



Edward J. Bloustein School of
Planning and Public Policy

The Union County Economic and Workforce Competitiveness Project

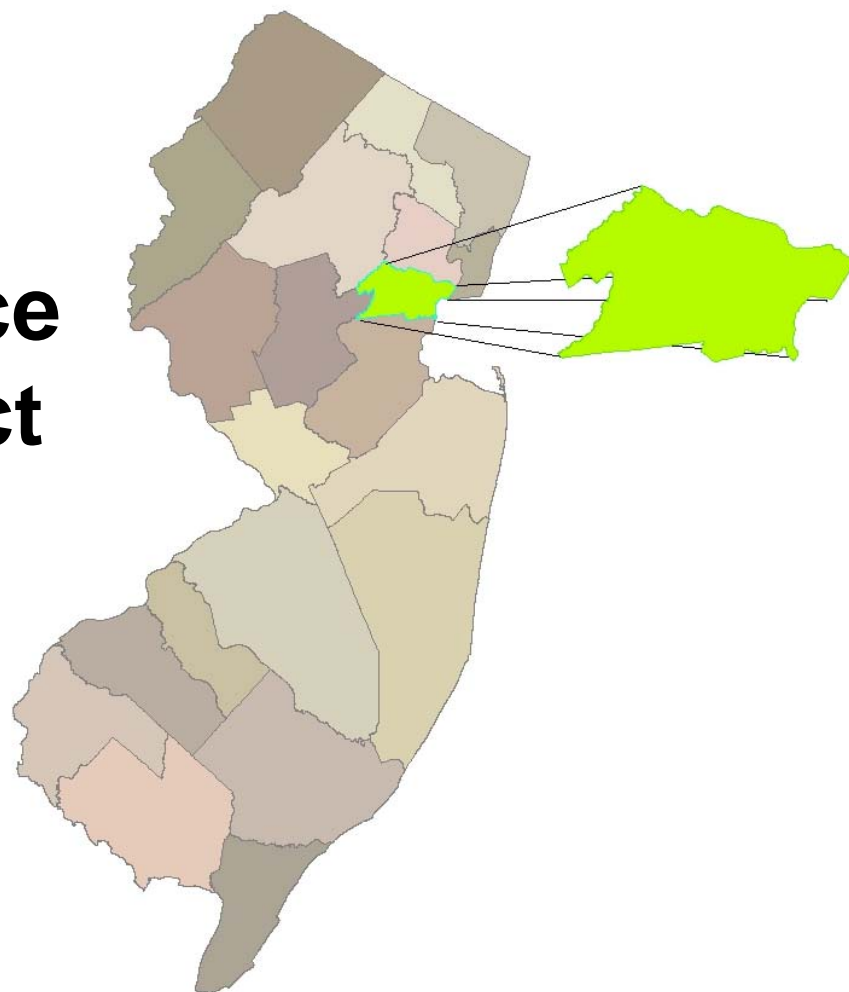
Prepared for

The County of Union, New Jersey

Prepared by

John J. Heldrich Center for Workforce Development

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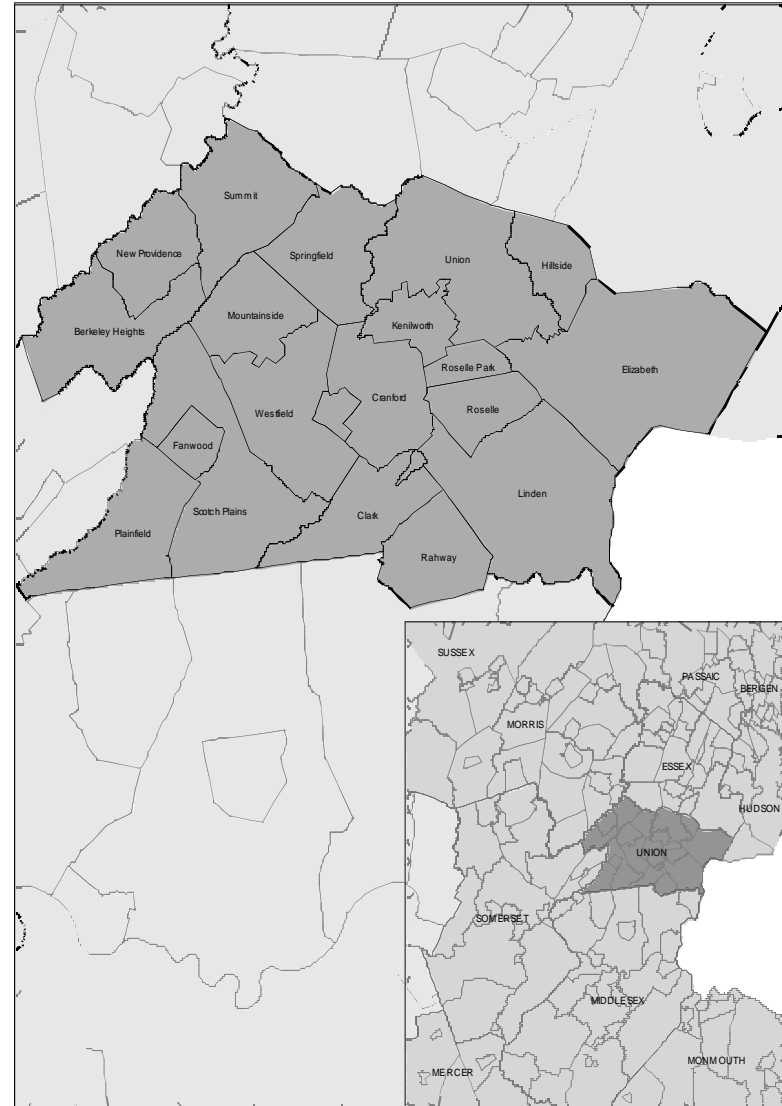


Union County and Its Municipalities: A Brief Overview

Union County, NJ is a hub of economic activity for the state located at the crossroads of global trade. The county is home to an array of industries, including pharmaceuticals, transportation and logistics, retail, educational services, health care, and others, that provide more than one-quarter million jobs, or nearly 6% of all jobs in the state.

Union County is also home to over one-quarter million residents, or nearly 6% of the state's population. The county encompasses 21 municipalities, as follows:

Berkeley Heights	Plainfield
Clark	Rahway
Cranford	Roselle
Elizabeth	Roselle Park
Fanwood	Scotch Plains
Garwood	Springfield
Hillside	Summit
Kenilworth	Union
Linden	Westfield
Mountainside	Winfield
New Providence	





Background and Overview

This report is intended to assist Union County officials and their partners to develop an economic growth and workforce development strategy for the county that is informed by an analysis of available labor market information, input from various experts in the region's economy and future development plans, and other relevant data.

In March 2007, The County of Union contracted with the John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey to develop a detailed profile of the economic landscape of Union County and to suggest strategies for supporting the growth of the county's key industries and assisting residents to advance within the county's labor market.

Information and recommendations in this report are based on interviews with 22 employers, economic development officials, and others, as well as a review and analysis of available labor market data. See Appendix A for a full list of methods, interview contacts, and sources.

Key Objectives

This report will assist Union County to:

1. **Support key industries that provide high-wage jobs in Union County or that offer a diversity of employment and advancement opportunities for Union County residents;**
2. **Build upon existing local, regional, and state policy initiatives to support key industries; and**
3. **Develop strategies to assist all county residents to thrive in the county's economy.**

Key Findings and Recommendations



Key Finding #1: Union County has overcome economic challenges, diversified its economy, and created potential for building on new economic strengths.

Relatively stable employment in Union County in the past decade (.09% growth from 1997-2006) compared to modest growth in surrounding counties and the state *masks a story of growth and recovery in the face of a major economic obstacle – the loss of over 13,000 “Old Economy” Manufacturing jobs.*

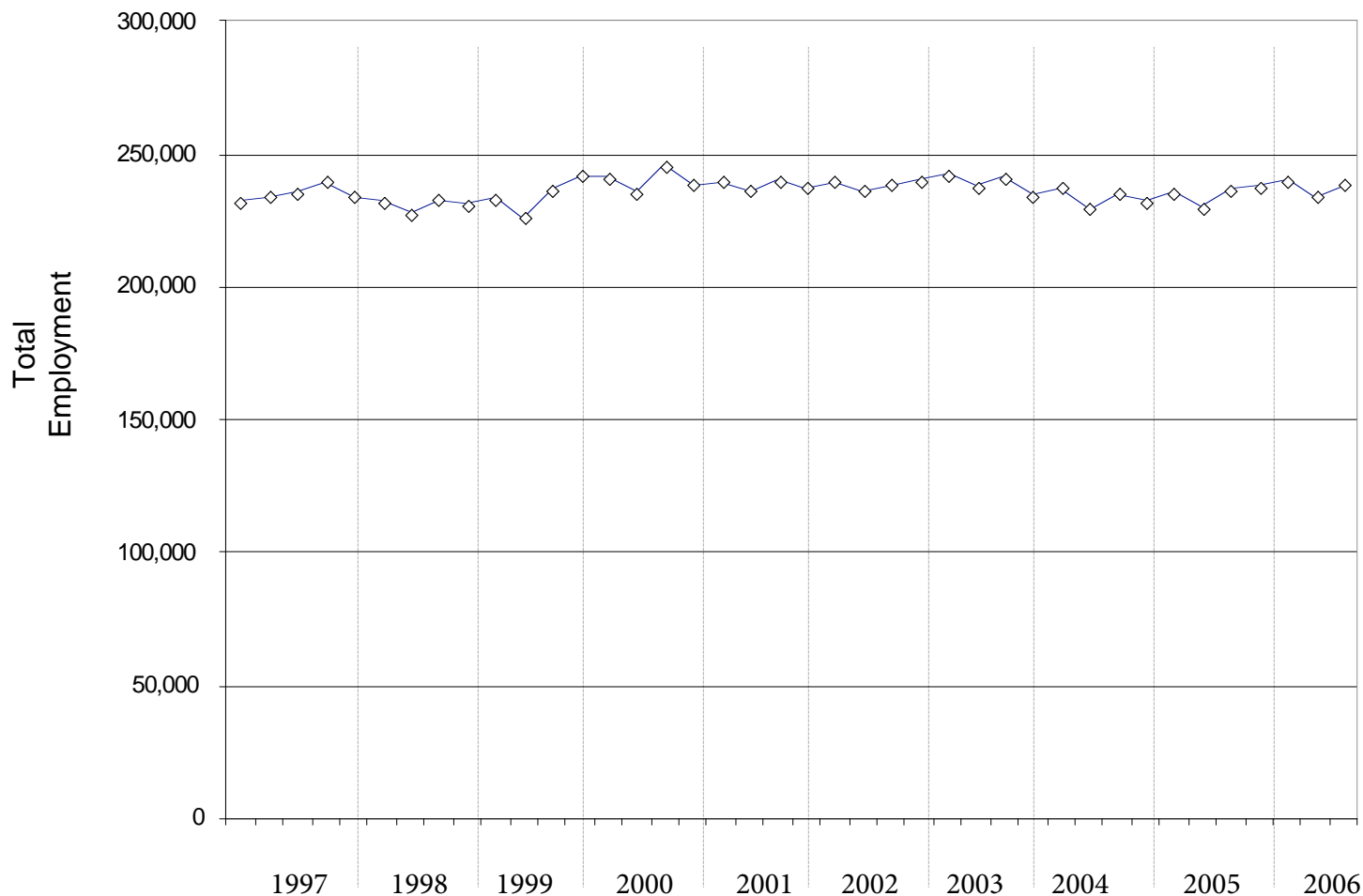
- **Union County moved from reliance on declining “Old Economy” Manufacturing sectors to a more diverse knowledge-based economy, allowing the county to successfully weather the nationwide decline in Manufacturing jobs.**
 - In 1997, Union County had nearly twice as many jobs in Manufacturing as the state (21% of all jobs vs. 12.5% statewide). As a result, the county faced a larger economic challenge than the state or surrounding counties when Manufacturing jobs declined, as they did throughout the national economy.
 - Growth in a diversity of other industries between 1997 and 2006 allowed Union County to overcome job losses in Manufacturing and stabilize its economy. By 2006, 15% of Union County jobs were in Manufacturing compared to 9% statewide.
 - In addition, by 2006, job losses in transportation equipment manufacturing, fabricated metals, machinery manufacturing, and other “Old Economy” production line jobs had been offset by growth in the more knowledge-intensive Chemical Manufacturing sector, which is dominated by Pharmaceutical Manufacturing. According to employers, this sector offers an increasing number of high-wage, “new economy” jobs in management, research and development, and production.
- **Union County’s newly diversified economy now provides higher average wages than both the state economy and the county’s older, more manufacturing-intensive economy.**
 - Average wages in Union County were over \$2,800 higher than the statewide average in 2006.
 - Wage growth in the county also outpaced the state average between 2002 and 2006, when adjusted for inflation.



KEY FINDINGS AND RECOMMENDATIONS

Key Finding #1 (Continued)

Total Employment In Union County, 1997 to 2006



Source: U.S. Census Bureau, Local Employment Dynamics.

10-Year Change

Employment in Union County was relatively stable, growing by 0.9% from 1997 to 2006 and adding 2,216 jobs to the economy.

During this period, total employment in New Jersey grew by 8% and total employment in the five counties surrounding Union County increased by 6.7%.

5-Year Change

Since 2002, employment in Union County decreased by 0.2% and the county lost 529 jobs.

Between 2002 and 2006, total employment in New Jersey grew by 2.5% and total employment in the five counties surrounding Union County increased by 0.8%.



Key Finding #1 (Continued)

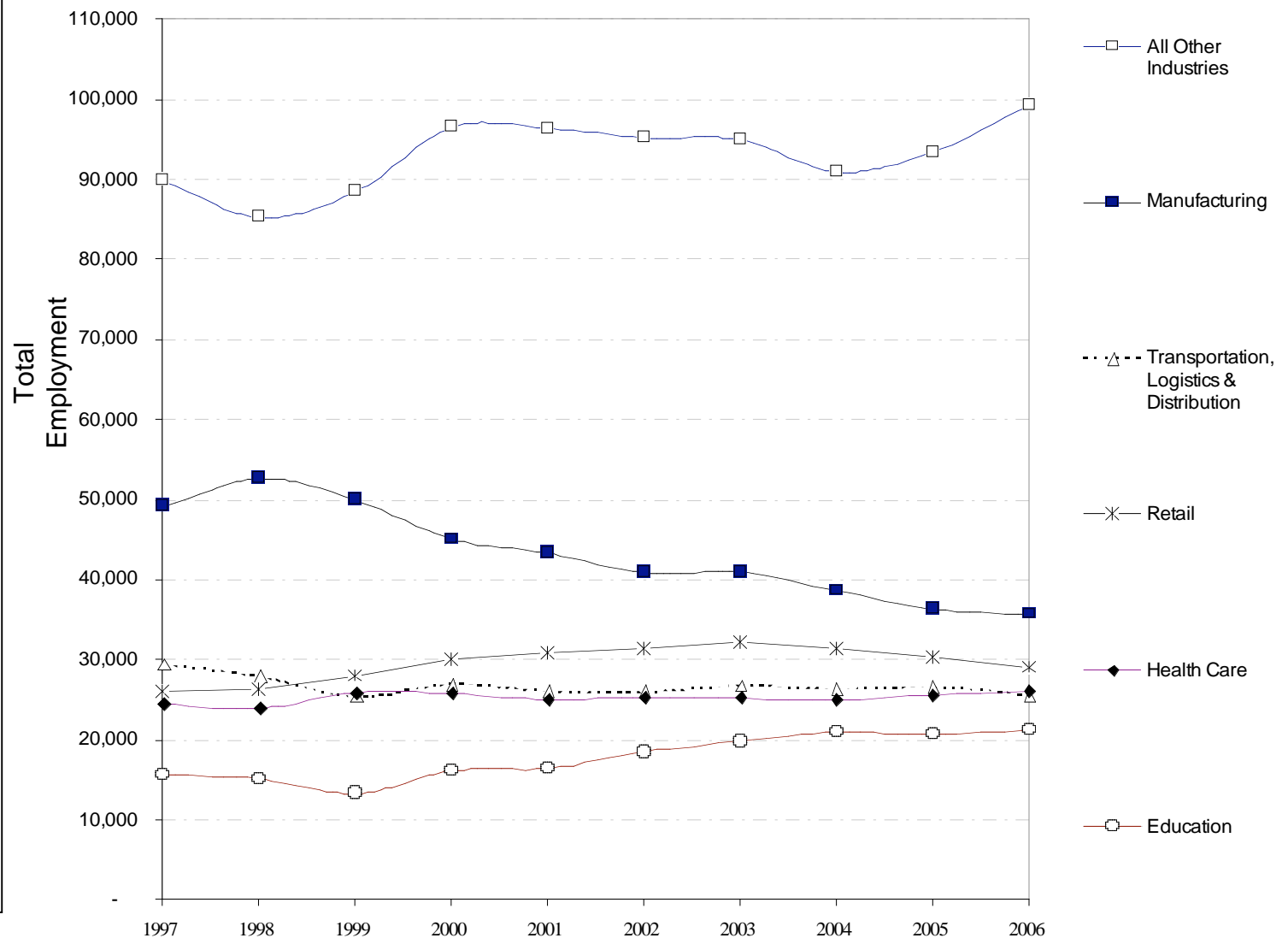
Between 1997 and 2006, Manufacturing employment fell by 27.5%, or over 13,500 jobs.

Some losses were due to large plant closings in transportation equipment manufacturing, including General Motors and General Bearing.

Manufacturing is more concentrated in Union County than in the state, making recovery from sharp manufacturing job losses more difficult.

While some other industries also lost jobs during this period, a variety of other industries grew.

Total Employment in Union County, 1997 to 2006, by Industry

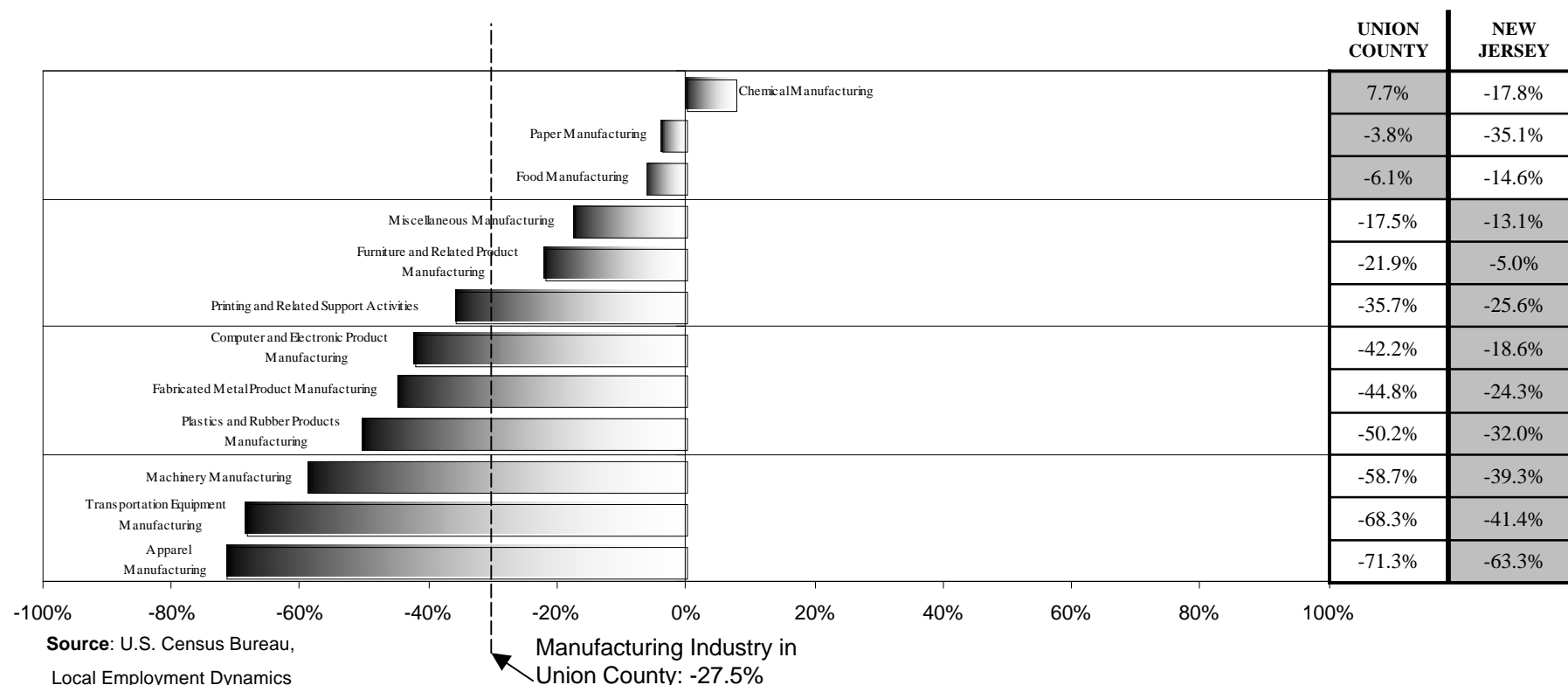


Source: U.S. Census Bureau,
Local Employment Dynamics.



Key Finding #1 (Continued)

Change in Manufacturing Employment by Sub-Industry, 1997-2006



Between 1997 and 2006, Union County experienced growth in Chemical Manufacturing (dominated by Pharmaceuticals) and slower-than-average losses in paper and food manufacturing while ***New Jersey lost jobs in every sector of Manufacturing***. Losses were steeper than the statewide average in other major sectors, but this may be due, in part, to the disproportionate effects one large business closing can have on the percentage of jobs in an area the size of Union County.



Key Finding #1 (Continued)

Declining and Growing Industries, 1997 to 2006

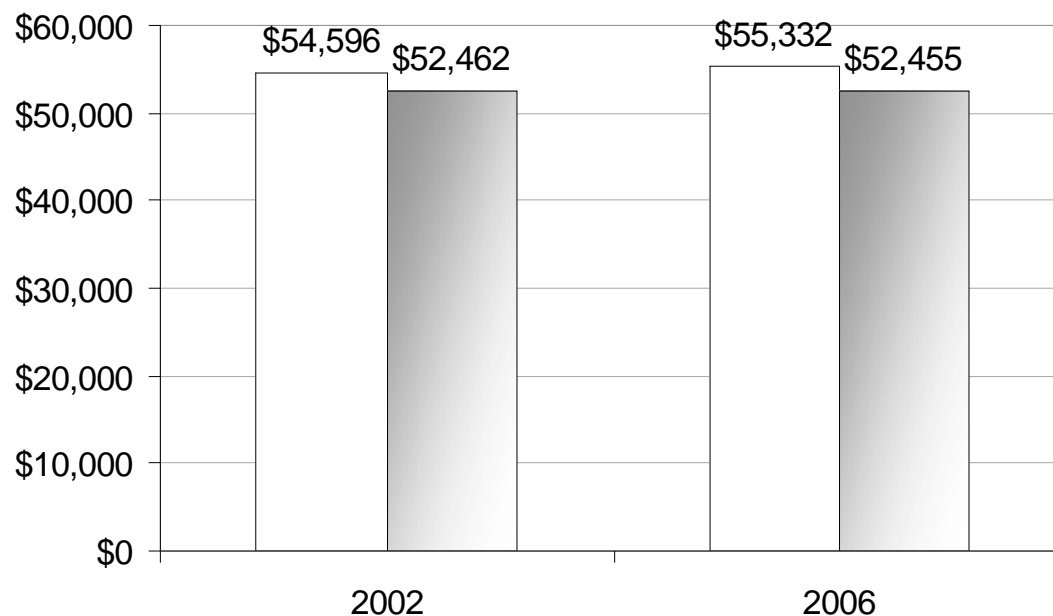
Industries with DECLINING Employment: 1997 to 2006		Industries with INCREASING Employment: 1997 to 2006	
Industry (Number of Employees 2006)	Change in Employment 1997 to 2006	Industry (Number of Employees 2006)	Change in Employment 1997 to 2006
Manufacturing (35,818)	(13,568)	Educational Services (21,337)	5,614
Transportation & Warehousing (10,597)	(4,023)	Retail Trade (29,131)	3,083
Information (3,042)	(1,641)	Administrative & Support Services (13,721)	2,622
Utilities (1,151)	(947)	Professional, Scientific & Technical Services (16,422)	2,043
		Public Administration (10,757)	1,877
		Health Care & Social Assistance (26,103)	1,528
		Management of Companies & Enterprises (4,960)	1,526
		Other Services (9,807)	1,093
		Real Estate & Rental & Leasing (3,658)	829
		Accommodation & Food Services (11,333)	828
		Arts, Entertainment, & Recreation (2,182)	736
		Construction (10,308)	309
		Wholesale Trade (15,162)	227
		Finance & Insurance (11,939)	142
TOTAL	(20,179)	TOTAL	22,457
Total Employment in the 4 Industries in 2006: 50,608 or 21% of all jobs in Union County		Total Employment in the 14 Industries in 2006: 186,820 or 79% of all jobs in Union County	

Job losses in Manufacturing and other industries in Union County over the past decade were offset by growth in a diverse array of industries, including educational services, retail, and many others.



Key Finding #1 (Continued)

Average Earnings of Individuals Employed in Union County and New Jersey in 2002 and 2006



Source: U.S. Census Bureau,
Local Employment Dynamics.

*2002 figures adjusted for inflation

□ Union County

■ New Jersey

With a newly diversified economy, **wages were higher and have increased faster in Union County than in the state as a whole in recent years.** In 2002, inflation-adjusted average wages in Union County were over \$2,100 more than the statewide average. Between 2002 and 2006, average wages increased by nearly \$750 in Union County jobs when adjusting for inflation, while statewide average wages dropped slightly. By 2006, average wages in Union County exceeded the statewide average by \$2,800.



Key Finding # 2: Three industry groups are strong economic drivers in Union County and provide the greatest potential for actionable change.

With a more stable, diversified economy, Union County has the potential to achieve additional economic growth by supporting key sectors of its new economy. Each of the following industries has unique characteristics that make it a suitable target for development efforts and provides opportunities to build on existing state, regional, and local economic and workforce development efforts.

Target Industry Group #1: Manufacturing, especially Pharmaceutical and Other Chemical Manufacturing

Large and robust, this sector provides a large number of high-wage jobs in Union County. Nearly half of all Manufacturing jobs in the county are in Pharmaceuticals and other Chemical Manufacturing.

Target Industry Group #2: Health Care

This large and fast-growing sector offers a multitude of advancement opportunities for Union County's resident workforce.

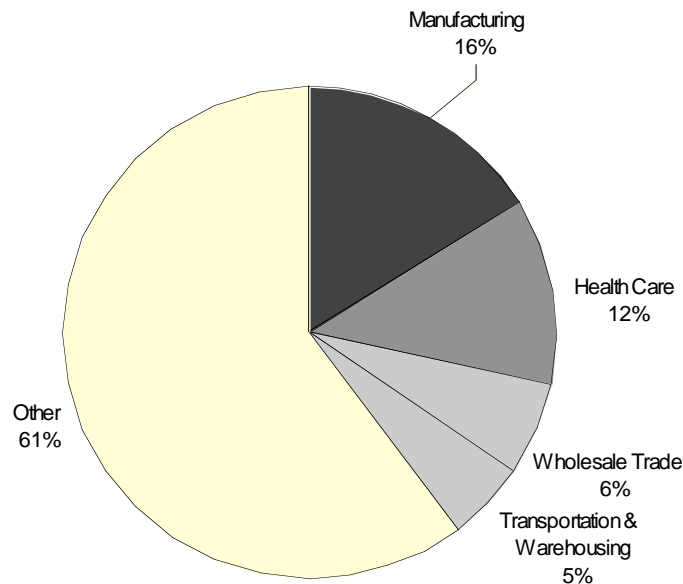
Target Industry Group #3: Transportation, Logistics, and Distribution (TLD), including Wholesale Trade, Transportation, and Warehousing

TLD offers a large number of middle-skill jobs that may be suitable advancement opportunities for low-wage workers in other industries.



Key Finding # 2: (Continued)

Employment Distribution by Industry in Union County, 2006



Major Other Industries	
Retail Trade	11%
Educational Services	9%
Professional, Scientific & Technical Services	6%
Administrative & Support Services	6%
Accommodation & Food Services	5%

Key Facts

The three target industries account for:

- 39% of all jobs in Union County;
- 44% of total payroll; and
- 25% of new hires (to fill new and replacement jobs)

Other large employment industries (Retail, Educational Services, and others) provide fewer opportunities for new policy and program interventions or are lacking in other key criteria.

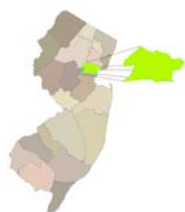


Key Finding #2 (Continued)

Criteria Used to Select Target Industries

	A. Current Economic Impact			B. Employment Potential			C. Availability of Diverse Employment Opportunities		D. Potential for Action
	Employment (2006)	Average Wages	Total Payroll	Recent Growth	Expected Growth	Employment Concentration	Number of New Hires	Diversity of Educational Requirements	Focus of current economic and workforce development efforts
	A1	A2	A3	B1	B2	B3	C1	C2	D
Manufacturing	35,818	☼	☼			☼	☼		☼
Retail Trade	29,131		☼		☼	☼	☼		
Health Care	26,103		☼	☼	☼		☼	☼	☼
Educational Services	21,337		☼	☼		☼			
Professional, Scientific & Technical Services	16,422	☼	☼	☼	☼				
Wholesale Trade	15,162	☼	☼	☼	☼	☼			☼
Administrative & Support Services	13,721			☼	☼		☼		
Finance and Insurance	11,939	☼		☼	☼				☼
Accommodation & Food Services	11,333			☼	☼		☼		
Public Administration	10,757			☼					
Transportation & Warehousing	10,597					☼			☼
Construction	10,308	☼				☼	☼	☼	
Other Services	9,807			☼	☼	☼		☼	
Management of Companies	4,960	☼		☼	☼				
Real Estate	3,658				☼				
Information	3,042								☼
Arts, Entertainment & Recreation	2,182			☼	☼				
Utilities	1,151	☼						☼	

Source: U.S. Census Bureau, Local Employment Dynamics.



Key Finding #2 (Continued)

Industry Group #1: Manufacturing, especially Pharmaceuticals and Other Chemicals

Manufacturing is the largest economic driver in Union County, providing over 36,000 jobs. Nearly 43% of these jobs (15,241) are concentrated in the knowledge-intensive Chemical Manufacturing sector, which includes Pharmaceutical Manufacturing. The sector provides a large number of high-paying jobs in functional areas that go beyond production, including research and development and corporate management.

Several characteristics make **Pharmaceutical and other Chemical Manufacturing** suitable targets for economic and workforce development efforts:

- **Highly concentrated in Union County compared to New Jersey.**
- **Large supplier of new and replacement jobs.**
- **Many high-wage, knowledge-intensive jobs for Union County's highly educated resident workforce.**
- **Higher-than-average wages.**
- **Potential for action is high – Pharmaceutical sector supported by state and regional economic growth strategies.**

Other key sub-sectors in Manufacturing: While Pharmaceutical and other Chemical Manufacturing make up the largest sector of the Manufacturing industry in Union County, other sectors are also important, including Fabricated Metal (3,474 employees in 2006) and Food Manufacturing (2,318 employees in 2006).

Key Facts

Pharmaceutical and Other Chemical Manufacturing

- Over 15,000 workers in 2006
- 500+ hires/quarter
 - 150+ new
 - 350+ replacements
- Average wages \$122,922/year



Key Finding #2 (Continued)

Industry Group #2: Health Care

Health Care is an important economic driver in Union County that offers county residents and other workers opportunities to advance their employment and wages through defined career ladders. Large hospitals, including Overlook Hospital, Trinitas Hospital, and Muhlenburg Regional Medical Center, are located throughout the county. Unique characteristics of the Health Care industry in Union County include:

- **Third largest industry employer in Union County (over 26,000 workers in 2006).**
- **Large supplier of new and replacement jobs.**
- **NJLWD projects nearly 25% growth 2004-14.**
- **Offers diverse employment opportunities with varied requirements and defined career ladders.**
- **Potential for action is high – Health Care supported by regional economic growth plans.**

Key Sub-Sectors: *Ambulatory Health Care Services, Hospitals*

These sectors comprise 67% of Health Care jobs in the county (over 17,000 jobs). Ambulatory Health Services, the highest paying sector, is growing. It currently accounts for nearly 1,200 new hires per quarter.

Key Facts

Health Care

- **Nearly 26,000 workers in 2006.**
- **2,800+ hires/quarter**
 - 1,000+ new
 - 1,800+ replacements
- **Average wages \$44,667/year**

Source: U.S. Census, Longitudinal Employer-Household Dynamics 2006



Key Finding #2 (Continued)

Industry Group #3: Transportation, Logistics, and Distribution (TLD)

TLD is vital to Union County, both in terms of employment and its relationship to other industries. In addition, the wholesale industry, in particular, provides opportunities for workers in the county's retail sector and other service industries to advance.

- Large supplier of new and replacement jobs.
- Wholesale trade is growing more rapidly than in the state (11% between 2002-06 in Union County vs. -1% in New Jersey).
- Higher-than-average wages.
- Offers diverse employment opportunities with varied requirements, particularly suitable for advancement of low-wage workers in Retail, TLD, and other industries.
- Potential for action is high – TLD is supported by state and regional economic growth plans.

Key Sub-Sectors: *Merchant Wholesalers (Durable), Merchant Wholesalers (Non-Durable), Truck Transportation, Support Activities for Transportation*

78% of TLD jobs (over 19,000 jobs) are in these sectors, which are highly concentrated in Union County compared to the state. All sub-sectors except truck transportation are growing.

Key Facts

Transportation, Logistics, and Distribution

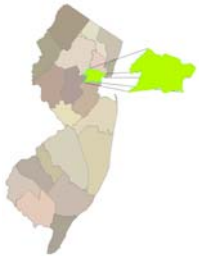
▪ 26,000+ workers in 2006

▪ 3,350+ hires/quarter

• 1,200+ new

• 2,100+ replacements

▪ Average wages \$57,319/year



Key Finding #3: Demographic trends present policy opportunities and challenges for Union County.

Union County is home to over a half million people (531,088 in 2006), and over half are in the workforce (52%). Between 2001 and 2006, Union County's population grew only slightly, adding nearly 4,000 residents (less than 1% growth). The population is increasing slightly in both young residents of working age (15- to 24-year-olds increased from an average of 11.8% of the population in 2001-03 to an average of 12.5% in 2004-06), as well as among those aged 45 to 64 (23.8% in 2001-03 to 25.4% in 2004-06). Meanwhile, the average percentage of population aged 25 to 44 shrank slightly from 30.7% to 28.2% during the same period.

Educational Attainment and English Language Proficiency

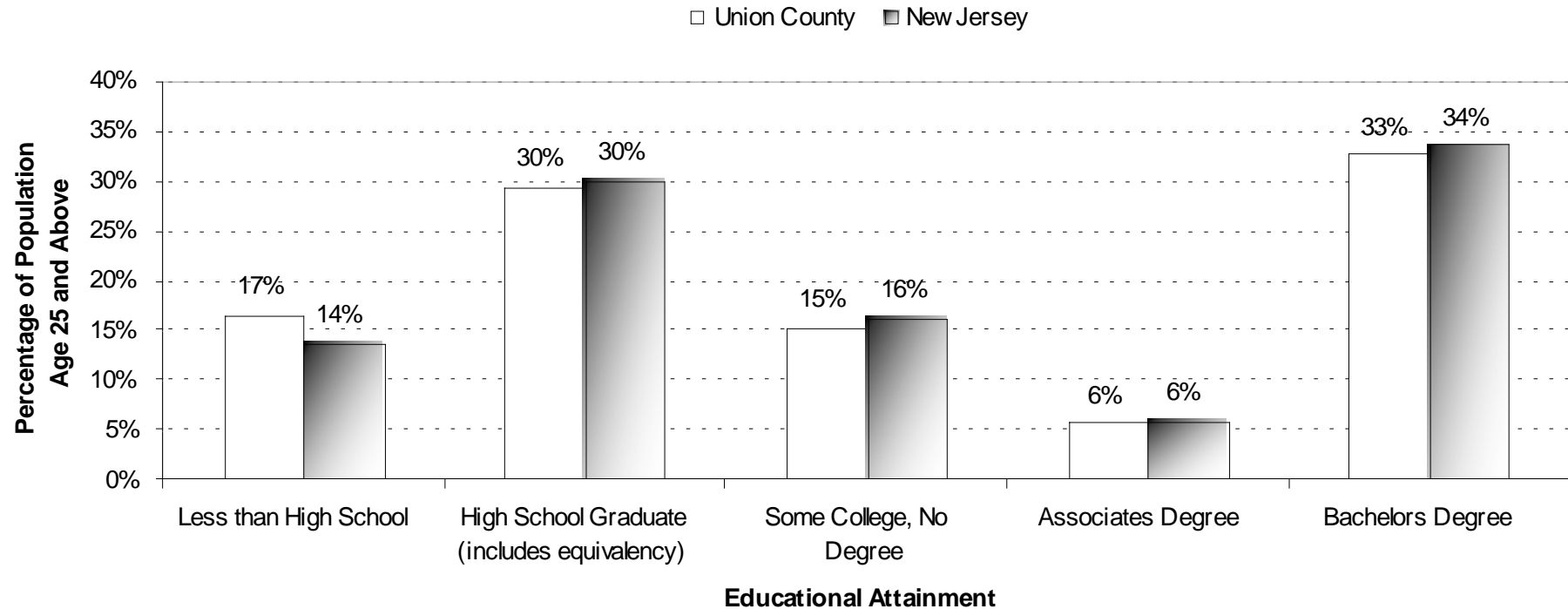
- Like New Jersey, Union County has a more highly educated population than the U.S. average. One-third of adults have a four-year degree or above, compared to just over one-quarter nationwide (27%) and 34% statewide.
- Union County has a slightly higher proportion of adults who have earned less than a high school diploma than the state (16.6% in the county vs. 13.8% statewide).
- The percentage of county residents who earned a two-year college degree or higher increased from an average of 35.8% between 2001 and 2003 to an average of 38.5% between 2004 and 2006.* However, the proportion of those who have less than a high school education remained the same (an average of 16.6%) over these time periods.
- The county has a higher percentage of foreign-born residents compared to the state, and these residents have lower educational attainment levels than the foreign-born population statewide and native-born county residents.
- In addition, the percentage of residents over age 5 who speak English "less than very well" increased from an average of 14.7% between 2001 and 2003 to an average of over 18.3% of the county's population between 2004 and 2006.*
- These demographic trends suggest a continued need for adult basic education services in Union County, as well as a possible increase in the need for English as a Second Language services, in order to help better connect disadvantaged residents with opportunities for advancement in the labor market.

* Due to small yearly sample sizes to collect these data, three-year averages provide a more reliable estimate of the actual change over time.



Key Finding #3 (Continued)

**Highest Level of Educational Attainment, 2004-06
Union County and New Jersey**



Sources: 2004-06 U.S. Census, American Community Survey, 3-year average data.

Between 2004-06, Union County had a higher average percentage of residents who had earned less than a high school diploma than the state as a whole (16.6% vs. 13.8%). In all other measures, however, the educational attainment of Union County's adult residents is roughly similar to that of all New Jersey adults during this period.



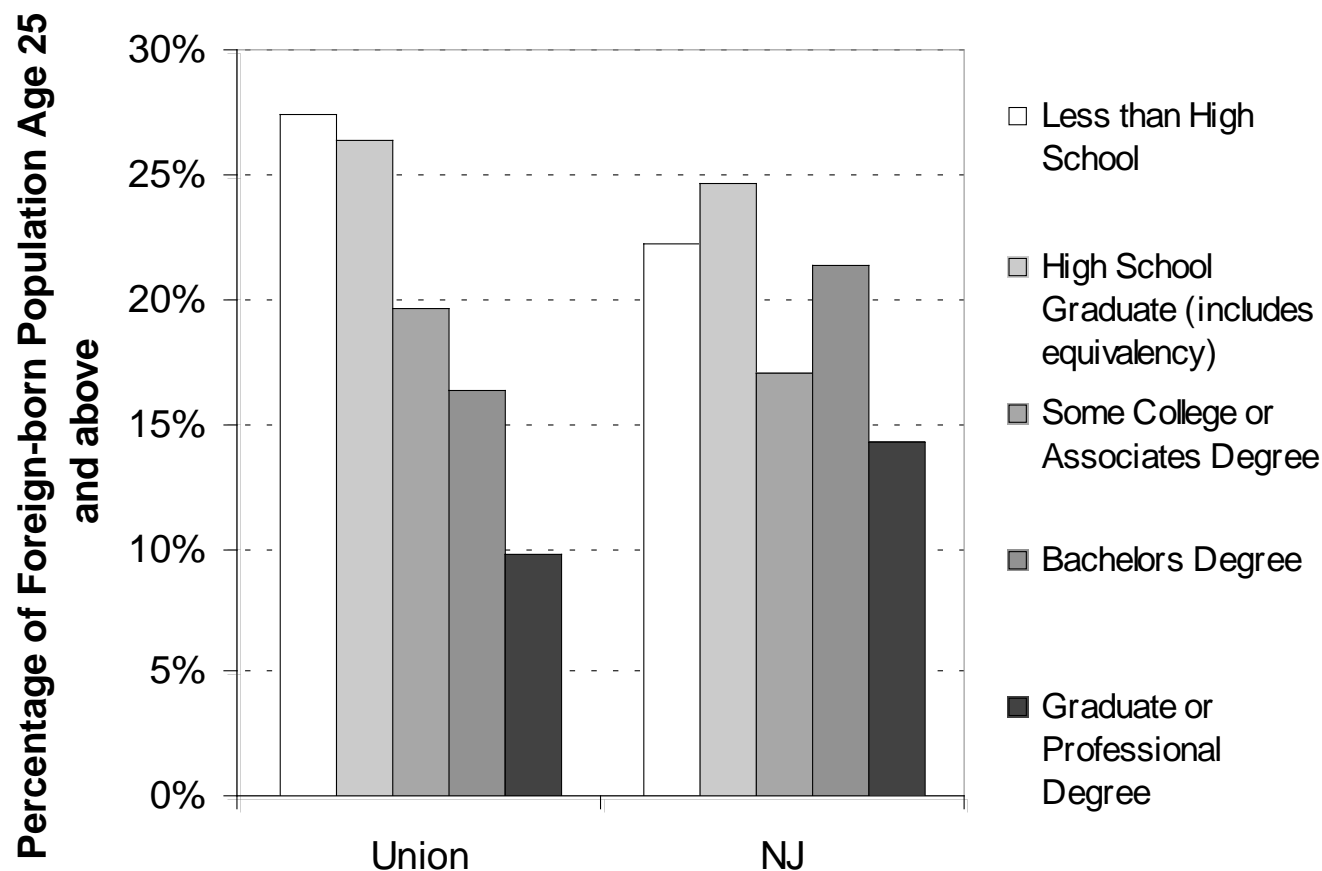
Key Finding #3 (Continued)

Twenty-eight percent of Union County's foreign-born adult residents completed less than high school versus 22% statewide.

The foreign-born also comprised a larger proportion of the population in Union County than in the state (2004-06 average 35% vs. 25% statewide), adding weight to the effect of their educational attainment on county-wide levels.

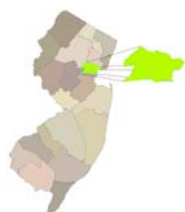
At both the county and state levels, only 11% of U.S.-born residents had earned less than a high school diploma. More native adults in Union County earned a four-year degree than their native-born counterparts statewide (36% vs. 33%).

Highest Level of Educational Attainment, Adult Foreign-born Residents, 2004-06



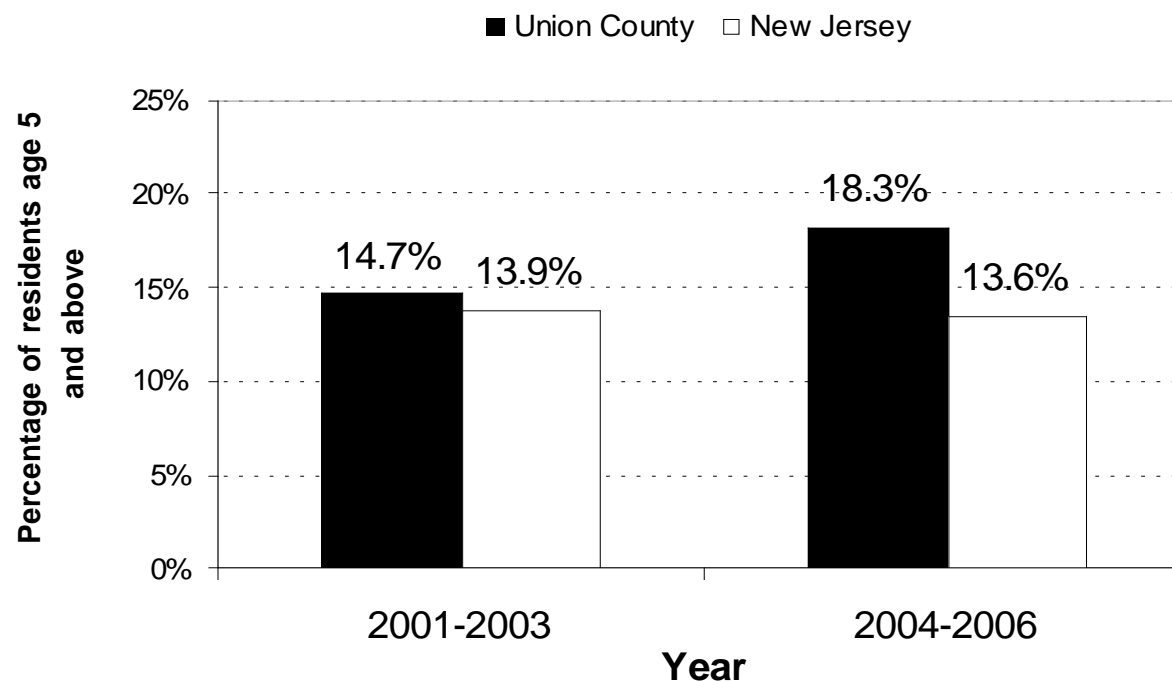
Sources: 2001-06 U.S. Census, American Community Survey, 3-year average data.

Note: All estimates include immigrants who are not legal U.S. residents.



Key Finding #3 (Continued)

Percentage of Residents Who Speak English Less Than Very Well, 2001-2006



Sources: 2001- 06 US Census, American Community Survey, 3-year average data.

The percentage of Union County residents who reported speaking English “less than very well” increased from an average of 14.7% in 2001-03 to 18.3% in 2004-06, while rates remained essentially stable statewide during the same period. In the 2004-06 period, Union County had a higher share of residents who had English language difficulties compared to the state (18.3% vs. 13.6%).

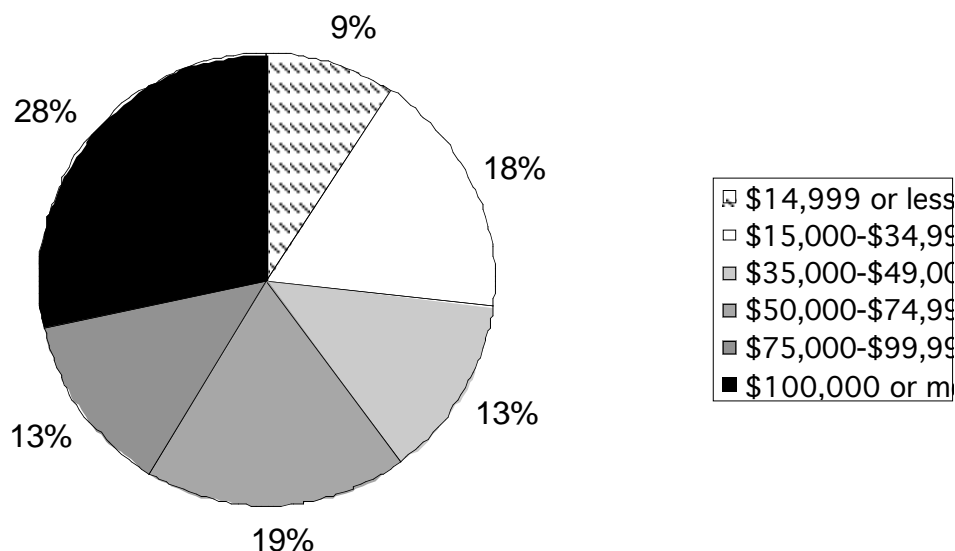


Key Finding #3 (Continued)

Income and Unemployment

- Median household income in the county is slightly lower than the statewide median (\$62,260 in 2006, slightly lower than the New Jersey median of \$64,470).
- Closer examination reveals that some residents are doing very well economically, while others are not sharing in the prosperity:
 - In 2006, over 40% of county households had incomes exceeding \$75,000.
 - On the other hand, over one-quarter (27%) earned less than \$35,000 per year.
 - Approximately 1 out of every 17 households (6%) in Union County has earnings below the poverty level compared to 6.4% statewide.
- Countywide, unemployment rates are similar to New Jersey rates (4.8% vs. 4.6% statewide.), but some urban centers have higher-than-average unemployment rates, including Hillside (7.4%), Roselle (7.0%), Elizabeth (6.8%), and Plainfield (6.4%).

Income Distribution of Residents in Union County (in 2006 inflation-adjusted dollars)





Summary of Union County's Strategic Advantages and Key Policy Challenges

Strategic Advantages

Union County is close to markets and population centers in New York City and northern and central New Jersey, including ready access to national and international markets via Port Newark/Elizabeth and Newark Liberty Airport. It also has several strong urban centers that serve as economic and community hubs for the county. In addition, Union County has:

- Many highly educated residents, providing knowledge-based employers with access to a skilled workforce.
- A mix of well-established industries, including Pharmaceuticals, Chemicals, and other types of Manufacturing, Health Care, and TLD, as well as emerging opportunities for new business development.
- Several large office or corporate headquarters of international companies, including Alcatel-Lucent, Celgene Corporation, Schering-Plough, Wakefern Foods, and others.
- A large number of high-wage jobs and opportunities for worker advancement.
- Access to high-quality education resources, including Union County College, Kean University, Union County Vocational Technical School within the county, and Rutgers University, New Jersey Institute of Technology, and others in the region.
- Opportunities for inclusion in state and regional economic development efforts, including the northern New Jersey WIRED region and the Portfields region, which may allow Union County to leverage considerable state and federal dollars to support initiatives that benefit county residents.

Key Policy Challenges

Union County also has several workforce and economic growth challenges that new policies and programs should seek to address, including:

- Slower recent economic growth than the state and surrounding region.
- Some residents who are not benefiting from the growth that is occurring in some industries.
- Changes in demographics and educational attainment rates that suggest needs for adult basic education, workforce training, and English as Second Language training for workers to succeed in the labor market.
- Local, county, and regional economic development entities that require a framework for effective collaboration.



Recommended Action Steps

To promote growth among key industries and to assist residents to enter and advance in the labor market, Union County should take the following steps:

- Step 1: Develop a county-level economic growth strategy that is focused on the key industries identified in this report and that involves key local and regional stakeholders.**
- Step 2: Develop a countywide workforce development plan that addresses general adult education needs, as well as employer skill needs in the three target industries included in the economic growth plan.**
- Step 3: Create a sustainable organizational structure to support cooperative implementation of county economic growth and workforce plans.**

Step 1: Develop a Union County Economic Growth Strategy

Key goals of the county's economic growth strategy should be to:

- Market the strategic advantages of the county and its municipalities to employers;
- Leverage existing state, regional, and local development efforts, including northern New Jersey WIRED initiatives, state economic growth programs, and others to accomplish plan goals;
- Encourage new business development in areas where it is welcomed and, where possible, along existing transportation routes; and
- Focus development efforts around the three key industries highlighted in this report.

Suggested economic growth strategies for these industries include:

- Support a Pharmaceutical and Chemical Manufacturing cluster by leveraging funds from regional initiatives (e.g., NJEIA) to create incubators for new “spin-off” technologies;
- Support a Transportation, Logistics, and Distribution (TLD) cluster by working with new and existing companies to develop relationships between TLD firms and other industries; and
- Support the Portfields initiative by developing a free trade zone, a clean-up plan, and marketing initiatives.



Recommended Action Steps (Cont'd)

Step 2: Develop a Countywide Workforce Development Plan

Key goals of a county workforce development strategy should be to:

- Ensure that adequate adult education and ESL resources are available in communities that need them most;
- Leverage existing state, regional, and local development efforts, including northern New Jersey WIRED initiatives, state economic growth programs, and others, to accomplish plan goals;
- Develop training and education initiatives that support the development of a skilled workforce in key industries identified in the economic growth strategy.

Suggested workforce development strategies for key industries include:

- Engage the Newark Workforce Investment Board and North Jersey Economic Innovation Alliance to:
 - Connect with the Newark Port One-Stop,
 - Coordinate entrepreneur symposia, and
 - Enhance mentoring and insurance programs designed to meet the demand for truck drivers in TLD.
- Explore a partnership with the Bio-1 WIRED region to expand workforce programs for the Pharmaceutical industry into Union County.
- Establish the Health Career Center (as discussed in the Union County Plan) and offer access to the Newark Workforce Investment Board in exchange for access to Newark's Port One-Stop.
- Use the Retail Skills Center to assist retail, transportation, and other workers to train for sales and customer service positions in the high-wage wholesale trade sector, as well as other customer service and sales leadership positions.
- Support training for Pharmaceutical and TLD repair technician programs.



Recommended Action Steps (Cont'd)

Step 3: Create a Sustainable Organizational Structure to Implement Economic and Workforce Plans

Stakeholders in the business, education, and government sectors generally agree that four basic elements are necessary to coordinate and activate economic and workforce development initiatives in Union County. These elements are:

- A nonpartisan coordinating council to guide all development efforts,
- An economic and workforce development practitioner network,
- Implementation teams that focus on key projects, and
- An entity to handle public awareness and stakeholder consensus-building.

A version of two of these components currently exists in Union County. The Union County Economic Development Corporation (UCEDC) currently sponsors a quarterly networking and information exchange for economic and workforce development professional practitioners. The Union County Alliance is a strong bipartisan forum for consensus building, stakeholder recruitment, and public awareness. These entities are a logical point of departure for integrating their functions into a broad countywide action agenda.

Stakeholders interviewed strongly recommended individual project-based teams of multi-jurisdictional and sectoral stakeholders to address specific development objectives ranging from multi-county led efforts to maximize benefits from expanding Port activities to contiguous community downtown development strategies that require county-level infrastructure support. Other areas recommended include a Workforce Investment Board-led effort to connect county education resources with the evolving skill and occupational clusters in allied health, and the preservation of pharmaceutical employment levels.

Finally, a neutral, county-level entity with broad community representation is needed to coordinate and facilitate the efforts of the groups mentioned above. This entity will also need to guide implementation efforts among other stakeholders, including the Workforce Investment Board; local, county, regional, and statewide economic development organizations; secondary and postsecondary educational institutions; businesses; transportation; and permitting. While Union County stakeholders must determine how this coordination body is organized, it may be possible to build upon the efforts of an existing entity by expanding membership to ensure adequate representation from all areas and interest groups within Union County.

II. Detailed Analysis of Population, Workforce, and Economic Data for Union County

SECTION 1:
**AN OVERVIEW OF THE UNION
COUNTY WORKFORCE AND
ECONOMY**



I. Overview of the Workforce and Economic Landscape of Union County

Introduction

This section of the report provides an overview of the key characteristics of Union County residents and working-age adults, including important demographic changes that may affect economic and workforce development planning. It also provides a broad picture of the Union County economy and ways that employment has changed over the past 10 years.

This area of the report is presented in two parts:

- A. Population and Workforce, and**
- B. Economy.**



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Overview

Over a half million people (531,088 individuals, or 6.1% of the population of New Jersey) live in Union County, and more than one-quarter million (273,493 people, or 52% of the population) are in the labor force (employed or unemployed and looking for work).

Between 2001 and 2006, Union County's population grew by 4,000 residents (less than 1% growth). The population is increasing slightly in both young residents of working age (15- to 24-year-olds increased from an average of 11.8% of the population in 2001-03 to an average of 12.5% in 2004-06), as well as among those aged 45 to 64 (23.8% in 2001-03 to 25.4% in 2004-06). Meanwhile, the average percentage of the population aged 25-44 shrank slightly from 30.7% to 28.2% during the same period.

Educational Attainment and Occupation of Residents

Like the state as a whole, Union County has a higher percentage of college-educated adults than the nation. Over one-third of adults in Union County have earned a four-year college degree or higher compared to 27.5% nationwide. In addition, the percentage of Union County's population that attained both two- and four-year college degrees increased slightly between 2001 and 2006.*

However, Union County has a slightly higher percentage of adults who have not earned a high school diploma or equivalent compared to New Jersey (16.6% vs. 13.8%). The county also has both a higher percentage of foreign-born residents compared to the state, and these residents have lower educational attainment levels, on average, than the foreign-born population statewide and native-born county residents. The percentage of the population over age 5 in Union County that reports that they speak English "less than very well" has risen from an average of 14.7% between 2001 and 2003 to an average of 18.3% between 2004 and 2006.

Reflecting the county's diversity of educational attainment levels, the largest job categories Union County residents reported holding jobs in include Management, Professional and Related Occupations, Sales and Office Occupations, and Service Occupations.

Income, Unemployment, and Poverty

Median household income in Union County was \$62,260 in 2006, slightly lower than the New Jersey median of \$64,470. Some residents, however, are not sharing in the prosperity. In 2006, 4.8% of Union County residents were unemployed, slightly higher than the unemployment rate of 4.6% for New Jersey. Some cities in Union County have higher unemployment rates, including Hillside (7.4%), Roselle (7.0%), Elizabeth (6.8%), and Plainfield (6.4%). Approximately 6% of the county's residents lived in households with incomes below the poverty line in 2006, compared to 6.4% statewide.

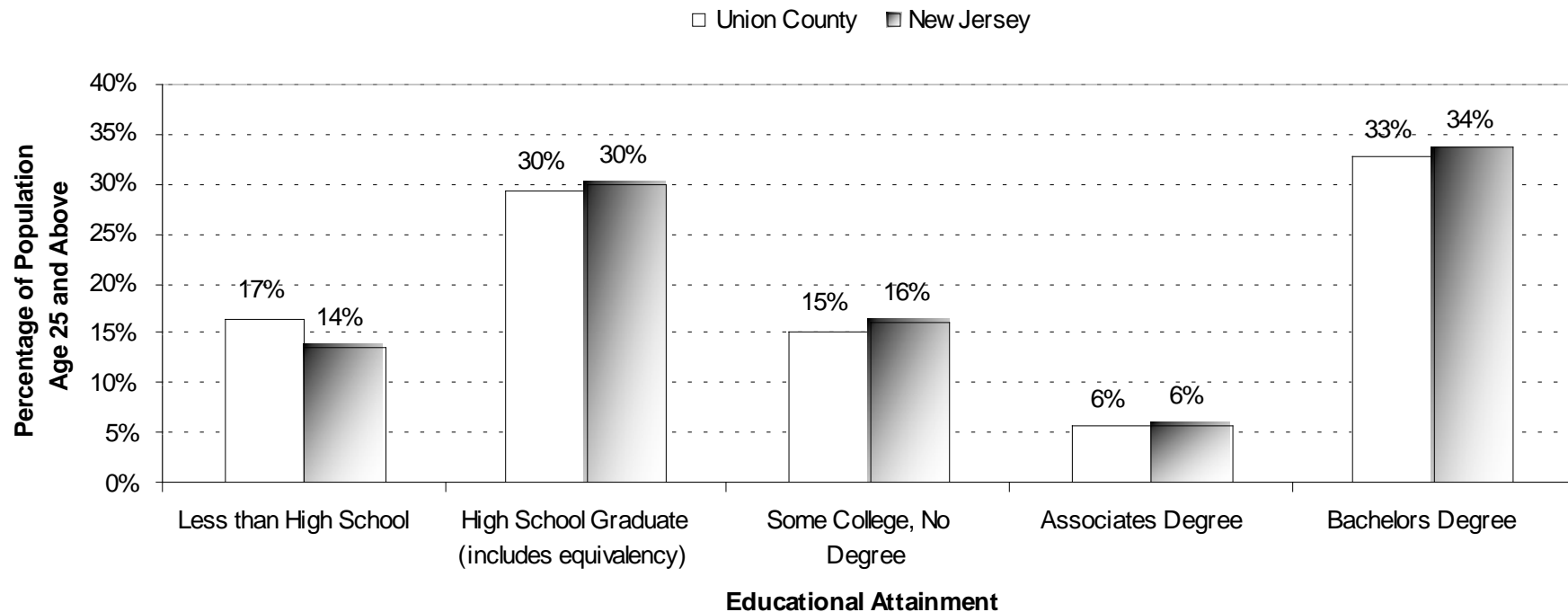
* Due to small yearly sample sizes to collect these data, three-year averages provide a more reliable estimate of the actual change over time.



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Educational Attainment

**Highest Level of Educational Attainment, 2004-06
Union County and New Jersey**



Sources: 2004-06 US Census, American Community Survey, 3-year average data

Overall, educational attainment levels in Union County are similar to New Jersey levels. However, the average percentage of Union County residents who completed less than a high school degree (17%) was slightly higher than the state average (14%) in the 2004-06 period.

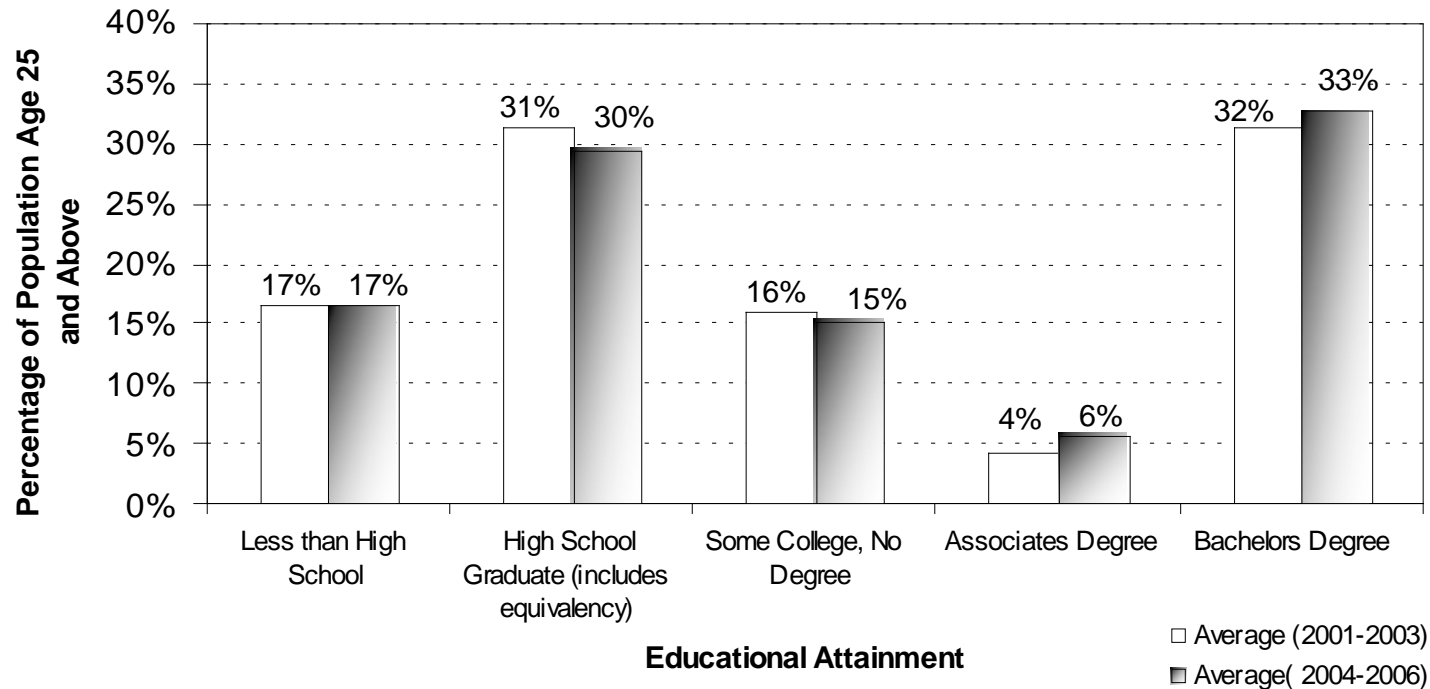


I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Educational Attainment

(continued)

Highest Educational Attainment Level of Union County Residents, 2001-06



Sources: 2001-06 US Census, American Community Survey, 3-year average data

Educational attainment levels in Union County have remained relatively stable over the last five years, with a slight increase in the percentage of people who earned a 2- or 4-year college degree.

Between 2001 and 2006, the percentage of the county's adult population that completed a college degree rose by one percentage point. The proportion of adults who earned less than a college degree remained stable or fell slightly.

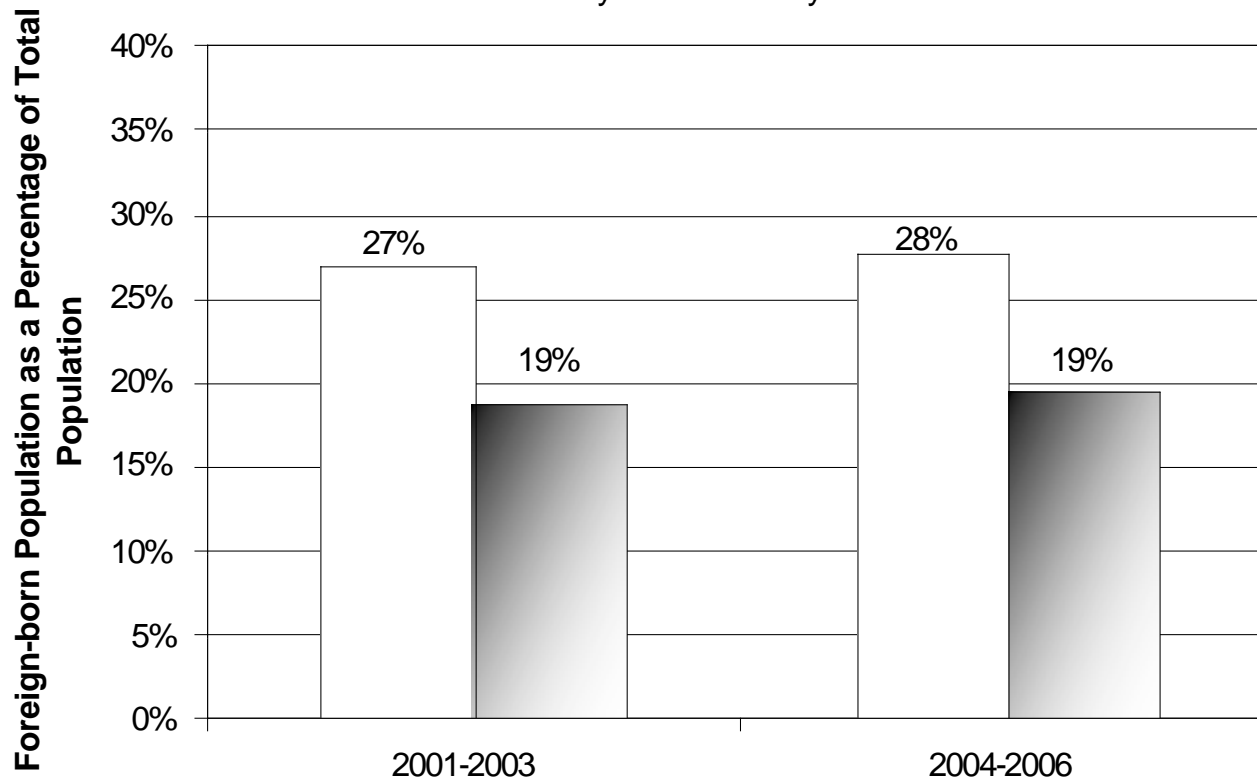


I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Foreign-Born Population

Foreign-Born Residents, 2001-06

□ Union County ■ New Jersey



Number of Foreign-born Residents

	Union County	New Jersey
2001-03 (average)	140,818	1,568,277
2004-06 (average)	145,943	1,672,559

Sources: 2001-06 US Census, American Community Survey, 3-year average data

The percentage of foreign-born residents in Union County is significantly higher than the state average. Over ¼ of Union County's population is foreign-born, compared to less than 1/5 statewide.



I. Overview of the Workforce and Economic Landscape of Union County

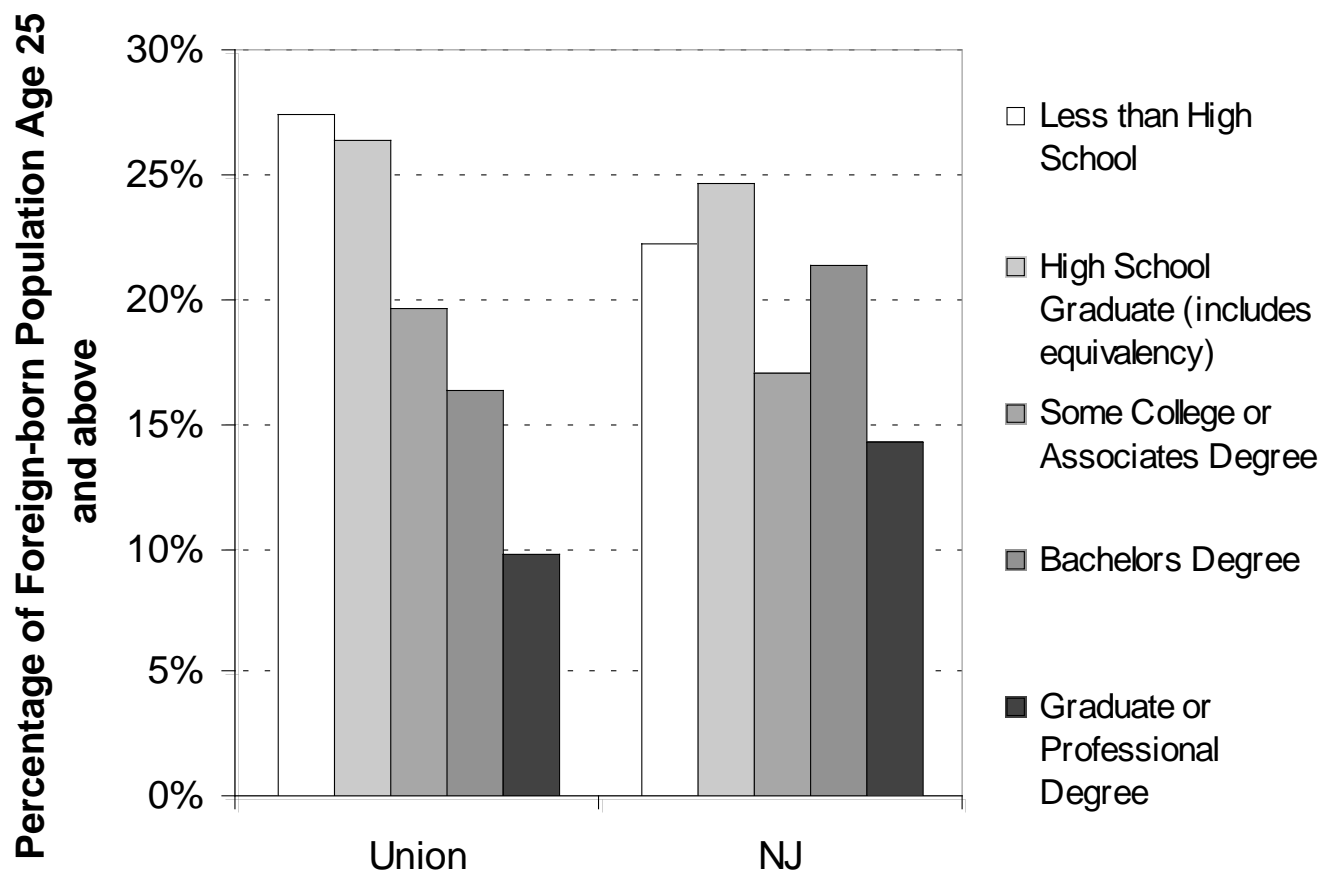
A. Population and Workforce: Educational Attainment of the Foreign-born

Twenty-eight percent of Union County's foreign-born adult residents completed less than high school versus 22% statewide.

The foreign-born also comprised a larger proportion of the population in Union County than in the state (2004-06 average 35% vs. 25% statewide), adding weight to the effect of their educational attainment on county-wide levels.

At both the county and state levels, only 11% of U.S.-born residents had earned less than a high school diploma. More native adults in Union County earned a four-year degree than their native-born counterparts statewide (36% vs. 33%).

Highest Level of Educational Attainment, Adult Foreign-born Residents, 2004-06



Sources: 2004-06 U.S. Census, American Community Survey, 3-year average data

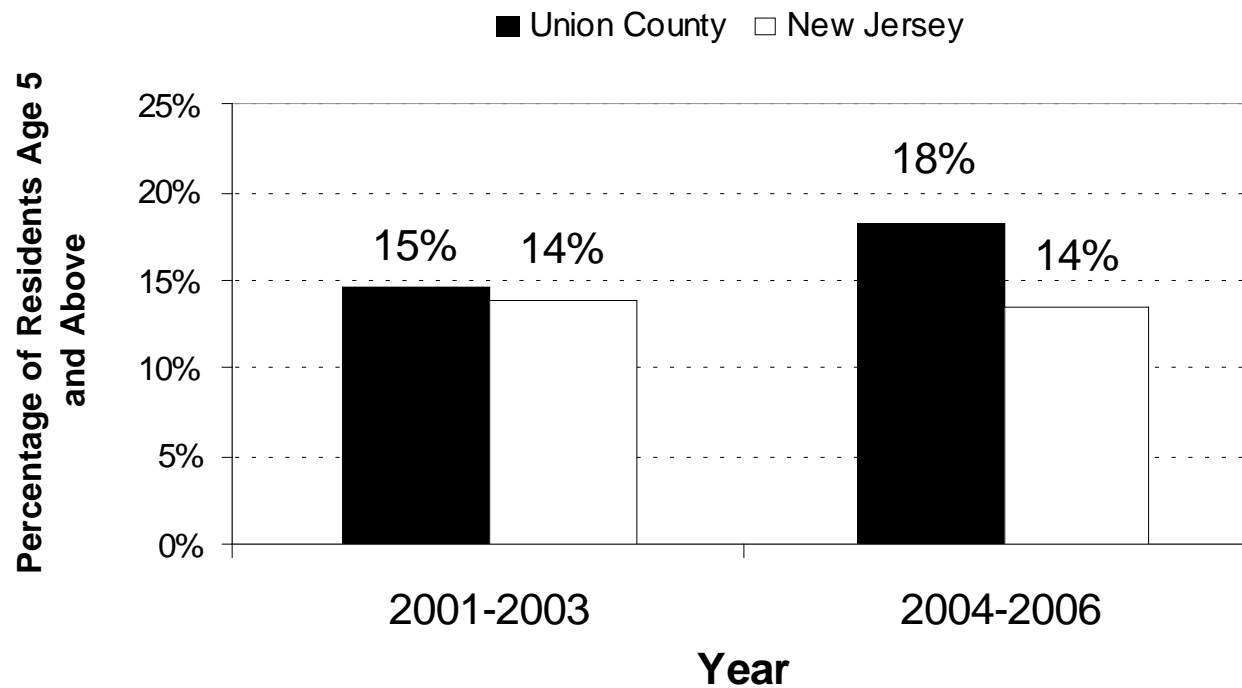
Note: All estimates include immigrants who are not legal U.S. residents.



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Language Abilities

Percentage of Residents Who Speak English Less Than Very Well, 2001-2006



Sources: 2001-06 U.S. Census, American Community Survey, 3-year average data

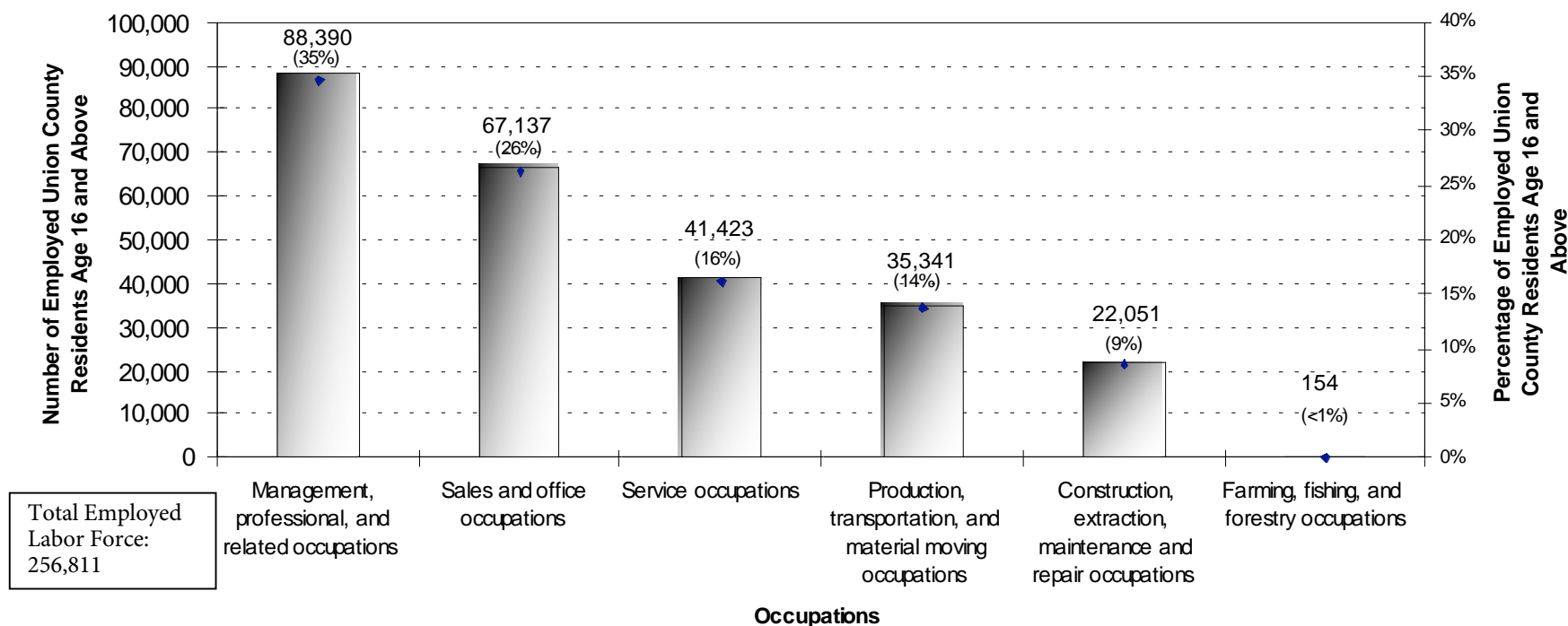
The percentage of school-age residents who speak English less than well has increased in recent years from an average of 15% between 2001-03 to an average of 18% between 2004-06. Meanwhile, the percentage statewide remained stable at 14%.



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Occupations of Residents

Occupation of Union County Residents, 2004-06 Average
Civilian Employed Population 16 Years and Over



Source: 2004-06 U.S. Census, American Community Survey, 3-year average data

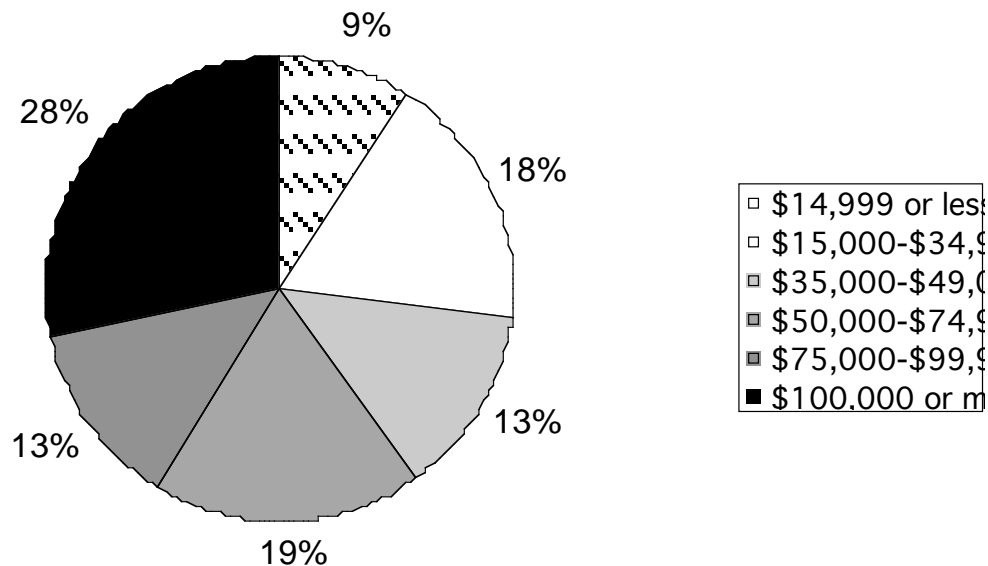
About one-third of the employed residents of Union County (88,390 people) worked in management, professional, and related occupations. Sales and office occupations and service occupations are the second and third largest occupations among working residents of Union County, with 67,137 and 41,423 workers, respectively.



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Income

Income Distribution of Residents in Union County
(in 2006 inflation-adjusted dollars)



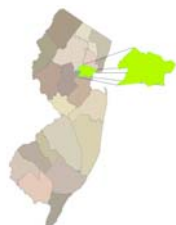
Source: 2006 U.S. Census, American Community Survey.

The average income for a household in Union county was \$87,577 in 2006.

In 2006, half of all households in Union County had an income less than \$62,260

Approximately 1 out of every 17 households (6%) in Union County has earnings below the poverty level. This rate was similar to the statewide figure (6.4%).

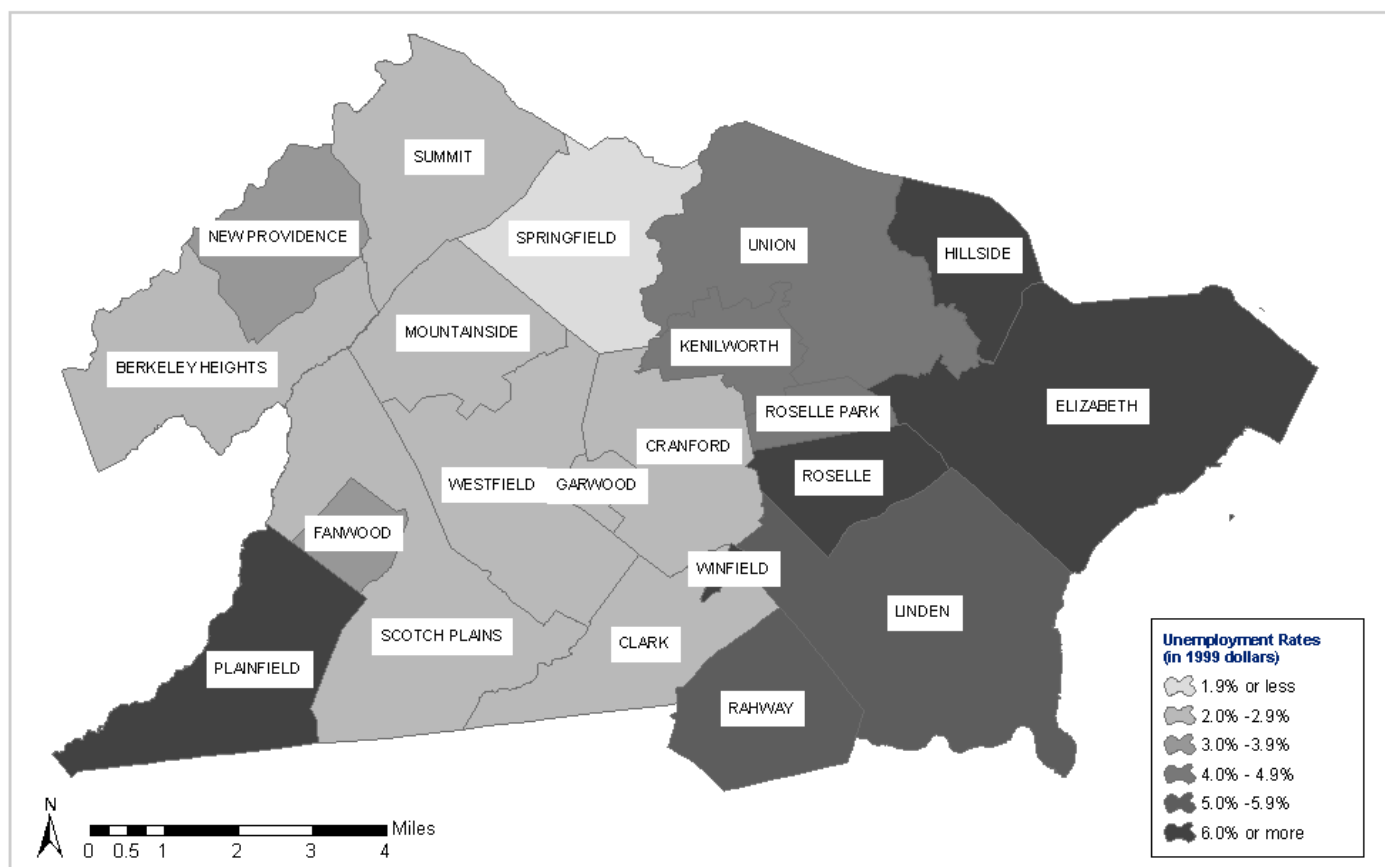
In 2006, the average federal poverty level for two-person households was \$13,167.



I. Overview of the Workforce and Economic Landscape of Union County

A. Population and Workforce: Unemployment Rates

Unemployment Rates Union County, 2006



Large municipalities with high unemployment rates in 2006 included:

- Hillside (7.4%)
- Roselle (7%)
- Elizabeth (6.8%)
- Plainfield (6.4%)

Most municipalities with moderate to high unemployment rates are located in the *eastern part* of Union County.

Source: United States Bureau of Labor Statistics and the United States Census Bureau

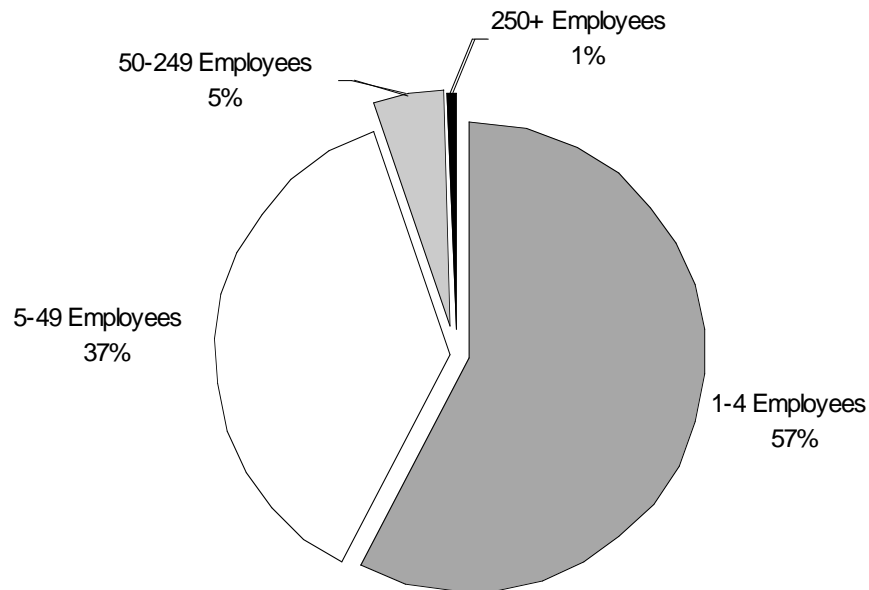


I. Overview of the Workforce and Economic Landscape of Union County

B. Economy

Union County is home to approximately 14,700 business establishments that employ a total of 237,500 people.

Distribution of Establishments by Size, 2005



The majority of business establishments in Union County (57% or 8,489 in total) employed less than five people.

An additional 37% of establishments (5,492 in total) employed 5 to 49 people in 2005.

Only 1% of establishments (101 total) employed more than 250 people.

Over half (56%) of those who work in Union County are county residents, according to the 2000 U.S. Census. Middlesex and Essex counties provide 13% and 12% of Union County's workers, respectively, while Morris, Somerset, and Monmouth each supply between 4% and 6% of all workers in Union County.



I. Overview of the Workforce and Economic Landscape of Union County

B. Economy: Major Employers in Union County

Several mid- to large-size companies (250+ employees) from a variety of industries are headquartered in Union County, including:

Alcatel-Lucent

Bed, Bath, and Beyond

BOC Group

CR Bard

Celgene Corporation

Havas Advertising

Hayward Industries

Intertek Labtest

Schering-Plough

Total Lubricants USA

Wakefern Food Corporation (Shop-Rite)

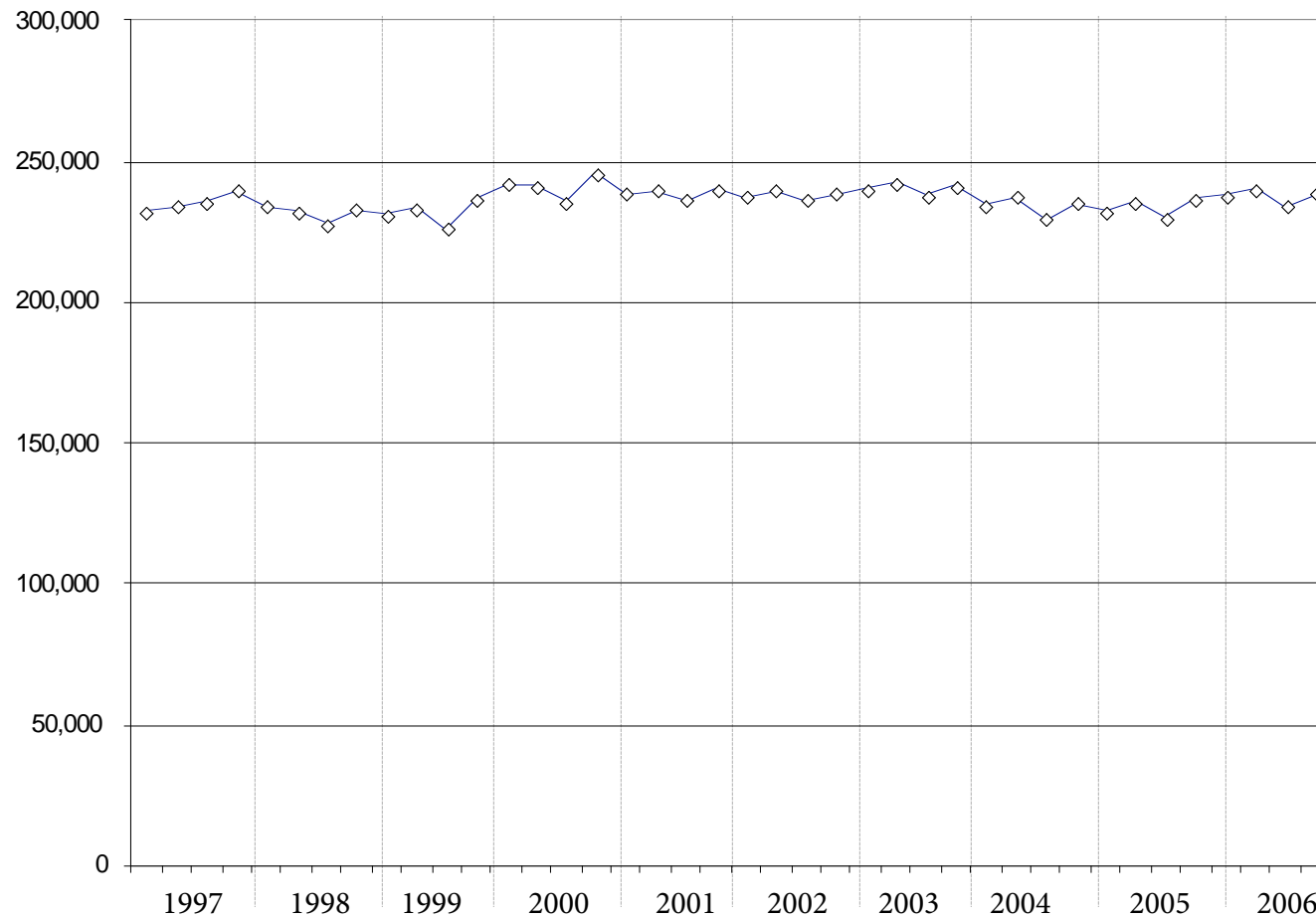
Businesses that employ over 1,000 workers in Union County include Bell Labs, ConocoPhillips Bayway Refinery, Kean University, Merck Research Laboratories, Overlook and Trinitas Hospitals, Muhlenburg Regional Medical Center, and others.



I. Overview of the Workforce and Economic Landscape of Union County

B. Economy: Employment Trends

Total Employment in Union County, 1997 to 2006



10-Year Change

Employment in Union County was relatively stable, growing by 0.9% from 1997 to 2006 and adding 2,216 jobs to the economy.

During this period, total employment in New Jersey grew by 8% and total employment in the five counties surrounding Union County increased by 6.7%.

5-Year Change

Since 2002, employment in Union County decreased by 0.2% and the county lost 529 jobs.

Between 2002 and 2006, total employment in New Jersey grew by 2.5% and total employment in the five counties surrounding Union County increased by 0.8%.



I. Overview of the Workforce and Economic Landscape of Union County

B. Economy: Place of Residence of Employees

County of Residence of Individuals Employed in Union County, 2000



Source: 2000 Census County-To-County Worker Flow Files
(www.census.gov/population/www/cen2000/commuting.html#NJ)

In 2000, 49% of the individuals employed in Union County also lived in Union County.

An additional 22% of workers in the county lived in Essex or Middlesex counties. This two-county region is the primary commutershed for Union County.

Smaller percentages of workers lived in Somerset (5%), Morris (4%), and Monmouth (4%) counties. This three-county region is a secondary commutershed for Union County.

SECTION 2:

TARGET INDUSTRIES FOR POLICY
ACTION IN UNION COUNTY



II. Key Industries in Union County

Findings and Selection Criteria

FINDINGS: Union County should focus future economic development and workforce development efforts on the following industry sectors:

- Pharmaceutical and Other Chemical Manufacturing
 - Health Care
 - Transportation, Logistics, and Distribution
-

CRITERIA: The Heldrich Center applied the following criteria to select these target industries for Union County's economic and workforce development efforts:

A. Current Economic Impact: The county's future economic and workforce development efforts should focus on those industries that currently have a significant impact on the county's economy by providing a large number of jobs and income to individuals.

Key indicators: 1. Employment, 2. Average Wages, 3. Total Payroll

B. Employment Potential: Future efforts should also focus on industries that have the potential to grow in the near future, as identified by recent growth, projected growth by the New Jersey Department of Labor and Workforce Development, and current concentration in Union County.

Key indicators: 1. Recent Growth, 2. Projected Growth, 3. Concentration of Employment

C. Diversity of Employment Opportunities: Workforce development efforts should be focused on those industries that hire large numbers of individuals and on those industries that provide employment opportunities to individuals with different levels of formal education and training.

Key indicators: 1. Number of New Hires, 2. Educational Requirements of Jobs

D. Potential for Action: Finally, workforce and economic development efforts in the county, where possible, should be coordinated with state and federal resources in order to leverage additional resources.



II. Key Industries in Union County

Summary of Criteria

	A. Current Economic Impact			B. Employment Potential			C. Availability of Diverse Employment Opportunities		D. Potential for Action
	Employment (2006) <i>A1</i>	Average Wages <i>A2</i>	Total Payroll <i>A3</i>	Recent Growth <i>B1</i>	Expected Growth <i>B2</i>	Employment Concentration <i>B3</i>	Number of New Hires <i>C1</i>	Diversity of Educational Requirements <i>C2</i>	Focus of current economic and workforce development efforts <i>D</i>
Manufacturing	35,818	☛	☛			☛	☛		☛
Retail Trade	29,131		☛		☛	☛	☛		
Health Care	26,103		☛	☛	☛		☛	☛	☛
Educational Services	21,337		☛	☛		☛			
Professional, Scientific & Technical Services	16,422	☛	☛	☛	☛				
Wholesale Trade	15,162	☛	☛	☛	☛	☛			☛
Administrative & Support Services	13,721			☛	☛		☛		
Finance and Insurance	11,939	☛		☛	☛				☛
Accommodation & Food Services	11,333			☛	☛		☛		
Public Administration	10,757			☛					
Transportation & Warehousing	10,597					☛			☛
Construction	10,308	☛				☛	☛	☛	
Other Services	9,807			☛	☛	☛		☛	
Management of Companies	4,960	☛		☛	☛				
Real Estate	3,658				☛				
Information	3,042								☛
Arts, Entertainment & Recreation	2,182			☛	☛				
Utilities	1,151	☛						☛	



II. Key Industries in Union County

Criteria A: Current Economic Impact - Summary

A1. EMPLOYMENT

Four industries in Union County have over 20,000 workers, including:

1. Manufacturing
2. Retail Trade
3. Health Care
4. Educational Services

The manufacturing industry provides more than 35,000 jobs (15% of the jobs in the county).

A2. AVERAGE WAGES

Union County has seven industries that supply **above-average wages**. These industries, which have average wages that are greater than the county average of \$52,000 per year, are:

1. Manufacturing
2. Professional, Scientific, and Technical Services
3. Utilities
4. Management of Companies
5. Finance and Insurance
6. Wholesale Trade
7. Construction

A3. TOTAL PAYROLL

In Union County, the industries with the highest **total payroll** represent the key economic drivers in the county. Total payroll is a function of high industry employment, high average wages, or both.

Together, the following six industries account for 2/3 (66%) of total payroll in the county. Alone, each of these industries accounts for more than 6% of total payroll in the county:

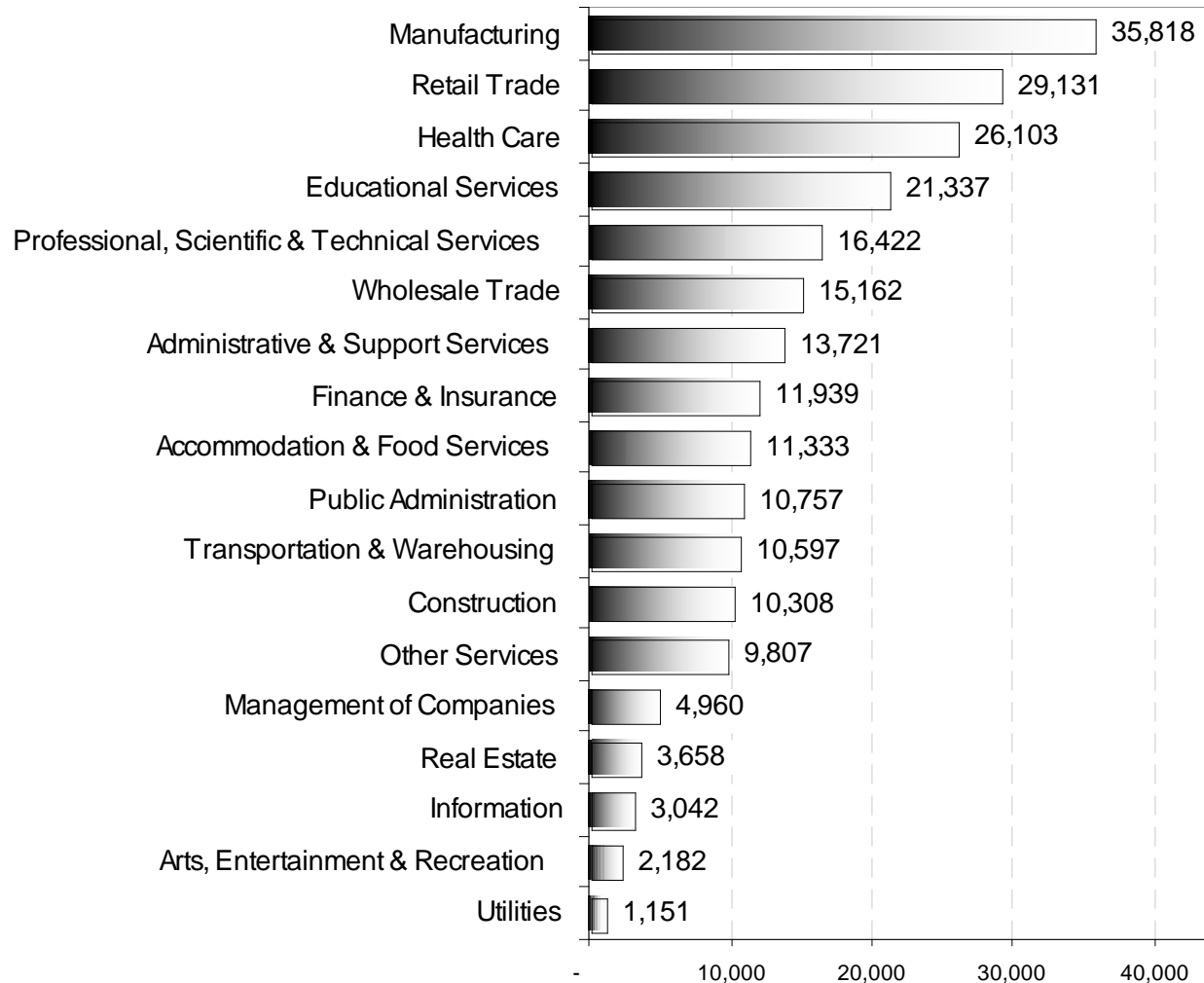
1. Manufacturing (24%)
2. Professional, Scientific, and Technical Services (11%)
3. Health Care (9%)
4. Retail Trade (8%)
5. Wholesale Trade (7%)
6. Educational Services (7%)



II. Key Industries in Union County

Criteria A1: Employment

Employment, by Industry, 2006



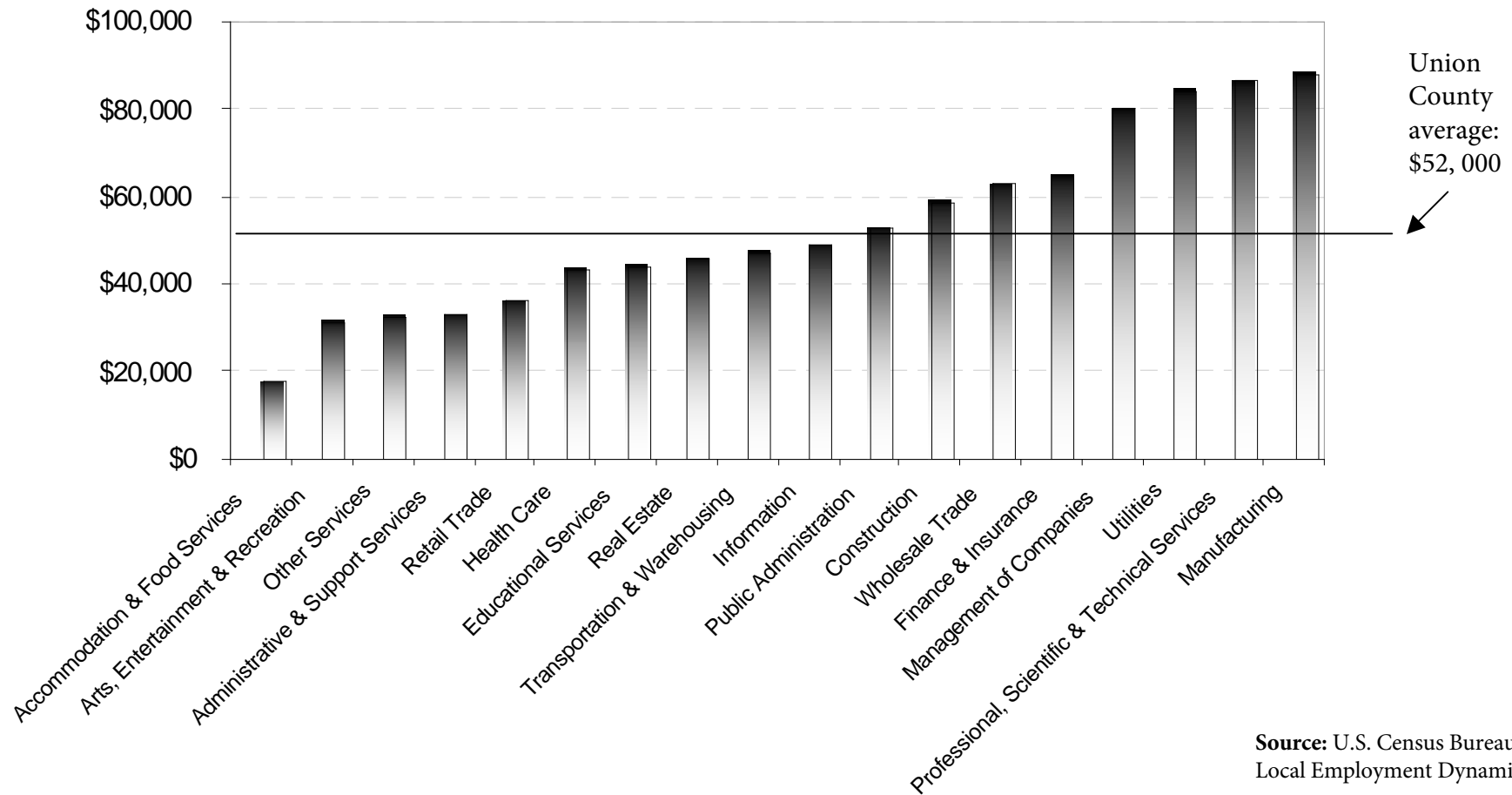
Source: U.S. Census Bureau,
Local Employment Dynamics.



II. Key Industries in Union County

Criteria A2: Average Wages

Average Estimated Annual Wages, 2006



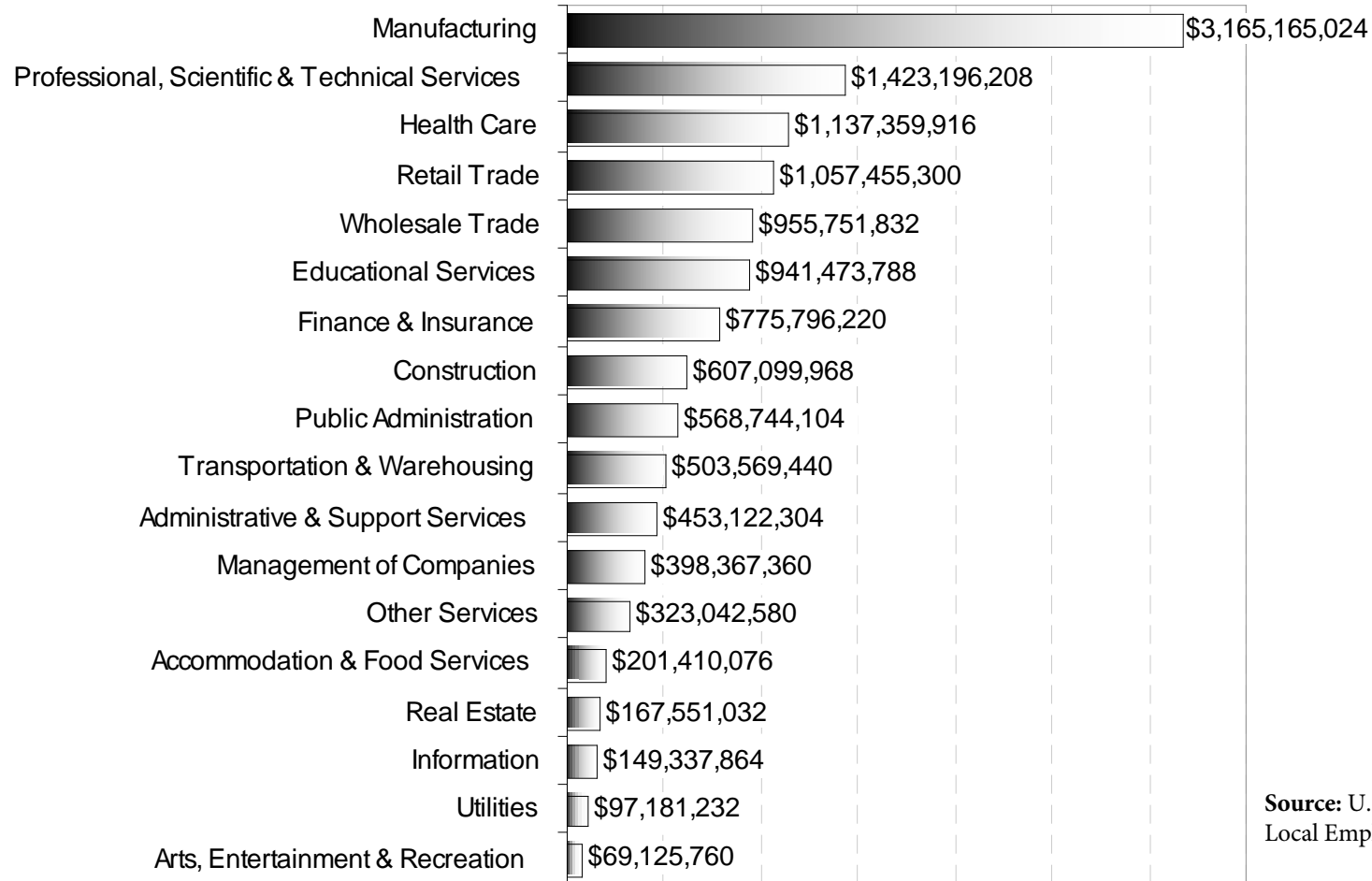
Source: U.S. Census Bureau,
Local Employment Dynamics.



II. Key Industries in Union County

Criteria A3: Total Payroll

Total Payroll, 2006



Source: U.S. Census Bureau,
Local Employment Dynamics.



II. Key Industries in Union County

Criteria B: Employment Potential - Summary

B1. RECENT GROWTH

Eleven of the 18 industries in Union County experienced an increase in employment between 2002 and 2006. Four industries increased in employment by 15% or higher.

These include:

1. Management of Companies (91%)
2. Arts, Entertainment, and Recreation (19%)
3. Other Services (18%)
4. Educational Services (15%)

▪The Utilities industry experienced the greatest decrease in employment between 2002-06 (-38%).

▪Union County's largest employment industry, Manufacturing, experienced an employment decrease of -13% during the period.

B2. EXPECTED GROWTH

Employment projections for 2014 indicate higher-than-average **expected growth** in 10 industries in Union County. Three of the industries had significantly higher rates of expected growth:

1. Arts, Entertainment, and Recreation (27%)
2. Administrative (25%)
3. Health Care (24%)

▪The average expected growth across all 18 industries is 9%.

▪Only the Manufacturing (-15%) and Information (-9%) industries are projected to have declining employment growth in Union County.

B3. EMPLOYMENT CONCENTRATION

Eight of the 18 industries are concentrated in Union County, as compared to all of New Jersey. This suggests that Union County provides strategic advantages to these industries as a place to do business.

The following industries have the highest level of concentration in Union County:

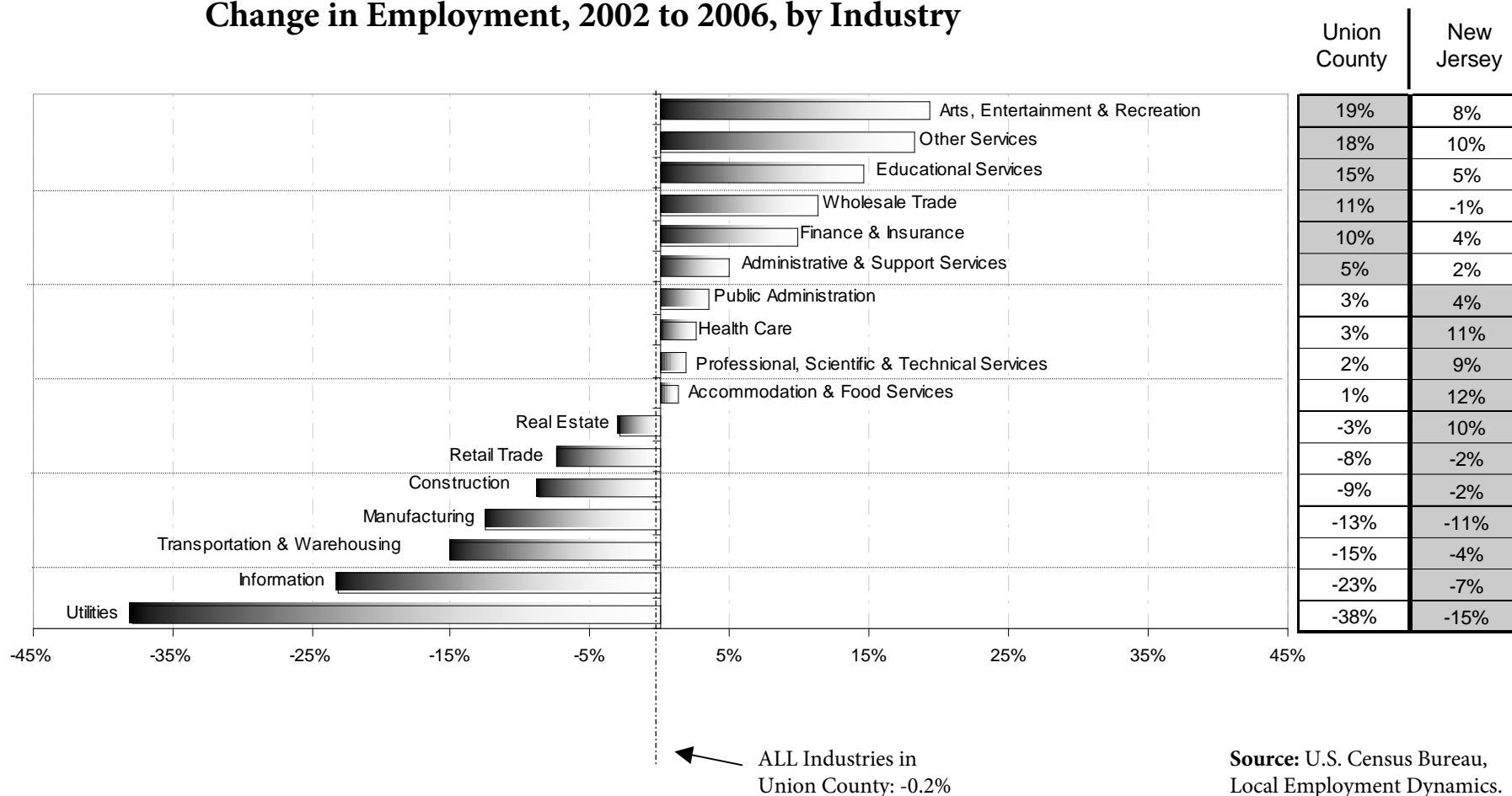
1. Manufacturing (1.76)
2. Other Services (1.27)
3. Construction (1.24)



II. Key Industries in Union County

Criteria B1: Recent Change in Employment

Change in Employment, 2002 to 2006, by Industry



NOTE: Data for the **Management of Companies** industry are not shown on this chart. Employment in this industry increased from 1,871 in 2002 to 4,960 in 2006, an increase of 91%.

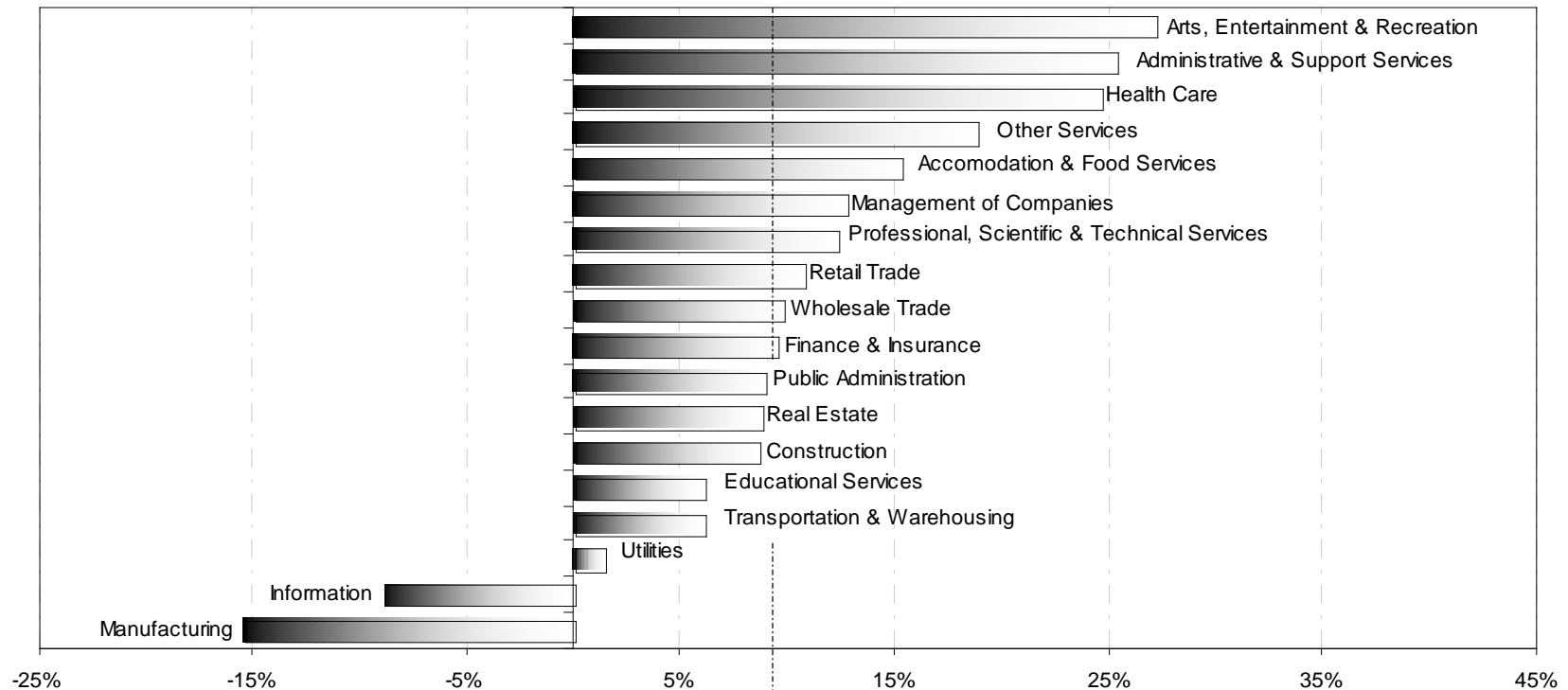
Although the data show a 3% decrease in the **Real Estate** industry from 2002-2006, there was a 3% increase from 2004 to 2006.



II. Key Industries in Union County

Criteria B2: Projected Change in Employment

Projected Change in Employment, by Industry, 2004-2014



Union County: 9%

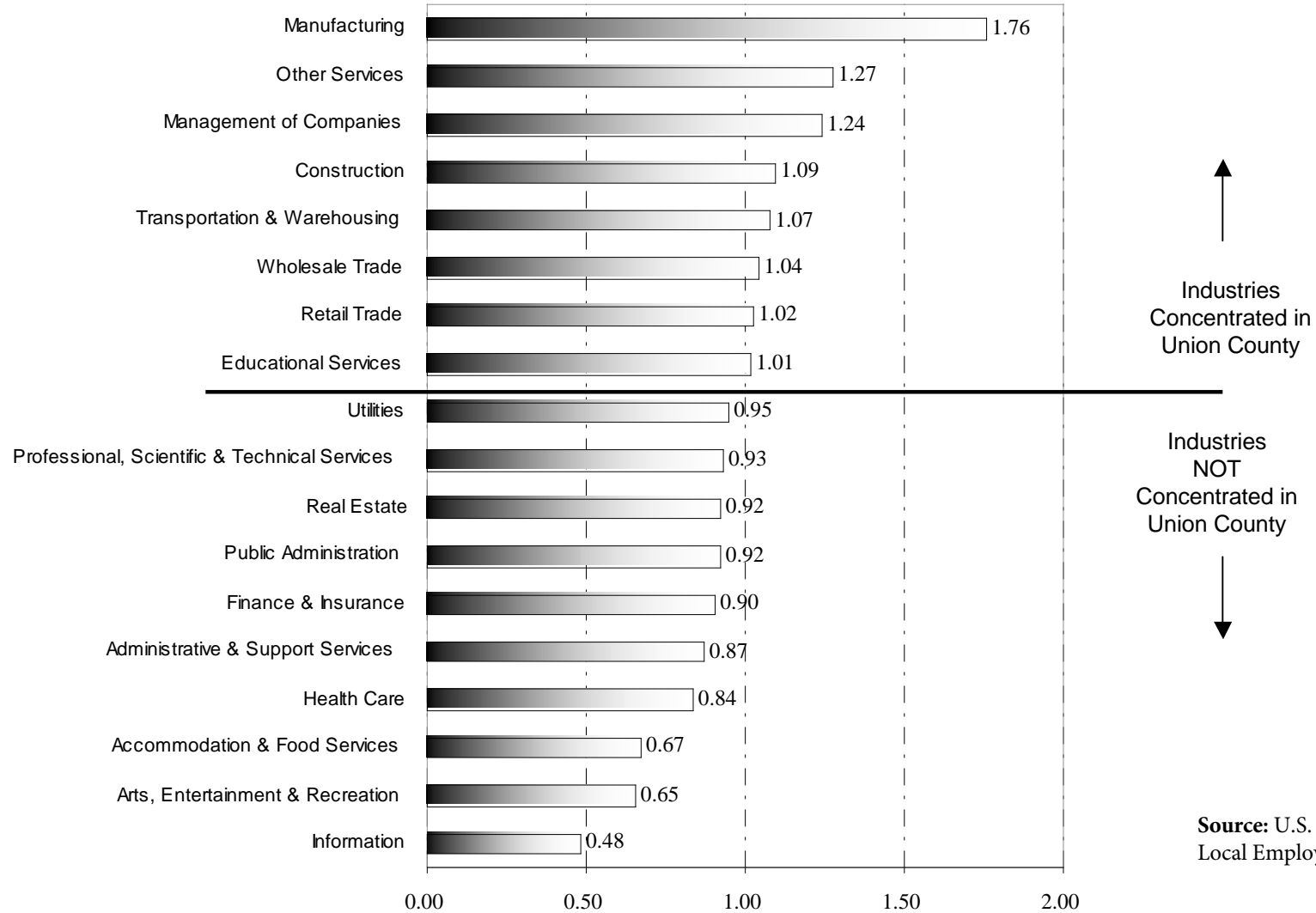
Source: New Jersey Department of Labor and Workforce Development



II. Key Industries in Union County

Criteria B3: Employment Concentration

Level of Concentration, Union County Compared to New Jersey, 2006





II. Key Industries in Union County

Criteria C: Employment Opportunities - Summary

C1. NEW HIRES

The number of **new hires** represents all individuals hired to fill new and replacement jobs in a quarter who were not working for the employer during the previous four quarters (recalled employees). The number of new hires helps to identify industries that have the most available job opportunities.

- In Union County, seven industries had an average of more than 2,000 hires per quarter during 2006.
- Two industries, Retail Trade (6,082 new hires per quarter) and Administrative and Support Services (4,541), account for nearly one-third (32%) of new hires in the county in 2006.

C2. DIVERSITY OF EDUCATIONAL REQUIREMENTS

Industries that employ individuals from a wide variety of different education levels can provide employment opportunities for many types of individuals and may provide opportunities for career advancement.

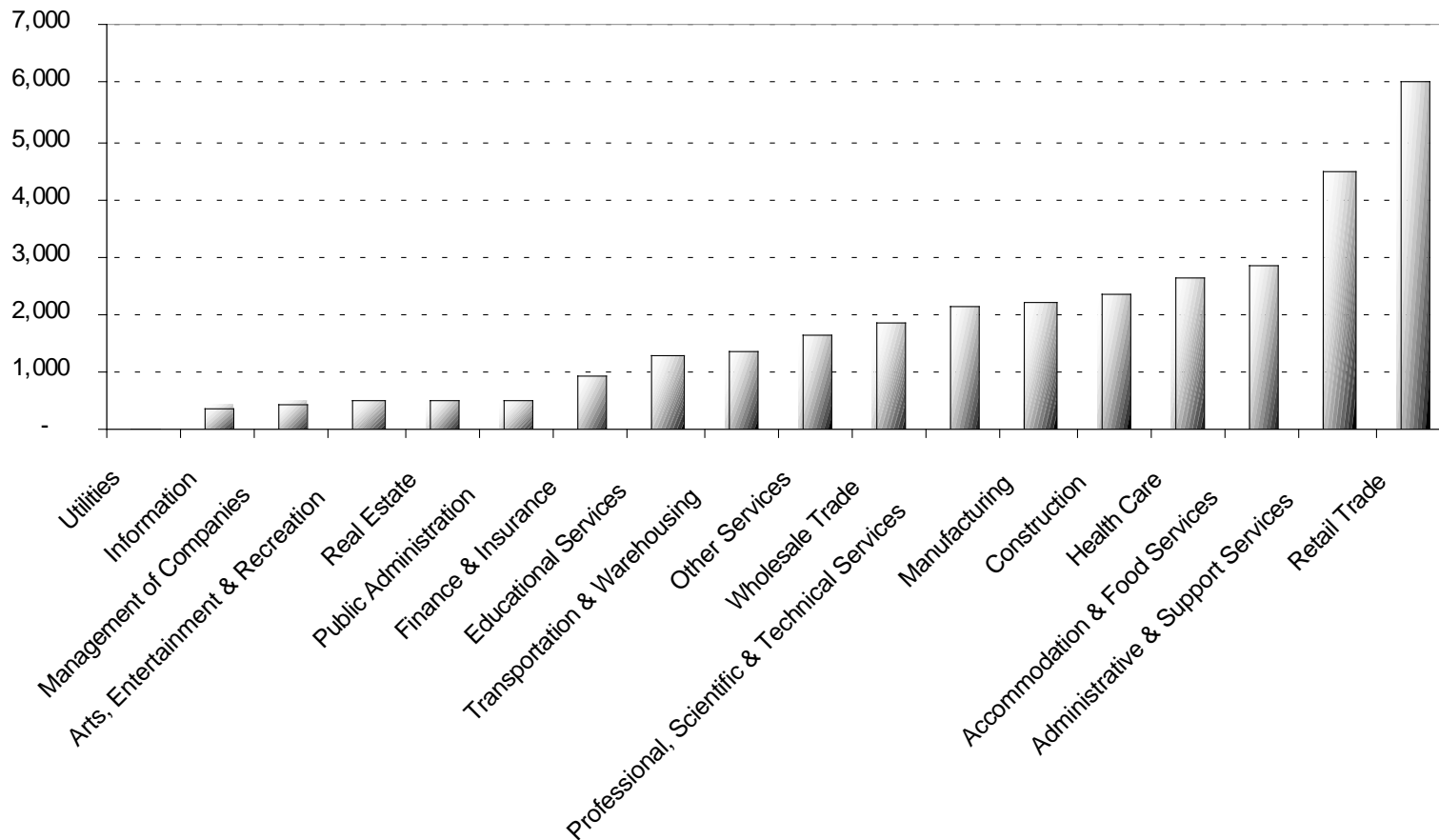
Four industries in New Jersey provide employment to individuals from a variety of education levels: Health Care, Construction, Other Services, and Utilities.



II. Key Industries in Union County

Criteria C1: Number of New Hires

Average Number of New Hires Per Quarter, 2006



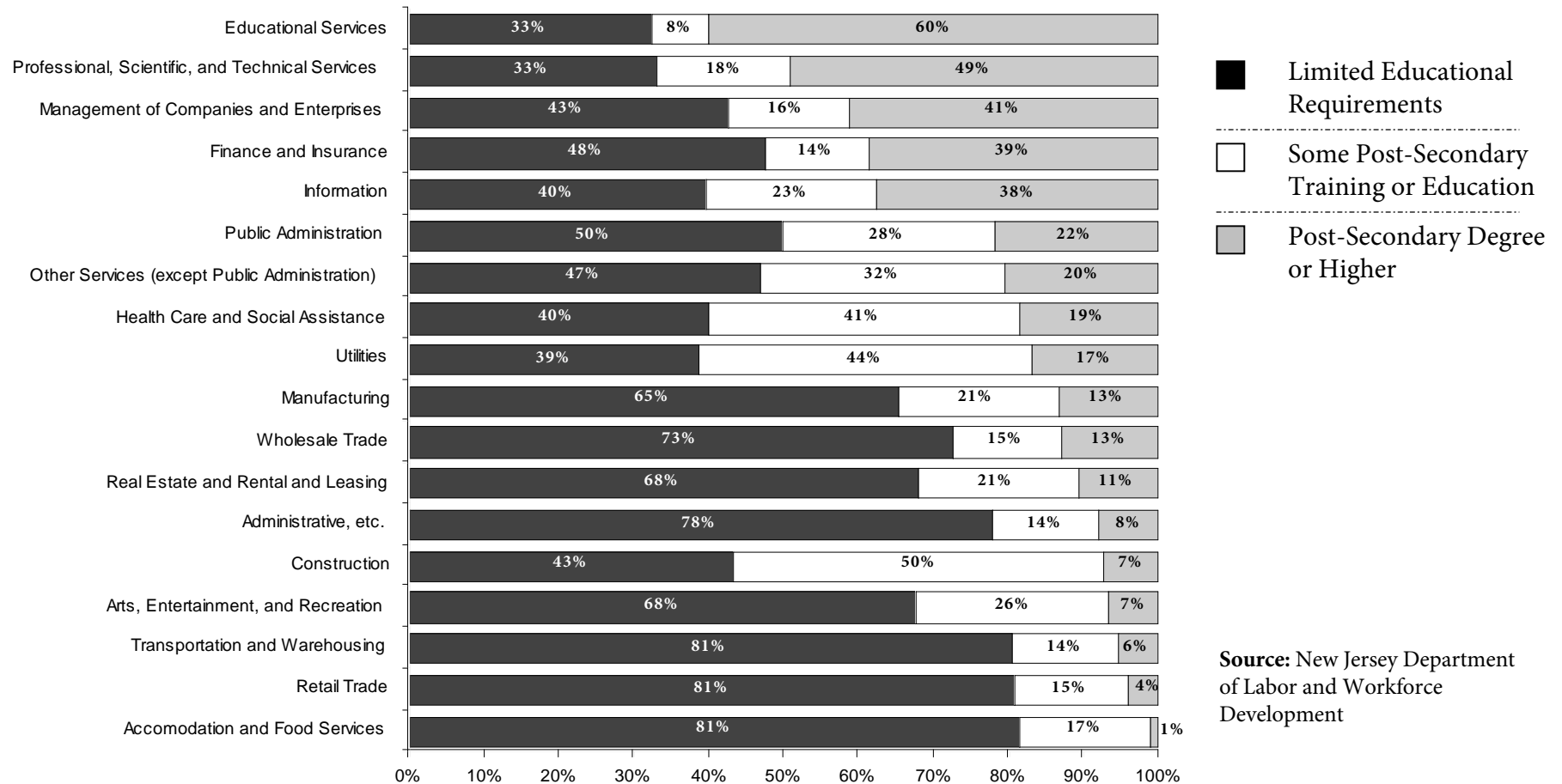
Source: U.S. Census Bureau, Local Employment Dynamics.



II. Key Industries in Union County

Criteria C2: Diversity of Educational Requirements

Distribution of Employment by Educational Requirements, New Jersey, 2005





II. Key Industries in Union County

Criteria D: Potential for Action

Key Workforce Initiatives of the Economic Growth Strategy for the State of New Jersey, 2007

Innovation Partnership Institute (IPI): The New Jersey Department of Labor and Workforce Development (NJLWD) and the Commission on Higher Education awarded \$150,000 grants to consortia of companies and educational institutions to develop and implement curricula tied to the skill needs of the state's key industries. These curricula, which will be developed at the high school, two- and four-year college level, and above, will be shared with other educational institutions in the state. IPIs are under way in **Pharmaceuticals/Life Sciences**, Communications/Information Technology, and Financial Services.

Customized Training: To assist companies to upgrade the skills of their employees, NJLWD is awarding grants to companies in key industries in the state. The grants, which are awarded on a competitive basis, leverage employer resources and are matched with state funds. Grant applications in **Advanced Manufacturing (including Pharmaceutical Manufacturing); Health Care; Transportation, Logistics, and Distribution (TLD);** Financial Services; and Communications/Information Technology are given priority in the application process.

U.S. Department of Labor WIRED Grants - The U.S. Department of Labor awarded \$5 million grants to fund the development of regional workforce and economic development efforts. Two regional efforts with significance for Union County are:

North Jersey Economic Innovation Alliance: This region includes Union County and other counties in northern New Jersey. Efforts will focus programs on the region's **Transportation, Distribution, and Logistics; Health Care;** and Finance industries, as well as other high-tech industries, including **Pharmaceutical Manufacturing**.

Bio-1: This region, located in central New Jersey, will focus all of its efforts on the **Pharmaceutical industry**. While this region does not include Union County, county officials may wish to explore collaboration opportunities with Bio-1 given the high concentration of Pharmaceutical Manufacturing in Union County.



II. Key Industries in Union County

Criteria D: Potential for Action

Six industries that are relevant in Union County have been targeted by state and federal initiatives and therefore provide an opportunity for Union County to leverage additional resources in support of workforce and economic development efforts.

Industry	Governor Corzine's Economic Growth Strategy for New Jersey (2007)	Federal Workforce Innovation in Regional Economic Development (WIRED) Grants North Jersey Economic Innovation Alliance Bio-1
Pharmaceutical manufacturing	X	X
Healthcare	X	X
Information/Communications	X	
Finance & Insurance	X	X
Transportation & Warehousing	X	X
Wholesale Trade		X

SECTION 3:

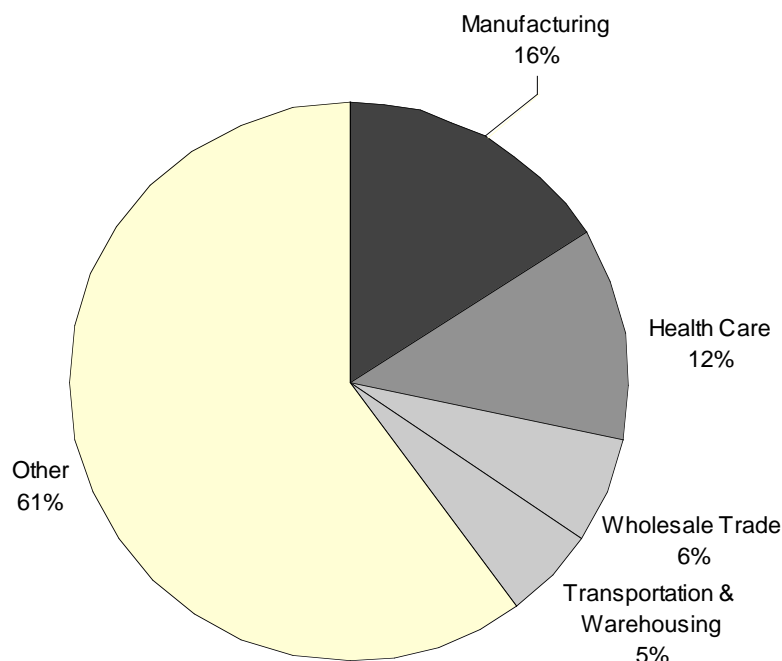
DETAILED INFORMATION ON TARGET INDUSTRIES AND SUB-SECTORS



III. Detailed Information on Key Industries in Union County

Summary

**Employment Distribution by Industry
in Union County, Second Quarter, 2006**



Major Other Industries	
Retail Trade	11%
Educational Services	9%
Professional, Scientific & Technical Services	6%
Administrative & Support Services	6%
Accommodation & Food Services	5%

Manufacturing

- High employment, Largest economic driver in the county by total payroll, Significantly higher-than-average wages, High level of employment concentration compared to the state, Significant number of new hires each quarter, Aligned with state and regional economic development efforts

Health Care

- Significant employment, Second largest economic driver in the county by total payroll, High employment levels, Expected future growth, Diverse and numerous employment opportunities, Aligned with state and regional economic development efforts

Transportation, Logistics and Distribution (TLD) (Wholesale Trade/Transportation and Warehousing)

- High employment (two industries combined), Higher-than-average wages, Significant payroll (combined), Recent growth (wholesale trade), Expected growth (wholesale trade), Employment concentration (both), Aligned with state and regional economic development efforts



III. Detailed Information on Key Industries in Union County

Manufacturing: Summary

Manufacturing, the largest industry in Union County, has long been an important economic engine in the region. The bulk of today's Manufacturing jobs in the county (43%) are concentrated in the chemical sector, especially pharmaceuticals. Other key sectors in Manufacturing in the county include fabricated metals and food manufacturing. Overall, the Manufacturing industry provides high average wages and employs a large number of new hires to fill new and replacement jobs.

Key Facts

For Union County:

Total Employment ¹	36,116
Establishments ¹	775
% fewer than 10 workers ²	51.8%
% fewer than 50 workers ²	86.2%
Average Monthly Wages ¹	\$6,990.75
Quarterly Turnover ³	8.4%
New Hires per quarter ³	2,470
Net Jobs Added per quarter ³	-64

Key Employers

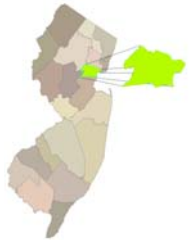
Union County is home to several large manufacturing employers, including:

- Celgene Corporation
- Conoco-Philips Bayway Refinery
- CR Bard
- Merck Research Laboratories
- Schering-Plough

1. New Jersey Department of Labor and Workforce Development, *Quarterly Census of Employment and Wages*, Second Quarter 2006.

2. U.S. Census Bureau, *Zip Code Business Patterns*, 2005.

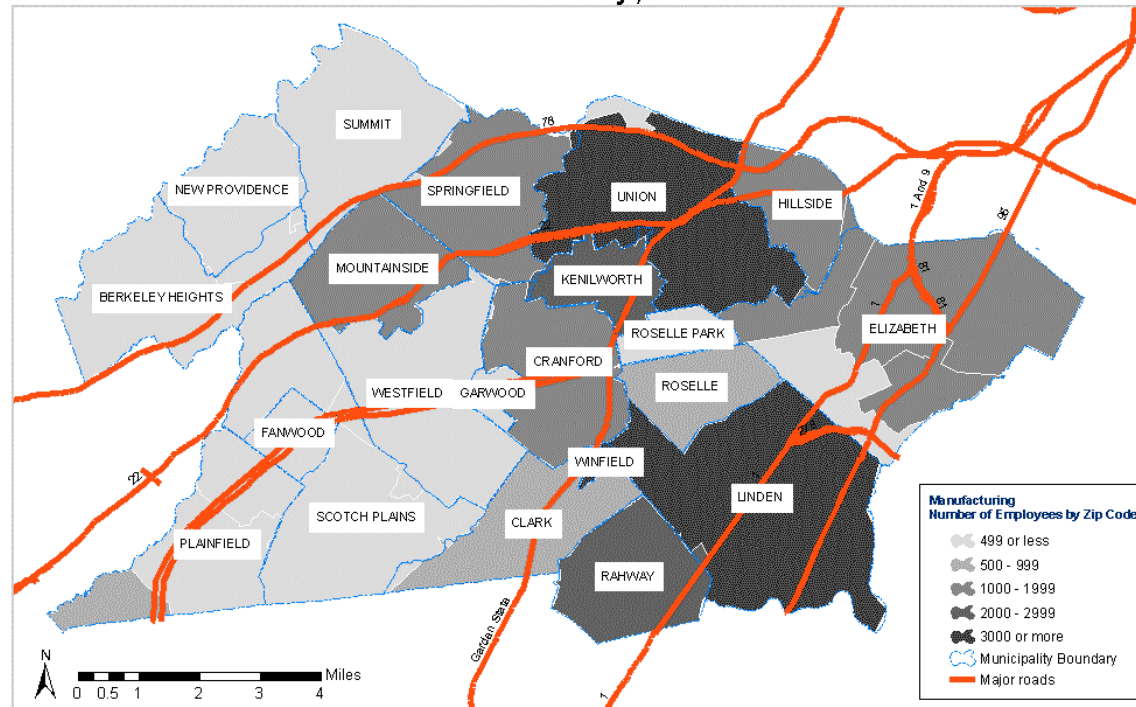
3. U.S. Census Bureau, *Local Employment Dynamics – Quarterly Workforce Indicators*, Second Quarter 2006.



III. Detailed Information on Key Industries in Union County

Manufacturing: Employment Concentration, by Municipality

Local Concentration of Employment Manufacturing Union County, NJ



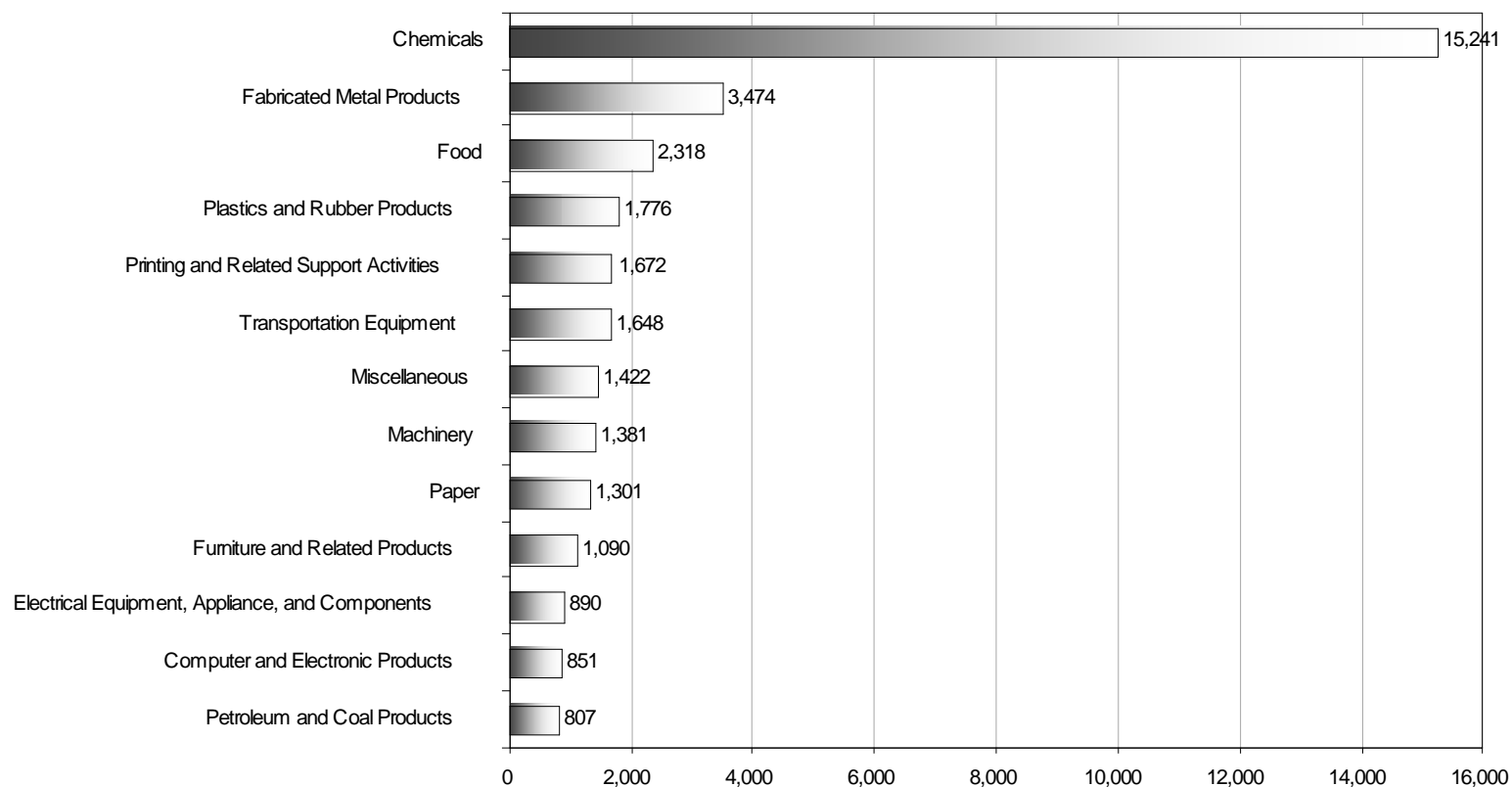
Source: Estimates based on 2005 Zip Code Business Patterns, U.S. Census Bureau.

In 2005, manufacturing employment in Union County was generally concentrated in the eastern part of the county with Union and Linden having the largest number of employees in the industry.



III. Detailed Information on Key Industries in Union County

Manufacturing: Employment, by Sub-Sector, 2006



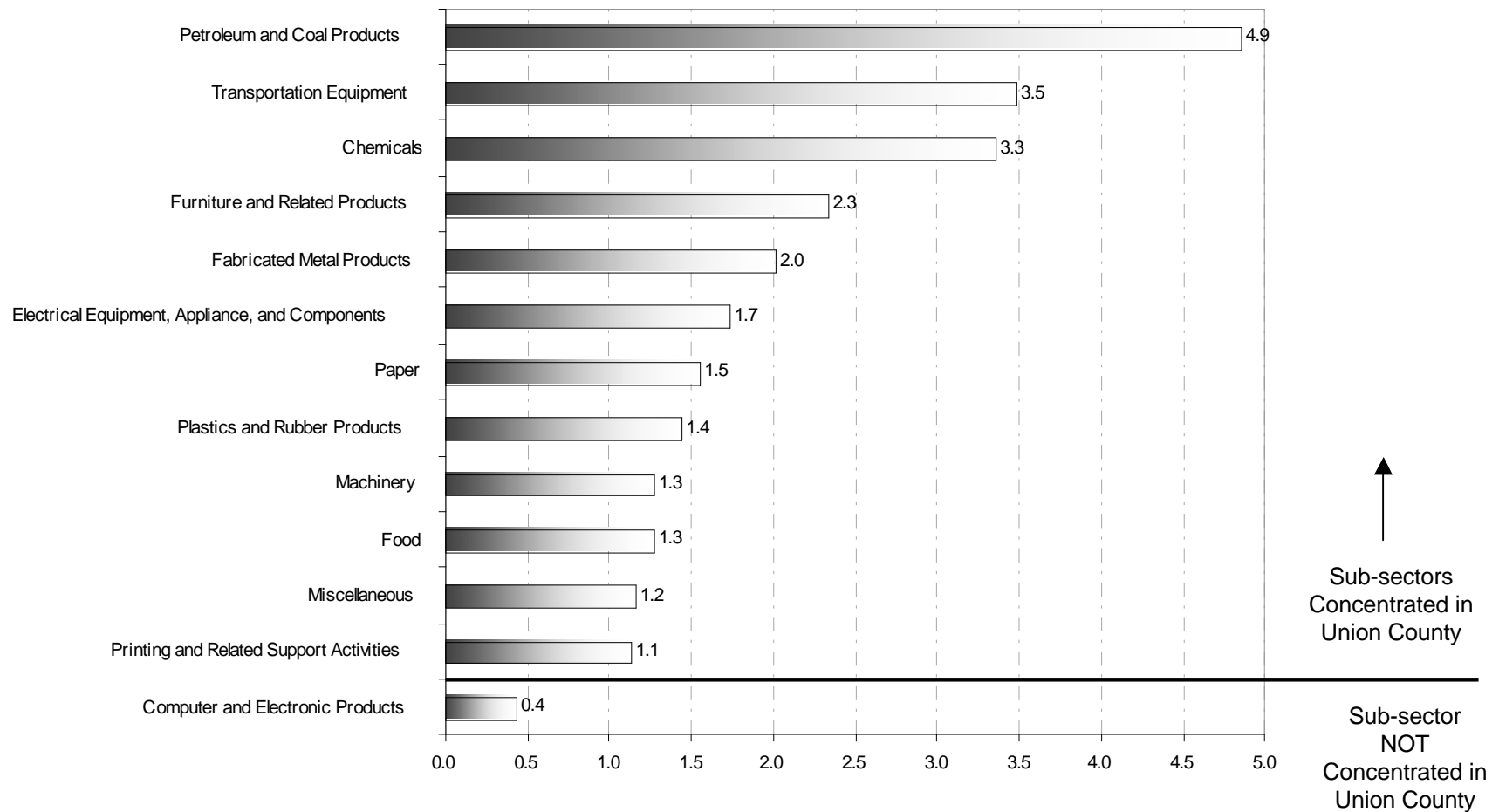
* Seven sub-sectors with fewer than 500 employees in 2006 are excluded. These additional sub-sectors employed 1,938 individuals in 2006, 5% of all manufacturing employees in Union County.

Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Manufacturing: Employment Concentration, by Sub-Sector, 2006

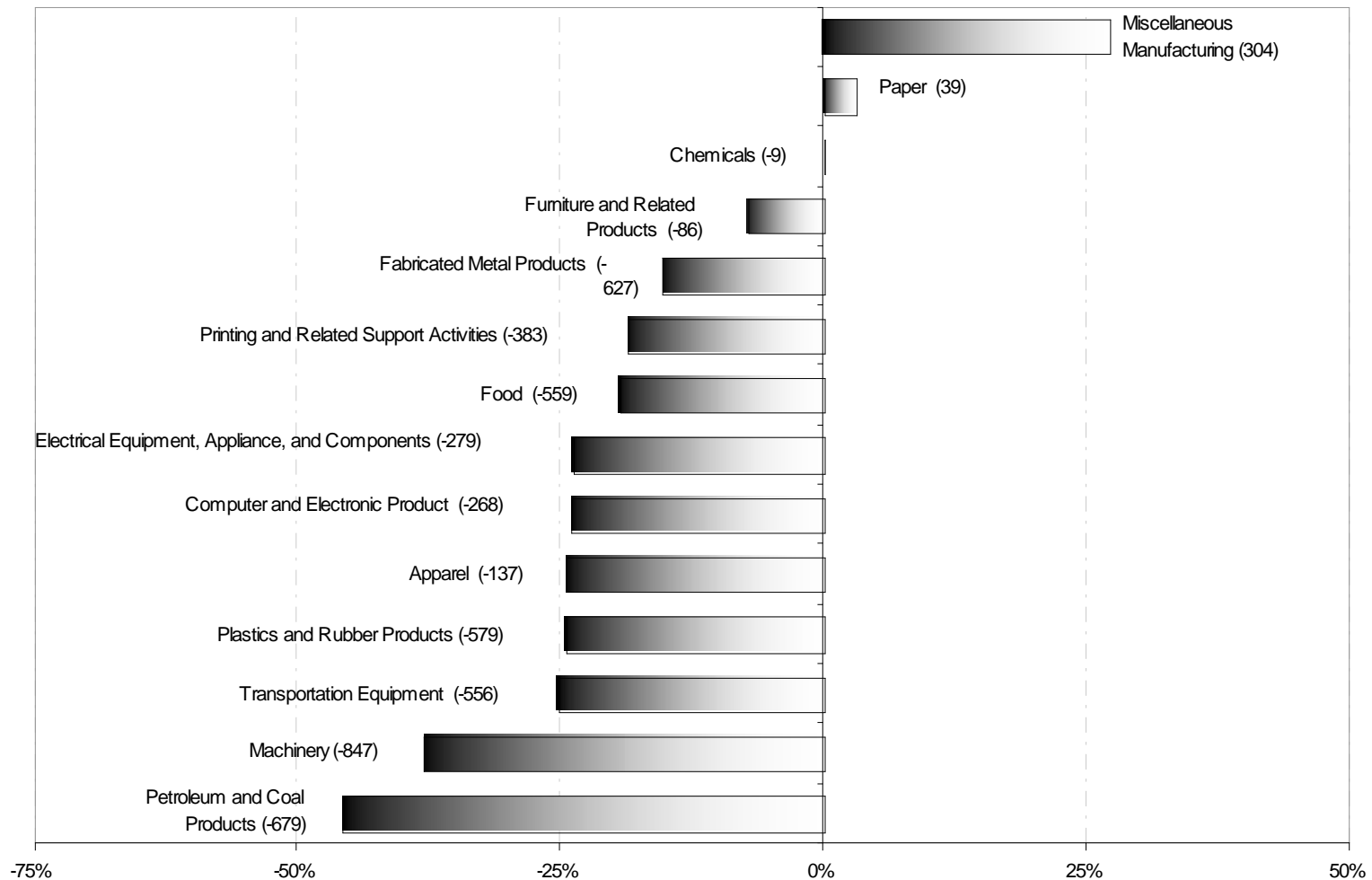


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Manufacturing: Recent Change in Employment, by Sub-Sector, 2002-2006

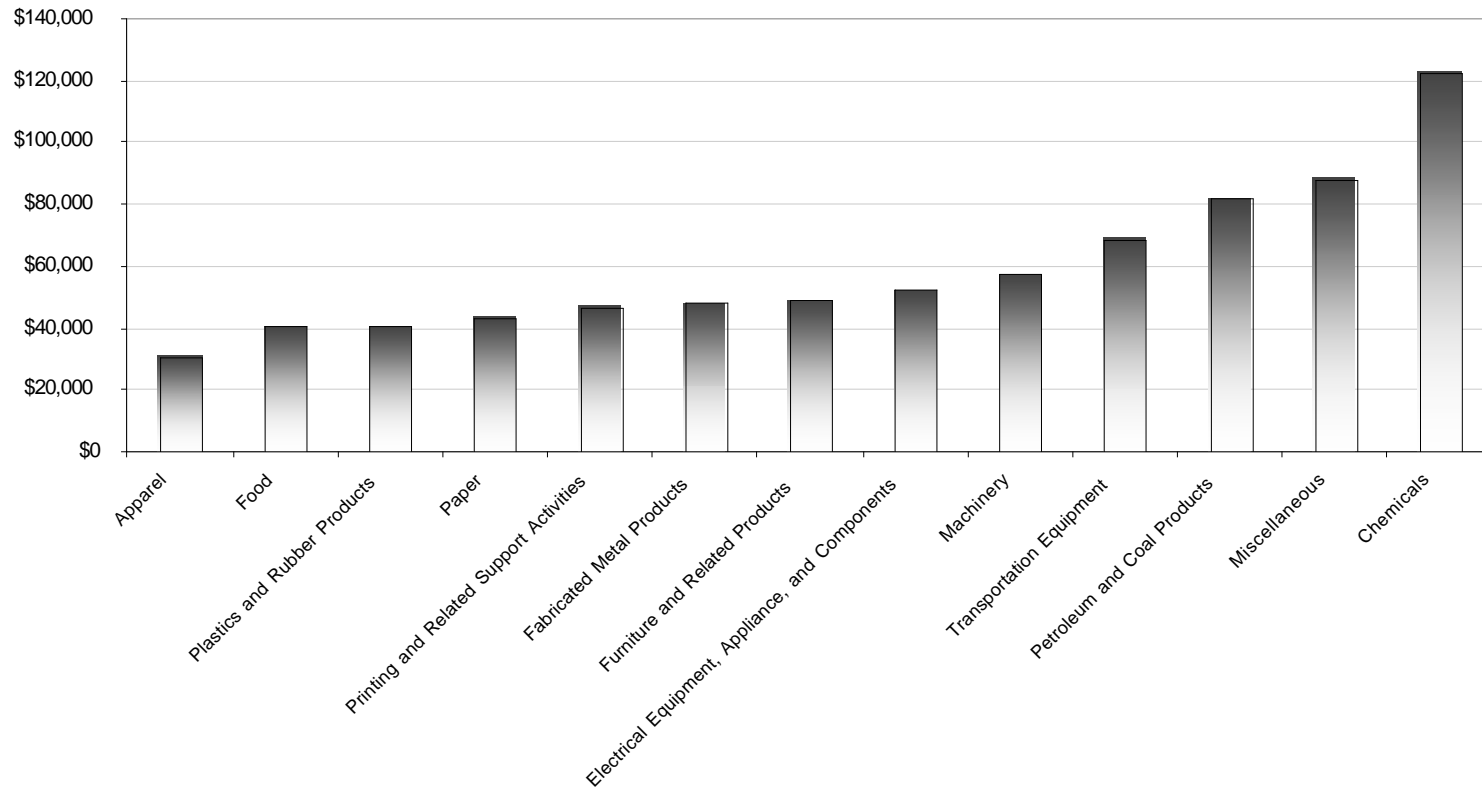


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Manufacturing: Average Wages, by Sub-Sector, 2006



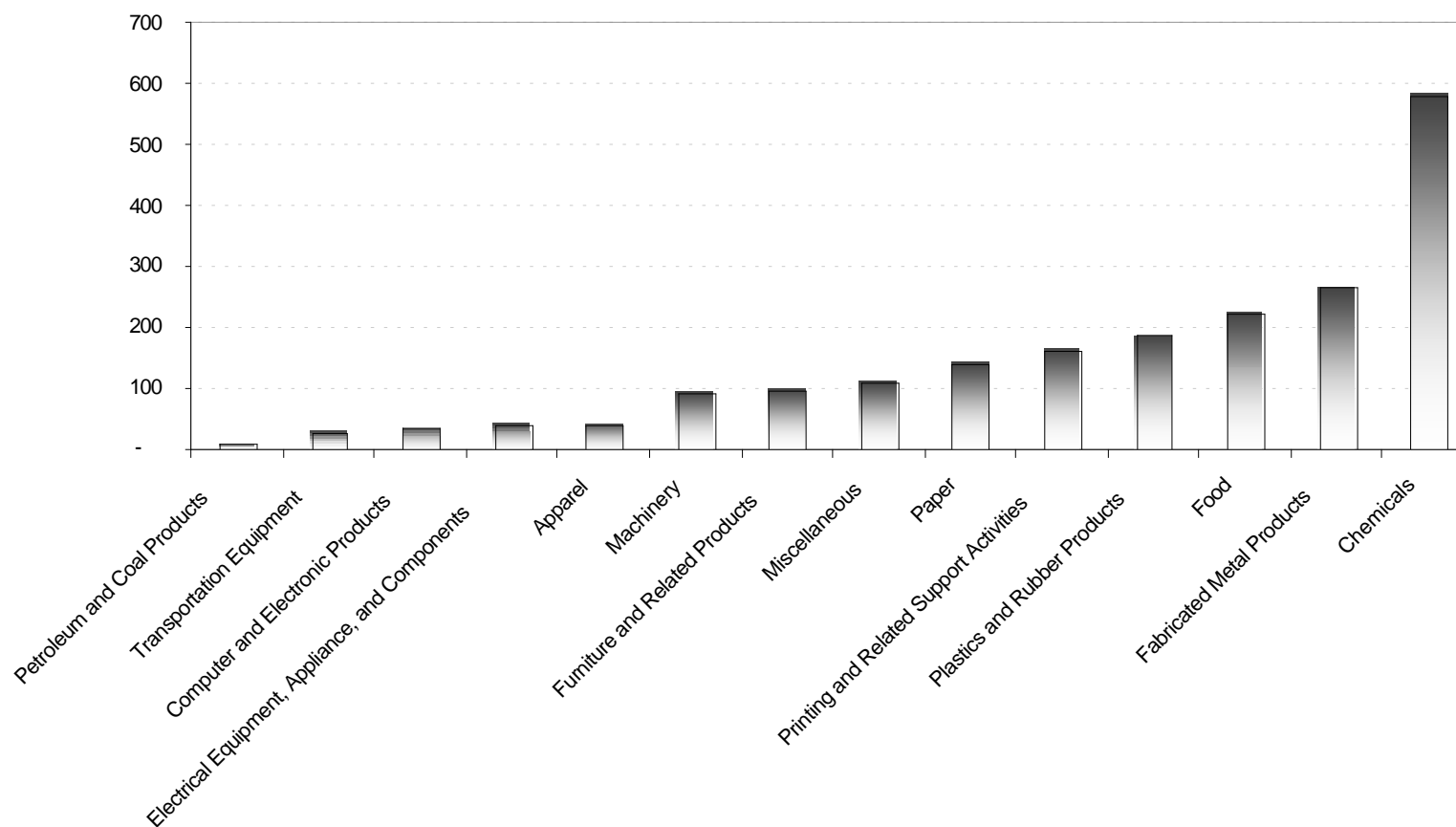
Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Manufacturing:

Number of New Hires per Quarter, by Sub-Sector, 2006



Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Summary

Chemical Manufacturing is a key driver of Union County's Manufacturing Industry. The large majority of the over 15,000 jobs in the Chemical sector are in Pharmaceutical and Medicine Manufacturing (12,754). This sector also provides the highest wages and offers a diverse array of jobs ranging from production jobs to occupations in research and management. The largest jobs in the chemical sector include: Packaging and filling machine operators and tenders, chemical equipment operators and tenders, chemists, mixing and blending machine operators and tenders, and first-line supervisors and managers of production and operating workers.

Key Facts

For Union County:

Total Employment ¹	15,241
Establishments ²	42, including 4 in Pharmaceutical and Medicine Manufacturing
Average Monthly Wages ²	\$122,922/year
Quarterly Turnover ³	6.5%
New Hires per quarter ³	583

1. New Jersey Department of Labor and Workforce Development, *Quarterly Census of Employment and Wages, Second Quarter 2006*.

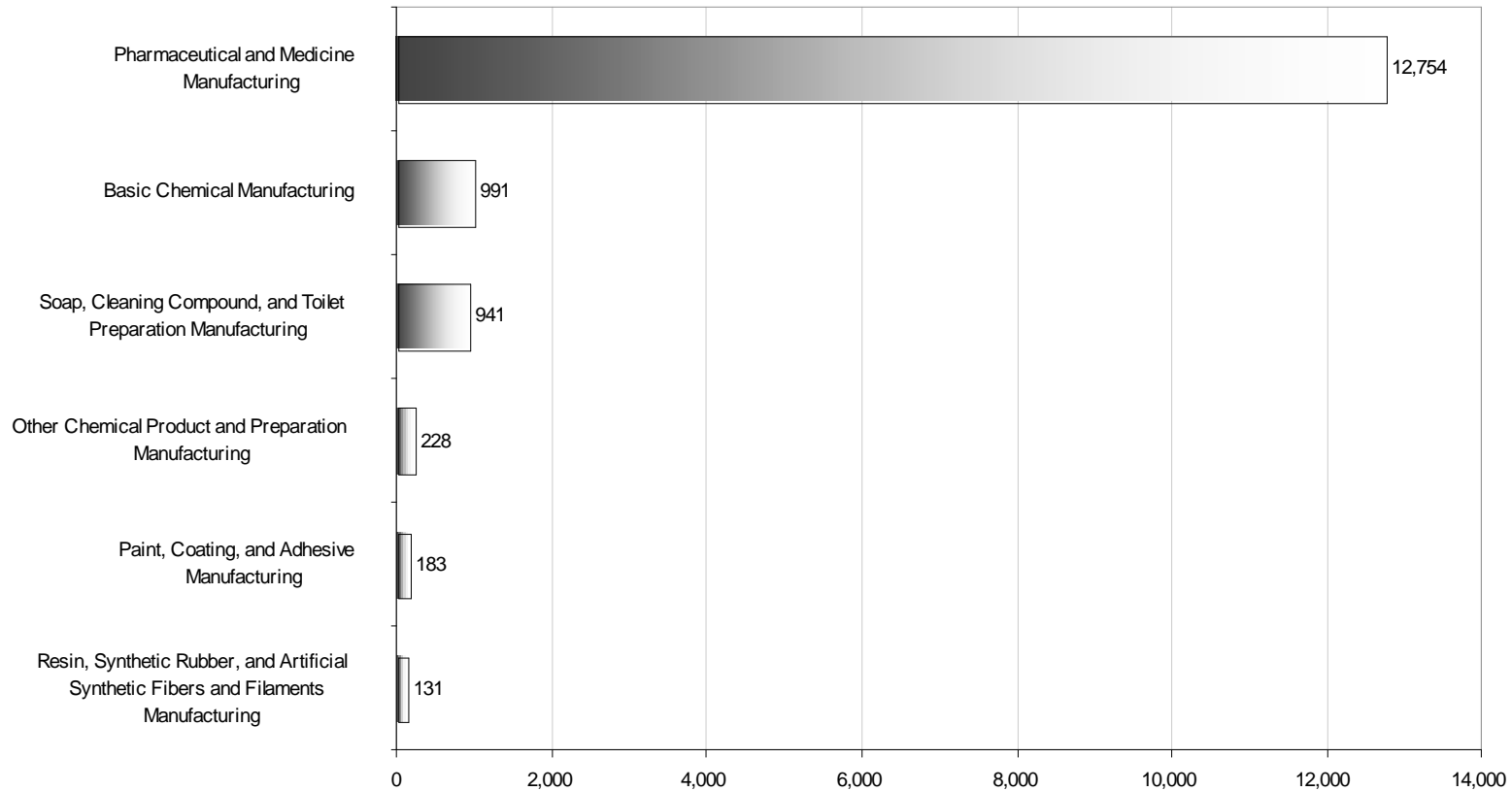
2. U.S. Census Bureau, *Zip Code Business Patterns, 2005*.

3. U.S. Census Bureau, *Local Employment Dynamics – Quarterly Workforce Indicators, Second Quarter 2006*.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Employment, by Sub-Sector, 2006

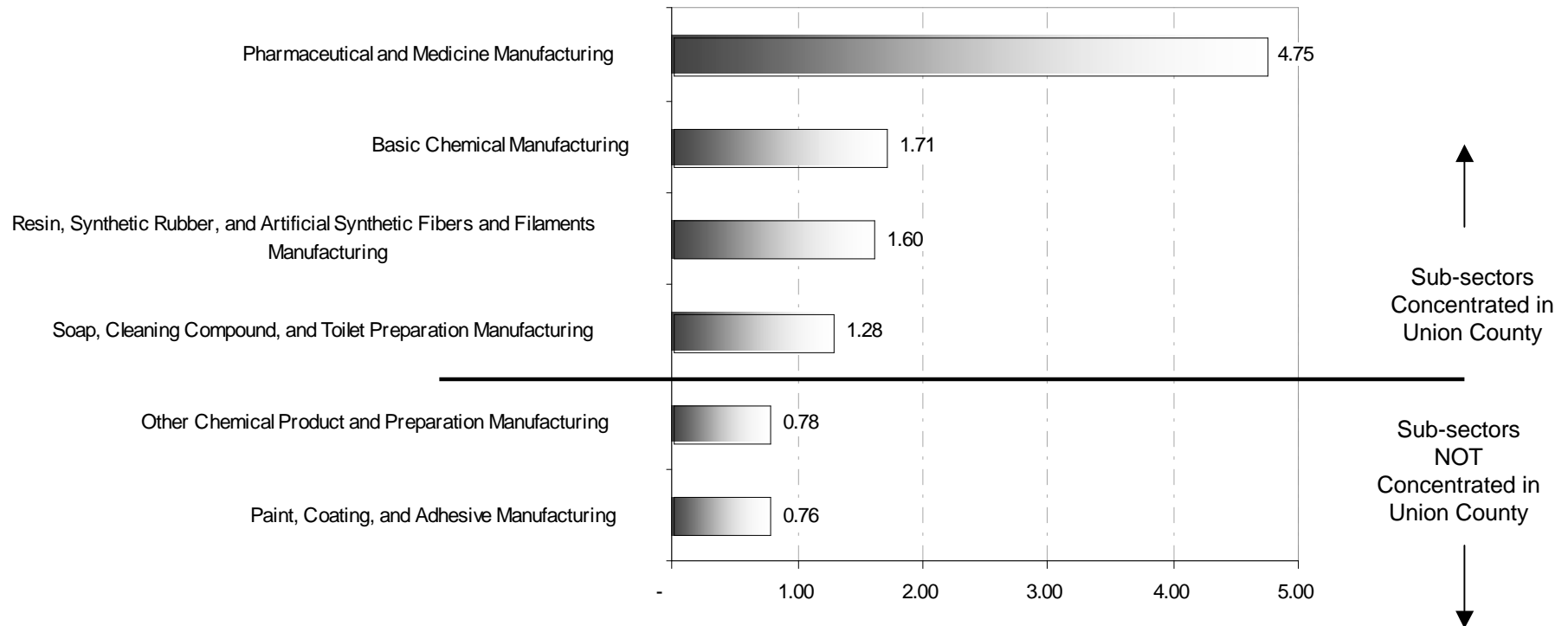


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Employment Concentration, by Sub-Sector, 2006

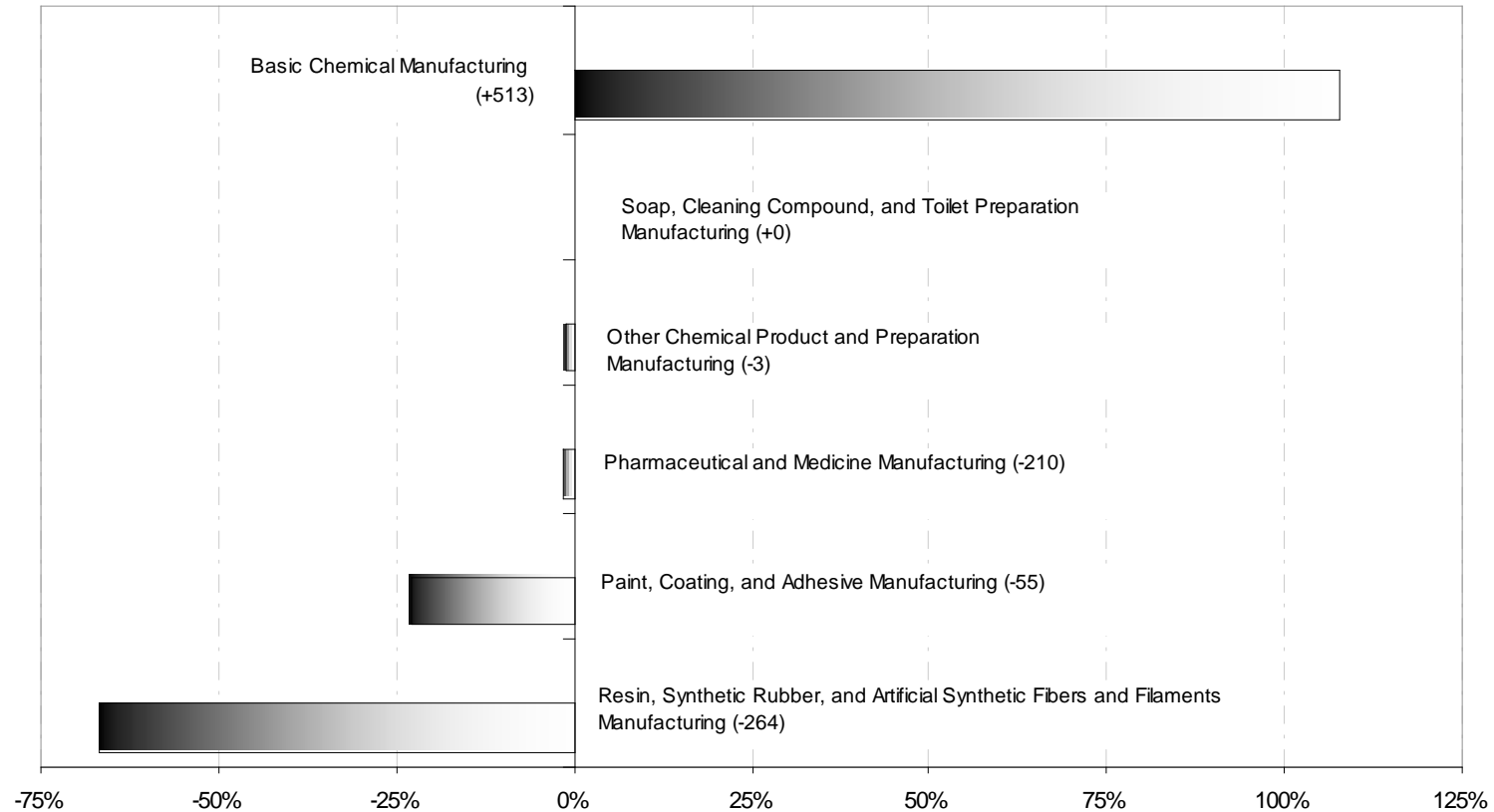


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Recent Change in Employment, by Sub-Sector, 2002-06

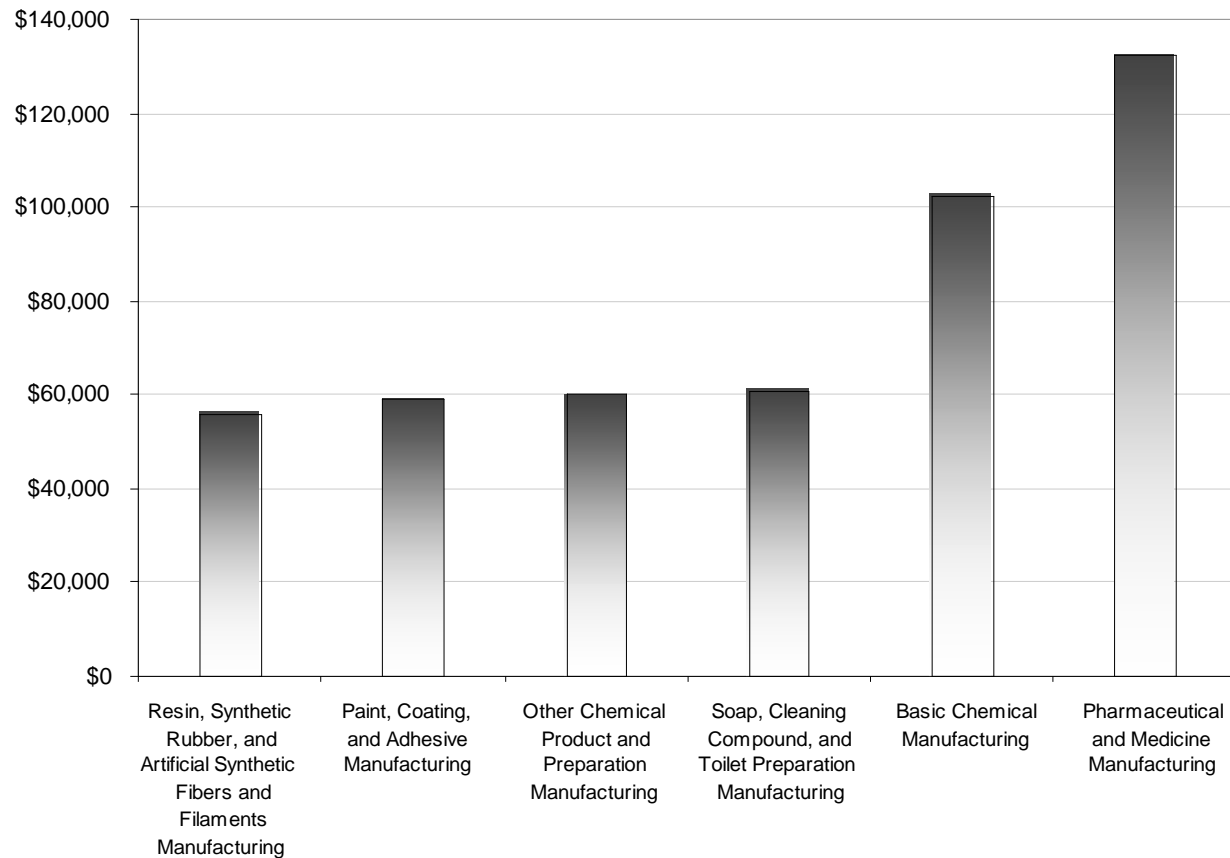


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Average Wages, by Sub-Sector, 2006

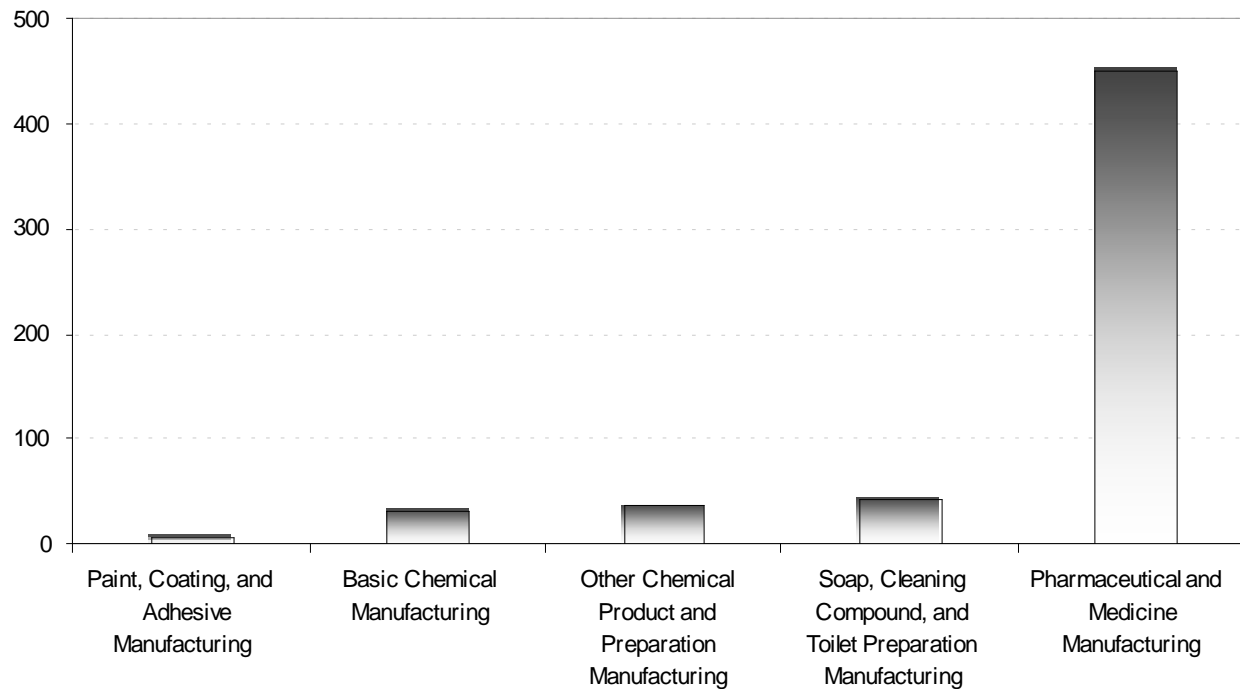


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Number of New Hires, by Sub-Sector, 2006





III. Detailed Information on Key Industries in Union County

Chemical Manufacturing: Key Occupations in Chemical Manufacturing

Ranked by prevalence in the Chemical Manufacturing industry

Occupations	Union County			Average Wage in the Union County Region*
	Estimated Employment: 2004 (All Industries)	Estimated Employment: 2014 (All Industries)	Annual Average Job Openings (All Industries)	
Packaging and Filling Machine Operators and Tenders	1,850	1,600	40	\$21,490
Chemical Equipment Operators and Tenders	250	200	10	\$38,900
Chemists	750	750	30	\$55,170
Mixing and Blending Machine Setters, Operators, and Tenders	550	500	10	\$28,610
First-Line Supervisors/Managers of Production and Operating Workers	1,400	1,250	30	\$52,440
Chemical Technicians	750	700	20	\$38,330
Laborers and Freight, Stock, and Material Movers, Hand	5,200	5,150	170	\$21,420
Chemical Plant and System Operators	200	150	10	\$50,260
Medical Scientists, Except Epidemiologists	1,650	2,050	70	\$80,710
Inspectors, Testers, Sorters, Samplers, and Weighers	950	800	20	\$32,780
Packers and Packagers, Hand	2,500	2,650	60	\$16,980
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1,500	1,600	50	
Maintenance and Repair Workers, General	1,950	2,050	50	\$35,150
Secretaries, Except Legal, Medical, and Executive	5,650	5,250	110	\$34,770
General and Operations Managers	3,400	3,750	100	\$125,880
Biological Technicians	250	300	10	\$41,950
Production Workers, All Other	350	200	10	\$32,860
Helpers—Production Workers	500	450	10	\$21,270
Shipping, Receiving, and Traffic Clerks	1,450	1,400	30	\$28,050
Industrial Machinery Mechanics	500	400	10	\$44,680



III. Detailed Information on Key Industries in Union County

Health Care: Summary

The Health Care industry provides the prevention, treatment, and management of illness and the preservation of mental and physical well-being. From personal care services and counseling to medications, this industry provides many services to Union County and neighboring regions.

Health Care is the third largest industry in Union County. The industry provides a large number of job opportunities and occupations in the industry have a diversity of educational requirements and defined career ladders, which may provide advancement opportunities for low-wage workers. The largest occupations in the industry include registered nurses; medical secretaries; nursing aides, orderlies, and attendants; home health aides; and licensed practical nurses.

Key Facts

For Union County:

Total Employment ¹	26,211
Establishments ¹	1517
% fewer than 10 workers ²	72.8%
% fewer than 50 workers ²	
Average Monthly Wages ¹	\$37,725.00
Quarterly Turnover ³	8.3%
New Hires per quarter ³	2,703
Net Jobs Added per quarter ³	307

Key Employers

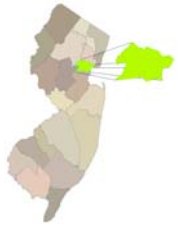
Union County is home to several large Health Care employers, including:

- Muhlenburg Regional Medical Center
- Overlook Hospital
- Trinitas Hospital
- Robert Wood Johnson Hospital - Rahway

1. New Jersey Department of Labor and Workforce Development, *Quarterly Census of Employment and Wages, Second Quarter 2006*.

2. U.S. Census Bureau, *Zip Code Business Patterns, 2005*.

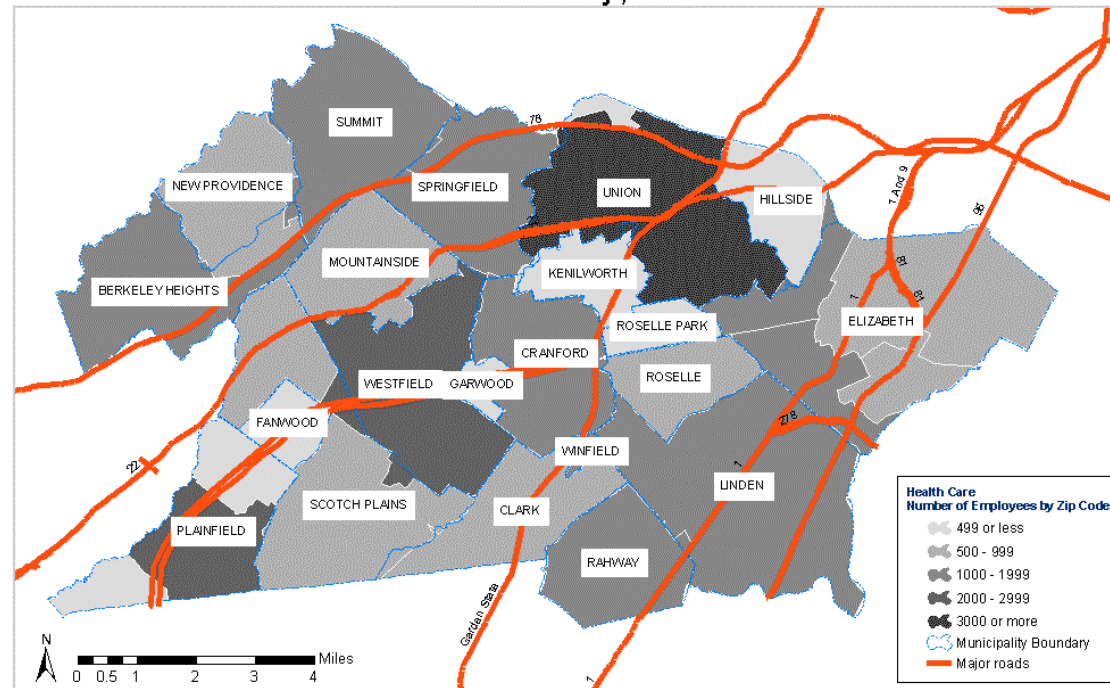
3. U.S. Census Bureau, *Local Employment Dynamics – Quarterly Workforce Indicators, Second Quarter 2006*.



III. Detailed Information on Key Industries in Union County

Healthcare: Employment Concentration, by Municipality

Local Concentration of Employment Health Care Union County, NJ



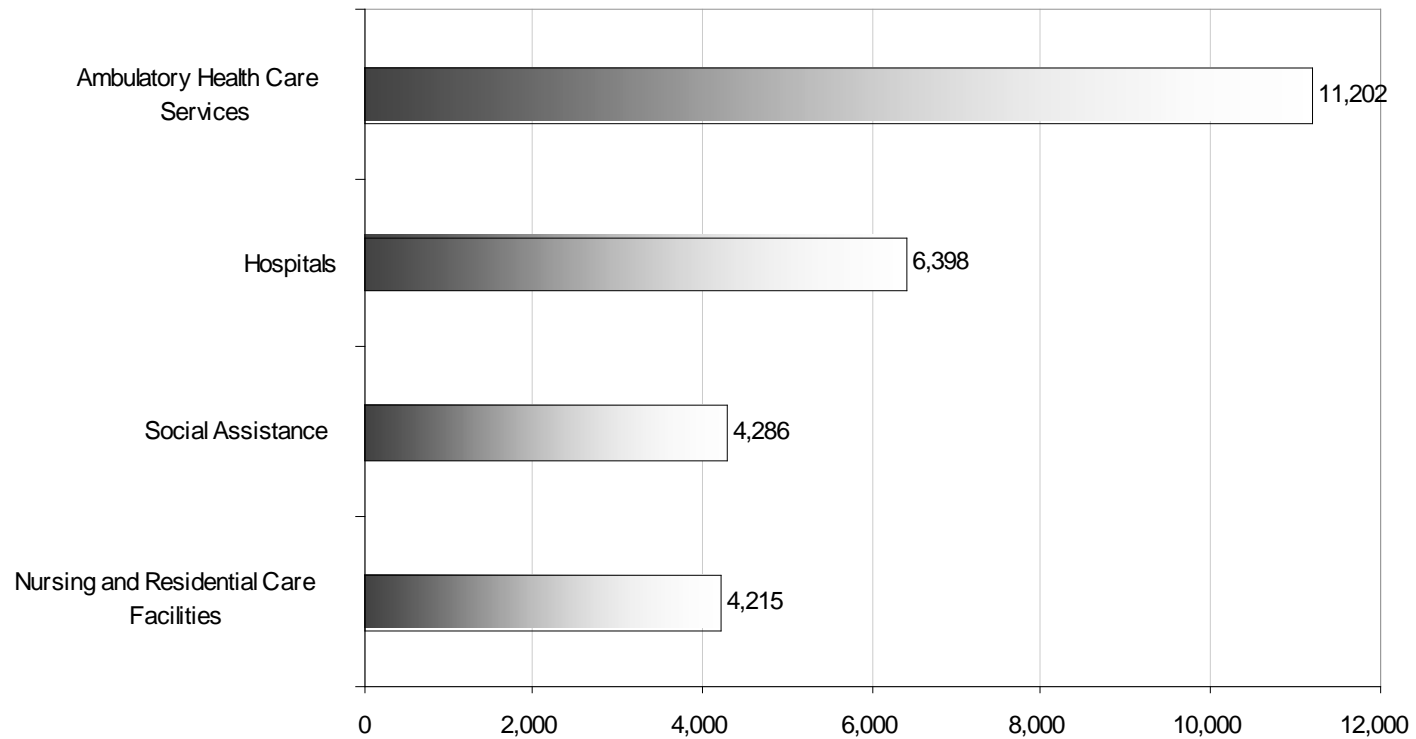
Source: Estimates based on 2005 Zip Code Business Patterns, U.S. Census Bureau.

Employment in Health Care was located throughout Union County in 2005. The municipalities with the highest concentration of Health Care employees were Union, Westfield, and Plainfield.



III. Detailed Information on Key Industries in Union County

Health Care: Employment, by Sub-Sector, 2006

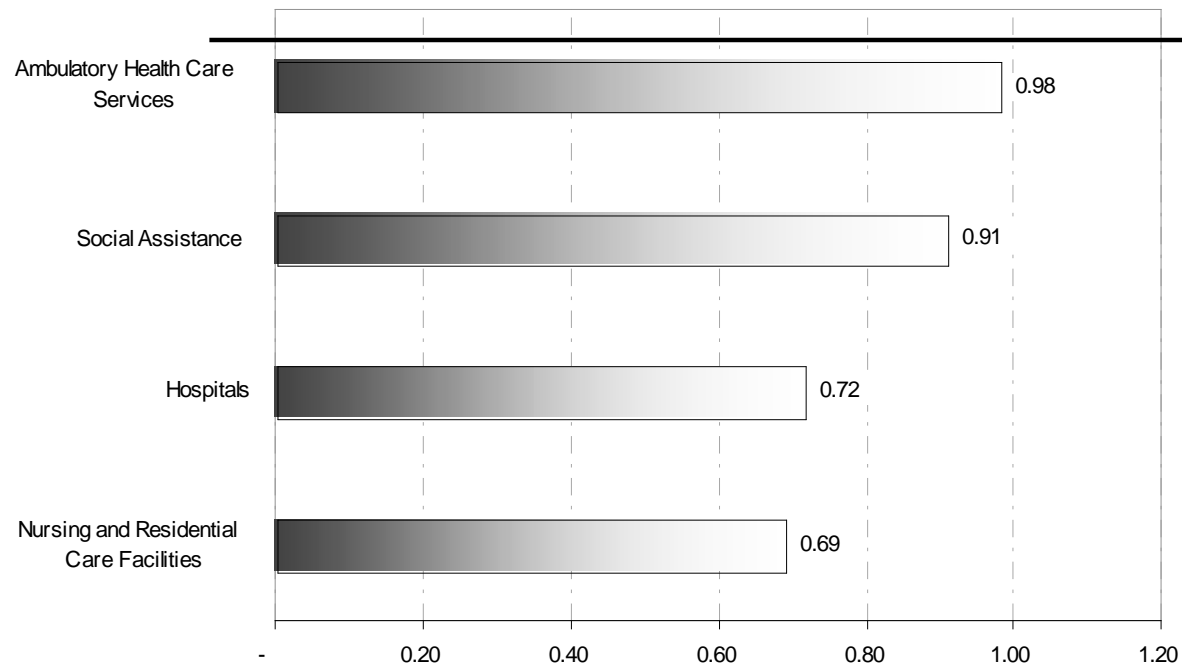


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Health Care: Employment Concentration, by Sub-Sector, 2006



All Sub-sectors
are NOT
Concentrated in
Union County



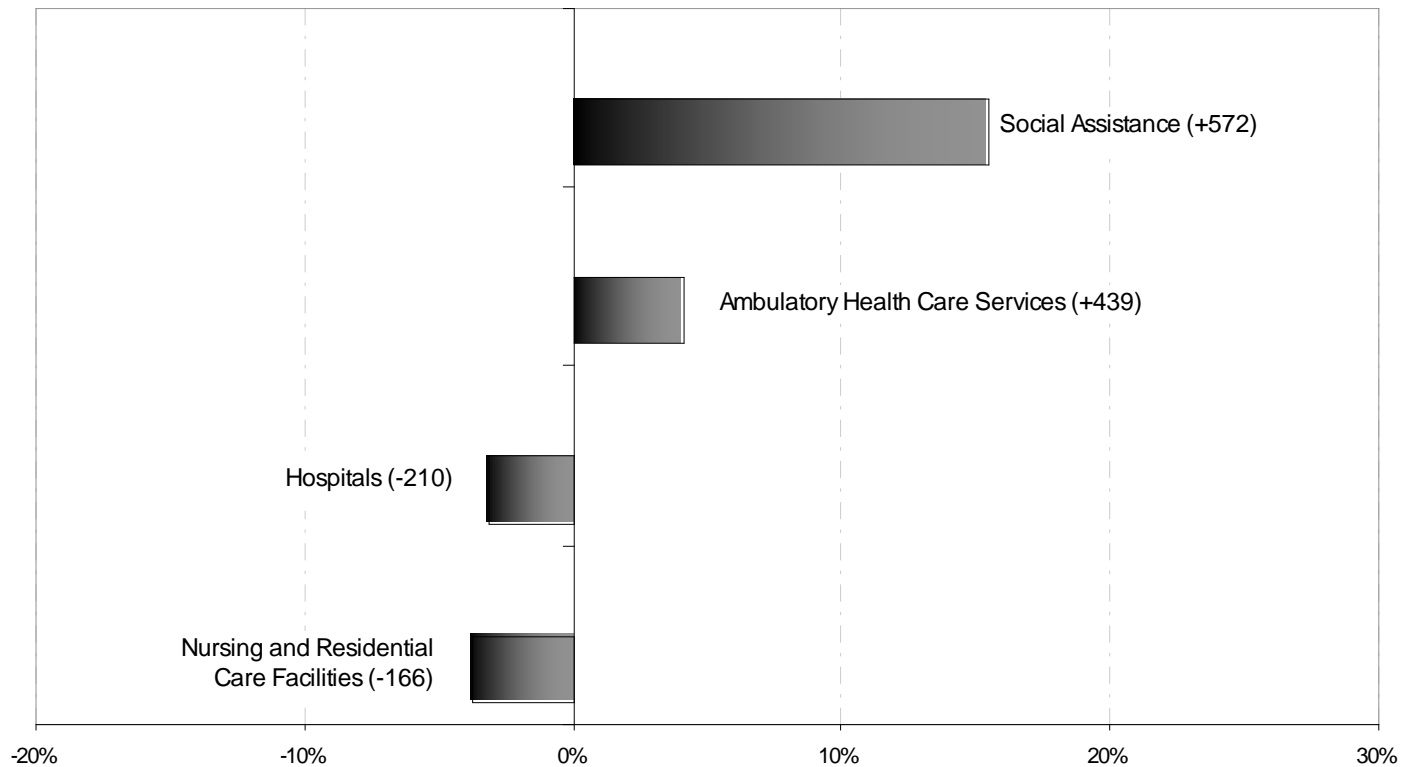
Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Health Care:

Recent Change in Employment, by Sub-Sector, 2002-06

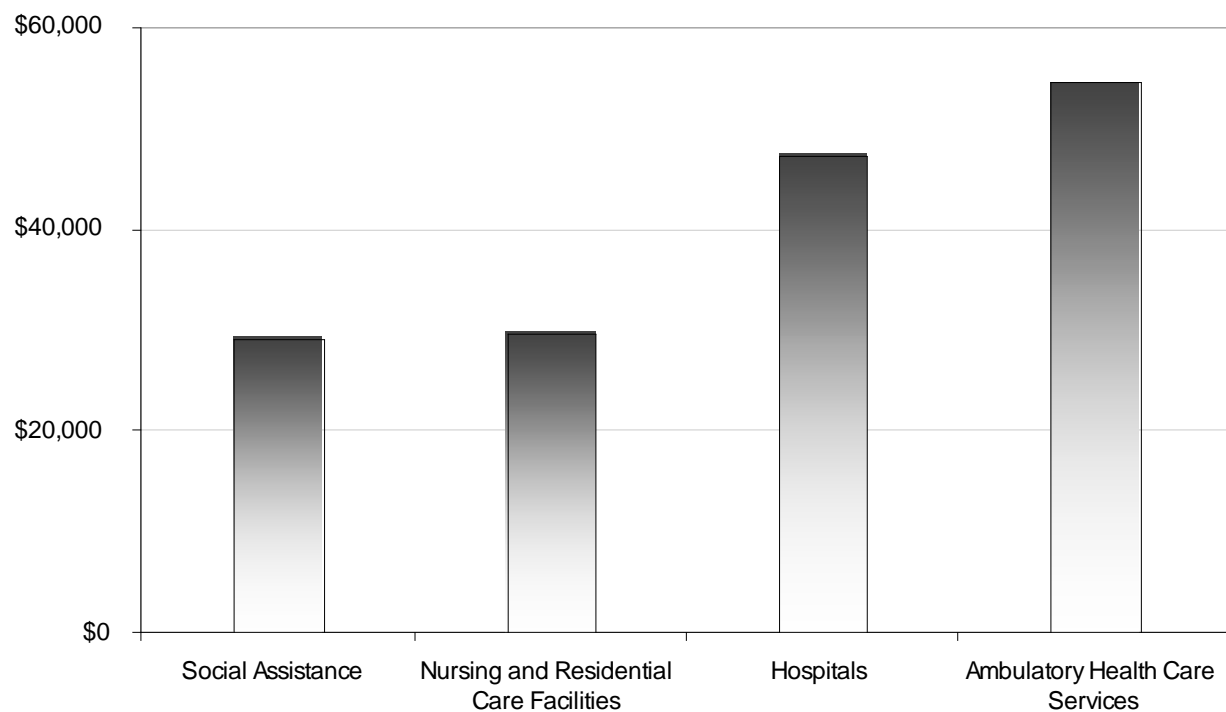


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Health Care: Average Wages, by Sub-Sector, 2006

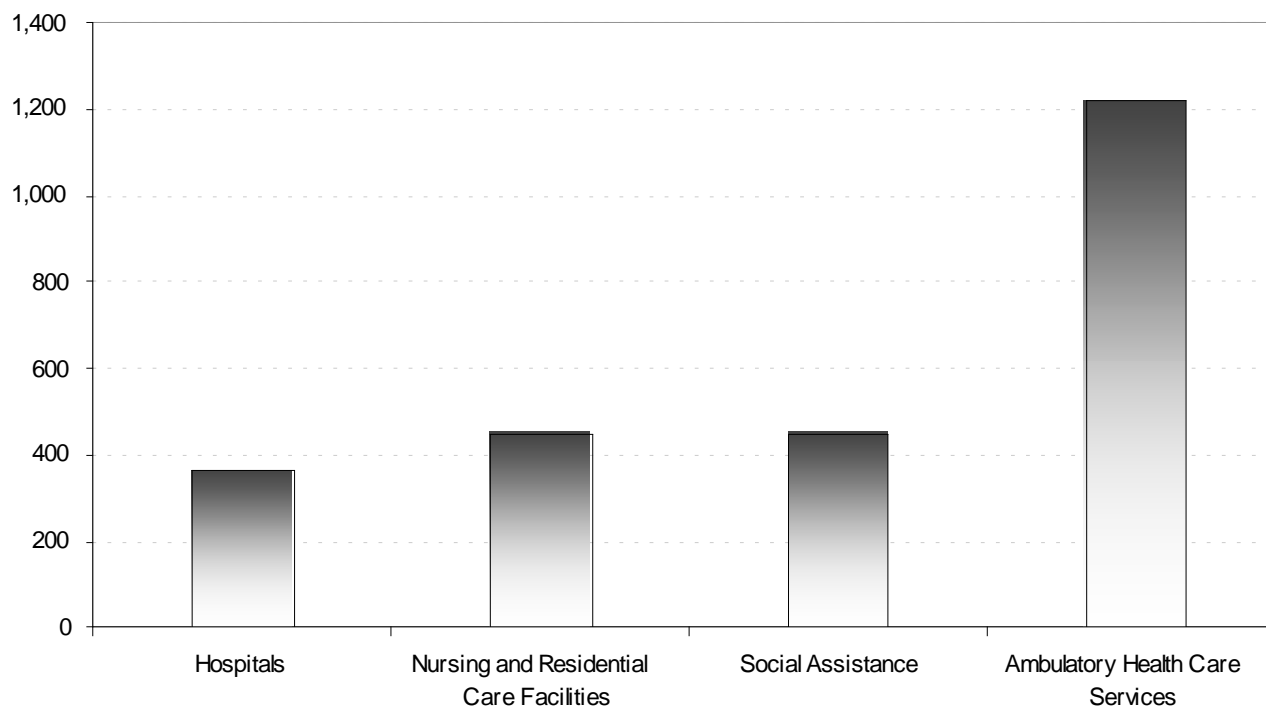


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Health Care: Number of New Hires, by Sub-Sector, 2006



Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Health Care:

Key Occupations in Ambulatory Health Care Services, Hospitals, and Nursing and Residential Care Facilities

Ranked by prevalence in the selected sub-sectors

Occupations	Union County			Average Wage in the Union County Region*
	Estimated Employment: 2004 (All Industries)	Estimated Employment: 2014 (All Industries)	Annual Average Job Openings (All Industries)	
Registered Nurses	3,900	4,800	170	\$66,240
Medical Secretaries	1,150	1,300	30	\$29,890
Nursing Aides, Orderlies, and Attendants	2,450	3,000	90	\$24,170
Home Health Aides	1,200	1,750	70	\$20,300
Licensed Practical and Licensed Vocational Nurses	850	1,000	30	\$44,790
Medical Assistants	450	600	30	\$29,150
Dental Assistants	1,900	2,450	110	\$30,320
Maids and Housekeeping Cleaners	1,050	1,150	40	\$19,070
Billing and Posting Clerks and Machine Operators	800	750	10	\$33,830
Office Clerks, General	5,900	6,050	150	\$25,270
Receptionists and Information Clerks	1,500	1,700	60	\$24,590
Secretaries, Except Legal, Medical, and Executive	5,650	5,250	110	\$34,770
Healthcare Support Workers, All Other	200	250	10	\$29,270
First-Line Supervisors/Managers of Office and Administrative Support Workers	2,700	2,800	70	\$48,460
Radiologic Technologists and Technicians	300	350	10	\$53,060
Dental Hygienists	950	1,200	40	\$71,480
Physicians and Surgeons, All Other	300	350	10	\$144,340
Medical and Clinical Laboratory Technologists	200	250	10	\$54,060
Rehabilitation Counselors	400	500	20	\$27,690
Food Servers, Nonrestaurant	350	350	10	\$20,330



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Summary

Close to Port Newark/Elizabeth and other major transportation hubs and the New York, Connecticut, and New Jersey consumer markets, Union County is a major location for goods movement, storage, and distribution businesses. The Wholesale Trade and Transportation and Warehousing industries comprise the core of this supply chain.

Wholesale Trade

The sixth largest industry in Union County, wholesalers generally act as intermediaries in the distribution process. Wholesale operators in the region purchase goods from producers and rely on the transportation sector to distribute these goods to retailers and end consumers in the New York/New Jersey metropolitan area and beyond. This industry has been experiencing much recent growth, which is expected to continue.

Key Facts

For Union County:

Total Employment ¹	15,101
Establishments ¹	1039
% fewer than 10 workers ²	68.0%
% fewer than 50 workers ²	93.1%
Average Monthly Wages ¹	\$5,393.25
Quarterly Turnover ³	8.1%
New Hires per Quarter ³	2,129
Net Jobs Added per Quarter ³	394

Transportation and Warehousing

One of the major industries in the region, this industry is comprised of businesses that plan and implement goods movement and storage. Highly connected to the wholesale industry and the next step in the supply chain after goods leave the warehouse, this industry is an important component of Union County's economy.

Key Facts

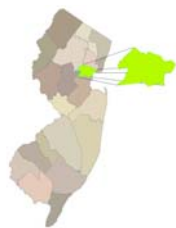
For Union County:

Total Employment ¹	10,644
Establishments ¹	658
% fewer than 10 workers ²	67.0%
% fewer than 50 workers ²	93.6%
Average Monthly Wages ¹	\$4,264.75
Quarterly Turnover ³	7.8%
New Hires per Quarter ³	1,416
Net Jobs Added per Quarter ³	159

1. New Jersey Department of Labor and Workforce Development, *Quarterly Census of Employment and Wages, Second Quarter 2006*.

2. U.S. Census Bureau, *Zip Code Business Patterns, 2005*.

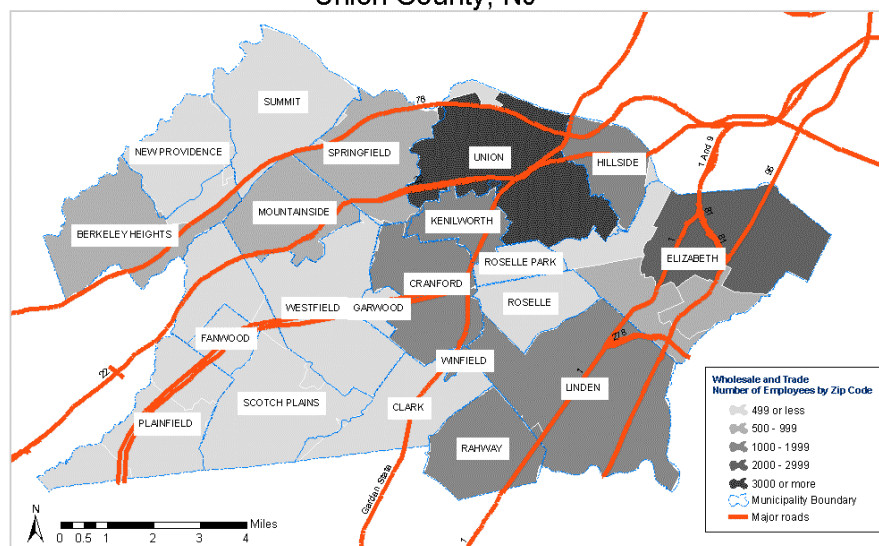
3. U.S. Census Bureau, *Local Employment Dynamics – Quarterly Workforce Indicators, Second Quarter 2006*.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Employment Concentration, by Municipality

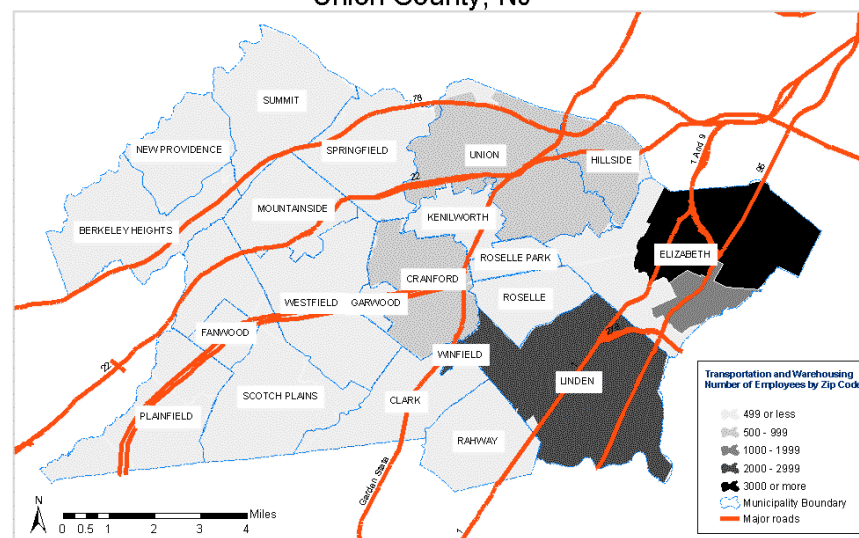
Local Concentration of Employment
Wholesale and Trade
Union County, NJ



Source: Estimates based on 2005 Zip Code Business Patterns, U.S. Census Bureau.

In 2005, Wholesale Trade employment was generally concentrated in the eastern part of Union County with Union and Elizabeth having the greatest number of employees in this industry.

Local Concentration of Employment
Transportation and Warehousing
Union County, NJ



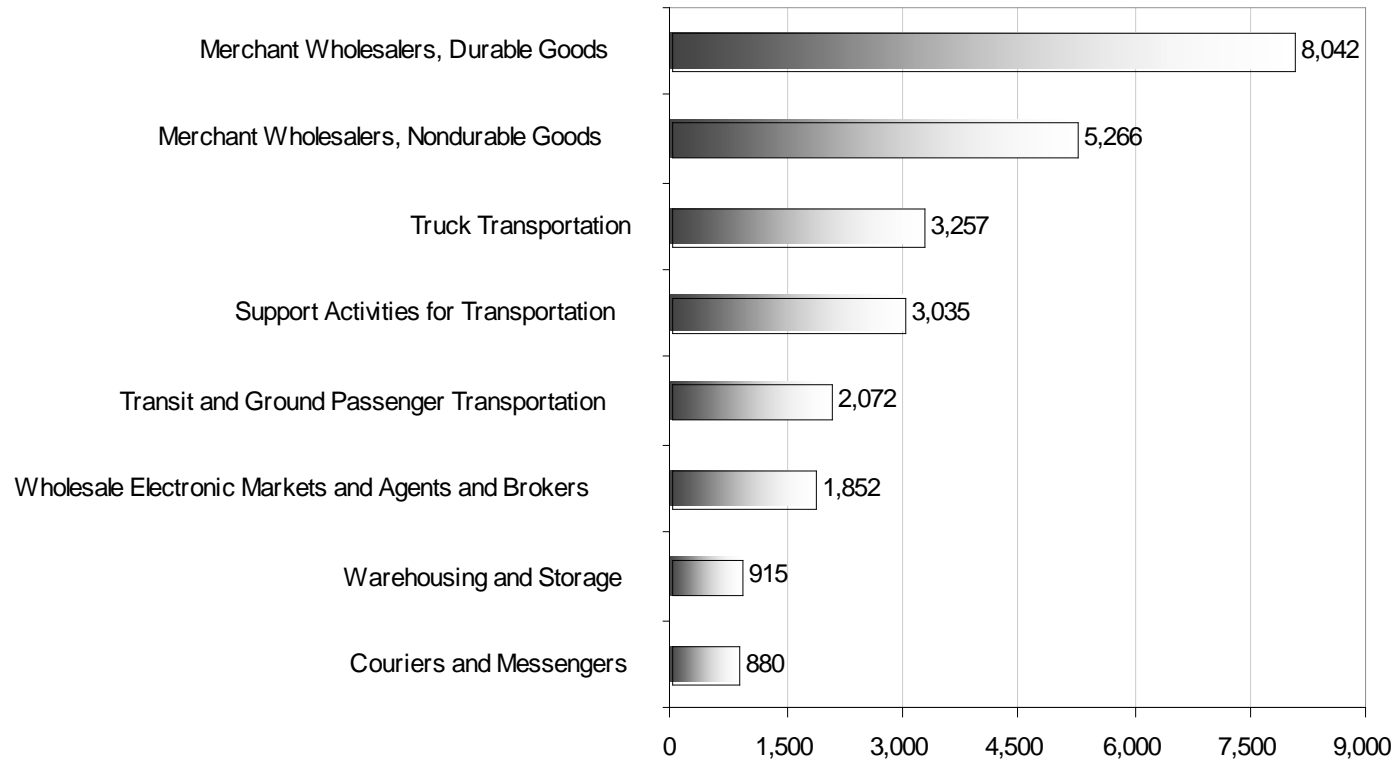
Source: Estimates based on 2005 Zip Code Business Patterns, U.S. Census Bureau.

The eastern part of Union County had the largest concentration of employees in Transportation and Warehousing in 2005. Elizabeth and Linden had the highest number of employees in this industry.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Employment, by Sub-Sector,* 2006



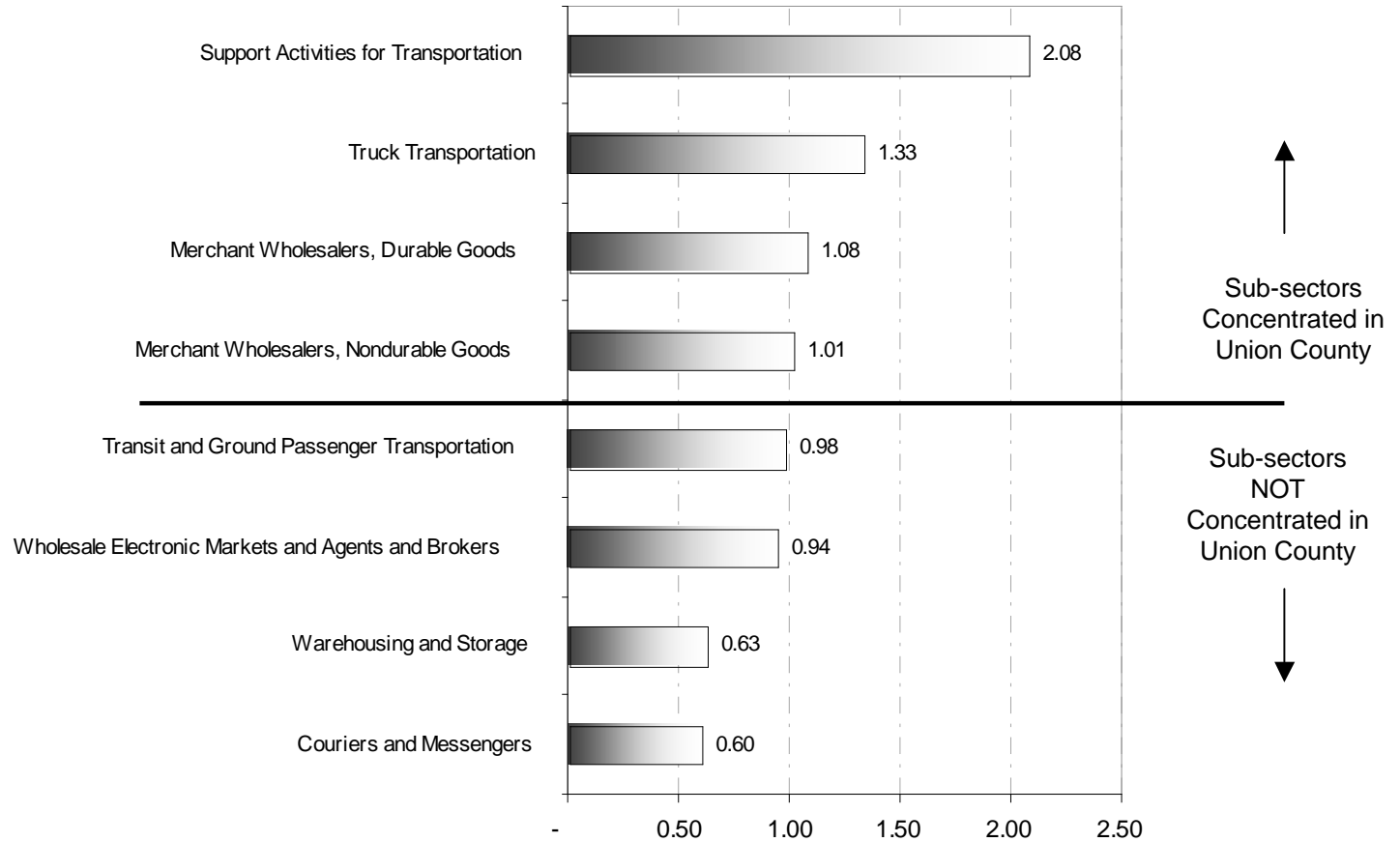
* Sub-sectors with fewer than 250 employees in 2006 were excluded, including water transportation (241), pipeline transportation (77), air transportation (54), rail transportation (0), scenic and sightseeing transportation (0), and postal service (0).

Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Employment Concentration, by Sub-Sector, 2006

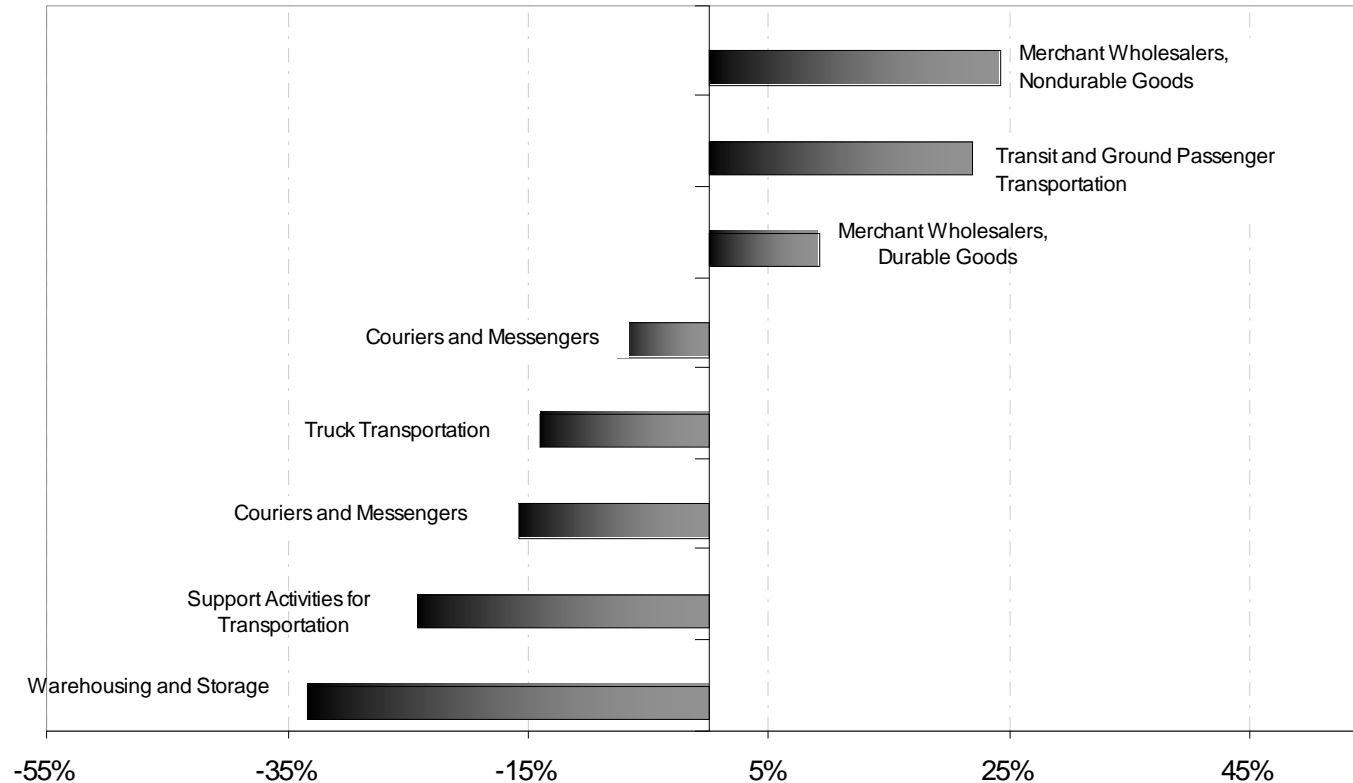


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Recent Change in Employment, by Sub-Sector, 2002-06

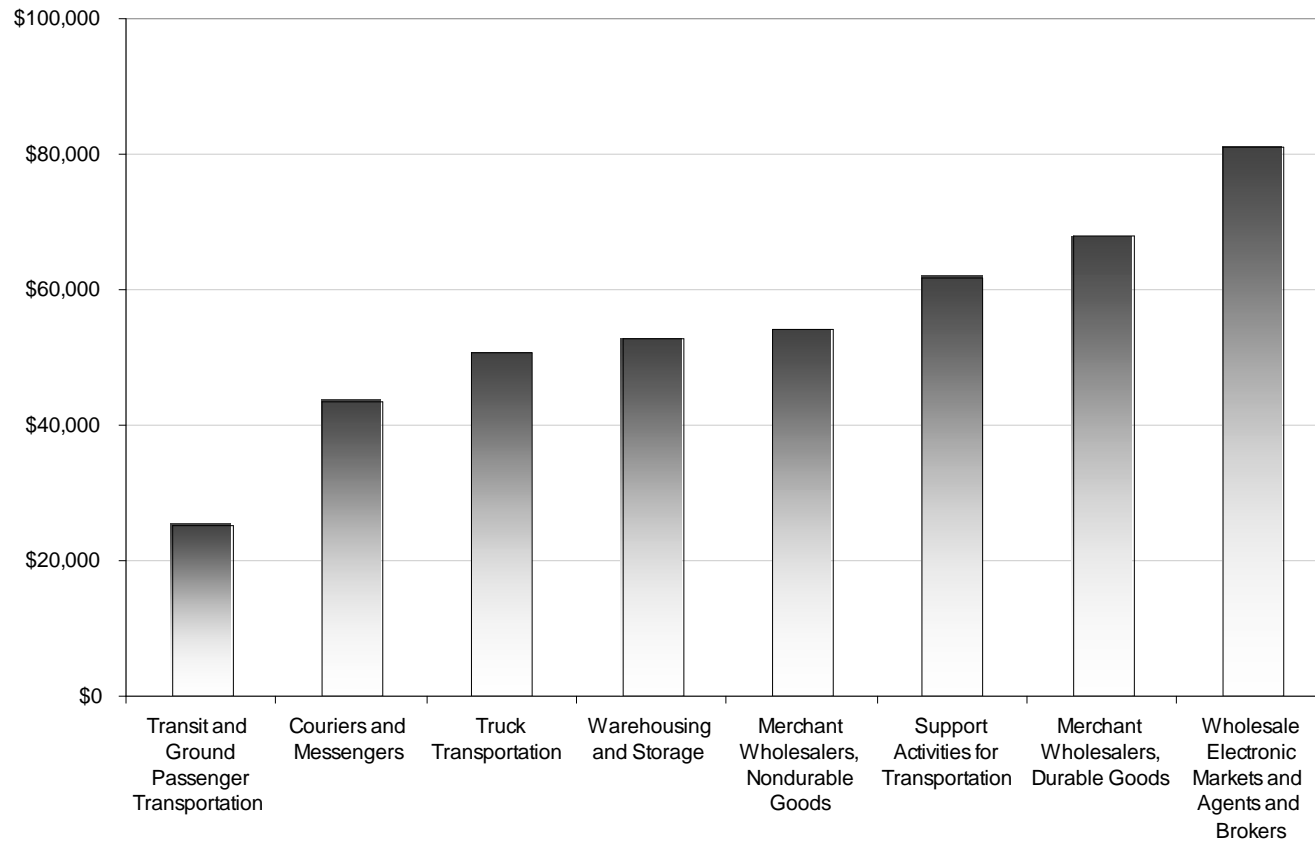


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Average Wages, by Sub-Sector, 2006

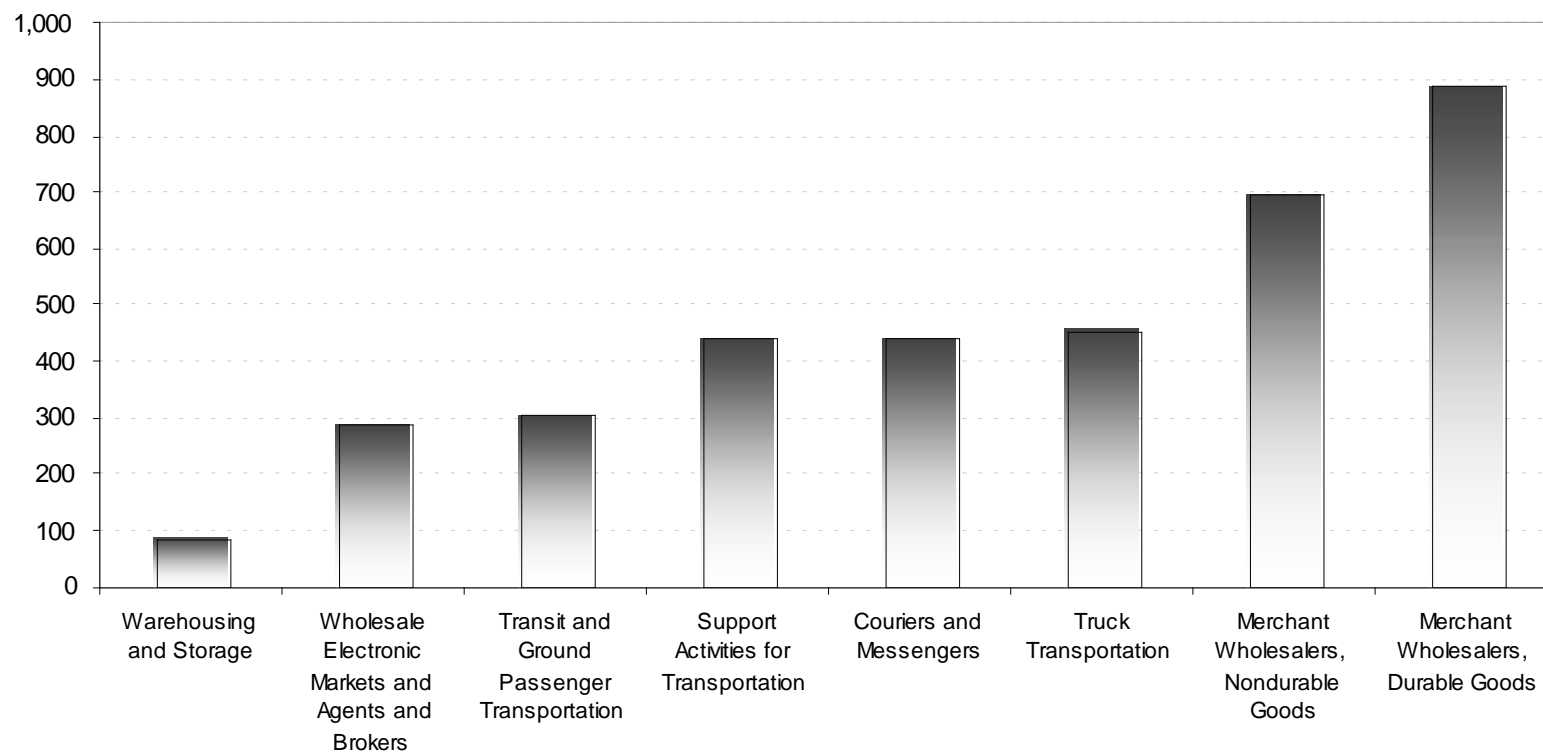


Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Number of New Hires, by Sub-Sector, 2006



Source: U.S. Census Bureau,
Local Employment Dynamics.



III. Detailed Information on Key Industries in Union County

Transportation, Logistics, and Distribution: Key Occupations in Support Activities for Transportation, Truck Transportation, and Warehousing and Storage

Ranked by prevalence in the selected sub-sectors

Occupation	Union County			Average Wage in the Union County Region*
	Estimated Employment: 2004 (All Industries)	Estimated Employment: 2014 (All Industries)	Annual Average Job Openings (All Industries)	
Truck Drivers, Heavy and Tractor-Trailer	3,000	3,200	70	\$37,800
Laborers and Freight, Stock, and Material Movers, Hand	5,200	5,150	170	\$21,420
Industrial Truck and Tractor Operators	1,450	1,500	30	\$27,040
Truck Drivers, Light or Delivery Services	2,900	3,250	60	\$28,260
Office Clerks, General	5,900	6,050	150	\$25,270
Packers and Packagers, Hand	2,500	2,650	60	\$16,980
Stock Clerks and Order Fillers	3,600	3,250	130	\$21,070
General and Operations Managers	3,400	3,750	100	\$125,880
First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	900	1,050	30	\$52,780
Customer Service Representatives	3,400	4,050	120	\$32,250
Shipping, Receiving, and Traffic Clerks	1,450	1,400	30	\$28,050
Bookkeeping, Accounting, and Auditing Clerks	4,500	4,600	90	\$35,100
Bus and Truck Mechanics and Diesel Engine Specialists	500	550	20	\$44,350
First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	650	700	20	\$46,640
Cargo and Freight Agents	400	400	10	\$35,510
Dispatchers, Except Police, Fire, and Ambulance	500	550	10	\$36,290
First-Line Supervisors/Managers of Office and Administrative Support Workers	2,700	2,800	70	\$48,460
Driver/Sales Workers	850	1,000	30	\$22,960
Transportation, Storage, and Distribution Managers	300	300	10	\$81,670
Maintenance and Repair Workers, General	1,950	2,050	50	\$35,150



Acknowledgements

The findings and recommendations in this report, *The Union County Economic and Workforce Competitiveness Project*, were produced under a contract between the County of Union and the John J. Heldrich Center for Workforce Development at Rutgers, The State University of New Jersey.

The principal authors of this report were Dr. Aaron Fichtner and Jennifer Cleary. William Tracy and Richard Kinney conducted numerous interviews and were instrumental in completing this project, as was Neil Ridley. Additional analysis and writing for this report was provided by Paimann Lodhi, Stephanie Luk, and Kyeong-Su Kim. Robb C. Sewell edited the report.

Special appreciation is due to the following individuals for their guidance and assistance throughout the project: Al Faella, Economic Development Director; Frank Guzzo, Human Services Director; William Inglefield, Special Assistant to the Director of Human Services; and Bette Jane Kowalski, Union County Freeholder Chairwoman.

A variety of other individuals and organizations provided vital information for this report through interviews with Heldrich Center researchers. See Appendix A for a full list of organizations included in interviews.

Appendix A

Interview Contacts

Government and Planning

Township of Cranford, Downtown Management Corporation
Kathleen Prunty

Elizabeth Department of Planning and Community Development
Oscar Ocasio

North Jersey Transportation Planning Authority
Cliff Sobel

The Union County Alliance
Michael Murray

Union County Economic Development Corporation
Maureen Tinen, Dan Devaney, Bill O'Dea

Union County Department of Economic Development and Division of Planning and Community Development
Al Faella, Kamal Saleh, Liza Betz, Stephen Meckham

Union County Department of Human Services
Frank Guzzo

Union County Workforce Investment Board
Margaret Neafsey, Joseph Keenan (Also Councilman, City of Elizabeth, and Union County CEDS Chair), Mike D'Agastino (Also represents Millwrights Carpenters Union)

Education

Kean University
Dahwood Farahi

Union County College
Paul Jurmo
Dr. Farrell

Union County Superintendent of Schools
Carmen Centuolo

Union County Vocational-Technical Schools
Dr. Thomas Bistocchi

Employers and other Stakeholders

Cali Futures
Brant Cali

Celegene
Sol Barer

Conoco Philips
Mike Karlovich

Greater Elizabeth Chamber of Commerce
Gordon Haas

Employers and other Stakeholders (cont'd)

Muhlenburg Regional Medical Center
Nancy A. Fiamingo

Norfolk Southern Railroad
Rich Crawford

Overlook Hospital
Grant Knaggs

Schering-Plough Corporation
Joseph Starkey

Suburban Chamber of Commerce
Maureen Kelly
Joe Steiner

Trinitas Hospital
Glen Nacion

Wakefern Corporation
Robert Gal