Lifetime Earnings in the United States over Six Decade

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"Online Appendix"

Not For Publication

A State-Level Panel Regressions

A.1 Overview and Summary

This paper was deliberately (and unapologetically) descriptive in its nature for the simple reason that we could not do justice to documenting the rich trends in the distribution of lifetime incomes in sufficient detail while simultaneously investigating their potential drivers. Understanding the forces behind these trends is the natural next step. So, we were curious to see if the data offered any useful clues about potential drivers that can guide future investigations. To this end, we ran various panel regressions exploiting cross-state variation in the evolution of the state/cohort-specific lifetime income distributions. This Appendix containts details of this analysis.

We first constructed the median lifetime income distribution for each state, by cohort and gender. We then regressed the median measure for men (since they were the ones experiencing the turning point around late 1970s and the decline thereafter) on a number of potential correlates measured at the state level: union coverage rate, measures of trade exposure, industry composition, educational attainment, age and gender composition of the workforce, among several others. The timing of the right-hand side variables was chosen to coincide with the entry year of the cohort used on the left-hand side.

Somewhat surprisingly (to us), many usual suspects—among them, unionization, trade, and industry composition—did not turn out to be robustly significant. However, two variables were consistently statistically significant and quantitatively large, and implied that: (i) cohorts that entered when the labor market had a large fraction of young workers (ages 25 to 35) experienced lower median lifetime incomes, and (ii) in entering cohorts that had a larger fraction of men relative to women in the workforce, men earned lower (median) lifetime incomes. Both effects are consistent with a simple demand side story with a production function where age and gender groups are imperfect substitutes. If the inputs are gross substitutes, a rise in the supply of younger workers or men depresses the wages of those groups. This is the same mechanism extensively studied to understand the trends in the college premium (e.g., Katz and Murphy (1992b)) as well as its different evolutions for different cohorts (Card and Lemieux (2001)).

We then repeated the same analysis for lifetime inequality, using the P90/P10 measure as the left-hand side variable. In contrast to the findings for the median, gender and age composition did not turn out to be significant. Instead, industry composition seems to matter: states where manufacturing share declined experienced a larger rise in lifetime inequality across cohorts compared with states where services share grew saw a smaller rise. These effects were more pronounced for inequality above the median (P90/P50) than below (P50/P10).

Overall, while no smoking gun emerged from this preliminary investigation, we found this exercise to be useful by showing that some of the most obvious explanations did not clearly emerge from the analysis. To the extent that they might have played a role, their effects might be more subtle than what this preliminary analysis was able to uncover. Clearly, these preliminary results are only suggestive at this point and invite more work on this topic.

Many of the usual suspects–increasing automation, outsourcing, declining union strength and coverage, among others–could be plausible explanations for the trends in lifetime earnings we document. We investigate the relationship between state-level lifetime earnings trends and trade

exposure, union coverage, industry composition of the workforce, and demographic composition during the year that a cohort enters the labor force. We find the growth in the share of young working age individuals in a state and the growth in the share of those young workers that are men to have a negative association with the growth in median lifetime earnings for men. While other variables, most notably race and college attainment, turn significant in some specifications, this does not seem robust.[34] We also find that the growth in employment in the manufacturing and services sectors have negative associations with growth in lifetime inequality. While we don't find associations with our measures of union coverage or trade exposure, they may explain some of the association with employment in the manufacturing sector.

A.2 Details of the Regression Analysis

We conduct a series of panel regressions on state-level variables to see if there are robust relationships between union coverage, trade exposure, industry composition, or demographic composition, and the trends in lifetime earnings that we document. Our dependent variables are state-level log change in median lifetime earnings and the log of the 90-10, 90-50, and 50-10 lifetime earnings ratios (by gender group).

Our independent variables come from several data sources. We use the union coverage series from Hirsch et al. (2001) which starts in 1964. We calculate trade exposure as the portion of state-level GDP that comes from manufacturing, agriculture, or mining using the Regional Economic Accounts maintained by the Bureau of Economic Analysis. For the industry and demographic composition of the workforce, we use two sources of data. We use the Annual Social and Economic Supplement of Current Population Survey (CPS) for annual state-level data beginning in 1967. However, the CPS groups many small states together in clusters that change between 1967 and 1983, which limits usable cross-state variation. As an alternative, we also use the 1960, 1970, and 1980 Censuses to use in decade-difference regressions.

We regress our dependent variable on state-level variables from the year that the cohort entered the labor market. In our baseline specification, our independent variables include the change in union coverage; the change in trade exposure; the change in the employment share in manufacturing, agriculture, and service industries; the change in the percent of the state population that is married, white, or aged 25 to 35; and the change in the percent of young people (aged 25-35) that are male or college educated.

In the annual regressions using the CPS, all changes are computed annually. We have 304 region-year observations between 1967 and 1983, where a region is either a large state or a regional group of small states. In our baseline specifications, we use region and year fixed effects. In the decade regressions using the Census, we compute ten-year changes in all variables. We have two observations per state, from 1960 to 1970 and 1970 to 1980. However, because of sample size censoring, we do not have lifetime earnings measures for all states in each year. As a result, we have 55 state-decade observations. We use neither state nor decade fixed effects in the decade regressions.

[34] While we find significant relationships between the share of individuals aged 25 to 35 that are men and median lifetime earnings, we do not find any similar association with the share of *working* young people that are men.

In addition to our baseline specifications, we also explore using levels instead of differenced dependent and independent variables. We experimented with toggling time and regional fixed effects. We added variables focusing on the labor market composition of the older generation of workers rather than the younger generation. Our baseline specification is not weighted, but we did run several specifications using weighted OLS as well. We also ran similar panel regressions using cross-sectional measures of earnings and inequality from the CPS rather than lifetime earnings measures.

In the decade regressions, we find a relatively robust relationship between the declining manufacturing share of the labor force and increases in earnings inequality, with the strongest association with 90-10 inequality. We also find evidence that growth in the share of the labor force working in the services industry has a negative association with growth in inequality.

Some of the demographic variables have relatively robust relationships. In the annual regressions, an increase in the share of 25 to 35 year olds that have a college education is positively associated with growth in the median lifetime earnings. We also find that an increase in the share of state that is white is negatively associated with median lifetime earnings and positive associated with 90-50 earnings inequality. In the decade regressions, we find the same relationship in the college share of young people. We also find the opposite relationship between the white share of a state and both median lifetime earnings and earnings inequality. We find that an increase in the share of the state aged 25-35 and the share of those young people that are men are negatively associated with male median lifetime earnings. These findings are consistent with a substitutable labor within cohorts, in which states with a greater labor supply drive lower wages in a manner that is persistent throughout the lifecycle of a cohort. When conditioning on the working population of young people, we do not find a significant association between the share of men and male median lifetime earnings.

A.3 State-Level Percentiles of the Lifetime Earnings Distribution

Table A.1: Decade Differences of Median Lifetime Earnings

VARIABLES	(1) Δ Med Lifetime Inc	(2) Δ Med	(3) Δ Med	(4) Δ Med
Δ Union Cov	-0.00218		-0.00454	
	(0.00560)		(0.00603)	
Δ %GDP Trade	0.00205		-0.000645	
	(0.00493)		(0.00541)	
Δ % Male of 25-35	-2.760	-3.072*	-2.824	-3.418**
	(1.756)	(1.604)	(1.874)	(1.717)
Δ % Married	-1.348		-1.982	
	(1.982)		(2.111)	
Δ % Coll. of 25-35	1.429	1.526	2.064	2.092*
	(1.043)	(0.958)	(1.277)	(1.130)
Δ % White	2.499**	1.935***	2.486*	1.655
	(1.244)	(0.727)	(1.510)	(1.060)
Δ % Aged 25-35	-2.413**	-2.691***	-2.531	-2.952***
	(1.078)	(0.708)	(1.551)	(0.977)
Δ % Manuf			1.101	0.798
			(1.027)	(0.946)
Δ % Services			-0.492	-0.437
			(1.522)	(1.305)
Δ % Agricult			0.557	0.425
			(1.298)	(1.339)
Constant	-0.0200	-0.0189	-0.0212	-0.00905
	(0.0538)	(0.0487)	(0.0790)	(0.0703)
Observations	55	55	55	55
R-squared	0.489	0.480	0.518	0.501
State Fixed Effects	N	N	N	N
Year Fixed Effects	N	N	N	N

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: These are the baseline specifications. The dependent variable is the change in median lifetime earnings (from SSA) from the 1960 to 1970 cohorts and 1970 to 1980 cohorts, in every state for which the 1% sample exceeds 100. Independent variables are the same ten-year changes in demographic and economic variables (from Census) in the year the cohorts enter the labor market. Variables include union coverage; percent of GDP in trade-exposed industries; percent of 25-35 year olds that are male or college educated; percent of total population that is aged 25-35, white, or married; and the percent of the working population employed the manufacturing, services, or agriculture.

Table A.2: Decade Differences in 90-10 Lifetime Earnings Inequality

VARIABLES	(1) Δ p90/p10	(2)	(3)	(4)
Δ Union Cov	-0.00449		-0.00401	
	(0.0118)		(0.0125)	
Δ %GDP Trade	0.000356		0.00691	
	(0.00820)		(0.00775)	
Δ % Male of 25-35	-0.373	-1.604	-4.500	-4.151
	(4.861)	(4.606)	(4.826)	(4.398)
Δ % Married	-3.935		-0.0207	
	(4.257)		(4.948)	
Δ % Coll. of 25-35	-0.144	0.309	1.060	0.947
	(2.614)	(2.439)	(2.369)	(2.167)
Δ % White	-0.605	-2.213*	-1.275	-1.456
	(1.947)	(1.303)	(2.376)	(1.778)
Δ % Aged 25-35	1.289	0.191	-3.662	-3.185*
	(2.733)	(1.754)	(3.042)	(1.895)
Δ % Manuf			-4.759**	-4.334**
			(2.024)	(1.760)
Δ % Services			-6.216**	-6.093**
			(2.913)	(2.703)
Δ % Agricult			-0.988	-0.723
			(2.481)	(2.321)
Constant	0.122	0.133	0.345***	0.338***
	(0.116)	(0.117)	(0.130)	(0.119)
Observations	55	55	55	55
R-squared	0.123	0.107	0.325	0.312
State Fixed Effects	N	N	N	N
Year Fixed Effects	N	N	N	N

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Notes: These are the baseline specifications. The dependent variable is the change in the p90/p10 ratio (from SSA) from the 1960 to 1970 cohorts and 1970 to 1980 cohorts, in every state for which the 1% sample exceeds 100. Independent variables are the same ten-year changes in demographic and economic variables (from Census) in the year the cohorts enter the labor market. Variables include union coverage; percent of GDP in trade-exposed industries; percent of 25-35 year olds that are male or college educated; percent of total population that is aged 25-35, white, or married; and the percent of the working population employed the manufacturing, services, or agriculture.

Table A.3: 90th Percentile of the Lifetime Earnings Distribution for Men, by State and Cohort

	Cohort					
	1957	1962	1967	1972	1977	1983
AL	63.55	58.50	77.14	82.06	85.03	81.39
AR	60.97	68.88	75.73	73.85	76.14	77.18
AZ						100.29
CA	87.66	86.21	102.40	101.57	93.73	101.99
CO					89.41	103.18
CT				98.69	103.97	124.51
FL			87.66	86.45	85.73	100.30
GA	62.35	61.84	71.14	76.44	81.91	83.26
IA	84.12	73.55	84.39	86.81	91.91	73.83
IL	82.58	91.14	107.07	105.07	95.41	103.22
IN	77.41	75.99	86.40	81.53	88.35	84.25
KS				80.30	100.07	88.59
KY	62.08	66.02	78.94	77.74	69.68	77.19
LA		74.58	75.66	76.01	84.80	86.44
MA	75.11	89.86	106.87	108.54	104.70	117.93
MD			70.69	106.47	91.66	103.71
MI	78.84	86.47	93.96	95.06	91.53	100.99
MN	74.89	79.79	88.18	88.42	89.46	100.33
MO	65.76	72.20	88.65	103.80	91.55	93.26
MS	55.22	66.64	63.51	71.23	76.52	76.02
NC	56.30	61.46	69.02	71.46	73.35	81.32
NE					101.67	
NJ	75.59	94.25	106.13	123.12	112.20	120.91
NY	93.38	113.84	114.32	123.11	125.39	122.53
OH	71.22	76.58	90.14	104.25	90.60	93.03
OK	69.60	87.61	85.76	81.17	85.77	91.55
OR					91.14	82.35
PA	73.34	79.48	88.10	93.05	95.78	106.34
SC		54.59	69.78	72.24	84.24	71.40
TN	61.95	73.46	77.94	75.05	76.12	83.15
TX	67.28	77.74	92.29	89.01	89.78	90.22
VA	53.25	67.09	69.22	76.76	84.63	94.97
WA				92.84	82.59	93.28
WI	78.12	77.97	90.24	108.23	88.03	91.66
WV	66.40	67.67	69.69	76.28	70.44	76.10

Notes: This table displays the 90th percentile of lifetime earnings for men by state and cohort. Values are displayed in thousands of 2013 dollars and deflated using the PCE. An empty cell indicates that the sample size for that state/cohort combination is too small to report.

Table A.4: Median of the Lifetime Earnings Distribution for Men, by State and Cohort

	Cohort					
	1957	1962	1967	1972	1977	1983
AL	31.28	34.47	38.69	37.38	37.59	34.24
AR	31.49	36.17	37.22	37.77	37.22	33.92
AZ						34.75
CA	47.63	45.98	49.16	44.19	43.63	41.21
CO					37.84	44.95
CT				48.20	51.56	51.94
FL			39.85	31.26	35.96	33.83
GA	34.02	32.88	37.34	36.33	37.78	31.89
IA	44.09	36.37	49.02	48.06	41.37	33.89
IL	46.61	49.79	52.72	51.26	45.18	44.76
IN	40.55	43.07	51.60	46.65	44.85	38.56
KS				44.67	42.46	44.41
KY	39.02	36.56	41.36	41.36	33.97	34.47
LA		36.56	42.19	42.50	41.16	35.18
MA	41.78	48.13	46.47	45.95	50.40	44.39
MD			41.28	50.68	42.71	39.66
MI	46.37	47.03	52.64	52.18	45.05	43.25
MN	45.13	44.04	53.54	44.69	42.31	43.36
MO	37.56	43.83	44.67	45.15	42.28	35.43
MS	31.74	33.43	35.43	32.18	31.98	28.58
NC	30.38	33.52	35.32	34.18	35.65	31.23
NE					41.77	
NJ	44.29	54.25	52.60	52.27	51.57	52.42
NY	47.91	50.34	51.72	52.11	47.27	45.40
OH	44.17	46.43	46.55	48.22	41.21	39.88
OK	37.35	39.32	37.95	38.30	34.75	38.44
OR					42.39	37.48
PA	40.75	45.05	47.33	46.84	43.38	43.01
SC		30.76	37.61	38.51	35.23	29.41
TN	32.63	36.05	34.67	35.63	38.94	34.65
TX	36.70	42.54	40.83	39.87	39.53	36.00
VA	32.45	33.65	35.08	37.77	35.39	37.03
WA				49.10	44.01	46.13
WI	42.08	47.04	49.33	47.32	46.12	42.25
WV	40.64	38.02	35.87	41.22	39.20	36.66

Notes: This table displays the median of lifetime earnings for men by state and cohort. Values are displayed in thousands of 2013 dollars and deflated using the PCE. An empty cell indicates that the sample size for that state/cohort combination is too small to report.

Table A.5: 10th Percentile of the Lifetime Earnings Distribution for Men, by State and Cohort

	Cohort					
	1957	1962	1967	1972	1977	1983
AL	11.96	13.39	15.96	14.25	10.80	11.04
AR	13.05	12.94	14.31	15.74	13.98	12.65
AZ						14.45
CA	20.81	18.44	18.90	14.80	16.67	12.90
CO					16.56	15.07
CT				15.48	18.16	15.80
FL			13.82	10.71	13.64	13.12
GA	12.11	13.78	13.02	11.98	11.41	10.42
IA	19.87	15.28	22.21	16.97	17.28	17.22
IL	17.63	19.90	23.04	19.87	17.13	13.90
IN	16.71	15.30	26.69	18.23	18.20	15.05
KS				20.31	15.27	14.62
KY	17.33	16.63	16.59	14.20	12.87	10.92
LA		14.43	17.50	15.68	12.41	10.72
MA	15.55	19.45	17.50	17.31	18.28	15.86
MD			15.42	18.14	15.81	14.19
MI	21.14	20.17	20.83	18.37	16.33	15.83
MN	22.12	20.34	21.33	18.27	17.18	14.84
MO	13.82	22.36	17.81	13.60	14.69	12.54
MS	11.26	15.10	11.20	11.85	12.04	9.30
NC	12.54	14.05	13.44	12.62	14.01	11.81
NE					18.42	
NJ	19.48	20.88	21.92	19.71	15.16	17.22
NY	20.21	21.33	22.03	19.77	16.10	14.90
OH	20.21	19.43	19.98	18.74	15.24	14.22
OK	16.88	17.85	13.85	14.66	14.02	11.24
OR					15.23	12.92
PA	18.28	19.60	19.70	18.23	17.38	14.55
SC		13.14	15.74	15.38	12.50	9.87
TN	9.82	15.77	13.28	15.46	13.23	12.72
TX	14.01	16.19	14.82	16.39	13.99	11.91
VA	14.82	11.62	15.01	12.63	13.12	13.56
WA				17.13	17.65	16.60
WI	21.86	21.15	23.95	20.57	18.34	18.46
WV	16.56	18.11	13.97	17.30	13.89	14.44

Notes: This table displays the 10th percentile of lifetime earnings for men by state and cohort. Values are displayed in thousands of 2013 dollars and deflated using the PCE. An empty cell indicates that the sample size for that state/cohort combination is too small to report.

B Trends in the Share of the Pie

In this Appendix, we offer an alternative perspective on trends in lifetime earnings inequality by examining how the aggregate lifetime earnings of each cohort—the pie, so to speak—is divided between males and females, and between individuals in different parts of the lifetime earnings distribution. So far, our analysis has documented very different trends in lifetime earnings for different groups in the population—men versus women, early versus late cohorts, low versus high earners. This section offers a way to quantify the differences in these trends by analyzing changes in how the lifetime earnings pie is shared across these groups.

B.1 Share of the Pie by Gender

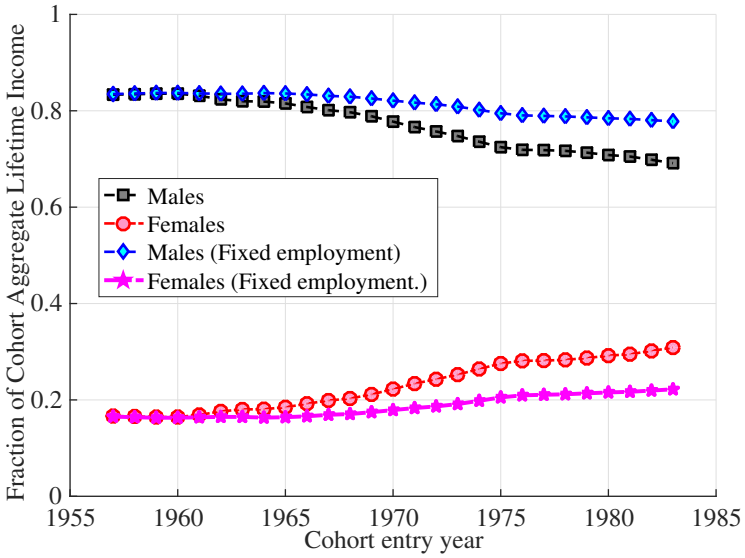
We begin with a comparison between men and women and ask how much of the pie was earned by each gender group in each cohort. In Figure B.1, each black square marker shows the share of the pie that accrued to the men in that cohort, and each red circle shows the same for women; so, the two lines always add up to 1 for each cohort. For the 1957 cohort, men collectively earned about 83.5% of the cohort's aggregate earnings, but this share has declined monotonically, at first slowly and then more rapidly, so that by the 1983 cohort, men's share had fallen to 69.1%, for a total decline of 14.4% percentage points. Of course, the mirror image has been experienced by women, whose share has almost doubled across these same cohorts, from 16.5% to 30.9% of the 1983 cohort's aggregate earnings.

An important point to note is that this rising share for women (and decline for men) is due to the closing gender gap in: (i) annual earnings, (ii) the number of years worked (conditional on having worked at least 15 years), and (iii) the fraction of the population (women vs. men) that satisfies the baseline sample criteria, which depends on the rising attachment of women to the labor force relative to that of men (as well as changing population ratios, which is a smaller concern). To see how much each channel contributes to these shifting shares, we construct an alternative statistic that isolates the first trend by controlling for (ii) and (iii). We do this by fixing the lifetime employment share of each gender (aggregate lifetime years worked for all women as a fraction of cohort total) at its value for the first cohort (1957) and tracking the shares that would have resulted if women's years of work (above 15 years) relative to men remained the same over time. These adjusted shares are shown with blue diamond markers for men and magenta star markers for women. As expected, for men, the employment-adjusted share declines more slowly than the unadjusted share (from 83.5% to 78%, compared with 83.5% to 69%). For women, the employment-adjusted share increases from 16.5% to 22.2% (compared with 16.5% to 30.5%).[35]

Thus, over the course of a generation (27 cohorts), the share of aggregate lifetime earnings accruing to women nearly doubled, and a large part of the increase is attributed to women becoming more strongly attached to the labor force.

[35]Because our selection criteria omits those who work less than 15 years, our measure of earnings shares misses earnings accruing to those that work few years. For example, if there was an increase in the average number of years worked by females who only worked for between 1 and 10 years, this should result in an increase in the earnings share accruing to women. Given our sample selection, this would be missed. Figure E.5 in Appendix E shows a version of Figure B.1 in which earnings shares are calculated without imposing any minimum earnings or years worked selection criterion. The results are similar to those in Figure B.1.

Figure B.1: Share of Cohort Aggregate Earnings Going to Each Gender Group



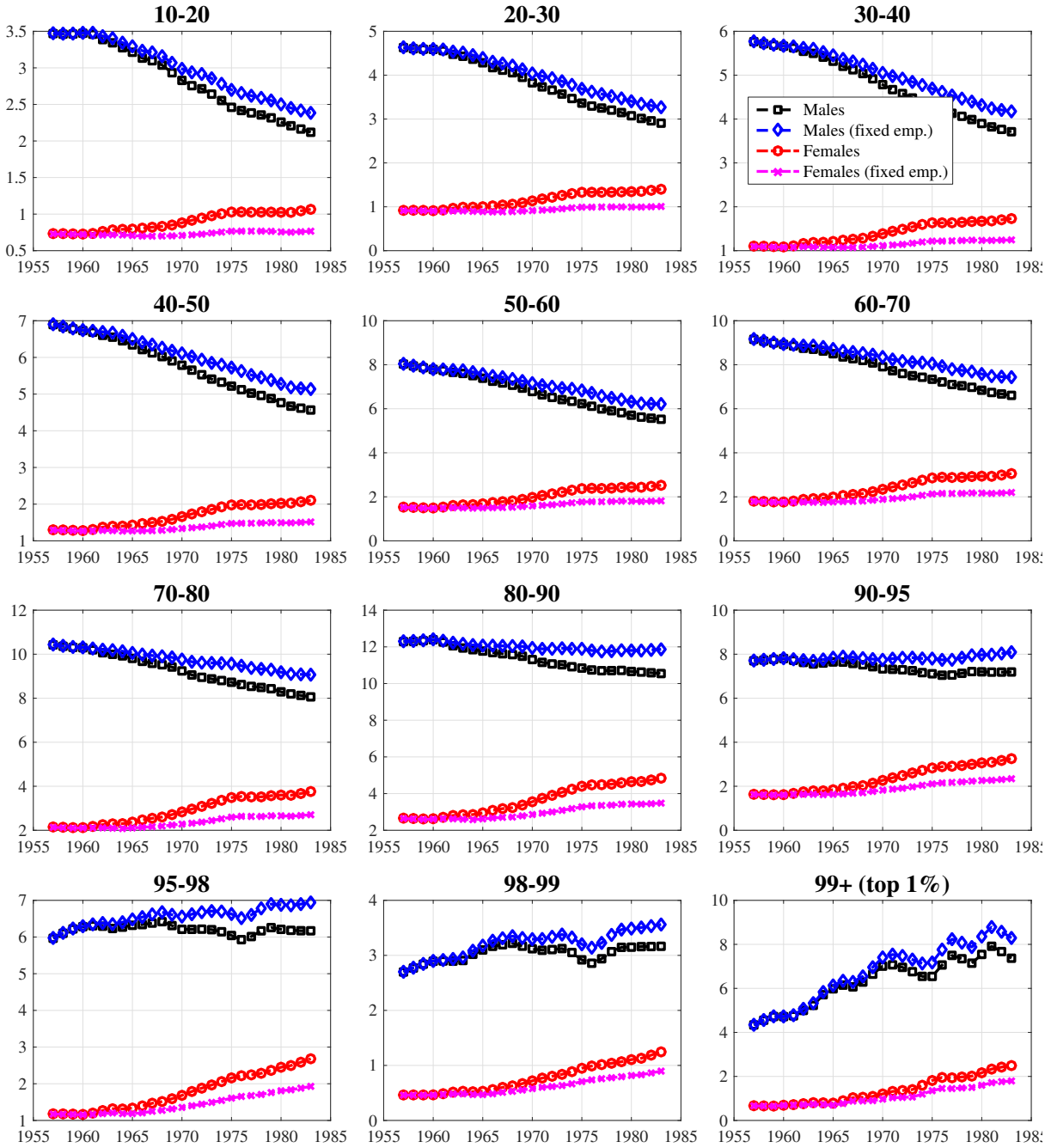
Notes: Each observation represents the share of aggregate lifetime earnings of each cohort that was earned by a particular gender in the baseline sample (see section 2.3). The figures shows the trends for men and women, plotted by the year each cohort entered the labor market, as well as counterfactual trends for men and women assuming that the gender gap in lifetime years worked remained fixed at the 1957 level. Male and female shares for the actual and counterfactual trends add to one in each year. Earnings is deflated using the PCE.

B.2 Share of the Pie by Gender and Lifetime Earnings Percentiles

We now delve one level deeper and ask within each gender group, which lifetime earnings percentile group has seen its share of the pie rise or fall, and by how much? To answer this question, Figure B.2 plots the share of each cohort's aggregate lifetime earnings accruing to men (black line with square markers) and women (red line with circles) in different parts of their gender-specific lifetime earnings distributions. For example, the 1957 point for men in the top left panel represents the fraction of the pie produced by the 1957 cohort that accrues to men in the 11th to 20th percentiles of the male lifetime earnings distribution in that cohort. The figures show both the raw shares and the employment-adjusted shares. We focus our discussion on the employment-adjusted shares, with the understanding that the raw earnings shares show even steeper declines for men and steeper increases for women.

One of the immediate findings revealed in this figure is the steadily declining fortunes (share of the pie) of the bottom 90% of men in each cohort. Even for men between the 91st and 95th percentiles, the share of the pie has been more or less flat. In fact, only men in the top 5% (of their lifetime earnings distribution) have seen a noticeable increase in their share of the pie, and this increase is really only significant for the top 1% of men: their share has almost doubled, from 4% to nearly 8% from the 1957 to 1983 cohorts. Women, on the other hand, have experienced an increase in their share of aggregate cohort earnings in all parts of the distribution. Noticeably,

Figure B.2: Share of Cohort Lifetime Earnings Going to Each Gender / Percentile Groups (indicated by the lower and upper end of percentile thresholds)



Notes: Each observation represents the share of aggregate lifetime earnings of a cohort that was earned by a particular gender and earnings percentile group in the baseline sample (see section 2.3). Each panel displays the analogous trends to Figure B.1 for a particular earnings group defined by the earnings percentiles above each panel. For example, the top left panel displays the share of aggregate lifetime earnings of each cohort earned by men and women between the 10th and 20th percentile of the lifetime earnings distribution for each cohort (as well as the counterfactual fixed employment trends). Earnings is deflated using the PCE.

the shares accruing to women in the bottom percentiles of the lifetime earnings distribution have grown more slowly than the shares accruing to women in the top percentiles.[36]

C Additional Tables and Figures for Section 3

[36]Figure E.6 in Appendix E is a version of Figure B.2 in which earnings shares are calculated without imposing any minimum earnings or years worked selection criterion. The results are similar to those in Figure B.2.

Table C.6: Distribution of Lifetime Incomes by Cohort, Males (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	42.21	37.71	10.58	14.50	23.50	52.79	56.90	70.06	88.28	156.75
1958	43.40	38.71	10.84	14.81	23.90	53.46	57.39	71.67	89.20	164.79
1959	43.86	38.07	10.65	14.64	23.74	53.83	58.16	74.29	94.19	179.16
1960	44.96	39.17	11.04	15.52	25.11	55.21	60.44	75.74	93.89	179.76
1961	45.33	39.17	11.64	15.56	24.59	55.66	60.13	75.74	96.94	184.10
1962	46.03	40.02	12.10	16.10	25.15	55.91	60.33	76.04	98.91	182.93
1963	47.41	40.74	11.66	15.68	25.62	57.79	62.49	78.35	100.36	196.22
1964	47.18	40.65	11.74	16.15	25.34	57.57	61.75	76.96	101.00	197.83
1965	49.22	40.53	11.32	15.57	25.65	58.54	63.46	80.85	108.00	230.73
1966	48.98	41.25	11.46	15.77	25.46	58.96	63.85	81.85	107.79	220.73
1967	51.47	42.34	12.08	16.16	26.07	61.15	66.71	86.00	113.65	246.98
1968	50.94	41.80	11.91	16.01	26.35	60.80	65.81	84.99	113.99	236.71
1969	51.08	41.19	11.53	15.48	25.41	61.08	66.45	85.52	112.13	249.65
1970	51.44	41.26	11.00	15.02	25.12	60.71	66.50	86.26	112.33	263.86
1971	52.27	42.15	11.48	15.69	25.68	61.46	67.13	86.81	116.77	260.52
1972	52.40	41.21	10.71	15.03	25.12	61.68	67.74	89.80	119.42	261.78
1973	51.50	40.79	11.00	14.95	24.78	60.99	67.08	87.03	116.46	270.30
1974	50.59	39.92	10.61	14.00	23.84	60.36	66.67	86.88	116.32	257.37
1975	50.22	39.81	10.17	13.65	23.14	60.42	66.30	86.76	115.90	238.90
1976	50.85	39.53	10.34	13.84	23.14	61.24	68.03	88.48	115.76	234.39
1977	51.85	39.49	10.42	14.02	23.32	60.52	66.86	88.49	118.50	249.74
1978	51.90	38.82	10.00	13.52	22.95	61.29	68.25	90.09	122.82	264.46
1979	51.56	39.01	9.89	13.74	22.85	61.33	67.88	91.01	124.27	271.17
1980	52.82	38.73	9.93	13.52	22.86	61.46	68.44	93.09	126.77	281.16
1981	53.17	38.36	9.70	13.33	22.50	61.16	68.77	94.24	127.75	294.04
1982	52.78	38.49	9.92	13.39	22.46	61.35	69.04	94.50	127.84	293.90
1983	52.22	37.96	9.62	12.96	21.96	60.33	68.24	94.58	128.68	290.16

Table C.7: Distribution of Lifetime Incomes by Cohort, Females (in Thousands of 2013 US $)

	Averages			Selected Percentiles							
Cohort	Mean	Median		p5	p10	p25	p75	p80	p90	p95	p99
1957	16.71	14.09	0.37	5.00	6.38	9.20	21.58	23.66	30.25	35.88	50.44
1958	16.93	14.39	0.37	5.28	6.42	9.44	21.73	24.12	30.82	37.18	51.00
1959	17.09	14.60	0.38	5.43	6.68	9.71	21.71	24.27	30.28	36.32	50.33
1960	17.33	14.36	0.37	5.25	6.54	9.54	22.57	24.82	31.86	38.02	51.65
1961	17.81	14.95	0.38	5.63	6.68	9.76	22.58	25.39	32.50	38.11	56.21
1962	18.22	15.36	0.38	5.36	6.68	10.03	23.32	25.75	33.06	40.55	57.57
1963	18.60	15.53	0.38	5.52	6.97	10.20	23.51	25.97	33.19	40.76	59.09
1964	18.56	15.31	0.38	5.75	7.08	10.27	23.32	25.87	33.64	41.67	59.41
1965	18.74	16.06	0.40	5.64	7.04	10.20	24.18	26.59	34.12	41.02	55.31
1966	19.88	16.50	0.40	5.57	7.00	10.49	25.67	28.45	36.46	43.96	62.80
1967	20.62	16.84	0.40	5.97	7.44	10.80	26.09	29.12	37.17	45.32	69.18
1968	21.09	17.32	0.41	5.82	7.24	10.93	27.10	29.97	38.29	47.43	73.96
1969	21.23	17.46	0.42	5.93	7.49	11.17	27.33	30.32	38.41	47.90	73.46
1970	22.52	18.20	0.44	5.96	7.50	11.36	28.45	31.94	41.94	51.52	83.66
1971	23.46	19.05	0.45	6.20	7.76	11.99	29.63	32.83	43.43	53.24	86.45
1972	23.70	19.03	0.46	6.31	7.91	11.92	29.97	33.74	43.44	54.29	90.08
1973	24.33	19.49	0.48	6.19	7.82	11.99	31.03	34.77	45.46	56.68	88.54
1974	24.87	19.94	0.50	6.38	8.16	12.57	31.64	35.27	46.29	57.93	96.75
1975	25.95	20.25	0.51	6.16	8.02	12.33	32.56	36.35	47.72	59.96	101.07
1976	27.15	21.11	0.53	6.59	8.52	13.00	34.63	38.25	50.39	63.63	112.28
1977	27.11	20.88	0.53	6.54	8.33	12.89	33.86	38.06	50.36	64.16	118.53
1978	27.59	21.43	0.55	6.47	8.47	13.05	34.11	38.59	51.49	64.94	121.29
1979	28.14	21.70	0.56	6.49	8.49	13.10	34.89	39.37	52.43	67.62	119.76
1980	28.76	21.91	0.57	6.55	8.47	13.22	35.81	40.24	53.80	69.32	124.78
1981	29.35	22.05	0.57	6.69	8.63	13.53	35.14	39.65	54.54	71.39	134.93
1982	29.27	22.05	0.57	6.57	8.56	13.48	35.54	39.92	53.64	71.55	128.08
1983	29.85	22.35	0.59	6.69	8.66	13.50	36.31	40.87	55.40	74.02	143.61

Table C.8: Distribution of Lifetime Incomes by Cohort, Males; Deflated with CPI (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	51.38	46.08	12.99	17.91	28.83	64.24	69.06	85.16	106.94	188.93
1958	52.59	47.17	13.45	18.16	29.26	64.91	69.55	86.85	108.00	193.95
1959	52.92	46.12	13.05	17.93	28.97	65.02	70.25	89.40	112.81	210.88
1960	54.00	47.34	13.46	18.89	30.55	66.32	72.61	90.66	112.28	209.89
1961	54.20	47.13	14.13	18.88	29.76	66.61	71.93	90.47	115.07	218.15
1962	54.77	47.87	14.63	19.51	30.46	66.56	72.06	90.23	117.24	214.62
1963	56.10	48.50	14.09	18.84	30.79	68.43	73.85	92.58	117.65	226.43
1964	55.59	48.17	14.09	19.39	30.31	67.89	72.63	90.32	117.45	228.05
1965	57.60	47.87	13.65	18.44	30.44	68.52	74.28	94.40	124.70	266.21
1966	57.04	48.38	13.66	18.71	30.20	68.66	74.41	95.34	124.42	254.00
1967	59.54	49.40	14.25	19.04	30.56	70.83	77.21	99.56	130.00	281.47
1968	58.61	48.39	13.96	18.74	30.71	70.09	75.85	97.51	129.43	267.51
1969	58.36	47.46	13.34	17.96	29.59	69.91	75.94	97.37	127.17	278.48
1970	58.36	47.31	12.64	17.30	28.89	69.12	75.56	97.79	126.26	292.87
1971	58.94	47.89	13.14	17.98	29.33	69.52	75.72	97.67	130.59	290.96
1972	58.70	46.64	12.32	17.10	28.51	69.29	76.07	100.56	132.58	287.89
1973	57.35	45.81	12.44	16.95	27.82	68.17	74.83	96.66	128.30	300.02
1974	56.02	44.53	11.86	15.73	26.72	66.93	73.95	95.98	128.11	279.78
1975	55.26	44.06	11.33	15.18	25.79	66.65	73.14	95.31	126.76	256.09
1976	55.60	43.52	11.42	15.41	25.67	67.19	74.32	96.37	126.10	251.53
1977	56.30	43.25	11.55	15.38	25.56	65.91	72.73	95.88	128.51	265.19
1978	56.06	42.24	10.90	14.74	25.12	66.43	73.75	96.81	131.78	279.78
1979	55.40	42.19	10.76	14.89	24.76	66.22	73.07	97.89	132.50	285.64
1980	56.44	41.68	10.67	14.65	24.71	65.85	73.31	99.33	134.63	294.02
1981	56.52	41.05	10.52	14.32	24.10	65.16	73.29	100.20	135.31	307.08
1982	55.85	41.03	10.65	14.40	23.92	65.26	73.26	99.79	134.61	305.62
1983	55.05	40.25	10.34	13.92	23.35	63.86	72.10	99.62	134.64	301.15

Table C.9: Distribution of Lifetime Incomes by Cohort, Females; Deflated with CPI (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	20.20	16.96	6.12	7.71	11.08	26.12	28.63	36.59	43.40	60.53
1958	20.38	17.23	6.36	7.71	11.29	26.22	29.08	37.09	44.61	61.84
1959	20.48	17.51	6.55	7.99	11.62	25.92	29.01	36.22	43.61	61.22
1960	20.66	17.08	6.25	7.85	11.37	26.96	29.60	38.01	45.65	61.67
1961	21.12	17.68	6.68	7.98	11.60	26.84	30.17	38.74	45.39	66.09
1962	21.49	18.04	6.36	7.90	11.80	27.50	30.36	39.09	47.69	67.06
1963	21.82	18.29	6.51	8.20	11.91	27.59	30.27	39.03	47.88	69.36
1964	21.66	17.81	6.77	8.27	12.01	27.15	30.27	39.26	48.40	69.15
1965	21.78	18.66	6.54	8.17	11.90	28.03	30.95	39.68	47.72	64.31
1966	22.97	19.09	6.45	8.13	12.17	29.67	32.88	42.22	51.12	72.94
1967	23.71	19.37	6.91	8.56	12.39	30.04	33.48	42.80	52.15	79.82
1968	24.09	19.74	6.68	8.32	12.54	30.85	34.15	43.90	53.90	84.25
1969	24.13	19.85	6.73	8.56	12.67	31.09	34.35	43.77	54.43	82.68
1970	25.43	20.53	6.81	8.53	12.87	32.14	36.03	47.28	57.91	93.47
1971	26.34	21.45	7.03	8.75	13.44	33.33	36.87	48.94	59.93	96.72
1972	26.47	21.24	7.09	8.85	13.41	33.47	37.60	48.46	60.73	98.53
1973	27.01	21.72	6.92	8.72	13.31	34.51	38.70	50.57	62.68	97.25
1974	27.47	22.06	7.04	9.03	13.91	35.03	39.08	50.99	63.67	105.71
1975	28.48	22.28	6.82	8.83	13.58	35.82	39.96	52.33	65.79	109.32
1976	29.63	23.12	7.23	9.29	14.24	37.74	41.80	55.26	69.30	121.97
1977	29.43	22.76	7.12	9.10	14.03	36.81	41.43	54.54	69.56	128.16
1978	29.77	23.22	7.05	9.17	14.13	36.81	41.72	55.63	69.75	128.39
1979	30.21	23.38	7.06	9.22	14.12	37.63	42.27	56.35	72.24	127.22
1980	30.73	23.47	7.09	9.09	14.23	38.30	43.17	57.54	74.02	131.99
1981	31.19	23.50	7.22	9.23	14.43	37.42	42.08	57.95	75.58	144.23
1982	30.97	23.39	7.01	9.13	14.35	37.55	42.34	56.89	75.70	133.99
1983	31.49	23.63	7.07	9.16	14.32	38.39	43.12	58.47	77.60	150.17

Table C.10: Growth Rates of Cohort Lifetime Earnings, Intensive Margin

Cohorts		Averages		Selected Percentiles							
		Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
Males – PCE											
57–68	Cumulative	21.46	12.80	11.59	9.70	9.31	16.89	17.97	24.35	32.86	55.20
	Annualized	1.78	1.10	1.00	0.85	0.81	1.43	1.51	2.00	2.62	4.08
68–83	Cumulative	3.61	–7.16	–17.37	–16.84	–14.07	3.42	7.20	11.54	12.91	17.41
	Annualized	0.24	–0.49	–1.26	–1.22	–1.01	0.22	0.46	0.73	0.81	1.08
57–83	Cumulative	25.84	4.73	–7.79	–8.77	–6.07	20.89	26.47	38.71	50.00	82.23
	Annualized	0.89	0.18	–0.31	–0.35	–0.24	0.73	0.91	1.27	1.57	2.33
Males – CPI											
57–68	Cumulative	14.83	7.12	6.12	3.76	3.66	10.88	11.62	17.25	25.27	43.18
	Annualized	1.26	0.63	0.54	0.34	0.33	0.94	1.00	1.46	2.07	3.32
68–83	Cumulative	–5.11	–15.13	–24.60	–24.32	–21.35	–5.55	–1.95	2.22	3.58	8.12
	Annualized	–0.35	–1.09	–1.86	–1.84	–1.59	–0.38	–0.13	0.15	0.23	0.52
57–83	Cumulative	8.96	–9.08	–19.98	–21.48	–18.48	4.73	9.45	19.85	29.75	54.80
	Annualized	0.33	–0.37	–0.85	–0.93	–0.78	0.18	0.35	0.70	1.01	1.69
Females – PCE											
57–68	Cumulative	24.02	18.02	11.43	11.26	14.80	23.11	24.28	27.76	37.48	35.51
	Annualized	1.98	1.52	0.99	0.97	1.26	1.91	2.00	2.25	2.94	2.80
68–83	Cumulative	33.56	19.97	12.29	12.54	16.70	28.34	32.21	44.40	51.60	92.81
	Annualized	1.95	1.22	0.78	0.79	1.03	1.68	1.88	2.48	2.81	4.47
57–83	Cumulative	65.63	41.58	25.12	25.22	33.97	57.99	64.31	84.49	108.42	161.27
	Annualized	1.96	1.35	0.87	0.87	1.13	1.77	1.93	2.38	2.86	3.76
Females – CPI											
57–68	Cumulative	17.16	11.78	5.13	4.83	8.40	16.71	17.63	20.97	29.35	30.03
	Annualized	1.45	1.02	0.46	0.43	0.74	1.41	1.49	1.75	2.37	2.42
68–83	Cumulative	23.45	10.92	3.61	4.28	8.05	18.61	21.95	32.96	40.26	73.75
	Annualized	1.41	0.69	0.24	0.28	0.52	1.14	1.33	1.92	2.28	3.75
57–83	Cumulative	44.64	23.98	8.92	9.32	17.13	38.43	43.45	60.85	81.42	125.91
	Annualized	1.43	0.83	0.33	0.34	0.61	1.26	1.40	1.84	2.32	3.18

Table C.11: Distribution of Lifetime Incomes by Cohort, Adjusted for Years Worked (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	39.87	34.19	11.37	14.24	21.50	49.76	53.66	66.78	83.64	157.19
1958	40.59	34.38	11.41	14.50	21.50	50.60	54.67	66.68	84.05	164.34
1959	41.04	34.33	11.77	14.56	21.56	50.22	54.66	68.85	88.17	175.91
1960	42.22	35.74	11.83	14.68	22.25	51.89	56.47	71.27	89.72	176.38
1961	42.59	35.41	12.04	14.92	22.31	52.18	56.94	71.72	92.51	176.71
1962	43.01	35.80	12.23	15.25	22.82	52.78	56.99	71.89	90.64	180.17
1963	43.88	35.95	12.23	15.34	22.41	53.54	58.36	73.58	94.25	186.19
1964	44.06	36.09	12.27	15.25	22.88	53.94	58.50	73.26	93.42	196.08
1965	45.42	36.15	12.17	15.10	22.86	54.23	59.27	75.38	100.19	216.48
1966	45.27	36.50	12.08	15.22	22.86	54.65	59.54	75.85	98.70	210.42
1967	47.28	37.32	12.60	15.63	23.27	56.36	61.63	79.16	104.84	243.38
1968	47.18	37.62	12.42	15.67	23.67	56.40	62.03	79.81	104.46	228.76
1969	47.04	36.92	12.45	15.72	23.39	55.98	61.62	79.68	102.62	231.33
1970	47.77	37.09	12.42	15.66	23.29	56.59	62.02	80.64	106.14	236.64
1971	48.41	37.69	12.76	16.11	24.03	56.96	62.39	81.01	107.08	227.62
1972	48.43	37.26	12.62	15.85	23.69	56.82	62.61	81.60	110.17	244.52
1973	48.24	37.32	12.69	15.97	23.75	56.43	62.54	81.57	107.86	245.61
1974	47.63	37.01	12.90	16.03	23.74	55.73	61.62	81.31	107.09	231.55
1975	47.89	36.75	12.53	15.79	23.47	56.64	62.43	81.12	107.63	227.84
1976	48.42	37.30	12.85	16.21	23.91	57.06	63.09	83.32	109.81	225.08
1977	48.93	37.06	12.84	16.14	23.91	57.11	63.47	83.39	110.39	238.23
1978	49.51	37.25	12.86	16.01	23.97	57.16	63.57	84.51	113.67	255.77
1979	49.55	37.25	12.97	16.15	24.01	57.59	64.18	85.86	114.91	258.92
1980	50.56	37.38	12.65	15.94	23.96	57.79	64.74	87.64	117.13	256.90
1981	51.06	37.10	12.78	16.06	23.88	57.79	64.63	88.57	119.07	266.42
1982	50.68	37.18	12.86	16.10	23.80	57.84	64.89	88.14	118.52	274.71
1983	50.48	36.70	12.66	15.97	23.49	57.72	64.64	89.33	120.49	264.22

Table C.12: Distribution of Lifetime Incomes by Cohort (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	33.70	27.34	6.77	8.89	14.97	45.14	49.82	62.65	78.26	135.71
1958	34.40	27.68	6.86	9.04	15.12	46.46	50.59	62.48	78.39	137.50
1959	34.80	27.52	6.99	9.33	15.22	45.61	50.35	64.40	82.14	149.87
1960	35.83	28.93	6.99	9.35	15.57	47.10	51.93	66.78	83.40	152.91
1961	35.89	28.47	7.25	9.48	15.67	46.91	52.02	66.48	84.00	160.22
1962	36.28	28.96	7.16	9.67	16.08	47.43	52.29	67.01	83.68	158.54
1963	36.95	28.76	7.40	9.65	15.81	48.50	53.25	67.73	86.13	162.67
1964	36.88	28.76	7.41	9.82	15.88	48.59	53.45	67.49	85.10	164.11
1965	38.10	29.16	7.38	9.61	16.01	48.27	53.59	69.22	90.73	188.18
1966	37.97	29.47	7.34	9.73	16.11	48.95	54.06	69.60	90.03	179.25
1967	39.73	29.80	7.69	9.94	16.50	50.36	55.93	72.66	94.95	206.15
1968	39.62	30.32	7.46	10.07	16.72	50.26	55.66	72.52	93.94	196.80
1969	39.42	29.57	7.58	9.97	16.48	49.91	55.55	72.66	92.36	194.33
1970	39.97	29.77	7.48	9.85	16.53	50.14	55.80	73.36	94.40	193.71
1971	40.58	30.29	7.74	10.31	17.13	50.30	56.02	73.63	95.18	198.50
1972	40.46	29.83	7.70	10.19	16.75	49.97	55.90	74.30	99.00	207.48
1973	40.25	30.09	7.72	10.25	17.06	49.68	55.60	73.68	95.10	199.67
1974	39.71	29.39	7.83	10.40	16.83	49.24	54.85	73.48	95.22	193.76
1975	39.90	29.72	7.57	10.05	16.60	49.62	55.72	73.03	95.58	192.54
1976	40.68	30.39	7.89	10.51	17.03	50.19	56.18	75.68	98.24	192.24
1977	40.96	30.15	7.86	10.45	16.98	49.88	56.09	74.67	97.45	204.65
1978	41.50	30.09	7.81	10.37	17.22	50.33	56.72	76.59	101.32	216.74
1979	41.54	30.18	7.91	10.44	17.24	50.45	56.71	77.29	102.85	222.90
1980	42.50	30.37	7.71	10.31	17.28	50.76	57.04	78.56	105.67	226.71
1981	42.80	29.93	7.85	10.34	17.11	50.53	56.87	80.17	106.64	226.90
1982	42.58	29.88	7.82	10.45	17.28	50.40	56.74	79.24	106.48	234.37
1983	42.33	29.84	7.85	10.31	16.84	50.00	56.66	79.87	108.29	228.15

Table C.13: Distribution of Lifetime Incomes by Cohort, Deflated with CPI (in Thousands of 2013 US $)

	Averages		Selected Percentiles							
Cohort	Mean	Median	p5	p10	p25	p75	p80	p90	p95	p99
1957	40.98	33.49	8.25	10.81	18.29	55.08	60.74	76.20	94.67	163.50
1958	41.64	33.70	8.34	10.99	18.35	56.24	61.50	75.66	94.80	164.15
1959	41.95	33.29	8.51	11.25	18.42	55.20	60.88	77.49	98.39	178.19
1960	42.99	34.94	8.43	11.13	18.76	56.56	62.37	80.06	99.77	182.27
1961	42.84	34.13	8.67	11.34	18.77	56.27	62.26	79.13	100.20	187.86
1962	43.11	34.53	8.47	11.46	19.18	56.59	62.32	79.39	98.83	184.54
1963	43.65	34.26	8.77	11.38	18.74	57.47	63.02	80.08	101.10	190.47
1964	43.38	34.09	8.70	11.60	18.75	57.32	63.09	79.33	99.90	191.10
1965	44.53	34.35	8.64	11.30	18.84	56.74	62.94	81.10	105.50	214.90
1966	44.15	34.50	8.60	11.35	18.90	57.19	63.18	80.80	104.06	203.75
1967	45.91	34.74	8.95	11.48	19.15	58.57	64.85	84.12	109.37	236.24
1968	45.52	35.11	8.64	11.61	19.31	58.05	64.37	83.22	107.05	221.26
1969	44.99	34.00	8.68	11.45	18.92	57.28	63.76	82.90	104.72	217.94
1970	45.30	33.84	8.53	11.27	18.84	57.15	63.47	83.21	106.74	215.71
1971	45.71	34.30	8.75	11.65	19.43	56.93	63.45	83.07	106.67	222.02
1972	45.29	33.59	8.61	11.47	18.86	56.14	62.81	83.17	110.08	229.35
1973	44.79	33.73	8.59	11.50	19.04	55.68	62.09	82.05	105.52	216.37
1974	43.94	32.75	8.68	11.53	18.70	54.66	60.94	81.17	105.02	211.29
1975	43.87	32.85	8.36	11.10	18.37	54.77	61.33	80.28	104.78	209.50
1976	44.46	33.34	8.70	11.56	18.73	55.07	61.65	82.64	106.85	207.69
1977	44.49	32.93	8.60	11.47	18.54	54.42	61.11	81.20	105.32	219.64
1978	44.81	32.72	8.50	11.28	18.69	54.62	61.40	82.73	109.20	231.77
1979	44.63	32.53	8.54	11.30	18.63	54.46	61.17	82.99	110.37	237.47
1980	45.41	32.67	8.34	11.10	18.60	54.44	61.07	83.89	112.74	239.34
1981	45.50	31.99	8.40	11.10	18.31	53.91	60.68	85.26	112.85	239.38
1982	45.06	31.74	8.34	11.18	18.42	53.50	60.32	83.91	112.72	245.03
1983	44.63	31.63	8.37	11.00	17.93	52.82	59.81	84.19	113.69	237.59

C.1 Comparison with Aggregate Earnings Growth

We compare average earnings growth in our sample with publicly available data from NIPA and the CPS. From 1957 to 2013, real GDP (shown by the dashed green line in Figure C.3a) grew by a factor of nearly five-and-a-half, while real wage and salary earnings recorded in NIPA (shown by the solid green line in Figure C.3a) grew by a factor of four – with most of the difference in growth between the two series taking place since 2000.

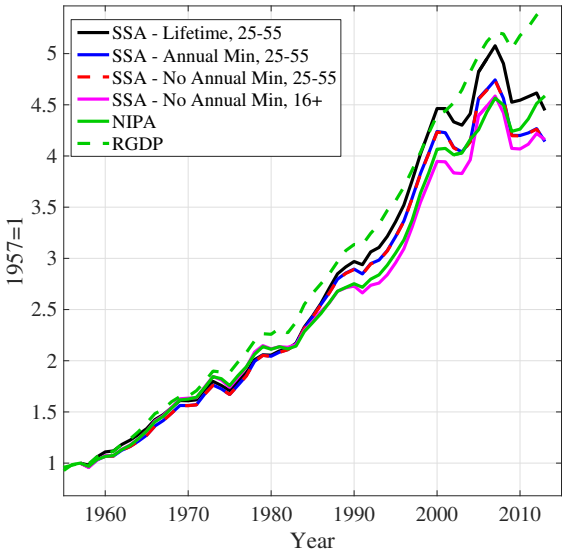
Given this large growth in aggregate earnings, one might be concerned that the stagnation in lifetime earnings that we have documented for the cohorts in the labor market during this period is a peculiarity of the measure of earnings that our lifetime statistics are based on—W2 earnings for 25 to 55 year old workers in commerce and industry sectors who satisfy minimum lifetime earnings criteria. But the black line in Figure C.3a shows that the growth in the total earnings accrued by individuals in our baseline sample is essentially the same as the growth in wage and salary earnings from NIPA. Hence the stagnation in lifetime earnings we document is not because we chose a measure of earnings, or sample of individuals, that showed little total growth over the period. To further underscore this point, the blue, red and pink lines show that when we broaden the sample to include individuals that (i) do not meet the lifetime minimum earnings requirement, (ii) do not meet the annual minimum earnings requirement, and (iii) are outside the 25-55 age range, the total earnings growth in our sample lines up even more closely with the NIPA wage and salary measure.

Figure C.3b shows how mean annual earnings in our baseline SSA sample (black solid line) compares with mean annual earnings for individuals aged 25 to 55 from other data sources and samples, over the period 1957 to 2013. First, the black dashed line shows mean annual earnings when individuals are selected based on an annual earnings criterion, rather than a lifetime criterion. Average earnings are higher with the lifetime selection criterion but the overall earnings growth over the period is essentially the same. Second, the blue solid line plots mean annual earnings for Commerce and Industry workers in the CPS (applying the same selection criteria as in the SSA data); comparing this line with the black dashed line shows the effect of measuring annual earnings in the SSA data versus the CPS. Third, the blue dashed line shows mean annual earnings in the CPS for all workers, not just those in Commerce and Industry sectors; comparing this line with the blue solid line shows the effect of focusing only on Commerce and Industry workers. Fourth, the red dashed line is mean wage and salary earnings per person aged 25 to 55 from NIPA. Overall, we see that aggregate growth in mean earnings has been, if anything, larger in our baseline SSA sample than implied by NIPA over this period.

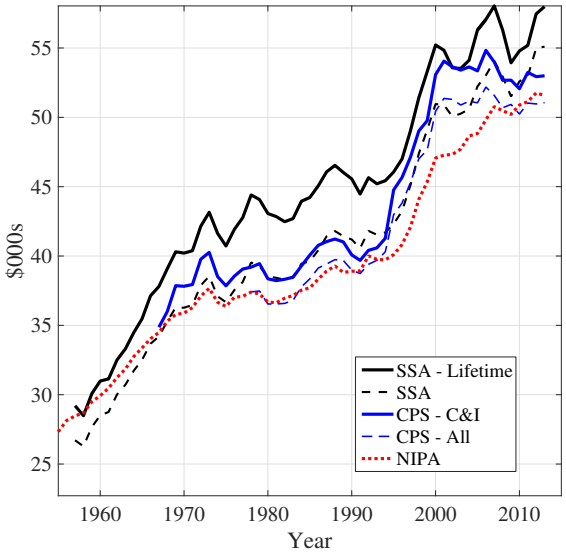
How then can we reconcile with the growth in aggregate earnings from 1957 to 2013 with the stagnant lifetime earnings for the cohorts of individuals who were in the labor market over this same period? The key takeaway from Figure C.3 is that there is nothing particularly unusual about the time-series for our earnings measure or sample. Rather, it is the lifetime perspective that drives the different conclusion about earnings growth over this period. The growth in mean cross-sectional earnings masks large shifts in how earnings gains are split between people of different ages (and hence cohorts) and between people in different parts of the earnings distribution. Much of the increase in earnings in Figure C.3 has accrued to older workers in older cohorts.

Figure C.3: Comparison with Alternative Data Sources

(a) Aggregate Earnings Growth, Various Sources



(b) Mean Earnings per Worker, Various Sources



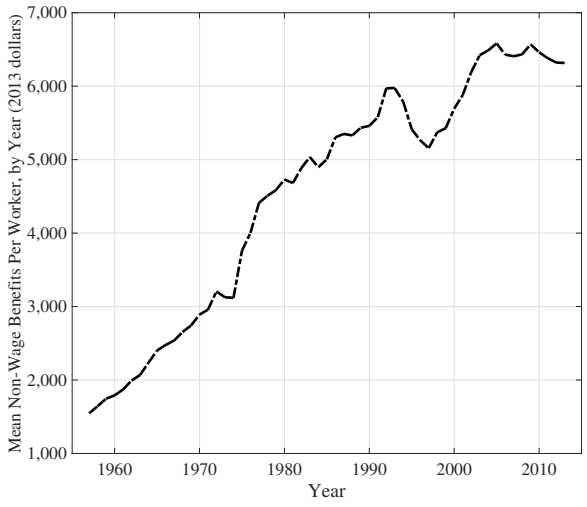
Notes: Panel (a) displays the trend in annual aggregate earnings in the baseline SSA sample, three progressively broader samples of SSA data, the NIPA wage and salary measure, and real GDP. The aggregate earnings trend is indexed to the level in 1957 in each data sample. Panel (b) displays the trend in average earnings per worker in 5 data series: the baseline sample (SSA - lifetime), an SSA sample selected on annual earnings rather than lifetime earnings (SSA), Commerce and Industry workers in the CPS (CPS - C&I), all workers in the CPS (CPS - All), and the mean earnings per person aged 25 to 55 from NIPA (NIPA). All values are deflated using the PCE and value in Panel (b) are displayed in thousands of 2013 US dollars.

C.2 Furter Details on Calculation of Non-Wage Benefits

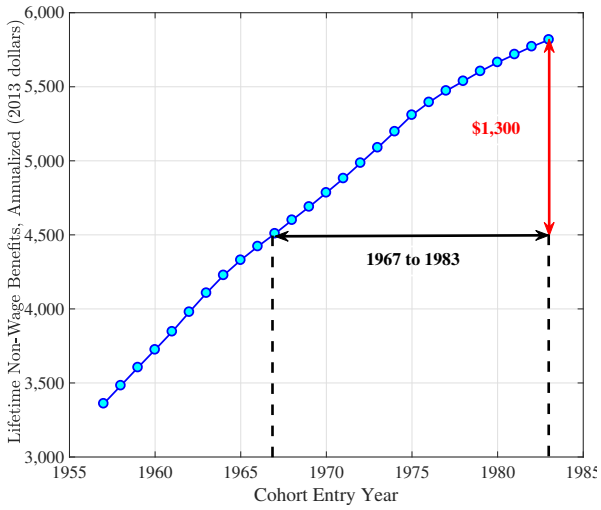
Figure C.4a plots "real employer contributions to employee pension funds and group health insurance for private industries" divided by the annual average number of private industry workers from the BLS Employment Situation. Non-wage compensation per worker has grown from $1,500 per worker in 1957 to about $6,300 per worker in 2013. The growth in non-wage benefits was faster from 1957 to the early 1990s, followed by a U-shape in the 1990s and a significant slowdown since the early 2000s. We compare lifetime average benefits across cohorts by computing average benefit amounts over the 31-year life cycle of each cohort. These are displayed in Figure C.4b. For example, the data point corresponding to the year 1957 is the average annual employer contributions per worker from 1957 to 1987. Lifetime benefits have risen from about $3,300 per year for the 1957 cohort to about $5,800 per year for the 1983 cohort. The increase from the 1967 to 1983 cohorts was slower, from an annualized value of about $4,500 to $5,800 per worker, for a gain of approximately $1,200. Given the increase in benefits inequality noted above, this average increase is a reasonable upper bound for the increase in benefits for the median worker.

Figure C.4: Employer-provided Benefits per Worker

(a) Real employer contributions to pension and group health insurance per worker



(b) Real lifetime value non-wage benefits, annualized, by cohort



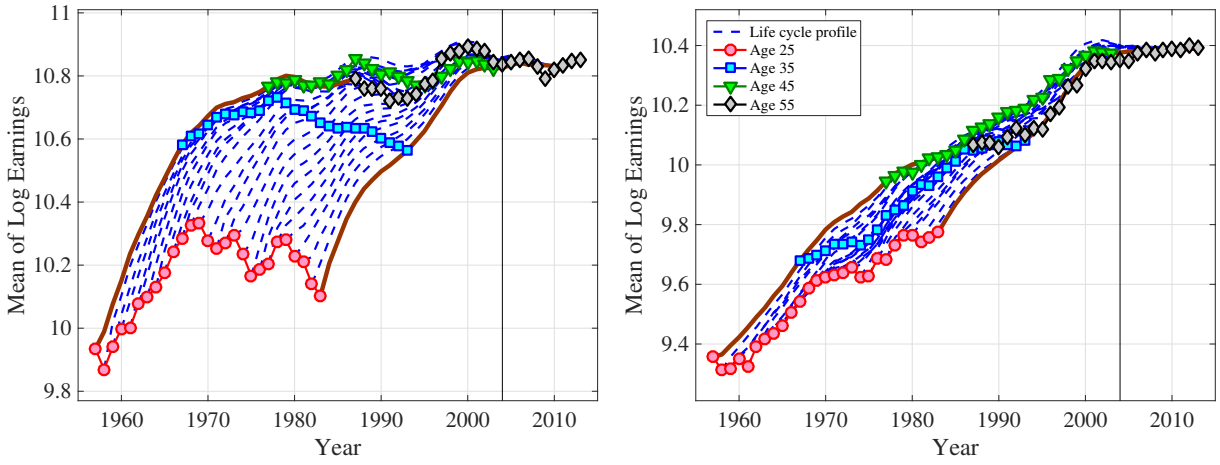
Notes: Panel (a) displays the real employer benefits (pensions and group health insurance) per worker, calculated using data from NIPA and BLS. Panel (b) displays the lifetime average of real employer benefits per worker for each cohort entering the labor market. For example, the data point corresponding to the 1957 cohort displays the average employer benefits per worker from 1957 through 1987. All values are displayed in 2013 US dollars and deflated using a weighted average of the PCE and the health care price deflator.

D Additional Tables and Figures for Section 4

D.1 Comparison with the CPS

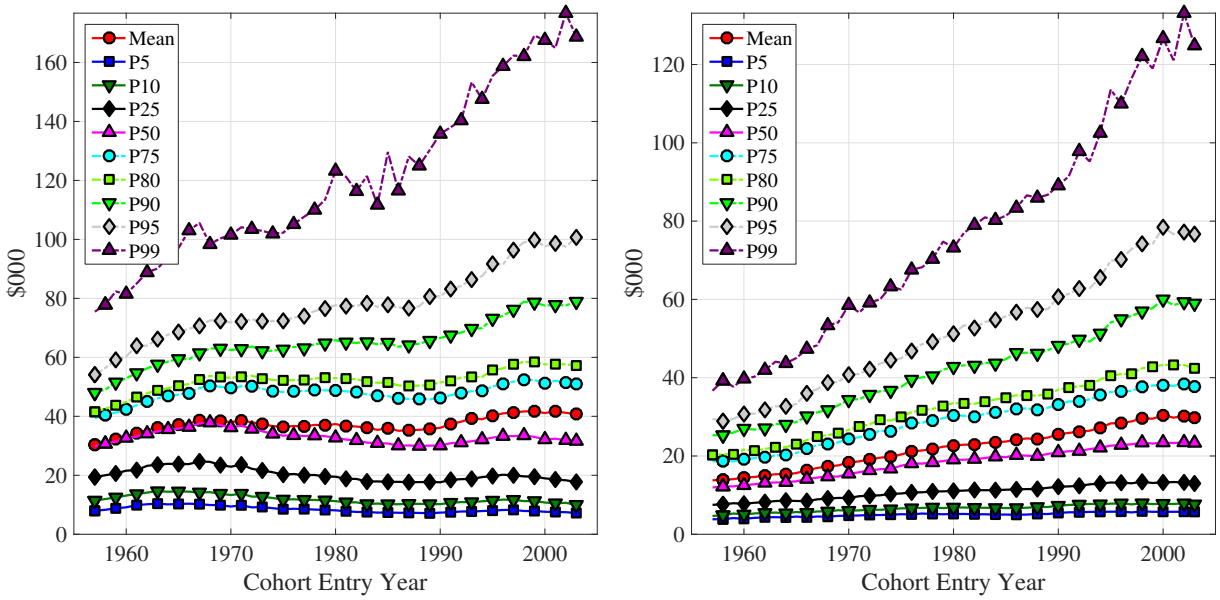
The life-cycle profiles for median earnings in Figures 5 and 7 make only limited use of the panel dimension of the SSA data. Were it not for the fact that our minimum earnings sample selection criterion is based on lifetime earnings rather than on annual earnings, it would be possible to produce analogues of these figures with only cross-sectional data. In Figure D.3, we compare the trends in median earnings at age 25 and age 45 from the CPS (red lines), with two versions of these trends from the SSA data (Figure D.4 in Appendix D shows the analogous plots for ages 35 and 55). The green lines show median earnings in the SSA data as reported in Figure 5 and Figure 7, that is, using the lifetime earnings selection criterion. The blue lines show median earnings in the SSA data but imposing the same annual minimum earnings criterion as for the CPS, that is, treating the SSA data as a cross-sectional survey.

For earnings at age 45 (dashed lines), the CPS and SSA produce very similar paths for median earnings when the SSA is treated as a cross-sectional survey like the CPS, with the caveat that in recent years, median earnings in the SSA are a little below those in the CPS, particularly for women. Both data sets yield substantially lower levels of median earnings than when individuals are selected based on lifetime earnings (green lines). The is because a nontrivial fraction of individuals



(a) Males (b) Females

Figure D.1: Age profiles of mean log earnings by cohort



(a) Males (b) Females

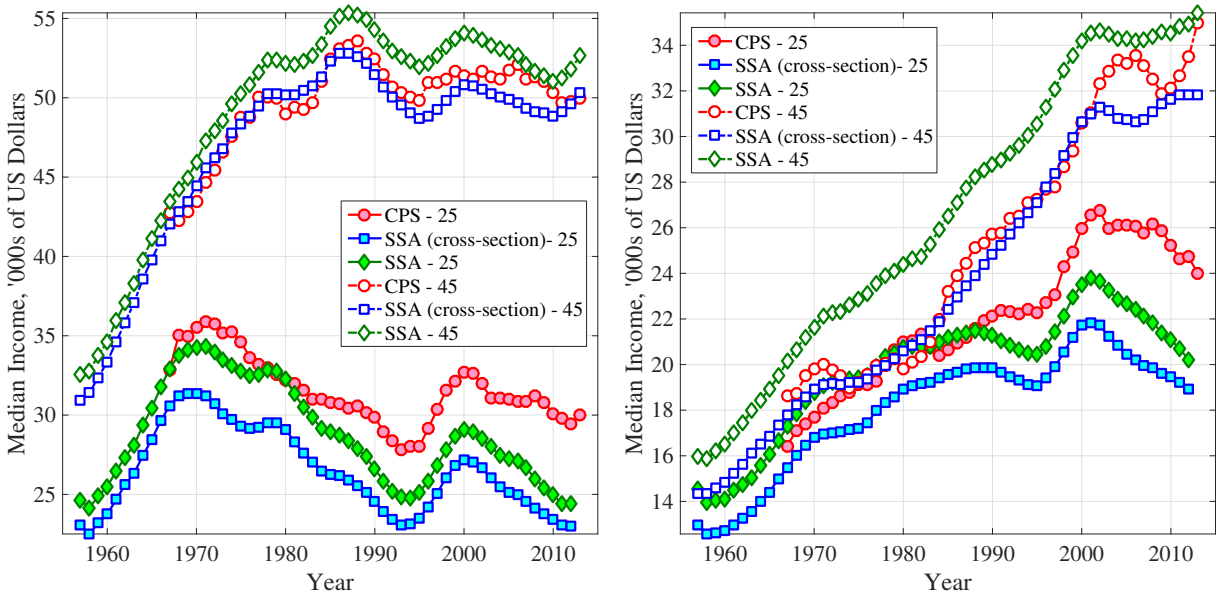
Figure D.2: Distribution of Age 25–35 Total Incomes by cohort (in Thousands of 2013 US $)

have no earnings in a single year, even though they are sufficiently attached to the labor market over their lifetime to meet our lifetime selection criteria (at least 15 years with earnings above an annual earnings threshold and total lifetime earnings above a lifetime earnings threshold). Since the cross-sectional perspective ignores these individuals, median earnings is understated relative to the lifetime perspective. As expected, this distinction is more important for women than for men.

Table D.1: Cumulative percent change in age specific median earnings, by cohort

	Male			Female			All		
	25-35	35-45	45-55	25-35	35-45	45-55	25-35	35-45	45-55
1957	71.37	23.65	3.13	28.27	24.82	15.06	63.10	14.15	3.51
1958	86.26	22.65	0.61	45.20	21.65	12.48	77.03	13.34	0.80
1959	84.35	17.13	-3.37	42.68	24.42	8.80	71.41	9.10	-0.79
1960	71.58	17.70	-2.17	32.29	22.31	13.05	61.72	9.68	-0.59
1961	75.91	13.23	-4.70	46.65	19.99	12.45	65.02	7.05	-0.99
1962	71.40	7.71	-1.99	38.30	21.95	13.66	62.99	0.23	2.34
1963	72.89	8.44	-3.66	36.14	19.02	9.82	63.27	-0.35	-1.90
1964	65.39	12.84	-6.53	28.17	28.92	10.17	52.50	6.44	-2.32
1965	56.84	16.36	-4.51	23.00	31.66	7.00	42.95	11.60	-1.44
1966	51.42	13.77	-5.03	22.84	31.61	5.46	39.50	10.06	-1.60
1967	51.82	13.22	-2.41	25.63	28.11	4.47	39.38	8.42	-1.42
1968	49.55	8.45	-0.29	23.35	24.00	12.01	37.44	5.61	3.73
1969	46.16	8.21	1.35	25.05	22.03	11.79	35.11	4.60	5.40
1970	44.90	9.31	6.03	22.94	24.50	14.95	33.87	8.61	9.64
1971	45.06	9.99	4.94	22.57	22.81	16.50	35.16	7.61	9.22
1972	39.38	13.20	3.74	22.83	22.68	16.95	31.37	10.71	10.13
1973	34.36	11.56	3.82	23.45	19.38	16.26	28.20	10.65	8.78
1974	45.19	7.70	4.70	32.27	18.09	16.37	39.85	8.15	8.62
1975	53.31	8.60	5.44	35.74	16.21	13.45	44.80	9.57	8.73
1976	47.09	9.90	5.75	35.05	17.08	12.36	42.93	10.80	8.57
1977	46.86	10.15	5.49	36.49	17.60	11.88	44.05	11.04	7.08
1978	39.75	13.31	1.79	32.22	21.01	5.76	37.37	15.63	1.69
1979	38.53	17.83	-3.69	27.66	25.84	3.95	35.10	17.86	-0.78
1980	38.32	21.42	-2.50	28.87	27.17	3.00	37.04	22.12	-1.29
1981	38.31	23.04	-1.40	28.14	31.64	-0.38	35.15	26.31	-1.17
1982	49.52	21.69	0.40	29.11	30.07	1.97	41.93	23.58	1.64
1983	46.07	25.10	1.98	28.67	28.53	0.74	39.79	26.49	0.54

For earnings at age 25 (solid lines), the distinction between the cross-sectional perspective and the lifetime perspective is also important, since this is also an age during which some individuals have very low earnings, even though they will go on to be substantially attached to the labor market over the remainder of the lifetime. Hence, the green lines are above the blue lines for both men and women. However, unlike at age 45, at age 25 there is a large difference between median earnings as measured in the CPS (red lines) compared with median earnings in the SSA when treated as a cross

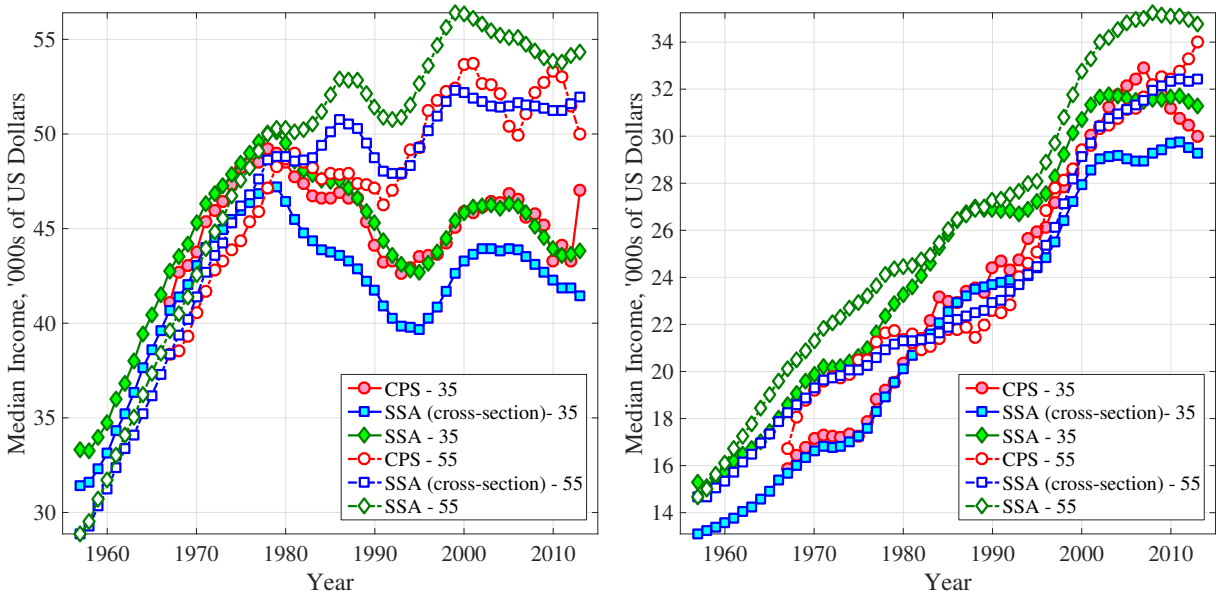


(a) Males (b) Females

Figure D.3: Median Earnings by Age and Cohort, SSA vs CPS

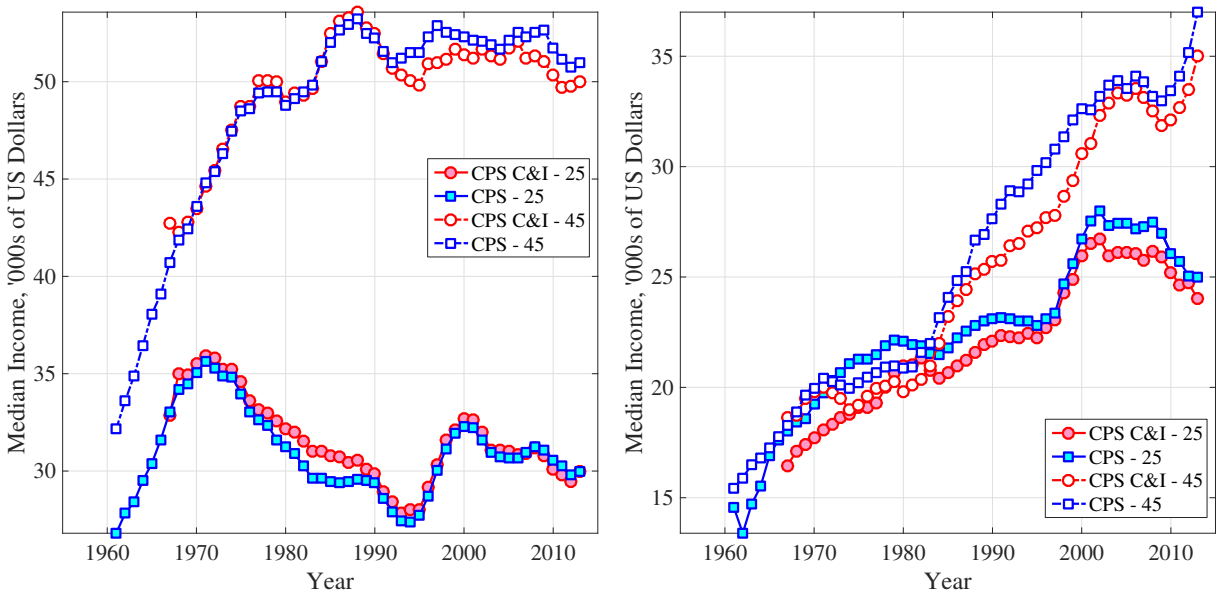
section (blue line), possibly because of earnings overstatement among low-earnings households in the CPS. Despite these differences in levels, the general trends are the same in the three data sets.

The sample for the CPS data is selected to be as similar as possible to the SSA sample, but with a minimum earnings selection criterion based on annual earnings. Our measure of earnings from the CPS is wages and salaries. We include only "commerce and industry workers" by omitting workers with industry codes corresponding to agriculture, forestry, fisheries, hospitals, education services, welfare services, nonprofits, private households, and public administration. Unlike in the SSA data, in the CPS it is possible to compute analogous statistics for workers in industries other than commerce and industry. Figure D.5 plots the analogous trends in median earnings at different ages with and without this restriction. The trends look virtually identical.



(a) Males (b) Females

Figure D.4: Median earnings by age and cohort, SSA vs CPS, (in Thousands of 2013 US $)



(a) Males (b) Females

Figure D.5: Median earnings by age and cohort, CPS – Commerce and Industry vs all workers (in Thousands of 2013 US $)

E Additional Tables and Figures for Section 5

E.1 Two Views of Increasing Lifetime Inequality

Why did lifetime inequality among men and among women increase across subsequent cohorts during this period? To shed light on this question, it is helpful to first examine the timing of the rise in within-cohort cross-sectional inequality over the life-cycle of a cohort. To illustrate some of the main ideas, consider the two possible scenarios shown in Figure E.1. In Figure E.1a, starting with the 1960 cohort, we plot the 90th percentile (the solid, upwardly sloping blue line) and the 10th percentile (the dashed blue line, which the smaller slope) of the age-specific earnings distribution at every age as the cohort gets older. The P90-P10 ratio at age 25 is marked with a dashed line to highlight how much earnings inequality that cohort had when those workers entered the labor market.

The first scenario (illustrated in E.1a) considers one possibility: each subsequent cohort enter the labor market with a higher initial inequality—shown with the larger P90-P10 ratio at age 25—but newer cohorts display the same rise in inequality over the life cycle as older cohorts, indicated by the fact that the P90 and P10 lines are parallel for every cohort. In this scenario, newer cohorts have higher lifetime inequality because they had higher inequality at all ages, starting at age 25. The second scenario (illustrated in E.1b) is that newer cohorts enter with the same initial inequality as older cohorts but display a faster rise in inequality with age, which in turn leads to higher level lifetime inequality.

These two scenarios can be examined through the lens of a simple stochastic process that underlies a lot of empirical work on earnings dynamics. Let the log earnings of individual i at age h, in year-of-birth cohort c be given by [37]

$$y_h^{i,c} = \alpha^{i,c} + z_h^{i,c}$$
$$z_h^{i,c} = z_{h-1}^{i,c} + \eta_h^{i,c},$$

where $\alpha^{i,c} \sim F(0, \sigma^2_{\alpha,c})$ is the individual-specific fixed effect, z_h is a random walk process with mean zero innovations $\eta^{i,c} \sim F(0, \sigma^2_{\eta,c})$, and $z_0^i \equiv 0$. Notice that the two variances are allowed to vary across cohorts but not with time (or age). Now define the lifetime average of log annual earnings[38] as

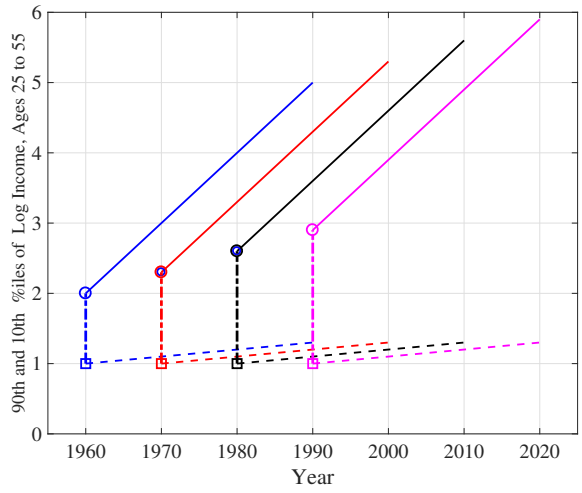
$$\overline{y}^{i,c} \equiv \frac{1}{31} \times \sum_{h=1}^{31} y_h^{i,c} = \alpha^{i,c} + \frac{1}{31} \times \sum_{h=1}^{31} \sum_{s=1}^{h} \eta_s^{i,c}.$$

[37] Year-of-birth cohort $c \equiv (t - 1957) - (h - 24)$. So the cohort that turned age 25 in year 1957 has $c = 1$ and each subsequent cohort is indexed sequentially. This process can be generalized by adding a purely transitory component or allowing for shocks that are less than permanent.

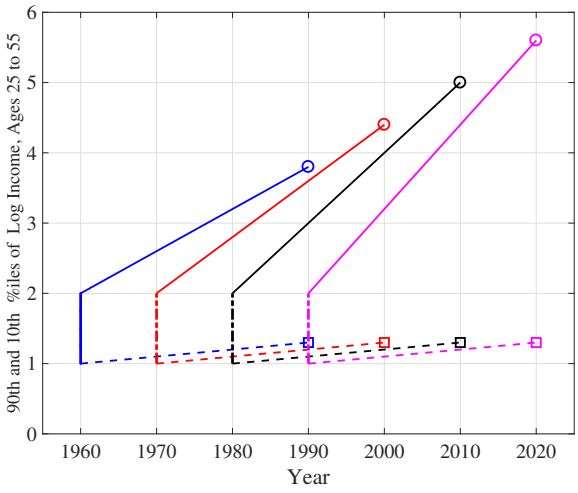
[38] This measure of lifetime earnings is related to the lifetime earnings measure we analyze in this paper but differs from it by a Jensen's inequality term. This measure is analytically more convenient for the purposes of this discussion.

Figure E.1: Two Basic Ways Inequality Can Change from Cohort to Cohort

(a) New cohorts may be be entering with higher initial (age 25) earnings dispersion



(b) Newer cohorts may be experiencing faster rise in earnings dispersion with age



With this earnings process, the variance of the lifetime average of log earnings is given by

$$\text{var}(\overline{y}^{i,c}) = \text{var}(\alpha^{i,c}) + \frac{1}{31^2} \times \sum_{h=1}^{31} \sum_{s=1}^{h} \text{var}\left(\eta_s^{i,c}\right) = \sigma_{\alpha,c}^2 + \frac{16 \times 21}{31} \times \sigma_{\eta,c}^2. \tag{1}$$

This expression shows that in this simple framework, lifetime earnings inequality of a cohort is determined by the two components discussed in the scenarios of Figure E.1: (i) initial inequality (at age 25) of the cohort, $\sigma_{\alpha,c}^2$, and (ii) the variance of earnings shocks, $\sigma_{\eta,c}^2$, which determines the rate at which inequality rises over the life-cycle of the cohort.

But how do we determine which one of these two components changed more from one cohort to the next and therefore contributed more to the rise in lifetime inequality in subsequent cohorts? To answer this question, notice that the same two variances in equation (1) also determine the *cross-sectional* variance of log earnings at different ages for a given cohort:

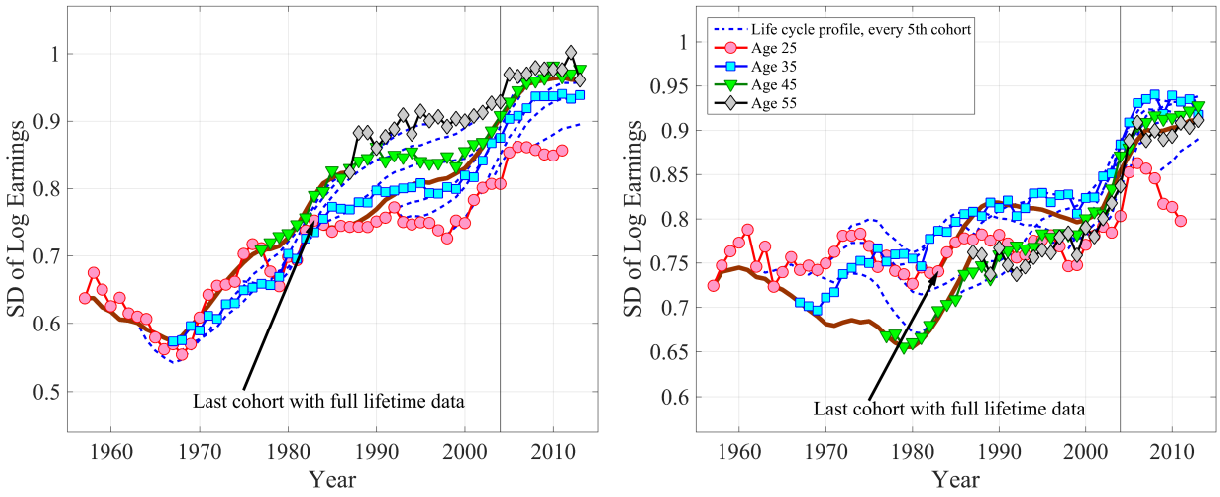
$$\text{var}(y_h^{i,c}) = \text{var}(\alpha^{i,c}) + \sum_{s=1}^{h} \text{var}(\eta_s^{i,c}) = \sigma_{\alpha,c}^2 + h \times \sigma_{\eta,c}^2. \tag{2}$$

This relationship suggests that we can learn about the contribution of each component to rising lifetime inequality by analyzing the evolution of cross-sectional inequality *over the life cycle* of each of the 27 cohorts.

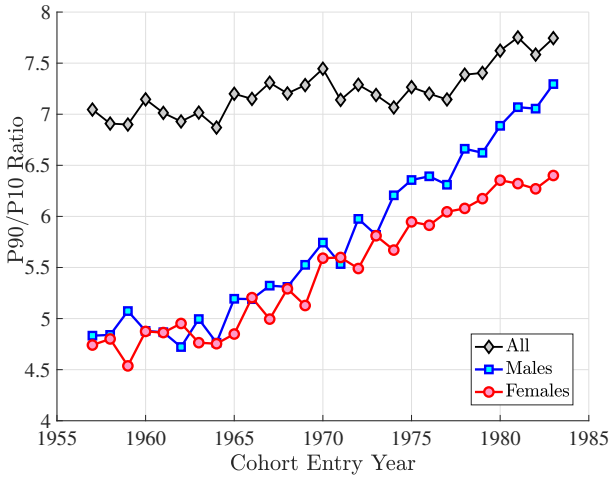
Figure E.2: Age Profiles of SD of Log Earnings, by Cohort

(a) Std Dev. of logs, Men

(b) Std Dev. of logs, Women



Notes: Each observation represents the earnings inequality within men or women of a particular age in a particular year in the baseline sample (see section 2.3). For example, the 1957 cohort is represented by an Age 25 observation in 1957, an Age 35 observation in 1967, an Age 45 observation in 1977, and an Age 55 observation in 1987. The dotted lines (solid for the first and last cohort with full life cycle profiles) connect all available age-year observations for every fifth cohort. Panel (a) displays the standard deviation of log-earnings for men within each age-year group. Panel (b) displays the same for women. Earnings is deflated using the PCE.

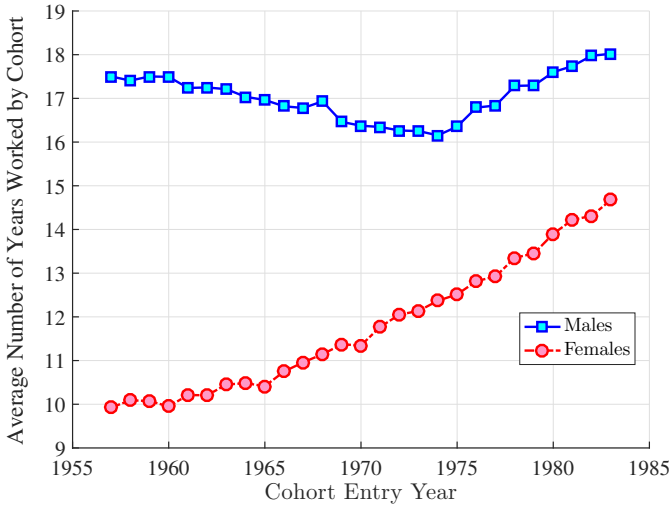


(a) P90/P10

Figure E.3: Cohort Lifetime Inequality (P90/P10), Overall and by Gender

Note: This figure displays P90/P10 of lifetime earnings distribution to complement Figure 8 in Section 5.

Figure E.4: Average Lifetime Years Worked by Cohort, *Sample 0*



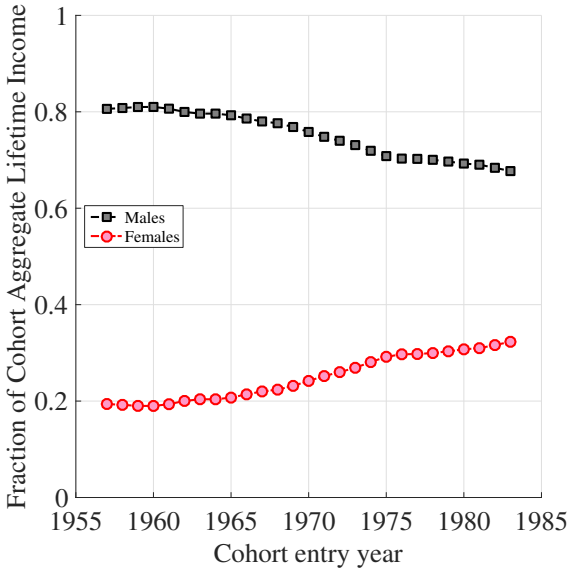


Figure E.5: Share of Cohort Aggregate Earnings Going to Each Gender Group, no earnings or years worked selection

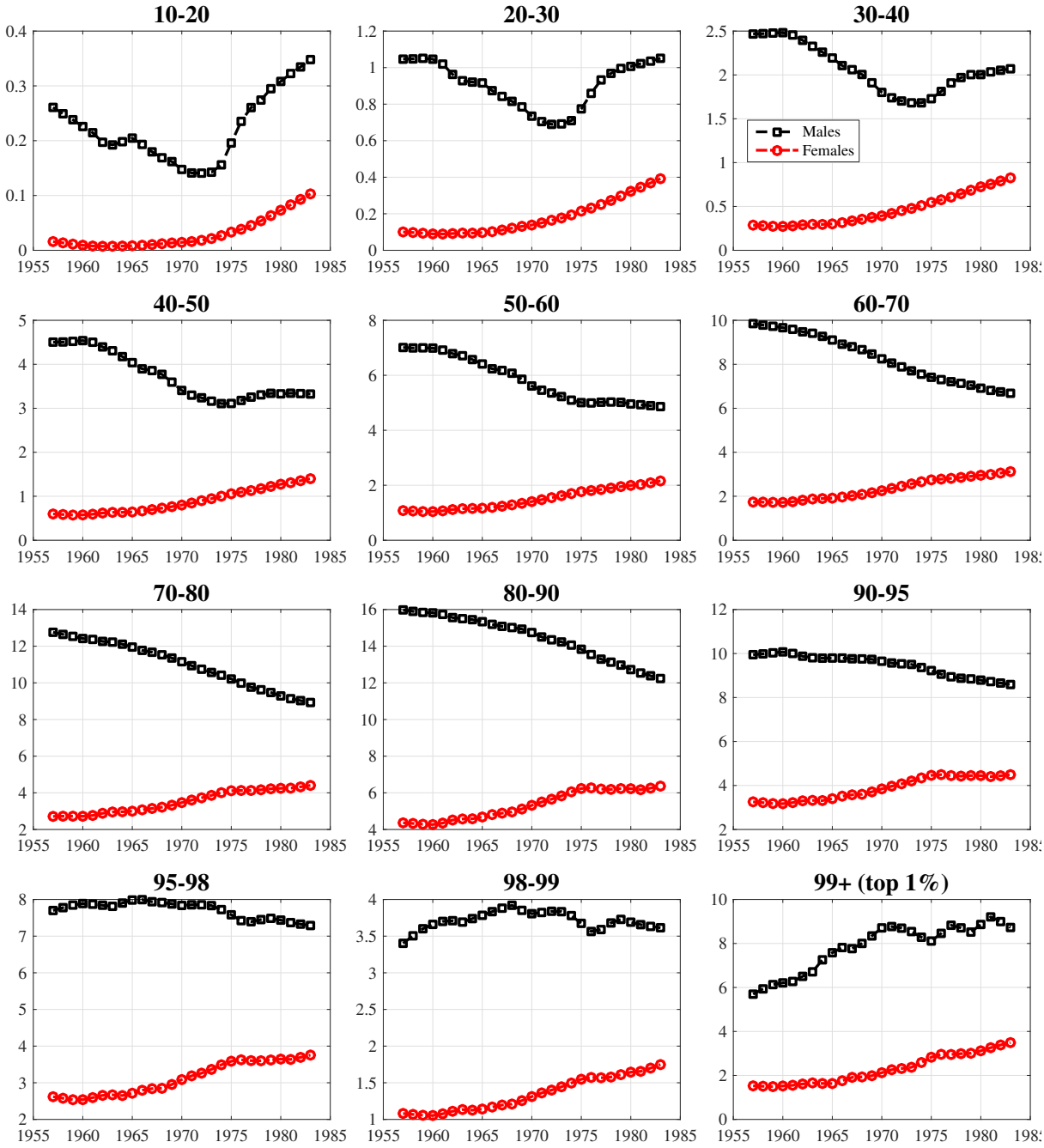


Figure E.6: Share of Cohort Lifetime Earnings Going to Each Gender / Percentile Groups (indicated by the lower and upper end of percentile thresholds), no earnings or years worked selection

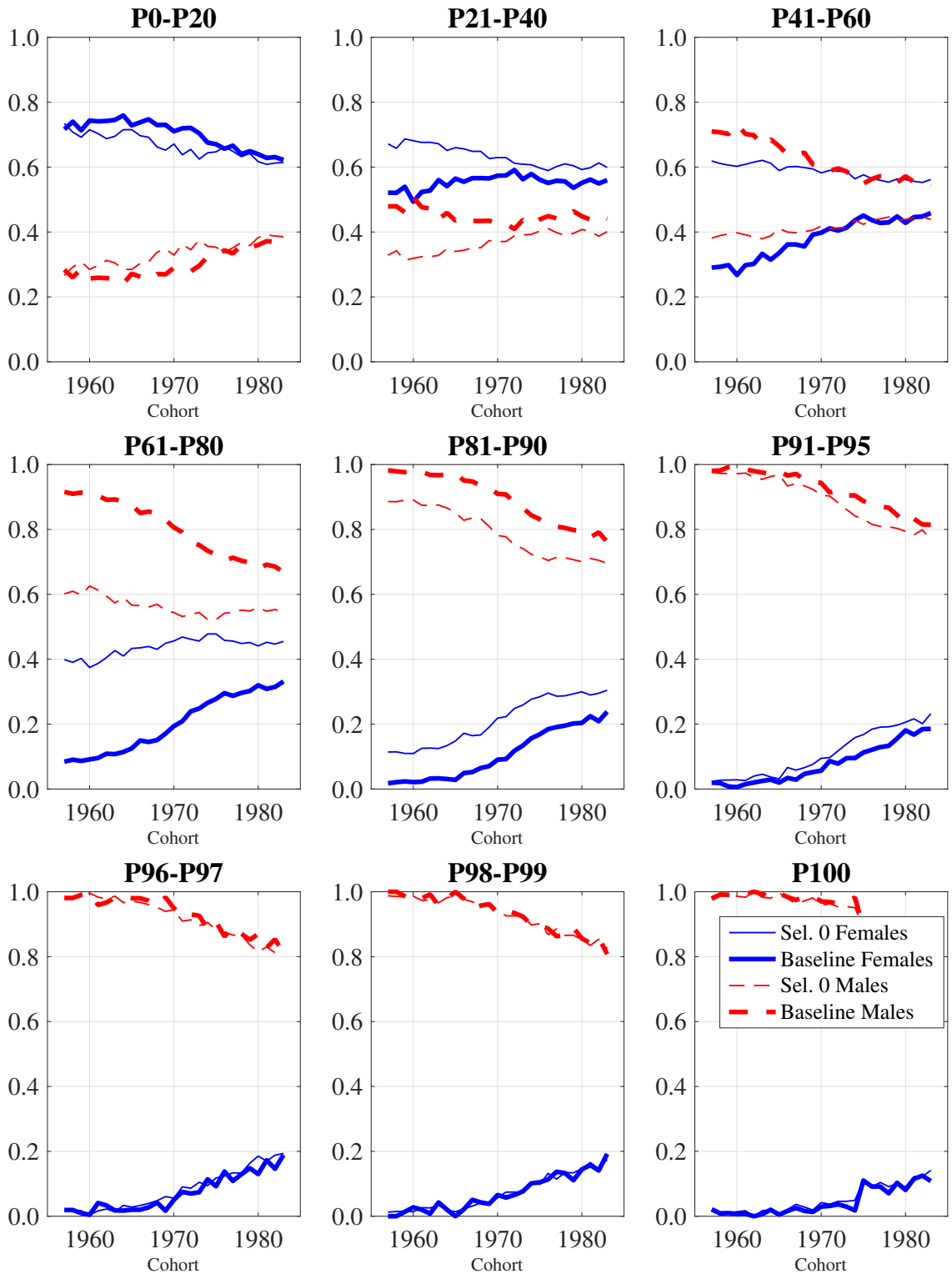


Figure E.7: Fraction of percentile's total lifetime earnings accruing to each gender in that percentile group, 1pc sample

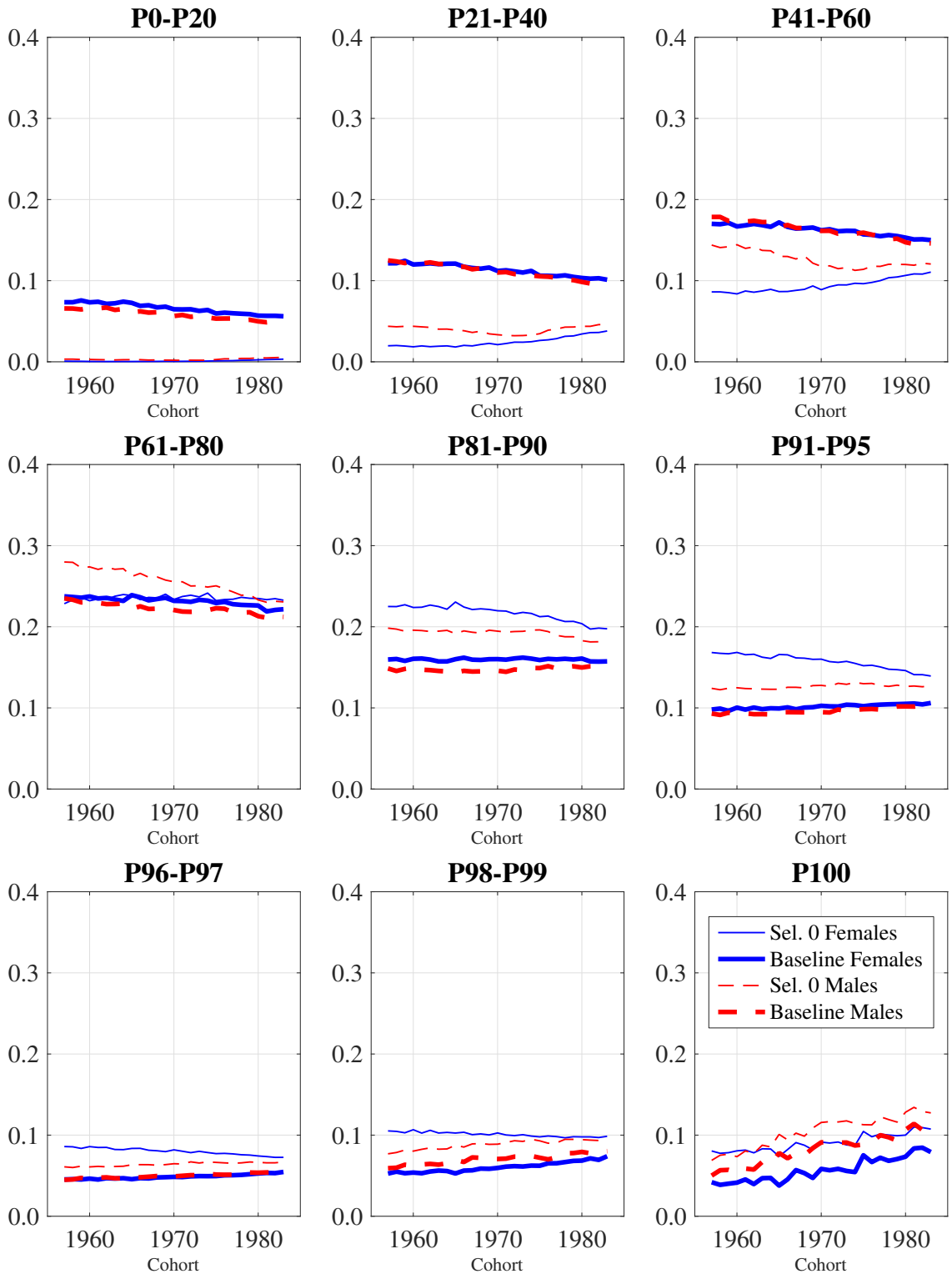


Figure E.8: Fraction of gender's total lifetime earnings accruing to each gender-specific percentile group, 1pc sample

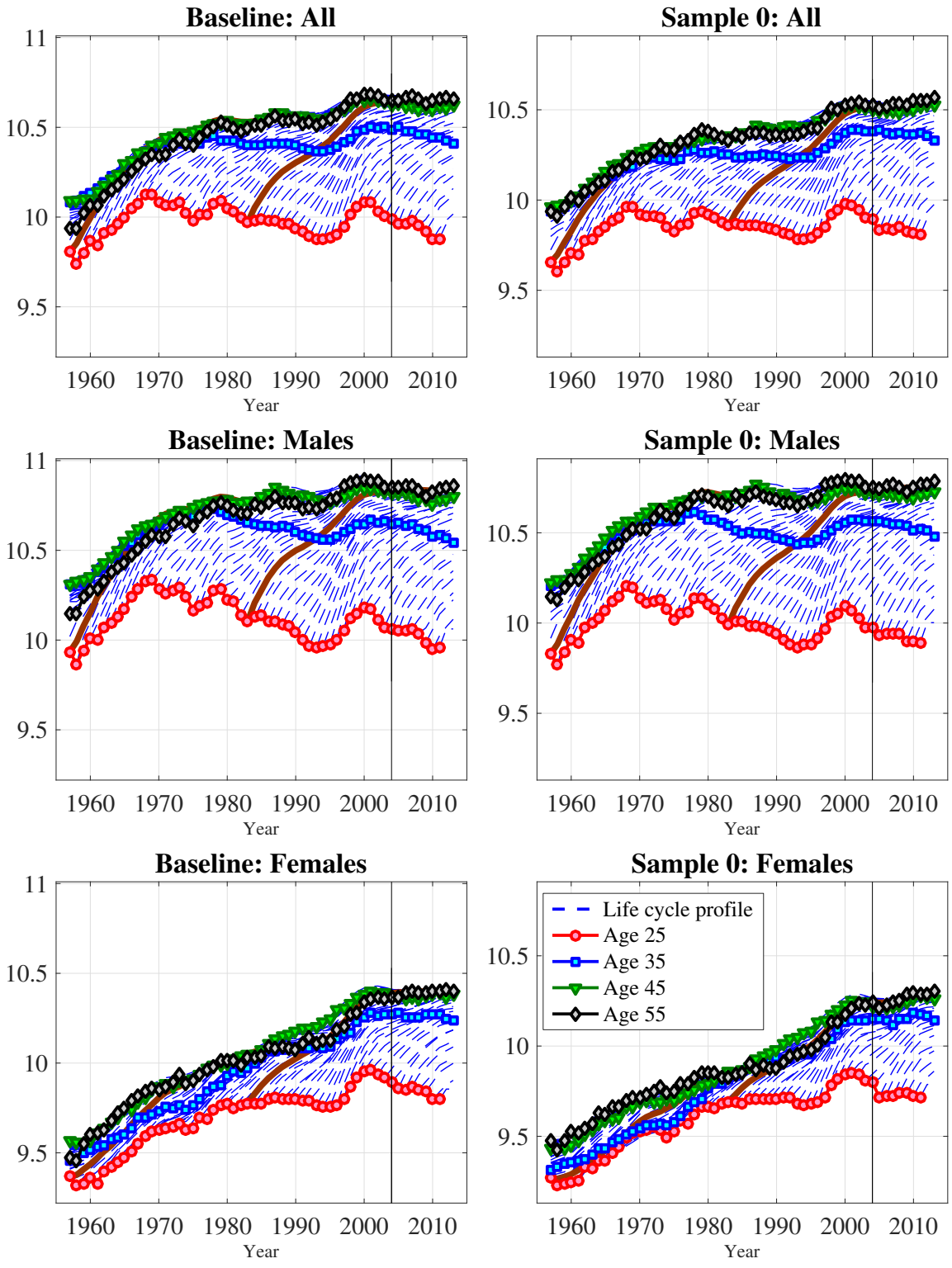


Figure E.9: Mean log earnings, 1pc sample

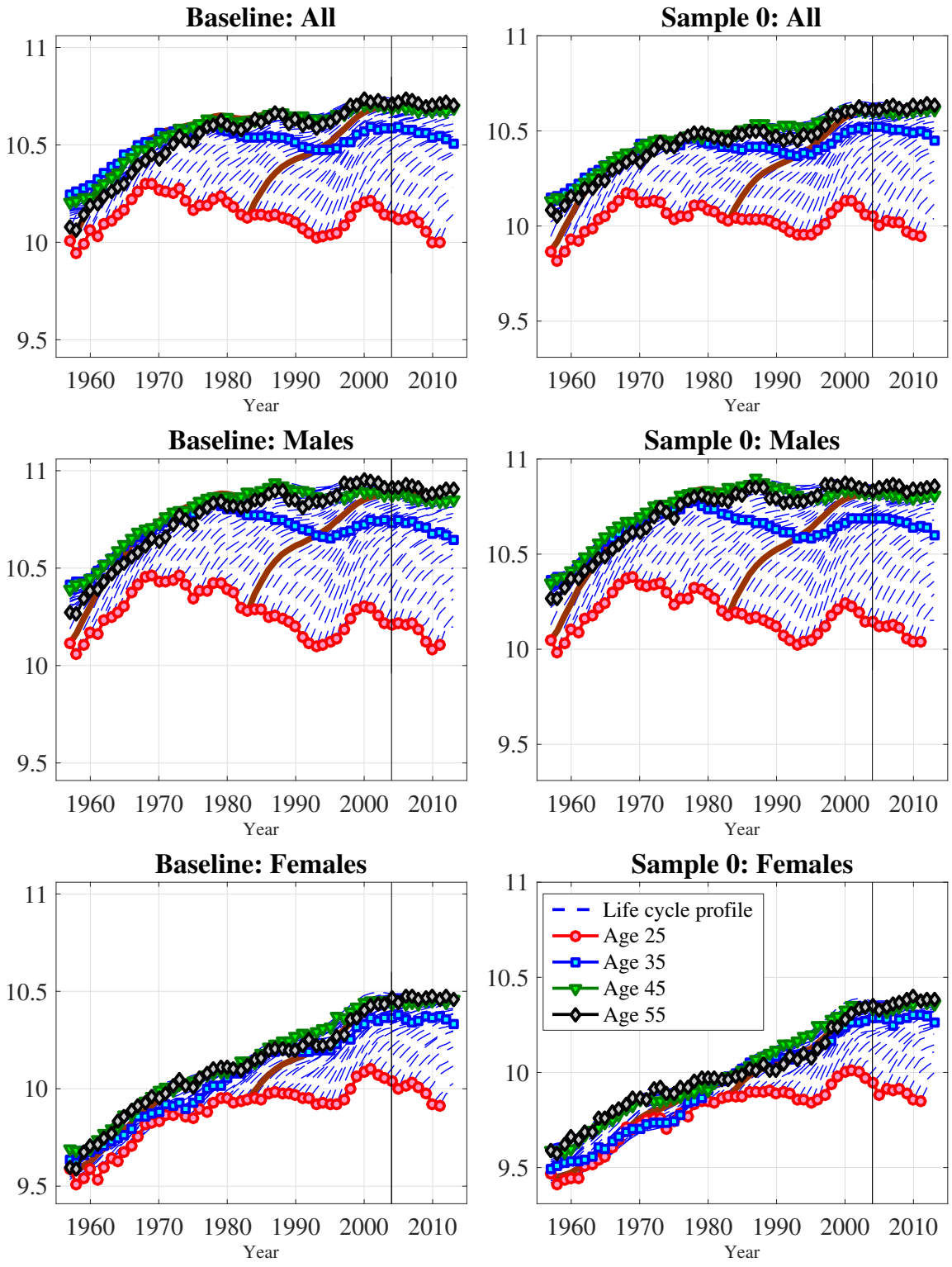


Figure E.10: P50 log earnings, 1pc sample

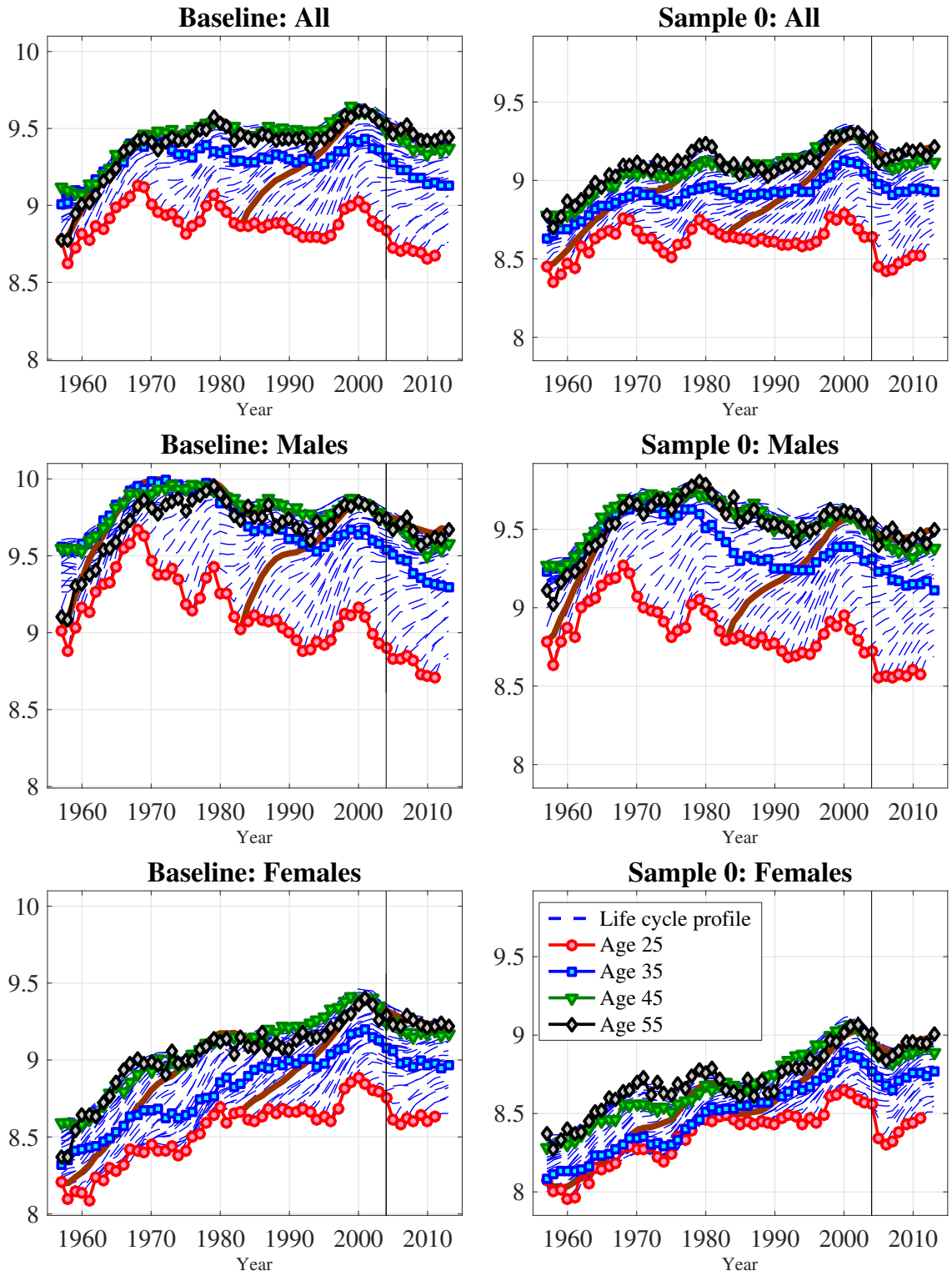


Figure E.11: P10 log earnings, 1pc sample

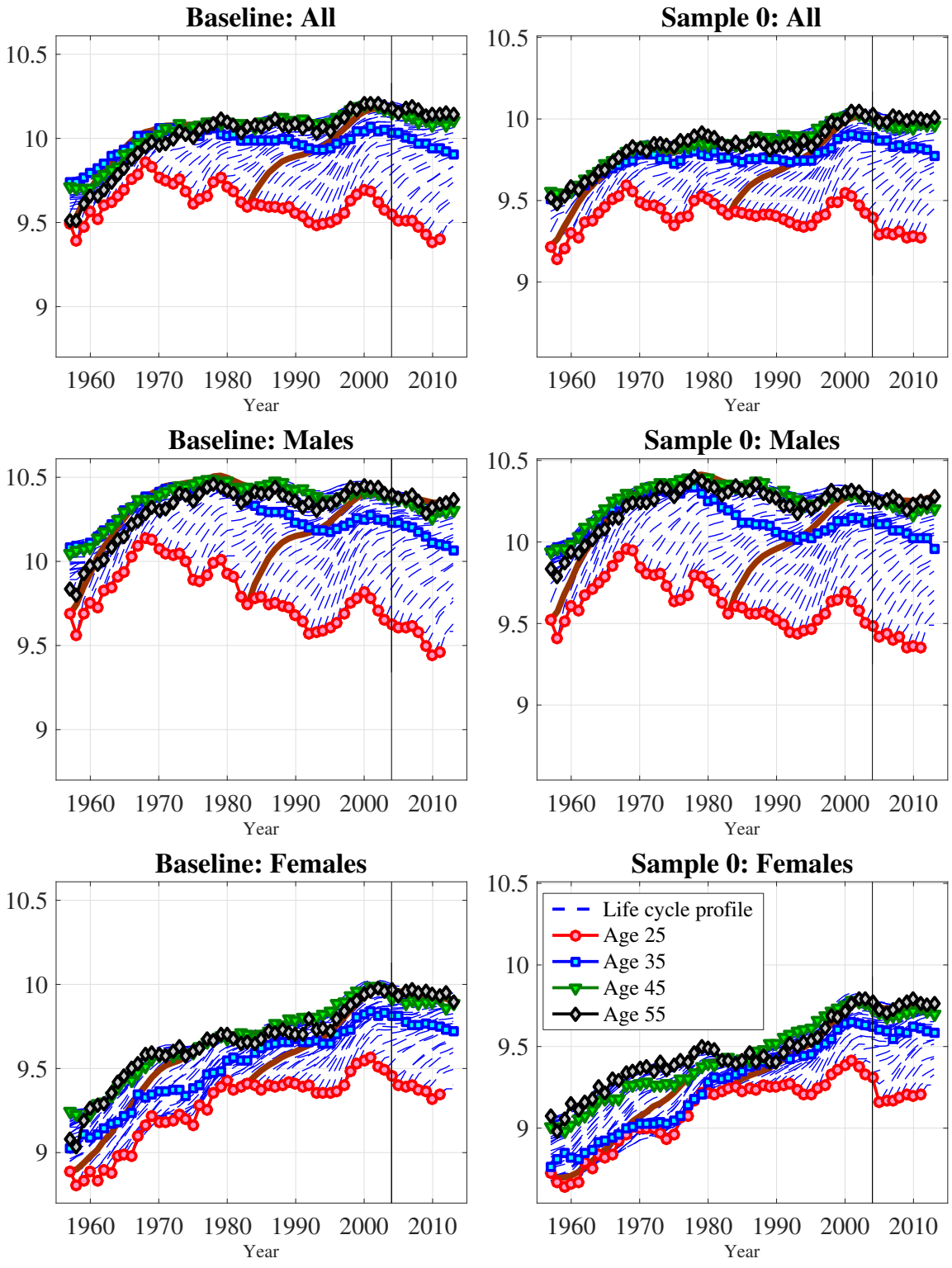


Figure E.12: P25 log earnings, 1pc sample

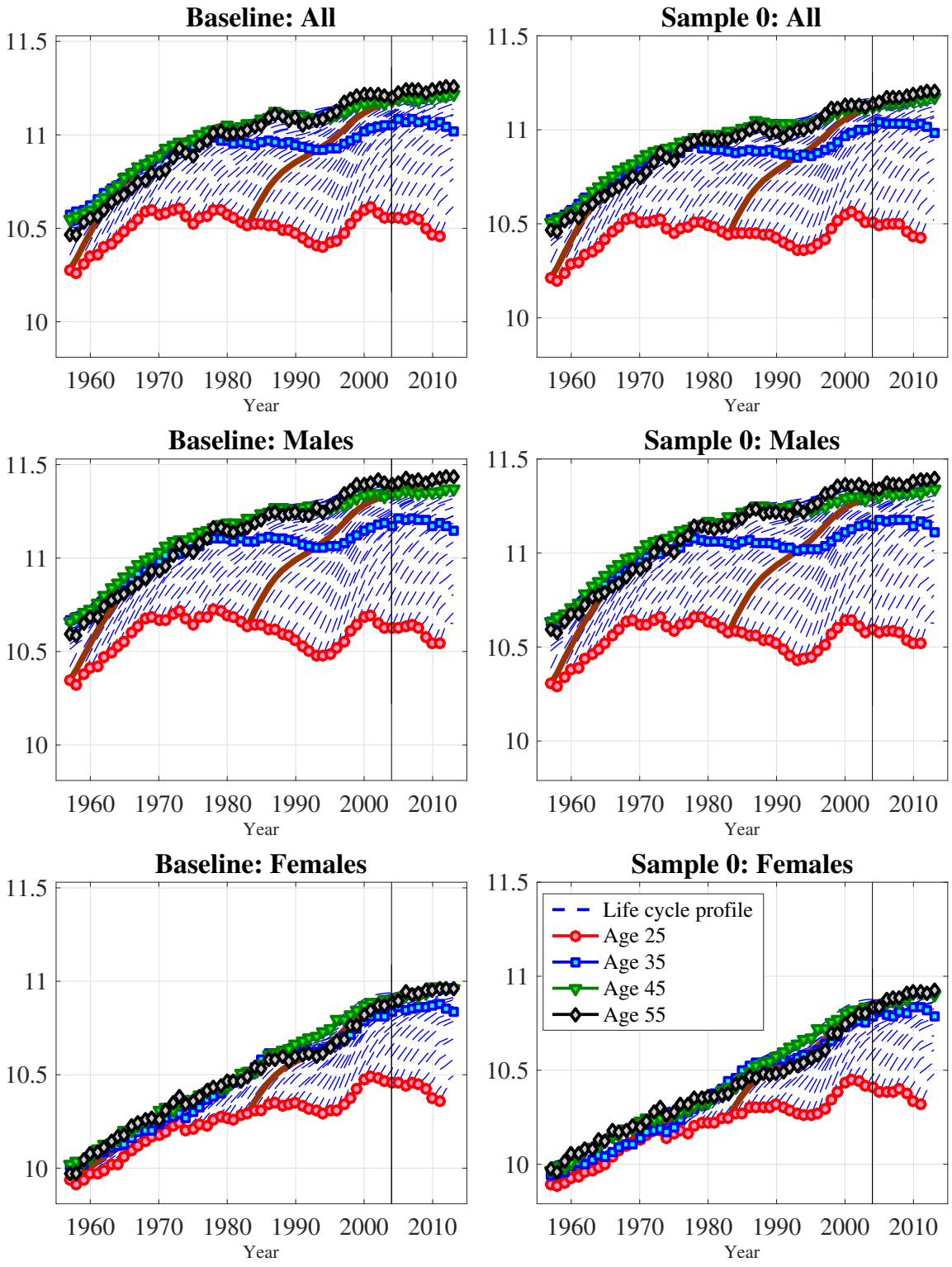


Figure E.13: P75 log earnings, 1pc sample

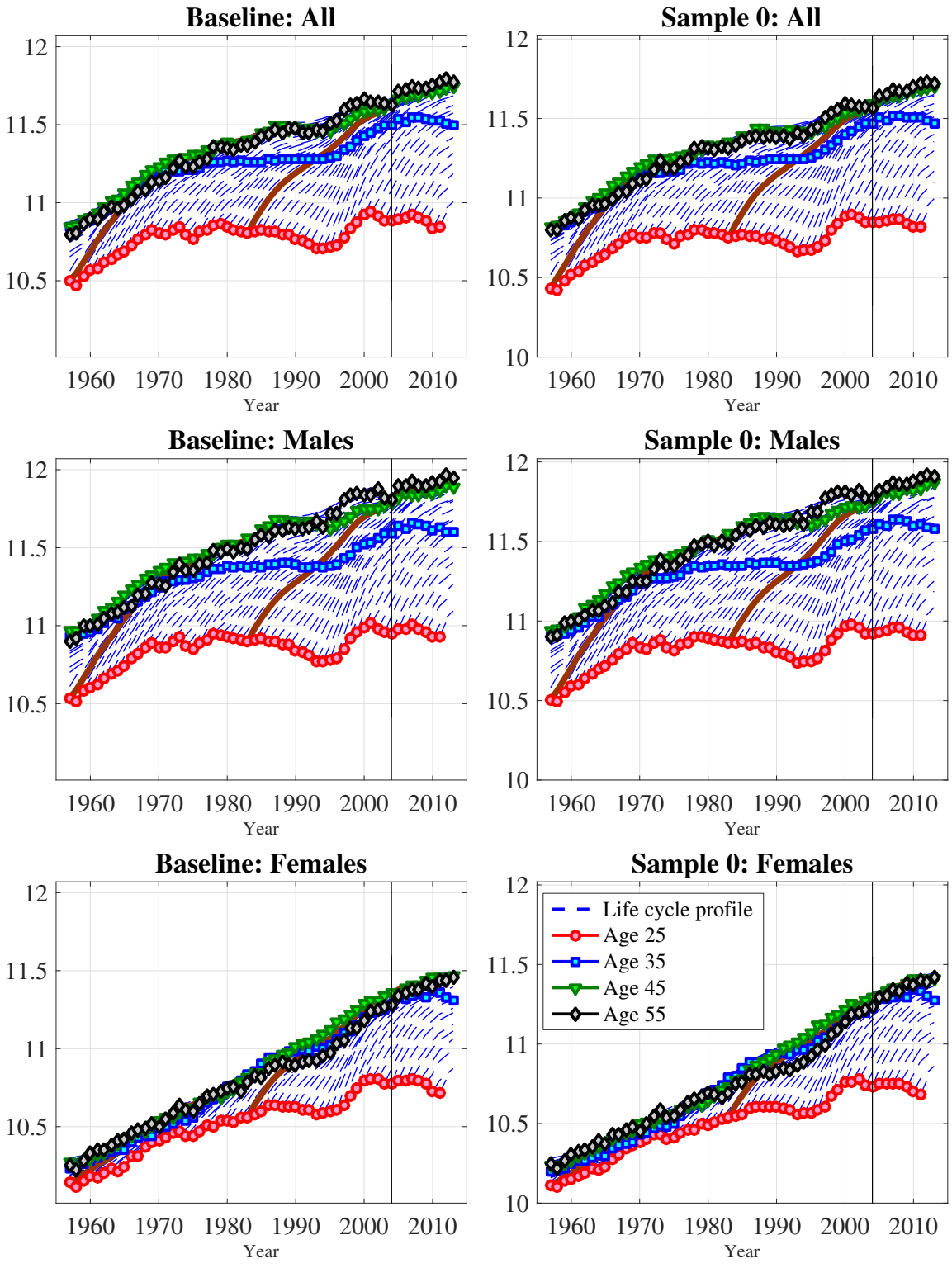


Figure E.14: P90 log earnings, 1pc sample

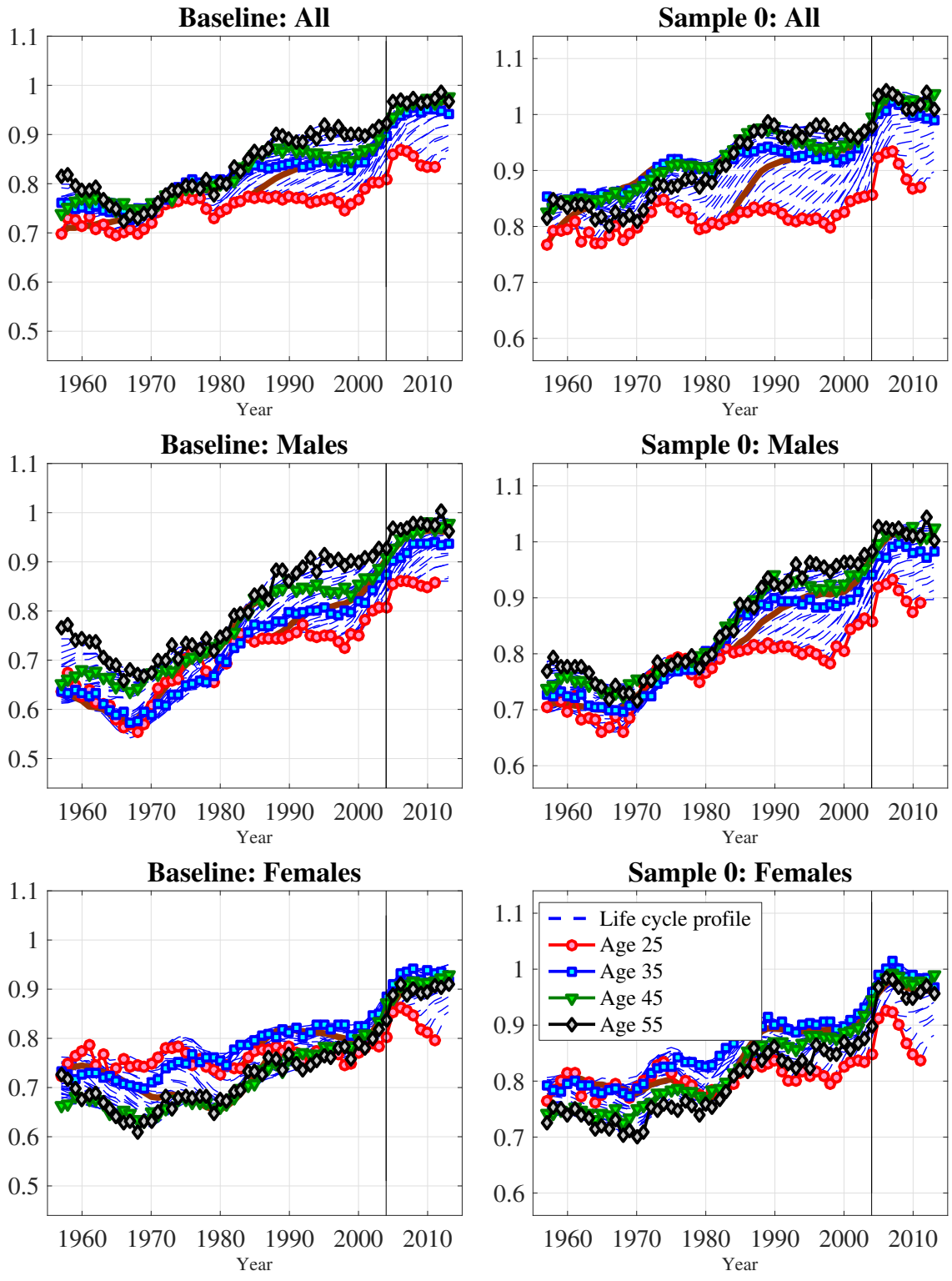


Figure E.15: SD log earnings, 1pc sample

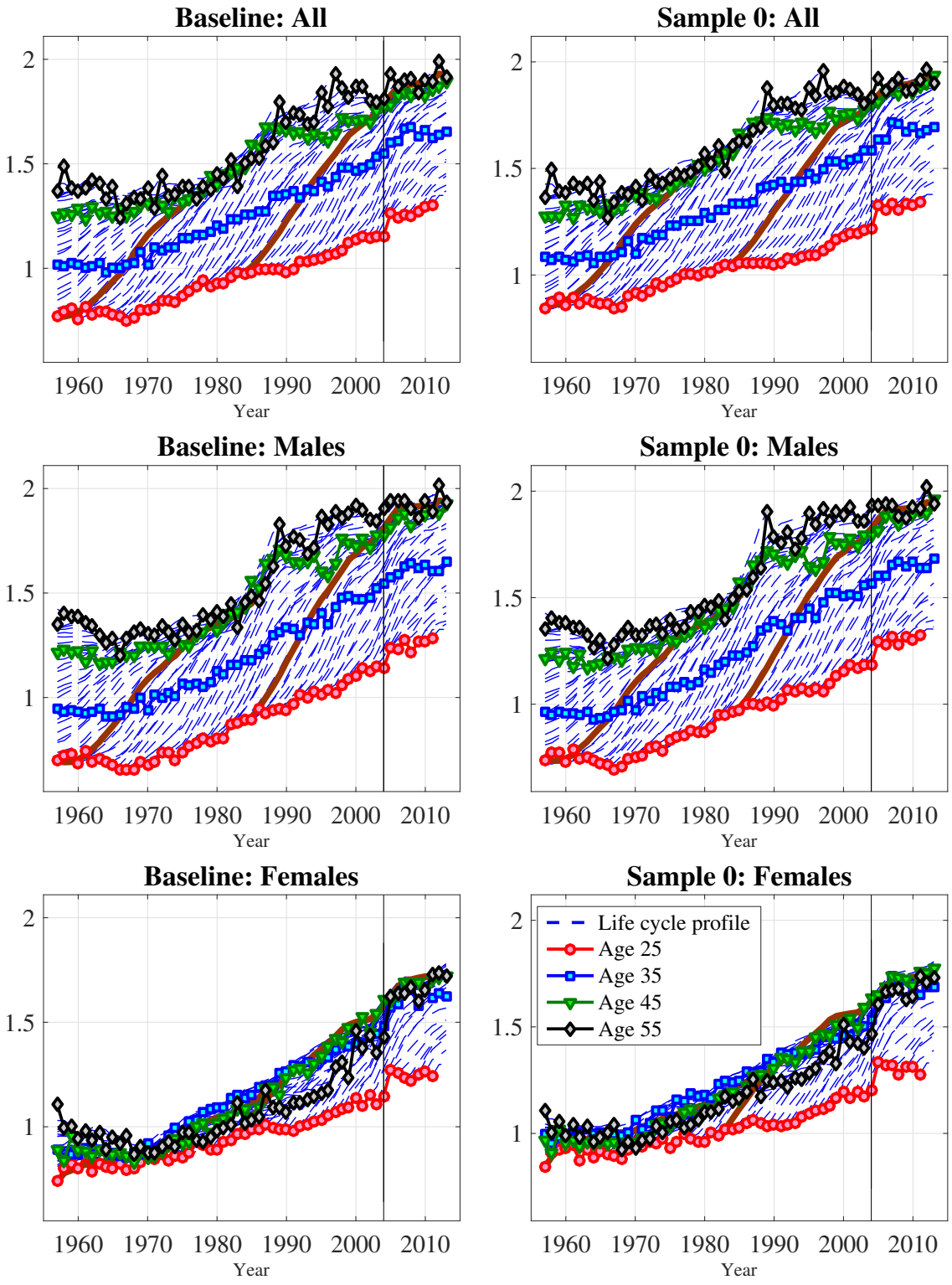


Figure E.16: P98–P50 log earnings, 1pc sample

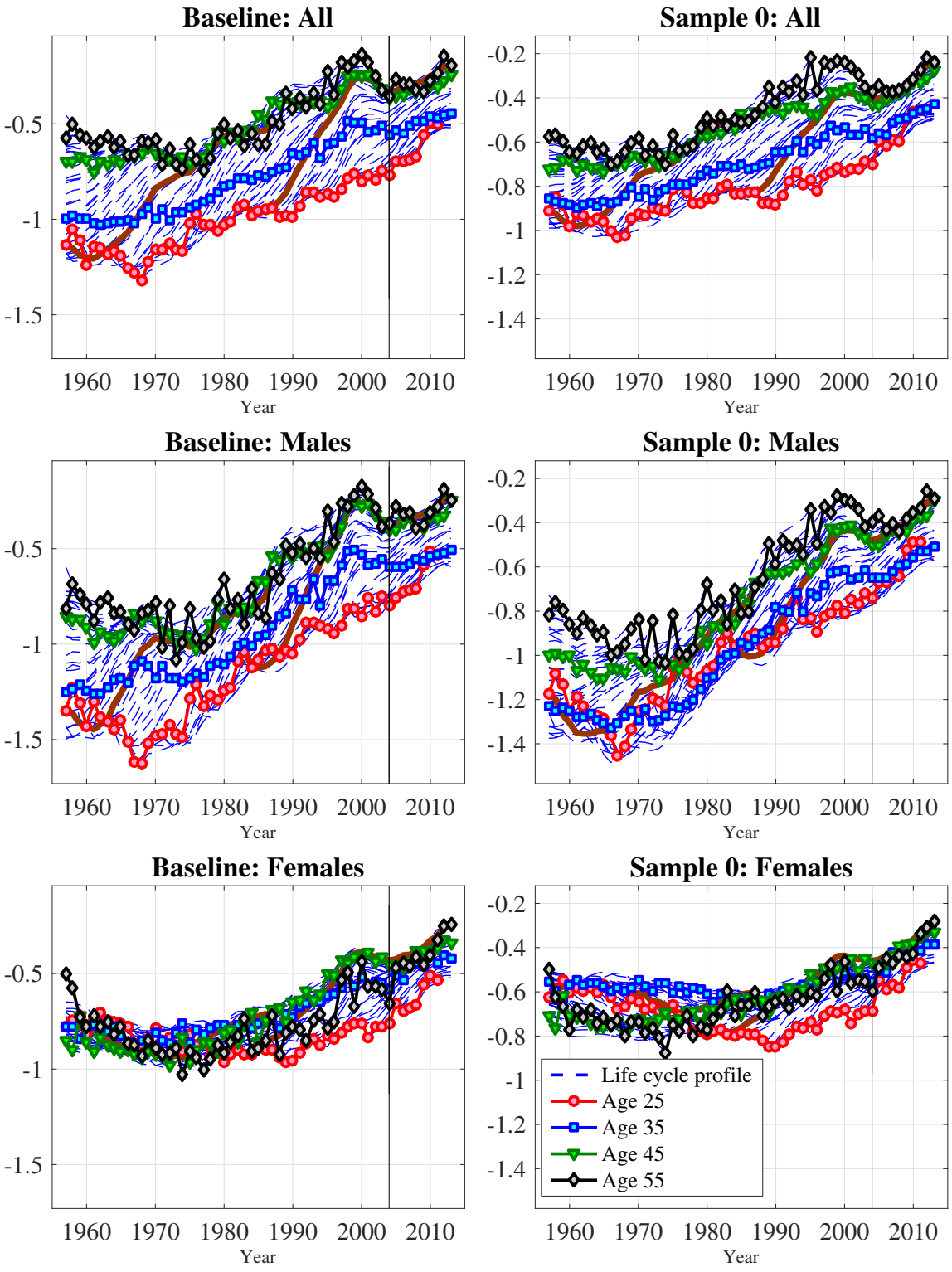


Figure E.17: Skew of log earnings, 1pc sample

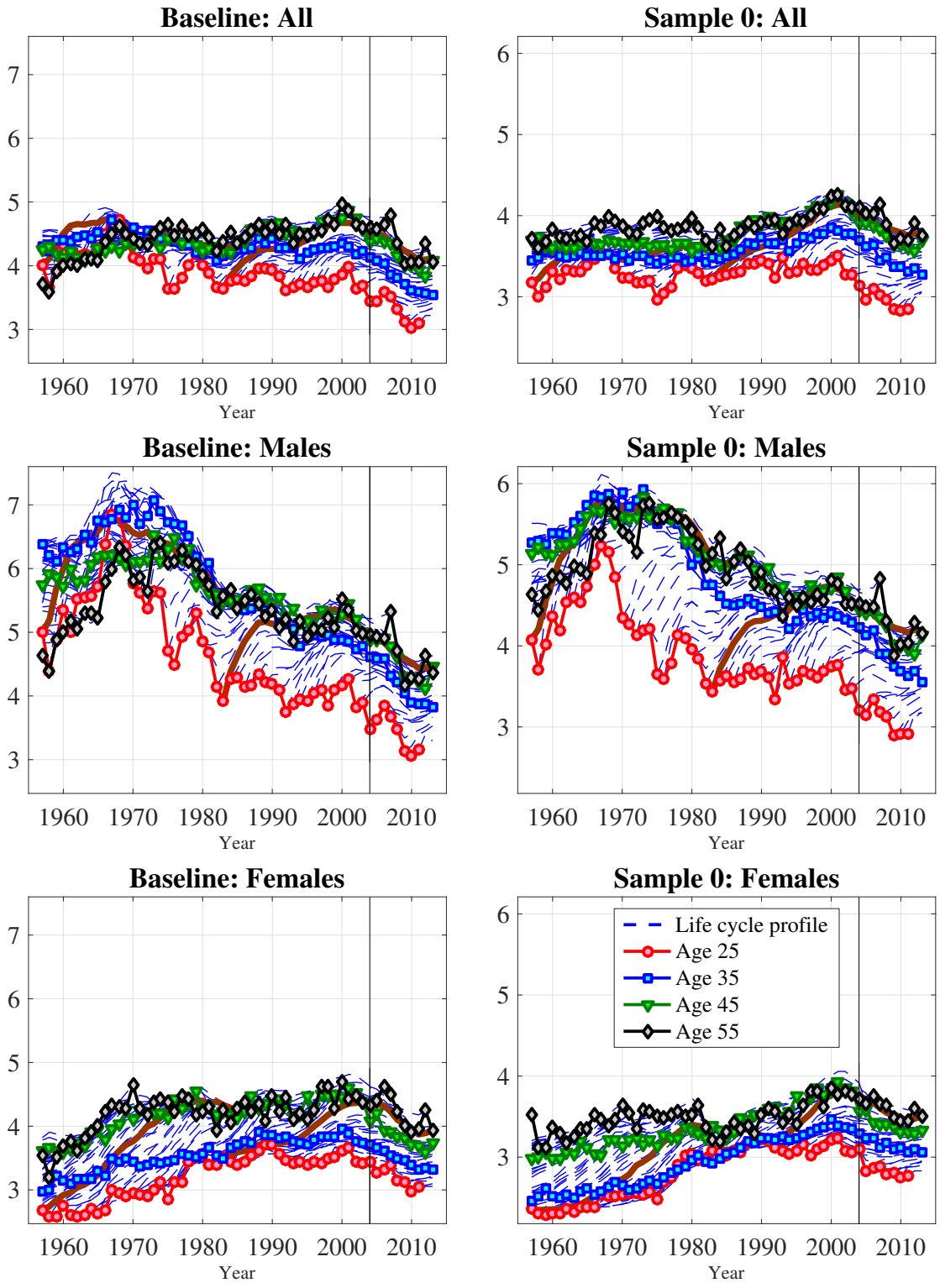


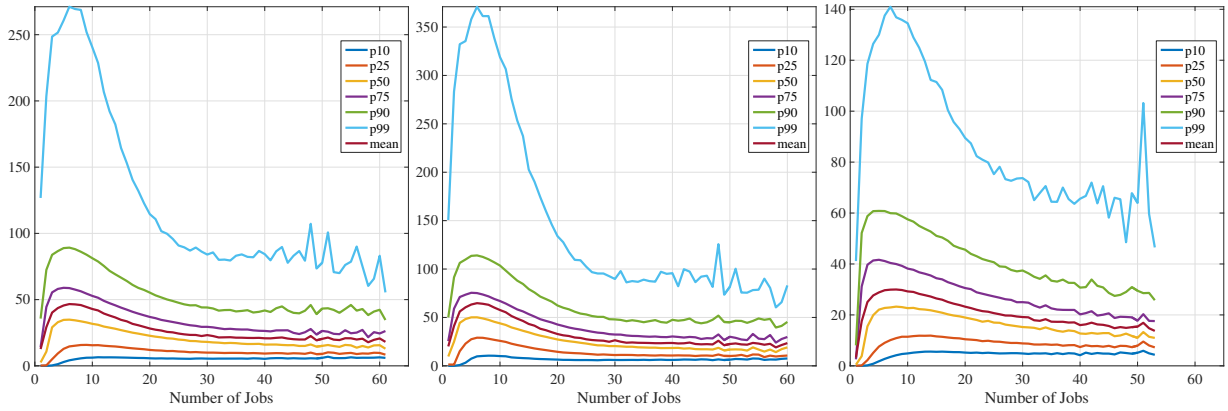
Figure E.18: Kurtosis of log earnings, 1pc sample

Table E.1: Fraction of cohort's total lifetime earnings accruing to each percentile, 1pc sample, selection 0

Selection	Cohort	p0p20	p21p40	p41p60	p61p80	p81p90	p91p95	p96p97	p98p99	rest
0	1957	0.1	2.0	8.2	23.6	23.3	16.0	7.8	9.9	9.0
0	1958	0.1	2.1	8.4	23.5	23.2	15.8	7.6	9.8	9.5
0	1959	0.1	2.0	8.4	23.4	22.7	15.7	7.8	10.1	9.8
0	1960	0.1	2.0	8.3	23.7	22.8	15.8	7.8	10.0	9.5
0	1961	0.1	2.0	8.5	23.4	22.5	15.7	7.7	10.1	10.1
0	1962	0.1	2.0	8.4	23.6	22.7	15.6	7.7	10.0	9.9
0	1963	0.1	2.0	8.4	23.1	22.5	15.6	7.7	10.0	10.6
0	1964	0.1	2.1	8.6	23.2	22.5	15.6	7.6	9.9	10.5
0	1965	0.1	2.0	8.2	22.6	21.9	15.3	7.6	10.3	11.9
0	1966	0.1	2.1	8.4	22.9	22.1	15.4	7.7	10.2	11.1
0	1967	0.1	2.0	8.4	22.6	21.7	15.3	7.7	10.3	12.1
0	1968	0.1	2.1	8.6	23.1	21.6	15.1	7.6	10.1	11.6
0	1969	0.1	2.2	8.7	22.7	21.4	15.2	7.6	10.0	12.1
0	1970	0.1	2.1	8.5	22.4	21.4	15.1	7.6	10.2	12.6
0	1971	0.1	2.2	8.7	22.7	21.2	14.9	7.5	10.1	12.7
0	1972	0.1	2.3	8.9	22.5	20.8	14.8	7.6	10.3	12.6
0	1973	0.1	2.4	8.9	22.8	20.9	14.8	7.5	10.1	12.5
0	1974	0.1	2.5	9.2	22.8	20.8	14.8	7.6	10.2	12.1
0	1975	0.2	2.7	9.2	22.7	20.8	14.7	7.4	10.1	12.3
0	1976	0.2	2.9	9.7	23.0	20.5	14.6	7.4	9.9	11.9
0	1977	0.2	3.0	9.8	22.7	20.2	14.3	7.3	9.9	12.7
0	1978	0.2	3.2	10.1	22.7	19.8	14.1	7.2	10.0	12.6
0	1979	0.3	3.3	10.2	22.7	19.8	14.1	7.3	10.1	12.2
0	1980	0.3	3.5	10.3	22.5	19.3	13.8	7.2	9.9	13.1
0	1981	0.3	3.6	10.4	22.2	19.0	13.7	7.2	9.9	13.6
0	1982	0.3	3.6	10.6	22.3	19.0	13.7	7.2	9.9	13.3
0	1983	0.4	3.8	10.7	22.4	18.9	13.6	7.2	10.1	12.9

Table E.2: Fraction of cohort's total lifetime earnings accruing to each percentile, 1pc sample, selection 3

Selection	Cohort	p0p20	p21p40	p41p60	p61p80	p81p90	p91p95	p96p97	p98p99	rest
3	1957	5.2	10.2	16.3	24.6	16.4	10.2	5.0	6.4	5.7
3	1958	5.1	10.1	16.2	24.6	16.2	10.1	4.9	6.5	6.2
3	1959	5.2	10.0	15.9	24.0	16.2	10.3	5.1	6.8	6.3
3	1960	5.1	10.1	16.3	24.1	16.3	10.3	5.0	6.7	6.0
3	1961	5.2	10.0	15.9	23.9	16.2	10.3	5.1	6.9	6.5
3	1962	5.2	10.1	16.0	24.0	16.1	10.2	5.0	6.9	6.4
3	1963	5.1	9.8	15.7	23.9	16.2	10.2	5.1	6.9	7.2
3	1964	5.2	9.9	15.7	24.0	16.2	10.1	5.1	6.9	7.1
3	1965	4.9	9.6	15.3	23.1	15.9	10.2	5.2	7.2	8.4
3	1966	5.0	9.8	15.5	23.5	16.0	10.3	5.2	7.0	7.7
3	1967	4.9	9.5	15.1	23.1	15.9	10.3	5.2	7.5	8.4
3	1968	4.9	9.7	15.3	23.1	15.9	10.2	5.2	7.5	8.1
3	1969	4.9	9.6	15.1	22.9	16.0	10.3	5.1	7.3	8.8
3	1970	4.9	9.5	15.0	22.8	15.8	10.3	5.2	7.2	9.4
3	1971	5.0	9.6	15.0	22.7	15.7	10.2	5.2	7.3	9.4
3	1972	4.9	9.5	14.8	22.4	15.8	10.5	5.4	7.5	9.3
3	1973	4.9	9.6	15.0	22.5	15.8	10.2	5.2	7.3	9.3
3	1974	5.1	9.6	14.9	22.5	15.9	10.4	5.3	7.5	8.8
3	1975	4.9	9.5	15.0	22.6	15.8	10.3	5.3	7.4	9.1
3	1976	5.0	9.6	15.0	22.4	15.9	10.4	5.3	7.2	9.0
3	1977	5.0	9.5	14.8	22.2	15.7	10.3	5.3	7.4	9.8
3	1978	4.9	9.4	14.6	22.0	15.8	10.4	5.4	7.8	9.6
3	1979	4.9	9.4	14.6	22.0	15.8	10.6	5.5	7.8	9.4
3	1980	4.7	9.3	14.4	21.6	15.6	10.6	5.5	7.8	10.5
3	1981	4.7	9.1	14.1	21.3	15.6	10.7	5.5	7.8	11.1
3	1982	4.8	9.2	14.1	21.5	15.7	10.7	5.5	7.9	10.7
3	1983	4.8	9.1	14.2	21.5	15.7	10.8	5.7	8.0	10.3

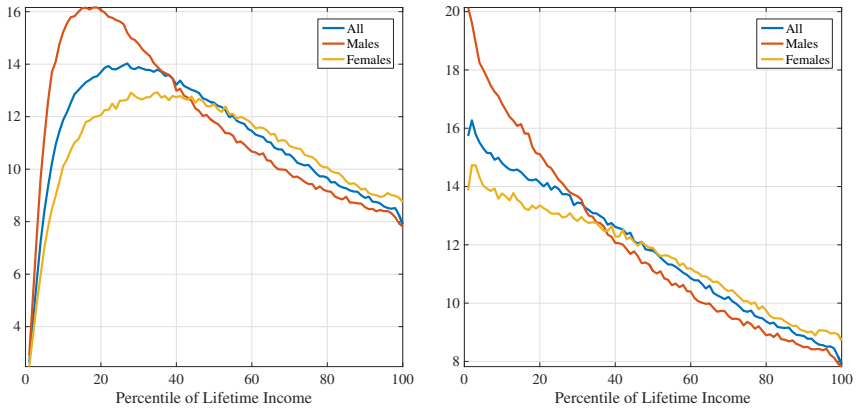


(a) All (b) Males (c) Females

Figure F.1: Distribution of lifetime earnings by number of unique jobs, broad sample

F Additional Figures on Lifetime Incomes Today

This appendix reports additional statistics on the distribution of lifetime earnings and its relationship with the number of jobs workers have, the state they live in, and the overall level of inequality for a sample that has a broader selection criteria (is more inclusive) than the baseline sample used in the main text. The data source is a 10% extract of the MEF from 1978 to 2013, which includes earnings data that is non-topcoded and covers all individuals regardless of the sector of the job they hold. Statistics are reported for this "broad sample" which includes all US-born individuals without a minimum threshold for lifetime earnings level, as well as for a "narrow sample," which coincides with the baseline sample in the main text.



(a) Broad sample (b) Narrow sample

Figure F.2: Average number of unique EINs by lifetime earnings percentile

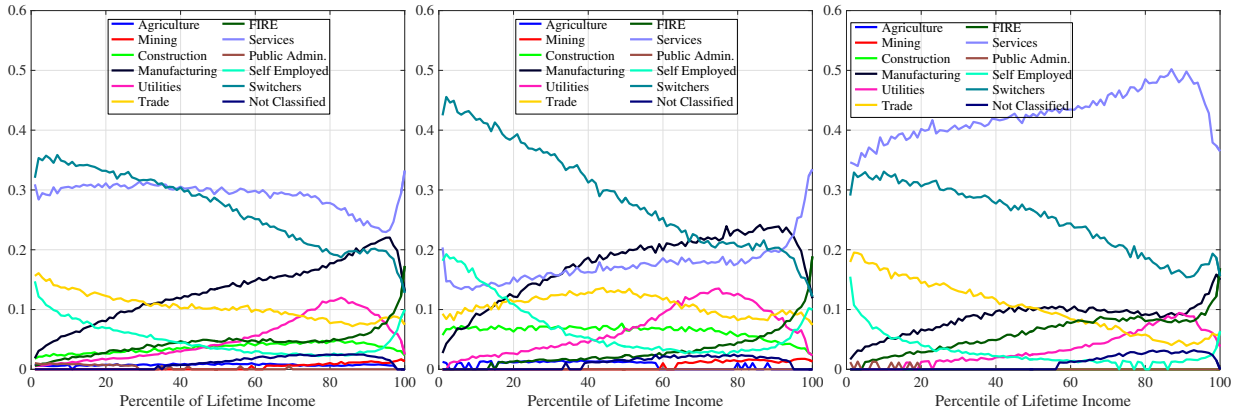
Table F.1: Lifetime Earnings Inequality: Broad Sample

	Mean	Inequality					Mean yrs
	($'000)	Sd Log	IQR	90-10	90-50	50-10	> $1,560
Lifetime Earnings							
All	39.08	1.39	3.97	19.09	2.71	7.05	24.2
Males	51.40	1.32	3.22	14.88	2.45	6.06	25.7
Females	26.99	1.38	4.01	19.28	2.70	7.15	22.8
							Fraction
Annual Earnings							present
All	36.99	1.25	14.49		3.03		78.0
Males	48.50	1.18	6.92		2.67		82.8
Females	25.14	1.26	28.40		3.28		72.9
Annual Earnings (CPS)							
All	35.99	1.14	7.25		2.71		
Males	48.23	1.00	3.13		2.37		
Females	24.12	1.19	88.39		3.13		

Table F.2: Lifetime Earnings Distribution: Broad Sample

	Percentiles						
	p10	p25	p50	p75	p90	p95	p99
Broad Sample							
All	4.38	13.51	30.44	53.34	81.97	108.95	229.35
Males	7.01	21.00	41.66	67.01	101.44	138.28	306.61
Females	3.14	9.85	22.07	39.32	59.40	74.90	128.14
Annual Earnings							
All	0.00	4.11	25.74	49.38	78.16	104.51	224.35
Males	0.00	10.74	35.54	61.33	94.20	129.63	295.84
Females	0.00	1.44	17.83	36.74	57.31	74.02	134.25
Annual Earnings (CPS)							
All	0.00	7.95	28.12	49.80	76.39	98.97	196.26
Males	1.83	20.28	39.36	62.40	93.04	121.71	290.09
Females	0.00	1.03	18.14	36.19	55.31	70.06	114.97

Notes: Statistics for US-born individuals only. Lifetime statistics refer to 31 years of earnings between ages 25 and 55 for the cohorts turning 25 in 1978 to 1983. Annual statistics are averages of annual statistics based on annual cross-sections from 1978 to 2013. For annual statistics, no additional restrictions are imposed. For lifetime statistics, data is restricted to individuals who survive until age 55.



(a) All (b) Males (c) Females

Figure F.3: Fraction of each percentile of lifetime earnings in each industry, narrow sample

Table F.3: Lifetime Earnings Inequality: Narrow Sample

	Mean	Inequality				
	($'000)	Sd Log	IQR	90-10	90-50	50-10
Lifetime Earnings						
All	45.26	0.80	2.84	7.42	2.43	3.05
Males	57.40	0.78	2.53	6.75	2.32	2.91
Females	32.28	0.74	2.73	6.52	2.33	2.80
Annual Earnings						
All	47.38	0.95	3.04	10.36	2.47	4.20
Males	58.69	0.93	2.75	9.20	2.36	3.88
Females	34.16	0.90	3.04	9.72	2.33	4.17
Annual Earnings (CPS)						
All	44.61	0.86	2.75	8.04	2.35	3.44
Males	54.09	0.79	2.48	6.43	2.23	2.88
Females	33.17	0.84	2.79	8.12	2.23	3.66

Notes: Statistics for US-born individuals only. Lifetime statistics refer to 31 years of earnings between ages 25 and 55 for the cohorts turning 25 in 1978 to 1983. Annual statistics are averages of annual statistics based on annual cross-sections from 1978 to 2013. For annual statistics, no additional restrictions are imposed. For lifetime statistics, data is restricted to individuals who survive until age 55.

Table F.4: Lifetime Earnings Distribution: Narrow Sample

	Percentiles						
	p10	p25	p50	p75	p90	p95	p99
Broad Sample							
All	11.07	19.19	33.80	54.50	82.14	109.73	167.92
Males	14.87	26.22	43.28	66.42	100.36	138.01	218.13
Females	9.19	15.07	25.71	41.17	59.86	75.11	101.27
Annual Earnings							
All	8.35	18.73	34.95	57.04	86.68	116.53	254.09
Males	11.25	24.74	43.46	67.98	102.77	142.48	328.24
Females	6.60	14.45	27.37	43.69	64.34	82.34	152.13
Annual Earnings (CPS)							
All	10.40	20.37	35.32	56.02	83.20	107.51	234.48
Males	15.17	26.83	43.49	66.32	97.17	127.61	295.26
Females	7.71	15.47	27.68	43.04	61.99	77.37	126.39

Table F.5: Fraction of State's Population in Each Decile of Lifetime Earnings: Broad Sample

	Deciles of Lifetime Earnings									
	1	2	3	4	5	6	7	8	9	10
AK	12.63	11.37	10.37	10.13	8.78	9.49	9.18	9.01	9.75	9.30
AL	12.61	12.33	11.56	11.33	10.67	9.95	9.27	8.56	7.42	6.30
AR	14.01	12.54	11.85	11.32	10.66	10.08	9.08	8.01	6.68	5.76
AZ	12.22	11.67	10.58	10.28	10.23	10.12	9.40	8.86	8.79	7.85
CA	11.92	10.27	9.64	9.17	9.01	8.97	9.08	9.63	10.83	11.50
CO	15.65	13.22	11.03	9.94	9.40	9.06	8.26	8.24	7.68	7.53
CT	6.11	7.71	8.43	8.96	8.97	9.59	10.26	11.83	13.49	14.65
DC	9.14	8.42	8.14	8.36	8.45	9.02	9.77	10.95	12.96	14.77
DE	7.35	9.38	8.77	9.38	10.26	10.21	10.52	11.25	11.77	11.13
FL	11.79	11.48	11.19	10.96	10.78	10.09	9.59	8.90	7.90	7.31
GA	11.94	11.85	11.43	11.12	10.67	10.41	9.86	8.83	7.72	6.16
HI	6.87	7.51	8.50	9.06	10.10	11.24	12.27	12.09	12.58	9.78
IA	6.25	8.44	9.71	10.40	10.97	12.07	12.38	10.99	9.54	9.26
ID	12.95	11.47	10.68	9.82	9.73	9.36	9.69	9.30	8.91	8.08
IL	8.97	9.25	9.30	9.51	9.34	9.71	10.02	10.75	11.27	11.89
IN	12.43	10.71	10.20	9.87	9.69	9.45	9.24	9.52	9.31	9.57
KS	15.34	13.71	11.54	9.97	9.52	8.69	8.56	8.00	7.77	6.90
KY	11.73	11.51	11.14	10.94	10.81	10.47	9.92	9.06	8.08	6.34
LA	14.31	12.25	11.34	10.66	10.02	9.53	8.93	7.99	7.71	7.24
MA	6.62	7.95	8.75	9.24	9.43	9.73	10.40	11.20	12.50	14.18
MD	9.10	9.22	9.46	9.81	9.90	10.05	10.48	10.63	11.18	10.17
ME	8.76	10.41	11.47	11.35	11.10	11.04	10.93	9.60	8.20	7.16
MI	9.72	9.69	9.73	9.36	9.34	9.25	9.62	10.37	11.60	11.32
MN	5.81	7.85	9.14	9.91	10.71	11.56	12.12	12.10	11.11	9.69
MO	9.16	9.77	10.19	10.46	10.71	10.68	10.28	9.68	9.77	9.30
MS	14.08	12.42	12.30	11.94	11.00	10.18	8.93	7.65	6.52	4.98
MT	9.39	10.94	11.30	10.73	10.52	10.62	9.81	9.28	8.91	8.49
NC	9.17	10.35	11.19	12.14	12.69	11.82	10.72	8.78	7.26	5.86
ND	6.34	8.61	10.83	10.78	11.31	11.75	10.84	10.54	10.03	8.97
NE	6.86	8.90	10.17	10.95	11.37	11.56	11.05	10.71	9.36	9.07
NH	5.84	8.18	10.17	9.76	11.14	12.09	12.42	11.98	9.61	8.79
NJ	7.38	8.31	8.40	8.51	8.87	9.00	9.69	10.67	12.95	16.22
NM	11.88	11.11	11.18	10.36	10.86	10.41	9.69	8.53	8.79	7.19
NV	10.11	8.91	9.94	9.78	9.81	10.64	10.61	10.58	10.48	9.14
NY	8.82	8.66	8.87	8.92	8.94	9.02	9.19	10.26	11.84	15.49
OH	9.04	9.69	9.80	10.03	9.99	10.22	10.76	10.87	10.27	9.34
OK	10.44	11.04	10.79	10.53	10.48	10.68	9.95	9.36	8.61	8.11
OR	9.67	10.45	10.99	10.23	10.29	10.15	10.35	10.56	9.49	7.82
PA	8.20	8.80	9.21	9.67	9.98	10.32	10.82	11.14	10.92	10.93
RI	6.75	8.03	9.11	9.76	9.89	10.82	10.96	11.39	11.45	11.84
SC	11.26	11.21	11.46	11.61	11.80	11.03	10.35	8.67	7.26	5.34
SD	6.94	8.96	10.53	11.18	11.44	11.72	11.42	10.27	9.04	8.50
TN	11.38	10.84	11.09	11.12	11.24	10.94	9.90	9.19	7.50	6.79
TX	11.28	11.02	10.49	10.50	10.28	10.06	9.97	9.32	8.68	8.39
UT	10.74	10.59	9.46	8.98	9.15	9.44	9.82	10.53	10.69	10.59
VA	9.11	10.11	10.32	10.77	10.75	10.63	10.77	10.21	9.19	8.13
VT	8.34	8.95	10.23	10.92	12.02	11.84	11.19	11.03	8.11	7.38
WA	9.02	9.76	9.60	9.46	9.81	9.91	10.44	11.10	11.08	9.82
WI	5.93	7.59	9.04	9.93	10.63	11.61	12.08	12.06	11.58	9.57
WV	13.39	11.05	10.81	10.45	10.02	10.09	9.53	9.73	8.38	6.55
WY	8.47	10.46	10.09	9.85	10.40	10.30	10.21	9.94	10.61	10.07