



Edward J. Bloustein School of
Planning and Public Policy

***Key Findings and
Recommendations***
**The Union County
Economic and Workforce
Competitiveness Project**

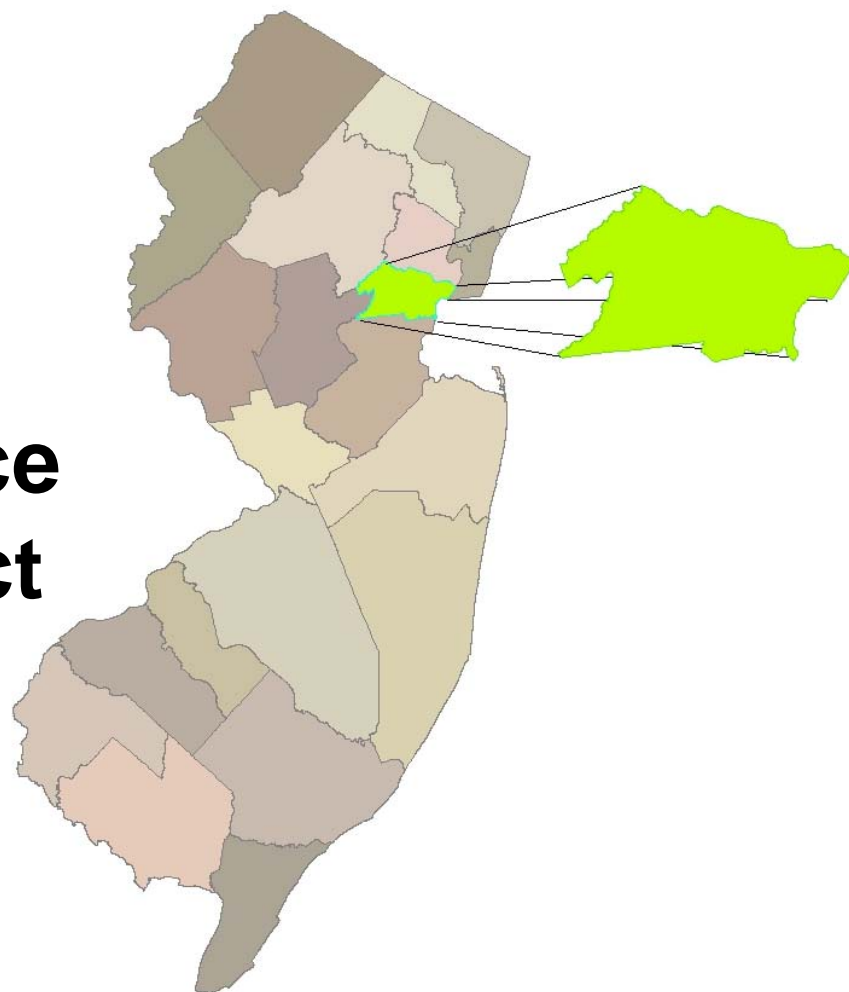
Prepared for

The County of Union, New Jersey

Prepared by

John J. Heldrich Center for Workforce Development

February 2008



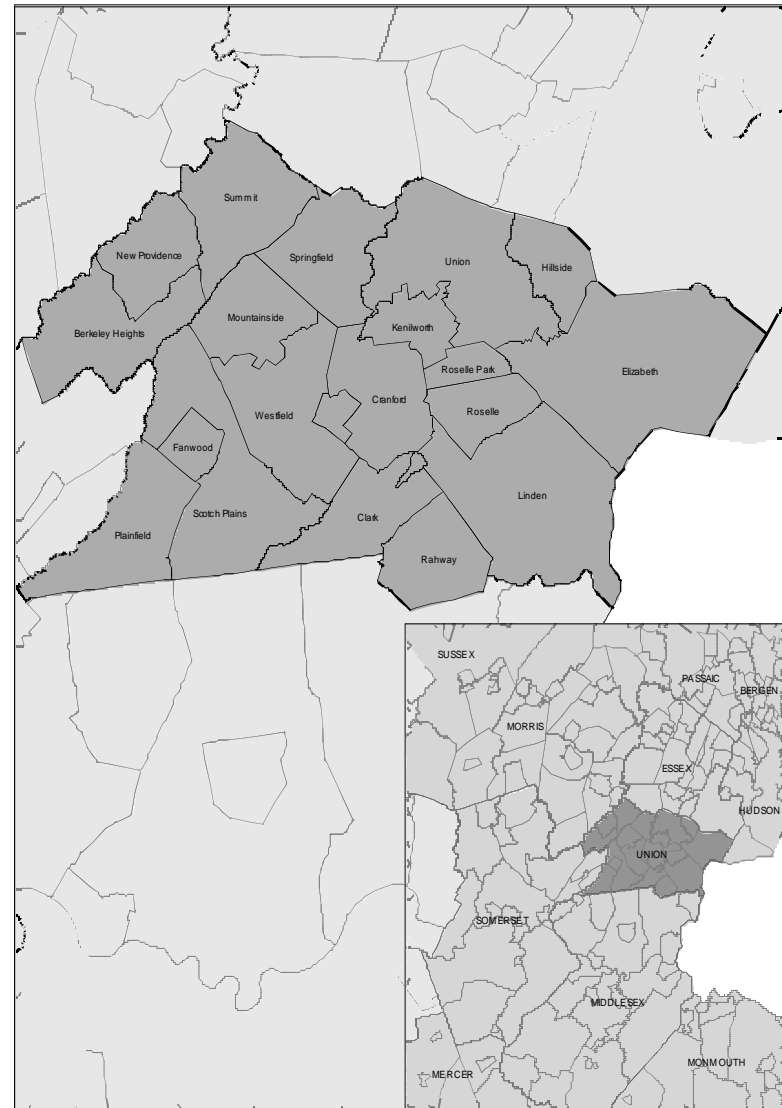


Union County and Its Municipalities: A Brief Overview

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.*

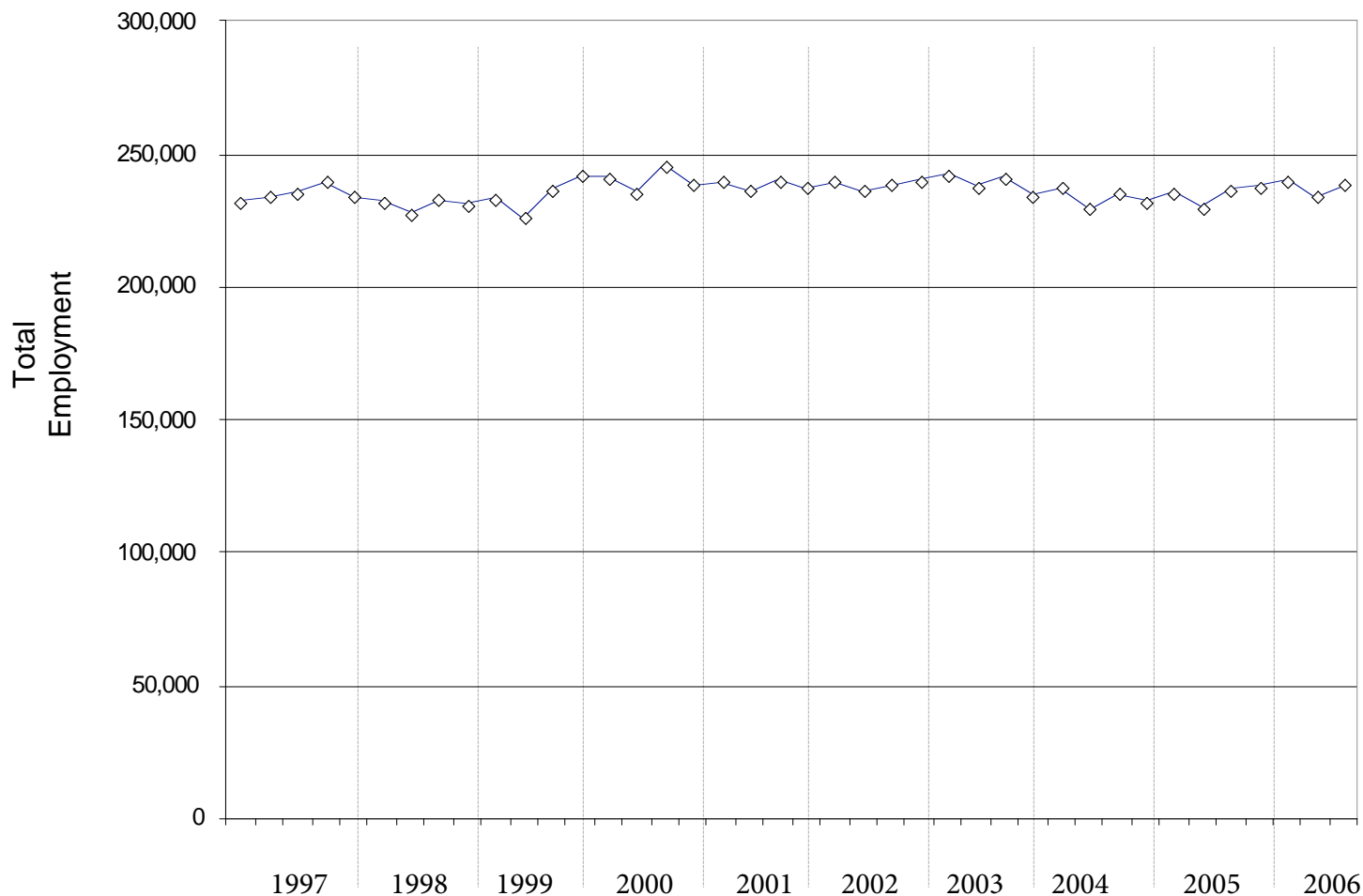
- **Union County moved from reliance on declining “Old Economy” Manufacturing sectors to a more diverse knowledge-based economy, allowing the county to successfully weather the nationwide decline in Manufacturing jobs.**
 - In 1997, Union County had nearly twice as many jobs in Manufacturing as the state (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)

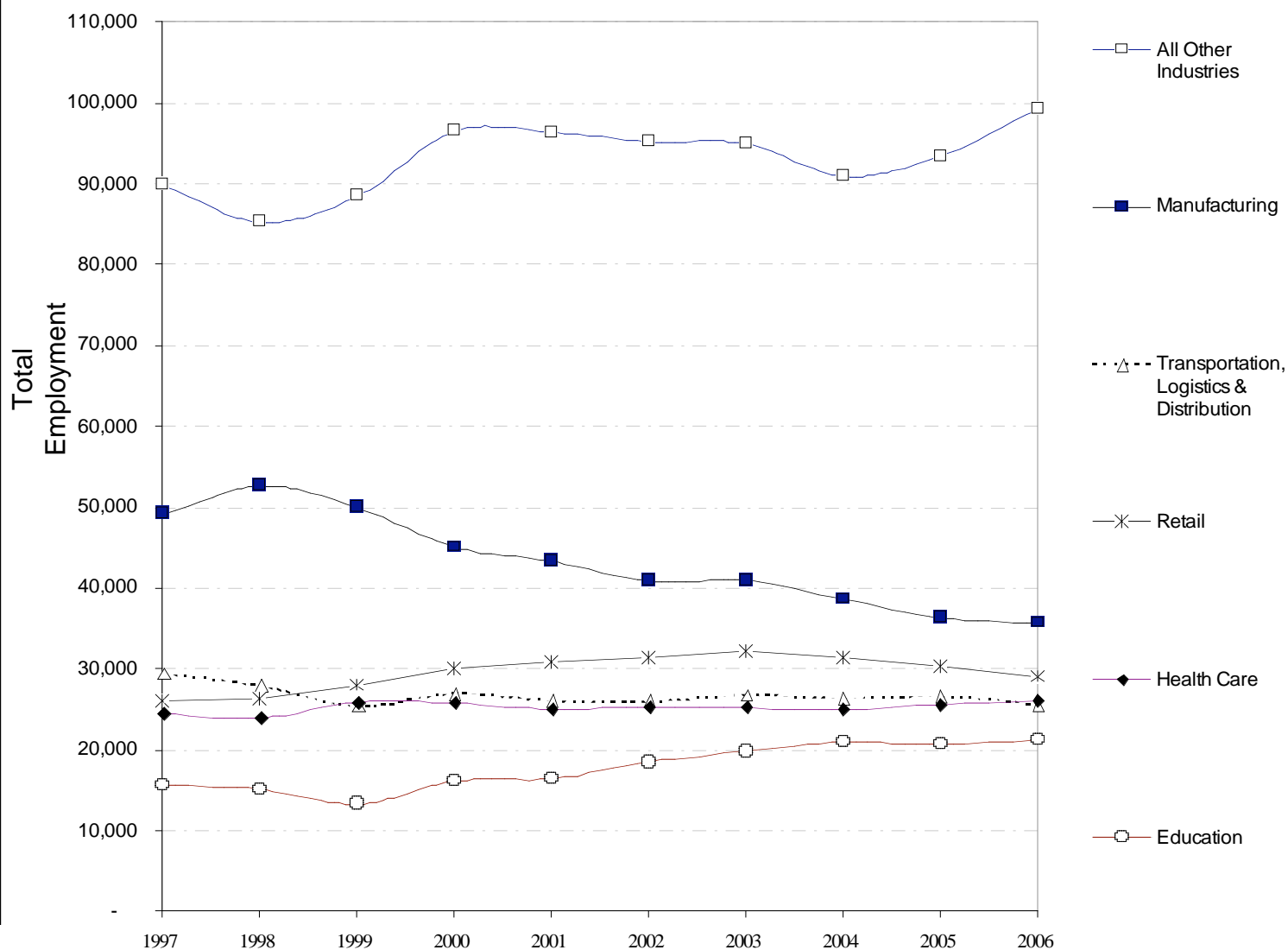
Between 1997 and 2006, Manufacturing employment fell by 27.5%, or over 13,500 jobs.

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

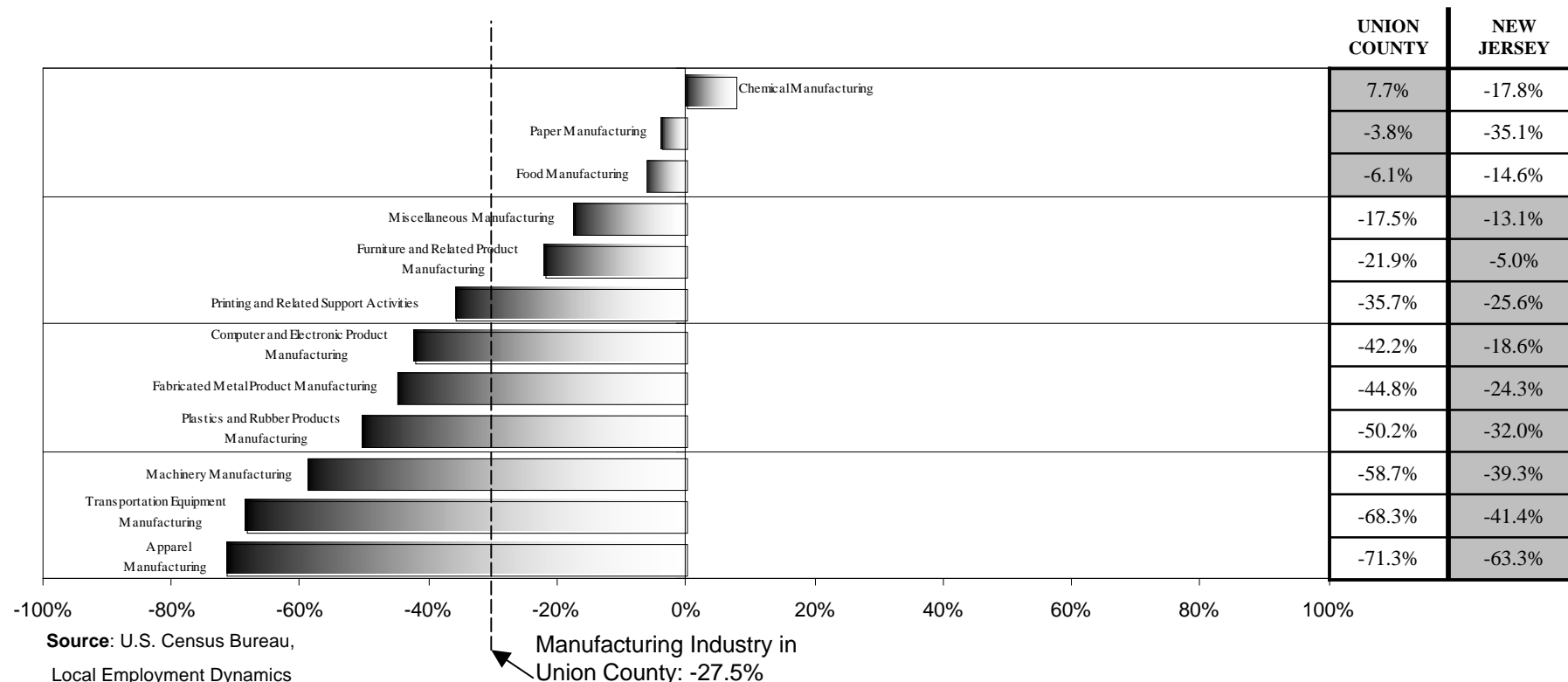


Source: U.S. Census Bureau,
Local Employment Dynamics.



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

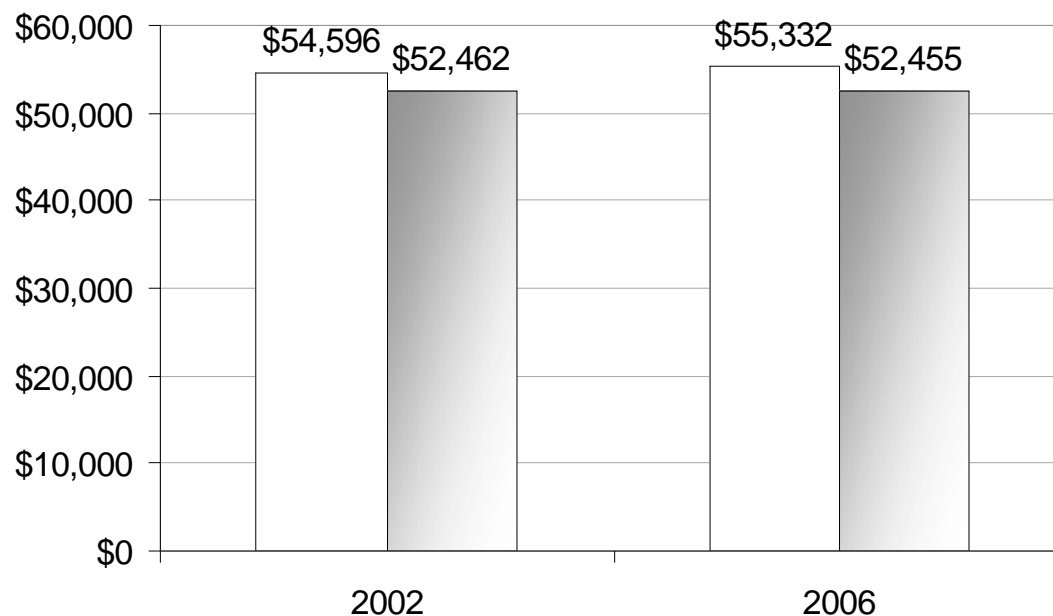
Industries with DECLINING Employment: 1997 to 2006		Industries with INCREASING Employment: 1997 to 2006	
Industry (Number of Employees 2006)	Change in Employment 1997 to 2006	Industry (Number of Employees 2006)	Change in Employment 1997 to 2006
Manufacturing (35,818)	(13,568)	Educational Services (21,337)	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.

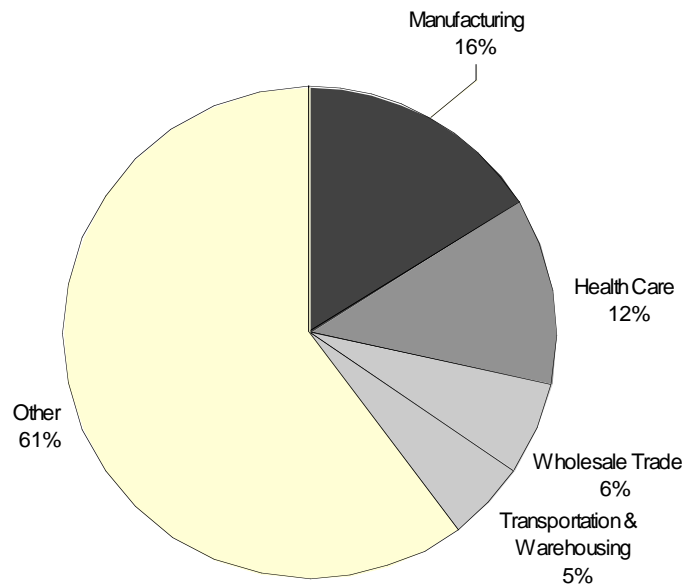
Target Industry Group #3: Transportation, Logistics, and Distribution (TLD), including Wholesale Trade, Transportation, and Warehousing

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**



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

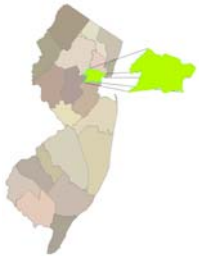
▪ 26,000+ workers in 2006

▪ 3,350+ hires/quarter

• 1,200+ new

• 2,100+ replacements

▪ Average wages \$57,319/year



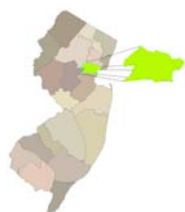
Key Finding #3: Demographic trends present policy opportunities and challenges for Union County.

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

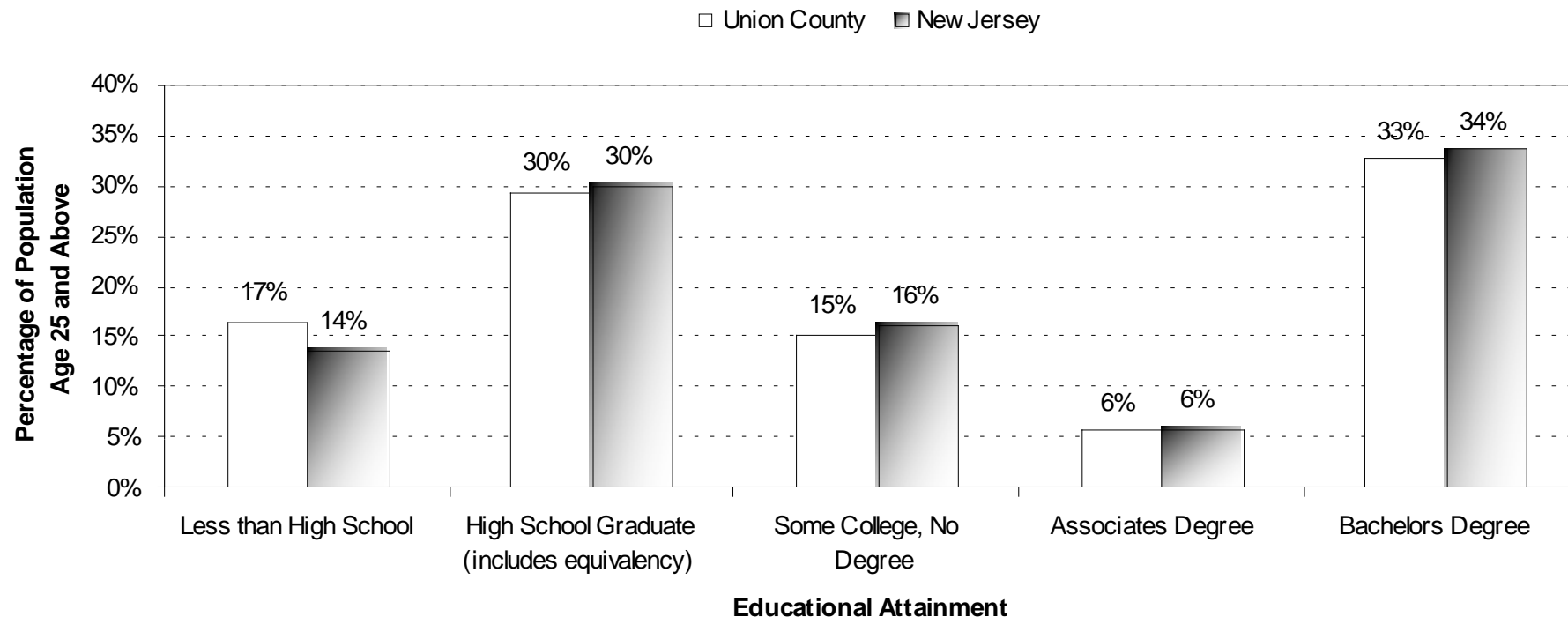
- Like New Jersey, Union County has a more highly educated population than the U.S. average. One-third of adults have a four-year degree or above, compared to just over one-quarter nationwide (27%) and 34% statewide.
- Union County has a slightly higher proportion of adults who have earned less than 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.



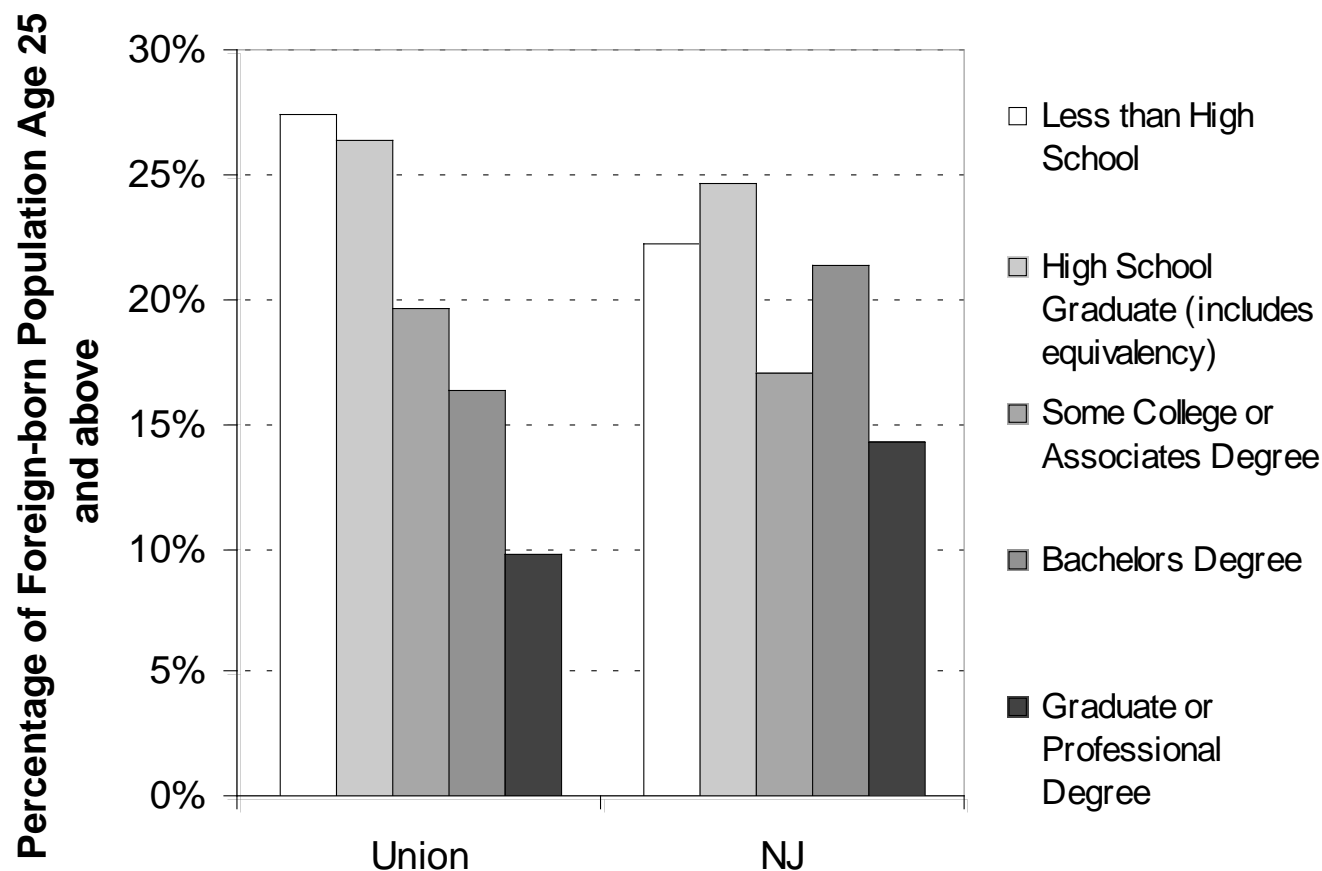
Key Finding #3 (Continued)

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



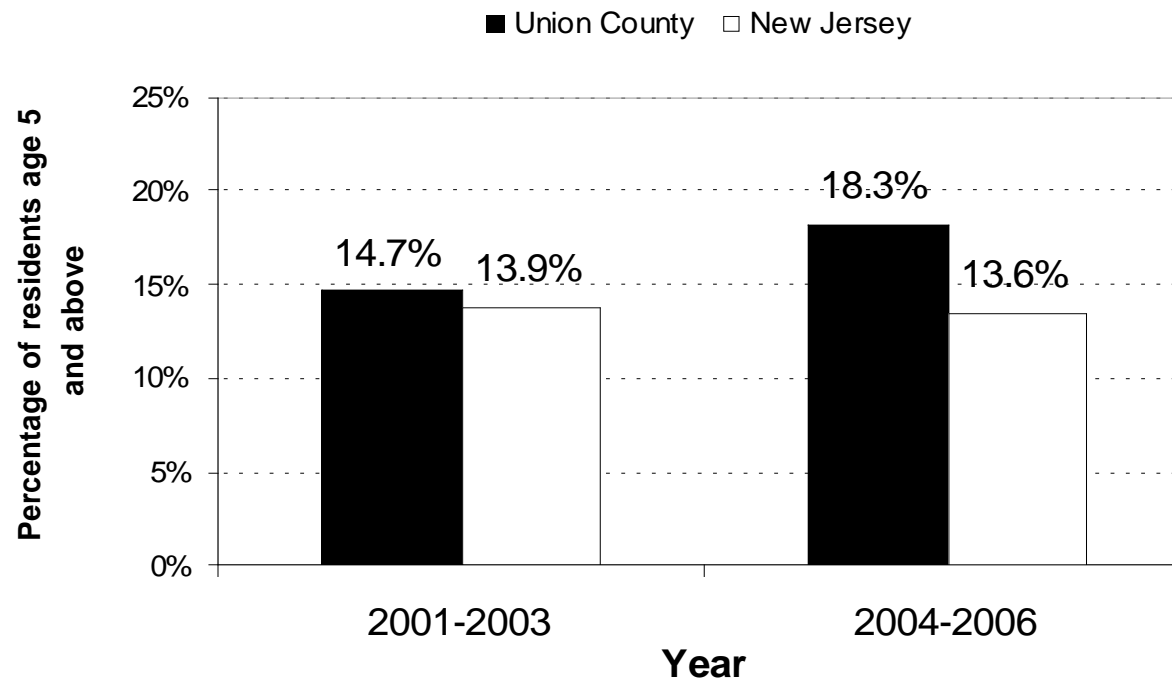
Sources: 2001-06 U.S. Census, American Community Survey, 3-year average data.

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%).

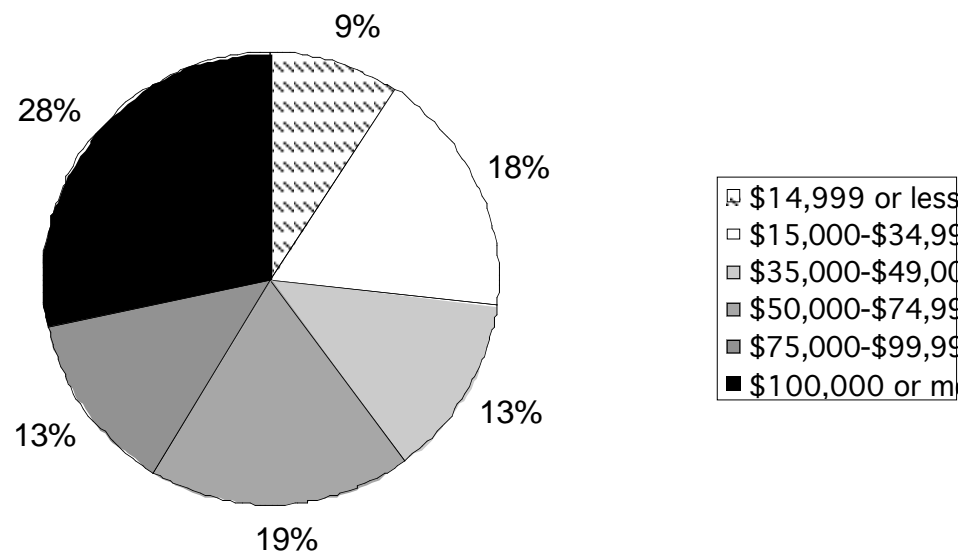


Key Finding #3 (Continued)

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.



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