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Comprehensive Economic Development Strategy (CEDS) for the Rio Grande Council of Governments (RGCOG)

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Planning in West Texas

Prepared by

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Planning in West Texas - Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio Counties

TR 2006-05

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Introduction

This project was undertaken by the Institute for Policy and Economic Development (IPED) at the University of Texas at El Paso through a contract with the Rio Grande Council of Governments (Rio Grande COG) in late 2005. The goal of the project is to fulfill requirements of the Economic Development Reform Act of 1998 (P.L. 105-393) that requires any area, community or region that is applying for Economic Development Administration (EDA) assistance develop to maintain a strategy for economic development known as a Comprehensive Economic Development Strategy or CEDS.

This document is a first step in that process, and as such, provides the governments of the counties in the six county Rio Grande COG (Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio counties) both a baseline and forecast of where the region has been since 1970 and where it may be heading in the next decade. As a public document, it also is the basis for developing input from stakeholders, namely the communities in the six counties Rio Grande COG, their citizens, business and government interests, in order to build a consensus about the direction economic development should take. In addition to the six counties of the Rio Grande COG, the four counties that make up southern New Mexico are part of the general economic region and are included in the analysis in order to complete the regional picture.

What is a Comprehensive Economic Development Strategy?

A completed CEDS is a requirement for designation as an economic development district. A CEDS provides a mechanism for coordinating the efforts of individuals, organizations, local governments, and private industry concerned with economic development. The CEDS process is intended to "help create jobs, foster more stable and diversified economies, and improve living conditions" for the area in question.[1]

As an analysis of the regional economy, the CEDS will help promote sustainable development activities and serve as a guidebook and tool for local decision makers.

The major components of a CEDS are:

1) A description of the area and status of economic development professionals that can serve as resources in the region;
2) A detailed analysis of the regional economy;
3) An examination of what the future of the region may look like;
4) An action plan or steps to take; and,
5) Follow-up and evaluation in the period after the CEDS has been adopted.

This document provides the first three items noted above and are the inputs for the Rio Grande COG and its member counties to undertake economic development activities and evaluation of those activities as described in items 4 and 5.

Planning Process Developed with Rio Grande COG and EDA

This report proceeds by establishing the parameters and geography of the region. In the following sections, eight key components of the regional economy, which are deemed key to the economic development of the region, are examined. In Section Two, the contributors to regional economic development are examined as potential resources for counties and their sub-units to utilize in their action and planning stages. In Section Three, the region's demographic characteristics, as reported through the U.S. Census Bureau and other data collection agencies, are examined, establishing the context for examining the regional economy. In Section Four, the regional labor and workforce composition are considered, thereby benchmarking where the West Texas District and neighboring New Mexico counties are at this point in time. Section Five looks at employment and employment by sectors, while Section Six moves in to more detail about income and its components and their contribution to the regional economy. Section Seven relies on a

recent study conducted by the Upper Rio Grande Workforce Board that examines current and emerging industry clusters that can help county leaders understand how the current trends in the region may be impacting their jurisdictions. Section Eight provides a brief examination of region-wide salaries and wages compared to the sate and the nation. Lastly, Section Nine reports forecasts of labor demand under an adjusted baseline that accounts for regional population shifts as a result of Base Realignment and Closure (BRAC) recommendations for Fort Bliss in El Paso County. While this is a region-wide forecast for the West Texas District, it provides some insight into the magnitude of the proposed influx of soldiers, civilian employees, and their dependents.

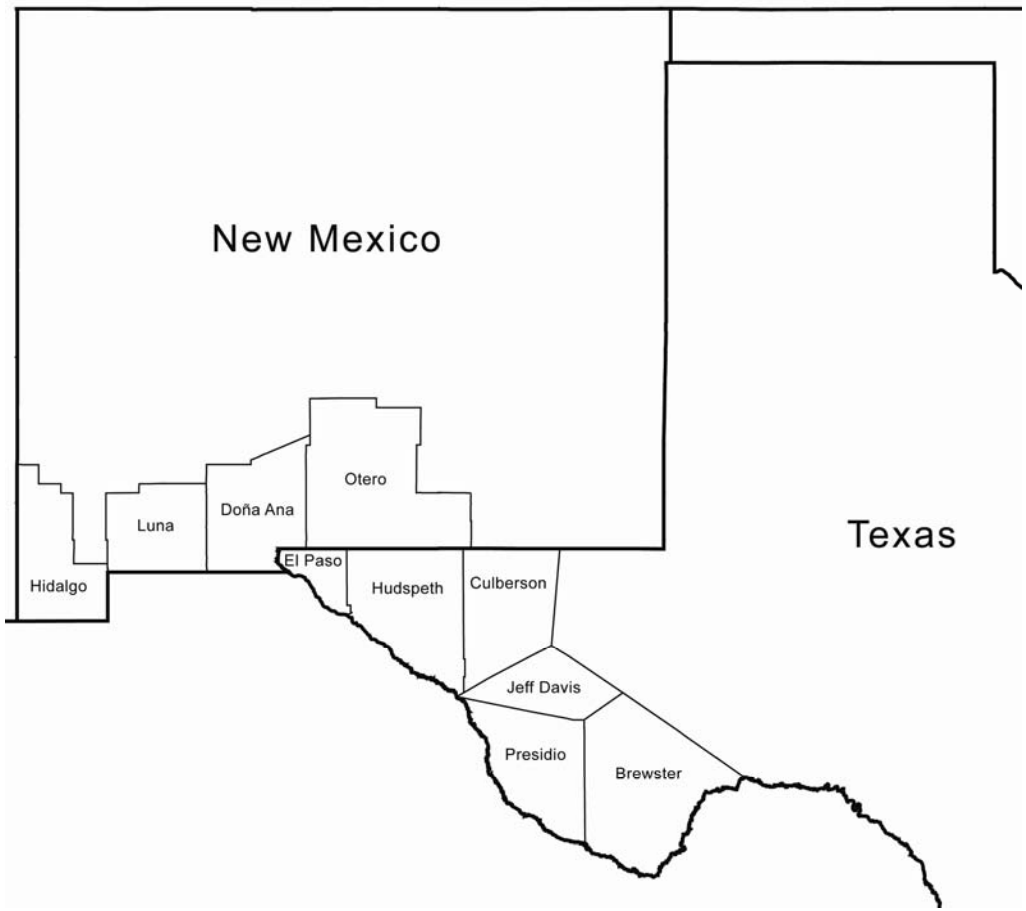
Comprehensive Economic Development Strategy Parameters

Location

The West Texas Economic District establishes the location for the coverage of the CEDS. As Map 1.1 shows, this is the southwest corner of the State of Texas, bordering Mexico on the south and the State of Chihuahua, New Mexico to the north and west. The six counties included in the analysis are: Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, and Presidio and as previously mentioned, four New Mexico counties, Luna, Hidalgo, Doña Ana, and Otero are included because of their role in the regional economy and as potential competition to economic development in the West Texas District.

Map 1.1

West Texas Economic District



The West Texas District incorporates an area of 21,709 square miles, of which 1013 square miles is in El Paso County, as shown by Table 1-1. Geographically, El Paso is the smallest county, but accounts for 96.5 percent of the population. As a result, the region outside of El Paso is sparsely populated with only one person per square mile. Outside the Texas counties, New Mexico counties also demonstrate similar trends but are slightly more densely populated outside Doña Ana County which includes the City of Las Cruces. When compared randomly to other states, the area is larger than Vermont and has more population than West Virginia, but is considerably less densely populated than eastern states. In comparison, the region is more similar to Wyoming, Montana, and the Dakotas in population per square mile, and, in fact, overall it has a larger population than these states; but, is somewhat similar in geographic size.

Table 1-1
2000 Population per Square Mile

Region	Total	COG Counties Population	COG not including El Paso	El Paso	Brewster	Culberson	Hudspeth	Jeff Davis	Presidio
Total population	1,969,188	704,318	24,696	679,622	8,866	2,975	3,344	2,207	7,304
Land area (square miles)	97,802	21,709	20,696	1,013	6,193	3,812	4,571	2,264	3,856
Persons per square mile	20	32	1	671	1.4	0.8	0.7	1	1.9

Region	New Mexico Counties Total	Dona Ana	Hidalgo	Luna	Otero
Total population	267,928	174,682	5,932	25,016	62,298
Land area (square miles)	16,844	3,807	3,446	2,965	6,626
Persons per square mile	16	45.9	1.7	8.4	9.4

Comparisons

	Vermont	West Virginia	Montana	North Dakota	South Dakota	Wyoming
Total population	608,827	1,808,344	902,195	642,200	770,883	493,782
Land area (square miles)	9,250	24,078	145,552	68,976	75,885	97,100
Persons per square mile	65.8	75.1	6.2	9.3	9.9	5.1

The region is characterized by a desert climate of low humidity and moderate rainfall creating a relatively mild year round climate. The sun shines more than 300 days per year and experiences its rainy season in mid-summer as seen in Charts 1-1 through 1-3.

Chart 1-1
Average Temperature Range

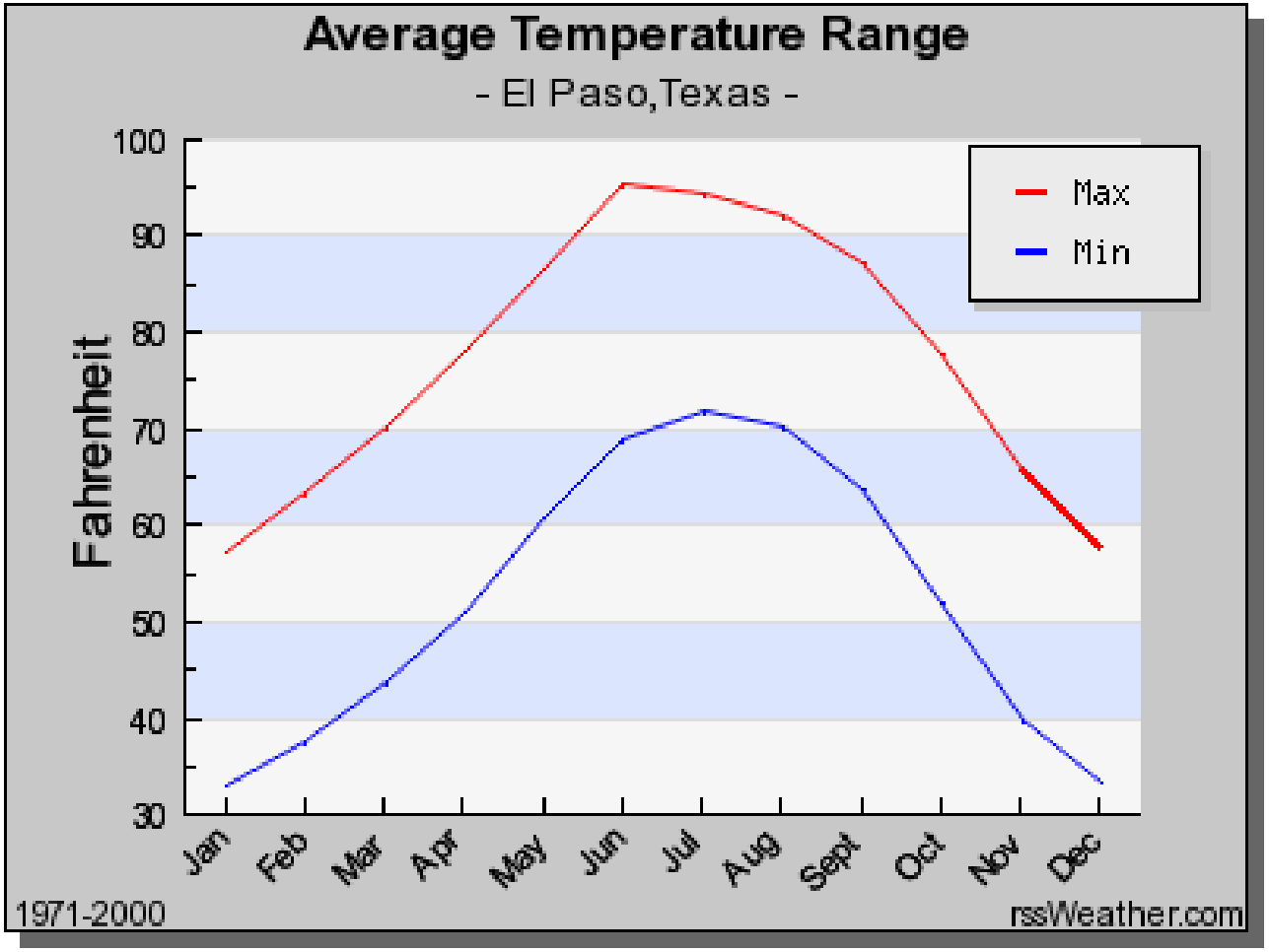


Chart 1-2
Average Monthly Precipitation

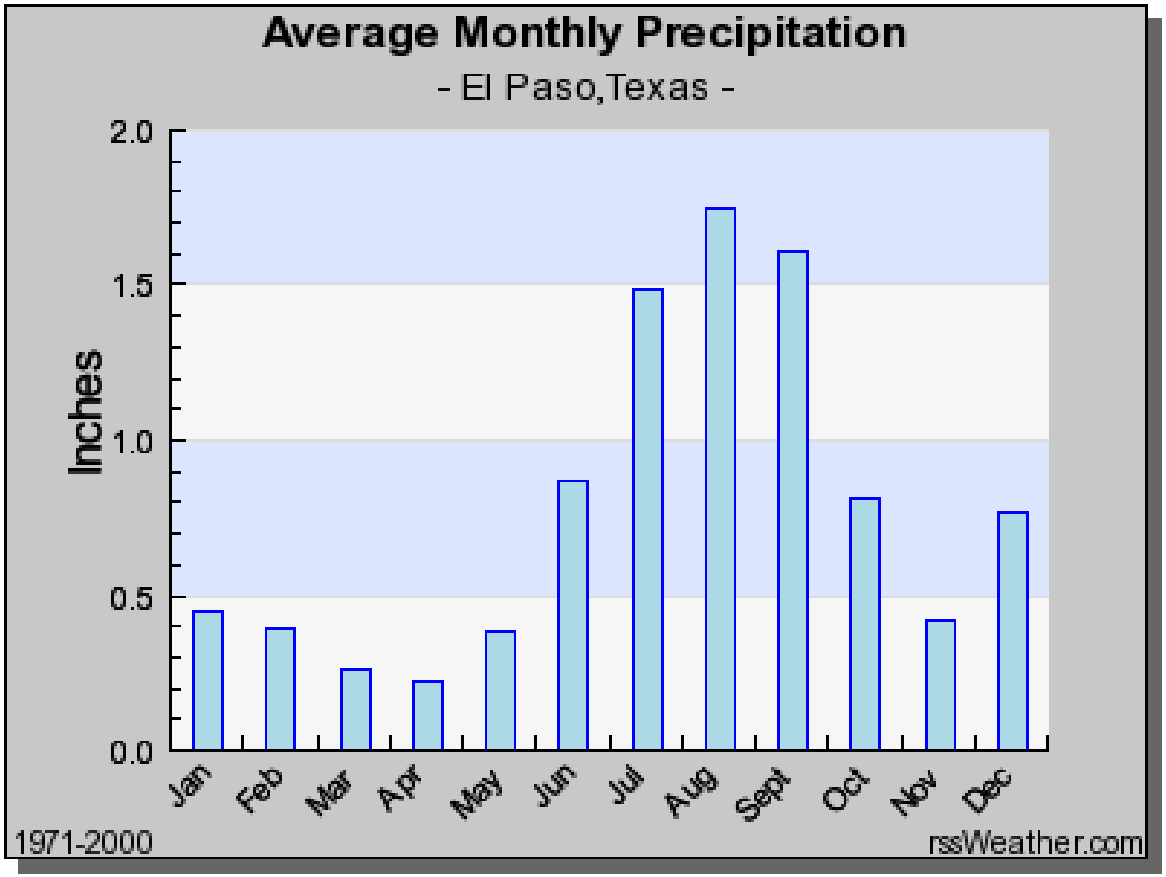
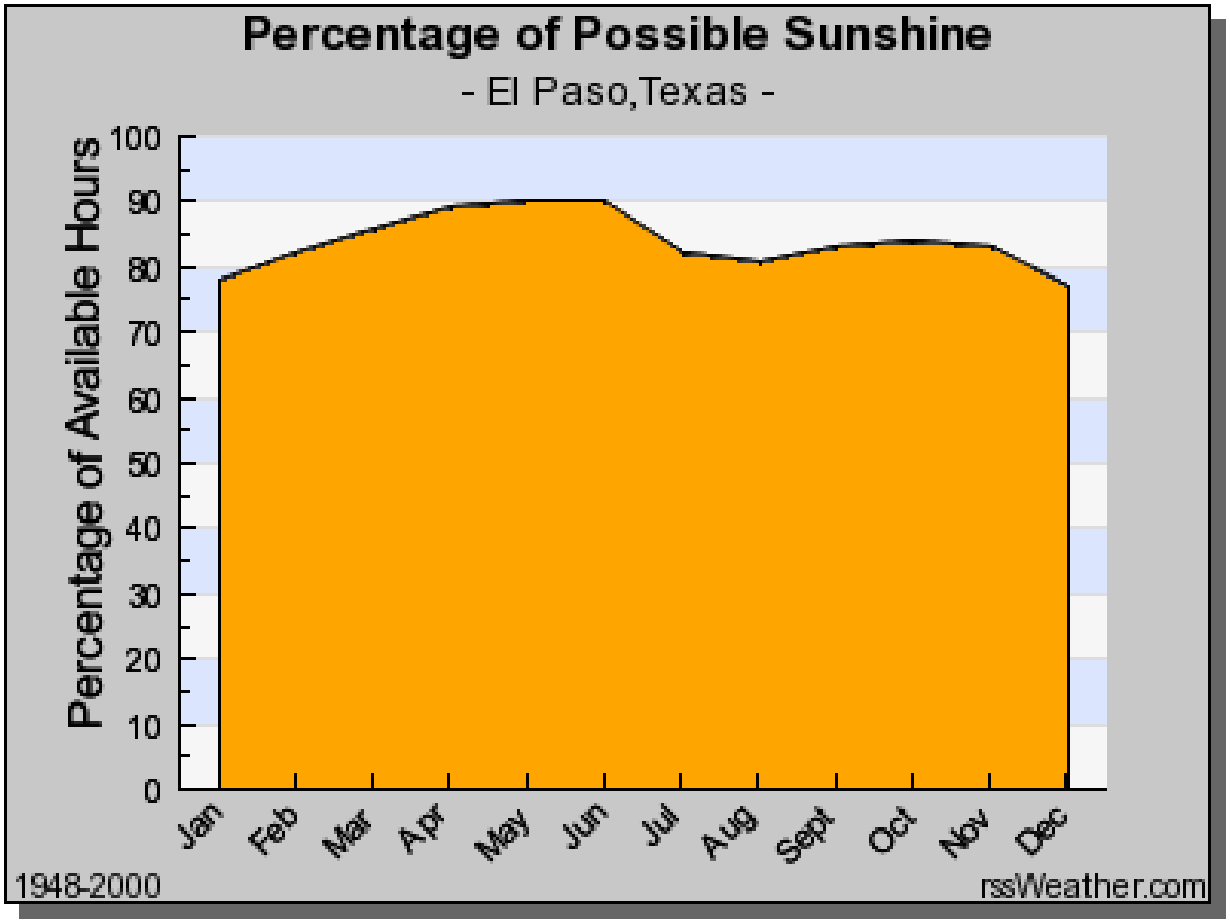


Chart 1-3
Percentage of Possible Sunshine



Time Frame and Data Sources

The time frame for the data presented and analyzed is based on U.S. Census Bureau, and its related agencies, from data collected for the period 1970 to 2003. In most cases the that most data is available is 2003. All data are sourced for follow-up by local jurisdictions as data are constantly updated by most agencies. Forecasts of future trends are based on *The Border Model,* a regional impact and forecasting model developed and maintained by IPED. The forecasts reported extend to 2015, a reasonable period if current trends remain in effect.

CEDS Development Partners

The **Rio Grande Council of Governments**, is a voluntary association that was created in 1967 to provide continuity to governing and planning between state and local governments. It is a member of the Texas Association of Regional Councils. The State of Texas passed the enabling legislation to create such organizations to provide services and aid to local governments. The Rio Grande COG serves 33 local governments, seven county governments (six in Texas and one in New Mexico), 12 municipalities, and 14 special districts. The Council of Governments is governed by a board of directors that is comprised of 19 local officials from the area.

Rio Grande COG Overview

Established: January 1967
Area: 22,000 sq. miles *(Includes 3,804 sq. miles of Dona Ana County, New Mexico)*
Population: 704,318 (2000 est.) *(Includes population in Dona Ana County, New Mexico)*
Counties Served: Brewster, Culberson, El Paso, Hudspeth, Jeff Davis, Presidio
website: www.riocog.org

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Fax: (915) 532-9385

Chairman
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Commissioner, Dona Ana County
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Las Cruces, New Mexico 88005
(505) 524-4232
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The El Paso, Texas/Cd. Juárez, Chihuahua metroplex--the center of the Paso del Norte region and one of the world's largest binational metropolitan areas -- is the ideal laboratory for social, economic, and policy research. **The Institute for Policy and Economic Development (IPED)**, located at the University of Texas at El Paso, is a key component in the university's commitment to deepen public understanding of the issues that face the culturally diverse community of tomorrow. The Institute's interdisciplinary approach to research design, data collection, and analysis provides the Institute's clientele with objective, timely information that forms the framework needed for public policy investigation. The Institute includes the programs and activities that represent the primary funded research and outreach activities related to policy issues and economic development in West Texas, the Paso del Norte region, and the U.S. Mexican border.

The Institute for Policy and Economic Development (IPED) Overview

Established: January 2001

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Institute for Policy and Economic Development Mission Statement

The Institute for Policy and Economic Development provides leadership and coordination at the University of Texas at El Paso in order to provide objective analysis and interpretation of public and private policy research, to address issues of importance to the people of the Paso del Norte and Camino Real and to insure economic development proceeds in a rational and sustainable fashion.

Endnotes to Section One

[1] Economic Development Administration, "Comprehensive Economic Development Strategy Guidelines," January 2000, http://www.doc.gov/eda/pdf/cedsguide.pdf.

Section Two: Planning and Staffing Economic Development in West Texas

Planning and staffing for economic development in West Texas is limited, in some respects, by the rural nature of most of the region and the fact that demand for full-time economic development specialists is not a priority in the five rural counties of Brewster, Culberson, Hudspeth, Jeff Davis, and Presidio, with El Paso considered an urban county. Professional assistance related to economic development in the region rests with several organizations and agencies as seen in Table 2-1.

Table 2-1
Organizations Supporting Economic Development: West Texas

	Brewster	Culberson	El Paso	Hudspeth	Jeff Davis	Presidio
Chambers of Commerce	Alpine Chamber of Commerce 106 North 3rd St. Alpine, TX 79830 432-837-2326 800-561-3735 www.alpinetexas.com Big Bend Chamber of Commerce Hwy 170 @ Terlingua Creek P.O. Box 607 Terlingua, TX 79852 432-371-2427 www.bigbendchamber.com Marathon Chamber of Commerce 105 Hwy 90 W Marathon, TX 79842 432-386-4516 www.marathontexas.net	Van Horn Chamber of Commerce P.O. Box 762 Van Horn, TX 79855 915-283-2043 www.vanhornadvocate.com	Greater El Paso Chamber of Commerce 10 Civic Center Plaza El Paso, TX 79901 915-534-0500 www.elpaso.org El Paso Black Chamber of Commerce One Texas Tower, 109 N. Oregon St. Ste. 212 El Paso, TX 79901-1153 915-534-0570 www.elpasoblackchamber.com El Paso Hispanic Chamber of Commerce 201 E. Main Ste. 100 El Paso, TX 79901 915-566-4066 www.ephcc.org	Dell City Chamber of Commerce P.O. Box 709 Dell City, TX 79837 915-964-2424 Sierra Blanca Chamber of Commerce 318 N. Rio Grande St. Sierra Blanca, TX 79851 915-369-4118	Fort Davis Chamber of Commerce P.O. Box 378 Fort Davis, TX 79734 432-426-3015 www.fortdavis.com	City of Presidio Chamber of Commerce P.O. Box 2497 Presidio, TX 79845 432-229-3199 www.presidiotx.org Marfa Chamber of Commerce 220 S. Abbott P.O. Box 635 Marfa, TX 79843 432-729-4942 www.marfacc.com
Economic Development		Van Horn EDC P.O. Box 517 Van Horn, TX 79857 432-283-7494 www.vanhorntexas.org	REDCO 201 E. Main, Ste. 1711 El Paso, TX 79901 800-651-8070 www.elpasoredco.org El Paso Department of Economic Development 2 Civic Center Plaza El Paso, TX 79901 915-533-4284 www.elpasotexas.gov			Development Corporation of Presidio
Universities and Colleges	Sul Ross State University P.O. Box C-114 Alpine, TX 79832 432-837-8011 www.sulross.edu		University of Texas at El Paso 500 West University Ave. El Paso, TX 79968 915-747-5000 www.utep.edu El Paso Community College 915-831-3722 www.epcc.edu			

Other Agencies:

United States Small Business Administration

SBA - Region VI Office
SBA Dallas Regional Office
4300 Amon Carter Boulevard Suite 108
Fort Worth, TX 76155
(817) 684-5581
(817) 684-5588 Fax

SBA - El Paso District Office
10737 Gateway West
El Paso, TX 79935
(915)633-7001
(915)633-7005 Fax

Economic Development Administration, Southwestern Region (VI)
Austin Regional Office
327 Congress Avenue, Suite 200
Austin, Texas 78701
512-381-8144

Section Three: The State of the Region-- Demographics and Business Overview

To develop this analysis, in this section and the sections that follow, data was collected from the U.S. Census Bureau and its related agencies (i.e., Bureau of Economic Analysis or BEA) beginning in 1970. This historical picture provides evidence of what has developed in the region over the last three decades and establishes a trend that we can further examine into the future in the following chapters.

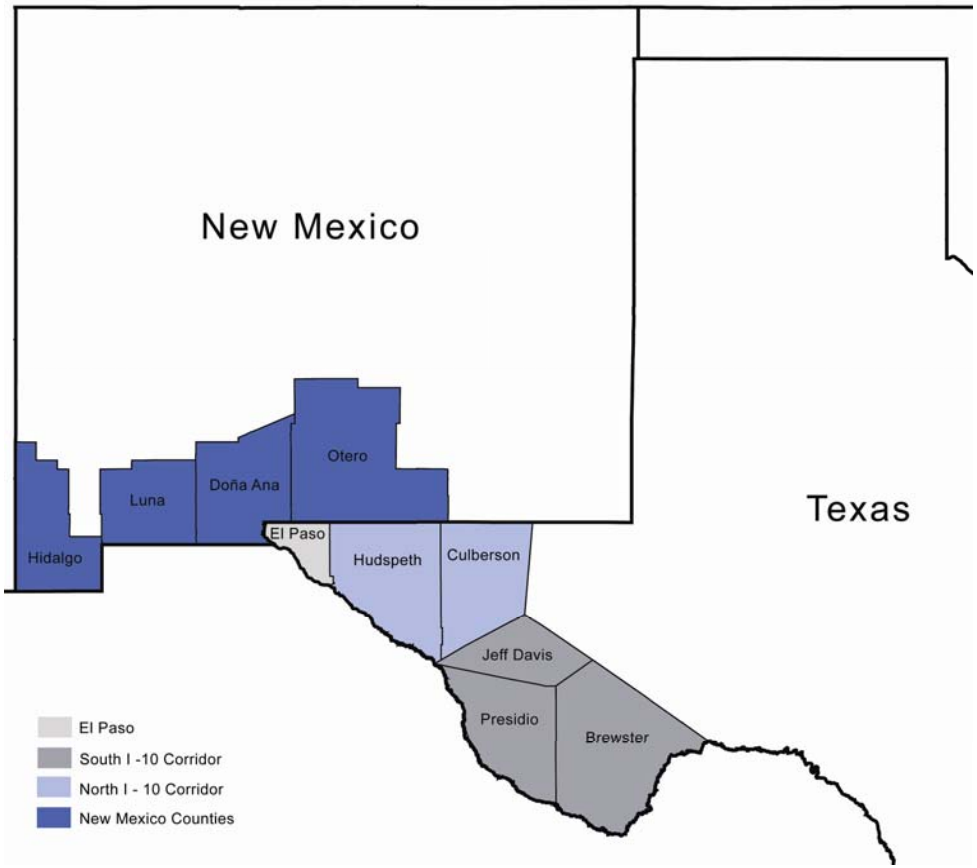
The data is quite extensive for all counties considered. The data tables are presented in total in appendices to each section, but for presentation and ease in reading, graphics have been developed that reduces the region into four areas. These regions were developed in response to some earlier work conducted by IPED for the Upper Rio Grande Workforce Development Board.[1] As a result of focus groups and labor market characteristics, the West Texas Economic District is represented as: 1) Counties north of Interstate 10 including the counties of Culberson and Hudspeth; 2) counties South of Interstate 10 including the counties of Presidio, Jeff Davis, and Culberson; 3) El Paso County; and, 4) the New Mexico counties (Doña Ana, Otero, Luna, and Hidalgo), as depicted in Map 3-1.[2]

Key Finding

The region's demographic characteristics result in a profile that remains distinctly rural outside of El Paso and Dona Ana County. Overall, the region lags the nation in a variety of areas and future economic development will be addressed from a position that may be more disadvantaged when compared to competing regions.

Map 3.2

The Six Counties in Rio Grande Council of Governments and New Mexico Counties in the Regional Economy



Demographics

West Texas

A variety of demographic trends highlight the region. Most notably is that El Paso is the urban center and regional core for the delivery of a variety of goods and services. Surrounding El Paso, the remaining five west Texas counties are characterized as small and rural by national standards as seen in Table 3-1. The region is experiencing population growth at a pace slower than the rest of Texas at 4.92 percent since 2000 compared to the state rate of 7.9 percent. It is also an area with a young population compared to the rest of the nation. Not surprisingly, it is also heavily Hispanic compared to the state and the rest of the nation; and, consequently, it has a higher proportion of the population that is foreign born, primarily originating from Mexico.

The region holds over 244,500 housing units and a home ownership rate that exceeds most national standards. High homeownership is closely linked to the affordability of housing in the region and prevails in most Texas border counties.[3] Median home values are below state median home values and well-below national values. However, this is paralleled by low median family household income which is well below state and national levels, a condition that is exacerbated by low levels of high school graduation in some areas and a low percentage of the population holding college degrees.[4]

New Mexico

In the adjoining New Mexico counties, a generally similar profile exists with Doña Ana County serving as the regional hub; but, it too depends on larger El Paso for many services, especially as both counties continue to extend their reach towards each other (Table 3-2). For purposes of economic development, the general similarities between the two

areas also suggest development may be more competitive, in some instances, because of fewer unique attributes that can be "marketed" or used to create economic niches that will differentiate the counties in the region.

Business Overview

The general business environment in the region indicates that the New Mexico counties are larger as a percentage of their state than the west Texas counties are relative to the state of Texas. Yet, in both areas, non-farm employment is not growing as rapidly as their respective states and is actually declining in many areas. Manufacturing, and hence manufacturing employment, is concentrated in El Paso and Doña Ana counties, as are retail sales. Although not fully reported due to disclosure standards of the U.S. Census Bureau, the region has significant minority business ownership and woman-owned businesses, a fact documented outside the Census.[5] In addition, as will be documented later in this report, retails sales are the key component of the economy and, in turn, employment and regional income. The region is also seeing a housing boom, mild by national standards, but a boom with a positive impact in Doña Ana and El Paso. The extent to which the boom will spillover into the rural counties is expected to be minimal in the short run. In following sections, the detail of the economy is more fully elaborated.

Table 3-1
Demographic Profile: West Texas Counties

Measure	Culberson	Hudspeth	Brewster	Jeff Davis	Presidio	El Paso	Texas
Population, 2004 estimate	2,727	3,300	9,226	2,253	7,639	713,126	22,490,022
Population, percent change, April 1, 2000 to July 1, 2004	-8.3%	-1.3%	4.1%	2.1%	4.6%	4.9%	7.9%
Population, 2000	2,975	3,344	8,866	2,207	7,304	679,622	20,851,820
Population, percent change, 1990 to 2000	-12.7%	14.7%	2.5%	13.4%	10.0%	14.9%	22.8%
Persons under 5 years old, percent, 2000	7.5%	8.6%	5.4%	4.1%	7.8%	8.7%	7.8%
Persons under 18 years old, percent, 2000	32.2%	34.1%	22.2%	24.4%	32.7%	32.0%	28.2%
Persons 65 years old and over, percent, 2000	11.2%	9.9%	14.6%	16.3%	13.9%	9.7%	9.9%
Female persons, percent, 2000	49.3%	49.3%	50.2%	48.9%	51.5%	51.8%	50.4%
White persons, percent, 2000 (a)	68.9%	87.2%	81.1%	90.5%	85.0%	73.9%	71.0%
Black or African American persons, percent, 2000 (a)	0.7%	0.3%	1.2%	0.9%	0.3%	3.1%	11.5%
American Indian and Alaska Native persons, percent, 2000 (a)	0.5%	1.4%	0.8%	0.3%	0.3%	0.8%	0.6%
Asian persons, percent, 2000 (a)	0.6%	0.2%	0.4%	0.1%	0.1%	1.0%	2.7%
Native Hawaiian and Other Pacific Islander, percent, 2000 (a)	0.0%	0.0%	0.1%	0.0%	Z	0.1%	0.1%
Persons reporting some other race, percent, 2000 (a)	27.1%	8.8%	13.4%	5.2%	13.5%	17.9%	11.7%
Persons reporting two or more races, percent, 2000	2.2%	2.1%	3.0%	3.0%	0.9%	3.2%	2.5%
White persons, not of Hispanic/Latino origin, percent, 2000	24.6%	23.0%	53.1%	62.3%	14.8%	17.0%	52.4%
Persons of Hispanic or Latino origin, percent, 2000 (b)	72.2%	75.0%	43.6%	35.5%	84.4%	78.2%	32.0%
Living in same house in 1995 and 2000', pct age 5+, 2000	68.0%	66.6%	48.9%	52.8%	56.6%	55.2%	49.6%
Foreign born persons, percent, 2000	15.6%	33.2%	6.9%	10.9%	35.8%	27.4%	13.9%
Language other than English spoken at home, pct age 5+, 2000	73.4%	74.1%	42.7%	36.9%	84.4%	73.3%	31.2%
High school graduates, percent of persons age 25+, 2000	56.1%	46.1%	78.6%	74.7%	44.7%	65.8%	75.7%
Bachelor's degree or higher, pct of persons age 25+, 2000	13.9%	9.7%	27.7%	35.1%	11.7%	16.6%	23.2%
Persons with a disability, age 5+, 2000	501	624	1,929	504	1,897	122,545	3,605,542
Mean travel time to work (minutes), workers age 16+, 2000	13.1	17	12.6	24.1	17.3	22.7	25.4
Housing units, 2002	1,344	1,507	4,711	1,424	3,449	232,142	8,502,060
Homeownership rate, 2000	70.8%	81.0%	59.5%	70.1%	70.3%	63.6%	63.8%
Housing units in multi-unit structures, percent, 2000	5.5%	1.6%	15.6%	1.6%	8.1%	24.3%	24.2%
Median value of owner-occupied housing units, 2000	$32,500	$30,500	$67,000	$59,800	$35,500	$69,600	$82,500
Households, 2000	1,052	1,092	3,669	896	2,530	210,022	7,393,354
Persons per household, 2000	2.82	3.03	2.31	2.39	2.85	3.18	2.74
Median household income, 1999	$25,882	$21,045	$27,386	$32,212	$19,860	$31,051	$39,927
Per capita money income, 1999	$11,493	$9,549	$15,183	$18,846	$9,558	$13,421	$19,617
Persons below poverty, percent, 1999	25.1%	35.8%	18.2%	15.0%	36.4%	23.8%	15.4%

Table 3-2
Demographic Profile: Regional New Mexico Counties

Measure	Doña Ana	Hidalgo	Luna	Otero	New Mexico
Population, 2004 estimate	186,095	5,186	26,129	63,282	1,903,289
Population, percent change, April 1, 2000 to July 1, 2004	6.5%	-12.6%	4.4%	1.6%	4.6%
Population, 2000	174,682	5,932	25,016	62,298	1,819,046
Population, percent change, 1990 to 2000	28.9%	-0.4%	38.1%	20.0%	20.1%
Persons under 5 years old, percent, 2000	7.8%	7.7%	7.7%	7.4%	7.2%
Persons under 18 years old, percent, 2000	29.7%	31.7%	30.0%	29.5%	28.0%
Persons 65 years old and over, percent, 2000	10.6%	13.6%	18.2%	11.7%	11.7%
Female persons, percent, 2000	50.9%	50.1%	51.2%	50.2%	50.8%
White persons, percent, 2000 (a)	67.8%	83.8%	74.3%	73.7%	66.8%
Black or African American persons, percent, 2000 (a)	1.6%	0.4%	0.9%	3.9%	1.9%
American Indian and Alaska Native persons, percent, 2000 (a)	1.5%	0.8%	1.1%	5.8%	9.5%
Asian persons, percent, 2000 (a)	0.8%	0.3%	0.3%	1.2%	1.1%
Native Hawaiian and Other Pacific Islander, percent, 2000 (a)	0.1%	0.0%	Z	0.1%	0.1%
Persons reporting some other race, percent, 2000 (a)	24.7%	11.9%	20.2%	11.7%	17.0%
Persons reporting two or more races, percent, 2000	3.6%	2.9%	3.1%	3.6%	3.6%
White persons, not of Hispanic/Latino origin, percent, 2000	32.5%	42.7%	39.7%	55.7%	44.7%
Persons of Hispanic or Latino origin, percent, 2000 (b)	63.4%	56.0%	57.7%	32.2%	42.1%
Living in same house in 1995 and 2000', pct age 5+, 2000	53.1%	64.4%	57.3%	48.1%	54.4%
Foreign born persons, percent, 2000	18.7%	11.1%	19.5%	11.1%	8.2%
Language other than English spoken at home, pct age 5+, 2000	54.4%	43.6%	49.5%	29.7%	36.5%
High school graduates, percent of persons age 25+, 2000	70.0%	68.8%	59.8%	81.0%	78.9%
Bachelor's degree or higher, pct of persons age 25+, 2000	22.3%	9.9%	10.4%	15.4%	23.5%
Persons with a disability, age 5+, 2000	31,450	1,316	5,647	10,868	338,430
Mean travel time to work (minutes), workers age 16+, 2000	21.3	22.6	17.9	20.9	21.9
Housing units, 2002	68,056	2,954	11,586	30,026	805,293
Homeownership rate, 2000	67.5%	67.9%	74.9%	66.9%	70.0%
Housing units in multi-unit structures, percent, 2000	16.3%	6.1%	9.0%	7.6%	15.3%
Median value of owner-occupied housing units, 2000	$90,900	$53,900	$66,000	$78,800	$108,100
Households, 2000	59,556	2,152	9,397	22,984	677,971
Persons per household, 2000	2.85	2.72	2.64	2.66	2.63
Median household income, 1999	$29,808	$24,819	$20,784	$30,861	$34,133
Per capita money income, 1999	$13,999	$12,431	$11,218	$14,345	$17,261
Persons below poverty, percent, 1999	25.4%	27.3%	32.9%	19.3%	18.4%

Table 3-3
Regional Business Overview

West Texas	Brewster	Jeff Davis	Presidio	Culberson	Hudspeth	El Paso	West Texas Total	Percent of Texas	Texas
Private nonfarm establishments with paid employees, 2001	292	55	116	62	41	12,214	12,780	2.70%	473,868
Private nonfarm employment, 2001	2,219	388	579	487	195	199,453	203,321	2.49%	8,161,321
Private nonfarm employment, percent change 2000-2001	1.7%	-10.2%	-8.7%	-17.0%	-11.8%	-0.2%			1.7%
Nonemployer establishments, 2000	568	172	404	162	123	32,163	33,592	2.64%	1,271,401
Manufacturers shipments, 1997 ($1000)	NA	NA	NA	NA	NA	7,966,475	7,966,475	2.68%	297,657,003
Retail sales, 1997 ($1000)	58,146	3,718	21,429	28,198	6,123	4,698,945	4,816,559	2.64%	182,516,112
Retail sales per capita, 1997	$6,563	$1,667	$2,588	$9,084	$1,913	$6,856	N/A	N/A	$9,430
Minority-owned firms, percent of total, 1997	14.7%	N/R	N/R	N/R	N/R	56.6%	N/A	N/A	23.9%
Women-owned firms, percent of total, 1997	25.0%	N/R	N/R	N/r	N/R	22.4%	N/A	N/A	25.0%
Housing units authorized by building permits, 2002	19	N/A	72	2	N/A	3,710	3,803	2.30%	165,027
Federal funds and grants, 2002 ($1000)	54,486	20,061	50,282	15,990	56,909	3,856,066	$4,053,794	3.28%	123,431,164

New Mexico	Doña Ana	Hidalgo	Luna	Otero	New Mexico Counties Total	Percent of New Mexico	New Mexico
Private nonfarm establishments with paid employees, 2001	3,226	101	403	1,030	4,760	11.15%	42,686
Private nonfarm employment, 2001	37,764	794	3,405	12,182	54,145	9.78%	553,357
Private nonfarm employment, percent change 2000-2001	1.9%	-7.2%	-2.0%	-2.4%			0.7%
Nonemployer establishments, 2000	7,574	193	812	2,017	10,596	13.02%	81,398
Manufacturers shipments, 1997 ($1000)	395,483	N/A	49,516	93,760	538759	3.01%	17,906,091
Retail sales, 1997 ($1000)	1,059,144	49,304	177,534	326,480	1,612,462	10.76%	14,984,454
Retail sales per capita, 1997	$6,364	$7,890	$7,539	$5,897	N/A	N/A	$8,697
Minority-owned firms, percent of total, 1997	44.8%	N/R	39.1%	19.7%	N/A	N/A	28.5%
Women-owned firms, percent of total, 1997	27.0%	N/R	17.9%	27.4%	N/A	N/A	29.4%
Housing units authorized by building permits, 2002	1,213	N/A	36	104	1353	11.21%	12,066
Federal funds and grants, 2002 ($1000)	$1,190,389	$32,822	$139,626	$553,222	$1,916,059	10.96%	17,477,521

N/A: Data Not Available

N/R: Data Not Reported due to less than 100 firms

Affordability and Cost of Living

Key Finding

The region is affordable when viewed on a national composite index for a bundle of goods and services. However, low incomes among many residents offset these perceived cost advantages and should be incorporated into development of economic development strategies.

Overall, the cost of living in the region can be rated as very affordable by national standards, but due to low income levels has to be considered within the context of household incomes rather than a straight comparison to other regions. In Table 3-4 using a national composite index of 100, which may be thought of as requiring $100 to buy a bundle of goods, we find that in the entire New Mexico and Texas area, the cost of living is below the national scale. Las Cruces, New Mexico is closest to the national index with Brownsville/Harlingen in the lower reaches of the Rio Grande being the lowest. El Paso, the largest city in the West Texas District, reports a 91.8 index score which, while affordable, does not make it the least expensive place in Texas to reside. As suggested, it may be that composite index scores, which are presently not reported in rural counties, are in fact lower, it is important to compare these to median income levels which are likewise lower. As a result, the relative cost when taking income into consideration may be the same or higher than in some areas where higher reported income levels are recorded.

Viewed more nationally in Table 3-5, El Paso fares well and is comparable to Mobile, AL, Little Rock, AK, Omaha, NB, Charlotte, NC and, no doubt, many other regions, but even a brief review of these other areas indicate relatively higher incomes levels in many cases. Thus, as a component of economic development strategies, it is important to recognize that affordability must be placed into the context of other economic and demographic indicators ranging from education, family size, and property tax rates, among others.

Table 3-4
Cost of Living Compared to Other Areas in Texas and New Mexico: United States = 100 (2005)

Metro/Micro Area	Urban Area And State	100% composite index
United States	United States	100
Carlsbad-Artesia NM Micro	Carlsbad NM	94.7
Las Cruces NM Metro	Las Cruces NM	99.8
Abilene TX Metro	Abilene TX	88.6
Amarillo TX Metro	Amarillo TX	86.5
Austin-Round Rock TX Metro	Austin TX	97.6
Brownsville-Harlingen TX Metro	Brownsville TX	89.4
Brownsville-Harlingen TX Metro	Harlingen TX	86.4
Corpus Christi TX Metro	Corpus Christi TX	88.3
Dallas-Plano-Irving TX Metro Div.	Dallas TX	93.7
El Paso TX Metro	El Paso TX	91.8
Fort Worth-Arlington TX Metro Div.	Arlington TX	92.7
Fort Worth-Arlington TX Metro Div.	Fort Worth TX	89.8
Laredo TX Metro	Laredo TX	85.1
Longview TX Metro	Longview TX	86.3
Lubbock TX Metro	Lubbock TX	86.6
San Antonio TX Metro	San Antonio TX	91.1
Odessa TX Metro	Odessa TX	87.9

Table 3-5
Cost of Living Compared to Other Areas in the United States: U.S. = 100 (2005)

Metro/Micro	Urban Area And State	100% composite index
US	US	100
Mobile AL Metro	Mobile AL	90.0
Phoenix-Mesa-Scottsdale AZ Metro	Phoenix AZ	98.0
Little Rock-North Little Rock AR Metro	Little Rock-N Little Rock AR	92.7
Fresno CA Metro	Fresno CA	119.4
Los Angeles-Long Beach-Glendale CA Metro Div.	Los Angeles-Long Beach CA	156.1
San Diego-Carlsbad-San Marcos CA Metro	San Diego CA	149.4
Colorado Springs CO Metro	Colorado Springs CO	95.7
Denver-Aurora CO Metro	Denver CO	102.3
Tampa-St. Petersburg-Clearwater FL Metro	Tampa FL	98.2
Atlanta-Sandy Springs-Marietta GA Metro	Atlanta GA	97.1
Chicago-Naperville-Joliet IL Metro Div.	Chicago IL	126.9
New Orleans-Metairie-Kenner LA Metro	New Orleans LA	103.2
Detroit-Livonia-Dearborn MI Metro Div.	Detroit MI	104.4
Kansas City MO-KS Metro	Kansas City MO-KS	95.3
Omaha-Council Bluffs NE-IA Metro	Omaha NE	90.0
New York-White Plains-Wayne NY-NJ Metro Div.	New York (Manhattan) NY	205.4
Charlotte-Gastonia-Concord NC-SC Metro	Charlotte NC	93.0
Cleveland-Elyria-Mentor OH Metro	Cleveland OH	102.0
Pittsburgh PA Metro	Pittsburgh PA	94.0
Seattle-Bellevue-Everett WA Metro Div.	Seattle WA	117.0
Cheyenne WY Metro	Cheyenne WY	105.5

Endnotes for Section Three

[1] McElroy, Mathew S., et. al. 2006. *Upper Rio Grande Workforce Development Board Industry Cluster Analysis.* Institute for Policy and Economic Development, Technical Report 2006-03, IPED, University of Texas at El Paso: El Paso, TX.

[2] Ibid.

[3] See, Soden, Dennis L. et. al. 2006. *At the Cross Roads: US/Mexico Border Counties in Transition*, Chapter 12: Housing. US / Mexico Border Counties Coalition, Washington, CD, March, pp. 12-1 - 12-6; www. bordercounties.org.

[4] Ibid, see especially Chapter 7: Public and Higher Education, pp. 7-1 - 7-9; www. bordercounties.org.

[5] Schauer, David A.**,** et. al. 2000. *Capital Access and Financial Services in El Paso*. TR 2000-6, IPED, University of Texas at El Paso: El Paso, TX; Johnson, Stephen A., David A. Schauer, and Dennis L. Soden. 2002. *Analysis of Small Business lending in Texas*. TR 2002-5, IPED, University of Texas at El Paso: El Paso, TX.

Section Four: The State of the Region-- Labor and Workforce

Key Finding

Overall, outside of El Paso County the labor force is relatively small and has witnessed unemployment cycles, but has been growing consistently over the past decade consistent with growth in population. The labor and workforce in the rural areas north and south of I-10 will closely follow trends that will spillover from El Paso County for the foreseeable future.

Labor Force

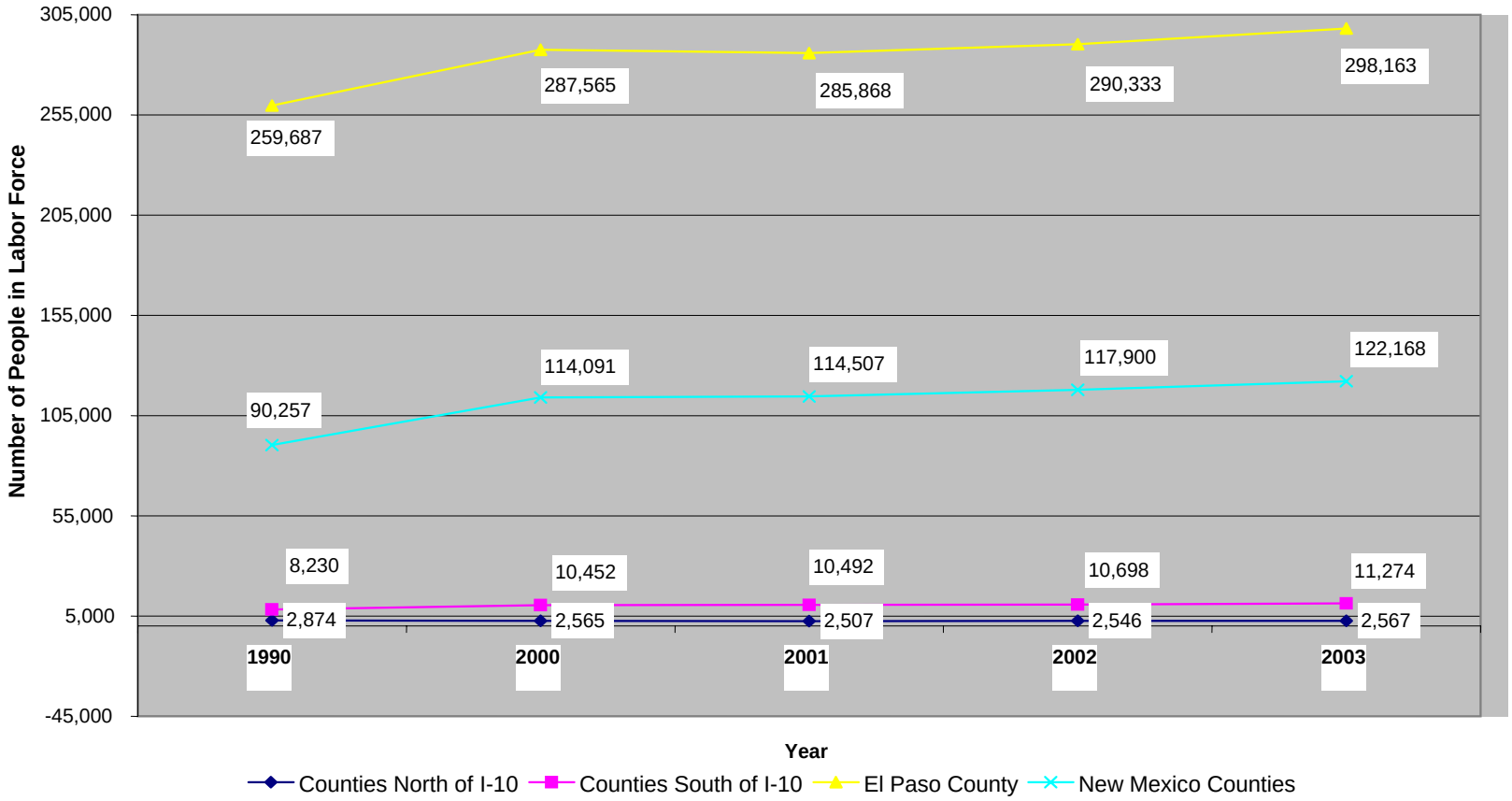
The Bureau of Labor and Statistics (BLS) within the Department of Labor defines the Labor Force as "all individuals 16 years of age or over who are part of the civilian non-institutional population and are either working or looking for work." People who are neither employed nor unemployed are not in the labor force. Persons not in the labor force are not classified as either employed or unemployed during the survey reference week.

- ✓ The total number of employed and unemployed people making up the Labor Force for El Paso County increased from 1990 through 2003 by approximately 38,000 (Chart 4-1).
- ✓ Overall, Labor Force increased steadily from 2001 through 2003 with the largest gains in the 1990s (Chart 4-1).
- ✓ The situation of the Labor Force for Counties North of I-10 indicates that the labor force increased slightly for Counties North of I-10 from 1990 through 2003 (Chart 4-1).

✓ For Counties South of I-10, the Labor Force decreased from 1990 through 2001 and experienced an additional slight decline from 2002 and 2003 (Chart 4-1).

Chart 4-1

Total Number of People in Labor Force from 1990 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Employed Persons

The BLS defines people with jobs as employed. Employed persons are all persons who did any work for pay or profit during the survey reference week,[1] did at least 15 hours of unpaid work in a family-operated enterprise, and were temporarily absent from their regular jobs because of illness, vacation, bad weather, industrial dispute, or various personal reasons.

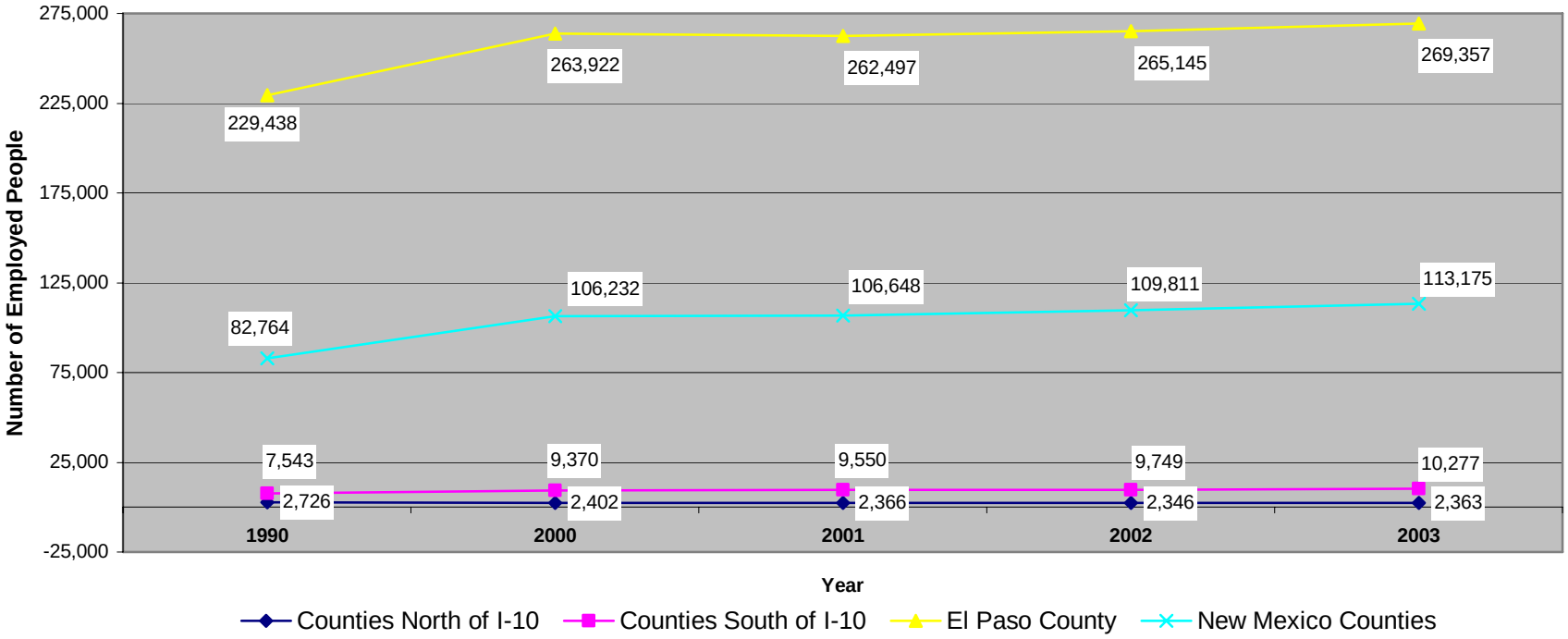
- ✓ The trend for the number of Employed persons follows the same trend as the Labor Force (Chart 4-2).
- ✓ The number of Employed persons increased from 1990 through 2000 for Counties South of I-10, El Paso County, and New Mexico Counties. For the three areas, the number of Employed persons increased steadily from 2001 through 2003 .
- ✓ The situation of Employed persons in Counties North of I-10 followed the same trend as the Labor Force and decreased from 2001 through 2003.

Unemployed Persons

Unemployed persons are defined as people who are jobless, actively looking for jobs, and available for work. Unemployed persons also include all persons who were not working and were waiting to be called back to a job from which they had been temporarily laid off.

Chart 4-2

Total Number of Employed People from 1990 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



The trend for number of Unemployed persons was different for each area of the region as seen in Chart 4-3.

- ✓ The number of Unemployed persons in Counties North of I-10 showed decreases in 1990 (148 persons) and 2001 (141 persons) compared to increases in 2000, 2002, and 2003.

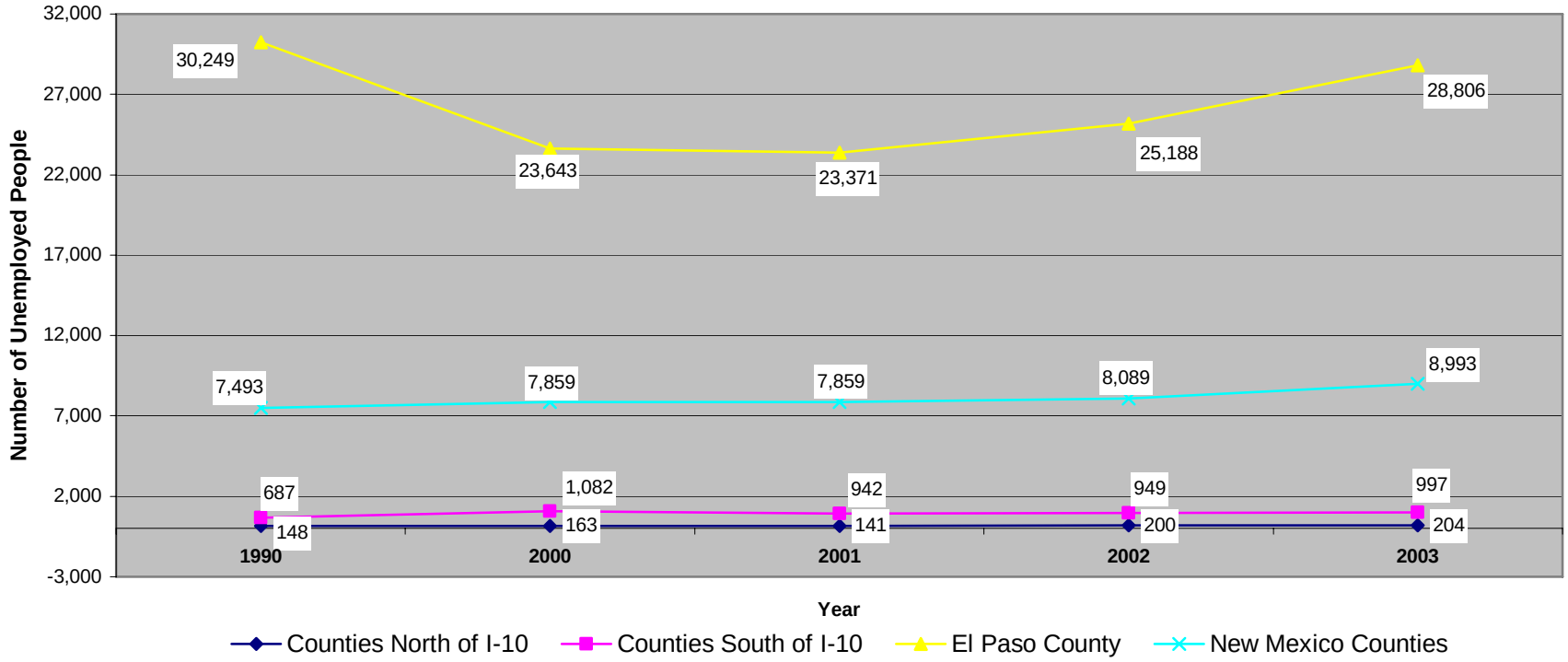
- ✓ For Counties South of I-10, the number of Unemployed persons peaked in 2000 to 1,082 persons, reached its lowest levels in 1990 (687 persons) and 2001 (942 persons), and increased slightly from 2001 through 2003.

- ✓ The number of Unemployed persons declined from 1990 through 2001 in El Paso County. The lowest level was in 2001 with 23,371 persons. From 2001 through 2003, the number of Unemployed persons increased from 23,371 to 28,806.

- ✓ The number of Unemployed persons in New Mexico Counties has increased steadily from 1990 through 2003.

Chart 4-3

Total Number of Unemployed People from 1990 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

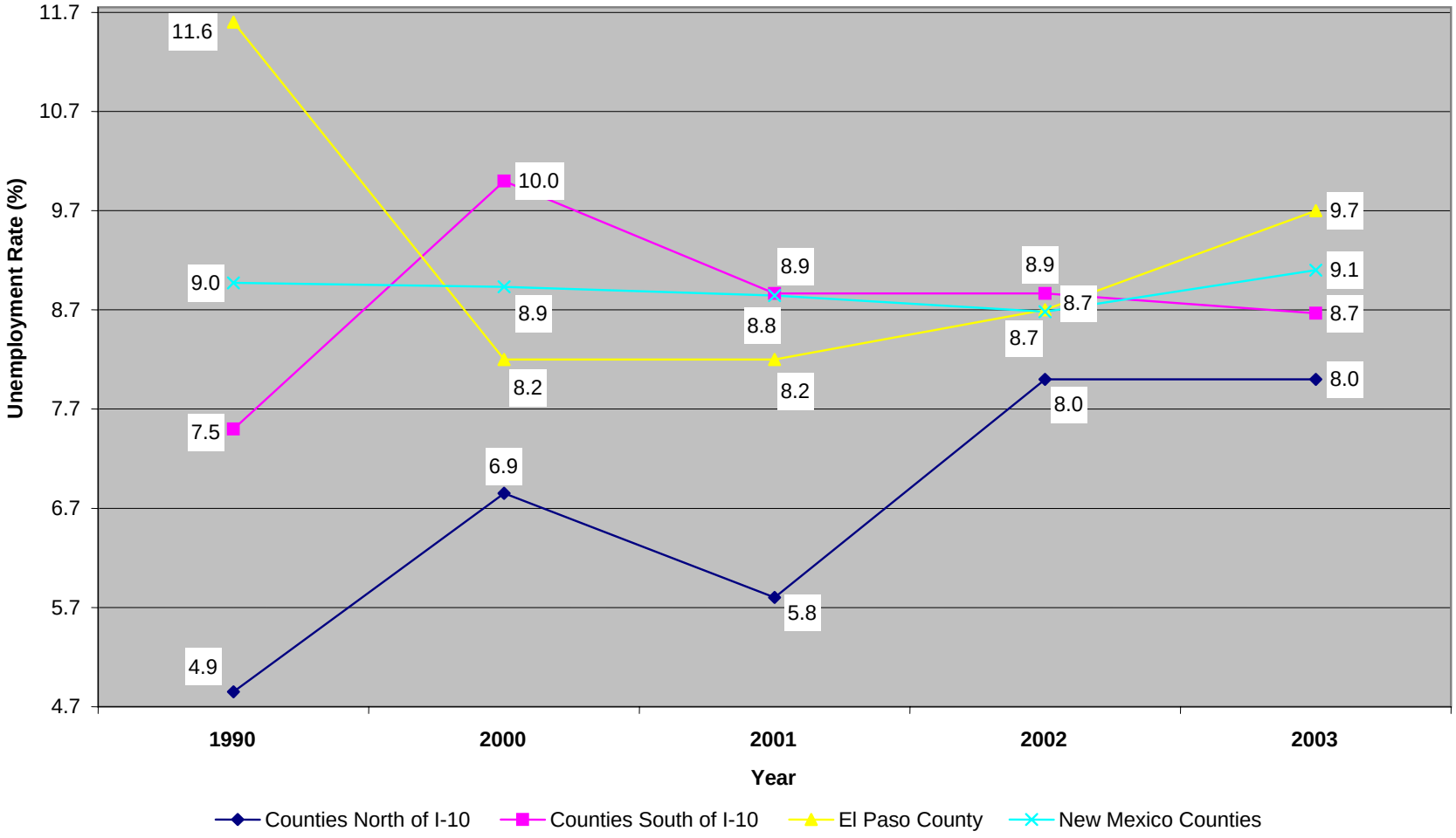


Unemployment Rate

- ✓ The Unemployment Rate exhibited a different pattern in each area as seen in Chart 4-4.
- ✓ The Unemployment Rate for Counties North of I-10 has its lowest point in 1990 (4.9) with the highest Unemployment Rate (8.0) reported in 2002 and 2003.
- ✓ For counties South of I-10, the Unemployment Rate peaked in 2000 at 10 percent and decreased in the period from 2001 through 2003.
- ✓ El Paso County recorded the highest Unemployment Rate in 1990 at 11.6 percent and in 2003 at 9.7 percent.
- ✓ New Mexico Counties showed the most stable Unemployment Rate that wavered between 8.7 percent in 2002 and 2003 and 9.0 percent in 1990.

Chart 4-4

Unemployment Rate in Labor Force from 1990 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



[1] http://www.bls.gov/cps/cps_htgm.htm. Each month, 1,500 highly trained and experienced U.S. Census Bureau employees interview persons in the 60,000 sample households for information on the labor force activities (jobholding and jobseeking) or non-labor force status of the members of these households during the week that includes the 12th of the month (the survey reference week). The sample is selected so as to be representative of the entire population of the United States. In order to select the sample, first, the 3,141 counties and county-equivalent cities in the country are grouped into 1,973 geographic areas. The U.S. Census Bureau then designs and selects a sample consisting of 754 of these geographic areas to represent each State and the District of Columbia. The sample is a State-based design and reflects urban and rural areas, different types of industrial and farming areas, and the major geographic divisions of each State.

Section Five: The State of the Region-- Employment by Sectors

Key Finding

Retail and Service are primary components of employment; but, the region can anticipate growth in construction and military employment, including civilian Department of Defense employees as a result of Base Realignment and Closure (BRAC). Tourism related employment is also likely to increase in counties near and adjacent to the Big Bend area and presents a better opportunity for the area south of I-10 more than in other areas of the region.

Employment

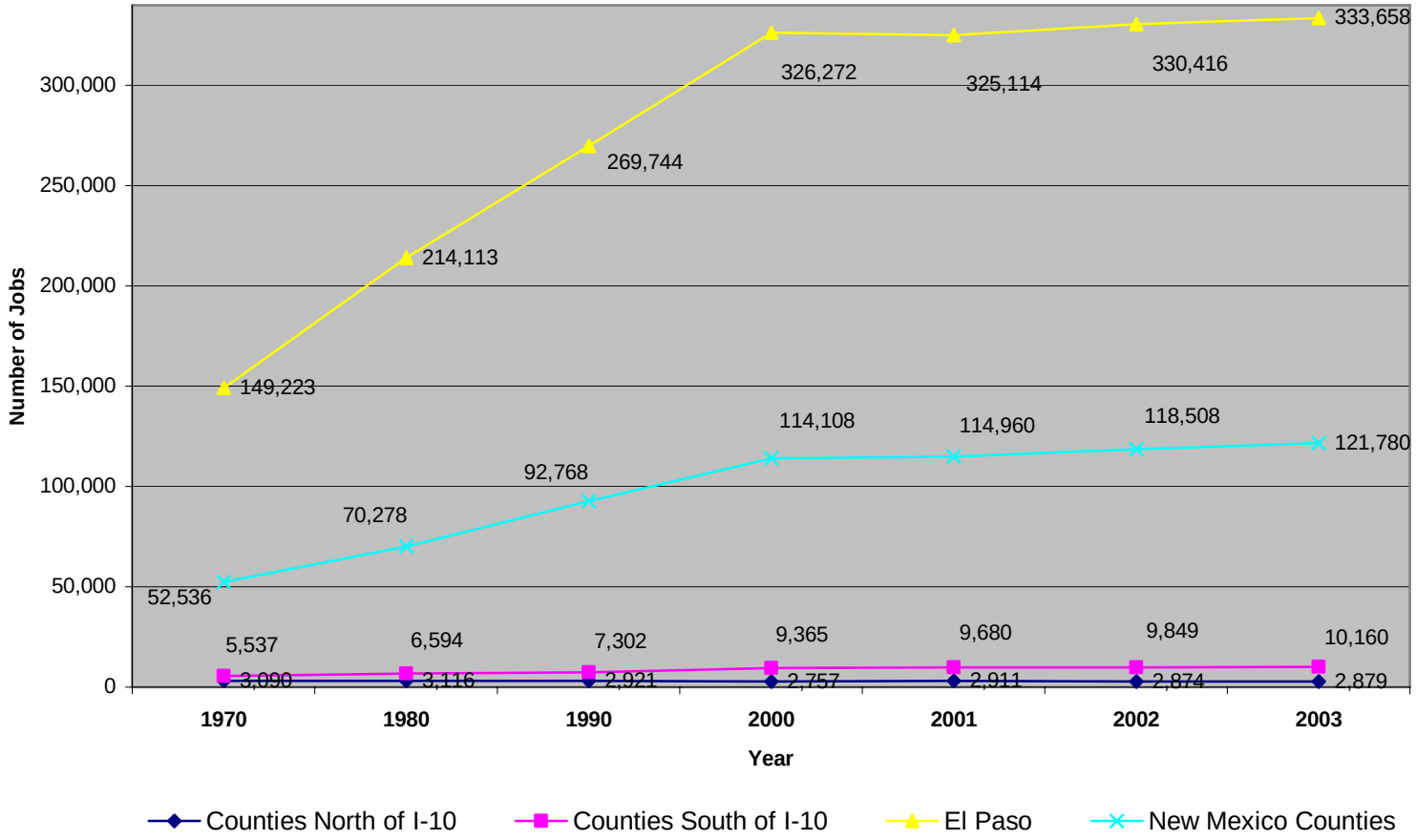
Employment refers to an estimate of the number of jobs, full-time plus part-time, by place of work. Total Employment is broken down into Farm and Nonfarm Employment. Nonfarm Employment is the sum of Private and Government Employment. Federal Civilian plus Military plus State and Local Government Employment equals Total Government Employment.[1]

Total Jobs

- ✓ According to Chart 5-1, the total number of jobs nearly doubled or more from 1970 through 2003 in Counties South of I-10, El Paso County, and New Mexico Counties.
- ✓ The total number of jobs declined slightly in Counties North of I-10 from 3,090 (1970) to 2,879 (2003).

Chart 5-1

Total Number of Jobs from 1970 though 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Private Industry Employment from 1970 though 2000

- ✓ Employment in the Service Industry has increased in all four areas as a share of total number of jobs as seen in Chart 5-2. For example, in Counties South of I-10 the Service Industry was 22.5 percent of total Private Industry Employment in 1970. In 2000, the share rose to 40.9 percent.

- ✓ Retail Trade remained relatively unchanged as a portion of Private Industry Employment in all four areas from 1970 though 2000 as seen in Chart 5-2.

- ✓ Manufacturing is highest in El Paso County and in New Mexico, while agriculture is distributed throughout the region and shows only minimal fluctuation.

Private Industry Employment from 2001 though 2003

- ✓ From 2001 through 2003, Retail Trade comprised over 15 percent of total jobs in all four areas. In 2003, Retail Trade was 25.2, 18.6, 15.8, and 15.3 percent of Private Industry Employment in Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties, respectively as shown in Chart 5-3.

- ✓ In Counties North of I-10 and Counties South of I-10 from 2001 through 2003, the proportion of Accommodation and Food Service jobs was larger when compared to El Paso County and New Mexico Counties, consistent with many tourism activities in these areas.

Chart 5-2

Private Industry Employment from 1970 through 2000 as a Share of Total Employment for Counties
North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

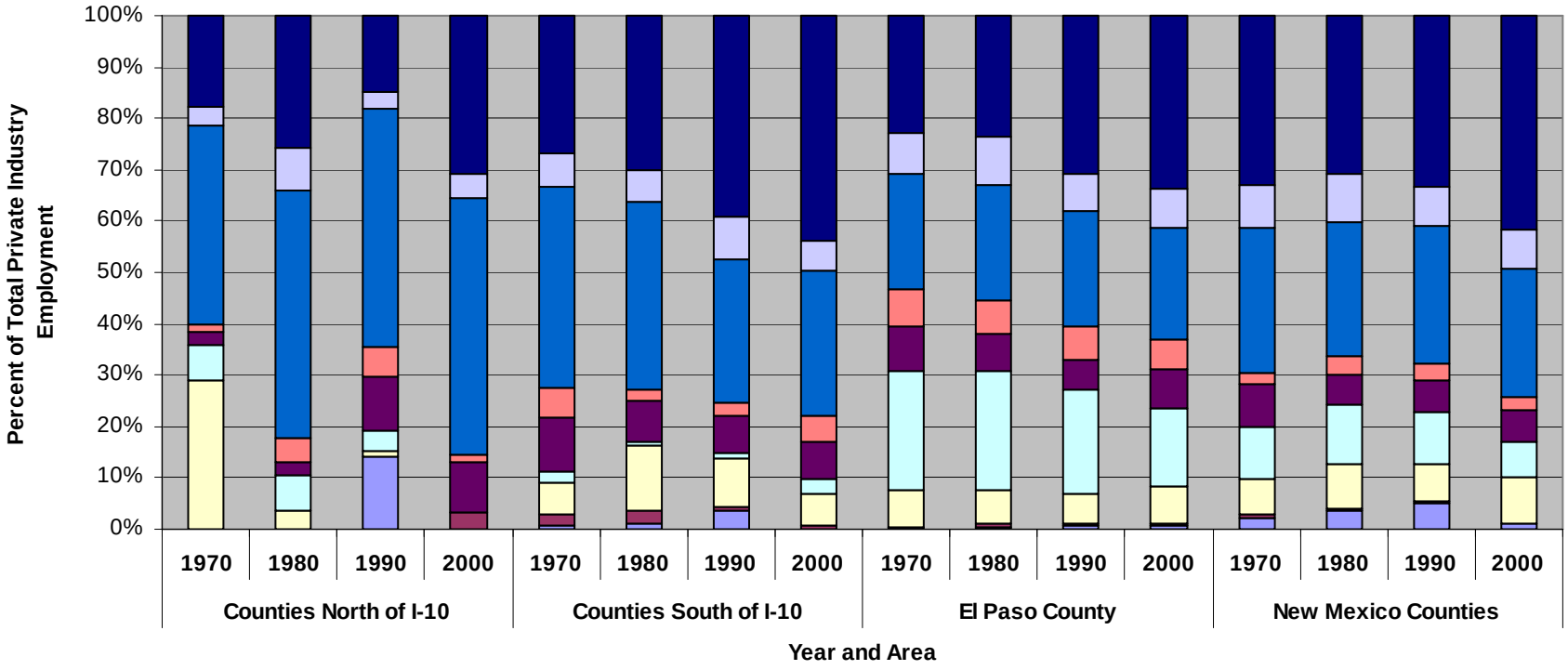
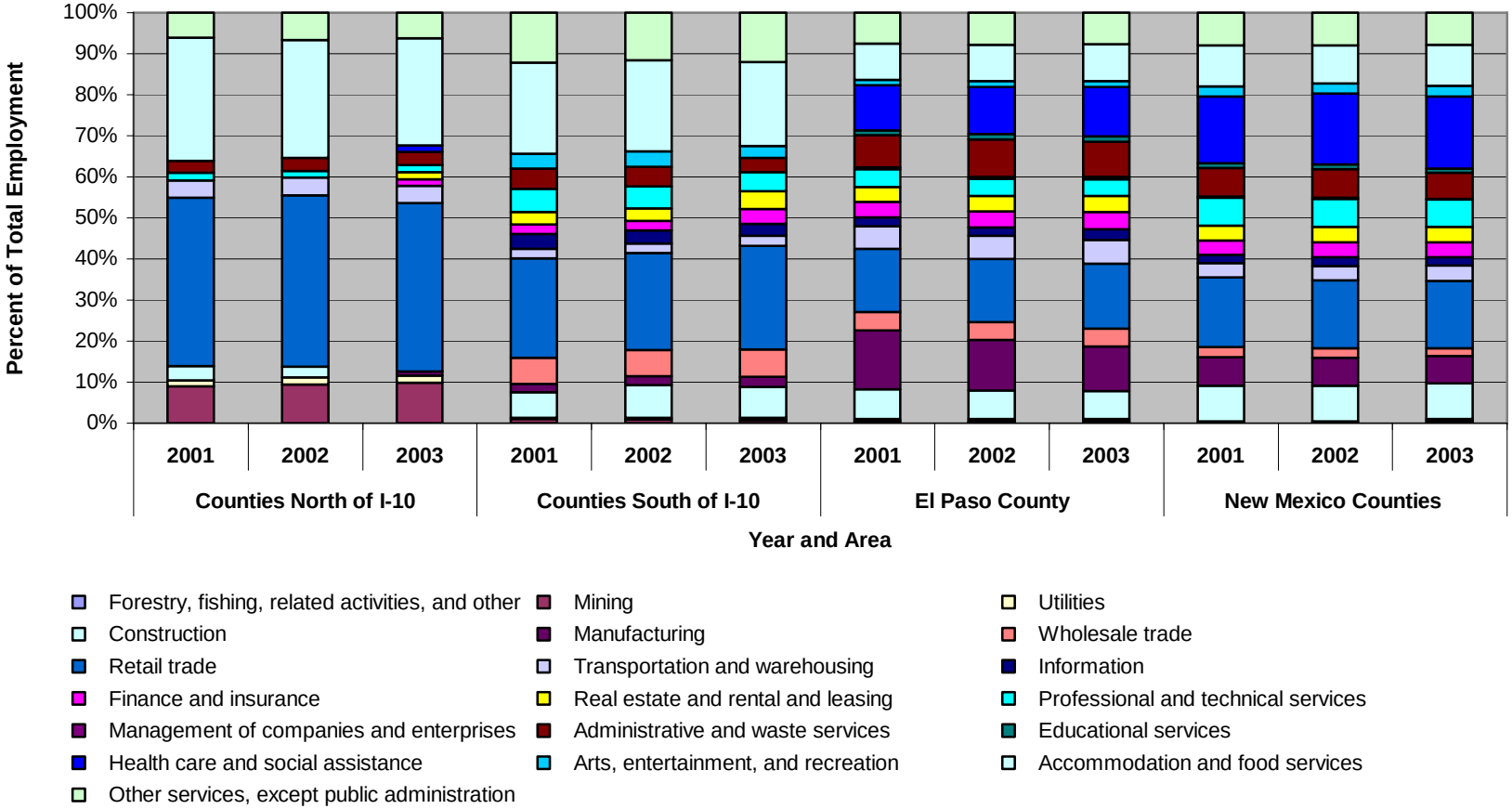


Chart 5-3

Private Industry Employment from 2001 through 2003 as a Share of Total Employment for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Private and Government Employment from 1970 through 2000

- ✓ The share of Private and Government Employment shows a different trend in all four areas from 1970 through 2000 illustrated by Chart 5-4.

- ✓ As a proportion of Total Employment, Private Industry Employment decreased from 1970 through 2000 in Counties North of I-10.

- ✓ In Counties South of I-10, the trend was relatively stable where Private Industry Employment rose from 69.3 in 1970 to 71.8 in 2000 as a share of Total Employment.

- ✓ In El Paso County and New Mexico Counties, Private Industry Employment increased as a share of total jobs. El Paso County increased from 69.5 to 79.1 percent in 1970 and 2000, respectively.

- ✓ In New Mexico Counties, Private Industry Employment as a share of total jobs increased from 54.3 percent in 1970 to 71.1 percent in 2000.

- ✓ Government Employment as a share of total jobs increased in Counties North of I-10, remained relatively stable in Counties South of I-10, and decreased in El Paso County and New Mexico Counties Total.

Private and Government Employment from 2001 through 2003

- ✓ In Counties South of I-10, El Paso County, and New Mexico Counties Total, Private Industry Employment as a share of Total Employment remained the same from 2001 through 2003 reported in Chart 5-5.

- ✓ Counties North of I-10 experienced a slight decrease in Private Industry Employment. Private Industry jobs as a portion of total jobs declined from 67.0 percent in 2001 to 65.9 percent in 2003.

- ✓ Government Employment in the region is highest in Counties North of I-10 and is expected to increase in El Paso County as a result of an influx of military personnel.

Chart 5-4

Private Industry and Government Employment from 1970 through 2000 as a Share of Total Employment for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

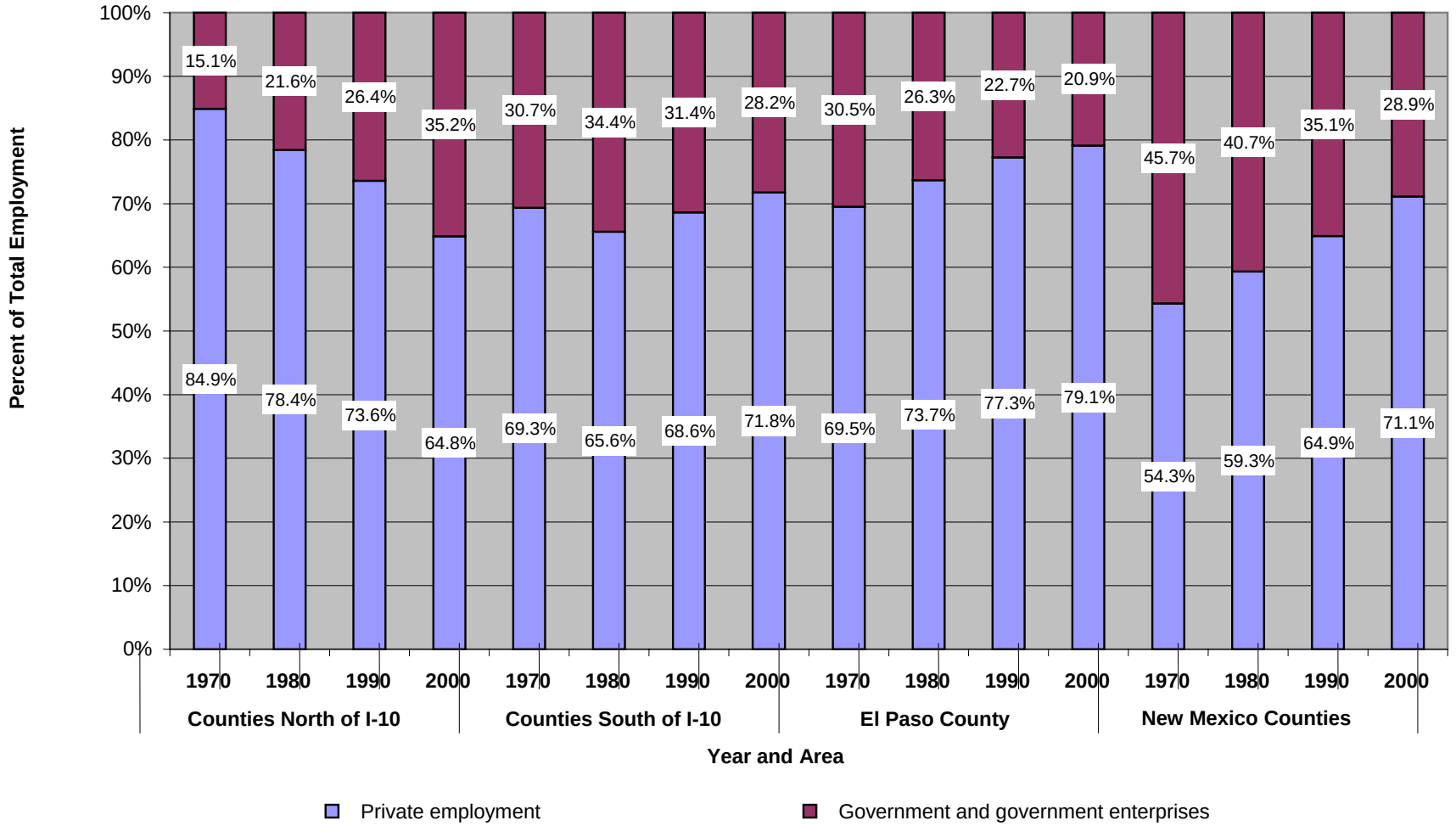
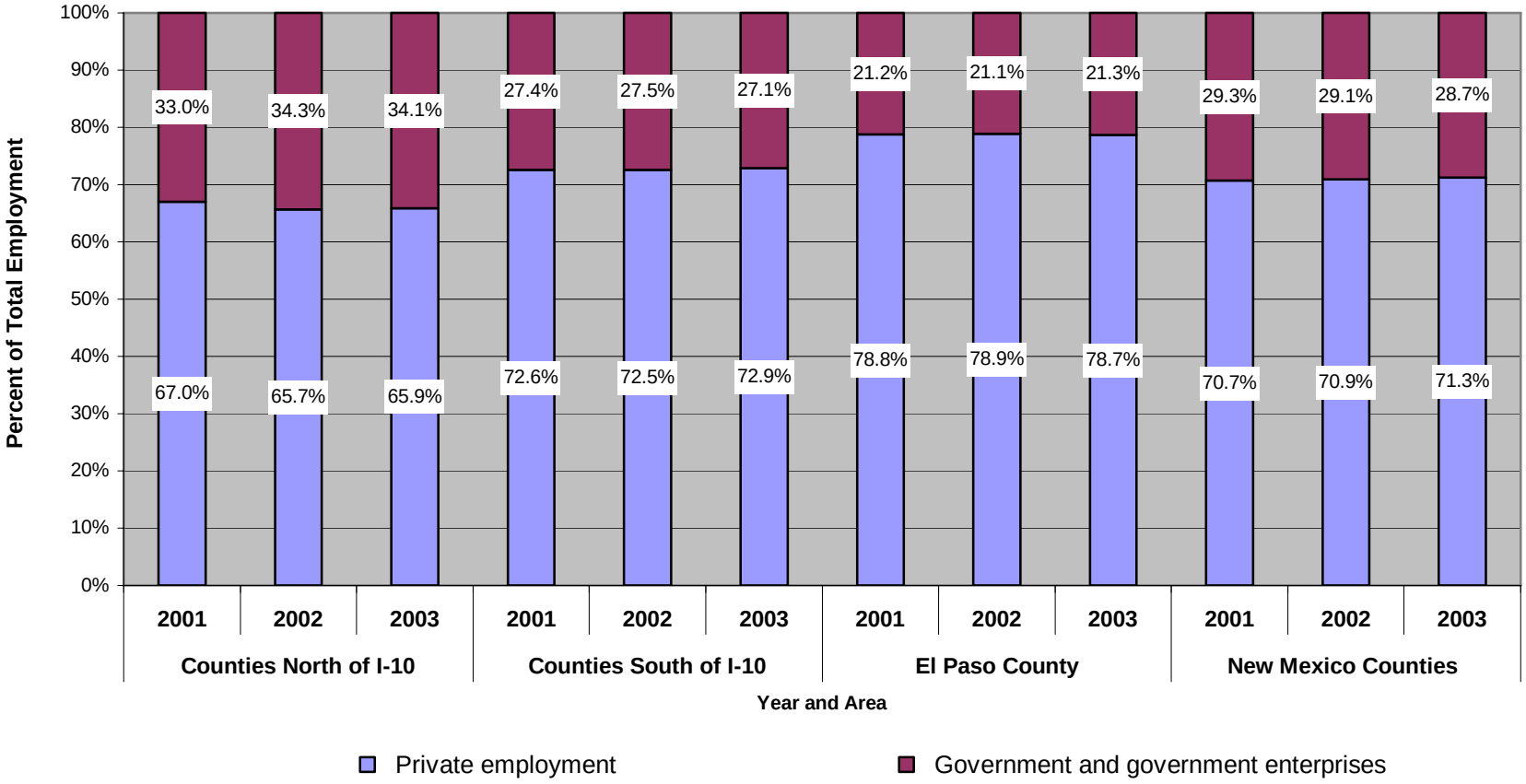


Chart 5-5

Private Industry and Government Employment from 2001 through 2003 as a Share of Total Employment for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Endnotes to Section Five

[1] Please note that the methodology for employment data collection was changed after 2000. The North American Industry Classification System was utilized from 2001 through 2003. From 1970 through 2000, the Standard Industry Classification system was used. For this reason, the names of the industries are different and not comparable across classification systems.

Section Six: The State of the Region-- Income and Its Components

Income Components

Personal Income

Personal Income is a key indicator regarding the economic well-being of a region. It is defined as the income that is received by all persons from all sources and is presented by the place of residence of the income recipients. Personal Income is calculated by tabulating its principal drivers which are the sum of Net Earnings (plus Residence Adjustments), income from Dividends, Interest, and Rent, Personal Transfer Payments, and less Contributions for Government Social Insurance.

Net Earnings is derived by adding the Resident Adjustment to Total Work Earnings. The Resident Adjustment is used to convert work earnings to a place of residence basis; and, a negative Resident Adjustment indicates that more non-residents commute into the area and take income out when compared to residents who do not commute and live in the area. Dividends, Interest, and Rent is money received from outside sources, such as stocks, rental income, etc. Personal Transfer Payments are payments made to persons and nonprofit institutions by federal, state, and local governments and by businesses.

Key Finding

For the four areas considered in this report, Personal Income has increased steadily from 1970 through 2003. As a result, per capita income has shown steady increases from 1970 through 2003 in all areas as shown in Chart 3-10. On the other hand, the key drivers of Personal Income—Total Earnings, Dividends, Interest, and Rent, and Personal Transfer Payments—tell a different story as seen in Chart 6-2. Residents are becoming more dependent on Transfer Payments which are growing at a faster rate than Total Earnings and Dividends, Interest, and Rent. The stagnant growth of Net Earnings and Dividends, Interest, and Rent could jeopardize the economic health of the four areas.

Personal Income from 1970 through 2003

- ✓ Overall, per capita personal income has grown steadily from 1970 through 2003 for all four areas except Counties North of I-10. Counties North of I-10 demonstrate a dramatic decreasing trend from over $25,000 in 1970 to $8,896 in 2003 seen in Chart 6-1.

- ✓ El Paso County per capita personal income increased the most from $14,130 in 1970 to $20,875 in 2003. Per Capita Income in Counties South of I-10 also increased from $12,439 in 1970, declined in 1990 ($16,212), and increased to $19,056 in 2003.

- ✓ As a measure of economic well-being, Net Earnings as a share of Personal Income declined from 1970 through 2000 in all areas. In 1970, Net Earnings consisted of the largest share in New Mexico Counties at 81.7 percent. In 2003, the largest share was held by El Paso County with 68.9 percent. In 2003, Counties South of I-10 reported 58.0 percent of Net Earnings as a share of Personal Income, the lowest among all four areas for 2003 in Chart 6-2.

- ✓ The trend for Dividends, Interest, and Rent as a share of Personal Income showed the same behavior for all four areas. As a share, it peaked in 1990 in all four areas and declined from 2000 through 2003. In 1990, Counties South of I-10 exhibited the largest share with 27.1 percent.

✓ In El Paso County in 2003, Dividends, Interest, and Rent comprised the smallest share of Personal Income (Chart 3-11). Dividends, Interest, and Rent comprised the largest portion of personal income in Counties North of I-10 with a share of 14.6 percent, the highest for all four areas in 2003.

Chart 6-1

Per Capita Income from 1970 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties in 2003 Real Dollars

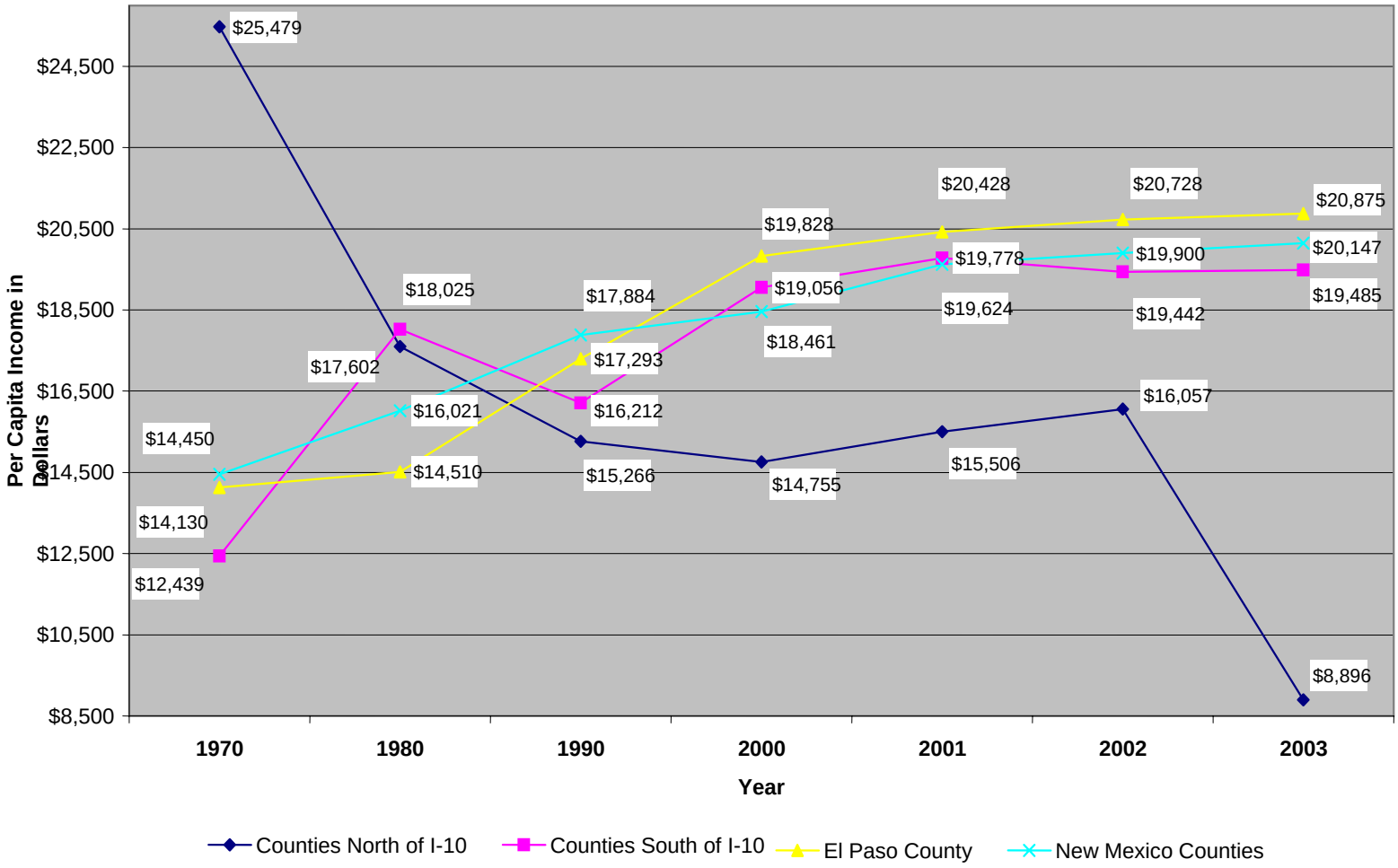
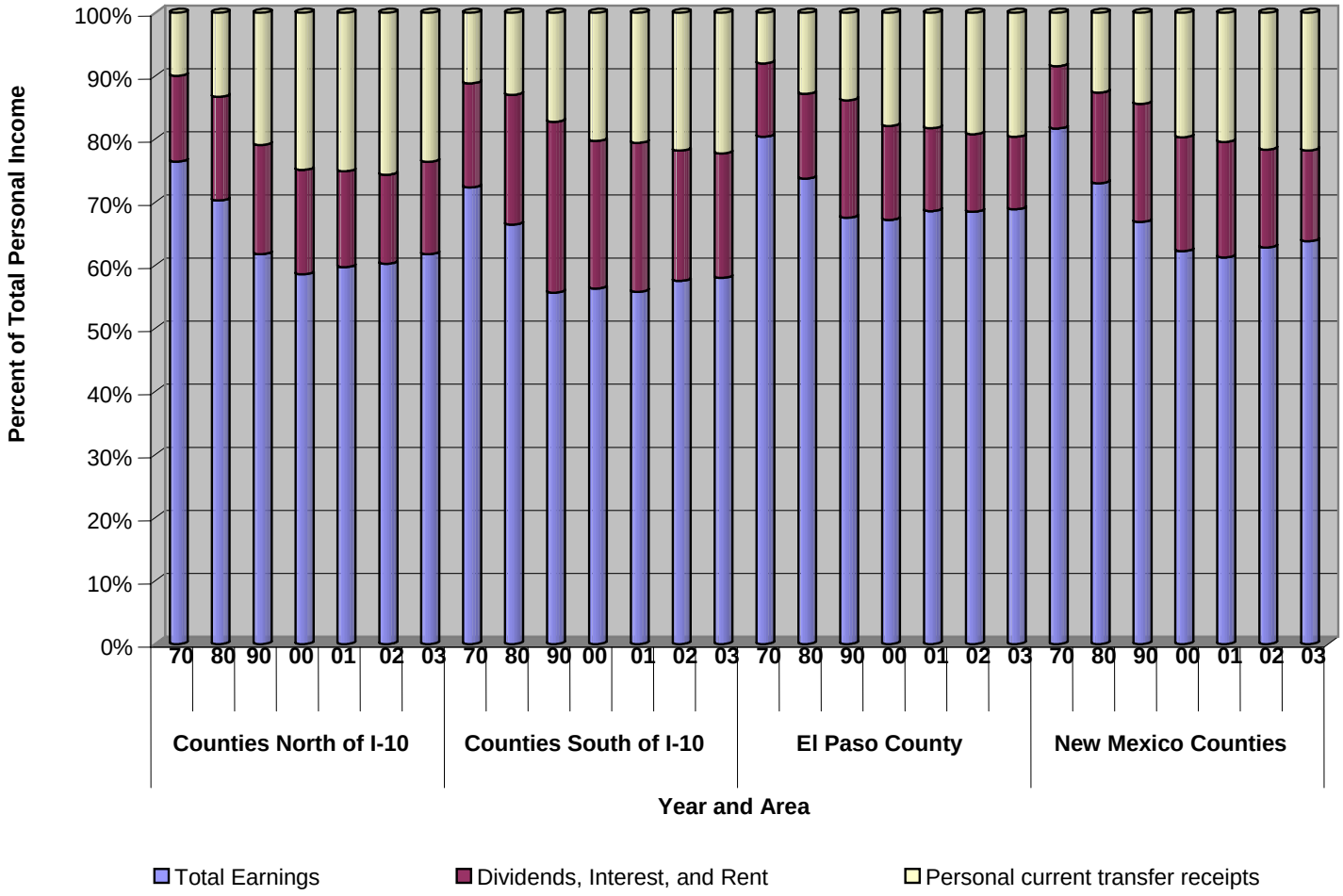


Chart 6-2

Percent of Personal Income Components from 1970 to 2003 for Counties North of I-10, South of I-10, El Paso County, and New Mexico Counties in 2003 Real Dollars



Average Wages per Job

According to the Bureau of Economic Analysis (BEA), average wage per job is wage and salary disbursements divided by the number of wage and salary jobs. The BEA also defines wage and salary disbursements as "the monetary remuneration of employees, including the compensation of corporate officers; commissions, tips, and bonuses; and, receipts in kind, or pay-in-kind, such as the meals furnished to the employees of restaurants. It reflects the amount of payments disbursed, but not necessarily earned during the year."

- ✓ Overall, El Paso County demonstrated higher levels of average wages per job from 1970 ($5,725) through 2003 ($27,454) except in 1990 when Counties North of I-10 recorded higher wages of $18,292 in contrast to El Paso's average wage of $18,087 as seen in Chart 6-3.
- ✓ Counties South of I-10 consistently showed lower average wages per job from 1970 ($3,002) through 2003 ($19,040).
- ✓ For the four areas from 1970 through 2000, the average wage per job increased with an average growth rate over 30 years of 343.2 percent. Counties South of I-10 experienced the most growth at 445.4 percent, while New Mexico Counties experienced the lowest growth rate at 284.7 percent shown in Table 6-1.
- ✓ The trend is different from 2001 through 2003 where we find growth of the average wage slightly increasing for all four areas, but not as great when compared to growth from 1970 through 2000. The average growth rate was 8.6 percent. Counties North of I-10 saw the highest growth at 14.3 percent and El Paso County saw the lowest growth at 5.4 percent.

Table 6-1
Average Wage Growth Rates 1970 to 2003

	Growth Rate from 1970 through 2000	Growth Rate from 2001 through 2003
Counties North of I-10	301.4%	14.3%
Counties South of I-10	445.4%	7.2%
El Paso County	341.3%	5.4%
New Mexico Counties	284.7%	7.6%
Average Growth Rate	343.2%	8.6%

Transfer Payments

- ✓ The components of Personal Transfer Payments show differing trends in Chart 6-4.
- ✓ Retirement and Disability, combined with veteran's benefits, dominate the transfer payments in the region and account for close to 50 percent of all transfers in all areas.
- ✓ As a share of Total Transfer Payments, Retirement and Disability Insurance Benefits decreased from 1970 through 2003 in all four areas.
- ✓ Medical and Income Benefits increased from 1970 through 2003 in all four areas when compared proportionally to Total Transfer Payments.
- ✓ Unemployment Insurance Compensation, Veterans Benefits, Federal Education and Training Assistance, and Other Transfer Payments demonstrated diverging patterns from 1970 through 2003 in all four areas.
- ✓ Unemployment Insurance Compensation increased in Counties South of I-10 from 1.5 percent in 1970 to 3.1 percent in 2003. El Paso County showed a different trend. Unemployment Insurance Compensation peaked in 1980 at 5.3 percent and declined to 0.7 percent in 2003.
- ✓ Veterans Benefits decreased in all four areas as a share of Total Transfer Payments. They were the highest in 1970 in all four areas.

Chart 6-3

Average Wage per Job from 1970 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

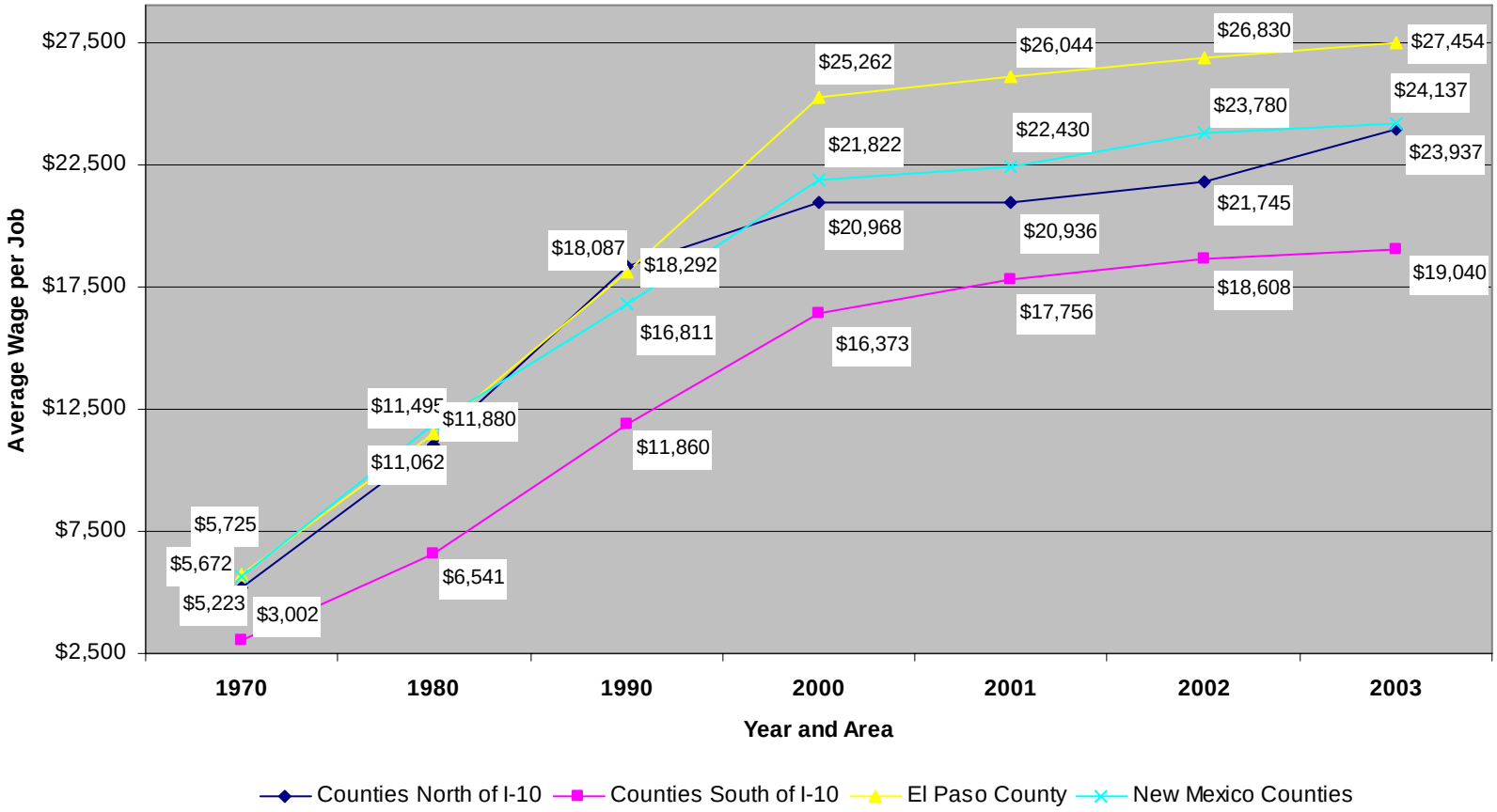
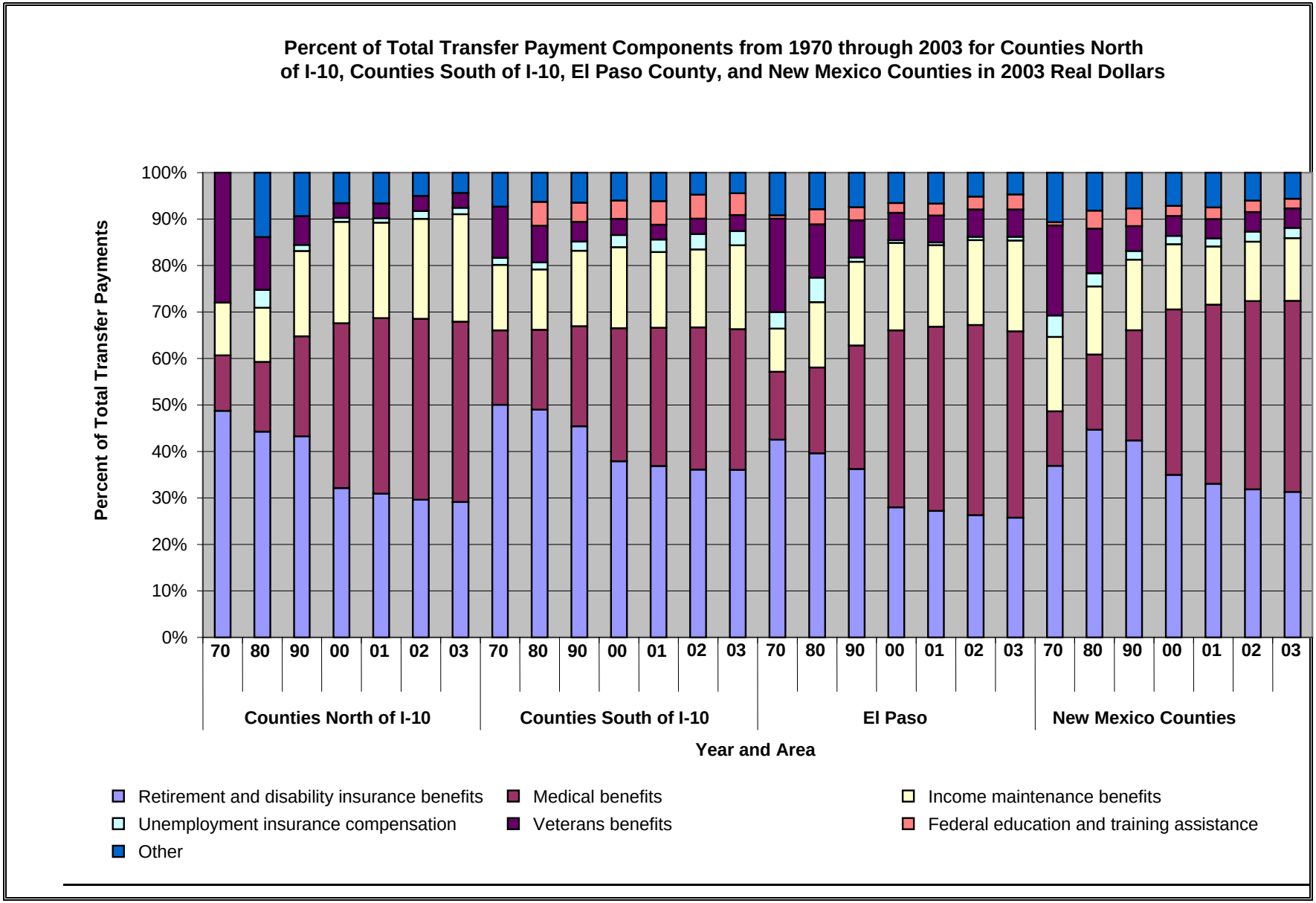


Chart 6-4


Percent of Total Transfer Payment Components from 1970 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties in 2003 Real Dollars
Percent of Total Transfer Payments
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
70 80 90 00 01 02 03 70 80 90 00 01 02 03 70 80 90 00 01 02 03 70 80 90 00 01 02 03
Counties North of I-10
Counties South of I-10
El Paso
New Mexico Counties
Year and Area
Retirement and disability insurance benefits
Medical benefits
Income maintenance benefits
Unemployment insurance compensation
Veterans benefits
Federal education and training assistance
Other

Earnings[1]

Work Earnings is the sum wage and salary disbursements, supplements to wages and salaries, and proprietors' income. Work Earnings can be further subdivided into Non-Farm and Farm Earnings. Non-Farm Earnings incorporate wage and salary disbursements, supplements to wages and salaries, and proprietors' income for all industries except for farm. Farm Earnings are the net income from the current production of agricultural commodities and excludes the income of non-family farm corporations.

Private Earnings and Government Earnings make up Non-Farm Earnings. Private Earnings is the sum of wage and salary disbursements, supplements to wages and salaries, and Non-Farm proprietor's income by Industry. Government Earnings consists of the wages and salaries of civilian employees of the Federal Government, full-time military personnel, members of the military reserves, and wages and salaries of state and local government employment.

Earnings from 1970 through 2000

- ✓ Nonfarm Earnings as a share of Total Earnings grew steadily from 1970 through 2000 for Counties North of I-10 and New Mexico Counties demonstrated by Chart 6-5. Counties South of I-10 grew slightly from 94.6 percent in 1970 to 95.5 percent in 2000.
- ✓ For El Paso County, Nonfarm Earnings as a share of Total Earnings remained consistent from 1970 through 2000.

Chart 6-5

Nonfarm Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

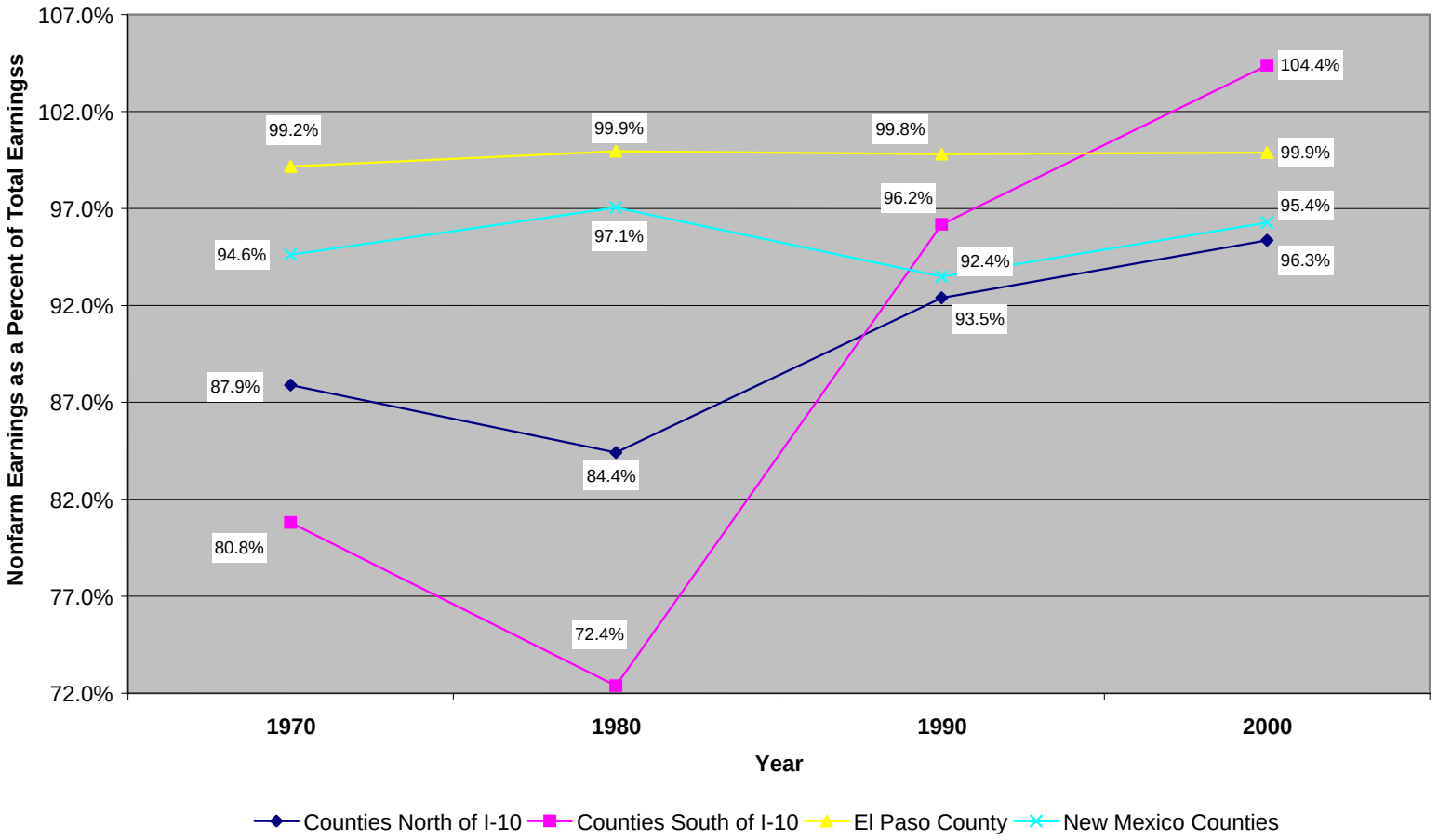
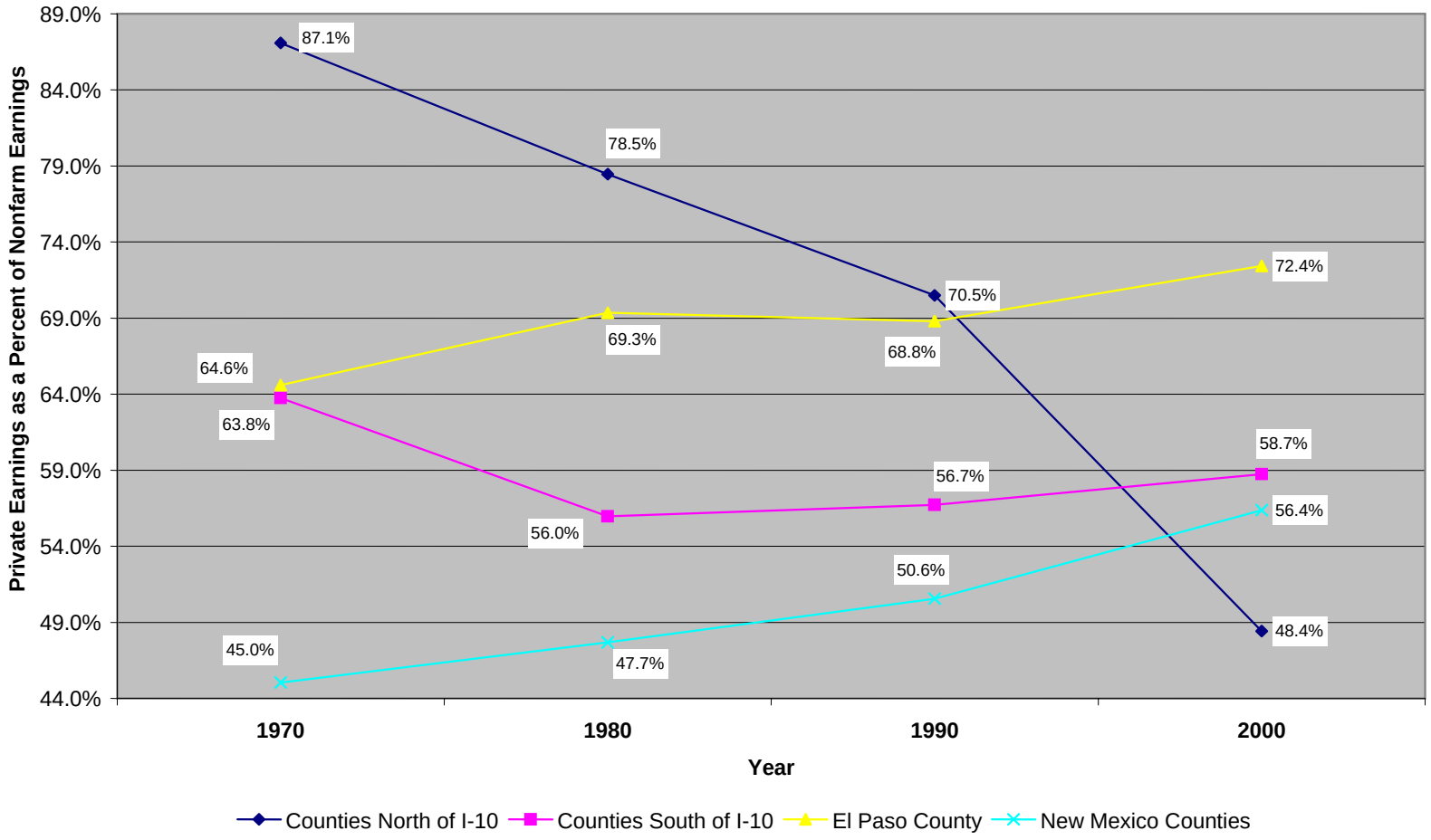


Chart 6-6

Private Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



- ✓ For Counties South of I-10, Private Earnings decreased as a share of Nonfarm Earnings from 1970 (63.8 percent) through 2000 (58.7 percent). Likewise, Counties North of I-10 showed a dramatic decreasing trend in Private Earnings as a share of Nonfarm Earnings from 87.1 percent (1970) to 48.4 percent (2000) viewed in Chart 6-6

- ✓ El Paso County and New Mexico Counties demonstrate an increasing trend. In El Paso County, Private Earnings as a share of Nonfarm Earnings increased from 64.6 percent in 1970 to 72.4 percent in 2000.

- ✓ In New Mexico Counties, the Private Earnings as a share of Nonfarm Earnings was 45 percent in 1970 and increased to 56.4 percent in 2000.

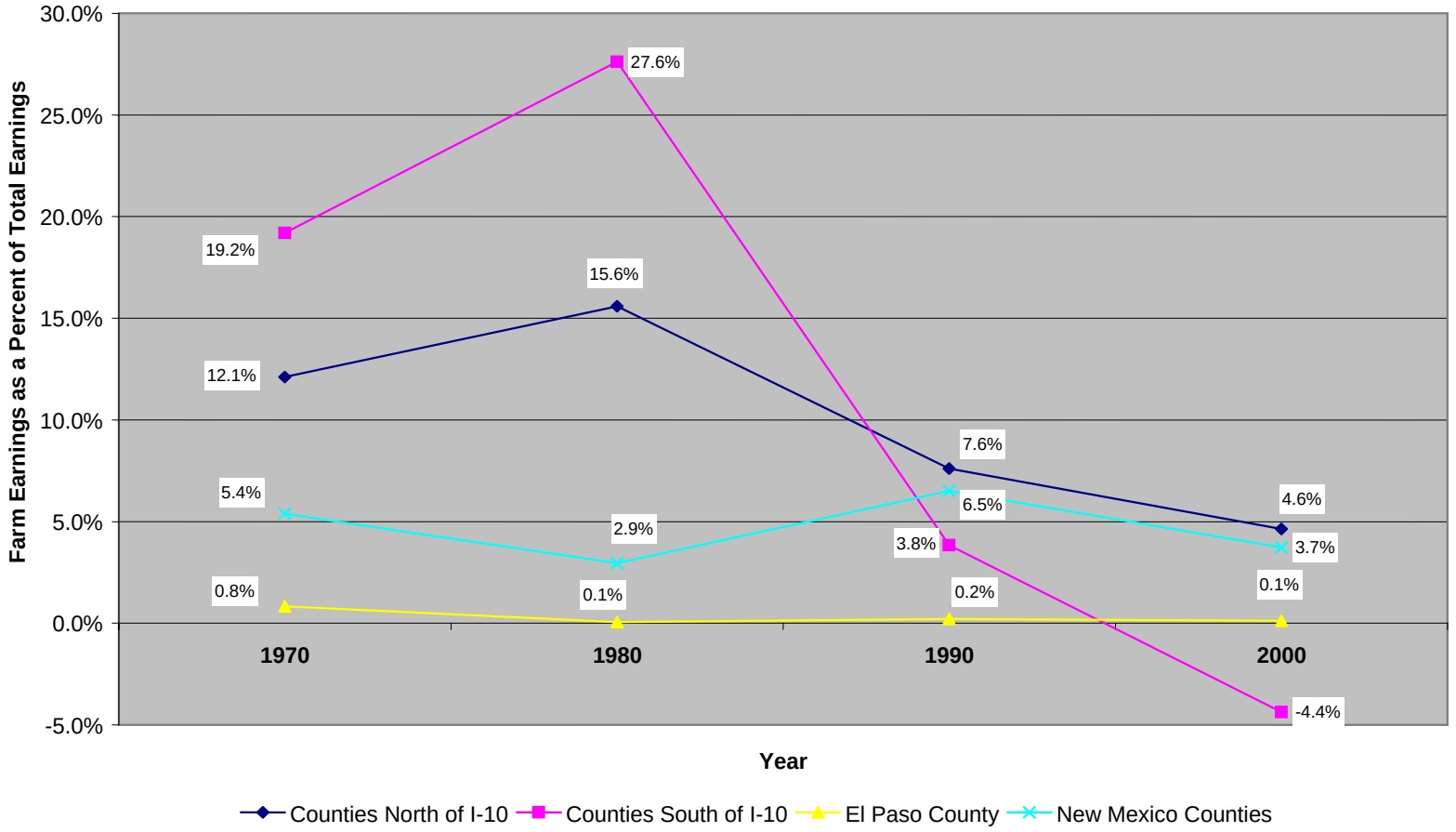
- ✓ Overall, Farm Earnings as a Share of Total Earnings declined steadily for Counties North of I-10, Counties South of I-10, and New Mexico Counties in Chart 6-7.

- ✓ For El Paso County, Farm Earnings compose a smaller share of Total Earnings when compared to the other areas 2000 and remained below one percent as a portion of Total Earnings.

- ✓ Private Earnings as a share of Nonfarm Earnings demonstrated different trends for each area.

Chart 6-7

Farm Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Earnings by Industry and Government

- ✓ Retail trade and services are the primary industry leaders in regional earnings based on data provided by Chart 6-8.

- ✓ In El Paso and Doña Ana, manufacturing has decreased marginally in the last decade.

- ✓ Services from 1970 to 2000 have increased in all four regions.

- ✓ Government Earnings, reported in Chart 6-9, range as a portion of Nonfarm Earnings increased from 1970 (12.9 percent) through 2000 (51.6 percent) for Counties North of I-10.

- ✓ In El Paso County and New Mexico Counties, Government Earnings as a share of Nonfarm Earnings decreased steadily from 1970 though 2000. In El Paso County, Government Earnings declined from 35.4 percent in 1970 to 27.6 percent in 2000.

- ✓ State and Local Government Earnings in El Paso County and New Mexico Counties increased as a share of Government Earnings from 1970 through 2000 in Chart 6-10. El Paso County had a share of 14.4 percent in 1990 and 44.9 percent in 2000. New Mexico Counties had a share that increased from 25.3 percent in 1990 to 51.5 percent in 2000.

- ✓ On the other hand, State and Local Government Earnings in Counties North of I-10 and Counties South of I-10 have decreased from 1970 through 2000. Counties North of I-10 had a share of 90.6 percent in 1970 which declined to 63.6 in 2000, while Counties South of I-10 had a share for 72.2 percent in 1990 that declined to 2000 in 68.4 percent.

Chart 6-8

Industry Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

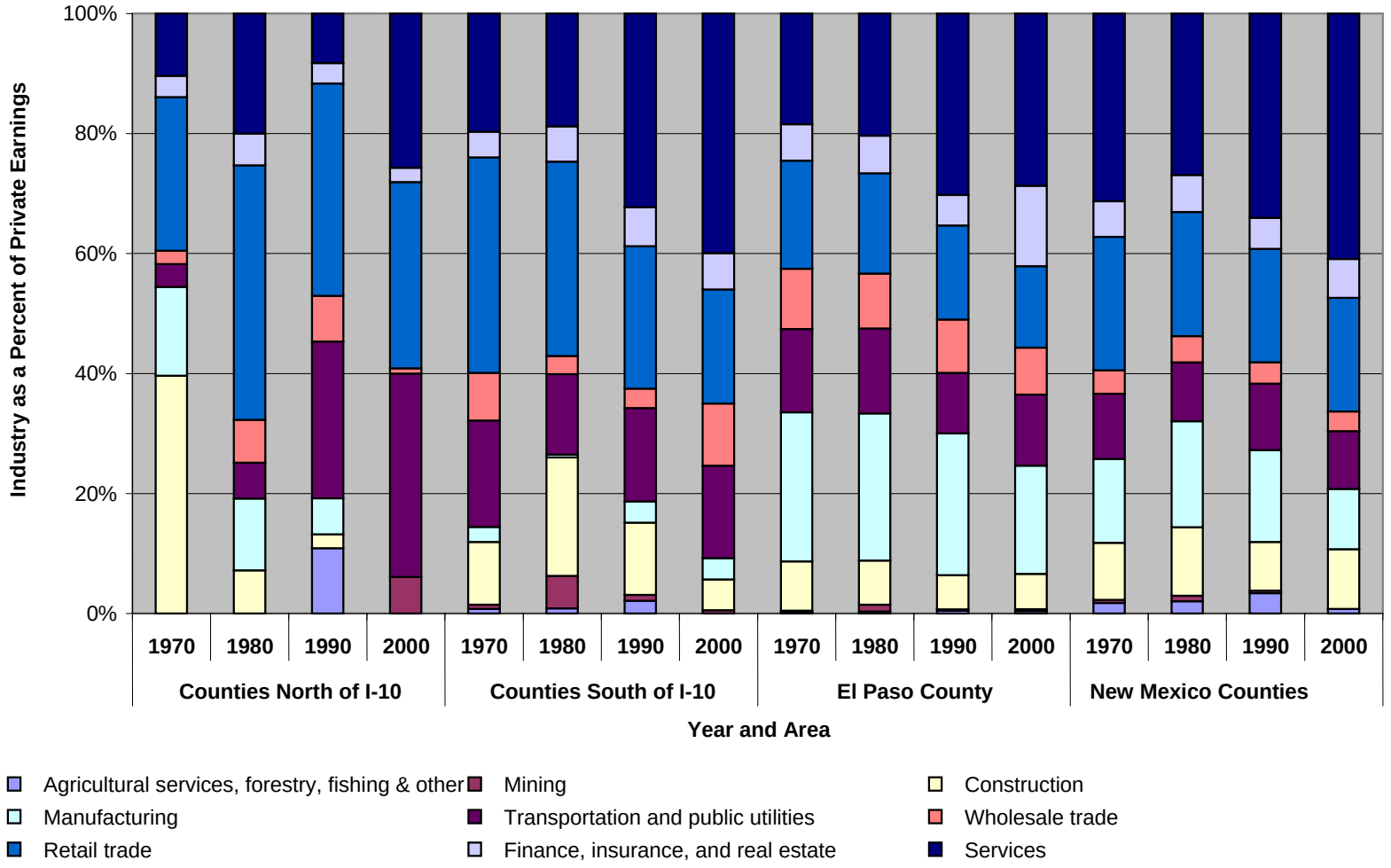


Chart 6-9

Government Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

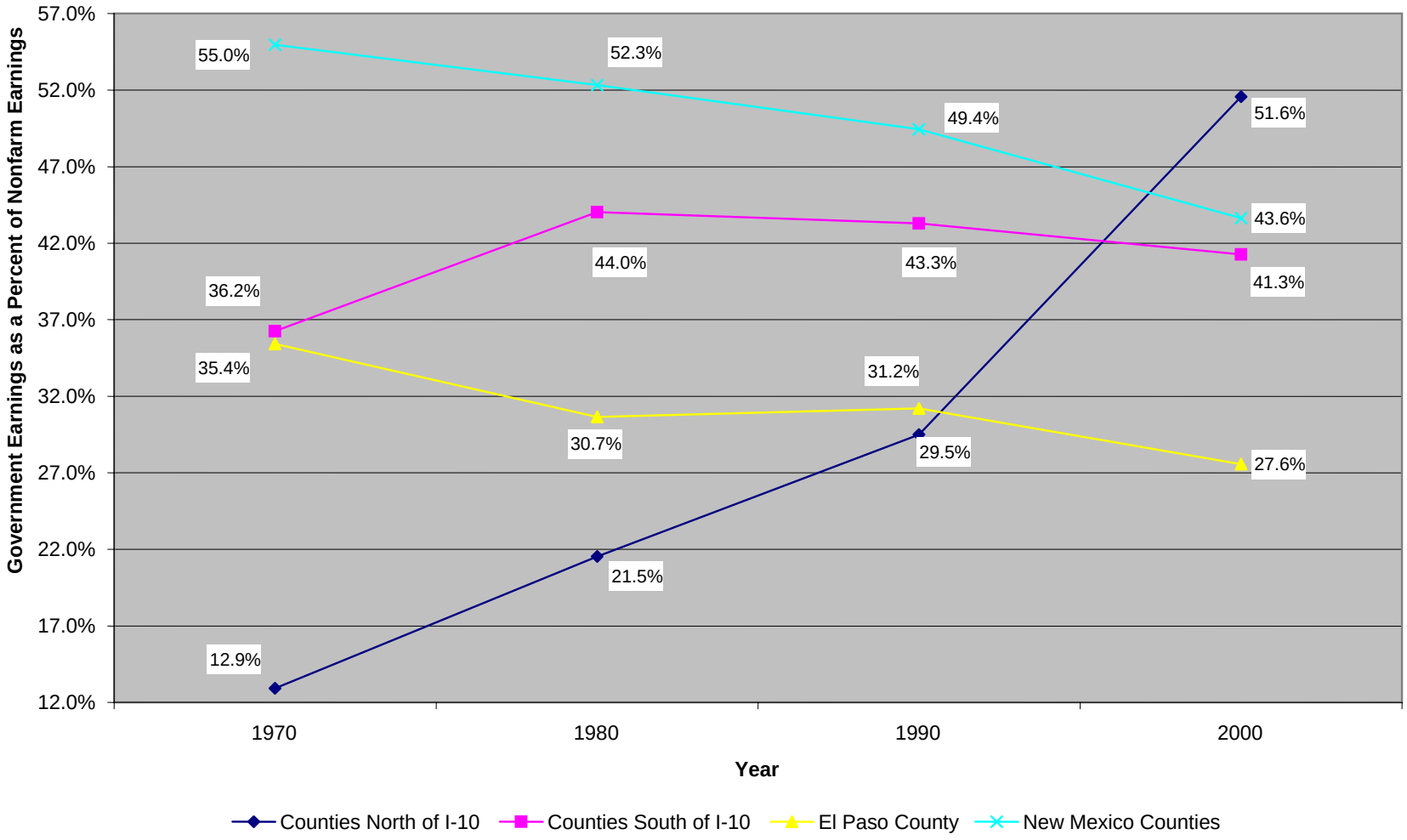
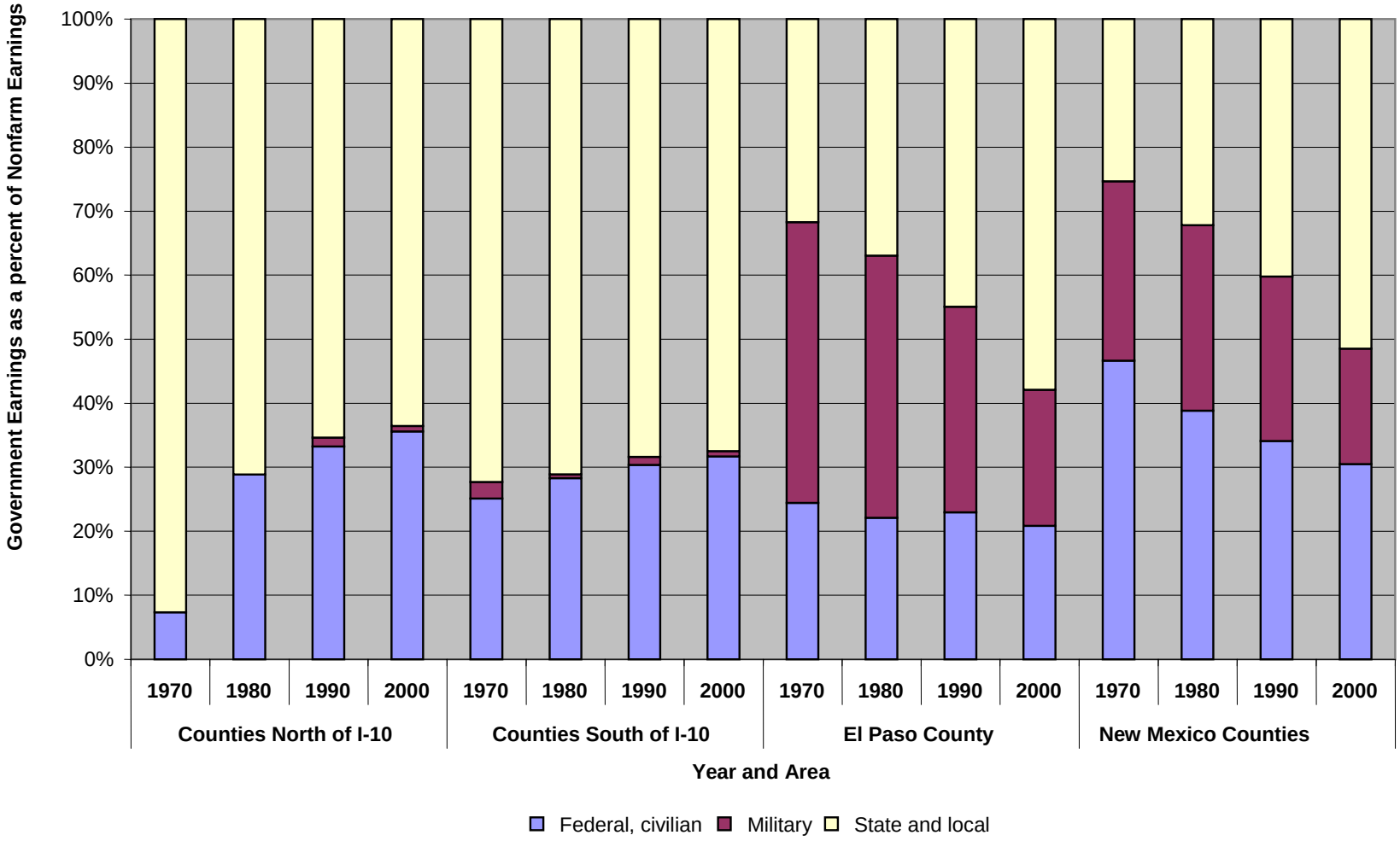


Chart 6-10

Government Earnings from 1970 through 2000 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Earnings from 2001 through 2003

The methodology used for collecting data changed from 2000 to 2001. Data from 1970, 1980, 1990, and 2000 figures utilize the Standard Industrial Classification (SIC) system, while data from 2001 forward utilizes the North America Industrial Classification System or NAICS. The transition resulted in regrouping several industrial classifications and correcting problems brought about by the impact of technology on many industries and harmonized trade records between the United States, Canada, and Mexico as part of NAFTA.

- ✓ El Paso County and New Mexico Counties showed a pattern consistent with 1970 through 2000 data. Both remained relatively the same from 2001 through 2003 as seen in Chart 6-11 when examining Nonfarm Earnings as a share of total Earnings.
- ✓ Counties South of I-10 demonstrate an increasing trend from 2001 through 2003 as the Nonfarm Earnings increased as a share of Total Earnings. Conversely, it decreased for the Counties North of I-10.
- ✓ Farm Earnings as a share of Total Earnings is the smallest in El Paso County and New Mexico Counties from 2001 through 2003 as seen in Chart 6-12.
- ✓ Counties North of I-10 illustrate a negative trend as a share of Total Earnings.
- ✓ As a share of Nonfarm Earnings, Private Earnings for all areas remained consistent from 2001 through 2003 in Chart 6-13.
- ✓ Overall, El Paso Counties had the highest share of Private Earnings and Counties North of I-10 had the lowest.
- ✓ The portion of Private Earnings in comparison to Total Earnings was similar between Counties South of I-10 and New Mexico Counties.

Chart 6-11

Nonfarm Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

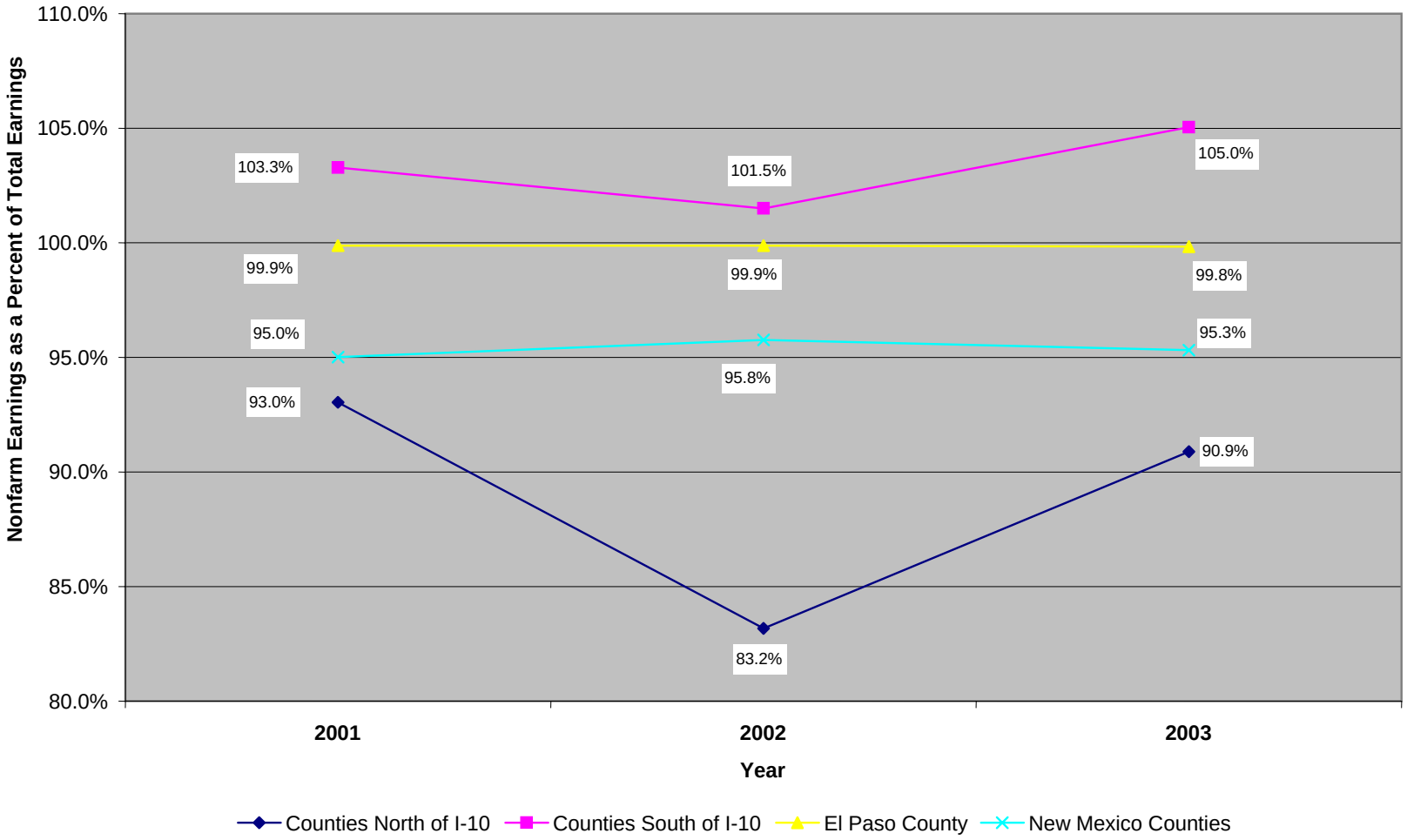


Chart 6-12

Farm Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

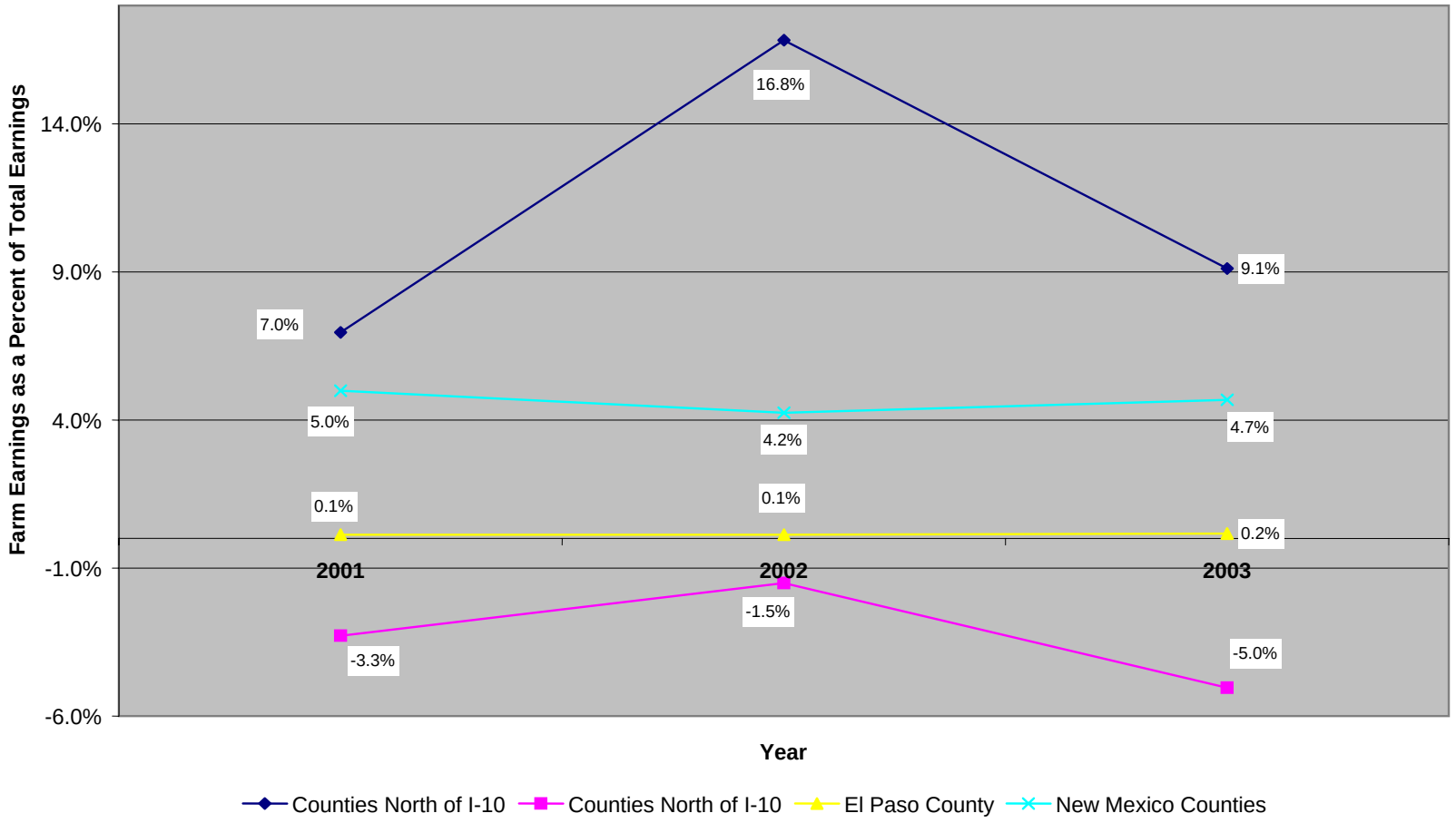
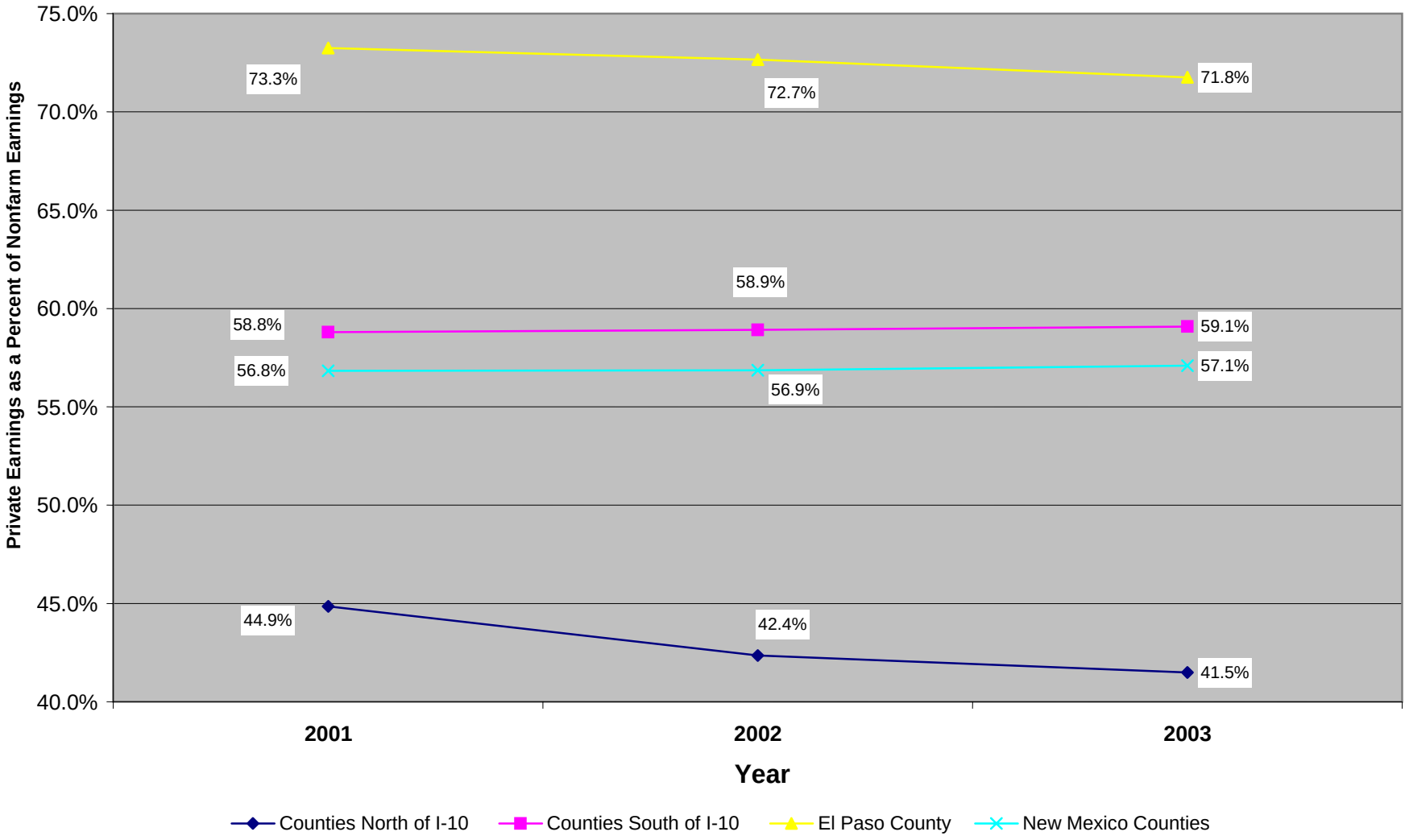


Chart 6-13

Private Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Government and Industry Earnings: 2000 to 2003

- ✓ The breakdown of earnings by industry from 2000 onward indicates that the new classification system has led to growth or reporting accuracy in arts, entertainment and recreation, a sector important to the Big Bend area and areas serving Carlsbad Caverns in Chart 6-14.

- ✓ In addition, the Rental and Leasing growth that El Paso has experienced is more visible, as well as Construction, which has accelerated in the past few years.

- ✓ Government Earnings as a share of Nonfarm Earnings remained consistent for Counties South of I-10 and New Mexico Counties from 2001 through 2003 while El Paso and the area north of I-10 reported growth as indicated in Chart 6-15.

- ✓ Military Earnings as a portion of Government Earnings have increased in all areas from 2001 through 2003 (Chart 6-16).

- ✓ Federal Civilian Earnings as a portion of Government Earnings have decreased in all areas from 2001 through 2003.

- ✓ State and Local Government Earnings as a portion of Government Earnings have decreased in all areas from 2001 through 2003.

Chart 6-14

Industry Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

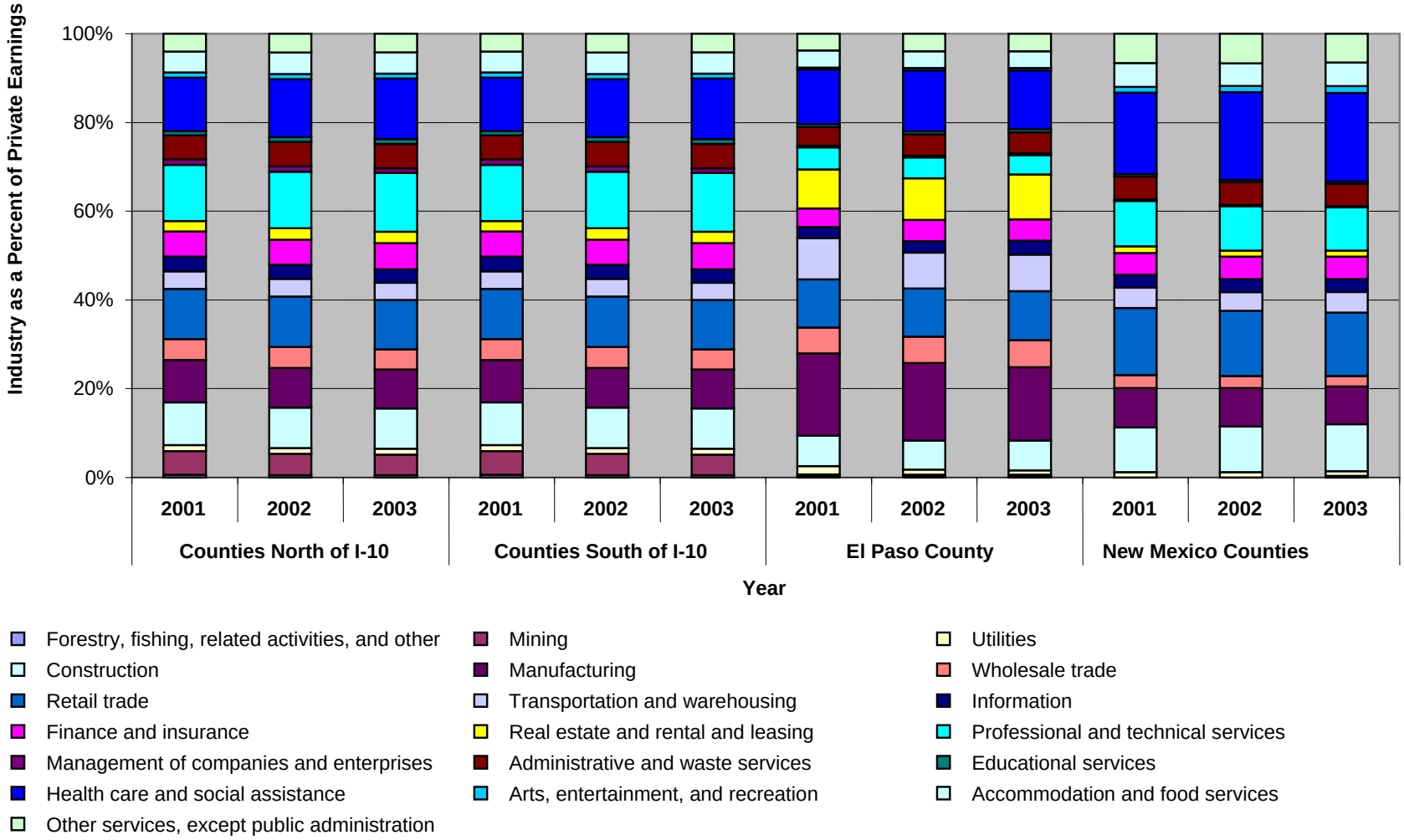


Chart 6-15

Government Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

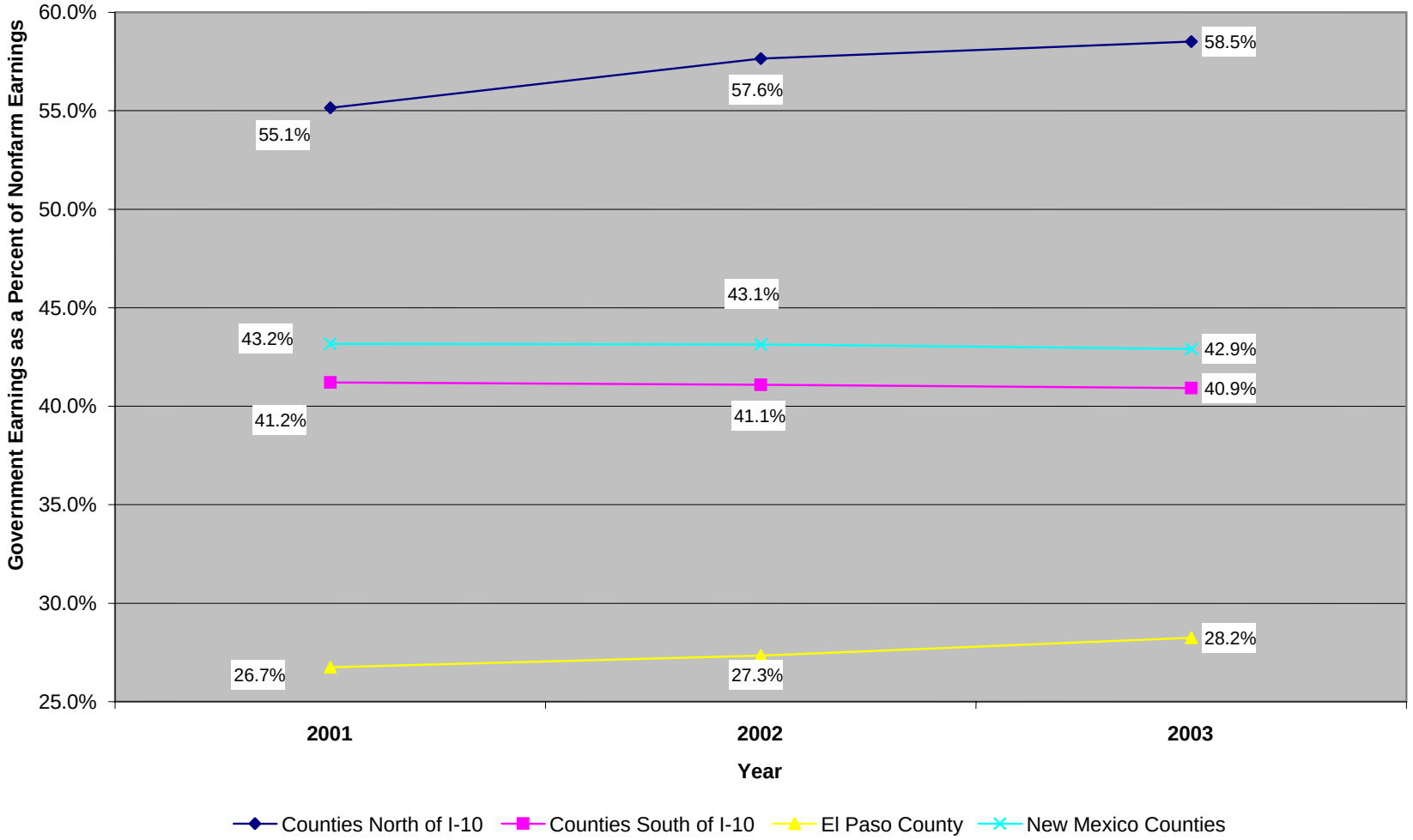
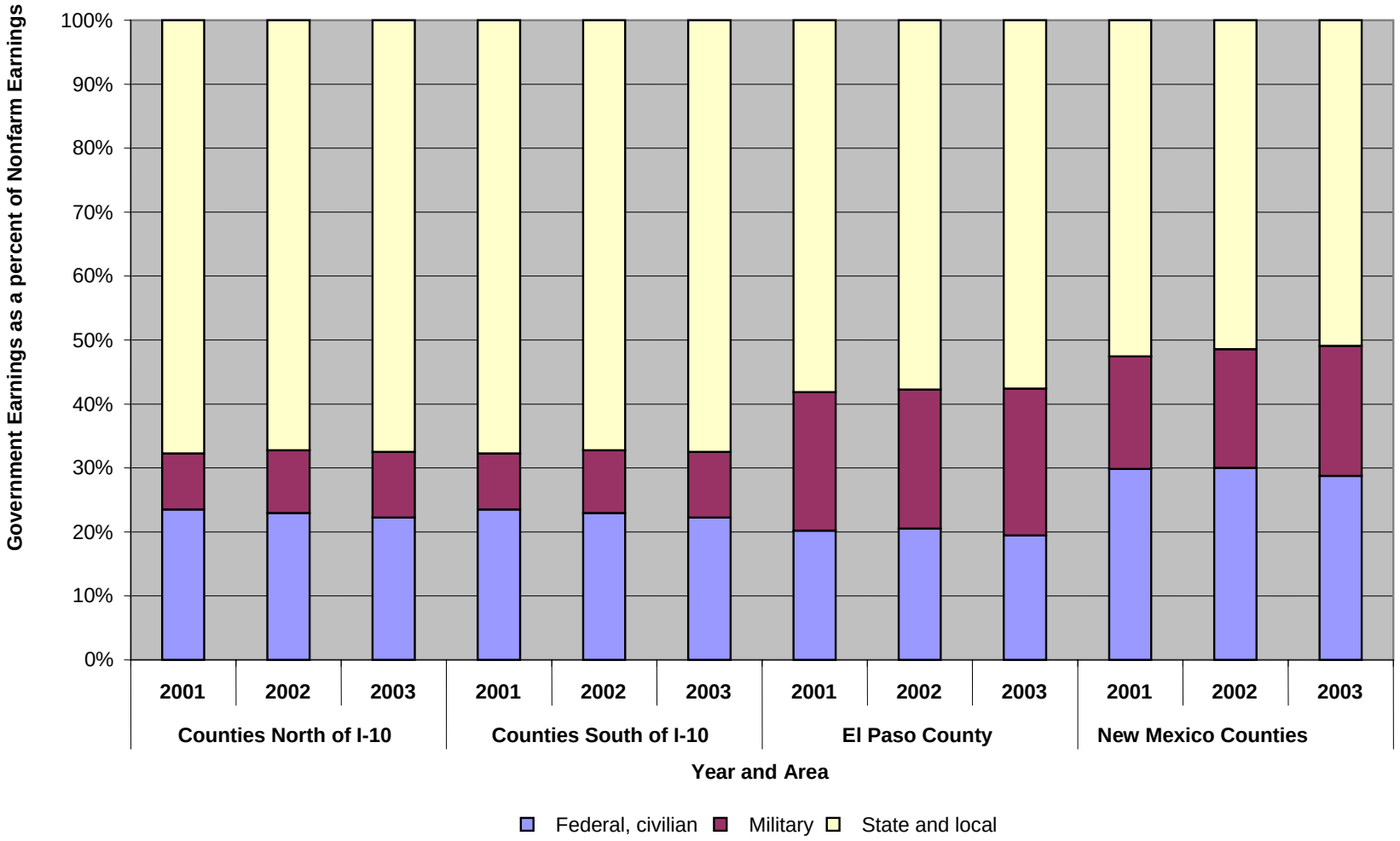


Chart 6-16

Government Earnings from 2001 through 2003 for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties



Endnotes to Section Six

[1] Please note that Earnings are reported separately from 1970 through 2000 and from 2001 through 2003 reflecting the change in the data collection system. The US Government used the Standard Industry Classification code from 1970 through 2000 which was replaced by the North American Industry Classification System from 2001 through 2003.

Section Seven: The State of the Region-- Upper Rio Grande Workforce Board Cluster Study: 2006

The following is included in this study with the permission of the Upper Rio Grande Workforce Development Board. It documents labor clusters in the region that includes the West Texas District.

A full copy of this report can be found on page A - 20 and at:

www.twc.state.tx.us/boards/board_plan/upperrio_cluster.pdf

Upper Rio Grande Workforce Development Board Industry Cluster Analysis

Report prepared by:
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Institute for Policy and Economic Development, University of Texas at El Paso
Ed Feser, University of Illinois
Ken Poole, Center for Regional Economic Competitiveness

(March 2006)

Executive Summary: The Upper Rio Grande Workforce Development Board Area Industry Clusters

El Paso's economic history is varied, having gone from median family income levels that were on par with the United States and above that of Texas in 1950 to trailing both by almost one third in 2000.[1] The reasons for this decline range from increased migration and a changing demographic to a failed courtship with the garment industry that led El Paso to market itself as a low wage alternative to high wage U.S. economies. The latter of these was precipitated, at least in part, by research suggesting that the garment industry was El Paso's next, best hope for economic development. Few now dispute the fact that the garment industry failed to provide the type of growth necessary for a modern urban economy to flourish.

New methods are available for examining how regional economies function; and as such, these new methods provide local economic developers with insights that have been heretofore unavailable. Among the most promising and widely accepted planning tools focuses on the "clusters" that make up a regional economy. In the method selected for this study, clusters are identified as either "Benchmark Value Chain" or "Technology Based." These clusters then serve not only as the foundations of an economy, but in varied forms (Existing, Emerging, Potential) also provide insight into areas that can be developed to promote regional economic expansion. Moreover, these clusters each have specifically defined industries that employ specific occupations. Combined, the industry and occupation data can be used to select occupations that are worthwhile candidates for workforce training.

What is a "Cluster?"

Clusters were originally conceived by Michael Porter as fuzzy groups of businesses that fell outside the bounds of rigid SIC or NAICS designations that bought from and sold to one another within geographic and economic space. To add to the current confusion, what now determines a cluster differs by methodology. Location quotients and shift-share analyses alone do not; and different actual cluster studies tell different stories. Porter, for example, focuses on clusters that are either locally oriented, resource dependent, or trade or export oriented.[2] Unfortunately, detailed information on how industries are related is absent. This is overcome by Feser, who uses as his foundation the national input-output (I-O) accounts, which track in detail what industries sell to and buy from related industries.

The Feser methodology adopted for this study groups industries with their strongest customers and suppliers, creating "a distinct value chain for each industry."[3] This is accomplished via what is essentially a data reduction technique that provides a set of 45 "Benchmark Value Chain" clusters and 15 "technology based" clusters.

Benchmark Value Chain Clusters Identified for the Workforce Board Region

Existing Clusters

- Basic Health: Easily El Paso's largest cluster, employing over 42,000 people in 2942 firms.
- Construction: The 20,000 troops planned for Fort Bliss will no doubt provide a huge stimulus to this cluster, but at the some risk since the cluster must cope with a slow down once the region has absorbed the new troops.
- Hotels and Transportation: El Paso's importance as a port for goods imported and exported from and to Mexico is well known. It is in these cluster industries that wages exceed the average for El Paso, while overall cluster wages would seem to be on par with that of the rest of the county. Tourism plays a far more important role in the rural Workforce Board counties, particularly around Big Bend National Park.
- Information Services: The information services cluster is not only a major employer in the region (19,504) but is relatively well diversified (1841 firms). While the level of concentration for the cluster could be higher, positive growth over the 1991 to 2005 period is promising.
- Financial Services and Insurance: This cluster also exhibits high employment (25,355) and diversification (1443 firms), but more importantly has grown at a rate almost twice that of the cluster at the national level over the 1991 to 2005 period.

Emerging Clusters

- Higher Education and Hospitals: This cluster employs 41,286 people in 2636 firms, but is not particularly concentrated in the region. It has, however, posted faster growth than the United States over the 1991 to 2005 period. The development of a 4-year medical school in the county is also critical to this cluster's long term success.

Potential Cluster

- Appliances: While small in absolute employment terms compared to each of the clusters above, the appliance cluster exhibits some of the highest concentration levels of any of the Benchmark Value Chain clusters.

Technology Based Clusters Identified for the Workforce Board Region

Existing Cluster

- Engine Equipment: The only Existing Technology-based value chain cluster employed over 2,300 people in the first quarter of 2005 among 22 different firms and is the only technology cluster with any level of concentration in the region.

Emerging Cluster

- Information Services: This cluster has the largest employment of any of the Technology-based clusters, employing 3,803 employees among 138 firms, but lacks industry diversification and concentration.

Potential Clusters

- Computer and Electronic Equipment: This cluster exhibits little concentration and actually saw faster decline than its U.S. counterpart between 1991 and 2005, yet many focus group participants believe in the tie between border security and technology intensive industries in the region. There are also a variety of ongoing local effort that seek to use the El Paso ports as a laboratory for developing and testing these new technologies.
- Architectural and Engineering Services and Technical and Research Services: These clusters both exhibit a very low degree of concentration, but unlike other technology based clusters, showed positive growth and strong employment between 1991 and 2005. The lack of concentration in the region may also provide a strong targeted training opportunity.

Training for the Region and Its Clusters: An Occupation Forecast and Web-based System

The continued expansion of these clusters will rely on a variety of regional efforts—one key component of which is workforce training. Also introduced is an occupational forecast to allow regional planners and policy makers to set training priorities to develop clusters and to support region wide ("cross-cutting) industrial growth. This ensures that there will be sufficient growth in selected occupations to warrant training dollars. Targeted occupations that arise from regional growth and cluster development include registered nurses; elementary, middle, and secondary school teachers; truck drivers, electricians, and carpenters. However, the occupational forecast also shows several highly technical occupations that require training beyond what local workforce boards can typically provide. These include occupations such as accountants, operations managers, advertising managers, computer and math occupations, and architecture and engineering occupations. Specific strategies for overcoming this gap will depend on broad based partnerships and long-

term planning. Both the tool and the forecast also focus on the fact that the cluster methodology, while extremely valuable, should not be the sole training guide. Overall regional growth should also be a focal point for training activities.

Strategic Recommendations for Regional and Cluster Development

Workforce Development Board Recommendations

Given the cluster and occupations findings, a set of broad ranging and cluster specific activities are needed to spur regional growth. Some are the sole province of the Workforce Board, but many rely on a variety of local partners. The Board can act as a key stakeholder to encourage local buy in and joint priority setting.

- Increase the participation/representation from targeted clusters on the Workforce Board.
- Analyze the specific jobs and related contracting opportunities being created at Fort Bliss as a result of BRAC in an effort to encourage new business development and identify occupational skill needs associated with the expected influx of workers.
- Develop a collaborative campaign with UTEP to attract talented students from outside the region to go to school in El Paso.
- Create a proactive initiative to provide career counseling information to area middle school and high school counselors, teachers, students (and their parents) regarding entry-level occupations related to occupations in targeted clusters.
- Collaborate with existing initiatives in the region aimed at encouraging more entrepreneurial behaviors among area workers – encouraging them to consider creating their own jobs – (through supporting “how-to-create-a-business” seminars and curricula).
- Assist area school systems in their efforts to implement reforms and encourage school efforts to ensure that students have basic skills and are computer literate.
- Encourage policy makers to assist UTEP and regional universities to take a more proactive role in developing programs that support the region’s targeted industry clusters (by: supporting research in these areas; offering more incentives in the tenure-granting process to faculty who collaborate with area companies (or create their own companies based on new technologies jointly developed with university resources); encouraging entrepreneurship among the college’s faculty members; and expanding curriculum related to these industry clusters).
- Provide support for financial literacy and the importance of “asset-building” as a life skill integrated into basic education curriculum.

Cluster-specific Recommendations

- Information Services and Engineering
    - Support economic development agency efforts to recruit defense contractors to service Fort Bliss and border security needs.
    - Ensure that regional universities and technology specific training centers continue to expand their higher level software engineering, database management, and network administration activities.
    - Review and support available training programs designed to provide introduction to computer programming.
    - Develop/support career information and apprenticeship opportunities by supporting apprenticeship programs that link more El Paso companies to UTEP and regional universities' engineering and computer sciences to small area companies (e.g., Innovation Philadelphia internship).
    - Support informal networking events among area information services companies on topics related to finding and keeping employees, identifying career opportunities for talented young adults at regional universities.
    - Encourage/support efforts by regional universities and trade schools to expand the exposure of engineering and computer technicians to design concepts and design-for-production tools.
- Construction Trades
    - Support efforts to expand apprenticeship programs in collaboration with area companies.
    - Develop a program in collaboration with SBDC to provide entrepreneurial training for sub-contracting opportunities and management training for potential sub-contractors.
    - Seed a program to offer cash bonuses to construction trades workers who complete their apprenticeship program within a time period specified by the Workforce Board.
    - Support the development of construction management degree program at UTEP and of construction management certification and related credits at EPCC and regional technical schools.
    - Develop a program to communicate opportunities and wages for construction trades occupations to high school students and young adults .
- Financial Services
    - Explore availability of existing financial services certification/licensing programs relative to needs to support entry level financial services staff for banking and insurance.
    - Offer more specific educational curriculum and enhance relationships with business and universities to expose more students to financial services careers.
    - Encourage community colleges to offer training in marketing and sales.
- Health care

  - Encourage expansion of educational programs (including Fast Track) to train teachers or other degree holders for nursing and other technical health care occupations.
  - Consider marketing El Paso as a private pay health care hub for Central and South America. The great majority of health care workers in the region are able to speak Spanish, making it an ideal location for exporting health care.
- Logistics—Hotel and Transportation Services
  - Expand training for truck drivers (CDLs) and truck/truck equipment maintenance.
  - Identify training opportunities related to occupations in logistics data management and analysis.
  - Encourage entrepreneurship among would-be jobseekers; creation of boutique firms focused on specialty transportation.

Endnotes to Section 7

[1] Brenner, C.T. (2003). “Education and the Status of Human Capital Development in Texas.” In *Dígame! Policy and Politics on the Texas Border.* C.T. Brenner, I. Coronado and D.L. Soden, Eds. Dubuque, IA: Kendall Hunt Publishing: 207-234.

[2] Porter, Michael E. 2003. "The economic performance of regions," *Regional Studies,* 37, 549-78.

[3] Feser, E. Benchmark value chain industry clusters for applied regional research. Latest version: October 2005. p 5.

Section Eight: The State of the Region--- Salaries and Wages

Salaries and Wages

Salaries and Wages
The pay and allowances due employees in exchange for the labor services they render in behalf of the transit agency. The allowances include payments direct to the employee arising from the performance of a piece of work. Also called "Labor."

Key Finding

Salaries and wages in the region lag the nation in almost all occupational categories in 2004.

Based on data provided by *The Border Model,* we are able to examine salaries and wages in the region for 2004, the most recent year for which data is available. In this regard, in the West Texas District we find among a variety of jobs where salaries fall both above and below the national median.

- ✓ For all occupations, the 2004 average and median hourly wages fell below the nation as seen in Table 8-1.
- ✓ The closest among the top 20 occupations to national standards is Registered Nurses.
- ✓ The largest difference is exhibited among general operations managers, followed by Maintenance and Repair Workers, who are paid approximately 25 percent less than the national average and medians.

Table 8-1
Top 20 Occupations by Number of Jobs: Wage Data in West Texas Compared to United States

Standard Occupational Classification	2004 Average Hourly. Wage	2004 Entry-Level Hourly. Wage	2004 Median Hourly Wage	2004 US Average Hourly. Wage	2004 US Median Hourly Wage	2004 West Texas Average Hourly Wage Compared to U.S.	2004 West Texas Median Hourly Wage Compared to U.S.
Total; All Occupations	$13.82	$6.47	$10.30	$17.80	$13.83	($3.98)	($3.53)
Retail Salespersons	$8.68	$5.93	$7.49	$11.03	$8.98	($2.35)	($1.49)
Cashiers	$7.02	$5.93	$6.72	$8.29	$7.81	($1.27)	($1.09)
Office Clerks; General	$9.33	$6.43	$8.76	$11.62	$10.95	($2.29)	($2.19)
Laborers & Freight; Stock & Material Movers; Hand	$7.83	$5.99	$6.97	$10.53	$9.67	($2.70)	($2.70)
Registered Nurses	$24.10	$16.00	$24.27	$26.06	$25.16	($1.96)	($0.89)
Waiters and Waitresses	$6.43	$5.90	$6.19	$7.66	$6.75	($1.23)	($0.56)
Combined Food Preparation and Serving Workers; Inc	$6.38	$5.92	$6.26	$7.40	$7.06	($1.02)	($0.80)
Janitors and Cleaners; Except Maids and Housekeepi	$7.39	$5.98	$6.77	$9.91	$9.04	($2.52)	($2.27)
Customer Service Representatives	$11.44	$8.54	$11.33	$14.01	$12.99	($2.57)	($1.66)
Bookkeeping; Accounting; and Auditing Clerks	$11.78	$7.83	$11.29	$14.34	$13.74	($2.56)	($2.45)
General and Operations Managers	$36.09	$16.57	$29.86	$44.24	$37.22	($8.15)	($7.36)
Secretaries; Except Legal; Medical; and Executive	$10.00	$6.63	$9.54	$13.06	$12.55	($3.06)	($3.01)
Stock Clerks and Order Fillers	$8.41	$5.96	$7.73	$10.52	$9.66	($2.11)	($1.93)
Truck Drivers; Heavy and Tractor-Trailer	$14.44	$9.53	$13.86	$16.63	$16.11	($2.19)	($2.25)
Elementary school teachers; except special education	$21.16	$0.00	$21.46	$0.00	$0.00	N/A	$21.46
Executive Secretaries & Administrative Assistants	$14.41	$10.45	$13.48	$17.69	$16.81	($3.28)	($3.33)
First-Line Supervisors/Managers of Office and Admi	$17.65	$10.80	$16.67	$21.15	$19.72	($3.50)	($3.05)
Nursing Aides; Orderlies; and Attendants	$8.98	$7.13	$8.39	$10.39	$10.09	($1.41)	($1.70)
Sales Representatives; Wholesale and Manufacturing	$20.22	$10.26	$18.58	$25.91	$21.83	($5.69)	($3.25)
Maintenance and Repair Workers; General	$11.33	$7.04	$10.18	$15.41	$14.77	($4.08)	($4.59)

- ✓ Table 8-2 reports salaries and wages for the Top 30 Occupations by Pay, comparing them to the nation and indicates that in most high paying job categories regional residents are paid lower than national standards.

- ✓ Regionally real estate brokers are faring well under the current real estate boom.

- ✓ Other occupations above national standards include: post-secondary educators, materials engineers, first line supervisors, physical therapists, and social scientists.

Table 8-2
Top 30 Paying Occupations in West Texas Compared to United States

Chief Executives	$62.62	$28.17	$62.64	$67.27	$67.47	($4.65)	($4.83)
Real Estate Brokers	$52.07	$27.68	$47.50	$37.43	$28.23	$14.64	$19.27
Physicians and Surgeons; All Other	$50.54	$19.78	$49.35	$66.16	$67.44	($15.62)	($18.09)
Lawyers	$49.63	$25.69	$44.69	$52.30	$45.64	($2.67)	($0.95)
Engineering Managers	$45.86	$32.82	$43.59	$49.33	$46.94	($3.47)	($3.35)
Pharmacists	$42.49	$35.91	$43.17	$40.56	$40.82	$1.93	$2.35
Surgeons	$42.47	$0.00	$43.13	$87.31	$0.00	($44.84)	N/A
Education Administrators; Postsecondary	$41.59	$22.73	$34.02	$36.44	$32.86	$5.15	$1.16
Materials Engineers	$39.43	$26.12	$39.31	$33.36	$32.26	$6.07	$7.05
Computer and Information Systems Managers	$38.86	$24.10	$38.66	$47.24	$44.51	($8.38)	($5.85)
Natural Sciences Managers	$38.16	$26.81	$38.08	$46.06	$42.63	($7.90)	($4.55)
Dentists; general	$37.76	$0.00	$33.79	$63.87	$59.16	($26.11)	($25.37)
Chiropractors	$37.76	$19.00	$33.79	$42.01	$33.61	($4.25)	$0.18
Marketing Managers	$37.54	$21.74	$33.75	$46.48	$42.13	($8.94)	($8.38)
Personal Financial Advisors	$37.52	$21.29	$35.33	$39.70	$30.14	($2.18)	$5.19
Environmental Engineers	$36.70	$27.38	$33.93	$32.86	$31.96	$3.84	$1.97
Training and Development Managers	$36.16	$25.14	$35.49	$35.45	$32.43	$0.71	$3.06
General and Operations Managers	$36.09	$16.57	$29.86	$44.24	$37.22	($8.15)	($7.36)
First-Line Super./Man. of Police & Detectives	$35.92	$28.40	$34.82	$31.34	$30.97	$4.58	$3.85
Financial Managers	$35.88	$20.07	$32.19	$44.04	$39.37	($8.16)	($7.18)
Industrial Production Managers	$35.58	$23.07	$33.16	$38.06	$35.09	($2.48)	($1.93)
Public Relations Managers	$35.37	$18.75	$26.99	$38.26	$33.65	($2.89)	($6.66)
Commercial pilots	$35.17	$0.00	$35.94	$0.00	$0.00	$35.17	$35.94
Economists	$34.51	$22.38	$33.31	$38.35	$34.99	($3.84)	($1.68)
Physical Therapists	$34.34	$23.70	$33.26	$30.00	$28.93	$4.34	$4.33
Managers; All Other	$34.27	$23.20	$33.38	$39.28	$37.19	($5.01)	($3.81)
Computer Software Engineers; Applications	$33.95	$20.53	$30.59	$37.18	$36.05	($3.23)	($5.46)
Human Resources Managers; All Other	$33.94	$25.68	$33.87	$42.11	$39.33	($8.17)	($5.46)
Computer Software Engineers; Systems Software	$33.87	$19.87	$31.09	$39.50	$38.34	($5.63)	($7.25)
Social Scientists and Related Workers; All Other	$33.08	$25.88	$34.10	$29.09	$28.12	$3.99	$5.98

Section Nine--- A View of the Future

In this section, we address what is likely to occur in the economy in the next few years. Forecasting is not without its caveats and many forecasts exist. IPED takes a rather conservative approach to forecasting using *The Border Model*, a blended input-output and econometric approach. Three important forecasts are included in this section, the first and second related to growth in occupations and anticipated pay scales in those occupations. The third incorporates what are the best estimates of the expansion of Fort Bliss as a result of Base Realignment and Closure (BRAC) decisions and what growth may be anticipated as a result of troop expansion. At one level, these two approaches, one looking at Fort Bliss growth and the other not incorporating Fort Bliss growth into a forecast, give us useful comparisons. However, because we do not know the actual occupational demands we can only estimate employment growth at the industry level with a Fort Bliss scenario, not occupational. In addition, there are some differences in the total numbers due to how occupations are now being counted by the Census Bureau and others, such that some occupations get counted in more than one place. For example, a materials engineer may be counted in mining and manufacturing, thus some double counting does occur, but not to the extent that it seriously impacts the final forecast.

Key Finding

In general, without considering the impact of Fort Bliss and BRAC, the region's job growth without any "shock" or change to the job market will follow existing regional trends.

- ✓ In Chart 9-1 we see that total employment in all occupations is expected to grow by 14.5 percent for a total of 37,715 jobs by 2014.

- ✓ Much of this growth is expected in the retail sector evidenced by retail sales (1,214 jobs) and cashiers (1,011 jobs) suggesting as well a continued strong role for this sector in the region.

- ✓ Office clerks and general office workers are also expected to grow as the business community itself expands creating an additional 875 jobs.

- ✓ Laborers and freight handlers we grow as part of a regional trend in warehousing and logistics (705 jobs) and will do so with some parallel growth in truck drivers and tractor-trailer operators (456 jobs).

- ✓ Strong growth in the need for registered nurses (679 jobs) reflects a national trend in this sector, but meeting demand is also a national problem.

Key Finding

With an expected growth in Fort Bliss, the regional job need should grow by an additional 9 percent over the 14 percent expected growth from the current base creating a total growth of 23.78 percent by 2015, well above national job growth estimates.

BRAC Employment Impact Summary from Table 9-2

- ✓ Major Industry Growth without BRAC Effects 2005-2015 = 50,522

- ✓ Major Industry Growth including Estimates of BRAC Effects 2005-2015 = 83,725

- ✓ Net Employment Effect of BRAC 2005-2015 = 34,725 jobs!

- ✓ 9.43 percent growth in employment opportunities above normal and expected growth of 14.35 percent, for a total job market growth of 23.78 percent in the region, not including military personnel.

Table 9-1
Projected Total and Top 20 Growth Occupations in West Texas Region: 2004-2014

Standard Occupation Classification	2004 Forcasted Emloyment	2014 Forcasted Employment	2004 - 2014 Forcasted Jobs Growth
Total; All Occupations	262850	300,565	37,715
Retail Salespersons	8464	9,678	1,214
Cashiers	7044	8,055	1,011
Office Clerks; General	6098	6,973	875
Laborers & Freight; Stock & Material Movers; Hand	4915	5,621	705
Registered Nurses	4731	5,410	679
Waiters and Waitresses	4547	5,200	652
Combined Food Preparation and Serving Workers; Inc	4390	5,019	630
Janitors and Cleaners; Except Maids and Housekeeping	4311	4,929	619
Customer Service Representatives	4153	4,749	596
Bookkeeping; Accounting; and Auditing Clerks	3627	4,148	520
General and Operations Managers	3601	4,118	517
Secretaries; Except Legal; Medical; and Executive	3575	4,088	513
Stock Clerks and Order Fillers	3207	3,667	460
Truck Drivers; Heavy and Tractor-Trailer	3180	3,637	456
Elementary school teachers; except special education	2918	3,336	419
Executive Secretaries & Administrative Assistants	2918	3,336	419
First-Line Supervisors/Managers of Office and Admi	2891	3,306	415
Nursing Aides; Orderlies; and Attendants	2839	3,246	407
Sales Representatives; Wholesale and Manufacturing	2839	3,246	407
Maintenance and Repair Workers; General	2602	2,976	373

Table 9-2
Total BRAC Employment Impacts to the West Texas Region
(2001-2003 is the baseline based on BEA data and revisions for BRAC)

		Period with new BRAC Troops									
NAICS	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
11- Agriculture, Forestry, Hunting & Fishing	2,850	2,809	2,769	2,732	2,696	2,661	2,625	2,590	2,557	2,528	2,501
21- Mining	876	871	865	862	858	855	848	841	835	830	825
22- Utilities	1,384	1,381	1,372	1,372	1,369	1,366	1,357	1,347	1,338	1,330	1,324
23- Construction	19,404	19,930	20,288	20,937	21,495	22,101	22,440	22,785	23,098	23,407	23,713
31- Manufacturing	9,800	9,044	8,353	7,765	7,233	6,762	6,323	5,932	5,593	5,306	5,063
32- Manufacturing	8,679	8,811	8,917	9,066	9,201	9,342	9,445	9,550	9,656	9,762	9,867
33- Manufacturing	11,219	11,327	11,365	11,495	11,584	11,680	11,691	11,704	11,725	11,752	11,783
42- Wholesale Trade	12,208	12,453	12,620	12,899	13,134	13,379	13,522	13,665	13,813	13,959	14,104
44- Retail Trade	28,094	28,670	29,099	29,762	30,343	30,953	31,348	31,748	32,142	32,533	32,919
45—Retail Trade	14,368	14,666	14,887	15,231	15,531	15,846	16,049	16,255	16,457	16,658	16,856
48- Transportation & Warehousing	12,937	13,248	13,492	13,848	14,169	14,508	14,751	15,001	15,253	15,503	15,752
49- Transportation & Warehousing	3,424	3,531	3,615	3,738	3,849	3,966	4,049	4,133	4,206	4,280	4,353
51- Information	8,037	8,290	8,459	8,752	8,999	9,262	9,416	9,576	9,747	9,919	10,091
52- Finance & Insurance	10,978	11,171	11,305	11,528	11,718	11,918	12,036	12,155	12,273	12,390	12,507
53Real estate, Rental & Leasing	11,834	12,044	12,235	12,470	12,696	12,930	13,133	13,340	13,550	13,757	13,963
54- Professional, Scientific & Technical Services	12,132	12,719	13,112	13,815	14,414	15,058	15,427	15,808	16,201	16,592	16,982
55- Management of Companies	967	988	1,002	1,025	1,045	1,066	1,078	1,090	1,102	1,114	1,126
56- Administrative & Support, Waste Management & Remediation Services	23,768	24,869	25,811	27,085	28,288	29,568	30,598	31,668	32,767	33,863	34,954
61- Education Services	4,024	4,229	4,375	4,623	4,842	5,078	5,223	5,371	5,512	5,651	5,789
62- Health Care & Social Assistance	32,477	33,757	34,850	36,322	37,707	39,173	40,343	41,550	42,762	43,967	45,165
71- Arts, Entertainment & Recreation	4,238	4,406	4,537	4,734	4,912	5,102	5,234	5,369	5,504	5,637	5,769
72- Accommodation & Food Services	25,570	26,155	26,600	27,270	27,862	28,483	28,901	29,324	29,745	30,160	30,571
81- Other Services (except Public Administration)	21,602	22,177	22,610	23,279	23,872	24,499	24,915	25,338	25,750	26,157	26,560
93- Public Administration	72,825	76,879	78,646	83,545	87,116	90,942	91,798	92,669	93,406	94,141	94,877
98- Owner Occupied Dwellings	18	18	19	19	20	21	21	22	22	23	23
Major Industry Total	352,192	356,329	360,713	365,331	370,168	375,207	380,435	385,851	391,453	397,079	402,714
Total Employment with BRAC Impact	353,714	364,441	371,204	384,176	394,953	406,517	412,568	418,830	425,012	431,219	437,439
Net BRAC Impact	1,522	8,112	10,490	18,844	24,784	31,310	32,133	32,979	33,559	34,140	34,725

Comprehensive Economic Development Strategy (CEDS)
for the
Rio Grande Council of Governments (RGCOG)

Planning in West Texas

APPENDIX

Prepared by

May 2006

Appendix of Tables

Section 4: Labor and Workforce

Appendix Table 4-1

Labor Force from 1976 through 2003

	1976	1980	1990	2000	2001	2002	2003
US	96,158,000	106,940,000	125,840,000	142,583,000	143,734,000	144,863,000	146,510,000
TX	5,708,000	6,739,000	8,618,780	10,401,557	10,530,613	10,686,166	10,910,344
NM	485,451	563,048	711,891	852,293	863,682	875,631	893,118
Counties North of I-10	2,202	2,383	2,874	2,565	2,507	2,546	2,567
Counties South of I-10	5,678	6,281	8,230	10,452	10,492	10,698	11,274
El Paso County	166,694	180,990	259,687	287,565	285,868	290,333	298,163
New Mexico Counties Total			90,257	114,091	114,507	117,900	122,168
Brewster County	3,019	3,593	4,252	5,480	5,603	5,647	5,895
Culberson County	1,300	1,509	1,614	1,086	1,081	1,136	1,095
Hudspeth County	902	874	1,260	1,479	1,426	1,410	1,472
Jeff Davis County	820	828	863	1,335	1,388	1,508	1,611
Presidio County	1,839	1,860	3,115	3,637	3,501	3,543	3,768
Dona Ana County	29,295	34,658	60,163	76,298	76,742	79,201	81,813
Hidalgo County			2,591	2,645	2,575	2,455	2,456
Luna County			7,551	10,807	10,800	11,402	12,359
Otero County			19,952	24,341	24,390	24,842	25,540

Note: The methodology for collecting data changed from 1989 to 1990.
Source: Bureau of Labor Statistics, Department of Labor

Appendix Table 4-2

Employed Persons from 1976 through 2003

	1976	1980	1990	2000	2001	2002	2003
US	88,752,000	99,303,000	118,793,000	136,891,000	136,933,000	136,485,000	137,736,000
TX	5,380,000	6,387,000	8,074,107	9,960,436	10,020,352	10,009,395	10,172,828
NM	442,856	520,151	663,698	810,024	821,003	827,303	840,422
Counties North of I-10	2,111	2,268	2,726	2,402	2,366	2,346	2,363
Counties South of I-10	2,584	2,699	7,543	9,370	9,550	9,749	10,277
El Paso County	148,001	164,154	229,438	263,922	262,497	265,145	269,357
New Mexico Counties							
Total			82,764	106,232	106,648	109,811	113,175
Brewster County	83	139	4,053	5,359	5,478	5,498	5,752
Culberson County	1,244	1,426	1,499	975	1002	1,030	1,003
Hudspeth County	867	842	1,227	1,427	1,364	1,316	1,360
Jeff Davis County	780	803	837	1,306	1,364	1,472	1,585
Presidio County	1,721	1,757	2,653	2,705	2,708	2,779	2,940
Dona Ana County	26,496	31,587	55,312	71,598	72,094	74,301	76,480
Hidalgo County			2,414	2,465	2,422	2,342	2,324
Luna County			6,553	9,129	9,044	9,757	10,417
Otero County			18,485	23,040	23,088	23,411	23,954

Note: The methodology for collecting data changed from 1989 to 1990.
Source: Bureau of Labor Statistics, Department of Labor

Appendix Table 4-3

Unemployed Persons from 1976 through 2003

	1976	1980	1990	2000	2001	2002	2003
US	7,406,000	7,637,000	7,047,000	5,692,000	6,801,000	8,378,000	8,774,000
TX	327,000	352,000	544,673	441,121	510,261	676,771	737,516
NM	42,595	42,897	48,193	42,269	42,679	48,328	52,696
Counties North of I-10	1,279	1,458	148	163	141	200	204
Counties South of I-10	241	267	687	1,082	942	949	997
El Paso County	18,693	16,836	30,249	23,643	23,371	25,188	28,806
New Mexico Counties							
Total			7,493	7,859	7,859	8,089	8,993
Brewster County	83	139	199	121	125	149	143
Culberson County	1,244	1,426	115	111	79	106	92
Hudspeth County	35	32	33	52	62	94	112
Jeff Davis County	40	25	26	29	24	36	26
Presidio County	118	103	462	932	793	764	828
Dona Ana County	2,799	3,071	4,851	4,700	4,648	4,900	5,333
Hidalgo County			177	180	153	113	132
Luna County			998	1,678	1,756	1,645	1,942
Otero County			1,467	1,301	1,302	1,431	1,586

Note: The methodology for collecting data changed from 1989 to 1990.
Source: Bureau of Labor Statistics, Department of Labor

Appendix Table 4-4

Unemployment Rate from 1976 through 2003

	1976	1980	1990	2000	2001	2002	2003
US	7.7	7.1	5.6	4.0	4.7	5.8	6.0
TX	5.7	5.2	6.3	4.2	4.8	6.3	6.8
NM	8.8	7.6	6.8	5.0	4.9	5.5	5.9
Counties North of I-10	4.1	4.6	4.9	6.9	5.8	8.0	8.0
Counties South of I-10	4.7	4.1	7.5	10.0	8.9	8.9	8.7
El Paso County	11.2	9.3	11.6	8.2	8.2	8.7	9.7
New Mexico Counties Total			9.0	8.9	8.8	8.7	9.1
Brewster County	2.7	3.9	4.7	2.2	2.2	2.6	2.4
Culberson County	4.3	5.5	7.1	10.2	7.3	9.3	8.4
Hudspeth County	3.9	3.7	2.6	3.5	4.3	6.7	7.6
Jeff Davis County	4.9	3.0	3.0	2.2	1.7	2.4	1.6
Presidio County	6.4	5.5	14.8	25.6	22.7	21.6	22.0
Dona Ana County	9.6	8.9	8.1	6.2	6.1	6.2	6.5
Hidalgo County			6.8	6.8	5.9	4.6	5.4
Luna County			13.2	15.5	16.3	14.4	15.7
Otero County			7.4	5.3	5.3	5.8	6.2

Note: The methodology for collecting data changed from 1989 to 1990.
Source: Bureau of Labor Statistics, Department of Labor

Section 5: Employment by Sectors

Appendix Table 5-1

Type of Employment as Share of Total Employment from 2001 through 2003: United States and Texas

	United States				Texas			
	2001	**2002**	**2003**	**% Growth**	**2001**	**2002**	**2003**	**% Growth**
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	1.8%	1.9%	1.8%	-0.7%	2.4%	2.4%	2.3%	-2.0%
Nonfarm employment	98.2%	98.1%	98.2%	0.1%	97.6%	97.6%	97.7%	0.3%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	85.9%	85.6%	85.6%	0.1%	85.6%	85.2%	85.1%	0.3%
Government and government enterprises	14.1%	14.4%	14.4%	2.1%	14.4%	14.8%	14.9%	3.8%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.7%	0.8%	0.8%	5.2%	0.7%	0.7%	0.7%	8.9%
Mining	0.6%	0.5%	0.5%	-11.4%	2.3%	2.1%	2.1%	-9.3%
Utilities	0.4%	0.4%	0.4%	-5.3%	0.5%	0.5%	0.5%	-6.5%
Construction	7.0%	6.9%	6.9%	-1.4%	8.2%	8.1%	8.0%	-3.6%
Manufacturing	12.1%	11.3%	10.8%	-11.0%	10.4%	9.7%	9.2%	-11.3%
Wholesale trade	4.5%	4.4%	4.3%	-2.7%	5.0%	4.9%	4.8%	-3.4%
Retail trade	13.2%	13.2%	13.1%	-0.3%	13.4%	13.5%	13.3%	-1.3%
Transportation and warehousing	3.9%	3.8%	3.8%	-3.1%	4.4%	4.3%	4.3%	-3.2%
Information	2.9%	2.7%	2.5%	-12.7%	2.9%	2.7%	2.5%	-13.0%
Finance and insurance	5.6%	5.6%	5.7%	2.5%	5.6%	5.7%	5.9%	4.4%
Real estate and rental and leasing	3.9%	4.1%	4.1%	4.9%	4.2%	4.3%	4.4%	4.1%
Professional and technical services	7.5%	7.5%	7.5%	0.0%	7.2%	7.2%	7.2%	-0.6%
Management of companies and enterprises	1.3%	1.3%	1.3%	1.3%	0.5%	0.5%	0.6%	31.4%
Administrative and waste services	6.8%	6.9%	6.9%	0.9%	7.2%	7.2%	7.2%	-0.2%
Educational services	2.2%	2.3%	2.4%	8.3%	1.5%	1.6%	1.6%	8.4%
Health care and social assistance	11.1%	11.5%	11.7%	5.7%	9.9%	10.3%	10.7%	8.2%
Arts, entertainment, and recreation	2.3%	2.4%	2.4%	4.5%	1.7%	1.8%	1.8%	6.0%
Accommodation and food services	7.7%	7.8%	7.9%	2.8%	7.7%	7.9%	8.0%	3.3%
Other services, except public administration	6.4%	6.7%	6.8%	5.9%	6.8%	7.1%	7.2%	5.6%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	11.8%	11.6%	11.6%	1.0%	10.0%	9.8%	9.8%	1.5%
Military	9.1%	9.1%	9.2%	4.2%	9.8%	10.0%	9.9%	5.1%
State and local	79.2%	79.3%	79.1%	4.2%	80.2%	80.3%	80.3%	5.1%
State and local	100.0%	100.0%	100.0%	2.0%	100.0%	100.0%	100.0%	4.0%
State government	27.4%	27.1%	27.0%	0.5%	23.3%	23.3%	23.0%	2.5%
Local government	72.6%	72.9%	73.0%	2.5%	76.7%	76.7%	77.0%	4.4%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-2

Type of Employment as Share of Total Employment from 2001 through 2003: New Mexico and Counties North of I-10

	New Mexico				Counties North of I-10			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	2.5%	2.4%	2.4%	-0.6%	19.8%	18.8%	18.5%	-7.5%
Nonfarm employment	97.5%	97.6%	97.6%	3.0%	80.2%	81.2%	81.5%	0.5%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	78.5%	78.3%	78.3%	3.0%	67.0%	65.7%	65.9%	0.5%
Government and government enterprises	21.5%	21.7%	21.7%	3.7%	33.0%	34.3%	34.1%	3.8%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.9%	1.0%	1.0%	5.2%	0.0%	0.0%	0.0%	0.0%
Mining	2.6%	2.3%	2.3%	-9.8%	5.3%	5.7%	6.1%	13.3%
Utilities	0.6%	0.5%	0.5%	-5.0%	0.9%	1.0%	1.0%	14.3%
Construction	8.4%	8.1%	8.2%	-0.2%	2.0%	1.5%	0.0%	-100.0%
Manufacturing	6.1%	5.8%	5.5%	-8.2%	0.0%	0.0%	0.6%	0.0%
Wholesale trade	3.7%	3.6%	3.4%	-5.6%	0.0%	0.0%	0.0%	0.0%
Retail trade	14.9%	14.8%	14.7%	1.8%	24.3%	25.0%	25.2%	2.4%
Transportation and warehousing	3.2%	3.2%	3.1%	1.0%	2.5%	2.6%	2.5%	0.0%
Information	2.6%	2.5%	2.3%	-8.3%	0.0%	0.0%	0.0%	0.0%
Finance and insurance	4.1%	4.1%	4.1%	2.2%	0.0%	0.0%	1.0%	0.0%
Real estate and rental and leasing	3.9%	4.0%	4.0%	6.2%	0.0%	0.0%	1.1%	0.0%
Professional and technical services	8.1%	8.1%	8.3%	5.2%	1.1%	1.0%	1.0%	-5.9%
Management of companies and enterprises	0.8%	0.8%	0.7%	-10.2%	0.0%	0.0%	0.0%	0.0%
Administrative and waste services	7.0%	7.1%	6.9%	0.3%	1.7%	1.9%	2.0%	14.8%
Educational services	1.6%	1.6%	1.7%	11.7%	0.0%	0.0%	0.0%	0.0%
Health care and social assistance	12.0%	12.7%	13.3%	13.8%	0.0%	0.0%	0.9%	0.0%
Arts, entertainment, and recreation	2.5%	2.6%	2.6%	8.1%	0.0%	0.0%	0.0%	0.0%
Accommodation and food services	10.2%	10.3%	10.3%	3.8%	17.8%	17.2%	16.0%	-11.1%
Other services, except public administration	6.7%	7.0%	7.1%	8.7%	3.6%	4.0%	3.8%	5.4%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	14.0%	13.9%	13.7%	1.1%	18.2%	19.8%	20.3%	15.7%
Military	8.3%	8.5%	8.5%	6.2%	0.0%	0.0%	0.0%	0.0%
State and local	77.7%	77.6%	77.8%	6.2%	79.9%	78.4%	77.9%	0.0%
State and local	100.0%	100.0%	100.0%	3.9%	100.0%	100.0%	100.0%	1.1%
State government	41.0%	40.5%	40.8%	3.2%	11.5%	11.6%	12.4%	8.5%
Local government	59.0%	59.5%	59.2%	4.3%	88.5%	88.4%	87.6%	0.2%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-3

Type of Employment as Share of Total Employment from 2001 through 2003: Counties South of I-10 and El Paso

	Counties South of I-10				El Paso			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	8.0%	7.5%	7.1%	-6.8%	0.4%	0.3%	0.3%	-8.9%
Nonfarm employment	92.0%	92.5%	92.9%	6.0%	99.6%	99.7%	99.7%	2.7%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	72.6%	72.5%	72.9%	6.0%	78.8%	78.9%	78.7%	2.7%
Government and government enterprises	27.4%	27.5%	27.1%	4.7%	21.2%	21.1%	21.3%	3.3%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.3%	-1.6%
Mining	0.7%	0.7%	0.6%	-18.8%	0.3%	0.2%	0.2%	-4.2%
Utilities	0.3%	0.3%	0.3%	20.0%	0.5%	0.5%	0.4%	-15.8%
Construction	4.7%	6.1%	5.6%	26.8%	7.2%	6.9%	6.9%	-1.3%
Manufacturing	1.6%	1.7%	1.8%	20.2%	14.3%	12.3%	10.8%	-22.5%
Wholesale trade	4.8%	4.9%	4.9%	8.0%	4.6%	4.4%	4.3%	-3.4%
Retail trade	18.6%	18.3%	18.6%	6.7%	15.4%	15.4%	15.8%	5.6%
Transportation and warehousing	1.9%	1.7%	1.9%	9.2%	5.5%	5.6%	5.8%	6.9%
Information	2.8%	2.5%	2.1%	-18.0%	2.1%	2.1%	2.6%	27.6%
Finance and insurance	1.8%	1.9%	2.7%	62.6%	3.7%	3.9%	4.3%	18.1%
Real estate and rental and leasing	2.3%	2.3%	3.2%	45.6%	3.7%	3.8%	3.9%	6.9%
Professional and technical services	4.3%	4.1%	3.5%	-15.3%	4.2%	4.2%	4.1%	-1.9%
Management of companies and enterprises	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.5%	18.3%
Administrative and waste services	3.9%	3.8%	2.6%	-29.3%	7.8%	9.1%	8.6%	12.1%
Educational services	0.0%	0.0%	0.0%	0.0%	1.3%	1.3%	1.4%	12.1%
Health care and social assistance	0.0%	0.0%	0.0%	0.0%	10.9%	11.4%	11.9%	11.8%
Arts, entertainment, and recreation	2.8%	2.9%	2.1%	-19.4%	1.4%	1.5%	1.5%	13.6%
Accommodation and food services	17.0%	17.2%	15.2%	-4.8%	8.8%	8.9%	8.9%	4.3%
Other services, except public administration	9.3%	8.9%	8.9%	1.2%	7.6%	7.8%	7.7%	4.7%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	17.6%	18.1%	17.9%	6.5%	12.3%	12.2%	12.1%	1.4%
Military	1.7%	1.7%	1.7%	4.9%	17.4%	18.1%	18.4%	8.9%
State and local	80.5%	80.0%	80.2%	4.9%	70.2%	69.7%	69.5%	8.9%
State and local	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
State government	10.6%	10.4%	46.6%	359.6%	16.1%	16.3%	15.9%	1.4%
Local government	30.3%	30.8%	53.4%	84.0%	83.9%	83.7%	84.1%	2.4%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-4

Type of Employment as Share of Total Employment from 2001 through 2003: New Mexico Totals and Brewster

	New Mexico Counties Total				Brewster			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	3.7%	3.6%	3.5%	-0.8%	4.1%	3.9%	3.7%	-5.5%
Nonfarm employment	96.3%	96.4%	96.5%	6.2%	95.9%	96.1%	96.3%	5.1%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	70.7%	70.9%	71.3%	6.2%	75.1%	74.9%	75.5%	5.1%
Government and government enterprises	29.3%	29.1%	28.7%	4.1%	24.9%	25.1%	24.5%	3.1%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Mining	0.0%	0.0%	0.1%	0.0%	1.1%	1.1%	0.9%	-18.8%
Utilities	0.5%	0.4%	0.4%	-7.4%	0.5%	0.5%	0.5%	20.0%
Construction	8.0%	8.0%	8.1%	8.8%	7.3%	7.4%	6.4%	-7.2%
Manufacturing	6.4%	6.2%	6.2%	3.4%	2.5%	2.1%	2.3%	-2.9%
Wholesale trade	2.3%	2.1%	1.8%	-17.5%	6.4%	6.5%	6.6%	9.8%
Retail trade	15.6%	15.2%	15.3%	5.1%	18.0%	17.8%	19.2%	12.9%
Transportation and warehousing	3.3%	3.3%	3.5%	12.0%	2.4%	2.3%	2.6%	10.8%
Information	1.8%	1.9%	1.9%	13.4%	3.8%	3.4%	3.0%	-16.6%
Finance and insurance	3.2%	3.4%	3.4%	11.3%	2.8%	2.9%	2.6%	0.9%
Real estate and rental and leasing	3.4%	3.5%	3.5%	9.7%	3.6%	3.7%	3.5%	4.0%
Professional and technical services	6.3%	6.3%	6.3%	6.6%	5.7%	5.4%	5.4%	0.8%
Management of companies and enterprises	0.2%	0.2%	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%
Administrative and waste services	6.4%	6.5%	5.9%	-1.2%	3.9%	3.8%	4.0%	9.3%
Educational services	1.1%	1.0%	1.0%	-6.3%	0.0%	0.0%	0.0%	0.0%
Health care and social assistance	15.0%	15.9%	16.4%	16.9%	0.0%	0.0%	0.0%	0.0%
Arts, entertainment, and recreation	2.3%	2.3%	2.4%	14.2%	3.1%	3.1%	3.1%	3.8%
Accommodation and food services	9.4%	8.5%	9.4%	6.8%	19.5%	19.1%	18.9%	2.8%
Other services, except public administration	7.3%	7.4%	7.4%	7.8%	7.8%	8.3%	8.2%	11.3%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	17.2%	17.0%	16.5%	-0.1%	14.6%	15.0%	15.5%	9.9%
Military	14.9%	15.2%	15.3%	7.3%	1.7%	1.7%	1.7%	4.3%
State and local	67.9%	67.8%	68.2%	7.3%	83.8%	83.3%	82.8%	4.3%
State and local	100.0%	100.0%	100.0%				100.0%	
State government	45.1%	43.4%	43.0%	-0.4%	0.0%	0.0%	62.4%	0.0%
Local government	54.9%	56.6%	57.0%	8.5%	0.0%	0.0%	37.6%	0.0%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-5

Type of Employment as Share of Total Employment from 2001 through 2003: Culberson and Hudspeth

	Culberson				Hudspeth			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	12.4%	11.8%	11.9%	-4.9%	27.5%	26.6%	25.5%	-8.7%
Nonfarm employment	87.6%	88.2%	88.1%	0.0%	72.5%	73.4%	74.5%	1.1%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	71.4%	71.6%	71.6%	0.0%	61.4%	57.9%	58.7%	1.1%
Government and government enterprises	28.6%	28.4%	28.4%	-0.8%	38.6%	42.1%	41.3%	8.0%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mining	8.9%	9.1%	10.1%	13.3%	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%	2.2%	2.8%	2.6%	14.3%
Construction	0.0%	0.0%	0.0%	0.0%	5.1%	4.0%	0.0%	-100.0%
Manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%
Wholesale trade	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Retail trade	30.1%	32.2%	33.3%	11.1%	15.8%	13.3%	12.7%	-22.0%
Transportation and warehousing	4.2%	4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Information	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Finance and insurance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	0.0%
Real estate and rental and leasing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%
Professional and technical services	1.8%	1.6%	1.7%	-5.9%	0.0%	0.0%	0.0%	0.0%
Management of companies and enterprises	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administrative and waste services	2.9%	3.0%	3.3%	14.8%	0.0%	0.0%	0.0%	0.0%
Educational services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health care and social assistance	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, entertainment, and recreation	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Accommodation and food services	26.9%	24.6%	21.8%	-18.4%	4.6%	5.2%	7.2%	51.7%
Other services, except public administration	0.0%	0.0%	0.0%	0.0%	8.8%	10.7%	9.6%	5.4%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	15.0%	16.4%	16.8%	10.7%	21.1%	22.7%	23.3%	19.0%
Military	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
State and local	83.1%	81.7%	81.4%	0.0%	76.9%	75.4%	74.9%	0.0%
State and local	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
State government	10.3%	10.4%	11.3%	6.3%	12.7%	12.9%	13.4%	10.3%
Local government	89.7%	89.6%	88.7%	-4.0%	87.3%	87.1%	86.6%	4.5%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-6

Type of Employment as Share of Total Employment from 2001 through 2003: Jeff Davis and Presidio

	Jeff Davis				Presidio			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	15.3%	13.8%	13.3%	-7.6%	13.2%	12.2%	11.7%	-7.3%
Nonfarm employment	84.7%	86.2%	86.7%	8.9%	86.8%	87.8%	88.3%	6.7%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	74.1%	74.6%	72.9%	8.9%	65.7%	65.7%	66.5%	6.7%
Government and government enterprises	25.9%	25.4%	27.1%	13.8%	34.3%	34.3%	33.5%	4.3%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Construction	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.5%	0.0%
Manufacturing	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	1.5%	0.0%
Wholesale trade	0.0%	0.0%	0.0%	0.0%	3.2%	3.3%	2.9%	-2.1%
Retail trade	12.1%	13.3%	12.0%	6.1%	23.9%	22.6%	20.7%	-6.5%
Transportation and warehousing	2.2%	2.1%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Information	0.0%	0.0%	0.0%	0.0%	1.4%	1.2%	0.9%	-28.6%
Finance and insurance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%
Real estate and rental and leasing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%
Professional and technical services	0.0%	0.0%	0.0%	0.0%	3.0%	2.7%	0.0%	-100.0%
Management of companies and enterprises	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Administrative and waste services	0.0%	0.0%	0.0%	0.0%	6.0%	5.6%	0.0%	-100.0%
Educational services	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Health care and social assistance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Arts, entertainment, and recreation	0.0%	1.2%	1.2%	0.0%	3.4%	3.3%	0.0%	-100.0%
Accommodation and food services	22.0%	23.5%	24.1%	17.4%	7.2%	8.1%	0.0%	-100.0%
Other services, except public administration	5.6%	0.0%	0.0%	-100.0%	15.8%	15.8%	15.6%	6.4%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	11.3%	10.6%	7.8%	-21.9%	25.3%	26.3%	26.1%	7.7%
Military	0.0%	0.0%	0.0%	0.0%	2.3%	2.4%	2.4%	5.6%
State and local	86.6%	87.7%	90.7%	0.0%	72.4%	71.4%	71.5%	5.6%
State and local	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
State government	52.7%	49.8%	46.2%	4.7%	14.2%	14.1%	14.3%	3.8%
Local government	47.3%	50.2%	53.8%	35.3%	85.8%	85.9%	85.7%	2.9%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-7

Type of Employment as Share of Total Employment from 2001 through 2003: Dona Ana and Hildalgo

	Dona Ana				Hidalgo			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	3.6%	3.5%	3.4%	-0.9%	13.8%	13.9%	14.1%	-0.6%
Nonfarm employment	96.4%	96.5%	96.6%	5.8%	86.2%	86.1%	85.9%	-3.0%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	73.5%	73.8%	74.4%	5.8%	74.1%	74.6%	74.1%	-3.0%
Government and government enterprises	26.5%	26.2%	25.6%	2.4%	25.9%	25.4%	25.9%	-3.1%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.2%	0.0%
Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Utilities	0.5%	0.5%	0.5%	-4.9%	0.0%	0.0%	0.0%	0.0%
Construction	8.3%	8.3%	8.6%	11.5%	0.0%	0.0%	0.0%	0.0%
Manufacturing	6.2%	5.8%	5.8%	0.6%	0.0%	0.0%	0.0%	0.0%
Wholesale trade	2.5%	2.3%	2.2%	-9.2%	0.0%	0.0%	0.0%	0.0%
Retail trade	14.2%	14.0%	13.9%	4.6%	21.3%	15.1%	16.1%	-26.5%
Transportation and warehousing	3.3%	3.3%	3.3%	6.2%	0.0%	0.0%	0.0%	0.0%
Information	1.9%	2.2%	2.2%	21.8%	1.4%	0.0%	0.0%	-100.0%
Finance and insurance	3.3%	3.4%	3.4%	11.3%	0.0%	0.0%	0.0%	0.0%
Real estate and rental and leasing	3.2%	3.3%	3.4%	10.9%	0.0%	0.0%	0.0%	0.0%
Professional and technical services	6.6%	6.7%	6.9%	11.4%	2.7%	2.9%	3.2%	17.1%
Management of companies and enterprises	0.1%	0.1%	0.1%	-1.2%	0.0%	0.0%	0.0%	0.0%
Administrative and waste services	7.1%	6.3%	5.7%	-14.5%	0.0%	0.0%	0.0%	0.0%
Educational services	1.0%	1.1%	1.1%	16.0%	1.0%	1.0%	1.2%	20.0%
Health care and social assistance	17.4%	18.5%	19.0%	16.7%	9.8%	11.5%	15.2%	50.3%
Arts, entertainment, and recreation	2.6%	2.9%	2.9%	16.8%	0.0%	0.0%	0.0%	0.0%
Accommodation and food services	9.4%	9.6%	9.8%	10.6%	0.0%	0.0%	0.0%	0.0%
Other services, except public administration	7.3%	7.3%	7.3%	7.0%	0.0%	0.0%	0.0%	0.0%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	17.1%	17.0%	17.0%	2.1%	12.4%	13.6%	13.0%	1.5%
Military	3.2%	3.1%	3.1%	-0.3%	3.3%	3.3%	3.1%	-11.1%
State and local	79.7%	79.8%	79.9%	-0.3%	84.3%	83.2%	83.9%	-11.1%
State and local	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
State government	55.0%	53.0%	53.4%	-0.3%	17.4%	18.2%	18.5%	2.5%
Local government	45.0%	47.0%	46.6%	6.3%	82.6%	81.8%	81.5%	-4.8%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Appendix Table 5-8

Type of Employment as Share of Total Employment from 2001 through 2003: Luna and Otero

	Luna				Otero			
	2001	2002	2003	% Growth	2001	2002	2003	% Growth
Total employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Farm employment	5.9%	5.5%	5.2%	-1.1%	2.4%	2.3%	2.2%	-0.3%
Nonfarm employment	94.1%	94.5%	94.8%	13.7%	97.6%	97.7%	97.8%	5.6%
Nonfarm employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Private employment	78.7%	79.8%	80.9%	13.7%	59.9%	59.4%	58.9%	5.6%
Government and government enterprises	21.3%	20.2%	19.1%	2.1%	40.1%	40.6%	41.1%	8.0%
Private employment	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Forestry, fishing, related activities, and other	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.0%
Mining	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%
Utilities	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%	0.4%	-16.5%
Construction	5.0%	6.3%	4.8%	10.9%	9.0%	8.3%	8.6%	-0.1%
Manufacturing	16.0%	17.9%	19.5%	42.5%	3.9%	3.1%	2.0%	-47.6%
Wholesale trade	2.5%	2.2%	0.0%	-100.0%	1.7%	1.5%	1.5%	-9.8%
Retail trade	18.1%	18.6%	19.5%	26.1%	18.9%	18.2%	18.5%	1.6%
Transportation and warehousing	0.0%	0.0%	3.1%	0.0%	5.0%	4.8%	4.6%	-5.1%
Information	0.5%	0.6%	0.5%	11.1%	2.0%	1.8%	1.8%	-6.1%
Finance and insurance	2.1%	2.4%	2.3%	27.3%	3.9%	4.0%	4.0%	7.8%
Real estate and rental and leasing	3.0%	2.8%	2.8%	8.7%	4.7%	4.7%	4.9%	7.0%
Professional and technical services	3.1%	2.6%	2.6%	-0.5%	6.9%	6.6%	6.1%	-8.6%
Management of companies and enterprises	0.0%	0.0%	0.0%	0.0%	0.4%	0.5%	0.4%	2.9%
Administrative and waste services	1.6%	1.7%	0.0%	-100.0%	6.8%	10.0%	10.3%	57.5%
Educational services	0.0%	0.0%	0.0%	0.0%	1.8%	0.8%	0.8%	-53.2%
Health care and social assistance	0.0%	0.0%	0.0%	0.0%	13.4%	14.4%	14.8%	15.4%
Arts, entertainment, and recreation	1.1%	0.0%	1.2%	30.6%	1.6%	1.5%	1.5%	-5.2%
Accommodation and food services	9.4%	0.0%	8.4%	4.2%	10.1%	9.2%	9.3%	-4.4%
Other services, except public administration	7.4%	7.1%	6.8%	7.6%	8.1%	8.4%	8.6%	10.5%
Government and government enterprises	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
Federal, civilian	11.1%	11.6%	12.0%	10.1%	18.8%	18.0%	16.5%	-4.8%
Military	4.6%	4.4%	4.4%	-1.2%	39.0%	39.7%	39.2%	8.7%
State and local	84.3%	84.0%	83.6%	-1.2%	42.2%	42.3%	44.2%	8.7%
State and local	100.0%	100.0%	100.0%		100.0%	100.0%	100.0%	
State government	20.6%	20.5%	20.9%	2.6%	21.4%	20.1%	18.5%	-2.2%
Local government	79.4%	79.5%	79.1%	0.8%	78.6%	79.9%	81.5%	17.2%

Source: Regional Economic Information System, Bureau of Economic Analysis, U.S. Department of Commerce

Section 6: Income and Its Components

Appendix Table 6-1

Per Capita Components of County Income from 1970 to 2003 for Counties North of I-10, South of I-10, El Paso County, and New Mexico Counties Total in 2003 Real Dollars

	1970	1980	1990	2000	2001	2002	2003
US	$19,370	$22,586	$27,420	$31,892	$31,784	$31,506	$31,472
TX	$17,227	$22,062	$24,525	$30,253	$30,192	$29,376	$29,074
NM	$15,117	$18,637	$21,010	$23,652	$25,041	$24,780	$24,995
Counties North of I-10	$25,479	$17,602	$15,266	$14,755	$15,506	$16,057	$8,896
Counties South of I-10	$12,439	$18,025	$16,212	$19,056	$19,778	$19,442	$19,485
El Paso County	$14,130	$14,510	$17,293	$19,828	$20,428	$20,728	$20,875
New Mexico Counties Total	$14,450	$16,021	$17,884	$18,461	$19,624	$19,900	$20,147
Brewster	$12,774	$19,164	$18,334	$23,162	$24,265	$23,796	$23,440
Culberson	$15,307	$17,028	$13,138	$14,866	$14,408	$16,091	$15,522
Hudspeth	$11,521	$13,164	$13,315	$15,074	$14,944	$16,453	$16,482
Jeff Davis	$13,768	$21,641	$18,786	$18,227	$20,019	$21,982	$20,154
Presidio	$11,495	$15,210	$12,740	$14,351	$14,278	$14,540	$14,465
Dona Ana	$14,223	$15,328	$17,754	$19,052	$20,363	$20,559	$20,756
Hidalgo County	$13,216	$17,910	$18,151	$16,955	$17,542	$17,313	$17,370
Luna County	$13,258	$13,730	$15,670	$15,594	$16,482	$16,879	$17,145
Otero County	$15,316	$18,067	$18,971	$18,089	$18,963	$19,455	$19,831

Source: U.S. Census Bureau, Bureau of Economic Analysis

Appendix Table 6-2

Per Capita Components of County Income from 1970 to 2003

	Counties South of I-10						
	1970	**1980**	**1990**	**2000**	**2001**	**2002**	**2003**
Personal income	$175,744	$260,838	$279,719	$351,674	$367,240	$365,401	$372,615
Population (persons)	14,129	14,471	17,254	18,455	18,568	18,794	19,123
Per capita personal income (dollars)	$12,439	$18,025	$16,212	$19,056	$19,778	$19,442	$19,485
Total Earnings	$8,999	$11,978	$9,025	$10,731	$11,038	$11,292	$11,302
Work Earnings	$9,384	$12,917	$9,835	$11,686	$12,112	$12,416	$12,510
Government Insurance	$508	$774	$900	$1,170	$1,265	$1,296	$1,369
Residence Adjustments	$134	-$165	$91	$216	$191	$173	$161
Dividends, Interest, and Rent	$2,051	$3,708	$4,388	$4,456	$4,667	$4,054	$3,841
Personal current transfer receipts	$1,389	$2,338	$2,799	$3,869	$4,073	$4,282	$4,343
Income maintenance benefits	$190	$301	$453	$673	$661	$717	$781
Unemployment insurance compensation	$21	$35	$55	$101	$110	$142	$134
Retirement and other	$1,137	$1,986	$2,284	$3,089	$3,297	$3,417	$3,424

Appendix Table 6-3

Per Capita Components of County Income from 1970 to 2003

	Counties North of I-10						
	1970	**1980**	**1990**	**2000**	**2001**	**2002**	**2003**
Personal income	$148,087	$107,495	$96,344	$92,868	$96,447	$98,974	$53,681
Population (persons)	5,812	6,107	6,311	6,294	6,220	6,164	6,034
Per capita personal income (dollars)	$25,479	$17,602	$15,266	$14,755	$15,506	$16,057	$8,896
Total Earnings	$19,476	$12,370	$9,429	$8,643	$9,259	$9,676	$5,494
Work Earnings	$27,033	$19,397	$10,553	$9,639	$10,361	$10,919	$6,154
Government Insurance	$2,190	$1,800	$925	$902	$918	$953	$504
Residence Adjustments	-$5,367	-$5,227	-$199	-$94	-$183	-$290	-$156
Dividends, Interest, and Rent	$3,465	$2,888	$2,644	$2,442	$2,353	$2,265	$1,303
Personal current transfer receipts	$1,132	$1,526	$1,943	$3,523	$3,725	$4,027	$4,223
Income maintenance benefits	$113	$182	$353	$764	$760	$863	$973
Unemployment insurance compensation	$0	$61	$25	$29	$37	$67	$58
Retirement and other	$877	$1,260	$1,545	$2,709	$2,912	$3,085	$3,177

Appendix Table 6-4

Per Capita Components of County Income from 1970 to 2003

	El Paso County						
	1970	**1980**	**1990**	**2000**	**2001**	**2002**	**2003**
Personal income	$5,093,248	$7,018,562	$10,295,383	$13,516,751	$14,044,844	$14,376,121	$14,667,058
Population (persons)	360,462	483,711	595,350	681,700	687,543	693,570	702,609
Per capita personal income (dollars)	$14,130	$14,510	$17,293	$19,828	$20,428	$20,728	$20,875
Total Earnings	$11,357	$10,699	$11,680	$13,325	$14,014	$14,196	$14,378
Work Earnings	$12,492	$13,347	$13,708	$15,659	$16,380	$16,624	$16,790
Government Insurance	$813	$1,164	$1,380	$1,526	$1,550	$1,595	$1,605
Residence Adjustments	-$323	-$1,485	-$647	-$807	-$816	-$833	-$808
Dividends, Interest, and Rent	$1,642	$1,949	$3,219	$2,948	$2,678	$2,547	$2,397
Personal current transfer receipts	$1,131	$1,863	$2,394	$3,554	$3,735	$3,985	$4,100
Income maintenance benefits	$105	$261	$431	$670	$656	$727	$804
Unemployment insurance compensation	$40	$98	$22	$20	$21	$28	$30
Retirement and other	$986	$1,503	$1,940	$2,864	$3,059	$3,229	$3,266

Appendix Table 6-5

Per Capita Components of County Income from 1970 to 2003

	New Mexico Counties						
	1970	**1980**	**1990**	**2000**	**2001**	**2002**	**2003**
Personal income	$1,851,263	$2,618,369	$3,803,943	$4,947,203	$5,271,910	$5,390,459	$5,551,570
Population (persons)	128,112	163,435	212,697	267,980	268,647	270,872	275,556
Per capita personal income (dollars)	$14,450	$16,021	$17,884	$18,461	$19,624	$19,900	$20,147
Total Earnings	$11,801	$11,697	$11,960	$11,489	$12,022	$12,504	$12,855
Work Earnings	$13,471	$12,976	$13,027	$11,977	$12,476	$13,085	$13,512
Government Insurance	$703	$954	$1,222	$1,230	$1,245	$1,333	$1,376
Residence Adjustments	-$967	-$325	$155	$742	$791	$752	$719
Dividends, Interest, and Rent	$1,430	$2,300	$3,345	$3,335	$3,590	$3,086	$2,902
Personal current transfer receipts	$1,219	$2,024	$2,579	$3,637	$4,012	$4,311	$4,391
Income maintenance benefits	$194	$296	$390	$509	$501	$549	$591
Unemployment insurance compensation	$57	$58	$49	$66	$72	$95	$97
Retirement and other	$965	$1,670	$2,140	$3,061	$3,439	$3,667	$3,701

Appendix Table 6-6

Percent of Personal Income Components from 1970 to 2003 for Counties North of I-10, South of I-10, El Paso County, and New Mexico Counties Total in 2003 Real Dollars

Counties South of I-10

	1970	1980	1990	2000	2001	2002	2003
Personal income	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Earnings	72.3%	66.5%	55.7%	56.3%	55.8%	58.1%	58.0%
Dividends, Interest, and Rent	16.5%	20.6%	27.1%	23.4%	23.6%	20.9%	19.7%
Personal current transfer receipts	11.2%	13.0%	17.3%	20.3%	20.6%	22.0%	22.3%

New Mexico Counties

	1970	1980	1990	2000	2001	2002	2003
Personal income	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Earnings	81.7%	73.0%	66.9%	62.2%	61.3%	62.8%	63.8%
Dividends, Interest, and Rent	9.9%	14.4%	18.7%	18.1%	18.3%	15.5%	14.4%
Personal current transfer receipts	8.4%	12.6%	14.4%	19.7%	20.4%	21.7%	21.8%

Counties North of I-10

	1970	1980	1990	2000	2001	2002	2003
Personal income	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Earnings	76.4%	70.3%	61.8%	58.6%	59.7%	60.3%	61.8%
Dividends, Interest, and Rent	13.6%	16.4%	17.3%	16.5%	15.2%	14.1%	14.6%
Personal current transfer receipts	10.0%	13.3%	20.9%	24.9%	25.1%	25.6%	23.6%

El Paso County

	1970	1980	1990	2000	2001	2002	2003
Personal income	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Earnings	80.4%	73.7%	67.5%	67.2%	68.6%	68.5%	68.9%
Dividends, Interest, and Rent	11.6%	13.4%	18.6%	14.9%	13.1%	12.3%	11.5%
Personal current transfer receipts	8.0%	12.8%	13.8%	17.9%	18.3%	19.2%	19.6%

Appendix Table 6-7

Percent of Personal Transfer Payment Components from 1970 to 2003 for Counties North of I-10, South of I-10, El Paso County, and New Mexico Counties in 2003 Real Dollars

Counties South of I-10	1970	1980	1990	2000	2001	2002	2003
Retirement and disability insurance benefits	48.6%	48.6%	45.3%	37.8%	36.8%	36.1%	36.0%
Medical benefits	15.5%	17.1%	21.5%	28.6%	29.7%	30.6%	30.3%
Income maintenance benefits	13.7%	12.9%	16.2%	17.4%	16.2%	16.7%	18.0%
Unemployment insurance compensation	1.5%	1.5%	2.0%	2.6%	2.7%	3.3%	3.1%
Veterans benefits	10.7%	7.8%	4.3%	3.5%	3.2%	3.3%	3.4%
Federal education and training assistance	0.0%	5.1%	4.1%	4.0%	5.1%	5.1%	4.7%
Other	7.1%	6.2%	6.4%	6.0%	6.1%	4.7%	4.5%
Counties North of I-10	1970	1980	1990	2000	2001	2002	2003
Retirement and disability insurance benefits	42.6%	45.4%	42.8%	31.9%	30.8%	29.5%	29.1%
Medical benefits	10.5%	15.4%	21.3%	35.3%	37.6%	38.8%	38.7%
Income maintenance benefits	9.9%	12.0%	18.2%	21.7%	20.4%	21.4%	23.0%
Unemployment insurance compensation	0.0%	4.0%	1.3%	0.8%	1.0%	1.7%	1.4%
Veterans benefits	24.4%	11.6%	6.1%	3.1%	3.1%	3.3%	3.2%
Federal education and training assistance	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	0.0%	14.3%	9.3%	6.5%	6.6%	5.0%	4.3%
El Paso	1970	1980	1990	2000	2001	2002	2003
Retirement and disability insurance benefits	42.6%	39.6%	36.2%	28.0%	27.2%	26.3%	25.7%
Medical benefits	14.6%	18.5%	26.6%	38.1%	39.7%	40.9%	40.1%
Income maintenance benefits	9.3%	14.0%	18.0%	18.9%	17.6%	18.3%	19.6%
Unemployment insurance compensation	3.6%	5.3%	0.9%	0.6%	0.6%	0.7%	0.7%
Veterans benefits	20.1%	11.5%	8.0%	5.9%	5.8%	5.9%	5.9%
Federal education and training assistance	0.7%	3.2%	2.8%	2.1%	2.6%	2.8%	3.2%
Other	9.2%	7.9%	7.4%	6.5%	6.7%	5.1%	4.7%
New Mexico Counties	1970	1980	1990	2000	2001	2002	2003
Retirement and disability insurance benefits	36.8%	44.7%	42.4%	35.0%	33.0%	31.8%	31.3%
Medical benefits	11.7%	16.2%	23.7%	35.6%	38.6%	40.5%	41.1%
Income maintenance benefits	15.9%	14.6%	15.1%	14.0%	12.5%	12.7%	13.5%
Unemployment insurance compensation	4.6%	2.9%	1.9%	1.8%	1.8%	2.2%	2.2%
Veterans benefits	19.3%	9.6%	5.4%	4.3%	4.1%	4.2%	4.2%
Federal education and training assistance	0.6%	3.9%	3.8%	2.2%	2.5%	2.4%	2.1%
Other	10.7%	8.1%	7.7%	7.2%	7.5%	6.1%	5.6%

Appendix Table 6-8
Percent of Earnings for Counties North of I-10, Counties South of I-10, El Paso County, and New Mexico Counties

	Counties North of I-10			Counties South of I-10			El Paso County			New Mexico Counties		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Farm earnings	6.96%	16.83%	9.11%	-3.29%	-1.50%	-5.04%	0.12%	0.13%	0.17%	4.99%	4.24%	4.69%
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Nonfarm earnings	93.04%	83.17%	90.89%	103.29%	101.50%	105.04%	99.88%	99.87%	99.83%	95.01%	95.76%	95.31%
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Nonfarm earnings	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Private earnings	44.86%	42.36%	41.49%	58.79%	58.92%	59.08%	73.25%	72.66%	71.76%	56.84%	56.85%	57.09%
Government and government enterprises	55.14%	57.64%	58.51%	41.21%	41.08%	40.92%	26.75%	27.34%	28.24%	43.16%	43.15%	42.91%

Appendix Table 6-9
Percent of Earnings by Industry, 2001-2003

	Counties North of I-10			Counties South of I-10			El Paso County			New Mexico Counties		
	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Forestry, fishing, related activities, & other	0.40%	0.35%	0.34%	0.40%	0.35%	0.34%	0.15%	0.15%	0.15%	0.00%	0.00%	0.15%
Mining	3.89%	3.42%	3.30%	3.89%	3.42%	3.30%	0.36%	0.29%	0.30%	0.01%	0.00%	0.04%
Utilities	0.96%	0.90%	0.91%	0.96%	0.90%	0.91%	1.34%	0.82%	0.70%	0.64%	0.62%	0.57%
Construction	6.92%	6.48%	6.41%	6.92%	6.48%	6.41%	5.04%	4.79%	4.83%	5.35%	5.47%	5.73%
Manufacturing	6.87%	6.32%	6.17%	6.87%	6.32%	6.17%	13.57%	12.69%	11.85%	4.73%	4.62%	4.58%
Wholesale trade	3.38%	3.36%	3.20%	3.38%	3.36%	3.20%	4.29%	4.32%	4.38%	1.56%	1.45%	1.27%
Retail trade	8.15%	8.07%	7.83%	8.15%	8.07%	7.83%	7.93%	7.91%	7.90%	8.05%	7.81%	7.74%
Transportation & warehousing	2.85%	2.77%	2.76%	2.85%	2.77%	2.76%	6.85%	5.86%	5.93%	2.46%	2.24%	2.51%
Information	2.42%	2.27%	2.12%	2.42%	2.27%	2.12%	1.82%	1.86%	2.24%	1.54%	1.56%	1.58%
Finance and insurance	4.06%	4.01%	4.17%	4.06%	4.01%	4.17%	3.07%	3.51%	3.43%	2.62%	2.71%	2.73%
Real estate, rental & leasing	1.73%	1.81%	1.79%	1.73%	1.81%	1.79%	6.40%	6.80%	7.26%	0.80%	0.74%	0.75%
Professional & technical services	9.09%	9.03%	9.34%	9.09%	9.03%	9.34%	3.67%	3.40%	3.15%	5.47%	5.32%	5.27%
Management of companies & enterprises	0.91%	0.87%	0.76%	0.91%	0.87%	0.76%	0.28%	0.29%	0.31%	0.16%	0.15%	0.13%
Administrative & waste services	3.88%	3.92%	3.85%	3.88%	3.92%	3.85%	3.07%	3.51%	3.38%	2.76%	2.75%	2.72%
Educational services	0.71%	0.72%	0.76%	0.71%	0.72%	0.76%	0.48%	0.49%	0.52%	0.30%	0.27%	0.29%
Health care & social assistance	8.66%	9.28%	9.64%	8.66%	9.28%	9.64%	8.99%	10.00%	9.49%	9.78%	10.49%	10.80%
Arts, entertainment, & recreation	0.85%	0.79%	0.77%	0.85%	0.79%	0.77%	0.35%	0.35%	0.37%	0.67%	0.76%	0.83%
Accommodation & food services	3.39%	3.45%	3.38%	3.39%	3.45%	3.38%	2.81%	2.77%	2.75%	2.87%	2.70%	2.87%
Other services, except public administration	2.90%	3.01%	2.96%	2.90%	3.01%	2.96%	2.77%	2.86%	2.83%	3.53%	3.56%	3.51%
Government & government enterprises												
Federal, civilian	23.52%	22.96%	22.25%	23.52%	22.96%	22.25%	20.20%	20.50%	19.45%	29.85%	30.02%	28.78%
Military	8.75%	9.78%	10.28%	8.75%	9.78%	10.28%	21.64%	21.75%	22.98%	17.61%	18.56%	20.28%
State and local	67.73%	67.26%	67.47%	67.73%	67.26%	67.47%	58.16%	57.76%	57.57%	52.54%	51.42%	50.93%
State government	45.53%	46.59%	47.86%	45.53%	46.59%	47.86%	17.67%	18.27%	17.44%	39.64%	39.24%	38.98%
Local government	54.47%	53.41%	52.14%	54.47%	53.41%	52.14%	82.33%	81.73%	82.56%	60.36%	60.76%	61.02%

Section 7:

Upper Rio Grande Workforce Development Board Industry Cluster Analysis

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Upper Rio Grande Workforce Development Board Industry Cluster Analysis

Cluster Methodology: How they were intended

Economic developers often forget that clusters were originally thought of by Porter as groups of businesses, which fell outside the bounds of rigid SIC or NAICS designations, that bought from and sold to one another within geographic and economic space. In fact, the cluster concept has a common theoretical base with the work of economists and planners who couched their work in far less attractive language that focused on economic geography and agglomeration—all while Porter focused on competitiveness. The latter may be the reason that economic developers ascribe so many meanings to clusters—because they were fuzzy even when Porter conceived them. Nonetheless, Porter's characterization of clusters added an energy to his work that made it attractive. What analysts and policymakers must understand is that what determines a cluster now differs by methodology. Location quotients and shift-share analyses alone do not, as both are purely industry studies; and different actual cluster studies tell different stories. Porter, for example, focuses on clusters that are either locally oriented, resource dependent, or trade or export oriented. Detailed information on how industries are related—how they sell to and purchase from one another—is absent. Moreover, the Porter approach tends to focus on industries that are both trading and operating in common space (based on the use of state level data). Readers familiar with the El Paso economy understand that interest should focus on industries that are related far more in "economic space" than in "geographic space,"[1] particularly given El Paso's relative isolation in far west Texas and the absence of data for what truly constitutes El Paso's economic region, namely Cd. Juárez. That said, the key strength of the Feser methodology adopted for this study is its reliance on the national input-output (I-O) accounts as a foundation. The national input-output accounts track in detail what industries sell to and buy from related industries, which allows for study of what industries rely upon one another in economic space to survive. Grouping these co-supportive and co- dependent industries gets at the essence of Porter's original cluster concept from the Competitive Advantage of Nations far more than other methods currently allow.

Feser does this by grouping industries with their customers and suppliers, creating "a distinct value chain for each industry."[2] This is accomplished via what is essentially a data reduction technique. The data reduction process is such that it takes a 437 row by 437 column matrix identifying the selling and buying patterns of 437 industries and reducing them to 45 "Benchmark Value Chain" clusters. The same is done for a 111 by 111 matrix of technology intensive industries to provide 15 additional "Technology-based" clusters. The Benchmark Value Chain and Technology-based clusters then serve as valuable tools for regional analysts.

Because Feser begins with the national input-output accounts, researchers at the regional level can benchmark the performance of industries (thus the "Benchmark Value Chain clusters") within each cluster to national performance. In other words, does the set of industries that make up a cluster at the national level perform worse than, the same as, or better than the same regional industries? A set of industries grouped into a cluster performing better at the regional level provides key insight into what may be some level of regional competitive advantage. Poor performance, conversely, may be indicative of some key industry within the cluster nationally being absent at the regional level—a useful tool in business recruitment or the development of incentive packages.

The specific use of the cluster methodology will differ based on the varying goals of different research projects, but it is clear that the reduction of two huge sets of trading patterns into 60 clusters provides an invaluable tool for regional economic analysis and planning.

Practical Use—Performance Benchmarking

The specific application of the mode of inquiry provided by Feser has two goals here. First is the identification of clusters (benchmark and technology) that exist in the El Paso and Workforce Board region rural counties relative to national benchmarks. Second is the identification of targeted training opportunities the Workforce Board may be able to support to enhance Existing, Emerging, or Potential clusters.

The performance benchmarking portion of this analysis is the most straightforward. Six digit NAICS industry employment data grouped into the 45 Benchmark Value Chain and 15 technology based clusters for the URGWDB counties are compared to the U.S. benchmarks for the same period. The periods selected for comparison in the table below (Table 11) are 1991 and 2005, with detailed results provided in Appendix A for all counties and varying time periods.

Before moving on to detailed results for the region, three key terms are essential for understanding how clusters are selected. While the actual number of clusters can be "fuzzed" to be greater than or less than 45 or 15 (respectively, for Benchmark Value Chain or Technology-based clusters), clusters are further defined for practical use as either Existing, Emerging, or Potential. Unlike the statistical methods and normative rules used to build the 60 clusters, there is less available guidance that clearly delineates where an Existing cluster begins and an Emerging cluster ends. The cutoffs are made quantitatively and qualitatively in that they rely on expert examination of the data and focus group follow-up to the statistical cluster results. The selection criteria for each type of cluster are defined as:

- Existing: These clusters tend to have a large, diversified number of firms operating in the region (in terms of industry and absolute number), a large number of employees, and a high level of concentration (as measured by location quotient). Existing clusters typically represent a region's productive core and also have strong wage performance and stability. The Textiles and Apparel cluster, for example, exhibits several of these characteristics, but shows rapid decline and very low wages relative to the U.S. and the region, making it a poor candidate as a focus for economic development planning.
- Emerging: These clusters, while potentially large, may lack key industries or be dominated by a small number of firms. A cluster might be made up of 15 industries. An Emerging cluster would show firms and employment in only about two thirds—or show employment only at the low end of industry association with the cluster.
- Potential: Employment in these clusters may be high, but may be dominated by one or a very small number of firms across very few industries that define a cluster. Potential clusters have a core set of establishments but may lack the strength to attract related firms in necessary industries.

A few additional instructions for the analysis below are warranted. First is a brief overview of location quotients (LQ), which are simply a measure of an industry or cluster's concentration in an area. A key tool in economic base theory, levels below 1 suggest that a region does not meet local demand for a certain good. Levels above 1 suggest not only concentration but specialization that allows the region to export a portion of the industry / cluster's output. The compound quarterly growth rate is a "smoothed" growth rate. The remaining tables measures are straight forward, although the bubble charts do warrant one note.

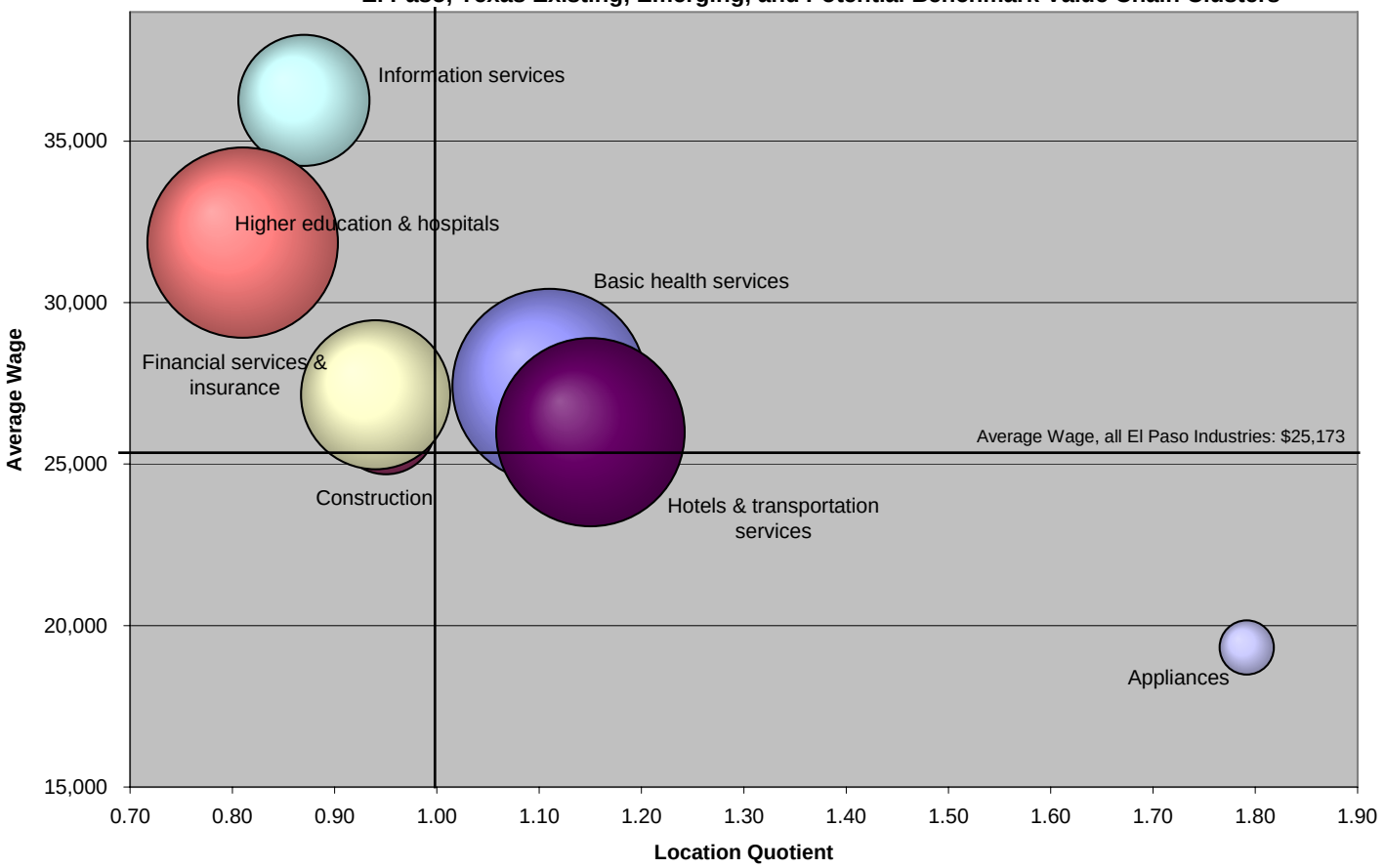
Ideally, each of the bubbles (cluster employment plotted in two space) would be above the regional wage average (bold horizontal line) and to the right of 1 on the x axis (bold vertical line). Very few industries in El Paso or the Workforce Board Area counties exhibit both, making identifying Existing clusters somewhat more difficult. There are several clusters with high wage rates and high employment levels that could develop a greater degree of concentration and move to the right along the x axis—such as Higher Education and Hospitals should Texas Tech Medical School open a four-year branch in El Paso.

Cluster Results: El Paso, the North Interstate 10 corridor, and the South Interstate 10 corridor

El Paso Benchmark Value Chain Cluster Results

The El Paso economy has a variety of strengths—its military presence and strong service sector built in part around serving visitors from Mexico. Unfortunately, these industries are not necessarily productive; they are not involved in the production of some tangible good or service (that is not exclusively local[3]). But this was in part the reason that the Feser clusters were selected to study the regional economy. The Feser clusters allow researchers to focus on mapping El Paso's productive activities, not activities suited to purely local serving production that typically have low wages. Because of El Paso's service and Military base, the economy did not fare particularly well when fitted at the six digit NAICS level to either the 45 Benchmark Value Chain clusters or the 15 Technology-based clusters. El Paso simply lacks activity in many productive industries—grouped by Feser or not. This is evident from examination of the location quotient column of the El Paso results below (Appendix Table 7-1), where upwards of 75 percent of the Benchmark Value Chain clusters fail to employ a sufficient number of individuals to meet local demand (LQ<1). Of the remaining clusters, many, such as textiles and apparel, have a very low wages relative to both the U.S. for the same cluster and for El Paso across all clusters. The nature of these results limits the ability of the researchers to define large sets of Existing, Emerging, and Potential clusters for both the Benchmark Value Chain and Technology-based industry groupings. Readers familiar with other regional studies that use a similar cluster methodology may note the selection of fewer Benchmark Value Chain and technology based clusters overall.

Appendix Figure 7-1
El Paso, Texas Existing, Emerging, and Potential Benchmark Value Chain Clusters



Existing Clusters

- Basic Health: This is easily El Paso's largest cluster, employing over 42,000 people across 2,942 firms. Population growth, the exporting of health services to Mexico, and BRAC all suggest that the cluster will remain at the core of the greater El Paso economy. The location quotient for this cluster is among the very few that is above one (1.11). Focus group comments suggest this is due in part to increased employment associated with lower wage levels relative to those of the United States. It is also highly likely that the high employment levels come from serving both paying and nonpaying customers from Mexico who demand health services.
- Construction: The construction cluster saw growth equal to that of the nation between 1991 and 2005, although this growth tapered off between 2002 and 2005. The 20,000 troops planned for Fort Bliss will no doubt provide a huge stimulus to this cluster and enhance local employment opportunity, helping push its location quotient over one. There is some risk in any construction employment build up associated with troop movements. Eventually the

construction slows significantly or stops as the new demand has been met. The key to development in this cluster will be creating more highly skilled workers within the industry once the regional BRAC adjustment is made.

- Hotels and Transportation: This sector is included here not because of the focus on hotels or tourism, but because of El Paso's importance as a port for goods imported and exported from and to Mexico. It is in these cluster industries that wages exceed the average for El Paso, while overall cluster wages would seem to be on par with that of the rest of the county. Maquila employment is also improving as producers relocate to Mexico because of the difficulty of moving some finished goods from China to final market in the U.S quickly.
- Information Services: The information services cluster is not only a major employer in the region (19,504) but is relatively well diversified (1841 firms). While the level of concentration for the cluster could be higher (LQ=.81), positive growth over the 1991 to 2005 period is promising. These results are bolstered by focus group comments which suggest that local firms are beginning to outsource information technology functions at a higher rate than over the past decade. It should also be noted that several information services member industries have very low employment, and the level of concentration for the cluster in the region actually dropped slightly between 1991 and 2005. However, over the 2002 to 2005 period, Information Services growth has been positive, while at the national level, employment declined, which bolsters focus group comments.
- Financial Services and Insurance: This cluster also exhibits high employment (25,355) and diversification (1443 firms), but more importantly has grown at a rate almost twice that of the cluster at the national level over the 1991 to 2005 period. Increasing remittances to Mexico and an increased focus on cross-border banking have also helped to solidify this cluster within the region.

Emerging Cluster

- Higher Education and Hospitals: This cluster employs 41,286 people in 2636 firms, but is not particularly concentrated in the region. It has, however, posted faster growth than the U.S. over the 1991 to 2005 period. This cluster suffers from very low employment in several specific industries, which is likely an outgrowth of low educational attainment levels in the region. It will no doubt be helped should Texas Tech open a 4-year medical school in the county.

Potential Cluster

- Appliances: While small in absolute employment terms compared to each of the other clusters above, the appliance cluster exhibits some of the highest concentration levels of any of the Benchmark Value Chain clusters. Its growth was also well above that of the U.S. over the 1991 to 2005 period. Unfortunately, the appliance cluster pays low wages not only compared to the U.S. but only slightly above the El Paso average. The key to cluster development here is shifting production to more technology oriented products that can build upon an established production base both in El Paso and across the border.

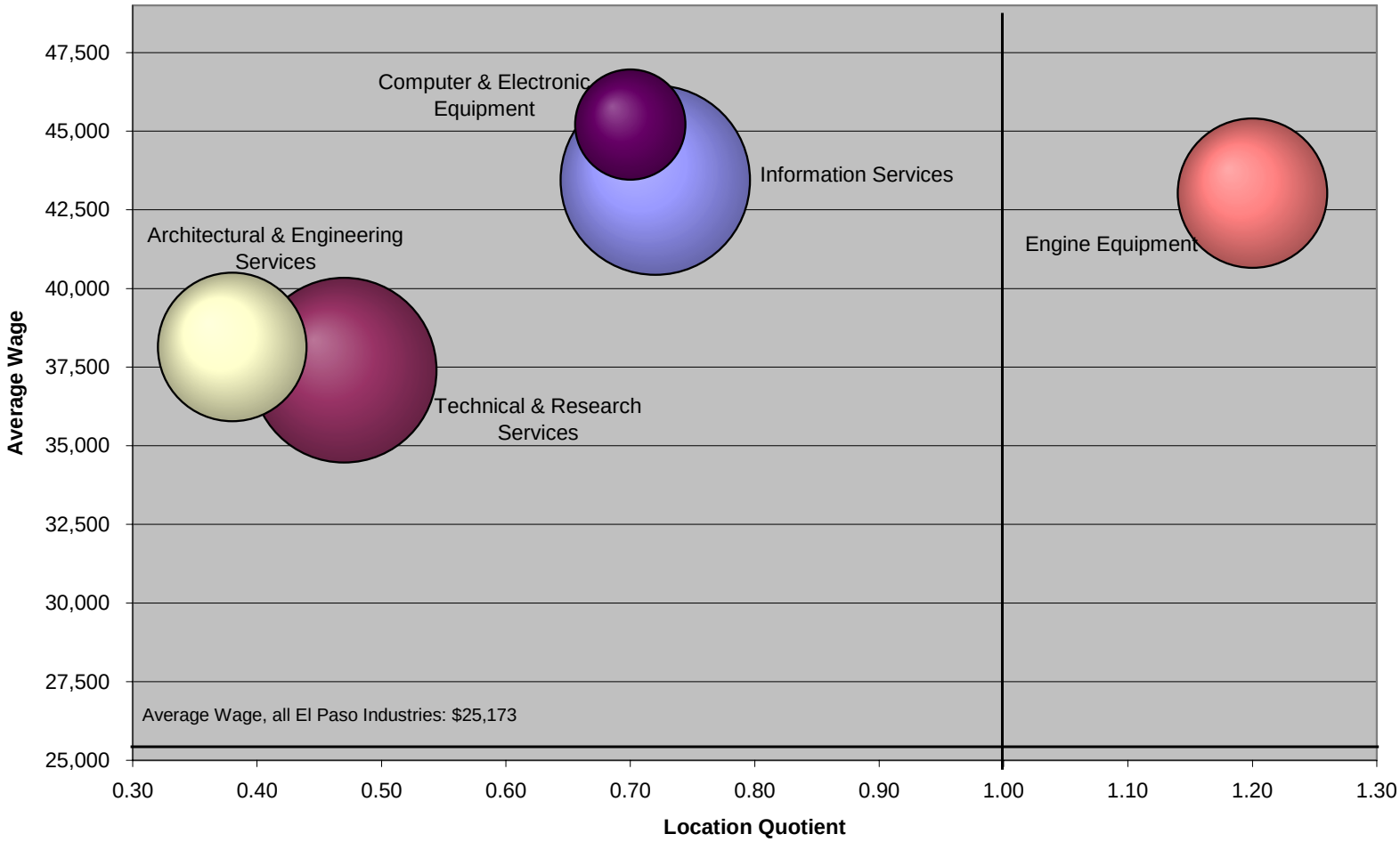
El Paso Technology-based Cluster Results

As with the Benchmark Value Chain cluster results, only a small group of the Technology-based clusters present themselves as a core for the region's productive base based on the selection criteria defined above. One Existing cluster, one Emerging cluster, and three Potential clusters of 15 are selected for analysis.

Existing cluster

- Engine Equipment: The only Existing Technology-based value chain cluster that falls within the Existing rubric is engine equipment, which employed over 2,300 people in the first quarter of 2005 among 22 different firms. While one-fifth the employment of many of the Benchmark Value Chain clusters, engine equipment is the only Technology-based cluster that exhibits any degree of specialization or concentration. With a location quotient of 1.2, this cluster likely serves in a portion of the needs of maquilas in Cd. Juarez which also produce automotive goods. Its growth over the 1991 to 2005 period was also well above that of the U.S., which saw a loss.

Appendix Figure 7-2
El Paso, Texas Existing, Emerging, and Potential Technology Based Clusters



Emerging Cluster

- Information Services: This cluster has the largest employment of any of the Technology-based clusters, employing 3,803 employees among 138 firms. It is significantly less concentrated, with a location quotient of .72 and lacks many supporting industries that fall within the cluster. It did, however, grow at almost twice the rate of the United States cluster between 1991 and 2005. This would coincide with information services Benchmark Value Chain cluster comments which suggest that local firms are beginning to outsource some information technology services.

Potential Clusters

- Computer and Electronic Equipment: This cluster exhibits little concentration and actually saw faster decline than its U.S. counterpart, yet many focus group participants felt that there should be some tie between border security and technology intensive industries in the region. Since many of the solutions to keeping the borders open will rely not only on software but hardware and computer solutions, this cluster is included here.

- Architectural and Engineering Services and Technical and Research Services: These clusters both exhibit a very low degree of concentration, but unlike other technology based clusters, showed positive growth and strong employment between 1991 and 2005. While the low levels of diversification and missing industries within the cluster may eventually prove to be obstacles that cannot be overcome, their strong employment should not be overlooked. The low location quotient also suggests that the cluster is not meeting local demand, a possible opportunity for increased training.

North I-10 Corridor Benchmark Value Chain Cluster Results

Not surprisingly, the clusters that surface for the North Interstate 10 corridor are Farming, Dairy, and Feed Products, all of which have historically been the center pieces of this rural economy. Location quotients and employment levels for all others suggest low levels of industrial concentration. Focus group comments generally support these findings. Construction and Hotels and Transportation Services clusters also show modest employment strength, but lacked concentration or diversity. It should also be noted that a far smaller percentage of total employment is captured by the employment data used in this study because so many individuals in this region are sole proprietors (on their own businesses and therefore did not pay unemployment insurance). As such, this data (ES-202) may not be entirely reflective of actual cluster strengths in rural counties. That said, focus groups did not suggest major deviation from the cluster results that are available. The detailed tables for these findings are presented below. Unfortunately, no technology clusters present themselves for analysis.

South I-10 Corridor Benchmark Value Chain Cluster Results

South of Interstate 10, Farming, Dairy, and Feed Products are still viable rural clusters, although Hotels and Transportation Services is the third largest employment cluster (1,163) in the region. This is due to Big Bend National Park and a myriad of ecotourism firms in the region. It should be noted that the same data limitations mentioned above apply to the South Interstate 10 corridor as well. The wood products cluster also shows some strength as a potential cluster in that its small number of firms had some concentration (LQ=.69) and showed growth well above that of the US 1991-2005. The rapid percentage growth, however, may be due to small overall employment totals.

Appendix Table 7-1
Detailed Results Benchmark Value Chain and Technology Based Clusters

Summary trends, benchmark value chain clusters, 1991-2005
El Paso County

		Employment							2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	El Paso '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Textiles & apparel	60	3,229	53.8	1.7	-3.2	-1.5	2.19	-3.3	20.4	13,861	0.79	25,330	0.80	0.02
Packaged food products	62	1,445	23.3	0.8	-1.7	-0.1	0.64	-0.8	8.4	14,583	0.65	23,229	0.70	0.05
Plastics & rubber manufacturing	12	636	53.0	0.3	-1.1	-0.6	0.57	-0.1	12.2	31,256	0.82	76,649	1.10	0.28
Aluminum & aluminum products	16	995	62.2	0.5	-0.2	-0.5	0.88	0.1	8.9	23,136	0.74	35,809	0.75	0.00
Basic health services	2,942	42,664	14.5	22.2	1.0	0.7	1.11	0.2	292.5	22,018	0.76	27,428	0.62	-0.15
Mining	9	50	5.6	0.0	0.3	-0.3	0.08	0.0	0.4	36,839	1.07	32,616	0.57	-0.50
Farming	80	621	7.8	0.3	-0.9	-0.5	0.60	-0.1	2.7	12,653	0.93	17,662	0.81	-0.13
Construction	978	11,445	11.7	5.9	0.6	0.6	0.95	0.0	75.1	16,705	0.63	26,233	0.67	0.04
Financial services & insurance	1,443	25,355	17.6	13.2	1.2	0.7	0.94	0.2	172.1	21,767	0.75	27,146	0.45	-0.30
Chemical-based products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Machine tools	77	1,442	18.7	0.7	1.5	-0.1	0.76	0.4	15.6	19,907	0.71	43,211	1.03	0.32
Precision instruments	11	648	58.9	0.3	-1.0	-0.6	0.91	-0.2	6.1	20,089	0.64	37,672	0.63	-0.01
Printing & publishing	243	2,538	10.4	1.3	0.0	0.2	0.57	-0.1	20.4	19,151	0.66	32,079	0.59	-0.07
Metalworking & fabr metal products	39	1,216	31.2	0.6	0.6	0.1	1.03	0.3	7.1	17,023	0.64	23,517	0.60	-0.04
Dairy products	23	442	19.2	0.2	-0.9	-0.1	0.68	-0.4	3.2	18,917	0.80	28,589	0.83	0.03
Nondurable industry machinery	62	2,160	34.8	1.1	0.2	-0.1	0.75	0.1	17.4	17,821	0.58	32,272	0.64	0.06
Computer & electronic equipment	51	1,559	30.6	0.8	-1.4	-0.5	0.63	-0.4	15.9	24,024	0.65	40,815	0.54	-0.12
Wood products & furniture	48	814	17.0	0.4	-0.9	-0.1	0.73	-0.4	3.7	13,903	0.69	18,115	0.58	-0.12
Const machinery & distribution equip	12	595	49.6	0.3	3.1	-0.3	0.54	0.4	4.2	22,495	0.72	27,954	0.53	-0.20
Wood processing	62	753	12.1	0.4	-0.1	0.0	0.51	0.0	3.3	13,169	0.66	17,452	0.56	-0.10
Paper	23	938	40.8	0.5	-0.3	-0.4	0.96	0.1	7.8	19,760	0.68	33,064	0.73	0.05
Concrete, brick building products	53	2,108	39.8	1.1	0.7	0.3	1.36	0.3	16.3	20,352	0.84	30,849	0.85	0.00
Motor vehicles	20	1,787	89.4	0.9	-0.4	0.1	0.80	-0.2	16.7	23,830	0.72	37,453	0.72	0.00
Wood building products	65	2,744	42.2	1.4	0.6	0.2	1.65	0.4	19.5	18,710	0.79	28,391	0.79	0.01
Plastics products	30	1,689	56.3	0.9	0.3	0.0	1.20	0.2	11.6	17,736	0.63	27,435	0.64	0.01
Feed products	91	747	8.2	0.4	-1.4	-0.2	0.54	-0.4	3.3	12,287	0.72	17,507	0.62	-0.10
Arts and media	1,506	16,255	10.8	8.4	0.0	0.3	0.83	-0.1	131.1	19,423	0.71	32,254	0.67	-0.05
Higher education & hospitals	2,636	41,286	15.7	21.4	0.6	0.5	0.81	0.1	328.8	20,730	0.79	31,857	0.68	-0.11
Information services	1,841	19,504	10.6	10.1	0.2	0.4	0.87	-0.1	176.8	22,467	0.71	36,262	0.64	-0.07
Petroleum & gas	60	2,087	34.8	1.1	-1.0	-0.4	0.87	-0.3	35.9	37,004	0.92	68,740	0.86	-0.06
Business services	2,650	39,611	14.9	20.6	0.6	0.6	0.93	0.0	279.1	19,413	0.72	28,180	0.53	-0.19
Grain milling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rubber products	16	473	29.6	0.2	0.1	-0.4	0.52	0.1	3.4	16,998	0.59	28,640	0.65	0.06
Glass products	14	388	27.7	0.2	0.9	-0.2	0.63	0.3	2.4	18,679	0.72	24,455	0.59	-0.13
Pharmaceuticals	6	276	46.0	0.1	3.8	0.0	0.29	0.3	2.7	20,519	0.57	39,628	0.51	-0.06
Steel milling	7	552	78.9	0.3	0.0	-0.6	1.61	0.5	4.1	19,791	0.56	29,629	0.51	-0.05
Nonresidential building products	204	3,968	19.5	2.1	0.4	0.3	0.99	0.0	31.5	21,483	0.69	31,750	0.63	-0.06
Tobacco products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Optical equipment & instruments	11	158	14.4	0.1	-2.9	-0.4	0.20	-0.5	1.4	16,783	0.59	36,166	0.68	0.09
Appliances	60	3,365	56.1	1.7	0.8	0.2	1.79	0.5	24.9	19,322	0.79	29,571	0.79	0.00
Copper & copper products	33	1,038	31.5	0.5	-0.9	-0.5	2.69	-0.4	14.5	31,226	1.12	55,686	1.28	0.16
Hotels & transportation services	2,187	40,260	18.4	20.9	1.1	0.6	1.15	0.3	261.6	17,882	0.77	25,992	0.64	-0.13
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Breweries & distilleries	7	548	78.3	0.3	-2.6	-0.5	0.94	-1.9	3.4	13,741	0.50	24,750	0.55	0.05
Leather products	37	1,094	29.6	0.6	-1.6	-1.1	4.14	-1.1	7.9	15,007	0.79	29,067	0.82	0.04
Total, establishments in VC sectors	7,177	125,215	17.4	65.0	0.2	0.3	n/a	n/a	950.0	19,253	0.71	30,347	0.63	-0.08
Total, all establishments	10,786	192,584	17.9	100.0	0.3	0.3	n/a	n/a	1,218.1	17,029	0.72	25,301	0.63	-0.10

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

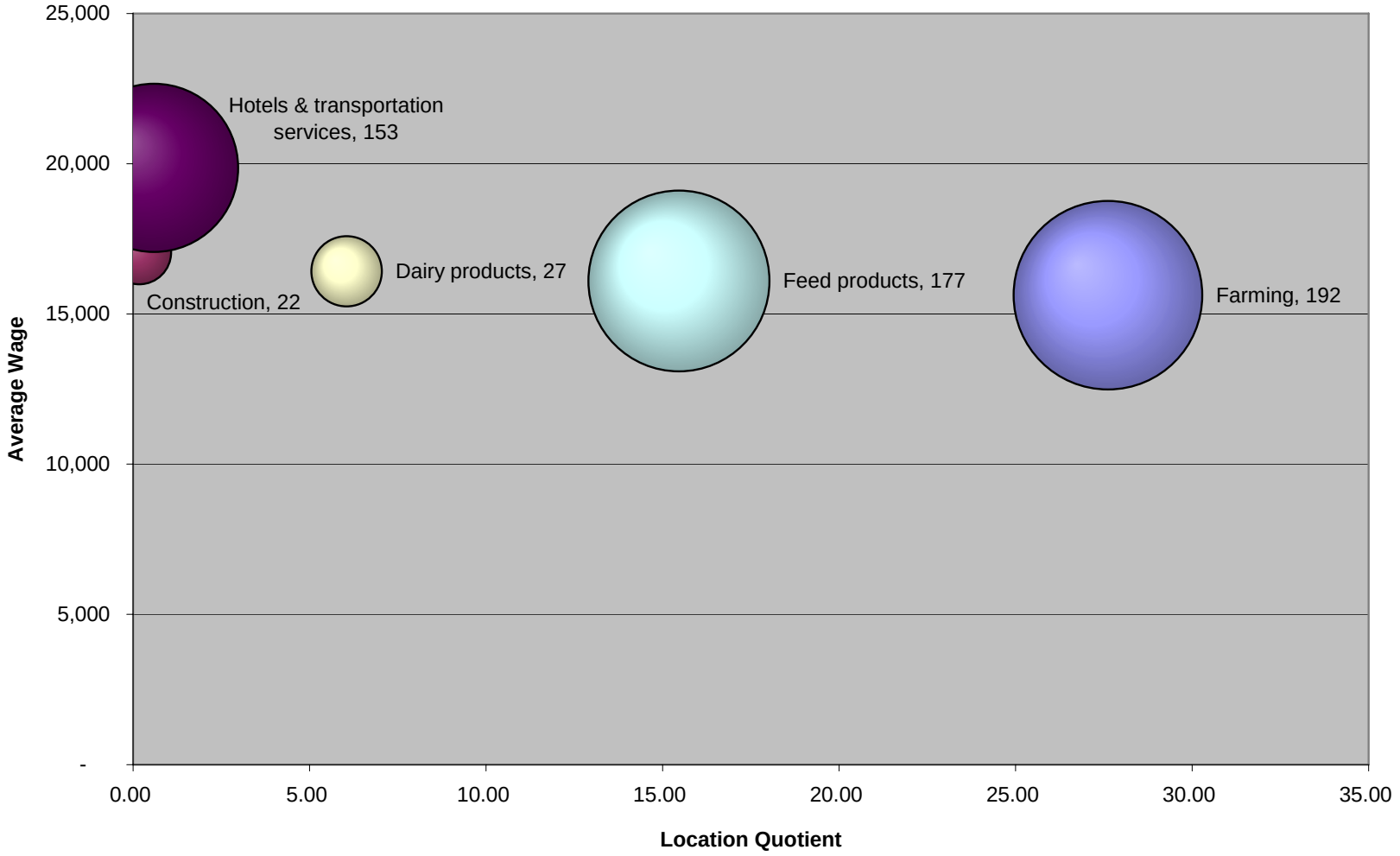
Appendix Table 7-2

Summary trends, benchmark technology-based value chain clusters, 1991-2005
El Paso County

		Employment							2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	El Paso '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Chemicals	9	49	5.4	0.0	3.5	-0.6	0.09	0.1	0.5	35,560	0.91	38,485	0.54	-0.37
Precision instruments	7	178	25.4	0.1	-1.4	-0.5	0.36	-0.2	1.0	13,965	0.43	23,329	0.37	-0.06
Engine equipment	22	2,375	108.0	1.2	0.7	-0.2	1.20	0.5	25.5	17,982	0.57	43,028	0.84	0.27
Computer & electronic equipment	20	1,295	64.8	0.7	-1.6	-0.6	0.70	-0.4	14.6	24,767	0.65	45,208	0.55	-0.10
Information services	138	3,803	27.6	2.0	1.3	0.8	0.72	0.2	41.3	26,453	0.70	43,444	0.58	-0.13
Pharmaceuticals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fertilizer & chemical products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Industrial machinery & distribution equip	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Medical instruments and optics	10	194	19.4	0.1	-2.4	-0.5	0.27	-0.5	2.0	17,115	0.56	40,865	0.74	0.18
Motor vehicles	16	1,663	103.9	0.9	-0.6	0.0	0.96	-0.3	14.4	23,447	0.68	34,626	0.62	-0.05
Wiring devices & switches	151	1,295	8.6	0.7	-0.2	0.4	0.51	-0.2	12.4	26,334	0.76	38,250	0.66	-0.09
Technical & research services	385	3,629	9.4	1.9	0.5	0.9	0.47	-0.1	33.9	25,191	0.71	37,401	0.59	-0.12
Cable manufacturing	6	147	24.5	0.1	-1.5	-0.5	0.55	-0.4	1.2	21,941	0.75	31,850	0.64	-0.11
Architectural & engineering services	321	2,352	7.3	1.2	0.3	0.9	0.38	-0.1	22.4	25,978	0.70	38,141	0.55	-0.14
Total, all Tech VC establishments	579	11,970	20.7	6.2	0.1	0.2	n/a	n/a	123.9	24,690	0.69	41,395	0.62	-0.07
Total, all establishments	10,786	192,584	17.9	100.0	0.3	0.3	n/a	n/a	1,218.1	17,029	0.72	25,301	0.63	-0.10

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

Appendix Figure 7-3
North I-10 Corridor Benchmark Value Chain Clusters



Appendix Table 7-3
Detailed Results North I-10 Benchmark Value Chain and Technology Based Clusters

Summary trends, benchmark value chain clusters, 1991-2005
North I10 Corridor (Hudspeth and Culberson Counties)

		Employment							2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	N I-10 '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Textiles & apparel	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Packaged food products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plastics & rubber manufacturing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aluminum & aluminum products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Basic health services	12	35	2.9	3.5	-1.6	0.6	0.13	-0.1	0.2	13,580	0.46	25,120	0.53	0.08
Mining	8	81	10.1	8.1	-3.4	-0.4	21.74	-47.9	0.5	36,290	1.07	25,884	0.47	-0.61
Farming	26	192	7.4	19.1	0.0	-0.5	27.61	14.1	0.8	11,158	0.82	15,627	0.71	-0.11
Construction	6	22	3.7	2.2	1.2	0.6	0.18	0.1	0.1	30,326	1.15	17,051	0.44	-0.71
Financial services & insurance	6	36	6.0	3.6	0.5	0.6	0.20	0.1	0.2	14,030	0.48	26,569	0.44	-0.04
Chemical-based products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Machine tools	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Precision instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Printing & publishing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Metalworking & fabr metal products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dairy products	7	27	3.9	2.7	-0.9	0.1	6.05	-0.4	0.1	11,439	0.51	16,417	0.52	0.00
Nondurable industry machinery	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Computer & electronic equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood products & furniture	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Const machinery & distribution equip	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood processing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paper	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Concrete, brick building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Motor vehicles	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plastics products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Feed products	28	177	6.3	17.6	-0.5	-0.2	15.46	4.5	0.7	10,272	0.67	16,100	0.63	-0.04
Arts and media	6	22	3.7	2.2	-2.7	0.2	0.14	-0.3	0.1	10,783	0.39	19,325	0.39	0.01
Higher education & hospitals	20	162	8.1	16.2	-0.3	0.4	0.46	0.0	0.6	9,647	0.36	16,042	0.34	-0.02
Information services	8	47	5.9	4.7	-1.3	0.3	0.25	-0.1	0.4	14,781	0.46	34,395	0.60	0.14
Petroleum & gas	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Business services	19	146	7.7	14.6	-0.7	0.4	0.45	-0.1	0.6	10,266	0.38	15,429	0.30	-0.08
Grain milling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rubber products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glass products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pharmaceuticals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Steel milling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nonresidential building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tobacco products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Optical equipment & instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Appliances	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Copper & copper products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hotels & transportation services	21	153	7.3	15.3	-0.2	0.5	0.59	0.1	0.8	11,436	0.48	19,863	0.47	-0.01
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Breweries & distilleries	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Leather products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total, establishments in VC sectors	82	556	6.8	55.4	-1.2	0.3	n/a	n/a	2.9	23,852	0.88	20,560	0.43	-0.45
Total, all establishments	128	1,003	7.8	100.0	-0.6	0.3	n/a	n/a	4.2	20,209	0.86	16,877	0.42	-0.44

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

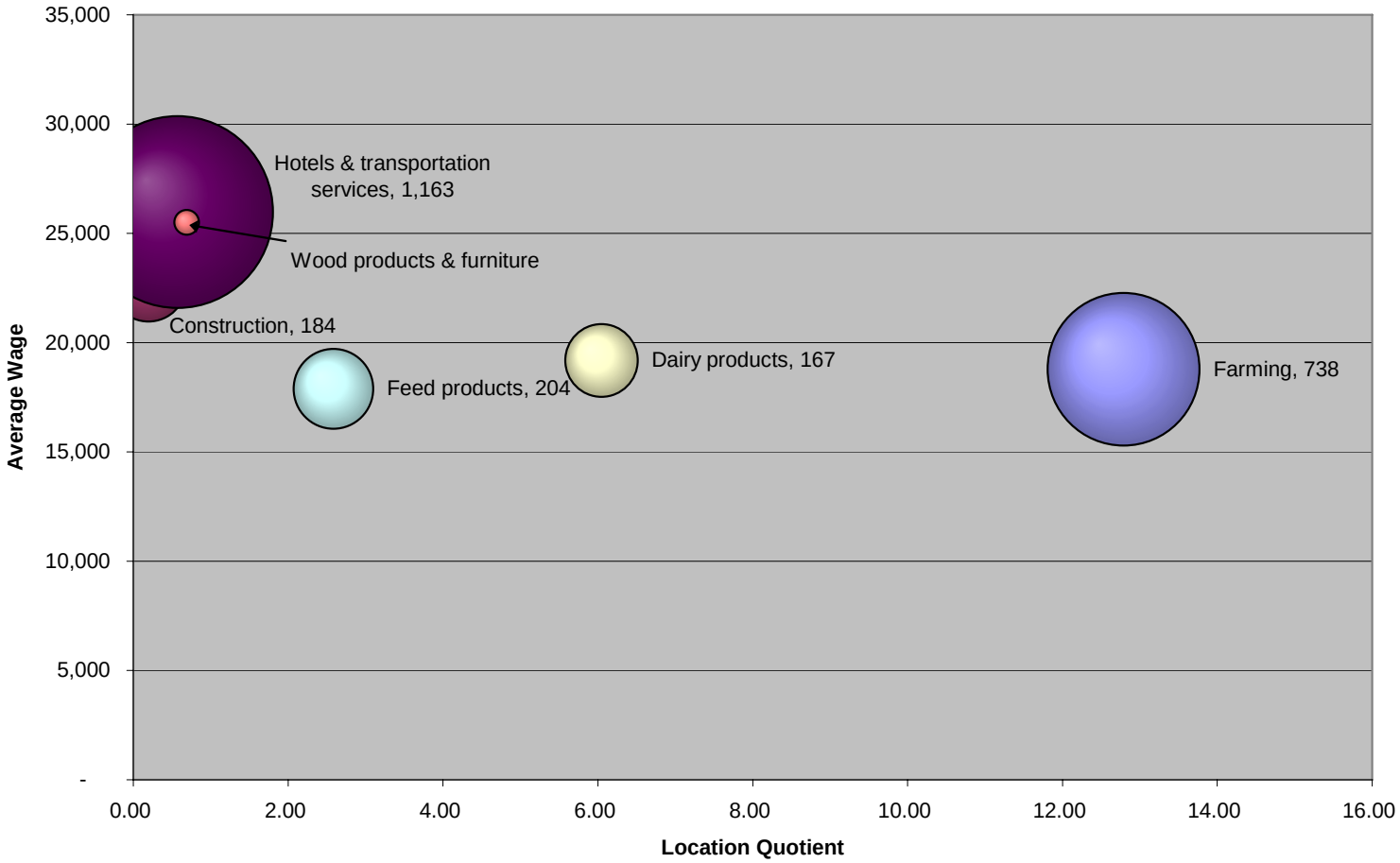
Appendix Table 7-4

Summary trends, benchmark technology-based value chain clusters, 1991-2005
North I10 Corridor (Hudspeth and Culberson Counties)

		Employment							2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	N I-10 '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Chemicals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Precision instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Computer & electronic equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Information services	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pharmaceuticals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fertilizer & chemical products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Industrial machinery & distribution equip	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Medical instruments and optics	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Motor vehicles	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wiring devices & switches	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Technical & research services	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cable manufacturing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Architectural & engineering services	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total, all Tech VC establishments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total, all establishments	128	1,003	7.8	100.0	-0.6	0.3	n/a	n/a	4.2	20,209	0.86	16,877	0.42	-0.44

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

Appendix Figure 7-4
South I-10 Corridor Benchmark Value Chain Clusters



Appendix Table 7-5
Detailed Results South I-10 Benchmark Value Chain and Technology Based Clusters

Summary trends, benchmark value chain clusters, 1991-2005
South I10 Corridor (Jeff Davis, Presidio & Brewster Counties)

		Employment							2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	S I-10 '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Textiles & apparel	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Packaged food products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plastics & rubber manufacturing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aluminum & aluminum products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Basic health services	97	581	6.0	11.6	1.8	0.6	0.24	0.1	5.1	16,955	0.57	34,894	0.76	0.19
Mining	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Farming	43	738	17.2	14.7	1.0	-0.2	12.79	3.3	3.5	9,973	0.71	18,786	0.86	0.15
Construction	48	184	3.8	3.7	0.7	0.6	0.20	-0.1	1.0	16,629	0.63	22,716	0.58	-0.05
Financial services & insurance	57	352	6.2	7.0	1.1	0.5	0.24	0.0	2.6	19,867	0.66	29,676	0.47	-0.19
Chemical-based products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Machine tools	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Precision instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Printing & publishing	12	43	3.6	0.9	1.2	0.1	0.23	0.0	0.4	14,940	0.53	37,906	0.73	0.20
Metalworking & fabr metal products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dairy products	36	167	4.6	3.3	-0.1	0.2	6.05	-4.4	0.8	10,092	0.47	19,190	0.64	0.16
Nondurable industry machinery	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Computer & electronic equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood products & furniture	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Const machinery & distribution equip	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood processing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paper	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Concrete, brick building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Motor vehicles	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wood building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plastics products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Feed products	45	204	4.5	4.1	-0.3	-0.1	2.59	-1.6	0.9	9,362	0.64	17,895	0.73	0.09
Arts and media	77	431	5.6	8.6	1.3	0.3	0.32	0.0	3.4	12,758	0.46	31,115	0.65	0.19
Higher education & hospitals	133	1,527	11.5	30.5	1.7	0.4	0.54	0.1	9.7	12,485	0.49	25,360	0.57	0.08
Information services	83	400	4.8	8.0	1.3	0.4	0.27	0.0	4.6	25,634	0.80	46,293	0.82	0.02
Petroleum & gas	11	120	10.9	2.4	0.7	-0.5	1.12	0.2	1.5	31,312	0.76	48,667	0.57	-0.18
Business services	128	1,217	9.5	24.3	1.5	0.4	0.48	0.1	8.2	13,911	0.50	26,900	0.50	-0.01
Grain milling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Rubber products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glass products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pharmaceuticals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Steel milling	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nonresidential building products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tobacco products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Optical equipment & instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Appliances	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Copper & copper products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hotels & transportation services	112	1,163	10.4	23.2	1.1	0.5	0.57	0.0	7.6	16,413	0.70	25,975	0.63	-0.08
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Breweries & distilleries	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Leather products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total, establishments in VC sectors	371	3,402	9.2	67.9	1.1	0.4	n/a	n/a	21.9	14,404	0.54	25,710	0.55	0.01
Total, all establishments	567	5,007	8.8	100.0	1.0	0.3	n/a	n/a	27.5	12,771	0.54	21,937	0.54	0.00

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

Appendix Table 7-6

Summary trends, benchmark technology-based value chain clusters, 1991-2005
South I10 Corridor (Jeff Davis, Presidio & Brewster Counties)

	Employment								2nd Quarter Payroll					
					CQGR		Location Quotient			Average Wage				
Clusters	Establishments IQ 2005	IQ 2005	Per establishment	% all sectors IQ 2005	S I-10 '91-'05	US '91-'05	IQ 2005	Change '91-'05	IQ 2005 mil $	3Q 1991	Ratio to US	IQ 2005	Ratio to US	Ratio chng
Chemicals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Precision instruments	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Computer & electronic equipment	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Information services	16	119	7.4	2.4	0.8	0.7	0.52	-0.2	1.5	38,583	1.04	49,303	0.67	-0.37
Pharmaceuticals	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fertilizer & chemical products	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Industrial machinery & distribution equip	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aerospace	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Medical instruments and optics	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Motor vehicles	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Wiring devices & switches	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Technical & research services	18	103	5.7	2.1	2.8	0.8	0.31	0.1	1.3	15,509	0.44	50,614	0.82	0.38
Cable manufacturing	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Architectural & engineering services	16	35	2.2	0.7	1.0	0.8	0.14	0.0	0.4	15,267	0.41	45,134	0.66	0.25
Total, all Tech VC establishments	30	212	7.1	4.2	1.4	0.3	n/a	n/a	2.7	34,142	0.96	50,670	0.77	-0.19
Total, all establishments	567	5,007	8.8	100.0	1.0	0.3	n/a	n/a	27.5	12,771	0.54	21,937	0.54	0.00

Note: El Paso data are from the Texas Workforce Commission (ES-202 file, confidential release). El Paso region is defined as the six county Upper Rio Grande region (El Paso, Hudspeth, Culberson, Jeff Davis, Presidio, and Brewster counties). US data are from the US Bureau of Labor Statistics, Quarterly Census of Employment and Wages. Clusters are not mutually exclusive. Data are only for businesses "covered" under unemployment insurance law and include only private sector establishments. CQGR: Compound quarterly growth rate. Sectors not assigned to any cluster include federal, state and local government; the US Postal Service; retail trade; basic consumer services; social services and religious organizations; and household employees.

Strategic Recommendations to Support Cluster and Regional Growth

Based on the findings from the cluster analysis as well as input from a series of seven industry cluster focus groups, a number of potential strategies were identified to address the training and educational needs of the region's workforce. In the following pages, the proposed recommendations that might be implemented are divided into two major categories: strategic cross-cutting (region wide) recommendations and cluster-specific actions. The cross-cutting recommendations are aimed at improving the quality of the region's overall workforce and would assist growing companies in almost any cluster (as does the occupation approach below). The cluster-specific suggestions are aimed at addressing specific gaps identified by industry leaders to reinforce economic and workforce development efforts targeted to that cluster.

Strategic Cross-cutting Recommendations

The cross-cutting recommendations are aimed at reinforcing the creative leadership guiding regional workforce investments as Board-related training initiatives, many are targeted to broader efforts aimed at broader educational needs and strategies to respond to industry demand that includes talent attraction as well as development efforts.

<u>Increase the participation/representation from targeted clusters on the Workforce Board:</u>

- The Upper Rio Grande Workforce Development Board (WDB) should engage representatives from several targeted clusters including information services, financial services, construction trades, healthcare, logistics/border security, and tourism industries to participate in board activities. While some of these industries may be/are already involved with the Board, it is crucial that the Board engage CEOs of companies in these industries to participate in Board planning and program implementation issues. An important way to engage these stakeholders is to focus certain WDB meetings on broad topics specific to one or more of these industries while minimizing the WDB time spent on managing specific program activities. The WDB will want to delegate

program management activities as much as possible to its staff and retain an oversight role, reviewing program performance toward addressing the needs of its targeted clusters.

Develop a collaborative campaign with UTEP to attract talented students from outside the region to go to school in El Paso

- Almost every cluster representative noted the severe talent shortage available as El Paso loses its best and brightest to other areas of the country (especially Phoenix, Dallas, and Houston). UTEP is well-known as a commuter school with a reported 95 percent of students from the greater El Paso region. While some of the region's best students go away to college, the El Paso region does not have a reputation for attracting students from other parts of the country. The region has a number of advantages that might appeal to students, especially those interested in developing an international education. The WDB should work with UTEP to develop a proactive student recruitment campaign aimed at attracting and retaining outside students to the region.

Expand existing efforts to increase access to "career-oriented" internships for students of regional universities

- Any campaign to attract students to the region should be supplemented with a retention strategy. The best way to retain the region's brightest graduates is to help them become "connected" while they are in school. This is a particular challenge for students who are not from the El Paso region. The WDB should explore collaborative efforts with UTEP to expand the number of students with access to part-time "career-oriented" jobs. Frequently, smaller companies are willing to take on one or two interns, but the companies need guidance in identifying appropriate linkages to the university and possibly even filtering potential candidates. This is time that small companies without a human resources office rarely have so possible internship opportunities are never offered. By creating a formal system targeted to the area's smallest companies in the WDB's targeted clusters, El Paso may be able to provide immediate job opportunities and help retain students who might otherwise seek jobs outside the region.

Create pro-active initiative to provide career counseling information to area middle school and high school counselors, teachers, students (and their parents) regarding entry-level occupations in targeted clusters

- The WDB should develop a formalized effort to work with area schools to enhance the information provided to young adults about career opportunities – especially in the targeted clusters. A number of approaches might be used to accomplish this goal, including providing access to web-based tools designed to provide students with information about careers of interest as well as creating a network of adults who might serve as mentors for students seeking information about careers of interest. Several models of these types of initiatives exist across the country. One example is Future4Kids (www.f4k.org), a nonprofit based in North Carolina that works with school systems in building just such technology-driven career counseling support.

Collaborate with existing initiatives in the region aimed at encouraging more entrepreneurial behaviors among area workers – encouraging them to consider creating their own jobs

- For many rural and smaller metropolitan areas, the key to economic prosperity is related to the region's ability to foster innovation and new business formation. In many of the targeted clusters, workers with experience can become successful entrepreneurs. The WDB should support "how-to-create-a-business" seminars and curricula in all of their education and training initiatives. The Board should collaborate with the area small business development center to offer information about creating a business for those who may be interested in taking that route to employment.

Assist area school systems in their efforts to implement reforms and encourage school efforts to ensure that students have basic skills and are computer literate

- Almost every business person interviewed agreed that area schools are not adequately preparing students for the workplace. This opinion is being expressed in every community across the nation. Businesses indicate that they are not expecting fully trained workers, but they do expect to hire high school graduates who can read instructions, perform basic computational tasks, work in teams, and solve problems creatively. Others noted that schools no longer provide basic vocational skills for students that are not going on to college and this limits students' exposure to many potentially lucrative career opportunities. If the schools were successful in addressing these challenges, the training job facing the WDB would be a bit less daunting. The WDB must actively participate in school reform discussions and offer their perspectives on potential solutions.

Analyze the specific jobs and related contracting opportunities being created at Fort Bliss to identify occupational skill needs associated with the expected influx of new workers and new jobs

- Fort Bliss is expected to receive about 20,000 new military and civilian personnel in the next few years. If it has not already done so, the WDB should sponsor research to determine the specific skills of the new jobs being brought to El Paso and determine which ones will likely need to be filled by local workers. Likewise, the Board should examine the skills of incoming spouses to determine what types of jobs they will require and provide that information to economic developers to help guide job creation efforts. The Board may also wish to use the information about in-migrating spouses to develop specialized training programs aimed at targeted clusters that represent the greatest opportunity for new job creation, including financial services, health care, and information technology.

Advocate to academic leadership and Austin policy makers on behalf of area universities to expand their support for targeted clusters

- The WDB should take an advocacy role in encouraging UTEP, EPCC and Sul Ross as the universities expand to fill the ever increasing education and research needs of the El Paso region. Among the advocacy positions that the Board could take would include:
  - supporting research in related cluster areas at UTEP and regional universities;
  - offering more incentives in the tenure-granting process to faculty who collaborate with area companies;
  - encouraging entrepreneurship among the college's faculty members; and
  - expanding curriculum related to the WDB's targeted industry clusters.

Provide support for financial literacy and information about the importance of "asset-building" as a life skill for all residents that is integrated into basic education curriculum

- The Workforce Board should work closely with area social service agencies to support programs aimed at improving the economic position of low and moderate income individuals in the region. Financial literacy is a critical building-block on which to help workers succeed of all income categories. Building on programs offered by the military for its young recruits as well as other existing programs, the Workforce Board can expand the availability of this curriculum to all area high school, college, and entry level workers. The Board may need to identify incentives (such as successful program completers would be eligible to receive a $100 Certificate of Deposit or some similar "bonus") to encourage broad participation in the program.

Cluster-specific Recommendations

Not only should the WDB support broad initiatives, it should also design its training and program activities to respond to the specific needs among the Existing, Emerging, and Potential clusters. The targeted clusters of particular interest to the WDB include: (a) information services and engineering; (b) construction trades; (c) financial services, (d) health care; and for rural counties in particular (e) tourism. The clusters were determined through a combination of quantitative analysis and qualitative research. Based on focus group discussions with local experts as well as our understanding of the efforts underway in other areas of the country, we propose the following a potential actions to help in enhancing the competitiveness of the labor force for each of these industry clusters. The actions are all designed to support job creation and workforce preparation efforts.

Information Services and Engineering

Support economic development agency efforts to recruit defense contractors to service Fort Bliss, border security needs

- This task might be accomplished by collaborating with economic developers in designing a recruitment strategy that includes proactive identification of workforce training options to support likely defense contractors.

Support UTEP and the and technology specific initiatives to expand software engineering, database management, and network administration educational programs

- A number of local companies noted a need for added computer software engineers and analysts. They also noted that UTEP and other technology trainers as a critical resource. The Workforce Board should collaborate with these institutions to ensure the programs continue to expand.

Review and support available training programs designed to provide introduction to computer programming

- Many companies noted that they sought access to semi-skilled workers who had some exposure to basic principles of computer programming. The primary benefit of this exposure is to provide an introduction to the field for young adults and potential entry level workers. These programs might be offered through vocational high school or community college programs.

Develop/support career information and internship opportunities in computing careers

- By supporting an internship program, the Workforce Board will expand links between existing El Paso companies and education/training options such as UTEP's engineering and computer sciences as well as area trade schools. The focus of the internship program should be on helping small area companies access 1 or 2 interns at a time and to encourage those companies to use these internships as a technique for finding possible new workers.

Collaborate with economic developers to support informal networking events among area information services companies

- The focus of these networking events would be on any topics of interest to the companies, but one area of particular interest will be on strategies designed to recruit and retain employees. The events might also include topics related to identifying career opportunities for talented young adults at regional universities or similar topics.

Encourage/support efforts by UTEP, EPCC and Sul Ross and technical schools to expand the educational curriculum for engineering and computer technicians to include design and design-for-production concepts

- Some experts report that existing higher educational curriculum is too oriented to traditional engineering and computer science theory. To respond more effectively to the knowledge-driven economy, educational programs should integrate computer-aided design into all aspects of the region's engineering programs.

Construction Trades

Support efforts to expand apprenticeship programs in collaboration with area companies

- The Workforce Board should focus its limited resources on efforts aimed at expanding the capacity of local training and educational institutions to meet critical shortages expected in carpentry, electrical, painting, first-line supervising, and flexible construction laborers region-wide. Many apprenticeship programs are reactive, allowing open enrollment for anyone who expresses an interest. Few of these applicants are motivated by gaining a career opportunity. Instead, many are interested in apprenticeships primarily as a short-term avenue for gaining access to a job. Since the apprenticeship program represents a significant investment for the company, the public sector, and the individual, it is incumbent that apprenticeship slots be reserved for those most motivated to complete the program.

- Given the general public policy interest in offering opportunities for minorities and women and the willingness of minorities and women to participate in apprenticeships, continued efforts should be targeted to encouraging women and minority apprentices. The images associated with these advertisements should demonstrate the participation of minorities currently working in the trades or participating in apprenticeships. The increased number of women and minorities in the construction trade also provide additional stream of laborers that can help reduce the pressure of the labor shortages in the construction industry.

- To support expansion of the apprenticeships, the WDB might also provide more funding for "apprenticeship financial aid" (to supplement tuition or wages) to allow the apprentice to attend full-time training courses. This will help apprentices to learn the required skills in a shorter period of time and allow them to work full-time for the industry without as much of a classroom commitment during work days.

Develop a program in collaboration with regional SBDC to provide entrepreneurial training for sub-contracting opportunities and management training for potential sub-contractors

One of the most important ways to increase workforce participation in the trades may well be to help motivated workers understand potential opportunities for owning their own business. This is an invaluable approach in expanding the availability of sub-contractors in the region. Several ideas could help in expanding the number of trades-related entrepreneurs including:

- Incorporate more management training into the apprenticeship program, especially for occupations in which the technician may be managing apprentices, laborers, or helpers. Effective management may reduce the drop-out rate by apprentices and help to reduce the high turnover rate that burdens many contractors.
- Provide entrepreneurial training that helps technicians and first-line supervisors understand the elements of running a business, including how to estimate jobs, administer payrolls, manage cash flow, make investment decisions, and choose good employees.
- Provide a "construction trades extension service" program to provide on-going support to firm managers. The purpose of the service is to increase awareness about and use of the latest in building materials technologies or methods for improving efficiency and quality in construction.
- Support efforts to expand the availability of skilled managers with technical experience in construction-related fields.

Many construction trades firms reported that skilled managers are in short supply. Three strategies might be employed to expand the number of managers available to support the industry:

- Support the development/expansion of construction management degree program at UTEP and of construction management certification and related credits at community college/technical schools.
- Create a "management" apprenticeship in which technicians are put into "assistant management training" aimed at developing competent and respected first-line supervisors, both from a technical perspective (as in the supervisor learns about trades not within his or her area of expertise) as well as providing management experience.
- Develop an initiative to encourage high school students, entry-level workers, and apprentices to move into these target occupations.The WDB might also develop a proactive program to communicate opportunities and wages for construction trades occupations to high school students and young adults. The program should include a career pathway map that demonstrates how continuously improving skills can enhance their earning power.

Financial Services

<u>Explore the availability of existing financial services certification/licensing programs relative to needs to support entry level financial services staff for banking and insurance</u>

- Many financial services firms are currently hiring, but they are increasingly requiring staff to obtain training and certification in order to maintain their jobs. The WDB should conduct an analysis of the demand for additional workers in this field, an assessment of available training programs, and identify gaps that might help guide its investment in appropriate initiatives.

<u>Offer more specific educational curriculum and enhance relationships with business and universities to expose students to financial services careers</u>

- The Workforce Development Board should develop a network of financial services firm representatives and related educational program managers to help in framing the educational needs and responses for the financial services cluster. The network would meet to review existing challenges, identify appropriate program models, and design plans for implementing those plans. If appropriate, the network might serve as a specialized ad hoc committee of the WDB.

<u>Encourage community colleges to offer training in marketing and sales</u>

- Several financial service firms noted that marketing and sales skills are critical for workers in the field. The Workforce Board should collaborate with regional universities to develop and implement a marketing and sales program targeted for financial services workers.

Health care

<u>Encourage expansion of educational programs (including Fast Track) to train teachers for nursing and other technical health care occupations</u>

- One of the fastest growing industries is health care, and El Paso is an important center for basic health care services. The area needs to meet a shortage of skilled nurses, medical technicians, and medical administrative workers. The shortage is due in part to a lack of training slots available. The Workforce Development Board should continue to expand its efforts to increase the number of teachers for health care-related occupational training.

Logistics and Border Security

Expand training for truck drivers (CDLs) and trucking maintenance

- El Paso is an important location for the North American trucking industry and logistics firms are in need of more drivers and maintenance workers. The WDB should work with the community college to expand the availability of these programs.

Identify training opportunities related to occupations in logistics management and data analysis

- Increasingly logistics firms manage a substantial amount of data. The Workforce Board should assess how many more administrative workers will be required to serve the field and support efforts to expand training available for logistics managers and data analysts. These jobs will be particularly important as border security initiatives are implemented during the coming years.

Work in collaboration with local economic development partners to foster the development of specialty transportation firms

- The WDB should encourage would-be jobseekers with experience to consider alternatives in entrepreneurship in logistics management, transportation, and security fields. Career counseling efforts should include information about new business development opportunities.

Tourism

Provide access to customer service and sales training to support the hospitality industry

- The hospitality industry is an important job creator in rural regions and El Paso. The local universities (Sul Ross) should examine the availability of programs that they offer to ensure that they are providing appropriate sales and service support training.

Provide continued support to the “master’s guides program”

- The rural communities, especially in the Big Bend area of the state, rely on outdoor tourism activities. The WDB should collaborate closely with area colleges and training institutes to expand on existing “master guides programs” and other initiatives to support the workforce needs of area tourism operators.

Encourage proprietor start-ups of tourism- and agricultural-related businesses

- Working in collaboration with the local SBDC and area universities, the WDB should support counseling in entrepreneurship and training in business management for area job-seekers interested in creating tour operator firms, eco-tourism enterprises, or similar small business operations.

Explore opportunities for creating hospitality management and entrepreneurial business management programs at Sul Ross State University

- The WDB should examine the availability of and support the development of new programs in related hospitality and business management programs at area universities, especially in the WDB’s rural region.

Targeted Occupations: Industry Forecast and Application of Occupational Matrix

Having identified cluster strengths in the region, it is possible to perform industry level forecasts to help select industries that would benefit from training assistance. Industries, however, are composed of individuals from a variety of different occupations—as even the construction industry, for example, employs accountants. Provided below is an overview of a web based system (temporarily http://tools.utep.edu/iped) that will allow Workforce Board planners and policy makers to target training based on forecast industry growth. The system allows users to track clusters, individual industries, and the region as a whole (all industries at a detailed level). The latter is provided because overall job growth in some occupations—while vital to a cluster—may not be sufficiently large to

attract or warrant training dollars. This has been the case in the past, but policy makers might consider programs which train for high skill occupations in large groups—such as tuition assistance for engineers or architects—to provide highly skilled labor to the region in addition to intermediate skill training.

The System: Employment Correspondence Estimates Between NAICS (4-digit) – SOC (6-digit)

The IPED NAICS-SOC Estimates web interface is a query system that allows users to link industry employment with occupational employment. Since industries employ a multitude of occupations, the program allows users to query all occupations and their employment and wage information. These data are employed by individual or several 2-, 3-, or 4-digit NAICS industry groups or by the pre-defined value-chain or technology cluster groups indicated in this report. The occupations information is the *output*, which the program provides, while the industry information is the *input*, which the user enters. Furthermore, the occupations output is provided as a baseline and forecast. The baseline tells the user current employment and wages per occupation from the designated industry or industries while the forecast tells the user expected future employment in the same occupations. Forecasts are based on the IPED *Border Model*. Wages are current wages based on latest available data and include average, entry and median wages.

To obtain a regional occupation-industry employment mix, one key assumption is made – the program assumes that the regional occupation-industry mix is identical to the United States mix. The program calculates a set of ratios of occupational employment at the national level and maps these ratios to a designated regional industry employment number to obtain the regional mix. The employment number can be entered manually or calculated automatically from internal databases (a manual entry can act as a baseline or forecast, allowing the analyst to control for a specific employment number and answer “what if?” questions).

The rationale for assuming that the regional employment mix is similar to the national mix is two-fold. First, detailed occupational-industry estimates are only provided at the national level. This approach is the best alternative given missing data at both the state (TWC) and regional levels. Second, assuming that the regional mix is similar to the national mix provides valuable insight about the regional economy. Analysts can identify gaps and opportunities by triangulating regional mix results based on national ratios with other available regional information. For example, analysis of Basic Health Services shows that the occupation 319091 Dental Assistants has significant employment and growth potential and currently pays an entry wage of $10.39. Most current occupations data from the TWC for the region also show that dental assistants comprise about 0.14 percent of all occupations in the URG region, versus 0.21 percent at the national level. The TWC also projects the occupation to add roughly 150 new jobs by the year 2012, while IPED estimates provided as part of the economy-wide projections show this occupation adding roughly 180 new jobs by 2014. In this occupation example, the analyst can see that dental assistants earn a relatively high entry wage and an even better median wage. The analyst can also identify a potential gap and growth opportunity since relative to the nation the region employs less of its labor supply in this occupation and is expected to add a substantial number of jobs. Clearly, using the national mix as a proxy identifies potential regional occupational employment opportunities and their wages which can be easily verified with current regional data.

The IPED NAICS-SOC Estimates web interface also provides economy-wide baseline and forecast information on occupations for the region (versus occupations per subsets of the economy such as clusters or various industry groups as discussed above). This part of the program provides two sets of estimates. The first set of estimates uses current TWC occupations data for the region and, hence, does not assume parity with the national mix. The second set of estimates does assume similarity between the regional and national industry-occupational mix. Similar to the above discussion, these latter estimates are provided to identify potential gaps and opportunities in occupations taking the nation as reference.

Region Wide and Cluster Specific Applications

Targeted occupations can be drawn from any of the clusters above—whether they are applied as Existing, Emerging, or potential. This does not, however, guarantee that there will be sufficient job growth by specific occupation in each of the clusters to support the allocation of training dollars. This is because several hundred occupations might be necessary for any given six digit industry to function properly. Instead, there must be sufficient job growth overall—region wide—to make training for specific occupations worthwhile (Appendix Table 7-7 below). The inclusion of the cluster industries in this system allows users to tie overall industry standard occupational classification needs to cluster standard occupational classification needs. The combination of the two will allow the Workforce Board to support growth in the entire region while being mindful of and tracking occupation needs for identified clusters. Overall results are presented below, while

a full list of all occupations and growth for the Workforce Board region is provided in Appendix B of the original report, but included in its essential state as Section 3 of the CEDS.

An example of total growth is provided in the table above , which shows URGWDB area total occupational growth to 2014 (37,715). By 25 on the absolute growth list (medical assistants), only about 35 new jobs will be created per year (in addition to replacement). While this may support Basic Health cluster, absolute growth may not warrant training dollars in the same way that growth in registered nurses may (close to 100 new jobs per year). Thus, while both occupations support the Basic Health cluster, only registered nurses shows substantial absolute growth that would warrant training dollars, particularly given the higher than average entry wage.

Further, an SOC such as school teachers also warrants particular attention since teachers do not fall into one of the productive industries measured by the Benchmark Value Chain or technology based clusters. Teachers not only earn higher than average wages, but help the region overcome low levels of educational attainment, a benefit to all clusters, Existing, Emerging, or Potential.

Provided as an example of cluster SOC cluster growth are the Basic Health and Construction (Appendix Tables 7-7 to 7-10). These tables demonstrate that beyond the top few occupations, very few occupations exhibit the growth that may be the necessary catalyst for training dollars—a key reason to group higher skill occupations and develop a strategy to expand high skill training. The tables also demonstrate how system output can be used to select cluster occupations by wage level. Those that do may not meet entry wage thresholds established by the Board over time.

Appendix Table 7-7
Upper Rio Grande Workforce Development Board Top Job Growth Occupations

Rank	SOC	SOC Title	URG Emp. Estimates		Emp. Jobs Growth 2004-2014	Emp. Rate Growth 2004-2014	2004 Hourly Wages			
			2004	2014			Avg.	Entry	Experienced	Median
	000000	Total, All Occupations	262,850	300,565	37,715	14.35%	$13.82	$6.47	$17.49	$10.30
1	353021	Combined Food Preparation and Serving W	8,680	10,976	2,296	26.45%	$6.38	$5.92	$6.61	$6.26
2	399021	Personal and Home Care Aides	3,870	5,726	1,856	47.95%	$6.06	$5.89	$6.14	$6.14
3	291111	Registered Nurses	4,360	5,723	1,363	31.25%	$24.10	$16.00	$28.15	$24.27
4	353031	Waiters and Waitresses	4,550	5,888	1,338	29.41%	$6.43	$5.90	$6.69	$6.19
5	412031	Retail Salespersons	11,140	12,260	1,120	10.05%	$8.68	$5.93	$10.05	$7.49
6	412011	Cashiers	7,950	9,032	1,082	13.61%	$7.02	$5.93	$7.56	$6.72
7	434051	Customer Service Representatives	4,030	5,081	1,051	26.09%	$11.44	$8.54	$12.89	$11.33
8	533032	Truck Drivers, Heavy and Tractor-Trailer	5,250	6,248	998	19.00%	$14.44	$9.53	$16.90	$13.86
9	252021	Elementary school teachers, except special	4,750	5,669	919	19.35%	$21.16			$21.46
10	311011	Home Health Aides	1,710	2,593	883	51.61%	$6.70	$5.94	$7.08	$6.38
11	333051	Police and Sheriff's Patrol Officers	2,140	2,908	768	35.90%	$20.92	$15.48	$23.64	$21.57
12	372011	Janitors and Cleaners, Except Maids and Ho	4,560	5,320	760	16.67%	$7.39	$5.98	$8.10	$6.77
13	252031	Secondary school teachers, except special a	3,200	3,923	723	22.58%	$21.06			$21.28
14	111021	General and Operations Managers	3,510	4,102	592	16.87%	$36.09	$16.57	$45.85	$29.86
15	259041	Teacher assistants	2,220	2,802	582	26.23%	$25.75			$25.52
16	339032	Security Guards	3,140	3,705	565	18.00%	$8.35	$5.97	$9.54	$6.99
17	439061	Office Clerks, General	5,620	6,169	549	9.76%	$9.33	$6.43	$10.78	$8.76
18	472061	Construction Laborers	2,240	2,787	547	24.44%	$8.92	$6.94	$9.91	$8.78
19	311012	Nursing Aides, Orderlies, and Attendants	1,680	2,211	531	31.58%	$8.98	$7.13	$9.91	$8.39
20	352014	Cooks, Restaurant	1,860	2,325	465	25.00%	$7.54	$6.33	$8.15	$7.61
21	499042	Maintenance and Repair Workers, General	2,900	3,358	458	15.79%	$11.33	$7.04	$13.48	$10.18
22	434171	Receptionists and Information Clerks	1,820	2,251	431	23.68%	$8.58	$6.41	$9.66	$8.08
23	434111	Interviewers, Except Eligibility and Loan	1,650	2,063	413	25.00%	$12.52	$8.06	$14.76	$12.41
24	351012	First-Line Supervisors/Managers of Food Pr	1,910	2,281	371	19.44%	$11.50	$6.88	$13.82	$10.40
25	319092	Medical Assistants	660	1,006	346	52.38%	$9.94	$7.23	$11.29	$9.37
26	533022	Bus Drivers, School	1,790	2,131	341	19.05%	$8.08	$6.12	$9.05	$7.43
27	252022	Middle school teachers, except special and	2,430	2,770	340	14.00%	$20.17			$19.97
28	533033	Truck Drivers, Light or Delivery Services	2,000	2,333	333	16.67%	$12.14	$6.67	$14.88	$9.46
29	352021	Food Preparation Workers	1,170	1,482	312	26.67%	$6.97	$5.96	$7.47	$6.89
30	411011	First-Line Supervis./Managers of Retail Sale	2,820	3,113	293	10.39%	$16.42	$10.00	$19.63	$14.13
31	433011	Bill and Account Collectors	920	1,196	276	30.00%	$10.80	$8.16	$12.12	$10.12
32	132011	Accountants and Auditors	1,280	1,543	263	20.51%	$24.62	$16.60	$28.63	$22.94
33	436011	Executive Secretaries & Administrative Assis	2,350	2,599	249	10.61%	$14.41	$10.45	$16.39	$13.48
34	373011	Landscaping and Groundskeeping Workers	1,200	1,447	247	20.59%	$7.99	$5.99	$8.99	$7.68
35	292061	Licensed Practical and Licensed Vocational	1,040	1,268	228	21.88%	$16.59	$13.14	$18.32	$16.15
36	472111	Electricians	980	1,203	223	22.73%	$17.66	$12.73	$20.13	$18.10
37	359011	Dining Room and Cafeteria Attendants and I	880	1,100	220	25.00%	$6.15	$5.89	$6.27	$6.16
38	399011	Child Care Workers	1,180	1,400	220	18.64%	$6.61	$5.92	$6.96	$6.38
39	252041	Special education teachers, preschool, kinde	680	884	204	30.00%	$21.48			$21.33
40	251194	Vocational Education Teachers, Postsecond	520	715	195	37.50%	$16.10	$10.49	$18.90	$14.47
41	412021	Counter and Rental Clerks	1,110	1,295	185	16.67%	$8.39	$5.89	$9.64	$7.11
42	431011	First-Line Supervisors/Managers of Office ar	2,820	3,005	185	6.56%	$17.65	$10.80	$21.08	$16.67
43	333021	Detectives and Criminal Investigators	640	823	183	28.57%	$26.41	$18.41	$30.41	$25.46
44	292052	Pharmacy Technicians	600	780	180	30.00%	$11.58	$9.59	$12.58	$10.99
45	319091	Dental Assistants	360	540	180	50.00%	$11.92	$10.39	$12.68	$11.95
46	359031	Host & Hostess, Restaurant, Lounge & Coffe	650	827	177	27.27%	$6.20	$5.92	$6.34	$6.23
47	211012	Educational, Vocational, and School Counse	620	797	177	28.57%	$22.71	$17.05	$25.54	$23.56
48	537062	Laborers & Freight, Stock & Material Movers	6,530	6,703	173	2.65%	$7.83	$5.99	$8.76	$6.97
49	472031	Carpenters	1,290	1,458	168	13.04%	$10.23	$8.26	$11.22	$9.91
50	359021	Dishwashers	950	1,118	168	17.65%	$6.15	$5.90	$6.27	$6.18

Appendix Table 7-7
Upper Rio Grande Basic Health Services Cluster Top Job Growth Occupations

Emp. Rank	SOC	SOC Title	URG Emp. Estimates from U.S. NAICS-SOC Estimates 2005	2015	Emp. Growth 2005-2015	URG Hourly Entry Wage	URG Hourly Median Wage
	Total	**Basic Health Services Cluster**	**42,385**	**58,065**	**15,680**	**$6.47**	**$10.30**
1	537062	Laborers & freight, stock & material movers	1,843	2,524	682	$5.99	$6.97
2	414012	Sales reps, wholesale & manufacturing, exc	1,685	2,308	623	$10.26	$18.58
3	372011	Janitors & cleaners, except maids & housek	1,585	2,171	586	$5.98	$6.77
4	439061	Office clerks, general	1,460	2,000	540	$6.43	$8.76
5	291111	Registered nurses	957	1,311	354	$16.00	$24.27
6	434051	Customer service representatives	931	1,276	345	$8.54	$11.33
7	434171	Receptionists and information clerks	902	1,236	334	$6.41	$8.08
8	373011	Landscaping and groundskeeping workers	899	1,232	333	$5.99	$7.68
9	433031	Bookkeeping, accounting and auditing clerk	867	1,187	321	$7.83	$11.29
10	436014	Secretaries, except legal, medical and exec	788	1,080	292	$6.63	$9.54
11	132011	Accountants and auditors	717	983	265	$16.60	$22.94
12	231011	Lawyers	696	953	257	$25.69	$44.69
13	111021	General and operations managers	673	922	249	$16.57	$29.86
14	436011	Executive secretaries and administrative as	654	896	242	$10.45	$13.48
15	431011	First-line supervisors/managers of office an	621	851	230	$10.80	$16.67
16	512092	Team assemblers	573	785	212	$5.98	$6.82
17	319092	Medical assistants	570	781	211	$7.23	$9.37
18	319091	Dental assistants	497	681	184	$10.39	$11.95
19	533032	Truck drivers; heavy and tractor-trailer	490	671	181	$9.53	$13.86
20	436013	Medical secretaries	474	649	175	$7.20	$9.14
21	311011	Home health aides	469	643	174	$5.94	$6.38
22	414011	Sales representatives; wholesale and manu	465	637	172	$18.00	$29.49
23	433021	Billing and posting clerks and machine oper	463	634	171	$7.53	$10.06
24	537064	Packers and packagers; hand	458	628	170	$5.95	$6.54
25	435081	Stock clerks and order fillers	450	617	167	$5.96	$7.73
26	533033	Truck drivers; light or delivery services	444	608	164	$6.67	$9.46
27	436012	Legal secretaries	442	605	164	$11.29	$14.48
28	433011	Bill and account collectors	428	586	158	$8.16	$10.12
29	435071	Shipping; receiving; and traffic clerks	428	586	158	$7.07	$9.63
30	419041	Telemarketers	426	583	157	$7.30	$9.94

* Highlighted - Occupations that pay entry wages between $7 and $9.

Appendix Table 7-8
Upper Rio Grande Basic Health Services Cluster Top Job Growth Occupations between $9.50 and $11.00

Entry Wage Rank	URG Emp. Estimates from TWC 2002	2012	Emp. Growth 2002-2012	URG Emp. Estimates from U.S. NAICS-SOC Estimates 2005	2015	Emp. Growth 2005-2015	URG Hourly Entry Wage	URG Hourly Median Wage
	Total	**Basic Health Services Cluster**	**98.13%**	**42,385**	**58,065**	**15,680**	**$6.47**	**$10.30**
137	499012	Control and valve installers and repairers; exc	0.01%	4	6	2	$10.99	$13.99
138	194091	Environmental science and protection technici	0.06%	24	33	9	$10.93	$14.63
139	431011	First-line supervisors/managers of office and a	1.47%	621	851	230	$10.80	$16.67
140	499052	Telecommunications line installers and repaire	0.01%	6	8	2	$10.80	$19.87
141	472152	Plumbers; pipefitters; and steamfitters	0.04%	16	22	6	$10.74	$14.79
142	211091	Health educators	0.03%	13	18	5	$10.63	$14.25
143	119031	Education administrators; preschool and child	0.00%	0	0	0	$10.61	$13.09
144	433061	Procurement clerks	0.06%	24	33	9	$10.55	$13.66
145	251194	Vocational education teachers; postsecondary	0.00%	1	1	0	$10.49	$14.47
146	434061	Eligibility interviewers; government programs	0.00%	1	2	0	$10.49	$15.11
147	436011	Executive secretaries and administrative assis	1.54%	654	896	242	$10.45	$13.48
148	472161	Plasterers and stucco masons	0.00%	1	1	0	$10.44	$12.59
149	173019	Drafters; all other	0.02%	10	14	4	$10.41	$16.45
150	319091	Dental assistants	1.17%	497	681	184	$10.39	$11.95
151	434141	New accounts clerks	0.00%	0	1	0	$10.30	$12.25
152	435011	Cargo and freight agents	0.01%	6	8	2	$10.27	$13.37
153	414012	Sales representatives; wholesale and manufa	3.97%	1,685	2,308	623	$10.26	$18.58
154	211021	Child; family; and school social workers	0.05%	19	27	7	$10.25	$15.04
155	492011	Computer; automated teller; and office machi	0.27%	115	158	43	$10.23	$13.55
156	493031	Bus and truck mechanics and diesel engine s	0.19%	82	113	30	$10.18	$13.30
157	194099	Life; physical; and social science technicians;	0.05%	23	31	8	$10.12	$15.05
158	472021	Brickmasons and blockmasons	0.01%	5	7	2	$10.06	$12.94
159	131022	Wholesale and retail buyers; except farm proc	0.25%	108	148	40	$10.05	$17.40
160	411011	First-line supervisors/managers of retail sales	0.14%	60	82	22	$10.00	$14.13
161	531021	First-line supervisors/managers of helpers; lab	0.18%	78	107	29	$9.99	$13.34
162	271025	Interior designers	0.05%	21	28	8	$9.97	$16.84
163	492096	Electronic equipment installers and repairers;	0.00%	2	2	1	$9.95	$11.34
164	271024	Graphic designers	0.11%	48	66	18	$9.85	$13.46
165	435041	Meter readers; utilities	0.00%	1	1	0	$9.84	$10.84
166	519071	Jewelers and precious stone and metal worke	0.01%	5	7	2	$9.76	$13.74
167	519051	Furnace; kiln; oven; drier; and kettle operators	0.00%	0	0	0	$9.68	$14.28
168	211015	Rehabilitation counselors	0.03%	11	15	4	$9.59	$13.16
169	292052	Pharmacy technicians	0.06%	27	36	10	$9.59	$10.99
170	519012	Separating; filtering; clarifying; precipitating; a	0.03%	13	18	5	$9.56	$14.44
171	533032	Truck drivers; heavy and tractor-trailer	1.16%	490	671	181	$9.53	$13.86
172	439022	Word processors and typists	0.17%	74	102	27	$9.52	$11.85
173	173012	Electrical and electronics drafters	0.05%	22	30	8	$9.51	$15.34
174	292012	Medical and clinical laboratory technicians	0.26%	112	154	41	$9.50	$11.93
175	531011	Aircraft cargo handling supervisors	0.00%	0	0	0	$9.50	$11.97

* Highlighted - Occupations with significant employment.

Appendix Table 7-9

Upper Rio Grande Construction Cluster Top Job Growth Occupations

Rank	SOC	SOC Title	Emp. % of Total	URG Emp. Estimates from U.S. NAICS-SOC Estimates		Emp. Growth 2005-2015	URG Hourly Entry Wage	URG Hourly Median Wage
				2005	2015			
	Total	**Construction Cluster**	**99.04%**	**19,428**	**22,003**	**2,575**	**$6.47**	**$10.30**
1	512092	Team assemblers	14.45%	2,808	3,180	372	$5.98	$6.82
2	517042	Woodworking machine setters, operators, &	10.03%	1,949	2,207	258	$5.85	$6.76
3	472031	Carpenters	6.83%	1,327	1,502	176	$8.26	$9.91
4	517041	Sawing machine setters, operators, & tende	5.27%	1,024	1,160	136	$5.84	$6.90
5	517011	Cabinetmakers & bench carpenters	4.59%	892	1,011	118	$7.23	$8.29
6	537062	Laborers and freight; stock; and material mo	4.48%	871	986	115	$5.99	$6.97
7	519198	Helpers--production workers	3.81%	740	838	98	$6.02	$6.95
8	511011	First-line supervisors/managers of productio	3.61%	702	795	93	$12.50	$19.53
9	537051	Industrial truck and tractor operators	2.94%	571	647	76	$6.35	$8.57
10	537063	Machine feeders and offbearers	2.82%	548	620	73	$6.66	$9.26
11	414012	Sales representatives; wholesale and manu	2.15%	418	474	55	$10.26	$18.58
12	512099	Assemblers and fabricators; all other	1.63%	316	358	42	$6.18	$6.93
13	111021	General and operations managers	1.43%	278	315	37	$16.57	$29.86
14	533032	Truck drivers; heavy and tractor-trailer	1.40%	272	308	36	$9.53	$13.86
15	519061	Inspectors; testers; sorters; samplers; and v	1.37%	266	302	35	$6.32	$8.16
16	519199	Production workers; all other	1.30%	253	287	34	-	-
17	499042	Maintenance and repair workers; general	1.27%	247	279	33	$7.04	$10.18
18	439061	Office clerks; general	1.24%	241	273	32	$6.43	$8.76
19	435071	Shipping; receiving; and traffic clerks	1.06%	206	233	27	$7.07	$9.63
20	433031	Bookkeeping; accounting; and auditing clerk	1.05%	205	232	27	$7.83	$11.29
21	517099	Woodworkers; all other	1.05%	205	232	27	-	-
22	514031	Cutting; punching; and press machine sette	1.00%	195	221	26	$6.03	$8.77
23	537064	Packers and packagers; hand	0.88%	171	194	23	$5.95	$6.54
24	472061	Construction laborers	0.85%	166	188	22	$6.94	$8.78
25	434051	Customer service representatives	0.82%	160	181	21	$8.54	$11.33
26	519121	Coating; painting; and spraying machine set	0.82% #	160	181	21	$6.68	$8.88
27	113051	Industrial production managers	0.76% #	147	167	20	$23.07	$33.16
28	533033	Truck drivers; light or delivery services	0.66% #	129	146	17	$6.67	$9.46
29	473012	Helpers--carpenters	0.62% #	121	137	16	$6.90	$8.62
30	499041	Industrial machinery mechanics	0.62% #	120	136	16	$8.96	$14.28

* Highlighted - Occupations that pay entry wages between $7 and $9.

Appendix Table 7-10

Upper Rio Grande Construction Cluster Top Job Growth Occupations between $9.50 and $11.00

Rank	SOC	SOC Title	Emp. % of Total	URG Emp. Estimates from U.S. NAICS-SOC Estimates		Emp. Growth 2005-2015	URG Hourly Entry Wage	URG Hourly Median Wage
				2005	2015			
	Total	**Construction Cluster**	**99.04%**	**19,428**	**22,003**	**2,575**	**$6.47**	**$10.30**
44	299011	Occupational health and safety specialists	0.02% #	3	3	0	$11.83	$13.28
45	492094	Electrical and electronics repairers; comme	0.01% #	2	3	0	$11.72	$16.63
46	537021	Crane and tower operators	0.02% #	4	5	1	$11.46	$14.33
47	131071	Employment; recruitment; and placement sp	0.01% #	2	3	0	$11.20	$15.25
48	151041	Computer support specialists	0.10% #	20	22	3	$11.16	$15.91
49	531031	First-line supervisors/managers of transport	0.14% #	27	30	4	$11.11	$18.04
50	413099	Sales representatives; services; all other	0.06% #	12	13	2	$11.01	$22.12
51	431011	First-line supervisors/managers of office an	0.50% #	98	111	13	$10.80	$16.67
52	472152	Plumbers; pipefitters; and steamfitters	0.12% #	23	26	3	$10.74	$14.79
53	433061	Procurement clerks	0.04% #	7	8	1	$10.55	$13.66
54	436011	Executive secretaries and administrative as	0.43% #	84	96	11	$10.45	$13.48
55	173019	Drafters; all other	0.10% #	20	22	3	$10.41	$16.45
56	414012	Sales representatives; wholesale and manu	2.15% #	418	474	55	$10.26	$18.58
57	493031	Bus and truck mechanics and diesel engine	0.03% #	5	6	1	$10.18	$13.30
58	131022	Wholesale and retail buyers; except farm pr	0.02% #	4	4	0	$10.05	$17.40
59	411011	First-line supervisors/managers of retail sal	0.02% #	4	4	0	$10.00	$14.13
60	531021	First-line supervisors/managers of helpers;	0.30% #	58	66	8	$9.99	$13.34
61	271025	Interior designers	0.02% #	3	3	0	$9.97	$16.84
62	271024	Graphic designers	0.02% #	4	4	0	$9.85	$13.46
63	519051	Furnace; kiln; oven; drier; and kettle operato	0.31% #	60	68	8	$9.68	$14.28
64	519012	Separating; filtering; clarifying; precipitating;	0.01% #	2	3	0	$9.56	$14.44
65	533032	Truck drivers; heavy and tractor-trailer	1.40% #	272	308	36	$9.53	$13.86
66	434161	Human resources assistants; except payroll	0.17% #	34	38	4	$9.42	$12.81
67	433051	Payroll and timekeeping clerks	0.21% #	41	47	5	$9.38	$12.86
68	514111	Tool and die makers	0.04% #	7	8	1	$9.38	$17.20
69	499043	Maintenance workers; machinery	0.25% #	48	54	6	$9.25	$12.87
70	173011	Architectural and civil drafters	0.18% #	36	41	5	$9.14	$14.21
71	419099	Sales and related workers; all other	0.04% #	7	8	1	$9.12	$12.56

* Highlighted - Occupations with significant employment.

Endnotes to Appendix Section Seven

[1] Feser, E. Benchmark value chain industry clusters for applied regional research. Latest version: October 2005. p. 5.

[2] ibid., p. 6.

[3] Exclusively local services are excluded from the 437 by 437 matrix and are not covered as productive industries by the Feser clusters.

Section 8: Salaries and Wages and Section 9: View of the Future

Appendix Table 8-1: Total Forecasted Employment and Wages 2004-2014

SOC Title	2004 Forecasted Employment	2014 Forecasted Employment	2004 - 2014 Forecasted Jobs Growth	2004 Average Hourly Wage	2004 Entry Hourly Wage	2004 Median Hourly Wage	2004 US Average Hourly Wage	2004 US Median Hourly Wage
Chief Executives	710	812	102	$62.62	$28.17	$62.64	$67.27	$67.47
Real Estate Brokers	79	90	11	$52.07	$27.68	$47.50	$37.43	$28.23
Physicians and Surgeons; All Other	342	391	49	$50.54	$19.78	$49.35	$66.16	$67.44
Lawyers	1078	1232	155	$49.63	$25.69	$44.69	$52.30	$45.64
Engineering Managers	394	451	57	$45.86	$32.82	$43.59	$49.33	$46.94
Pharmacists	447	511	64	$42.49	$35.91	$43.17	$40.56	$40.82
Surgeons	105	120	15	$42.47	$0.00	$43.13	$87.31	$0.00
Education Administrators; Postsecondary	210	240	30	$41.59	$22.73	$34.02	$36.44	$32.86
Materials Engineers	53	60	8	$39.43	$26.12	$39.31	$33.36	$32.26
Computer and Information Systems Managers	552	631	79	$38.86	$24.10	$38.66	$47.24	$44.51
Natural Sciences Managers	79	90	11	$38.16	$26.81	$38.08	$46.06	$42.63
Dentists; general	184	210	26	$37.76	$0.00	$33.79	$63.87	$59.16
Chiropractors	53	60	8	$37.76	$19.00	$33.79	$42.01	$33.61
Marketing Managers	368	421	53	$37.54	$21.74	$33.75	$46.48	$42.13
Personal Financial Advisors	184	210	26	$37.52	$21.29	$35.33	$39.70	$30.14
Environmental Engineers	105	120	15	$36.70	$27.38	$33.93	$32.86	$31.96
Training and Development Managers	79	90	11	$36.16	$25.14	$35.49	$35.45	$32.43
General and Operations Managers	3601	4118	517	$36.09	$16.57	$29.86	$44.24	$37.22
First-Line Super./Man. of Police & Detectives	184	210	26	$35.92	$28.40	$34.82	$31.34	$30.97
Financial Managers	1025	1172	147	$35.88	$20.07	$32.19	$44.04	$39.37
Industrial Production Managers	315	361	45	$35.58	$23.07	$33.16	$38.06	$35.09
Public Relations Managers	105	120	15	$35.37	$18.75	$26.99	$38.26	$33.65
Commercial pilots	53	60	8	$35.17	$0.00	$35.94	$0.00	$0.00
Economists	26	30	4	$34.51	$22.38	$33.31	$38.35	$34.99
Physical Therapists	289	331	41	$34.34	$23.70	$33.26	$30.00	$28.93
Managers; All Other	736	842	106	$34.27	$23.20	$33.38	$39.28	$37.19
Computer Software Engineers	867	992	124	$33.95	$20.53	$30.59	$37.18	$36.05
Human Resources Managers; All Other	131	150	19	$33.94	$25.68	$33.87	$42.11	$39.33

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Computer Software Engineers; Systems Software	657	751	94	$33.87	$19.87	$31.09	$39.50	$38.34
Social Scientists and Related Workers; All Other	53	60	8	$33.08	$25.88	$34.10	$29.09	$28.12
Compensation and Benefits Managers	105	120	15	$32.58	$21.99	$31.88	$35.59	$31.99
Sales Managers	657	751	94	$32.54	$17.65	$26.97	$45.68	$40.49
Management Analysts	841	962	121	$32.34	$18.18	$25.82	$34.97	$30.51
Purchasing Managers	158	180	23	$32.24	$19.87	$29.44	$37.51	$34.83
Agricultural and food science technicians	26	30	4	$32.20	$0.00	$29.60	$15.37	$14.29
Industrial Engineers	368	421	53	$31.82	$22.95	$30.80	$32.05	$31.26
Clinical; Counseling; and School Psychologists	210	240	30	$31.73	$18.38	$29.11	$29.24	$26.42
Medical and Health Services Managers	447	511	64	$31.71	$20.72	$29.39	$36.12	$32.42
Electronics Engineers; Except Computer	289	331	41	$31.65	$23.70	$31.43	$37.24	$36.43
Transportation; Storage & Distribution Managers	184	210	26	$31.53	$19.32	$29.35	$34.87	$32.02
Nuclear Medicine Technologists	26	30	4	$30.93	$23.38	$28.93	$29.43	$27.14
Occupational Therapists	184	210	26	$30.88	$22.52	$29.28	$27.19	$26.28
Sales Representatives; Wholesale & Manufacturing	789	902	113	$30.56	$18.00	$29.49	$32.37	$28.17
Soil and Plant Scientists	26	30	4	$30.39	$23.35	$27.94	$26.67	$24.62
Securities; Commodities; and Financial Services Sa	499	571	72	$30.28	$14.66	$20.45	$43.77	$33.27
Administrative Services Managers	526	601	75	$29.15	$15.80	$27.26	$31.98	$28.99
Electrical Engineers	315	361	45	$29.13	$22.34	$26.62	$35.68	$34.43
Judges; Magistrate Judges; and Magistrates	53	60	8	$29.03	$6.28	$27.96	$42.96	$44.75
Engineers; All Other	315	361	45	$28.83	$18.43	$28.33	$36.32	$35.78
Computer Systems Analysts	999	1142	143	$28.63	$21.02	$28.79	$32.87	$31.95
Education teachers; postsecondary	105	120	15	$28.40	$0.00	$27.52	$0.00	$0.00
Operations Research Analysts	105	120	15	$28.07	$18.36	$27.69	$30.49	$28.94
Computer science teachers; postsecondary	79	90	11	$28.07	$0.00	$25.27	$0.00	$0.00
Sales Engineers	158	180	23	$28.01	$17.88	$28.62	$36.42	$33.95
Mechanical Engineers	447	511	64	$27.99	$18.51	$24.88	$32.91	$31.88
First-Line Supervisors/Managers; Protective Service	105	120	15	$27.78	$15.90	$30.10	$20.05	$17.91

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Lodging Managers	53	60	8	$27.32	$13.69	$17.37	$21.18	$18.11
Compensation; Benefits; Job Analysis Specialists	184	210	26	$27.19	$14.96	$20.82	$24.10	$22.83
Network Systems and Data Communications Analysts	342	391	49	$27.02	$17.13	$24.65	$30.49	$29.14
Civil Engineers	447	511	64	$26.99	$18.46	$26.21	$32.18	$30.88
Computer Programmers	841	962	121	$26.97	$16.43	$24.31	$31.69	$30.24
Advertising and Promotions Managers	105	120	15	$26.77	$12.45	$24.87	$36.76	$30.58
Architects; Except Landscape and Naval	184	210	26	$26.51	$17.03	$24.51	$31.84	$28.99
Education Administrators; All Other	53	60	8	$26.49	$14.82	$25.91	$32.01	$28.96
Detectives and Criminal Investigators	184	210	26	$26.41	$18.41	$25.46	$27.16	$25.96
Health diagnosing and treating practitioners; all other	105	120	15	$26.12	$0.00	$25.33	$44.38	$27.87
Business Operations Specialists; All Other	1735	1984	249	$26.08	$16.70	$23.98	$27.72	$25.70
Insurance underwriters	210	240	30	$26.02	$0.00	$24.11	$26.08	$23.34
Financial Analysts	368	421	53	$25.93	$17.54	$23.99	$33.89	$29.76
Instructional Coordinators	210	240	30	$25.80	$17.07	$25.70	$24.74	$23.46
Teacher assistants	2550	2915	366	$25.75	$0.00	$25.52	$0.00	$0.00
First-Line Super./Mgr; Non-Retail Sales Workers	631	721	91	$25.75	$12.97	$24.10	$34.33	$28.51
Database Administrators	210	240	30	$25.40	$15.94	$24.20	$30.51	$29.16
Environmental engineering technicians	53	60	8	$25.34	$0.00	$23.07	$19.55	$18.53
Credit Analysts	131	150	19	$25.33	$11.80	$21.29	$26.57	$22.72
Electrical and Electronic Engineering Technicians	368	421	53	$25.21	$12.53	$22.83	$22.66	$22.26
Logisticians	105	120	15	$25.14	$17.33	$24.59	$28.99	$27.46
Construction Managers	368	421	53	$25.13	$16.59	$21.65	$37.83	$33.59
Speech-Language Pathologists	184	210	26	$25.10	$18.87	$24.47	$26.71	$25.20
Technical Writers	105	120	15	$25.07	$17.68	$24.50	$27.24	$25.71
Counselors; All Other	53	60	8	$25.07	$22.45	$25.06	$18.21	$16.82
Postmasters and Mail Superintendents	53	60	8	$24.66	$21.01	$24.38	$24.43	$24.32
Environmental Scientists and Specialists; and Others	131	150	19	$24.65	$16.39	$20.87	$26.53	$24.56
Zoologists and Wildlife Biologists	26	30	4	$24.65	$15.11	$24.10	$25.54	$24.20
Accountants and Auditors	2050	2344	294	$24.62	$16.60	$22.94	$27.35	$24.41

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Appraisers and assessors of real estate	131	150	19	$24.50	$0.00	$22.82	$23.73	$20.86
Diagnostic Medical Sonographers	79	90	11	$24.44	$19.27	$24.41	$25.78	$25.24
Biological Scientists; All Other	53	60	8	$24.30	$18.02	$24.11	$29.03	$27.05
Sales Representatives; Services; All Other	710	812	102	$24.19	$11.01	$22.12	$25.93	$22.60
Registered Nurses	4731	5410	679	$24.10	$16.00	$24.27	$26.06	$25.16
Radiology Technologists and Technicians	368	421	53	$23.23	$16.31	$22.01	$21.41	$20.84
Postal Service Clerks	158	180	23	$23.01	$20.48	$23.58	$19.82	$19.69
Budget Analysts	105	120	15	$23.00	$18.05	$23.23	$28.41	$26.94
Educational; Vocational; and School Counselors	447	511	64	$22.71	$17.05	$23.56	$22.88	$21.91
Medical and Clinical Laboratory Technologists	315	361	45	$22.60	$16.68	$21.92	$22.41	$21.99
First-Line Super./Man. of Correctional Officers	79	90	11	$22.39	$12.17	$24.75	$22.83	$21.50
Network and Computer Systems Administrators	526	601	75	$22.38	$15.44	$20.98	$29.55	$27.98
Medical and Public Health Social Workers	210	240	30	$22.31	$15.91	$23.11	$19.92	$19.27
Compliance Officers; Except Agriculture; Construct	342	391	49	$22.27	$16.10	$21.30	$24.64	$22.78
Cardiovascular Technologists and Technicians	79	90	11	$22.24	$14.56	$21.26	$19.09	$18.60
Tax Examiners; Collectors; and Revenue Agents	158	180	23	$22.15	$12.18	$20.99	$23.18	$20.91
Adult literacy; remedial education; and GED teachers and instructors	131	150	19	$22.07	$0.00	$21.86	$20.92	$18.74
Postal Service Mail Carriers	710	812	102	$21.98	$18.30	$22.50	$20.85	$21.37
Librarians	315	361	45	$21.98	$17.13	$22.67	$22.88	$22.07
Cost Estimators	394	451	57	$21.92	$12.69	$20.00	$25.90	$24.01
First-Line Supervisors/Managers of Mechanics; Inst	946	1082	136	$21.71	$12.96	$21.20	$25.34	$24.20
Mechanical Engineering Technicians	105	120	15	$21.71	$12.81	$22.15	$21.66	$20.87
Dietitians and Nutritionists	105	120	15	$21.60	$16.21	$20.78	$21.46	$20.98
Food Service Managers	421	481	60	$21.51	$14.21	$20.00	$21.13	$19.04
Special education teachers; preschool; kindergarten; and elementary school	421	481	60	$21.48	$0.00	$21.33	$0.00	$0.00
Financial Specialists; All Other	237	271	34	$21.47	$15.71	$19.24	$26.64	$23.82

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Anthropologists and Archeologists	0	0	0	$21.41	$16.12	$20.73	$22.86	$21.10
Market Research Analysts	342	391	49	$21.26	$13.69	$19.62	$30.28	$26.99
Interpreters and translators	53	60	8	$21.22	$0.00	$18.40	$17.61	$16.28
Media & Communication Equipment Workers; All Other	26	30	4	$21.22	$8.41	$23.01	$22.36	$19.77
Elementary school teachers; except special education	2918	3336	419	$21.16	$0.00	$21.46	$0.00	$0.00
Social and Community Service Managers	237	271	34	$21.16	$11.48	$20.32	$24.39	$22.50
Human Resources; Training; and Labor Relations Specialists	315	361	45	$21.06	$14.29	$19.39	$23.67	$22.85
Secondary school teachers; except special and vocational education	2103	2405	302	$21.06	$0.00	$21.28	$0.00	$0.00
Vocational education teachers; secondary school	210	240	30	$21.00	$0.00	$20.72	$0.00	$0.00
Police and Sheriff's Patrol Officers	1262	1443	181	$20.92	$15.48	$21.57	$22.20	$21.74
Computer Specialists; All Other	263	301	38	$20.86	$14.49	$18.51	$30.31	$28.60
Healthcare Practitioners & Tech. Workers; Other	105	120	15	$20.72	$5.79	$12.75	$18.20	$16.04
Industrial Engineering Technicians	131	150	19	$20.69	$14.43	$19.08	$22.64	$20.96
Writers and Authors	79	90	11	$20.59	$12.78	$17.49	$25.52	$21.32
Insurance Sales Agents	578	661	83	$20.41	$9.06	$12.79	$26.77	$20.06
First-Line Supervisors/Managers of Production and	1419	1623	204	$20.28	$12.50	$19.53	$22.96	$21.51
Protective Service Workers; All Other	263	301	38	$20.28	$12.70	$21.66	$14.54	$13.50
Sales Representatives; Wholesale and Manufacturing	2839	3246	407	$20.22	$10.26	$18.58	$25.91	$21.83
Postal Service Mail Sorters; Processors;	447	511	64	$20.20	$15.09	$21.17	$18.12	$18.96
Middle school teachers; except special and vocational education	1288	1473	185	$20.17	$0.00	$19.97	$0.00	$0.00
Claims Adjusters; Examiners; and Investigators	473	541	68	$20.13	$11.48	$19.18	$22.74	$21.26
Respiratory Therapists	184	210	26	$20.10	$17.15	$19.85	$21.24	$20.74
Purchasing Agents; Exc Wholesale; Retail & Farm	526	601	75	$20.03	$12.43	$18.43	$24.60	$22.92
Interior Designers	105	120	15	$20.01	$9.97	$16.84	$21.59	$19.56
Chemists	158	180	23	$19.83	$12.88	$19.47	$29.43	$26.95

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Avionics Technicians	53	60	8	$19.80	$18.89	$19.66	$21.38	$21.30
Vocational education teachers; middle school	26	30	4	$19.78	$0.00	$19.46	$0.00	$0.00
Airline pilots; copilots; and flight engineers	158	180	23	$19.68	$0.00	$18.28	$0.00	$0.00
Training and Development Specialists	421	481	60	$19.65	$13.62	$18.99	$22.97	$21.43
Forensic Science Technicians	26	30	4	$19.63	$15.62	$19.64	$22.83	$21.16
Special education teachers; secondary school	289	331	41	$19.53	$0.00	$19.44	$0.00	$0.00
First-Line Supervisors/Managers of Transportation	447	511	64	$19.50	$11.11	$18.04	$23.23	$21.54
Special education teachers; middle school	210	240	30	$19.43	$0.00	$19.22	$0.00	$0.00
Wholesale and Retail Buyers; Except Farm Products	289	331	41	$19.32	$10.05	$17.40	$23.29	$20.30
Paralegals and Legal Assistants	421	481	60	$19.31	$12.69	$18.47	$19.95	$18.81
Legal Support Workers; All Other	131	150	19	$19.26	$14.73	$19.48	$21.79	$20.26
Real Estate Sales Agents	263	301	38	$19.16	$6.26	$11.16	$23.05	$17.15
Health and Safety Engineers; Except Mining Safety	53	60	8	$19.11	$12.21	$13.38	$31.78	$30.64
Title examiners; abstractors; and searchers	105	120	15	$19.04	$0.00	$18.63	$18.93	$16.77
Law Clerks	79	90	11	$18.92	$14.83	$18.50	$16.92	$16.34
Public Relations Specialists	342	391	49	$18.74	$12.33	$16.37	$23.80	$21.07
First-Line Supervisors/Managers of Construction	1104	1262	158	$18.70	$12.05	$17.63	$25.95	$24.25
English language and literature teachers; postsecondary	105	120	15	$18.68	$0.00	$17.25	$0.00	$0.00
Loan Officers	578	661	83	$18.52	$11.15	$17.95	$27.98	$23.48
Coaches and scouts	263	301	38	$18.33	$0.00	$18.68	$0.00	$0.00
Construction and Building Inspectors	158	180	23	$18.30	$14.41	$18.34	$21.86	$21.00
Property; Real Estate & Community Association Mgr	315	361	45	$18.22	$9.30	$16.24	$23.44	$19.22
Telecommunications Line Installers and Repairers	289	331	41	$18.22	$10.80	$19.87	$19.55	$19.39
Electrical and Electronics Repairers; Commercial a	158	180	23	$18.21	$11.72	$16.63	$20.63	$20.48
Mechanical Drafters	158	180	23	$18.17	$13.34	$18.26	$21.70	$20.67
Bindery workers	158	180	23	$18.12	$0.00	$20.53	$12.33	$11.31

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Metal Workers and Plastic Workers; All Other	105	120	15	$18.11	$8.44	$20.53	$17.19	$16.15
Physical Therapist Assistants	105	120	15	$18.10	$9.12	$18.61	$18.14	$18.22
Media and Communication Workers; All Other	53	60	8	$17.85	$11.53	$17.39	$21.66	$19.64
Business teachers; postsecondary	131	150	19	$17.78	$0.00	$17.93	$0.00	$0.00
Electricians	1183	1353	170	$17.66	$12.73	$18.10	$21.58	$20.33
First-Line Supervisors/Managers of Office and Administration	2891	3306	415	$17.65	$10.80	$16.67	$21.15	$19.72
Painters; Transportation Equipment	105	120	15	$17.64	$9.09	$13.14	$18.17	$16.89
Community and Social Service Specialists; Other	184	210	26	$17.56	$11.74	$17.16	$16.57	$15.64
Respiratory Therapy Technicians	53	60	8	$17.49	$12.17	$17.67	$18.00	$17.67
Motor Vehicle Operators; All Other	184	210	26	$17.34	$13.37	$18.30	$11.04	$9.45
Curators	26	30	4	$17.29	$8.35	$14.65	$23.04	$20.97
Computer Support Specialists	999	1142	143	$17.24	$11.16	$15.91	$20.97	$19.44
Funeral Directors	53	60	8	$17.24	$13.44	$17.03	$25.82	$22.10
Private Detectives and Investigators	53	60	8	$17.24	$12.43	$18.49	$17.47	$15.44
Tool and Die Makers	210	240	30	$17.00	$9.38	$17.20	$21.19	$20.55
Substance abuse and behavioral disorder counselors	131	150	19	$16.81	$0.00	$16.21	$16.50	$15.45
Stationary Engineers and Boiler Operators	105	120	15	$16.72	$12.87	$15.60	$21.66	$21.22
Audio-Visual Collections Specialists	26	30	4	$16.64	$11.14	$16.27	$17.13	$15.86
Licensed Practical and Licensed Vocational Nurses	1446	1653	207	$16.59	$13.14	$16.15	$16.75	$16.33
Veterinary technologists and technicians	131	150	19	$16.48	$0.00	$16.72	$12.49	$11.99
Surgical Technologists	158	180	23	$16.45	$13.20	$16.70	$16.72	$16.35
Advertising Sales Agents	289	331	41	$16.43	$6.16	$12.80	$23.76	$19.37
First-Line Supervis./Managers of Retail Sales Work	2234	2555	321	$16.42	$10.00	$14.13	$18.01	$15.73
Civil Engineering Technicians	184	210	26	$16.41	$11.15	$16.81	$19.18	$18.50
Occupational Health and Safety Specialists	79	90	11	$16.39	$11.83	$13.28	$25.54	$24.79
Life; Physical & Social Science Technicians; Other	158	180	23	$16.28	$10.12	$15.05	$20.52	$18.19
Drafters; All Other	53	60	8	$16.27	$10.41	$16.45	$21.91	$20.13

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Vocational Education Teachers; Postsecondary	237	271	34	$16.10	$10.49	$14.47	$21.19	$19.59
Loan Counselors	53	60	8	$16.07	$11.55	$13.61	$18.61	$16.33
Medical Equipment Repairers	53	60	8	$16.03	$7.46	$16.16	$18.72	$17.90
Plumbers; Pipefitters; and Steamfitters	867	992	124	$15.97	$10.74	$14.79	$21.21	$19.85
Chemical Technicians	131	150	19	$15.70	$11.10	$13.75	$19.04	$18.35
Electrical and Electronics Drafters	79	90	11	$15.67	$9.51	$15.34	$22.48	$20.76
Meeting and Convention Planners	79	90	11	$15.61	$11.43	$14.64	$20.43	$19.05
Control and Valve Installers and Repairers; Except	79	90	11	$15.61	$10.99	$13.99	$20.83	$21.01
Legal Secretaries	552	631	79	$15.55	$11.29	$14.48	$18.40	$17.65
Employment; Recruitment & Placement Specialists	342	391	49	$15.52	$11.20	$15.25	$22.76	$19.80
Floral designers	131	150	19	$15.33	$0.00	$12.94	$10.51	$9.83
Transportation Inspectors	53	60	8	$15.32	$6.69	$14.35	$24.89	$24.22
Dietetic Technicians	53	60	8	$15.31	$8.92	$14.51	$11.89	$11.05
Gas Compressor and Gas Pumping Station Operators	0	0	0	$15.29	$10.62	$12.96	$21.56	$21.07
Occupational Therapist Assistants	53	60	8	$15.24	$9.48	$13.21	$18.49	$18.48
Chefs and Head Cooks	237	271	34	$15.23	$8.34	$13.60	$16.42	$14.75
Education administrators; elementary and secondary school	421	481	60	$15.11	$0.00	$13.10	$0.00	$0.00
Education Administrators; Preschool & Child Care	105	120	15	$15.11	$10.61	$13.09	$19.74	$17.18
Computer; Automated Teller & Office Mach. Repairer	289	331	41	$15.01	$10.23	$13.55	$17.59	$16.90
Library Technicians	237	271	34	$15.00	$9.45	$13.09	$12.63	$11.99
Cargo and Freight Agents	131	150	19	$14.97	$10.27	$13.37	$17.24	$16.47
Graphic Designers	315	361	45	$14.94	$9.85	$13.46	$20.25	$18.28
Radio and Television Announcers	79	90	11	$14.94	$5.86	$8.66	$15.22	$10.64
Surveyors	105	120	15	$14.91	$7.49	$15.47	$22.15	$20.66
Industrial Machinery Mechanics	447	511	64	$14.82	$8.96	$14.28	$19.28	$18.78
Child; Family; and School Social Workers	526	601	75	$14.62	$10.25	$15.04	$18.19	$16.74
Health Educators	105	120	15	$14.60	$10.63	$14.25	$20.25	$18.50
Crushing; grinding; and polishing machine setters; operators; and tenders	79	90	11	$14.57	$0.00	$14.96	$13.70	$12.96

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Mental Health and Substance Abuse Social Workers	237	271	34	$14.56	$9.40	$13.33	$17.34	$16.31
Architectural and Civil Drafters	210	240	30	$14.53	$9.14	$14.21	$19.59	$18.84
Environmental Science and Protection Technicians;	53	60	8	$14.51	$10.93	$14.63	$17.90	$16.99
Bus & Truck Mechanics & Diesel Engine Specialists	526	601	75	$14.49	$10.18	$13.30	$17.66	$17.20
Truck Drivers; Heavy and Tractor-Trailer	3180	3637	456	$14.44	$9.53	$13.86	$16.63	$16.11
First-Line Supervisors/Managers of Helpers; Laborers	342	391	49	$14.43	$9.99	$13.34	$19.45	$18.40
Executive Secretaries & Administrative Assistants	2918	3336	419	$14.41	$10.45	$13.48	$17.69	$16.81
Public Address System and Other Announcers	26	30	4	$14.33	$7.21	$8.63	$14.08	$10.56
Eligibility Interviewers; Government Programs	184	210	26	$14.32	$10.49	$15.11	$16.25	$15.92
Crane and Tower Operators	79	90	11	$14.30	$11.46	$14.33	$18.81	$17.99
Textile Bleaching & Dyeing Machine Op. & Tenders	53	60	8	$14.21	$8.58	$13.93	$10.96	$10.56
Aircraft mechanics and service technicians	237	271	34	$14.19	$0.00	$14.28	$22.69	$21.77
Loan Interviewers and Clerks	421	481	60	$14.16	$9.36	$14.37	$14.75	$13.94
Jewelers and Precious Stone and Metal Workers	53	60	8	$14.15	$9.76	$13.74	$14.76	$13.18
Drilling and Boring Machine Tool Setters; Operator	79	90	11	$14.00	$9.16	$13.49	$14.72	$13.69
Procurement Clerks	158	180	23	$13.98	$10.55	$13.66	$15.11	$14.85
Automotive Body and Related Repairers	342	391	49	$13.93	$8.13	$12.95	$18.10	$16.68
Sales and Related Workers; All Other	394	451	57	$13.84	$9.12	$12.56	$18.44	$15.09
Total; All Occupations	262850	300565	37715	$13.82	$6.47	$10.30	$17.80	$13.83
Preschool Teachers; Except Special Education	736	842	106	$13.80	$6.00	$12.63	$11.51	$10.09
Kindergarten teachers; except special education	342	391	49	$13.80	$0.00	$12.63	$0.00	$0.00
First-Line Supervisors/Managers of Landscaping; La	210	240	30	$13.70	$8.10	$13.10	$18.38	$16.99
Brickmasons and Blockmasons	210	240	30	$13.61	$10.06	$12.94	$20.42	$20.07
Mobile Heavy Equipment Mechanics; Except Engines	237	271	34	$13.60	$8.74	$13.56	$18.68	$18.34

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Heating; Air Conditioning; and Refrigeration Mechanics	473	541	68	$13.52	$8.69	$12.23	$18.30	$17.43
Reservation and Transportation Ticket Agents and T	315	361	45	$13.52	$8.27	$11.21	$14.48	$13.34
Self-Enrichment Education Teachers	289	331	41	$13.51	$7.25	$10.96	$16.93	$14.85
Information and Record Clerks; All Other	552	631	79	$13.47	$7.13	$12.02	$18.34	$15.44
Separating; Filtering; Clarifying; Precipitating;	79	90	11	$13.47	$9.56	$14.44	$16.49	$15.98
First-Line Supervisors/Managers of Housekeeping an	421	481	60	$13.43	$8.91	$11.71	$15.32	$14.19
Production; Planning; and Expediting Clerks	578	661	83	$13.42	$8.35	$12.22	$18.10	$17.47
Medical Records and Health Information Technicians	315	361	45	$13.39	$8.50	$13.64	$13.30	$12.30
Home Appliance Repairers	79	90	11	$13.36	$9.17	$12.46	$16.00	$15.47
Audio and Video Equipment Technicians	79	90	11	$13.26	$8.99	$12.26	$17.62	$15.66
Payroll and Timekeeping Clerks	421	481	60	$13.18	$9.38	$12.86	$15.02	$14.59
Rehabilitation Counselors	237	271	34	$13.13	$9.59	$13.16	$14.76	$13.40
First-Line Super./Manag.; Personal Service Workers	237	271	34	$13.13	$7.38	$11.64	$16.07	$14.59
Furnace; Kiln; Oven; Drier; & Kettle Oper. & Tenders	53	60	8	$13.10	$9.68	$14.28	$15.08	$14.29
Dispatchers; Except Police; Fire; and Ambulance	342	391	49	$13.07	$8.67	$11.70	$16.01	$14.87
Human Resources Assistants; Except Payroll and Tim	342	391	49	$12.97	$9.42	$12.81	$15.77	$15.26
Plasterers and Stucco Masons	105	120	15	$12.96	$10.44	$12.59	$16.96	$15.60
Automotive Service Technicians and Mechanics	1367	1563	196	$12.95	$8.03	$12.33	$16.61	$15.60
Maintenance Workers; Machinery	184	210	26	$12.85	$9.25	$12.87	$16.40	$15.79
Photographers	105	120	15	$12.83	$8.80	$12.33	$15.00	$12.54
Hazardous Materials Removal Workers	79	90	11	$12.83	$9.21	$11.39	$17.54	$16.02
Rolling Machine Setters; Operators; and Tenders; M	79	90	11	$12.75	$8.86	$13.43	$14.81	$14.33
Computer-Controlled Machine Tool Operators; Metal	263	301	38	$12.69	$7.42	$13.12	$15.22	$14.75
Surveying and Mapping Technicians	131	150	19	$12.66	$8.76	$11.83	$15.76	$14.60
Pest Control Workers	131	150	19	$12.66	$9.12	$11.94	$13.38	$12.61

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Forging Machine Setters; Operators; and Tenders;	79	90	11	$12.61	$8.37	$12.86	$14.05	$13.22
Medical and Clinical Laboratory Technicians	289	331	41	$12.56	$9.50	$11.93	$15.44	$14.83
Interviewers; Except Eligibility and Loan	394	451	57	$12.52	$8.06	$12.41	$11.91	$11.38
New Accounts Clerks	210	240	30	$12.49	$10.30	$12.25	$13.55	$12.91
Dental hygienists	315	361	45	$12.47	$0.00	$11.91	$28.58	$28.05
Telemarketers	841	962	121	$12.43	$7.30	$9.94	$11.29	$9.82
Security and fire alarm systems installers	79	90	11	$12.42	$0.00	$11.34	$16.78	$16.06
Electronic Equipment Installers and Repairers; Mot	26	30	4	$12.42	$9.95	$11.34	$14.24	$12.79
Aircraft Cargo Handling Supervisors	26	30	4	$12.34	$9.50	$11.97	$18.90	$16.40
Tax Preparers	105	120	15	$12.32	$8.56	$10.34	$16.50	$13.33
Word Processors and Typists	342	391	49	$12.28	$9.52	$11.85	$14.17	$13.48
Office and Administrative Support Workers; Other	657	751	94	$12.23	$8.63	$12.06	$13.16	$12.22
Reporters and Correspondents	105	120	15	$12.16	$8.39	$11.42	$18.58	$15.06
Truck Drivers; Light or Delivery Services	1919	2194	275	$12.14	$6.67	$9.46	$12.88	$11.80
Structural Iron and Steel Workers	131	150	19	$12.13	$8.74	$10.72	$21.30	$20.40
Paving; Surfacing; & Tamping Equipment Operators	131	150	19	$12.07	$7.70	$9.93	$16.07	$14.42
Welders; Cutters; Solderers; and Brazers	710	812	102	$12.01	$8.09	$11.10	$15.41	$14.72
Dental Assistants	552	631	79	$11.92	$10.39	$11.95	$13.97	$13.62
Operating Engineers and Other Construction Equipment	736	842	106	$11.89	$9.32	$11.58	$18.62	$17.00
Computer Operators	289	331	41	$11.89	$7.44	$10.06	$15.79	$14.94
Healthcare Support Workers; All Other	368	421	53	$11.87	$8.16	$11.56	$12.62	$12.01
Veterinary assistants and laboratory animal caretakers	131	150	19	$11.86	$0.00	$12.01	$9.44	$8.97
Drywall and ceiling tile installers	237	271	34	$11.84	$0.00	$11.55	$17.71	$16.36
Broadcast Technicians	53	60	8	$11.83	$7.12	$10.17	$16.14	$13.47
Correspondence Clerks	53	60	8	$11.79	$6.84	$13.77	$14.19	$13.51
Bookkeeping; Accounting; and Auditing Clerks	3627	4148	520	$11.78	$7.83	$11.29	$14.34	$13.74
Extruding and Drawing Machine Setters; Operators;	184	210	26	$11.78	$8.50	$11.43	$13.54	$13.18

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Mail Clerks and Mail Machine Operators; Except Postal Employees	315	361	45	$11.77	$8.37	$11.83	$11.27	$10.76
Health Technologists and Technicians; All Other	158	180	23	$11.60	$9.23	$10.93	$18.10	$16.46
Pharmacy Technicians	526	601	75	$11.58	$9.59	$10.99	$11.87	$11.37
Demonstrators and Product Promoters	184	210	26	$11.53	$7.62	$9.79	$12.00	$9.95
Meter Readers; Utilities	105	120	15	$11.53	$9.84	$10.84	$15.03	$14.15
First-Line Supervisors/Managers of Food Preparation	1498	1713	215	$11.50	$6.88	$10.40	$13.21	$12.22
Emergency Medical Technicians and Paramedics	394	451	57	$11.47	$7.89	$10.55	$13.30	$12.17
Customer Service Representatives	4153	4749	596	$11.44	$8.54	$11.33	$14.01	$12.99
Maintenance and Repair Workers; General	2602	2976	373	$11.33	$7.04	$10.18	$15.41	$14.77
Pipelayers	105	120	15	$11.28	$9.16	$11.21	$15.40	$13.68
Excavating & Loading Machine & Dragline Operators	131	150	19	$11.27	$9.13	$10.56	$16.40	$15.37
Machinists	736	842	106	$11.25	$6.57	$9.95	$16.73	$16.33
Driver/Sales Workers	841	962	121	$11.24	$7.42	$10.08	$11.36	$9.66
Credit Authorizers; Checkers; and Clerks	131	150	19	$11.24	$5.85	$9.46	$15.15	$13.97
Molding; Coremaking; and Casting Machine Setters;	315	361	45	$11.23	$7.57	$10.44	$12.47	$11.63
Installation; Maintenance & Repair Workers; Other	289	331	41	$11.10	$7.23	$10.23	$17.23	$16.23
Sheet Metal Workers	368	421	53	$10.95	$7.39	$9.76	$18.63	$17.09
Grinding; Lapping; Polishing; and Buffing Machine	210	240	30	$10.95	$8.92	$10.45	$14.10	$13.19
Lathe and turning machine tool setters; operators; and tenders; metal and plastic	131	150	19	$10.95	$0.00	$10.45	$15.47	$15.04
Coin; Vending; and Amusement Machine Servicers	79	90	11	$10.92	$6.75	$10.21	$13.95	$13.47
Tapers	79	90	11	$10.89	$0.00	$10.44	$19.25	$18.78
Prepress Technicians and Workers	158	180	23	$10.84	$6.66	$9.64	$16.08	$15.30
Extruding; Forming; Pressing; and Compacting Machines	158	180	23	$10.83	$7.46	$10.20	$13.88	$13.20
Order Clerks	605	691	87	$10.81	$6.92	$9.67	$12.85	$12.07
Bill and Account Collectors	920	1052	132	$10.80	$8.16	$10.12	$13.95	$13.20
Fitness Trainers and Aerobics Instructors	368	421	53	$10.78	$6.45	$9.31	$14.98	$12.25

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Office Machine Operators; Except Computer	210	240	30	$10.77	$7.64	$10.63	$11.83	$11.16
Medical transcriptionists	184	210	26	$10.72	$0.00	$10.47	$14.01	$13.64
Medical Equipment Preparers	79	90	11	$10.72	$8.29	$10.47	$12.14	$11.76
Coil Winders; Tapers; and Finishers	53	60	8	$10.71	$9.04	$10.89	$12.69	$12.24
Conveyor Operators and Tenders	105	120	15	$10.67	$7.19	$10.63	$12.85	$12.23
Material Moving Workers; All Other	105	120	15	$10.66	$7.29	$9.90	$15.29	$13.87
Massage Therapists	79	90	11	$10.64	$6.80	$8.93	$17.63	$15.36
Outdoor Power Equipment & Other Small Engine Mech.	53	60	8	$10.62	$7.78	$8.81	$12.66	$11.98
Painters; Construction and Maintenance	499	571	72	$10.45	$8.87	$10.11	$15.87	$14.55
Billing and Posting Clerks and Machine Operators	1025	1172	147	$10.43	$7.53	$10.06	$13.50	$13.00
Library Assistants; Clerical	210	240	30	$10.34	$7.85	$10.33	$10.57	$9.96
Locksmiths and Safe Repairers	26	30	4	$10.28	$6.05	$10.31	$15.30	$14.60
Carpenters	1814	2074	260	$10.23	$8.26	$9.91	$18.26	$16.78
Dental Laboratory Technicians	79	90	11	$10.21	$6.66	$8.50	$16.21	$14.93
Printing Machine Operators	368	421	53	$10.19	$7.39	$9.57	$15.26	$14.38
Tile and marble setters	79	90	11	$10.17	$0.00	$9.86	$18.28	$17.02
Helpers--Installation; Maint.; & Repair Workers	315	361	45	$10.16	$7.16	$9.71	$11.18	$10.25
Parts Salespersons	473	541	68	$10.15	$6.64	$9.55	$13.58	$12.32
Roofers	237	271	34	$10.04	$7.73	$9.73	$16.17	$14.83
Secretaries; Except Legal; Medical; and Executive	3575	4088	513	$10.00	$6.63	$9.54	$13.06	$12.55
Shipping; Receiving; and Traffic Clerks	1525	1743	219	$9.98	$7.07	$9.63	$12.43	$11.73
Multiple Machine Tool Setters; Operators; and Tend	210	240	30	$9.98	$7.51	$8.76	$14.88	$14.06
Medical Assistants	789	902	113	$9.94	$7.23	$9.37	$12.21	$11.83
Cement Masons and Concrete Finishers	394	451	57	$9.93	$7.24	$10.09	$16.36	$15.10
Insurance Claims and Policy Processing Clerks	499	571	72	$9.92	$6.53	$8.88	$14.70	$14.06
Opticians; Dispensing	131	150	19	$9.87	$7.64	$9.38	$14.37	$13.44
Medical Secretaries	736	842	106	$9.75	$7.20	$9.14	$13.42	$12.76
Tellers	1130	1292	162	$9.72	$8.12	$9.70	$10.30	$10.15
File Clerks	499	571	72	$9.69	$6.83	$8.94	$10.72	$10.11

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Coating; Painting; and Spraying Machine Setters; O	210	240	30	$9.52	$6.68	$8.88	$13.25	$12.64
Tailors; dressmakers; and custom sewers	53	60	8	$9.51	$0.00	$9.33	$11.76	$10.79
Shoe and Leather Workers and Repairers	26	30	4	$9.51	$7.38	$9.33	$9.68	$9.29
Weighers; Measurers; Checkers; and Samplers; Recorders	184	210	26	$9.49	$6.99	$8.25	$12.92	$11.81
Producers and directors	105	120	15	$9.47	$0.00	$9.03	$34.84	$25.40
Merchandise Displayers and Window Trimmers	131	150	19	$9.46	$7.10	$9.01	$12.51	$10.89
Helpers--Brickmasons; Blockmasons; Stonemasons; an	131	150	19	$9.39	$7.63	$9.54	$13.40	$12.00
Structural Metal Fabricators and Fitters	184	210	26	$9.37	$6.00	$8.36	$14.94	$14.34
Bakers	315	361	45	$9.36	$6.96	$8.93	$10.97	$10.26
Tire Repairers and Changers	184	210	26	$9.36	$7.04	$9.57	$10.75	$10.01
Machine Feeders and Offbearers	315	361	45	$9.35	$6.66	$9.26	$11.31	$10.68
Office Clerks; General	6098	6973	875	$9.33	$6.43	$8.76	$11.62	$10.95
Inspectors; Testers; Sorters; Samplers & Weighers	1025	1172	147	$9.33	$6.32	$8.16	$15.00	$13.66
Cooks; Institution and Cafeteria	815	932	117	$9.28	$6.35	$8.95	$9.55	$9.10
Butchers and Meat Cutters	263	301	38	$9.25	$5.94	$7.87	$13.12	$12.45
Sewing Machine Operators	499	571	72	$9.21	$6.51	$8.77	$9.24	$8.61
Industrial Truck and Tractor Operators	1288	1473	185	$9.11	$6.35	$8.57	$13.57	$12.78
Paper Goods Machine Setters; Operators; & Tenders	237	271	34	$9.10	$6.67	$8.57	$15.01	$14.63
Helpers—Carpenters	210	240	30	$9.09	$6.90	$8.62	$10.94	$10.38
Cutters and trimmers; hand	53	60	8	$9.07	$0.00	$8.82	$11.60	$10.59
Cutting; Punching; and Press Machine Setters; Operators	499	571	72	$9.06	$6.03	$8.77	$13.04	$12.45
Ushers; lobby attendants; and ticket takers	237	271	34	$9.04	$0.00	$9.50	$8.07	$7.30
Mixing and Blending Machine Setters; Operators; an	237	271	34	$9.04	$7.09	$8.77	$14.06	$13.51
Helpers--Painters; Paperhangers; Plasterers; and S	53	60	8	$9.02	$7.64	$8.72	$10.87	$9.87
Nonfarm Animal Caretakers	158	180	23	$9.01	$5.91	$9.49	$9.24	$8.39
Nursing Aides; Orderlies; and Attendants	2839	3246	407	$8.98	$7.13	$8.39	$10.39	$10.09

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Helpers--Pipelayers; Plumbers; Pipefitters; and St	158	180	23	$8.97	$6.43	$8.92	$11.50	$10.75
Cutting and Slicing Machine Setters; Operators; an	158	180	23	$8.96	$7.49	$8.50	$13.46	$12.82
Construction Laborers	1761	2014	253	$8.92	$6.94	$8.78	$13.86	$12.10
Textile Cutting Machine Setters; Operators; Tender	53	60	8	$8.84	$6.02	$9.04	$10.44	$9.80
Fabric and Apparel Patternmakers	26	30	4	$8.83	$5.98	$8.77	$16.23	$13.85
Cabinetmakers and Bench Carpenters	237	271	34	$8.75	$7.23	$8.29	$12.90	$12.16
Farmworkers; Farm and Ranch Animals	79	90	11	$8.74	$6.11	$7.28	$9.07	$8.31
Electrical and Electronic Equipment Assemblers	447	511	64	$8.72	$6.41	$8.19	$12.63	$11.68
Travel Agents	184	210	26	$8.69	$6.16	$8.75	$14.25	$13.29
Retail Salespersons	8464	9678	1214	$8.68	$5.93	$7.49	$11.03	$8.98
Helpers--Electricians	184	210	26	$8.60	$6.56	$8.50	$11.97	$11.26
Receptionists and Information Clerks	2208	2525	317	$8.58	$6.41	$8.08	$10.91	$10.50
Packaging & Filling Machine Operators & Tenders	841	962	121	$8.56	$6.06	$7.99	$11.59	$10.67
Recreation Workers	552	631	79	$8.56	$5.99	$7.52	$10.43	$9.29
Data Entry Keyers	631	721	91	$8.55	$5.97	$8.05	$11.72	$11.18
Residential advisors	105	120	15	$8.53	$0.00	$7.49	$11.17	$10.30
Stock Clerks and Order Fillers	3207	3667	460	$8.41	$5.96	$7.73	$10.52	$9.66
Painting; Coating; and Decorating Workers	53	60	8	$8.41	$7.88	$8.36	$12.01	$10.95
Counter and Rental Clerks	920	1052	132	$8.39	$5.89	$7.11	$10.47	$8.79
Security Guards	1998	2284	287	$8.35	$5.97	$6.99	$10.61	$9.77
Physical Therapist Aides	79	90	11	$8.28	$5.83	$7.55	$11.14	$10.28
Tour Guides and Escorts	53	60	8	$8.27	$7.02	$8.01	$9.92	$9.32
Personal Care and Service Workers; All Other	131	150	19	$8.26	$5.97	$7.96	$9.81	$8.63
Grinding and Polishing Workers; Hand	79	90	11	$8.22	$6.54	$8.00	$12.03	$11.28
Switchboard Operators; Including Answering Service	421	481	60	$8.19	$5.96	$7.57	$10.81	$10.38
Food Cooking Machine Operators and Tenders	79	90	11	$8.12	$6.92	$8.08	$10.72	$10.02
Bus Drivers; School	973	1112	140	$8.08	$6.12	$7.43	$11.33	$11.18
Taxi Drivers and Chauffeurs	263	301	38	$8.07	$7.03	$7.88	$10.34	$9.41

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Landscaping and Groundskeeping Workers	1761	2014	253	$7.99	$5.99	$7.68	$10.62	$9.82
Social and Human Service Assistants	683	781	98	$7.96	$5.81	$6.55	$12.45	$11.67
Funeral Attendants	53	60	8	$7.86	$6.85	$7.80	$10.05	$9.26
Couriers and Messengers	237	271	34	$7.85	$6.06	$7.31	$10.26	$9.71
Graders and Sorters; Agricultural Products	105	120	15	$7.85	$5.90	$6.94	$8.52	$7.90
Laborers & Freight; Stock & Material Movers; Hand	4915	5621	705	$7.83	$5.99	$6.97	$10.53	$9.67
Assemblers and Fabricators; All Other	526	601	75	$7.67	$6.18	$6.93	$14.14	$11.90
Helpers--Production Workers	973	1112	140	$7.65	$6.02	$6.95	$10.35	$9.70
Manicurists and Pedicurists	79	90	11	$7.63	$6.82	$7.72	$9.65	$8.89
Cementing and Gluing Machine Operators and Tenders	53	60	8	$7.63	$5.91	$7.54	$12.34	$11.57
Hairdressers; Hairstylists; and Cosmetologists	683	781	98	$7.61	$5.99	$6.68	$10.95	$9.52
Cooks; short order	473	541	68	$7.60	$0.00	$7.65	$8.46	$8.11
Cooks; Restaurant	1577	1803	226	$7.54	$6.33	$7.61	$9.73	$9.39
Upholsterers	79	90	11	$7.53	$6.03	$6.93	$13.05	$12.35
Helpers—Roofers	53	60	8	$7.42	$6.08	$7.25	$10.58	$9.93
Janitors and Cleaners; Except Maids and Housekeeping	4311	4929	619	$7.39	$5.98	$6.77	$9.91	$9.04
Pressers; Textile; Garment; and Related Materials	158	180	23	$7.39	$5.97	$6.86	$8.62	$8.33
Entertainment Attendants & Related Workers; Other	79	90	11	$7.35	$5.89	$7.22	$8.57	$8.14
Team Assemblers	2471	2825	355	$7.27	$5.98	$6.82	$12.36	$11.42
Laundry and Dry-Cleaning Workers	447	511	64	$7.25	$5.97	$6.84	$8.74	$8.28
Woodworking Machine Setters; Operators; and Tender	184	210	26	$7.25	$5.85	$6.76	$11.43	$10.93
Service Station Attendants	184	210	26	$7.25	$5.86	$7.31	$8.92	$8.29
Sawing Machine Setters; Operators & Tenders; Wood	105	120	15	$7.23	$5.84	$6.90	$11.35	$10.91
Crossing Guards	131	150	19	$7.12	$5.82	$7.21	$9.94	$9.28
Motorcycle Mechanics	26	30	4	$7.11	$5.84	$6.60	$14.61	$13.70
Amusement and Recreation Attendants	499	571	72	$7.03	$5.96	$6.51	$8.00	$7.47
Cashiers	7044	8055	1011	$7.02	$5.93	$6.72	$8.29	$7.81
Food Preparation Workers	1761	2014	253	$6.97	$5.96	$6.89	$8.47	$8.03

Appendix Table 8-1- Continued
Total Forecasted Employment and Wages 2004-2014

Cleaners of Vehicles and Equipment	683	781	98	$6.95	$5.90	$6.59	$9.33	$8.41
Hotel; Motel; and Resort Desk Clerks	394	451	57	$6.90	$5.94	$6.59	$8.93	$8.51
Food Batchmakers	184	210	26	$6.88	$5.85	$6.86	$11.34	$10.62
Packers and Packagers; Hand	1787	2044	256	$6.86	$5.95	$6.54	$8.97	$8.25
Home Health Aides	1235	1413	177	$6.70	$5.94	$6.38	$9.13	$8.81
Bartenders	946	1082	136	$6.68	$5.90	$6.33	$8.29	$7.42
Counter Attendants; Cafeteria; Food Concession; an	946	1082	136	$6.66	$5.88	$6.35	$7.78	$7.53
Cooks; Fast Food	1341	1533	192	$6.63	$5.86	$6.46	$7.33	$7.07
Child Care Workers	1051	1202	151	$6.61	$5.92	$6.38	$8.57	$8.06
Lifeguards; Ski Patrol; and Other Recreational Pro	210	240	30	$6.60	$5.94	$6.45	$8.43	$7.95
Food Servers; Nonrestaurant	394	451	57	$6.46	$5.91	$6.29	$8.58	$7.95
Waiters and Waitresses	4547	5200	652	$6.43	$5.90	$6.19	$7.66	$6.75
Parking Lot Attendants	237	271	34	$6.43	$5.90	$6.25	$8.48	$8.08
Baggage Porters and Bellhops	105	120	15	$6.43	$5.83	$6.39	$10.46	$8.54
Combined Food Preparation and Serving Workers; Inc	4390	5019	630	$6.38	$5.92	$6.26	$7.40	$7.06
Maids and Housekeeping Cleaners	1814	2074	260	$6.30	$5.88	$6.24	$8.62	$8.13
Host & Hostess; Restaurant; Lounge & Coffee Shop	657	751	94	$6.20	$5.92	$6.23	$7.82	$7.52
Dishwashers	1025	1172	147	$6.15	$5.90	$6.18	$7.50	$7.35
Dining Room and Cafeteria Attendants and Bartender	815	932	117	$6.15	$5.89	$6.16	$7.44	$7.10
Personal and Home Care Aides	1104	1262	158	$6.06	$5.89	$6.14	$8.38	$8.12