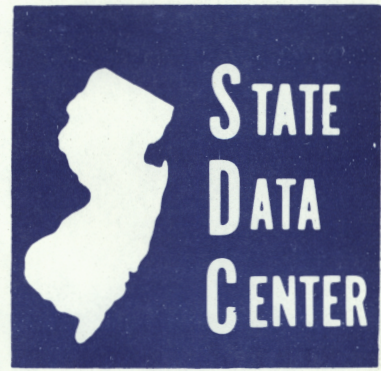


974.905
C396.2
C1

A NEW JERSEY NEWSLETTER

POPULATION AND CENSUS



Thomas H. Kean, Governor

Charles Serraino, Commissioner

Issues 35 & 36

May 1985

PROPERTY OF
NEW JERSEY STATE LIBRARY
MAY 1 1985
100 W. State St.
Trenton, N.J.

Earnings of Women in New Jersey	2
New Jersey's Density Surpasses 1000	9
1982 Economic Censuses for NJ	10
Survey of Income and Program Participation ..	13
Census Data on Diskettes	14
CENDATA: Online Information	16
Evaluating New Jersey's Population Estimating Techniques, Part II Municipal Population Estimates	17
Conferences/Workshops	24
New Publications	25
Subject Index	26

EARNINGS OF WOMEN IN NEW JERSEY

Connie O. Hughes
New Jersey State Data Center

INTRODUCTION

The 1979 median earnings of women in New Jersey was \$9,863. The corresponding statistic for men was \$18,256. There are many demographic, economic, and social factors which contribute to this difference. This article will attempt to identify some of these based on tabulations from the 1970 and 1980 censuses. To be addressed in the following analyses are age, education, and labor force participation.

There are several caveats that must be recognized in reviewing the data presented. The data are based on the sample questionnaires of the decennial censuses and therefore are subject to sampling variability. In some cases, characteristic data are cross-tabulated only by income and in other cases by earnings. Additionally, some data are summarized in terms of medians and others in terms of means. (The differences between these concepts -- income vs. earnings and median vs. mean -- are provided at the end of the article.)

NEW JERSEY VS. THE UNITED STATES

As can be seen from Table 1, median income and earnings tended to be higher in New Jersey than in the nation as a whole. But, the differences between male and female earnings were approximately the same. In general, the ratio of female income to male income is smaller than that for earnings. The 1979 income ratio in New Jersey was .40 and the earnings ratio was .54. For the United States as a whole, the 1979 income ratio was .43 and the earnings ratio was .56.

Earnings of both males and females nearly doubled from 1969 to 1979. Median earnings of women in New Jersey increased by 94% and of men by 95%. This pattern mirrored, except at a slightly slower pace, the national trend -- female median earnings grew by 96% and male earnings by 98%. These small differences in growth rates may not be significant because the data are based on a sample. The end result is that the total female/male median earnings ratio barely changed from 1969 to 1979 in either New Jersey or the nation.

LABOR FORCE PARTICIPATION AND EARNINGS

Obviously, there is a direct relationship between labor force status and earnings. According to the 1980 census, there were over 385,000 or 34% more women in New Jersey's labor force in 1980 than in 1970. The number of men in the state's labor force, on the other hand, grew by 166,000 or 9%. However, as shown in Table 2, the percentage of females that worked year-round part-time was almost twice that of males and the percentage that worked year-round full-time, almost half. The level of participation in the workforce (i.e., full-time, part-time), affects earnings as is evidenced in Table 3. The difference between the median earnings of females and males working full-time year-round is less than between all females and males working year-round.

OCCUPATION AND EARNINGS

Of the six major occupational classifications listed in Table 4, managers and professionals had the highest earnings in 1979, according to the 1980 census. The median earnings for female managers and professionals was \$14,345 and 22% of all working women were in this category. Male managers and professionals, on the other hand, had median earnings of \$25,674 and 31% held such jobs.

An estimated 54% of the female experienced labor force held technical, sales or administrative support positions, with a median earnings of \$10,711. Only 22% of the males worked in these types of jobs, with median earnings of \$18,361. However, within the broad category, a far greater proportion of males (44%) were in sales than females (13%). Conversely, 80% of these females held administrative support jobs (e.g., secretaries, clerks), while about 39% of such males were in clerical jobs.

In general, median earnings by broad occupational group were higher for males than for females and the concentration of females tended to be in the lower paying occupations.

AGE, EDUCATION AND EARNINGS

Women have tended to have completed fewer years of schooling than men and this has contributed to lower overall earnings of women. In 1970, 52% of the females 25 years of age and over in New Jersey were high school graduates and 8% had completed four or more years of college. On the other hand, 53% of the males had graduated from high school and 16% finished at least four years of college. According to the 1980 census, 66% of the state's females had high school educations and 14% were college graduates; this compares to 69% and 24% respectively for males. Thus, the educational levels of females and males increased during the 1970s.

When the educational data are examined by sex and age, it is found that the differences in attainment by sex are far smaller for younger persons than older persons. For example, in 1980, 87% of females 25 to 29 years old were high school graduates; for males, it was also 87%. An estimated 24% of these females completed four or more years of college compared to 29% of the 25- to 29-year old males. At the extreme end of the age range (75 years and older) 9% of the males were college educated and 5% of the females had finished at least four years of college. As the population ages, the female/male educational attainment gap should narrow, in turn, possibly causing the earnings difference to also decrease. (For a somewhat more detailed discussion of this topic, see: Connie O. Hughes, "Educational Attainment in New Jersey 1970 - 1980," Economic Indicators, No. 237, April 1984.) This possibility is further evidenced by examining more detailed decennial census data.

Table 5 shows mean or average weekly earnings in 1979 by sex, education, and age for New Jersey from the 1980 census. These data are only for persons who worked a minimum of 35 hours per week and at least 40 weeks in 1979. The differences by sex in earnings appear to be most prominent for persons 45 to 54 years of age and for persons who have completed only four years of college. The 1979 female/male ratio for persons 45 to 54 years of age was .56, but was .92 for 18 to 24 year olds. Women's earnings also tended to be closer to males 55 years of age and older (61% for 55 to 64 year olds and 63% for 65 years and older).

Females with four years of college, on average, earned 62% as much as males who had completed only four years of college. Women may have benefitted slightly more than males from an extra year or two of college. The difference between the average earnings of a female with four years of college and one with five to six years of college was \$77 in 1979. The corresponding figure for males was \$63.

SUMMARY

As in the nation, women in New Jersey tended to earn less than men, as evidenced by data from the 1980 census. As the data shows, social, demographic, and economic factors contribute to the disparity. It has been traditional for a greater proportion of females than males to work part-time. Women have historically worked in lower-paying occupations. And, women, in the past, have completed less years of school.

However, women have been entering the labor force in large numbers. From 1970 to 1980, there was a 34% increase in the number of women in the labor force in New Jersey. Data are not available to compare changes in part-time versus full-time during the past decade, but the number of women working a minimum of 50 weeks per year increased by 48%. There was an 84% growth in the number of female managers and professionals -- 27% for males.

And, the number of females that were college graduates in 1980 was almost twice that in 1970 (330,324 vs. 171,614) -- the number of male college graduates grew by 60%.

Thus, although there is still a male-female earnings gap, there is a potential for it to continually narrow. Persons 24 years and younger at the time of the 1980 census exhibited the smallest differences in earnings level. Should these patterns continue, and as these persons and those younger move through the labor force cycle, the gap may narrow.

DATA CONCEPTS AND AVAILABILITY

Data Concepts

The concepts in this article reflect the U.S. Bureau of the Census definitions.

Income: Total money income as ascertained on a sample basis for all persons 15 years old and over. Total income is the sum of the amounts reported separately for income from wages and salaries; nonfarm self-employment; farm self-employment; interest, dividends and net rentals; Social Security; public assistance; and all other sources.

Earnings: The sum of wage or salary income and net self-employment income from nonfarm and farm sources. Earnings are those sources of income most appropriately interrelated with labor force characteristics.

Median: The income or earnings level at which 50% of the persons have income or earnings above and 50% have income or earnings below.

Mean: The amount obtained by dividing the total income or earnings of all persons with income or earnings by the number of such persons.

Data Availability

The data presented in this article were obtained from the 1970 and 1980 censuses. Similar 1980 data for New Jersey's metropolitan areas of 250,000 or more inhabitants (Jersey City, NJ; Long Branch-Asbury Park, NJ; New Brunswick-Perth Amboy-Sayreville, NJ; Newark, NJ; Paterson-Clifton-Passaic, NJ; and Trenton, NJ) are available in the U.S. Bureau of the Census, Detailed Population Characteristics (New Jersey). The publication may be reviewed at all federal depository libraries.

Table 1
Median Income and Earnings by Sex: 1969 and 1979
United States and New Jersey

	1969		1979	
	Median Income	Median Earnings	Median Income	Median Earnings
United States				
Females	\$2,330	\$4,668	\$ 5,263	\$ 9,126
Males	\$6,446	\$8,293	\$12,192	\$16,416
New Jersey				
Females	\$2,764	\$5,082	\$ 5,721	\$ 9,863
Males	\$7,773	\$9,348	\$14,151	\$18,256

Notes: Includes persons 14 years of age and over.
Includes persons 15 years of age and over.
Includes persons who worked year-round, full-time and part-time.

Source: U.S. Bureau of the Census, 1970 and 1980 censuses.

Table 2
Labor Force Participation by Sex: 1979
New Jersey

	Females		Males	
	Number	Percent	Number	Percent
Total, 16 Years & Over	2,996,280	100.0	2,655,521	100.0
In labor force in 1979	1,672,198	55.8	2,138,584	80.5
Worked in 1979	1,626,478	54.3	2,103,678	79.2
Year-Round	866,268	28.9	1,473,478	55.5
Full-time	688,444	23.0	1,392,586	52.4
Part-time	177,824	5.9	80,892	3.0
Less than 50 weeks	760,210	25.4	630,200	23.7
Full-time	405,073	13.5	462,229	17.4
Part-time	355,137	11.9	167,971	6.3

Notes: 50 weeks or more.
35 hours or more.

Source: U.S. Bureau of the Census, 1980 Census.

Table 3
Median Earnings by Sex: 1969-1979
New Jersey

Sex	Median Earnings		Change: 1969-1979	
	1969	1979	Number	Percent
Females				
Total	\$3,486	\$ 7,047	\$3,561	102.2
Year-Round	5,082	9,863	4,781	94.1
Full-time	NA	10,865	--	--
Males				
Total	\$8,115	\$15,454	\$7,339	90.4
Year-Round	9,348	18,256	8,908	95.3
Full-time	NA	18,737	--	--

Notes: 1. Data are for persons who worked during the respective years.
2. Data for 1969 are for persons aged 14 years and over; for 1979 for persons aged 15 and over.

Source: U.S. Bureau of the Census, 1970 and 1980 censuses.

Table 4
Median Earnings by Sex and Occupation: 1979
New Jersey

	Male	Median Earnings	Female	Median Earnings
TOTAL	1,361,302	\$18,889	669,733	\$10,905
Managerial and Professional Specialty	425,171	25,674	147,938	14,345
Technical, Sales, and Administrative Support	294,825	18,361	362,045	10,711
Service	107,483	13,822	60,243	8,350
Farming, Forestry, and Fishing	11,497	11,857	1,318	7,435
Precision Production Craft and Repair	267,571	18,005	16,021	10,762
Operators, Fabricators, and Laborers	254,454	15,402	82,132	8,844
Not Classified	301		36	

Note: Data are tabulated for the experienced civilian labor force who worked year-round full-time in 1979.

Source: U.S. Bureau of the Census, 1980 census.

Table 5
 Mean Weekly Earnings by Sex, Education & Age: 1979
 New Jersey

Age	Total		4 years of High School		1 to 3 years of College		4 years of College		5 to 6 years of College		7 or more years of College	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Total	\$279	\$443	\$259	\$369	\$286	\$430	\$372	\$602	\$449	\$665	\$513	\$775
18-24	203	220	193	216	214	237	266	281	273	303	333	483
25-34	293	378	260	332	290	361	360	439	400	496	433	532
35-44	298	516	273	420	310	501	427	695	488	726	544	830
45-54	296	529	288	440	322	544	444	790	529	818	587	935
55-64	292	478	296	425	341	543	436	752	555	800	595	912
65 +	287	453	304	429	365	549	451	722	451	727	442	745

Notes: Data are for persons who worked 35 or more hours per week and 40 or more weeks in 1979.
 Source: U.S. Bureau of the Census, 1980 census.

NEW JERSEY'S DENSITY SURPASSES 1000
Alfred Toizer
Office of Demographic and Economic Analysis

The population density of New Jersey rose past 1,000 persons per square mile in 1984, according to provisional state population estimates released by the Census Bureau recently. This marks the first time any state in the union has reached that level of density.

The Census Bureau's provisional estimate put the State's population at 7,515,000 residents as of July 1, 1984. On the basis of the New Jersey Department of Community Affairs' figures setting the total area of the State at 7,495.7 square miles, the overall population density was 1,002.6 persons per square mile in mid-1984.

The estimated statewide population increase of 150,000 persons represents a 2.0% level of growth since the 1980 census. Thus, the population of New Jersey is rising by almost a half percent per year--nearly double the growth rate of the 1970s.

This growth has been due mainly to natural increase, with births having exceeded deaths by approximately 125,000 between the census date (April 1, 1980) and the latest estimate date (July 1, 1984). The balance of the increase--about 25,000 persons--was growth from population migration, due to an excess of in-migrants over out-migrants. Between the 1970 and 1980 censuses, New Jersey experienced a ten-year net out-migration estimated at 119,000 persons, so 1980-1984's net in-migration signifies a sharp reversal of the pattern of the preceding decade.

Given the modest but consistent population growth since 1980, passing the above-noted density milestone was inevitable, sooner or later. By the time of the 1970 census, New Jersey had passed Rhode Island to become the most densely populated state, at 953.2 persons per square mile. The density reached 982.6 as of the 1980 census date, and it has climbed upward since then.

<u>Date</u>	<u>Population</u>	<u>Persons Per Square Mile</u>
April 1, 1980	7,365,011 (census)	982.6
July 1, 1981	7,407,000 (revised estimate)	988.2
July 1, 1982	7,428,000 (revised estimate)	991.0
July 1, 1983	7,464,000 (revised estimate)	995.8
July 1, 1984	7,515,000 (provisional estimate)	1002.6

Rhode Island, whose density is estimated at 911.8 persons per square mile in 1984, remains in second place, followed by Massachusetts (741.1), Connecticut (647.4), and Maryland (442.1).

The figures cited in this article were derived from a pre-publication press release issued by the U.S. Bureau of the Census on December 28, 1984, and from other supporting documentation. Formal publication of the provisional 1984 (and revised 1981-83) population estimates for all states and the District of Columbia is scheduled for March 1985.

1982 ECONOMIC CENSUSES FOR NJ

Selected products containing data for New Jersey from the 1982 Economic Censuses have been released. The next issue of this newsletter will include summary analyses on each of the censuses. This article will briefly highlight some of the findings for New Jersey and overview the 1982 Economic Censuses.

FINDINGS FOR NJ

- Retail store sales climbed from \$24.3 billion in 1977 to \$36.3 billion in 1982, a rise of 49%. Grocery stores had the highest sales at \$7.7 billion and new car dealers had the highest sales per employee at \$255,000. Bergen County had the greatest total sales at \$5.2 billion.
- Wholesalers reported sales of \$89.4 billion in 1982, an increase of 62% since 1977. Sales of wholesalers of durable goods rose 58%, while sales of those selling nondurables were up 65 percent. Bergen County led in wholesale trade with sales of \$23.1 billion.
- The 45,490 service businesses with employees reported receipts of \$16.3 billion in 1982, an increase of 111% from \$7.7 billion in 1977. Hotels, motor hotels, and motels had the highest receipts at \$2.4 billion, up 548% from 1977, with Atlantic City accounting for over three-quarters of the total. Bergen County led in service business receipts with \$2.6 billion.
- Manufacturing employment declined 4% from 778,300 in 1977 to 750,600 in 1982. New capital expenditures increased by 50% to \$2.1 billion in 1982. And, the wages of production workers amounted to \$7.2 billion in 1982. Bergen County led in wages of production workers at \$903.3 million, but Middlesex County ranked first in new capital expenditures at \$296.4 million.

ECONOMIC CENSUSES OVER TIME

The early beginnings of America's industrial output were first measured in the United States in the 1810 Decennial Census and again in 1820, when questions on manufacturing were included with those for population. Beginning with the 1840 Decennial Census, there were enumerations of manufactures and mineral industries at ten-year intervals up to and including the year 1900 for manufactures and 1940 for mineral industries. The latter census was again taken for 1954, 1958, 1963, and 1967.

Because of the increasing dominance of manufacturing in the early 20th century, Congress directed that quinquennial censuses of manufactures be taken beginning in 1905. However, from 1919 through 1939, these censuses were conducted every two years. The need for war-related current surveys in the early 1940s postponed the next census of manufactures until 1948 (for 1947). That census was again taken for 1954, 1958, 1963, and 1967.

Retail and wholesale trade data were first collected in 1930, and in 1933 information on selected service industries was added to the data-collection operation. These business censuses, as they were called, were again taken for 1935, 1939 (as part of the 1940 decennial program), 1948, 1954, 1958, 1963, and 1967.

Information on construction industries was first obtained in 1930 and again for 1935 and 1939. Data for the full spectrum of construction industries were not gathered again until 1968 (for 1967).

The need for transportation data to supplement information available from existing governmental or private sources was recognized by Congress in the late 1950s and early 1960s. The census of transportation (consisting of several surveys) was first taken for 1963 and again for 1967.

Since 1967, all of the above censuses have been taken quinquennially as part of the Census Bureau's economic census program. (For the 1977 censuses, the coverage of the service industries was broadened from "selected services" to all services, except religious organizations and private households. A total of 41 additional four-digit Standard Industrial Classifications (SIC's) in seven SIC major groups was added to the scope of the census. While most of the industries included for the first time for 1977 were covered again for 1982, some were not, i.e., hospitals; elementary and secondary schools; colleges, universities, and professional schools; junior colleges and technical institutes; labor unions and similar labor organizations; and political organizations.)

The first manufacturing census for an outlying area was conducted in Puerto Rico for the year 1909. Thereafter, with the exception of 1929, a census was taken at ten-year intervals through 1949. The first censuses of retail trade, wholesale trade, and selected service industries in Puerto Rico were conducted for

1939. These censuses also were taken for the years 1949, 1954, 1958, 1963, and 1967. A census of construction industries was first introduced in Puerto Rico for 1967. These censuses of Puerto Rico have been taken since then for the years 1972, 1977, and 1982.

Censuses of manufactures, retail trade, wholesale trade, and selected service industries were conducted in Guam and the Virgin Islands of the United States for 1958, 1963, 1967, 1972, 1977, and 1982. Censuses of mineral industries were taken in the Virgin Islands of the United States for the years 1958, 1963, and 1967 but not since that time. A census of construction industries was also undertaken in these areas for 1972, 1977, and 1982.

Retail trade, wholesale trade, selected service industries, manufacturing, and construction industries were canvassed for the first time in the Northern Mariana Islands in 1983 (for 1982).

For 1982, the economic censuses and agriculture censuses were conducted concurrently.

RELIABILITY OF DATA

All data compiled in these censuses originated from either census questionnaires or administrative records of other federal agencies and, therefore, are not subject to sampling errors. However, the data are subject to nonsampling errors. Nonsampling errors can be attributed to many sources: inability to identify all cases in the actual universe; definition and classification difficulties; differences in the interpretation of questions; errors in recording or coding the data obtained; and other errors of collection, response, coverage, and estimation for missing or misreported data.

The accuracy of these tabulated data is determined by the joint effects of the various nonsampling errors. No direct measurement of these effects has been obtained except for estimation for missing or misreported data; however, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize the effects of nonsampling errors.

The Bureau of the Census obtains on computer tape limited information extracted from administrative records of other federal agencies. This information is used in conjunction with other information available to the Census Bureau to develop estimates for small employers and other establishments for which responses were not received in time for publication.

SURVEY OF INCOME AND PROGRAM PARTICIPATION

WHAT IS SIPP?

The Survey of Income and Program Participation (SIPP) is the first Census Bureau survey to collect monthly information on income, labor force experience, and participation in major government assistance programs.

About 26,000 housing units were selected to be in the 1984 panel of SIPP. Of these, about 21,000 were occupied and eligible for interview. Each household in the sample was scheduled to be interviewed at four-month intervals over a period of 2 1/2 years beginning in October 1983. The reference period (that is, the period for which the data are collected) is the four months preceding the interview. The sample is divided into four equal subsamples called "rotation groups," and one rotation group is interviewed each month. In general, one cycle of four interviews per household uses the same questionnaire and is called a "wave."

Household members are asked questions about their earnings, cash and noncash benefits, and employment for the previous four months. Periodic questions will be added dealing with school enrollment, marital history, migration, disability, and other topics. Special supplemental questions will also be added to the SIPP questionnaire.

As a rule, SIPP data are available in three forms: quarterly statistical reports, microfiche of these reports, and microdata tape files containing person, family, and household records (minus identifying information) for one wave.

SIPP data will help to more accurately measure income distribution and poverty throughout the country. These data will be used to study federal and state aid programs (such as food stamps, welfare, Medicaid, and subsidized housing), to estimate future program costs and coverage, and to assess the effects of proposed changes in program eligibility rules or benefit levels.

SIPP PRODUCTS

A variety of products are/will be available from this survey program. To date, a report, Economic Characteristics of Households in the United States: Third Quarter 1983 has been published. And, two computer files have been released.

In general, state-level data are not available. The survey sample was chosen to provide statistically reliable estimates for the nation. Although some estimates are available for the four major regions, no estimates are available for individual states in the printed report. Similarly, the computer file was designed to produce national estimates. While it does contain the codes for 38 states, the sample was not designed to produce usable estimates at that level.

Users' Guide: The guide includes a technical documentation with a data dictionary for the microdata tape file, describes the sample design and survey procedures, offers key definitions, and provides a copy of the questionnaire. The guide comes with the computer file, but can be purchased from the Census Bureau separately for \$10.

MORE INFORMATION

Past issues of the Census Bureau's, Data User News, detail SIPP. Additionally, a series of Technical Papers are available from the Bureau. For more information and upcoming data products, contact Daniel Kasprzyk (301-763-5784) or David McMillen (301-763-5592) of the Population Division, Bureau of the Census, Washington, D.C. 20233.

CENSUS DATA ON DISKETTES

The Census Bureau is now making selected data available on 5 1/4-inch diskettes for the IBM Personal Computer and compatible micro-computers. The diskettes are designed to be used with the PC DOS 2.0 operating system.

AVAILABLE DISKETTES (as of 2/85)

Local Population Estimates: 1980 and 1982 total population and 1979 and 1981 per capita income for states, counties, and municipalities. These estimates are presented in ASCII, in a compressed comma-delimited format which can be read directly by programs written in BASIC and most commercially available software packages.

The entire file consists of nine diskettes, costing \$156. Diskettes for specific states can also be ordered at \$60 for the first diskette and \$12 for every additional diskette.

Federal-State Cooperative Program Estimates: April 1, 1980 census figures and July 1, 1982 county population estimates derived through the Federal State Cooperative Program (FSCP) in which the Bureau and individual state government agencies work together to produce estimates. The FSCP estimates are presented in ASCII, in a format readable in BASIC.

The FSCP estimates are available on one diskette costing \$60.

County and City Data Book: Statistics on many subjects and from many sources, not just the Census Bureau. Its tables cover population, migration, income, employment, vital statistics, poverty, health, voting trends, industry, business, and numerous other topics. As shown below, there are several options from which to choose.

Microcomputer Diskette Options for the County and City Data Book

- . Complete set of 33 diskettes containing data for counties, cities, and places. Also data for the United States and individual states. Cost: \$444.
- . County option of 22 diskettes containing data for 3,137 U.S. counties. Also has data for United States and individual states. Cost: \$312.
- . City option of seven diskettes containing data for 957 U.S. cities with 25,000 or more people in 1980. Also has data for individual states. Cost: \$132.
- . Place option of six diskettes containing data for 9,969 incorporated and census designated places with 2,500 or more inhabitants. Also has data for individual states. Cost: \$120.
- . U.S. and state option of two diskettes containing data only for the United States and individual states. Cost: \$72.
- . Special extracts from the county, city, or place sets. Costs vary.
- . State option containing extracts from the county, city, and place sets for one state or a small group of states. Costs vary.

County Business Patterns: Annual product covering total establishments, employment, and annual payroll for industries at various Standard Industrial Classification (SIC) levels. The data are available as follows: (a) U.S. summary for industries at all levels (2-, 3-, and

4-digit SIC's) on one or two diskettes; (b) state summaries (2-digit SIC's only) on one or two diskettes; (c) summaries for individual counties (2-digit SIC's only) in state packages. Costs depend upon the number of diskettes in an order: the first diskette costs \$60; each subsequent diskette costs \$12.

Agriculture Census Results: Results from the 1982 Census of Agriculture. All data found in the preliminary reports and tape files appear on diskettes for each state. These statistics cover farm size, land use, operator characteristics, sales, selected expenditures, and other topics. Both 1978 and 1982 data are shown for the states and every county with ten or more farms.

Diskettes for individual states can be purchased. States with fewer than 40 counties are available on one diskette per state; others on two or three; and Texas on seven. The total file costs \$1,308. For smaller orders, the cost of the first diskette is \$60 and \$12 for additional diskettes.

HOW TO OBTAIN DISKETTES

NJSDC Network Members: The NJSDC has or will have copies of the above diskettes for New Jersey only. Members of the NJSDC network may obtain copies by contacting: Connie O. Hughes (609-984-2593).

Rutgers University Community: The Computer Center Information Services (CCIS) has selected census data on diskettes, as well as the capability to download data to diskettes. Contact: Gertrude Lewis (201-932-2483).

Princeton University Community: The Princeton University Computer Center has been purchasing many of the complete files available on diskette. Contact: Judith Rowe (609-452-6052).

All Others: Diskettes can be purchased as described above from Customer Services, Bureau of the Census, Washington, D.C. 20233 (301-763-4100).

CENDATA: ONLINE INFORMATION

Census Bureau data is available online through DIALOG Information Services, Inc. and The Glimpse Corporation. Called

"CENDATA," this service provides selected summary data from all Bureau programs. It also includes Bureau news releases and the most up-to-date ordering information on products released by the Bureau.

CENDATA offers current economic data in the areas of manufacturing, business, foreign trade, and construction. Demographic data include excerpts from the Current Population Reports and other population and housing information. Also, limited demographic data are provided for more than 200 countries. In addition, CENDATA contains selected agriculture and government data and a cumulative daily listing of available Bureau products.

Journalists, economists, public administrators, librarians, and others who must be alert to social and economic trends will find CENDATA to be a valuable source of continuously updated information.

For further information on accessing CENDATA, contact DIALOG Marketing on (800)227-1927 or (800)982-5838 (in California), The Glimpse Corporation on (703)836-6800, or the Census Bureau on (301)763-2074 or 4100.

The amount of information available on CENDATA will increase incrementally over time. The Bureau is interested in receiving suggestions on specific data that users would like included. Please send comments to CENDATA Program, Data User Services Division, Bureau of the Census, Washington, D.C. 20233.

EVALUATING NEW JERSEY'S POPULATION ESTIMATING TECHNIQUES PART II: MUNICIPAL POPULATION ESTIMATES

Alfred Toizer
Office of Demographic & Economic Analysis

Evaluating the methods that were used during the 1970s to prepare annual state and county population estimates was reported in the May 1984 edition of this newsletter. We turn now to the evaluation of the methods that had been used to estimate the population of New Jersey's municipalities.

The basic scheme of the test-of-methods program was to employ the estimating procedures used through the 1970s, to produce test-estimates of the 1980 population. Those estimates then were compared to the results that were obtained in the official 1980 U.S. Census, so that the evaluators could assess the accuracy of the population estimating techniques.

The study was conducted under the auspices of the Federal-State Cooperative Program for Local Population Estimates (FSCPE). In this program, the U.S. Census Bureau and the participating states work together in preparing annual estimates of the current population in the states and counties. Estimates for municipalities are produced less frequently under the FSCPE. However, in New Jersey, the FSCPE's cooperating agency itself prepares yearly municipal population estimates. This agency is the Office of Demographic and Economic Analysis (ODEA) in the state's Department of Labor.

MUNICIPAL POPULATION ESTIMATES

For sub-county areas, two methods of population estimating have been devised: a version of the Housing Unit Method (HUM) that has been evolved by the staff of ODEA, and a somewhat simplified version of Administrative Records (AR) that has been developed by the Census Bureau.

For most states, the results produced through AR alone are used by the Federal government's Office of Revenue Sharing (ORS) as the official population estimates for local jurisdictions that receive disbursements under its program. However, for seven states -- including New Jersey -- the AR results are averaged with those prepared by the cooperating state agency.

A considerable body of experience has shown that the smaller the territory, the more prone to error are the local population estimates. Municipalities can be very small indeed. All but 13 of New Jersey's 567 municipalities have fewer persons than the state's smallest county (Salem, at 64,676 as of 1980). Thus, not only are localities, in general, subject to greater inaccuracy in estimating population than are counties, but the fact that there are so many small places imposes a great burden on the estimating process.

Even when the results of both the HUM and AR were combined, the 1980 municipal population estimates for New Jersey erred by an average of 6.66% compared to the actual census counts. The Administrative Records Method's results produced mis-estimates averaging 7.16% per municipality and the Housing Unit Method 6.85% per municipality. For places with fewer than 1,000 persons, the AR erred by an average of 19.86%, and the HUM by 18.36%. The combination of the two did not improve the situation (as usually happens), with the revised estimates missing by 18.45%. In contrast, the revised 1980 estimates for municipalities of 50,000 persons or more were in error by an average of only 3.52%.

Several other types of municipalities were prone to large mis-estimates: those in the 1,000 to 2,499 population-size category, those that had mainly seasonal housing, those that were primarily rural in character, and those which experienced substantial population change (especially those which fell by 15% or

more from 1970 to 1980). Most serious were the estimates for municipalities that exhibited several of these characteristics: for example, small places with a large proportion of their housing stock for seasonal occupancy, or rural places whose population declined.

In the on-going estimates process, the Census Bureau is able to produce AR results about every other year. On the other hand, ODEA prepares municipal population estimates each year, using its Housing Unit Method. Therefore, until revised municipal estimates become available, the brunt of the local-estimates burden falls upon the HUM. The ODEA study paid particular attention to this method -- whose results form the basis for the provisional population estimates used in the annual allocation of state income tax revenues to municipalities, as well as for vital rates and epidemiological statistics, economic development and site selection decisions, and a wide variety of other public and private-sector planning purposes.

The HUM was analyzed for its accuracy in estimating each of the following elements, for every MCD:

- (1) year-round housing units -- the basic statistic that drives the method and gives it its name
- (2) occupancy rates -- the proportion of the year-round stock which is occupied
- (3) occupied housing units, or households -- the product of occupancy rates applied to year-round units
- (4) average household size -- persons per household (per occupied housing unit)
- (5) household population -- the product of average household size applied to total occupied units
- (6) group quarters population -- persons living in non-household facilities
- (7) total population -- addition of the household and group quarters components.

The table which follows will provide a quick summary of how accurately each of these elements was estimated for 1980, with the Housing Unit Method's results compared to the actual findings of the U.S. Census.

In the HUM, the process begins by estimating the current supply of year-round housing units in each municipality; and the primary data source is the building permit report system. These data are subjected to considerable review and revision, and other data also are called upon; but the fact remains that local reports of authorized residential construction and demolition are used as the basic indicator of change in each municipality's housing stock -- and, ultimately, in its resident population.

The stock of year-round housing units was estimated within 5% accuracy in more than two-thirds of all municipalities; but about 4% of the estimates (23 places) missed the 1980 census mark by 25% or more. Underestimating was the general rule; but over-

Table 1
Percent Error in Municipal Estimates for 1980,
Using New Jersey's Housing Unit Method

Element of Housing Unit Method	Average Percent Error Per Municipality	Cumulative Percent of Municipalities Estimated within Error Range of:				Percent Under-Estimated
		5%	10%	15%	25%	
Housing Units	6.69%	67.9	84.5	90.8	95.9	63.5%
Occupancy Rate	3.74%	86.9	94.2	96.5	98.1	71.3%
Occupied Units (Households)	6.07%	64.6	84.0	91.9	97.9	70.9%
Persons per Household	4.41%	69.8	91.2	95.9	99.5	41.3%
Household Population	7.42%	54.9	79.2	88.9	96.8	57.3%
Total Population	7.41%	53.3	78.0	89.6	96.6	57.5%
Total, after Adjustments*	6.85%	57.5	80.8	89.8	96.3	48.0%

Note: *Following special handling for 34 selected municipalities, and after adjusting municipal estimates to agree with the county totals.

estimating was common among the smallest communities, the mostly-seasonal ones, and/or those of marked population decline. What is more, the margins of error in those cases often were quite large. It is not surprising, therefore, that the poorest local population estimates which emerged at the end of this method reflected the level of reliability shown by this basic input variable.

On average, housing-stock estimates erred by 6.69% per municipality. In contrast, the estimates of local occupancy rates missed by an average of just 3.74%, and the persons-per-household estimates were off by only 4.41% per municipality. Occupancy rates and average household size both were estimated by assuming that each locality's rate/size as measured in the 1970 census had changed by 1980 in the same proportion as in the nation as a whole. Occupancy rate and average household size usually do not fluctuate beyond a fairly narrow range.

They had been carefully measured at the time of the 1970 census; and more recent trends were being monitored nationwide in the Census Bureau's various ongoing population and housing sample-survey programs. Thus, municipal occupancy rates and persons-per-household for 1980 proved to be not all that difficult to estimate with reasonable accuracy. The incidence of large-error estimates was extremely low for both of these variables. Only 11 occupancy-rate estimates, and a mere three

persons-per-household estimates, erred by 25% or more; and even at the 15%-or-more range, there were just 20 and 23 municipalities, respectively.

However, while housing stock and occupancy rates usually were underestimated at the municipal level, persons-per-household was more often overestimated. Unfortunately, rather than the one type of bias compensating for the others, in computing estimates of the household population, the effect appears to have been compounding. The household populations of only about 55% of all localities were estimated within 5% accuracy; and the average error for 1980 was 7.42% per municipality.

For most places, persons in households constitute almost the entire resident population; but for many places, a non-household (or group quarters) component must be estimated. Usually, there were comparatively few persons in this category; so although the relative error in the estimates often was quite large, the absolute numbers involved usually were not significant.

Thus, the degree of error in estimating the total local population was very nearly the same as in the household population estimates. The average error was 7.41% per municipality.

However, the Housing Unit Method as applied in New Jersey is flexible. When circumstances made it appropriate, some places were handled individually during the 1970s; and by 1980, some 34 municipalities received such adjustments. Almost two-thirds of these were places where special censuses had been taken during the decade (at various dates from March 1973 to May 1979). Those enumerations provided data more current than the 1970 census, so the special-census population and housing data became the base-lines for the estimates in those communities.

One particular adjustment, however, was unique. It was made for Pahaquarry Township (Warren County), where plans were pending for the proposed Tocks Island Dam. Recognizing that the standard HUM was not able to record the substantial decline in housing stock that was occurring in this vicinity, ODEA turned to an alternative data source: the mayor. In a place so scantily populated, the local official could provide a reasonably accurate estimate, it was thought.

In this case, the alternative source was indeed reliable. The standard method produced a 1980 population estimate of 88 persons -- an error of 62 (or 239.6%), the highest margin of error by far. The local informant estimated a population of 29, for an error of "just" three persons, or 11.5%.

This one special adjustment was so large that it reduced the statewide average error to 7.02% per municipality; and the adjustments made in the 33 other individually handled places brought the average error down further, to 6.87%. Finally, the Housing Unit Method's municipal population estimates were adjusted so that, when summed, they would add up to the county popula-

tion estimates; and this step reduced the average error to 6.85% which, as we noted earlier, was slightly better than the over-all margin of error produced by the Administrative Records Method.

IMPROVING THE H.U.M.

An average error in the range of approximately 7% is about on par with what would be expected, given the size of New Jersey's communities and the quality of the various data sources. It is not likely that dramatic advancements can be effected -- that completely reliable data sources suddenly will emerge, or superior new estimating techniques will be created. But improvements are possible, and some potentially promising changes already have been implemented.

As the Test of Methods report noted frequently, estimates for seasonal places, and for small municipalities, were more prone to significant error than most other types of places. Therefore, more attention was turned to them. It was found, for example, that a large part of the problem in seasonal communities lay with the basic input data on the 1970 housing stock. The base-year housing supply is supposed to be year-round housing units; but a review of 1970 and 1980 Census of Housing data strongly suggested that the "year-round" concept was not uniformly applied. Census Bureau enumerators apparently could not consistently distinguish between units that were for seasonal or migratory housing (which are not considered to be units for year-round use), and vacant units that are held for occasional occupancy (which are considered to be of year-round quality even though occupied only for weekend or other kinds of part-time use).

An alternative definition of year-round housing was tested, in which the vacant occasional-occupancy units were regarded as non-year-round. This revised definition also required recalculating the base-year and estimate-year occupancy rates (but did not affect persons per household, which pertains only to occupied units). The test produced an average error in local housing unit estimates of only 5.39%, compared to the 6.69% found earlier. Furthermore, the average error in occupancy-rate estimates fell from 3.74% to 2.23%. Thus, a redefinition of year-round housing seemed to promise better housing-stock estimates for most municipalities.

In addition, for the municipalities whose housing stock is mostly seasonal, an adjustment factor was developed which tried to account for the probability that a significant proportion of the newly authorized housing units (as reported on building permits) were not intended for year-round occupancy. The Test of Methods clearly underlined the need for such a factor. In the HUM, adjustments had been estimated for 14 seashore municipalities, and they seemed to have been reasonably effective.

For post-1980 estimates, the adjustment factor will be estimated from 1970-1980 census changes in year-round (as newly redefined) versus total housing stock. Generally, this "factor" indicates that between only one-third and two-thirds of newly permitted units in the seasonal communities ought to be considered additions to the year-round housing supply.

Recent changes in the building permit reporting form also will provide more information on changes to existing structures. Thus, the construction and demolition data that formed the primary measures of housing stock change now are supplemented by data on conversions of structures to residential use (beginning in 1980), and alterations in residential structures that increase or decrease the housing supply (beginning in 1982).

The Pahaquarry case provided yet another innovation that has been implemented: the direct surveying of small municipalities. The 12 places that were in the under-500 population category in 1980 had been mis-estimated by an average of 49.4% using the standard HUM. Of course, the Pahaquarry error alone was a major reason for this; but even so, the 11 other small municipalities as a group were missed by an average of 32.1%.

Large percentage mis-estimates are virtually inevitable in very small communities, such as the four smallest (among whom Pahaquarry is the most populous, at 26 persons). Missing by only two persons can mean an above-average percent error. However, even among the municipalities in the 100-to-500-person range, large mis-estimates were frequently made, with three places in error by more than 100 persons, ranging from 34.0% to 107.6%.

For the 1980s, the chief local official of each of the places is telephoned annually and is asked to provide a current estimate of the municipal population. For the four smallest places -- Pahaquarry, Teterboro, Pine Valley, and Tavistock -- the numbers reported are substituted for the Housing Unit Method's estimated population. For the eight others, the local informants' estimates are used as yardsticks in evaluating the HUM-estimated population; and should significant differences begin to show up, the locally provided estimates will be verified by ODEA field visits.

Occasional field trips also are contemplated to check on such problematical factors as occupancy rates and seasonal-housing conversions -- or, for that matter, any situation where serious questions about current data or trends would appear to warrant close inspection.

The above changes already have been adopted and are directed toward improving the accuracy of the local housing-unit estimates. Occupancy-rate and average household-size estimates were (as we have seen) rather less urgent as items of concern, but interest has been expressed in using a housing-type approach in monitoring change in municipal housing supply. In such an approach, single-family, multi-family, and mobile home units would

be tallied separately. Both occupancy rates and average household size are apt to vary significantly among these types of housing units.

Far-reaching changes in the composition of a municipality's housing stock do not occur often; but where they do take place, the estimator's assumptions concerning occupancy rate and/or persons per household might become inapplicable. Plainsboro Township in Middlesex County offers an excellent example of such a situation, where an area of single-family homes was transformed during the 1970s by the construction of vast apartment developments. Not being able to differentiate the multi-family character of so much of the authorized new housing construction, the HUM seriously over estimated the 1980 population of Plainsboro, because the township's estimated 1980 occupancy rate and average household size both had been based on the high 1970 rates characteristic of a largely single-family community.

An adequately conclusive test of a "housing-by-type method" would have required more time and much better data than were available; but intuitively, such an approach has some enticing possibilities, and ODEA demographers will continue to work on its potential application.

CONFERENCES/WORKSHOPS

NEW JERSEY STATE DATA CENTER: For further information contact the NJSDC at 609-984-2593.

April 23, 1985 - NJSDC Network Meeting
Center for Health Affairs
Alexander Road
Princeton, New Jersey
(By invitation)

June 28, 1985 - Census Basics
State Library
Trenton, New Jersey
(Nominal fee)

U.S. BUREAU OF THE CENSUS: Described below are Census information workshops being offered by the Philadelphia Regional Office during the Spring 1985. The workshops will be conducted on the dates indicated in Room 9226, Federal Building, 600 Arch Street, Philadelphia, PA. To sign up or for more information, call 215-597-8313. (All workshops are free.)

- April 24, 1985 - Census Data for Businesses
9:00 AM to 12:00 Noon
- May 28, 1985 - Census Data: An Intermediate
9:00 AM to 12:00 Noon Workshop
- May 29, 1985 - Census Data for Businesses
9:00 AM to 12:00 Noon
- June 5, 1985 - Seeking Proof of Age?
9:00 AM to 12:00 Noon Applying for a Pension?
Census Records Can Help You!
- June 25, 1985 - Census Data Applications
9:00 AM to 12:00 Noon

NEW PUBLICATIONS

NEW JERSEY STATE DATA CENTER: To obtain any of the following, complete the order form at the end of this newsletter and mail it along with a check (Payable to: NJ Department of Labor) to NJSDC, Division of Planning and Research, New Jersey Department of Labor, CN388, Trenton, New Jersey 08625-0388. A copy of the publications are also available for review at all NJSDC network agencies.

Demographic & Economic Factbook 1984: Selected data on population, income, building permits, employment, labor force, and occupation for a variety of areas in New Jersey. (\$2.00)

Census Trends 1970-1980: Selected comparable 1970 and 1980 census data (population and housing) and analyses. One report for the State of New Jersey and one for each county (Bergen, Cape May, Cumberland, Gloucester, Mercer, Monmouth, Passaic -- as of 3/85). (\$5.00 each)

Current Population Survey, Annual Demographic File: Tabulations from the CPS for New Jersey and an analysis of the reliability of the statistics (\$1.50)

New Jersey: The Next Ten Years: Selected proceedings from the 5th Annual NJSDC conference. Includes presentations on the demographics of women, fiscal impacts in New Jersey, the issues of Mount Laurel II and urban enterprise zones, and innovations in financial services. (\$2.00)

1979 & 1981 Per Capita Money Income: Estimates of per capita money income for New Jersey, the 21 counties, and the 567 municipalities. (\$1.00)

U.S. BUREAU OF THE CENSUS: Available for review at all federal depository libraries and for purchase from Customer Services, U.S. Bureau of the Census, Washington, D.C. 20233 (prepayment required).

1982 Census of Retail Trade, Geographic Area Series, NJ, RC82-A-31, Stock Number: 003-024-90981-2 (\$4.75).

1982 Census of Service Industries, Geographic Area Series, NJ, SC82-A-31, Stock Number: 003-024-91041-1 (\$5.50)

1985 Statistical Abstract of the United States, clothbound Stock Number: 003-024-06136-8 (\$23.00) or paperback Stock Number: 003-024-06135-0 (\$19.00)

1982 Census of Wholesale Trade, Geographic Area Series, NJ, WC82-A-31. Stock Number: 003-024-90881-6 (\$3.00).

1982 Population Estimates and 1981 Per Capita Income Estimates for Counties and Incorporated Places, NJ, P26, No. 82-30-SC, Stock Number: 003-024-060337 (\$1.25).

SUBJECT INDEX
NJSDC NEWSLETTERS
(1/83 - 9/84)

SUBJECT	ISSUE NO.	ISSUE DATE	PAGE
Ancestries	29	4/83	14
Commutation Data	28	1/83	14
Commutation Data	32	1/84	2
Computer Tape Holdings, NJSDC	30	7/83	4
Congressional Districts Data	30	7/83	19
County Contacts, NJSDC	29	4/83	23
Census Data and Microcomputers	32	1/84	26
Census IQ	33	5/84	24
Census, 1990 Planning	32	1/84	28
Census, 1990 Local Public Meeting	33	5/84	14
Census, 1990 Local Public Meeting	34	9/84	2
Classification of Counties	28	1/83	32
Earnings and College Education	30	7/83	33
Economic Censuses	28	1/83	29
Educational Attainment	33	5/84	2

SUBJECT INDEX
 NJSDC NEWSLETTERS
 (1/83 - 9/84)
 (Continued)

SUBJECT	ISSUE NO.	ISSUE DATE	PAGE
EEO Data	29	4/83	25
EEO Data	28	1/83	26
Expenditures, Federal	29	4/83	26
Farm Population	29	4/83	19
Geographic Base Development Program	30	7/83	35
Hispanic Population	28	1/83	18
Household Formation	32	1/84	12
Income, Personal (County 1981)	30	7/83	30
Income, Personal (NJ 1982)	30	7/83	29
Income, Per Capita (NJ 1982)	31	10/83	8
Income, Census	29	4/83	5
Jersey City 1990 Census Pretest	34	9/84	25
Labor Force, Women in	28	1/83	11
Languages	29	4/83	14
Manufacturing Goods, Export of	30	7/83	34
Maps	28	1/83	30
Metropolitan Statistical Areas	28	1/83	31
Metropolitan Statistical Areas	31	10/83	2
Microdata Files	30	7/83	22
Mobility, New Jersey's Population	30	7/83	15
MSA Designations	29	4/83	28
Neighborhood Statistics Program	28	1/83	9
Neighborhood Statistics Program	32	1/84	20
Occupations: By Race, Spanish Origin & Sex	30	7/83	9
Occupation Codes	28	1/83	27
Occupation Information Hotline	32	1/84	35
Place of Work	28	1/83	14
Population Estimates by Age, 1981 & 1982	30	7/83	21
Population, Voting Age	28	1/83	34
Population, Voting Age	33	5/84	13
Population Estimates 1981	28	1/83	35
Population Estimates 1983	33	5/84	12
Population Estimates, Evaluating the Techniques	33	5/84	17
Poverty, Cities and	30	7/83	18
Product Primers on Census Reports	29	4/83	21
PUMS	30	7/83	22
Rankings, NJ	31	10/83	9
Standard Errors	28	1/83	19
STF3	28	1/83	7
Spanish Origin	28	7/83	18
TIGER	30	7/83	35
Transportation Planners Guide	30	7/83	26
Using Census Data, Example	31	10/83	12
Women in the Labor Force	28	1/83	11

NJSDC PUBLICATIONS ORDER FORM

(R 3/85)



NOTE: There is a Limit of 1 Copy of Each Free Publication Per Agency.
(Please allow 3-4 weeks for delivery.)

<u>CENSUS PRODUCTS</u>	<u>PRICE</u>	<u>QUANTITY</u>	<u>TOTAL AMOUNT</u> (if applicable)
County Profiles (all 21 counties & state)	\$ 1.50	_____	_____
Census Trends 1970-1980			
New Jersey	\$ 5.00	_____	_____
Bergen	\$ 5.00	_____	_____
Cape May	\$ 5.00	_____	_____
Cumberland	\$ 5.00	_____	_____
Gloucester	\$ 5.00	_____	_____
Mercer	\$ 5.00	_____	_____
Monmouth	\$ 5.00	_____	_____
Passaic	\$ 5.00	_____	_____
Geocode Book	FREE	_____	NA
Income & Poverty in New Jersey	\$ 2.50	_____	_____
Municipal Profiles (all 567 + 21 counties + state)			
Vol. I: Characteristics of Persons	\$20.00	_____	_____
Vol. II: Characteristics of Households & Families	\$20.00	_____	_____
Vol. III: Characteristics of Housing Units	\$20.00	_____	_____
Vol. IV: Characteristics of the Labor Force	\$20.00	_____	_____
Vol. V: Income Statistics for New Jersey	\$20.00	_____	_____
NJ Population by Age & Household Type & Relationship	\$ 2.50	_____	_____
NJ Population by Age and Sex	\$ 2.50	_____	_____
NJ Population Per Household, 1970 & 1980	\$ 1.00	_____	_____
NJ Population by Race, Spanish Origin & Age Group	\$ 2.50	_____	_____
NJ Population Trends, 1790-1980	\$ 2.00	_____	_____
<u>OTHER DATA PRODUCTS</u>			
Current Population Survey, Annual Demographic File	\$ 1.50	_____	_____
County Summary, 1982	FREE	_____	NA
Demographic & Economic Factbook 1984	\$ 2.00	_____	_____
1979 & 1981 Per Capita Money Income	\$ 1.00	_____	_____
<u>MISCELLANEOUS</u>			
New Jersey's Growth Areas: New Vs. Old (Conference Proceedings)	\$ 1.00	_____	_____
New Jersey: The Next Ten Years (Conference Proceedings)	\$ 2.00	_____	_____
Statistical Source Directory for New Jersey State Government	\$ 2.50	_____	_____
Subscription to NJSDC "Population & Census" Newsletter	FREE	_____	NA

MAKE CHECK PAYABLE TO: New Jersey Department of Labor

MAIL TO: Connie O. Hughes, Staff Director
New Jersey State Data Center
Division of Planning and Research
Department of Labor, CN 388
Trenton, NJ 08625-0388

TOTAL AMOUNT
ENCLOSED \$ _____

NAME: _____

AGENCY: _____ PHONE: _____

MAILING ADDRESS: _____

ZIP: _____

STATE OF NEW JERSEY
DEPARTMENT OF LABOR
DIVISION OF PLANNING AND RESEARCH
C N 388
TRENTON, NEW JERSEY 08625 - 0388

BULK RATE
U.S. Postage Paid
TRENTON, N.J.
Permit No. 21

NOTICE

This newsletter will publicize any Census, population, planning and economic conference or seminar to be held in New Jersey. Please send all pertinent information, including the name and phone number of a contact person, to Connie O. Hughes, Office of Demographic and Economic Analysis, New Jersey Department of Labor CN 388, Trenton, New Jersey 08625.