

**NEW JERSEY 'S LINK TO THE 21ST CENTURY:
MAXIMIZING THE IMPACT OF
INFRASTRUCTURE INVESTMENT**

Working Paper No. 4

Socio-Economic Characteristics of Northern New Jersey

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Summary: Significant Characteristics and Trends in Northern New Jersey

This working paper describes the socio-economic trends in the fourteen northern New Jersey counties which constitute the study area for the project: New Jersey: Link to the 21st Century. The paper is based on data primarily taken from the 1990 Census and from data posted on the web by the New Jersey Department of Labor. The following eight points summarized major findings of the paper.

1. Although incomes vary widely within the study area, Northern New Jersey is a relatively high-income area; in 1989, Morris County had the highest household income in the immediate region, considerably higher than the U.S. as a whole. Since then, household incomes in Somerset and Hunterdon Counties have surpassed Morris County's.
2. Northern New Jersey is a highly developed, densely settled area compared to almost anywhere else in the United States. Its past and continuing development owes a great deal to its proximity to New York City, to its location between New York City and Philadelphia along the major rail and highway corridors through the northeast conurbations, and to its marine ports with good access to the hinterland west of the coast.
3. The old industrial core of New Jersey was predominantly in Essex County (centered on Newark), Hudson County (Jersey City), Union County (Elisabeth), and the eastern section of Passaic County (Paterson). These counties still retain a major proportion of jobs and residential density, but they are largely now slow growth areas (with the exception of that part of Hudson County that is along the Hudson River; see next bullet) as the new growth seeks out greener pastures and the general trend of suburbanization and lowering densities tends to spread residences and jobs away from the older centers. Population also tends to be moving to the south; jobs have not yet shown as strong a southward movement.
4. There is a counter trend of growth of jobs along the west shore of the Hudson, and particularly the Jersey City and Hoboken areas in Hudson County. Much of this growth results from developers and businesses seeking less expensive land in New Jersey while taking advantage of proximity and good access (via PATH, NJT Rail, and the private ferries) to Manhattan. The Hudson-Bergen Light rail will probably enhance this growth.
5. In the past (1970 - 1990) There was substantial growth in the counties along Route 1 and the northeast rail corridor radiating from the older core through Middlesex and Mercer Counties. The density maps (Maps 5 and 6) show this strongly.
6. As these counties become more developed and probably in response to higher land prices and congestion along Route 1, growth has moved to adjacent counties. Employment will continue to grow at a healthy rate in Middlesex, but the adjacent Counties of Monmouth, Ocean, and particularly Somerset are predicted to grow rapidly also.

7. Recent development in Northern New Jersey particularly along the Hudson-Middlesex-Mercer Counties tends to be in the growth industries of high technologies and services, which builds on the academic institutions in the corridor of Rutgers and Princeton. An agglomeration growth center is the concentration of pharmaceutical companies in Northern New Jersey.

8. The projected growth industries throughout the area are in business and health services; which is not that different from the country as a whole. The counties that have a predominant growth in a different industrial area are: Hudson - Securities (growth of back offices for the Wall Street concerns); Essex - air transportation (reflecting the importance of Newark Airport to the economy); Sussex - recreation (taking advantage of the hilly, undeveloped land); and Somerset - communications.

9. The northwestern parts of the area (Sussex, Warren and Hunterdon Counties) are much more rural and less developed than the rest of the area. These three counties have the most acreage in agriculture. The terrain is rugged and recreation is a major industry. The open land may invite development, but the terrain may discourage it.

Table of Contents

Summary: Significant Characteristics and Trends in Northern New Jersey	i
Table of Contents	iii
Table of Tables	iv
Table of Maps.....	iv
<i>Preface</i>	v
Socio-Economic Characteristics of Northern New Jersey.....	1
Transportation Network.....	2
Population.....	3
Population Growth	6
Incomes.....	14
Travel Behavior	17
Economic Development	18
Employment Growth	22
Land in Agriculture	26
References	28

Table of Tables

<i>Table 1: Population of Counties (in order of 1999 estimated population)</i>	4
<i>Table 2: Population (in order of density)</i>	5
<i>Table 3: Population Growth (in order of absolute growth from 1990-1999)</i>	7
<i>Table 4: Population Growth (in order of 1990-99 Growth Rate)</i>	9
<i>Table 5: Components of Population on Change (in order of net migration)</i>	10
<i>Table 6: Housing Permits 1990-98 (in order of permits for total period)</i>	12
<i>Table 7: Single Family Homes and Density in 1990</i>	13
<i>Table 8: Age Distribution of Population (% of Population in 1990)</i>	14
<i>Table 9: Average Incomes (in order of median household income)</i>	15
<i>Table 10: Average Incomes in Region in 1989 (in order of median household income)</i>	16
<i>Table 11: Transportation and Journey to Work in 1990</i>	18
<i>Table 12: Employment by Sector in 1987 (in order of total employment)</i>	19
<i>Table 13: Percentage of Employment per Sector</i>	21
<i>Table 14: Employment Relative to Population (in order of jobs / worker)</i>	22
<i>Table 15: Estimation of Employment Growth 1996-2006 (in order of jobs in 2006)</i>	23
<i>Table 16: Estimated Employment Growth in Dominant Sectors</i>	26
<i>Table 17: Land in Agricultural Use in 1987 (in order of most acreage)</i>	27

Table of Maps

<i>Map 1: Study Area and its Vicinity</i>	1
<i>Map 2: Areas of NY-NJ-Philadelphia (with Major Interstate Highways)</i>	1
<i>Map 3: Areas of NY-NJ-Philadelphia (with Commuter Rail Lines)</i>	2
<i>Map 4: Study Area and Major Cities</i>	3
<i>Map 5: 1990 Population Density (Population per sq. Mile)</i>	5
<i>Map 6: 1999 Population Density (Population per sq. mile)</i>	6
<i>Map 7: 1980 - 1990 Population Changes (Increase/Decrease)</i>	8
<i>Map 8: 1980 - 1990 Population Changes (Increase/Decrease)</i>	8
<i>Map 9: 1990- 1999 Population Changes (Increase/Decrease)</i>	9
<i>Map 10: 1990 - 1999 Net Migration (Increase/Decrease)</i>	11
<i>Map 11: 1987 Employment</i>	20
<i>Map 12: 1996 Employment</i>	24
<i>Map 13: 2006 Estimated Employment</i>	24
<i>Map 14: 1996 - 2006 Employment Growth</i>	25
<i>Map 15: 1996 - 2006 Employment Growth Rate</i>	25
<i>Map 16: Land in Agricultural Use</i>	28

Preface

This working paper was undertaken as part of the background research for the project: New Jersey's Links to the 21st Century: Maximizing the Impact of Infrastructure Investment. While many team members contributed comments and suggestions, this is not an official expression of the research team. Further comments, suggestions, information, and insights are invited.

This project is funded by New Jersey Department of Transportation and the University Transportation Research Center.

Socio-Economic Characteristics of Northern New Jersey

This working paper discusses the socio-economic characteristics in Northern New Jersey as background to the New Jersey's: Link to the 21st Century project. For the purposes of this paper and the project, the Northern New Jersey study area is defined as the 13 counties of the Northern Jersey Transportation Planning Association (NJTPA) plus Mercer County (see Map 1). These 14 counties make up the New Jersey part of the census-defined New York-Northern New Jersey-Long Island Consolidated Metropolitan Statistical Area (CMSA). A larger envelope will also be looked at; this will include, besides the 14 county study area, the five counties of New York City, Orange, Rockland, and Westchester Counties in New York, and the counties in Pennsylvania that abut the study area. (See Map 1) For comparison purposes, data on the nation, on the Middle Atlantic Region (New York, New Jersey and Pennsylvania), and for the total state of New Jersey will also be included. Data from the 1990 Census and estimates of growth since then and into the future from the New Jersey Department of Labor (data published on the web) are the primary basis for this description. All of the numbers are for 1990 unless otherwise stated.

Map 1: Study Area and its Vicinity



Geographic Area

The fourteen counties in the study area include 4423 Square miles, which represents about 60% of the land area of New Jersey. The study area is bordered by the Delaware River on the West, New York State on the north, the Hudson River for almost half of its eastern border and the Atlantic Ocean for the remaining part, and the southern part of New Jersey on the South. New York City is across the Hudson from the northern part of the study area, specifically from Bergen and Hudson Counties. Philadelphia is about 20 miles southwest of the study area, closest to Mercer County and the City of Trenton.

The northwestern part of the study area is hilly (even mountainous in areas) and has many recreational areas, particularly along the Delaware River. The northeastern part is urban. The area along the Atlantic Ocean has developed as a recreational area. 17.9% of the study area is in agricultural use, compared to 18.8% for the total state.

Transportation Network

The Interstate highway system within New Jersey (see Map 2) tends to radiate from New York City with two major arteries (I80 and I78) crossing the northern part of the study area in an east-west direction. There is also a circumferential interstate segment (I287) circling the urbanized area around Newark and along the Hudson about 20 miles west of the Hudson. There are two major toll roads in the study area. The New Jersey Turnpike runs northeast to southwest from southern Bergen County. The Garden State Parkway parallels the Hudson and then the shore of the Atlantic. Sussex County, in the northwest corner of the study area, is the only one of the 14 counties that does not have one of these highways penetrating it.

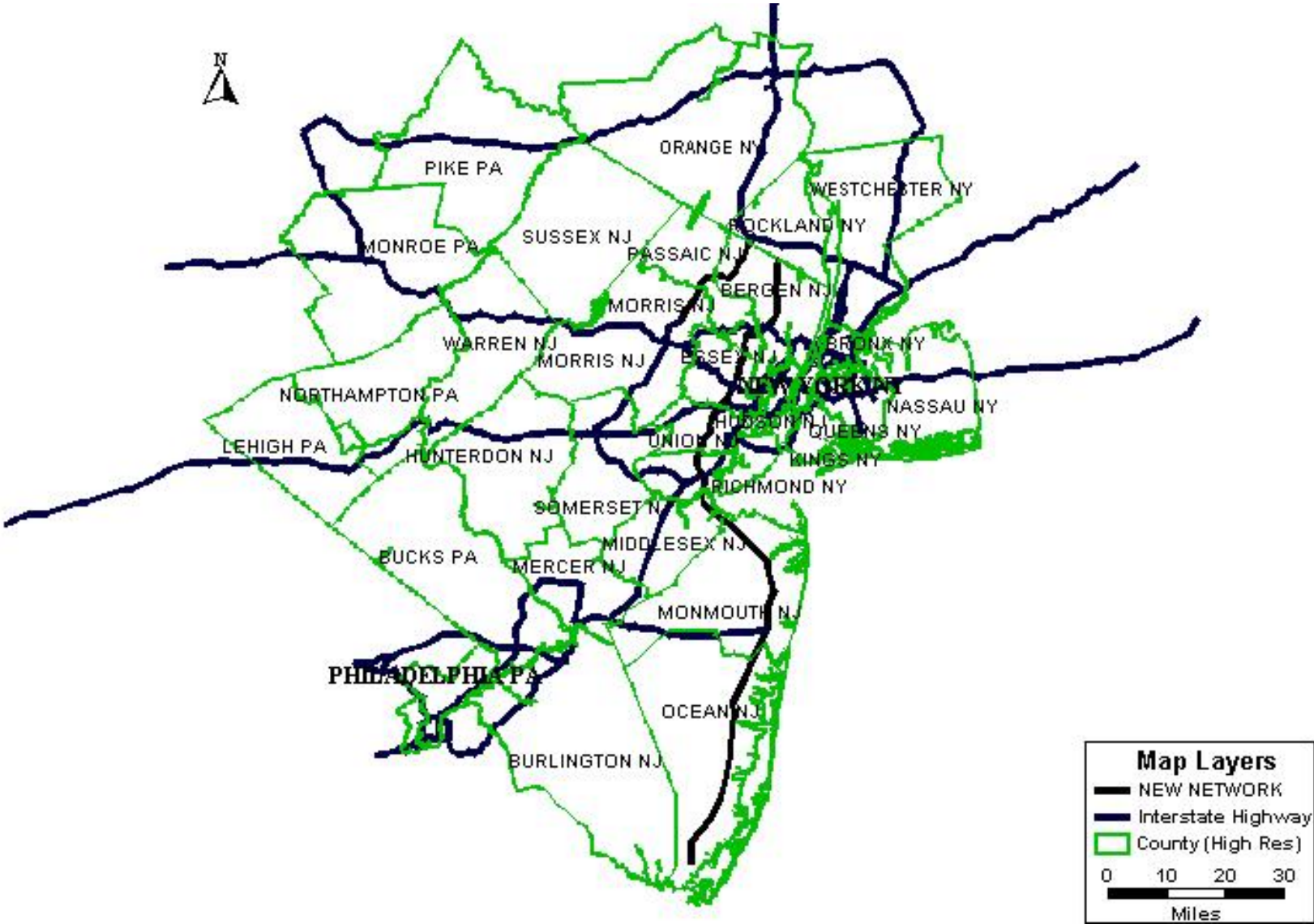
There is an extensive commuter rail system radiating from Newark and Hoboken and serving New York City. (See Map 3) Additionally Amtrak's main line (the Northeast Corridor) runs through New Jersey along the same corridor as the New Jersey Transit main line from Newark to Trenton. Newark also has a light rail system, and the first leg of the Hudson Bergen Light Rail line running along the Hudson River has just been completed in early 2000.

The passenger rail system does not penetrate either Sussex County in the northwest or Ocean County in the South, it barely penetrates Warren County (in the west) and, while it runs along the north and east edges of Monmouth County, the majority of Monmouth is fairly far from the railroad.

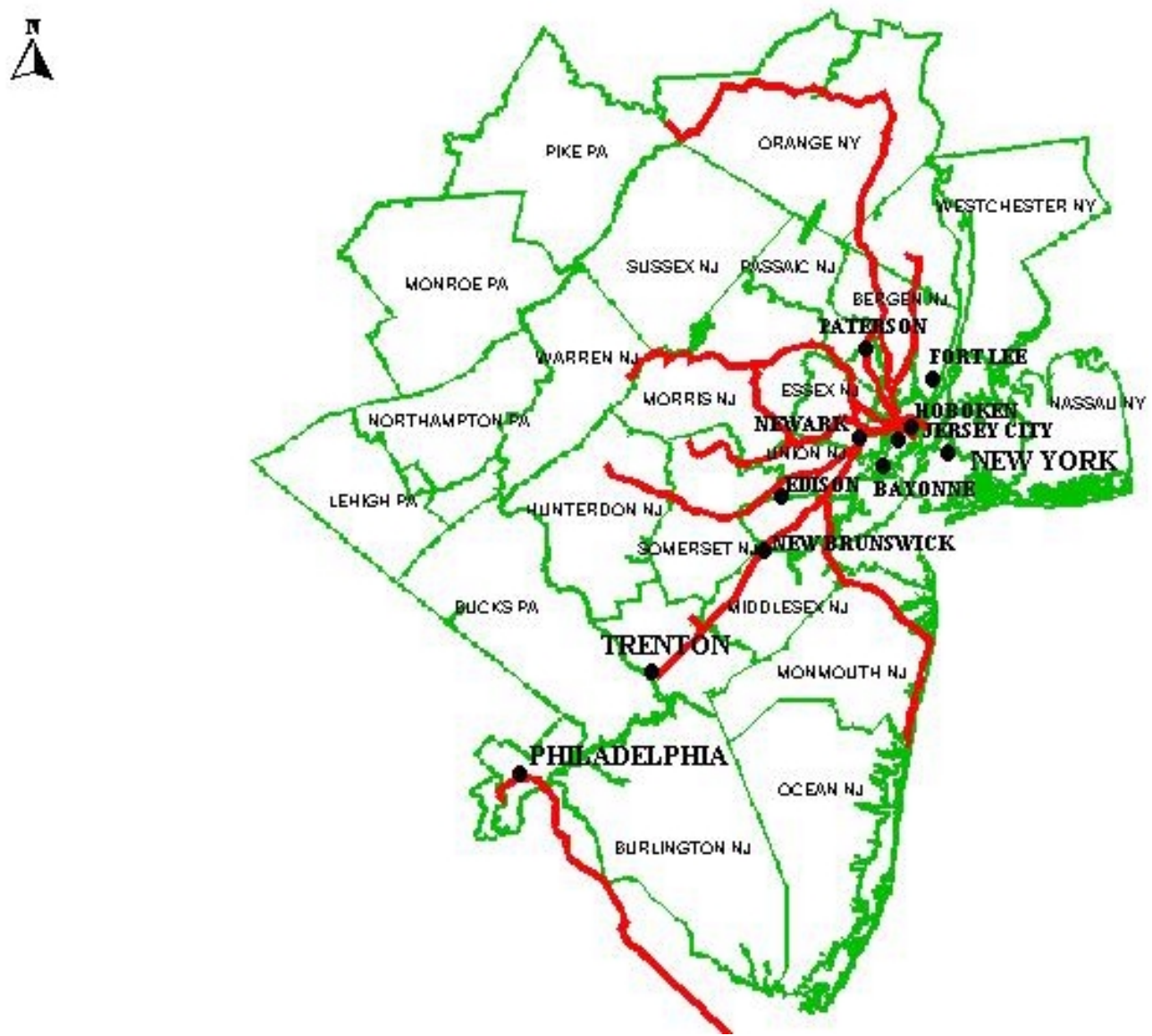
There is a major transportation corridor running northeast to southwest from the area around Newark to and passed Trenton. The corridor is comprised on the Amtrak and New Jersey Transit northeast corridor, the New Jersey Turnpike, Route 1, and U.S. 130.

Additionally, the Newark International Airport and the system of marine ports form major transportation hubs in the study area.

Map 2: Areas of NY-NJ-Philadelphia (with Major Interstate Highways)



Map 3: Areas of NY-NJ-Philadelphia (with Commuter Rail Lines)



Map 4: Study Area and Major Cities



Population

In 1990, the 14 county study area had a total population of 6.1 million, which represents 78.6% of the total population of the 21 county state (7.7 million) and 39.5% of the total envelope area. The 14 counties contain 60% of the geographic area of New Jersey. (See Map 1) The most populous county is Bergen, with 13.6% of the population of the study area. (See Table 1) Essex and Middlesex closely follow Bergen with 12.8% and 11.1% respectively. The four largest cities in New Jersey - Newark (pop. 275,221), Jersey City (pop. 228,537), Paterson (pop. 140,891), and Elizabeth (pop. 110,002) - are all in the study area (see Map 4). All of them are small compared to the two large cities on New Jersey's border: New York City with 7.3 million people and Philadelphia with 1.6 million. The four New Jersey cities are all in the dense area around Newark, in the respective counties: Essex, Hudson, Passaic, and Union. Passaic County does not have the very high densities of the other three because it is a long county that stretches to the Northwest, to the more suburban/rural area between Bergen and Morris counties.

When the geographic sizes of the counties are taken into account, Hudson County, the smallest in New Jersey with only 47 square miles, has the greatest population density of almost 11,800

people per square mile. (See Table 2 and Maps 5 and 6.) This compares with 1375 people per square mile for the overall study area and 1042 for New Jersey as a whole in 1990. This density is of course relatively low when compared to 24,000 people per square mile for New York City and 53,000 for Manhattan. The lowest densities are in Hunterdon and Sussex (both with 251 people per square mile) followed by Warren with 256 people per square mile. Hunterdon has the highest percentage of workers in agriculture (2.6%) in the study area.

Table 1: Population of Counties (in order of 1999 estimated population)

County	1980 pop	1990 Pop	1999 est	Land area	1990 Density	1999 density	1990 households	1990 size of household
Bergen	845385	825380	857052	234	3527	3663	197325	2.74
Essex	851304	778206	747355	126	6176	5931	277667	2.72
Middlesex	595893	671780	717949	311	2160	2309	179966	2.71
Monmouth	503173	553124	611444	472	1172	1295	155450	2.85
Hudson	556972	553099	552819	47	11768	11762	308795	2.64
Union	504094	493819	498759	103	4794	4842	238974	2.71
Ocean	346038	433203	497533	636	681	782	88819	2.67
Passaic	447585	453060	485064	185	2449	2622	208574	2.62
Morris	407630	421353	463545	469	898	988	148627	2.78
Mercer	307863	325824	333861	226	1442	1477	168312	2.54
Somerset	203129	240279	288090	305	788	945	116777	2.65
Sussex	116119	130943	144700	521	251	278	33876	2.66
Hunterdon	87361	107776	124553	430	251	290	44492	2.91
Warren	84429	91607	100312	358	256	280	38152	2.76
Study area	5856975	6079453	6423036	4423	1375	1452	949965	
New Jersey	7365011	7730188	8143412	7419	1042	1098	2794316	2.70
Sources:	U.S Bureau of the Census							

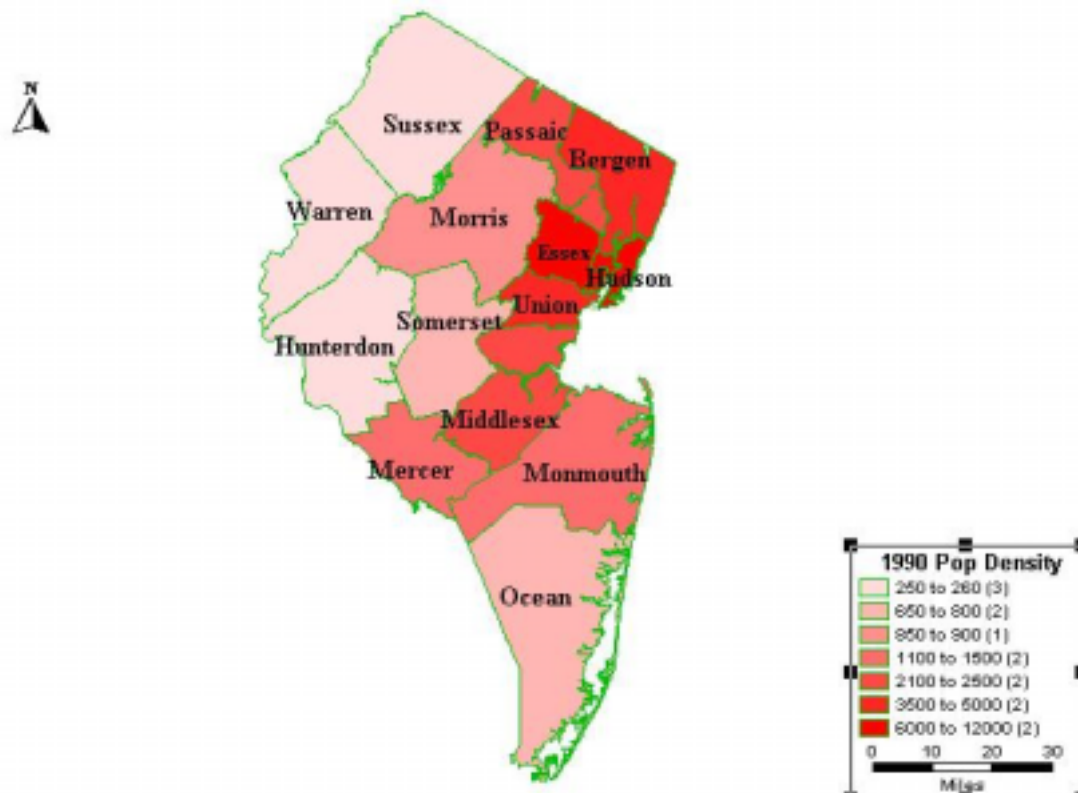
Household sizes in 1990 in the 14 county study area vary from 2.54 to 2.91 people per household, about evenly spread around the state average of 2.70. (See Table 1) The largest households are in Sussex County in the northwestern corner of the study area. Sussex County also has the greatest percentage of households that are families (80.1%) and with children (42.9%) and the smallest percentage population 65 or older (8.9%). Sussex is one of the two lowest density counties in the study area (Hunterdon is the other), with only 251 people per square mile. The second largest household size (2.85) occurs in Passaic County, which stretches from an older urban area around the City of Paterson to a more rural area adjacent to Sussex County.

Table 2: Population (in order of density)

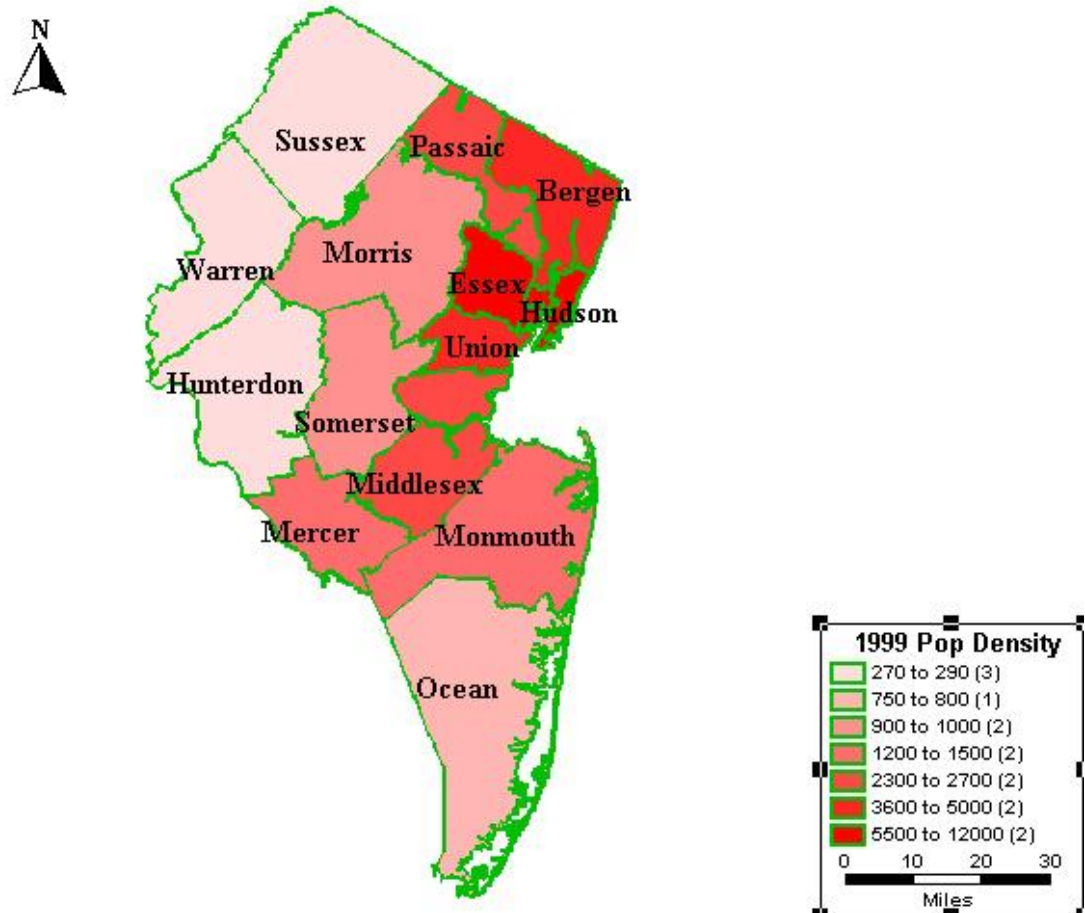
County	1980 pop	1990 Pop	1999 est	Land area	1990 Density	1999 density
Hudson	556972	553099	552819	47	11768	11762
Essex	851304	778206	747355	126	6176	5931
Union	504094	493819	498759	103	4794	4842
Bergen	845385	825380	857052	234	3527	3663
Passaic	447585	453060	485064	185	2449	2622
Middlesex	595893	671780	717949	311	2160	2309
Mercer	307863	325824	333861	226	1442	1477
Monmouth	503173	553124	611444	472	1172	1295
Morris	407630	421353	463545	469	898	988
Somerset	203129	240279	288090	305	788	945
Ocean	346038	433203	497533	636	681	782
Hunterdon	87361	107776	124553	430	251	290
Warren	84429	91607	100312	358	256	280
Sussex	116119	130943	144700	521	251	278
Study area	5856975	6079453	6423036	4423	1375	1452
New Jersey	7365011	7730188	8143412	7419	1042	1098

Sources: U.S Bureau of the Census

Map 5: 1990 Population Density (Population per sq. Mile)



Map 6: 1999 Population Density (Population per sq. mile)



The smallest average household size (2.54) occurs in Ocean County which also has the lowest percent of households with children (28.9%), but only 27.9% households without families which is the fourth highest. 23.2% of the Ocean County population is 65 or older. The largest percent of households that are not families occurs in Hudson (34.0%) and Bergen (30.5%), two of the more urbanized counties.

Population Growth

The population of the study area grew by 3.8% from 1980 to 1990 (see Table 3), which is slower than the state=s growth of 5.0%, but is higher than the average for the Middle Atlantic Region (New Jersey, New York, and Pennsylvania) of 2.2%. The East is growing slowly compared to Western United States; overall population growth in the U.S. was 9.8%. The estimated growth of population in the study area from 1990 to 1999 is 344,000 people or 5.7%, slightly greater than the State=s estimated growth of 5.3% for that period.

The greatest absolute growth within the study area for both periods (and also within the state)

was in Ocean County. From 1980 to 1990, Ocean County grew 25.2% for a total of 87,000 more people. From 1990 to 1999, the growth rate fell to 14.8%. Table 3 shows the counties in order of the absolute growth in estimated population from 1990 to 1999. Monmouth County showed the second greatest growth for that period, followed by Somerset, Middlesex, and Morris.

From 1980 to 1990, the four dense counties along the Hudson River (Essex, Union, Hudson, and Bergen) lost population. From 1990 to 1999, Essex and Hudson continued to lose population but at a slower rate, while Bergen and Union grew.

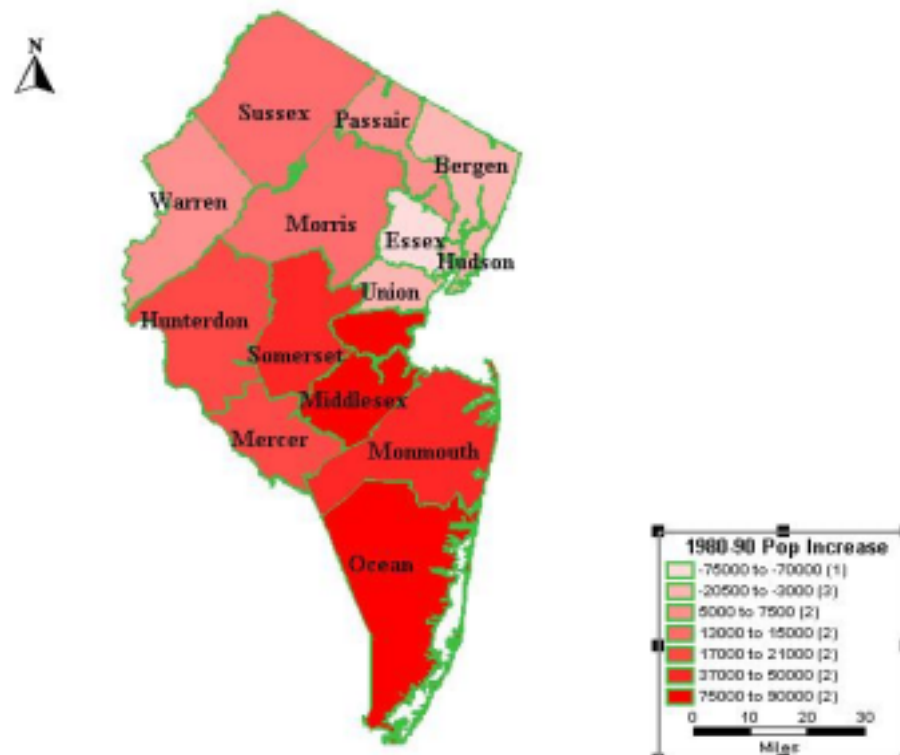
Table 3: Population Growth (in order of absolute growth from 1990-1999)

County	1980 pop	1990 Pop	1999 est	Land area	1990 Density	1999 density	Growth '80-'90	'90-'99	% Growth '80-'90	% Growth '90-'99
Ocean	346038	433203	497533	636	681	782	87165	64330	25.2%	14.8%
Monmouth	503173	553124	611444	472	1172	1295	49951	58320	9.9%	10.5%
Somerset	203129	240279	288090	305	788	945	37150	47811	18.3%	19.9%
Middlesex	595893	671780	717949	311	2160	2309	75887	46169	12.7%	6.9%
Morris	407630	421353	463545	469	898	988	13723	42192	3.4%	10.0%
Passaic	447585	453060	485064	185	2449	2622	5475	32004	1.2%	7.1%
Bergen	845385	825380	857052	234	3527	3663	-20005	31672	-2.4%	3.8%
Hunterdon	87361	107776	124553	430	251	290	20415	16777	23.4%	15.6%
Sussex	116119	130943	144700	521	251	278	14824	13757	12.8%	10.5%
Warren	84429	91607	100312	358	256	280	7178	8705	8.5%	9.5%
Mercer	307863	325824	333861	226	1442	1477	17961	8037	5.8%	2.5%
Union	504094	493819	498759	103	4794	4842	-10275	4940	-2.0%	1.0%
Hudson	556972	553099	552819	47	11768	11762	-3873	-280	-0.7%	-0.1%
Essex	851304	778206	747355	126	6176	5931	-73098	-30851	-8.6%	-4.0%
Study area	5856975	6079453	6423036	4423	1375	1452	222478	343583	3.8%	5.7%
New Jersey	7365011	7730188	8143412	7419	1042	1098	365177	413224	5.0%	5.3%
Sources:	U.S Bureau of the Census NJDOL Division of Labor Market and Demographic Research									

Maps 5 and 6 show population growth in absolute numbers. Both show the decrease in the industrial core around Newark and Elizabeth and the increase in the southern counties, particularly Ocean. In the more recent decade, there is also a strong growth in the collar of counties around the industrial core.

If we look at growth *rate* over the last nine years instead of the total increase in population (see Table 4, which shows the same data ordered by growth rate and Map 15), Somerset County has been growing the fastest, followed by Hunterdon, and Ocean. While Somerset has been growing at about the same rate for almost 20 years, growth in the other two has slowed down considerably as has growth in Middlesex County. On the other hand, growth in Morris and Passaic counties increased in the second decade, and Bergen County showed a shift from a decrease in population in the eighties to growth in the nineties. The density column in Table 4 (which is ordered by

Map 7: 1980 - 1990 Population Changes (Increase/Decrease)



Map 8: 1980 - 1990 Population Changes (Increase/Decrease)

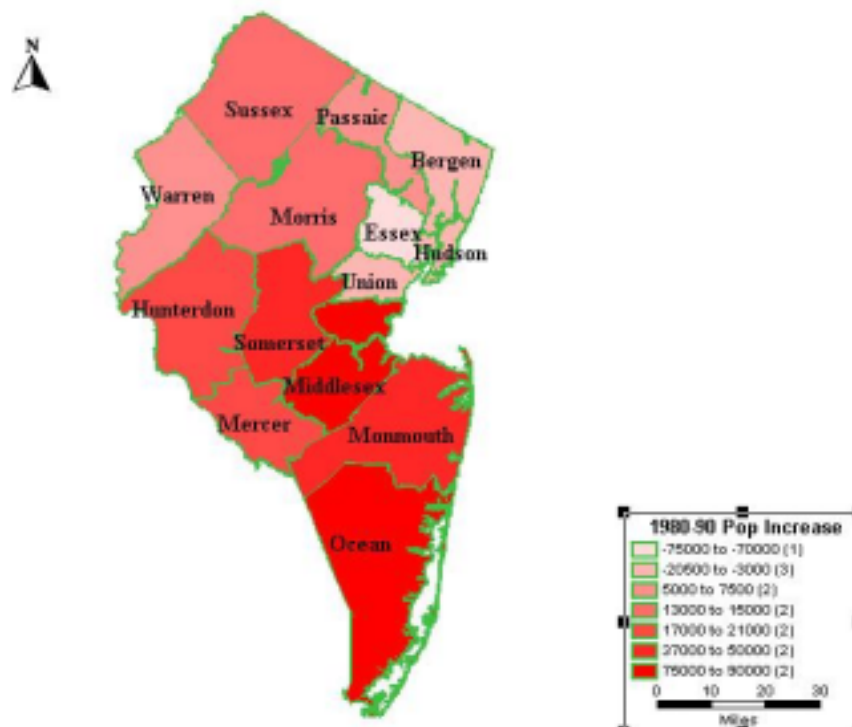
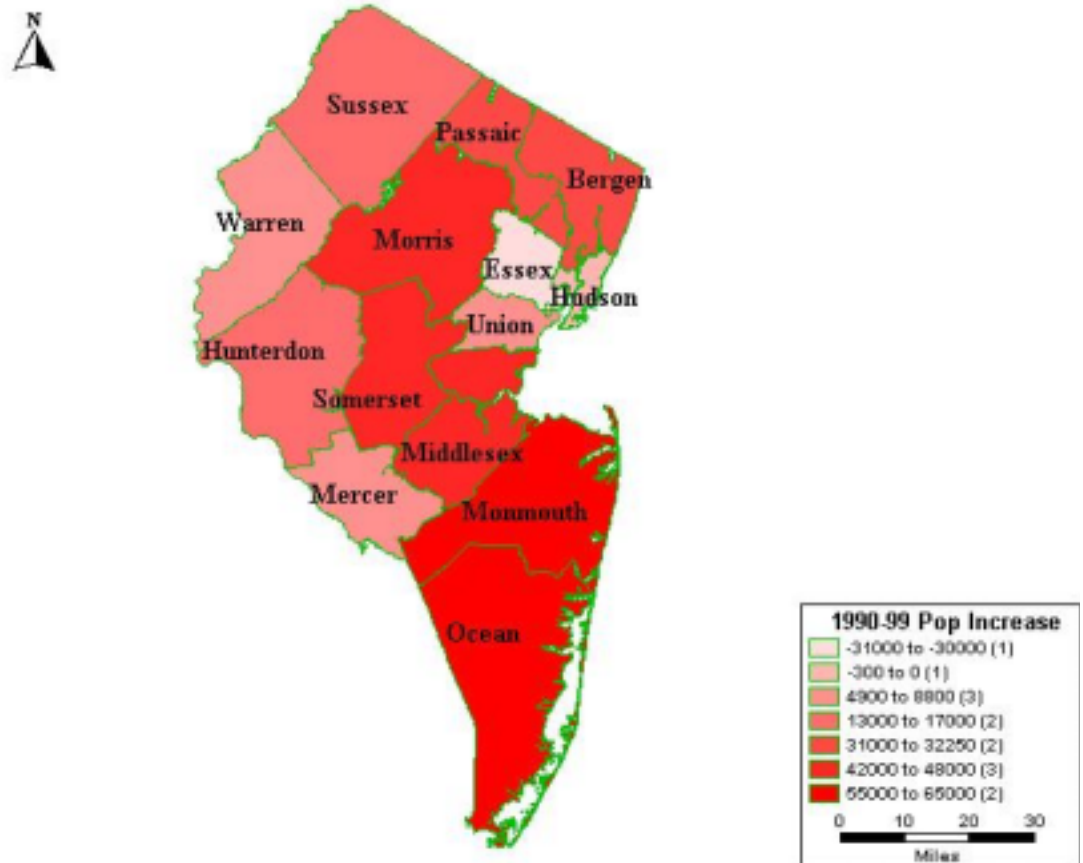


Table 4: Population Growth (in order of 1990-99 Growth Rate)

County	1980 pop	1990 Pop	1999 est	Land area	1990	1999	Growth		% Growth	
					Density	density	'80-'90	'90-'99	'80-'90	'90-'99
Essex	851304	778206	747355	126	6176	5931	-73098	-30851	-8.6%	-4.0%
Hudson	556972	553099	552819	47	11768	11762	-3873	-280	-0.7%	-0.1%
Union	504094	493819	498759	103	4794	4842	-10275	4940	-2.0%	1.0%
Mercer	307863	325824	333861	226	1442	1477	17961	8037	5.8%	2.5%
Bergen	845385	825380	857052	234	3527	3663	-20005	31672	-2.4%	3.8%
Middlesex	595893	671780	717949	311	2160	2309	75887	46169	12.7%	6.9%
Passaic	447585	453060	485064	185	2449	2622	5475	32004	1.2%	7.1%
Warren	84429	91607	100312	358	256	280	7178	8705	8.5%	9.5%
Morris	407630	421353	463545	469	898	988	13723	42192	3.4%	10.0%
Sussex	116119	130943	144700	521	251	278	14824	13757	12.8%	10.5%
Monmouth	503173	553124	611444	472	1172	1295	49951	58320	9.9%	10.5%
Ocean	346038	433203	497533	636	681	782	87165	64330	25.2%	14.8%
Hunterdon	87361	107776	124553	430	251	290	20415	16777	23.4%	15.6%
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New Jersey	7365011	7730188	8143412	7419	1042	1098	365177	413224	5.0%	5.3%

Sources: U.S Bureau of the Census
NJDOLE Division of Labor Market and Demographic Research

Map 9: 1990- 1999 Population Changes (Increase/Decrease)



growth rate) indicates that the counties with lower densities are growing fastest and the counties with the densities are losing population. Thus, northern New Jersey is showing the same tendency toward dispersion of population from the urban cores that have been observed elsewhere.

Maps 7 and 8 show graphically this dispersion away from the urban core of Essex and Union Counties. They also indicate that there is a major shift of population to the southern most counties in the study area, Ocean and Monmouth.

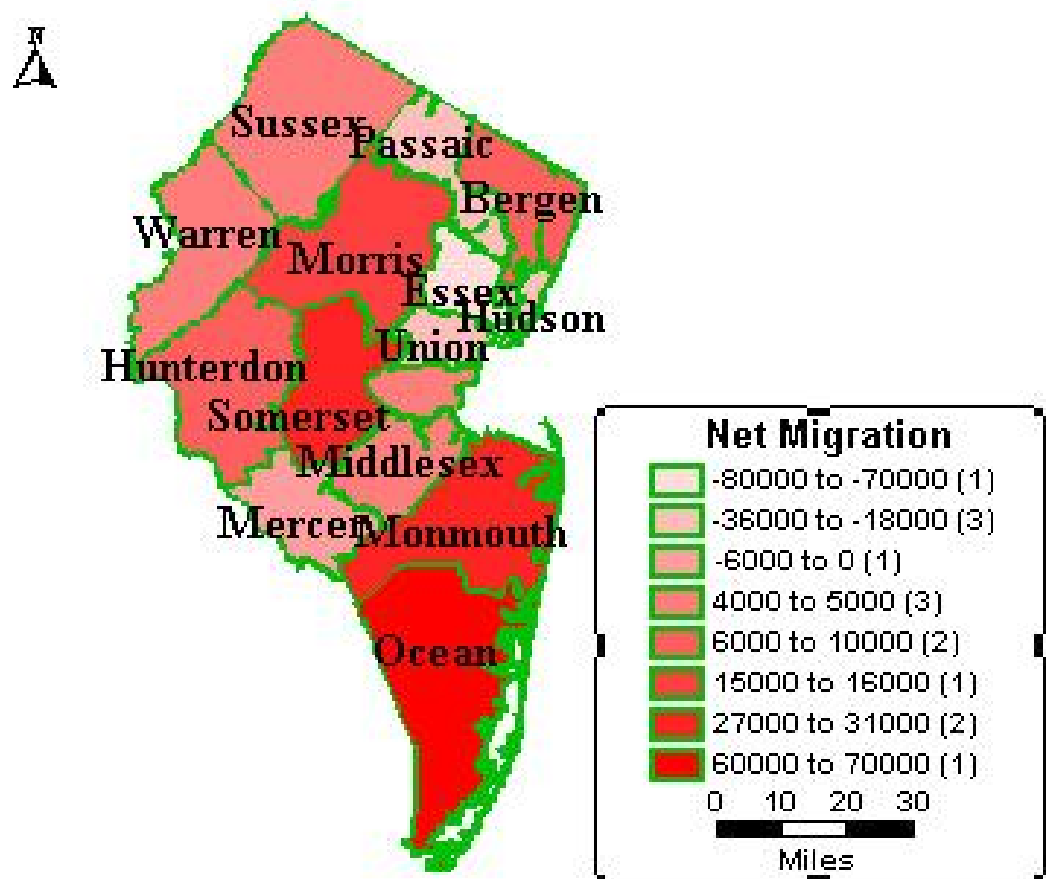
Changes in population are due to births, deaths, and people moving into or out of the area. Table 5 looks at these components of population growth. The average (from 1990 to 1999) annual birth rates varied from 12.7 births per 1000 people for Hunterdon to 16.9 per 1000 for Essex. These higher birth rates tend to be in the older urban counties. Death rates vary from 6.2 deaths per 1000 people in Hunterdon to a high of 13.6 per 1000 in Ocean. Ocean County has an exceptionally high death rate. In fact the average death rate is higher than their average birth rate. This is understandable given that a very high percentage of the Ocean County population was 65 years or older - 23.2% in 1990. (See Table 7.) Despite the high death rate, Ocean had the greatest absolute growth in population, due to the large net migration of people into the county.

Table 5: Components of Population on Change (in order of net migration)

County	Birth rate 1990-99	Death rate 1990-99	Migration 1990-1999			1990		
			Domestic	International	Total	population	Foreign born pop	Percent for born
Essex	16.9	10.4	-128742	53942	-74800	777964	121400	15.6%
Hudson	16.5	9.3	-105537	70000	-35537	553099	169248	30.6%
Passaic	16.7	8.9	-64116	44975	-19141	470864	87894	18.7%
Union	15.1	9.5	-48849	30366	-18483	493819	90863	18.4%
Mercer	14.1	9.1	-17479	11590	-5889	325824	28347	8.7%
Warren	13.9	9.0	3437	1034	4471	91607	3756	4.1%
Sussex	14.3	6.8	3359	1169	4528	130943	6154	4.7%
Middlesex	14.6	7.8	-38415	43387	4972	671811	95393	14.2%
Bergen	12.8	9.1	-41890	48044	6154	825380	148568	18.0%
Hunterdon	12.7	6.2	8565	1336	9901	107802	5389	5.0%
Morris	13.9	7.1	-856	16501	15645	421361	44663	10.6%
Somerset	15.8	7.0	14111	13083	27194	240245	26190	10.9%
Monmouth	14.2	8.9	19634	11046	30680	553093	41484	7.5%
Ocean	13.3	13.6	62812	3028	65840	433203	25992	6.0%
Sturdy Area			-333966	349501	15535	6097015	895341.9	14.7%
New Jersey	14.7	9.1	-378495	377830	-665	7747750	966274	12.5%
Sources:	U.S Bureau of the Census NJDOLE Division of Labor Market and Demographic Research							

While migration into and out of New Jersey as a whole has been roughly balanced from 1990 to 1999, the study area has shown a net in-migration of 15,500 people. This is due to the large number of people moving from outside the United States into northern New Jersey. The net domestic flows (334,000 people) were out of the study area, while close to 350,000 people moved into the study area from overseas. The foreign immigrants largely settled in the older, urban counties (Hudson, Essex, Bergen, Passaic, Middlesex, and Union), the same counties that are losing their population to other counties or states. A comparison of the net domestic and foreign immigration in Map 10 with the population density in Map 5 indicates that the densely settled core along the Hudson River and Northeast rail/Route 1 corridor is losing population to the surrounding counties. Bergen is the exception among the dense counties, in that it is showing strong growth.

Map 10: 1990 - 1999 Net Migration (Increase/Decrease)



When the number of housing permits issued from 1990 to 1998 (Table 6) are compared to population growth from 1990 to 1999, the pattern is roughly the same among the faster growing counties, with Ocean County followed by Monmouth County leading in housing permits and population. At the other end, there is less correspondence, with the two counties with shrinking population (Hudson and Essex) having more housing permits than would be expected; in both cases, there seems to be a boom in housing starts in 1997 and 98. Mercer County also seems to have more housing permits than seems appropriate for its relative growth. This may be due to the replacement of deteriorated housing in older urban areas. Passaic County, on the other hand, has issued relatively few housing permits relative to its population growth.

More recently, Somerset County has been identified as the fastest growing county; Aa national real estate survey last month declared Somerset, Middlesex and Hunterdon the hottest market in the United States@ (Mansnerus, 2000). The article points out that given the large lots of in the Somerset area, undeveloped land is disappearing faster there than in other areas. (While the data presented in this working paper appears to agree that Somerset and Hunterdon are rapidly growing counties, Middlesex seems to have begun to stabilize.)

Table 6: Housing Permits 1990-98 (in order of permits for total period)

COUNTY	1990	1991	1992	1993	1994	1995	1996	1997	Total 1998 90-98	
Ocean County	1,824	1,517	1,790	2,794	3,432	2,508	2,983	3,433	3,934	24,215
Monmouth County	1,529	1,837	2,450	2,525	2,492	2,291	2,284	3,234	3,277	21,919
Middlesex County	1,486	1,293	1,893	2,496	2,087	2,090	2,992	3,037	2,837	20,211
Somerset County	1,273	1,419	1,887	1,963	1,593	1,997	2,264	2,146	2,508	17,050
Morris County	798	1,189	1,614	2,416	2,372	2,088	1,742	1,622	1,881	15,722
Bergen County	817	420	661	924	991	946	1,240	1,713	1,931	9,643
Mercer County	1,004	431	648	1,370	1,304	858	802	1,063	1,393	8,873
Essex County	540	313	514	915	901	712	539	1,171	844	6,449
Hunterdon County	281	362	449	610	810	986	683	781	875	5,837
Hudson County	486	260	259	440	464	294	360	702	1,788	5,053
Passaic County	728	172	412	647	591	410	366	452	509	4,287
Warren County	227	196	288	466	606	444	444	451	784	3,906
Sussex County	337	282	447	356	469	382	515	473	552	3,813
Union County	138	497	447	645	459	320	267	429	488	3,690
Study Area	11,468	10,188	13,759	18,567	18,571	16,326	17,481	20,707	23,601	150,668
NEW JERSEY	17,524	14,856	19,072	25,188	25,388	21,521	24,173	28,018	31,345	207,085

Source: NJ Dept. Of Labor

Table 7: Single Family Homes and Density in 1990 (in order of % of housing that is single family)

County	Hsg (%) sing fam detch'd	1990 Density	Median HH Income
Sussex	81.5	251	48,823
Hunterdon	73.8	251	54,628
Ocean	73.1	681	33,110
Morris	71.7	898	56,273
Monmouth	65.8	1172	45,912
Warren	63.0	256	39,929
Somerset	60.2	788	55,519
Bergen	56.1	3527	49,249
Middlesex	54.1	2160	45,623
Union	53.7	4794	41,791
Mercer	47.4	1442	41,227
Passaic	43.5	2449	37,596
Essex	33.3	6176	34,518
Hudson	9.3	11768	30,917

Source: U.S. Bureau of Census

Table 7 attempts to relate the percent of housing that is detached single family houses to density and income. There appears to be a stronger relation with population density, with the county with the highest percentage of single family homes (Sussex) having the lowest density and the county with the lowest percentage (Hudson) having the highest density. Warren County, which has a low percent of single family houses for its density, probably has a large percentage of its population living in the urbanized area around Phillipsburg.

Table 8: Age Distribution of Population (% of Population in 1990)

County	<5	5-17	18-20	21-24	25-34	55-64	65-74	>74
Bergen	5.9	14.5	3.5	5.4	16.5	11.1	9.1	6.2
Essex	7.0	17.2	4.6	6.4	17.6	9.0	7.3	5.4
Hudson	6.7	15.5	4.2	6.9	20.4	9.1	7.5	5.2
Hunterdon	7.1	17.0	3.5	5.0	17.1	8.4	5.6	3.9
Mercer	6.7	15.8	5.5	6.4	17.3	9.0	7.8	5.2
Middlesex	6.7	14.8	5.1	6.9	19.6	9.1	7.6	4.2
Monmouth	7.0	17.3	3.9	5.2	16.5	9.1	7.3	5.4
Morris	6.6	16.3	4.0	5.7	17.0	9.5	6.2	4.4
Ocean	6.7	16.0	3.5	4.4	14.5	9.1	12.9	10.3
Passaic	7.3	16.7	4.7	6.5	17.7	9.0	7.4	5.5
Somerset	7.0	15.0	3.3	5.3	20.0	9.7	6.6	4.2
Sussex	8.3	19.5	3.8	4.6	17.9	6.7	5.0	3.9
Union	6.6	15.3	3.9	5.7	17.2	10.2	8.9	6.1
Warren	7.6	17.2	3.7	5.2	17.4	16.1	10.8	8.8
New Jersey	6.9	16.4	4.2	5.9	17.6	9.3	7.9	5.5
Source:	U.S. Bureau of Census							

Income

The 1989 median household income data (see Tables 9 and 10; all income figures are in current dollars for the year noted, uncorrected for inflation) are from the 1990 U.S. Census. The year 1989 was a recession period; thus, the income figures do not reflect the economic boom of the late nineties and are included for comparison between counties.

The average median household income in 1989 for the study area is \$42,500, which is considerably higher than that for the United States (\$30,056) or for the Mid Atlantic region (\$32,869). (See Table 9) The three counties with the highest average household incomes (Morris, Somerset, and Hunterdon, with average household incomes of close to and above \$55,000) form a cluster to the west and southwest of the dense, older counties.

The poorest counties in the study area were Hudson (\$30,917) followed by Ocean (\$33,110). These two counties are of very different character, Hudson being very densely settled, urban, and with a high percent of families below the poverty line (12.4%). Ocean had a low density, low percentage of families below the poverty line (4.3%), lowest household size in the study area (2.54), and an extremely high percentage of population over 64 years (23.2%). From 1979 to 1989, median household incomes grew most in Sussex County and dropped in Union and Middlesex. Interestingly this was a period of strong growth in Middlesex.

Table 9: Average Incomes (in order of median household income)

	1989 and 1990 data			Est. 1995	% change	per capita personal income		% change
County	Median HH Income	% change 79-89	% fam below pov	Median HH Income	Med HH inc 89-95	1989	1998	per inc 89-98
Morris	56,273	111.3	1.8	62,773	11.6	30,640	47,915	56.4
Somerset	55,519	111.6	1.4	66,223	19.3	31,404	49,594	57.9
Hunterdon	54,628	126.5	1.8	66,265	21.3	27,155	42,471	56.4
Bergen	49,249	104.8	2.7	55,340	12.4	31,652	47,101	48.8
Sussex	48,823	123.2	2.5	57,064	16.9	21,410	29,180	36.3
Monmouth	45,912	118.0	3.4	53,199	15.9	24,974	35,636	42.7
Middlesex	45,623	99.9	3.4	50,019	9.6	22,940	33,289	45.1
Union	41,791	93.3	5.3	46,161	10.5	24,952	37,340	49.6
Mercer	41,227	109.7	5.3	47,088	14.2	24,764	37,551	51.6
Warren	39,929	110.5	3.8	47,043	17.8	20,491	28,093	37.1
Passaic	37,596	110.0	7.6	38,381	2.1	20,339	26,748	31.5
Essex	34,518	113.3	11.3	36,365	5.4	22,198	33,102	49.1
Ocean	33,110	104.1	4.3	40,474	22.2	20,261	26,815	32.3
Hudson	30,917	114.9	12.4	32,152	4.0	18,554	26,970	45.4
New Jersey	40,927	106.7	5.6	44,345	8.4	23,595	34,383	45.7
Source:	U.S. Bureau of Census as reported by NJ Department of Labor www.wnjin.state.nj.us/OneStopCareerCenter?LaborMarketInformation							

Data for more recent years posted on the Internet by the New Jersey Department of Labor show some interesting trends. The county with highest growth in (estimated) household income from 1989 to 1995 (22.2%) was Ocean County; however, the change in per capita personal income (over the longer period of 1989 to 1998) is the second lowest compared to the other counties in the study area. This difference is probably due to a growth in household size and proportional decrease in single person, older households. Putting this together with changes in population (above) and jobs (below) this confirms a supposition that the character of Ocean County is changing as the dense settlements around the Newark core pushes out and south.

The next two counties in order of greatest growth in household income are Hunterdon and Somerset, both of which have by passed Morris County in household income by 1995. These three counties also show the highest growth in per capita income. They are part of the Awealth belt@ that is drawing development from New York and Philadelphia, identified in a New York Times article last March (Mansnerus, 2000).

The counties with the lowest growth in household income are Passaic, Hudson, and Essex (in that order), all counties in the dense urbanized area.

Table 10 shows 1989 income data for a wider region including the adjacent counties. While the 14 counties of the study area had median 1989 incomes that varied widely, the most well-to-do

counties had the highest median incomes in the region, suggesting the relative wealth of the study area.

Table 10: Average Incomes in Region in 1989 (in order of median household income)

County	Median HH Income	% change 79-89	Per Capita income	% fam below pov
Morris	56,273	111.3	25,177	1.8
Somerset	55,519	111.6	25,111	1.4
Hunterdon	54,628	126.5	23,236	1.8
Rockland, NY	52,731	105.6	20,195	4.1
Bergen	49,249	104.8	24,080	2.7
Sussex	48,823	123.2	18,566	2.5
Westchester, NY	48,404	113	25,584	4.7
Monmouth	45,912	118.0	20,565	3.4
Middlesex	45,623	99.9	18,714	3.4
Richmond, NY	43,861	106.9	17,507	6.3
Bucks County, PA	43,347	96.9	18,292	2.9
Burlington	42,373	99.9	17,707	3.1
Union	41,791	93.3	19,660	5.3
Mercer	41,227	109.7	18,936	5.3
Warren	39,929	110.5	16,716	3.8
Orange, NY	39,198	117.6	15,198	6.4
Passaic	37,596	110.0	16,048	7.6
Essex	34,518	113.3	17,574	11.3
Queens, NY	34,186	100.8	15,348	8.3
Atlantic	33,716	114.0	16,016	6.4
Salem	33,155	84.0	13,961	8.4
Ocean	33,110	104.1	15,598	4.3
Northampton, PA	32,890	78.1	14,562	4.9
Monroe, PA	32,465	102.9	13,630	5.1
Lehigh, PA	32,455	72.7	15,458	4.9
Manhattan, NY	32,262	132.0	27,862	17.4
Hudson	30,917	114.9	14,480	12.4
Pike, PA	30,314	105.9	13,785	5.1
Kings, NY	25,684	115.5	12,388	19.5
Philidelphia Co, PA	24,603	86.8	12,091	16.1
Bronx, NY	21,944	100.5	10,535	25.7
New Jersey	40,927	106.7	18,714	5.6
Mid Atlantic region	32,869	93.1	16,187	8.5
USA	30,056	78.5	14,420	10.0
Source:	U.S. Bureau of Census			

Travel Behavior

There are 3.5 million vehicles in the study area or 1.6 vehicles per household, the same ratio as for New Jersey as a whole and close to the national average of 1.7. Vehicles per household within the study area vary substantially, from 0.9 in Hudson County (both the densest county in the study area and the one with the lowest median household income) to 2.1 in Hunterdon and 2.0 vehicles per household in both Morris and Sussex Counties. All three of these counties have high median incomes, with Morris County having a very high median income; Sussex and Hunterdon have the lowest population densities in the study area.

The percentage of study area workers who drive alone to work is 70.8% and those that rode in car pools is 12.4%, which is close to the state rates and on the low side for the nation as a whole (73.2% and 13.4% respectively). Within the study area the drive alone rates vary from lows of 42.4% in Hudson County followed by 61.4% in Essex County to highs of 82.4% in Hunterdon, 81.5% in Somerset, and 81.2% in Morris. Car-pooling varies from 9.4% in Somerset to 15.4% in Hudson County.

Public transportation use for the journey to work in the study area (9.8%) is a little higher than for New Jersey as a whole (8.8%) and considerably higher than for the United States as a whole (5.3%). Public transportation use varies from 0.9% in Warren County and 1.3% in Hunterdon to 29.3% in Hudson, 17.1% in Essex, and 10.6% in Bergen County. Hudson County also recorded the highest percentage of workers who used other modes (11.5% compared to the next highest of 7.0% in Mercer County); perhaps this reflects a high rate of walking due to the high density with presumably short journey-to-work distances.

Average travel times to work vary from 22.1 minutes for workers who live in Mercer County to 33.3 minutes for workers living in Sussex County. Mercer and Sussex, respectively, have the least and most workers who travel of jobs outside the county of residence. The average for New Jersey workers is 25.3 minutes, higher than the United States average of 22.4 minutes. The proportion of the Study Area workers who commute to a different county (42.3%) is slightly higher than for the state as a whole (41.4%) and much higher than for the United States as a whole (23.9%). These high inter-county commute rates may reflect the smaller counties of the eastern part of the United States.

Table 11: Transportation and Journey to Work in 1990 (in order of % using public transportation for JTJW)

County	Veh/ vehicles	HH	Workers >15	Per cent of workers who						avg time to work
				Work out side Co	Work at home	Drove alone	car pool	Pub trans	Other	
Hudson	196650	0.9	262745	46.3	1.4	42.4	15.4	29.3	11.5	27.4
Essex	353431	1.3	356562	41.3	1.9	61.4	13.8	17.1	5.8	26.4
Bergen	529897	1.7	429102	40.2	2.3	72.3	10.6	10.6	4.2	25.7
Union	293725	1.6	247205	48.3	1.9	72.3	12.5	8.4	4.9	24.3
Middlesex	419484	1.8	353628	39.9	1.7	75.2	11.0	8.1	4.0	26.3
Monmouth	349768	1.8	274238	35.4	2.7	74.6	11.4	7.4	3.9	27.3
Passaic	243352	1.6	220595	47.7	1.5	70.7	14.7	6.7	6.4	22.8
Mercer	187826	1.6	162920	23.4	2.5	71.5	12.7	6.3	7.0	22.1
Somerset	172121	1.9	134390	54.3	2.7	81.5	9.4	3.9	2.5	25.5
Morris	298603	2.0	231093	39.9	2.6	81.2	9.9	3.5	2.8	25.7
Ocean	268419	1.6	178966	40.9	2.1	79.4	13.3	2.0	3.2	26.9
Sussex	89453	2.0	66593	58.5	2.7	80.7	12.8	1.5	2.3	33.3
Hunterdon	78646	2.1	57721	55.8	3.6	82.4	9.8	1.3	2.9	28.5
Warren	60334	1.8	44891	55.6	2.6	77.4	14.3	0.9	4.8	28.4
Study area	3541709	1.6	3020649	42.3	2.1	70.8	12.4	9.8	5.0	25.9
New Jersey	4517638	1.6	3812684	41.4	2.1	71.6	12.4	8.8	5.1	25.3
United States		1.7		23.9	3.0	73.2	13.4	5.4	5.0	22.4
Source: U.S. Bureau of Census										

Economic Development

Non-farm employment (that is, jobs located in the county) will be used as a measure of economic development in the study area, that is, specifically paid employment as included in the census data, including paid employment in manufacturing, wholesale trade, retail trade, taxable service, and federal and state and local government. (See Table 12.) This does not represent all employment; for example agricultural employment, people working in the non-profit sector, and salesmen on commission are excluded. As a rough measure of development in the counties, jobs per population and per area are used.

Bergen County has the most jobs, followed by Essex and then Middlesex. (see Table 12 and Map 11.) The three northwest, largely rural counties, Hunterdon, Warren, and Sussex, have the least number of jobs. The latter three also are extensive in area; when job density (jobs per square mile) is considered, these three counties look even less developed. Hudson, Essex, Union, and Bergen, in that order, have the highest density of jobs.

Table 13 shows the employment in each sector as a percentage of employment in the county. The relative proportion of jobs in the different industry sectors in the study area is about the same as for New Jersey as a whole, but study area jobs in wholesale trade is noticeably higher than for

the Middle Atlantic Region or the United States as a whole. This may be due to the role of the seaports in the New Jersey economy. To compensate, a smaller proportion of jobs or in state and local government.

Table 12: Employment by Sector in 1987 (in order of total employment)

County	Manufact	Wholesale Trade	Retail Trade	Taxable Service	Government Federal	State & local	Total	Job density (jobs/sm)
Bergen	101300	61051	73285	84041	3949	39074	362700	1550
Essex	66000	27436	48542	67150	10817	63395	283340	2249
Middlesex	76300	31356	49664	47958	3972	45989	255239	821
Union	69700	25194	32996	40778	2739	25896	197303	1916
Morris	46700	14662	36159	47016	7641	22820	174998	373
Hudson	46000	27088	28538	24524	11769	31532	169451	3605
Passaic	61400	15787	33870	28834	2068	23362	165321	894
Monmouth	27600	9335	47630	36900	12390	28784	162639	345
Mercer	39800	7376	25324	29629	3675	47328	153132	678
Somerset	26100	7520	18346	21180	3258	11811	88215	289
Ocean	7200	3055	28260	17255	3840	19344	78954	124
Hunterdon	7800	935	7688	5309	315	6434	28481	66
Warren	9400	1968	6177	3029	331	4744	25649	72
Sussex	3000	1012	6300	5150	324	6421	22207	43
Study Area	588300	233775	442779	458753	67088	376934	2167629	490
New Jersey	690800	270976	566214	595807	81464	477749	2683010	362

Note: Employment figures do not include the non-profit, farm, or self employed.

Source: U.S. Bureau of Census

Passaic, Warren, and Union Counties had from 35 to 37 % of their employment in manufacturing in 1987. This is not surprising for Passaic and Union, but Warren is a largely rural county. However, the industrial area of Bethlehem, Pennsylvania is immediately to the west of Warren, and Phillipsburg, Warren=s main city, is on I78 which connects New Jersey to the Bethlehem area. Presumably many spillover companies are located in Phillipsburg, and these jobs dominate the small overall employment base of the county.

Four counties, Bergen, Hudson, Union, and Middlesex, had over 10% of their employment in wholesale trade in 1987. For the latter three counties, this is probably a reflection of their location adjacent to the ports of New Jersey.

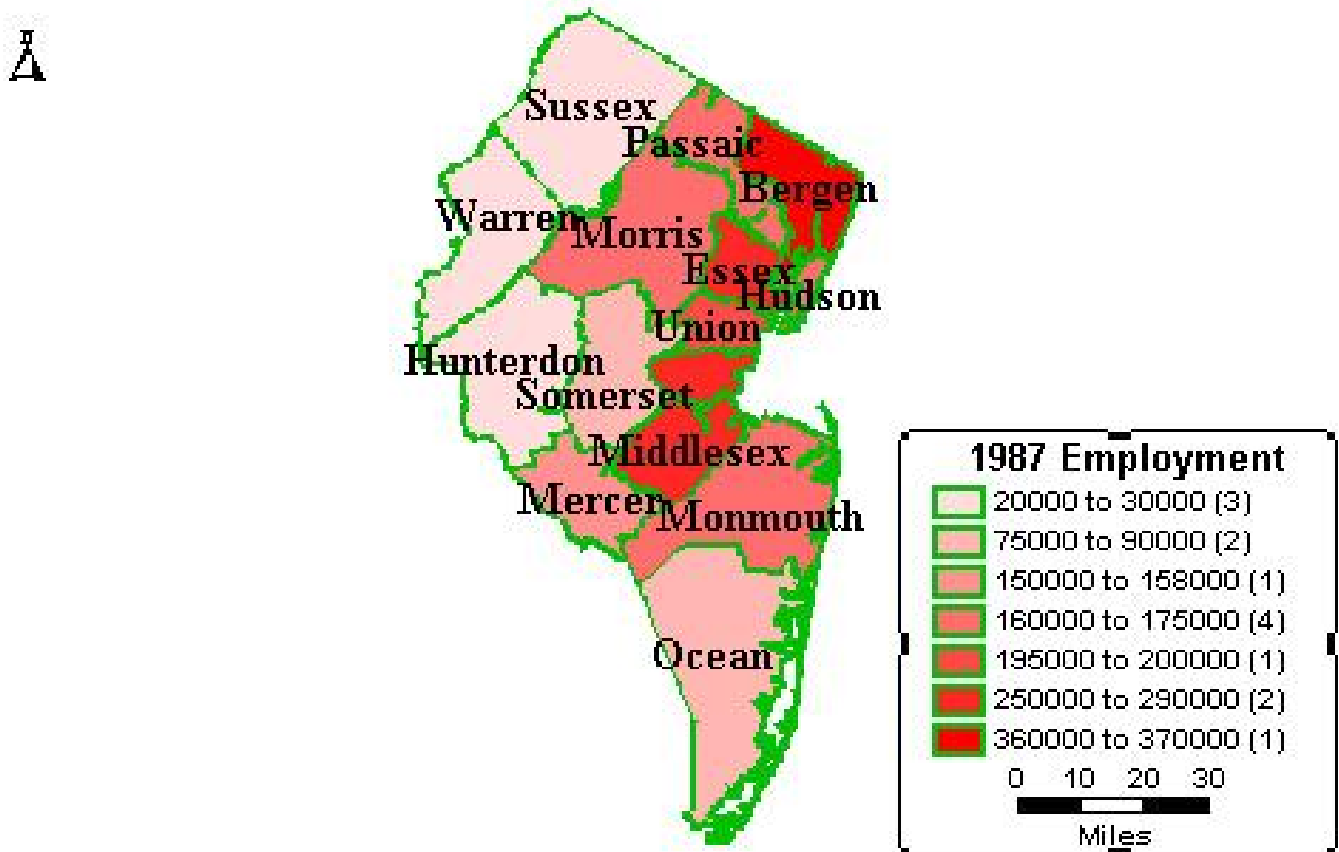
Morris and Somerset had the highest percentage of jobs in service industries. As these are the growth industries of the late twentieth century, this suggests the basis for strong economies in

these two counties.

Compared to the other counties in the Study Area, Hudson and Monmouth have the greatest proportion of their employment in the Federal government. Mercer and Sussex have the highest proportion of their jobs in state and local government. Given that Trenton, the state capital, is located in Mercer County, the fact that 31% of Mercer=s jobs are in government is not surprising.

Sussex=s high showing may simply be an indirect result of the low number of jobs in other sectors.

Map 11: 1987 Employment



Retail employment is probably largely a function of population and income (or buying power) rather than an indication of development. Many of the counties with a high percentage of employment in retail trade are those counties with a relatively low number of jobs.

Table 14 looks at 1987 employment in each county relative to population and workers living in the county, as a measure of which areas have labor surpluses. However, because the employment figures do not include *all* jobs (see the qualifications above), the numbers in the table are used only to compare counties.

The two measures of jobs per population and jobs per worker are strongly correlated. The table is ordered by jobs per worker, but the jobs per population also decreases largely in tandem. Mercer County has the highest number of both, and it correspondingly has the fewest number of workers with jobs outside the county. Sussex has the lowest jobs per population and per worker

Table 13: Percentage of Employment per Sector (in order of % employment in manufacturing)

County	Manufact	Wholesale Trade	Retail Trade	Taxable Service	Government Federal	State & local	Sum
Passaic	37.1%	9.5%	20.5%	17.4%	1.3%	14.1%	100.0%
Warren	36.6%	7.7%	24.1%	11.8%	1.3%	18.5%	100.0%
Union	35.3%	12.8%	16.7%	20.7%	1.4%	13.1%	100.0%
Middlesex	29.9%	12.3%	19.5%	18.8%	1.6%	18.0%	100.0%
Somerset	29.6%	8.5%	20.8%	24.0%	3.7%	13.4%	100.0%
Bergen	27.9%	16.8%	20.2%	23.2%	1.1%	10.8%	100.0%
Hunterdon	27.4%	3.3%	27.0%	18.6%	1.1%	22.6%	100.0%
Hudson	27.1%	16.0%	16.8%	14.5%	6.9%	18.6%	100.0%
Morris	26.7%	8.4%	20.7%	26.9%	4.4%	13.0%	100.0%
Mercer	26.0%	4.8%	16.5%	19.3%	2.4%	30.9%	100.0%
Essex	23.3%	9.7%	17.1%	23.7%	3.8%	22.4%	100.0%
Monmouth	17.0%	5.7%	29.3%	22.7%	7.6%	17.7%	100.0%
Sussex	13.5%	4.6%	28.4%	23.2%	1.5%	28.9%	100.0%
Ocean	9.1%	3.9%	35.8%	21.9%	4.9%	24.5%	100.0%
Study Area	25.7%	10.1%	21.1%	22.2%	3.0%	17.8%	100.0%
New Jersey	27.1%	10.8%	20.4%	21.2%	3.1%	17.4%	100.0%
Middle Atlantic	23.9%	7.8%	20.4%	20.5%	3.1%	24.3%	100.0%
United States	24.7%	7.3%	23.1%	20.9%	4.2%	19.8%	100.0%

Note: Employment figures do not include the non-profit, farm, or self employed.

Source: U.S. Bureau of Census

and also has the highest percentage of workers commuting to jobs outside the county. Looking at workers per population, Somerset (a county with very high median household incomes) has the highest ratio of workers per population and the lowest unemployment rate. Ocean County, on the other hand, has the lowest ratio of workers to population, but not the highest unemployment rate; Ocean County has a much older population and presumably many of them are retired. The counties with the highest unemployment rates are Essex and Hudson, two of the urban core counties and the two counties that have continued to lose population in the 1990s.

Table 14: Employment Relative to Population (in order of jobs / worker)

County	1990 Population	1987 Jobs in county	Workers >15	Work out side Co	Jobs per capita	Jobs per worker	Workers per pop	Unemployed (%)	Fam below pov line (%)
Mercer	325824	153132	162920	23.4	0.47	0.94	0.50	5.2	5.3
Bergen	825380	362700	429102	40.2	0.44	0.85	0.52	4.4	2.7
Union	493819	197303	247205	48.3	0.40	0.80	0.50	6.1	5.3
Essex	778206	283340	356562	41.3	0.36	0.79	0.46	8.8	11.3
Morris	421353	174998	231093	39.9	0.42	0.76	0.55	3.5	1.8
Passaic	453060	165321	220595	47.7	0.36	0.75	0.49	7.1	7.6
Middlesex	671780	255239	353628	39.9	0.38	0.72	0.53	5.0	3.4
Somerset	240279	88215	134390	54.3	0.37	0.66	0.56	3.4	1.4
Hudson	553099	169451	262745	46.3	0.31	0.64	0.48	8.8	12.4
Monmouth	553124	162639	274238	35.4	0.29	0.59	0.50	5.2	3.4
Warren	91607	25649	44891	55.6	0.28	0.57	0.49	4.3	3.8
Hunterdon	107776	28481	57721	55.8	0.26	0.49	0.54	2.8	1.8
Ocean	433203	78954	178966	40.9	0.18	0.44	0.41	5.9	4.3
Sussex	130943	22207	66593	58.5	0.17	0.33	0.51	4.2	2.5
Study area	6079453	2167629	3020649		0.36	0.72	0.50		
New Jersey	7730188	2683010	3812684	41.4	0.35	0.70	0.49	5.7	5.6
Source:	U.S. Bureau of Census								

Employment Growth

Table 15 shows estimates of job growth in each county from 1996 to 2006; the estimates are from the New Jersey Department of Labor. The greatest estimated growths (in absolute numbers) are for Middlesex and Bergen, the counties with the greatest number of jobs in 1996. The lowest number of new jobs is estimated to occur in the three rural counties of Warren, Sussex, and Hunterdon. The largest growth rate is estimated for Somerset (19.4% increase in jobs over ten years) followed by Ocean (16.7%) and Sussex (16.3%). All three had relatively few jobs in 1996; Somerset, however, show the third highest new jobs in absolute numbers. The lowest growth rates are for Union (3.5%) followed by Passaic (5.0%), both counties where manufacturing dominates the job base.

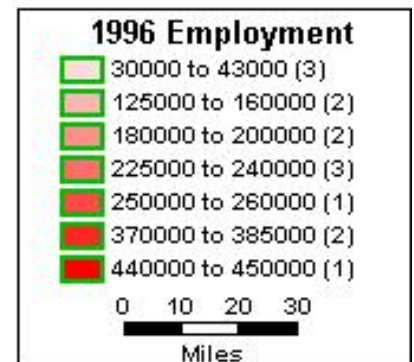
Table 15: Estimation of Employment Growth 1996-2006 (in order of jobs in 2006)

County	1996	2006	96-06 Growth		96 job Density	Job growth Density
			Absolute	Rate	(jobs/sm)	(dJobs/sm)
Bergen	443600	487250	43650	9.8%	1896	187
Middlesex	380550	432050	51500	13.5%	3020	409
Essex	373400	400800	27400	7.3%	7945	583
Morris	256500	283150	26650	10.4%	597	62
Hudson	239300	261100	21800	9.1%	1059	96
Monmouth	225750	254850	29100	12.9%	726	94
Union	234200	242400	8200	3.5%	496	17
Mercer	192300	209400	17100	8.9%	410	36
Passaic	182350	191550	9200	5.0%	287	14
Somerset	158650	189350	30700	19.4%	858	166
Ocean	128800	150250	21450	16.7%	422	70
Hunterdon	42350	48300	5950	14.0%	81	11
Sussex	34150	39700	5550	16.3%	332	54
Warren	33450	35850	2400	7.2%	93	7
Study area	2925350	3226000	300650	10.3%	661	68
New Jersey	3639900	4046900	407000	11.2%	491	55
United States	118731000	136318000	17587000	14.8%	34	5
Source:	NJ Department of Labor www.wnjin.state.nj.us/OneStopCareerCenter?LaborMarketInformation					

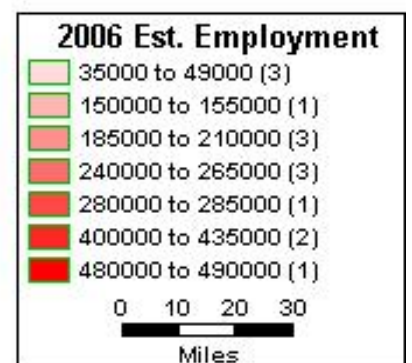
Maps 12 and 13 show employment in 1996 and estimated employment in 2006 respectively. Comparison of these two maps indicates that, despite the variation in the growth rates, the geographic pattern of jobs (at least at the county level) will not change much, with the exception that Somerset County will have a stronger employment role compared to the other counties.

Map 14 shows job growth from 1996 to 2006 in absolute numbers, this map shows the major job growth in the collar counties around the dense urban core. It also shows growth in Monmouth, perhaps following the southward movement of population noted above (see Maps 7 and 8). Map 15 shows the growth rate in employment. Again, Somerset is the leader in job growth. The strong showing for Sussex and Hunterdon is due to the relatively small base employment in 1996. The high growth rate in Ocean may be the same movement noted for Monmouth County of jobs following the population movement south.

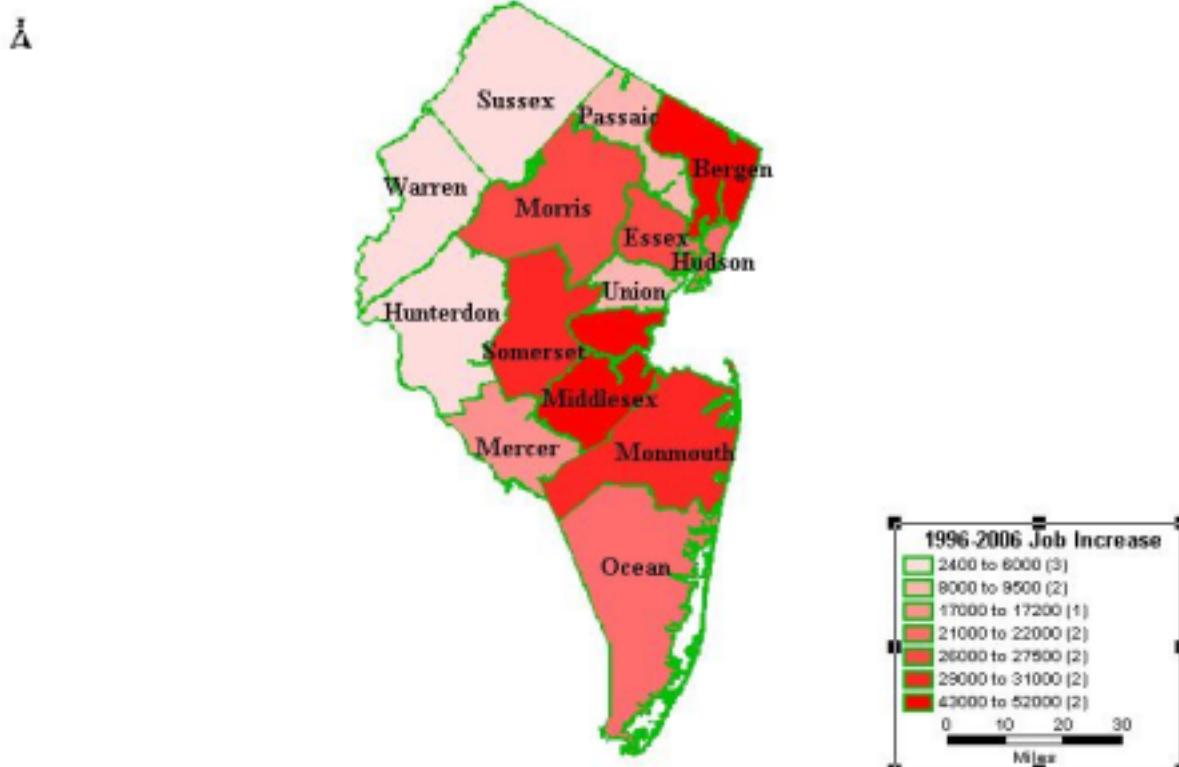
Map 12: 1996 Employment



Map 13: 2006 Estimated Employment



Map 14: 1996 - 2006 Employment Growth



Map 15: 1996 - 2006 Employment Growth Rate

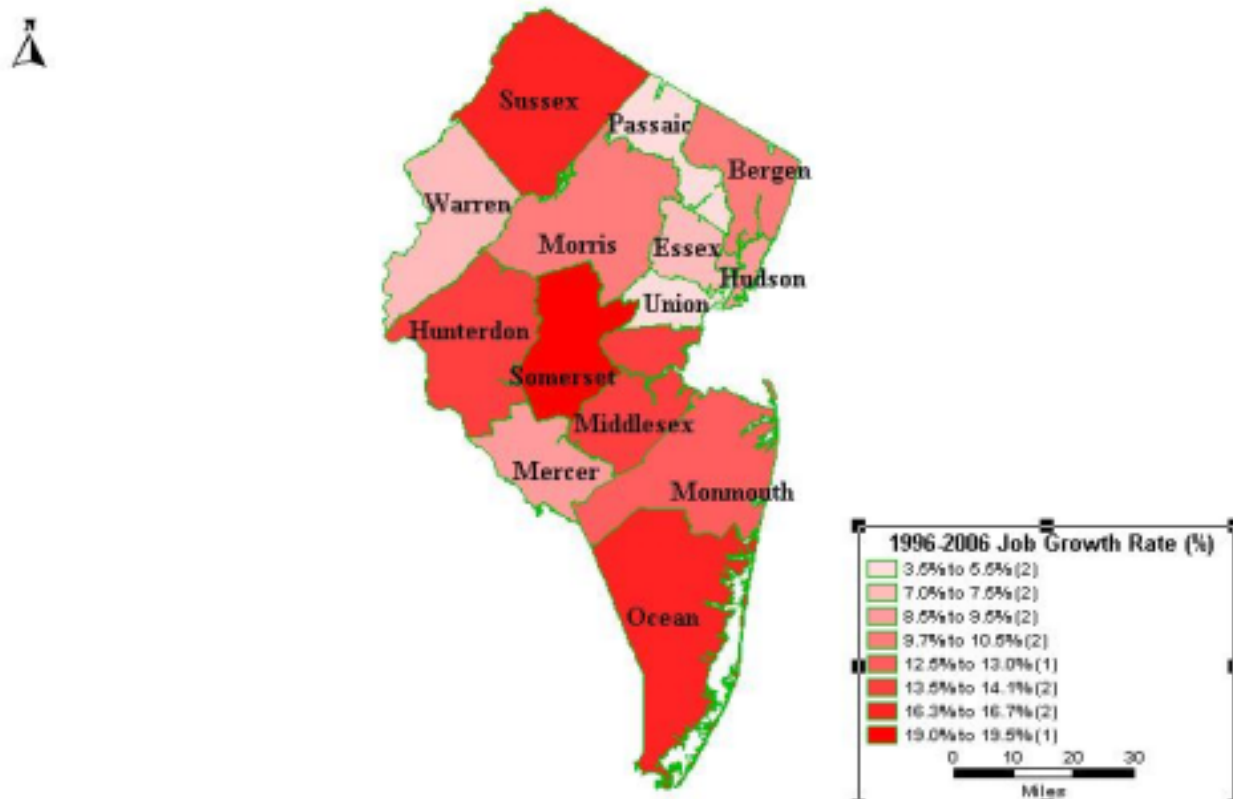


Table 16 shows the three industries with the highest estimated rate of job growth for each county. Business services and health services with other similar industries lead in almost all cases with the following exceptions. Hudson County has an estimated 55% growth in securities and commodities brokers; a large number of back office operations from Wall Street have moved across the Hudson to Jersey City and Hoboken, causing a building boom along the Hudson River front. Essex is forecasted to have strong growth in jobs related to air transportation, reflecting the importance of Newark International Airport to the economy. Somerset County, the fastest growing county, is forecasted to have strong growth in communications. And Sussex is forecasted for strong growth in amusement and recreation, reflecting its location in the Kittatinny Mountains and along the Delaware River.

Table 16: Estimated Employment Growth in Dominant Sectors (in order of increase in total jobs)

County	96-06 Growth		Top three industries in growth of total jobs				
	1996	2006	Absolute	Rate			
Middlesex	380550	432050	51500	13.5%	Business services (61.0%)	Health services (26.6%)	Eng'g & mgmt servs(20.4%)
Bergen	443600	487250	43650	9.8%	Business services (34.6%)	Health services (31.8)	Social services (36.8%)
Somerset	158650	189350	30700	19.4%	Business services (55.8%)	Communications (25.9%)	Health services (33.6%)
Monmouth	225750	254850	29100	12.9%	Health services (29.8%)	Business services (50.1%)	Social services(48.2%)
Essex	373400	400800	27400	7.3%	Business services (27.4%)	Health services (17.0%)	Transportation by air (34.9%)
Morris	256500	283150	26650	10.4%	Business services (29.4%)	Health services (24.3%)	Eng'g & mgmt servs(21.4%)
Hudson	239300	261100	21800	9.1%	Business services (50.1%)	Sec & Com brkrs (54.6)	Health services (23.6%)
Ocean	128800	150250	21450	16.7%	Health services (37.9%)	Business services (47.1%)	Misc.retail (46.6%)
Mercer	192300	209400	17100	8.9%	Business services (50.1%)	Health services (25.7%)	Social services(44.9%)
Passaic	182350	191550	9200	5.0%	Health services (28.7%)	Business services (26.8%)	Social services(32.7%)
Union	234200	242400	8200	3.5%	Health services (15.0%)	Business services (18.5%)	Social services(37.8%)
Hunterdon	42350	48300	5950	14.0%	Eng'g & mgmt servs(35.3%)	Health services (29.5%)	Business services (43.9%)
Sussex	34150	39700	5550	16.3%	Health services (25.9%)	Business services (53.4%)	Amusemt & recreation (49,7%)
Warren	33450	35850	2400	7.2%	Health services (24.4%)	Food stores)15.4%)	Misc.retail (16.8%)
Study area	3E+06	3226000	300650	10.3%			
Source:	NJ Department of Labor www.wnjin.state.nj.us/OneStopCareerCenter?LaborMarketInformation						

Land in Agriculture

Table 17 and Map 16 show the land within each county that is in agricultural use along with the change. In 1987 the AGarden State@ had 18.8% of its total area in farmland; the study area had only slightly less - 17.9%. For comparison, 43% of all land in the United States and 27% of land in the Middle Atlantic Region were used for farming in 1987.

The three counties characterized above as rural have the most acreage in farms, although of the

three, only Hunterdon (44.9%) and Warren (38.2%) exceed the other 12 counties in *percentage* of total area in farmland; third place goes to Mercer County, with 28.6% of total area devoted to farming. Sussex presumably has much more land in recreational use or nature preserves. The five urban counties along the Hudson River have the least land and the lowest percentage of land in agricultural use, followed closely by Ocean County. Interestingly, the acreage in agricultural use has increased for the three northwestern counties and for Mercer and Morris as well.

Table 17: Land in Agricultural Use in 1987 (in order of most acreage)

County	Acreage	change 82-87	avg farm size	Total Land area (sq.mi.)	Farm land area (sq.mi.)	Percent farm land
Hunterdon	123698	3458	88	430	193	44.9%
Warren	87583	225	132	358	137	38.2%
Sussex	76641	5480	101	521	120	23.0%
Monmouth	65846	-2429	78	472	103	21.8%
Somerset	45190	-4318	111	305	71	23.2%
Mercer	41303	1280	134	226	65	28.6%
Morris	27086	1510	63	469	42	9.0%
Middlesex	25222	-7216	100	311	39	12.7%
Ocean	8820	-1140	43	636	14	2.2%
Bergen	2596	-132	21	234	4	1.7%
Passaic	1380	-119	24	185	2	1.2%
Essex	580	-624	23	126	1	0.7%
Union	449	-130	14	103	1	0.7%
Hudson	0	0	0	47	0	0.0%
Study area	506394	-4155		4423	791	17.9%
New Jersey	894426	-21905	88	7419	1398	18.8%
Source:	U.S. Bureau of Census					

Map 16: Land in Agricultural Use



References

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