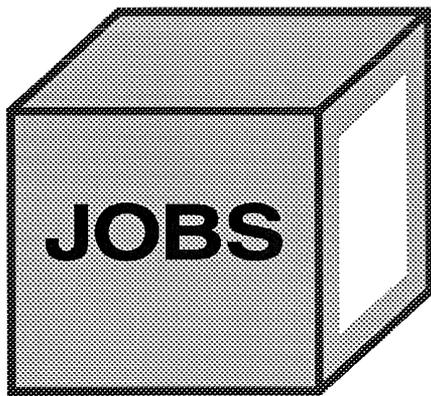


THE MISMATCH BETWEEN



&



in the
DELAWARE VALLEY



**THE DELAWARE VALLEY REGIONAL
PLANNING COMMISSION**

JULY 1991

**THE MISMATCH BETWEEN
JOBS AND WORKERS
IN THE
DELAWARE VALLEY REGION**

Prepared by:



Delaware Valley Regional Planning Commission

**The Bourse Building
Twenty-One South Fifth Street
Philadelphia, Pennsylvania 19106**

JULY 1991

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Created in 1965, the Delaware Valley Regional Planning Commission (DVRPC) is an interstate, intercounty and intercity agency which provides continuing, comprehensive and coordinated planning for the orderly growth and development of the Delaware Valley region. The region includes Bucks, Chester, Delaware, and Montgomery counties as well as the City of Philadelphia in Pennsylvania and Burlington, Camden, Gloucester, and Mercer counties in New Jersey. The Commission is an advisory agency which divides its planning and service functions between the Office of the Executive Director, the Office of Public Affairs, and three line Divisions: Transportation Planning, Regional Information Services Center, which includes Strategic Planning, and Finance and Administration. DVRPC's mission for the 1990s is to emphasize technical assistance and services and to conduct high priority studies for member state and local governments, while determining and meeting the needs of the private sector.



The DVRPC logo is adapted from the official seal of the Commission and is designed as a stylized image of the Delaware Valley. The outer ring symbolizes the region as a whole while the diagonal bar signifies the Delaware River flowing through it. The two adjoining crescents represent the Commonwealth of Pennsylvania and the State of New Jersey. The logo combines these elements to depict the areas served by DVRPC.

DELAWARE VALLEY REGIONAL PLANNING COMMISSION

Publication Abstract

<p>TITLE</p> <p>THE MISMATCH BETWEEN JOBS AND WORKERS IN THE DELAWARE VALLEY</p>	<p>Date Published: July 1991</p> <p>Publication No. 91027</p>
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Geographic Area Covered:

The nine-county DVRPC region, including Philadelphia, Bucks, Chester, Delaware and Montgomery counties in Pennsylvania and Burlington, Camden, Gloucester and Mercer counties in New Jersey.

Key Words:

Employers, job skills, training, decentralization, employment by sector, housing affordability

ABSTRACT

Explores the social and economic impacts of a mismatch between the location and types of jobs available in the Delaware Valley and the skills of the regional labor force. Reviews the forces of demographic change in the region, including the shifting of population and employment to suburban locations. Considers forecasts of future population and employment locations and densities. Examines employer skill requirements and existing job training programs and proposes future research agenda.

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I. INTRODUCTION

The mismatch between jobs and workers in the Delaware Valley region is an issue with potentially significant social and economic implications for the labor force, business and the regional economy. A mismatch between jobs and workers occurs when existing jobs cannot be filled by the available labor pool due to either the location of the job or skill requirements of the job. If the available jobs are physically inaccessible to the majority of the labor pool, or workers' skills are inadequate to meet employers' needs, the region may be faced with increased unemployment, lower productivity, increased social service costs and a weakened economy.

The Delaware Valley has witnessed a dramatic transformation over the past 20 years, with many new jobs created in suburban areas. But an unforeseen impact of this decentralization has been the difficulty encountered by suburban employers to fill their labor needs. Suburban employers are unable to tap Philadelphia's extensive labor supply because of the length of the commute, the expense of the commute and, in many cases, the jobs' inaccessibility to public transportation. The lack of affordable suburban housing has limited the ability of urban dwellers to relocate to the suburbs to fill the available jobs and has further exacerbated the mismatch problem.

When viewed in terms of skill requirements, there are three types of skills which may be mismatched. "Skills" is a broad term which may refer to the occupational skill requirements of a given job. The transformation of the region from a manufacturing-based economy to one with a technological and service orientation has created new skill requirements which may not be met by area employees. Skills may also refer to the demand for employees with general job preparedness and a good work ethic, which are necessary to function in any job, but particularly the service sector jobs now available. Finally, skill requirements may refer to the employers' need for employees who are proficient in basic math, english and communications.

Whether due to the decentralization of the region into multiple business centers, population and employment dispersal, technological shifts or other demographic changes, an incompatible job market and labor force could act as a brake on the engine of regional economic growth and the ability of the Delaware Valley to compete nationally and globally. The human casualties of such a mismatch can be just as devastating, when viewed in terms of the increased burden the untrained, unemployable persons will place on the community as well as the social welfare system.

Over the past five years, the mismatch between jobs and workers has received increased attention both as a national problem and as a concern here in the

Delaware Valley. The purpose of this study is to provide an improved understanding of regional development patterns, the forces which are creating the mismatch between jobs and workers, and recent efforts to close the gap. Future research efforts of the DVRPC are described.

The paper is organized into three major sections which describe:

- recent economic and demographic trends that have affected the fit between available jobs and workers' skills;
- identification of the issues involved in the mismatch between jobs and workers, including a review of the programs which have been implemented to address the problem; and,
- an outline of a research plan for Phase II of this project.

II. REGIONAL DEVELOPMENT PATTERNS

Regional Population Changes

The Delaware Valley region grew dramatically between 1950 and 1970, but growth since 1970 can be characterized as slow to moderate. As indicated on Table 1, the region grew by approximately 18.2% between 1950 and 1960 (representing an increase of over 708,000 people) and gained an additional 519,000 people (an 11.3% increase) between 1960 and 1970. Growth during these decades was entirely in the suburban counties, as the City of Philadelphia lost a total of 121,600 residents during these two decades. By contrast, both Bucks and Montgomery counties realized increases of over 270,000 people per county between 1950 and 1970.

Although overall population growth slowed after 1970, the pattern of regional decentralization continued. The region experienced an overall population loss of 2% between 1970 and 1980. This population loss was largely attributable to a significant loss of population in the City of Philadelphia and in Delaware County, due primarily to a loss of manufacturing jobs in these older urban areas. During this same decade Bucks, Chester, Burlington and Gloucester counties each realized population gains of over 10%.

Although the region's population increased by 3% between 1980 and 1990, significant population gains in Bucks, Chester and Gloucester counties were again offset by losses in the City of Philadelphia and several older boroughs and townships surrounding the City. These population losses during the 1980's were linked to a continued loss of manufacturing jobs in these areas and a declining average household size, which has led to population losses in areas which have not experienced significant new residential construction. Figure 1 illustrates the continuing decentralization of the region's population between 1980 and 1990.

As illustrated in Figure 2, decentralization of the region's population is forecast to continue into the twenty-first century, with the largest percentage increases in population anticipated to occur in those municipalities located approximately 20 to 25 miles away from the region's center.

TABLE 1

POPULATION CHANGE*

DELAWARE VALLEY REGION

1950 - 1990

	1950 - 1960		1960 - 1970		1970 - 1980		1980 - 1990	
	Absolute Change	Percent Change	Absolute Change	Percent Change	Absolute Change	Percent Change	Absolute Change	Percent Change
Philadelphia	(69.1)	-3.3%	(52.5)	-2.6%	(261.8)	-13.4%	(102.6)	-6.1%
Bucks	164	113.4%	108.1	35.1%	62.5	15%	61.9	12.9%
Chester	51.5	32%	67.1	32%	38.9	14%	59.7	19%
Delaware	139	33.5%	50.3	9.1%	(48.5)	-8%	(7.4)	-1.3%
Montgomery	163.6	46.3%	107.4	20.8%	19.5	3.1%	34.5	5.4%
Burlington	88.6	65.2%	98.6	43.9%	39.4	12.2%	32.5	9%
Camden	91.3	30.4%	64.3	16.4%	15.4	3.4%	31.2	6.6%
Gloucester	43.1	47%	37.8	28.1%	27.2	15.8%	30.2	15.1%
Mercer	36.6	15.9%	37.7	14.2%	3.8	1.2%	18	5.8%
TOTAL REGION	708.5	18.2%	518.9	11.3%	(103.6)	-2.0%	158.0	3.1%

*Population change in thousands.

Source: United States Census Bureau

Delaware Valley Regional Planning Commission, June 1991

Figure 1
POPULATION CHANGE
DELAWARE VALLEY REGION
1980 - 1990

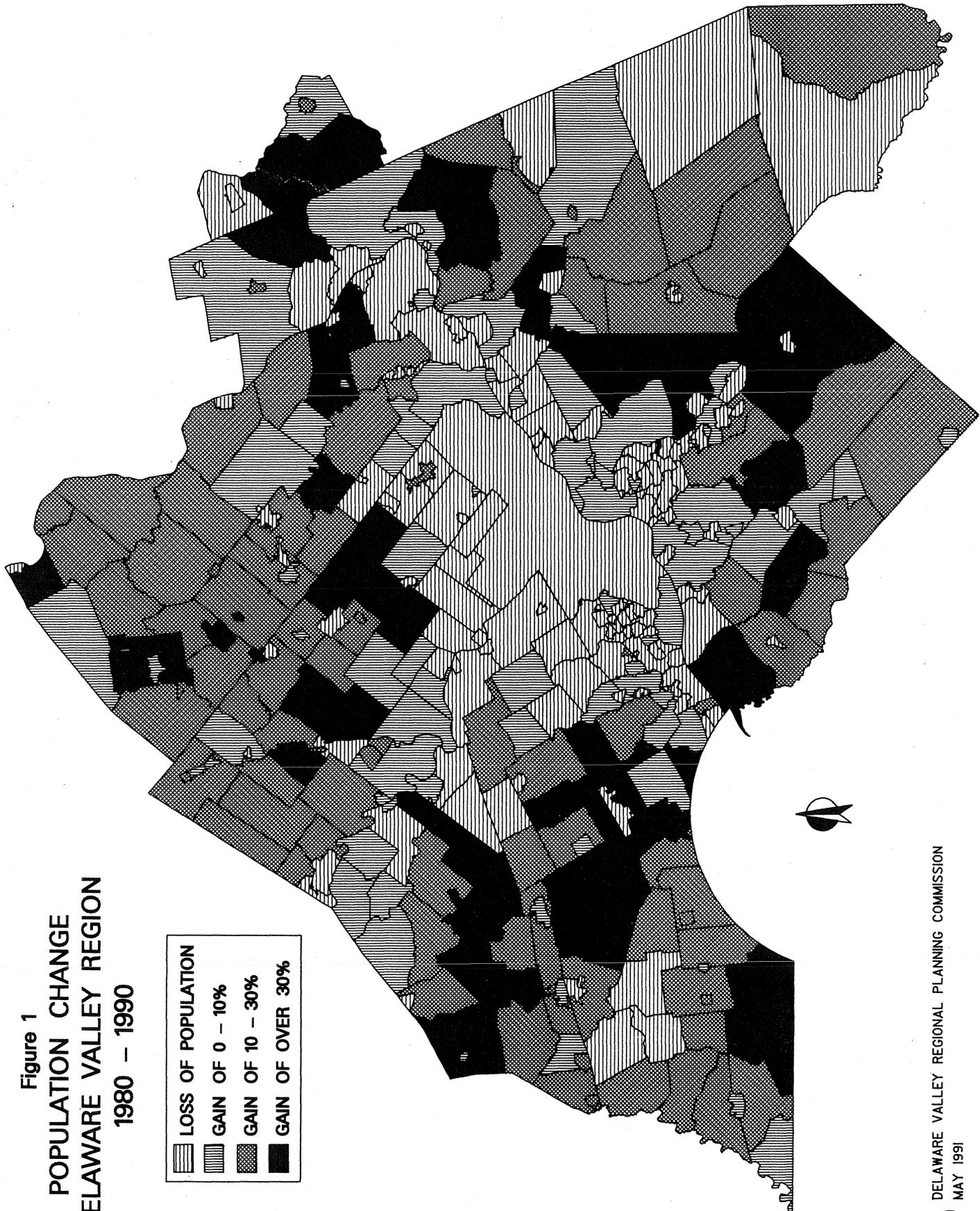
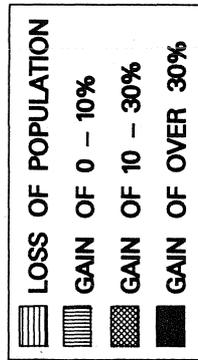
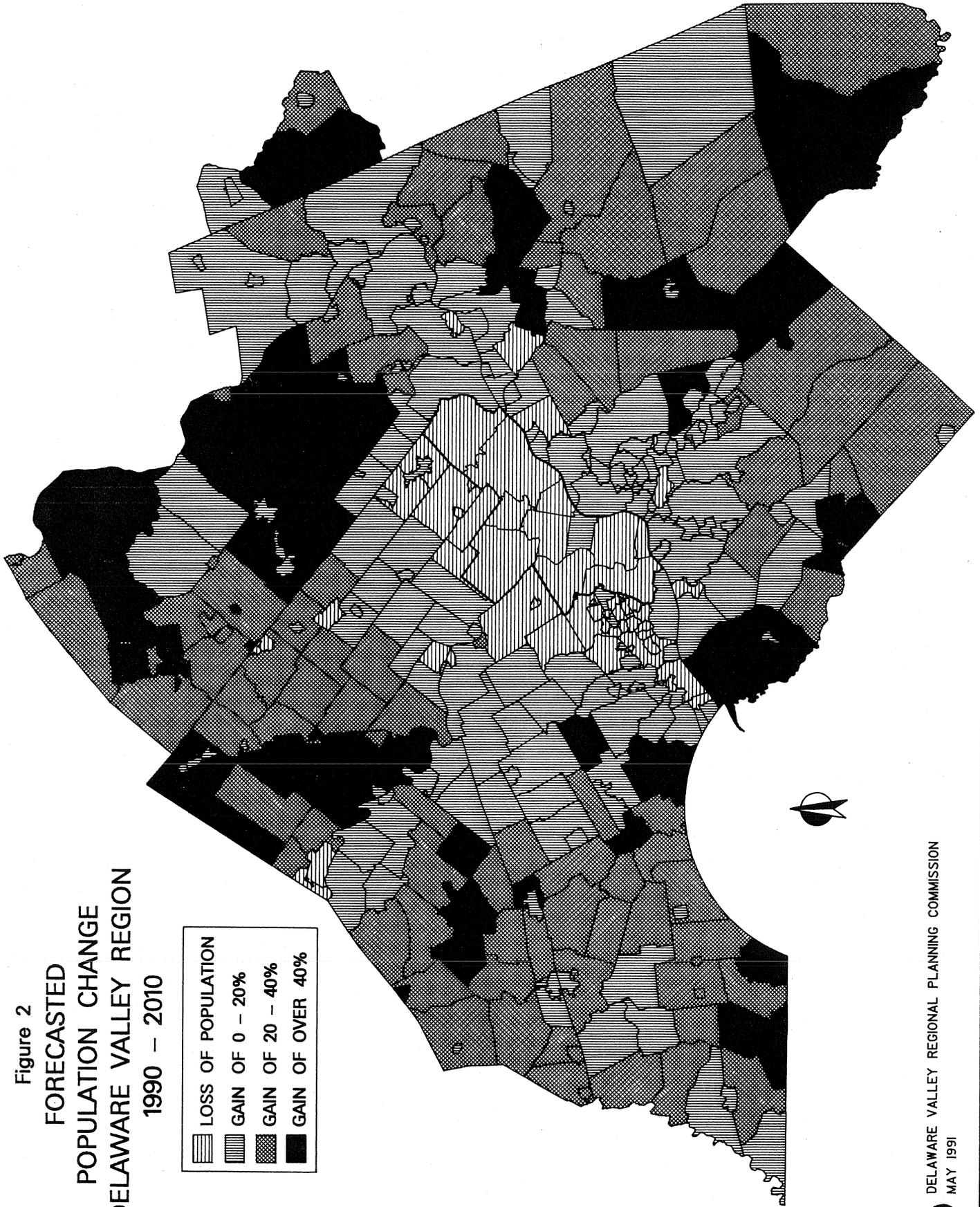
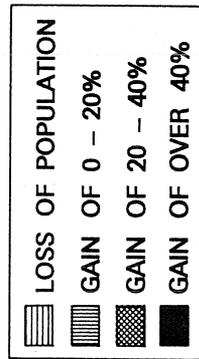


Figure 2
 FORECASTED
 POPULATION CHANGE
 DELAWARE VALLEY REGION
 1990 - 2010



Regional Employment Changes

Although population growth has been slow, overall employment growth in the region between 1970 and 1990 has been strong. Regional employment has grown during the last two decades despite a declining number of jobs within the City of Philadelphia, as employment opportunities continue to move into suburban locations. Between 1970 and 1990, the Delaware Valley region gained over 600,000 jobs, with the greatest increase realized in Montgomery County.

As indicated on Table 2, the City of Philadelphia lost approximately 148,000 jobs between 1970 and 1980. The rate of employment loss slowed during the 1980's, with the city's total employment remaining essentially stable between 1980 and 1990. In the suburbs, however, the region gained almost 350,000 jobs between 1970 and 1980, and an additional 410,000 jobs between 1980 and 1990, resulting in a net regional gain of almost 200,000 jobs during the 1970's, and over 400,000 jobs in the 1980's. Decentralization of the region's employment is forecast to continue over the next 20 years, as illustrated in Figure 3, with a slight growth in Philadelphia employment accompanied by stronger growth in the suburbs.

Table 2 also reveals those areas where employment growth has clearly exceeded population growth. Montgomery County, for example, gained over 200,000 jobs between 1970 and 1990 while gaining only 50,000 people during the same time period. Delaware County gained over 70,000 jobs while losing approximately 55,000 people, and Camden County added over 90,000 jobs but gained only 46,000 people. Similarly, Mercer County gained over 63,000 jobs between 1970 and 1990 while gaining only 21,000 residents.

In other counties, such as Chester and Gloucester, population growth exceeded employment growth between 1970 and 1990, while in Bucks and Burlington counties absolute population and employment growth were approximately equal. In Philadelphia, population losses have been twice as large as employment losses since 1970.

Philadelphia's employment base stabilized during the 1980's, as new office construction replaced lost manufacturing jobs. Strong employment growth in the suburban counties, however, has resulted in the city realizing a declining share of the region's overall employment, as illustrated in Figure 4. While remaining the largest single concentration of employment opportunities in the region, Philadelphia's share of the overall regional employment base has declined since 1970.

As with population, regional employment is expected to continue to grow in the suburbs (and particularly in the New Jersey suburbs) at a greater rate than in the City of Philadelphia. Figure 3 illustrates the forecasted location of that growth

through the year 2010, and Figure 5 describes the forecasted rate of growth. Although employment in the region as a whole is expected to increase by 10%, Philadelphia is forecast to realize only a 1% increase in employment by 2010, and Delaware County is projected to increase by 5%. The greatest percentage increase in employment (28%) is forecast for Gloucester County. Employment in Burlington County is also expected to increase significantly (by 19%).

TABLE 2

ABSOLUTE POPULATION AND

EMPLOYMENT GROWTH

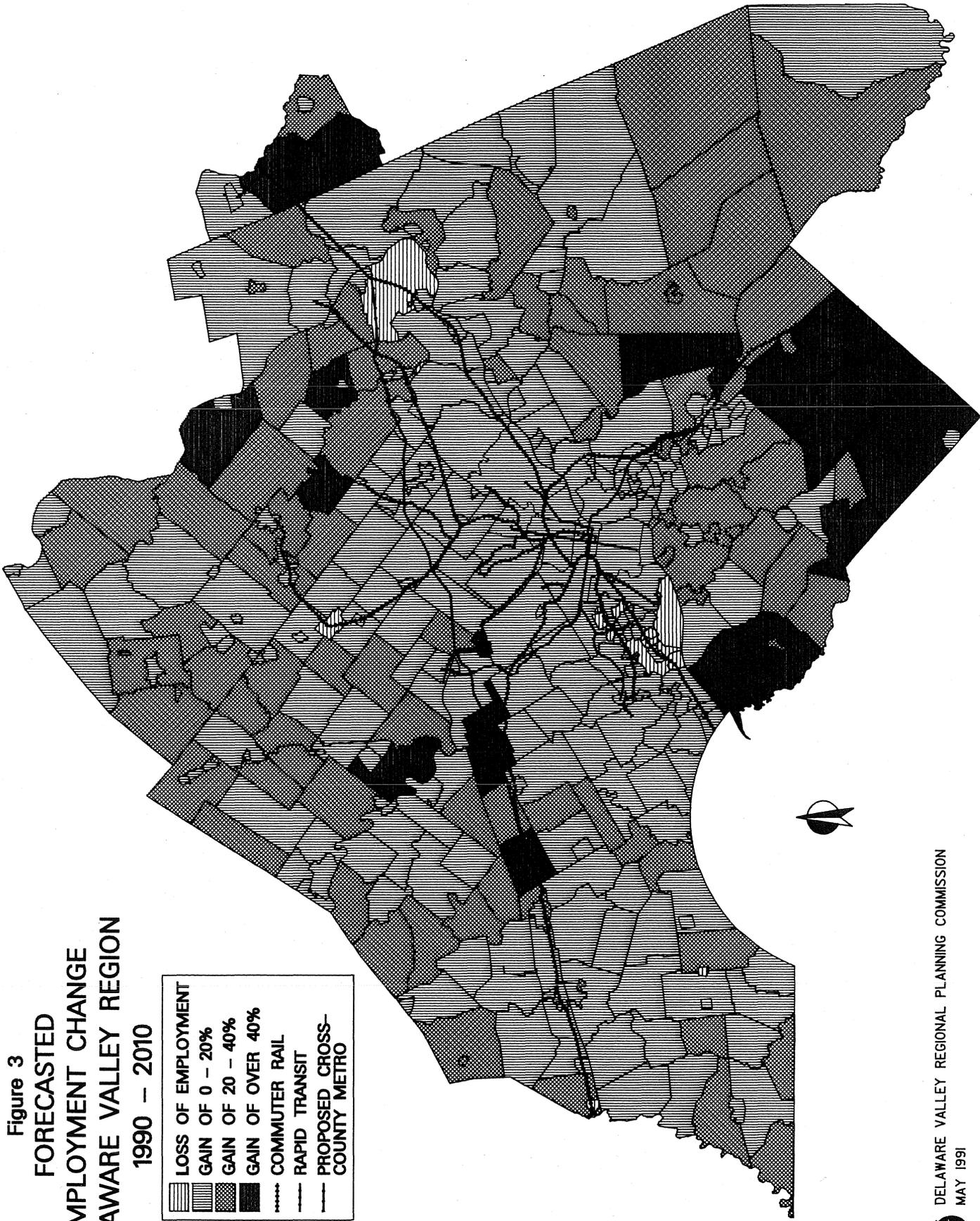
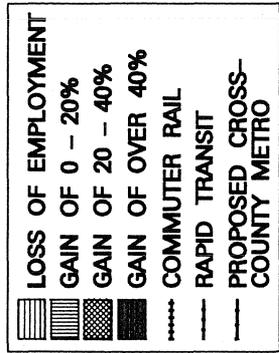
DELAWARE VALLEY REGION

	1970-1980		1980-1990	
	Population	Employment	Population	Employment
Philadelphia	-261,786	- 148,348	- 102,633	- 718
Bucks	+62,483	+ 68,984	+ 61,963	+ 60,301
Chester	+38,914	+ 39,329	+ 59,736	+ 44,107
Delaware	- 48,449	+ 35,531	- 7,356	+ 38,543
Montgomery	+19,541	+ 98,457	+ 34,490	+108,255
PENNSYLVANIA SUBURBS	+72,489	+242,301	+148,833	+251,206
Burlington	+39,410	+ 11,960	+ 32,524	+ 54,814
Camden	+15,359	+ 40,857	+ 31,174	+ 49,982
Gloucester	+27,236	+ 25,396	+ 30,165	+ 17,354
Mercer	+ 3,747	+ 26,664	+ 17,961	+ 37,315
NEW JERSEY SUBURBS	+85,752	+104,877	+111,824	+159,465
DVRPC REGION	-103,545	+198,830	+158,024	+409,953

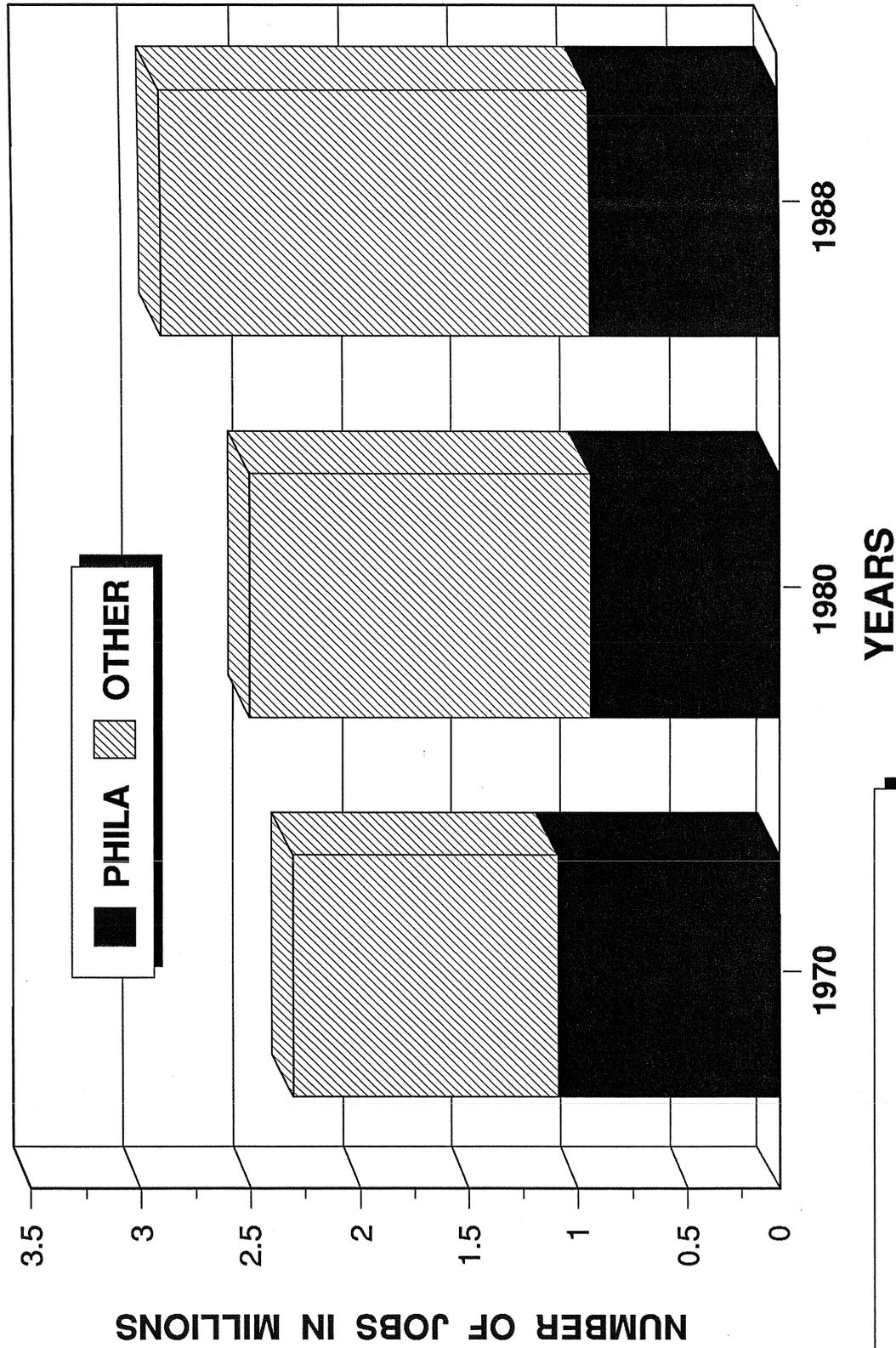
SOURCES: United States Census Bureau; Bureau of Economic Analysis. 1990 employment data based on Bureau of Economic Analysis statistics adjusted by Bureau of Labor Statistic's growth rates.

Delaware Valley Regional Planning Commission, May 1991

Figure 3
**FORECASTED
 EMPLOYMENT CHANGE
 DELAWARE VALLEY REGION
 1990 - 2010**



**FIGURE 4
PHILADELPHIA SHARE OF REGIONAL EMPLOYMENT**

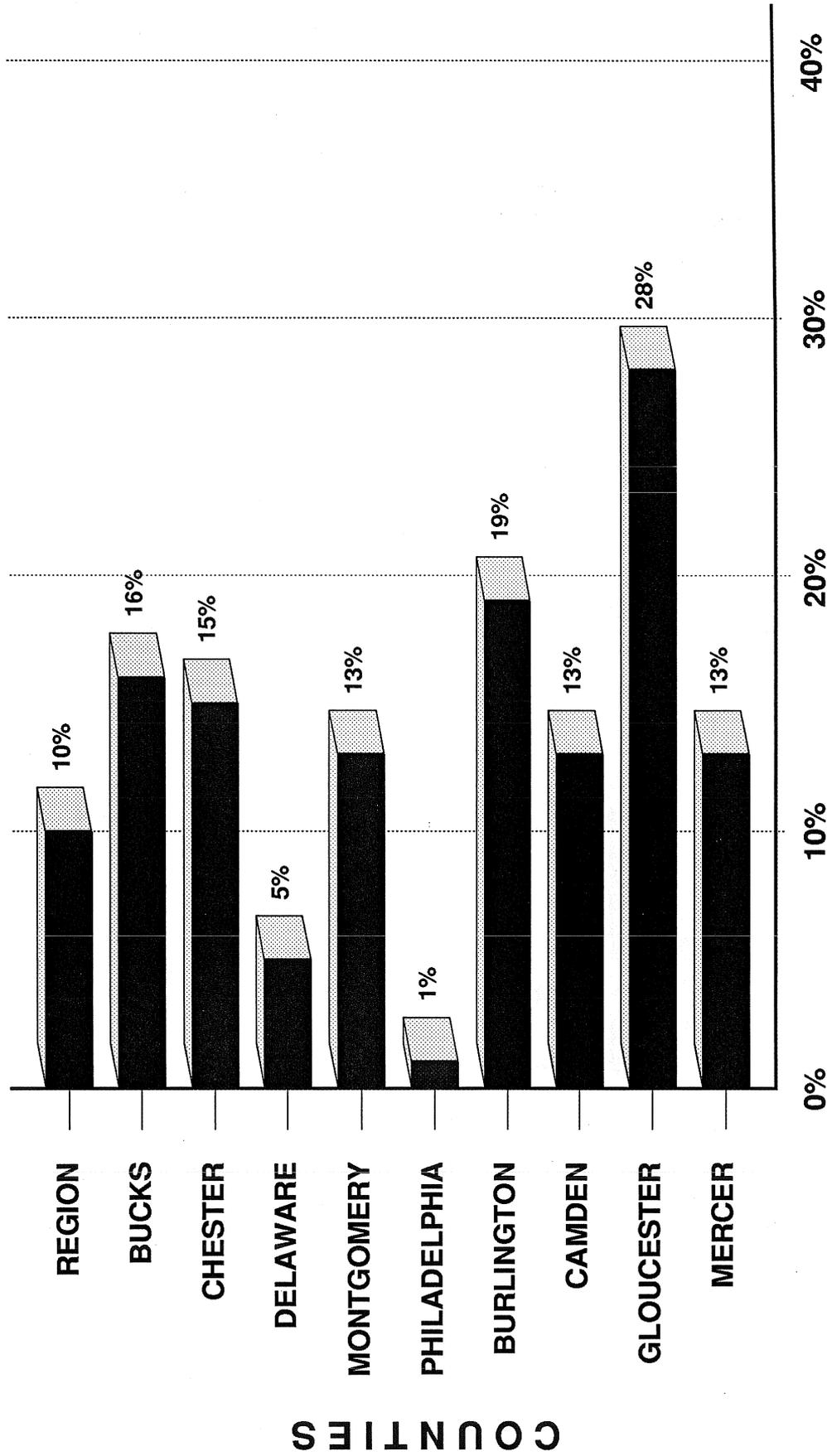


Source:
Bureau of Economic
Analysis



Delaware Valley Regional Planning Commission
June 1991

FIGURE 5
EMPLOYMENT GROWTH 1990 to 2010



*DVRPC Population and Employment
Forecasts, adopted June, 1988.*



Delaware Valley Regional Planning Commission
June 1991

The Location Of Jobs And Workers

Suburban counties, where employment growth has significantly exceeded population growth, have become net importers of labor, with the number of people entering the county to work each day exceeding the number of residents leaving the county to work in other locations. The outward migration of employment opportunities from the city center to suburban locations has serious implications for the region's travel patterns, particularly the mass transit network which was designed to move suburban residents to employment locations in the city. Transit services from the city out to suburban job locations or between suburban residential concentrations and suburban employment centers are extremely limited.

A comparison of the number of jobs located in each county within the DVRPC region to the number of workers who resided in each county in 1988 is presented in Table 3. Ratios of jobs to resident workers of less than 1 indicate counties where the number of resident workers exceeds the number of jobs, while ratios of more than 1 indicate the opposite. In Montgomery County, for example, there were approximately 1.31 jobs located within the county for each resident worker in 1988, while in Bucks County there were 0.88 jobs per worker. Counties such as Montgomery, Mercer and Philadelphia can be described as net importers of labor, while counties with ratios of less than 1, such as Bucks, Delaware and Gloucester, contain significant numbers of resident workers who commute to jobs in other locations. This information is illustrated in Figure 6.

Another method of comparing the number of jobs and the available work force in an area is to compare employment to the number of households. In previous years a jobs/households ratio of 1.0 to 1.25 was considered an acceptable indicator of a stable economy. Since changing demographics have resulted in an increase in the number of two-worker households, jobs/households ratios ranging up to 1.5 are now considered an acceptable indication that labor force needs can be met by the population surrounding the employment center. As illustrated in Table 4, the estimated 1990 jobs/households ratios in the DVRPC region range from 1.13 in Gloucester County to 2.11 in Montgomery County. In Montgomery County and Mercer County, estimated jobs/households ratios indicate a clear mismatch between the location of employment opportunities and the location of the population (and hence the labor force).

The ratio of jobs to households is forecasted to remain high in Montgomery and Mercer counties and increase to over 1.5 in the City of Philadelphia by the year 2010. While a higher ratio of jobs to households is appropriate for the City of Philadelphia, given the capacity of its existing transit system to move suburban workers to city job sites, the mismatch between employment centers and an available labor force is expected to continue to impact the suburban counties.

TABLE 3
EMPLOYMENT AND THE RESIDENT LABOR FORCE, 1988
DELAWARE VALLEY REGION

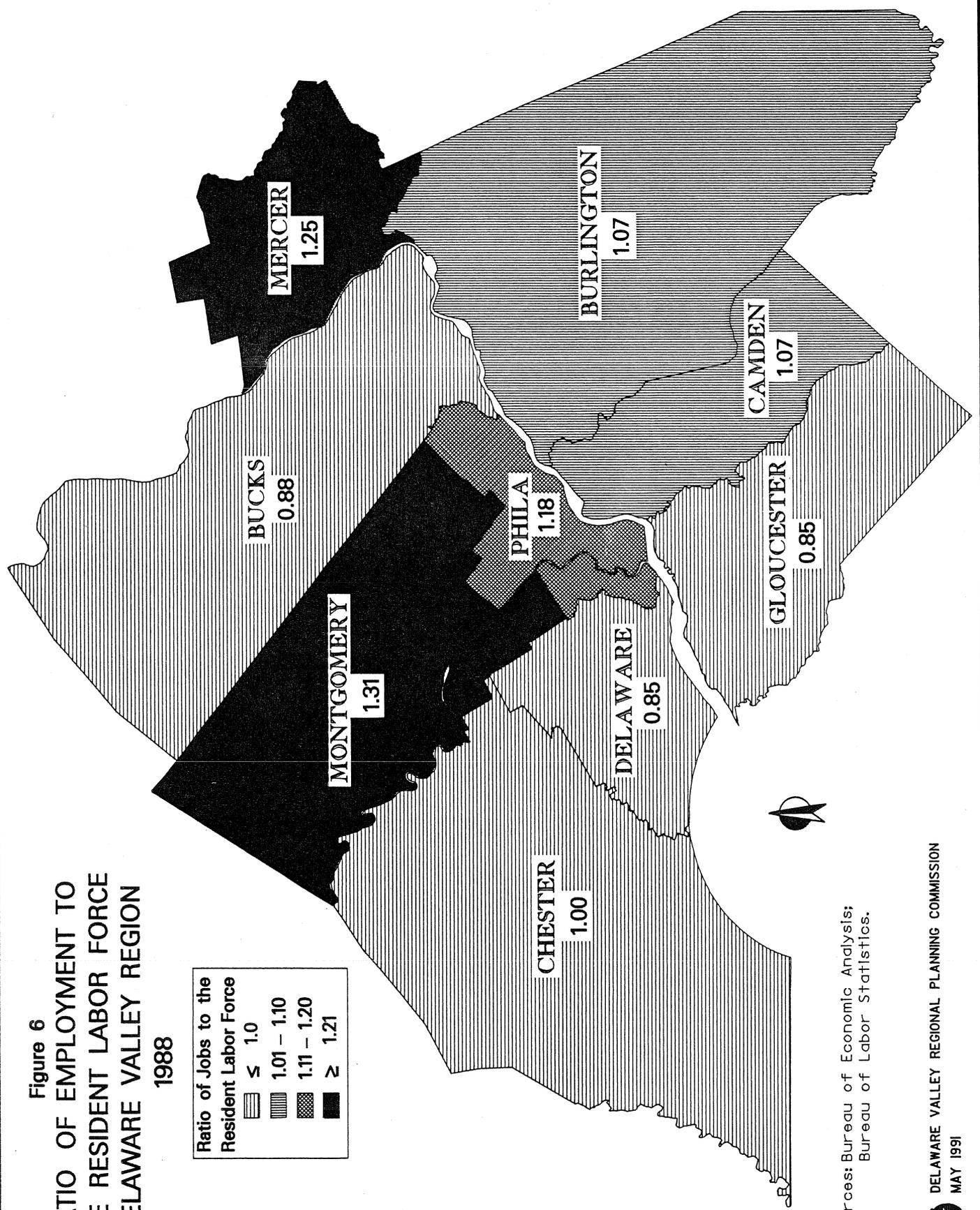
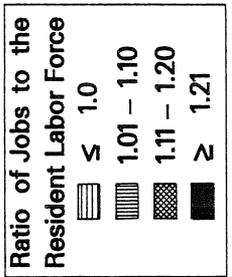
	<u>1988 Employment*</u>	<u>1988 Resident Labor Force**</u>	<u>Ratio of Jobs To Resident Workers</u>
Bucks	257,747	293,332	.88
Chester	190,052	190,345	1.00
Delaware	253,514	296,891	.85
Montgomery	506,159	385,721	1.31
Philadelphia	868,580	736,109	1.18
Burlington	196,092	182,476	1.07
Camden	250,001	233,450	1.07
Gloucester	86,095	101,559	.85
Mercer	216,430	172,945	1.25
DVRPC REGION	2,824,670	2,592,828	1.09

*Source: Bureau of Economic Analysis, as printed by DVRPC, May 1990

**Source: United States Department of Labor, Bureau of Labor Statistics

Delaware Valley Regional Planning Commission, May 1991

Figure 6
**RATIO OF EMPLOYMENT TO
 THE RESIDENT LABOR FORCE
 DELAWARE VALLEY REGION
 1988**



Sources: Bureau of Economic Analysis;
 Bureau of Labor Statistics.

TABLE 4
RATIO OF JOBS TO HOUSEHOLDS
1990 - 2010

	1990 Actual Population	1990 Estimated Households	1990 Estimated Employment	1990 Jobs/Households Ratio	Revised 2010 Forecasted Population	2010 Forecasted Households	Revised 2010 Forecasted Employment	2010 Forecasted Jobs/Households Ratio
Bucks	541,174	186,612	259,784	1.39	683,503	253,149	301,349	1.19
Chester	376,396	129,792	191,554	1.48	439,631	162,826	220,479	1.35
Delaware	547,651	195,590	255,517	1.31	546,556	202,428	268,548	1.33
Montgomery	678,111	242,183	510,159	2.11	737,107	283,503	574,949	2.03
Philadelphia	1,585,577	587,251	864,400	1.47	1,499,956	579,906	876,502	1.52
Burlington	395,066	131,689	197,642	1.50	477,635	170,584	235,392	1.38
Camden	502,824	179,580	251,977	1.40	583,779	216,214	283,978	1.31
Gloucester	230,082	76,694	86,775	1.13	283,691	97,825	111,159	1.14
Mercer	325,824	116,366	218,140	1.87	380,888	136,032	245,844	1.81
DVRPC REGION	5,182,705	1,845,757	2,835,948	1.54	5,632,746	2,102,467	3,118,200	1.48

NOTES: 1990 estimated employment based on Bureau of Economic Analysis statistics adjusted by Bureau of Labor Statistics growth factors. Revised 2010 population and employment forecasts incorporate 1990 data and DVRPC's adopted 1990-2010 growth rates.

Estimated number of households based on the forecasted decline in average household size through 2010, as described in DVRPC's Regional Mobility Policy Analysis (January, 1990).

Delaware Valley Regional Planning Commission, May 1991

Changes In Employment By Sector

Figure 7 illustrates the changes which have occurred in the distribution of employment by sector in the Delaware Valley region since 1970. In 1970, manufacturing represented 29% of the region's total employment, and service sector employment accounted for 19.4% of total jobs. By 1990, however, manufacturing accounted for only 15.6% of total employment, while service sector jobs accounted for over 30% of the region's total. In the City of Philadelphia alone, approximately 53,000 manufacturing jobs were lost between 1980 and 1990, while the city gained 52,000 new service jobs.¹ This shift from a manufacturing base to an economy weighed heavily toward service sector employment is forecast to continue over the next twenty years, with service and retail/wholesale sector employment anticipated to account for over 56% of the region's total employment and manufacturing jobs accounting for approximately 13.1% of the region's employment by 2010.

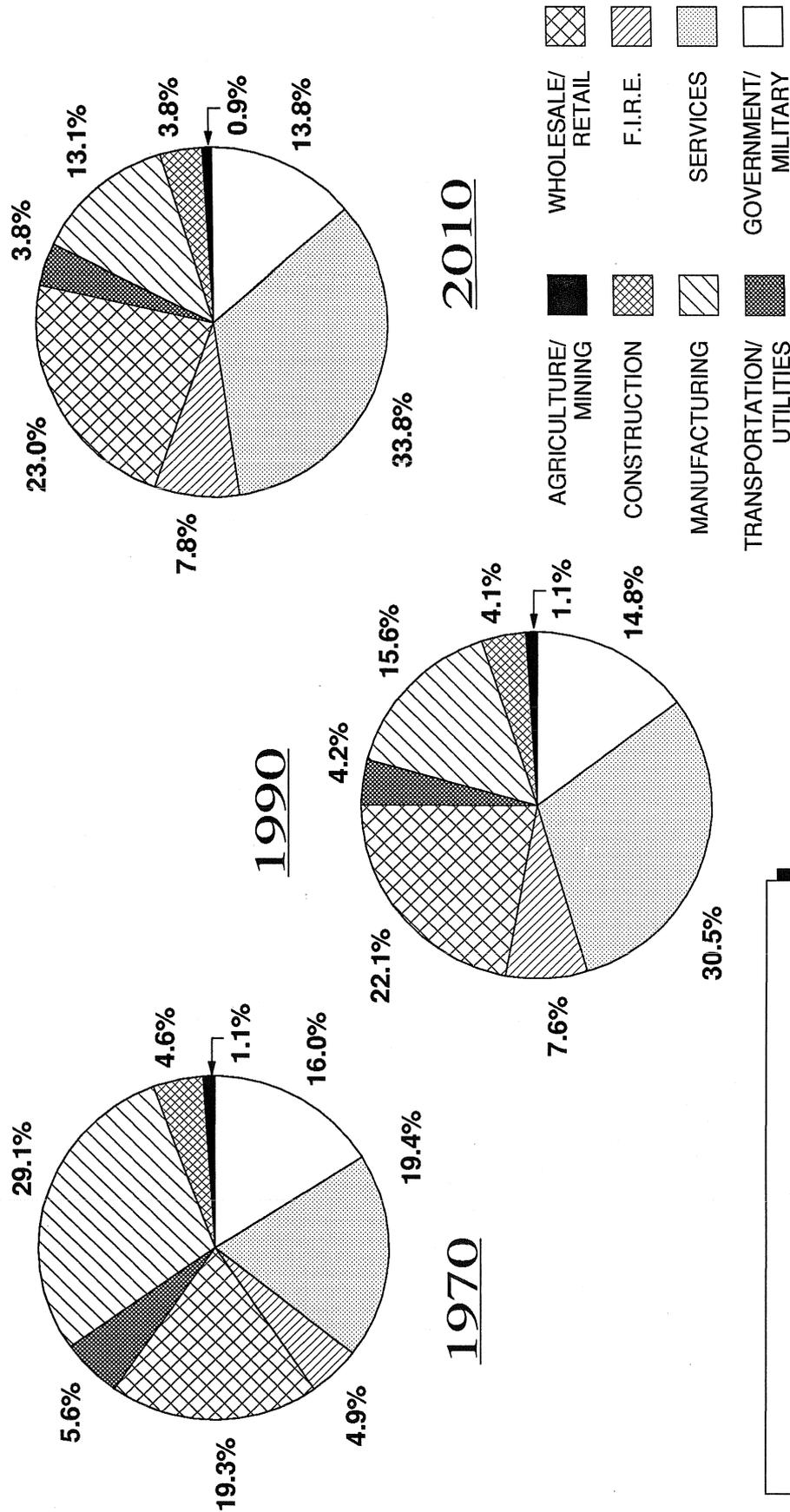
This shift from a manufacturing base to a service-sector economy has changed not only the occupational skill requirements for workers but the locational focus of job growth in the region as well. Manufacturing uses traditionally located along major railroad corridors and along the rivers, given their need to import resources and move completed products. In contrast, service sector employment is not tied to production requirements but is more mobile, locating in areas with an available labor force, highway access and nearby markets. The suburbs have become attractive to prospective service sector employers, given the availability of larger tracts of land, concentrations of residential development and access provided by the highway system. The shift from a manufacturing base to a service and retail economy has also changed the skills demanded of the labor force by employers, particularly for entry-level positions. The changes in necessary labor force skills and training needs are further discussed in Section III.

¹Borowski, Neill, "City's Alarming Loss of Jobs," Philadelphia Inquirer, April 7, 1991.

FIGURE 7

EMPLOYMENT BY SECTOR, 1970 - 2010

DELAWARE VALLEY REGION



Sources: "Regional Mobility Policy Analysis" D V R P C, January, 1990.



Delaware Valley Regional Planning Commission
May 1991

Housing Affordability

Limited affordable housing opportunities for employees can have a significant impact on employers and the regional economy. Negative consequences of the affordable housing crisis include disproportionately high wages which must be paid to compensate employees for housing or commuting costs; decreased employee productivity; increased absenteeism; higher employee turnover; and a subsequent increase in retraining costs. Recent studies have confirmed that employers in areas with high housing costs have found it increasingly difficult to attract and retain a qualified work force.²

A recent DVRPC report found that a median income household would be unable to purchase a median-priced housing unit in 81% of the region's 353 municipalities.³ That report defined as "affordable" any municipality where a household earning \$38,300 annually (the regional median income for a four-person household, as defined by the United States Department of Housing and Urban Development) could afford to purchase a median-priced housing unit. Table 5 lists the 1989 median annual earnings of people in selected occupations in the Delaware Valley, including service sector employees in positions that are vital to prospective employers. Annual earnings of most of these workers fall below the \$38,300 income threshold used for the purposes of DVRPC's affordability study. Clearly, a lack of conveniently-located affordable housing will hamper employers efforts to fill these service positions, especially at the entry level.

According to DVRPC's report, areas identified as having "affordable" homeownership opportunities include the City of Philadelphia, southern New Jersey and western Chester County (see Figure 8). However, municipalities which contain affordable housing are often not located near major employment centers and are not well served by efficient mass transit services. The area with the greatest concentration of affordable housing (the City of Philadelphia) continues to lose population, and its share of the region's total employment continues to decline. Instead, existing employment centers are often located in suburban municipalities where a median-priced housing unit is unaffordable to median or moderate income households, including King of Prussia, Cherry Hill and the Route 1 Corridor.

The limited availability and escalating costs of rental units and the lack of affordable homeownership opportunities in suburban locations may limit continued economic growth within the DVRPC region. Potential solutions to the mismatch between the

²Joint Center for Housing Studies (Harvard University), "The State of the Nation's Housing, 1990," Cambridge, Massachusetts, 1991.

³Delaware Valley Regional Planning Commission, "Homeownership: A Vanishing Dream?", November, 1990.

location of employment opportunities and the location of affordable housing alternatives for prospective employees include either (a) increasing the availability of affordable housing in close proximity to suburban employment centers; or (b) attracting prospective employment opportunities back into the cities, where an affordable housing stock, including both rental and owner-occupied units, already exists.

TABLE 5**MEDIAN ANNUAL WAGES IN SELECTED OCCUPATIONS, 1989****DELAWARE VALLEY REGION***

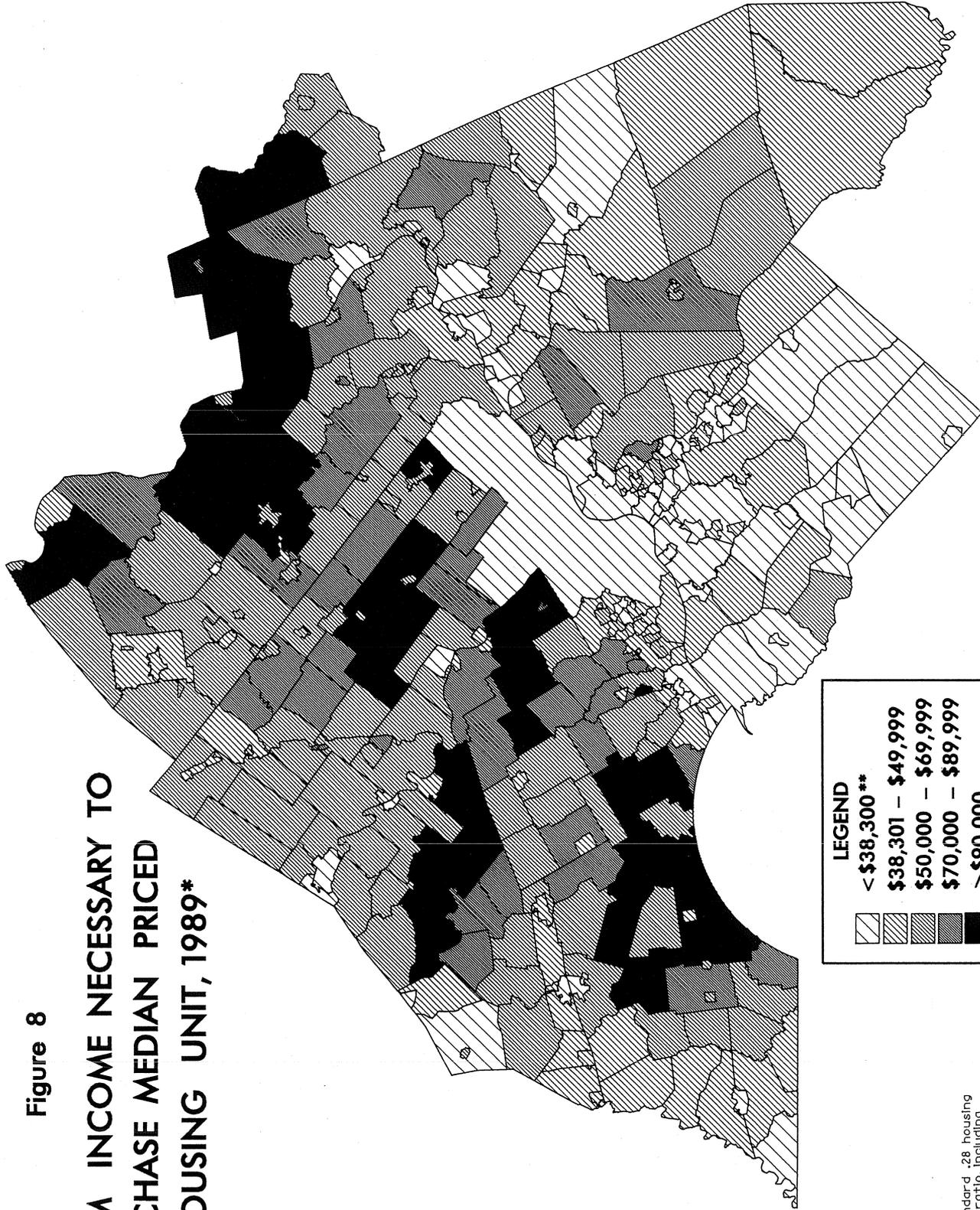
<u>OCCUPATION</u>	<u>MEDIAN ANNUAL WAGE</u>
Secretary	\$21,788
Typist	\$14,716
Word Processor	\$17,576
Switchboard Operator	\$15,470
Receptionist	\$15,340
Accounting Clerk	\$16,978
Computer Analyst	\$39,442
Computer Operator	\$19,604
Computer Programmer	\$30,472
Drafter	\$26,260
Registered Nurse	\$27,950
Truckdriver**	\$29,952
Warehousemen**	\$24,274
Security Guard**	\$10,400
Janitor**	\$14,392
General Maintenance Worker**	\$19,448

* Includes Philadelphia, Bucks, Chester, Delaware, Montgomery, Burlington, Camden and Gloucester Counties

** Usually "straight time" positions; annual wage based on standard forty hour work week.

Source: "Area Wage Survey: Philadelphia, Pennsylvania-New Jersey Metropolitan Area, November, 1989," United States Department of Labor, Bureau of Labor Statistics, Bulletin 3050-54.

Figure 8
MINIMUM INCOME NECESSARY TO
PURCHASE MEDIAN PRICED
HOUSING UNIT, 1989*



LEGEND

	< \$38,300**
	\$38,301 - \$49,999
	\$50,000 - \$69,999
	\$70,000 - \$89,999
	> \$90,000

** Median income for four-person household in Philadelphia Region as of January, 1990, as estimated by the U.S. Department of H&H.

* Assumes standard .28 housing cost/income ratio, including mortgage principal and interest, taxes and insurance.

SOURCE: Delaware Valley Regional Planning Commission

III. EMPLOYEE SKILLS AND TRAINING PROGRAMS

The alarm has been sounded: experts throughout the country now fear that a sizeable portion of the American labor force is not prepared or trained to meet the basic requirements for the jobs of the future. An inadequately prepared labor force will affect this region and the nation as a whole, as American companies will be increasingly unable to compete in the global marketplace due to a lack of productive and motivated employees.

Employers are being confronted with a new crisis in the work place primarily due to the nation's switch from a manufacturing-based economy to a service and technology-based economy. As discussed, this switch has been dramatic in the Delaware Valley region. The new service economy has placed a greater demand on employees who have mastered basic english, math and communication skills. The positions created by the service industry do not have the technical skill requirements or pay as well as the positions they replace in the manufacturing sector, but they do require a higher level of these basic skills. In the past, a drill press operator could perform his job effectively with limited communication, english or math skills. Today, a minimum wage employee in the service industry must be capable of counting change, reading a menu and placing an order. The development of the service industry has also placed a greater demand on hiring employees with good interpersonal skills and a good work ethic. So many of the service industry jobs rely on direct contact with the public and require skills that were not highly regarded when manufacturing prevailed. Therefore, for employees to function within the new job market mastery of the basics is essential, followed closely by good interpersonal skills and a strong sense of responsibility.

Based on research to date, there is sufficient evidence to conclude that the current labor supply includes a significant underclass of workers who are not adequately trained to fill entry-level positions. Depending on the type of job, the company, and the needs of a given employer, the type of skills which may be lacking can be characterized broadly as occupational, basic (math, english and communication) and job readiness/work ethic. This section will review recent research efforts which have analyzed employer needs and present an overview of area job training programs.

Research Results

The results of a national study recently released by the Secretary's Commission on Achieving Necessary Skills reported the startling result that 50% of American teenagers do not possess the skills required to enter the work force.⁴ The

⁴The Philadelphia Inquirer, "50% of Teens Not Ready for Work, U.S. Panel Says." July 3, 1991.

Commission placed the blame on schools for not providing students with planning, teamwork, and decision-making skills. Asked to identify the skills which they felt were essential, the educators, business people, public officials and union leaders mentioned:

- the ability to allocate time, money and material;
- interpersonal skills;
- ability to acquire and process information;
- understanding organizational and technological systems; and,
- the ability to apply technology.

A study conducted by the National Center on Education and the Economy in 1990⁵ was originally designed to examine current job demands and compare them with future job demands. Skills were loosely defined to include a wide range of concerns. While over 80% of the respondents initially indicated that they were concerned about a current shortage of skills, upon closer examination it became clear that they were actually concerned that their employees did not possess a good work ethic. In fact, concern about the shortage of workers possessing occupational skills was a low priority for the employers interviewed; only 15% of the respondents reported difficulty finding workers with the appropriate occupational skills.

Results reported by the U.S. Department of Labor⁶ in a study conducted in cooperation with the American Society for Training and Development indicate that employers are looking for an updated collection of skills in potential applicants. Mastery of the three Rs is essential, however, employers are also seeking employees who can demonstrate problem solving, listening and negotiating skills. According to the authors, because of technological changes in the work place, employers will be looking for employees who can readily adapt to changes, work effectively as part of a team and take responsibility. These requirements will not only be in effect for upper level managers but also for employees located at all ends of the work spectrum.

⁵National Center on Education and the Economy, "America's Choice: high skills or low wages," 1990.

⁶The American Society for Training and Development and U.S. Department of Labor Employment and Training Administration, "Work Place Basics: The Skills Employers Want," 1988.

In a series of articles published in the New York Times⁷ in 1989 on the issue of skills versus jobs, employers were interviewed and asked to comment on the quality of the labor force. Representatives from companies such as Motorola, Ford, Xerox, Polaroid and Eastman Kodak reported that the ability of employees to master basic english and math skills has plummeted to such a low that the companies had to supplement their employees' skills with basic english and math training that is offered in-house. Overall, employers indicated that as jobs become more and more sophisticated it will become more difficult to fill them because job applicants have failed to master the basics.

Regional research conducted by Earle Palmer Brown and Spiro⁸ for the Urban Affairs Partnership and the Greater Philadelphia Economic Development Coalition indicates that area employers are interested in hiring job applicants with the proper attitude and responsibility toward work, the so-called job readiness skills. Other skills which are highly valued are the ability to learn and solve problems. Among the positions which are most difficult for area employers to fill are secretarial, clerical, nursing and sales. Based on the results of the survey conducted for this study, it appears that in the future, employers offering entry level positions will not only expect job applicants to be job-ready, and proficient in math, reading and english, but will also require some level of computer or other technical ability.

In a study conducted by the United Way of Southeastern Pennsylvania⁹ the researchers studied the job/worker mismatch in the Philadelphia region. They identified three sources of the mismatch between jobs and workers. These include: lack of public transportation to work sites, lack of information about suburban jobs and shortage of basic skills. Basic skills would include such skills as literacy which are a prerequisite for many of the lower paying clerical, sales, and service positions currently experiencing a labor shortage in the suburbs.

Bell of Pennsylvania under its Business Outreach Program¹⁰ administered surveys to employers in Chester County and portions of Bucks, Montgomery and Philadelphia counties. The studies were conducted throughout 1989 and 1991. Designed to provide insights into the business climate of each geographic area surveyed, one component of the survey focused on labor concerns of the

⁷The New York Times, "Skills vs. Jobs: The Classroom Mismatch," September 26-28, 1989.

⁸The Urban Affairs Partnership and Greater Philadelphia Economic Development Coalition, "Keeping the Competitive Edge," 1989.

⁹United Way of Southeastern Pennsylvania, "The Mismatch Between Jobs and Labor in Metropolitan Philadelphia," 1989.

¹⁰Bell of Pennsylvania, "The Pennsylvania Business Outreach Program"

businesses surveyed. Employers were almost unanimous in identifying deficiencies in communication as one of the greatest problems encountered with job applicants. Following close behind, deficiencies in math and english were also cited as problems.

An Overview Of Area Training Programs

Within the region, a number of programs are now in place to provide skills training, primarily for economically disadvantaged residents. The skills that are emphasized in these programs are primarily occupational or technical, with a secondary focus on job readiness and basic skills. The various programs are operated through federal, state, local and private funds.

In Pennsylvania and New Jersey programs funded under the federal Jobs Training Partnership Act (JPTA) have been designated to provide training to economically disadvantaged youths and adults. Job training offices exist in all of the counties located within the study area. While the individual programs may vary, their basic format is similar. Candidates that meet residency and income requirements are placed in either a classroom or on-the-job training program. In an on-the-job training program the agency contracts with a vendor who provides job training and workshops, including occupational and job readiness skills. Classroom programs also offer a job readiness component, although both on-the-job programs and classroom programs emphasize occupational skill training over job readiness training.

Most of these training programs rely on secondary data sources to select job opportunities and occupational skill requirements. These sources may include Department of Labor information, state labor information and newspaper advertisements. The JPTA offices indicated that they have not initiated any type of large scale information exchange with local employers to determine the local skills that are in demand. These agencies are limited to what they can do with the amount of money available. In most cases it is not feasible for these agencies to conduct large scale outreach with area employers.

Other state funded programs which are geared to providing occupational skills to clients include Transitionally Needy Demonstration Project, SPOC and SKILS. Training for clerical, office technology and maintenance positions are provided through these programs. Services are targeted to welfare recipients and the aim of the programs are to move program participants from the welfare rolls to the job market.

A number of privately funded training programs are also available in the region. Programs such as Phila-A-Job and Career Vocational programs coordinate with local business to place and train low income residents for employment.

The region's youth have been the greatest beneficiaries of employment training programs across the region. Whether funded with public or private dollars, these programs have one goal in mind: to ensure that young adults possess marketable skills. The School District of Philadelphia has introduced an initiative to restructure career and vocational education in Philadelphia's comprehensive high schools. The goal of the plan is to improve education for employment by combining school based planning with a career and vocational initiative which encourages employer participation. Motivation of students is key to ensuring that they remain in school to acquire those basic skills identified as critical to almost any job. Education for employment is viewed as one of the most basic requirements of the educational system.

In addition to youth employment and training programs, sponsorship programs are being introduced into the school systems. Typically, such programs will match a student or classroom with a corporation, business or private group. The sponsoring agency may assign a mentor to each child in addition to providing training programs, workshops and employment or further educational opportunities.

Job training programs within the region have done an admirable job of providing occupational training to those who are motivated to work but are deficient in specific occupational skills. Based on our discussions with area training programs, it appears that most are overburdened and relying on a training model which may be more appropriate for a manufacturing economy. Many of the programs now in place provide a strong emphasis on occupational training without giving equal emphasis to job readiness/work ethic training. It also appears that many of the programs are not closely tied into employer needs. While most rely on state job information, none maintain a wide contact with employers within their area of service. While state job information may provide information about the jobs in demand, it does not adequately provide information about the skills in demand.

Implications For The Region

Based on the research completed to date on employer's needs and the brief overview of the area job training programs, it is possible to identify several conclusions and implications for regional employers.

The mismatch between jobs and workers is a problem which primarily affects economically disadvantaged urban residents for whom a suburban job is not available due to lack of transportation to the job site and lack of job readiness on the part of the applicant. Many younger entry-level workers are disenfranchised from the school system and have failed to master basic english, math and communication skills.

One of the critical components in the mismatch of jobs and workers is a mismatch of skills, including a deficiency of occupational skills, basic skills and job readiness skills. Research conducted to date, however, has not adequately examined the interrelationship among the skills deficiencies or have focused on only one aspect of skills. Future efforts to close the mismatch gap must focus on linking job readiness training with the basic educational skills. Occupational training will not be successful unless accompanied by these other skills.

The number and type of employment training programs now available in the Delaware Valley provides job applicants an opportunity to learn a variety of occupational skills. While a small component of each program's curriculum is job readiness, there appears to be a need for long-term work ethic/job readiness training to complement existing occupational skills training programs. Work ethic skills are essential for any employee and will assist them in any field.

Many of the job training programs are working with limited budgets and high demand for their services. Consequently, these programs have been unable to find the time and money to work closely with area businesses to determine employment needs. Coordination among the programs is critical in order to ensure that training programs are meeting the needs of their clients — both employers and employees — in the most productive and cost-efficient manner. Greater coordination is also needed to ensure that a central data bank exists that would pull together and constantly update information on area employer's employment needs.

Employment training programs are a critical stepping stone between the school system and the job market. They have also provided the safety net for the unemployable client who, without training, would have had little hope of breaking into the job market. In order to improve the delivery of services under these training programs, there needs to be a stronger emphasis on coordination, promotion and expansion of services.

IV. FUTURE RESEARCH EFFORTS

This report is intended as an introduction to the problems raised by a mismatch between jobs and workers and an overview of conditions in the Delaware Valley region. As discussed, the mismatch issue is a complex one, related not only to the physical location of employment centers and the labor force, but also to the types of jobs, the educational system, housing opportunities, the transportation network, training programs and social services. Clearly, a continuing mismatch between jobs and workers will pose serious social and economic challenges for the Delaware Valley region.

Many talented and committed individuals and organizations are active in addressing various components of the jobs-workers mismatch issue. However, given existing mandates and limited resources, there are certain central elements which have not received adequate attention. The Delaware Valley Regional Planning Commission (DVRPC), in anticipation of future funding, has proposed a research agenda to address certain issues and provide new information for area employers, job training and social service programs, and public planning agencies.

DVRPC is in a unique role to undertake this project. Since its inception in 1965, the agency has provided continuing, comprehensive and coordinated planning for the Delaware Valley region, including the counties of Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania, and Burlington, Camden, Gloucester and Mercer in New Jersey. The Commission includes local, state and federal agency representation and input. The jobs-workers mismatch issue was identified as a priority concern for the region because of the wide-ranging implications of the problem.

The scope of work for this study will focus on three areas:

- Programs and policies to increase affordable housing opportunities in proximity to employment centers;
- Programs and policies to encourage job growth and economic development in existing population centers; and
- A comparison of the identified job skills and needs to the existing training and education programs in the region.

Specific tasks and products will include the following:

Tasks

1. Identify the existing and projected future concentration of employment centers, population density and transit and transportation linkages in the region.

2. Select representative employment centers and major mixed use developments. Survey residents and employers regarding journey-to-work patterns.
3. Interview property managers, developers and municipal officials to determine perceptions and attitudes towards mixed-use employment and housing developments.
4. Review the Municipal Planning Codes and other pertinent legislation of Pennsylvania and New Jersey for regulations affecting the zoning and design of mixed-use centers.
5. Examine approaches used in this and other regions to increase the production of affordable housing units in proximity to employment centers, including but not limited to:
 - mixed use zoning
 - linkage programs through bonus incentives
 - required developer set-aside programs
 - employer-assisted housing programs
6. Examine public policies and programs used to encourage job growth in existing population centers, including but not limited to:
 - tax incentive programs
 - enterprise zones
 - loans or start-up assistance
 - land banking for economic development
7. Prepare and administer a survey of regional employers to determine employment opportunities, required job skills, and employee qualities needed for area jobs.
8. Compare identified job needs to existing training and education programs, including public education, private vocational training, and publicly-assisted training programs.
9. Review information network available to employers and potential employees. Work with county and state officials to establish a regional job information and training network.

Products

1. Identification of specific areas in the region where the mismatch between available jobs and the available labor force is the greatest, including those

population centers in need of additional jobs and those job centers in need of affordable housing.

2. A summary report on tools and techniques to accommodate mixed-use development and affordable housing, including survey results, approaches from other regions, review of enabling legislation and changes, if any, to Municipal Planning Codes.
3. An analysis of job training needs in the region and an action agenda and recommendations for job training and educational programs to better match employer needs with employee training, including a system format for a regional job information and training network.
4. Recommendations for city, county and state planning and economic development agencies to improve policies and programs targeted to job creation and retention.

Anticipated completion date for this project is June, 1992.

