Long-Run Stagnation in US Real Wages: An Unconditional Quantile Approach

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Abstract

This paper examines long-run stagnation in real wages and lifetime earnings in the United States, contrasting the experiences the Silent Generation (1925–1945), Baby Boomers (1946–1964), Generation X (1965–1979), and Millennials (1980–1999). Despite significant economic growth, we find persistent stagnation or decline in real wages across generations, with younger cohorts earning less than their predecessors over the lifecycle. Using data from the CPS and employing unconditional quantile regression, we reveal heterogeneous effects across the earnings distribution. Overall, earnings declines are concentrated in the middle of the distribution with increases at the top and the bottom. Declines are particularly large for Millennials. However, this trend masks differences by gender. These declines are driven by falling incomes of men, which outweigh the increases observed for women over the period. We find declines in men's wages at nearly every quantile for post-Silent generations, with the decline greater in lower quantiles. Increases in women's real wages have stalled – while Boomers earn more than their Silent Generation equivalents, Millennial women do not earn more than Baby Boomers. We find a similar pattern across races and education levels.

Keywords: Quantile Regression, Unconditional Quantile, Wages, Intergenerational Differences, Stagnation

JEL Codes: J31, C21, E24, D31

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1 Introduction

We used to take economic progress for granted. We expected that most of the time our earnings, and those of others, would increase from one year to the next. Likewise, we expected to be more prosperous than our grandparents, and they expected the same. Today such expectations are increasingly unaligned with our experience. US real median earnings have barely increased since 1980[1], while US GDP per capita has more than doubled during this period.[2]

A corollary of stagnant wages and conventional lifecycle income trajectories, reflecting returns to experience and seniority, is a real decline in total lifecycle earnings for younger generations (Heckman, 1976).[3] This can be seen in Figure 1, which shows median earnings in 1999 dollars at each age for White, male, high school educated, Americans by decade of birth. We can see, for example, that a White male high school graduate born in the 1930s on average were earning about $\$50,000$ at age 40, their sons, born in the 1950s, made around $\$40,000$, and their grandson, born in the 1970s, had a median wage around $\$35,000$ at the same age. Using Social Security Administration data Guvenen et al. (2022) show that median life-time earnings for men fell by between 10 percent and 19 percent between those born in 1942 and those born 1958.

Such stagnation in wages is in contrast to other changes in the US labor market and economy, as well as American society more broadly, over the same period. For example, women's labor market participation increased from 40% in 1960 to 72% in 2011 for those aged 22 to 65, and the share of non-White workers increased by from 11% to 24%, respectively. There were also important generational changes in the industrial and occupational composition of the workforce. These changes were mirrored by changes in education level – of those born in 1945, 6% had received a bachelors degree by age 30, compared to 18% of those born in 1990. Among women the increase is larger still from 3% to 21%, and it is larger again among African Americans and particularly, African American women, 1% and 13% respectively.[4]

These changes complicate comparisons of real earnings over time, as the median worker's characteristics have evolved. This suggests a quantile regression based approach so that we can understand changes in median wages, and indeed the wage distribution as a whole, controlling for individual characteristics. However, conventional quantile regression estimators recover the distribution of *conditional*

[1] Guvenen et al. (2022) provide comprehensive evidence of this, including for a variety of datasets and for a range of alternative inflation adjustments.

[2] Measured in 2010 Dollars, it was $\$28,589$ in 1980 and $\$61,280$ in 2021. Data from: https://data.worldbank.org/indicator/NY.GDP.PCAP.KD?locations=US

[3] Chetty et al. (2014) documents the growing importance of the 'birth lottery', this implies the average ticket is now a losing one in absolute terms.

[4] These estimates are from US census for data pre-2000 and the American Community Survey for 2000-present data.

quantiles, but we are primarily interested in the unconditional distribution of earnings. This is for both because changes in the composition of the workforce, say the share of college-educated workers, make interpretation of changes in conditional quantiles hard, and because changes in the unconditional earnings distribution are a better measure of wage-stagnation. The question is not what would have happened to the wage distribution if the composition of the workforce had not changed. To address this issue we use the Generalized Quantile Regression (GQR) estimator introduced by Powell (2020). This allows us to include controls such that we are allowing for the changing composition of the labor force, and comparisons of the median or other quantiles over are meaningful, whilst recovering changes in the unconditional distribution of earnings.

To keep things simple, we focus on comparisons between generations. In these terms, the implication of Figure 1 is that for each generation after the Baby Boomers, living standards have declined substantially in real terms. That is, rather than being richer than their parents, the median member of Generation X, born between 1965–1979, or a Millennial born in the period 1980–1999, is poorer at every point during their working lives than their parents were as members of either the Boomer or Silent Generations, born between 1946–1964 or 1925–1945 respectively.

Computing median incomes over the lifecycle, disaggregating by gender, race, and education that except for the African American women there is little evidence of wage growth across generations and some clear declines in other groups. This paper documents the phenomenon of *levelling down* and its uneven impact across different groups.

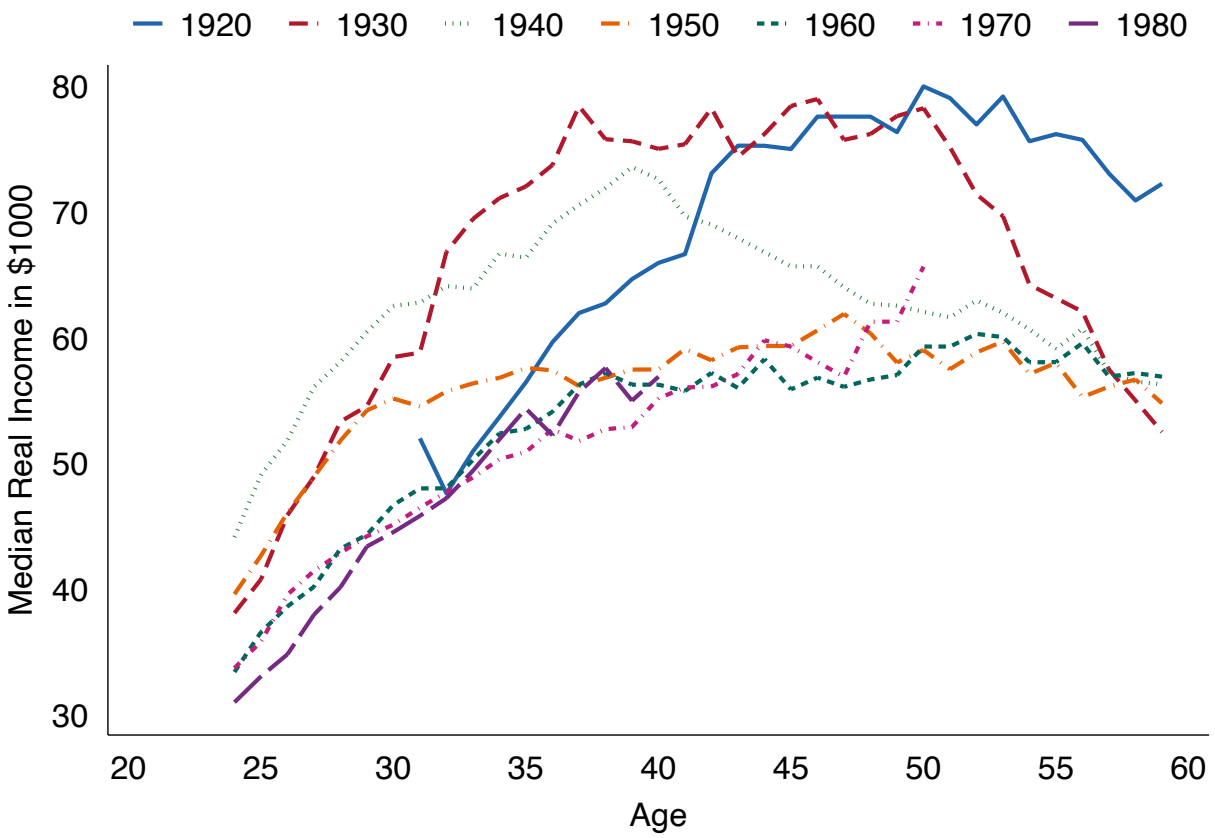
Our regression results provide a more nuanced picture. Taking into account changes in the composition of the workforce we find evidence of some growth in women's wages. But, while high school and college educated women experienced increases in real earnings relative to the Silent generation, there has been clear declines among Millennials. We see a similar pattern for African American men, whilst most Hispanic men have seen declines relative to the Silent Generation. Likewise, we find declines for men regardless of educational achievement. These results suggest that the phenomenon of declining wages is not limited to White men or to those without college degrees.[5] We demonstrate that this phenomenon of *declining* incomes, first documented by Guvenen et al. (2022), is true conditional on a broad set of controls and allowing for unrestricted heterogeneity across industries.

Our unconditional quantile regression estimates further show that focusing on unconditional median wages misses some important heterogeneity. We find increases at the top and the bottom of the wage distribution, although not for Millennials, but we observe these declines for those on middle incomes even when conditioning on a broad range of observable characteristics. Specifically, we find that for

[5] Case and Deaton (2017) provide evidence of declining incomes of Whites with high school educations or less. Coile and Duggan (2019) argue *'men's real median earnings have been flat since the early 1970s'*.

men the median Boomers' earnings were 12% lower than the Silent Generation's, whilst Gen. X'ers and Millennials were earning 20% and 38% less than the Silent Generation, respectively. For women, the equivalent figures are increases of 20, 25, and 19%, respectively. One implication of these results is that they imply that reductions in the gender pay gap across generations have been driven as much by falling male wages as they have increases in women's wages. Disaggregating further by education and race shows that this is a consistent pattern across different demographic groups despite substantial changes in racial discrimination and the returns to education over the period.

Figure 1: Real Median Wages of White Male High School Graduates, by Decade of Birth



Source: ASEC supplement of the CPS, survey years 1962–2022.
Note: Includes male high school graduates aged 23–65 with wages above the minimum threshold. Wages are in 2015 US dollars; individual weights are used.

The paper proceeds as follows. Section 2 plots the median wage for different generations across the life-cycle and over time for the population as a whole and for different demographic groups, including gender, education, and race. Section 3 presents unconditional quantile regression analyzes from the estimator of Powell (2020) that show differences between generations in the distribution of earnings within different groups allowing for observable characteristics and fixed-effects. Section 4 briefly concludes.

2 Decomposing Median Income and Wages

In this section we focus on annual incomes, and variation in the life-cycle trajectories of these between generations and across demographic groups.[6] We take most of our data from the March Supplement of the Current Population Survey (CPS). Our main variable of interest here is annual wage and salary income.[7] Further discussion of these data and how we handle them may be found in Appendix A.

We present results which disaggregate by a number of characteristics. Making use of the detailed demographic data in the ASEC supplement of the March CPS, we are able to present results which disaggregate by race and education as well as gender. We focus on those born between 1925 and 1994 — at the price of not being able to follow the last generation, the Millennials, throughout their lives. However, by now the oldest of these are over 40, and thus we are in position to compare their comparative fortunes to this point. This comparison is worthwhile because by around this age many Americans would hope to have bought a house, started a family, and to be earning close to their maximum real incomes. More generally, a standard discounting argument implies that an income profile that offers greater earnings early in one's life, holding total earnings constant, is to be preferred. Thus, the shape and level of each generation's earnings profile matters for welfare, and by age 40 we can meaningfully compare them.

Table 1: Different birth cohorts.

Year born	**Birth cohort**
2000 – Present	Generation Z
1980 – 1999	Millennials (Gen. Y)
1965 – 1979	Generation X (Gen. X)
1946 – 1964	Baby Boomers (Boomers)
1925 – 1945	Silent Generation

For exposition purposes, we divide the Americans in our data into generations, as they are typically defined. Table 1 displays how we define each generation. Before turning to the disaggregated data we review overall trends in median income. Figure 2 is analogous to Figure 1 except now the median wage over the life cycle is plotted by generation. We see a dominance for later generations over the Silent generation starting at age 40. Prior to this the Silent generation appear to be out earning later generations at each age.[8] However, as we discuss in the following section, this masks important

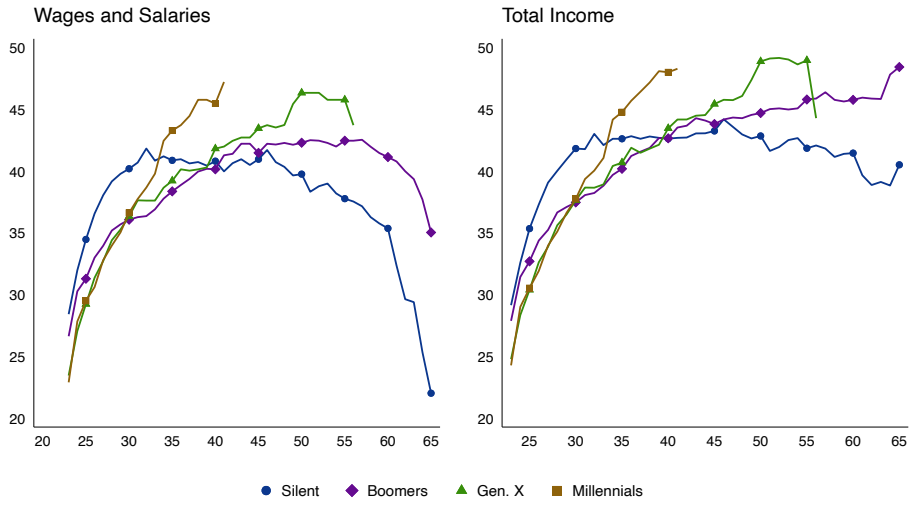
[6] In appendix B we report complimentary results for two other aspects of the life-cycle, the age at which peak earnings is reached, and hours worked. These capture the fact that, for example due to imperfect credit markets, individuals will prefer a lifecycle earnings trajectory in which higher incomes are obtained earlier to one with the same (appropriately discounted) life-time total. Likewise, systematic differences in hours worked may complicate welfare analyses. The results suggest that peak earnings have not only been declining, but were obtained in their fifties for those born in 1965 versus at their thirties for those born in 1945.

[7] We use wage and earnings interchangeably to refer to total annual income from wages and salaries.

[8] In this section, we do not comment on the statistical significance of differences observed.

heterogeneity. We begin by disaggregating by gender and education levels, before moving to look at changing earnings for minorities.[9]

Figure 2: Median Wage and Income (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022
Note: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars.

2.1 Lifetime Wages by Gender

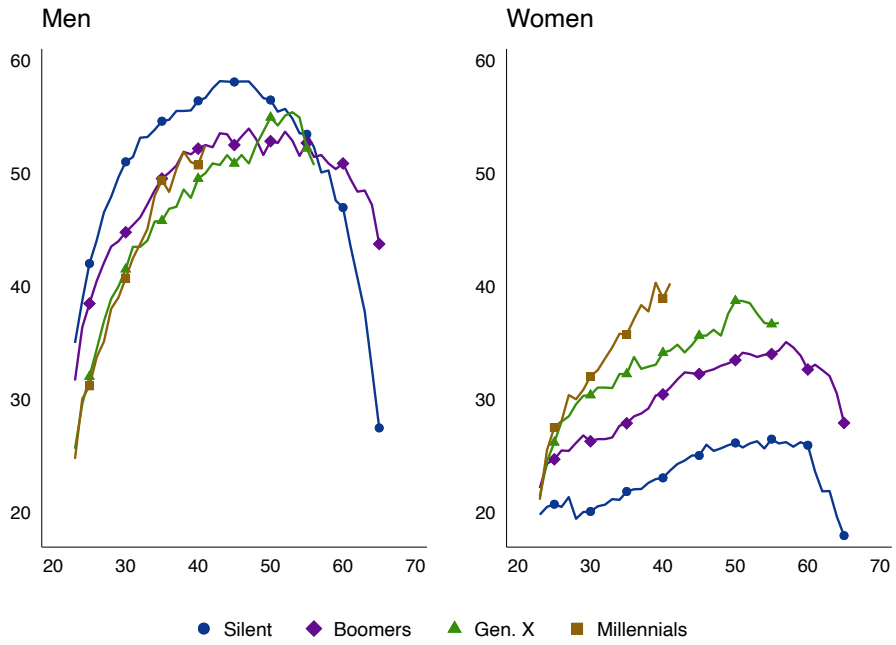
Figure 3 shows the median wage over the life cycle for each generation separated for Men and Women. We see immediately quite contrasting fortunes for different generations and genders. Unsurprisingly, the median man of all generations are out-earning the median woman at each point in the life cycle. However, we note improvement in median wages for each subsequent generation of women. The same does not appear to hold for men. The Silent generation earn more at each point in the lifecycle up age 50, where we observe a fall in median wage and later generations appear catch up and later overtake them in terms of wages.

2.1.1 Lifetime Wages for Men

We delve into these gender difference by decomposing trends further to include education. Figure 5 plots median wages over the life-cycle, but this time disaggregated by gender and education level. The top left panel shows the median wages of men that graduated from high school. We can see clearly that the Silent Generation (born 1925–1945 denoted by blue circles) have higher earnings at every point than the Boomers (purple diamonds), Gen. X'ers (green triangles) and Millennials (brown squares). Moreover, this difference is substantial, nearly $\$20,000$ a year at age 45, or two thirds of

[9]We check the robustness of our findings in Appendix C by using an alternative price deflator and alternative dataset; the American Community Survey

Figure 3: Median wage (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars.

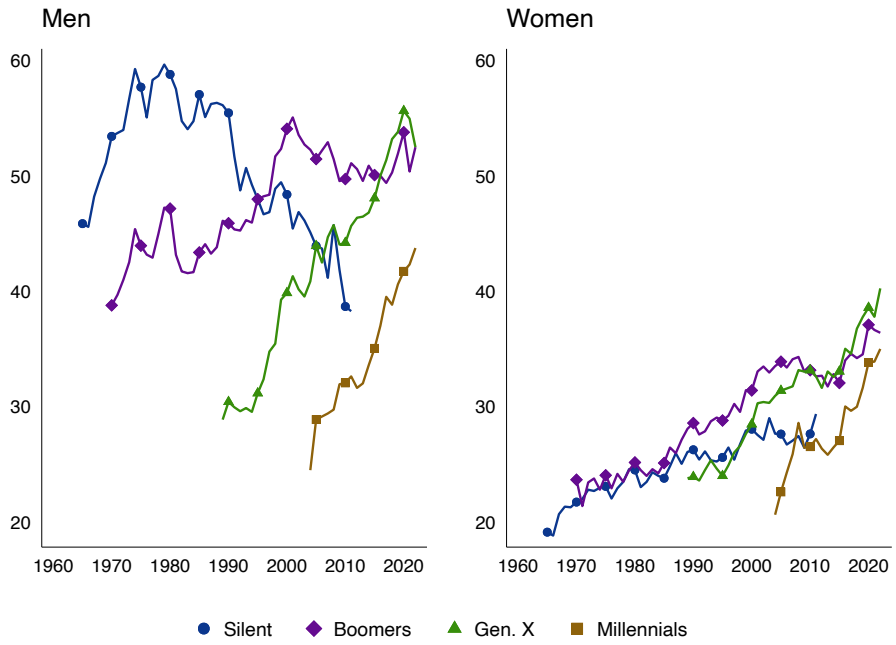
Boomer earnings. While the Boomers earn less than the Silent Generation, they do earn more than the later two generations. Moreover, they hit peak earnings sooner, by their late 20s, while Gen. X'ers experienced a much slower growth in their earnings, even if they seem to have converged by age 50. This is also true for Millennials.

Figure 6 reports the same data but now with year rather than age on the horizontal axis.[10] This makes clear the declining fortunes of high school graduates. Each generation's median wage at each age is below (excluding a drop-off in earnings for the Silent Generation from age 50 onwards) that of the one before. The average across all generations, not plotted, thus declines as Gen. X'ers and Millennials start to replace the Silent Generation and Boomers. Note, that we might expect, given substantial economic growth, the opposite: that each generation would start from a higher point than the preceding one and increase from there such that the curves would intersect. Given the shape of the plotted lifecycle income trajectories, this would be true even if increased college attendance meant that the average potential productivity of high school graduates was higher in earlier generations.

The bottom-left panel of Figure 5 presents results for men with at least a bachelors degree. We see that, again, the median wage of the Silent Generation is higher at all points in their career. This means that the decline of real wages has not only been experienced by high school graduates. Suggesting that

[10]Note, that there will be some difference in the estimates since Figure 5 takes the median of all members of a given generation at a given age. Figure 6 reports the median in a given year of all members of a generation who will hence be of a range of ages.

Figure 4: Median wage (in $1000) for each generation over time



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars.

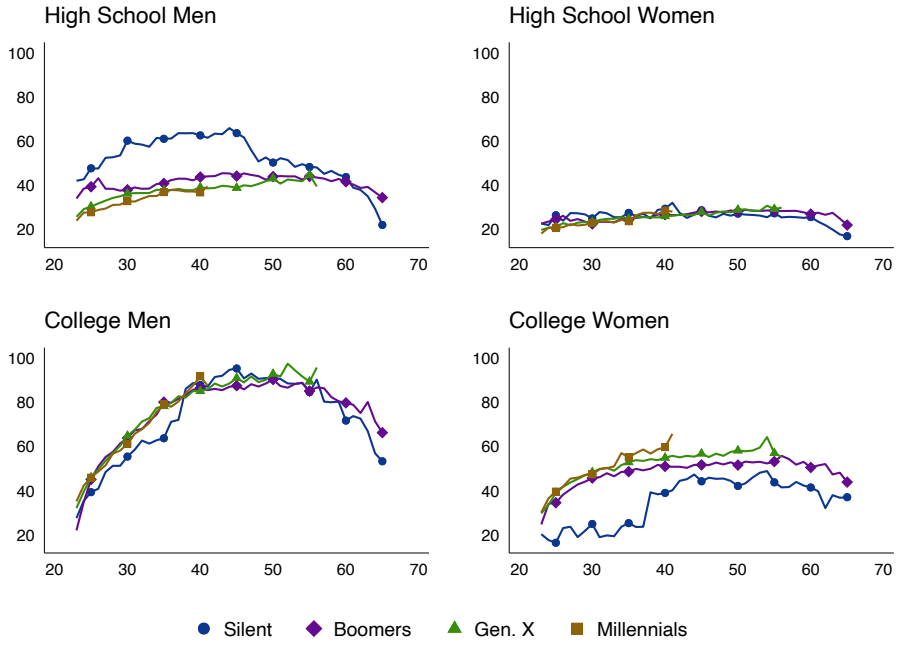
the phenomenon is not limited to those in lower-skill occupations, or reflecting only a composition effect. But the difference with the Boomers is smaller here and there is no appreciable difference between the Boomers and the subsequent generations. This is consistent with skills-biased technological change advantaging those with more formal education in subsequent generations relative to those with less in their generation. Thus, reducing the gap between generations of the more educated. This explanation aligns with evidence suggesting improved earnings for Millennials who attended college in the last couple of years relative to the Boomers and Gen. X'ers. But, without more data, it is not possible to rule out that this is just a short-term fluctuation.

Looking at the bottom-left panel of Figure 6 reinforces the point. We again can see lower earnings at every point for each subsequent generation and more notably for this sample, pronounced generational differences in the rate of progress over the life cycle. This can be seen by comparing the difference between the Boomer's curve and that of Gen. X or the Millennials', which are substantially flatter at the beginning.

2.1.2 Lifetime Wages for Women

The right two panels of Figure 5 show the results of the same analysis for women. Looking first at the results for high school graduates in the top-right panel, it is clear that women's median earnings are

Figure 5: Median wage (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

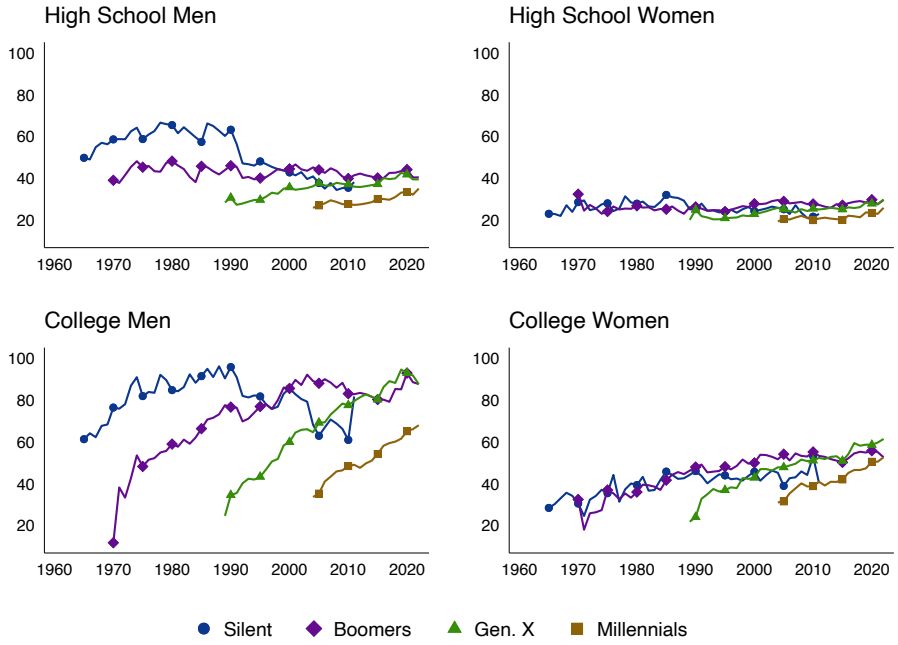
on average, across the life cycle and across all generations, considerably lower than those of men. It is also clear that there is little progress across generations. This result is in contrast to the findings for the overall population of women of Guvenen et al. (2022), and this may reflect differences in the origins of the data used and the sample definition.[11] Looking at the top right panel of Figure 6 we see that each generation seems to converge to within a few thousand dollars of a median of $20,000.

The bottom-right panel of Figure 5 now shows the results for women who attended college. Here, the opposite story is true. Each generation seems to be out earning the one before it. Thus, the Silent Generation now has the lowest median wage, followed by the Boomers, the Gen. X'ers and finally Millennials. Consistent with this, in Figure 6 we now see this pattern of the median earnings of each cohort intersecting with those before it (albeit not yet for Millennials). This suggests, that perhaps the growth in women's earnings documented by Guvenen et al. (2022), are due solely to the growth in the earnings of college-educated women and the growth in the proportion of women attending college.[12]

[11] One feature of Guvenen et al. (2022) is that they are able to use administrative data providing recorded rather than self-reported earnings data. A disadvantage of this is that it may exclude unrecorded earnings, which our data should capture.

[12] Guvenen et al. (2022) restrict the sample to those with consistent labor market engagement and a minimal level of income that may disproportionately exclude less-educated women, who may be more likely to be in informal employment.

Figure 6: Median wage (in $1000) for each generation over time



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

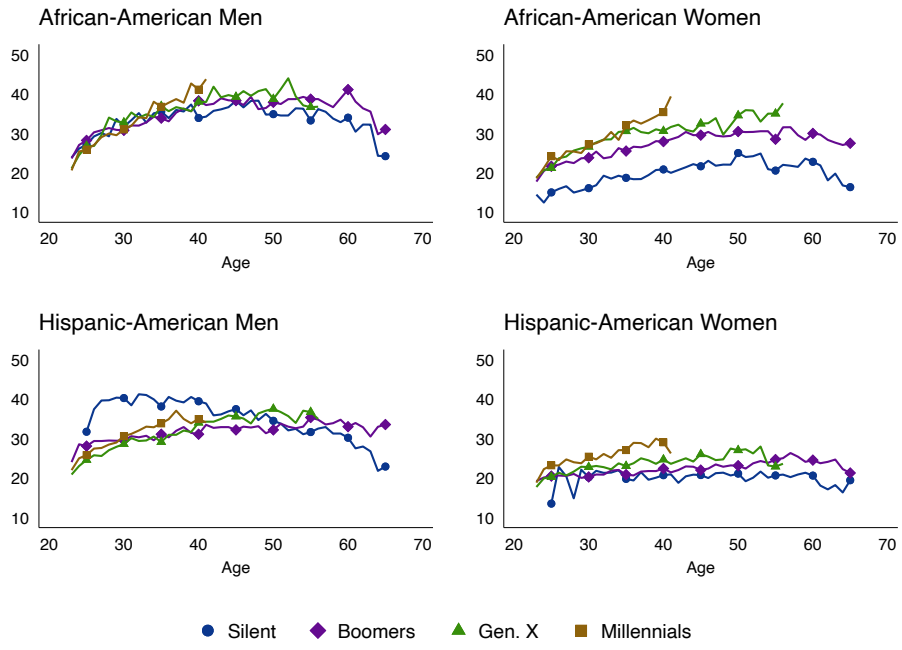
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

2.2 Lifetime Wages for Minorities

Another key margin of income inequality is race: African Americans and Hispanic Americans continue to have lower average incomes than other Americans (Fryer, 2011). Around the beginning of our sample period, the Civil Rights Act made discrimination on the basis of race illegal, and recent evidence suggests that discrimination can account for a relatively small proportion of the racial earnings gap (Fryer, 2011). Thus, we might expect subsequent generations of African American and Hispanic men to have higher incomes than those of the Silent Generation even if male earnings in general are declining. Similarly, we expect more rapid growth in the earnings of African American and Hispanic women. However, inspection of the left two panels of Figure 7 which reproduces Figure 5 for African American and Hispanic men suggests that this is not the case. Incomes at each point in the life cycle are broadly constant across all four generations of African American men. The relative pay of the Hispanic Silent Generation was so higher than subsequent generations up till age 40. But, focusing on the Boomers onwards we see no evidence of an increase in the wages of Hispanic men either, and indeed arguably a decline. Of course, migration makes comparisons across generations more difficult here, and it maybe that the lack of earnings growth is due to a composition effect. This would explain, potentially, the substantial decline in earnings from the Silent Generation to subsequent generations.

The right two panels report results for African American and Hispanic women, respectively. Now, we see clear signs of increasing incomes from one generation to the next. Looking first at the evidence for the African American women in the bottom left panel we see that working women of the Silent Generation earned around $\$5,000$ less than Boomers, who in turn earned less, albeit not as much less, than Gen. X'ers and Millennials. A similar, but arguably more pronounced pattern can be seen in the bottom right panel for Hispanic women. Now, as well as daylight between the Silent Generation and the Boomers there is a clear difference between Boomers and Gen. X'ers and in turn them and Millennials. Common to both African American and Hispanic women is that Gen. X'ers, and particularly Millennials, both show signs of rapid income growth during their 20s and 30s. This is consistent with the closing of the gap in college enrollment rates in both populations compared to American women as a whole.

Figure 7: Median wage by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

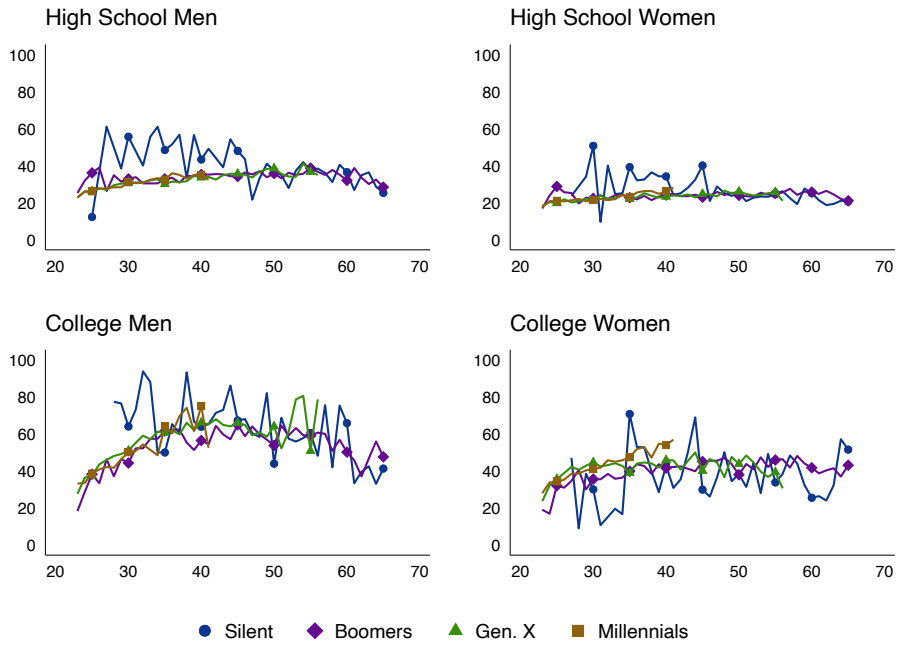
2.2.1 Lifetime Wages by Race and Education Level

We can further decompose the trends for minorities by both gender and education level to see if we observe the same growth in wages for college educated women from minority backgrounds. Figures 8 and 9 decompose median wages by gender and education level for Hispanic and African Americans, respectively.

It is evident that we do not observe the growth in median wage in the same way for subsequent generations to the Silent for college educated women from minority backgrounds. Whilst there appear to be some improvements, particularly for younger African American women who are college educated. The gains do not appear over the lifecycle as they did when we considered women as a whole. Suggesting that African American and Hispanic women have not benefitted in the same way from greater access to higher education as White women.

Men seemingly appear to also not experience median wage growth across generations, regardless of education level. Showing a similar story to when we considered the generations as a whole. The earnings profile for minority men does appear flatter than considered previously, particularly for high school graduates only.

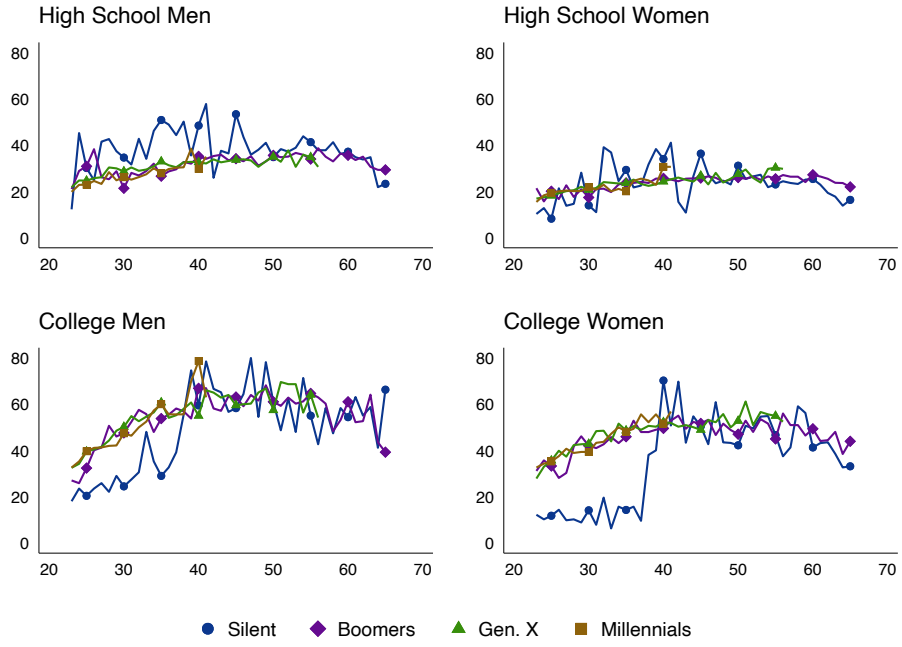
Figure 8: Median wage by generation over the life cycle by education level for Hispanic Americans



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

Figure 9: Median wage by generation over the life cycle by education level and gender for African Americans



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

3 Unconditional Quantile Regressions

The preceding graphical analysis suggested that later generations of American men have, to date, received lower incomes than their elder peers. This is also true for female high school graduates. But, not for African American or Hispanic women or women who attended college. We now expand our analysis in two key respects. First, we now work with individual level data so that we can understand intergenerational differences controlling for a range of determinants. Second, analyze these data using unconditional quantile regressions that allow us to understand the full distribution in intergenerational differences in earnings.

In this section we exploit the richness of the CPS data to investigate how these patterns identified in Section 2 are related to structural change in the US economy. Specifically, whether there remain intergenerational differences in incomes once we allow for the changing sectoral composition of the US labor market, the changing geographical distribution of economic activity, or the increasing returns to education.[13] While for clarity the preceding graphical analysis focused on median earnings, prior work such as Piketty and Saez (2003), Gabaix et al. (2016) has highlighted the changing shape of the earnings distribution as a whole. Others, including Chetverikov et al. (2016), have documented the

[13] Acemoglu and Autor (2011) provide a detailed discussion of the leading models/data.

uneven impact of secular changes such as increased import competition.[14] This raises the question, of whether the trends identified above have affected those in some parts of the distribution more than others. Thus, in this section we broaden our attention to other quantiles of the earnings distribution.

As discussed in the introduction, to do so we use the recent Generalized Quantile Regression estimator of Powell (2020), which has the important advantage that it gives us the "*ability to handle treatment variables differently from control variables*". This allows recovery of the unconditional quantiles such that we can interpret the estimated coefficients for each quantile, τ as we would for analogous coefficients for the mean from a Least-Squares estimator, while including a full set of individual controls and fixed effects to make our comparison meaningful. Importantly, given we include fixed effects, it allows for the conventional interpretation of our coefficients as within-estimates rather than the more difficult estimates from other quantile regression models for panel data.

We apply this estimator to the following model:

$$Q\left(y_{jt} \mid \tau\right) = \delta_g(\tau) + \mathbf{X}'_{j,t}\beta(\tau) + \gamma_i\left(\tau\right) + \gamma_o\left(\tau\right) + \gamma_s(\tau) + \varepsilon_{j,t}(\tau), \tag{1}$$

where $y_{jt} = Y$ is a vector of log wages indexed by individual j and year t. $Q\left(y_{jt} \mid \tau\right) \equiv Q_\tau(Y)$ is the quantile function of the unconditional distribution of (log) wages.

We are most interested in the vector of generational dummies $\gamma_g(\tau)$, which capture how a given quantile, τ of the earnings distributions of each generation differs from the Silent Generation. That (1) relates changes in the unconditional distribution described by $Q\left(y_{jt} \mid \tau\right)$ to the $\delta_g(\tau)$ is the key advantage of the Powell (2020) estimator.

More precisely, the GQR estimator uses the control variables $\mathbf{X}$ and the fixed effects γ only to predict proneness (the likelihood of someone to be a high earner)(Doksum, 1974, Chernozhukov and Hansen, 2005) but not in estimating the differences in the quantile function across distributions, which are estimated jointly using GMM.

This means that $\beta^i(\tau)$ captures, in the conventional way, the effects of a standard set of educational, demographic, and occupation controls on each part of the distribution. Specifically, we include in $\mathbf{X}_{j,t}$ a quadratic in age, dummies for being African American, Hispanic, or 'Other' as well as Female and whether the respondent graduated from high school or attended college.[15] Likewise, we include a full-set of occupation dummies to capture the impact of changing technologies and the value of human

[14] While our prior focus on median earnings is preferable to mean earnings given the concentration of earnings growth on the top percentiles of the distribution highlighted by Piketty and Saez (2003), Gabaix et al. (2016), it is by the same token largely uninformative about the remainder of the (conditional) earnings distribution.

[15] Given how we construct our data, we do not have sufficient variation to include year fixed effects as well as our age and generation controls. Thus, the age coefficients will reflect both age related effects such as human capital accumulation or seniority, and the average shock experienced by members of that generation at that age. Given our focus on cohorts, this does not overly affect our inference.

capital, $\delta_o(\tau)$. Finally, we include a vector of industry dummies $\delta_i(\tau)$ and state fixed effects, $\delta_s(\tau)$, to capture persistent differences in local labor markets. $\varepsilon_{j,t}(\tau)$ is a quantile specific disturbance term.

Given we include individual controls as well as state, industry, and occupation fixed effects we interpret $\gamma_g(\tau)$ as the change in the quantile τ of the distribution of earnings, holding all else constant. Our analysis is non-causal, it simply estimates the generational differences in earnings distributions allowing for changes in the geographical, industrial, occupational, and demographic composition of the workforce.

A key assumption of the Powell (2020) estimator is that of Rank Similarity (assumption 1D).[16] This states, loosely, that the probability of an individual with given characteristics being in a given quantile of the income distribution is independent of their treatment status. This is a weaker assumption than the alternative of Rank Invariance, as imposed by Newey and Powell (2003), Chernozhukov et al. (2007), which requires that the response to the treatment for different individuals are identical if their outcome absent the treatment is the same. But, assuming only Rank Similarity means that estimated coefficients will describe the change in quantile τ of the distribution of y_{jt}, $Q_\tau(Y)$, rather than the effect on any given individual j.

In general, if the Rank Similarity assumption is violated then it means that the estimated change in wages at a particular quantile will reflect both the role of the treatment and changes in their place in the earnings distribution, complicating the interpretation of a treatment effect substantially. It is instructive to consider in more detail what this assumption means for our application, and likewise what are the implications of possible violations of it.

Because the Powell (2020) estimator allows for the inclusion of covariates, the assumption is that the expected rank in the earnings distribution is the same for people of different generations with otherwise the same observable characteristics such as education, location, gender, industry, etc. Put differently, this is an assumption that the same kinds of people are at the top and the bottom of the earnings distribution across generations. While plausible in general, it may not be true in some cases – one might think, for example, that reduced discrimination means equally well qualified minority women are more likely to be at the top of the earnings distribution if they are a Millennial than their Silent generation equivalents.

However, since our analysis is only descriptive, violation of the Rank Similarity assumption are less problematic than in the context of causal inference. Here, it will mean that the estimated change will conflate differences in the earnings distribution by generation and differences in the expected rank. We

[16] The others are standard Potential Outcomes assumptions, or apply to the case of an Instrumental Variable estimator.

will separate these two effects by also obtaining estimates for demographic subgroups which allow us to abstract from the ranking issue.

3.1 Results

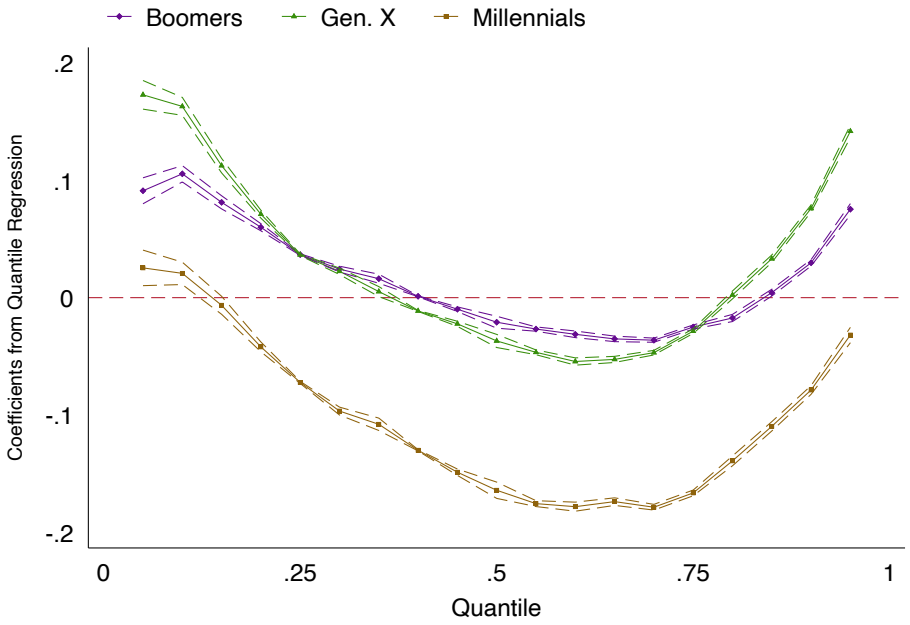
We firstly look at our whole sample, this is shown in Figure 10 which plots the coefficients on the generation dummies for $\tau \in \{0.05, 0.1, \ldots, 0.95\}$.[17] We can see that focusing on the median hides important heterogeneity in differences in earnings between generations across the earnings distribution. Median earnings are lower for each subsequent generation, but the differences vary across the distribution. There is wage growth, relative to the Silent Generation, for both the bottom 35% of Boomers and the top 15%, but declines for the those in between. The pattern is similar pattern, but more pronounced, for Gen X.'ers, who see larger increases for the bottom 35% and the top 20%. Earnings for Millennials are lower for all but the bottom 10% relative to the Silents, and lower relative to the Boomers and Gen X.'ers across the distribution, and substantially so, with the estimated coefficients for those in the third quartile approaching -0.18, 0.14 and 0.12 below the estimates for Boomers and Gen. X, respectively. Interestingly, these gaps between Millennials and the previous two generations are relatively consistent across the distribution in contrast to the gaps relative to the Silent generation. One interpretation of this is that the decline in median earnings, relative to the Silent Generation, among Boomers and Gen. X'ers, in part reflected a change in the distribution *within* generations, with those in the middle two quartiles losing relative to those at the top and the bottom for Millennials this effect is dominated by an aggregate decline in earnings that means only the poorest 10% have higher real earnings than those born 55 years previously.

Of course, the composition of the labor force has changed substantially over the period we study and one concern might be that this means we are not comparing like with like, and in particular that the rank similarity assumption implicitly requires that there were sufficient women and non-White Americans across the earnings distribution in every generation. As noted above, a weaker requirement is that the rank similarity assumption holds within particular subgroups.

Figure 11 plots the results of eq. (1) estimated separately for men and women. Looking first at the results for men in the left-hand panel we can see that the results are broadly similar to those for the pooled sample –real earnings for each generation subsequent to the Silents have been decreasing, but now this effect is not limited to the middle of the earnings distribution but is true for the bottom nine deciles. We also still see that Millennials have particularly low real earnings relative to earlier generations. One important difference, however, is that excluding women the estimated differences are

[17] Numerical results are reported in appendix D. Estimates for each quantile are obtained using MCMC with 50,000 draws after discarding 15,000 burn-in draws, and with an acceptance rate of 0.25.

Figure 10: Quantile regression results



Note: The plot reports the coefficient on the generation dummies from the following quantile regression:

$$Q\left(y_{jt} \mid \tau\right) = \delta_g(\tau) + \mathbf{X}'_{j,t}\beta(\tau) + \gamma_i\left(\tau\right) + \gamma_o\left(\tau\right) + \gamma_s(\tau) + \varepsilon_{j,t}(\tau),$$

The coefficients of interest are the vector of generational dummies $\delta_g(\tau)$, which are plotted above, with the base generation being the Silent generation. $X'_{j,t}\beta(\tau)$ is individual controls including, race, gender, and a cubic in age, and γ_i,γ_o, γ_s are industry, occupation, and state fixed effects respectively. The dashed lines are the corresponding 95% confidence interval. Data are from the CPS, our core regression sample as constructed in Appendix A. The same results are reported as a table in Appendix D.

now much larger. For example, the coefficients imply median earnings that are 12, 20, and 38% lower for Boomers, Gen. X, and Millennials respectively, other things equal.

The results for women in the right-hand panel of Figure 11 show that, in contrast to men, the real earnings of women have increased. This increase is smallest at the bottom of the earnings distribution, and likewise largest at the top. Gen. X women have seen the largest increases, with real earnings 46% higher for highest earning 5% of women. One interpretation of this, which would also be consistent with the results seen for men, is that Gen. X women were relatively likely to experience reduced labor market discrimination, while not facing the same downwards pressures on real earnings as Millennials that lead to the pronounced drop in Millennial earnings we observe for men.

One interesting implication of the increase in earnings we observe for women, and the decline for (most) men, is that the reduction in gender pay inequality observed over the period may reflect not only increases in women's real earnings but also declines in men's. In particular, the median Gen. X woman earns 25% more than their Silent equivalent, whilst the median man earns 20% less.

The picture becomes more nuanced when we also disaggregate by education. Looking at Figure 12 we can see that the decline in men's real wages has, perhaps unsurprisingly, been concentrated on

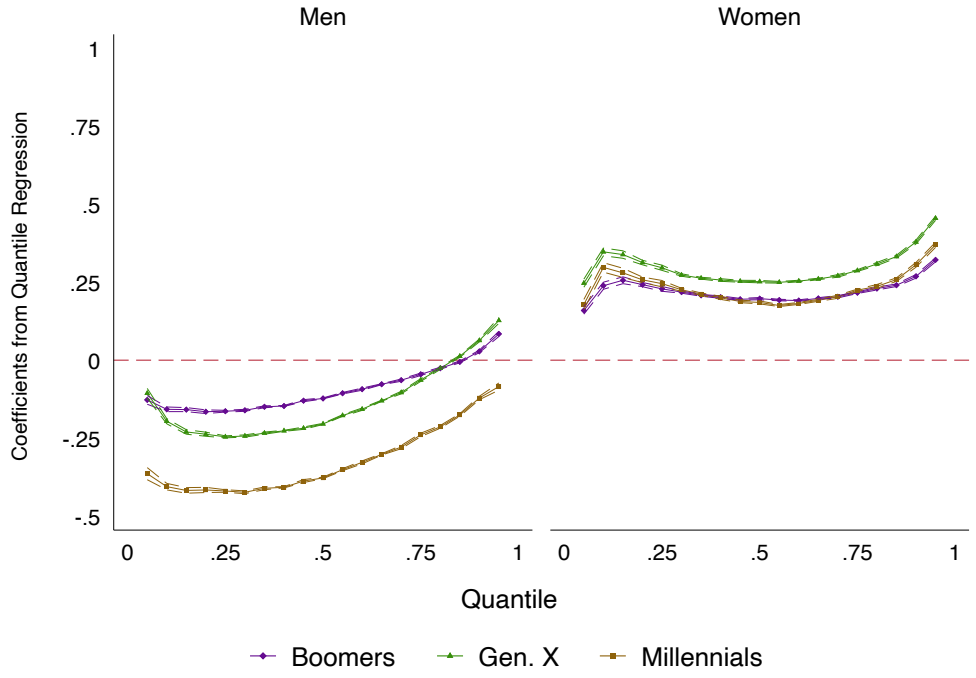


Figure 11: Quantile Regressions by gender

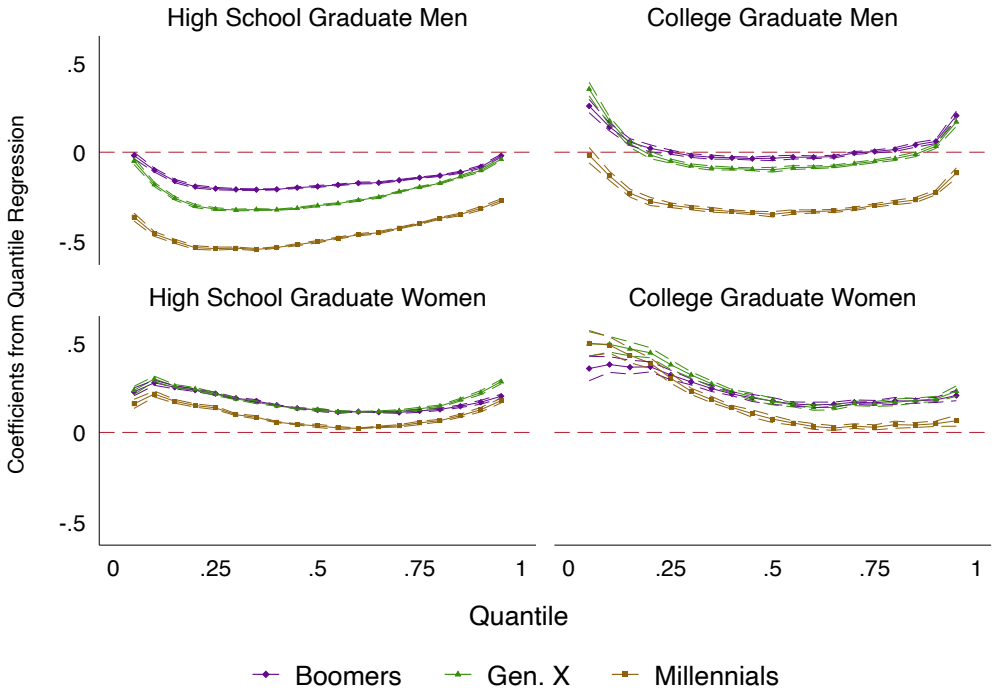
Note: Details as for Figure 10.

high school graduates and Millennial college graduates. The coefficients for Millennial high school graduates are notable for their magnitude which in some cases are below -0.5 implying wages that are 39% lower for the median individual. The results for college graduate men and high school graduate women are consistent with what we have seen previously – greater growth at the bottom and the top of the distributions and lower earnings across the distribution for Millennials. The results for women college graduates are interesting in that they suggest substantially higher rates of earnings growth for women in the bottom half of the earnings distribution. This difference is largest for Millennials, followed by Gen. X'ers, with the growth in earnings of Boomers relatively flat across the earnings distribution. It is unclear what the interpretation of this is. One explanation, might be that such women have benefited particularly from technological change, another would be that they have been the key beneficiaries of further reductions in discrimination (Bailey et al., 2024).

Figure 13 reports results estimated separately for each of the three largest racial groups in our data.[18] The results for Whites again show a clear reduction in earnings across generations. There is evidence of wage growth for African Americans, although, again, not for all but the highest earning Millennials. Given that conditional on age, education, and location, African Americans earned 29% less than Whites in 1950 (Black et al., 2013), this growth in wages among Boomers and Gen. Xers, in contrast to Whites, may well reflect the closing of some of the racial wage gap. Likewise, the

[18]Sample size limitations preclude analysis of other groups.

Figure 12: Quantile regression results



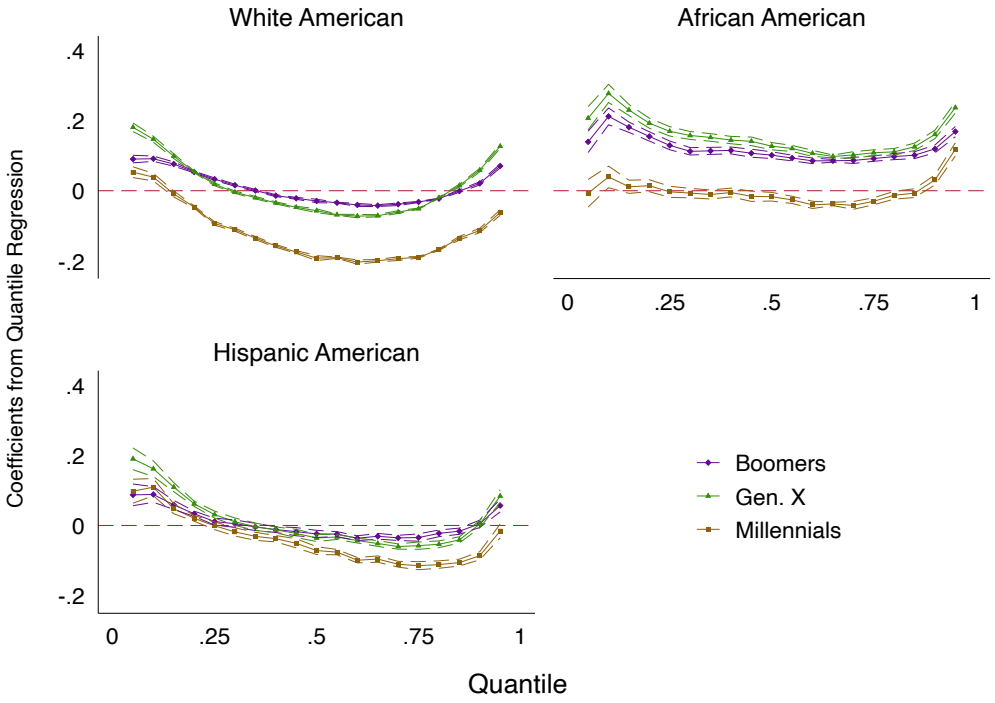
Notes: Results are for separate quantile regressions, for men and women and excluding controls for education. Other details as for Figure 10.

intergenerational trends in the earnings of Hispanic Americans have seen some growth at the bottom of the distribution and at the very top, but otherwise the same pattern of reduced earnings for each subsequent generation emerges as for White Americans, with substantial declines for subsequent generations just above the median.

To explore the racial differences in wages across generations and racial groups, we consider two further subgroup analysis for our quantile regressions. Firstly by gender and then by education level, we obtain separate results for White American, African American and Hispanic Americans. The estimates are now a little noisier reflecting the smaller available samples. Figure 14 plots the coefficients for regressions separately for each racial group and gender. We observe that wage declines across the distribution are common for men from all racial groups. Conversely, wage growth can be observed for women across the earnings distribution, with wage growth the highest among for Gen. Xers. Earnings growth is somewhat lower for Hispanic women, and is particularly high for high earning White women and African American women. Quantitatively and qualitatively, the results are very similar for White and African American men, with less difference between generations for Hispanic men, and less variation across the earnings distribution.

Figure 15 considers the intersection of race and educational attainment. The results are consistent with those in Figure 12. We see the same overall decline in earnings, albeit with some growth among

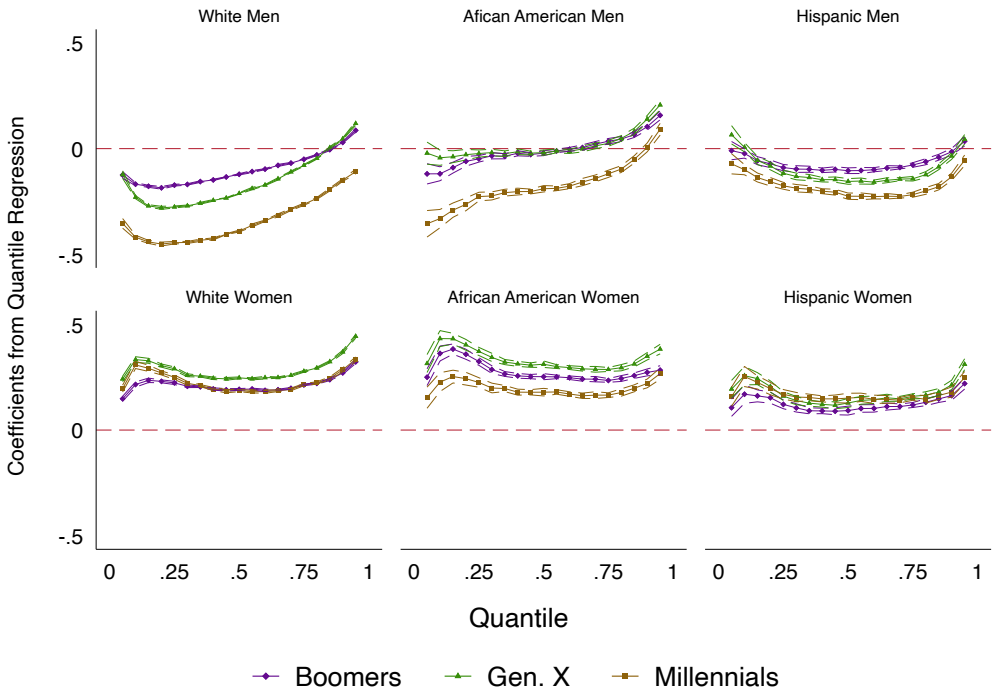
Figure 13: Quantile regression results



Notes: Results are for separate quantile regressions for African American, Hispanic, and White Americans. Other details as for Figure 10.

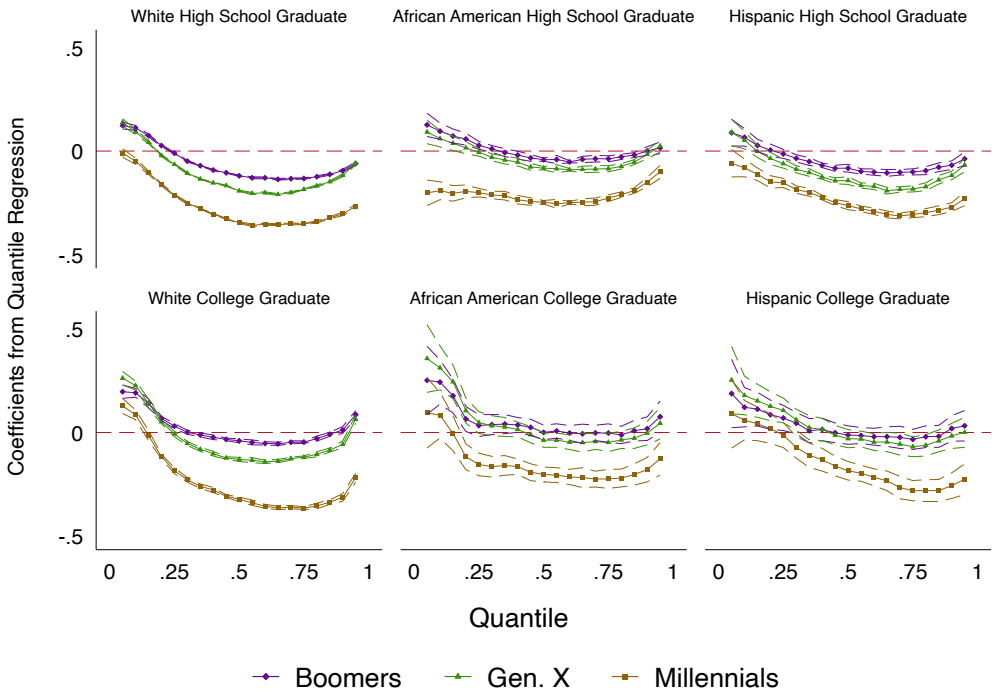
the lowest earners in each group. Likewise, the decline, consistent with Figure 13 seems to be less pronounced among African and Hispanic Americans.

Figure 14: Quantile regression results



Notes: Results are for separate quantile regressions for African American, Hispanic, and White Americans. Other details as for Figure 10.

Figure 15: Quantile regression results



Notes: Results are for separate quantile regressions for African American, Hispanic, and White Americans. Other details as for Figure 10.

4 Conclusion

This paper was motivated by the fact that standard lifecycle income dynamics and stagnant median real wages imply declining real wages of later generations. Descriptive statistics provide evidence for this, but potentially reflect other changes in the labor market over the period. Our unconditional quantile regression approach enabled us to capture intergenerational differences in earnings distributions, other things being equal, after allowing for the role of age, education, location, industry, and occupation in determining the structure of the earnings distribution.

Taken together the results show that there have been consistent declines in male earnings since the Silent generation at every point of the distribution except for the highest 10% of earners. Millennials' earnings are notably lower still than those of Boomers and Gen. Xers. These declines are particularly pronounced for High School graduates, and for White Americans, but are not limited to either group. For example, African American Millennial college graduates earn less than their forbears in the Silent Generation. Similarly, while women's earnings are higher across the distribution, progress appears to have stalled, with Millennial earnings lower than those of Gen X and comparable to Boomers'.

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Appendix

NOT FOR PUBLICATION APPENDICES

A Data appendix

A.1 Current Population Survey (CPS)

The CPS is individual micro-level data which is available from 1962 to 2022 and with the sample weights it is representative of the US population each year (Flood et al., 2023) and is provided by the US Census Bureau and Bureau of Labor Statistics. We use the ASEC supplement of the March CPS for our analysis, the core of which is at the cohort or generation level. These are defined by the year of birth of individuals, which we work out from year of survey and their age. The classifications are presented in Table A.1. The first column refers to year born with the corresponding definition in the right column.

Table A.1: Different birth cohorts.

Year born	**Birth cohort**
2000 – Present	Generation Z
1980 – 1999	Millennials (Gen. Y)
1965 – 1979	Generation X (Gen. X)
1946 – 1964	Baby Boomers (Boomers)
1925 – 1945	Silent Generation

In Table A.2, we present summary statistics for the CPS, both for each of our cohorts and for the total sample. All monetary amounts are adjusted for inflation using Consumer Price Index (CPI) with 1999 as the base year. We make a number of sample restrictions. Firstly, we drop individuals who are self-employed, in education or working for the government. And secondly, we consider only individuals between the ages of 23 and 65. Further to this, we also drop observations where the annual earnings do not meet the minimum income threshold. Following Guvenen et al. (2022), we define the threshold as 520 hours times half the federal minimum wage for that year. In all cases we use the probability weights provided by the CPS.

The ASEC supplement of the March CPS is not affected by the same survey redesign which affects the May CPS and Outgoing Rotation Group samples. Hence, our main income variable, annual wage and salary income, is broadly consistent over the time period considered. Inconsistencies could arise from minor changes in the wording of the survey. Similarly, there are changes in top-coding conventions, but given most of our results are working with the median, this should not affect our results.

Table A.2: Summary statistics (CPS), total and by cohort

	Total		*Silent*		*Boomer's*		*Gen. X*		*Millennials*	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Demographics										
Age	40.23	11.42	44.17	10.77	41.76	11.43	36.19	8.25	28.83	4.47
Female	0.44	0.50	0.41	0.49	0.46	0.50	0.46	0.50	0.46	0.50
Married	0.64	0.48	0.77	0.42	0.66	0.47	0.59	0.49	0.41	0.49
Separated/Divorced	0.13	0.34	0.13	0.33	0.17	0.37	0.14	0.34	0.07	0.25
White	0.83	0.37	0.88	0.33	0.85	0.36	0.80	0.40	0.76	0.43
African American	0.11	0.31	0.10	0.30	0.11	0.31	0.12	0.33	0.13	0.34
Hispanic	0.12	0.33	0.06	0.24	0.09	0.29	0.18	0.38	0.21	0.41
Education										
High School Graduate	0.60	0.49	0.26	0.44	0.66	0.47	0.85	0.36	0.89	0.31
College	0.22	0.42	0.10	0.30	0.21	0.41	0.32	0.47	0.37	0.48
Labour Market										
Union	0.10	0.30	0.14	0.35	0.11	0.32	0.08	0.27	0.06	0.24
Usual hours worked per week (last yr)	40.50	9.83	39.92	10.21	40.80	9.92	40.84	9.57	39.80	9.42
Labour Income	48,100	51,301	46,157	38,405	49,883	53,722	50,839	60,009	43,971	51,860
Total Income	78,760	14,705,979	88,433	17,429,279	53,590	57,227	53,633	62,962	46,232	54,037
Household Total Income	94,113	88,006	87,031	99,500	95,383	81,190	99,302	93,076	97,042	91,960
Observations	2,793,752		572,475		1,068,427		644,133		291,543	

Note: The sample used includes only individuals who are in employment, and are not the self-employed or those working for the government. We include those between the ages of 23 and 65. We drop observations which do not meet the minimum income threshold as described in the main text. Income and wage variables are in 2015 US dollars adjusted for using CPI. Summary statistics are produced using the individual weights from the CPS.

Demographic variables were coded as dummy variables. The main income measure we use is total pre-tax wage and salary income in the year prior to the survey.[19] Our preferred occupation controls are six broad occupation categories, aggregated from the 389 categories included in the CPS. Our results are robust to the inclusion of finer occupation codes.

B Additional results

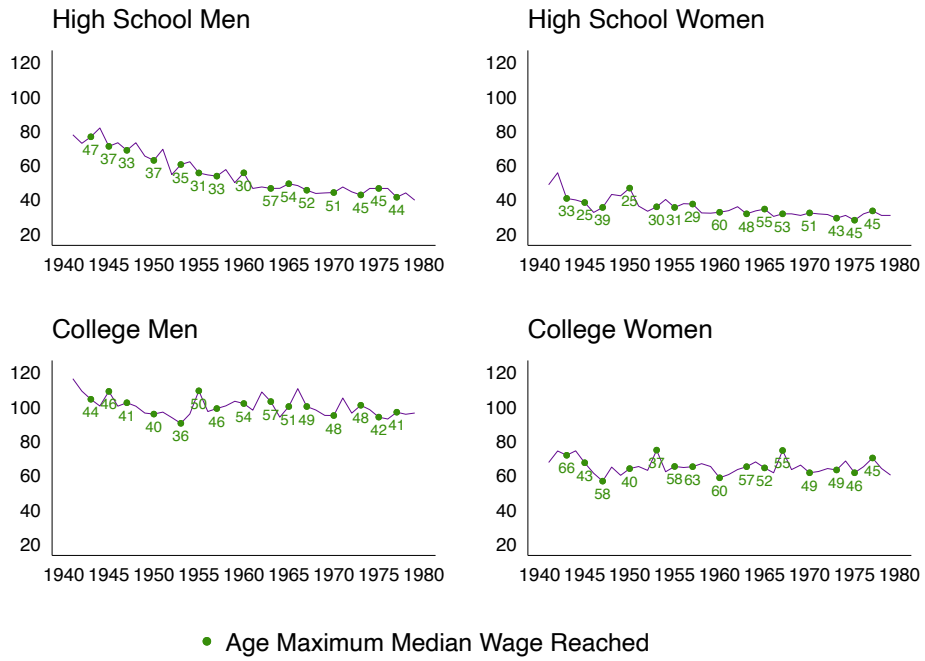
B.1 Age of Peak Earnings

The purple line in the top-left panel of Figure B.1 plots the maximum median wage reached by year born for male high school graduates. We then annotate these points (in green) with the age when this wage income was reached. We see that median American born in 1945 had maximum earnings of just over $\$65,000$ which they achieved age 47. In comparison, the maximum median wage of those born 10–15 years later was substantially lower, but was achieved by their early 30s. Those born from around 1961 to 1970 not only had lower maximum earnings, but they did not receive them until they were 50. More recent cohorts had again lower maximum earnings, albeit slightly earlier at around age 45. Given the effects of the Financial Crisis, it may be premature to reach a conclusion about those born in the late 1970s as it is conceivable that their earnings will still increase meaningfully.

[19] There were changes in the question wording which might impact our results, notably, for the period 1962 – 1968, respondents were asked how much they earned in wages and salary. For 1969-1979, they asked about wages or salary before any deductions. For later years, respondents were prompted to include overtime pay, tips, bonuses, and commissions from their primary employer, as well as money from other employers.

The same plot is presented in the other panels for High School and College graduate women as well as for college educated men. We observe a flat profile of median wage over year born for these groups, with some variation in the age this maximum median wage is reached.

Figure B.1: Maximum Median Wage (in $1000) by Year born and the Age which it was reached.



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

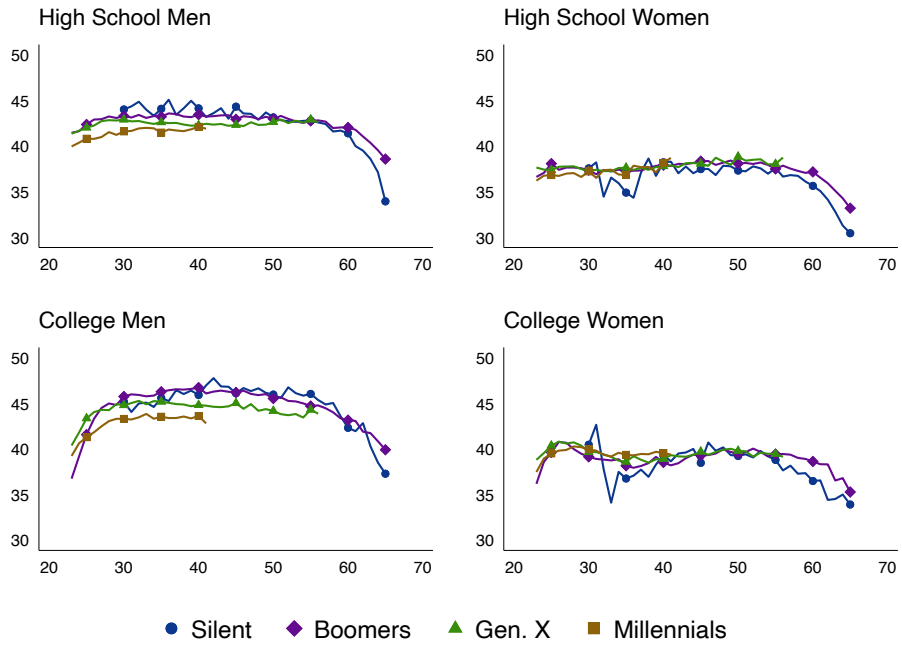
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

B.2 Hours worked

One possibility is that stagnant earnings reflect in part reductions in hours worked. This alters the comparison across generations since we normally presume that welfare is decreasing in hours worked. Figure B.2 reports the number of hours usually worked per week over the life course for each generation. Looking at the plots for men in the left column we see that, consistent with existing evidence (Blundell et al., 2011, McDaniel, 2011), that there have been no abrupt changes in the number of hours worked. There is some evidence that Silent Generation high school graduates worked more on average and particularly in their 30s, and that Millennials seem to work less than Boomers and Gen. X'ers, but the overall differences are relatively small. There are, as expected, greater changes for women. With a clear increase in hours worked by all generations subsequent to the Silent Generation for all women. As well as smaller, but still noticeable, differences for college-educated women between the Boomers and Gen. X'ers (and Millennials). Figure B.3 provides analogous plots for African Americans and

Hispanic Americans showing similar patterns. Overall, it seems that there has not been a sufficiently large decrease in hours worked by American men to imply a rising real hourly wage.

Figure B.2: Weekly hours worked by generation over the life cycle

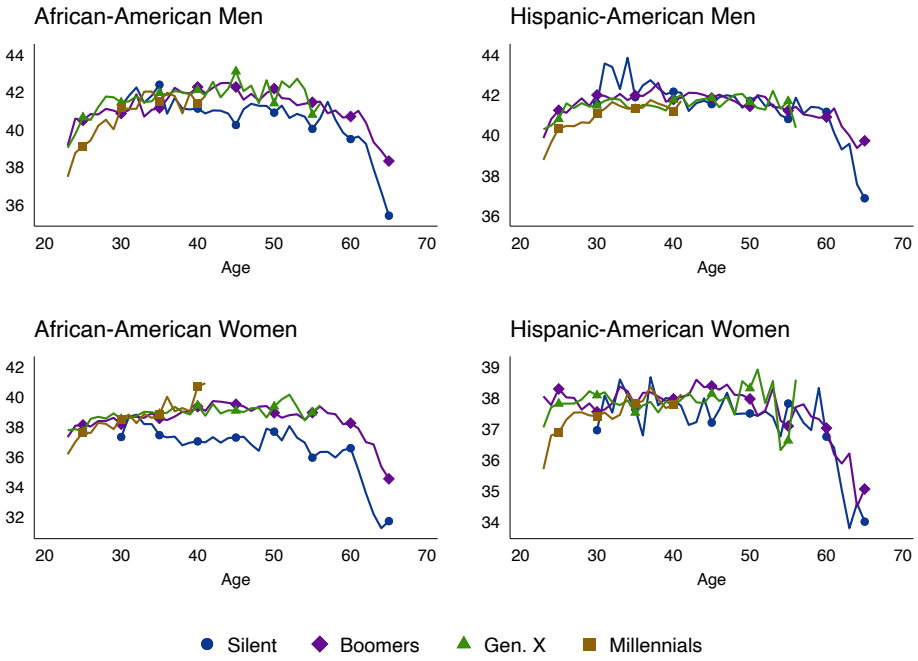


Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

The right-hand panels of Figure B.2 show that the average hours worked by women was lower for the Silents than it was for subsequent generations. However, this change was minimal for high school graduates, and while larger only $1-3$ hours per week for those who attended college. Thus suggesting, that any increases in median female earnings are driven by increased hourly wages rather than increases in hours worked.

Figure B.3: Hours worked by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022
Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

C Robustness

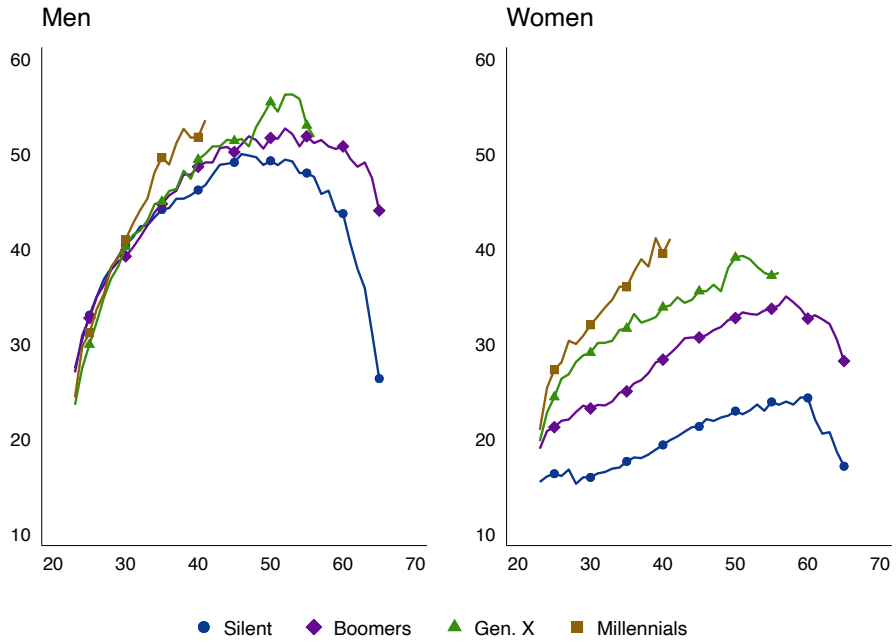
We review the robustness of our results in two main ways. Firstly through the use of an alternative adjustment for inflation, and secondly by using an alternative data source. These are described in more detail in the following subsections.

C.1 PCE Deflator

We replicate some of our key figures using an alternative price deflator; the personal consumption expenditures price index (PCE), the most common alternative to the CPI. The PCE differs to the CPI in that it incorporates a broader basket of goods and services than the CPI, tracking what consumers actually purchase over time relative to price changes. The advantage of the CPI and why it is our preferred measures is that (i) it is commonly used in studies of inequality and (ii) CPI is based on the expenditures of a typical household using detailed survey data.

As is shown in Figures C.1 to C.4, the results remain qualitatively the same, regardless of the choice of price deflator. We see that by use PCE wages are lower across the lifecycle for all generations. Yet we are still observing the dominance between the generations as described in Section 2.

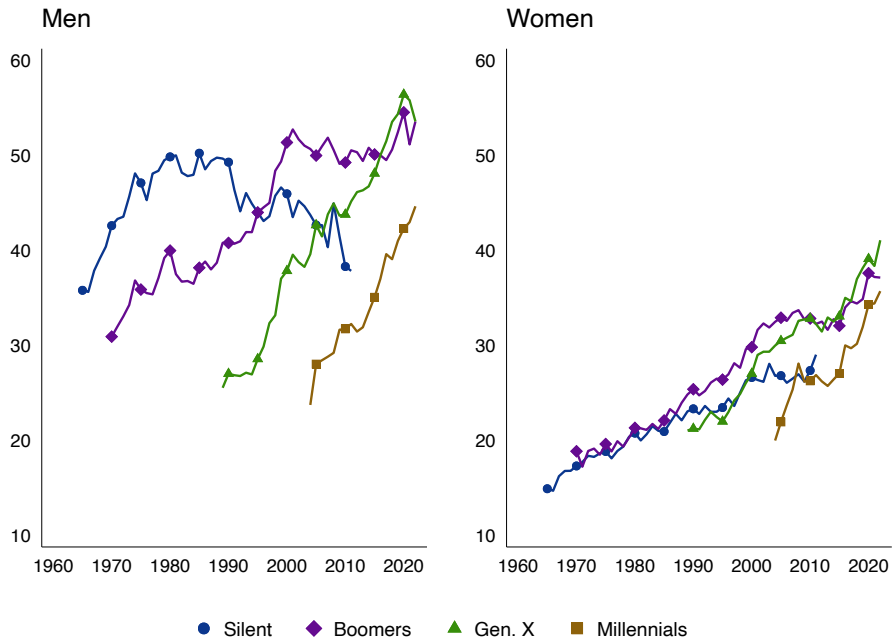
Figure C.1: Median wage (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Note: Includes the total population, wages are adjusted for inflation, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars, adjusted using PCE.

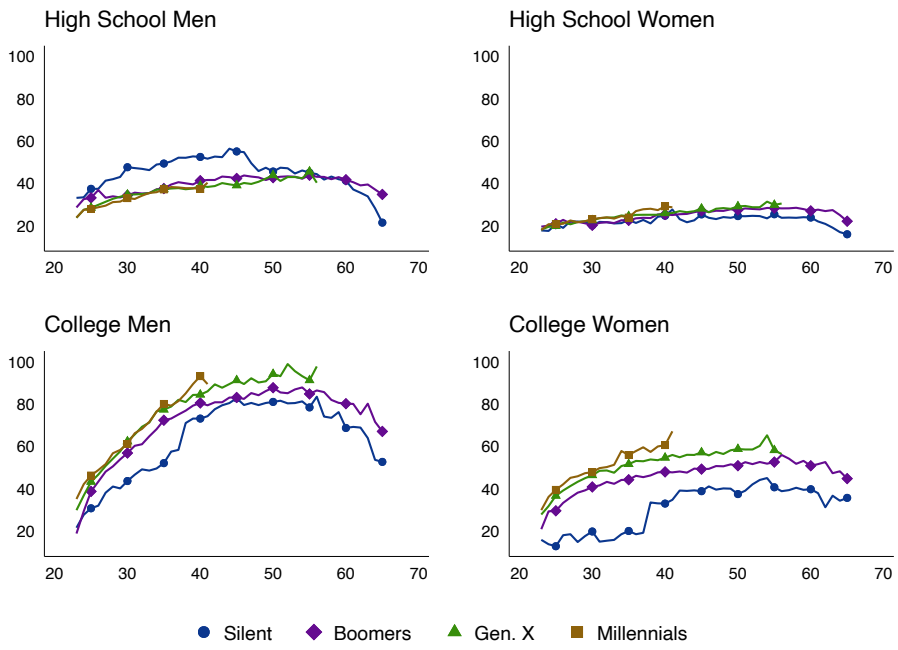
Figure C.2: Median wage (in $1000) for each generation over time



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Note: Includes the total population, wages are adjusted for inflation, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars, adjusted using PCE.

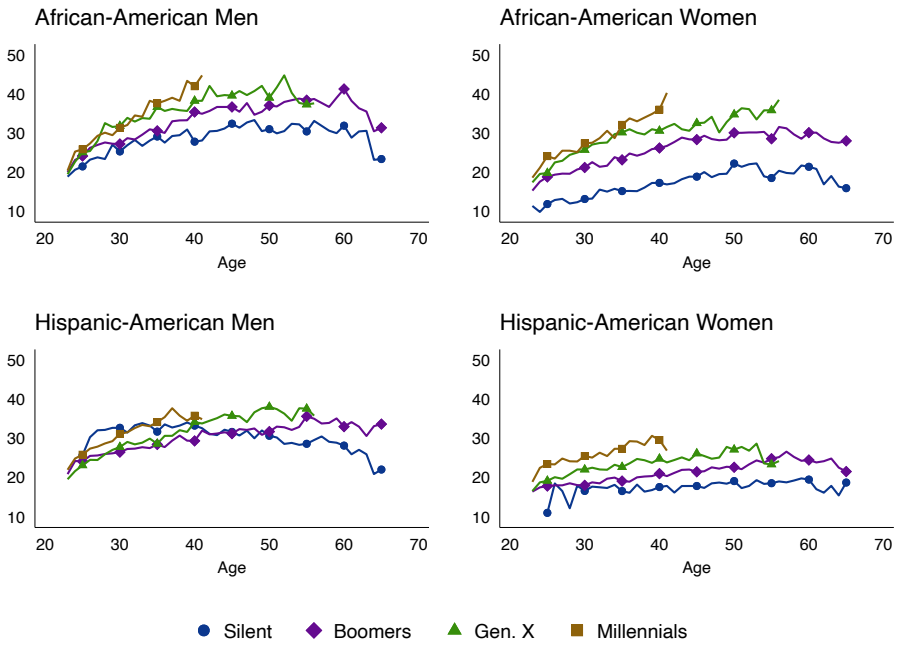
Figure C.3: Median wage (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Note: Includes the total population, wages are adjusted for inflation, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars, adjusted using PCE.

Figure C.4: Median wage (in $1000) by generation over the life cycle



Source: ASEC supplement of the Current Population Survey (CPS), 1962-2022

Note: Includes the total population, wages are adjusted for inflation, and individual weights are used. The vertical axis is median real wage in $1000, measured in 2015 dollars, adjusted using PCE.

C.2 Alternative Data Source: American Community Survey (ACS)

Lastly, we replicate our findings using an alternative data source, namely the American Community Survey (ACS) (Ruggles et al., 2023). As with the CPS, it is a nationally representative sample administered by the US Census Bureau, it contains harmonized census and American Community Survey Data over a substantial time period.

We use data from 1970-2021 and apply the same sample restrictions as implemented for the CPS.[20] All results are produced using the survey weights provided. Table C.1 present summary statistics of our key variables of interest, both overall and by generation.

Table C.1: Summary statistics (ACS), total and by cohort

	Total		***Silent***		***Boomer's***		***Gen. X***		***Millennials***	
	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.	Mean	Std.Dev.
Demographics										
Age	40.46	11.47	41.78	11.39	44.51	11.37	37.58	8.16	29.06	4.67
Female	0.43	0.50	0.40	0.49	0.44	0.50	0.44	0.50	0.44	0.50
Married	0.62	0.48	0.77	0.42	0.66	0.47	0.59	0.49	0.39	0.49
Separated/Divorced	0.14	0.35	0.12	0.32	0.18	0.39	0.15	0.36	0.07	0.26
White	0.77	0.42	0.87	0.33	0.80	0.40	0.70	0.46	0.65	0.48
African American	0.11	0.31	0.10	0.29	0.10	0.30	0.12	0.32	0.12	0.33
Hispanic	0.13	0.33	0.06	0.23	0.10	0.30	0.19	0.39	0.21	0.41
Education										
High School Graduate	0.37	0.48	0.41	0.49	0.40	0.49	0.36	0.48	0.33	0.47
College Graduate	0.22	0.42	0.09	0.28	0.23	0.42	0.29	0.45	0.34	0.47
Labour Market										
Usual hours worked per week	40.92	10.53	40.05	10.89	41.26	10.61	41.50	10.34	40.06	10.22
Labour Income	50,117	52,649	48,098	42,089	53,659	57,807	53,307	59,491	42,495	45,211
Total Income	52,803	56,329	51,680	46,615	56,963	62,694	55,175	62,448	43,683	46,754
Observations	6,290,366		1,162,039		2,227,782		1,515,839		884,665	

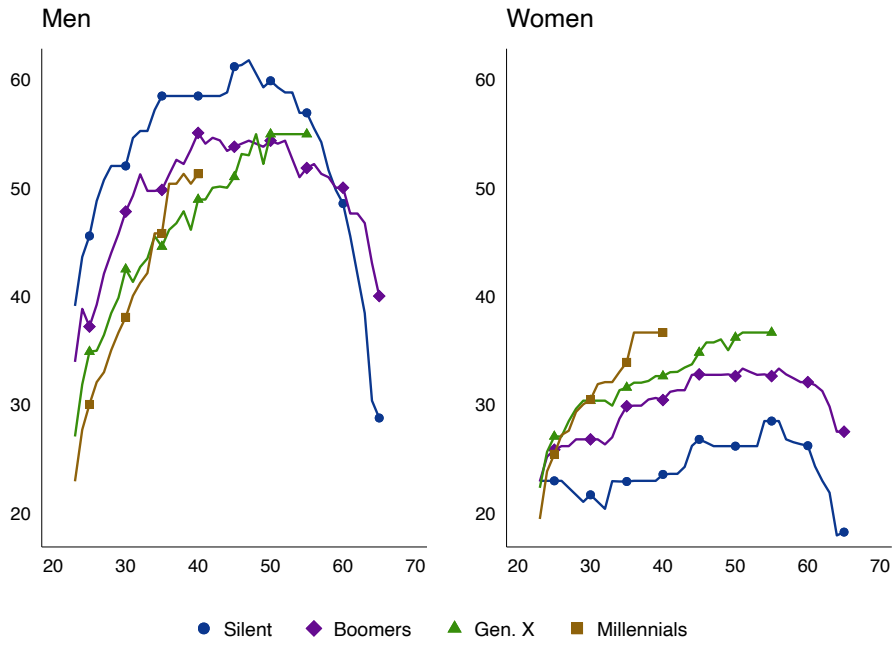
Note: The sample used includes only individuals who are in employment, and are not the self-employed or those working for the government. We include those between the ages of 23 and 65. We drop observations which do not meet the minimum income threshold as described in the main text. Income and wage variables are in 2015 US dollars adjusted for using CPI. Summary statistics are produced using the individual weights from the ACS.

Whilst we have more observations in the ACS, these are not annual as with the CPS. However, both samples appear similar on aggregate. Incomes appear to be slightly higher in the ACS sample compared to the CPS, similarly the share of our sample only achieving High School level education appears lower.

Figures C.5 to C.7 replicate some of our key figures but using the ACS sample. As seen with the CPS data, we observe the same dominance in median wage across generations, with the ACS sample presenting qualitatively the same story, median wages have been falling yet this decline is not uniform for all demographics.

[20] 1970, 1980,1990 2000 are the 1 sample and 2006, 2011, and 2016 are ACS samples. These are the default samples which are selected.

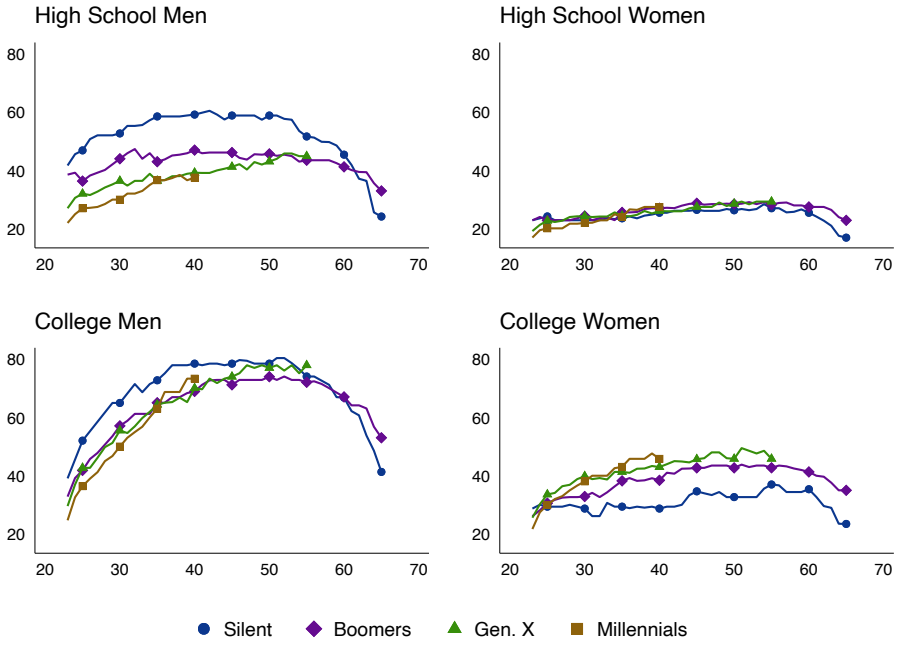
Figure C.5: Median wage (in $1000) by generation over the life cycle



Source: American Community Survey (ACS), survey years 1970-2021

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

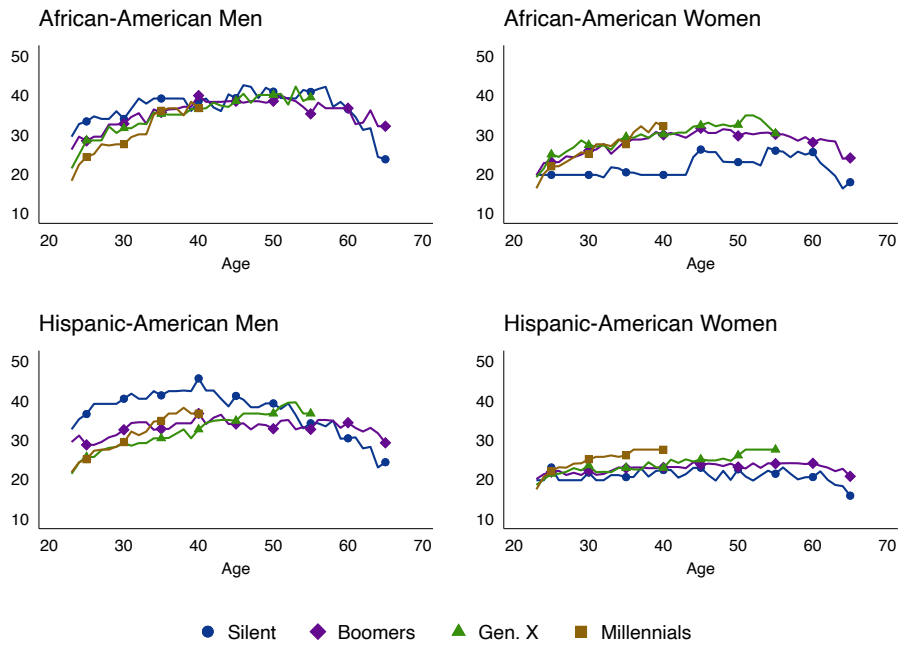
Figure C.6: Median wage (in $1000) by generation over the life cycle



Source: American Community Survey (ACS), survey years 1970-2021

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

Figure C.7: Median wage (in $1000) by generation over the life cycle



Source: American Community Survey (ACS), survey years 1970-2021

Source: Includes the total population, wages are adjusted for inflation using CPI, and individual weights are used. 'College' includes those who attended college and have at least a bachelor's degree. The vertical axis is median real wage in $1000, measured in 2015 dollars.

D Quantile Regression Tables

Table D.1: Quantile Regression Estimates – Pooled Sample

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
Boomers	0.091	0.105	0.081	0.060	0.037	0.024	0.016	0.001	−0.010	−0.021	−0.027	−0.031	−0.035	−0.036	−0.025	−0.017	0.004	0.030	0.075
	(0.006)	(0.004)	(0.003)	(0.002)	(0.000)	(0.001)	(0.002)	(0.000)	(0.001)	(0.003)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Gen. X	0.173	0.163	0.112	0.071	0.037	0.022	0.005	−0.011	−0.022	−0.037	−0.047	−0.054	−0.053	−0.047	−0.029	0.002	0.033	0.076	0.142
	(0.006)	(0.004)	(0.003)	(0.002)	(0.000)	(0.001)	(0.002)	(0.000)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)
Millennials	0.025	0.021	−0.00	−0.042	−0.072	−0.097	−0.108	−0.130	−0.149	−0.164	−0.175	−0.178	−0.174	−0.178	−0.166	−0.139	−0.110	−0.079	−0.032
	(0.008)	(0.005)	(0.004)	(0.002)	(0.000)	(0.002)	(0.003)	(0.000)	(0.001)	(0.004)	(0.001)	(0.002)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)

Note: This table reports the coefficients on the generation dummies from the following quantile regression:

$$Q\left(y_{jt} \mid \tau\right) = \gamma_g(\tau) + X'_{j,t}\beta(\tau) + \delta_s(\tau) + \varepsilon_{j,t}(\tau)$$

Where $Q\left(y_{jt} \mid \tau\right)$ is the τ^{th} quantile of the unconditional distribution of log wages, y_{jt} in which j and t index individuals and year respectively. The coefficients of interest are the vector of generational dummies $\gamma_g(\tau)$, which are reported above, with the base generation being the Silent generation. $X'_{j,t}\beta(\tau)$ is a full set of controls including, individual controls, and industry controls. The same results are reported graphically in Figure 10.

Table D.2: Quantile Regression Estimates by Gender

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
Men																			
Boomers	-0.127	-0.158	-0.158	-0.165	-0.164	-0.161	-0.149	-0.147	-0.130	-0.123	-0.106	-0.093	-0.077	-0.064	-0.045	-0.026	-0.006	0.028	0.084
	(0.007)	(0.004)	(0.003)	(0.003)	(0.001)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.004)
Gen. X	-0.106	-0.196	-0.230	-0.237	-0.246	-0.243	-0.234	-0.226	-0.218	-0.204	-0.177	-0.157	-0.130	-0.104	-0.064	-0.026	0.013	0.063	0.127
	(0.008)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.005)
Millennials	-0.364	-0.405	-0.418	-0.416	-0.420	-0.424	-0.411	-0.408	-0.388	-0.378	-0.351	-0.328	-0.302	-0.279	-0.240	-0.214	-0.176	-0.121	-0.084
	(0.010)	(0.005)	(0.005)	(0.004)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.001)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.006)
Women																			
Boomers	0.159	0.239	0.256	0.242	0.229	0.218	0.208	0.202	0.195	0.197	0.193	0.191	0.198	0.203	0.216	0.230	0.240	0.269	0.322
	(0.006)	(0.006)	(0.006)	(0.003)	(0.004)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)	(0.003)
Gen. X	0.247	0.347	0.339	0.313	0.296	0.273	0.263	0.257	0.253	0.252	0.250	0.254	0.260	0.270	0.287	0.309	0.332	0.379	0.455
	(0.007)	(0.006)	(0.006)	(0.004)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)	(0.003)	(0.003)
Millennials	0.179	0.298	0.280	0.258	0.245	0.226	0.212	0.200	0.188	0.185	0.175	0.182	0.192	0.203	0.225	0.237	0.258	0.306	0.370
	(0.008)	(0.008)	(0.007)	(0.005)	(0.005)	(0.002)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)

Note: This table reports the coefficients on the generation dummies from the quantile regression as described in Table D.1 but partitioned by gender. The same results are reported graphically in Figure 11.

Table D.3: Quantile Regression Estimates by Gender and Education Level

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
High School Graduate Men																			
Boomers	-0.018	-0.100	-0.161	-0.192	-0.204	-0.208	-0.210	-0.208	-0.198	-0.191	-0.183	-0.173	-0.171	-0.157	-0.143	-0.131	-0.112	-0.082	-0.020
	(0.009)	(0.005)	(0.005)	(0.004)	(0.004)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
Gen. X	-0.049	-0.181	-0.258	-0.301	-0.318	-0.324	-0.321	-0.322	-0.314	-0.299	-0.287	-0.269	-0.252	-0.221	-0.196	-0.174	-0.137	-0.102	-0.039
	(0.010)	(0.006)	(0.005)	(0.005)	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.005)	(0.004)
Boomers	-0.363	-0.457	-0.498	-0.534	-0.539	-0.537	-0.544	-0.533	-0.517	-0.501	-0.480	-0.462	-0.450	-0.424	-0.400	-0.369	-0.348	-0.314	-0.271
	(0.011)	(0.007)	(0.006)	(0.005)	(0.004)	(0.003)	(0.003)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.004)	(0.005)	(0.005)
High School Graduate Women																			
Boomers	0.227	0.278	0.253	0.237	0.217	0.191	0.176	0.153	0.136	0.126	0.114	0.116	0.114	0.112	0.121	0.129	0.147	0.169	0.203
	(0.011)	(0.007)	(0.005)	(0.004)	(0.004)	(0.002)	(0.004)	(0.001)	(0.002)	(0.004)	(0.003)	(0.001)	(0.002)	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.006)
Gen. X	0.235	0.300	0.259	0.243	0.215	0.188	0.169	0.149	0.133	0.127	0.115	0.117	0.117	0.121	0.132	0.147	0.183	0.223	0.284
	(0.012)	(0.008)	(0.005)	(0.004)	(0.004)	(0.002)	(0.004)	(0.001)	(0.002)	(0.004)	(0.004)	(0.001)	(0.002)	(0.003)	(0.004)	(0.003)	(0.004)	(0.006)	(0.006)
Millennials	0.160	0.215	0.174	0.151	0.137	0.099	0.085	0.058	0.046	0.037	0.025	0.023	0.031	0.037	0.053	0.066	0.094	0.127	0.178
	(0.013)	(0.009)	(0.005)	(0.005)	(0.005)	(0.003)	(0.004)	(0.001)	(0.002)	(0.004)	(0.004)	(0.001)	(0.002)	(0.003)	(0.005)	(0.004)	(0.004)	(0.006)	(0.007)
College Graduate Men																			
Boomers	0.258	0.141	0.057	0.021	-0.000	-0.019	-0.027	-0.032	-0.036	-0.034	-0.028	-0.028	-0.024	-0.004	0.004	0.015	0.041	0.060	0.205
	(0.019)	(0.011)	(0.010)	(0.010)	(0.006)	(0.005)	(0.006)	(0.004)	(0.004)	(0.007)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.006)	(0.013)
Gen. X	0.353	0.175	0.047	-0.016	-0.050	-0.076	-0.088	-0.091	-0.095	-0.098	-0.086	-0.084	-0.080	-0.065	-0.051	-0.035	-0.012	0.034	0.170
	(0.020)	(0.012)	(0.010)	(0.010)	(0.006)	(0.005)	(0.006)	(0.004)	(0.004)	(0.007)	(0.006)	(0.004)	(0.004)	(0.004)	(0.004)	(0.006)	(0.007)	(0.006)	(0.013)
Millennials	-0.016	-0.133	-0.229	-0.276	-0.297	-0.311	-0.322	-0.332	-0.340	-0.347	-0.334	-0.332	-0.329	-0.317	-0.297	-0.281	-0.267	-0.225	-0.116
	(0.022)	(0.013)	(0.011)	(0.012)	(0.007)	(0.006)	(0.007)	(0.004)	(0.005)	(0.008)	(0.006)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.007)	(0.007)	(0.015)
College Graduate Women																			
Boomers	0.358	0.380	0.365	0.367	0.322	0.283	0.246	0.216	0.193	0.176	0.159	0.154	0.158	0.169	0.166	0.177	0.176	0.182	0.207
	(0.035)	(0.022)	(0.020)	(0.014)	(0.014)	(0.009)	(0.009)	(0.005)	(0.010)	(0.010)	(0.006)	(0.008)	(0.006)	(0.006)	(0.007)	(0.010)	(0.007)	(0.007)	(0.015)
Gen. X	0.495	0.493	0.468	0.446	0.379	0.322	0.272	0.230	0.199	0.173	0.154	0.140	0.139	0.163	0.159	0.168	0.179	0.187	0.231
	(0.035)	(0.022)	(0.020)	(0.014)	(0.014)	(0.009)	(0.009)	(0.005)	(0.010)	(0.010)	(0.006)	(0.008)	(0.006)	(0.006)	(0.007)	(0.010)	(0.007)	(0.007)	(0.015)
Millennials	0.499	0.489	0.431	0.388	0.304	0.230	0.184	0.140	0.105	0.075	0.053	0.033	0.025	0.035	0.029	0.043	0.041	0.049	0.065
	(0.036)	(0.023)	(0.021)	(0.015)	(0.014)	(0.009)	(0.009)	(0.005)	(0.011)	(0.010)	(0.006)	(0.008)	(0.007)	(0.007)	(0.007)	(0.010)	(0.007)	(0.008)	(0.016)

Note: This table reports the coefficients on the generation dummies from the quantile regression as described in Table D.1 but partitioned by gender and education. The same results are reported graphically in Figure 12.

Table D.4: Quantile Regression Estimates by Race

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
White American																			
Boomers	0.090	0.091	0.076	0.053	0.033	0.016	0.001	-0.014	-0.022	-0.029	-0.034	-0.040	-0.042	-0.038	-0.032	-0.022	-0.001	0.021	0.070
	(0.006)	(0.004)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.002)	(0.003)
Gen. X	0.181	0.147	0.098	0.054	0.018	-0.004	-0.020	-0.035	-0.047	-0.057	-0.068	-0.072	-0.071	-0.061	-0.051	-0.020	0.015	0.059	0.127
	(0.006)	(0.004)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.003)	(0.003)
Millennials	0.053	0.039	-0.009	-0.046	-0.093	-0.111	-0.135	-0.157	-0.174	-0.192	-0.191	-0.203	-0.199	-0.193	-0.190	-0.168	-0.135	-0.113	-0.062
	(0.008)	(0.005)	(0.004)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.001)	(0.003)	(0.002)	(0.003)	(0.001)	(0.001)	(0.003)	(0.003)	(0.004)
African American																			
Boomers	0.139	0.212	0.181	0.155	0.129	0.112	0.114	0.115	0.107	0.101	0.093	0.085	0.085	0.086	0.092	0.097	0.101	0.119	0.168
	(0.016)	(0.012)	(0.007)	(0.007)	(0.006)	(0.005)	(0.005)	(0.005)	(0.006)	(0.005)	(0.004)	(0.004)	(0.002)	(0.004)	(0.004)	(0.004)	(0.005)	(0.006)	(0.007)
Gen X	0.207	0.277	0.230	0.192	0.169	0.157	0.152	0.144	0.141	0.127	0.120	0.107	0.098	0.102	0.108	0.111	0.125	0.160	0.237
	(0.017)	(0.013)	(0.008)	(0.007)	(0.007)	(0.006)	(0.006)	(0.005)	(0.006)	(0.005)	(0.004)	(0.004)	(0.002)	(0.005)	(0.004)	(0.005)	(0.005)	(0.006)	(0.008)
millennials	-0.007	0.039	0.011	0.014	-0.003	-0.007	-0.011	-0.005	-0.016	-0.017	-0.026	-0.040	-0.038	-0.042	-0.030	-0.013	-0.007	0.031	0.118
	(0.020)	(0.016)	(0.010)	(0.009)	(0.008)	(0.007)	(0.007)	(0.006)	(0.007)	(0.006)	(0.005)	(0.005)	(0.002)	(0.006)	(0.005)	(0.006)	(0.006)	(0.007)	(0.010)
Hispanic American																			
Boomers	0.087	0.088	0.059	0.033	0.011	0.005	-0.004	-0.012	-0.018	-0.024	-0.025	-0.036	-0.031	-0.035	-0.034	-0.022	-0.016	0.005	0.057
	(0.016)	(0.011)	(0.007)	(0.004)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.009)
Gen X	0.190	0.162	0.109	0.062	0.031	0.011	-0.003	-0.012	-0.023	-0.036	-0.033	-0.043	-0.051	-0.060	-0.057	-0.054	-0.041	0.004	0.084
	(0.016)	(0.011)	(0.007)	(0.004)	(0.005)	(0.005)	(0.005)	(0.004)	(0.006)	(0.005)	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.004)	(0.005)	(0.009)
millennials	0.098	0.109	0.048	0.020	-0.001	-0.018	-0.031	-0.038	-0.051	-0.071	-0.076	-0.099	-0.096	-0.110	-0.114	-0.111	-0.106	-0.086	-0.016
	(0.017)	(0.012)	(0.007)	(0.004)	(0.006)	(0.006)	(0.006)	(0.005)	(0.007)	(0.006)	(0.004)	(0.004)	(0.005)	(0.004)	(0.006)	(0.005)	(0.005)	(0.006)	(0.010)

Note: This table reports the coefficients on the generation dummies from the quantile regression as described in Table D.1 but partitioned by race. The same results are reported graphically in Figure 13.

Table D.5: Quantile Regression Estimates by Race and Gender

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
White Men																			
Boomers	-0.125	-0.168	-0.178	-0.185	-0.173	-0.169	-0.156	-0.148	-0.134	-0.121	-0.108	-0.097	-0.079	-0.068	-0.050	-0.030	-0.005	0.029	0.086
	(0.008)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)
Gen. X	-0.123	-0.230	-0.271	-0.280	-0.276	-0.270	-0.258	-0.245	-0.233	-0.212	-0.189	-0.172	-0.143	-0.110	-0.079	-0.046	0.004	0.046	0.119
	(0.009)	(0.004)	(0.003)	(0.004)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.003)	(0.001)	(0.003)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(0.005)
Millennials	-0.353	-0.419	-0.441	-0.451	-0.445	-0.443	-0.433	-0.427	-0.404	-0.390	-0.363	-0.341	-0.316	-0.288	-0.263	-0.235	-0.193	-0.148	-0.109
	(0.012)	(0.005)	(0.004)	(0.005)	(0.003)	(0.002)	(0.003)	(0.002)	(0.001)	(0.002)	(0.004)	(0.002)	(0.004)	(0.002)	(0.003)	(0.002)	(0.003)	(0.003)	(0.006)
African American Men																			
Boomers	-0.119	-0.119	-0.090	-0.060	-0.048	-0.034	-0.036	-0.022	-0.028	-0.022	-0.011	-0.003	0.005	0.021	0.035	0.045	0.066	0.104	0.158
	(0.024)	(0.017)	(0.013)	(0.012)	(0.008)	(0.007)	(0.006)	(0.006)	(0.004)	(0.006)	(0.004)	(0.005)	(0.007)	(0.006)	(0.007)	(0.006)	(0.007)	(0.008)	(0.011)
Gen. X	-0.021	-0.043	-0.038	-0.029	-0.023	-0.019	-0.024	-0.015	-0.021	-0.019	-0.011	-0.013	-0.001	0.013	0.025	0.049	0.082	0.140	0.207
	(0.027)	(0.018)	(0.014)	(0.013)	(0.009)	(0.008)	(0.007)	(0.007)	(0.005)	(0.006)	(0.005)	(0.005)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.009)	(0.012)
Millennials	-0.355	-0.331	-0.291	-0.263	-0.227	-0.224	-0.208	-0.203	-0.203	-0.190	-0.188	-0.177	-0.158	-0.141	-0.119	-0.096	-0.051	0.006	0.092
	(0.032)	(0.022)	(0.017)	(0.015)	(0.010)	(0.010)	(0.008)	(0.008)	(0.006)	(0.008)	(0.006)	(0.006)	(0.009)	(0.008)	(0.009)	(0.008)	(0.009)	(0.011)	(0.014)
Hispanic Men																			
Boomers	-0.009	-0.023	-0.057	-0.072	-0.090	-0.097	-0.098	-0.102	-0.098	-0.104	-0.103	-0.100	-0.092	-0.089	-0.077	-0.062	-0.041	-0.015	0.035
	(0.022)	(0.011)	(0.010)	(0.009)	(0.007)	(0.008)	(0.007)	(0.005)	(0.006)	(0.007)	(0.007)	(0.005)	(0.006)	(0.004)	(0.006)	(0.007)	(0.007)	(0.008)	(0.011)
Gen. X	0.065	0.007	-0.056	-0.082	-0.117	-0.132	-0.137	-0.147	-0.146	-0.155	-0.153	-0.158	-0.149	-0.144	-0.142	-0.123	-0.086	-0.035	0.044
	(0.022)	(0.011)	(0.010)	(0.009)	(0.007)	(0.008)	(0.007)	(0.005)	(0.006)	(0.007)	(0.007)	(0.005)	(0.006)	(0.004)	(0.006)	(0.007)	(0.007)	(0.008)	(0.011)
Millennials	-0.072	-0.100	-0.137	-0.157	-0.176	-0.187	-0.192	-0.201	-0.206	-0.225	-0.225	-0.227	-0.225	-0.226	-0.218	-0.200	-0.180	-0.133	-0.055
	(0.024)	(0.012)	(0.011)	(0.010)	(0.008)	(0.009)	(0.008)	(0.006)	(0.007)	(0.008)	(0.008)	(0.006)	(0.007)	(0.004)	(0.006)	(0.008)	(0.008)	(0.009)	(0.013)
White Women																			
Boomers	0.148	0.215	0.235	0.230	0.223	0.207	0.205	0.194	0.190	0.192	0.194	0.188	0.191	0.197	0.214	0.221	0.239	0.270	0.323
	(0.006)	(0.006)	(0.005)	(0.003)	(0.004)	(0.003)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)
Gen. X	0.242	0.333	0.327	0.305	0.290	0.259	0.255	0.245	0.242	0.247	0.242	0.248	0.248	0.258	0.278	0.293	0.323	0.370	0.443
	(0.007)	(0.007)	(0.006)	(0.004)	(0.004)	(0.004)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.003)	(0.001)	(0.002)	(0.002)	(0.002)	(0.003)	(0.004)	(0.004)
Millennials	0.196	0.308	0.292	0.270	0.250	0.221	0.210	0.194	0.184	0.187	0.181	0.182	0.186	0.192	0.215	0.223	0.245	0.285	0.335
	(0.008)	(0.009)	(0.007)	(0.005)	(0.005)	(0.004)	(0.002)	(0.004)	(0.004)	(0.003)	(0.003)	(0.004)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)
African American Women																			
Boomers	0.250	0.362	0.383	0.358	0.324	0.286	0.265	0.256	0.253	0.252	0.251	0.248	0.241	0.241	0.235	0.244	0.257	0.273	0.283
	(0.020)	(0.018)	(0.012)	(0.012)	(0.009)	(0.009)	(0.006)	(0.006)	(0.005)	(0.007)	(0.004)	(0.004)	(0.005)	(0.006)	(0.004)	(0.007)	(0.007)	(0.008)	(0.011)
Gen. X	0.315	0.433	0.432	0.403	0.372	0.344	0.322	0.313	0.307	0.311	0.300	0.295	0.290	0.287	0.287	0.295	0.313	0.349	0.383
	(0.022)	(0.019)	(0.013)	(0.013)	(0.010)	(0.010)	(0.006)	(0.006)	(0.005)	(0.008)	(0.005)	(0.005)	(0.005)	(0.007)	(0.005)	(0.008)	(0.007)	(0.009)	(0.012)
Millennials	0.153	0.227	0.253	0.243	0.225	0.199	0.196	0.179	0.179	0.179	0.180	0.170	0.162	0.165	0.165	0.178	0.198	0.221	0.267
	(0.026)	(0.023)	(0.015)	(0.015)	(0.011)	(0.012)	(0.007)	(0.007)	(0.006)	(0.009)	(0.005)	(0.005)	(0.006)	(0.008)	(0.006)	(0.009)	(0.008)	(0.010)	(0.014)
Hispanic Women																			
Boomers	0.106	0.170	0.162	0.153	0.122	0.105	0.091	0.091	0.089	0.092	0.102	0.102	0.111	0.112	0.119	0.132	0.147	0.163	0.220
	(0.021)	(0.022)	(0.014)	(0.013)	(0.010)	(0.010)	(0.007)	(0.007)	(0.008)	(0.011)	(0.009)	(0.009)	(0.009)	(0.006)	(0.006)	(0.008)	(0.009)	(0.011)	(0.013)
Gen. X	0.194	0.257	0.243	0.206	0.161	0.139	0.127	0.122	0.117	0.128	0.140	0.144	0.153	0.148	0.160	0.165	0.179	0.214	0.311
	(0.021)	(0.022)	(0.014)	(0.014)	(0.011)	(0.010)	(0.007)	(0.007)	(0.008)	(0.011)	(0.009)	(0.009)	(0.009)	(0.006)	(0.006)	(0.008)	(0.009)	(0.011)	(0.013)
Millennials	0.158	0.253	0.225	0.196	0.169	0.156	0.154	0.148	0.148	0.151	0.155	0.146	0.145	0.141	0.154	0.145	0.163	0.180	0.248
	(0.023)	(0.024)	(0.016)	(0.015)	(0.012)	(0.011)	(0.008)	(0.007)	(0.009)	(0.012)	(0.010)	(0.010)	(0.009)	(0.007)	(0.007)	(0.009)	(0.009)	(0.012)	(0.014)

Note: This table reports the coefficients on the generation dummies from the quantile regression as described in Table D.1 but partitioned by race and gender. The same results are reported graphically in Figure 14.

Table D.6: Quantile Regression Estimates by Race and Education

	$\tau = 0.05$	$\tau = 0.10$	$\tau = 0.15$	$\tau = 0.20$	$\tau = 0.25$	$\tau = 0.30$	$\tau = 0.35$	$\tau = 0.40$	$\tau = 0.45$	$\tau = 0.50$	$\tau = 0.55$	$\tau = 0.60$	$\tau = 0.65$	$\tau = 0.70$	$\tau = 0.75$	$\tau = 0.80$	$\tau = 0.85$	$\tau = 0.90$	$\tau = 0.95$
White High School Graduate																			
Boomers	0.123	0.111	0.075	0.027	-0.010	-0.049	-0.070	-0.092	-0.105	-0.119	-0.129	-0.129	-0.136	-0.133	-0.132	-0.124	-0.112	-0.094	-0.060
	(0.008)	(0.006)	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)	(0.002)	(0.002)	(0.003)	(0.004)
Gen. X	0.138	0.092	0.043	-0.022	-0.064	-0.107	-0.135	-0.153	-0.167	-0.192	-0.204	-0.201	-0.209	-0.200	-0.185	-0.168	-0.148	-0.117	-0.059
	(0.009)	(0.006)	(0.004)	(0.003)	(0.002)	(0.002)	(0.001)	(0.002)	(0.001)	(0.002)	(0.003)	(0.002)	(0.002)	(0.002)	(0.001)	(0.003)	(0.002)	(0.004)	(0.004)
Millennials	-0.010	-0.049	-0.104	-0.162	-0.212	-0.251	-0.278	-0.304	-0.327	-0.345	-0.358	-0.353	-0.354	-0.351	-0.351	-0.342	-0.322	-0.303	-0.266
	(0.010)	(0.007)	(0.004)	(0.003)	(0.002)	(0.003)	(0.001)	(0.002)	(0.001)	(0.002)	(0.003)	(0.003)	(0.002)	(0.002)	(0.001)	(0.003)	(0.003)	(0.004)	(0.005)
African American High School Graduate																			
Boomers	0.126	0.096	0.072	0.058	0.028	0.011	-0.007	-0.020	-0.033	-0.041	-0.041	-0.052	-0.040	-0.037	-0.037	-0.028	-0.019	0.000	0.015
	(0.029)	(0.020)	(0.017)	(0.014)	(0.009)	(0.008)	(0.010)	(0.009)	(0.008)	(0.004)	(0.010)	(0.003)	(0.008)	(0.008)	(0.007)	(0.006)	(0.006)	(0.011)	(0.015)
Gen. X	0.092	0.060	0.037	0.016	-0.006	-0.030	-0.043	-0.053	-0.077	-0.082	-0.085	-0.090	-0.089	-0.086	-0.085	-0.074	-0.053	-0.016	0.024
	(0.029)	(0.020)	(0.018)	(0.015)	(0.010)	(0.009)	(0.010)	(0.010)	(0.008)	(0.004)	(0.010)	(0.003)	(0.008)	(0.008)	(0.008)	(0.006)	(0.006)	(0.011)	(0.015)
Millennials	-0.201	-0.191	-0.204	-0.194	-0.201	-0.212	-0.215	-0.235	-0.244	-0.247	-0.254	-0.249	-0.247	-0.244	-0.227	-0.210	-0.191	-0.150	-0.100
	(0.031)	(0.022)	(0.019)	(0.016)	(0.010)	(0.009)	(0.011)	(0.010)	(0.009)	(0.004)	(0.011)	(0.003)	(0.008)	(0.009)	(0.008)	(0.007)	(0.007)	(0.012)	(0.016)
Hispanic High School Graduate																			
Boomers	0.089	0.066	0.027	0.005	-0.014	-0.035	-0.051	-0.069	-0.083	-0.082	-0.098	-0.101	-0.105	-0.103	-0.100	-0.095	-0.078	-0.068	-0.037
	(0.033)	(0.021)	(0.015)	(0.015)	(0.011)	(0.009)	(0.009)	(0.006)	(0.007)	(0.010)	(0.006)	(0.008)	(0.008)	(0.007)	(0.008)	(0.010)	(0.011)	(0.010)	(0.017)
Gen. X	0.090	0.053	-0.002	-0.035	-0.061	-0.088	-0.104	-0.125	-0.143	-0.142	-0.166	-0.170	-0.191	-0.185	-0.183	-0.172	-0.138	-0.118	-0.067
	(0.033)	(0.021)	(0.015)	(0.015)	(0.011)	(0.009)	(0.009)	(0.005)	(0.007)	(0.010)	(0.006)	(0.008)	(0.008)	(0.007)	(0.007)	(0.010)	(0.011)	(0.010)	(0.016)
Millennials	-0.059	-0.081	-0.112	-0.148	-0.154	-0.186	-0.199	-0.224	-0.248	-0.263	-0.279	-0.290	-0.306	-0.313	-0.306	-0.297	-0.285	-0.270	-0.230
	(0.034)	(0.022)	(0.015)	(0.015)	(0.011)	(0.009)	(0.010)	(0.006)	(0.007)	(0.010)	(0.007)	(0.008)	(0.009)	(0.007)	(0.008)	(0.010)	(0.011)	(0.011)	(0.017)
White College Graduate																			
Boomers	0.197	0.192	0.141	0.068	0.031	0.001	-0.012	-0.023	-0.033	-0.040	-0.048	-0.053	-0.055	-0.047	-0.046	-0.030	-0.009	0.012	0.086
	(0.016)	(0.011)	(0.011)	(0.005)	(0.007)	(0.005)	(0.005)	(0.006)	(0.003)	(0.005)	(0.006)	(0.004)	(0.004)	(0.004)	(0.003)	(0.006)	(0.005)	(0.008)	(0.010)
Gen. X	0.262	0.226	0.141	0.052	-0.007	-0.053	-0.081	-0.102	-0.123	-0.130	-0.134	-0.141	-0.138	-0.125	-0.119	-0.105	-0.085	-0.057	0.064
	(0.017)	(0.011)	(0.011)	(0.005)	(0.007)	(0.005)	(0.005)	(0.006)	(0.003)	(0.005)	(0.006)	(0.004)	(0.004)	(0.004)	(0.003)	(0.006)	(0.005)	(0.009)	(0.010)
Millennials	0.128	0.085	-0.014	-0.116	-0.184	-0.228	-0.259	-0.277	-0.307	-0.322	-0.339	-0.355	-0.364	-0.360	-0.365	-0.354	-0.336	-0.313	-0.218
	(0.018)	(0.012)	(0.012)	(0.005)	(0.007)	(0.005)	(0.005)	(0.006)	(0.003)	(0.005)	(0.007)	(0.005	(0.004)	(0.004)	(0.003)	(0.007)	(0.005)	(0.009)	(0.011)
African American College Graduate																			
Boomers	0.252	0.243	0.177	0.065	0.034	0.038	0.041	0.037	0.025	0.000	0.007	-0.002	-0.006	-0.002	-0.003	-0.012	0.009	0.018	0.076
	(0.084)	(0.054)	(0.042)	(0.031)	(0.027)	(0.025)	(0.023)	(0.018)	(0.020)	(0.018)	(0.018)	(0.018)	(0.024)	(0.019)	(0.023)	(0.021)	(0.025)	(0.029)	(0.039)
Gen. X	0.357	0.312	0.245	0.105	0.048	0.033	0.027	0.014	-0.010	-0.037	-0.037	-0.047	-0.049	-0.044	-0.048	-0.036	-0.027	-0.003	0.045
	(0.083)	(0.054)	(0.041)	(0.031)	(0.027)	(0.025)	(0.023)	(0.018)	(0.020)	(0.018)	(0.018)	(0.018)	(0.024)	(0.019)	(0.023)	(0.021)	(0.025)	(0.029)	(0.039)
Millennials	0.094	0.083	-0.004	-0.117	-0.154	-0.165	-0.159	-0.165	-0.192	-0.202	-0.206	-0.214	-0.218	-0.225	-0.224	-0.220	-0.202	-0.179	-0.127
	(0.086)	(0.056)	(0.043)	(0.032)	(0.028)	(0.025)	(0.024)	(0.019)	(0.021)	(0.018)	(0.018)	(0.019)	(0.024)	(0.020)	(0.023)	(0.022)	(0.026)	(0.030)	(0.040)
Hispanic College Graduate																			
Boomers	0.188	0.122	0.113	0.086	0.070	0.045	0.008	0.015	-0.002	-0.012	-0.015	-0.020	-0.020	-0.023	-0.033	-0.020	-0.019	0.019	0.032
	(0.084)	(0.048)	(0.041)	(0.036)	(0.031)	(0.026)	(0.030)	(0.028)	(0.024)	(0.023)	(0.020)	(0.021)	(0.024)	(0.027)	(0.025)	(0.027)	(0.027)	(0.031)	(0.037)
Gen. X	0.253	0.178	0.153	0.127	0.106	0.061	0.023	0.015	-0.013	-0.030	-0.031	-0.046	-0.046	-0.056	-0.069	-0.062	-0.040	-0.016	0.001
	(0.083)	(0.047)	(0.041)	(0.035)	(0.030)	(0.026)	(0.030)	(0.027)	(0.024)	(0.022)	(0.019)	(0.020)	(0.024)	(0.027)	(0.024)	(0.026)	(0.027)	(0.031)	(0.037)
Millennials	0.090	0.059	0.042	0.019	-0.012	-0.072	-0.109	-0.131	-0.162	-0.185	-0.196	-0.216	-0.233	-0.265	-0.280	-0.280	-0.280	-0.256	-0.225
	(0.084)	(0.048)	(0.042)	(0.036)	(0.031)	(0.026)	(0.030)	(0.028)	(0.024)	(0.023)	(0.020)	(0.021)	(0.024)	(0.027)	(0.025)	(0.027)	(0.027)	(0.031)	(0.038)

Note: This table reports the coefficients on the generation dummies from the quantile regression as described in Table D.1 but partitioned by race and gender. The same results are reported graphically in Figure 15.