
The Income and Household Composition of City-County Migrants in the 1990's

Robert P. Strauss* and Tomohiro Nakamura**

Final

Migrate1.doc

1/13/99 3:36:15 PM

A Paper Presented at
National Tax Association
91st Conference
Hyatt Regency Hotel
Austin, Texas

Tuesday November 10, 1998
8:30-10:00 AM

Session on Cities and Policy Advice

*Professor of Economics and Public Policy and **Graduate Assistant, H. John Heinz III. School of Public Policy and Management, Carnegie-Mellon University, Pittsburgh, Pennsylvania, 15213-3890. Email: RS9F@Andrew.CMU.Edu; Home Page: <http://www.heinz.cmu.edu/~rs9f/>.

The authors' benefited from the comments of Rob Wassmer and Dick Netzer and the participants at the NTA Session on Cities and Policy Advice. Financial support for this project from the U.S. Department of Housing and Urban Development under Grant H-21156CA is gratefully acknowledged. The authors wish to thank Ms. Emily Gross and Ms. Beth Kils of the Statistics of Income Division of the IRS for providing a variety of summary information about county migration patterns. Responsibility for the research findings and any errors in this paper, however, are the sole responsibility of the authors.

1. Introduction

It is now almost a decade since the prospect of the end of the Cold War led optimists to predict a domestic policy renaissance in the US which would result from redirecting some federal defense spending to a wide range of domestic public service needs. In retrospect this seems naive, especially in light of the increased skepticism which the voting public have expressed for traditional federal intergovernmental solutions to public problems in the states and their localities. Some realized that persistence of tight federal budgets, even with defense savings, would mean that the states would be left to their own devices to address, for example, welfare and education issues. John Shannon described this likely turn of events as “do it yourself federalism,” and wondered out loud how governors, viewing each other from their state capitols, might resolve public service demands with the new political culture which demands both lower taxes *and* higher service levels.

Inside the Beltway, the prospects for a rational debate about how the US federal system should be reengineered in the Post-Cold War era diminished with the demise of the Advisory Commission on Intergovernmental Relations. To older generations of public finance scholars, the federal government’s abandonment of a forum for discourse with the states and localities about how to devise a new form of federalism to address public service needs whose economic and cultural assumptions would be relevant to the 21st century was disappointing.¹ Perhaps the election of a former governor to the presidency explains why this has come to pass.² To be sure, rational outcomes need not be preceded by rational discussion and analysis; however, it seems likely that, upon reflection, many will agree that we currently are short of new ways to think about the US federal system in a world that is increasingly inter-dependent.

Currently, there seems to be awareness that the state-local sector is facing new fiscal challenges as evidenced by widespread worry over how electronic commerce may be eroding the state and local sales tax bases in many jurisdictions. Still, there has been far less worry about the fiscal health of central city budgets, and even less worry about the fiscal health of central city school districts.³ Yet, several central cities, most recently the District of Columbia, have gone to the fiscal brink, and experienced the embarrassment of substituting some form of external fiscal control for the fiscal excesses permitted under extreme Jeffersonian democracy.

The subject matter of this paper is one piece of the continuing municipal finance puzzle in the US, and entails a close study of those who move into and those who move out of central cities. It is well known that major municipalities have continued to lose population; however, the pattern of population movements over time and the composition of those who leave, and how they compare to those who move in are less well understood. Understanding these facts can inform municipal decision-making, for it surely matters that migration is occurring because: (i) people are following

¹ It is remarkable to recall that in the depths of World War II, the Secretary of the Treasury began focusing on new ways to structure federal-state relations, and asked Professor Harold Groves of the University of Wisconsin to create a national commission to precipitate debate on American federalism.

² One might thus summarize the 1992 to date period in the US as “one of the boys federalism.”

³ See, however, Chernik(1998), Chernik and Reschovsky(1997) and Ladd and Yinger(1990) for analyses of municipal financial problems.

their jobs as employers are looking for vacant land and less expensive office space, (ii) migrants are seeking more attractive housing opportunities, (iii) and/or migrants are seeking more attractive bundles of municipal and educational services in comparison with local tax costs.⁴

Here, we begin an examination of several major cities through the analysis of tax return information. The research is a replication of an analysis performed by one of the authors⁵ which found that the income of migrants into the District of Columbia is not that dissimilar to the income of migrants out of the District of Columbia to the Maryland and Virginia suburbs. What was striking about the DC metropolitan area's migration patterns was the difference in family size of immigrants (measuring family size in terms of the number of personal exemptions claimed on the federal tax return) to the District compared to those leaving, and the decline in the number of low and moderate income households which were captured by DC and federal tax systems. Tax returns leaving DC were larger than those moving into the District; compare 1.7 exemptions/return to about 1.5 exemptions/return. Moreover, about 1/2 of those moving to the District filed as single taxpayers. Examination of movement into and out of zip codes within the District of Columbia over time indicated that those which had growth in crime were also those which experienced net out migrations.

The paper is frankly empirical and exploratory. We examine below the circumstances of most of the major US city-county governments through the use of the IRS's Statistics of Income series on county migration patterns to see if earlier patterns observed in the District of Columbia persist. The issue of the income composition of migrants is important, for it relates to policies which some argue are necessary to retain middle and upper income households, who otherwise will leave central cities for the suburbs.⁶

The paper is organized as follows. Section 2 describes the tax return data and research methodology to be used to examine migration. Section 3 presents the characteristics of central city migrants. Section 4 discusses the implications of these findings for several dimensions of central city municipal and school services, and identifies outstanding research questions.

⁴ See Nechyba and Strauss(1998) for an analysis of how housing and public service levels affect location decisions.

⁵ See Strauss(1998) for an analysis of the District of Columbia's migration patterns.

⁶ See Kasarda *et al* (1997) for the analysis of these issues through the use of the Current Population Survey.

2. Data and Methodology

2.1 The City County Areas

Analysis of annual migration at the small geographic area (e.g. municipality level) is hampered by the relative paucity of data. Federal demographic and fiscal measurement does not occur at the sub-county level on an annual basis, and the states typically are unable to measure local migration. Local health records, maintained pursuant to state law, typically deal with location of births and deaths. Most available annual migration data is federally collected, and at the county geographic area level.⁷ Given that major municipalities and school districts are frequently sub-areas of counties, it is difficult to draw direct inferences of inter-county migration that could inform municipal fiscal decision-making. Fortunately, there are, however, a number of county areas, which function as stand-alone municipalities, and they are the focus of this paper. Table 1 lists the cities under study.⁸

It is immediately evident that some of the cities under study lost significant numbers of residents during the period 1970-90. Note that Baltimore, DC, Philadelphia, and St. Louis each lost more than 20% of their 1970 population, and New Orleans lost 18% of its 1970 population. Only Jacksonville and Nashville's populations grew substantially.

Table 1: City-County Governments in Study

City-County Government	1970 Population	1994 Population	Change	%Change
Baltimore, Maryland	904,585	703,090	-201,495	-22%
Denver, Colorado	515,561	493,205	-22,356	-4%
District of Columbia	755,087	568,022	-187,065	-25%
Indianapolis, Indiana	793,990	816,619	22,629	3%
Jacksonville, Florida	529,538	703,152	173,614	33%
Nashville, Tennessee	448,151	528,292	80,141	18%
New Orleans, Louisiana	592,714	485,582	-107,132	-18%
New York, New York	7,600,102	6,967,323	-632,779	-8%
Philadelphia, Pennsylvania	1,946,646	1,522,380	-424,266	-22%
St. Louis, Missouri	619,269	367,647	-251,622	-41%
San Francisco, California	712,874	729,193	16,319	2%

Source: US Census Bureau (1986, 1996)

2.2 BEA Earnings and Population Data

The Bureau of Economic Analysis of the US Department of Commerce routinely collects annual earnings information by county-area, and reports it in conjunction with Census Bureau

⁷ The Current Population Survey does periodically measure migration; however, the sample is not large enough to inform migration research at the municipality level.

⁸ We intend to add St. Louis to this analysis.

annual population estimates for county areas.⁹ These annual cross-sections permit us to examine the total population of these city-county governments, and the earnings of residents and non-residents. The latter are of interest as they indicate the value of daily commuter flows, and presumed non-resident uses of local services which residents typically at least partially finance.

2.3 IRS Migration Data

Most of what we know statistically about US population movements at the small area level *between* the decades (and thus between each decennial census) is ultimately due to the Census Bureau's analysis of the IRS Individual Income Master file. The Master file has been annually provided by the IRS to Census for some time.¹⁰ By utilizing the mailing address of individual income taxpayers (what is on the mailing label), Census can track by Social Security Number migrants and non-migrants each year. Census annually provides back to the IRS Statistics of Income Division tabulations of the number of returns, exemptions and, since 1991, the total and median money income levels of tax returns showing county changes in mailing address. The Statistics Division of IRS publishes state level tables showing inter-state and metropolitan area movements, and maintains the county level data on an unpublished basis.¹¹ It should be remembered that taxpayers are not obligated to report to the IRS their residence address. A small (unknown) portion use either their place of work address to receive their paper tax return, or the place at which their tax preparer receives their paper tax return. However, it is reasonable to presume that *changes* in mailing address, especially across county boundaries, reflect changes in residential location decisions.

⁹ The data are now conveniently available on CD as the Regional Economic Information System (REIS) in August of each year. Data reported below are derived from the REIS 1969-95 CD.

¹⁰ The universe of IRS individual income tax returns was first provided to Census under the State and Local Assistance Act of 1972 (General Revenue Sharing) which also obligated Census to make small area population and income estimates to be used by Treasury in its administration of the revenue sharing legislation.

¹¹ SOI currently sells the county level tables via its electronic bulletin board.

3. Empirical Results

3.1 Annual Population Levels of City-County Governments and Suburban Counties: 1969-95

A graphical analysis of the city-county governments which lost *significant* population during 1969-95 (See Table 1 above) did not reveal any particular subperiod of population gain that was subsequently offset by more substantial population loss. Cities such as Baltimore, DC, Philadelphia, and St. Louis show a continual decline in number of inhabitants. New York City's population¹² declined to a minima, according to the Census Bureau, in 1981, and then grew moderately until the early 1990's when it has stabilized at about 92% of its 1969 level. San Francisco showed a similar pattern of decline between 1969 and 1979, recoupment and net growth to 1986, and then a stabilization from 1989 to 1995. (See Figure 1 and Figure 2). Every city-county in this study was surrounded by at least one suburban county, which had a spectacular percentage growth in population (at least 150% or more¹³).

3.2 Resident Earnings as % of Total Earnings Paid in the Cities: 1969-95

Among the city-county governments under study, DC and St. Louis had the most dramatic commuter flows implied by the calculated resident earnings percentage. While DC residents earned initially only on the order of ½ of total earnings paid in DC and St. Louis residents earned initially only 47% of total earnings paid in St. Louis, resident earnings as a percentage of total earnings in the other cities under study were on the order of 62% to 95%. In 1969, DC residents earned only 46% of total earnings paid in DC, and by 1995; their portion of total earnings had fallen to 36%. (See Figure 3). All the other city-county governments displayed similar long-term declines in the resident's share of earnings paid with the exceptions of: Denver (See Figure 4), New York (see Figure 5), Philadelphia (see Figure 6), San Francisco (see Figure 7) and St. Louis. In these five cities, the resident's share of earnings declined on the order of 5 to 10 percentage points to a minimum in the early 1980's, and then rebounded in the late 1980's and early 1990's. Whether or not this significant improvement in resident earnings was due to conscious public policy changes in these cities or simply the improved economic circumstances of residents is something we shall be investigating.

With regard to the fiscal implications of such resident earning patterns, it should be recalled that while New York and Philadelphia aggressively tax commuters, DC does not with the result that DC residents must finance services used by non-residents. As the federal payment to DC disappears, this issue will become more pronounced.

¹² New York City's population is perhaps more difficult to measure than most other cities under study because of illegal aliens, and under-enumeration of African Americans.

¹³ Over 26 years, a 50% increase in population would occur if it compounded at 1.57% per year. Nationally, the US population increased 29% during this period which implies compounding at about 1% per year.

3.3 Migration of Households as Measured by Location of Federal Tax Returns: 1991-5

Among the cities under study, four (Denver, Jacksonville, Nashville, and San Francisco) displayed more households (defined as a federal tax return) moving into the cities than moving out by 1995, compared to 1994. In Baltimore, about 4,000 more tax returns moved out of Baltimore than moved in. In DC and New Orleans about 5,000 more tax returns moved out than moved in by 1995, while in Philadelphia, about 7,000 more tax returns migrated out than in. In New York City, about 35,000 more tax returns migrated out than in 1995.

3.4 Average Number of Exemptions on Federal Tax Returns 1991-5

In every one of the cities under study, the average number of exemptions per federal tax return which left the city was larger than the average number of exemptions per federal tax return which moved into the city. Generally the differences between these two averages was about .15 to .25 exemptions per return.¹⁴ Also, the number of exemptions per federal tax return generally declined in the early 1990's.

3.5 Total Exemption Flows: 1991-5

If we add up each year the total number of exemptions migrating into and out of each of the cities under study, we come close to measuring the number of persons so migrating. Non-filers are, of course, not accounted for by such calculations. Using this tax-based measure of migration, we find that only Jacksonville among the cities under study displayed a positive net inflow in the number of migrating. This is not surprising since Jacksonville experienced, according to the Census Bureau, the largest (33%) population increase over the 1969-95 period. Thus, while Denver had more federal tax returns moving into than departing Denver each year, the number of exemptions on those departing tax returns was sufficiently larger on average that there was a net out migration of about 3,000 exemptions in 1995/6. Nashville lost about 2,000 net exemptions as well.

3.6 Median and Average Incomes of In and Out-Migrants: 1992-5

Of immediate interest to municipal tax administrators is the ability to pay of those migrating into their jurisdiction compared to those departing. In all cities under study, those migrating out had higher median total incomes than those migrating in did, and the average total income¹⁵ of out migrants was higher than the total income of those moving in each year. In DC, New York, Philadelphia, San Francisco and St. Louis, the differences in median incomes were on the order of \$5,000, while in the other cities the differences were much smaller, on the order of \$2,000. Table 2 displays the ratio of out migrating median incomes to in migrating median incomes at the beginning and end of the study period. Several points emerge: for all but Nashville

¹⁴ Only Jacksonville had more than 2 exemptions per return (2.04 in 1995) of out migrating federal tax returns. The other cities were in the 1.6 to 1.8 exemptions/return range. This no doubt reflects the large number of single taxpayers who migrate.

¹⁵ The total income concept is due to the Census Bureau and not the IRS Statistics of Income Division, although it is derived from income reported on federal tax returns.

and Indianapolis, the relative difference in migrants' median incomes declined, and only in Jacksonville, which grew most dramatically among the cities under study, was the differential less than 5% between the median income of immigrants and the median income of out migrants. In cities which lost population, the median total income of outmigrants was anywhere from 12% larger (New Orleans) to 30% larger (Philadelphia) than the median total income of immigrants.

The average incomes of migrants were generally much higher than the medians for the same cities, indicating that the distribution of income for those moving in and those moving out were both skewed to the right. Total average income was highest for New York City migrants; the initial difference was over \$8,000 in 1992/3 and narrowed to about \$5,000 in 1995/6. The average total income of those migrating into New York City was about \$10,000 higher than the median total average income of those migrating in; the average total income of those migrating out of New York City was about \$14,000 higher than the median total income of those migrating out of New York City. (See Figure 9 and Figure 10).

Table 2: Ratio of Out-Migrant Median Income to Immigrant Median Income (%)

City County Government	1991/2 Outmigrant/ Immigrant Median Y (%)	1995/6 Outmigrant / Immigrant Median Y (%)
Baltimore, Maryland	114%	114%
Denver, Colorado	117%	114%
District of Columbia	130%	117%
Indianapolis, Indiana	122%	126%
Jacksonville, Florida	104%	102%
Nashville, Tennessee	115%	122%
New Orleans, Louisiana	116%	112%
New York, New York	119%	116%
Philadelphia, Pennsylvania	139%	130%
St. Louis, Missouri	119%	117%
San Francisco, California	127%	117%

4. Discussion

4.1 Some Stylized Facts

Our analysis of population and income data and tax return information over time for major city-county governments suggests several stylized facts:

- population decline in the majority of US city-county governments was general smooth over the past quarter century;
- over the period 1992-5, only Jacksonville, Florida and Nashville, Tennessee displayed significant population growth;
- every city-county government studied was surrounded by at least one suburban county with very high growth rates;
- city-county governments with declining population remained centers of employment; however, resident earnings as a proportion of total earnings paid generally declined; DC had the most extreme circumstance in that by 1995, residents earned only 36% of total earnings paid to those working in DC;
- five city-county governments experienced a reversal in the early to mid-1980's of their resident's declining share of total earnings paid;
- in all city-county governments studied, the average number of exemptions per federal tax return of those migrating out was larger than the average number of exemptions per federal tax return of those migrating in; over time, the averages for both groups generally declined;
- only Jacksonville, Florida displayed an excess of exemptions migrating in compared to the numbers migrating out; however, the number of net immigrants was modest, and needs to be compared carefully to Census estimated population counts in the 1990's;
- the median income of those migrating out was always larger than the median income of those migrating in; the differential generally narrowed in the 1990's to 2% for Jacksonville, Florida, to 30% for Philadelphia; and,
- the average total income of those migrating out was always larger than the average total median income of those migrating in; the differential generally narrowed during the 1990's.

4.2 Some Implications for Government Finance

Given that state and local governments have a constitutional obligation to balance their budgets, one may ask at the outset whether the above facts are meaningful sources of concerns for local officials. Certainly with regard to the composition of services and their levels, the changing household composition of those departing raises questions about what central cities and

central city school districts will be asked to accomplish in the coming decade.¹⁶ Another possible implication of these data is that those moving in are systematically younger than those moving out. Again, differential age and household sizes of migrants raises questions of the composition and level of services which municipal and school officials seek to provide.

The differing ability to pay observed between those leaving and those moving to city-county governments does raise questions about the viability of income-based revenue sources compared to the traditional, local property tax.¹⁷ The growth in non-resident share of earnings paid in most of the city-county governments implies that the service burdens of commuters must be growing while the revenue base to support their cost is narrowing. This trend raises questions not only at the local and regional level, but also questions about state intergovernmental fiscal policy. There are rationales to support state defraying some of local municipal costs, because the higher level of government can more readily adjudicate the spillovers of the costs imposed by commuters. Whether states, now fiscally flush, will address this issue along with the related problems of tax-exempt property in central cities compared to suburbs, is difficult to predict.

Beyond the immediate questions raised by the observed populations and migration patterns are a series of research questions yet to be answered. First, what has been happening recently to the migration patterns at the low and high ends of the distribution of income? Second, what has been happening to the types of tax filing units, which are migrating in and migrating out? Third, are there long-term differences in the rates of in and out migration among the major US central cities. Fourth, what accounts for the differential migration rates, and what accounts for the resurgence of resident earnings in several of the cities under study? Fifth, are the patterns observed for city-county governments observable in cities of comparable size which are also surrounded by suburbs (some also with significant vacant land) and parts of metropolitan areas?

As this is essentially a work-in-progress report, many of these questions will be answered within the parameters of our planned research. Pending is the annual analysis of Pennsylvania's personal income tax filers by municipality and school district from year to year in conjunction with federal tax return information matched to them. Hopefully this more detailed, annual examination of the individual characteristics of movers and non-movers within one state can answer these important policy questions, and lead to a deeper understanding of why so many choose to move each year.

¹⁶ While it appears that larger households are departing than are moving into the cities under study, it should be remembered that this stylized fact holds for those filing tax returns. Further analysis is necessary to ascertain if this is true for the non-taxable (poor) population which moves as well.

¹⁷ See Rodgers(1987) for an extensive discussion of local non-property tax revenue sources.

5. References

Brunori, David (1998), "Metropolitan Taxation in the 21st Century," *National Tax Journal*, LI, 3 (September, 1998), 541-551.

Chernik, Howard (1998), "Fiscal Capacity in New York: The City versus the Region," *National Tax Journal*, LI, 3 (September, 1998), 531-540.

Chernik, Howard and Andrew Reschovsky (1997), "Urban Fiscal Problems: Coordinating Actions among Governments," in Burton A. Weisbrod and James C. Worth (editors). **The Urban Crisis: Linking Research to Action.** (Northwestern University Press).

Kasarda, John d., Stephen J. Appold, Stuart H. Sweeny, and Elaine Sieff (1997), "Central -City and Suburban Migration Patterns: Is A Turnaround on the Horizon?," *Housing Policy Debate*, 8, 2, 307-58.

Ladd, Helen F. and John Yinger (1989). **America's Ailing Cities: Fiscal Health and the Design of Urban Policy.** (The Johns Hopkins Press).

Nechyba, Thomas and Robert P. Strauss(1998), "Community Choice and Local Public Services: A Discrete Choice Approach," *Regional Science and Urban Economics*, 39, 1(January, 19998). 51-79.

O'Clairacain, Carol (1997). **The Orphaned Capital: Adopting the Right Revenues for the District of Columbia.** (The Brookings Institution).

Rodgers, James D. (1987), "Sales taxes, income taxes, and other nonproperty tax revenues," in Aaronson, J. Richard and Eli Schwartz (editors), **Management Policies in Local Government Financel.** (International City Managers Association).

Strauss, Robert P. (1996), "Why Homeowners Hate the Local Property Tax," *State Tax Notes* (June 16, 1996), 1802-6.

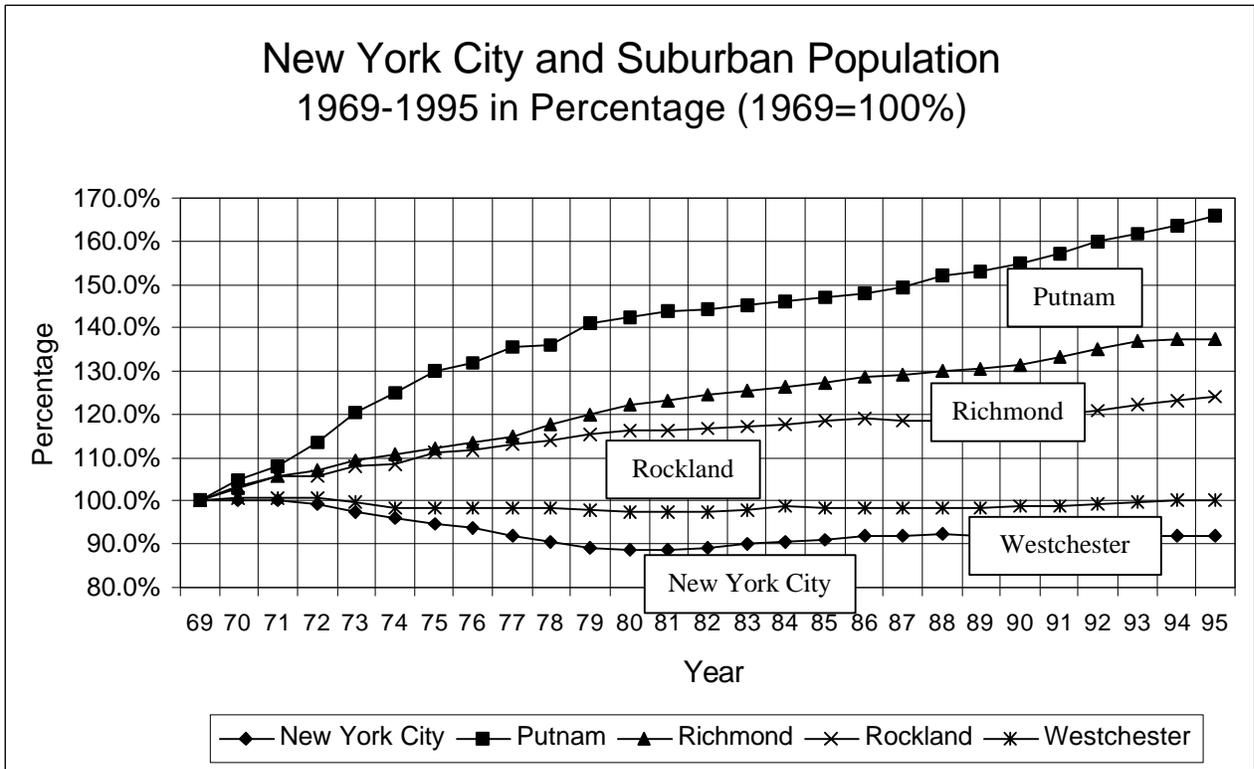
Strauss, Robert P. (1998a). *The District of Columbia's Individual Income Tax: Structure, Characteristics, and Policy Alternatives.* (Washington, DC: DC Tax Revision Commission, January 6, 1998).

Strauss, Robert P. (1998b), "The income of Central City and Suburban Migrants: A Case Study of Washington, D.C. Metropolitan Area," *National Tax Journal*, LI, 3 (September, 1998), 531-540.493-516.

US Bureau of the Census (1986). **Statistical Abstract of the United States: 1986.**

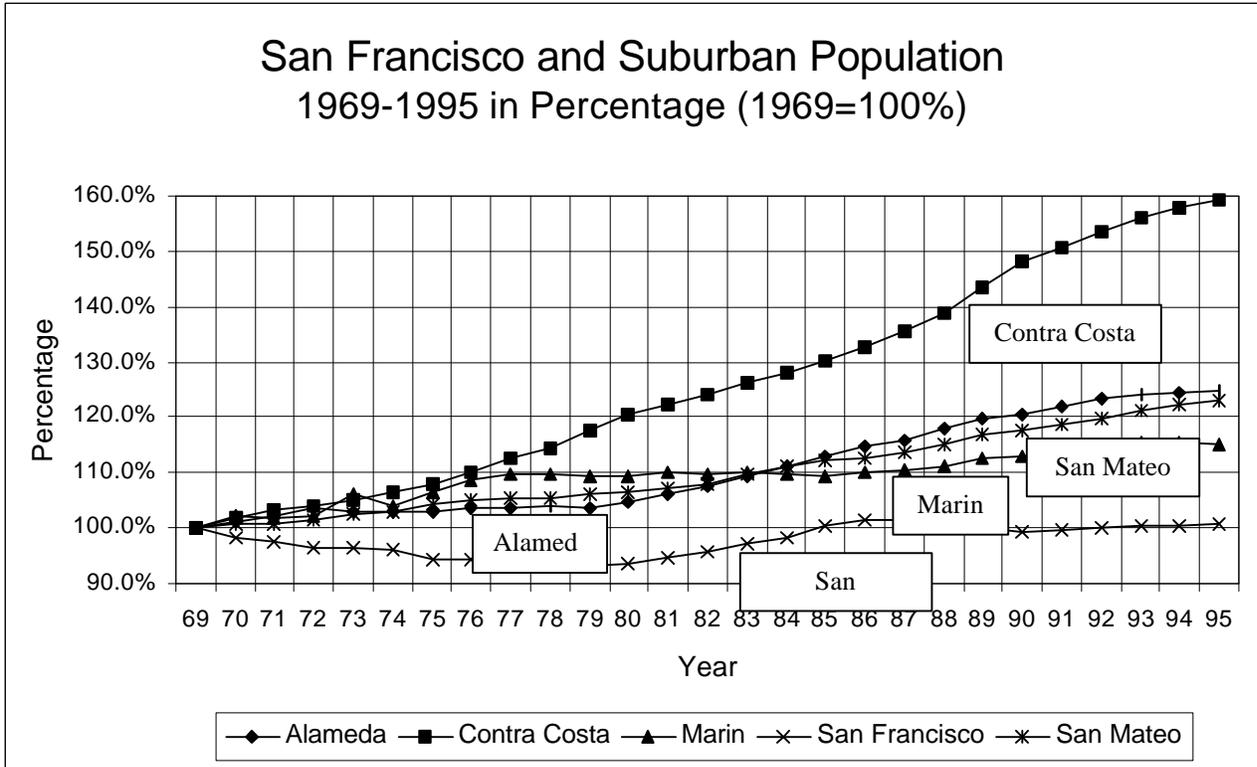
US Bureau of the Census (1996). **Statistical Abstract of the United States: 1996.**

Figure 1



Note: New York City = Bronx + Kings + New York + Queens Counties

Figure 2



Note: San Francisco = San Francisco County

Figure 3

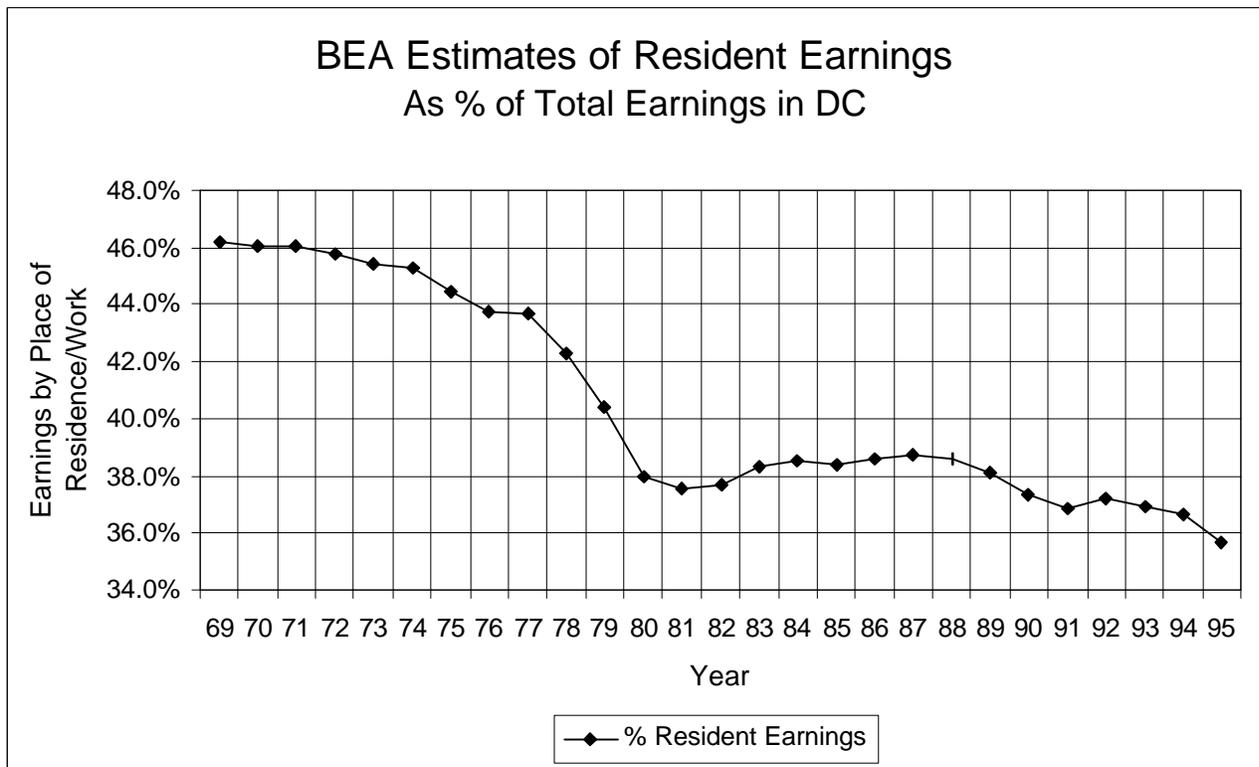
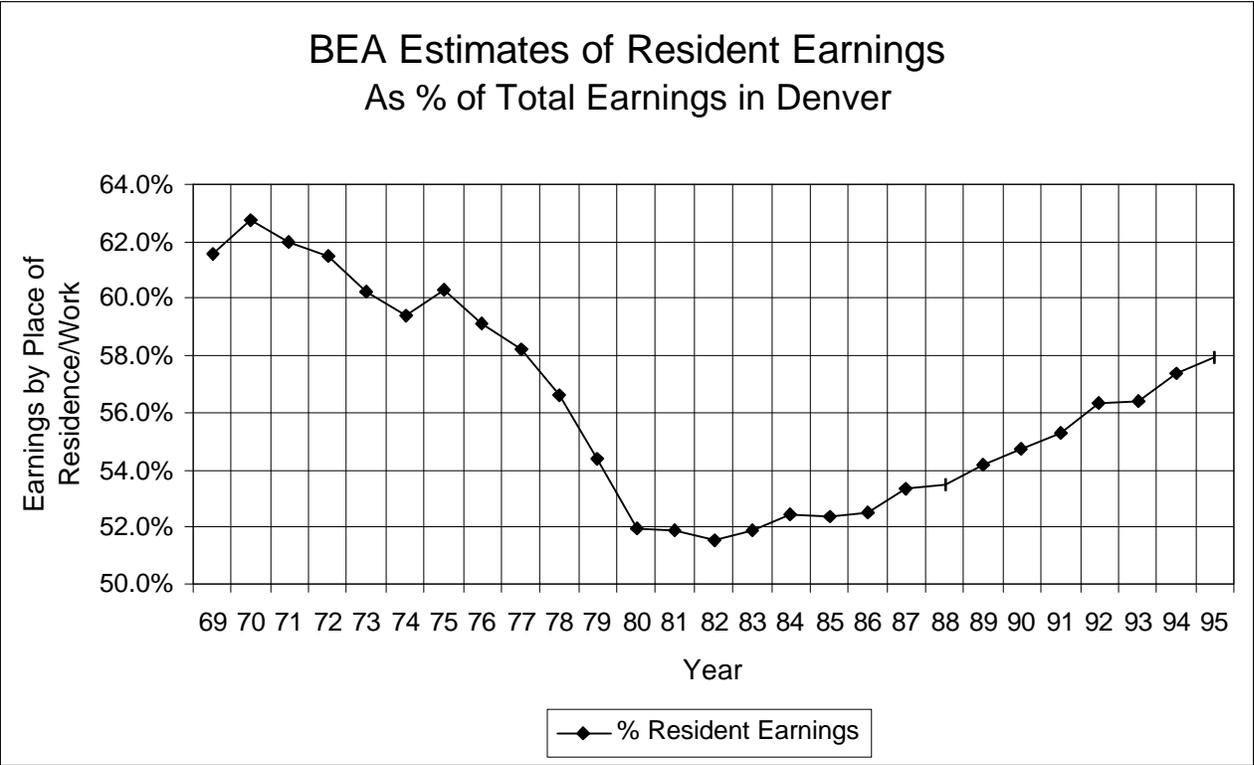
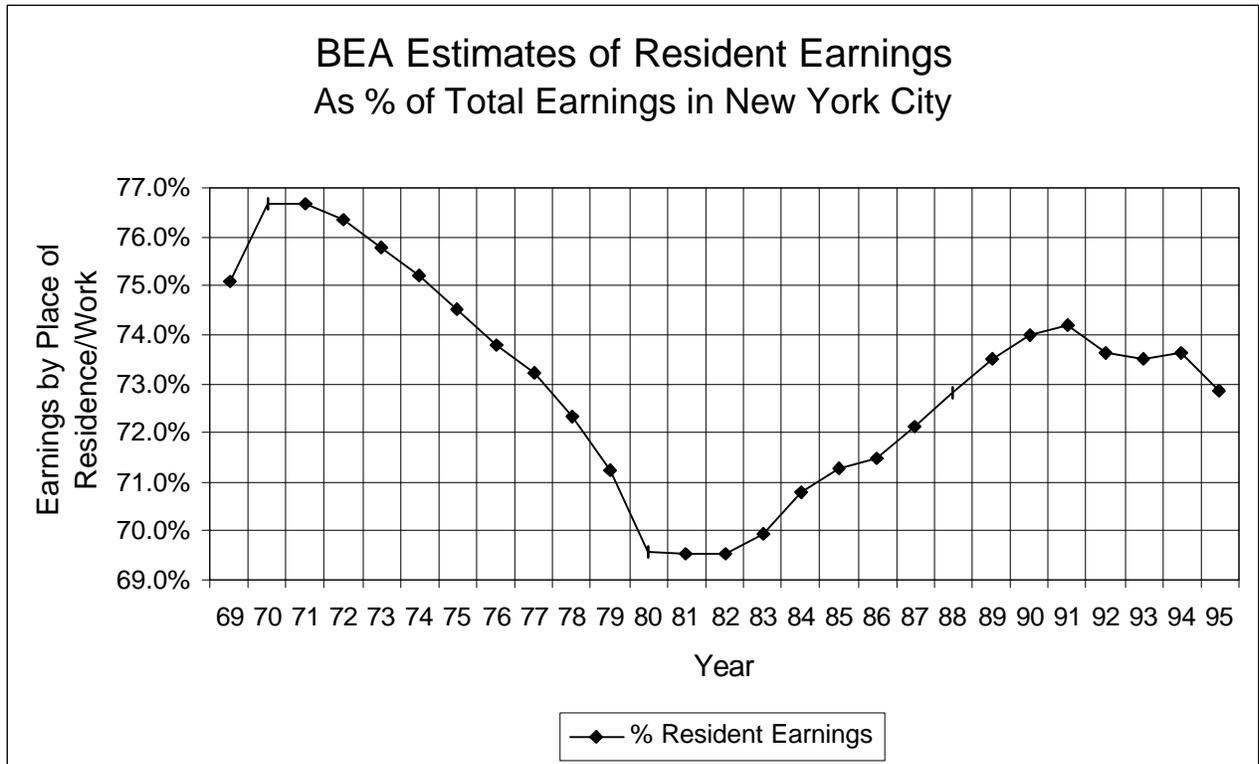


Figure 4



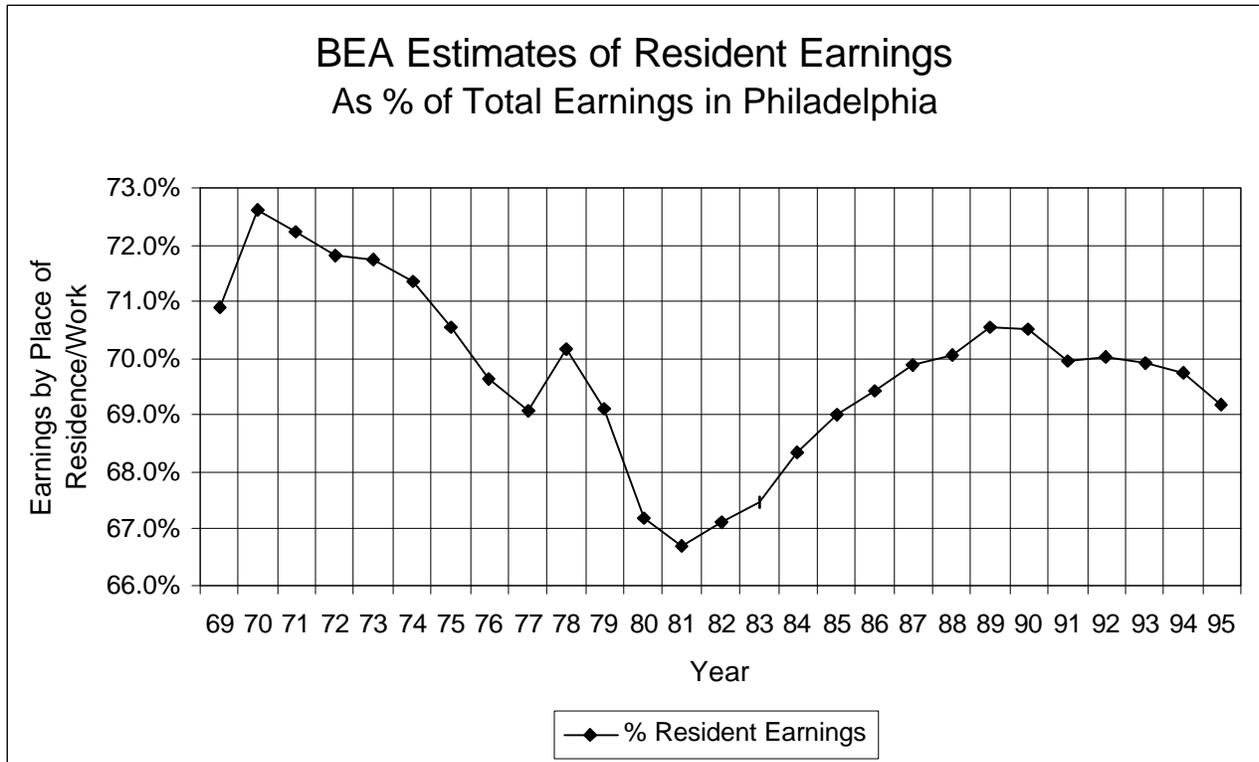
Note: Denver = Denver County

Figure 5



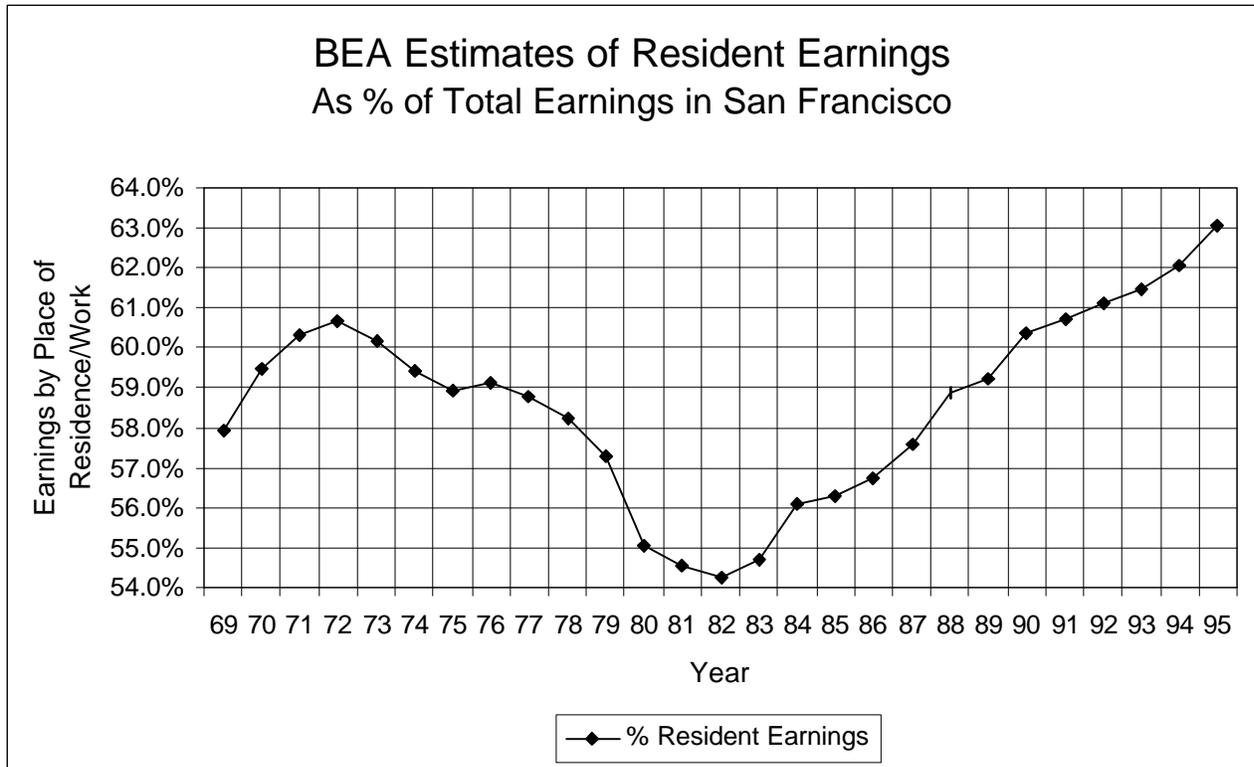
Note: New York City = Bronx + Kings + New York + Queens Counties

Figure 6



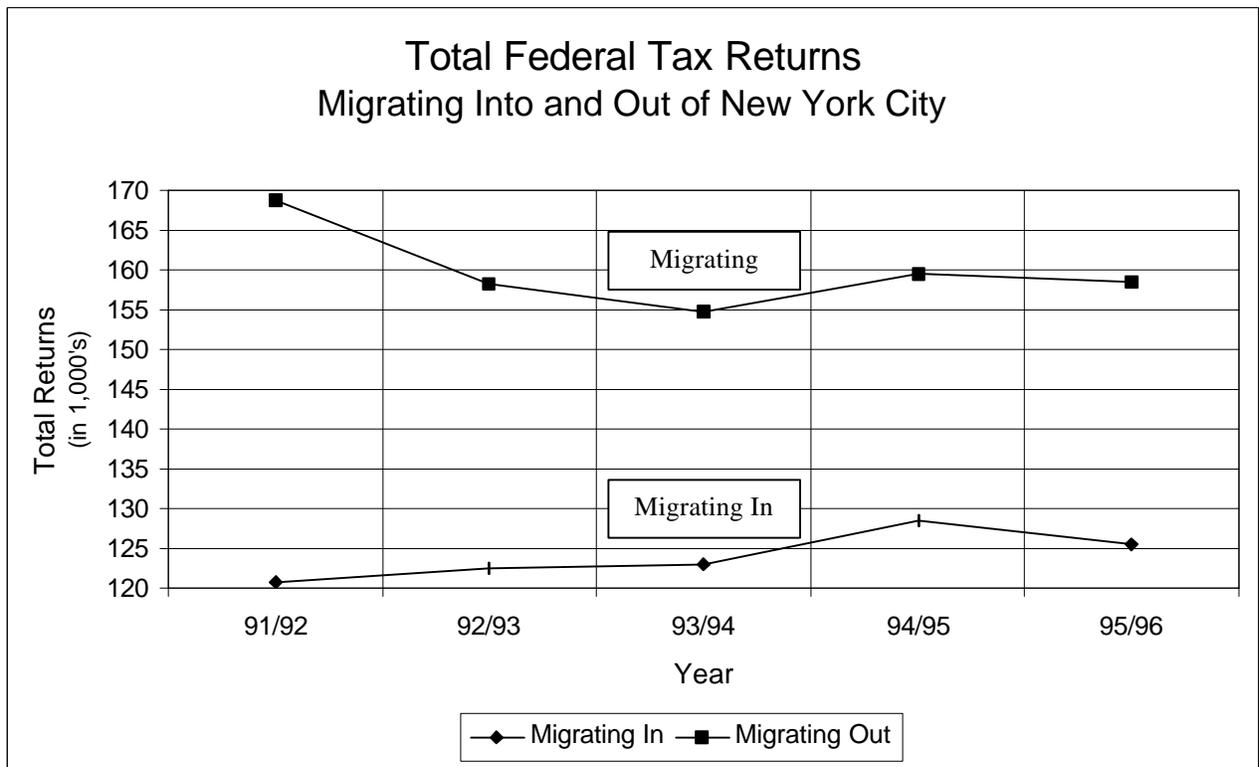
Note: Philadelphia = Philadelphia County

Figure 7



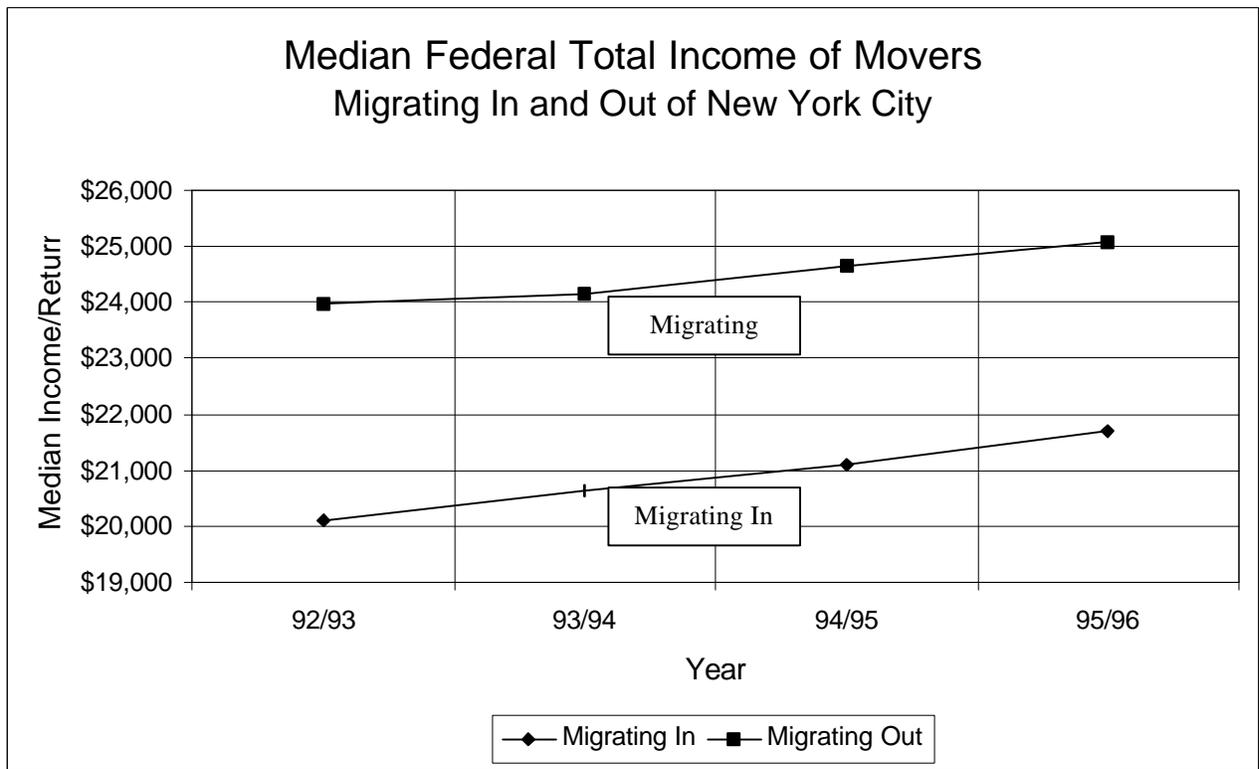
Note: San Francisco = San Francisco County

Figure 8



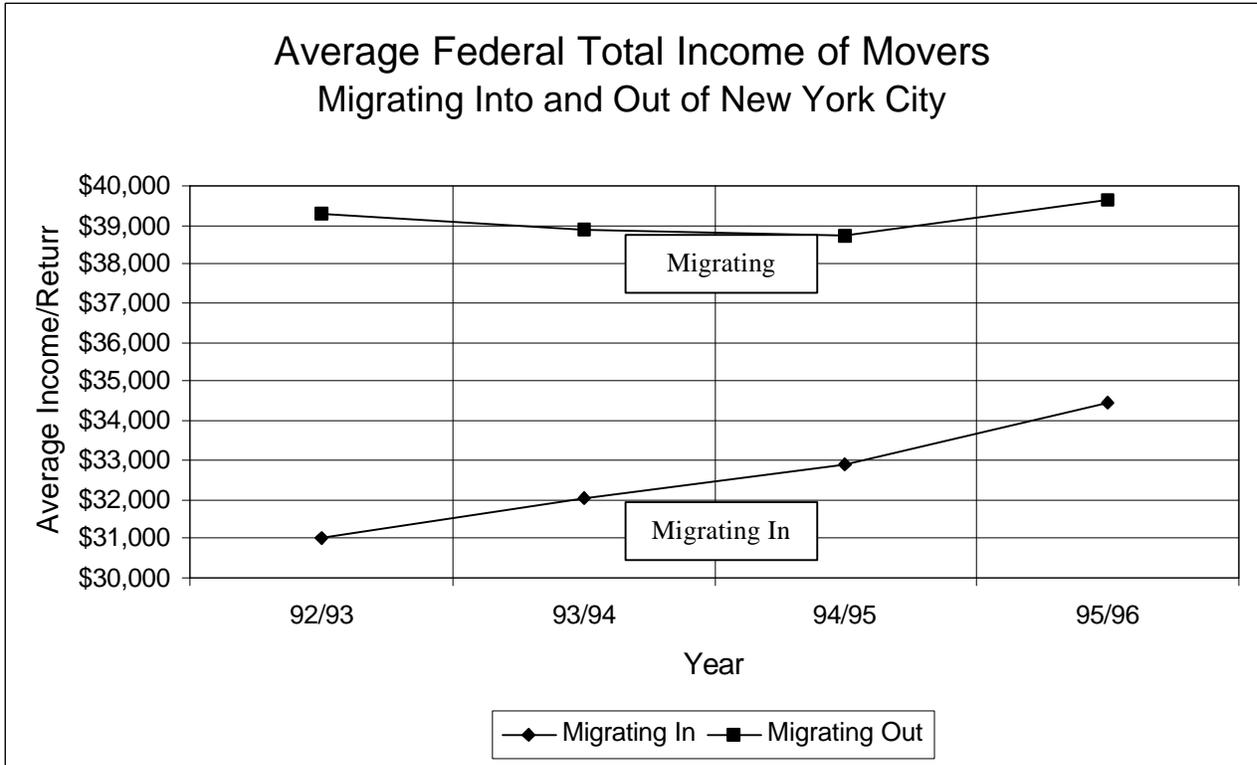
Note: New York City = Bronx + Kings + New York + Queens Counties

Figure 9



Note: New York City = Bronx + Kings + New York + Queens Counties

Figure 10



Note: New York City = Bronx + Kings + New York + Queens Counties