

# Facts on the Distributions of Earnings, Income, and Wealth in the United States: 2007 Update

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## **Abstract**

This article is largely a description of inequality of earnings, income, and wealth in the United States in 2007 as measured by the Survey of Consumer Finances (SCF). We look at inequality in relation to various characteristics such as age, education, employment status, marital status, and whether households are late payers or include bankruptcy filers. We also look at economic mobility. We compare these variables in 2007 with their values in our earlier study in 1998.

*The views expressed herein are those of the author(s) and not necessarily those of the Federal Reserve Bank of Minneapolis or the Federal Reserve System.*

# Facts on the Distributions of Earnings, Income, and Wealth in the United States: 2007 Update<sup>\*</sup>

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This article is largely a description of inequality in the United States in 2007 as measured by the Survey of Consumer Finances (SCF). Essentially we report, organize, and discuss a series of snapshots of inequality taken at a point in time in the United States.

Inequality is a slippery topic because of its multi-dimensional nature. People differ in luck, talent, opportunities, earnings, income, wealth, consumption, leisure, bequests, and so on. In this article, we focus on the inequality of earnings, income, and wealth. But we also discuss other features of inequality, such as age, education, employment status, marital status, and financial trouble. Because the SCF is not a panel that tracks people over time and we cannot follow the same group of households, we are not able to discuss the life-time features of inequality. Moreover, lacking detailed and reliable data, we must also ignore other interesting features of economic inequality, such as inequality in consumption or leisure, which are the main arguments of the most interesting and elusive dimension of inequality: inequality in welfare.

The SCF is a special survey, conducted by the National Opinion Research Center at the University of Chicago and sponsored by the Federal Reserve with the cooperation of the Department of the Treasury. Its sample size of 4,500 households is appreciably smaller

than that of other samples, such as the Current Population Survey (CPS), which has a sample size of 50,000. The CPS is a monthly survey conducted, for more than 50 years, by the Bureau of the Census for the Bureau of Labor Statistics.

Despite its small sample size, the SCF is particularly careful to represent the upper tail of the distributions by oversampling the rich. For instance, in the 2007 sample, **the net worth of the wealthiest household was over \$1.4 billion, and the household with the highest income earned more than \$119 million.** These huge numbers are unheard of in any other sample. In addition to providing ample data on household earnings, income, and wealth, the SCF includes detailed information on other features of inequality, such as age, education, employment status, marital status, and household composition. We organize and report this additional information and use it to describe these other dimensions of inequality.

For the most part, we let the data speak for themselves and simply report how things are. As we did in the past, to complement our description of inequality, we use the Panel Study of Income Dynamics (PSID) to describe economic mobility, using five-year periods and

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Table 1

**Quantiles of the 2007 Earnings, Income, and Wealth Distributions (x 10<sup>3</sup> 2007 USD)**

Quantiles	0	1	5	10	20	40	60	80	90	95	99	100
Earnings	-1,547	0.0	0.0	0.0	0.0	25.7	50.4	87.5	126.1	180.2	497.0	161,523
Income	-506.0	4.2	8.9	12.3	20.1	36.3	58.8	98.7	142.0	207.2	680.7	187,202
Wealth	-474.0	-31.3	-4.6	0.0	7.3	64.7	197.7	496.9	908.4	1,890	8,327	1,411,730

focusing on mobility in earnings, income, and wealth. The PSID is conducted by the Survey Research Center of the University of Michigan and is funded primarily by the National Science Foundation.

This article is the third in a series of similar articles that use the SCF to describe inequality in the United States. The previous two articles are Díaz-Giménez, Quadrini, and Ríos-Rull (1997) and Budría, Díaz-Giménez, Quadrini, and Ríos-Rull (2001). We complement our discussions of the properties of the data with a comparison of the data in 1998. We have redone the calculations of our previous articles using consistent definitions and the same code. We have found some disparities between the statistics that we report here and those that we reported in the past. The numbers we report in this article supersede those that we reported in the previous two articles.

Overall, we find that there has been a substantial increase in most measures of inequality since 1998 and a small increase in the correlations among the variables.

## Earnings, Income, and Wealth Inequality

### A Description of the Distributions

#### The Quantiles

In Table 1 we report the main *quantiles* of the *earnings*, *income*, and *wealth* distributions of *households*. Earnings means the rewards to all types of labor including entrepreneurial labor; income includes earnings plus capital income plus government transfers; and wealth means the value of all assets.<sup>1</sup> The first four columns of Table 1 describe the bottom tails of the distributions. The middle four columns describe the quintiles. And the last four columns describe the top tails of the distributions. We repeat this organization throughout the article.

The first feature that stands out from a quick glance at Table 1 is the size of the ranges. Incomes of around \$190 million and net worths of around \$1.4 billion are truly

spectacular. The SCF is highly successful in ferreting out the very income-rich and wealthy. On the low side of the ranges, the large sizes of the negative values, and especially those of earnings, are also impressive. Most of these negative values arise from business losses.

The second feature that stands out is the large number of households with zero earnings. Most of these households are headed by retirees, who make up approximately 18.7 percent of the sample. Most of the remaining households—6.3 percent—consist of disabled households who do not plan to work again. Later on, we will take an exhaustive look at these distributions and their similarities and differences, as well as how they relate to other household characteristics.

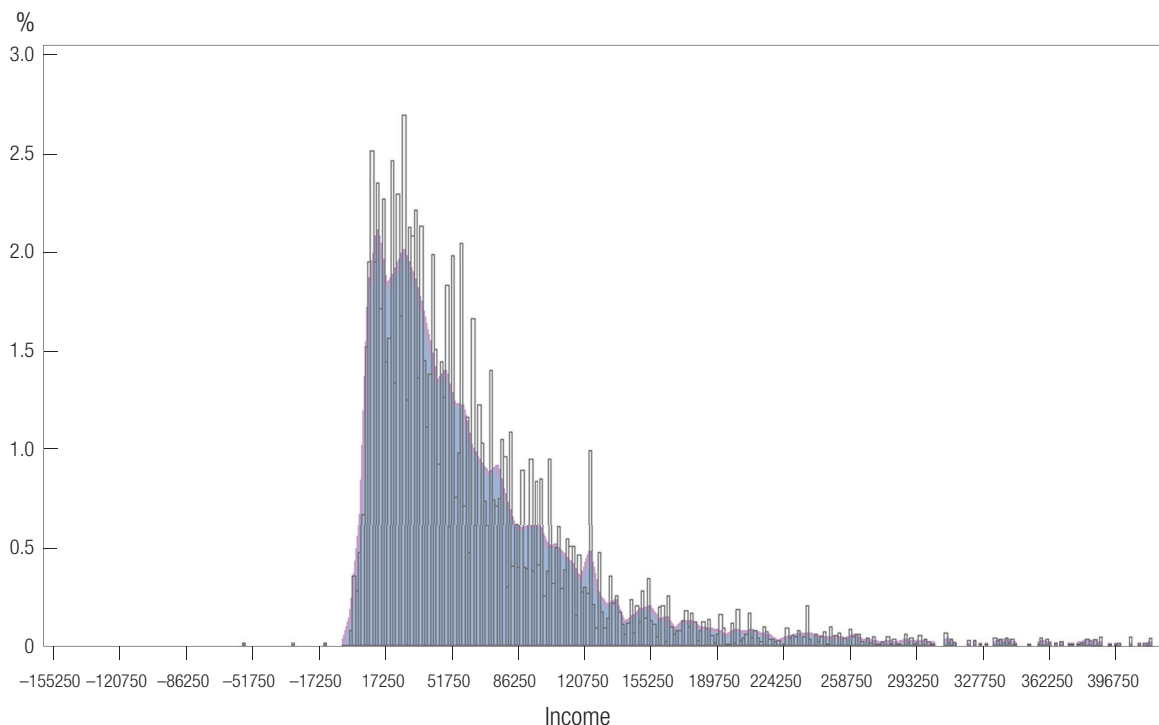
Readers can use Table 1 to identify the relative position of their households along the various distributions. For instance, someone whose household income is \$60,000 would be slightly above the 60th percentile of the income distribution. But it takes a yearly income of more than \$681,000 to be a truly income-rich household that belongs to the top percentile of the income distribution.

#### The Histograms

In Figure 1 we plot the *histogram* of the 2007 SCF income distribution (and of its smoothed *kernel density estimates*). We have truncated both tails of the sample at plus or minus \$418,000, which corresponds to five times the average household income (\$83,600). This truncation cuts out slightly more than 1 percent of the top households, and a few households form the bottom tail of the income distribution. The main features of the income distribution are immediately apparent with a glance at its histogram: income is highly disperse and skewed to the right, with a very thin and long right tail,

<sup>1</sup>See the Appendix for technical definitions of these and all other italicized variables.

Figure 1

**Histogram of the 2007 Income Distribution (2007 USD)**

and there is a large accumulation of mass in a relatively small range of values. For instance, the income of 50 percent of the households ranges between \$12,300 and \$58,800.

Qualitatively, the histograms of the earnings and wealth distributions are similar, and we have chosen to omit them for the sake of brevity.

#### *Concentration and Skewness*

In the top half of Table 2, we report four measures of concentration of the earnings, income, and wealth distributions: the *coefficients of variation*, the *variances of the logs*, the *Gini indexes*, and the ratios of the top percentiles to the bottom 40 percent of the distributions. All four measures confirm that wealth is the most concentrated of the three variables. The ranking between earnings and income is more ambiguous: the coefficient of variation of earnings is bigger for income, but the variance of the logs, the Gini index, and the ratio of

the top 1 percent to the bottom 40 percent are bigger for earnings.

The peculiarities of both distributions account for the ambiguous ranking between earnings and income. First, a large share of the households have zero labor earnings, whereas the number of households with zero income is negligible, mostly because of the equalizing role played by transfers. Second, income is more concentrated than earnings at the top of the distribution, mostly because of the role played by capital income, which is roughly proportional to wealth and therefore highly concentrated. Third, the Gini index of earnings is large partly because of the role played by negative values, which tend to exaggerate it.

In the bottom two rows of Table 2, we report two measures of *skewness*: the locations of the mean and the mean-to-median ratios. Both measures show that the distributions of earnings, income, and wealth are clearly

Table 2

**Concentration and Skewness of the Distributions**

	Earnings	Income	Wealth
Coefficient of variation	3.60	4.32	6.02
Variance of the logs	1.29	0.99	4.53
Gini index	0.64	0.58	0.82
Top 1% / lowest 40%	183	88	1,526
Location of mean (%)	69	74	80
Mean / median	1.72	1.77	4.61

skewed to the right. They also show that wealth is the most skewed of the three variables and that earnings is the least skewed.

*Correlation*

In Table 3 we report the correlation coefficients of earnings, income, and wealth with each other and with the four sources of income, namely, labor income, capital income, business income, and transfers. We find that the correlation between earnings and income is high (0.84), that the correlation between income and wealth is sizably lower (0.57), and that the correlation between earnings and wealth is the lowest (0.48). This means that the wealthy do not work much, either because they have other sources of income or because many of them have retired.

We also find that labor income and business income are most correlated with earnings and least correlated with wealth. The first result follows from our definition of earnings. The fact that the correlation of business income and wealth is relatively low is partly related to the retired status of many wealthy households.

**The Poor and the Rich**

*The rich tend to be rich along all three dimensions. This is not the case with the poor.*

Common usage of the concepts of the poor and the rich is fairly ambiguous. To clarify this ambiguity, in this section we distinguish between the poor and the rich in terms of earnings, income, and wealth. To this purpose, in this section we discuss some of the facts reported in Tables 4, 5, and 6. In those tables we rank the sample households according to their earnings, income, and wealth, and we report the main economic and demo-

Table 3

**Correlation Coefficients of Earnings, Income, and Wealth**

Variable	$E$	$Y$	$W$	$Y_l$	$Y_k$	$Y_b$	$Y_z$
Earnings ( $E$ )	1.00	0.84	0.48	0.62	0.25	0.81	-0.04
Income ( $Y$ )	0.84	1.00	0.57	0.48	0.73	0.71	0.07
Wealth ( $W$ )	0.48	0.57	1.00	0.29	0.40	0.39	0.11
Labor income ( $Y_l$ )	0.62	0.48	0.29	1.00	0.15	0.04	-0.06
Capital income ( $Y_k$ )	0.25	0.73	0.40	0.15	1.00	0.20	0.04
Business income ( $Y_b$ )	0.81	0.71	0.39	0.04	0.20	1.00	0.00
Transfers ( $Y_z$ )	-0.04	0.07	0.11	-0.06	0.04	0.00	1.00

graphic characteristics of the households that belong to the various groups of the three distributions. We focus our discussion on two groups of households: those that belong to the bottom tails of the distributions, which we refer to generically as the poor, and those that belong to the top tails of the distributions, which we refer to generically as the rich. We do this because one of the hardest tasks that any theory of inequality faces is to account for both tails of the distributions simultaneously. To keep the language simple, we call the households in the bottom 1 percent of the distributions “the poorest” and those in the bottom quintile “the poor.” With the households in the top quintile and with those in the top 1 percent, we do likewise.<sup>2</sup>

*The Poor*

*The Earnings-Poorest.* The earnings-poorest have negative earnings. This is because they incurred sizable business losses, which account for -17 percent of their income. The earnings-poorest are wealthy. They own almost twice the sample average wealth. This would put them in the top decile of the wealth distribution. The earnings-poorest are income-rich. Their average income is 86 percent of the sample average. This would put them in the fourth quintile of the income distribution. Most of the income of the earnings-poorest (79 percent) comes from capital sources. The earnings-poorest are older than average, and many of them are singles with no children. Retired widows account for 22.1 percent of the earnings-poorest. This number is very large—three times the sample average, which is 7.7 percent.

<sup>2</sup>The bottom and top 1 percent of each distribution hold relatively few households. The income-poorest category contains the fewest: 35 households.

Table 4

**Earnings Partition** of the 2007 SCF Sample (Gini Index = 0.636)

	Bottom (%)			Quintiles					Top (%)			All
	0–1	1–5	5–10	1st	2nd	3rd	4th	5th	90–95	95–99	99–100	0–100
Averages (x 10 <sup>3</sup> 2007 USD)												
Earnings	-9.1	0.0	0.0	-0.5	13.4	37.2	66.4	202.5	149.9	264.8	1,191	63.8
Income	71.8	27.1	29.3	30.4	26.5	44.3	74.0	242.6	173.7	321.6	1,553	83.6
Wealth	1,026	309.3	317.8	359.0	199.6	200.4	328.2	1,690	1,094	2,618	12,197	555.4
Shares of Total Sample (%)												
Earnings	-0.1	0.0	0.0	-0.1	4.2	11.7	20.8	63.5	11.7	16.6	18.7	100.0
Income	0.9	1.3	1.8	7.3	6.3	10.6	17.7	58.1	10.4	15.4	18.6	100.0
Wealth	1.8	2.2	2.9	12.9	7.2	7.2	11.8	60.9	9.9	18.9	22.0	100.0
Income Sources (%)												
Labor	1.8	0.0	0.0	0.2	45.2	76.6	82.9	66.6	77.4	63.3	49.1	64.3
Capital	78.6	12.5	16.8	25.1	8.6	5.2	3.7	11.5	8.6	12.2	17.7	10.2
Business	-16.7	0.0	0.0	-2.0	6.5	8.4	7.9	19.6	10.3	22.0	31.9	13.9
Transfers	34.8	83.2	78.3	73.4	35.7	8.1	4.5	1.8	2.9	1.6	1.2	10.3
Other	1.6	4.4	4.8	3.2	4.1	1.7	1.0	0.6	0.8	0.9	0.0	1.2
Age (%)												
Under 31	2.8	5.4	3.2	3.1	26.0	23.1	14.2	6.1	5.8	2.5	0.1	14.5
31–45	7.9	3.6	13.3	7.82	24.2	37.5	38.4	36.2	34.4	31.8	22.5	28.8
46–65	51.9	20.0	25.6	25.1	29.9	32.9	44.1	53.5	54.9	57.5	68.9	37.1
Over 65	37.5	70.9	57.9	64.0	19.9	6.5	3.3	4.2	4.9	8.2	8.5	19.6
Average (years)	62.6	69.7	66.8	68.5	46.8	42.9	44.5	47.4	47.8	50.1	52.8	50.0
Education (%)												
Dropouts	24.7	24.0	26.6	26.1	20.3	13.9	5.1	2.3	3.1	0.3	0.3	13.5
High school	30.8	41.8	37.6	39.3	40.9	35.5	31.4	17.2	14.6	10.3	4.5	32.9
Some college	19.9	12.9	16.7	15.3	20.4	23.1	18.3	14.6	14.6	9.1	6.9	18.4
College	24.6	21.3	19.2	19.3	18.4	27.5	45.2	65.9	67.7	80.3	88.3	35.3
Employment Status (%)												
Workers	2.7	0.6	1.6	1.4	58.6	81.5	81.6	76.4	75.9	61.1	42.3	59.9
Self-employed	17.3	0.3	1.1	1.7	11.3	9.4	11.6	18.2	18.3	30.4	47.8	10.5
Retired	53.7	75.0	65.4	68.9	14.4	3.6	3.2	3.5	2.7	7.7	8.4	18.7
Nonworkers	26.4	24.2	31.9	28.0	15.6	5.6	3.6	1.8	3.0	0.8	1.5	10.9
Marital Status (%)												
Married	48.4	28.6	32.8	33.1	42.8	54.3	75.0	88.8	91.2	89.0	95.9	58.8
Single w/ dependents	16.0	17.7	16.6	16.6	30.7	22.9	10.0	4.9	3.7	5.0	0.6	17.0
Single w/o dependents	35.6	53.7	50.7	50.2	26.5	22.8	15.0	6.3	5.1	6.0	3.5	24.2
Family size	1.83	1.6	1.7	1.6	2.3	2.5	2.7	3.0	3.0	2.9	3.2	2.4
Marital Status Excluding Retired Widows												
Single w/ dependents	8.9	10.8	13.5	11.7	30.3	22.8	10.0	4.6	3.7	4.0	0.6	15.9
Single w/o dependents	24.2	26.1	28.7	25.6	23.8	22.8	14.9	6.3	5.1	6.0	3.3	18.7
Family size	2.00	1.68	1.80	1.70	2.52	2.69	2.84	3.07	3.11	2.93	3.18	2.56

Table 5

**Income Partition of the 2007 SCF Sample (Gini Index = 0.575)**

	Bottom (%)			Quintiles					Top (%)			All
	0–1	1–5	5–10	1st	2nd	3rd	4th	5th	90–95	95–99	99–100	0–100
Averages (x 10 <sup>3</sup> 2007 USD)												
Earnings	0.0	1.9	2.9	4.2	18.2	36.4	64.6	195.6	144.6	264.6	1,111	63.8
Income	–7.6	7.0	10.5	11.7	28.2	47.1	76.6	254.4	169.6	330.8	1,753	83.6
Wealth	490	82.0	53.2	102.8	139.4	211.3	377.3	1,946	1,195	3,174	14,407	555.4
Shares of Total Sample (%)												
Earnings	0.0	0.1	0.2	1.3	5.7	11.4	20.3	61.3	11.3	16.6	17.4	100.0
Income	–0.1	0.3	0.6	2.8	6.7	11.3	18.3	60.9	10.2	15.9	21.0	100.0
Wealth	0.9	0.6	0.5	3.7	5.0	7.6	13.6	70.1	10.8	22.9	25.9	100.0
Income Sources (%)												
Labor	32.2	25.2	26.1	35.6	60.8	72.6	77.8	60.5	75.8	60.6	39.0	64.3
Capital	–105.5	1.5	1.0	–1.9	1.8	1.9	2.9	15.5	7.7	11.9	30.4	10.3
Business	–37.1	1.5	1.3	0.7	4.6	5.5	7.6	19.0	10.9	22.5	28.3	13.9
Transfers	9.9	66.0	64.2	59.9	30.3	18.4	10.5	4.3	4.7	4.0	2.1	10.3
Other	–0.5	5.9	7.4	5.7	2.5	1.6	1.2	0.7	0.9	1.1	0.3	1.2
Age (%)												
Under 31	27.6	23.2	23.1	21.4	18.5	16.4	11.0	5.3	4.2	1.2	0.0	14.5
31–45	26.4	14.6	16.6	19.7	24.7	32.0	36.1	31.5	35.4	24.1	18.4	28.8
46–65	33.0	34.5	22.0	25.5	30.4	34.6	41.7	53.4	51.1	60.6	61.6	37.1
Over 65	13.0	27.7	38.4	33.5	26.4	17.1	11.2	9.8	9.4	14.1	20.0	19.6
Average (years)	45.0	52.0	54.7	53.3	51.0	48.2	47.7	49.8	49.8	52.9	55.9	50.0
Education (%)												
Dropouts	22.1	36.2	36.4	30.5	19.0	10.3	5.6	2.2	3.4	0.9	0.7	13.5
High school	32.1	37.4	39.6	40.6	41.3	39.2	28.5	14.8	13.8	9.7	5.0	32.9
Some college	24.5	12.8	12.3	17.2	20.1	20.3	18.7	15.5	14.2	8.0	9.5	18.4
College	21.3	13.6	11.7	11.8	19.6	30.2	47.3	67.6	68.5	81.3	84.8	35.3
Employment Status (%)												
Workers	23.3	20.1	27.0	30.2	56.4	70.5	73.2	69.3	67.7	54.2	32.1	59.9
Self-employed	17.7	5.9	3.6	5.3	8.1	7.5	11.2	20.1	20.2	33.0	50.9	10.5
Retired	13.8	30.3	32.6	32.4	24.8	16.2	11.4	8.7	8.9	12.0	15.0	18.7
Nonworkers	45.2	43.7	36.8	32.1	10.7	5.8	4.2	1.8	3.2	0.8	2.0	10.9
Marital Status (%)												
Married	18.1	17.0	17.8	24.2	45.6	59.4	77.6	87.1	88.4	87.6	94.9	58.8
Single w/ dependents	40.7	30.5	29.4	31.5	23.8	15.3	9.1	5.5	4.2	4.9	0.8	17.0
Single w/o dependents	41.1	52.5	52.8	44.3	30.6	25.3	13.3	7.4	7.4	7.5	4.3	24.2
Marital Status Excluding Retired Widows												
Single w/ dependents	40.7	26.2	27.1	28.7	22.3	14.7	8.7	5.0	4.2	3.8	0.8	15.9
Single w/o dependents	34.0	38.1	34.4	29.4	23.7	22.0	11.8	6.6	6.0	7.2	4.1	18.7
Family size	2.41	1.90	1.87	2.03	2.41	2.59	2.83	2.94	2.94	2.85	3.03	2.56

Table 6

**Wealth Partition of the 2007 SCF Sample (Gini Index = 0.816)**

	Bottom (%)			Quintiles					Top (%)			All
	0-1	1-5	5-10	1st	2nd	3rd	4th	5th	90-95	95-99	99-100	0-100
Averages ( x 10 <sup>3</sup> 2007 USD)												
Earnings	35.5	31.9	15.7	22.1	34.4	47.4	62.0	153.2	104.6	254.1	764.3	63.8
Income	38.4	37.8	21.8	27.5	40.5	56.5	74.2	219.2	137.9	347.6	1,323	83.6
Wealth	-79.0	-13.6	-0.9	-5.3	29.7	123.6	312.3	2,316	1,233	3,710	18,653	555.4
Shares of Total Sample (%)												
Earnings	0.6	2.0	1.2	6.9	10.8	14.9	19.4	48.0	8.2	15.9	12.0	100.0
Income	0.5	1.8	1.3	6.6	9.7	13.5	17.8	52.5	8.3	16.6	15.8	100.0
Wealth	-0.1	-0.1	-0.0	-0.2	1.1	4.5	11.2	83.4	11.1	26.7	33.6	100.0
Income Sources (%)												
Labor	85.6	83.5	72.4	78.9	81.2	78.6	77.1	51.4	58.6	54.7	30.2	64.3
Capital	0.0	-0.0	0.0	0.1	0.5	1.0	2.7	18.3	7.9	17.8	33.7	10.3
Business	8.1	1.2	-0.3	1.9	4.2	6.2	7.5	21.4	20.1	21.4	32.0	13.9
Transfers	3.7	12.1	22.3	15.5	12.0	12.4	12.1	8.2	12.6	5.5	3.6	10.3
Other	2.7	3.3	5.5	3.7	2.0	1.8	0.7	0.7	0.9	0.7	0.6	1.2
Age (%)												
Under 31	47.3	44.6	29.0	36.0	22.6	8.6	3.8	1.5	0.4	1.9	3.0	14.5
31-45	38.8	32.7	38.3	32.1	36.5	32.8	25.7	17.0	19.6	13.1	7.9	28.8
46-65	13.9	16.9	24.1	22.1	28.3	35.5	45.6	53.9	50.1	57.7	57.7	37.1
Over 65	0.0	5.8	8.6	9.8	12.6	23.1	24.8	27.6	29.8	27.4	31.4	19.6
Average (years)	34.2	36.6	41.8	40.8	44.2	52.0	55.3	57.9	58.7	58.0	59.4	50.0
Education (%)												
Dropouts	6.9	12.3	34.3	25.0	42.5	14.4	8.0	4.3	3.26	1.9	1.2	13.5
High school	13.2	23.4	33.7	34.1	19.9	35.2	33.8	18.6	13.9	10.2	6.1	32.9
Some college	23.7	29.2	21.5	22.1	41.6	18.9	17.4	13.4	14.5	10.3	7.1	18.4
College	56.2	35.2	10.5	18.8	29.9	31.5	40.8	63.7	68.4	77.6	85.6	35.3
Employment Status (%)												
Workers	73.2	70.6	53.2	61.2	71.5	61.0	59.7	46.3	43.2	30.8	28.4	59.9
Self-employed	6.1	1.8	1.2	4.2	5.4	8.1	10.6	24.0	24.3	44.7	48.6	10.5
Retired	3.3	4.1	8.8	9.1	10.9	22.9	23.9	26.7	29.6	23.2	21.8	18.7
Nonworkers	17.3	23.5	36.9	25.6	12.2	8.1	5.9	2.9	2.8	1.4	1.2	10.9
Marital Status (%)												
Married	51.2	41.2	30.6	38.3	51.3	63.8	65.9	74.7	74.3	82.5	90.6	58.8
Single w/ dependents	22.7	35.8	35.8	32.4	22.4	13.1	9.6	7.5	7.3	3.5	1.6	17.0
Single w/o dependents	26.1	23.1	33.6	29.3	26.3	23.0	24.4	17.8	18.4	14.1	7.8	24.2
Marital Status Excluding Retired Widows												
Single w/ dependents	22.7	35.8	35.8	32.3	21.3	11.5	8.6	5.8	5.3	3.5	1.6	15.9
Single w/o dependents	26.1	20.5	29.4	25.0	23.0	16.2	17.0	12.2	11.3	10.5	6.9	18.7
Family size	2.77	2.55	2.54	2.51	2.64	2.64	2.48	2.54	2.52	2.63	2.63	2.56



The earnings-poorest are not very educated. The share of dropouts among this group is almost twice the average share, and their share of college graduates is 10 percentage points below the sample average. Most of the earnings poorest are either retired (54 percent) or self-employed (17 percent).

*The Earnings-Poor.* The average earnings of the earnings-poor are still negative. The earnings-poor are still wealthy—their average wealth would put them in the fourth wealth quintile—but sizably less wealthy than the earnings-poorest. Most of their income comes from transfers and capital (73 and 25 percent). They are older than the earnings-poorest (64 percent are over 65), and the vast majority are retirees (more than 90 percent). Their average education is similar to that of the earnings-poorest: many are high school dropouts, and few have completed college (26 and 19 percent). The share of singles without dependents (50 percent) among the earnings-poor is more than twice the sample average (24 percent). Many of them are retired widows (the share of singles with dependents in this group is much smaller—26 percent—when we exclude retired widows).

*The Income-Poorest.* The income-poorest have negative income and zero earnings, and they are wealthy. Their negative income comes from both their business (37 percent) and their capital losses (106 percent). Their average wealth would put them in the fourth quintile of the wealth distribution. Unlike the earnings-poorest, the income-poorest are young (the share of under-31s in this group is almost twice the sample average). Many income-poorest have failed to complete their education (22 percent are high school dropouts, and 24 percent have only some college, whereas the sample averages are 14 and 18 percent). In this group, many households are headed by nonworkers (45 percent, while the sample average is only 11 percent). The share of households headed by the self-employed is also large (18 percent, relative to 11 percent sample-wide). Most of the income-poorest are single (82 percent, which is twice the sample average).

*The Income-Poor.* The average household income of the income-poor is \$11,700. Most of this income comes from transfers and labor (60 and 36 percent). The income-poor are either very young or very old (21 percent are under 31, and 34 percent are over 65; the sample averages are 15 and 20 percent). In this group are many high school dropouts and very few college

graduates (31 and 12 percent; the sample averages are 14 and 35 percent). Many of the households in this group are headed by either retirees or nonworkers (32 percent each). Most of them are single, both with dependents and without (32 and 44 percent).

*The Wealth-Poorest.* The average net worth of the wealth-poorest is \$-79,000. But their income is approximately \$40,000. Most of their income comes from labor. They are young, and a majority have gone to college. About a third of their debt is from student loans, amounting to \$42,400, which is over half of their negative net worth position. They are very young (86 percent are under 45, which is twice the sample average; and almost no one is over 65). A majority of the household heads have completed college (56 percent, whereas the sample average is 35 percent), and there are very few high school dropouts (7 percent, which is half the sample average). Most of them are workers, but there is also a relatively large share of nonworkers in this group (73 and 17 percent; the sample averages are 60 and 11 percent, respectively). The marital status of the household heads in this group is similar to the sample average. All in all: those who are young and college educated, and who owe about two times their yearly income, need not worry. This economic situation is an illness that time will cure. Finally, some of the wealth-poorest (3.3 percent) are retirees who may have outlived their savings or may not have accumulated enough savings in the first place.

*The Wealth-Poor.* The wealth-poor are similar to the wealth-poorest. Their average wealth holdings are negative, but not by much (\$-5,300). Most of the household income comes from labor (79 percent). The household heads are young (68 percent of them are under 45), and many of them are singles, both with dependents and without (32 and 29 percent). The main difference with the wealth-poorest lies in their education. Although most of the wealth-poorest are college graduates, a large share of the wealth-poor are high school dropouts (25 percent, which is almost twice the sample average).

#### *The Rich*

*The Earnings-Richest.* The earnings-richest are rich along all three dimensions. Their average earnings, income, and wealth are 19, 19, and 22 times the sample averages. Their share of business income is over twice the sample average, and they receive a trivial amount of transfers. Most of them belong to the 46–65 age group (69 percent), which are the prime years for working.

A large majority of the household heads in this group (88 percent) have completed college. Many of them are self-employed (48 percent, which is more than four times the sample average), and almost all of them are married (96 percent).

*The Earnings-Rich.* The earnings-rich are still rich along all three dimensions, but appreciably less so than the earnings-richest. Their average earnings, income, and wealth are about three times the sample averages. Their income sources are similar to the sample averages. When compared with the earnings-richest, more of their income comes from labor and less from business and capital sources. The household heads are still prime-age workers, but on average they are about five years younger than the earnings-richest. A very large share of the household heads have completed college (66 percent), and the share of married households is still overwhelming (89 percent).

*The Income-Richest.* The income-richest are very rich along all three dimensions. Their average earnings, income, and wealth are 17, 21, and 26 times the sample averages. When compared with the earnings-richest, the income-richest are clearly wealthier. Large shares of their income come from capital and business sources (30 and 28 percent). The household heads are old. Their average age is 56, and 20 percent of them are over 65. Most of them have completed college (85 percent), many of them are self-employed (51 percent), and almost all of them are married (95 percent).

*The Income-Rich.* The income-rich are rich along all three dimensions, but their earnings, income, and wealth are only about three times the sample averages. When compared with the income-richest, most of their income comes from labor and less from capital and business sources. Their average age is 50 years old, which makes them on average 6 years younger than the income-richest. Most of the household heads have completed college (68 percent), they are mostly workers and self-employed (69 and 20 percent), and a very large share of them are married (87 percent).

*The Wealth-Richest.* The wealth-richest own extremely large wealth holdings (34 times the sample average) and relatively smaller earnings (12 times the sample average). Their income is almost evenly split between labor capital and business sources (30, 34, and 32 percent). They are quite old (the average age of the household heads is 59, and 31 percent of them are over 65). They are also highly educated, with 86 percent hav-

Table 7

### Average Earnings, Income, Wealth, Nonhousing Wealth, and Household Size

	Earnings	Income	Wealth	Nonhousing Wealth	HH Size
2007	63,820	83,584	555,443	420,235	2.56
1998	56,542	71,130	360,647	286,305	2.60
% $\Delta$	12.9	17.5	54.0	46.8	-1.5

ing completed college. A very large share of them are self-employed (49 percent, which is almost five times the sample average), and almost all of them are married (91 percent).

*The Wealth-Rich.* The wealth-rich are still rich along all three dimensions, but there is a gap between their wealth holdings and their labor earnings (4.2 and 2.4 times the sample averages). Business and capital income are still important, but a larger share of their income comes from labor, as compared with the wealth-richest (51 and 30 percent). The household heads are old (58 years on average), they have completed college (64 percent), and many of them have retired (27 percent). Although most of them are married (75 percent), the share of singles without dependents is also sizable (18 percent).

### Changes in the Last 10 Years

Although this paper looks at inequality, many economists care about how U.S. households fared over time. In Table 7, we report the average values of earnings, income, wealth, and wealth net of home equity (nonhousing wealth) per household in 1998 and 2007, measured in 2007 dollars using the consumer price index (CPI) as the price deflator.<sup>3</sup> We find that household earnings increased by 13 percent, that income increased by 18 percent, and that wealth increased by an impressive 54 percent.<sup>4</sup> Even though the growth in home equity

<sup>3</sup>As is well known, there is much debate about the extent to which using the CPI does a good job of allowing for a comparison between dollars of different years. For example, the Boskin Commission (Boskin et al. 1996) states that using the CPI yields numbers about 1.1 percent below those that would obtain using more sophisticated methods. Still, we use the CPI as the price deflator here because it is the one most commonly used.

<sup>4</sup>The 2007 SCF was conducted at the peak of assets markets. After 2007, the value of total wealth in the United States dropped by about 30 percent, according to data from the Flow of Funds.

Table 8

**Changes in Concentration**

	Gini Indexes				Mean-to-Median Ratios				Coefficients of Variation			
	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>
2007	0.636	0.575	0.816	0.881	1.72	1.77	4.61	10.45	3.60	4.32	6.02	7.60
1998	0.611	0.548	0.800	0.861	1.56	1.62	3.95	7.64	2.82	3.56	6.47	7.93
% $\Delta$	4.1	4.9	2.0	2.3	10.2	9.3	16.7	36.8	27.7	21.3	-7.0	-4.2

Table 9

**Changes with Respect to the Medians**

	50–30 Ratios				90–50 Ratios			
	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>
2007	2.77	1.68	4.54	4.73	3.41	3.00	7.55	15.73
1998	2.80	1.71	4.00	4.54	3.18	2.87	6.88	12.56
% $\Delta$	-1	-2	13	4	7	4	10	25

accounts for only 31 percent of the growth in wealth (housing equity grew by about 82 percent, but was only about 20 percent of total wealth; thus, if only home equity had grown, then total wealth would have grown by 17 percent), housing wealth is much more evenly distributed across people, as Table 8 shows. The large increase in asset prices implies that the average wealth-to-earnings ratio—which is a key ratio for many issues in economics—increased from 6.4 to 8.7 between 1998 and 2007 despite the low savings rate in the United States during those years.

Between 1998 and 2007, there are some interesting quantitative changes in the distributions of earnings, income, and wealth. Perhaps the most noteworthy of these changes is that the concentration of all three variables has increased. In Table 8 we report the changes in the Gini indexes, in the mean-to-median ratios, and in the coefficients of variation. We find that the Gini indexes and the mean-to-median ratios of all three variables have increased. The sizes of these changes are larger for the mean-to-median ratios than for the Gini indexes, and they are largest for the coefficients of variation of earnings and income. The coefficient of variation of wealth,

which decreased by about 7 percent between 2007 and 1998, is an exception to this pattern.

We also find that the top tails of the distributions account for most of these increases in concentration. In Table 9 we report the ratios of the earnings, income, and wealth of the 90th percentiles and the medians, and of the medians and the 30th percentiles. Concentration increased in the top tails for all three variables.

When we look at the difference between the median and the poorest groups—which we define to be the 30th percentile because of the large numbers of households with zero earnings or zero wealth—we see a different picture. Earnings and income witnessed little change. If anything, the poorest groups advanced slightly relative to the median. However, the opposite is true for wealth: in 2007 the bottom fell sharply relative to the median when compared with 1998.

Next, we ask who are the households that benefited the most from this spurt of economic growth. To this purpose, in Table 10 we report the earnings, income, and wealth of the 30th, 50th, and 90th percentiles. The values of all these statistics have increased, but they have all done so less than their respective averages. How can this

Table 10

**Changes in Earnings, Income, and Wealth: 30th, 50th, and 90th Percentiles**

	Bottom 30				Median				Top 10			
	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>	<i>E</i>	<i>I</i>	<i>W</i>	<i>N-H-W</i>
2007	13,369	28,301	26,500	8,500	37,021	47,305	120,430	40,200	126,067	141,987	908,400	632,500
1998	12,910	25,819	22,764	8,237	36,147	44,022	91,287	37,432	114,895	126,565	628,315	471,204
% $\Delta$	3.6	9.6	16.4	3.2	2.4	7.5	31.9	7.4	9.7	12.2	44.6	34.2

be? Because the lion's share of the gains of growth went to the households in the top tails of the distributions. The gains for households around the 30th percentile were meager in terms of earnings—3.6 percent—whereas the average gain was 12.9 percent. In terms of wealth, the gains of this group were even smaller—16.4 percent—whereas the average gain was 54 percent. Similar changes occurred for the median household. Its earnings increased by a paltry 2.4 percent—barely 0.25 percent per year—but its wealth went up by 31.9 percent. Even households in the 90th percentile fared worse than the average: their earnings went up by 9.7 percent and their wealth by 44.6 percent. If we look further in the top tail of the wealth distribution, we find that the wealth of the 95th and 99th percentiles increased by 65 and 72 percent.

To summarize, there has been an increase in the main measures of inequality in the last 10 years. The three

variables have become more concentrated in their very top tails, and the bottom tails have changed little. Therefore, a fair conclusion is that the lion's share of productivity growth and asset price increases experienced between 1998 and 2007 went to the rich and the very rich.

**Other Dimensions of Inequality**

Some characteristics of households that are closely related to earnings, income, and wealth are age, education, employment status, marital status, and financial trouble. In this section, we discuss how these characteristics contribute to earnings, income, and wealth inequality. We do so by sorting the population according to those five criteria and reporting for each of the groups their average earnings, income, and wealth; their Gini indexes; the average shares of their income source; the relative group size; and the average number of people per primary economic unit.

Table 11

**Age Partition of the 2007 SCF Sample**

Age	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	<i>Size</i> <sup>j</sup>
–25	25.9	28.2	44.7	88.9	0.5	3.6	3.4	3.6	0.44	0.39	1.12	0.84	0.75	12.09	6.8	2.46
26–30	52.3	54.6	121.2	91.8	0.9	4.5	1.4	1.4	0.42	0.39	0.88	0.82	0.78	5.38	7.7	2.80
31–35	66.8	70.8	156.7	85.9	1.1	9.7	2.0	1.2	0.45	0.43	0.78	1.67	1.70	3.94	8.9	3.31
36–40	75.1	82.8	280.7	82.2	4.5	9.8	2.0	1.5	0.47	0.46	0.76	2.50	3.91	5.26	9.4	3.43
41–45	77.6	88.9	401.8	73.3	6.4	16.1	2.9	1.3	0.53	0.53	0.79	2.24	3.11	6.71	10.5	3.11
46–50	90.7	101.6	595.7	77.4	5.6	13.7	2.1	1.2	0.53	0.54	0.77	2.48	3.55	4.94	11.2	2.89
51–55	99.6	119.9	797.5	69.2	10.8	16.0	2.9	1.0	0.61	0.61	0.79	2.90	3.50	4.58	10.3	2.52
56–60	94.6	119.1	925.9	66.1	10.7	15.5	6.9	0.8	0.63	0.60	0.77	3.21	3.84	4.55	8.2	2.15
61–65	67.4	106.3	1039.5	47.6	15.5	18.3	17.4	1.3	0.75	0.64	0.79	6.08	6.36	4.62	7.5	2.03
66+	19.0	64.6	809.0	15.7	25.8	15.9	41.9	0.7	0.91	0.64	0.78	11.96	5.68	5.92	19.6	1.66
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group;

<sup>j</sup>average number of persons per primary economic unit.

## Age and Inequality

*Earnings and income inequality tend to increase with age, whereas wealth inequality decreases until age 40 and becomes almost constant thereafter.*

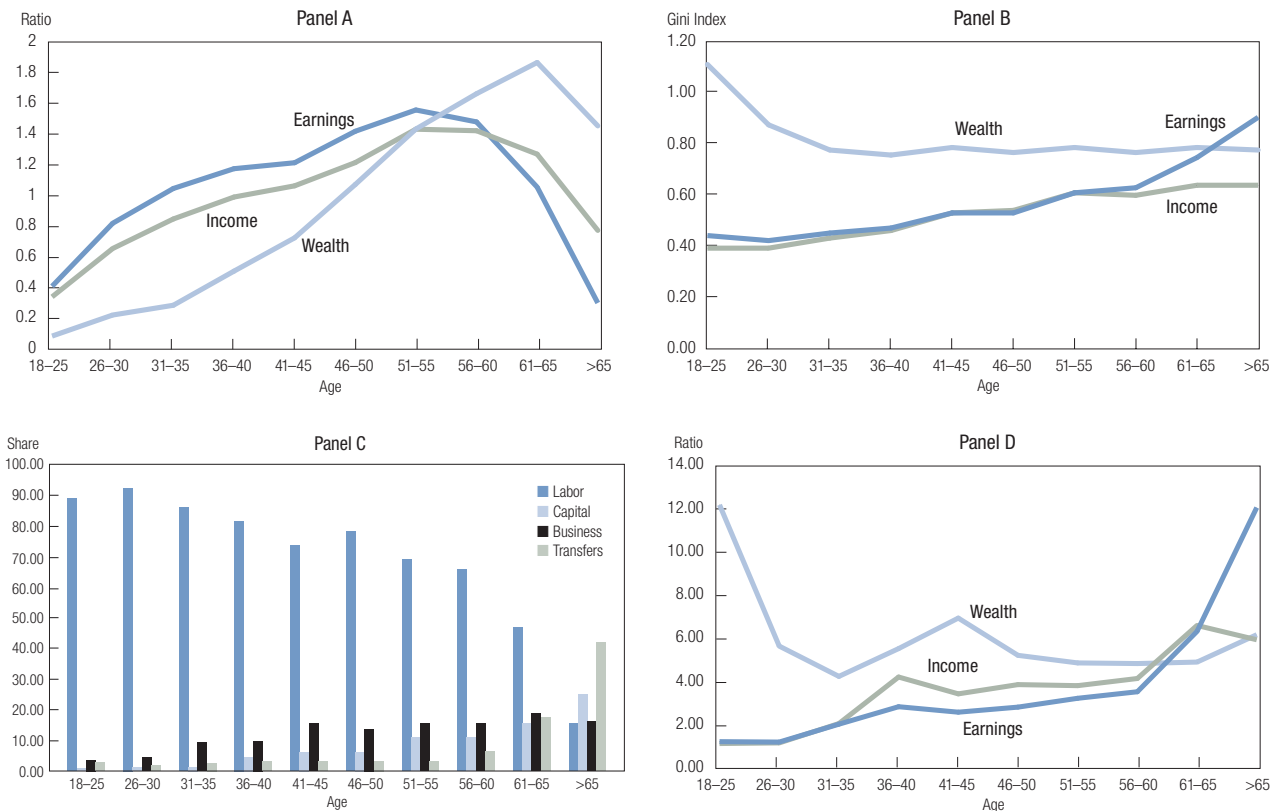
Some of the differences in earnings, income, and wealth across households can be safely attributed to the differences in people's ages—so much so that there is a large literature in economics that organizes its models around the households' life cycle. The SCF is not a panel, and therefore we cannot follow the same group of households as their members age. Instead, to describe the relationship between age and inequality, we organize the SCF sample into 10 cohorts according to the age of

the household head. We compute the relevant statistics for each cohort, and then we compare them with the statistics for the other cohorts and for the entire sample. We report these statistics in Table 11.

In Panel A of Figure 2, we represent the average earnings, income, and wealth of each cohort, once they have been normalized by dividing by their corresponding sample averages. Earnings and income display the typical hump shape conventionally attributed to the life cycle. But, perhaps more interestingly, the life-cycle pattern of average wealth increases until retirement and only decreases thereafter. Average cohort earnings are monotonically increasing in the age of household heads until age 55, and they start to decline thereafter. Not

Figure 2

**Average Earnings, Income, and Wealth (Panel A); Gini Indexes (Panel B); Income Sources (Panel C); and Coefficients of Variation (Panel D) for 10 Age Cohorts**





surprisingly, the average earnings of households whose head is over age 65 drop to only about 20 percent of the sample average because of retirement. Average income levels off for the 51–55 and 56–60 age cohorts, and the dip only really starts around age 60. In contrast, average cohort wealth increases monotonically with the life cycle, and it peaks in the 61–65 cohort, a full 10 years after both earnings and income. Moreover, the cohort over age 65 is still significantly wealthy: it owns 46 percent more wealth than the sample average, and it is wealthier than any of the cohorts aged 55 and under.

In Panel B of Figure 2, we represent the Gini indexes of earnings, income, and wealth of the age cohorts. We find that even within cohorts there is substantial inequality, as indicated by the large values of the Gini indexes for all three variables and for every cohort. We also find that the Gini indexes of earnings and income are moderately increasing with age, and that their numerical values are very similar to each other for every cohort until age 60. After that age, the Gini index of earnings increases significantly, and its highest value corresponds to the over-65 cohort. In contrast, the Gini index of wealth is largest among the young: its highest value corresponds to the under-25 cohort, and the second largest is the 26–30 cohort. After that it stabilizes, albeit at a value almost as large as that of the entire sample.

In Panel C of Figure 2, we represent the income sources of the age cohorts. We find that the shares of each type of income are roughly monotonic in age for labor, capital, and business income. The average share of labor income decreases with age. In contrast, the shares of both capital and business income tend to increase with age. Moreover, the share of business income decreases slightly after age 65, suggesting that business owners either retire a bit later than workers or are able to maintain their business income despite having retired.

Finally, the average shares of income accounted for by transfers are small for every cohort except, of course, for the older cohorts. These shares increase somewhat in the 61–65 cohort, and they peak in the over-65 cohort. In fact, transfers account for almost 50 percent of this cohort's income. Transfers also account for a somewhat larger share of income in the under-25 cohort than in the middle-aged cohorts.

In Panel D of Figure 2, we represent the coefficients of variation of earnings, income, and wealth of the age cohorts. Even though the coefficients of variation tend to put more emphasis on the lower ranges of the distribu-

tions than the Gini indexes do, the same picture evolves: there is large inequality within groups. Earnings and income increase over the life cycle, and wealth remains stable after a drastic reduction from the very initial high levels in the two youngest age groups.

To summarize, earnings and income display the hump shapes that the life-cycle abstraction emphasizes. The hump shape of wealth is not as obvious. Moreover, we also find that there is still substantial economic inequality within the five-year cohorts—the cohort Gini indexes for earnings, income, and wealth are smaller than those for the entire sample, but only slightly so.

### Education and Inequality

*The educated fare much better than the uneducated in earnings, income, and especially in wealth. But there remains a large amount of inequality within the education groups. In most cases, the Gini indexes of the education groups are only slightly smaller than those for the entire sample.*

To document the relationship between education and inequality, we partition the 2007 SCF sample into four groups according to the level of education attained by the head of the household. In Table 12 we report the averages for earnings, income, and wealth; the shares of income obtained from various sources; the Gini indexes and coefficients of variation; the relative group sizes; and the average number of people per primary economic unit for these four education groups and for the entire sample.

The first education group, which we label *Dropouts*, includes the households whose head has not completed high school; the second group, which we label *High school*, includes the households whose head has obtained a high school degree but has not started college; the third group, which we label *Some college*, includes the households whose head has started college but has not obtained a college degree; and the fourth group, which we label *College*, includes the households whose head has obtained at least a college degree.

The education level and the economic performance of households are closely associated. College graduates earn on average 5.4 times more than high school dropouts and 2.2 times more than households whose head has not completed college. The differences in wealth holdings are even larger—about 7.7 and 3.0 times larger. The differences in income among the education groups, while still large, are somewhat smaller than the differ-

Table 12

### Education Partition of the 2007 SCF Sample

Education	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	<i>Size</i> <sup>j</sup>
Dropouts	20.5	31.3	142.9	57.1	3.0	9.8	27.9	2.1	0.66	0.45	0.78	1.86	1.47	4.31	13.5	2.69
High school	39.1	50.8	251.6	66.1	4.3	12.7	15.4	1.5	0.59	0.45	0.74	3.84	3.89	5.11	32.9	2.60
Some college	51.0	67.8	366.3	64.9	9.8	11.9	11.5	1.9	0.56	0.50	0.81	5.30	5.85	7.09	18.4	2.45
College	110.1	142.4	1095.1	64.2	12.9	15.2	6.9	0.8	0.59	0.57	0.78	2.68	3.47	4.66	35.3	2.54
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group; <sup>j</sup>average number of persons per primary economic unit.

ences in either earnings or wealth. This is partly due to the equalizing effect of transfers, which are much larger for high school dropouts.

In the second block of Table 12, we report the income sources of the education groups. Labor is the main source of income for all four of our education groups. Capital income is increasing in education. College graduates are the most enterprising of the four groups, as measured by their share of business income. But, interestingly, high school graduates obtain more income from business sources than households with only some college. And transfers are clearly decreasing in education.

In the third block of Table 12, we report the Gini indexes of the education groups. We find that the maximum differences are 12 percentage points for income, 10 for earnings, and 8 for wealth. But their maximum and minimum values correspond to different groups. Earnings are most unequally distributed among high school dropouts and least among the households with some college. Income inequality is monotonically increasing in education. And wealth is most unequally distributed among households with some college and least among high school graduates.

The picture of inequality within education groups provided by the coefficients of variation is different from that of the Gini indexes for earnings and income. The high school dropouts have very small coefficients of variation relative to all the other groups, and the group with some college has the highest. Again, this points to more inequality at the bottom of the distribution rather than at the top.

In the 2007 SCF sample, there are many more households who have completed their education—either high school or college—than households who failed to complete either high school or college. Interestingly,

household size is decreasing in education until we reach the group of households who have completed college. The size of households in this group is larger than that for households with only some college.

### Employment Status and Inequality

*If you want to be income-rich and wealthy, make sure that you are self-employed, and avoid being a nonworker.*

To document the relationship between employment status and inequality, we partition the 2007 SCF sample into workers, self-employed, retirees, and nonworkers according to the employment status declared by the household heads. In Table 13 we report the averages for earnings, income, and wealth; the shares of income obtained from various sources; the Gini indexes and coefficients of variation; the relative group sizes; and the average number of people in these four employment status groups.

It turns out that the differences across these employment status groups are substantial. Workers are by far the largest group (accounting for 59.9 percent of the sample); their earnings and income are close to the sample average (117.1 and 99.7 percent), but they are significantly wealth-poorer than the sample average (their wealth is 63 percent of the average).

Retirees are the second most numerous group, accounting for a startling 18.7 percent of the 2007 SCF sample. Naturally, they are both earnings- and income-poor (their earnings and income are 25 and 70 percent of the sample average), but their wealth is greater than the sample average (122 percent). This suggests that, on average, retirees supplement their income by running down their wealth holdings.

Table 13

**Employment Status Partition of the 2007 SCF Sample**

Occupation	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	<i>Size</i> <sup>j</sup>
Worker	74.7	83.3	349.9	86.9	5.3	3.3	3.5	1.1	0.47	0.48	0.78	2.55	3.44	5.42	59.9	2.82
Self-employed	136.2	186.7	1953.5	34.1	16.8	44.9	3.4	0.7	0.67	0.67	0.78	3.62	4.13	4.15	10.5	2.84
Retired	16.1	58.6	680.2	19.4	22.9	9.3	47.1	1.3	0.94	0.61	0.77	8.95	5.05	4.55	18.7	1.70
Nonworker	16.5	29.4	130.7	51.0	4.2	6.0	33.4	5.5	0.68	0.55	0.91	4.18	2.93	7.02	10.9	2.36
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group;

<sup>j</sup>average number of persons per primary economic unit.

The self-employed make up 10.5 percent of the sample and are the third most numerous group. It is remarkable that as much as 10 percent of the household heads in the United States declare that they spend a majority of their time in entrepreneurial activities. Among the employment status groups, the self-employed are kings of the hill: their earnings, income, and wealth are 2.1, 2.2, and a whopping 3.6 times the sample averages.

Finally, households headed by a nonworker make up 10.9 percent of the population. Of those, 6.3 percent are disabled who do not plan to work again. The average earnings, income, and wealth of nonworker households are 26 percent, 35 percent, and 24 percent of the sample average.

Two aspects of the Gini indexes of earnings, income, and wealth differ sizably across the employment status groups—more so than across any other partition of the 2007 SCF sample. Earnings is most equally distributed among workers and most unequally distributed among retirees. This is not surprising; although most households with a retired head have zero earnings, other households headed by retirees have other members fully engaged in working in the market and therefore have sizable labor earnings. Income is also most equally distributed among workers, but it is most unequally distributed among the self-employed. This is because some of them run successful businesses and others run businesses that fail. Wealth is most unequally distributed among nonworkers, and its Gini indexes are similar for the other employment status groups. We conjecture that some of the nonworkers are very wealthy, and they choose not to work because they can live off their wealth. Others, however, are incapable of holding a job, a condition that puts them among the wealth-poorest. The coefficients

of variation give the same picture of inequality for the employment status groups, with only one exception: the coefficient of variation of wealth for the workers (5.4) is larger than that for the self-employed (4.2).

The differences in income sources are very large across the employment status groups by construction. Interestingly, the shares of labor income of the self-employed, the retirees, and the nonworkers are sizable: a third, a fifth, and a surprising 51 percent of their incomes. We conjecture that the majority of these labor incomes were earned by household members other than the household head. Finally, the retirees and the nonworkers are the largest recipients of transfers: 47 and 33 percent.

### **Marital Status and Inequality**

*If you want to be earnings and income-rich and wealthy, it pays to be married, according to the 2007 SCF.*

To document the relationship between marital status and inequality, we partition the 2007 SCF sample into married households and single households with and without dependents according to the marital status of the household heads. We also subdivide these last two groups according to the sex of the household heads. We refer to these groups as the *marital status partition*.<sup>5</sup> Finally, because of their nontrivial size, we look at retired widows separately. In Table 14 we report the averages for earnings, income, and wealth; the shares of income obtained from various sources; the Gini indexes and

<sup>5</sup>Note that singles without children do not necessarily live alone; they may also live with either adult dependents or other financially independent adults.



Table 14

**Marital Status Partition of the 2007 SCF Sample**

Marital Status	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	E	Y	W	L <sup>d</sup>	K <sup>e</sup>	B <sup>f</sup>	Z <sup>g</sup>	O <sup>h</sup>	E <sup>a</sup>	Y <sup>b</sup>	W <sup>c</sup>	E <sup>a</sup>	Y <sup>b</sup>	W <sup>c</sup>	H (%) <sup>i</sup>	Size <sup>j</sup>
Married	88.6	113.0	759.1	65.5	10.9	15.0	7.9	0.7	0.58	0.55	0.80	3.12	3.89	5.51	58.8	3.15
Single	28.4	41.6	264.8	59.8	7.8	9.7	19.8	2.9	0.65	0.50	0.80	4.60	4.61	5.38	41.2	1.72
Single w/dependents	30.1	39.4	170.9	67.0	2.7	10.8	14.6	4.9	0.58	0.47	0.83	2.41	2.73	7.40	17.0	2.75
Male	38.5	48.1	212.3	70.1	2.4	11.6	13.3	2.5	0.60	0.51	0.80	3.39	3.73	8.67	4.4	2.48
Female	27.2	36.5	156.7	65.5	2.8	10.5	15.2	6.0	0.56	0.44	0.84	1.27	1.84	6.33	12.7	2.84
Single w/o	27.2	43.1	330.9	55.3	11.1	9.0	23.1	1.5	0.70	0.52	0.78	5.86	5.42	4.61	24.2	1.00
Single males w/o	39.4	56.3	387.7	60.9	14.5	10.6	13.0	1.1	0.65	0.54	0.81	6.17	6.38	5.39	9.7	1.00
Single females w/o	19.0	34.3	292.8	49.1	7.3	7.3	34.3	2.0	0.73	0.47	0.75	2.73	2.00	3.35	14.5	1.00
Retired widows (females)	1.3	24.5	350.6	1.2	13.1	4.7	78.4	2.7	1.03	0.41	0.67	19.1	1.70	2.63	4.5	1.00
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group;

<sup>j</sup>average number of persons per primary economic unit.

coefficients of variation; the relative group sizes; and the number of people per primary economic unit for these marital status groups and for the entire sample.

The majority of the sample (59 percent) lives in households where the head is married. Notice that this number refers to the share of households. Since the average household size in the sample is 2.56, the share of married people in the sample is somewhat smaller (46 percent). Married households have substantially higher earnings and income, and their wealth is substantially higher than that of their single counterparts. Specifically, the average earnings, income, and wealth of married households are higher than the sample averages, and those of all other groups are lower.

The shares of income accounted for by labor, capital, and business sources are higher for married people than for single people, who receive more transfers. All single groups derive a larger fraction of their income from transfers than married households, with retired widows getting almost 80 percent of their income from this source.

Earnings are most unequally distributed among singles without dependents. Its Gini index is 0.70. The measures of earnings inequality for married households and for singles with dependents are similar. Their Gini indexes are both 0.58. The earnings inequality of single females without dependents, with a Gini index of 0.73, is huge.

The ranking of income inequality among the marital status groups is married, single without dependents, and single with dependents. Their Gini indexes are 0.55, 0.52, and 0.47. The income inequality of single females

with dependents, with a Gini index of only 0.44, is the smallest.

Finally, wealth inequality is largest among singles with dependents, followed by married households and by singles without dependents. Their Gini indexes are 0.83, 0.80, and 0.78. When we consider the sex partition, we find that with a Gini index of 0.84, wealth inequality is largest among single females with dependents.

### **Financial Trouble and Inequality**

In this subsection, we use the SCF to describe the demographic and economic features of U.S. households in financial trouble and to examine the relationship between financial trouble and inequality. The SCF asks its respondents **whether they have filed for bankruptcy**. Unfortunately, it does not ask them which chapter of the U.S. Bankruptcy Code was invoked when filing.<sup>6</sup> The SCF also asks its respondents whether they have

<sup>6</sup>According to the American Bankruptcy Institute, in its *Definitions from Bankruptcy Overview: Issues, Law and Policy* (Ayer 2006), some of the relevant details of the U.S. Bankruptcy Code are the following: (a) Chapter 7 of the Bankruptcy Code is available to both individual debtors and business debtors. Its purpose is to achieve a fair distribution of the debtors' nonexempt property among their creditors. Unsecured debts not reaffirmed are discharged, thus providing the filer with a fresh financial start. (b) Chapter 11 of the Bankruptcy Code is available to both business debtors and consumer debtors. Its purpose is either to rehabilitate a business as a going concern or to reorganize a person's finances by means of a court-approved reorganization plan. (c) Chapter 12 of the Bankruptcy Code is designed to provide special debt relief to families that obtain a regular income from farming. Chapter 12 expired on June 30, 2000, and was not reenacted until May 11, 2001. (d) Chapter 13 of the Bankruptcy Code is available to individuals who have a regular source of income and whose debts do not exceed specific amounts. It is typically used to budget some of the debtor's future earnings under a plan designed to pay the creditors all or part of their outstanding loans.

Table 15

**Economic Characteristics of Late and Timely Payers**

	Late	Timely		Late	Timely
	2007 Averages (\$)			Income Sources (%)	
Earnings	32,738	65,630	Labor	79.5	64.0
Income	38,471	86,212	Capital	0.4	10.5
Wealth	117,848	580,938	Business	6.6	14.1
Debt	80,033	98,063	Transfers	10.7	10.3
			Other	2.9	1.1
	Education (%)			Employment Status (%)	
Dropouts	16.4	13.4	Workers	66.1	59.6
High school	33.8	32.8	Self-employed	6.7	10.7
At least some college	49.8	53.8	Retirees	5.52	4.7
			Nonworkers	21.7	10.29
	Marital Status (%)			Other Features	
Married	51.7	59.2	Age	42.4	50.5
Single w/	27.9	16.4	Household size	3.0	2.5
Single w/o	20.4	24.4	Debt-to-income ratio	2.1	1.1
			Debt-to-wealth ratio	0.7	0.2

delayed their payments for two months or more. This practice is clearly a milder form of financial distress: 5.5 percent of the sample households declare that they have delayed their payments for two months or more, and only 0.9 percent of households declare that they have filed for bankruptcy. In the next two sections, we report some of the economic circumstances of these two groups of households.<sup>7</sup>

*Late Payer Households*

In Table 15 we report some of the main economic and demographic features of late payers. Approximately 5.5 percent of the households in the 2007 SCF sample fell behind on some of their payments by at least two months. As far as their economic features are concerned, not surprisingly we find that late payers are appreciably worse off than timely payers. The average earnings, income, and wealth of late payers are 50, 45, and 20 percent of those of timely payers. Late payers obtain larger shares of their income from labor sources than timely payers (80 versus 64 percent), smaller shares from business sources (7 versus 14 percent), and a trivial share from capital sources (0.4 versus 11 percent). This means that the assets of the late payers are clearly nonperforming.

As far as the demographic features of late payers are concerned, we find that, on average, late payers tend to be younger and somewhat less educated, and to live in larger economic units than the timely payers. We also find that among the late payers, the share of nonworkers is twice as large and the share of workers is slightly larger; as a result, the shares of the self-employed and retirees are smaller. Finally, we find that among the late payers, there are more single households (48 versus 41 percent) and that there is a sizably larger share of singles with dependents (28 versus 16 percent).

Next, in Table 16 we report the shares of late payers in the income and wealth quintiles. Perhaps surprisingly, we find that the shares of late payers among the bottom three income quintiles are almost the same—approximately 7 percent. The share drops to 4 percent in the fourth income quintile and to less than 1 percent in the top quintile. In contrast, the shares of late payers are clearly decreasing in the wealth quintiles. They range from a sizable 13 percent in the bottom wealth quintile to, once again, less than 1 percent in the top wealth quintile. These results seem to suggest that wealth is a

<sup>7</sup>Statistics concerning bankrupt households are less precise than usual, since only 33 households fell into this category.

Table 16

**Shares of Late Payers in the Income and Wealth Quintiles**

Income Quintiles					Wealth Quintiles					
1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	All
7.61	7.86	7.21	3.92	0.92	13.17	6.38	5.14	2.1	0.74	5.51

Note: Percentage share of the group who has ever been late on a payment for more than two months.

Table 17

**Economic Characteristics of Bankrupt and Solvent Households**

	Bankrupt	Solvent		Bankrupt	Solvent
	2007 Averages (\$)			Income Sources (%)	
Earnings	35,469	64,084	Labor	84.8	64.2
Income	40,792	83,983	Capital	0.1	10.3
Wealth	89,884	559,790	Business	2.5	14.0
Debt	79,201	97,237	Transfers	9.8	10.3
			Other	2.7	1.2
	Education (%)			Employment Status (%)	
Dropouts	9.9	13.6	Workers	75.5	59.8
High school	38.1	32.8	Self-employed	5.8	10.5
College	52.0	53.6	Retirees	7.8	18.8
			Nonworkers	10.9	10.9
	Marital Status (%)			Other Features	
Married	51.0	58.9	Age	42.4	50.5
Single w/	32.1	16.9	Household size	3.0	2.6
Single w/o	16.9	24.2	Debt-to-income ratio	1.9	1.2
			Debt-to-wealth ratio	0.9	0.2

better indicator than income when attempting to forecast the likelihood of becoming a late payer.

*Bankrupt Households*

In Table 17 we report some of the main economic and demographic features of the households who filed for bankruptcy during 2007. Approximately 1 percent of the households in the 2007 SCF sample filed for some form of bankruptcy protection. As expected, we find that bankrupt households were sizably worse off than solvent households. The average earnings, income, and wealth of bankrupt households were 55, 49, and 16 percent of those of solvent households. However, it was also the case that the average wealth owned by households who filed for bankruptcy puts them between the second and third quintiles of the wealth distribution. Perhaps this is

a consequence of the lenient minimum wealth requirements imposed by many states in bankruptcy filings, or perhaps it is a sign that many households file for bankruptcy to reschedule their debt, not to default on it.

As was the case with the late payers, we find that bankrupt households obtain larger shares of their income from labor sources than solvent households (85 versus 64 percent), smaller shares from business sources (3 versus 14 percent), and, once again, a trivial share from capital sources (0.1 versus 10 percent). Quite obviously, this fact suggests that wealth and capital income are valuable ways to protect oneself against bankruptcy.

Interestingly, we find that the education shares of bankrupt and solvent households are very similar. If anything, bankrupt households tend to be somewhat

Table 18

**Shares of Bankrupt Households in the Income and Wealth Quintiles**

Income Quintiles					Wealth Quintiles					
1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	All
1.19	1.27	1.50	0.61	0.06	2.24	1.54	0.57	0.25	0.04	0.93

Note: Percentage share of the group who filed for bankruptcy in 2007.

more educated than their solvent counterparts. Among bankrupt households there are fewer dropouts (10 versus 14 percent) and more high school graduates (38 versus 33 percent) than among solvent households. We also find that among bankrupt households, there are more workers (76 versus 60 percent) and sizably fewer self-employed (6 versus 11 percent) and retirees (8 versus 19 percent) than among solvent households.

These results may indicate that the self-employed, despite facing more risk, hold enough assets to avoid bankruptcy and that pensions offer a well-functioning economic safety net for retirees. Alternatively, it could also be possible that a sole proprietor filed early in the year and became a worker for the remainder of the year, or even that a sole proprietor that is incorporated may have filed for business bankruptcy rather than personal bankruptcy (the SCF phrases this question ambiguously, so it is not clear whether a respondent would answer yes under those circumstances).

Finally, we find that most of the demographic characteristics of bankrupt households are similar to those of the households that delayed their payments. On average, households who filed for bankruptcy were younger and lived in larger households than those who did not file. A larger share of them were single. And among the singles in the bankrupt households, there were almost twice as many singles with dependents (32 versus 17 percent) and just over half the number of singles without dependents (17 versus 24 percent).

In Table 18 we report the shares of bankrupt households in the income and wealth quintiles. We find that the highest incidence of bankruptcy occurs in the third income quintile, not in the first income quintile as we would have expected. In contrast, we find that the bankruptcy shares are clearly decreasing in wealth. In principle, it is hard to understand how recent bankruptcy filers can manage to make it into the top wealth quintiles.

Two possible explanations are that those filers live in states with large homestead exemptions, or they may have filed for an incorporated business but responded positively (and incorrectly) to the question.

***Changes in the Last 10 Years******Age and Inequality***

As shown in Table 19, the changes in the age distribution of household heads are tiny. Earnings and income have increased almost uniformly across the age partition, but especially so between ages 45 and 65. Wealth has also increased, but in a different fashion. Its increases are larger for older household heads. Inequality within the age groups, as measured by the Gini index, has remained almost constant, but there have been small increases in earnings and income inequality for the households in the 41–60 age group. But there have been large increases in the coefficient of variation of wealth for the under-25 households (from 4.4 in 1998 to 12.1 in 2007). The coefficient of variation of income has increased between ages 36 and 65, and the coefficient of variation of earnings has remained almost unchanged. The changes in the sources of income are tiny. Finally, the size of the households has decreased for households between ages 26 and 45 and has increased for households between ages 46 and 65.

***Education and Inequality***

As shown in Table 20, there has been a large increase in the education of the household groups. The share of households headed by a dropout has decreased by 3 percent, and the share of households headed by a college graduate has increased by 2 percent. Within education groups, the households headed by college graduates have fared a lot better than the other groups, with real increases in earnings, income, and wealth of 20, 24, and 62 percent. The increases for the households headed by dropouts are 6, 9, and 42 percent, whereas

Table 19

### Age Partitions of the 2007 and 1998 SCF Samples

Age	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation			H (%) <sup>i</sup>	Size <sup>j</sup>
	E	Y	W	L <sup>d</sup>	K <sup>e</sup>	B <sup>f</sup>	Z <sup>g</sup>	O <sup>h</sup>	E <sup>a</sup>	Y <sup>b</sup>	W <sup>c</sup>	E <sup>a</sup>	Y <sup>b</sup>	W <sup>c</sup>		
2007																
−25	25.9	28.2	44.7	88.9	0.5	3.6	3.4	3.6	0.44	0.39	1.12	0.84	0.75	12.09	6.8	2.46
26–30	52.3	54.6	121.2	91.8	0.9	4.5	1.4	1.4	0.42	0.39	0.88	0.82	0.78	5.38	7.7	2.80
31–35	66.8	70.8	156.7	85.9	1.1	9.7	2.0	1.2	0.45	0.43	0.78	1.67	1.70	3.94	8.9	3.31
36–40	75.1	82.8	280.7	82.2	4.5	9.8	2.0	1.5	0.47	0.46	0.76	2.50	3.91	5.26	9.4	3.43
41–45	77.6	88.9	401.8	73.3	6.4	16.1	2.9	1.3	0.53	0.53	0.79	2.24	3.11	6.71	10.5	3.11
46–50	90.7	101.6	595.7	77.4	5.6	13.7	2.1	1.2	0.53	0.54	0.77	2.48	3.55	4.94	11.2	2.89
51–55	99.6	119.9	797.5	69.2	10.8	16.0	2.9	1.0	0.61	0.61	0.79	2.90	3.50	4.58	10.3	2.52
56–60	94.6	119.1	925.9	66.1	10.7	15.5	6.9	0.8	0.63	0.60	0.77	3.21	3.84	4.55	8.2	2.15
61–65	67.4	106.3	1039.5	47.6	15.5	18.3	17.4	1.3	0.75	0.64	0.79	6.08	6.36	4.62	7.5	2.03
66+	19.0	64.6	809.0	15.7	25.8	15.9	41.9	0.7	0.91	0.64	0.78	11.96	5.68	5.92	19.6	1.66
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56
1998																
−25	23.9	25.7	22.8	91.2	1.1	2.0	3.4	2.3	0.46	0.43	1.08	0.89	0.83	4.43	6.8	2.40
26–30	44.9	47.5	58.8	89.8	1.1	5.5	2.3	1.3	0.44	0.43	0.90	0.92	0.94	4.63	9.0	2.74
31–35	62.9	68.2	159.9	86.0	3.5	7.2	1.6	1.6	0.43	0.43	0.82	1.90	2.51	5.60	9.7	3.26
36–40	69.2	73.1	197.4	86.5	2.1	9.5	1.3	0.5	0.45	0.44	0.73	1.56	1.65	4.83	11.3	3.29
41–45	81.2	91.4	323.5	76.9	6.7	13.7	1.7	0.8	0.50	0.51	0.76	1.77	1.92	5.06	12.0	3.21
46–50	83.7	93.5	428.8	77.8	5.2	13.5	2.2	1.2	0.46	0.46	0.76	1.89	2.04	4.94	9.9	2.78
51–55	86.7	100.6	578.7	72.4	8.1	15.9	3.2	0.2	0.53	0.53	0.76	2.55	2.92	5.84	8.7	2.50
56–60	74.0	94.8	641.4	61.3	11.7	19.4	6.4	1.1	0.63	0.61	0.78	2.52	3.42	5.27	7.3	2.26
61–65	68.0	99.5	771.8	50.4	11.6	20.9	14.9	2.1	0.77	0.66	0.80	5.71	4.79	6.37	5.1	1.99
66+	12.5	46.0	486.9	17.5	26.0	11.3	43.0	2.1	0.91	0.60	0.73	8.58	7.61	5.41	20.2	1.73
Total	56.5	71.1	360.6	68.4	8.7	12.8	8.8	1.2	0.61	0.55	0.80	2.82	3.56	6.47	100.0	2.60

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group; <sup>j</sup>average number of persons per primary economic unit.

Table 20

### Education Partitions of the 2007 and 1998 SCF Samples

	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
Education	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	Size <sup>j</sup>
2007																
Dropouts	20.5	31.3	142.9	57.1	3.0	9.8	27.9	2.1	0.66	0.45	0.78	1.86	1.47	4.31	13.5	2.69
High school	39.1	50.8	251.6	66.1	4.3	12.7	15.4	1.5	0.59	0.45	0.74	3.84	3.89	5.11	32.9	2.60
Some college	51.0	67.8	366.3	64.9	9.8	11.9	11.5	1.9	0.56	0.50	0.81	5.30	5.85	7.09	18.4	2.45
College	110.1	142.4	1095.1	64.2	12.9	15.2	6.9	0.8	0.59	0.57	0.78	2.68	3.47	4.66	35.3	2.54
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56
1998																
Dropouts	19.4	28.6	100.4	63.6	5.5	5.1	24.8	0.9	0.68	0.48	0.75	2.03	1.79	7.33	16.5	2.60
High school	39.6	49.4	200.8	73.2	4.7	8.2	12.8	1.0	0.55	0.45	0.74	3.16	3.02	9.33	31.9	2.64
Some college	54.9	67.1	303.8	68.5	6.9	15.4	7.2	2.0	0.57	0.52	0.78	2.48	5.17	7.29	18.5	2.60
College	92.1	115.3	674.8	67.1	11.4	14.9	5.6	1.0	0.56	0.53	0.78	2.38	2.74	4.66	33.2	2.53
Total	56.5	71.1	360.6	68.4	8.7	12.8	8.8	1.2	0.61	0.55	0.80	2.82	3.56	6.47	100.0	2.60

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group; <sup>j</sup>average number of persons per primary economic unit.

Table 21

**Employment Status Partitions of the 2007 and 1998 SCF Samples**

Occupation	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	<i>Size</i> <sup>j</sup>
2007																
Worker	74.7	83.3	349.9	86.9	5.3	3.3	3.5	1.1	0.47	0.48	0.78	2.55	3.44	5.42	59.9	2.82
Self-employed	136.2	186.7	1953.5	34.1	16.8	44.9	3.4	0.7	0.67	0.67	0.78	3.62	4.13	4.15	10.5	2.84
Retired	16.1	58.6	680.2	19.4	22.9	9.3	47.1	1.3	0.94	0.61	0.77	8.95	5.05	4.55	18.7	1.70
Nonworker	16.5	29.4	130.7	51.0	4.2	6.0	33.4	5.5	0.68	0.55	0.91	4.18	2.93	7.02	10.9	2.36
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56
1998																
Worker	65.0	70.9	215.1	88.1	4.3	4.1	2.6	0.9	0.43	0.44	0.77	1.50	1.75	5.34	59.2	2.82
Self-employed	125.7	156.9	1173.4	49.0	11.5	36.4	2.6	0.5	0.64	0.64	0.77	3.10	3.46	4.81	11.3	2.85
Retired	11.1	45.6	460.2	16.9	25.3	8.6	45.8	3.5	0.92	0.59	0.70	7.23	7.16	4.40	18.9	1.77
Nonworker	17.1	26.8	132.5	56.7	7.1	8.4	25.8	2.1	0.79	0.58	0.89	2.65	2.25	10.77	10.6	2.49
Total	56.5	71.1	360.6	68.4	8.7	12.8	8.8	1.2	0.61	0.55	0.80	2.82	3.56	6.47	100.0	2.60

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group;<sup>j</sup>average number of persons per primary economic unit.

for households headed by those with high school and some college, the differences are -1, 3, and 25 percent and -7, 1, and 21 percent. These differences are large and cannot be attributed to changes in the composition of the populations, since college graduates have increased in size, and their group increases in earnings, income, and wealth are larger than the overall increases, which were 13, 18, and 54 percent. Inequality of earnings within groups has increased a bit, but only if measured via the coefficients of variation and not by using the Gini indexes (except for dropouts). This is not the case for inequality in wealth. Interestingly, all groups reduced the role of labor as a source of income, which, given the small change overall, means that composition was important in this respect.

*Employment Status and Inequality*

Overall, the shares of households did not change drastically. The self-employed share fell the most (0.8 percent), and the worker share rose the most (0.7 percent) (see Table 21). The earnings, income, and wealth of the four employment status groups have increased somewhat. The largest increases correspond to the wealth of the self-employed. The self-employed now obtain larger shares of their income from business and capital sources. Nonworkers obtain a larger share of their income from transfers, and the income sources of the other two employment status groups have remained al-

most unchanged. The Gini indexes of earnings, income, and wealth have increased somewhat for workers, for the self-employed, and for retirees. The Gini indexes for earnings and income have decreased slightly for nonworkers. The coefficients of variation tell a different story about the changes of inequality among the employment status groups. The coefficients of variation of earnings increased for every group. The coefficients of variation of income increased for workers, for the self-employed, and for nonworkers, but they decreased for retirees. Finally, the coefficients of variation of wealth decreased sizably for nonworkers, whereas for the other groups they remained almost the same.

*Marital Status and Inequality*

Between 1998 and 2007, there was an increase in the share of married households and a larger increase in the share of single households with dependents at the expense of the share of singles without dependents (see Table 22). The average earnings, income, and wealth of married households increased by more than those of single households, and therefore the gap between married and single households increased. Among the singles with dependents, the increase in the average income of households headed by females more than doubled the increase in the average income of households headed by males (26 and 12 percent), but the increase in wealth was less than half (19 and 48 percent). Among the singles



Table 22

**Marital Status Partitions of the 2007 and 1998 SCF Samples**

Marital Status	Averages			Income Sources (%)					Gini Indexes			Coefficients of Variation				
	<i>E</i>	<i>Y</i>	<i>W</i>	<i>L</i> <sup>d</sup>	<i>K</i> <sup>e</sup>	<i>B</i> <sup>f</sup>	<i>Z</i> <sup>g</sup>	<i>O</i> <sup>h</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>E</i> <sup>a</sup>	<i>Y</i> <sup>b</sup>	<i>W</i> <sup>c</sup>	<i>H</i> (%) <sup>i</sup>	<i>Size</i> <sup>j</sup>
<b>2007</b>																
Married	88.6	113.0	759.1	65.5	10.9	15.0	7.9	0.7	0.58	0.55	0.80	3.12	3.89	5.51	58.8	3.15
Single	28.4	41.6	264.8	59.8	7.8	9.7	19.8	2.9	0.65	0.50	0.80	4.60	4.61	5.38	41.2	1.72
Single w/dependents	30.1	39.4	170.9	67.0	2.7	10.8	14.6	4.9	0.58	0.47	0.83	2.41	2.73	7.40	17.0	2.75
Male	38.5	48.1	212.3	70.1	2.4	11.6	13.3	2.5	0.60	0.51	0.80	3.39	3.73	8.67	4.4	2.48
Female	27.2	36.5	156.7	65.5	2.8	10.5	15.2	6.0	0.56	0.44	0.84	1.27	1.84	6.33	12.7	2.84
Single w/o	27.2	43.1	330.9	55.3	11.1	9.0	23.1	1.5	0.70	0.52	0.78	5.86	5.42	4.61	24.2	1.00
Single males w/o	39.4	56.3	387.7	60.9	14.5	10.6	13.0	1.1	0.65	0.54	0.81	6.17	6.38	5.39	9.7	1.00
Single females w/o	19.0	34.3	292.8	49.1	7.3	7.3	34.3	2.0	0.73	0.47	0.75	2.73	2.00	3.35	14.5	1.00
Retired widows (females)	1.3	24.5	350.6	1.2	13.1	4.7	78.4	2.7	1.03	0.41	0.67	19.1	1.70	2.63	4.5	1.00
Total	63.8	83.6	555.4	64.3	10.2	13.9	10.3	1.2	0.64	0.57	0.82	3.60	4.32	6.02	100.0	2.56
<b>1998</b>																
Married	78.3	95.9	484.0	69.5	8.8	14.2	6.6	0.9	0.54	0.51	0.77	2.53	3.35	5.74	58.5	3.20
Single	25.9	36.2	186.6	64.6	8.4	7.9	16.9	2.1	0.64	0.50	0.82	2.45	2.26	7.94	41.5	1.73
Single w/dependents	25.5	32.7	135.0	73.0	4.7	5.9	12.8	3.7	0.57	0.47	0.85	1.49	1.51	9.80	16.5	2.83
Male	36.7	42.8	143.9	78.6	5.0	8.4	7.0	1.0	0.49	0.45	0.84	1.49	1.56	6.60	4.5	2.61
Female	21.3	29.0	131.6	69.8	4.6	4.4	16.0	5.2	0.59	0.47	0.85	1.33	1.39	10.94	12.0	2.91
Single w/o	26.1	38.6	220.7	59.9	10.5	9.0	19.3	1.3	0.68	0.51	0.79	2.90	2.53	7.14	25.0	1.00
Single males w/o	38.6	50.3	288.1	67.0	11.2	11.4	9.6	0.8	0.61	0.54	0.84	2.59	2.49	7.22	9.8	1.00
Single females w/o	18.0	31.0	177.5	52.6	9.8	6.5	29.3	1.8	0.71	0.47	0.74	2.94	2.36	6.42	15.2	1.00
Retired widows (females)	2.3	22.8	242.7	2.8	19.3	8.4	67.0	2.5	0.97	0.46	0.68	36.8	5.19	5.95	3.8	1.00
Total	56.5	71.1	360.6	68.4	8.7	12.8	8.8	1.2	0.61	0.55	0.80	2.82	3.56	6.47	100.0	2.60

<sup>a</sup>Earnings; <sup>b</sup>income; <sup>c</sup>wealth; <sup>d</sup>labor; <sup>e</sup>capital; <sup>f</sup>business; <sup>g</sup>transfers; <sup>h</sup>other; <sup>i</sup>percentage number of households per group;

<sup>j</sup>average number of persons per primary economic unit.

without dependents, the signs of the changes were reversed: the average income of households headed by males increased slightly more than that of households headed by females, and the average wealth of households headed by females increased by almost twice that of households headed by males (65 and 35 percent). The economic situation of retired widows also improved.

The share of income obtained from labor sources fell in every marital status group. The largest drop was for single males with dependents, and the smallest was for single females without dependents (8.5 and 3.5 percentage points). In contrast, the share of income obtained from transfers increased for every group except for single females with dependents. The largest increase was for retired widows, and the smallest was for married households (11.4 and 1.3 percentage points).

According to the Gini indexes, among married households, earnings, income, and wealth inequality increased, and among households headed by singles, earnings inequality increased, wealth inequality de-

creased, and income inequality remained unchanged. Among singles, income inequality increased for every group except for single females with dependents and retired widows, and wealth inequality decreased for every group except for single females without dependents.

The coefficients of variation tell a different story. The coefficients of variation of earnings and income increased for both married and single households, and the coefficients of variation of wealth decreased for both. Interestingly, according to this statistic, economic inequality decreased sizably along the three dimensions for households headed by retired widows and by single females without dependents at large.

#### *Changes in Financial Trouble and Inequality*

As in the previous section on financial trouble and inequality, here we look separately at those that declare they have delayed their payments (5.5 percent of the sample in 2007) and those that declare they have filed for bankruptcy (0.9 percent in 1998).

Table 23

**Late and Timely Payers in 1998 and 2007**

	Late Payers			Timely Payers		
	2007	1998	△	2007	1998	△
<b>Earnings, Income, and Wealth</b>						
Earnings	32,738	39,904	-18.0	65,630	57,603	13.9
Income	38,471	43,646	-11.9	86,212	72,884	18.3
Wealth	117,848	75,078	57.0	580,938	378,873	53.3
<b>Sources of Income</b>						
Labor	79.5	83.8	-4.3	64.0	67.9	-3.9
Capital	0.4	1.0	-0.6	10.5	9.0	1.5
Business	6.6	9.0	-2.4	14.1	13.0	1.1
Transfers	10.7	5.0	5.7	10.3	8.9	1.4
Other	2.9	1.4	1.5	1.1	1.2	-0.1
<b>Education</b>						
Dropouts	16.4	18.5	-2.1	13.4	16.3	-2.9
High school	33.8	36.1	-2.3	32.8	31.6	1.2
College	49.8	45.4	4.4	53.8	52.1	1.7
<b>Employment Status</b>						
Workers	66.1	67.5	-1.4	59.6	58.7	0.9
Self-employed	6.7	13.9	-7.2	10.7	11.1	-0.4
Retired	5.5	2.3	3.2	19.4	20.0	-0.6
Nonworkers	21.7	16.4	5.3	10.3	10.3	0.0
<b>Marital Status</b>						
Married	51.7	53.1	-1.4	59.2	58.9	0.3
Single	48.3	46.9	1.4	40.8	41.1	-0.3
Single w/ dependents	27.9	25.8	2.1	16.4	15.9	0.5
Single w/o dependents	20.4	21.1	-0.7	24.4	25.2	-0.8
<b>Other Features</b>						
Debt-to-income ratio	2.08	1.17	77.8%	1.14	0.83	37.3%
Debt-to-wealth ratio	0.68	0.68	0.0%	0.17	0.16	6.3%
Debt	80,033	51,227	56.2%	98,063	60,353	62.5%
Age	42.4	41.0	1.4	50.5	49.2	1.3
Household size	3.0	3.0	0.0	2.5	2.6	-0.1

*Late Payer Households*

There was a slight decline in the fraction of households that declared themselves to be late payers—from 6.0 percent in 1998 to 5.5 percent in 2007.

*Earnings, Income, and Wealth.* Between 1998 and 2007, the changes in the average wealth of late and timely payers have been similar and sizable: average wealth has increased by 57 and 53 percent (see Table 23). In contrast, the changes in their average earnings and income have been smaller and very different: the earnings and income of late payers have decreased by 18 and 12 percent, and those of timely payers have

increased by 14 and 18 percent. Consequently, the gaps in earnings and income between late and timely payers have increased sizably, whereas the gap in wealth has remained about the same.

*Sources of Income.* Between 1998 and 2007, the business and capital income of late and timely payers have changed in different directions. Both types of income have risen for timely payers (1.5 percent and 1.1 percent) and have fallen for late payers (-0.6 percent and -2.4 percent). Late payers have experienced a larger rise in transfers than timely payers (5.7 percent versus 1.4 percent).



Table 24

**Shares of Late Payers in the Income and Wealth Quintiles**

	Income Quintiles					Wealth Quintiles					All
	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	
2007	7.61	7.86	7.21	3.92	0.92	13.17	6.38	5.14	2.10	0.74	5.51
1998	5.63	8.38	8.11	5.63	2.25	10.37	9.87	5.36	3.21	1.18	6.00

Note: Percentage share of the group who has ever been late on a payment for more than two months.

*Education.* Between 1998 and 2007, late payers have become more educated. The shares of dropouts and high school households have decreased, and the shares of households with at least some college have increased by a noteworthy 4.4 percentage points. Timely payers have also become more educated, but clearly less so. Among them the share of households who have completed college has increased by only 1.7 percentage points. Therefore, the education gap between late and timely payers has diminished.

*Employment Status.* Between 1998 and 2007, there have been sizable changes in the employment status of late payers, and, in contrast, the employment status of timely payers has remained almost unchanged. Among the late payers, the most noteworthy changes are the decrease in the self-employed and the increase in non-workers (by 7.2 and 5.3 percentage points). Among late payers, the maximum difference between the shares of the employment status groups is a mere 0.9 percentage points.

*Marital Status.* Between 1998 and 2007, the share of married households has decreased among the late payers and has increased among the timely payers by 1.4 and 0.3 percentage points. Interestingly, the shares of singles with dependents have increased in both cases, whereas the shares of singles without dependents have decreased in both cases.

*Other Features.* Between 1998 and 2007, the debt-to-income ratios of both late and timely payers have increased, but logically more so for the late payers (77.8 and 37.3 percent). In contrast, the debt-to-wealth ratios for both late and timely payers have increased slightly. Both late and timely payers have become about one year older on average, and the household sizes have remained the same for late payers and decreased slightly for timely payers.

*Late Payer Households in the Income and Wealth Quintiles.* In 2007 late-paying households are more concentrated in the lower income and wealth quintiles than they were in 1998, as shown in Table 24.

*Bankrupt Households*

According to the SCF, the number of bankrupt households has shrunk dramatically from 1.76 to 0.93 percent of the sample.<sup>8</sup> In flow terms, the total number of nonbusiness bankruptcy filings in 1998 was 1,397,695 according to the American Bankruptcy Institute, whereas in 2007 the number was 822,590. Part of this reduction was due to the 2006 bankruptcy legislation that tightened the requirements for filing and induced many people to file earlier (as many as 2,039,214 people filed in 2005).

*Earnings, Income, and Wealth.* Between 1998 and 2007, the economic situation of bankrupt households in the United States changed in a rather surprising way (see Table 25). The average earnings and income of bankrupt households have decreased by 17 and 11 percent, but average wealth has increased by a healthy 48 percent. This could mean that the assets of bankrupt households are nonperforming, or it could reflect a valuation problem—for instance, due to increases in real estate prices. In contrast, the economic situation of solvent households has improved along all three dimensions, and especially so with respect to their average wealth.

*Sources of Income.* Between 1998 and 2007, the share of income obtained from labor by bankrupt households decreased by 9 percent, and the share obtained from capital decreased by 0.4 percent. The share of income obtained from labor by solvent households also

<sup>8</sup>We define a bankrupt household as one in which the head or spouse of head has filed and reports filing either less than a year ago or a year ago (the wording of the questionnaire is a bit ambiguous).

Table 25

**Bankrupt and Solvent Households in 1998 and 2007**

	Bankrupt Households			Solvent Households		
	2007	1998	△	2007	1998	△
<b>Earnings, Income, and Wealth</b>						
Earnings	35,469	42,737	-17.0%	64,084	56,790	12.8%
Income	40,792	46,009	-11.3%	83,983	71,581	17.3%
Wealth	89,884	60,707	48.1%	559,790	366,033	52.9%
<b>Sources of Income</b>						
Labor	84.8	93.5	-8.7	64.2	68.2	-4.0
Capital	0.1	0.5	-0.4	10.3	8.8	1.5
Business	2.5	-0.7	3.2	14.0	13.0	1.0
Transfers	9.8	4.6	5.2	10.3	8.8	1.5
Other	2.7	2.1	0.6	1.2	1.2	0.0
<b>Education</b>						
Dropouts	9.9	8.7	1.2	13.6	16.6	-3.0
High school	38.1	48.9	-10.8	32.8	31.6	1.2
College	52.0	42.4	9.6	53.6	51.8	1.8
<b>Employment Status</b>						
Workers	75.5	79.1	-3.6	59.8	58.8	1.0
Self-employed	5.8	5.4	0.4	10.5	11.4	-0.9
Retired	7.8	2.7	5.1	18.8	19.2	-0.4
Nonworkers	10.9	12.8	-1.9	10.9	10.6	0.3
<b>Marital Status</b>						
Married	51.0	49.6	1.4	58.9	58.7	0.2
Single	49.0	50.4	-1.4	41.1	41.3	-0.2
Single w/ dependents	32.1	34.2	-2.1	16.9	16.2	0.7
Single w/o dependents	16.9	16.2	0.7	24.2	25.1	-0.9
Retired widows	0.00	0.00	0.00	4.56	4.38	0.18
<b>Other Features</b>						
Debt-to-income ratio	1.94	1.38	40.6%	1.16	0.83	39.8%
Debt-to-wealth ratio	0.88	1.04	-15.4%	0.16	0.16	0.0%
Debt	79,201	63,357	25.0%	97,237	59,742	63.5%
Age	44.0	41.3	2.7	50.1	48.9	1.2
Household size	3.1	3.2	-0.1	2.6	2.6	0.0

decreased by 4 percent. These results reflect the overall decrease in the labor income share experienced in the U.S. economy during those years. Perhaps these results reflect the increase in unemployment brought about by the recession. They are moderately consistent with the nonperforming asset interpretation suggested in the previous paragraph.

*Education.* Between 1998 and 2007, the education distribution among bankrupt households became more U-shaped. The number of dropouts increased by 1.2 percentage points, and the number of households with

at least some college increased by 9.6 percentage points. Naturally, the number of households that had completed high school decreased. In contrast, solvent households became more educated: the number of dropouts decreased by 3 percentage points, and the other two groups increased by 1.2 and 1.8 percentage points.

*Employment Status.* Between 1998 and 2007, fewer bankrupt households claimed to be workers, more claimed to be nonworkers, and more were headed by retirees. The differences in percentage points were -3.6, -1.9, and 5.1. These results are consistent with the

Table 26

**Shares of Bankrupt Households in the Income and Wealth Quintiles**

	Income Quintiles					Wealth Quintiles					All
	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	
2007	1.19	1.27	1.50	0.61	0.06	2.24	1.54	0.57	0.25	0.04	0.93
1998	1.09	1.80	3.29	1.94	0.70	1.62	4.49	1.87	0.78	0.06	1.76

Note: Percentage share of the group who filed for bankruptcy.

increase in unemployment brought about by the recession, which we have already mentioned. Moreover, the results suggest that the economic situation of retirees in the United States has deteriorated. In contrast, the changes in the employment status of solvent households did not change as much. The numbers of workers and nonworkers increased, and the number of self-employed and retirees decreased—but in every case by 1 percentage point or less.

*Marital Status.* Between 1998 and 2007, the marital status of bankrupt and solvent households in the United States remained virtually unchanged. Slightly more bankrupt and solvent households were headed by married people. Among the bankrupt households, a few less were headed by singles with dependents and a few more by singles without dependents, whereas the opposite was the case for solvent households.

*Other Features.* Between 1998 and 2007, the average debt-to-income ratio of bankrupt households increased by 41 percent, and the debt-to-wealth ratio decreased by 15 percent. For solvent households, these numbers were 40 percent and nil. If we put these facts together with the changes in their average income and wealth, this means that the average debt of bankrupt households increased sizably less than the average debt of solvent households. Although the whole sample got a bit older, the age of the heads of bankrupt households increased more than the age of the heads of solvent households.

*Bankrupt Households in the Income and Wealth Quintiles.* Like the late payers, in 2007 bankrupt households are much more concentrated in the lowest income and wealth quintiles in relation to their 1998 counterparts, who were quite dispersed (see Table 26).

**Earnings, Income, and Wealth Mobility**

*According to the second eigenvalues of the mobility matrices, earnings mobility is greater for the youngest workers and for college graduates.*

As people go through their lives, they move up and down the economic scale, partly because of life-cycle reasons but also because some people fare better than others. Entrepreneurs can start companies that do well or not; workers can find jobs that suit them very well, or they may lose their jobs and have trouble finding another of similar pay; health problems and divorces can have devastating financial consequences. Furthermore, other changes are a consequence of the conscious effort of households to smooth their consumption over time. Whatever its cause, economic mobility makes inequality an essentially dynamic phenomenon that implies that people do not necessarily stay in the same earnings, income, and wealth groups forever.

All the facts reported so far in this article are based on data from the 2007 SCF. But the SCF is not a panel study and therefore does not track people over time. To construct our mobility measures, we use data from the Panel Study of Income Dynamics (PSID) instead.<sup>9</sup> Specifically, we use data on the net worth of households from the PSID for the years 2001 and 2007, which means that although the data on wealth pertain to those years, the data on earnings and income refer to 2000 and 2006, respectively.<sup>10</sup> We use these data to construct Table 27, where we report the *transition matrices* for the earnings, income, and wealth quintiles. We see a substantial amount of mobility across all variables: except for the lowest earnings quintile and the highest wealth quintile, at least one-third of the households leave that quintile after six years. To partially get rid of the effects introduced by the life cycle or by the groups that have already retired from the labor force, we take a

<sup>9</sup>The PSID was not designed to address issues related to wealth holdings, nor to have an accurate picture of the income-rich; therefore, the data for these variables are likely to be of lower quality.

<sup>10</sup>The PSID now interviews households every two years, not every year as it used to do.

Table 27

**Transition Matrices for Earnings, Income, and Wealth Quintiles, 2001–7**

Earnings Mobility					
	1st	2nd	3rd	4th	5th
1st	0.73	0.22	0.03	0.01	0.00
2nd	0.13	0.47	0.30	0.07	0.03
3rd	0.06	0.19	0.42	0.27	0.06
4th	0.05	0.07	0.17	0.48	0.24
5th	0.04	0.05	0.08	0.16	0.68
Income Mobility					
1st	0.65	0.21	0.08	0.04	0.02
2nd	0.21	0.45	0.22	0.09	0.02
3rd	0.07	0.21	0.40	0.25	0.07
4th	0.04	0.09	0.22	0.42	0.23
5th	0.02	0.03	0.08	0.21	0.66
Wealth Mobility					
1st	0.62	0.23	0.11	0.03	0.01
2nd	0.27	0.41	0.23	0.08	0.02
3rd	0.07	0.26	0.39	0.21	0.06
4th	0.03	0.08	0.23	0.45	0.21
5th	0.01	0.03	0.04	0.23	0.70

closer look at earnings mobility in Table 28, where we show the transition matrices of those in the 35–45 age group in 2001 and those that had positive earnings in both 2000 and 2006.

Transition matrices are hard to assess because they do not include any single summary statistic of mobility. For this purpose, we use Table 29, where we provide various measures of mobility for selected groups and variables. The last five columns of the table report the fractions of the households of each quintile that have moved to a different quintile during the six years that lapsed between 2001 and 2007. We call these fractions the *mobility statistics*.<sup>11</sup>

For some purposes, the mobility statistics reported in the last five columns of Table 29 might still contain too much information, and it might be useful to have a simpler, one-dimensional summary statistic for each variable. One such statistic is a simple arithmetic transformation of the second-highest eigenvalue of the mobility matrix.<sup>12</sup> The closer this eigenvalue is to 1, the more persistent is the variable under study. Consequently, the closer *one minus the second-highest eigenvalue* is to 0,

Table 28

**Transition Matrices for Earnings, 2001–7: A Closer Look**

Heads 35–45 in 2001					
	1st	2nd	3rd	4th	5th
1st	0.65	0.28	0.05	0.01	0.01
2nd	0.23	0.47	0.25	0.04	0.01
3rd	0.07	0.16	0.49	0.20	0.08
4th	0.01	0.07	0.17	0.54	0.21
5th	0.03	0.02	0.05	0.21	0.70
Positive Earnings in Both 2000 and 2006					
1st	0.56	0.30	0.08	0.03	0.02
2nd	0.25	0.39	0.23	0.10	0.03
3rd	0.10	0.17	0.42	0.24	0.08
4th	0.04	0.10	0.20	0.45	0.21
5th	0.05	0.04	0.07	0.18	0.66

the more mobile is the variable under study. We report these statistics in the first column of Table 29. According to these statistics, the mobility among the income quintiles is slightly greater than the mobility among the wealth and earnings quintiles, and the mobility of the wealth quintiles is the smallest. However, when we take a look at mobility as measured by the fraction of households that leave each quintile, a different picture emerges. Earnings mobility is the smallest in all but the fifth quintile, where it takes second place after income. The households in the lowest earnings quintile are by far the least mobile.

To account for the effects of aging on mobility, the next three rows of Table 29 display earnings mobility within limited 10-year age groups. We see that the measures of mobility diminish slightly but not by a lot, indicating that there is a sizable amount of mobility in earnings among U.S. households. The following three rows of the table isolate education groups. We see that mobility across these groups is highest for college graduates.

**Changes in the Last 10 Years**

A comparison with our findings from the 1989–94 period is problematic because in this study we are looking at changes over a six-year time span, whereas during

<sup>11</sup>Note that the shares reported in the top three rows of Table 29 are one minus the shares reported in the diagonals of Table 27.

<sup>12</sup>The highest eigenvalue of probability transition matrices is always 1.

Table 29

**Earnings, Income, and Wealth Mobility between 2001 and 2007 (PSID)**

	Fraction of Households that Left the Quintile					
	1–2E <sup>a</sup>	1st Q	2nd Q	3rd Q	4th Q	5th Q <sup>b</sup>
Earnings	0.26	0.27	0.53	0.58	0.52	0.32
Income	0.28	0.35	0.55	0.60	0.58	0.34
Wealth	0.24	0.38	0.59	0.61	0.55	0.30
Earnings (25–34) <sup>c</sup>	0.30	0.39	0.58	0.61	0.61	0.36
Earnings (35–44) <sup>c</sup>	0.21	0.35	0.53	0.51	0.46	0.30
Earnings (45–54) <sup>c</sup>	0.27	0.39	0.56	0.61	0.49	0.30
Earnings (HS dropout) <sup>d</sup>	0.23	0.21	0.44	0.62	0.64	0.41
Earnings (HS grad) <sup>d</sup>	0.25	0.27	0.54	0.58	0.54	0.38
Earnings (college grad) <sup>d</sup>	0.35	0.35	0.53	0.59	0.55	0.36
Earnings (positive both years)	0.32	0.44	0.61	0.58	0.55	0.34

<sup>a</sup> This column reports one minus the second-highest eigenvalues of the corresponding mobility matrices.

<sup>b</sup> The last five columns report the fractions of the households of each quintile that have moved to a different quintile during the six years lapsed between 2001 and 2007.

<sup>c</sup> These rows report the mobility statistics of earnings of households headed by individuals between ages 25 and 34, 35 and 44, and 45 and 54.

<sup>d</sup> These rows report the mobility statistics of earnings for households relative to households of the given group.

the earlier period, we were looking at changes over a five-year time span. Overall, however, earnings look a lot more mobile than in the earlier period: the main statistic of mobility (one minus the second-highest eigenvalue) was 0.15 over 1989 and 1994, and has been 0.26 between 2000 and 2006. The numbers for income (0.28 both then and now) and wealth (0.24 both then and now) have remained unchanged, but the longer horizon in recent data points to a reduction in mobility. What is true for earnings as a whole is

not true for earnings in the 35–45 age group. In that age group, mobility was 0.28 over a five-year span and recently has been 0.21 over six years. Those with positive earnings at the beginning and end of the period had mobility of 0.31 and 0.32 in the recent sample. The contradictory outcomes of global earnings mobility and the mobility of the 35–45 age group may very well be due to sampling error; therefore, we should not be too hasty in drawing strong conclusions about changes in society based solely upon this evidence.

## Appendix: Some Technical Definitions

Here we define some technical terms used in this article.

**Coefficient of variation.** The coefficient of variation is a normalized measure of dispersion of a probability distribution. It is defined as the ratio of the standard deviation to the mean and is unit independent.

**Earnings.** We define labor earnings as wages and salaries of all kinds, plus a fraction of business income. Business income includes income from professional practices, businesses, and farm sources. The value for the fraction of business and farm income that we impute to labor earnings is the sample-wide ratio of unambiguous labor income (wages plus salaries) to the sum of unambiguous labor income and unambiguous capital income. This ratio is 0.863 for the 2007 SCF sample (it was 0.857 for the 1998 SCF sample and 0.864 for the 1992 SCF sample).

**Gini index.** The Gini index is a measure of the inequality of a distribution, where a value of zero expresses total equality and a value of one expresses maximal inequality for positive variables.<sup>13</sup> It is based on the Lorenz curve, which plots on the  $y$  axis the proportion of the total amount of the variable that we are measuring that is cumulatively associated with the bottom  $x$  percent of the population. The line at 45 degrees thus represents perfect equality of incomes. The Gini coefficient is the ratio of the area that lies between the line of equality and the Lorenz curve over the total area under the line of equality.

**Histogram.** A histogram is a graphic with tabular frequencies, shown as adjacent rectangles, erected over discrete intervals (bins), with an area equal to the frequency of the observations in the interval.

**Households.** Households are the primary economic units of the SCF. A primary economic unit is a person or a couple who live together and all the other people who live in the same household who are financially dependent on them. For example, underage children and, in some circumstances, older relatives are considered dependents. A financially independent person who lives in the same dwelling, such as a roommate or a brother-in-law, is not considered to be a member of the same economic unit. We also follow the SCF convention to determine who is the head of the household. The SCF considers the male of a couple to be the head of the household in every case. In single households, the financially independent person of either sex is considered to be the head of the household.

**Income.** Income consists of all kinds of revenue before taxes. Hence, our definition of income includes both government and private transfers. Specifically, the sources of income that we consider are the following: wages and salaries; both positive and negative income from professional practices, businesses, and farm sources; interest income, dividends,

gains or losses from the sale of stocks, bonds, and real estate; rent, trust income, and royalties from any other investments or business; unemployment and worker compensation; child support and alimony; Aid to Dependent Children, Aid to Families with Dependent Children, food stamps, and other forms of welfare and assistance; income from Social Security and other pensions, annuities, compensation for disabilities, and retirement programs; income from all other sources including settlements, prizes, scholarships and grants, inheritances, gifts, and so on. In other words, the notion of income that we use attempts to include all before-tax income received during the year. It approximately corresponds to the payments to the factors of production owned by the household plus transfers. However, it does not include the income imputed from the services of some assets such as owner-occupied housing. (See Slesnick 1992, 1993 for details.)

**Kernel density estimator.** The kernel density estimator of a data set  $\{x_i\}_{i=1}^n$  is  $f_\lambda(x) = (1/n\lambda) \sum_{i=1}^n K(x - x_i / \lambda)$ . The parameter  $\lambda$  is the bandwidth of the kernel and controls how closely the fitted curve conforms to the true data. Higher values of  $\lambda$  result in smoother kernels, and lower values of  $\lambda$  result in estimates that are closer to the data.

**Marital status partition.** This term refers to the partition of the 2007 SCF sample into married households and single households with and without dependents according to the household heads' marital status.

**Mobility statistics.** The mobility statistics represent the fractions of the households of each quintile that have moved to a different quintile during the period, according to the 2001–7 PSID waves.

**One minus the second-highest eigenvalue.** One minus the second-highest eigenvalue is a common, long-run measure of the persistence of transition matrices. The larger the value, the more mobility.

**Quantile.** Quantiles are values that separate fractions of the population; that is, the quantile 20 is the value that makes 20 percent of the sample to have less and 80 percent to have more. The 0 and 100 quantiles are the minimum and maximum values, respectively.

**Skewness.** Skewness is a measure of the asymmetry of a distribution. Its value can be positive or negative, the latter indicating that the tail on the left side is longer than the right side and that the bulk of the values (including the median) lie to the right of the mean.

**Transition matrix.** The transition matrix is a matrix in which each element  $a_{i,j}$  denotes the probability that an individual initially in group  $i$  will end up in group  $j$ . The sum of all the elements of each row is one. When both sets of initial and final groups are quintiles, the sum of the values row by row is also one.

<sup>13</sup>However, if a variable takes negative values, then the Gini index can be greater than one; this does occur in this article for wealth in some subsamples.



**Variance of the logs.** By taking logs of the original variables, we obtain a variance that is unit independent.

**Wealth.** Wealth is the net worth of the households. Our definition includes the value of financial and real assets of all kinds, minus the value of various kinds of debts. Specifically, the assets that we consider are the following: residences and other real estate; farms and all other businesses; checking accounts, certificates of deposit, and other banking accounts; IRA/Keogh accounts, money market accounts, mutual funds, bonds and stocks, cash and call money at the stock brokerage, and all annuities, trusts, and managed investment accounts; vehicles; the cash value of term life insurance policies and other policies; money owed to friends, relatives, businesses, and others; pension plans accumulated in accounts; and other assets. The debts that we consider are housing debts, such as mortgages, home equity, and home equity lines of credit; other residential property debts, such as those derived from land contracts and vacation residences; credit card debts; installment loans; loans taken against pensions; loans taken against life insurance; and margin loans and other miscellaneous debts.<sup>14</sup>

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<sup>14</sup>Note that in our definition of wealth, we have not included the present value of pension plans not accumulated in accounts.

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