Online Appendix

A Definition of Sample and Income Concepts

A.1 Sample Definitions

We denote the full time period available for the analysis by T^{max}. We define two types of samples for the main analysis, which are used to estimate cross-sectional (CS) and longitudinal (LX) statistics, respectively.

The CS sample includes all workers aged 25–55 who have real annual earnings in the current year above the minimum earnings threshold. The LX sample includes all workers who are in the CS sample and have 1-year and 5-year (forward) residual earnings changes, as defined below. We further define the LX-H sample which selects the subset of LX with a permanent earnings measure over the past three years, as defined below.

In addition, we define analogous samples CSB, LXB, LXB-H which cover the same worker population but over the shorter time period 1995–2016 for which disposable income measures and benefits receipt are available.

Finally, we define the wage survey sample as all workers aged 25–55 who have real annual earnings in the current year above the minimum earnings threshold and who are covered by the Wage Structure Statistics. This sample allows us to compare wage and earnings dynamics for about 50 percent of the full sample.

A.2 Definitions for Income Measures

We denote residualized log earnings by ϵ_{it}. This measure is computed in order to avoid trends being affected by people being at different stages of their life cycles, business cycle, etc. To obtain this measure, we regress log real earnings, log y_{it}, against a full set of age dummies, separately by gender and year. Residualize log earnings ϵ_{it} are the residuals from these regressions.

Based on residualized log earnings, we define earnings growth as 1-year forward residualized log earnings changes,

$$g_{it} = \Delta\epsilon_{it} = \epsilon_{i,t+1} - \epsilon_{it}.$$

Note that these measures of earnings changes will only be computed for individuals who have earnings above the minimum income threshold in time t and above one-third of the threshold

income in t+1. Similarly, we define 5-year forward residualized log earnings changes,

$$g_{it}^{5} = \Delta^{5}\epsilon_{it} = \epsilon_{i,t+5} - \epsilon_{it}.$$

In addition, we calculate the 1 year forward arc-percent change in earnings as

$$\Delta^{1} dhs_{it} = \frac{\tilde{y}_{i,t+1}^{ga} - \tilde{y}_{it}^{ga}}{0.5 \cdot (\tilde{y}_{i,t+1}^{ga} + \tilde{y}_{it}^{ga})}$$

where $\tilde{y}_{it}^{ga} = y_{i,t+1}/\bar{y}_{i,t+1}^{ga}$ is real annual earnings relative to the gender-age specific average earnings level.

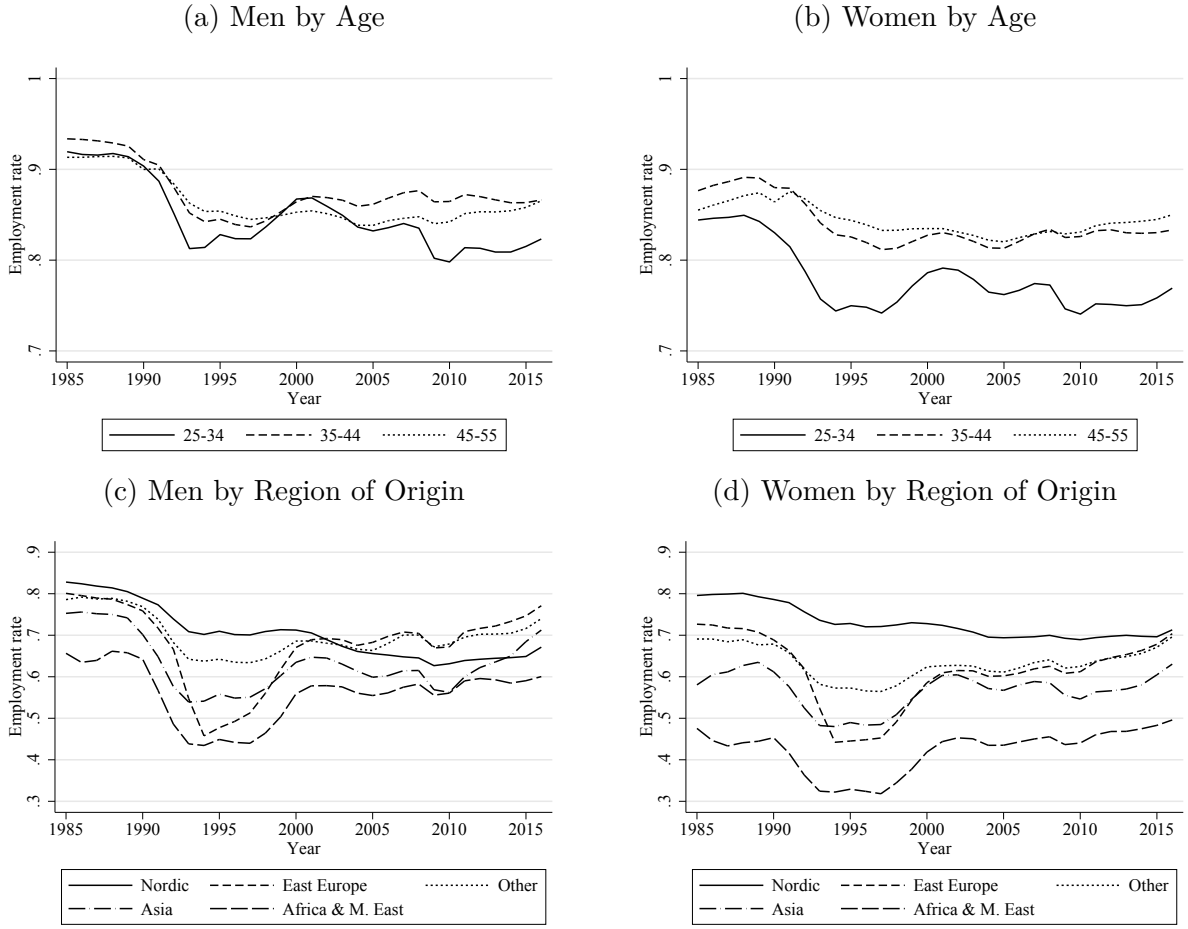
Finally, we define permanent earnings as

$$P_{it-1} = \frac{\sum_{s=t-3}^{t-1} y_{is}}{3}.$$

This measure takes average earnings over the previous three years. This measure includes zeros or earnings below the minimum income threshold for individuals who have at least 2 years of earnings above the threshold. To again avoid contamination from life cycle effects, etc., we regress this measure against a full set of age dummies, separately by gender and by year. We call the residuals of this regressions ϵ_{it}^{P} and these residuals are used to rank people in percentiles of the corresponding distribution.

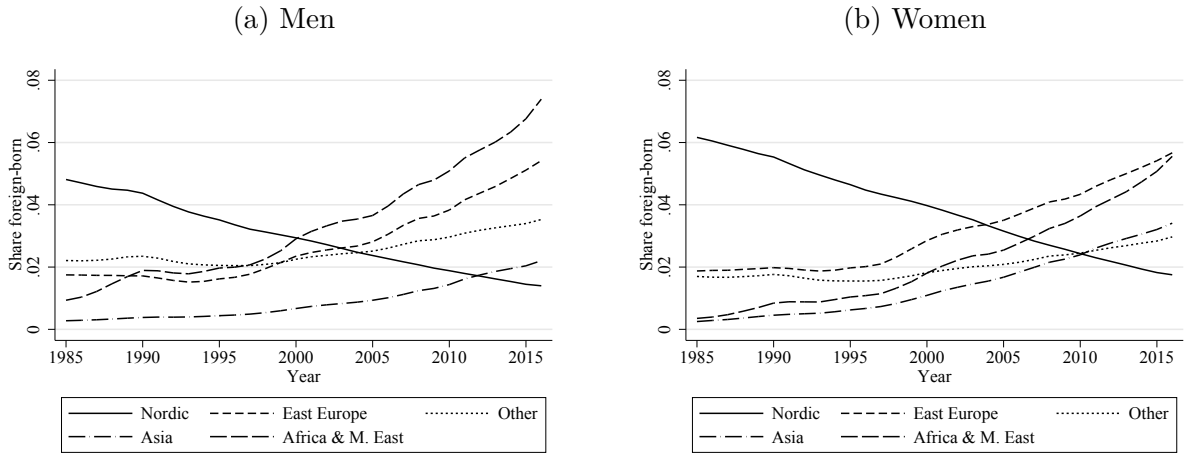
B More Stylized Facts on Sample Composition and Income

Figure A.1: Employment Rates Across Groups



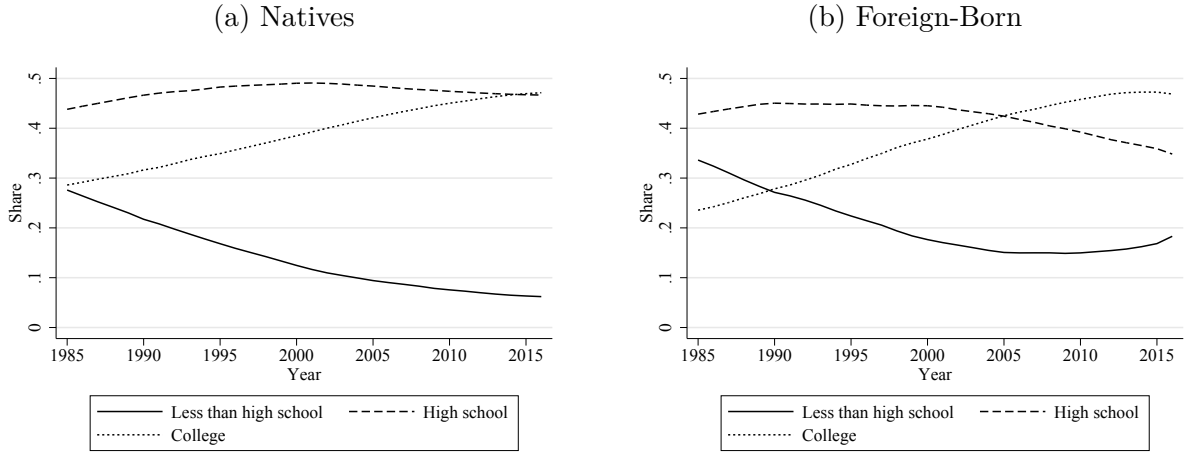
Notes: *Figure A.1 plots the share employed in the population aged 25–55 by gender, age and region of origin. Employment is defined as having annual earnings above 1.5 times the monthly earnings at the retail minimum wage.*

Figure A.2: Share Foreign-Born Among Employed in Ages 25–55, by Gender and Region of Origin



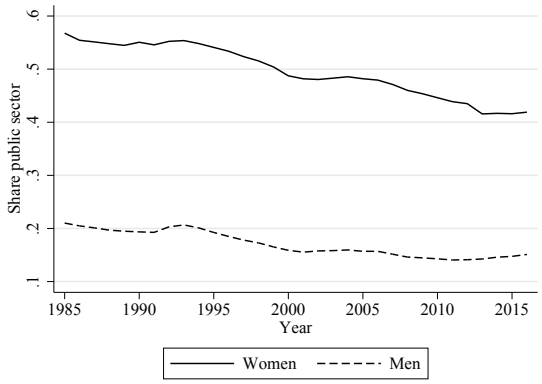
Notes: *Figure A.2 plots the share foreign-born among employed in ages 25–55 from different regions of origin by gender.*

Figure A.3: Natives and Immigrants by Education Level



Notes: *Figure A.3 plots the share of natives and foreign-born with different levels of education among employed in ages 25–55. Education is defined by the maximum education level achieved during 1985–2016.*

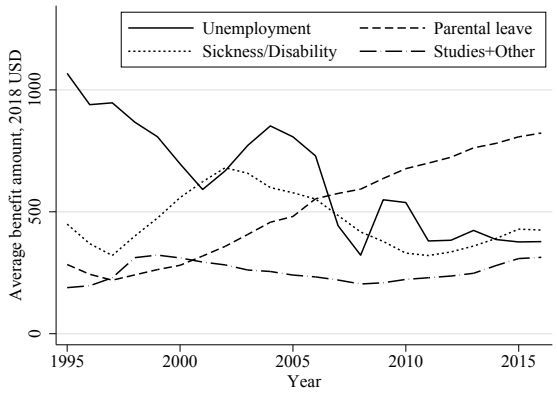
Figure A.4: Public Sector Employment



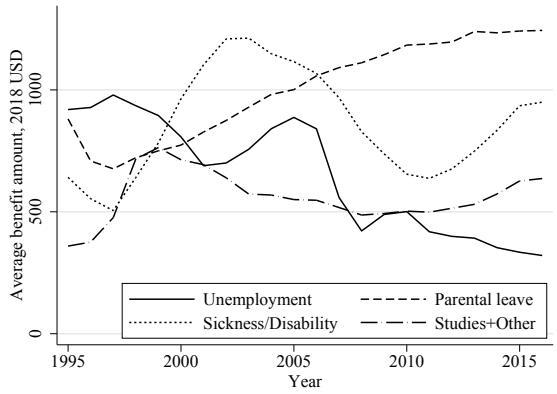
Notes: *Figure A.4 plots the share of employed men and women in ages 25–55 working in the public sector, based on the employment with largest annual earnings in the Register-Based Labor Market Statistics (RAMS).*

Figure A.5: Benefits Usage among Employed in Ages 25–55

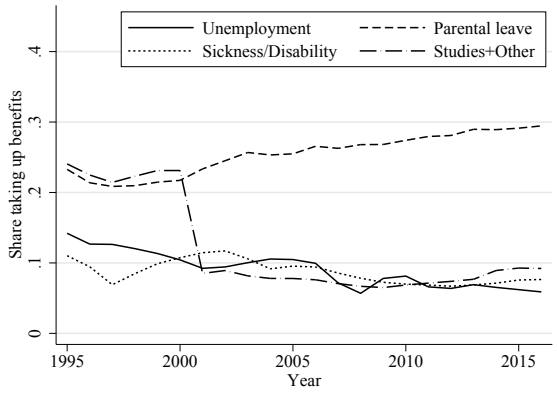
(a) Benefit Amounts, Men



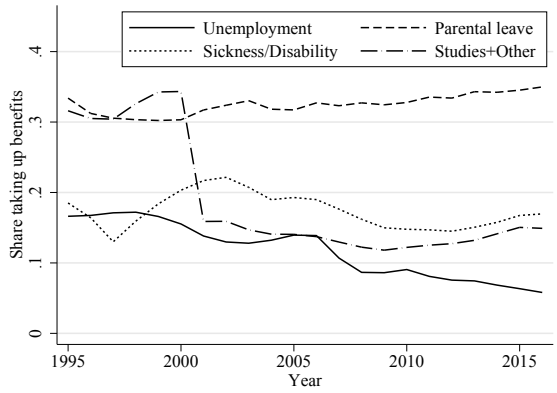
(b) Benefit Amounts, Women



(c) Benefits Take-up, Men

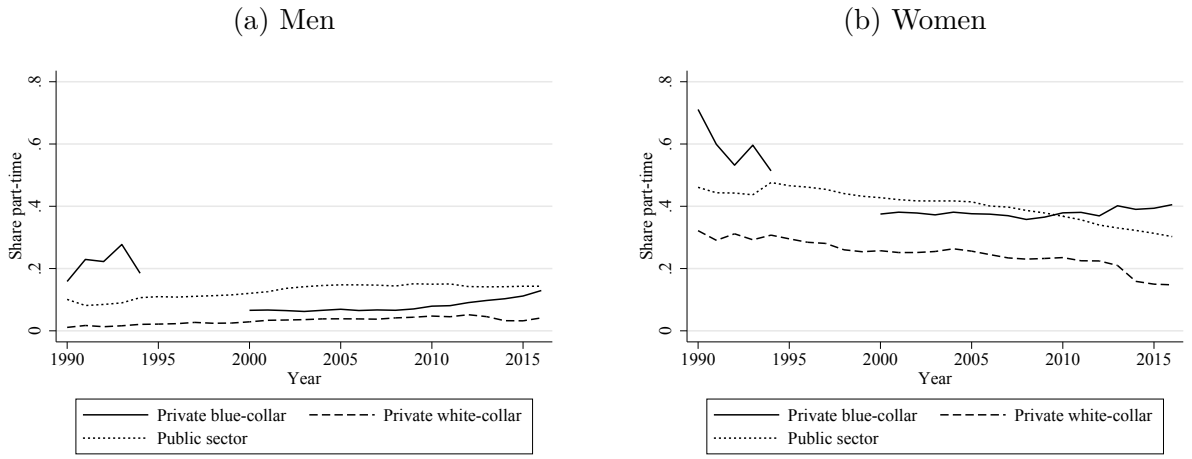


(d) Benefits Take-up, Women



Notes: *Figure A.5 plots the average benefit amounts and share taking up benefits among employed in ages 25–55 by benefit types. The discontinuous break for studies+other benefits in Figures A.5c and A.5d indicates a time series break in the included variables. However, the pattern is not reflected in Figures A.5a and A.5b, which suggests that the break concerns benefit types with low average amounts.*

Figure A.6: Share Part-Time Work

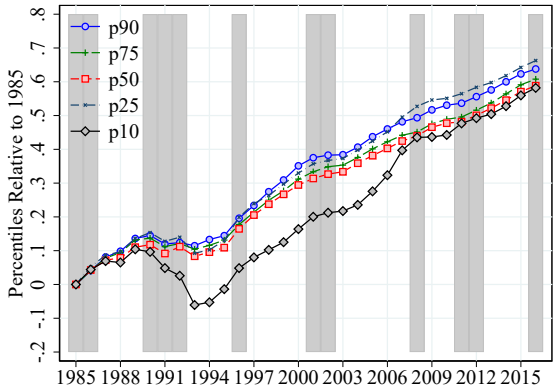


Notes: *Figure A.6 shows the share part-time workers among employed in ages 25–55 included in the Wage Structure Statistics. The register is based on five separate data collections for the municipality, county council and state sector in the public sector and for blue-collar and white-collar workers in the private sector. We pool information from the municipality, county council and state sector into a public sector, but keep blue-collar and white-collar workers separately. For the public sector, we use information on contracted hours and define part-time work as less than 87.5 percent of full-time. For most workers this implies less than 35 contracted hours per week. For the private sector, we use a variable directly capturing the incidence of part-time work.*

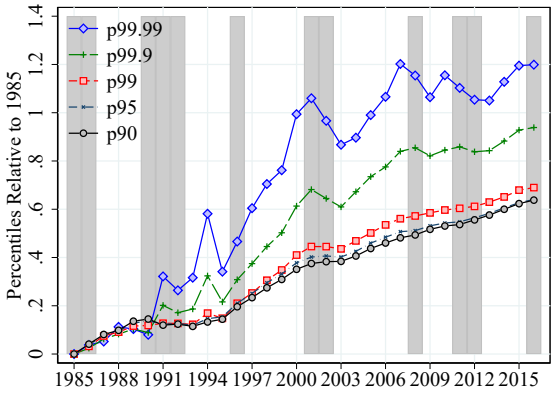
C Additional Results for Section 3

Figure A.7: Distribution of Earnings in the Population

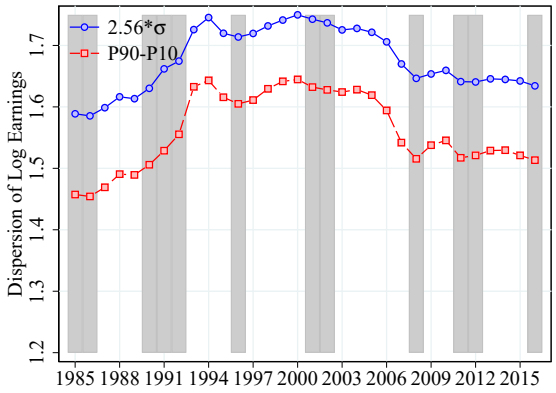
(a) Percentiles



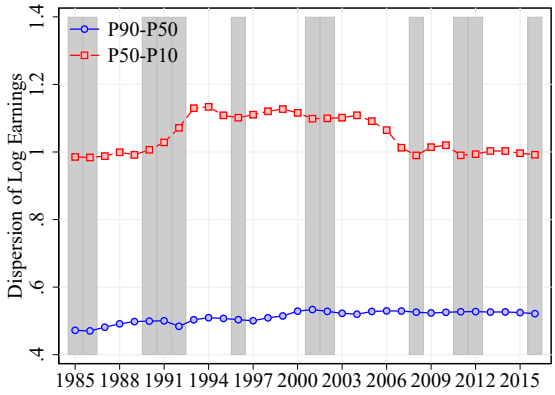
(b) Top Percentiles



(c) Dispersion



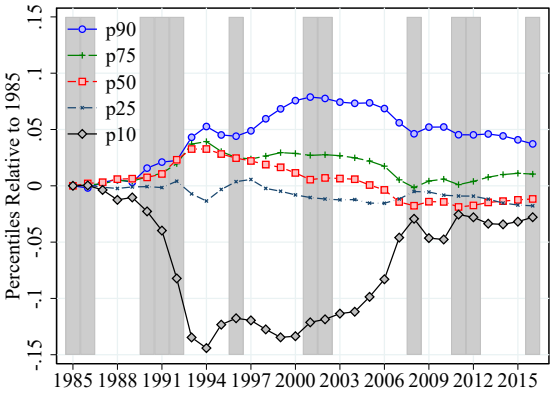
(d) Right- and Left-Tail Dispersion



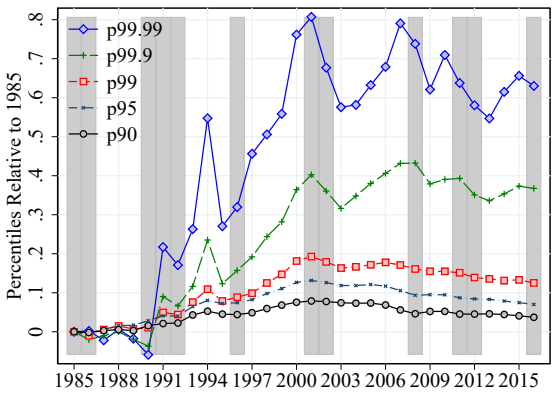
Notes: *This figure reports results for the pooled sample of men and women. Using raw log earnings and the CS sample, Figure A.7 plots against time the following variables: (a) P10, P25, P50, P75, P90, (b) P90, P95, P99, P99.9, P99.99, (c) P90–10 and 2.56*SD of log income, (d) P90–50 and P50–10. In (a) and (b) percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.8: Distribution of Residual Earnings in the Population after Controlling for Age

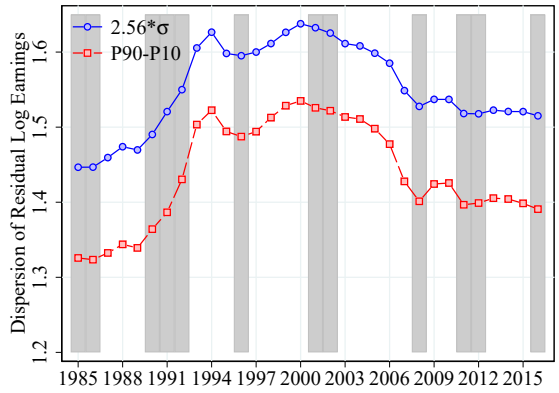
(a) Percentiles



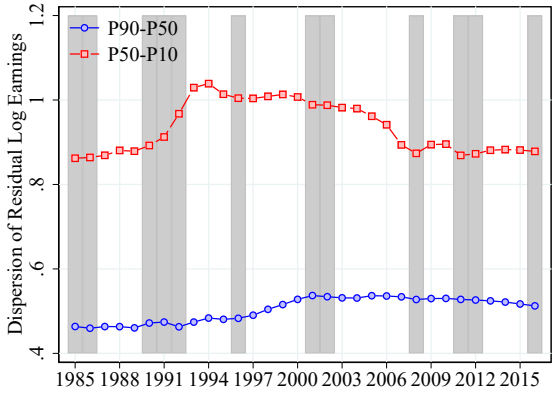
(b) Top Percentiles



(c) Dispersion



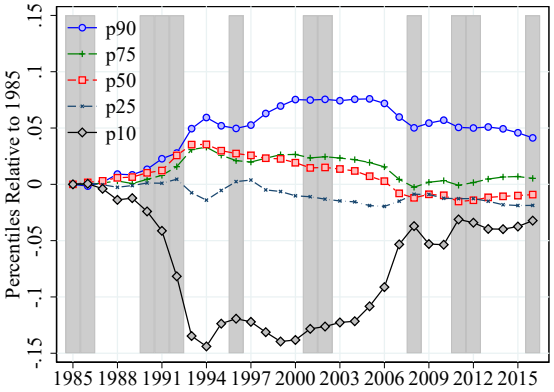
(d) Right- and Left-Tail Dispersion



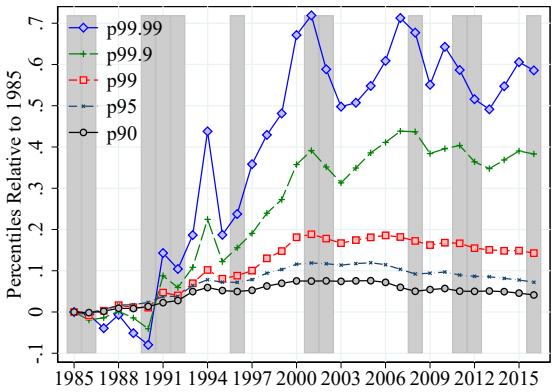
Notes: *This figure reports results for the pooled sample of men and women. We residualize log earnings using gender×age×year fixed effects. Using these residual earnings and the CS sample, Figure A.8 pools men and women and plots against time the following variables: (a) P10, P25, P50, P75, P90, (b) P90, P95, P99, P99.9, P99.99, (c) P90–10 and 2.56*SD of log income, (d) P90–50 and P50–10. In (a) and (b) percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.9: Distribution of Residual Earnings in the Population after Controlling for Age and Education

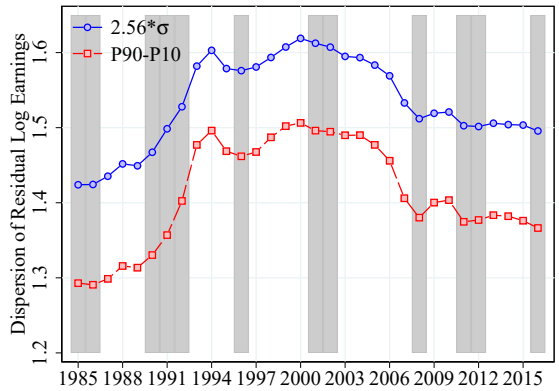
(a) Percentiles



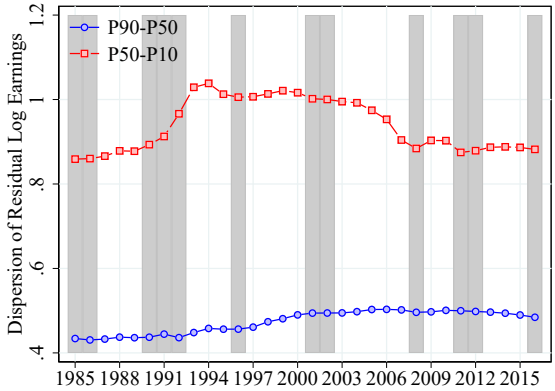
(b) Top Percentiles



(c) Dispersion



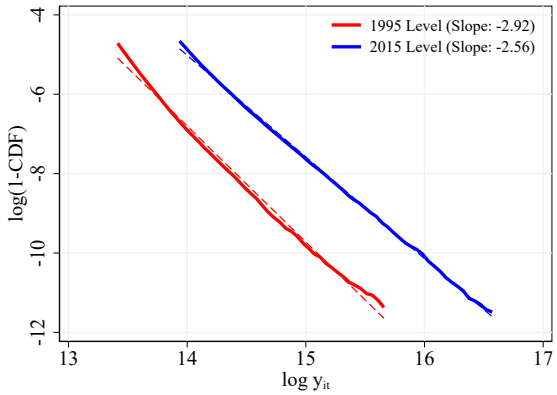
(d) Right- and Left-Tail Dispersion



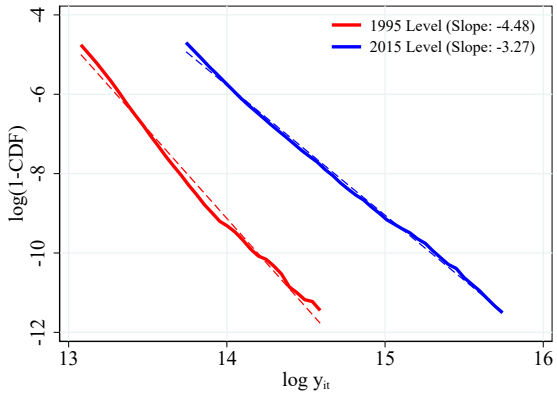
Notes: *This figure reports results for the pooled sample of men and women. We residualize log earnings using gender×age×education×year fixed effects, where education is measured by two groups (high school or less and at least some college). Using these residual earnings and the CS sample, Figure A.9 pools men and women and plots against time the following variables: (a) P10, P25, P50, P75, P90, (b) P90, P95, P99, P99.9, P99.99, (c) P90–10 and 2.56*SD of log income, (d) P90–50 and P50–10. In (a) and (b) percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.10: Top Income Inequality: Pareto Tail at Top 1%

(a) Men



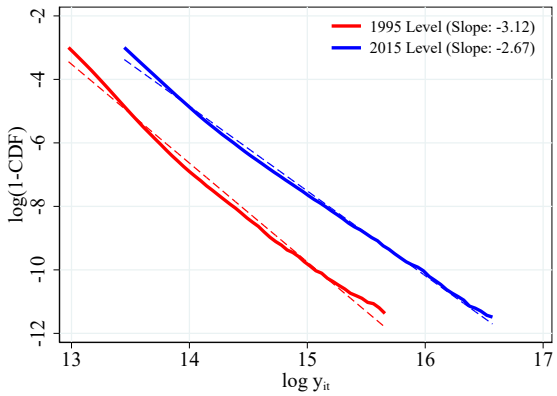
(b) Women



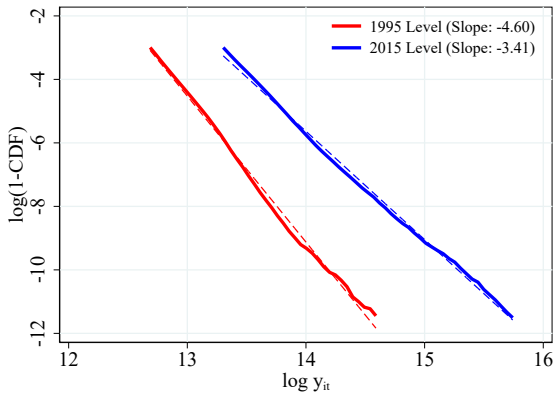
Notes: *Using the top 1% of the CS sample, Figure A.10 plots the log empirical density (log(1-CDF)) of log earnings in a log-log plot. We provide the linear fitted line and report the slope measuring the Pareto tail index in 1995 and 2015, separately for men and women.*

Figure A.11: Top Income Inequality: Pareto Tail at Top 5%

(a) Men



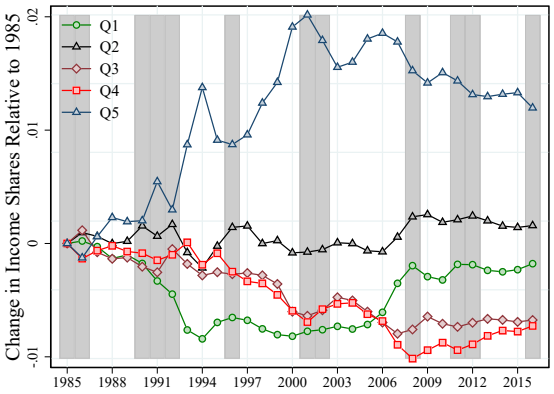
(b) Women



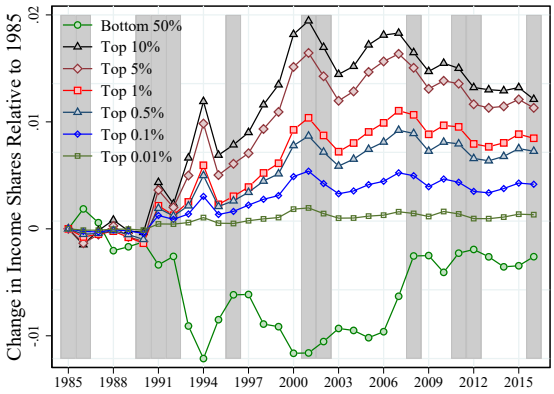
Notes: *Using the top 5% of the CS sample, Figure A.10 plots the log empirical density (log(1-CDF)) of log earnings in a log-log plot. We provide the linear fitted line and report the slope measuring the Pareto tail index in 1995 and 2015, separately for men and women.*

Figure A.12: Changes in Income Shares Relative to 1985

(a) Income Shares of Quintiles

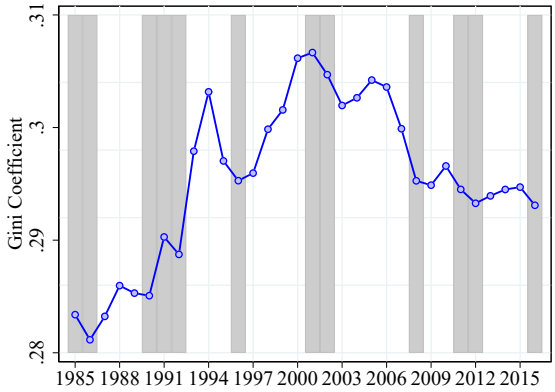


(b) Selected Income Shares



Notes: *Using earnings and the CS sample for the full population, Figure A.12 plots against time the following variables: (a) share of total earnings accruing to each quintile of the earnings distribution, (b) share of total earnings accruing to the bottom 50%, top 10%, 5%, 1%, 0.5%, 0.1%, 0.01%. All income shares are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

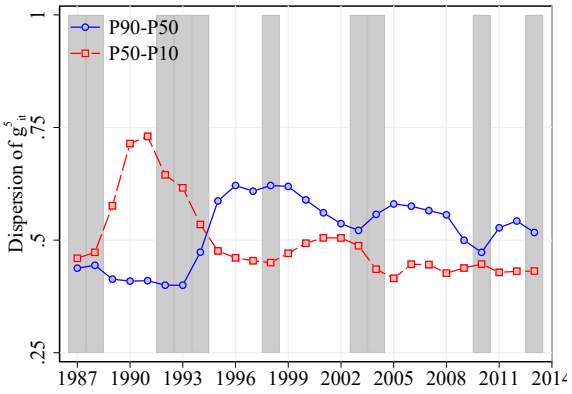
Figure A.13: Gini Coefficient



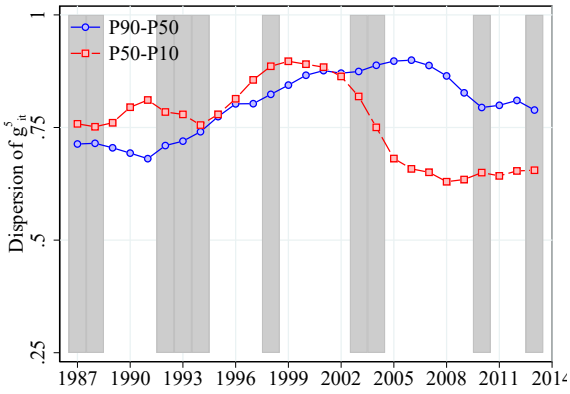
Notes: *Using earnings and the CS sample for the full population, Figure A.13 plots against time the Gini coefficient. Shaded areas are recessions.*

Figure A.14: Dispersion of Five-Year Earnings Change

(a) Men



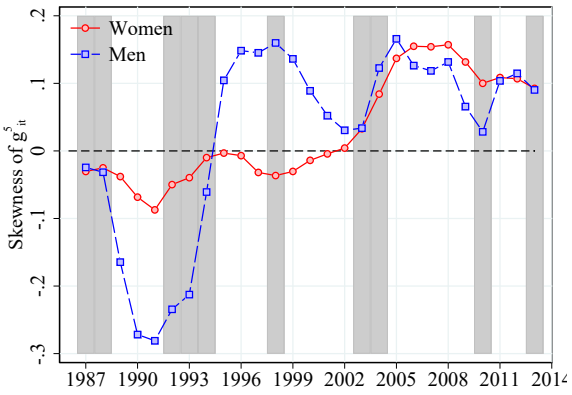
(b) Women



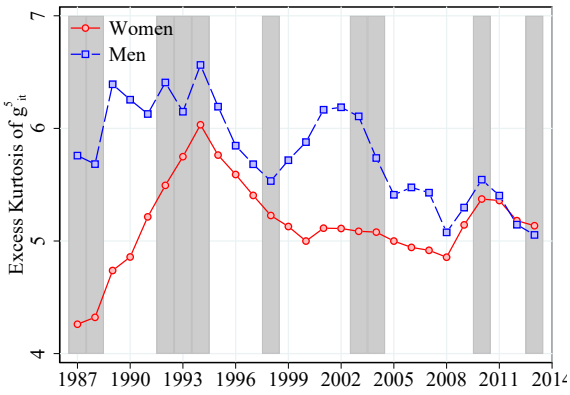
Notes: *Using residual five-year earnings changes and the LX sample, Figure A.14 plots against time the P90–50 and P50–10 gaps for (a) Men, (b) Women. Shaded areas are recessions.*

Figure A.15: Skewness and Kurtosis of Five-Year Earnings Change

(a) Kelley Skewness



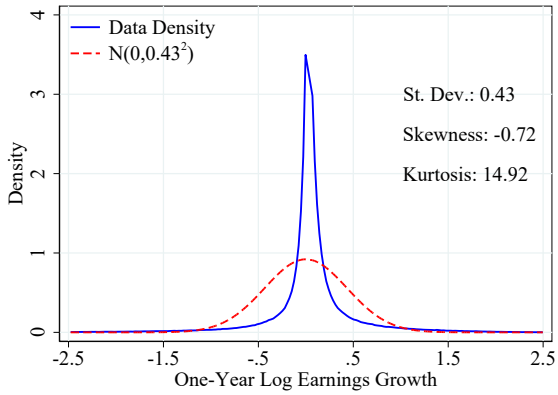
(b) Excess Crow-Siddiqui Kurtosis



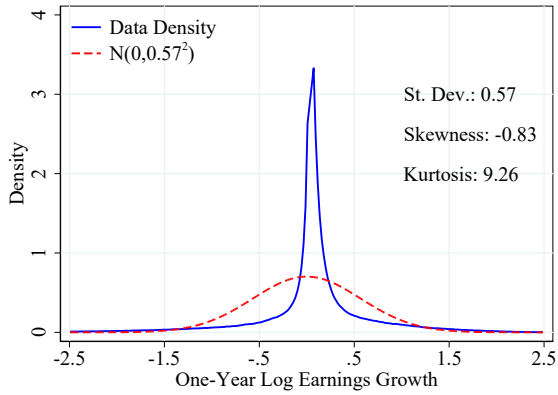
Notes: *Using residual five-year earnings changes and the LX sample, Figure A.15 plots against time the following variables: (a) Men and Women: Kelley skewness, defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$*, (b) Men and Women: Excess Crow-Siddiqui kurtosis calculated as* $\frac{P97.5-P2.5}{P75-P25} - 2.91$ *where the first term is the Crow-Siddiqui measure of Kurtosis and 2.91 corresponds to the value of this measure for a Normal distribution. Shaded areas are recessions.*

Figure A.16: Empirical Densities of One-Year Earnings Growth

(a) Men



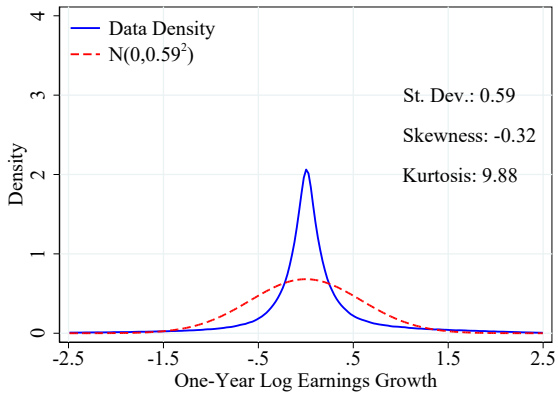
(b) Women



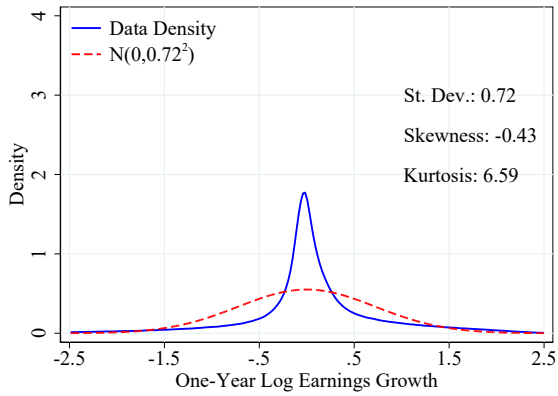
Notes: *Using the LX sample in 2005, Figure A.16 plots the density of residual one-year earnings changes and the best fit using a normal distribution, separately for (a) Men and (b) Women.*

Figure A.17: Empirical Densities of Five-Year Earnings Growth

(a) Men



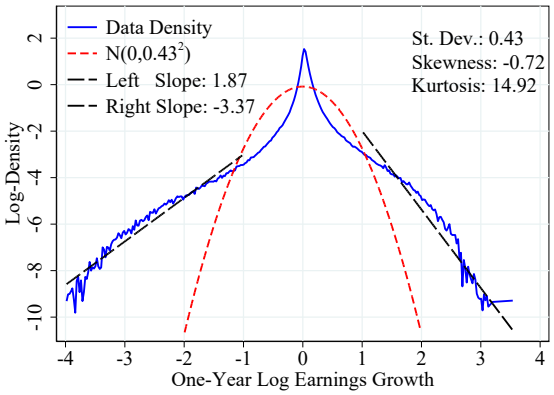
(b) Women



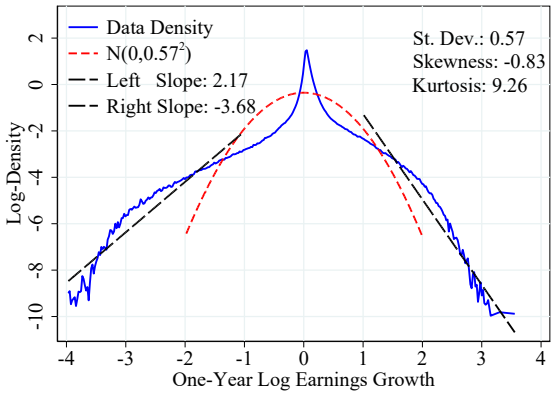
Notes: *Using the LX sample in 2005, Figure A.17 plots the density of residual five-year earnings changes and the best fit using a normal distribution, separately for (a) Men and (b) Women.*

Figure A.18: Empirical Log-Densities of One-Year Earnings Growth

(a) Men



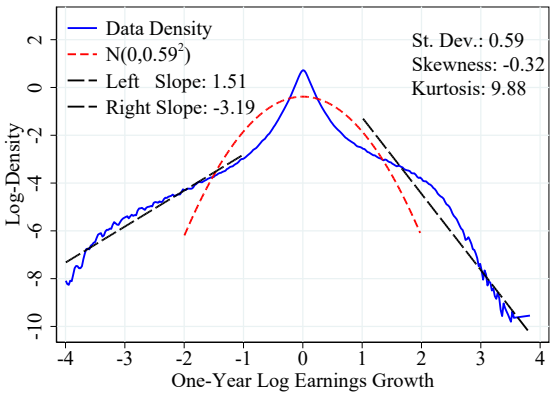
(b) Women



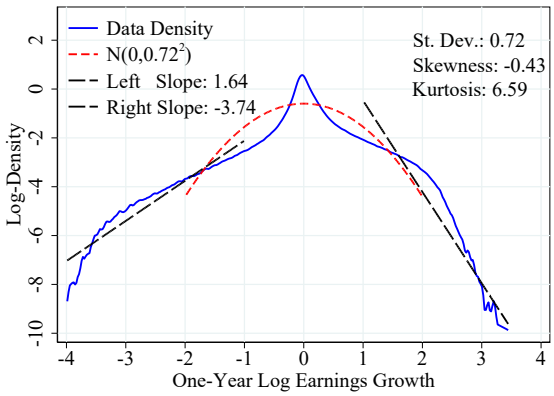
Notes: *Using the LX sample in 2005, Figure A.18 plots the log-density of residual one-year earnings changes and the best fit using a normal distribution, separately for (a) Men and (b) Women.*

Figure A.19: Empirical Log-Densities of Five-Year Earnings Growth

(a) Men



(b) Women

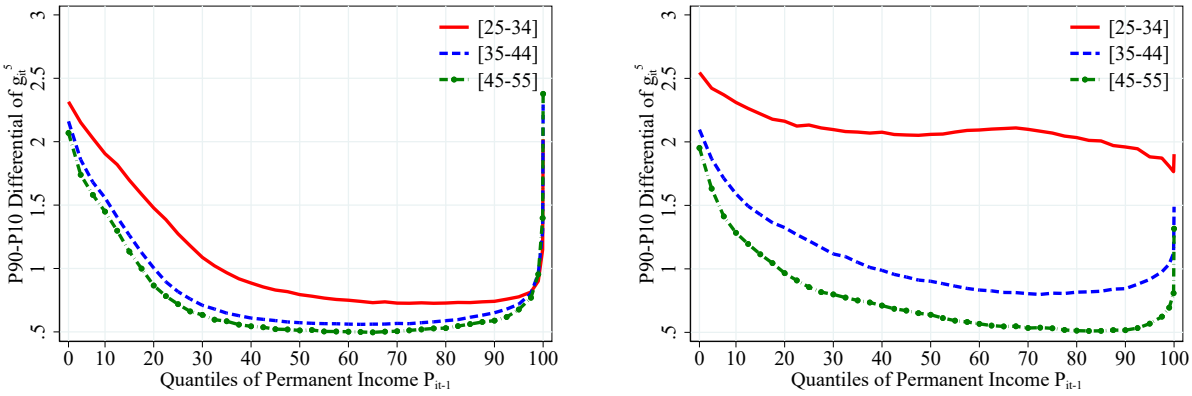


Notes: *Using the LX sample in 2005, Figure A.19 plots the log-density of residual five-year earnings changes and the best fit using a normal distribution, separately for (a) Men and (b) Women.*

Figure A.20: Dispersion, Skewness, and Kurtosis of 5-Year Log Earnings Changes

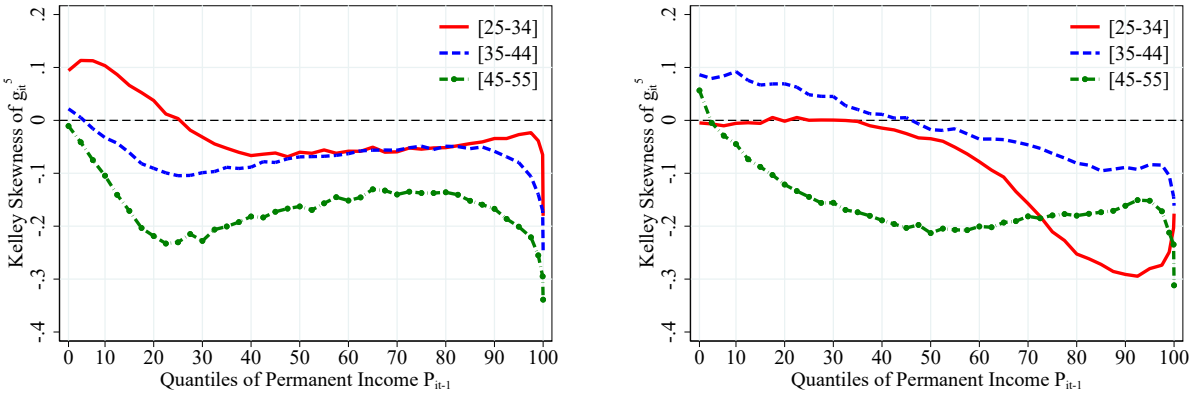
(a) Men

(b) Women



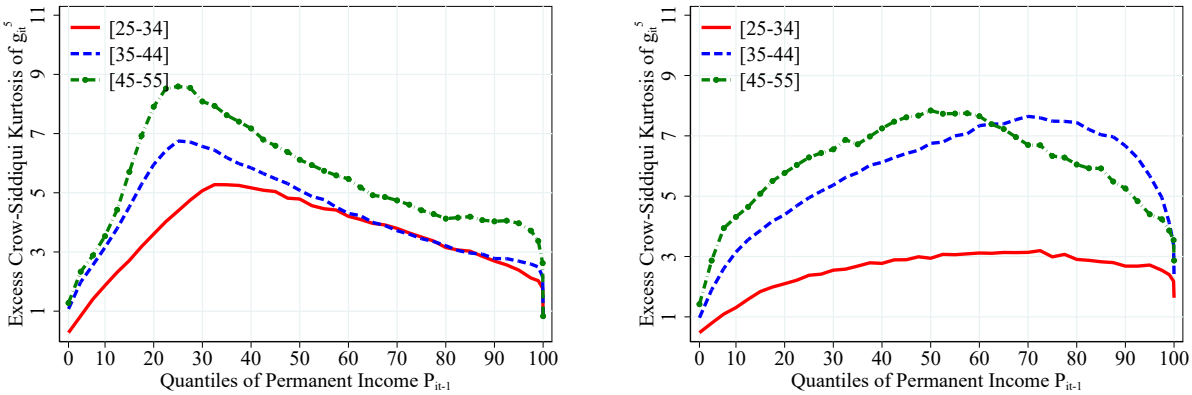
(c) Men

(d) Women



(e) Men

(f) Women

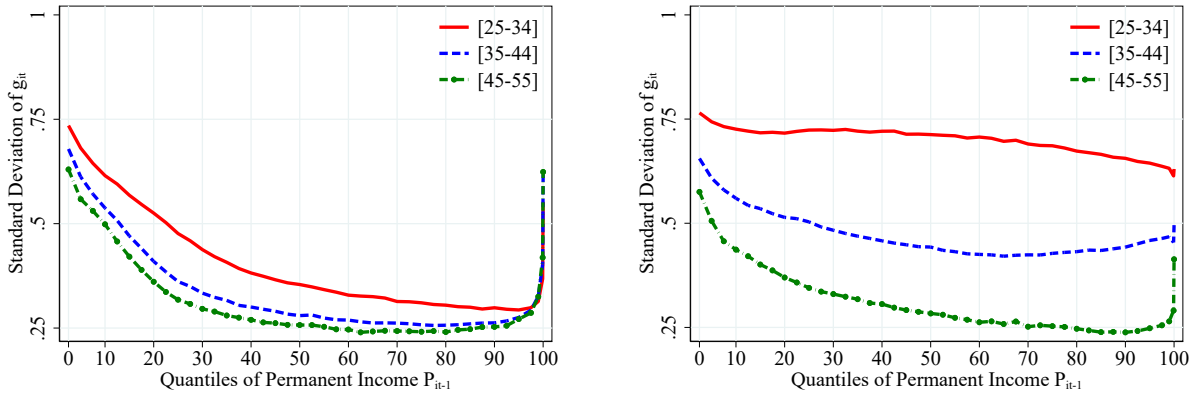


Notes: *Using residual five-year earnings changes and the LX-H sample, Figure 8 plots against permanent income quantile groups the following variables for the 3 age groups: (a) Men: P90–10, (b) Women: P90–10, (c) Men: Kelley Skewness, (d) Women: Kelley Skewness, (e) Men: Excess Crow-Siddiqui kurtosis, (f) Women: Excess Crow-Siddiqui kurtosis. Kelley Skewness defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$. *Excess Crow-Siddiqui kurtosis calculated as* $\frac{P97.5-P2.5}{P75-P25} - 2.91$ *where the first term is the Crow-Siddiqui measure of Kurtosis and 2.91 corresponds to the value of this measure for Normal distribution.*

Figure A.21: Standardized Moments of 1-Year Log Earnings Changes

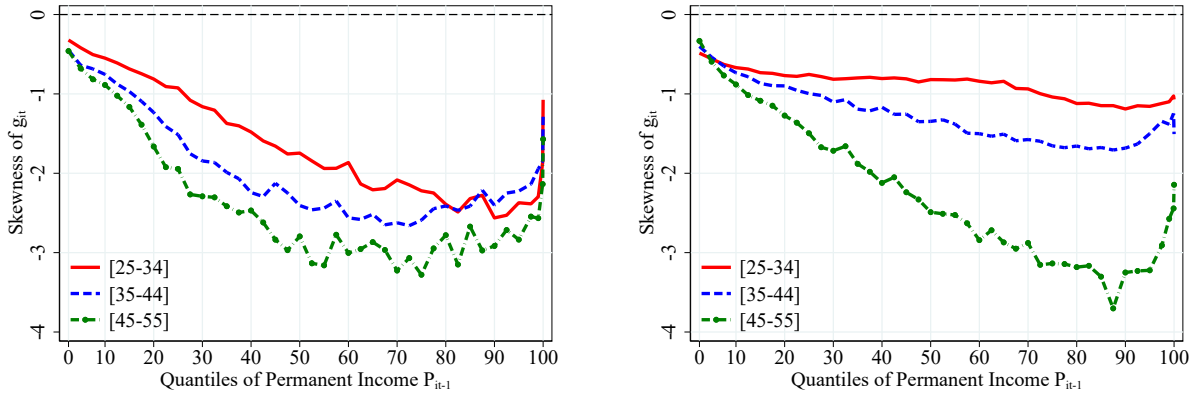
(a) Men

(b) Women



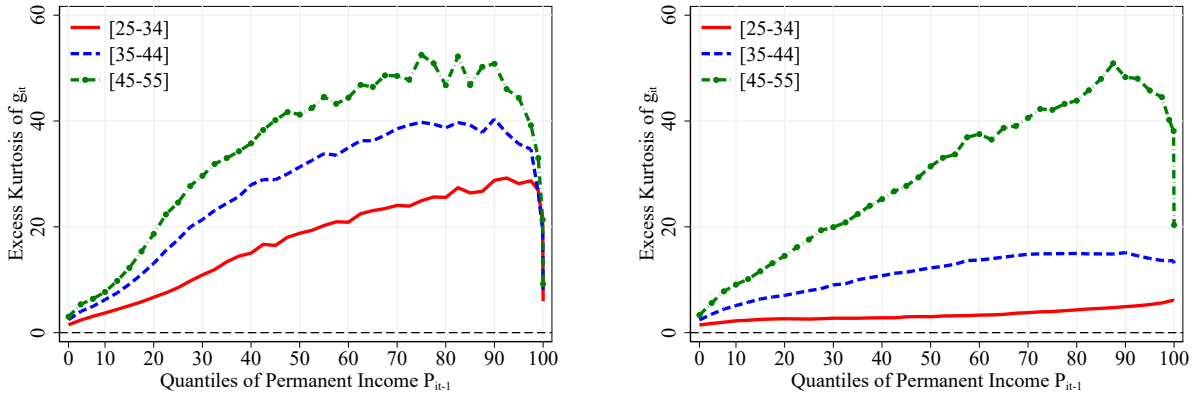
(c) Men

(d) Women



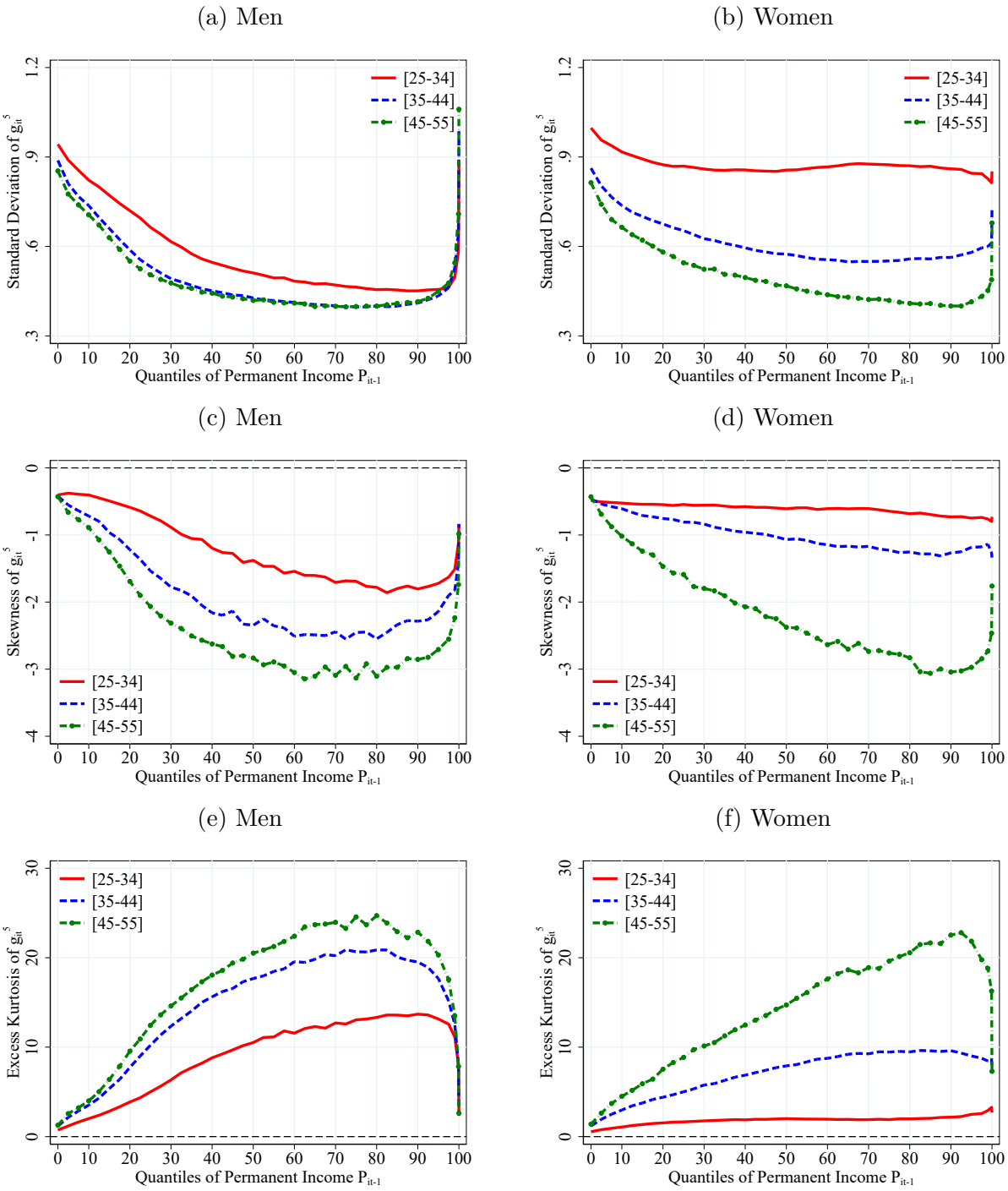
(e) Men

(f) Women



Notes: *Using residual one-year earnings changes and the LX-H sample, Figure 8 plots against permanent income quantile groups the following variables for the 3 age groups: (a) Men: Standard deviation, (b) Women: Standard deviation, (c) Men: Coef of Skewness, (d) Women: Coef of Skewness, (e) Men: Excess Kurtosis, (f) Women: Excess Kurtosis. Excess kurtosis equals the coefficient of kurtosis minus 3, the coefficient of kurtosis for the Normal distribution.*

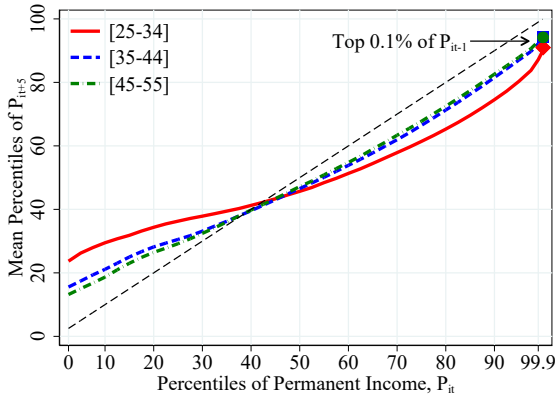
Figure A.22: Standardized Moments of 5-Year Log Earnings Changes



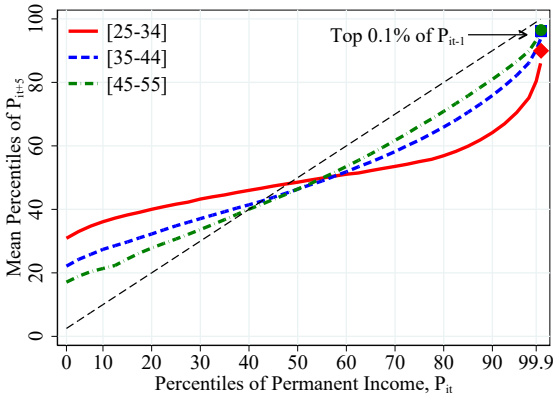
Notes: *Using residual five-year earnings changes and the LX-H sample, Figure 8 plots against permanent income quantile groups the following variables for the 3 age groups: (a) Men: Standard deviation, (b) Women: Standard deviation, (c) Men: Coef of Skewness, (d) Women: Coef of Skewness, (e) Men: Excess Kurtosis, (f) Women: Excess Kurtosis. Excess kurtosis equals the coefficient of kurtosis minus 3, the coefficient of kurtosis for the Normal distribution.*

Figure A.23: Evolution of 5-Year Mobility Over the Life Cycle

(a) Men



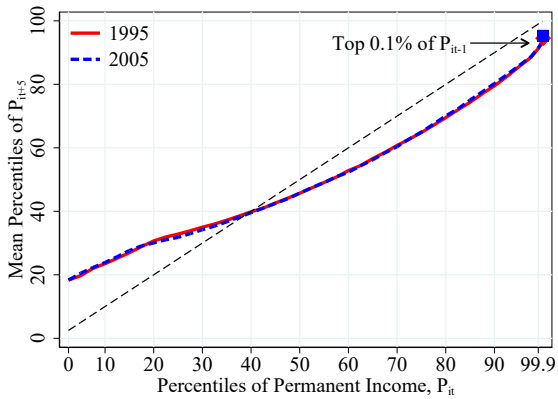
(b) Women



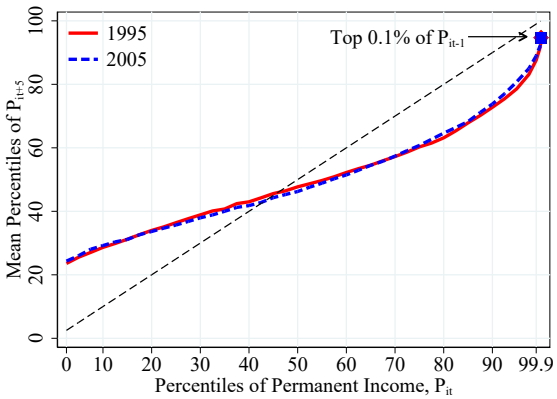
Notes: *Figure A.23 shows average rank-rank mobility over 5 years by computing average percentiles of permanent income, P_{t+5} five years later for workers in each permanent income percentile in the base year. The figure separately plots mobility for workers in age groups 25–34 and 35–44 in the base year and averages over the results for each available base year 1985–2005.*

Figure A.24: Evolution of 5-Year Mobility Over Time

(a) Men



(b) Women



Notes: *Figure A.24 shows average rank-rank mobility over 5 years by computing average percentiles of permanent income, P_{t+5} five years later for workers in each permanent income percentile in the base year, using two alternative base years 1995 and 2005 and averaging over all age groups.*

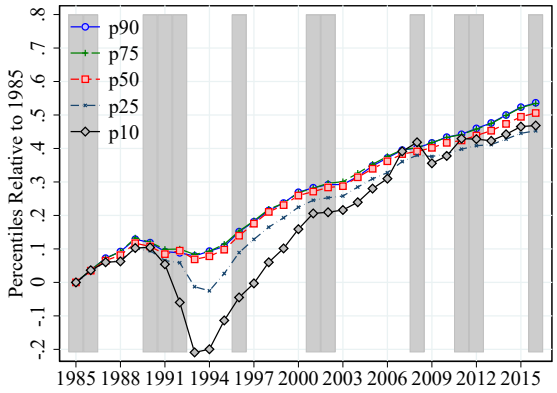
D Additional Results for Section 4

D.1 Education

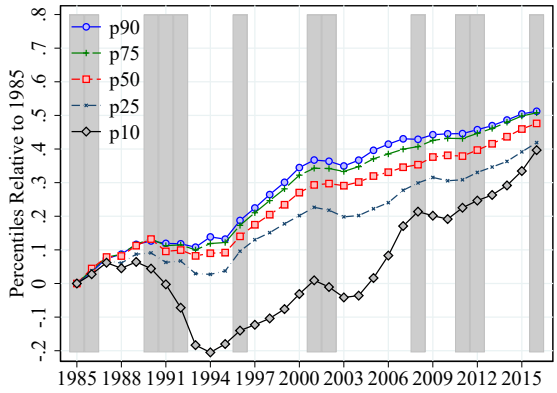
Education level for each individual is determined by the maximum level achieved during the observation period. We divide individuals into two broad education groups, where *Low-Educated* consists of individuals with elementary or high school education and *High-Educated* consists of individuals with at least some college education.

Figure A.25: Income Percentiles by Gender and Education

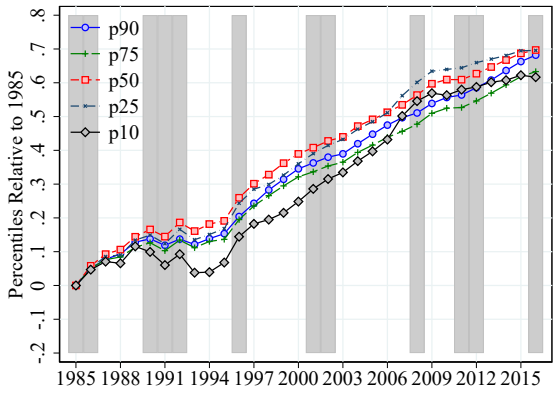
(a) Low-Educated Men



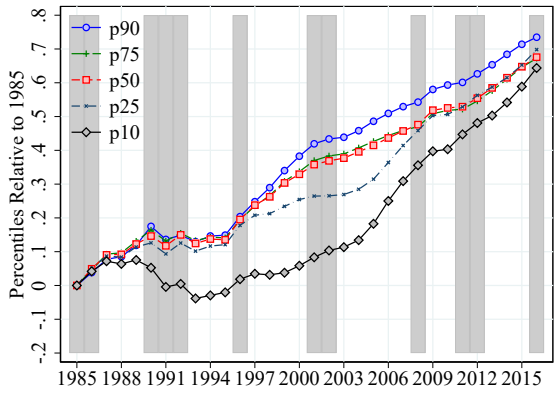
(b) High-Educated Men



(c) Low-Educated Women



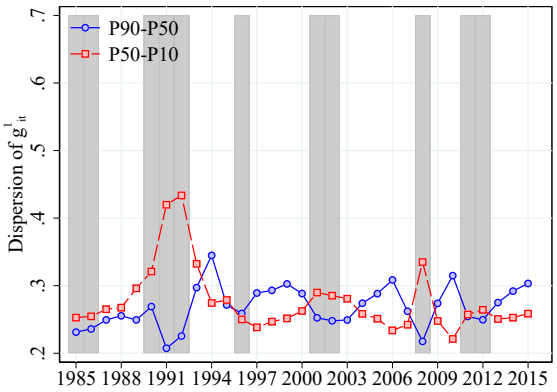
(d) High-Educated Women



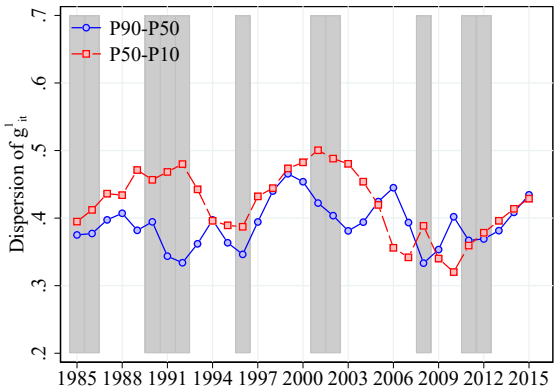
Notes: *Using raw log earnings and the CS sample, Figure A.25 plots against time P10, P25, P50, P75, P90, separately by gender and education group. All percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.26: Dispersion and Skewness of 1-Year Log Earnings Changes by Gender and Education

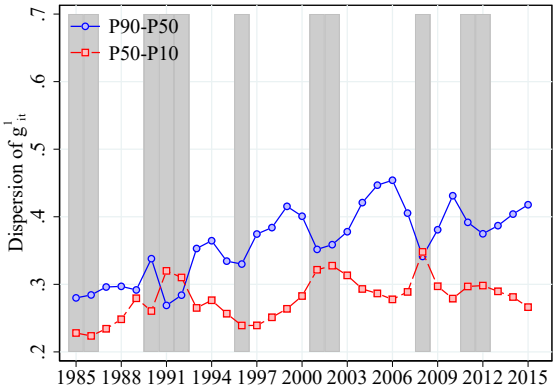
(a) Dispersion, Low-Educated Men



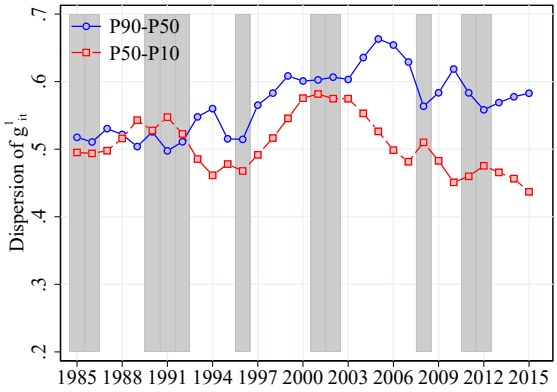
(b) Dispersion, Low-Educated Women



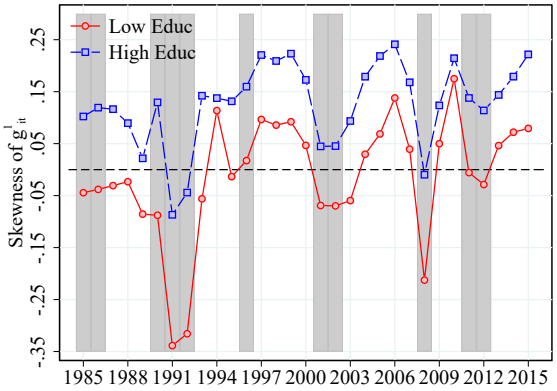
(c) Dispersion, High-Educated Men



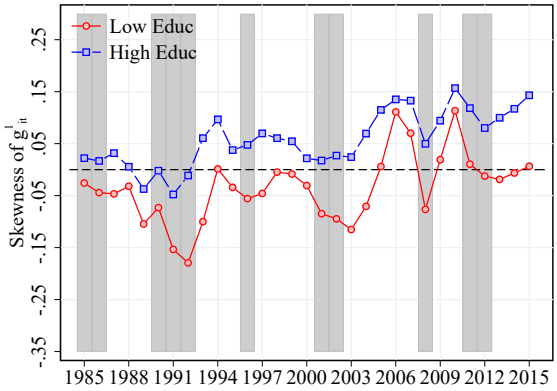
(d) Dispersion, High-Educated Women



(e) Kelley Skewness, Men



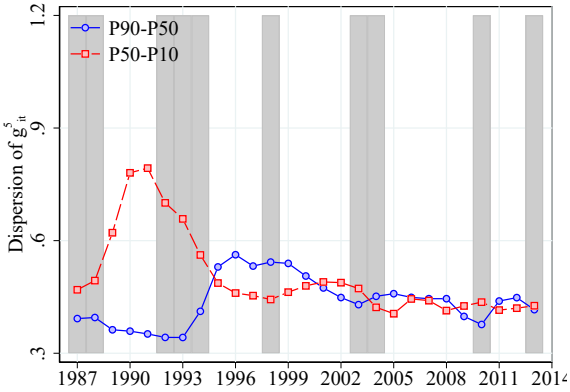
(f) Kelley Skewness, Women



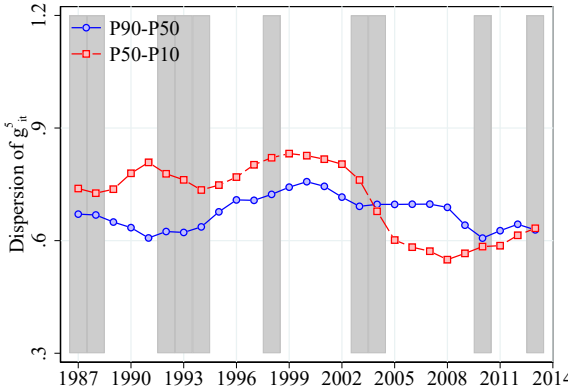
Notes: *Using residual one-year earnings changes and the LX sample, Figures A.26a–A.26d plot the P90-50 and P50-10 differential against time by gender-education group. Figures A.26e and A.26f show Kelley skewness by education for men and women, respectively. Shaded areas are recessions.*

Figure A.27: Dispersion and Skewness of 5-Year Log Earnings Changes by Gender and Education

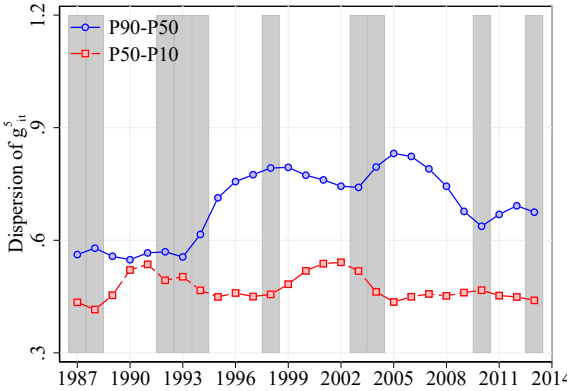
(a) Dispersion, Low-Educated Men



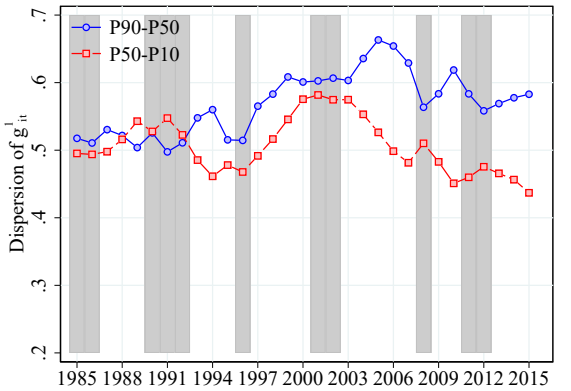
(b) Dispersion, Low-Educated Women



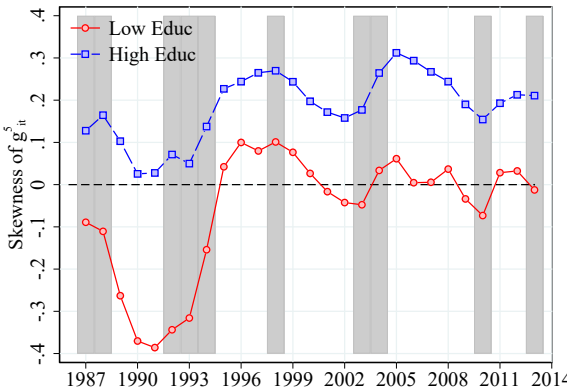
(c) Dispersion, High-Educated Men



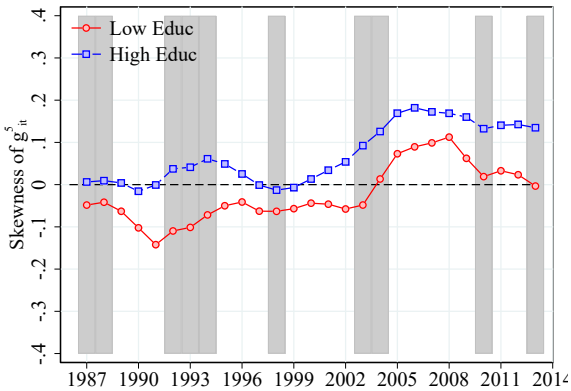
(d) Dispersion, High-Educated Women



(e) Kelley Skewness, Men



(f) Kelley Skewness, Women

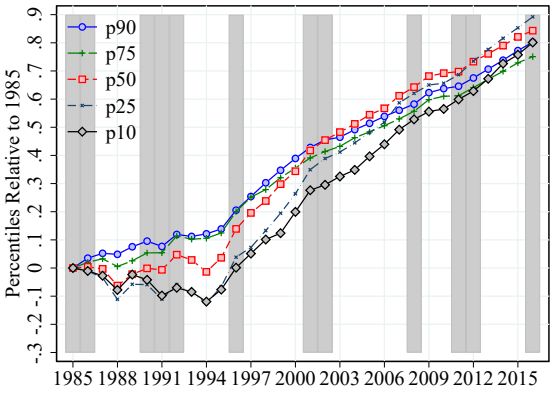


Notes: *Using residual five-year earnings changes and the LX sample, Figures A.27a–A.27d plot the P90-50 and P50-10 differential against time by gender-education group. Figures A.27e and A.27f show Kelley skewness by education for men and women, respectively. Shaded areas are recessions.*

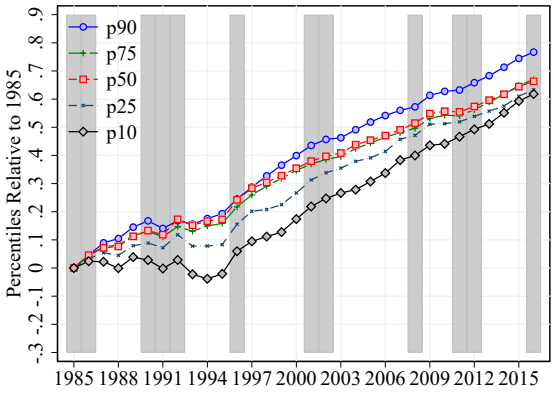
D.2 Immigration

Figure A.28: Income Percentiles by Region of Origin among Foreign-Born Female Workers

(a) Women: Africa, Asia, and Middle East



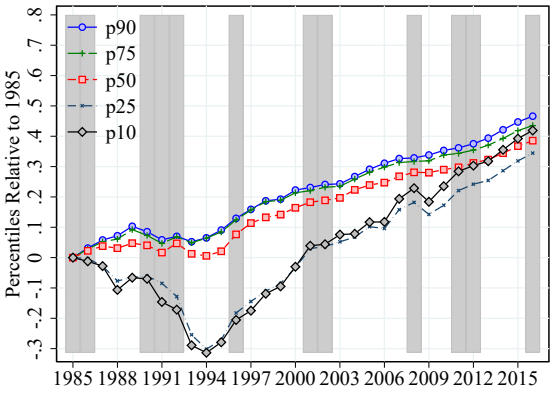
(b) Women: Europe and the Americas



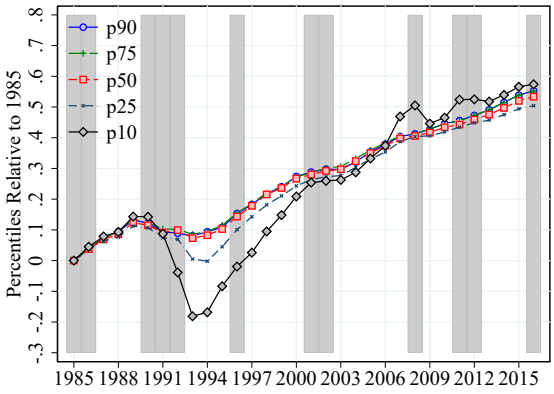
Notes: *Using raw log earnings and the CS sample, Figure A.28 plots against time P10, P25, P50, P75, P90, for female immigrants. We split foreign-born women by region of origin, distinguishing two groups, (a) Africa, Asia and Middle East, and (b) Europe and the Americas. All percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.29: Income Percentiles for Men by Education and Origin

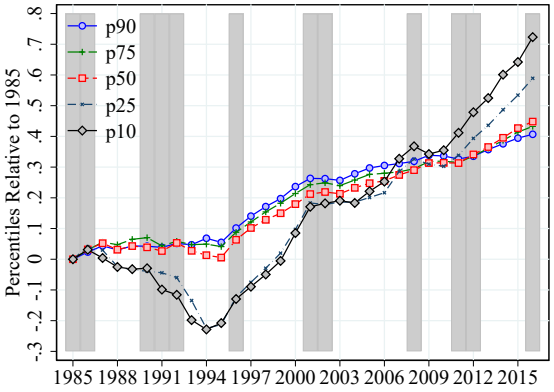
(a) Foreign-Born Men, Low Education



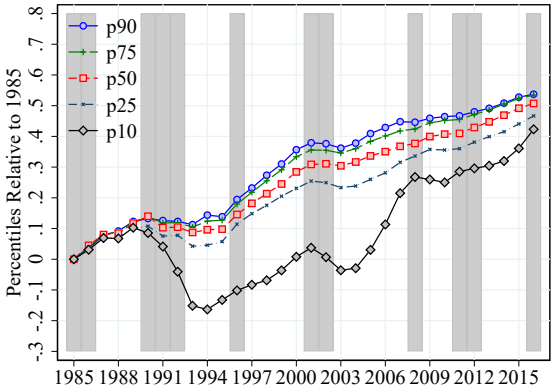
(b) Native Men, Low Education



(c) Foreign-Born Men, High Education



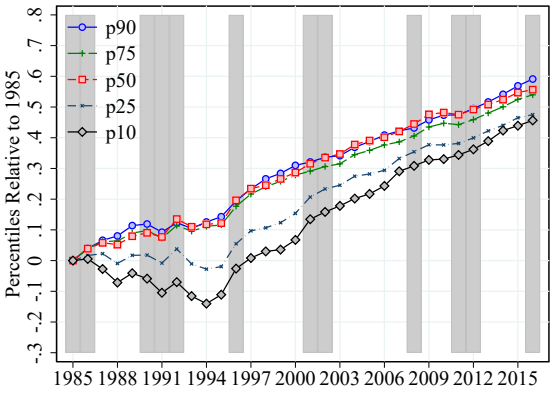
(d) Native Men, High Education



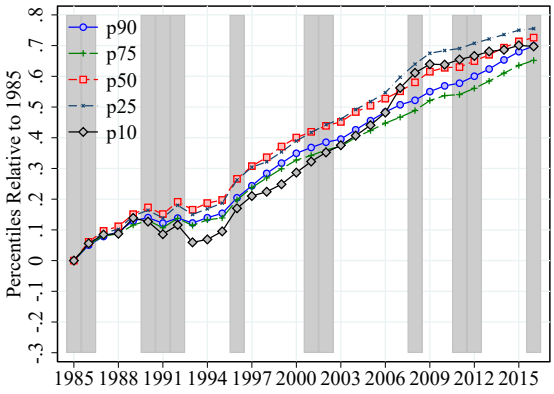
Notes: *Using the CS sample, Figure A.29 plots P10, P25, P50, P75, P90 of log earnings for men against time, separately by education and origin. The figures distinguish foreign-born and native men, and workers with and without college education (low vs high education). All percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.30: Percentiles of Log Earnings for Women by Education and Origin

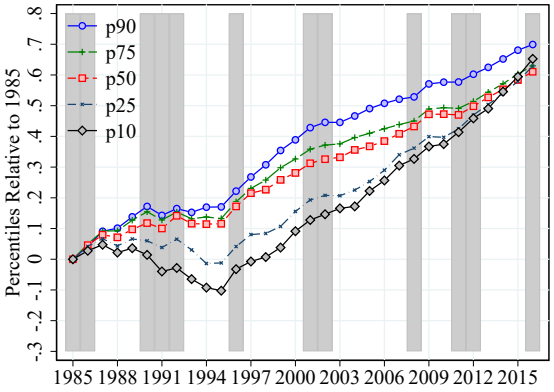
(a) Foreign-Born Women, Low Education



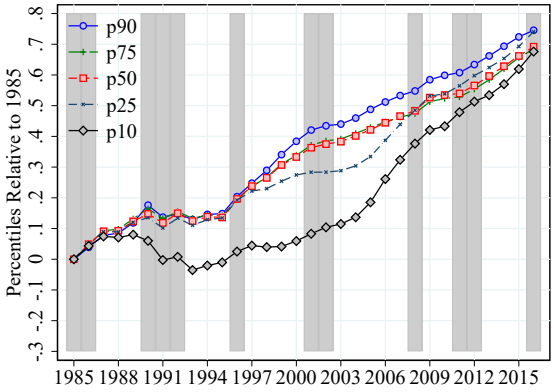
(b) Native Women, Low Education



(c) Foreign-Born Women, High Education



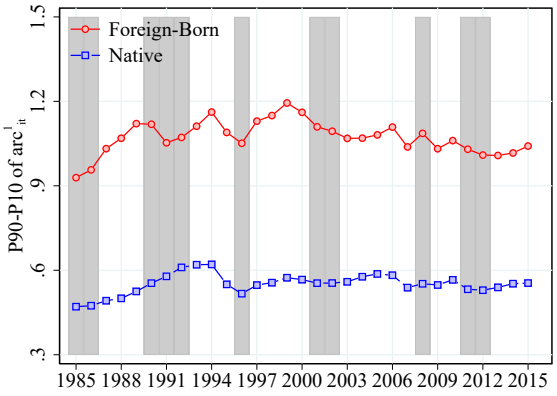
(d) Native Women, High Education



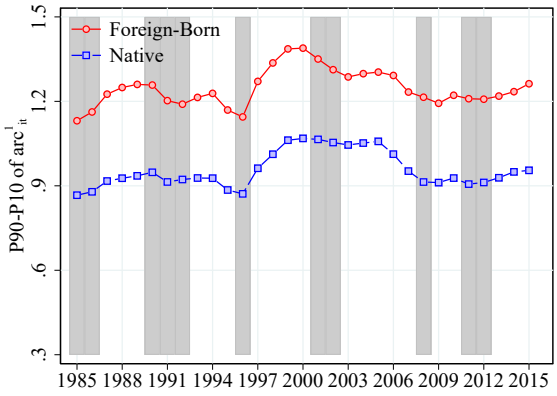
Notes: *Using the CS sample, Figure A.30 plots P10, P25, P50, P75, P90 of log earnings for women against time, separately by education and origin. The figures distinguish foreign-born and native women, and workers with and without college education (low vs high education). All percentiles are normalized to 0 in the first available year, 1985. Shaded areas are recessions.*

Figure A.31: Dispersion of 1-Year Arc-Percent Changes in Earnings by Gender and Origin

(a) Men



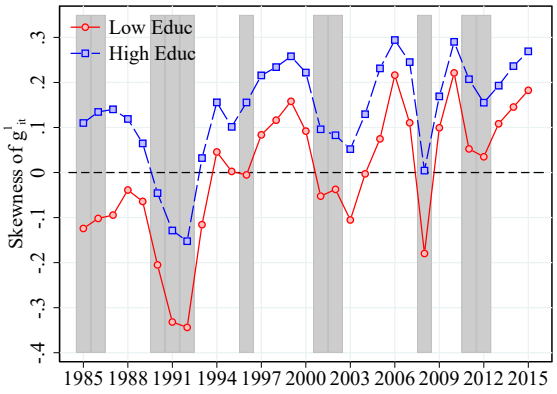
(b) Women



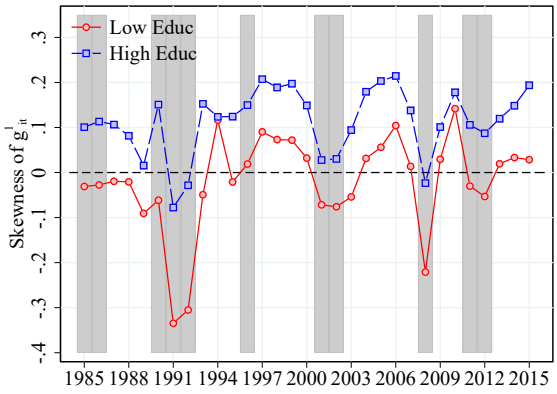
Notes: *Using the LX sample, Figure A.31 plots the P90–10 differential in 1-year arc-percent change in earnings against time, separately for foreign-born and native workers and by gender. Arc-percent change is defined in section A. Shaded areas are recessions.*

Figure A.32: Kelley Skewness of 1-Year Earnings Growth by Gender, Origin, and Education

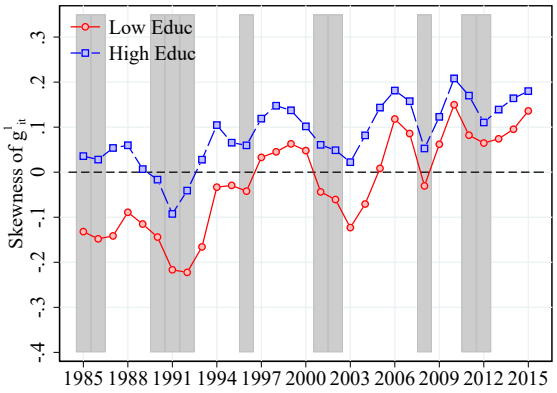
(a) Foreign-Born Men



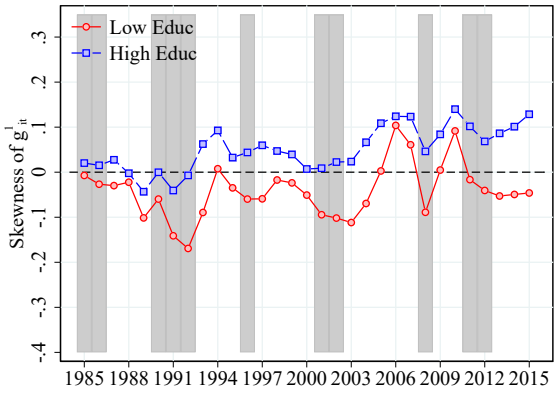
(b) Native Men



(c) Foreign-Born Women

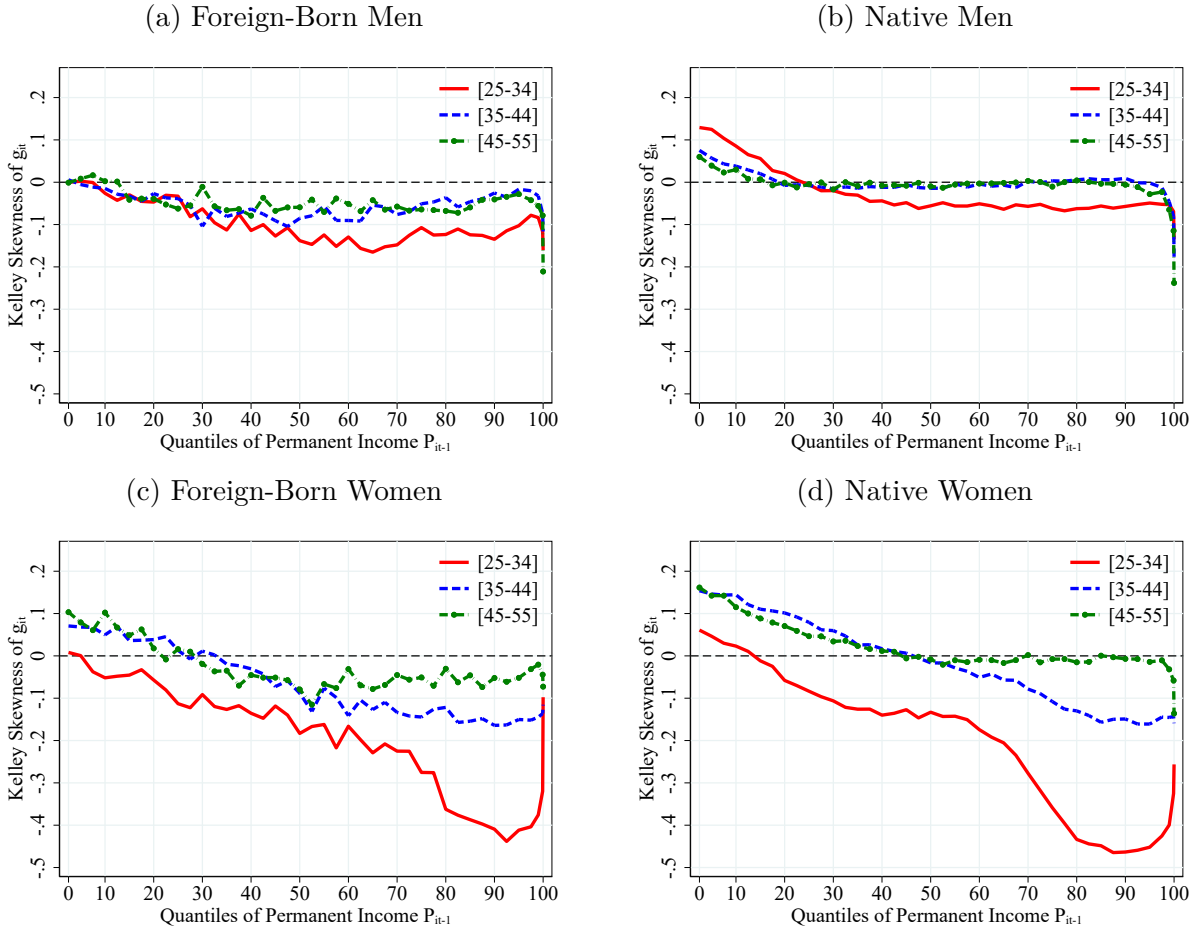


(d) Native Women



Notes: *Figure A.32 uses residual one-year earnings changes to plot Kelley skewness for foreign-born and native workers, separately by gender. Each plot further distinguishes the gender-origin subsample by education group. Shaded areas are recessions.*

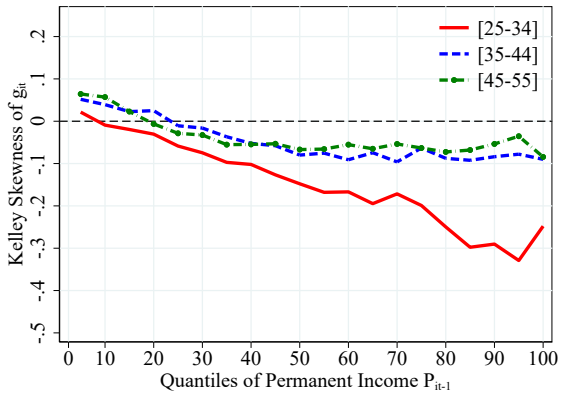
Figure A.33: Kelley Skewness of 1-Year Earnings Growth by Gender, Origin, Age, and Income



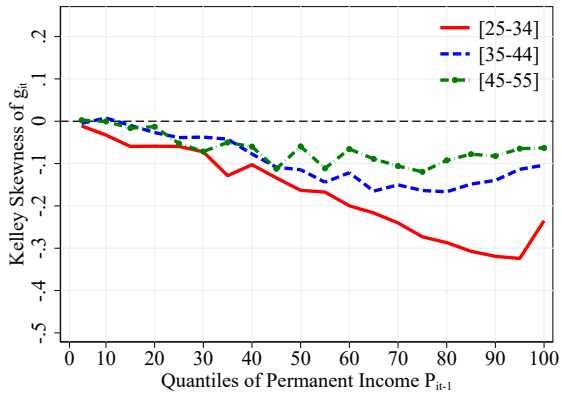
Notes: *Using residual one-year earnings changes and the LX-H sample, Figure A.33 plots Kelley Skewness against permanent income quantile groups for the 3 age groups, separately by gender and origin (foreign-born and natives). Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

Figure A.34: Kelley Skewness of 1-Year Earnings Growth by Region of Origin, Age, and Income

(a) Europe and the Americas



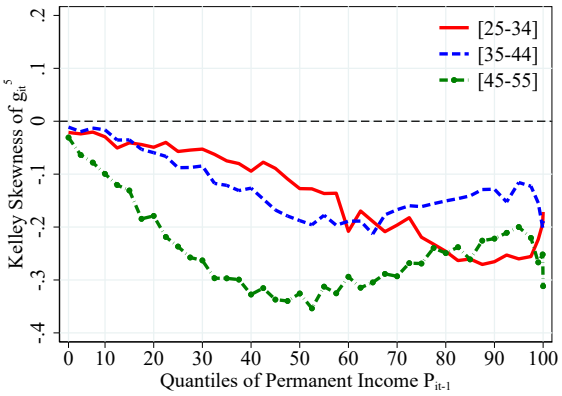
(b) Africa, Asia, and Middle East



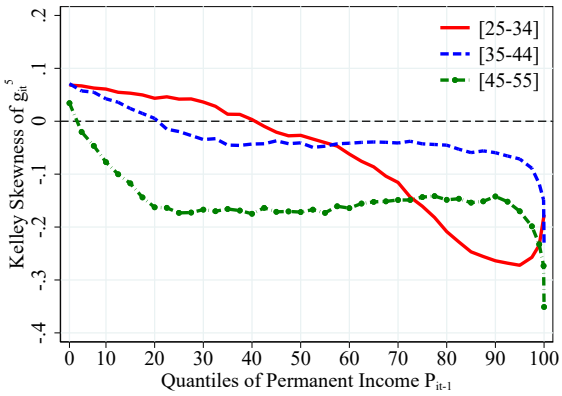
Notes: *Using residual one-year earnings changes and the LX-H sample for the full immigrant population, Figure A.34 plots Kelley Skewness against permanent income quantile groups for the 3 age groups, separately by foreign region of origin. Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

Figure A.35: Kelley Skewness of 5-Year Earnings Growth by Gender, Origin, Age, and Income

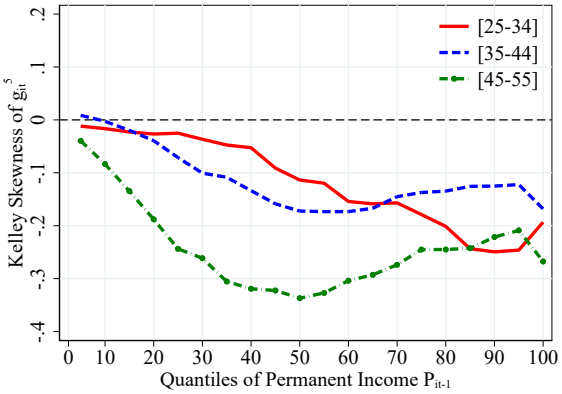
(a) All Foreign-Born



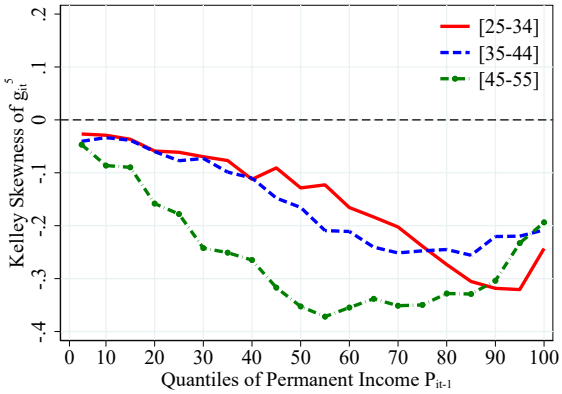
(b) All Natives



(c) Europe and the Americas



(d) Africa, Asia, and Middle East

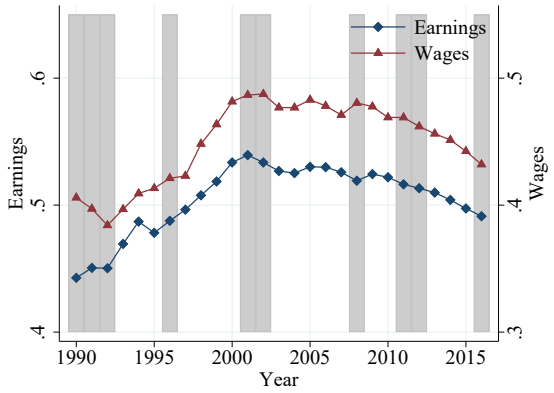


Notes: *Using residual five-year earnings changes and the LX-H sample, Figure A.33 plots Kelley Skewness against permanent income quantile groups for the 3 age groups, separately for the following subpopulations: (a) All foreign-born, (b) All natives, (c) foreign-born from Europe and the Americas, (d) foreign-born from Africa, Asia, and Middle East. Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

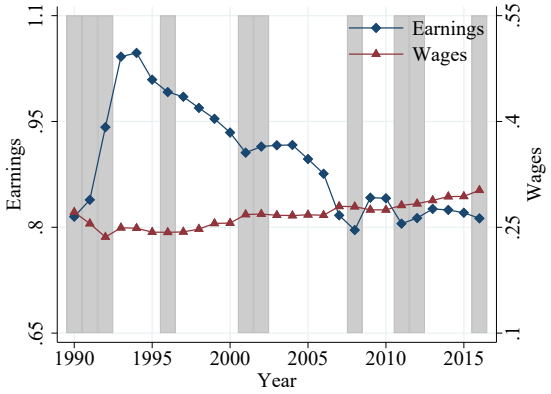
D.3 The Role of Hours and Wages

Figure A.36: Level and Trend in Inequality: Wages and Earnings

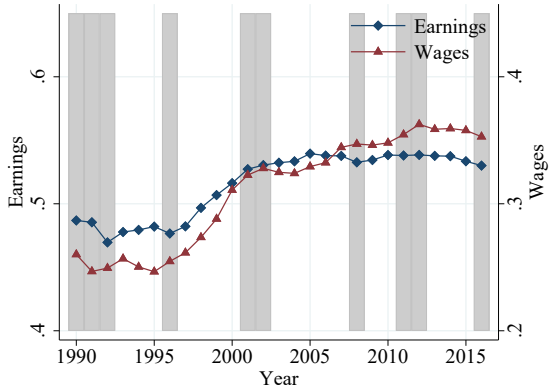
(a) P90–50 Gap, Men



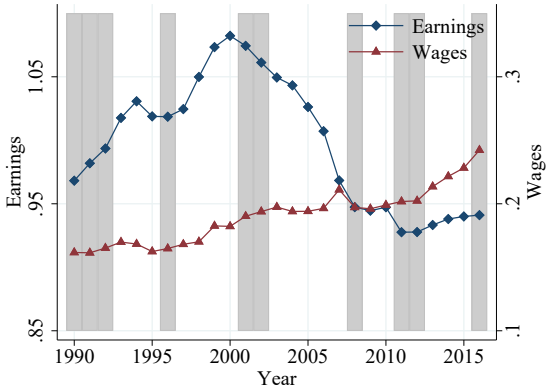
(b) P50–10 Gap, Men



(c) P90–50 Gap, Women



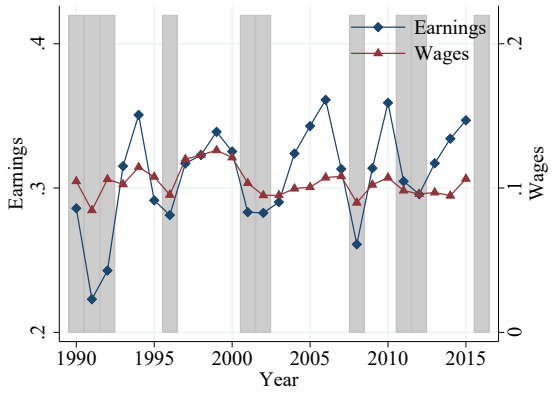
(d) P50–10 Gap, Women



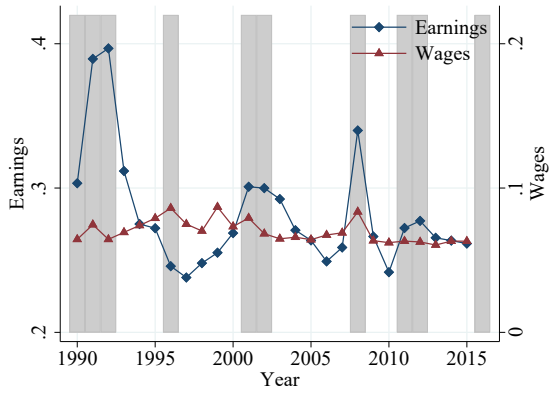
Notes: *Using the wage survey sample, Figure A.36 plots the P90–50 gap and P50–10 gap in log earnings and log monthly wages against time, separately for men and women. Shaded areas are recessions.*

Figure A.37: Level and Trend in Volatility: Wages and Earnings

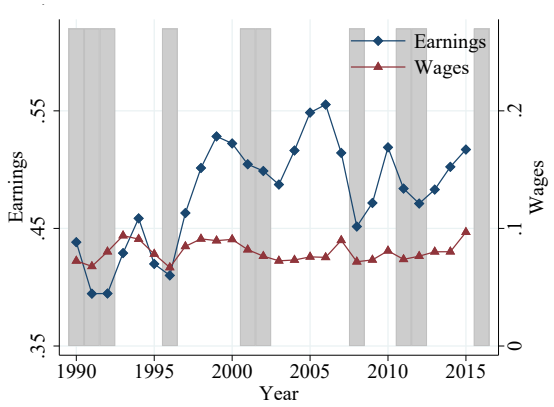
(a) P90–50 Gap, Men



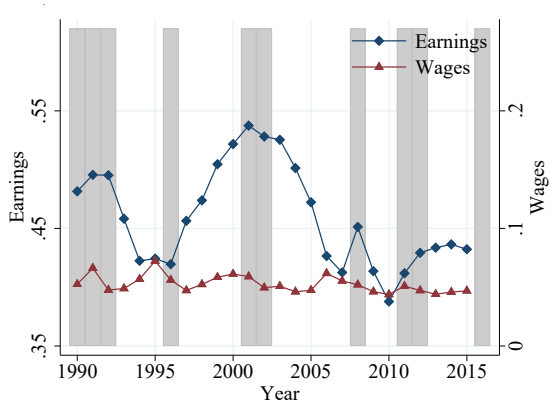
(b) P50–10 Gap, Men



(c) P90–50 Gap, Women



(d) P50–10 Gap, Women



Notes: *Using the wage survey sample, Figure A.37 plots the P90–50 gap and P50–10 gap in 1-year changes of residualized earnings and residualized monthly wages against time, separately for men and women. Shaded areas are recessions.*

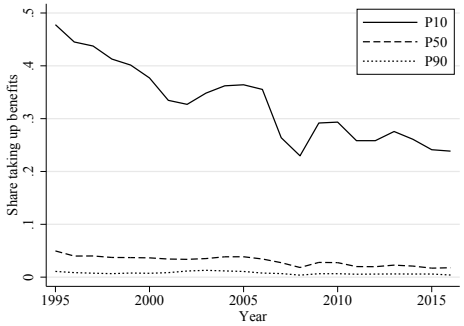
D.4 Work-Related Benefits

Figure A.38: Benefits Take-Up across Percentiles of the Earnings Distribution

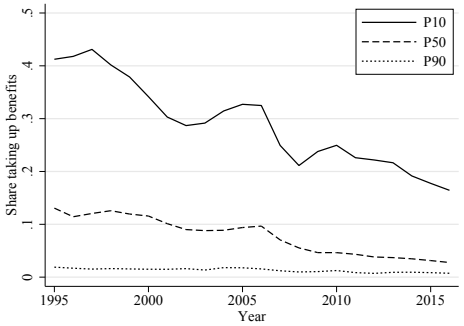
Notes: *Figure A.38 shows the share of employed in ages 25–55 taking up work-related benefits, as defined in section 2.1, at different percentiles of the earnings distribution, by gender.*

Figure A.39: Benefits Take-Up by Benefit Type across Percentiles of the Earnings Distribution

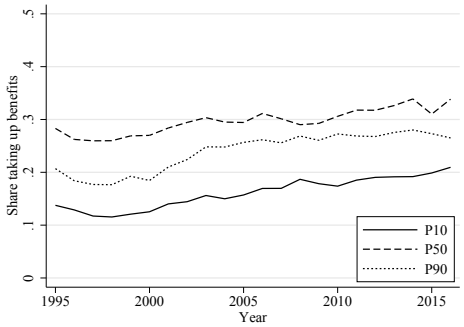
(a) Men, Unemployment



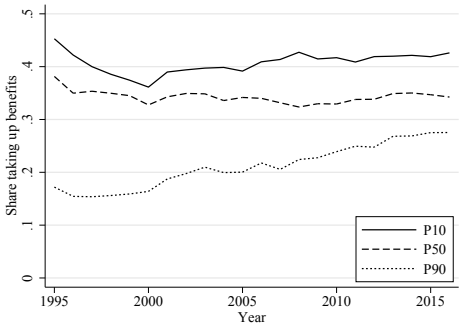
(b) Women, Unemployment



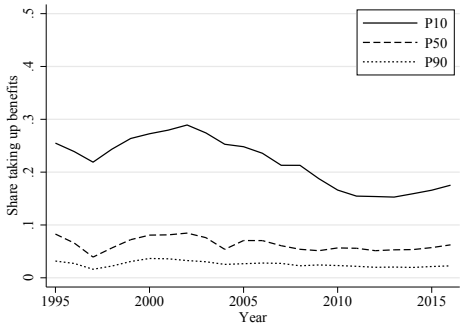
(c) Men, Parental Leave



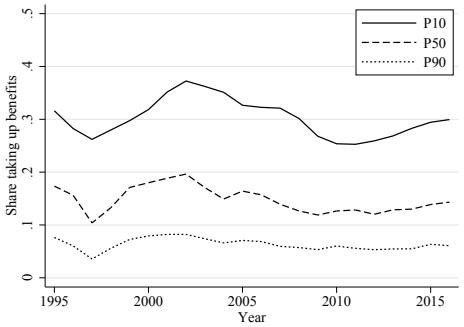
(d) Women, Parental Leave



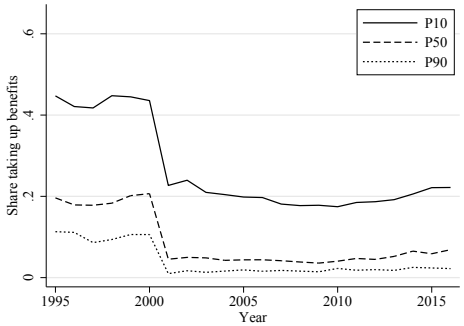
(e) Men, Sickness/Disability



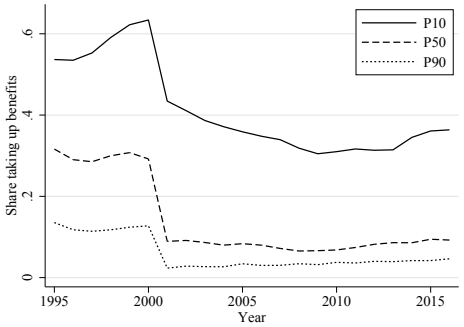
(f) Women, Sickness/Disability



(g) Men, Studies + Other



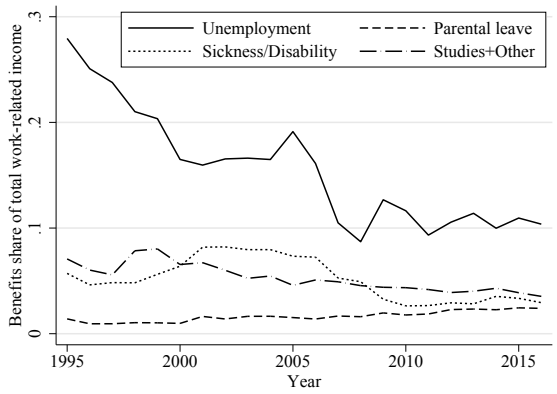
(h) Women, Studies + Other



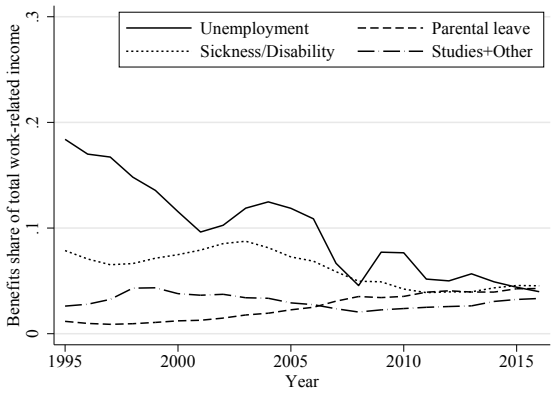
Notes: *Figure A.39 shows the share of employed in ages 25–55 taking up different types of work-related benefits at different percentiles of the earnings distribution, by gender.*

Figure A.40: Benefits Usage by Origin at the 10th Percentile of the Earnings Distribution

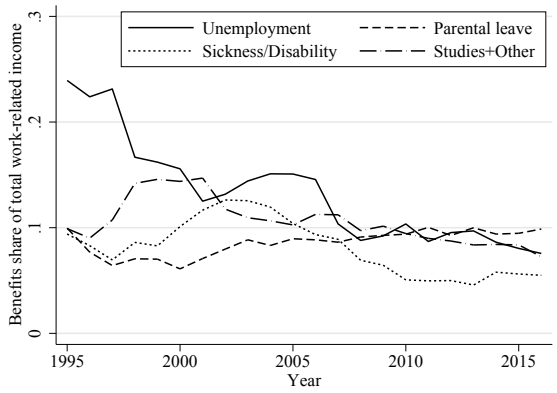
(a) Foreign-Born Men



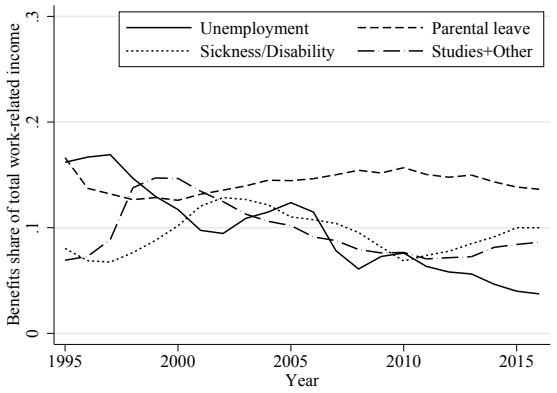
(b) Native Men



(c) Foreign-Born Women

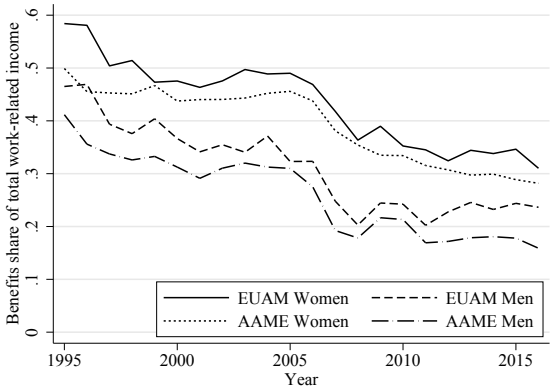


(d) Native Women



Notes: *Figure A.40 shows the share of different types of work-related benefits in total work-related income among employed in ages 25–55 at the 10th percentile of the earnings distribution by gender and origin.*

Figure A.41: Benefits Usage by Region of Origin at the 10th Percentile of the Earnings Distribution

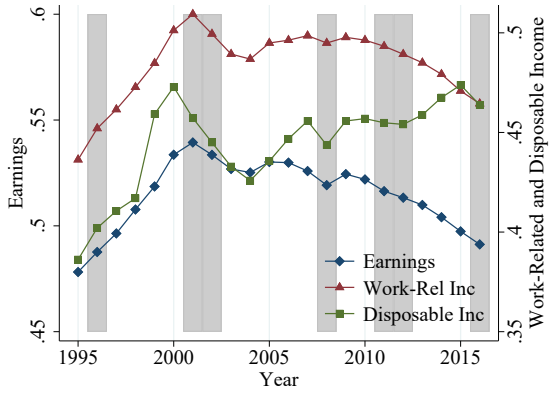


Notes: *Figure A.41 shows the share work-related benefits in total work-related income among employed in ages 25–55 at the 10th percentile of the earnings distribution by gender and region of origin.*

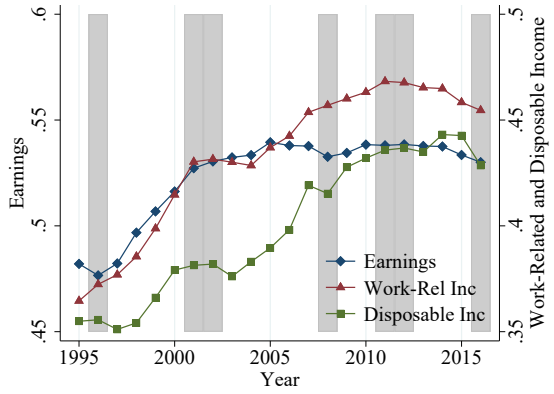
D.5 Social Insurance

Figure A.42: Income Inequality: Earnings, Benefits, and Disposable Income

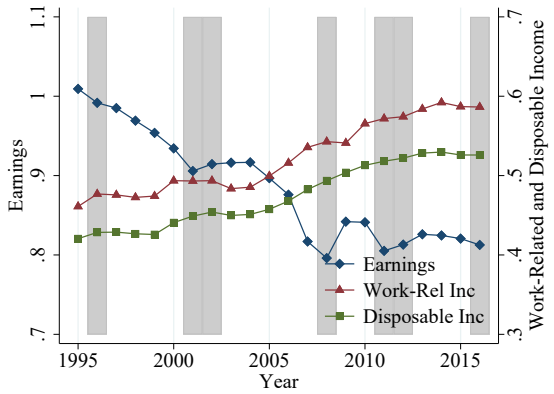
(a) P90–50 Log(Income), Men



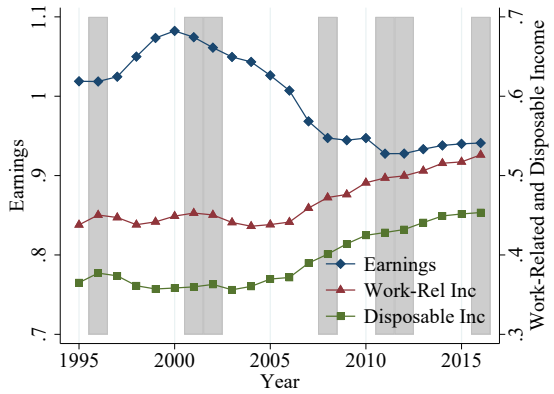
(b) P90–50 Log(Income), Women



(c) P50–10 Log(Income), Men



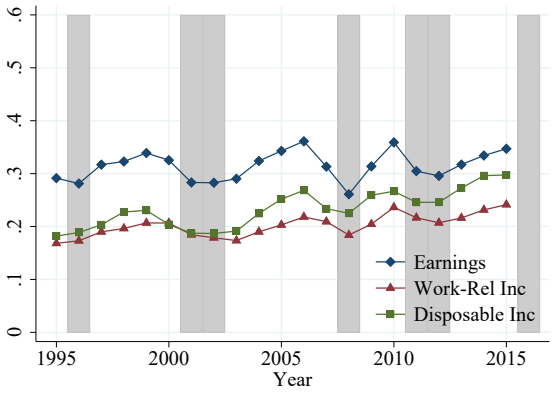
(d) P50–10 Log(Income), Women



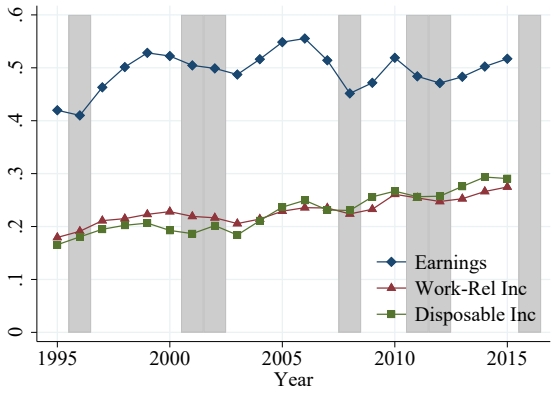
Notes: *Using the CSB sample over 1995–2016, Figure A.42 plots the P90–50 and P50–10 differentials in log income against time, separately for men and women. Each figure distinguishes three income concepts; log earnings, log total work-related income, and log disposable income, see section 2.1. Shaded areas are recessions.*

Figure A.43: Income Volatility: Earnings, Benefits, and Disposable Income

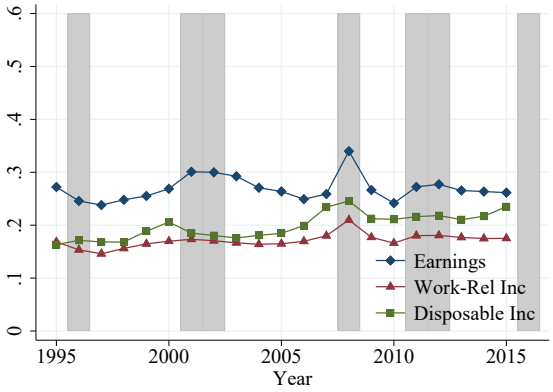
(a) P90–50 Income Growth, Men



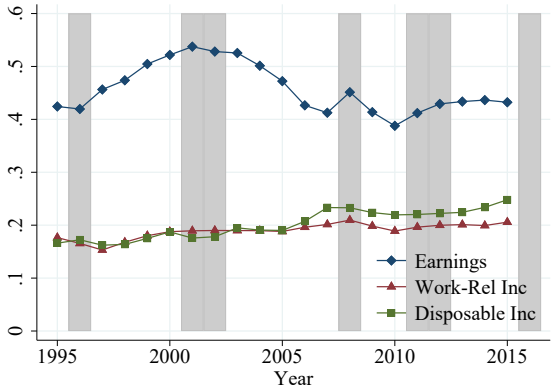
(b) P90–50 Income Growth, Women



(c) P50–10 Income Growth, Men



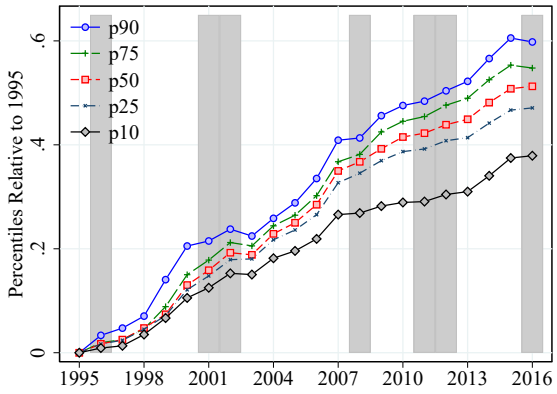
(d) P50–10 Income Growth, Women



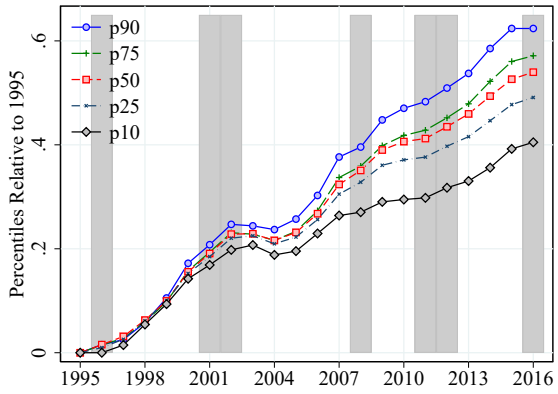
Notes: *Using the LXB sample over 1995–2016, Figure A.43 plots the P90–50 and P50–10 differentials in 1-year residualized income changes against time, separately for men and women. Each figure distinguishes three income concepts; log earnings, log total work-related income, and log disposable income, see section 2.1. Shaded areas are recessions.*

Figure A.44: Trends in Disposable Income Inequality

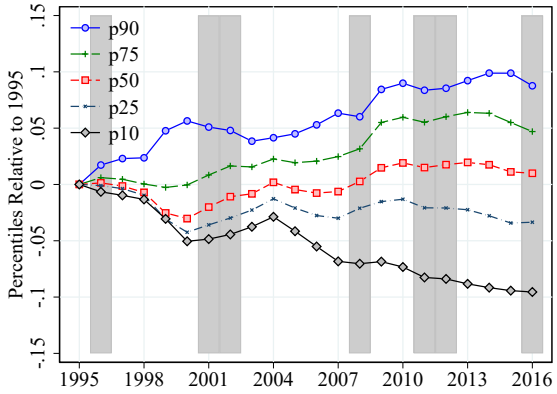
(a) Men, Log Income



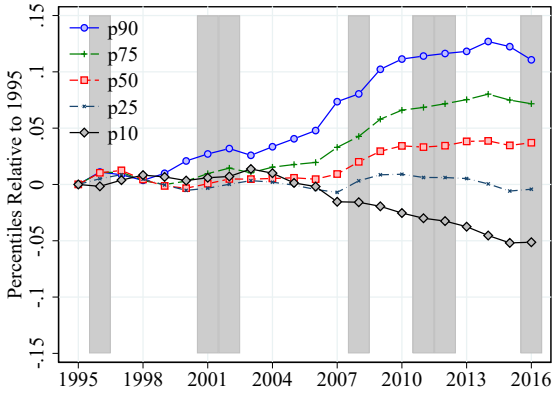
(b) Women, Log Income



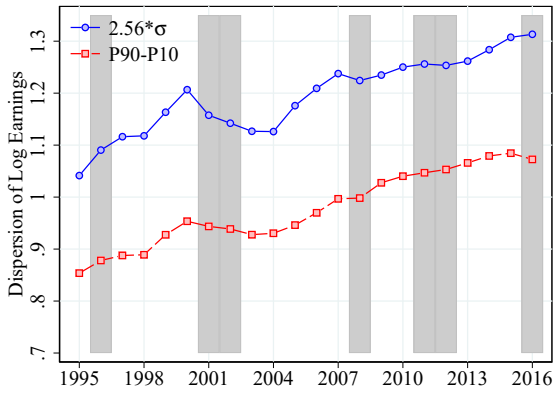
(c) Men, Residual Income



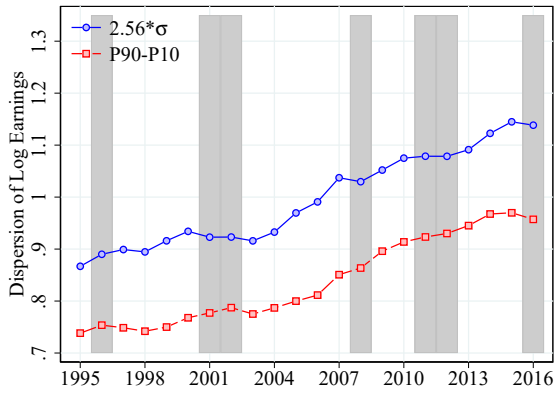
(d) Women, Residual Income



(e) Men, Log Income Inequality



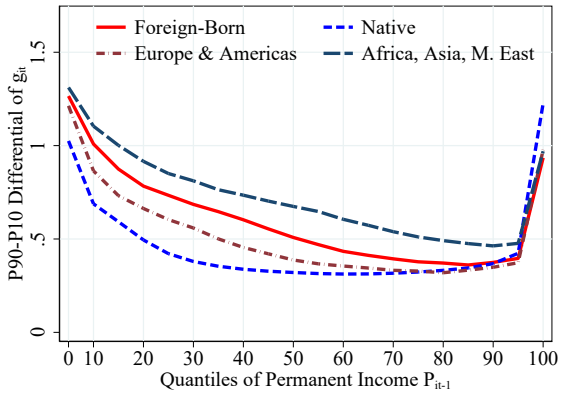
(f) Women, Log Income Inequality



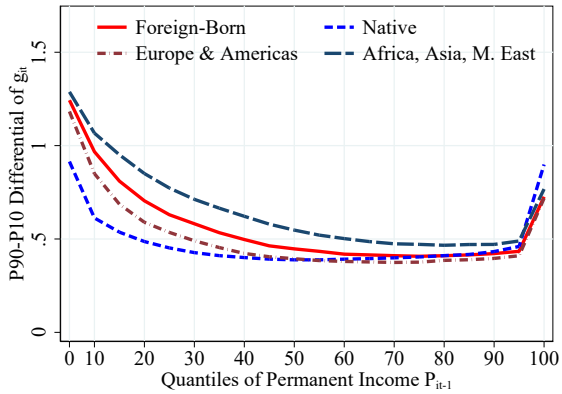
Notes: *Using the CSB sample, Figures (a)-(d) plot P10, P25, P50, P75, P90 by gender, using log disposable income in panels (a) and (b) and residualized disposable income in (c) and (d). All percentiles are normalized to 0 in the first available year, 1995. Figures (e) and (f) show 2.56*Standard deviation and the P90–10 gap in log disposable income by gender over time. Shaded areas are recessions.*

Figure A.45: 1-Year Disposable Income Volatility by Income and Origin

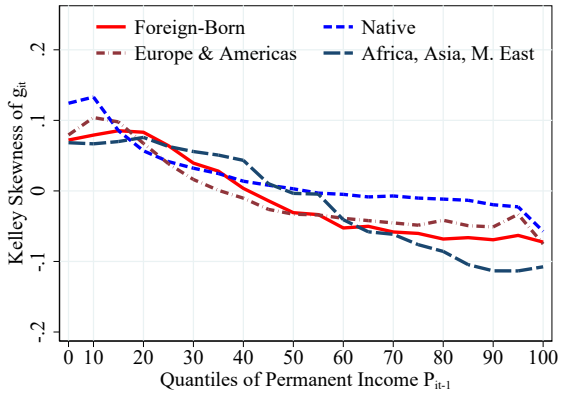
(a) P90–10 Income Growth, Men



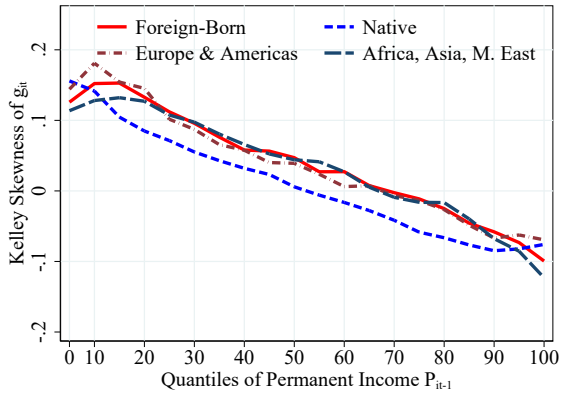
(b) P90–10 Income Growth, Women



(c) Kelley Skewness, Men



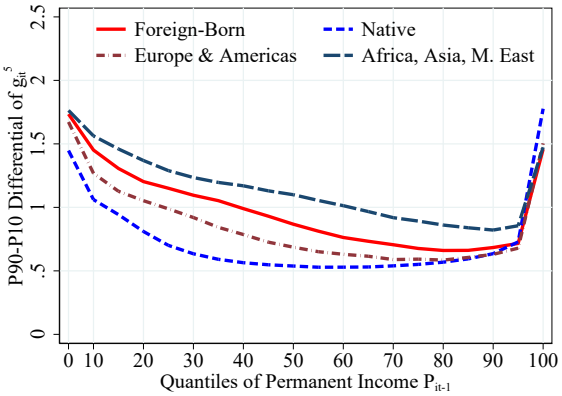
(d) Kelley Skewness, Women



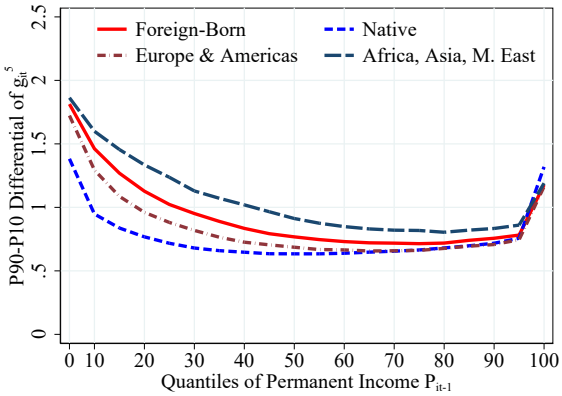
Notes: *Using residual one-year changes in disposable income and the LXB-H sample, Figure A.45 plots against permanent income quantile groups the following variables: (a) Men: P90–10, (b) Women: P90–10, (c) Men: Kelley Skewness, (d) Women: Kelley Skewness. Each figure distinguishes foreign-born and native workers, and further splits the immigrant sample by two regions of origin (Europe & Americas, and Africa, Asia, Middle East). Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

Figure A.46: 5-Year Disposable Income Volatility by Income and Origin

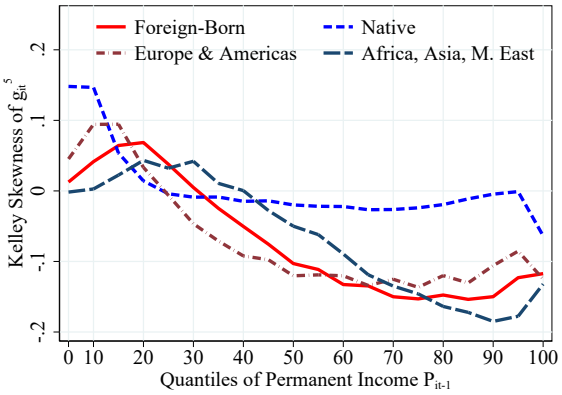
(a) P90–10 Income Growth, Men



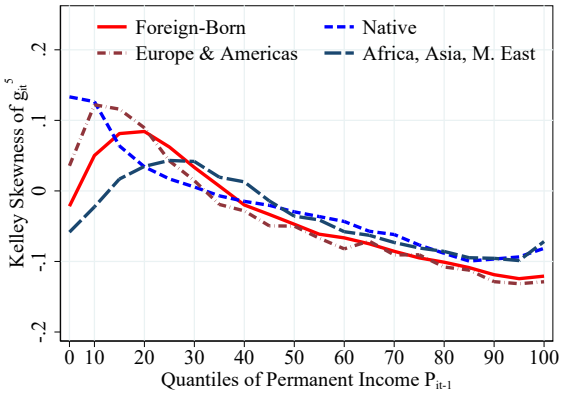
(b) P90–10 Income Growth, Women



(c) Kelley Skewness, Men



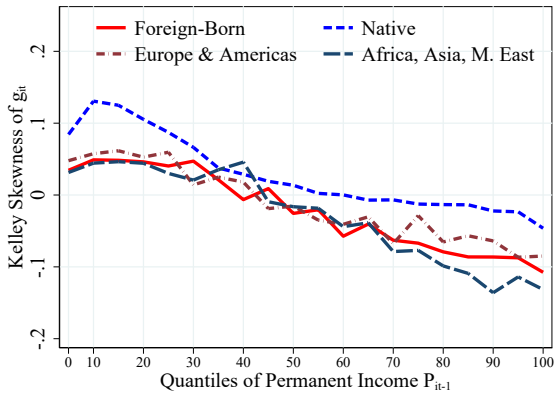
(d) Kelley Skewness, Women



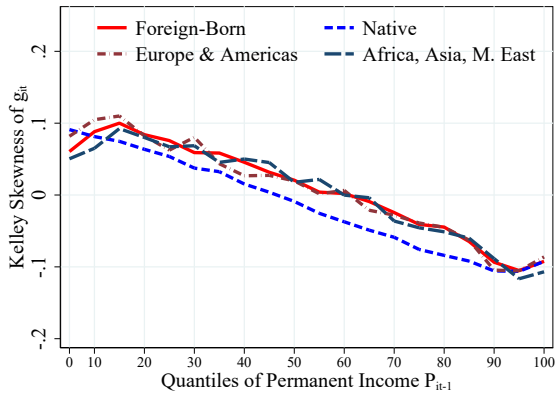
Notes: *Using residual five-year changes in disposable income and the LXB-H sample, Figure A.46 plots against permanent income quantile groups the following variables: (a) Men: P90–10, (b) Women: P90–10, (c) Men: Kelley Skewness, (d) Women: Kelley Skewness. Each figure distinguishes foreign-born and native workers, and further splits the immigrant sample by two regions of origin (Europe & Americas, and Africa, Asia, Middle East). Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

Figure A.47: Kelley Skewness of 1-Year Disposable Income Changes by Age, Income, and Origin

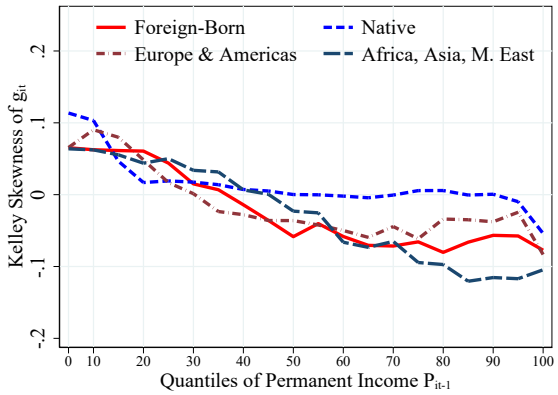
(a) Men, Age 25–34



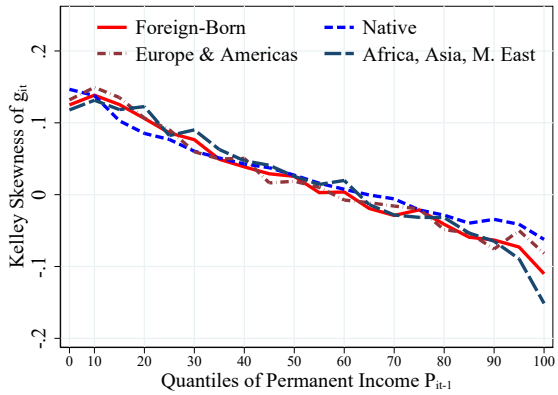
(b) Women, Age 25–34



(c) Men, Age 35–44



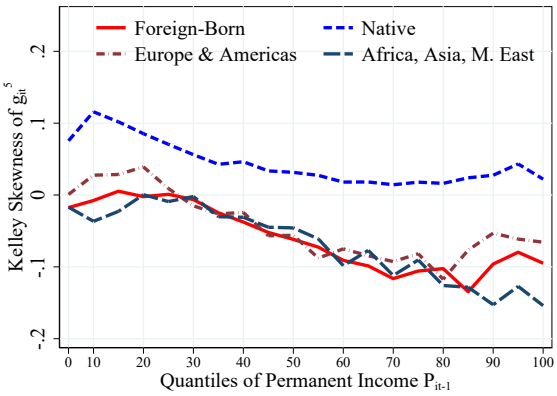
(d) Women, Age 35–44



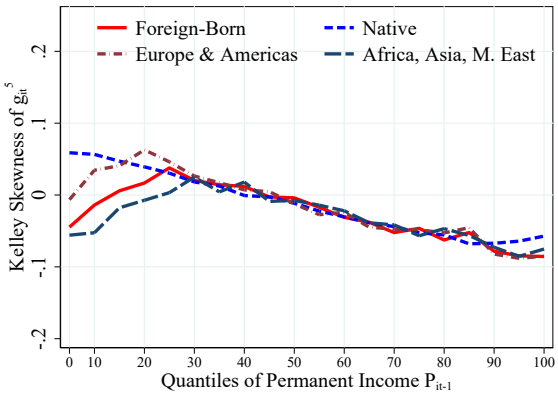
Notes: *Using residual one-year changes in disposable income and the LXB-H sample, Figure A.47 plots Kelley Skewness against permanent income quantile groups for: (a) Men, Age 25-34, (b) Women, Age 25-34, (c) Men, Age 35-44, (d) Women, Age 35-44. Each figure distinguishes foreign-born and native workers, and further splits the immigrant sample by two regions of origin (Europe & Americas, and Africa, Asia, Middle East). Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

Figure A.48: Kelley Skewness of 5-Year Disposable Income Changes by Age, Income, and Origin

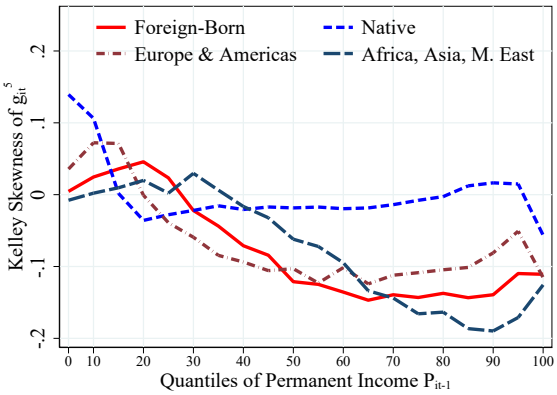
(a) Men, Age 25–34



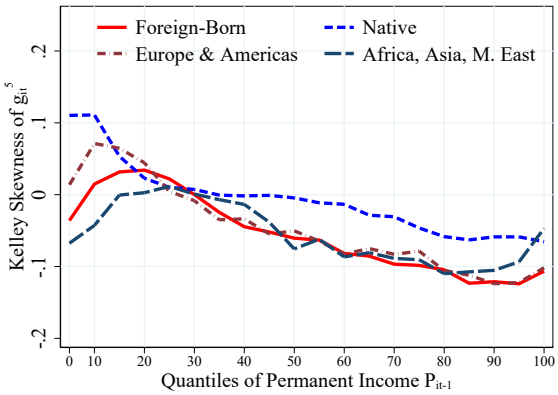
(b) Women, Age 25–34



(c) Men, Age 35–44



(d) Women, Age 35–44



Notes: *Using residual five-year changes in disposable income and the LXB-H sample, Figure A.48 plots Kelley Skewness against permanent income quantile groups for: (a) Men, Age 25-34, (b) Women, Age 25-34, (c) Men, Age 35-44, (d) Women, Age 35-44. Each figure distinguishes foreign-born and native workers, and further splits the immigrant sample by two regions of origin (Europe & Americas, and Africa, Asia, Middle East). Kelley Skewness is defined as* $\frac{(P90-P50)-(P50-P10)}{P90-P10}$.

D.6 Capital Income

This section considers the role of capital income in overall income inequality. Most Swedish taxpayers report negative capital income based on mortgage payments, for example, reducing their gross income. Figure A.49a shows that including capital income implies slightly lower income for the bottom 90 percent of the distribution, compared to focusing only on labor income. In contrast, average income among the top 10 percent of the distribution in Figure A.49b increases substantially more, especially during boom periods, when including capital gains.

Figure A.49: Labor and Capital Income Across the Earnings Distribution

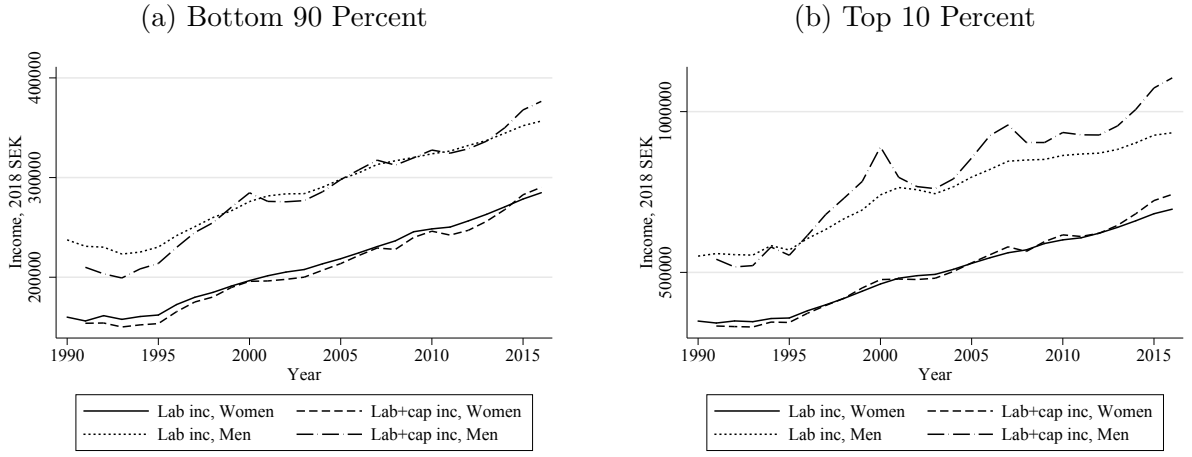
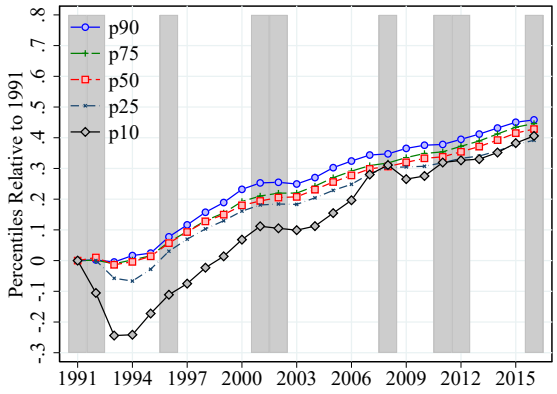


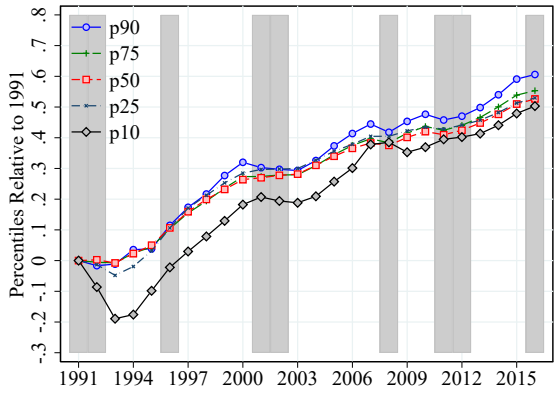
Figure A.50 plots the time series of income percentiles from 1991–2016 for earnings and earnings plus capital income. Here, we find that real gains were larger when including capital gains. These differences are largest at the 90th percentile of the distribution, but they also exist throughout the income distribution, with about 10 percent larger real gains over 1991–2016 at the median income when including capital income.

Figure A.50: Income Inequality: The Role of Capital Income

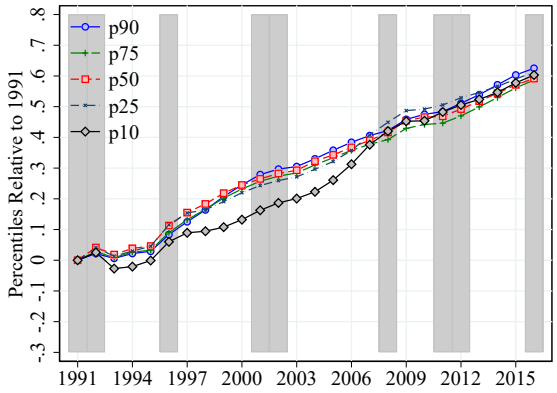
(a) Earnings, Men



(b) Earnings + Capital Income, Men



(c) Earnings, Women



(d) Earnings + Capital Income, Women

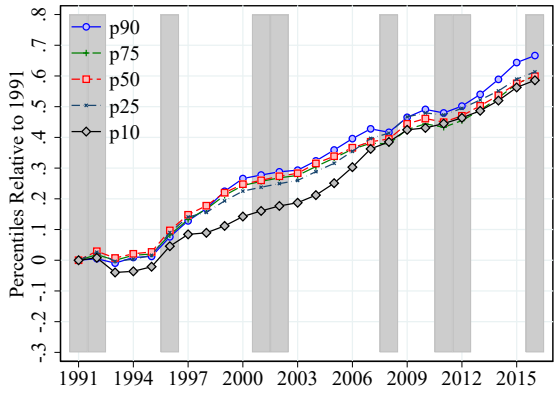
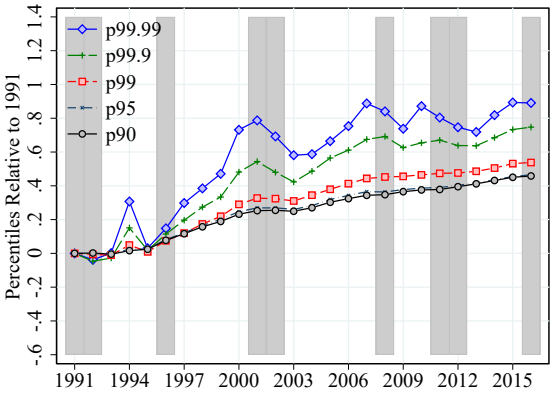


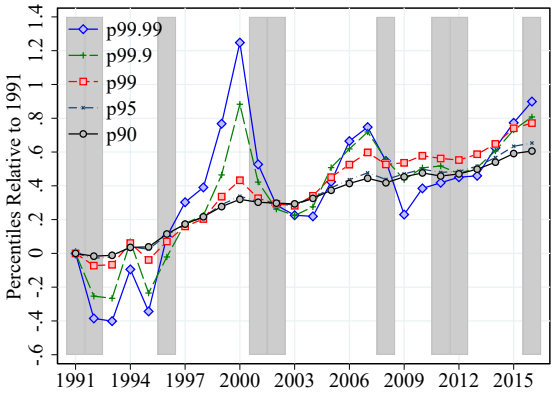
Figure A.51 plots the time series of top income percentiles from 1991–2016 for earnings and earnings plus capital income. We document that capital income yields much more volatile patterns over time, whereas top earnings increase steadily and substantially over time.

Figure A.51: Top Income Inequality: The Role of Capital Income

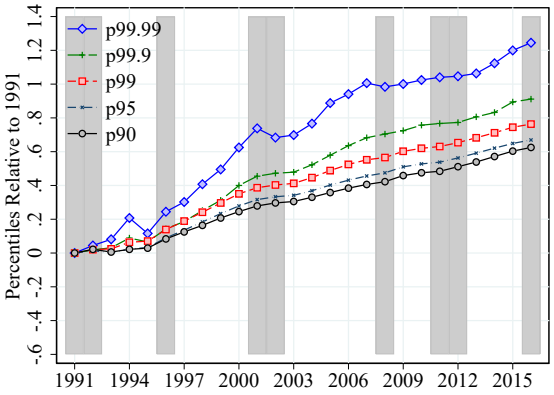
(a) Earnings, Men



(b) Earnings + Capital Income, Men



(c) Earnings, Women



(d) Earnings + Capital Income, Women