.80
9221	Justice, Public Order, and Safety Activities (Fed. Gvt.)	D*	D*	D*	D*	D*
9221	Justice, Public Order, and Safety Activities (State Gvt.)	-5.6%	0.59	-4.7%	0.94	1.39
9231	Administration of Human Resource Programs (Fed. Gvt.)	D*	D*	D*	D*	D*
9231	Administration of Human Resource Programs (State Gvt.)	-35.4%	0.36	-32.0%	0.86	1.24
9231	Administration of Human Resource Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9241	Administration of Environmental Quality Programs (Fed. Gvt.)	-2.9%	3.55	-4.0%	0.92	1.82
9241	Administration of Environmental Quality Programs (State Gvt.)	-18.2%	1.17	-14.2%	0.86	1.23
9241	Administration of Environmental Quality Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9251	Administration of Housing Programs, Urban Planning, and Community Development (Loc. Gvt.)	D*	D*	D*	D*	D*
9251	Administration of Housing Programs, Urban Planning, and Community Development (State Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (Loc. Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (Fed. Gvt.)	D*	D*	D*	D*	D*
9261	Administration of Economic Programs (State Gvt.)	D*	D*	D*	D*	D*
9281	National Security and International Affairs (State Gvt.)	D*	D*	D*	D*	D*
9999	Unclassified	-21.7%	0.11	-15.6%	0.73	0.92

* Confidentiality restrictions do not permit disclosure of industry data.

Source: Oregon Employment Department
<http://www.qualityinfo.org/olmis/CEP>

Appendix D

Non-Employer Statistics for
The United States and
Jackson County, 2001

Source:
U.S. Census Bureau
<http://www.census.gov/epcd/nonemployer/>

Accessed 6/2006

Non-Employer Statistics, 2001
Jackson County and United States

NAICS		Jackson County	United States	Total Employment		JK/US Ratio of %
				Jackson %	US %	
	Total QCEW Employment*	74,107	342,021,512			
	Non-Employer Total	13,256	16,979,498	15.2%	4.7%	3.2
	Businesses With and Without Employee Totals	87,363	359,001,010			
115	Support Activities for Forestry	127	84,800	0.15%	0.02%	6.2
311	Food Manufacturing	17	19,127	0.1%	0.1%	1.1
321	Wood Product Manufacturing	55	27,912	0.4%	0.2%	2.5
339	Miscellaneous Manufacturing	121	15,983	0.9%	0.1%	9.7
4541	Electronic Shopping and Mail-Order Houses	73	50,276	0.6%	0.3%	1.9
5121	Motion Picture and Video Industries	35	41,202	0.3%	0.2%	1.1
623	Nursing and Residential Care Facilities	53	43,585	0.4%	0.3%	1.6
711	Performing Arts, Spectator Sports and Related Industries	579	20,535	4.4%	0.1%	36.1
7115	Independent Artists, Writers, and Performers	488	525,921	3.7%	3.1%	1.2
7211	Traveler Accommodation	48	33,391	0.4%	0.2%	1.8
7212	RV Parks and Recreational Camps	11	6,873	0.1%	0.0%	2.1

* *Businesses with Employees*

Source: Census Bureau at: <http://www.census.gov/epcd/nonemployer/>

Appendix E

National Employment Projections 2004-2014

Source:

U.S. Bureau of Labor Statistics
<http://www.bls.gov/emp/empinddetail.htm>

Accessed 6/2006

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg.	% Change
		1994-2004	2004-2014	2004-2014	2004-2014
	11 Agriculture, forestry, fishing, and hunting	-3	-1.1	0.989	-10.5%
	111 Crop production	-3.5	-1.8	0.982	-16.6%
	112 Animal production	-3.3	-0.8	0.992	-7.7%
1131	1132 Forestry	0.9	-2.1	0.979	-19.1%
	1133 Logging	-1.7	-1	0.99	-9.6%
	114 Fishing, hunting and trapping	-3.6	-2	0.98	-18.3%
	115 Support activities for agriculture and forestry	2.7	0.9	1.009	9.4%
	NA Nonagriculture wage and salary	1.4	1.3	1.013	13.8%
	21 Mining	-1	-0.9	0.991	-8.6%
	211 Oil and gas extraction	-2.7	-1.4	0.986	-13.2%
	212 Mining (except oil and gas)	-2.1	-1.4	0.986	-13.2%
	2121 Coal mining	-3.6	-2.6	0.974	-23.2%
	2122 Metal ore mining	-5.1	-3.4	0.966	-29.2%
	2123 Nonmetallic mineral mining and quarrying	0.2	-0.2	0.998	-2.0%
	213 Support activities for mining	2	-0.2	0.998	-2.0%
	22 Utilities	-1.9	-0.1	0.999	-1.0%
	2211 Electric power generation, transmission and	-2	-0.3	0.997	-3.0%
	2212 Natural gas distribution	-2.8	-0.5	0.995	-4.9%
	2213 Water, sewage and other systems	2.3	1.9	1.019	20.7%
	23 Construction	3.2	1.1	1.011	11.6%
31-33	Manufacturing	-1.7	-0.6	0.994	-5.8%
	311 Food manufacturing	-0.3	0.4	1.004	4.1%
	3111 Animal food manufacturing	-1	-0.5	0.995	-4.9%
	3112 Grain and oilseed milling	-1.4	-0.7	0.993	-6.8%
	3113 Sugar and confectionery product manufacturing	-1.7	-0.5	0.995	-4.9%
	3114 Fruit and vegetable preserving and specialty food manufacturing	-1.7	-0.1	0.999	-1.0%
	3115 Dairy product manufacturing	-0.4	-1.1	0.989	-10.5%
	3116 Animal slaughtering and processing	1	1.2	1.012	12.7%
	3117 Seafood product preparation and packaging	-2.4	-0.4	0.996	-3.9%
	3118 Bakeries and tortilla manufacturing	-0.4	0.4	1.004	4.1%
	3119 Other food manufacturing	0.3	0.6	1.006	6.2%
	312 Beverage and tobacco product manufacturing	-0.5	-0.7	0.993	-6.8%
	3121 Beverage manufacturing	0	-0.1	0.999	-1.0%
	3122 Tobacco manufacturing	-2.9	-5.6	0.944	-43.8%
	313 Textile mills	-6.7	-6.6	0.934	-49.5%
	3131 Fiber, yarn, and thread mills	-5.5	-7.5	0.925	-54.1%
	3132 Fabric mills	-7.5	-6.4	0.936	-48.4%
	3133 Textile and fabric finishing and fabric coating mills	-6.2	-6.5	0.935	-48.9%
	314 Textile product mills	-2.1	-2	0.98	-18.3%
	3141 Textile furnishings mills	-2.3	-1.3	0.987	-12.3%
	3149 Other textile product mills	-1.7	-3.1	0.969	-27.0%
	315 Apparel manufacturing	-10.4	-8.7	0.913	-59.8%
	3151 Apparel knitting mills	-9	-7.2	0.928	-52.6%
	3152 Cut and sew apparel manufacturing	-11	-9.6	0.904	-63.6%
	3159 Apparel accessories and other apparel manufacturing	-6.3	-4.2	0.958	-34.9%

Source: Bureau of Labor Statistics, 2005

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg.	% Change
		1994-2004	2004-2014	2004-2014	2004-2014
	316 Leather and allied product manufacturing	-9.3	-2.7	0.973	-23.9%
	3161 Leather and hide tanning and finishing	-7.3	-1.7	0.983	-15.8%
	3162 Footwear manufacturing	-11.3	-4.3	0.957	-35.6%
	3169 Other leather and allied product manufacturing	-7	-1.6	0.984	-14.9%
	321 Wood product manufacturing	-0.2	0.7	1.007	7.2%
	3211 Sawmills and wood preservation	-1.7	-2	0.98	-18.3%
	3212 Veneer, plywood, and engineered wood product manufacturing	1.4	0.7	1.007	7.2%
	3219 Other wood product manufacturing	-0.2	1.6	1.016	17.2%
	322 Paper manufacturing	-2.4	-0.2	0.998	-2.0%
	3221 Pulp, paper, and paperboard mills	-4.2	-1.7	0.983	-15.8%
	3222 Converted paper product manufacturing	-1.6	0.3	1.003	3.0%
	323 Printing and related support activities	-1.9	-1	0.99	-9.6%
	324 Petroleum and coal products manufacturing	-2.4	-1.5	0.985	-14.0%
	325 Chemical manufacturing	-1.2	-0.1	0.999	-1.0%
	3251 Basic chemical manufacturing	-4	-3.4	0.966	-29.2%
	3252 Resin, synthetic rubber, and artificial synthetic fibers and filaments manufa	-2.6	-2.4	0.976	-21.6%
	3253 Pesticide, fertilizer, and other agricultural chemical manufacturing	-2.1	-1.9	0.981	-17.5%
	3254 Pharmaceutical and medicine manufacturing	2.4	2.3	1.023	25.5%
	3255 Paint, coating, and adhesive manufacturing	-1.6	-0.7	0.993	-6.8%
	3256 Soap, cleaning compound, and toilet preparation manufacturing	-1	0.5	1.005	5.1%
	3259 Other chemical product and preparation manufacturing	-2.6	-1	0.99	-9.6%
	326 Plastics and rubber products manufacturing	-1	-1	0.99	-9.6%
	3261 Plastics product manufacturing	-0.8	-0.5	0.995	-4.9%
	3262 Rubber product manufacturing	-1.7	-2.6	0.974	-23.2%
	327 Nonmetallic mineral product manufacturing	0	0.4	1.004	4.1%
	3271 Clay product and refractory manufacturing	-2.3	0.6	1.006	6.2%
	3272 Glass and glass product manufacturing	-2.5	-1.4	0.986	-13.2%
	3273 Cement and concrete product manufacturing	2.2	1	1.01	10.5%
	3274 Lime and gypsum product manufacturing	2.6	1.8	1.018	19.5%
	3279 Other nonmetallic mineral product manufacturing	-0.2	0.3	1.003	3.0%
	331 Primary metal manufacturing	-3	-2	0.98	-18.3%
	3311 Iron and steel mills and ferroalloy manufacturing	-4.7	-1.7	0.983	-15.8%
	3312 Steel product manufacturing from purchased steel	-1.1	-1	0.99	-9.6%
	3313 Alumina and aluminum production and processing	-2.9	-2.5	0.975	-22.4%
	3314 Nonferrous metal (except aluminum) production and processing	-3.7	-1.7	0.983	-15.8%
	3315 Foundries	-2.2	-2.5	0.975	-22.4%
	332 Fabricated metal product manufacturing	-0.4	-0.2	0.998	-2.0%
	3321 Forging and stamping	-1.8	-0.9	0.991	-8.6%
	3322 Cutlery and handtool manufacturing	-2.7	-0.7	0.993	-6.8%
	3323 Architectural and structural metals manufacturing	1.3	0.2	1.002	2.0%

Source: Bureau of Labor Statistics, 2005

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg.	% Change
		1994-2004	2004-2014	2004-2014	2004-2014
3324	Boiler, tank, and shipping container manufacturing	-1.4	-0.8	0.992	-7.7%
3325	Hardware manufacturing	-3.6	-1	0.99	-9.6%
3326	Spring and wire product manufacturing	-2.6	-2.1	0.979	-19.1%
3327	Machine shops; turned product; and screw, nut, and bolt manufacturing	0.4	0.4	1.004	4.1%
3328	Coating, engraving, heat treating, and allied activities	-0.4	0.5	1.005	5.1%
3329	Other fabricated metal product manufacturing	-1.1	-0.8	0.992	-7.7%
333	Machinery manufacturing	-1.9	-1.4	0.986	-13.2%
3331	Agriculture, construction, and mining machinery manufacturing	-0.8	-0.3	0.997	-3.0%
3332	Industrial machinery manufacturing	-2.2	-1.3	0.987	-12.3%
3333	Commercial and service industry machinery	-2.1	-3	0.97	-26.3%
3334	Ventilation, heating, air-conditioning, and commercial refrigeration equipment	-1.3	-0.9	0.991	-8.6%
3335	Metalworking machinery manufacturing	-2.4	-1.8	0.982	-16.6%
3336	Engine, turbine, and power transmission equipment manufacturing	-2.1	-1.7	0.983	-15.8%
3339	Other general purpose machinery manufacturing	-2.2	-1.4	0.986	-13.2%
334	Computer and electronic product manufacturing	-2.2	-0.7	0.993	-6.8%
3341	Computer and peripheral equipment manufacturing	-3.3	-1.9	0.981	-17.5%
3342	Communications equipment manufacturing	-3.6	-1.1	0.989	-10.5%
3343	Audio and video equipment manufacturing	-5.7	-2.4	0.976	-21.6%
3344	Semiconductor and other electronic component manufacturing	-1.7	-1.2	0.988	-11.4%
3345	Navigational, measuring, electromedical, and control instruments manufacturing	-1.3	0.4	1.004	4.1%
3346	Manufacturing and reproducing magnetic and optical media	-0.4	0	1	0.0%
335	Electrical equipment, appliance, and component manufacturing	-2.7	-2.1	0.979	-19.1%
3351	Electric lighting equipment manufacturing	-1.8	-1.7	0.983	-15.8%
3352	Household appliance manufacturing	-2.2	-3.1	0.969	-27.0%
3353	Electrical equipment manufacturing	-3.5	-2.7	0.973	-23.9%
3359	Other electrical equipment and component	-2.6	-1	0.99	-9.6%
336	Transportation equipment manufacturing	-0.9	0.5	1.005	5.1%
3361	Motor vehicle manufacturing	-0.9	0.2	1.002	2.0%
3362	Motor vehicle body and trailer manufacturing	0.8	0.8	1.008	8.3%
3363	Motor vehicle parts manufacturing	-0.7	0.6	1.006	6.2%
3364	Aerospace product and parts manufacturing	-2.2	0.8	1.008	8.3%
3365	Railroad rolling stock manufacturing	-2.7	-2.6	0.974	-23.2%
3366	Ship and boat building	0.2	-0.2	0.998	-2.0%
3369	Other transportation equipment manufacturing	0.1	1.5	1.015	16.1%
337	Furniture and related product manufacturing	-0.5	-0.2	0.998	-2.0%
3371	Household and institutional furniture and kitchen cabinet manufacturing	-0.4	-0.2	0.998	-2.0%
3372	Office furniture (including fixtures) manufacturing	-1.3	0.1	1.001	1.0%
3379	Other furniture related product manufacturing	1	-0.4	0.996	-3.9%
339	Miscellaneous manufacturing	-0.8	-0.3	0.997	-3.0%

Source: Bureau of Labor Statistics, 2005

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg.	% Change
		1994-2004	2004-2014	2004-2014	2004-2014
	3391 Medical equipment and supplies manufacturing	0.3	0.3	1.003	3.0%
	3399 Other miscellaneous manufacturing	-1.7	-0.8	0.992	-7.7%
	42 Wholesale trade	0.8	0.8	1.008	8.3%
	44,45 Retail trade	1.1	1	1.01	10.5%
48 492 493	Transportation and warehousing	1.4	1.1	1.011	11.6%
	481 Air transportation	0.1	0.8	1.008	8.3%
	482 Rail transportation	-0.5	-0.4	0.996	-3.9%
	483 Water transportation	0.9	0.2	1.002	2.0%
	484 Truck transportation	1.1	0.9	1.009	9.4%
	485 Transit and ground passenger transportation	2	2.1	1.021	23.1%
	486 Pipeline transportation	-3.8	-0.5	0.995	-4.9%
	487 Scenic and sightseeing transportation	2.3	2.8	1.028	31.8%
	488 Support activities for transportation	2.8	1.1	1.011	11.6%
	492 Couriers and messengers	1.9	0.7	1.007	7.2%
	493 Warehousing and storage	2.6	2.2	1.022	24.3%
	51 Information	1.4	1.1	1.011	11.6%
	511 Publishing industries	0.2	2.1	1.021	23.1%
	5111 Newspaper, periodical, book, and directory publishers	-1.2	0.6	1.006	6.2%
	5112 Software publishers	5.7	5.3	1.053	67.6%
	512 Motion picture, video, and sound recording industries	3.4	1.5	1.015	16.1%
	515 Broadcasting (except internet)	1.2	1	1.01	10.5%
	517 Telecommunications	0.8	-0.7	0.993	-6.8%
516 518 519	Internet and other information services	4	2.5	1.025	28.0%
	52-53 Financial activities	1.6	1	1.01	10.5%
	521 522 Monetary authorities, credit intermediation, and related activities	1.8	0.5	1.005	5.1%
	523 Securities, commodity contracts, and other financial investments and related	3.3	1.5	1.015	16.1%
	5241 Insurance carriers	-0.1	0.3	1.003	3.0%
	5242 Agencies, brokerages, and other insurance related activities	2	1.8	1.018	19.5%
	525 Funds, trusts, and other financial vehicles	2.8	0.9	1.009	9.4%
	531 Real estate	1.8	1.7	1.017	18.4%
	5321 Automotive equipment rental and leasing	2	1.5	1.015	16.1%
5322 5323	Consumer goods rental and general rental centers	1.7	1	1.01	10.5%
	5324 Commercial and industrial machinery and equipment rental and leasing	2.8	2.1	1.021	23.1%
	533 Lessors of nonfinancial intangible assets (except copyrighted works)	3.3	0.9	1.009	9.4%
	54 Professional, scientific, and technical services	3.4	2.5	1.025	28.0%
	5411 Legal services	1.9	1.4	1.014	14.9%
	5412 Accounting, tax preparation, bookkeeping, and payroll services	2	3	1.03	34.4%
	5413 Architectural, engineering, and related services	2.8	1.5	1.015	16.1%
	5414 Specialized design services	3.1	2.5	1.025	28.0%
	5415 Computer systems design and related services	8	3.4	1.034	39.7%
	5416 Management, scientific, and technical consulting services	6.5	4.8	1.048	59.8%

Source: Bureau of Labor Statistics, 2005

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg.	% Change
		1994-2004	2004-2014	2004-2014	2004-2014
	5417 Scientific research and development services	1.4	1.1	1.011	11.6%
	5418 Advertising and related services	1.3	2	1.02	21.9%
	5419 Other professional, scientific, and technical services	3.2	2.5	1.025	28.0%
	55 Management of companies and enterprises	0.3	1	1.01	10.5%
	56 Administrative and support and waste management and remediation services	3.4	2.7	1.027	30.5%
	561 Administrative and support services	3.5	2.8	1.028	31.8%
	5611 Office administrative services	4.4	3.5	1.035	41.1%
	5612 Facilities support services	4.8	3.9	1.039	46.6%
	5613 Employment services	4.5	3.8	1.038	45.2%
	5614 Business support services	2.8	1	1.01	10.5%
	5615 Travel arrangement and reservation services	-1.8	0.3	1.003	3.0%
	5616 Investigation and security services	2.7	2.1	1.021	23.1%
	5617 Services to buildings and dwellings	2.9	1.9	1.019	20.7%
	5619 Other support services	3	0	1	0.0%
	562 Waste management and remediation services	2.2	2.4	1.024	26.8%
	5621 Waste collection	3.1	2	1.02	21.9%
	5622 5629 Waste treatment and disposal and waste management services	1.8	2.6	1.026	29.3%
	61 Education services	3.9	2.9	1.029	33.1%
	6111 Elementary and secondary schools	4.3	2.4	1.024	26.8%
	6112 6113 Junior colleges, colleges, universities, and professional schools	3.1	3	1.03	34.4%
6114 6115 6116 6117	Other educational services	5.6	3.2	1.032	37.0%
	62 Health care and social assistance	2.7	2.7	1.027	30.5%
	621 Ambulatory health care services	3.3	3.6	1.036	42.4%
6211 6212 6213	Offices of health practitioners	3.2	3.2	1.032	37.0%
	6216 Home health care services	3.4	5.4	1.054	69.2%
621 6215 6219	Outpatient, laboratory, and other ambulatory care	3.5	3.3	1.033	38.4%
	622 Hospitals, private	1.4	1.5	1.015	16.1%
	623 Nursing and residential care facilities	2.4	2.5	1.025	28.0%
	6231 Nursing care facilities	1.4	1.1	1.011	11.6%
6232 6233 6239	Residential care facilities	3.8	4	1.04	48.0%
	624 Social assistance	4.4	3	1.03	34.4%
6241 6242 6243	Individual, family, community, and vocational rehabilitation services	4.6	2.9	1.029	33.1%
	6244 Child day care services	4.2	3.3	1.033	38.4%
	71 Arts, entertainment, and recreation	2.9	2.3	1.023	25.5%
	711 Performing arts, spectator sports, and related	2.1	2	1.02	21.9%
	7111 Performing arts companies	0.8	1.6	1.016	17.2%
	7112 Spectator sports	2.3	2.3	1.023	25.5%
7113 7114	Promoters of events, and agents and managers	3	1	1.01	10.5%
	7115 Independent artists, writers, and performers	4.2	3.8	1.038	45.2%
	712 Museums, historical sites, and similar institutions	3.7	1.8	1.018	19.5%
	713 Amusement, gambling, and recreation industries	3.1	2.4	1.024	26.8%
	72 Accommodation and food services	2	1.5	1.015	16.1%
	721 Accommodation	1.1	1.6	1.016	17.2%

Source: Bureau of Labor Statistics, 2005

**BLS Projections
Employment Growth
for U.S. Industries
2004-2014**

2002 NAICS	Industry	Average Annual Rate of Change		1+ Ave. Ann. Rate of Chg. 2004-2014	% Change 2004-2014
		1994-2004	2004-2014		
	722 Food services and drinking places	2.2	1.5	1.015	16.1%
	81 Other services	1.8	1.1	1.011	11.6%
	811 Repair and maintenance	1.8	1.4	1.014	14.9%
	8111 Automotive repair and maintenance	2.4	1.8	1.018	19.5%
	8112 Electronic and precision equipment repair and	0.1	-1	0.99	-9.6%
	8113 Commercial and industrial machinery and equipment (except automotive and elec	0.9	0.8	1.008	8.3%
	8114 Personal and household goods repair and maintenance	0	0.1	1.001	1.0%
	812 Personal and laundry services	1.3	1.5	1.015	16.1%
	8121 Personal care services	2.5	1.8	1.018	19.5%
	8122 Death care services	1.4	1.3	1.013	13.8%
	8123 Drycleaning and laundry services	-0.4	0.8	1.008	8.3%
	8129 Other personal services	1.5	1.8	1.018	19.5%
	813 Religious, grantmaking, civic, professional, and similar organizations	2.5	1.2	1.012	12.7%
	8131 Religious organizations	3.2	1.1	1.011	11.6%
	8132 8133 Grantmaking and giving services and social advocacy organizations	1.6	1.7	1.017	18.4%
	8134 8139 Civic, social, professional, and similar organizations	1.6	1.3	1.013	13.8%

Source: Bureau of Labor Statistics, 2005

Appendix F

Employment Projections by Industry Oregon and Jackson and Josephine Counties

Source:

Employment Projections By Industry, 2004 - 2014
Oregon and Regional Summary

Oregon Employment Department, July 2005
<http://www.qualityinfo.org/pubs/indprj/industry.pdf>

Accessed 6/2006

Oregon:		Industry Employment Forecast, 2004-2014		
	2004	2014	Change	% Change
Total nonfarm employment	1,594,300	1,833,900	239,600	15.0%
Total private	1,324,500	1,540,000	215,500	16.3%
Natural resources and mining	9,600	9,400	-200	-2.1%
Logging	7,800	7,300	-500	-6.4%
Construction	82,300	97,200	14,900	18.1%
Construction of buildings	20,000	23,800	3,800	19.0%
Residential building construction	11,800	14,000	2,200	18.6%
Nonresidential building construction	8,200	9,800	1,600	19.5%
Heavy and civil engineering construction	10,000	11,100	1,100	11.0%
Specialty trade contractors	52,300	62,300	10,000	19.1%
Building foundation and exterior contractors	11,000	13,000	2,000	18.2%
Building equipment contractors	21,100	25,100	4,000	19.0%
Building finishing contractors	12,700	15,200	2,500	19.7%
Other specialty trade contractors	7,500	9,000	1,500	20.0%
Manufacturing	199,500	205,500	6,000	3.0%
Durable goods	147,600	154,300	6,700	4.5%
Wood product manufacturing	32,000	30,200	-1,800	-5.6%
Sawmills and wood preservation	8,900	8,800	-100	-1.1%
Plywood and engineered wood product mfg.	11,100	10,200	-900	-8.1%
Other wood product manufacturing	12,000	11,200	-800	-6.7%
Primary metal manufacturing	7,800	7,500	-300	-3.8%
Fabricated metal product manufacturing	15,700	17,800	2,100	13.4%
Machinery manufacturing	11,700	12,500	800	6.8%
Computer and electronic product manufacturing	41,300	43,800	2,500	6.1%
Computer and peripheral equipment mfg.	3,600	4,000	400	11.1%
Semiconductor and electronic component mfg.	30,400	32,500	2,100	6.9%
Electronic instrument manufacturing	5,500	5,500	0	0.0%
Transportation equipment manufacturing	16,700	19,000	2,300	13.8%
Nondurable goods	51,900	51,200	-700	-1.3%
Food manufacturing	21,800	20,900	-900	-4.1%
Fruit and vegetable preserving and specialty	8,800	7,800	-1,000	-11.4%
Paper manufacturing	6,600	5,800	-800	-12.1%
Printing and related support activities	7,200	7,100	-100	-1.4%
Plastics and rubber products manufacturing	6,400	7,100	700	10.9%
Trade, transportation, and utilities	320,400	366,400	46,000	14.4%
Wholesale trade	75,400	85,300	9,900	13.1%
Merchant wholesalers, durable goods	34,200	38,400	4,200	12.3%
Merchant wholesalers, nondurable goods	30,400	34,900	4,500	14.8%
Electronic markets and agents and brokers	10,800	12,000	1,200	11.1%
Retail trade	188,200	215,400	27,200	14.5%
Motor vehicle and parts dealers	26,800	31,300	4,500	16.8%
Building material and garden supply stores	14,500	17,500	3,000	20.7%
Food and beverage stores	36,700	40,900	4,200	11.4%
Gasoline stations	11,700	13,100	1,400	12.0%
Clothing and clothing accessories stores	15,300	16,800	1,500	9.8%
Sporting goods, hobby, book and music stores	9,900	11,100	1,200	12.1%
General merchandise stores	36,000	41,700	5,700	15.8%
Miscellaneous store retailers	11,300	13,000	1,700	15.0%
Nonstore retailers	6,500	6,900	400	6.2%
Transportation, warehousing, and utilities	56,800	65,700	8,900	15.7%
Utilities	5,300	5,400	100	1.9%

Oregon: Industry Employment Forecast, 2004-2014 (Continued)

	2004	2014	Change	% Change
Transportation and warehousing	51,500	60,300	8,800	17.1%
Air transportation	4,200	4,600	400	9.5%
Truck transportation	19,000	21,600	2,600	13.7%
Couriers and messengers	6,500	8,000	1,500	23.1%
Warehousing and storage	7,200	9,900	2,700	37.5%
Information	33,000	38,200	5,200	15.8%
Publishing industries, except internet	13,200	15,700	2,500	18.9%
Newspaper, book, and directory publishers	6,600	7,600	1,000	15.2%
Software publishers	6,600	8,100	1,500	22.7%
Telecommunications	8,900	9,700	800	9.0%
Financial activities	96,700	108,100	11,400	11.8%
Finance and insurance	59,200	67,200	8,000	13.5%
Credit intermediation and related activities	29,000	32,800	3,800	13.1%
Insurance carriers and related activities	25,500	28,500	3,000	11.8%
Real estate and rental and leasing	37,500	40,900	3,400	9.1%
Real estate	29,700	31,500	1,800	6.1%
Professional and business services	176,800	225,700	48,900	27.7%
Professional and technical services	62,600	78,300	15,700	25.1%
Legal services	11,800	13,600	1,800	15.3%
Architectural and engineering services	12,200	15,700	3,500	28.7%
Computer systems design and related services	8,300	10,800	2,500	30.1%
Management of companies and enterprises	26,500	29,500	3,000	11.3%
Administrative and waste services	87,700	117,900	30,200	34.4%
Administrative and support services	82,600	112,500	29,900	36.2%
Employment services	37,300	52,300	15,000	40.2%
Business support services	13,400	19,400	6,000	44.8%
Services to buildings and dwellings	18,800	24,800	6,000	31.9%
Educational and health services	193,000	241,400	48,400	25.1%
Educational services	26,100	32,300	6,200	23.8%
Health care and social assistance	166,900	209,100	42,200	25.3%
Ambulatory health care services	58,000	73,900	15,900	27.4%
Hospitals	47,500	58,500	11,000	23.2%
Nursing and residential care facilities	36,100	46,100	10,000	27.7%
Social assistance	25,300	30,600	5,300	20.9%
Leisure and hospitality	155,800	184,400	28,600	18.4%
Arts, entertainment, and recreation	20,700	23,900	3,200	15.5%
Amusement, gambling, and recreation	15,300	17,900	2,600	17.0%
Accommodation and food services	135,100	160,500	25,400	18.8%
Accommodation	21,400	24,800	3,400	15.9%
Food services and drinking places	113,700	135,700	22,000	19.3%
Full-service restaurants	54,800	67,300	12,500	22.8%
Limited-service eating places	47,800	55,800	8,000	16.7%
Other services	57,400	63,700	6,300	11.0%
Repair and maintenance	16,700	19,100	2,400	14.4%
Personal and laundry services	12,100	13,300	1,200	9.9%
Membership associations and organizations	28,600	31,300	2,700	9.4%
Religious organizations	16,500	18,100	1,600	9.7%
Government	269,800	293,900	24,100	8.9%
Federal government	30,200	29,200	-1,000	-3.3%
State government	62,100	65,100	3,000	4.8%
State education	26,700	28,200	1,500	5.6%
Local government	177,500	199,600	22,100	12.5%
Indian tribal	7,700	10,700	3,000	39.0%
Local education	93,900	104,000	10,100	10.8%

Region 8:**Industry Employment Forecast, 2004-2014
Jackson and Josephine Counties**

	2004	2014	Change	% Change
Total nonfarm employment	101,620	121,440	19,820	19.5%
Total private	86,510	104,840	18,330	21.2%
Natural resources and mining	970	990	20	2.1%
Construction	5,940	7,270	1,330	22.4%
Manufacturing	10,010	10,870	860	8.6%
Durable goods	7,640	8,160	520	6.8%
Wood product manufacturing	3,030	2,940	-90	-3.0%
Trade, transportation, and utilities	23,220	27,520	4,300	18.5%
Wholesale trade	3,130	3,590	460	14.7%
Retail trade	17,010	20,270	3,260	19.2%
Transportation, warehousing, and utilities	3,080	3,660	580	18.8%
Information	2,170	2,570	400	18.4%
Financial activities	5,480	6,340	860	15.7%
Professional and business services	9,100	11,740	2,640	29.0%
Educational and health services	14,560	19,320	4,760	32.7%
Health care and social assistance	13,870	18,400	4,530	32.7%
Health care	12,400	16,500	4,100	33.1%
Leisure and hospitality	11,410	14,030	2,620	23.0%
Accommodation and food services	9,780	12,120	2,340	23.9%
Other services	3,650	4,190	540	14.8%
Government	15,110	16,600	1,490	9.9%
Federal government	2,040	2,050	10	0.5%
State government	2,780	3,010	230	8.3%
State education	1,480	1,580	100	6.8%
Local government	10,290	11,540	1,250	12.1%
Local education	6,030	6,650	620	10.3%

Appendix G

EDA Cluster Analysis Team
Southern Oregon University

EDA Cluster Analysis Team Southern Oregon University

Lead Researcher: Rebecca Reid, MS, Adjunct Instructor of Economics

Researcher: Steve Schein, MA, Assistant Professor, School of Business

Project Manager: Hart Wilson, MM, Administrative Faculty, School of Business

Project Conducted with the Assistance of:

Rene Ordonez, PhD, Professor, School of Business

Dan Rubenson, PhD, Professor, Economics

Mark Siders, PhD, Associate Professor, School of Business

Charles Jaeger, PhD, Assistant Professor, School of Business

Donna Lane, PhD, Assistant Professor, School of Business

Dennis Slattery, MBA, Assistant Professor, School of Business

Project Conducted under the Leadership of:

Earl Potter, III, PhD, Provost, Southern Oregon University

Sebastian Sanzberro, MS, Interim Dean, School of Business

David Harris, JD, Dean, School of Business

Appendix H

School of Business Cluster Survey



Dear Business Leader:

In southern Oregon, we appreciate the beauty of our region as well as the cultural and economic elements that serve as the backdrop for our daily lives. We would like to better understand our region's rich, diverse, growing economy—and its assets and competitiveness. I am writing to ask for your help in a study of economic activity in Jackson and Josephine counties.

The School of Business at Southern Oregon University has received a grant from the U.S. Economic Development Administration to conduct this study. Our research will be based on interviews with local business leaders, in-depth analysis of economic data, and information gathered directly from Rogue Valley businesses across diverse industries. The enclosed survey is a critical element in this study, and we are counting on your participation to make the results meaningful and useful.

The survey should take about 20 minutes to complete. Your participation is voluntary, and your responses will be treated with complete confidentiality. Neither you nor your company will be identified in any report based on this survey, and all results will be reported in aggregate form only. We ask that you complete the survey by **March 24, 2006**. There are two ways to respond: return the completed survey in the enclosed postage-paid envelope or complete the online version at www.sou.edu/business/cluster-survey.

We would like to provide all recipients of this survey with a copy of the survey findings, an invitation to the Emerging Clusters Business Conference at the School of Business. The last page of the survey gives you the opportunity to provide us with your contact information.

If you have any questions or comments about this survey or the project as a whole, please feel free to contact me.

Thank you for your assistance. Each survey we receive will increase understanding of our economic strengths and challenges, allowing us to better serve the region's needs and to improve the ability of our citizens to sustain its economy.

Sincerely,

A handwritten signature in black ink, appearing to read "Sebastian Sanzberro".

Sebastian Sanzberro, Dean

sanzbers@sou.edu

Rogue Valley Region Business Survey

School of Business

Southern Oregon University

Please complete the following survey and return it in the postage-paid envelope provided by **March 24, 2006**. You may also complete the survey online at: www.sou.edu/business/cluster-survey. Thank you for the investment of your valuable time in this important project. *Note: Throughout the survey “Rogue Valley region” refers to all of Jackson and Josephine counties.*

Business Environment

1. Please indicate how strongly you *agree or disagree* with the following statements:

Business Conditions	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The overall cost of doing business in the Rogue Valley region is low (costs of land, labor, utilities, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The network of highways and roads in the Rogue Valley region meets the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air transportation is sufficient to support my company's growth.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The telecommunications infrastructure in the Rogue Valley region meets the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The supply of commercial or industrial land in the Rogue Valley region is adequate to meet my company's need for expansion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
State and regional environmental and/or safety regulations constrain the growth of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cost of liability and workers' compensation insurance is low.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to financial capital, such as business loans or venture capital, is limited in the Rogue Valley region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land use and zoning laws make the physical expansion of my company difficult.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Companies in my industry have specialized infrastructure needs (in areas such as transportation, communications, waste disposal, and utilities).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Connections with Rogue Valley Region Businesses	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The majority of the suppliers of my company's materials, machinery, and services are available within the region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company's competitors are located primarily in the Rogue Valley region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most of my company's customers are located in the Rogue Valley region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company's ability to develop new products and services is improved by its location in the Rogue Valley region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company participates in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company benefits from sharing technology and information with other companies in the region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Employment, Education, and Training	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The available pool of skilled workers in the Rogue Valley region is sufficient to meet the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The available pool of professional employees in the Rogue Valley region is sufficient to meet the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The available pool of unskilled/seasonal workers in the Rogue Valley region is sufficient to meet the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Southern Oregon University (SOU) provides companies in the Rogue Valley region with well-trained employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rogue Community College (RCC) provides companies in the Rogue Valley region with well-trained employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Institute of Technology (OIT) provides companies in the Rogue Valley region with well-trained employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The quality of K-12 education improves my company's ability to recruit and retain employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training in computer and Internet technology that is provided in the Rogue Valley region meets the needs of my company.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The cost of living in the Rogue Valley region hinders my company's ability to recruit and retain employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The overall quality of life in the Rogue Valley region (e.g., climate, cultural and recreational opportunities) supports my company's ability to recruit and retain employees.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My company draws from the same specialized labor pool as other businesses in the region.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internet and Communications Technology	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Internet technology is critical to my company's competitive advantage.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps my company build stronger customer relationships.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps extend my company's reach to new, more distant customer markets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps my company build stronger supplier relationships.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps extend my company's reach to new, more distant suppliers .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps my company build stronger distribution relationships.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The Internet helps extend my company's reach to new, more distant distributors .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Please rate the *importance* of the following factors to your *company's success*:

Factors Affecting My Company's Success	Not at all Important	Somewhat Important	Important	Very Important	Critically Important
Proximity of raw materials, components, supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity to customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity and access to distribution networks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity and access to air transportation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Access to specialized services, labor, or infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of commercial or industrial land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Factors Affecting My Company's Success	Not at all Important	Somewhat Important	Important	Very Important	Critically Important
Availability of low cost of labor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low liability and workmen's compensation insurance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of unskilled or seasonal workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of skilled workers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of professional employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal or informal networks with regional competitors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal or informal networks with regional suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Formal or informal networks with regional customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Presence of industry and trade associations or consortia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of telecommunications infrastructure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of fast and reliable Internet connections	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of affordable housing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proximity to venture capital firms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low business tax burden (tax rate and incentives)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of business incubators	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Please describe your company's main product or service:

4. Does your company participate in a formally or informally organized group of firms or organizations to improve business operations, aid innovation, reach new markets, or solve business problems?

☐ Yes ☐ No

If yes, how would you characterize the kinds of companies and organizations involved?

For example, a regional food and wine group might include local farms, dairies, wineries, Visitors and Convention Bureaus, the Rogue Valley Wine Board, Southern Oregon University, and the Oregon Wine and Farm Tour.

5. What are *three* major advantages and *three* major disadvantages to locating your company in the Rogue Valley region?

Advantages	Disadvantages
1.	1.
2.	2.
3.	3.

6. In the *past three years*, how many times has your company *sought assistance* from the following institutions and organizations for new product/service development, commercialization, distribution, and/or marketing?

Institutions and Organizations	Never	1 to 4 times	5 to 9 times	Over 9 times
Southern Oregon University (SOU)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rogue Community College (RCC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Oregon Institute of Technology (OIT)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Oregon universities or colleges (UO, OSU, PSU, other)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Universities or colleges outside of Oregon: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public or private research institutions (other than universities)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industry and trade associations or consortia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Small Business Development Centers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOREDI (Southern Oregon Economic Development, Inc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other economic development agencies: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local Chambers of Commerce	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

About Your Business

7. Please complete this brief background section.

Keep in mind that the information you supply about yourself and your organization will remain confidential and will be analyzed only in combination with other responses.

My company sells primarily... ✓ <i>Check one only</i>	<input type="checkbox"/> Products <input type="checkbox"/> Services
Most of my customers are located... ✓ <i>Check one only</i>	<input type="checkbox"/> Within the Rogue Valley region <input type="checkbox"/> Outside the Rogue Valley region, but within Oregon <input type="checkbox"/> Outside Oregon, but within the United States <input type="checkbox"/> Outside the United States

<p>Over the <i>past three years</i> my company has...</p> <p>✓ <i>Check all that apply</i></p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <input type="checkbox"/> Relocated from outside the Rogue Valley region <input type="checkbox"/> Expanded physically <input type="checkbox"/> Increased employment <input type="checkbox"/> Invested in new plant and equipment <input type="checkbox"/> Developed new products or services <input type="checkbox"/> Expanded market reach and distribution <input type="checkbox"/> Decreased employment <input type="checkbox"/> Sold a portion of the business </div>
<p>Please estimate your company's average <i>annual revenue growth</i> over the past three years:</p>	<div style="display: flex; flex-wrap: wrap; gap: 10px;"> <div style="display: flex; flex-direction: column; gap: 5px;"> <input type="checkbox"/> < 0% <input type="checkbox"/> 1 to 10% <input type="checkbox"/> 11 to 20% </div> <div style="display: flex; flex-direction: column; gap: 5px;"> <input type="checkbox"/> 21-100% <input type="checkbox"/> Over 100% </div> </div>
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 45%;"> <p>Please list the kinds of positions your company has difficulty filling from the available labor pool in the Rogue Valley region:</p> <p><input type="checkbox"/> No problems recruiting in the Rogue Valley region.</p> </div> <div style="width: 50%;"> <p style="text-align: center;"><u>Kinds of Positions</u></p> <div style="display: flex; flex-direction: column; gap: 20px;"> <div>1.</div> <div>2.</div> <div>3.</div> <div>4.</div> </div> </div> </div>	
<p>Which of the following best describes your business sales relationship?</p> <p>✓ <i>Check one only</i></p>	<div style="display: flex; flex-direction: column; gap: 5px;"> <input type="checkbox"/> Business-to-Consumer/End User <input type="checkbox"/> Business-to-Government <input type="checkbox"/> Business-to-Non Profit Organizations <input type="checkbox"/> Business-to-Business (Wholesaler/Distributor) <input type="checkbox"/> Business-to-Business (Manufacturer) </div>

Sales within the Rogue Valley Region

What percent of your company's total sales/revenues come from customers in the Rogue Valley region?

_____ Percent sales/revenues from the Rogue Valley region

Which Rogue Valley region industries are your customers?

Rogue Valley region customers:

- _____ End User
- _____ Natural Resources/Forestry
- _____ Agriculture
- _____ Construction
- _____ Manufacturing
- _____ Wholesale/Retail Trade
- _____ Information
- _____ Finance/Insurance/Real Estate
- _____ Professional & Business Services
- _____ Education
- _____ Health Services
- _____ Arts/Entertainment/Recreation
- _____ Hospitality (Accommodations, and Eating and Drinking Places)
- _____ Repair and maintenance
- _____ Government (excluding Education)
- _____ Other: _____

✓ *Check all that apply.*

Purchases within the Rogue Valley Region

What percent of your company's total purchases of services, products, and/or raw materials do you buy from suppliers in the Rogue Valley region?

_____ Percent purchases from the Rogue Valley region

Which Rogue Valley region industries are your suppliers?

Rogue Valley region suppliers:

- _____ Natural Resources/Forestry
- _____ Agriculture
- _____ Construction
- _____ Manufacturing
- _____ Wholesale/Retail Trade
- _____ Information
- _____ Finance/Insurance/Real Estate
- _____ Professional & Business Services
- _____ Education
- _____ Health Services
- _____ Arts/Entertainment/Recreation
- _____ Hospitality (Accommodations, and Eating and Drinking Places)
- _____ Repair and maintenance
- _____ Government (excluding Education)
- _____ Other: _____

✓ *Check all that apply.*

Your Company's Future					
How likely is it that your company will implement the following changes in the next three years?	Very unlikely	Unlikely	Neutral	Likely	Very likely
Expand physically	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Invest in new plant and equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Increase employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Develop new products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Expand market reach and distribution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relocate outside the Rogue Valley region	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sell or divest business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Decrease employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Close business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Which best describes your position in your company?</p> <p> <input type="checkbox"/> Owner, President, or CEO <input type="checkbox"/> Senior Executive or Senior Official <input type="checkbox"/> Manager <input type="checkbox"/> Administrative Assistant <input type="checkbox"/> Human Resources Professional <input type="checkbox"/> Other: _____ </p>					

This page will be detached from the survey

Please provide your company's name and address below so that we can relate survey responses to other industry data.

Remember that all of your answers will be kept **confidential** and results will be reported in aggregate form only. Your participation is essential to the success and reliability of this project.

Company Name:	_____
Street Address:	_____
ZIP Code:	_____
Additional contact information (optional):	
E-mail:	_____
Telephone:	_____

Would you like to...

...receive a copy of the survey results?

☐ Yes

☐ No

...receive an invitation to the SOU School of Business Emerging Clusters Conference?

☐ Yes

☐ No

Thank you for your cooperation

Please return survey in the enclosed postage-paid envelope by March 24, 2006

**Emerging Clusters Study
Sebastian Sanzberro, Dean
School of Business
Southern Oregon University
1250 Siskiyou Boulevard
Ashland, OR 97520**

Appendix I

Select Results School of Business Cluster Survey

School of Business Cluster Survey

Business Conditions

The overall cost of doing business in the Rogue Valley region is low (costs of land, labor, utilities, etc.).

The network of highways and roads in the Rogue Valley region meets the needs of my company.

Air transportation is sufficient to support my company's growth.

The telecommunications infrastructure in the Rogue Valley region meets the needs of my company.

The supply of commercial or industrial land in the Rogue Valley region is adequate to meet my company's need for expansion.

State and regional environmental and/or safety regulations constrain the growth of my company.

The cost of liability and workers' compensation insurance is low.

Access to financial capital, such as business loans or venture capital, is limited in the Rogue Valley region.

Land use and zoning laws make the physical expansion of my company difficult.

Companies in my industry have specialized infrastructure needs (in areas such as transportation, communications, waste disposal, and utilities).

Cluster (n=90)					Non-Cluster (n=164)				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
9%	40%	25%	25%	1%	12%	38%	26%	23%	2%
2%	20%	14%	57%	7%	2%	15%	18%	58%	7%
2%	20%	25%	48%	4%	3%	5%	22%	53%	96%
2%	12%	16%	62%	8%	7%	14%	14%	60%	6%
6%	20%	31%	38%	6%	1%	11%	38%	43%	7%
8%	33%	28%	19%	12%	9%	40%	28%	15%	7%
13%	37%	33%	14%	2%	18%	30%	36%	16%	1%
2%	30%	38%	23%	7%	1%	32%	38%	23%	5%
5%	16%	26%	34%	18%	4%	25%	37%	24%	9%
3%	19%	38%	34%	5%	7%	31%	36%	23%	3%

Connections with Rogue Valley Businesses

The majority of the suppliers of my company's materials, machinery, and services are available within the region.

My company's competitors are located primarily in the Rogue Valley region.

Most of my company's customers are located in the Rogue Valley region.

My company's ability to develop new products and services is improved by its location in the Rogue Valley region.

My company participates in formal or informal networks with other firms or organizations to improve business operations, aid innovation, or solve business problems.

My company benefits from sharing technology and information with other companies in the region.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
10%	37%	10%	41%	2%	16%	30%	11%	38%	5%
18%	26%	9%	32%	16%	21%	24%	8%	34%	12%
30%	23%	7%	24%	16%	22%	14%	10%	35%	19%
9%	27%	49%	12%	2%	7%	23%	54%	13%	4%
2%	18%	26%	48%	5%	4%	16%	23%	49%	9%
8%	24%	27%	39%	2%	7%	27%	30%	31%	5%

School of Business Cluster Survey

Employment, Education, and Training

The available pool of skilled workers in the Rogue Valley region is sufficient to meet the needs of my company.

The available pool of professional employees in the Rogue Valley region is sufficient to meet the needs of my company.

The available pool of unskilled/seasonal workers in the Rogue Valley region is sufficient to meet the needs of my company.

Southern Oregon University (SOU) provides companies in the Rogue Valley region with well-trained employees.

Rogue Community College (RCC) provides companies in the Rogue Valley region with well-trained employees.

Oregon Institute of Technology (OIT) provides companies in the Rogue Valley region with well-trained employees.

The quality of K-12 education improves my company's ability to recruit and retain employees.

Training in computer and Internet technology that is provided in the Rogue Valley region meets the needs of my company.

The cost of living in the Rogue Valley region hinders my company's ability to recruit and retain employees.

The overall quality of life in the Rogue Valley region (e.g., climate, cultural and recreational opportunities) supports my company's ability to recruit and retain employees.

My company draws from the same specialized labor pool as other businesses in the region.

Cluster (n=91)					Non-Cluster (n=163)				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
14%	36%	21%	27%	1%	15%	36%	22%	27%	1%
10%	27%	30%	33%	0%	7%	35%	29%	27%	2%
3%	17%	36%	42%	2%	4%	10%	54%	28%	4%
3%	10%	66%	21%	0%	1%	8%	62%	27%	1%
2%	8%	62%	27%	1%	0%	7%	59%	33%	1%
1%	3%	71%	23%	1%	0%	4%	72%	23%	1%
5%	25%	45%	23%	1%	9%	23%	45%	19%	5%
1%	12%	42%	44%	1%	2%	20%	41%	36%	1%
0%	20%	27%	36%	17%	1%	24%	26%	26%	22%
0%	9%	23%	58%	10%	2%	7%	29%	52%	10%
1%	21%	22%	51%	5%	6%	19%	20%	49%	6%

School of Business Cluster Survey

Internet and Communications Technology

Internet technology is critical to my company's competitive advantage.

The Internet helps my company build stronger customer relationships.

The Internet helps extend my company's reach to new, more distant customer markets.

The Internet helps my company build stronger supplier relationships.

The Internet helps extend my company's reach to new, more distant suppliers.

The Internet helps my company build stronger distribution relationships.

The Internet helps extend my company's reach to new, more distant distributors.

Cluster (n=91)					Non-Cluster (n=164)				
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1%	13%	29%	38%	19%	1%	15%	13%	44%	28%
1%	18%	16%	48%	16%	1%	12%	17%	45%	25%
1%	15%	21%	43%	20%	2%	10%	16%	46%	26%
1%	19%	37%	31%	12%	2%	13%	32%	35%	18%
2%	19%	27%	41%	11%	1%	9%	23%	43%	23%
2%	19%	48%	20%	11%	1%	12%	49%	25%	13%
2%	21%	43%	24%	10%	1%	13%	40%	33%	14%

How likely is it that your company will implement the following changes in the next three years?

Expand physically
Invest in new plant and equipment
Increase employment
Develop new products or services
Expand market reach and distribution
Relocate outside the Rogue Valley region
Sell or divest business
Decrease employment
Close business

Cluster (n=87)					Non-Cluster (n=152)				
Very Unlikely	Unlikely	Neutral	Likely	Very Likely	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
33%	14%	8%	28%	17%	28%	24%	12%	27%	10%
17%	11%	8%	39%	25%	20%	13%	15%	38%	13%
11%	15%	19%	31%	24%	13%	12%	16%	48%	11%
10%	14%	23%	34%	19%	11%	6%	15%	45%	24%
10%	9%	15%	40%	26%	8%	9%	15%	49%	19%
61%	18%	11%	6%	3%	60%	21%	11%	5%	4%
34%	27%	25%	11%	2%	40%	23%	21%	9%	7%
31%	47%	20%	2%	0%	37%	36%	18%	4%	4%
57%	32%	6%	5%	0%	61%	22%	11%	3%	3%

School of Business Cluster Survey

Cluster (n=88)						Non-Cluster (n=158)					
Not at all Important	Somewhat Important	Important	Very Important	Critically Important		Not at all Important	Somewhat Important	Important	Very Important	Critically Important	
35%	25%	13%	18%	9%		35%	27%	22%	9%	7%	
23%	21%	18%	23%	15%		18%	17%	17%	27%	21%	
31%	21%	25%	20%	4%		26%	24%	30%	13%	6%	
34%	32%	18%	11%	5%		35%	28%	22%	11%	4%	
26%	28%	17%	26%	3%		16%	31%	30%	16%	7%	
40%	28%	17%	10%	4%		45%	27%	17%	7%	4%	
22%	24%	21%	20%	12%		30%	25%	21%	15%	9%	
6%	20%	28%	29%	18%		12%	19%	29%	29%	11%	
40%	20%	24%	10%	6%		63%	11%	12%	8%	6%	
8%	17%	30%	33%	12%		9%	23%	31%	25%	12%	
27%	24%	20%	20%	9%		18%	23%	31%	21%	8%	
31%	38%	21%	6%	3%		44%	24%	23%	7%	2%	
36%	33%	16%	13%	2%		29%	26%	26%	13%	6%	
31%	20%	19%	22%	7%		24%	17%	30%	20%	10%	
40%	30%	16%	9%	4%		40%	23%	24%	9%	4%	
7%	20%	20%	35%	18%		4%	13%	33%	31%	20%	
10%	13%	19%	34%	24%		6%	8%	26%	33%	27%	
11%	15%	25%	35%	15%		12%	10%	31%	30%	16%	
52%	30%	9%	3%	6%		43%	21%	23%	9%	3%	
13%	18%	24%	30%	15%		14%	12%	28%	24%	22%	
50%	21%	19%	6%	4%		48%	20%	26%	4%	2%	

Factors Affecting My Company's Success

Proximity of raw materials, components, supplies	
Proximity to customers	
Proximity and access to distribution networks	
Proximity and access to air transportation	
Access to specialized services, labor, or infrastructure	
Availability of commercial or industrial land	
Availability of low cost labor	
Low liability and workmen's compensation insurance	
Availability of unskilled or seasonal workers	
Availability of skilled or seasonal workers	
Availability of professional employees	
Formal or informal networks with regional competitors	
Formal or informal networks with regional suppliers	
Formal or informal networks with regional customers	
Presence of industry and trade associations or consortia	
Quality of telecommunications infrastructure	
Availability of fast and reliable Internet connections	
Availability of affordable housing	
Proximity to venture capital firms	
Low business tax burden (tax rate and incentives)	
Availability of business incubators	