

**International Studies Program
Working Paper 06-20
July 2006**

**Income Mobility:
The Recent American Experience**

Robert Carroll
David Joufaian
Mark Rider



**International Studies Program
Working Paper 06-20**

**Income Mobility:
The Recent American Experience**

**Robert Carroll
David Joulfaian
Mark Rider**

July 2006

International Studies Program
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 651-1144
Fax: (404) 651-4449
Email: ispaysps@gsu.edu
Internet: <http://isp-aysps.gsu.edu>

Copyright 2006, the Andrew Young School of Policy Studies, Georgia State University. No part of the material protected by this copyright notice may be reproduced or utilized in any form or by any means without prior written permission from the copyright owner.

International Studies Program Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to two academic departments (economics and public administration), the Andrew Young School houses seven leading research centers and policy programs, including the International Studies Program.

The mission of the International Studies Program is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

The International Studies Program at the Andrew Young School of Policy Studies is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies and private sector institutions.

The success of the International Studies Program reflects the breadth and depth of the in-house technical expertise that the International Studies Program can draw upon. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not to merely provide technical prescriptions for policy reform, but to engage in a collaborative effort with the host government and donor agency to identify and analyze the issues at hand, arrive at policy solutions and implement reforms.

The International Studies Program specializes in four broad policy areas:

- Fiscal policy, including tax reforms, public expenditure reviews, tax administration reform
- Fiscal decentralization, including fiscal decentralization reforms, design of intergovernmental transfer systems, urban government finance
- Budgeting and fiscal management, including local government budgeting, performance-based budgeting, capital budgeting, multi-year budgeting
- Economic analysis and revenue forecasting, including micro-simulation, time series forecasting,

For more information about our technical assistance activities and training programs, please visit our website at <http://isp-aysps.gsu.edu> or contact us by email at ispaysps@gsu.edu.

*Income Mobility: The Recent American Experience**

Robert Carroll and David Joulfaian

Office of Tax Analysis, U.S. Department of the Treasury

And

Mark Rider

Andrew Young School of Policy Studies, Georgia State University

Abstract

This paper examines the pattern of income mobility during the 1980s and the mid 1990s. It employs a panel of individual income tax returns for the years 1979 through 1995 to study this pattern, and explore whether income mobility has increased during the period. We focus on working age Americans, those age 30 and over in 1979, the first year of the panel, and up to age 61 in 1995, the last year of the panel. Consistent with other research, we find evidence of considerable mobility. For example, more than one-half of those in the bottom quintile move to a higher quintile over the period.

* An earlier version of this paper employing data through 1991 was presented at the Allied Social Science Association meeting in Chicago, January 1998, under the title "Income Mobility: The American Experience during the Eighties." At that time, Mark rider, the third author, served as an economist with the Office of Tax Analysis. The research assistance of Anna Rakhman is greatly appreciated. The views expressed are those of the authors and do not necessarily reflect those of the U.S. Treasury Department.

1. Introduction

After considerable debate there is growing consensus that the 1980s and 1990s have been characterized by increasing income (wage) inequality. Many factors, including technological change, international trade, declining unionization, increasing immigration, and increasing returns to human capital and education have been found to contribute to the growth in inequality.¹ Although establishing the source of rising income inequality is important, the overall effect and appropriate policy response, depends, at least in part, on the extent to which income mobility may mitigate its effects.

Income mobility means that the same households do not occupy the same position in the income distribution year after year. A high degree of mobility over time could offset increased inequality at each point in time and also indicate greater equality of lifetime incomes. As stated in Krugman (1992), “If income mobility were very high, the degree of inequality in any given year would be unimportant, because the distribution of lifetime income would be very even.”

To further explore the extent of income mobility, we use administrative records from tax returns. More specifically, we employ a panel of individual income tax returns for the years 1979 through 1995 to examine the pattern of income mobility and whether income mobility has increased during the period. The use of tax return data has both advantages and disadvantages. First, as we are using a sample of actual tax returns, we have very good information on capital income, an income source that is often underreported in survey data. Second, unlike survey data, which contain relatively few high-income households or where income is top coded, our sample of tax returns contains a large number of high income taxpayers. However, notwithstanding the advantages, there are several drawbacks to using tax return data to study income mobility. First, tax data only include those who file tax returns. Non-filers, who are predominately very low income, are excluded from our data. Second, tax return data also contain very little demographic information such as education and immigration status. Third, some income sources are reported on tax returns when realized, not when received by the taxpayer.

¹ See, for example, the series of articles on income inequality in the Spring 1997 issue of the *Journal of Economic Perspectives* (Gottschalk, 1997; Johnson, 1997; Topel, 1997; and Fortin and Lemieux, 1997).

Two common examples are realized capital gains and exercised stock options.²

The paper proceeds as follows: In the next section, we review the literature on income mobility. In Section III, we describe the panel data used for this study. In Section IV, we present results from the panel data. This section also considers whether income mobility changes depending on the population and income sources examined and presents evidence on the change in mobility over time. Section V concludes the paper with a summary of findings and suggestions for further research.

2. Literature review

In 1992, the U.S. Treasury Department conducted a study on income mobility using panel data spanning 1979 through 1988 (Office of Tax Analysis, 1992a). The Treasury study suggests substantial household income mobility over time, especially from lower to higher percentiles of the income distribution. The Treasury study used a panel of tax returns containing many high income taxpayers and data on capital income, and an income concept that holds constant the effect of statutory changes in the definition of income for taxpayers. The Treasury study also used changes in the percentile distribution as the measure of income mobility.

The Treasury study, however, was criticized for characterizing taxpayers as high or low income based on their initial level of income (Krugman, 1992). It was also criticized for comparing the incomes and transitions of taxpayers in the tax return data to the population of all taxpayers. That is, the income thresholds used to construct the percentile distributions are based on the population of all taxpayers in each year, rather than the population of tax filers represented by the panel.³ Krugman (1992) argues that restricting the analysis to individuals who paid taxes in all ten years introduces a bias because only the economically successful tend to pay taxes. Also, Krugman (1992) indicates that by comparing the sample with the population of all taxpayers, rather than only with taxpayers in the panel, the study treated the normal tendency of earnings to rise with age as representing income mobility. That is, according to Krugman, the college

² The tax data can also reflect shifts in the organization of businesses, from C corporations to S corporations and partnerships and vice versa.

³ The population in the panel is a subset of the overall population. However, the panel is representative of the population in the panel center year (i.e. 1981).

student who later gets a real job in his thirties is treated as upward income mobility in the study.

A study by Sawhill and Condon (SC, 1992) uses the Panel Study of Income Dynamics (PSID) for 1967 through 1986 to examine income mobility. SC select all individuals between the ages of 25 and 54 in 1967 and 1977 and calculate what happens to their incomes over the subsequent decade (1967 through 1976 and 1977 through 1986). Because this study uses survey data, non-filers are included in the sample, and the quintiles are based on the population within the specified ages. This study finds that 56 percent of families in the bottom quintile in 1967 are there in 1976. For the decade beginning in 1977, 53 percent of families in the bottom quintile at the start of the decade remained there at the end of the decade. Slightly greater mobility was found for the top quintile with 52 percent remaining at the top in the first decade and 50 percent remaining at the top in the second decade.

To respond to the criticisms leveled by Krugman (1992) and others, the Treasury released another study (Office of Tax Analysis, 1992b) of income mobility. The Treasury also compared the findings in their revised study to those reported by SC. By applying a similar age restriction as SC and using sample-based quintiles, the revised Treasury study reports tabulations based on a methodology similar to the one adopted by SC. Once these modifications are made, the Treasury results are very similar to those obtained by SC.

As in SC, Gottschalk (1997) also employs PSID data and focuses on the period 1974 through 1991. He restricts the sample to males 20 to 42 years of age in 1974. For these 17 years, Gottschalk reports that 42 percent of households remain in the bottom quintile while 53.9 percent remain in the top quintile. Similarly, Bradbury and Katz (2002) also employ PSID data and examine mobility for three groups over the periods 1969-1979, 1979-1989, and 1988 through 1998. For each of the three periods, they find that about 50 percent of those in the bottom and top quintiles maintain their positions in the beginning of each ten year period.⁴

⁴ Burkhauser, Holtz-Eakin, and Rhody (1996) also use the PSID but focus on wage and salary incomes from 1970 to 1991.

3. Description of the data

This study uses data from a 17-year panel of federal individual income tax returns. The sample for this panel was initially selected for tax year 1981 in two parts. The first part is a sub-sample of the annual Statistics of Income (SOI) stratified random sample of all tax returns filed in 1982.⁵ The second part of the panel sample is a purely random (non-stratified) sample of all tax returns filed in 1981. The two parts combined contain about 20,000 tax filing units and are representative of the tax filing universe in 1981. All of these tax filing units were then followed backward two years to tax year 1979 and forward to 1995.⁶

Table 1 provides the sample size for each year in the panel. The sample size is, of course, the highest in 1981, the center year of the panel, with about 20,000 returns, and declines gradually to about 14,400 returns in 1995. We exclude fiscal year returns and focus on taxpayers who filed on a calendar year basis for all 17 years of the panel.⁷ After these sample restrictions, 11,626 taxpayers, or a total of 197,642 tax returns, remain in the panel.

To abstract from the influence of labor force entry and retirement and normal tendencies in the earnings of the young on mobility, only returns with primary taxpayers age 30 and over in 1979, and 61 and younger in 1995, are retained. This additional sample restriction reduces the size of the panel to 4,065 tax returns. When weighted, this sample represents 48 million tax returns filed for tax year 1981.

The use of tax returns requires the construction of an income measure that is consistent over time and unaffected by the statutory changes in the definition of the tax base. Taxpayers are classified by their real constant law income. Constant law income includes wages, self-employment and rental income, interest, dividends, realized capital gains, unemployment and social security benefits, among others.⁸ The most important

⁵ 1981 tax returns were mostly filed in 1982

⁶ For joint filers, only the primary taxpayer, the taxpayer whose Social Security number was listed first on the return filed in 1981, were followed. Because some taxpayers choose to file late, tax year 1995 returns also include returns filed in 1997 in addition to those filed in 1996. Typically, 5 percent of taxpayers file late and are generally better off than the general population.

⁷ Fiscal year returns are excluded because they may represent incomes for only part of a year.

⁸ This measure of income, however, does not represent a taxpayer's economic income. In particular, realized rather than accrued capital gains are included in income, and tax-exempt interest and the imputed

adjustment is adding back excluded capital gains in 1986 and prior years. Other adjustments include adding back the untaxed portion of unemployment compensation and pension income, the dividend exclusion, and subtracting alimony paid. Changes in the taxable part of Social Security income are not important because only taxpayers age 61 and under in 1995, the last year of the panel, are included in the panel. The income data for the panel are adjusted to 1995 dollars using CPI-U to account for changes in the price level. Results are presented for quintiles and for 90th to the 95th percentile, 95th to the 99th, and the top one percent of the income distribution.

4. Findings and results

4.1 Basic findings

To measure income mobility, transition matrices are constructed that show the transition of taxpayers in 1979 quintiles to their respective 1995 quintiles.⁹ Four matrices are considered: (1) the base sample as described above, (2) the base sample, but income defined to exclude capital gains, (3) the base sample, but with income defined to exclude business income, and (4) the base sample, but excluding taxpayers whose filing status changed over the period.

The transition matrix for the 1979 income quintiles for those age 30 to 44 in 1979 (i.e., ages 47 through 61 in 1995) is shown in Table 2.¹⁰ The entry in the first cell -- the first row and column of the table -- shows that about 46 percent of the taxpayers in the lowest income quintile in 1979 were also in the lowest income quintile in 1995; that is, 54 percent of taxpayers in the bottom quintile were in a higher quintile in 1995. About 53 percent of taxpayers in the highest income quintile in 1979 remained in the highest income quintile in 1995. The top fifth and bottom fifth are the least mobile, with the top

rental value of owner-occupied housing are excluded from income.

⁹ Although the analysis focuses on 1979 and 1995, the results are conditioned on a taxpayer being in the panel (and a tax filer) in each year. Alternatively, the transition matrices could have only been conditioned on filing a tax return in 1979 or 1995. This alternative sample restriction would have included some additional tax returns who presumably would have been non-filers in intervening years. We condition on a taxpayer being in the panel for all 17 years to facilitate comparison to transition matrices constructed for different (and shorter) intervals discussed below.

¹⁰ The percentages presented in Table 2 are based on the sum of taxpayers across rows. That is, the results are conditional on a taxpayer's quintile in 1979. Similar tabulations based on a taxpayers grouping in 1995 indicate virtually identical results.

fifth exhibiting somewhat less mobility than the bottom fifth. The higher degree of immobility observed in the bottom and top quintiles, relative to the middle quintiles, should not be that surprising since the bottom fifth have no where to go but up, and the top fifth have no where to go but down. Nevertheless, both quintiles show that about one-half move into lower/higher quintiles.

Of taxpayers in the bottom quintile in 1979, only about 4 percent moved to the top quintile by 1995 and about 27 percent moved to the second quintile. Nearly 7.5 percent of taxpayers in the top quintile in 1979 moved to the bottom quintile by 1995 with about 19 percent moving to the fourth quintile. A greater percentage of taxpayers in the top quintile move to the lowest two quintiles than taxpayers in the bottom quintile move to highest two quintiles.

Table 2 also shows the mobility of very high income taxpayers. About 30 percent of taxpayers in the top one percent in 1979 remained in the top one percent in 1995. Similarly, about 24 percent of taxpayers in the 95 to 99 percentiles in 1979 remained there in 1995. Although, these tabulations indicate a substantial number of taxpayers remain at the very top between 1979 and 1995, they also indicate that a very large fraction of taxpayers at the top of the income distribution in 1979 moved to lower percentiles by 1995.

Table 3 replicates the transition matrix of Table 2, but excludes realized capital gains from the income measure used for the rankings. Capital gains realizations can be volatile from year to year reflecting the timing of a taxpayer's decision to sell a small business, home, or stock, rather than the accrual of income. Excluding capital gains allows us to consider whether the observed income mobility is simply an artifact of taxpayer decisions to sell these often lumpy assets. The pattern of income mobility that emerges in Table 3 is similar to that observed in Table 2, suggesting that decisions to realize capital gains do not significantly influence the results presented in Table 2. However, a greater mobility is observed in the richest 5 percent of taxpayers.

Table 4 replicates the estimates in Table 3 but defines income so as to exclude self-employment income instead of capital gains. Changes in tax regimes over this period have created incentives to enter entrepreneurship as well as alter the organizational form of businesses. The latter may have critical implications for the reporting of

corporate income by individuals, as firms choose between organizing as C corporations or as S corporations and partnerships. Defining income to exclude business and Schedule E income does not seem to alter the mobility observed earlier. However, a greater mobility is observed for the richest one percent in 1979. Only a fifth maintains the same position, while about 6 percent move from the top one percent down to the bottom quintile.

Similarly, Table 5 replicates the transition matrix of Table 2, but restricts the sample to those with no change in their filing status between 1979 and 1995. In other words, single individuals in 1979, who are married in 1995 and vice versa, are excluded. Changes in marital status due to divorce, marriage, or death of spouse may affect household income, and imposing this sample restriction allows us to consider the sensitivity of our results to changes in marital status. Again, the pattern observed in Table 4 is similar to that observed in Table 2. More specifically, a significant degree of mobility is observed, with less mobility observed in the top and bottom quintiles. Even for these two quintiles, only slightly more than half are in the same quintile in both years.

The results presented above are similar to those reported by SC, though our results show somewhat less mobility. The similarity between the results is important and may even be surprising to some because our data exclude those who don't file a tax return in either 1979 or 1995, and who are typically in the lowest strata of the income distribution. In contrast, the results reported by SC pertain to the entire population, whether they file a tax return or not. The exclusion of non-filers does not appear to have a dramatic impact on the results.

The fraction declines from 46.1 to 43.1 percent in the first quintile, and from 53.41 to 50.36 in the top quintile, when the age limit is lowered from 30 to 25 years as in SC, suggesting slightly greater mobility. However, the respective figures become 35.40 and 46.84, when the age limit is reduced to 20 years as in Gottschalk (1997). On the other hand, removing only the upper age limit instead, the fractions observed in the bottom and top quintiles become 37.35 and 45.17 percent respectively.

4.2 The Pattern of Mobility over Time

Although it appears that there is a high degree of mobility over this 17-year period, another important question is whether income mobility increased or decreased

during this period. This raises the difficult issue of how to make such comparisons. A natural candidate for measuring the degree of mobility is the trace of the transition matrix - the sum of the diagonal elements - since it corresponds to the percentage of households whose relative position in the income distribution has not changed. Furthermore, we can normalize the transition matrix by dividing the number in each cell by the matrix sum rather than the row sum. For example, consider Table 6 which is the counterpart of Table 2, but where the percentages are computed by dividing the number in each cell by the matrix sum. In other words Table 6 reports table percentages rather than row percentages, as in Tables 2 through 5. We refer to this version as the relative frequency matrix.

We define a mobility index to be 100 minus the trace of the relative frequency matrix.¹¹ The index indicates the percentage of the sample that changed quintiles between the two periods under consideration. If there is no mobility, then the trace is equal to 100, and the mobility index is equal to zero. If there is complete mobility, then the trace is equal to zero, and the index is equal to 100. The index has other desirable properties, in addition to ease of interpretation. Since the index is a mapping into the real numbers, the induced ordering is complete, reflexive, and transitive. It should also be noted that this index corresponds to a utilitarian social welfare function because it gives the same weight to a given change in the transition probability in the first quintile as it would to the same change in the fifth quintile, or any other quintile for that matter. For example, consider two cases, one in which there is no mobility except for one individual that moves from the first quintile to the fifth quintile and another in which one individual moves from the fifth to the first. Our mobility index would assign the same value to both cases. However, some may not view these two situations as equivalent in terms of social welfare.

Table 6 reports the mobility indices for the relative frequency matrices corresponding to Tables 2. As explained above, the index for the relative frequency

¹¹ Since the trace of a matrix is equal to the sum of the characteristic roots of the matrix, functions of the eigenvalues of transition matrices may provide measures with more general welfare properties for comparing transition matrices than the rather restrictive one based on the trace. Since the eigenvalues of real valued matrices are also real valued, indexes based on continuous functions of the eigenvalues would induce complete, reflexive, and transitive orderings. One approach would be to take the difference of two transition matrices, if the resulting matrix is positive definite (e.g., all eigenvalues are positive) then mobility would be increasing for all linear social welfare functions. The drawback with this measure of mobility is that it does not provide a complete ordering.

matrix corresponding to Table 2 is equal to 63. In other words, 63 percent of the observations in the sample are in different quintiles in 1995 than the one in which they began in 1979.

Next we split the period into two nearly equal intervals, 1979-1986 and 1987-1995, and obtain the relative frequency matrices for the age restricted sample. The relative frequency matrices for the two intervals are provided in Tables 7 and 8, respectively. The mobility index is equal to 56 for the relative frequency distribution corresponding to the first 8-year interval of 1979 to 1986, and 54 for the subsequent 9-year interval of 1987-1995. Thus, according to this index, income mobility appears to be decreasing during the same period in which income dispersion is believed to be increasing.

Clearly breaking the 17-year interval between 1986 and 1987 is somewhat arbitrary. In fact, the decline in the index may be a simple artifact of the various tax reforms enacted during this period or differences in phases of the business cycle for this choice of the starting and ending years of the two intervals. To address this potential objection we compute mobility indexes for the relative frequency distributions corresponding to each consecutive four-year interval: 1979-1982, 1983-1985, and 1985-1988, 1988-1991, and 1991-1995. Again, as is evident from examining this series in Table 9, we find the same pattern: mobility declines 47 to 41.

Finally, we compute mobility indexes for the relative frequency matrices corresponding to each three-year and two-year interval and report these series in Table 9. Although there are some small dips and swings as the interval is shortened from three years to one year, they also exhibit the same general pattern: mobility appears to be decreasing during this period. An exception is the large couple three years in the panel where the decline in mobility seems to have reversed.

5. Conclusion

This paper examines the pattern of income mobility in the 1980s and first half of the 1990s. It uses a panel of individual income tax returns for the years 1979 through 1995 to examine the pattern of income mobility and whether income mobility has increased during the period. We focus on those age 30 and over in 1981 or age 61 and

younger in 1995, the last year of the panel. These age limits are chosen so as to control for potential bias that would result from normal labor force entry and retirement decisions.

We find evidence of considerable income mobility, with over one half of the poorest quintile moving up the income distribution. These results do not seem to be sensitive to inclusion or exclusion of realized capital gains or changes in marital status. The degree of mobility, however, appears to have declined over this period.

Although this paper indicates a high degree of mobility, additional research should be done to identify whether the degree of mobility and changes in mobility over time can be attributed to particular sources of income or particular groups of taxpayers. Identifying differences in mobility across age cohorts and distinguishing between the role played by labor and capital income would help us better interpret our results.

References

- Bradbury, Katharine L. and Jane Katz (2002). Women's Labor Market Involvement and Family Income Mobility When Marriages End, *New England Economic Review*, Fourth Quarter, Federal Reserve Bank of Boston, 41-74.
- Fortin, Nicole M. and Thomas Lemieux (1997). Institutional Changes and Rising Wage Inequality: Is There a Linkage? *Journal of Economic Perspectives*, 11:2, 75-96.
- Gottschalk, Peter (1997). Inequality, Income Growth, and Mobility: The Basic Facts. *Journal of Economic Perspectives*, 11:2, 21-40.
- Johnson, George E. (1997). Changes in Earnings Inequality: The Role of demand Shifts. *Journal of Economic Perspectives*, 11:2, 41-54.
- Krugman, Paul R. (1992). The Right, the Rich, and the Facts: Deconstructing the Income Distribution Debate. *The American Prospect* Fall 11, 19-31.
- McMurrer Daniel P and Isabel V. Sawhill (1996). *Economic Mobility in the United States*. No 6722, The Urban Institute.
- Office of Tax Analysis. *Household Income Mobility During the 1980s: A Statistical Assessment Based on Tax Return Data*. U.S. Department of the Treasury. June 1, 1992.
- Office of Tax Analysis. *Household Income Changes Over Time: Some Basic Questions and Facts*. U.S. Department of the Treasury. August 24, 1992.
- Sawhill, Isabel V. and Michael Condon. *Is Income Inequality Really Growing? Sorting Out the Fairness Question*. The Urban Institute. June 1992.
- Topel, Robert H. (1997). Factor Proportions and Relative Wages: The Supply-Side Determinants of Wage Inequality. *Journal of Economic Perspectives*, 11:2, 55-74.

Table 1

Sample Size and Distribution of Taxpayers in the 1981 Center Year Panel

Year	Adjusted Gross Income, Nominal									Total
	Negative	Under 10,000	10,000- 20,000	20,000- 30,000	30,000- 50,000	50,000- 75,000	75,000- 100,000	100,000- 200,000	200,000 and over	
1979	789	3,693	3,212	2,239	1,817	833	563	1,663	3,792	18,601
1980	1,038	3,660	3,221	2,196	2,014	793	486	1,441	4,296	19,145
1981	1,275	3,899	3,304	2,245	2,053	871	297	783	5,416	20,143
1982	1,279	3,132	3,132	2,280	2,242	926	454	1,113	4,585	19,143
1983	1,351	2,813	2,998	2,174	2,455	1,000	466	1,139	4,450	18,846
1984	1,313	2,453	2,840	2,130	2,617	1,152	506	1,147	4,373	18,531
1985	1,319	2,116	2,755	2,126	2,686	1,278	521	1,152	4,227	18,180
1986	1,272	1,941	2,532	2,058	2,729	1,346	584	1,154	4,197	17,813
1987	1,083	1,687	2,370	1,981	2,713	1,507	674	1,153	4,273	17,441
1988	983	1,517	2,183	1,857	2,722	1,595	674	1,138	4,430	17,099
1989	890	1,334	2,050	1,734	2,646	1,691	803	1,115	4,353	16,616
1990	856	1,258	1,814	1,687	2,612	1,722	797	1,185	4,165	16,096
1991	860	1,242	1,749	1,604	2,489	1,791	843	1,241	3,890	15,709
1992	892	1,202	1,707	1,531	2,531	1,816	859	1,299	3,799	15,636
1993	829	1,155	1,645	1,476	2,435	1,773	884	1,328	3,712	15,237
1994	822	1,013	1,557	1,480	2,235	1,822	975	1,320	3,627	14,851
1995	734	935	1,467	1,335	2,137	1,827	977	1,371	3,631	14,414

Table 2								
Income Mobility: 1979-1995								
Quantiles in 1979	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	46.06	26.86	15.11	8.16	3.81	0.85	0.60	0.18
20-40	25.87	25.62	24.71	18.69	5.11	1.28	0.54	0.00
40-60	11.86	22.24	28.01	23.95	13.94	2.72	1.35	0.00
60-80	8.64	15.39	22.41	29.86	23.70	4.60	3.66	1.05
80-100	7.57	9.93	9.76	19.33	53.41	--	--	--
90-95	10.45	6.94	4.58	16.65	--	23.11	12.56	2.06
95-99	6.05	9.26	5.58	14.00	--	21.29	24.46	4.92
Top 1%	2.10	11.14	1.83	6.84	--	12.72	26.16	29.87

Sample size= 4,065

Note: Each cell entry indicates the percentage of taxpayers in each quintile in 1979 that are in a given quintile in 1995. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 3								
Income Mobility: 1979-1995								
Income Excludes Realized Capital Gains								
Quantiles in 1979	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	45.61	27.96	13.68	8.63	4.11	0.94	0.46	0.34
20-40	25.41	26.56	25.31	18.46	4.25	1.02	0.56	0.00
40-60	11.88	21.81	27.82	23.83	14.67	2.95	1.05	0.24
60-80	8.92	14.50	23.77	28.44	24.37	4.80	3.90	0.84
80-100	8.07	9.20	9.53	20.61	52.57	--	--	--
90-95	10.86	8.20	5.51	17.27	--	20.86	11.24	1.63
95-99	6.09	7.04	5.48	12.99	--	22.48	24.07	3.95
Top 1%	2.17	8.27	2.93	6.69	--	10.26	41.15	25.28

Sample size = 4,065

Note: Each cell entry indicates the percentage of taxpayers in each quintile in 1979 that are in a given quintile in 1995. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 4								
Income Mobility: 1979-1995								
Income Excludes Business Source Income								
Quantiles in 1979	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	47.10	24.96	12.18	10.45	5.31	1.57	0.87	0.29
20-40	24.03	30.06	25.40	16.12	4.39	0.55	0.34	0.21
40-60	12.31	22.17	28.42	24.10	13.00	2.10	1.45	0.00
60-80	8.31	14.09	24.56	29.67	23.37	4.99	3.93	0.69
80-100	8.14	8.82	9.36	19.76	53.92	--	--	--
90-95	13.27	6.11	6.76	16.54	--	23.51	9.34	0.03
95-99	6.77	7.18	4.06	14.50	--	18.20	22.38	9.42
Top 1%	6.20	7.48	12.96	1.99	--	8.59	35.89	20.77

Sample size = 4,065

Note: Each cell entry indicates the percentage of taxpayers in each quintile in 1979 that are in a given quintile in 1995. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 5								
Income Mobility: 1979-1995 No Change in Marital Status								
Quantiles in 1979	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	51.12	26.19	14.45	4.82	3.43	1.09	0.57	0.02
20-40	24.70	26.47	24.96	18.93	4.94	0.42	0.72	0.00
40-60	8.93	23.60	31.73	24.40	11.35	2.80	0.97	0.01
60-80	8.39	14.95	19.36	30.61	26.69	5.63	4.52	1.11
80-100	6.86	8.84	9.52	21.00	53.79	--	--	--
90-95	3.75	7.79	6.43	22.52	--	24.94	9.55	2.59
95-99	4.48	7.81	4.50	15.29	--	20.36	24.61	5.10
Top 1%	2.02	10.31	0.93	2.26	--	12.56	30.65	29.69

Sample size = 3,273

Note: Each cell entry indicates the percentage of taxpayers in each quintile in 1979 that are in a given quintile in 1995. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Quantiles in 1979	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	9.20	5.36	3.02	1.63	0.76	0.17	0.12	0.04
20-40	5.18	5.13	4.95	3.74	1.02	0.26	0.11	0.00
40-60	2.37	4.45	5.60	4.79	2.79	0.54	0.27	0.00
60-80	1.73	3.07	4.48	5.96	4.74	0.92	0.73	0.21
80-100	1.52	1.99	1.95	3.87	10.70	--	--	--
90-95	0.52	0.35	0.23	0.83	--	1.16	0.63	0.10
95-99	0.24	0.37	0.22	0.56	--	0.85	0.98	0.20
Top 1%	0.02	0.11	0.02	0.07	--	0.13	0.26	0.30

Mobility Index = 63.41

Sample size = 4,065

Note: Each entry indicates the percentage of taxpayers in each cell. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 7								
Relative Frequency Distribution: 1979-1986								
Quantiles in 1979	Quantiles in 1986							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	11.23	5.29	1.75	1.13	0.56	0.25	0.04	0.03
20-40	4.50	7.20	5.16	2.30	0.85	0.17	0.15	0.05
40-60	1.92	3.90	6.88	5.31	2.00	0.29	0.27	0.00
60-80	1.23	2.37	4.43	7.01	4.93	1.14	0.57	0.08
80-100	1.09	1.25	1.77	4.23	11.70	--	--	--
90-95	0.34	0.22	0.31	0.78	--	1.01	0.91	0.05
95-99	0.25	0.15	0.17	0.54	--	0.80	1.11	0.44
Top 1%	0.11	0.00	0.10	0.04	--	0.04	0.26	0.36

Mobility Index = 55.98

Sample size=4,065

Note: Each entry indicates the percentage of taxpayers in each cell. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 8								
Relative Frequency Distribution: 1987 - 1995								
Quantiles in 1987	Quantiles in 1995							
	0-20	20-40	40-60	60-80	80-100	90-95	95-99	Top 1%
0-20	11.01	5.89	1.55	0.93	0.62	0.26	0.08	0.05
20-40	4.43	7.25	5.42	1.98	0.88	0.22	0.13	0.05
40-60	2.35	3.65	7.11	5.35	1.55	0.31	0.21	0.00
60-80	1.39	2.14	4.21	7.90	4.39	0.76	0.36	0.00
80-100	0.82	1.07	1.70	3.84	12.57	--	--	--
90-95	0.17	0.19	0.24	0.81	--	1.43	0.67	0.09
95-99	0.17	0.06	0.12	0.38	--	0.96	1.45	0.40
Top 1%	0.05	0.03	0.06	0.00	--	0.02	0.35	0.40

Mobility Index = 54.16

Sample size = 4,065

Note: Each entry indicates the percentage of taxpayers in each cell. Age limited to 30-44 in 1979, or 47-61 years in 1995.

Table 9						
The Pattern of Mobility from 1979 through 1995						
Years	Mobility Index	Diagonal Elements of the Relative Frequency Quintile Matrix				
		First	Second	Third	Fourth	Fifth
79-95	63.41	9.20	5.13	5.60	5.96	10.70
2 intervals						
79-86	55.98	11.23	7.20	6.88	7.01	11.70
87-95	54.16	11.01	7.25	7.11	7.90	12.57
5 intervals						
79-82	47.33	13.50	8.90	7.78	8.98	13.15
82-85	41.19	14.05	10.46	9.37	10.35	14.6
85-88	41.18	13.97	10.73	9.76	9.88	14.7
88-91	41.08	13.92	9.99	9.59	10.32	15.0
91-95	41.88	13.43	9.97	9.95	10.42	14.64
8 intervals						
79-81	40.59	14.73	10.81	9.61	10.35	13.91
81-83	38.14	14.47	10.89	10.52	11.38	14.60
83-85	37.44	14.41	11.00	10.80	11.02	15.33
85-87	38.16	14.97	10.93	10.06	10.83	15.05
87-90	36.42	14.95	10.91	10.24	11.88	15.60
89-91	35.15	14.99	11.64	10.31	11.75	16.16
91-93	35.05	14.76	11.30	11.46	11.98	15.45
93-95	34.38	14.81	11.62	11.42	12.22	15.55
16 intervals						
79-80	33.61	16.00	12.17	11.27	11.58	15.37
80-81	31.54	15.72	12.87	12.06	12.01	15.80
81-82	31.51	15.81	12.55	11.69	12.55	15.89
82-83	28.97	15.86	12.94	12.54	13.35	16.34
83-84	29.22	15.76	12.95	12.73	13.02	16.32
84-85	31.20	15.83	12.51	12.30	12.15	16.01
85-86	29.25	16.10	13.56	12.35	12.54	16.20
86-87	31.64	15.65	12.33	12.07	12.38	15.93
87-88	29.86	16.21	12.66	11.59	13.14	16.54
88-89	28.96	15.98	13.16	12.30	13.21	16.39
89-90	26.67	16.37	13.32	12.79	14.01	16.84
90-91	26.58	16.13	13.41	13.28	13.91	16.69
91-92	25.67	16.24	13.59	13.39	14.22	16.89
92-93	28.61	15.62	12.90	12.68	13.54	16.65
93-94	28.08	15.87	13.00	12.89	13.68	16.48
94-95	28.76	16.01	13.42	12.66	12.92	16.23