

Consumption and Saving

Lecture 5

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Figure 1. Standard Deviation of Log Weekly Wages

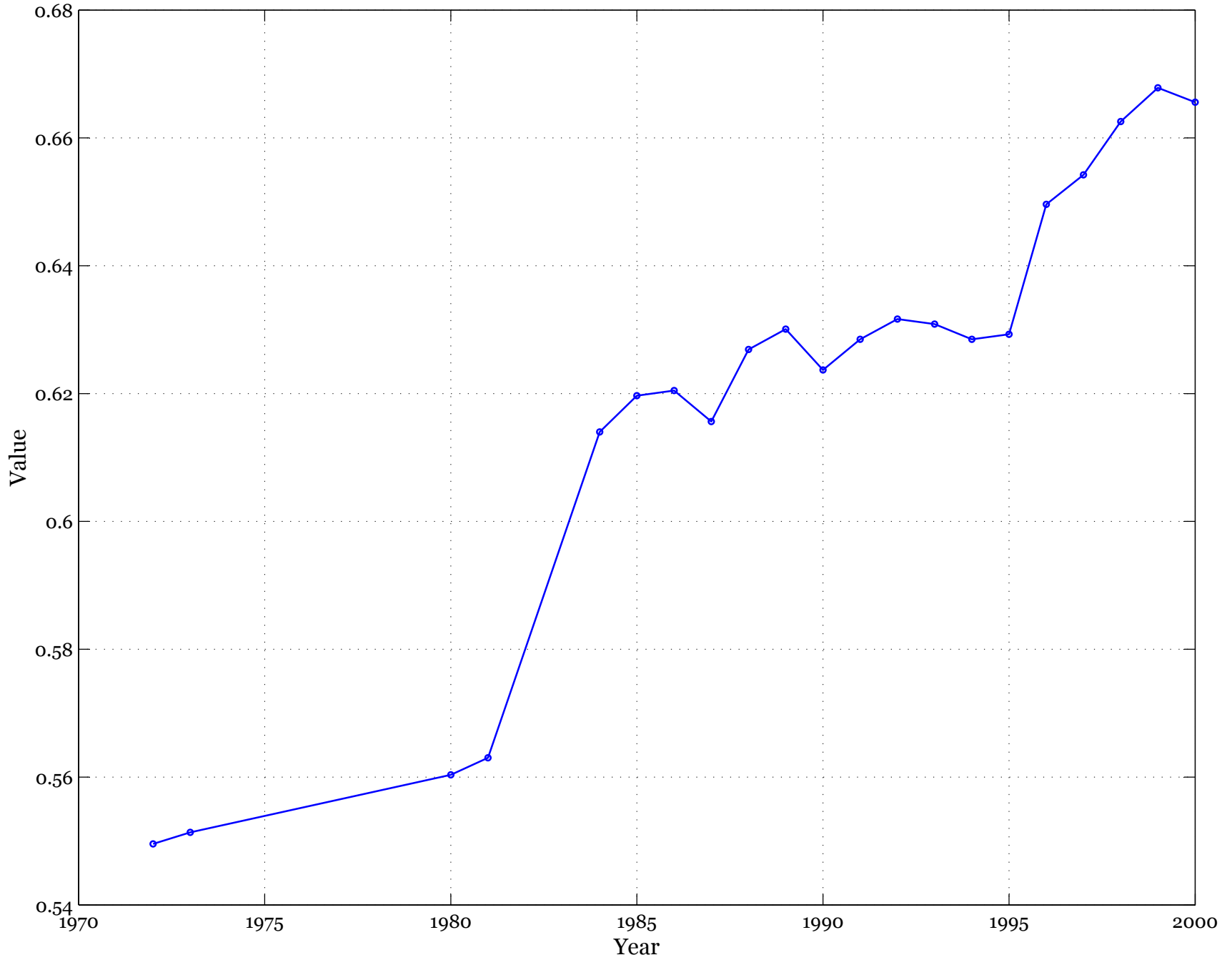
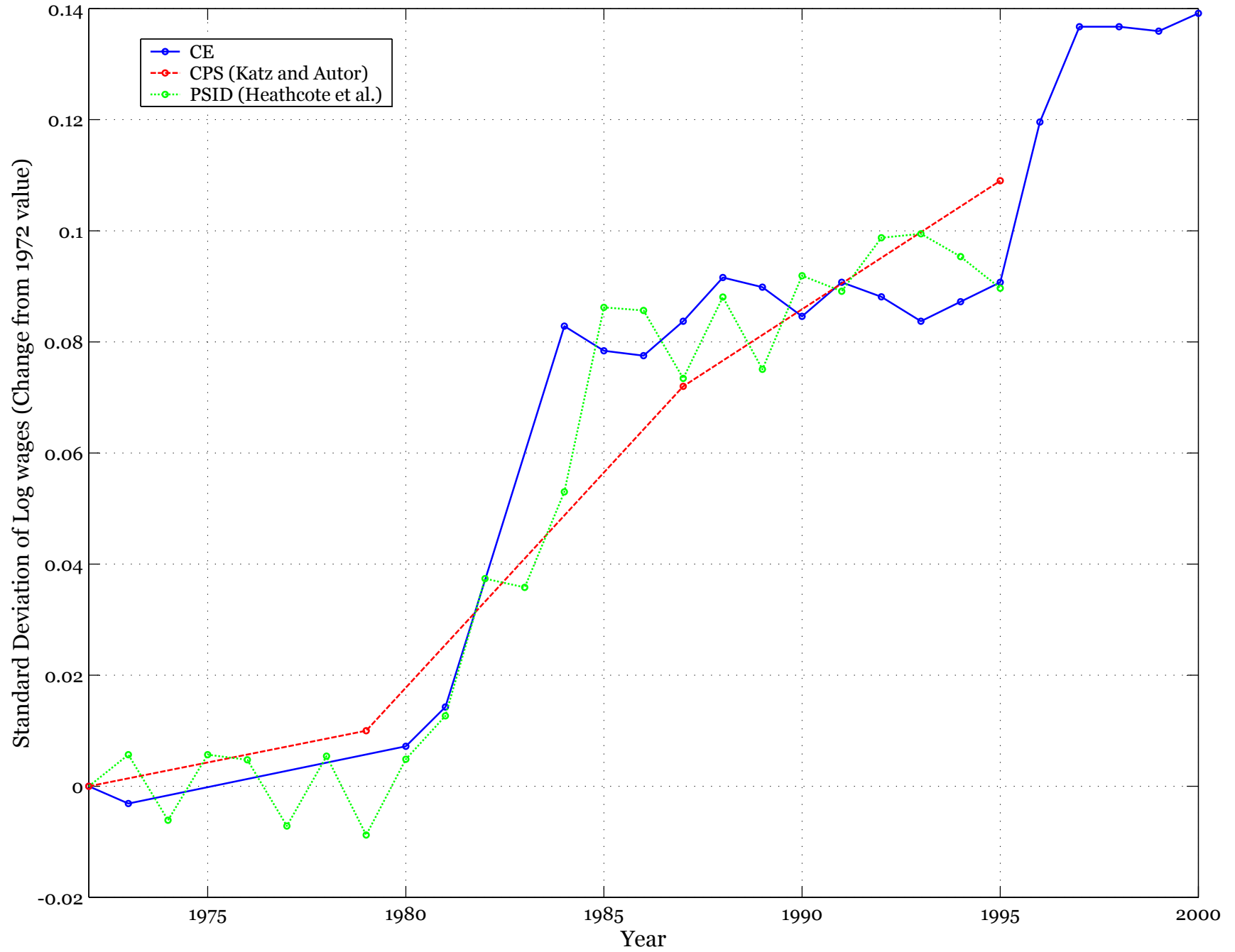
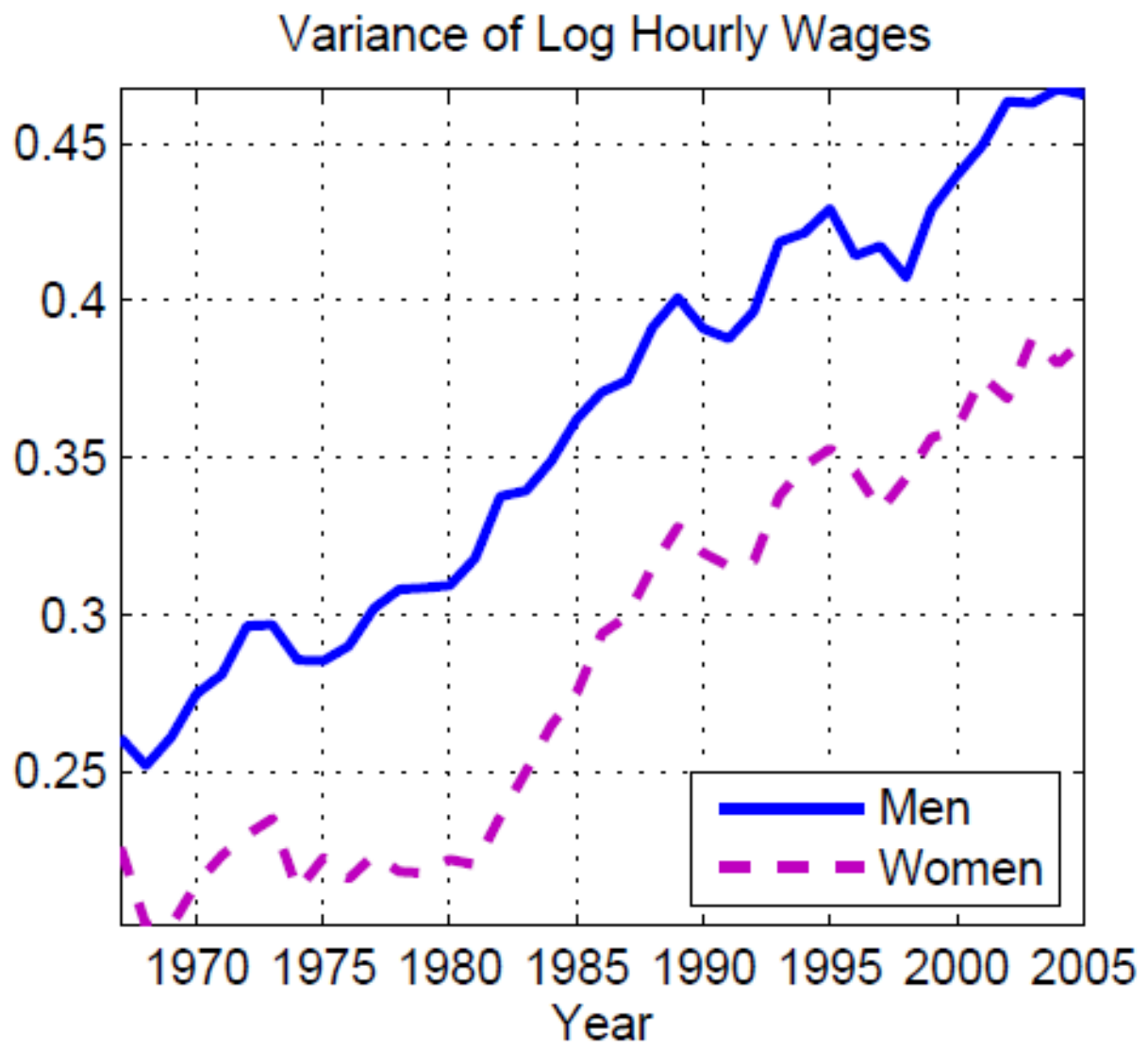


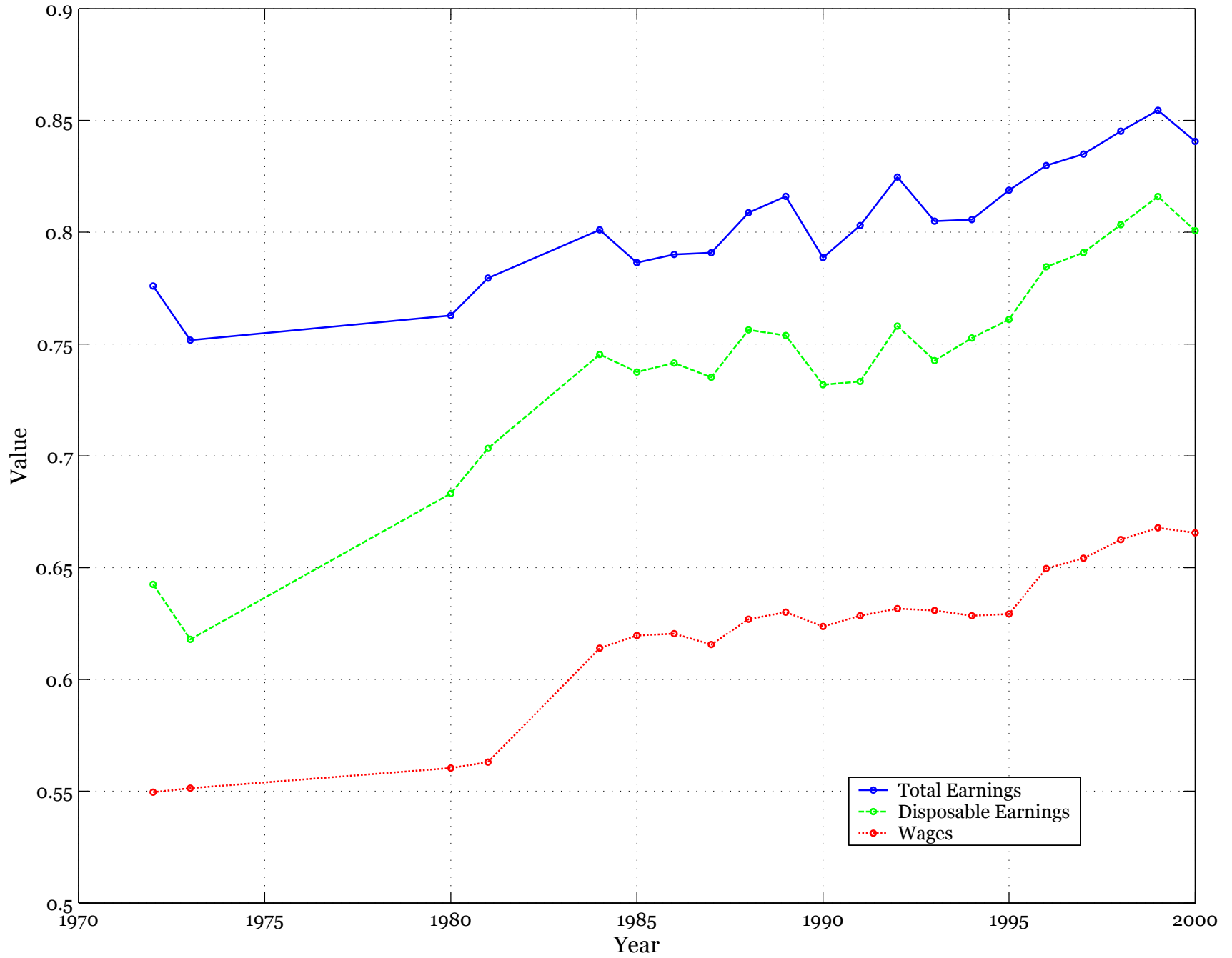
Figure 3. Change in wage inequality from CE, CPS and PSID





Source: Heathcoate, Perri, Violante
(Review of Economic Dynamics, 2010)

Figure 4. Standard Deviation of Log Total and Disposable Earnings



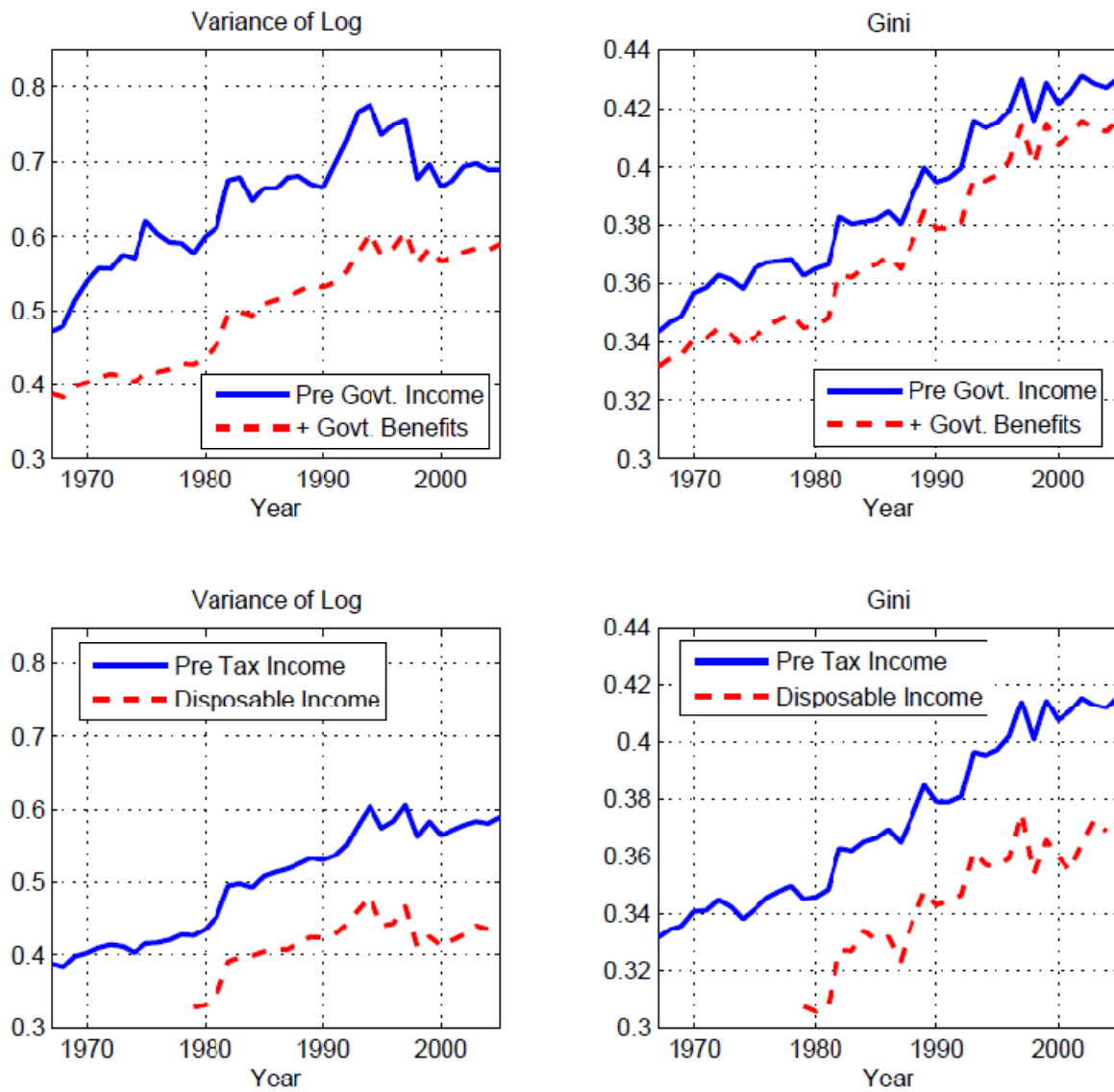


Figure 12: From pre-government to disposable income (CPS)

Source: Heathcoate, Perri, Violante
 (Review of Economic Dynamics, 2010)

Figure 5. Decomposition of Disposable Earnings Inequality

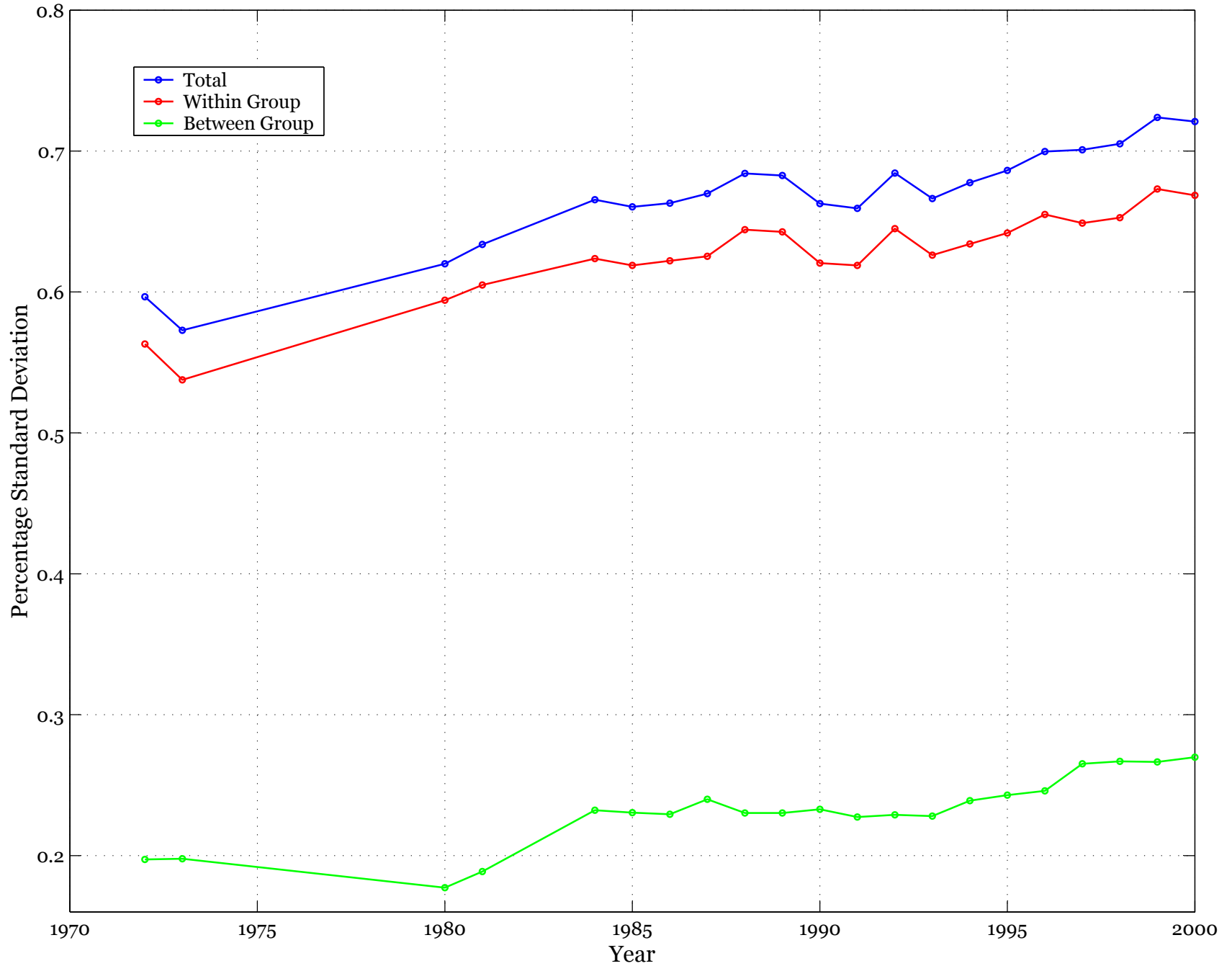
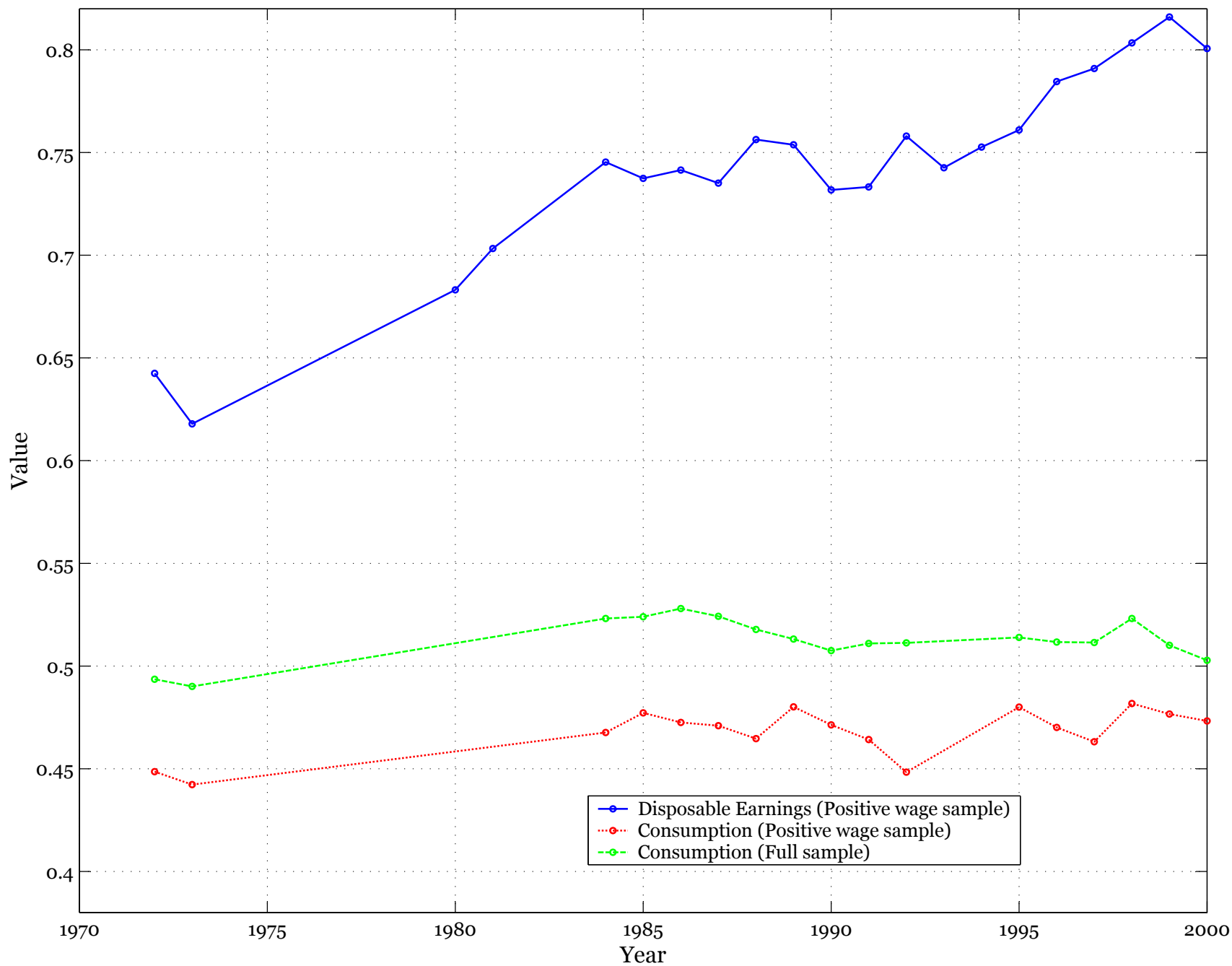


Figure 6. Standard Deviation of Log Disposable Earnings and Log Consumption



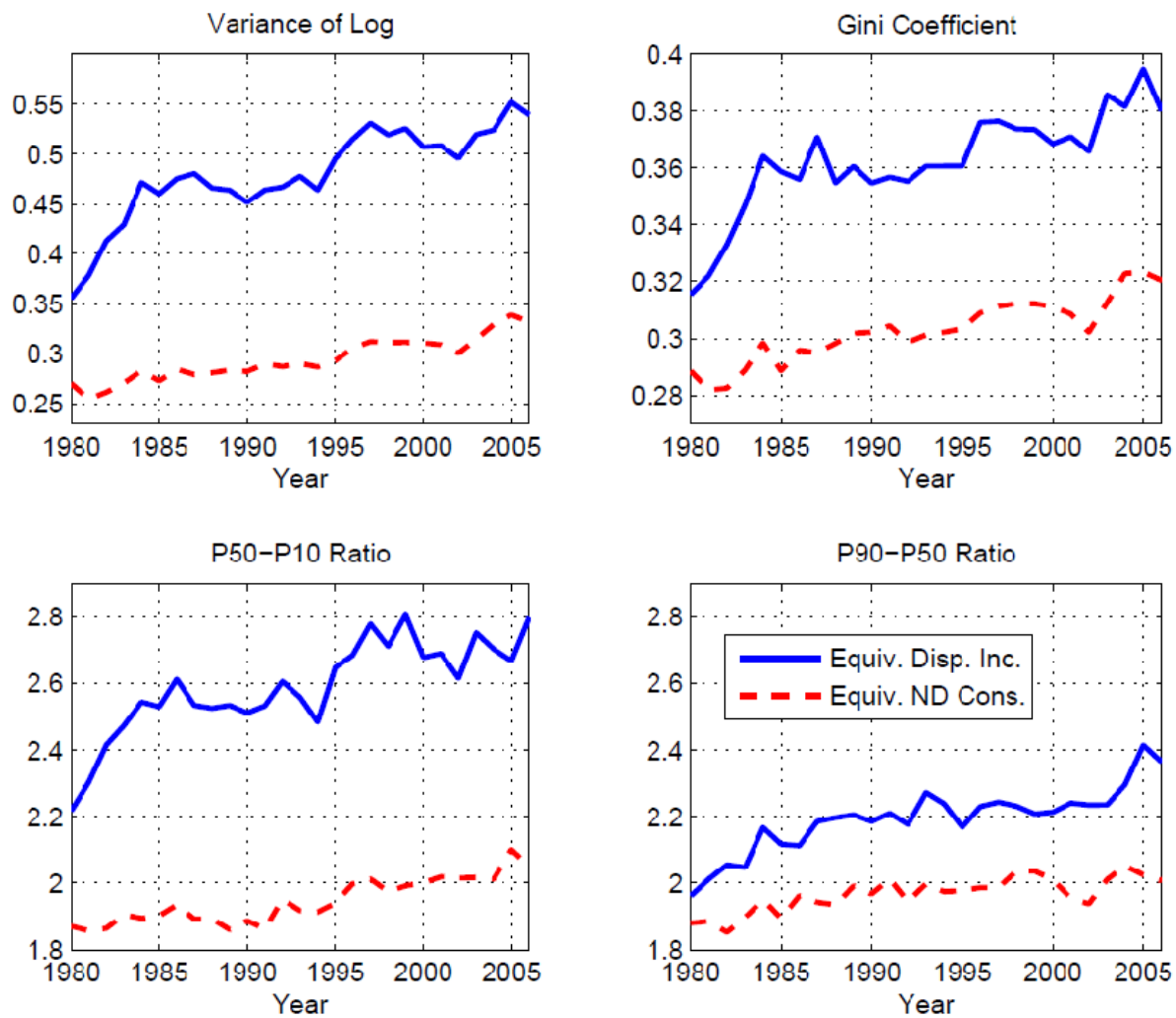


Figure 13: From disposable income to consumption (CEX)

Source: Heathcoate, Perri, Violante
(Review of Economic Dynamics, 2010)

Figure 7. Consumption by selected quintiles of the disp. earnings distribution

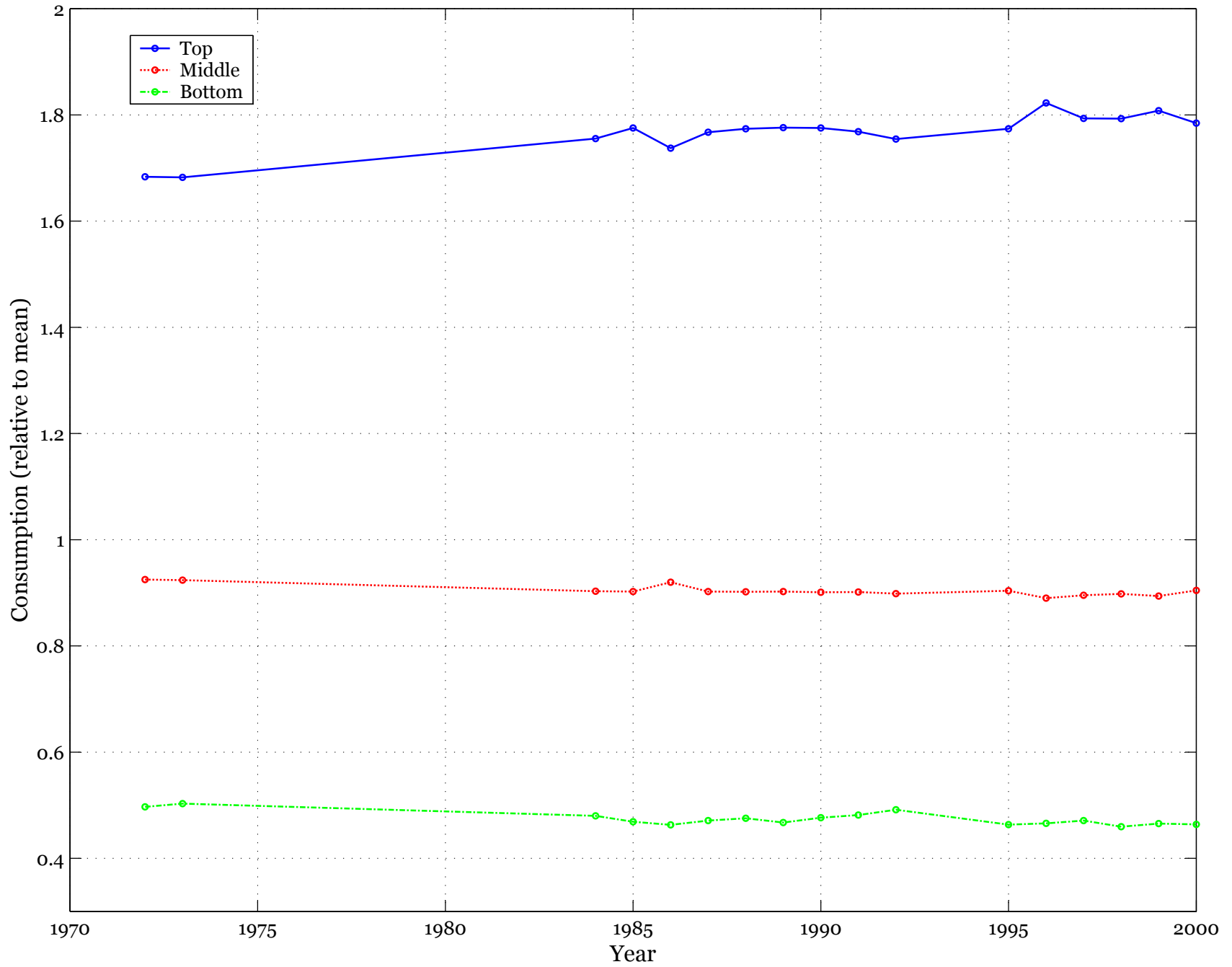
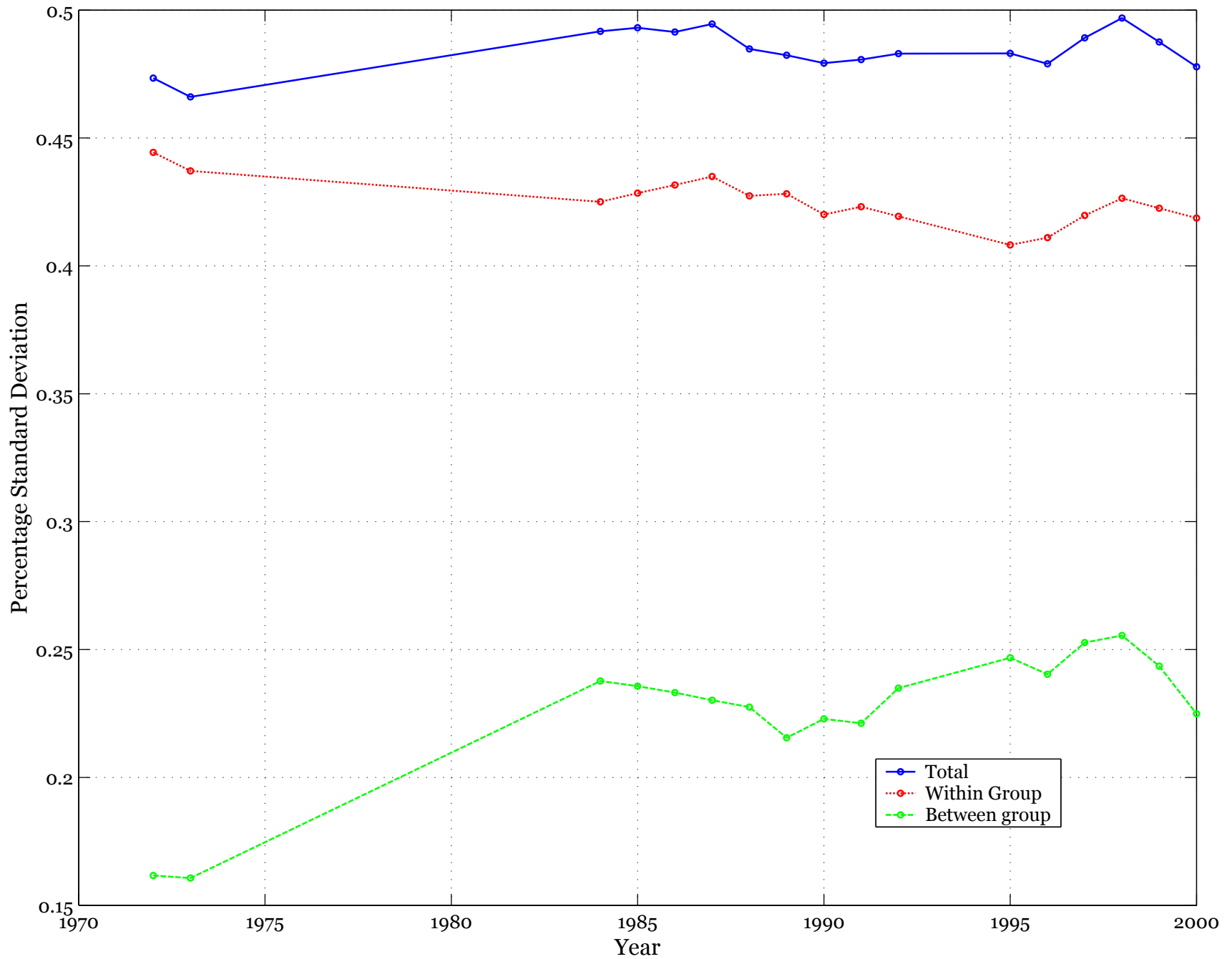


Figure 8. Decomposition of Consumption Inequality



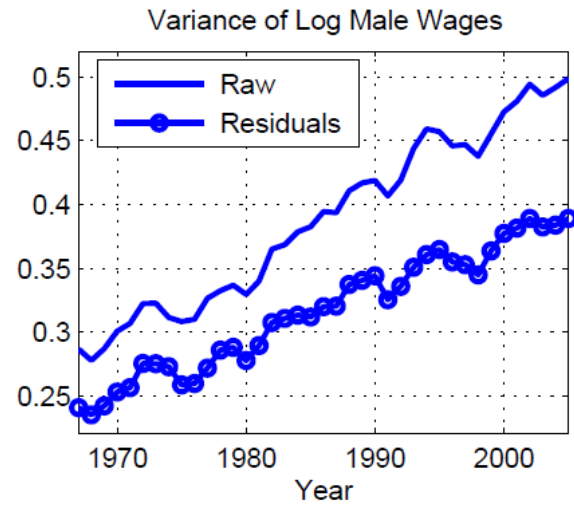
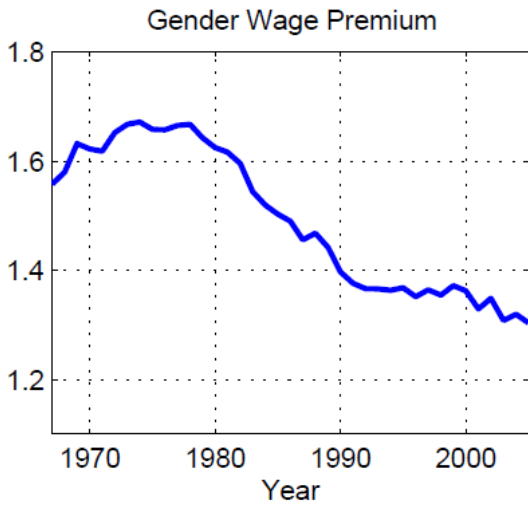
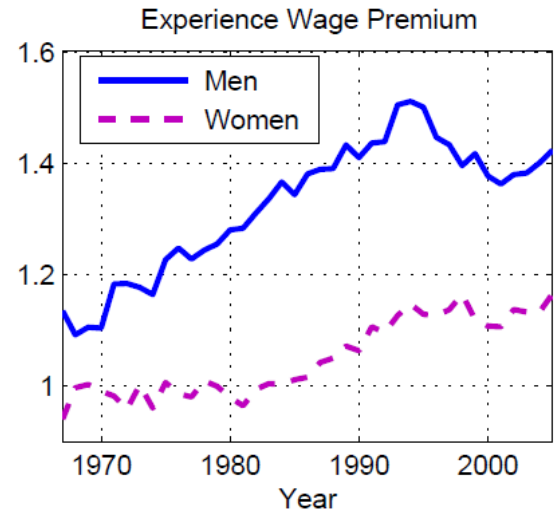
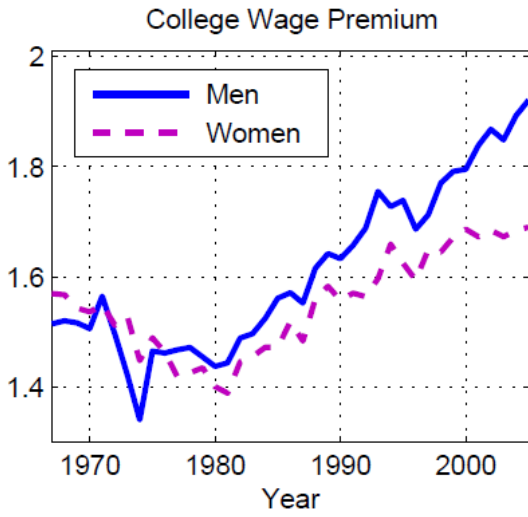
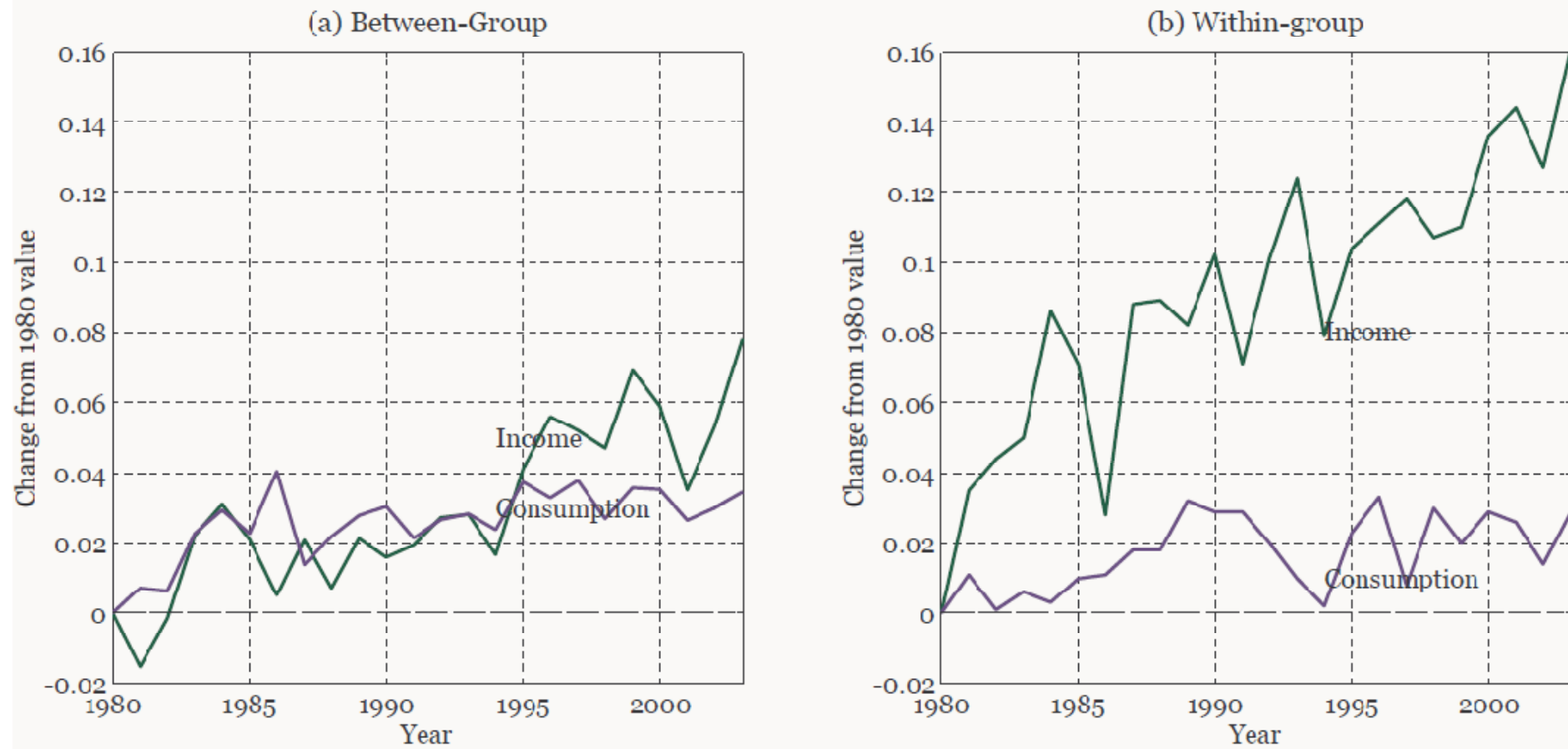


Figure 5 from Heathcoate, Perri, Violante
(Review of Economic Dynamics, 2010)

Figure 2. Changes in between and within-group Income and Consumption Inequality



Source: Krueger and Perri, Review of Economic Studies (2006)

Figure 9. Standard Deviation of Log Wages and of Log per adult hours

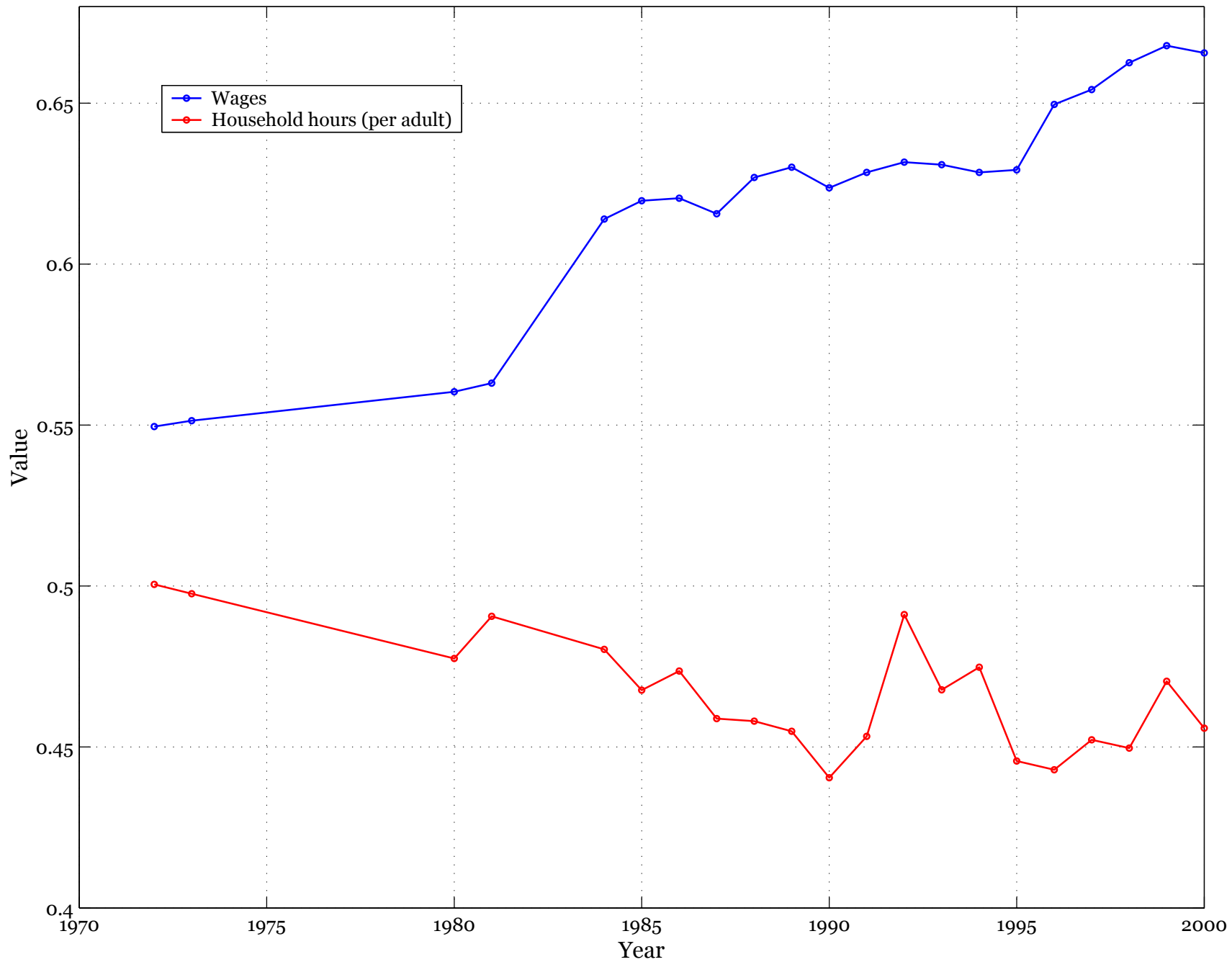


Figure 10. Yearly hours worked per person(average and by selected quintiles of the consumption distribution)

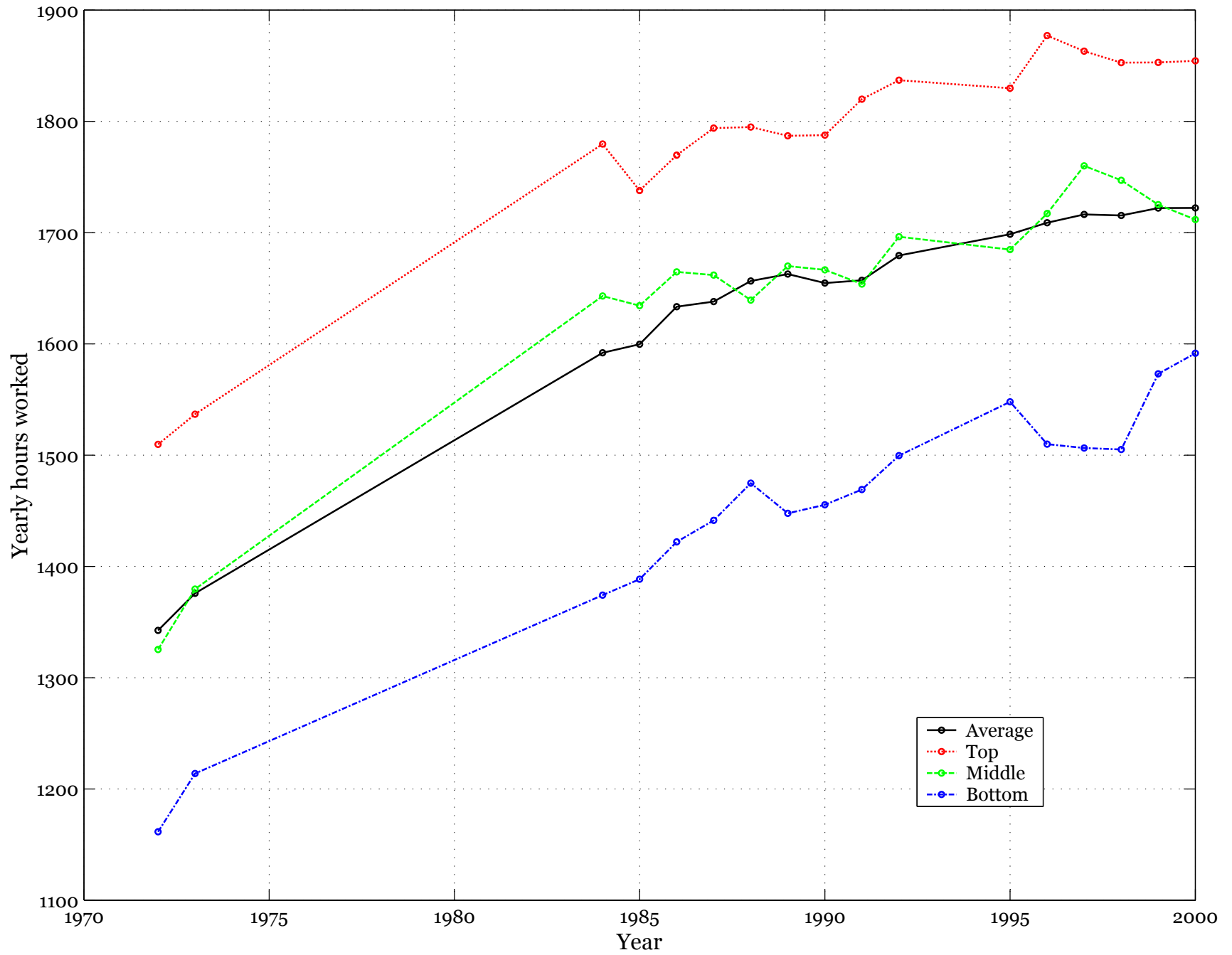


Figure 11. Correlation of hours worked and consumption

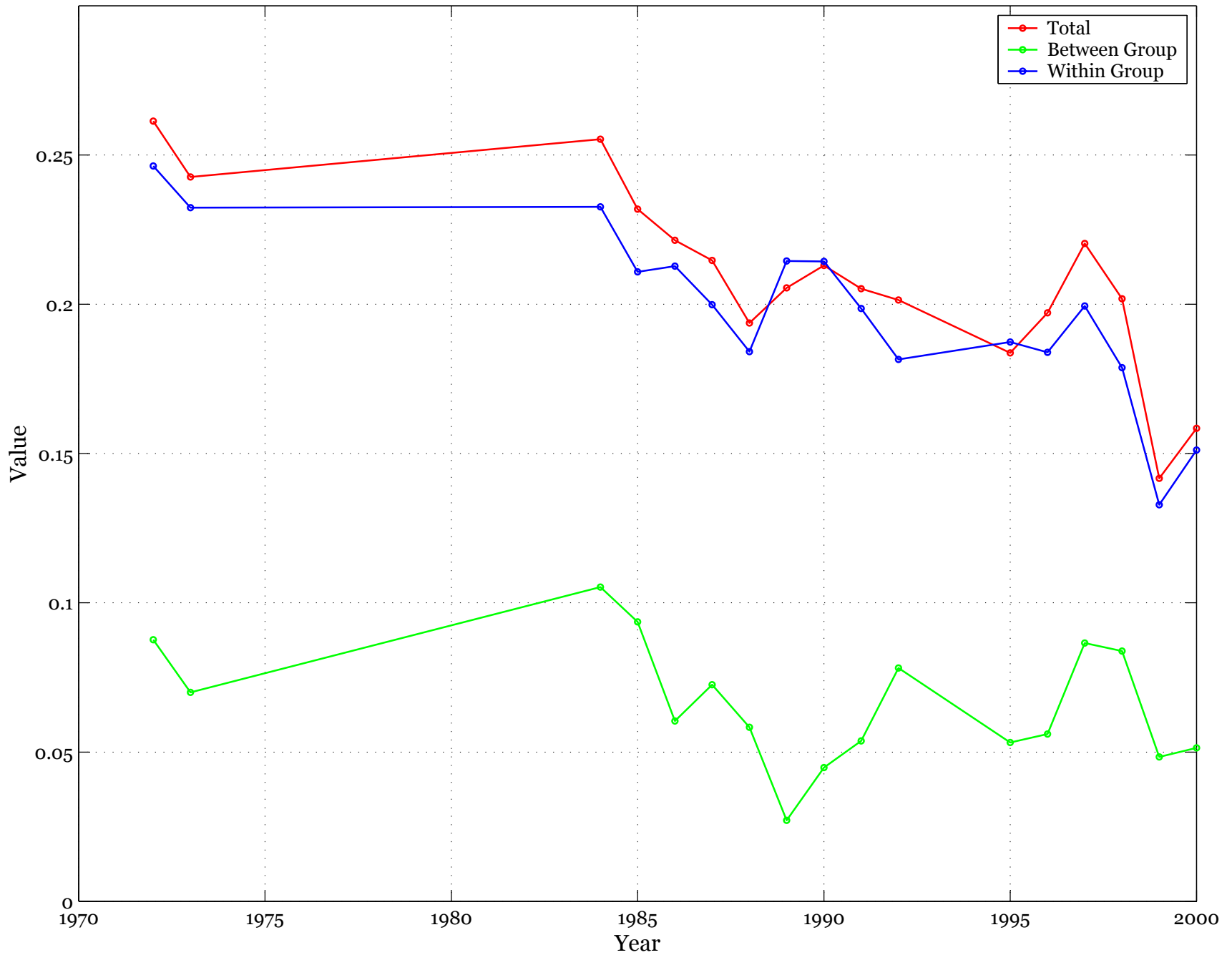


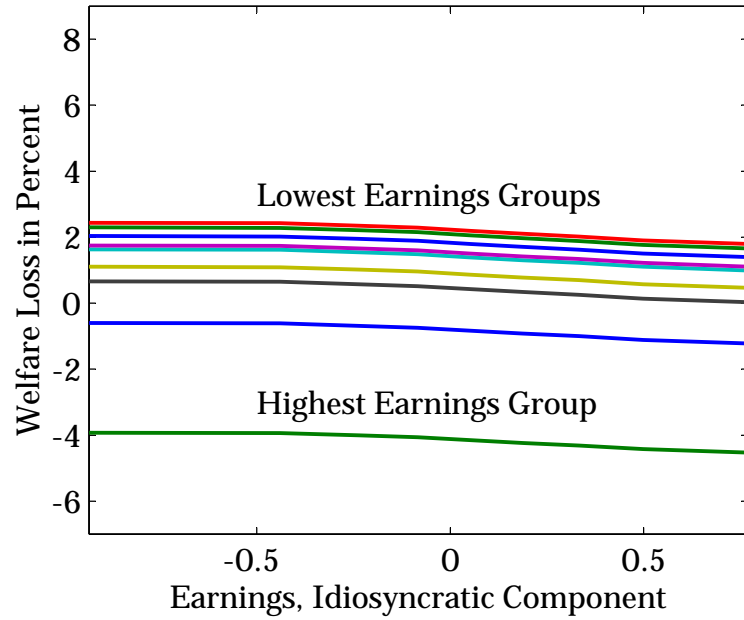
Table 1. The persistence of the estimated processes*

Disposable Earnings		
	Within-group	Between-group
Value	0.76	0.97
Consumption		
	Within-group	Between-group
Value	0.72	0.98

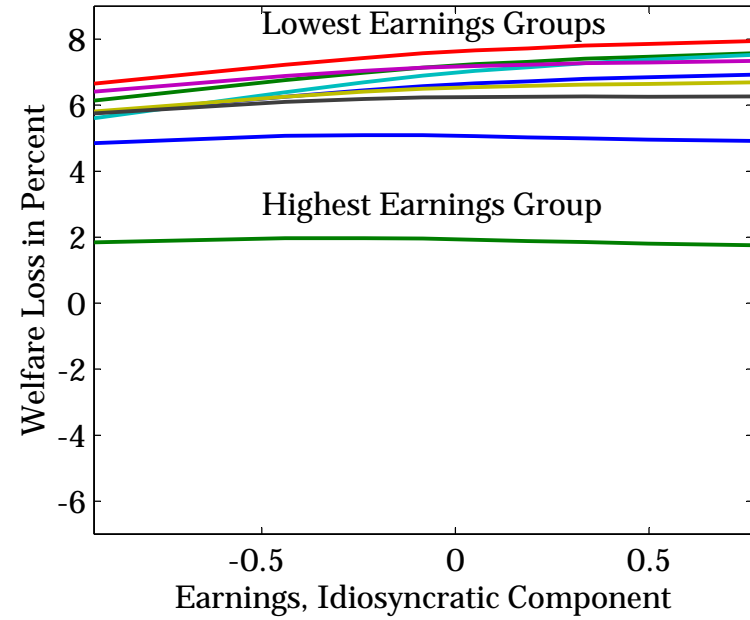
*The reported measure of persistence is the value of the second largest eigenvalue of the transition matrices π^d and π^g

Figure 12. Welfare Losses

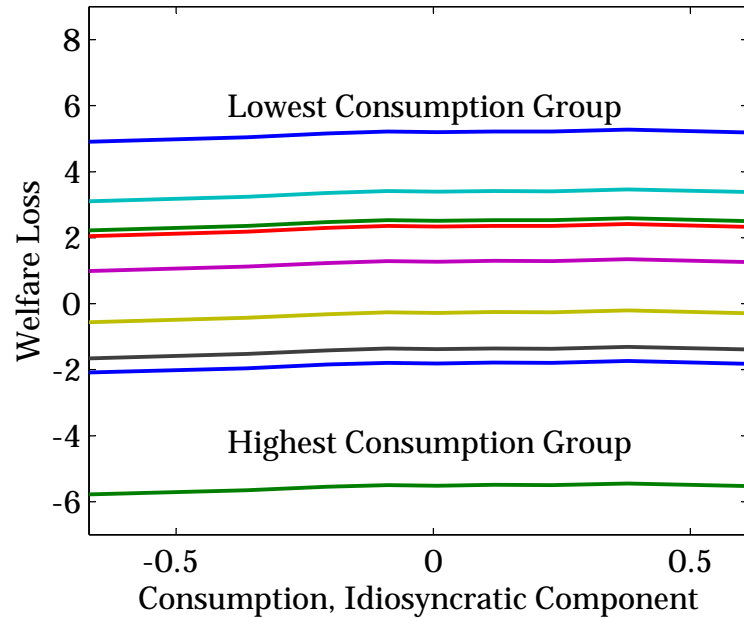
12a. Using Earnings ($\sigma=1$)



12b. Using Earnings ($\sigma=2$)



12c. Using Consumption ($\sigma=1$)



12d. Using Consumption ($\sigma=2$)

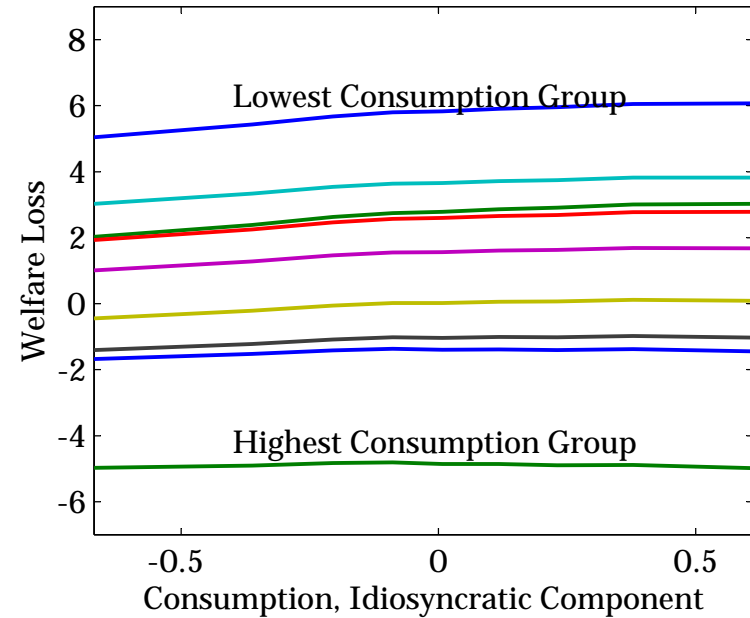
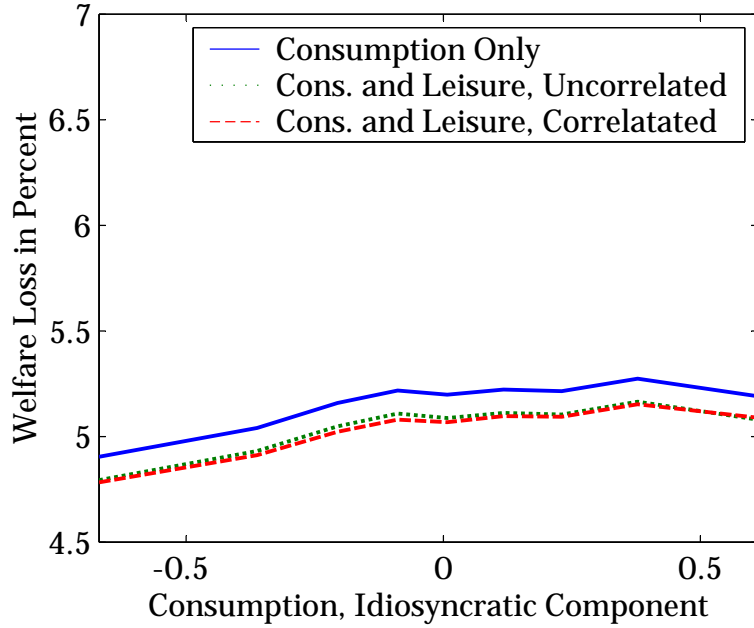


Figure 13. Welfare Losses

13a. Lowest Cons. Group (CRRA=1)



13b. Lowest Cons. Group (CRRA=2)

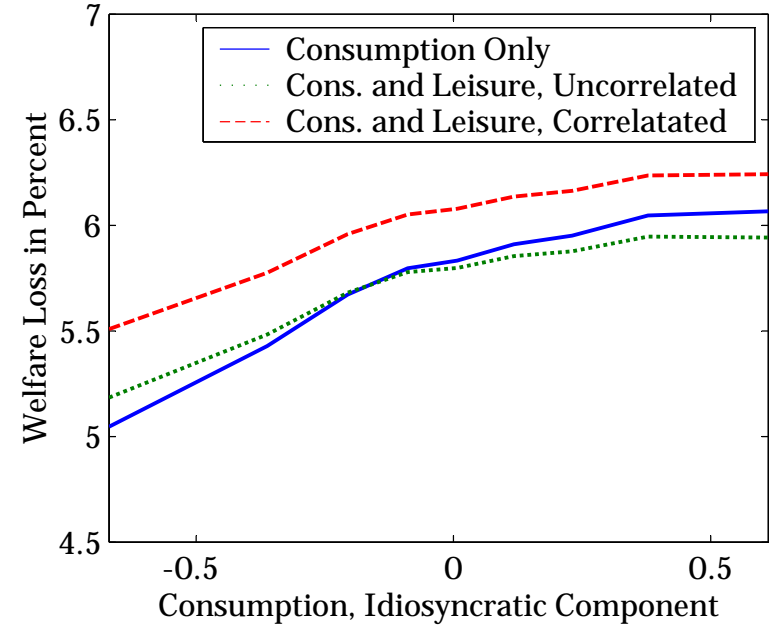
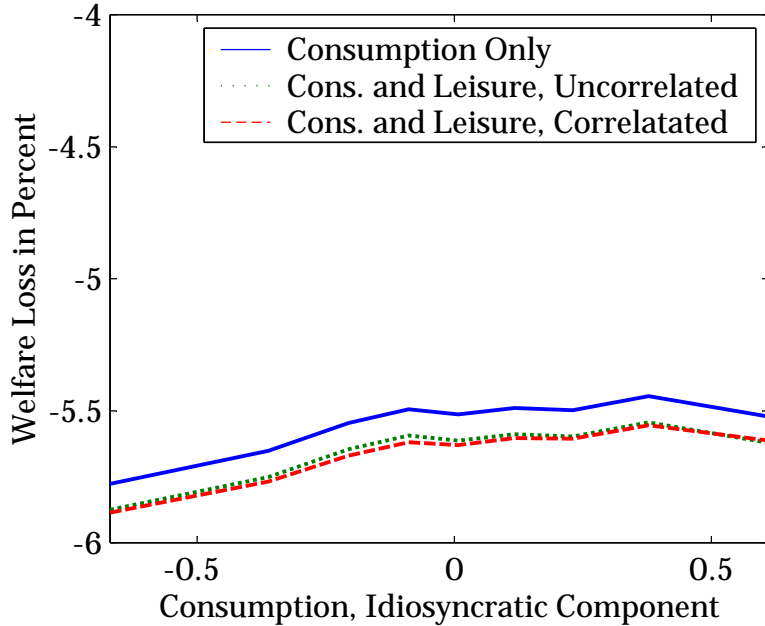
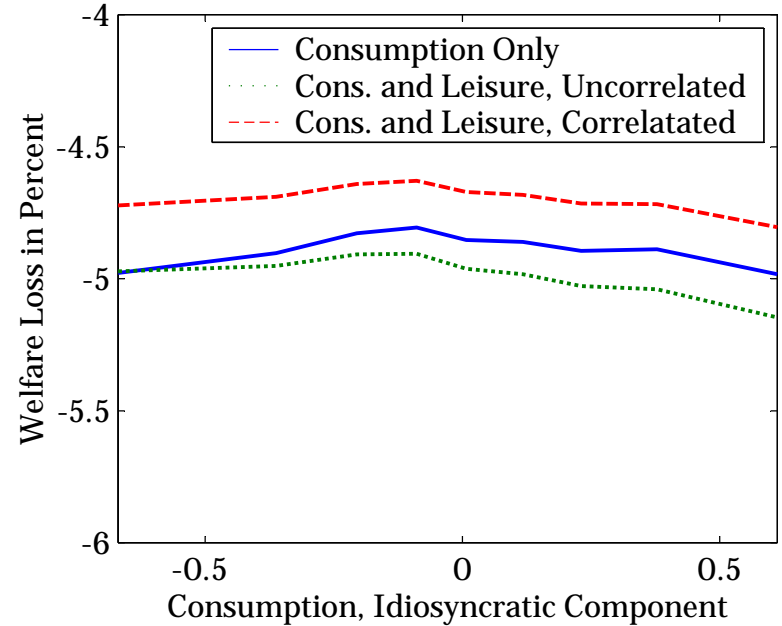
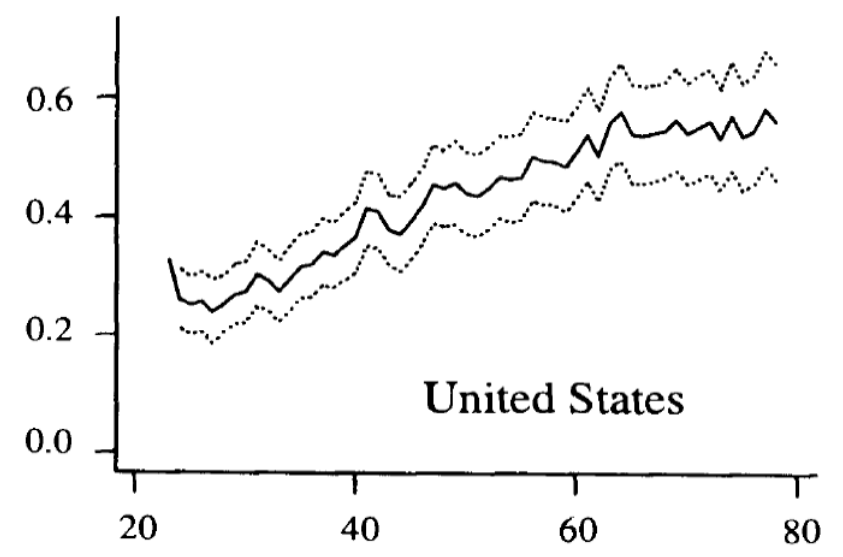
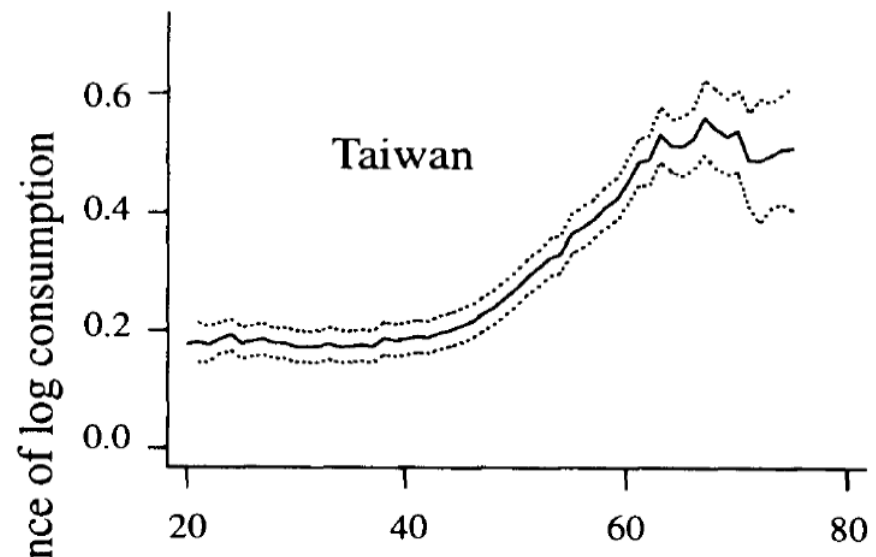


Figure 13c. Highest Cons. Group (CRRA=1)



13d. Highest Cons. Group (CRRA=2)





(broken lines are two standard errors from estimates)

age

FIG. 4.—Age effects (and confidence bands) for the variance of log consumption
Deaton/Paxson (1994)

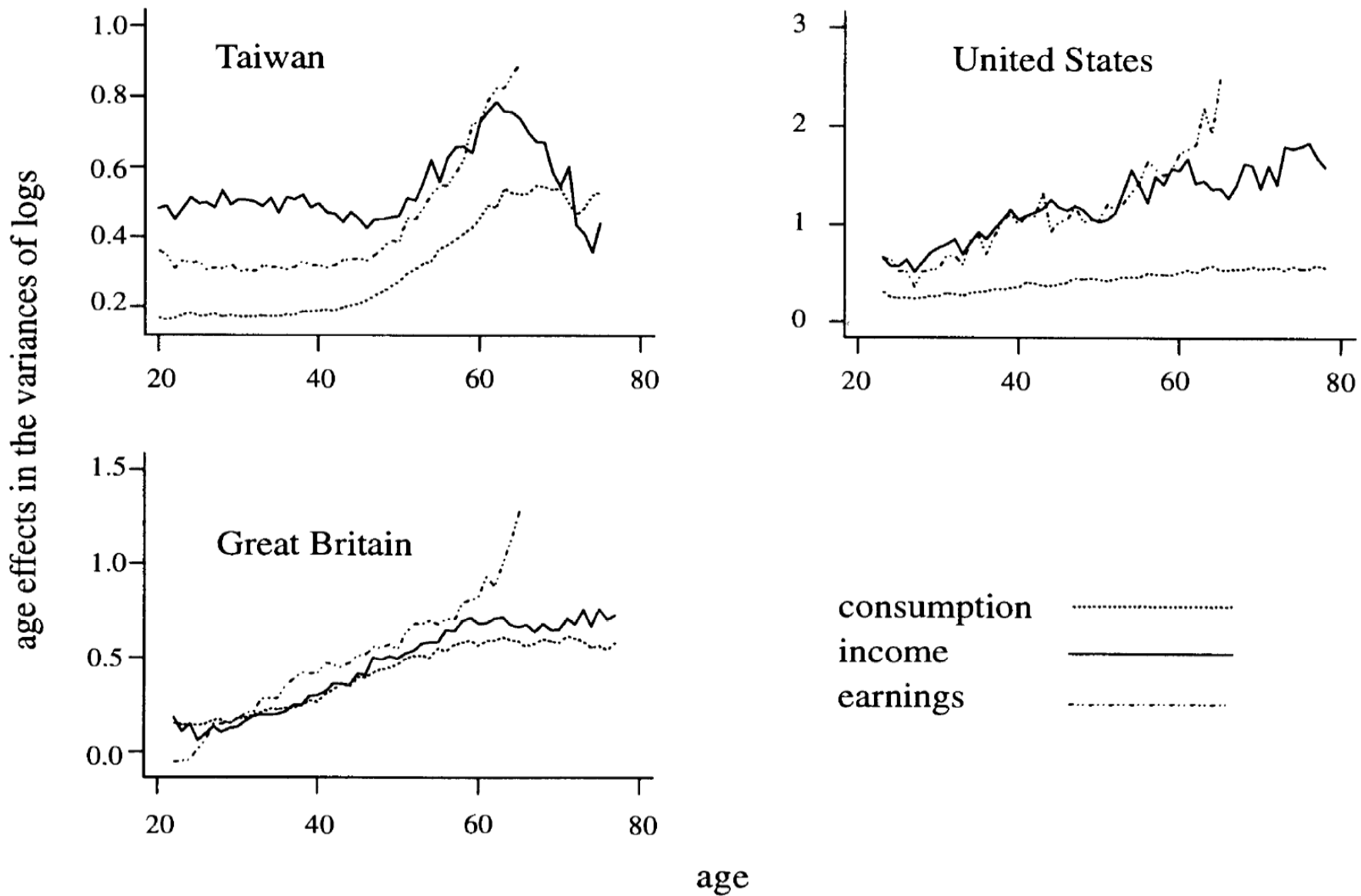


FIG. 6.—Age effects in the variances of logarithms of income, earnings, and consumption.

Deaton/Paxson (1994)

TABLE II
Hours per Week Spent in Market and Non-Market Work over Time for Full Sample, Men, and Women

Panel 1: Full Sample						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Core Market Work	29.63	28.79	27.74	29.93	28.63	-1.00
Total Market Work	35.98	33.79	32.67	33.22	31.71	-4.27
Core Non-Market Work	13.02	11.34	10.82	8.75	8.66	-4.35
Obtaining Goods and Services/Shopping	6.18	5.40	5.84	5.20	5.19	-0.99
Total Non Market Work	22.09	20.15	21.00	18.40	18.31	-3.78
Child Care: Primary	2.82	2.37	2.73	2.30	3.72	0.90
Child Care: Educational	0.35	0.41	0.38	0.25	0.72	0.38
Child Care: Recreational	0.51	0.33	0.53	0.56	1.06	0.55
Child Care: Total	3.67	3.11	3.64	3.11	5.50	1.83
Total Market Work + Total Non-Market Work	58.07	53.94	53.67	51.61	50.02	-8.05
Total Market Work + Non-Market Work + Child Care	61.74	57.05	57.31	54.73	55.53	-6.21
Underlying Sample Size	1,854	1,673	3,168	5,347	15,091	

Source: Aguiar and Hurst (2007)

TABLE II (continued)
Hours per Week Spent in Market and Non-Market Work over Time for Full Sample, Men, and Women

Panel 2: Men						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Core Market Work	42.09	39.80	36.86	38.52	35.54	-6.55
Total Market Work	51.58	46.53	43.35	42.74	39.53	-12.05
Core Non-Market Work	1.96	2.01	3.82	2.90	3.40	1.44
Obtaining Goods and Services/Shopping	4.85	4.44	4.59	3.83	4.34	-0.51
Total Non Market Work	9.67	10.85	13.96	12.44	13.43	3.75
Child Care: Primary	0.77	1.06	1.04	0.90	1.89	1.12
Child Care: Educational	0.12	0.15	0.17	0.17	0.43	0.31
Child Care: Recreational	0.54	0.19	0.44	0.39	0.92	0.38
Child Care: Total	1.44	1.40	1.66	1.47	3.24	1.80
Total Market Work + Total Non-Market Work	61.25	57.38	57.32	55.18	52.96	-8.29
Total Market Work + Non-Market Work + Child Care	62.69	58.78	58.97	56.65	56.20	-6.49
Sample Size	833	756	1,412	2,483	6,699	

TABLE II (continued)
Hours per Week Spent in Market and Non-Market Work over Time for Full Sample, Men, and Women

Panel 3: Women						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Core Market Work	18.83	19.24	19.84	22.49	22.65	3.82
Total Market Work	22.45	22.74	23.41	24.97	24.93	2.48
Core Non-Market Work	22.61	19.43	16.89	13.83	13.23	-9.38
Obtaining Goods and Services/Shopping	7.33	6.23	6.92	6.38	5.93	-1.40
Total Non Market Work	32.86	28.21	27.10	23.56	22.55	-10.31
Child Care: Primary	4.59	3.51	4.20	3.52	5.30	0.71
Child Care: Educational	0.54	0.64	0.56	0.32	0.98	0.44
Child Care: Recreational	0.48	0.45	0.60	0.70	1.18	0.71
Child Care: Total	5.60	4.60	5.36	4.54	7.46	1.86
Total Market Work + Total Non-Market Work	55.31	50.95	50.51	48.52	47.48	-7.83
Total Market Work + Non-Market Work + Child Care	60.91	55.55	55.87	53.06	54.94	-5.97
Sample Size	1,021	917	1,756	2,864	8,392	

Notes: All means are calculated using fixed demographic weights, as described in the text. See Table A1 and text for category definitions. The sample restrictions are described in the note to Table I.

TABLE III
Hours per Week Spent in Leisure for Full Sample, Men, and Women

Panel 1: Full Sample						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Leisure Measure 1	30.77	33.24	34.78	37.47	35.33	4.56
Leisure Measure 2	102.23	106.62	107.82	110.04	107.73	5.50
Leisure Measure 3	105.90	109.74	111.46	113.16	113.23	7.33
Leisure Measure 4	109.93	114.06	114.33	116.39	117.98	8.05
Panel 2: Men						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Leisure Measure 1	31.80	33.36	35.15	37.65	37.40	5.60
Leisure Measure 2	101.68	105.33	106.81	108.50	107.88	6.20
Leisure Measure 3	103.12	106.73	108.47	109.97	111.13	8.01
Leisure Measure 4	106.75	110.62	110.68	112.82	115.04	8.29
Panel 3: Women						
Time Use Category (Hours per Week)	1965	1975	1985	1993	2003	Difference: 2003–1965
Leisure Measure 1	29.89	33.14	34.46	37.32	33.54	3.65
Leisure Measure 2	102.70	107.75	108.69	111.38	107.59	4.89
Leisure Measure 3	108.31	112.35	114.05	115.92	115.06	6.75
Leisure Measure 4	112.69	117.05	117.49	119.48	120.52	7.83

Notes: All means are calculated using fixed demographic weights, as described in the text. Leisure Measure 1 refers to the time individuals spent socializing, in passive leisure, in active leisure, volunteering, in pet care, and gardening. Leisure Measure 2 refers to the time individuals spent in Leisure Measure 1 plus time spent sleeping, eating, and in personal activities (excluding own medical care). Leisure Measure 3 includes Leisure Measure 2 plus time spent in child care. Leisure Measure 4 defined as any time not allocated to market or non-market work. See Table A1 and text for additional detail. The relevant sample sizes are as reported in Table II. The sample restrictions are described in the note to Table I.

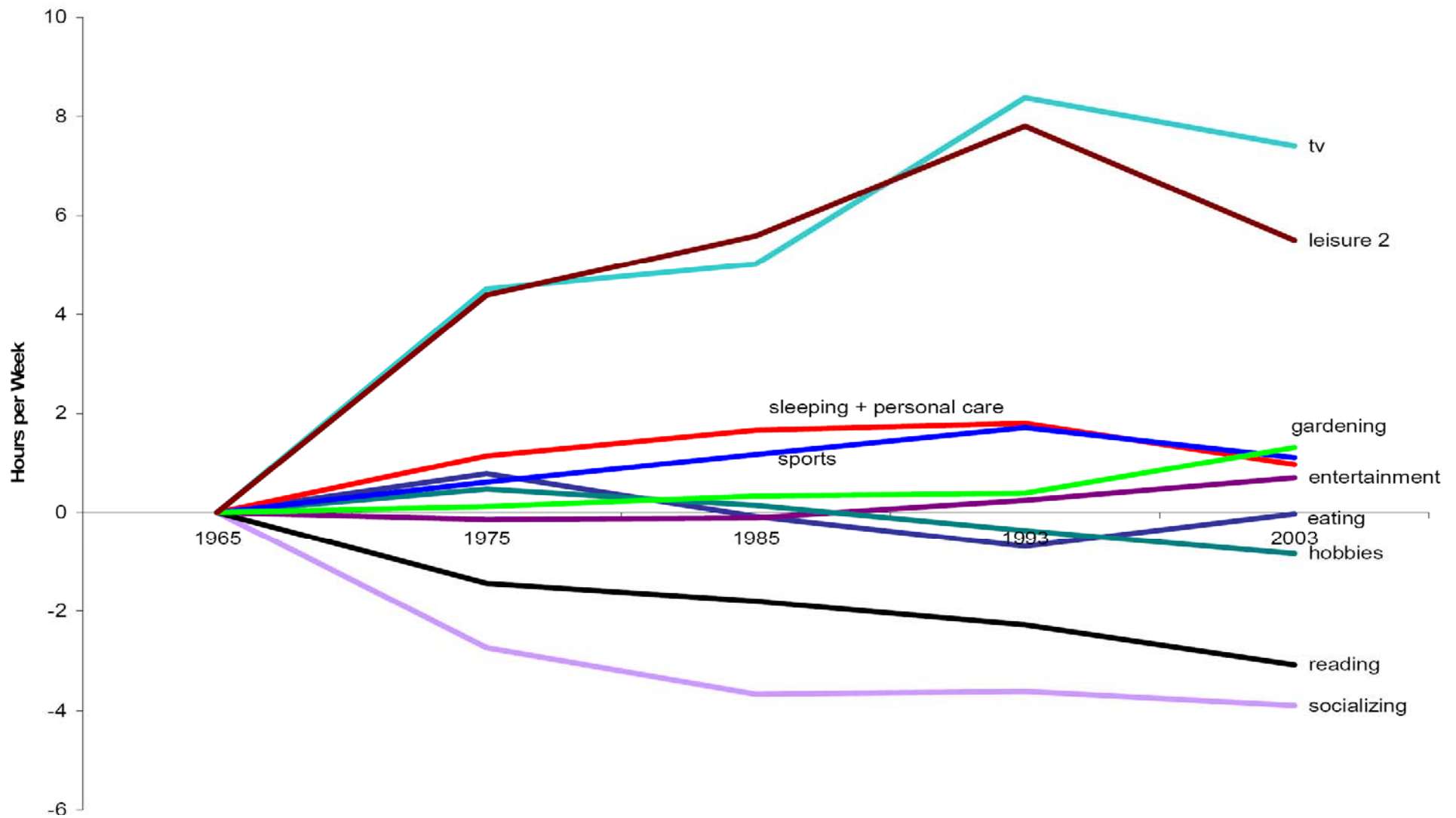


FIGURE I
Breakdown of Leisure By Activity Deviations From 1965

Notes: This figure plots the evolution of the sub-components of Leisure 2 for the full sample, represented as differences from each sub-component's mean in 1965. All means are calculated using fixed demographic weights, as described in the text.

TABLE IV
Blinder-Oaxaca Decomposition of Mean Unconditional Changes in Time Use

Time Use Category (Y)	Unconditional Change (Hours per Week)	Change Due to Different Demographics	Change Due to Different Cell Means
Panel 1: Decomposition Evaluated at 1965 Demographic Weights and 2003 Cell Means			
	$W_{2003} Y_{2003} - W_{1965} Y_{1965}$	$(W_{2003} - W_{1965}) Y_{2003}$	$W_{1965} (Y_{2003} - Y_{1965})$
Total Market Work	-0.78	4.03	-4.81
Total Non-Market Work	-5.56	-1.12	-4.44
Total Child Care	0.88	-1.11	1.99
Leisure Measure 2	4.21	-2.04	6.25
Panel 2: Decomposition Evaluated at 2003 Demographic Weights and 1965 Cell Means			
	$W_{2003} Y_{2003} - W_{1965} Y_{1965}$	$(W_{2003} - W_{1965}) Y_{1965}$	$W_{2003} (Y_{2003} - Y_{1965})$
Total Market Work	-0.78	2.59	-3.37
Total Non-Market Work	-5.56	-2.31	-3.25
Total Child Care	0.88	-1.08	1.96
Leisure Measure 2	4.21	0.11	4.10

Notes: This table reports two alternative Blinder-Oaxaca decompositions of trends in the allocation of time to market work, non-market work, child care, and leisure. The first column represents the overall unconditional change between 1965 and 2003 for each activity. The second and third columns decompose the total change into components due to different weights on demographic cell means ($W_t, t=1965, 2003$) and to different cell means ($Y_t, t=1965, 2003$), respectively. Panel 1 evaluates the effect of the change in demographic weights using the cell means of 2003, while Panel 2 evaluates the change in weights at the cell means of 1965. Correspondingly, Panel 1 evaluates the change in cell means at the demographic weights of 1965 and Panel 2 evaluates the change in cell means at the demographic weights of 2003.

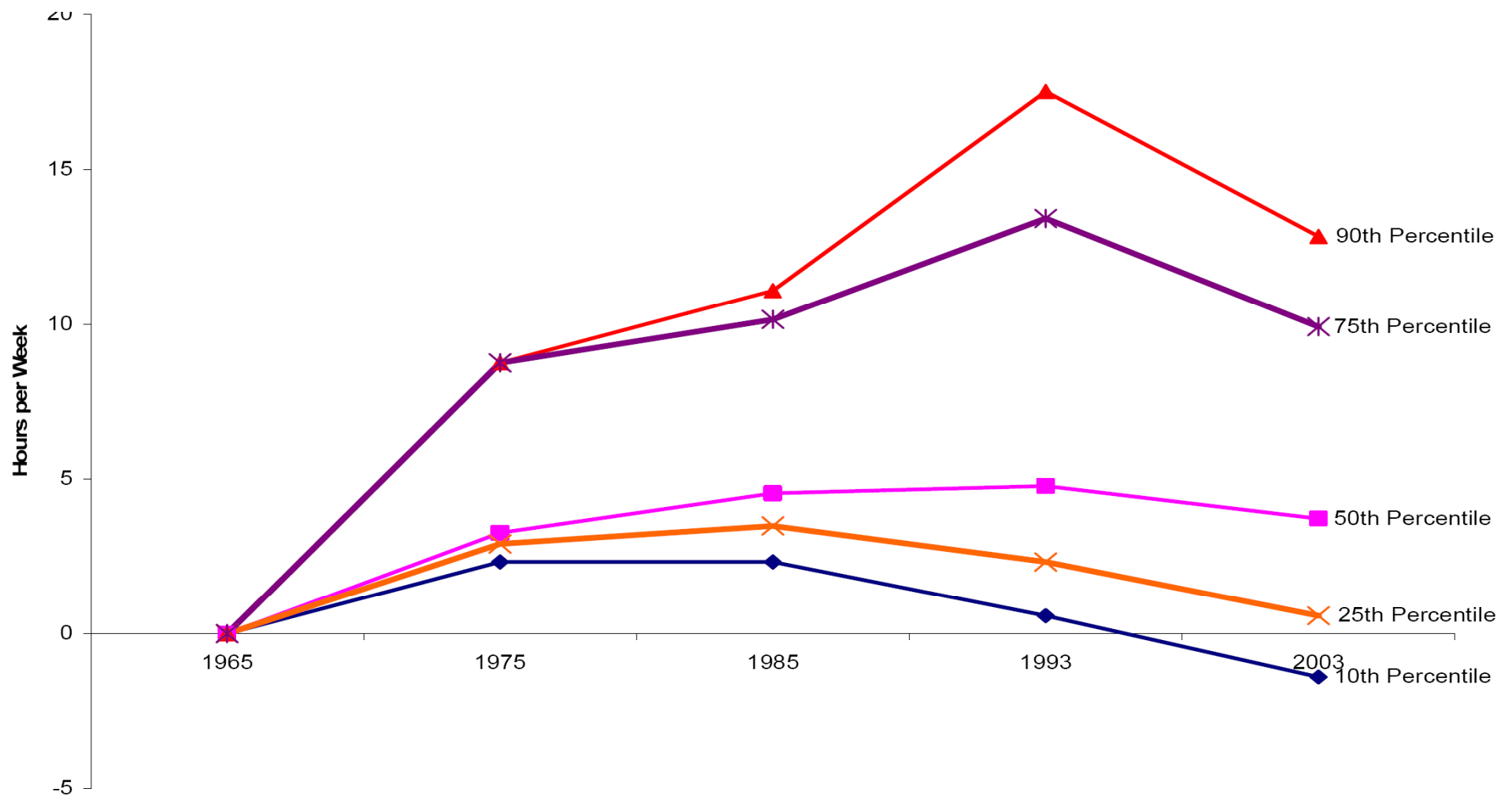


FIGURE II
Key Percentiles of Leisure 2 Distribution Deviations From 1965

Notes: This figure plots the evolution of key percentiles of the cross-sectional distribution of Leisure 2 for the sample, represented as differences from each percentile point's value in 1965. The percentile points represent unconditional sample distribution in each year, unadjusted for demographic changes.

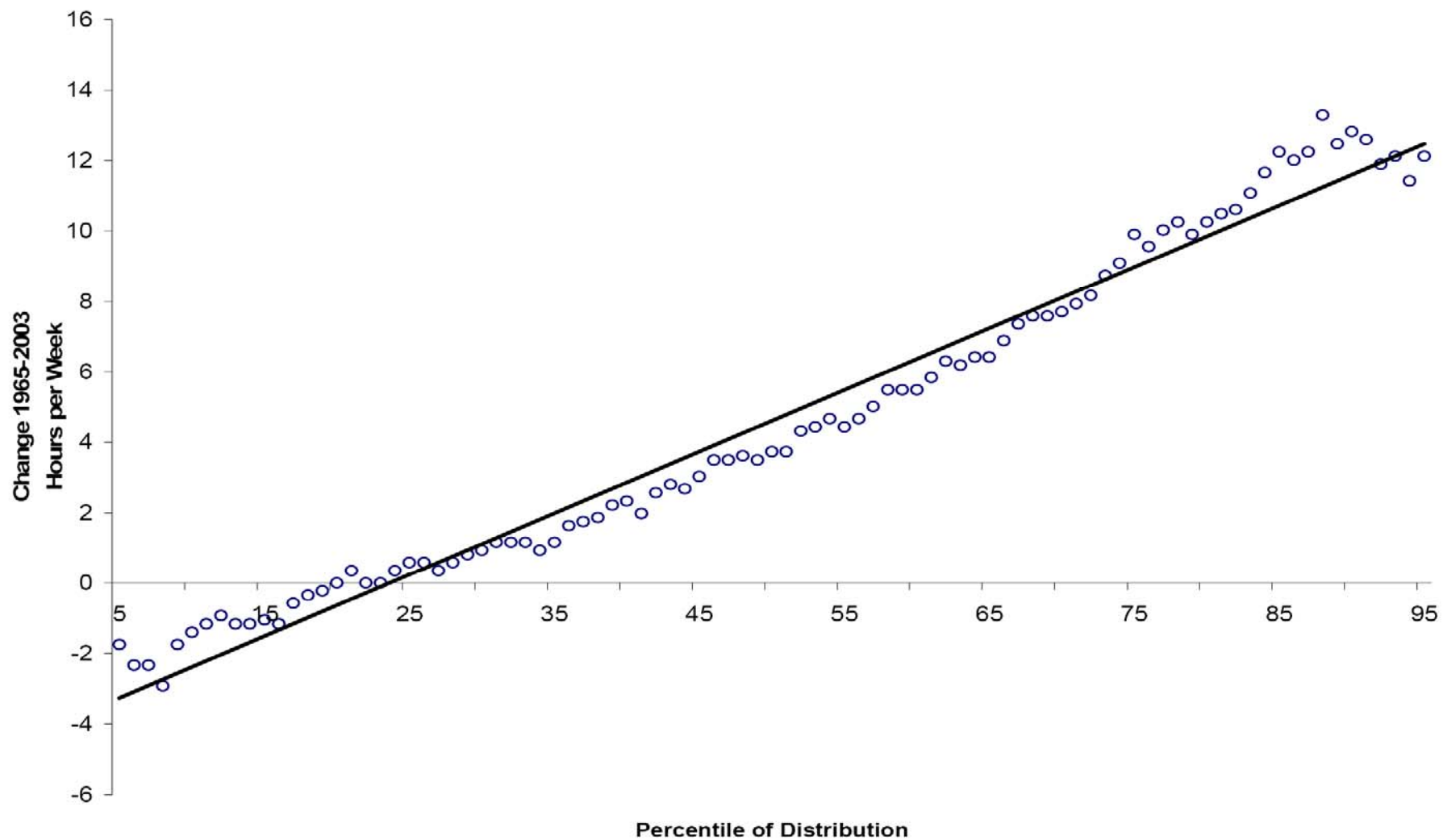


FIGURE III
Change By Percentile Point For Leisure 2 1965-2003

Notes: This figure plots the change at each percentile point of the Leisure 2 distribution between 1965 and 2003. The percentile points represent the unconditional full-sample distribution in each year, unadjusted for demographic changes.

TABLE V
Means of Time Use Categories by Educational Attainment

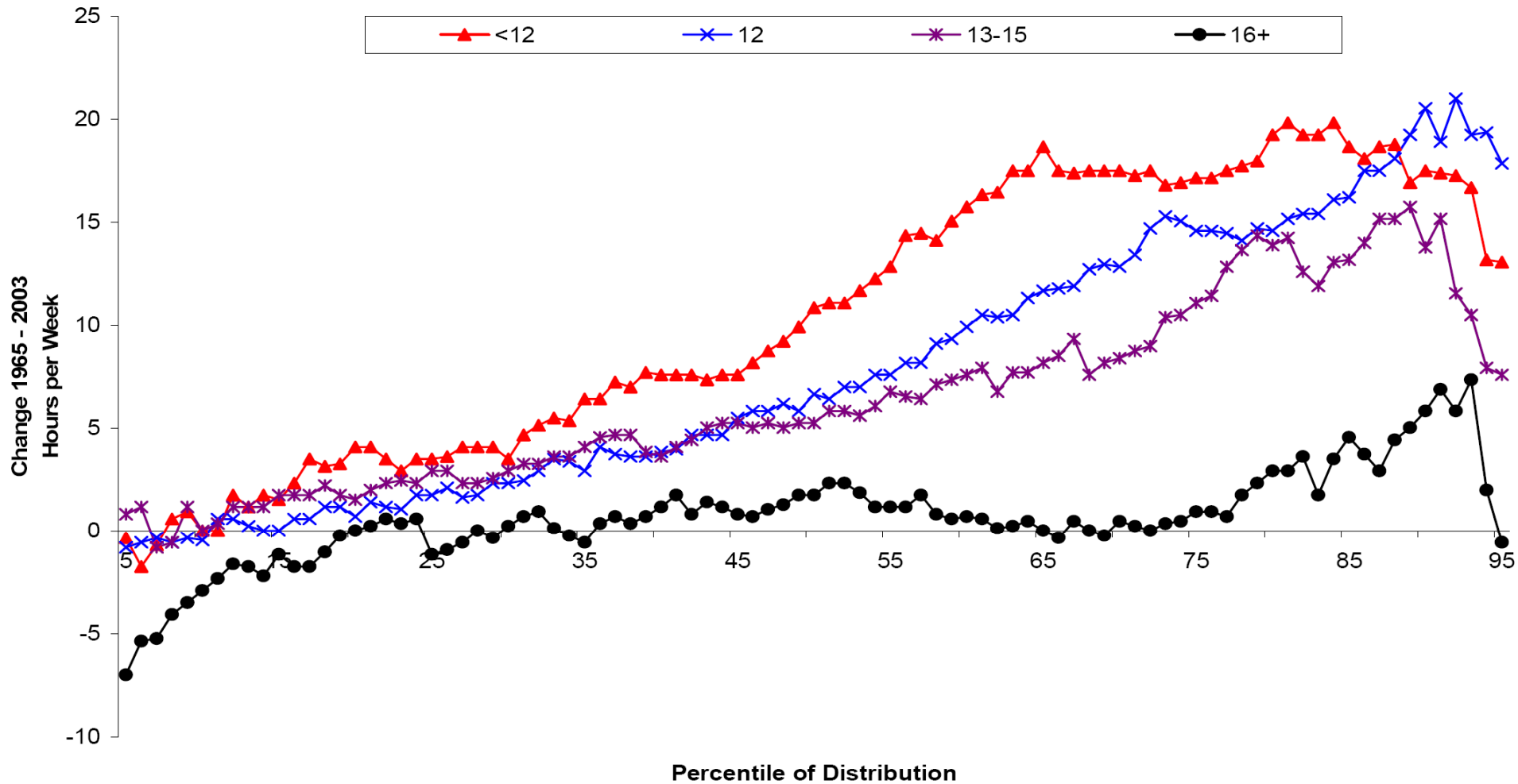
Year/Category	Years of Schooling							
	<12	12	13-15	16+	<12	12	13-15	16+
<u>Panel 1: Total Market Work</u>								
	Men				Women			
1965	51.10	52.91	52.44	49.37	17.87	22.91	21.65	26.63
1985	43.79	42.84	46.13	41.65	18.22	23.60	25.61	25.93
2003	33.08	39.22	39.81	44.96	15.44	24.94	28.17	30.89
Change 1965 – 2003	-18.02	-13.69	-12.63	-4.41	-2.43	2.03	6.52	4.26
<u>Panel 2: Total Non-Market Work</u>								
	Men				Women			
1965	9.49	9.11	9.71	10.61	36.28	33.42	32.01	29.33
1985	13.76	13.39	14.04	14.89	28.89	27.54	26.84	24.79
2003	12.92	13.59	13.26	13.73	26.18	22.61	20.56	20.82
Change 1965 – 2003	3.43	4.48	3.55	3.12	-10.10	-10.81	-11.45	-8.51
<u>Panel 3: Leisure 2</u>								
	Men				Women			
1965	104.12	101.66	99.21	101.64	105.70	101.82	102.47	101.77
1985	106.94	107.53	105.03	107.02	113.16	108.66	107.09	105.99
2003	116.34	108.94	105.42	101.44	113.58	108.13	105.20	103.10
Change 1965 – 2003	12.22	7.28	6.21	-0.20	7.88	6.31	2.73	1.33

Notes: This table reports the hours per week spent in different activities by education and sex category for 1965, 1985, and 2003. All means are calculated using fixed demographic weights, as described in the text. See Table I for sample restrictions and Table A1 for definitions of activity categories.

TABLE VII
Changes in Leisure 2 1965-2003, Component Breakdown by Education

Category	Years of Schooling			
	<12	12	12-15	16+
TV	9.31	7.79	6.93	5.48
Sleeping and Personal Care	3.15	1.43	0.67	-1.44
All Other Leisure Measures	2.57	2.04	1.40	0.72
Gardening and Pet Care	1.10	1.52	1.01	1.38
Sports/Sporting Events	0.89	0.68	1.18	1.97
Eating	-1.58	-0.04	0.03	1.29
Reading	-2.74	-3.16	-2.84	-3.46
Socializing	-2.79	-3.52	-4.05	-5.39
All Leisure 2	9.91	6.74	4.33	0.56

Notes: This table reports the change in several sub-categories of Leisure 2 between 1965 and 2003, broken down by educational attainment. All differences are calculated using fixed demographic weights, as described in the text.



Decomposition of Leisure Inequality

$$Y_{it} = \underbrace{X_{it}\bar{\beta} + \bar{F}^{-1}(\theta_{it}|X_{it})}_{Y_{it}^1} + X_{it}(\beta_t - \bar{\beta})$$
$$\underbrace{\hspace{10em}}_{Y_{it}^2}$$
$$+ \left(F_t^{-1}(\theta_{it}|X_{it}) - \bar{F}^{-1}(\theta_{it}|X_{it}) \right)$$

TABLE VIII
Juhn-Murphy-Pierce Decomposition of the Change in the Leisure 2 Distribution

Distribution Percentile Comparison	Total Change	Decomposition		
		Demographic Quantities	Cell Means	Unobservables
Panel 1. 1965-2003				
90-10	14.23	-0.76	2.70	12.29
90-50	9.10	-0.19	0.67	8.63
50-10	5.13	-0.57	2.03	3.67
Panel 2. 1965-1985				
90-10	8.75	-1.14	0.57	9.32
90-50	6.53	-0.32	-0.41	7.27
50-10	2.22	-0.82	0.99	2.05
Panel 3. 1985-2003				
90-10	5.48	0.38	2.13	2.97
90-50	2.57	0.13	1.08	1.36
50-10	2.92	0.25	1.05	1.62

Notes: This table reports the change in the cross-sectional distribution of Leisure 2 between 1965 and 2003 (Panel 1), between 1965 and 1985 (Panel 2), and between 1985 and 2003 (Panel 3). The cross-sectional distribution is measured by the 90-10 percentile difference (row 1 in each panel), the 90-50 percentile difference (row 2), and the 50-10 percentile difference (row 3). The changes in these percentile comparisons, not adjusting for any demographics, are shown in column 1. The portion of the unadjusted change attributed to changing demographic quantities is reported in column 2. The portion of the unadjusted change attributed to changing demographic cell means is reported in column 3. The last column is the remaining change attributed to unobservables. The details of the methodology are described in the text.