CENTER for RETIREMENT RESEARCH at BOSTON COLLEGE

HOW WILL EMPLOYER HEALTH INSURANCE AFFECT WAGES AND SOCIAL SECURITY FINANCES?

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Abstract

The rising cost of employer contributions to employee-sponsored health insurance (ESHI) can slow wage growth and erode the Social Security wage base. Both these effects were evident in the decades before 2005, as ESHI increased as a share of compensation. Fortunately, the ratio of ESHI contributions to compensation plateaued after 2005, stabilizing wages and halting the erosion of the share of labor compensation subject to Social Security's taxable base. The question is whether the stabilization of employer contributions as a share of compensation is temporary or permanent. The analysis used the *Medical Expenditure Panel Survey* (MEPS) to determine why ESHI contributions rose as a share of compensation prior to 2005 and why this ratio stabilized in recent years. These findings, combined with some speculation about the impact of the Affordable Care Act (ACA) and the COVID pandemic, are used to project the ratio of ESHI to compensation over the next decade.

The paper found that:

- The growth in National Health Expenditures (NHE) as a percentage of GDP was the major driver of the ESHI-to-compensation ratio both before and after 2005.
- After 2005, however, this impact was largely offset by the decline in ESHI participation among lower earners and the decline in demand for family plans.
- Looking forward, CMS projects that NHE as a share of GDP will grow faster than in the previous decade, leading to a significant increase in ESHI as a share of compensation.
- But, if ESHI participation and demand for family plans decline as they have in recent years, these two factors should offset the growth in healthcare expenditures.

The policy implications of the findings are:

- The potential increase in ESHI as a percentage of compensation would slow wage growth and erode Social Security finances.
- A key question is whether the decline in participation among low earners and the demand for family plans will continue.
- The findings offer one more reason to get the growth in healthcare expenditures under control.

Introduction

The rising cost of employer contributions to employee health insurance has two important implications. First, since workers bear most of the burden of the employer contribution, for any given level of compensation, they receive lower cash wages. Hence, rising health insurance costs have been identified as one of the major contributors to wage stagnation. Second, rising health insurance contributions reduce the percentage of labor compensation that is subject to the Social Security payroll tax and thereby undermine the program's finances.

Both these effects were evident in the decades before 2005, as employer-sponsored health insurance (ESHI) increased as a share of compensation. Fortunately, the ratio of ESHI contributions to compensation plateaued after 2005, stabilizing wages and halting the erosion of Social Security's taxable wage base. The question is whether the stabilization of employer contributions as a share of compensation is temporary or permanent.

This study attempts to answer that question, using data from the *Medical Expenditure Panel Survey* (MEPS) to determine why ESHI contributions rose as a share of compensation prior to 2005 and why this ratio stabilized in recent years. These findings, combined with some speculation about the impact of the Affordable Care Act (ACA) and the COVID pandemic, are used to project the ratio of ESHI to compensation over the next decade.

The discussion proceeds as follows. The first section provides an overview of the major factors that could impact the ratio of ESHI to compensation. The second section describes the MEPS data. The third discusses the methodology for decomposing the role of various factors in the increase and subsequent stabilization of the ESHI-to-compensation ratio and how to project it going forward. The fourth presents the results, which show that three major factors – trends in aggregate health expenditures, participation rates for low earners, and the share of participants in family plans – explain the rising and flattening trends of ESHI in recent decades. The fifth section uses these results and projections of *National Health Expenditures* (NHE) from the Centers for Medicare & Medicaid Services (CMS) to estimate what the ratio of ESHI to compensation may look like over the next ten years and then speculates on how the ACA and COVID may affect these estimates.

The final section concludes that the growth in NHE was the major driver of the ratio of ESHI to compensation both before and after 2005, but after 2005 this impact was largely offset by the decline in participation among low earners and the decline in demand for family plans.

Looking forward, CMS projects that NHE as a percentage of GDP will increase from 17.6 percent in 2019 to 19.6 percent in 2031. If nothing else changes, ESHI as a share of compensation will increase as well. But, if ESHI participation and demand for family plans decline from 2019-2031 as they have from 2005-2019, these two factors should largely offset the growth in healthcare expenditures and the ratio of ESHI to compensation should remain stable. The unknown is whether COVID and the repeal of components of the ACA will affect participation in employer-sponsored plans.

Background

Economists generally assume that the costs of employer benefits – in this case health insurance – are passed onto the employee through slower wage growth. As a result, the rising cost of ESHI has been identified as a major contributor to wage stagnation (Groshen and Holzer 2019; Case and Deaton 2020) and the major reason for the decline in the share of compensation subject to the Social Security payroll tax (Burtless and Milusheva 2013).[1]

The good news is that between 2005 and 2019 – with a temporary spike during the Great Recession – the ratio of ESHI to compensation stabilized (see Figure 1). For this analysis, compensation is defined as wages plus the employer portion of health insurance, which is the only benefit that can be clearly derived from the MEPs data.[2] Fortunately, data from the Bureau of Economic Analysis shows that ESHI as a share of compensation – which includes contributions to Social Insurance, retirement benefits, and life insurance – follow the same pattern as our definition of compensation (see Figure 2). Moreover, this analysis focuses on the years 1996, the first year for which MEPS data are available, to 2019, the last year before COVID. The potential impact of COVID, as well as the ACA, is discussed in the final section. For the period 1996-2019, several factors may have contributed to the growth and later slowdown of ESHI contributions.

[1] Higher ESHI costs also have a subtler effect on the distribution of wages subject to the payroll tax as well, since ESHI premiums are a much larger share of compensation for those below the taxable maximum.
[2] While the MEPs asks whether respondents have a retirement plan, they do not ask if the employer contributes.

Overall Healthcare Costs

General trends in healthcare spending are, not surprisingly, an important driver for trends in ESHI. Indeed, national health expenditures increased from about 13 percent of GDP in the mid-1990s to around 17 percent of GDP in 2009, before plateauing and remaining around 17 percent until 2019 (see Figure 3). Growth in national health expenditures depends on two factors: healthcare inflation – the rate at which the price of healthcare increases – and utilization – the amount of healthcare services consumed.

Healthcare costs typically grow faster than overall inflation, but this pattern was particularly pronounced in the 1990s and early-2000s (see Figure 4). Prior research has pointed to consolidation among health insurers as a potential reason for higher premium growth (Robinson 2004; Feldman, Wholey, and Christianson 1995; and Dafny, Duggan, and Ramanarayanan 2012). While insurance markets in most states are still highly concentrated, [3] the market share held by the top five and top ten insurers has decreased slightly since 2001 (Ng et al. 2020), which may have contributed to the slowdown in the growth of overall healthcare costs and, therefore, ESHI contributions. Similarly, the onslaught of blockbuster drugs also contributed to rising costs during the 1990s and mid-2000s, after which FDA approvals of new drugs fell sharply (Aitken, Berndt, and Cutler 2008), which again may have dampened the growth in healthcare expenditures.[4]

The growth in national healthcare spending after 2005 was also affected by passage in 2010 of the ACA, which included several cost-containment measures, such as cost growth targets for Medicare and a tax on high-cost tax plans (the "Cadillac tax"). The impact of the ACA on Medicare costs, however, is unclear. Some studies found Medicare cost savings to be small (Weiner, Marks, and Pauly 2017; Antos and Capretta 2020), but the projected trajectory of Medicare spending is substantially lower since the ACA – even with the actuaries' more realistic assumptions about cost constraints (Munnell and Wicklein 2023). In any event, the implementation of the Cadillac tax was postponed until 2018 and eventually repealed in 2019.

[3] According to the Kaiser Family Foundation, the largest insurer has more than 50 percent of the large group market in 32 states and more than 50 percent of the small group market in 35 states (Kaiser Family Foundation 2019).
[4] In the 1990s, per-capita prescription drug spending in the United States also began to increase much more rapidly than in other developed countries. The rapid growth is not because Americans take more prescription drugs or take a higher proportion of brand-name drugs, but that the prices on blockbuster drugs are higher in the United States than in other countries (Papanicolas, Woskie, and Jha 2018).

The other component of healthcare cost growth is utilization. The diffusion of new healthcare technologies – such as medical procedures (e.g., joint replacements, organ transplants, stents), diagnostic tests (biopsies, CTs and MRIs), medical devices (stents, defibrillators) and electronic medical records – may have contributed to the higher healthcare utilization during the 1990s and 2000s.[5] However, Fisher et al. (2009) found large variations in the adoption of new technologies across geographic areas and how physicians used technologies, particularly in cases where the benefits were not obvious. Costs may have slowed as more consensus evolved around when the use of certain technologies is actually warranted.

Utilization may also have been affected by the changing nature of health plans. On the one hand, the growth of Preferred Provider Organization (PPO) plans, which allow consumers to pick the providers they want, albeit at a higher premium, may have increased utilization (Gabel et al. 2002). The share of covered workers with PPOs peaked at around 61 percent in 2005, up from 26 percent in 1993 (Kaiser Family Foundation 2022). On the other hand, the increase in the share of workers with High Deductible Health Plans (HDHP), which rose from 4 percent in 2005 to about 30 percent today (Kaiser Family Foundation 2022), may have discouraged utilization.

The Characteristics of ESHI Participants

Another determinant of trends in ESHI costs is the makeup of the participant population, specifically the decline in participation among lower earners (see Figure 5). Since the cost of health insurance as a percentage of compensation is higher for lower earners than for high earners (see Figure 6), a decline in participation among low earners decreases the employer's overall ratio of ESHI costs to compensation.

Prior studies have found that the decline in participation among low earners is driven almost entirely by a decline in employee take-up and not by a decline in firms offering health insurance to the workers (Cooper and Steinberg Schone 1997; Farber and Levy 2000; Chernew, Cutler, and Keenan 2005, Burtless and Milusheva 2013).[6] The drop in ESHI take-up among

[5] American providers and consumers are more willing to adopt new medical technologies than other countries (Kim, Blendon, and Benson 2001). Once in place, it is often difficult to reduce the use of technologies, even if the technologies are later shown to be less effective or unnecessary (National Center for Health Statistics 2010).
[6] Both rates increase with earnings. The offer rate appears to range from about 20 percent for workers in the lowest decile of earnings to 90 percent for those in the top, and the take-up rate follows a similar pattern.

lower-wage workers can be attributed to a number of factors. First, rising healthcare costs make it harder for all workers – but particularly lower-wage workers – to cover the employee portion of health insurance premiums. As premiums rose during the 1990s and early-2000s, more lower-wage workers opted out (Fronstin and Snider 1996; Kronick and Gilmer 1999; Cutler 2002; and Glied and Jack 2003). Although healthcare costs flattened out after the mid-2000s, the Great Recession soon hit, and earlier studies found that health insurance enrollment declines during recessions (Gabel et al 2002).

Second, the share of premiums paid by employers also influences ESHI take-up. Gruber and McKnight (2003) found that, while employers paid for the full cost of ESHI for over 44 percent of covered workers in 1982, this share declined to 28 percent by 1998, and has continued to drop. As more of the premium costs are shifted onto workers, participation, particularly among lower-wage workers, decreases.

The third reason for the decline in ESHI take-up is the expansion of Medicaid (see Figure 7), which made it easier for low-wage workers to opt for the public program. The ACA substantially expanded Medicaid coverage – to date, 40 states and the District of Columbia have adopted the Medicaid expansion (Kaiser Family Foundation 2023). But even prior to the ACA, several states had expanded Medicaid benefits or initiated reforms that provided healthcare options for lower-compensated workers.[7]

All these developments encouraged lower earners to opt out of ESHI and shifted the distribution of participation in ESHI to higher earners, reducing ESHI costs as a percentage of compensation.

Family vs. Individual Coverage

The final factor that affected the ratio of ESHI to compensation is the share of participants that opt for family plans as opposed to individual plans. Family plans are substantially more expensive than individual plans, and their costs have grown at a faster pace (see Figure 8). In response, the share of workers opting for family coverage has declined at a

[7] Several significant expansions to Medicaid or health insurance occurred between the late 1990s and the enactment of the ACA. Massachusetts initiated a major health insurance reform in 2006. Oregon substantially expanded Medicaid coverage to about 30,000 uninsured adults in 2008. Arizona, Connecticut, DC, Illinois, Maine, Maryland, Missouri, New Jersey, New York, Rhode Island, Tennessee, and Wisconsin each increased their income eligibility threshold for parents by at least 50 percentage points over this time period. See Lyon, Douglas, and Cooke (2014) and McMorrow et al. (2016) for a summary of the literature.

steady clip in recent decades (see Figure 9), placing downward pressure on the growth of ESHI costs as a percentage of compensation. The characteristics of who is opting for family coverage also matters for ESHI costs. If most of the decline in family coverage is driven by lower-wage workers, then ESHI costs should decline substantially since family plans represent a particularly large portion of compensation for lower-wage workers.

The questions are the extent to which each of these factors contributed to the increase in the share of compensation paid as ESHI prior to 2005 and then to the stabilization of this share after 2005 and whether this ratio will remain stable going forward.

Data

The data for the analysis come from the Department of Health and Human Services' *Medical Expenditure Panel Survey* (MEPS). The MEPS is a two-year panel survey that contains information on households, medical providers, and types and costs of health insurance offered by employers.[8] Our analysis uses microdata from the 1996-2019 household survey files and the aggregate data from the employer survey.[9]

Respondents surveyed in the MEPs are interviewed five times over two calendar years. We link respondents across interview waves and include only those who are present for all interviews. Each respondent is counted once each year but will appear twice in the data, once for each of the calendar years they are interviewed. Because we only count respondents once a year, those who change insurance status or type of insurance in mid-year or have missing data are dropped from the sample. Those who have different insurance status or type of insurance across years are still included. With these exclusions, the final sample consists of 274,163 workers for the period 1996-2019. The details for the final sample are shown in Table 1. This analysis stops in 2019 because COVID disrupted many pre-existing trends in 2020. But the projections will include a discussion of whether COVID's initial disruptions will have a lasting impact on ESHI-to-compensation trends.

The analysis also supplements data from the MEPs with data from the CMS's NHE. The NHE measures all annual health spending in the United States and includes projections to 2031.

[8] MEPS data are used to construct data for the National Health Accounts.
[9] Microdata from the employer survey are not publicly available.

Methods

To understand changes in ESHI cost trends in recent decades and how they might evolve going forward, the analysis begins by identifying the role of the three factors: 1) overall healthcare costs; 2) the characteristics of ESHI participants; and 3) the percentage of workers with family vs. individual coverage. Once the contribution of each of the three major factors has been established, the analysis projects what ESHI costs as a percentage of compensation might look like in the future.

Explaining ESHI Trends: 1996-2005 and 2005-2019

The analysis begins by estimating two OLS regressions, one for 1996-2005 and a second for 2005-2019. The regressions are as follows:

$$ESHI_{i,t} = \beta_0 + \beta_1 N_t + \beta_2 D_{i,t} + \beta_3 L_{i,t} + \beta_4 F_{i,t} + \beta_5 H_{i,t} F_{i,t} + \beta_6 X_t + \varepsilon_{i,t} \quad (1)$$

The outcome variable $ESHI_{i,t}$ represents the cost of each households' ESHI as a percentage of compensation. In terms of the explanatory variables, N_i represents aggregate annual NHE as a percentage of GDP, $H_{i,t}$ is an indicator if the worker is in the high compensation deciles (5-10) and $L_{i,t}$ is an indicator if the worker is in the low compensation deciles (1-4), and $F_{i,t}$ indicates whether the work has a family plan.[10] The equation also includes an interaction term of high-compensation decile and family plan, represented by $H_{i,t}F_{i,t}$. The interaction is important because, as discussed earlier, ESHI costs would decline much more if most of the shift away from family plans is driven by lower-compensated workers. If higher-compensated workers are also dropping family plans, the effect on ESHI cost trends will be smaller. Finally, X is the vector of controls such as working in the public sector, being in a union, being near retirement, marital status, and gender.

The contribution of each factor to the estimated change in the ESHI-to-compensation ratio from 1996-2005 and from 2005-2019 can be denoted as:

$$\widehat{ESHI_a - ESHI_b} = (\overline{N_a} - \overline{N_b})'\widehat{\beta_1} + \cdots + (\overline{X_a} - \overline{X_b})'\widehat{\beta_5} \quad (2)$$

where $\overline{N}_a$, …, $\overline{X_a}$ is the average of each respective factor at the beginning of the period and $\overline{N}_b$, …, $\overline{X_b}$ is the average at the end of the period. The β coefficients come from the regressions. For

[10] Figure 4 shows that the participation rate has declined the most among workers in deciles 1-4 of the compensation distribution.

example, the term, $(\overline{N_a} - \overline{N_b})'\widehat{\beta_1}$ represents the contribution of the change in NHE to the estimated change in the ratio of ESHI to compensation during the period.[11]

Projecting ESHI Trends

Once the contribution of each factor to trends in the ratio of ESHI to compensation has been determined, these findings can be used to project how this ratio might evolve over the next decade. This exercise requires some assumptions about the future of national health expenditures, the characteristics of participants, the choice of family vs. individual plans, and other explanatory variables in equation (1). Projections for nationwide health costs come from CMS. For the other factors, the assumption is that trends between 2005-2019 will continue going forward. We can estimate the average annual change in each factor during that period using a univariate regression:

$$F_{i,t} = \beta_0 + \beta_1 Y_t + \varepsilon_{i,t} \quad (3)$$

where $F_{i,t}$, represents each of the factors – characteristics of participants, the choice of family vs. individual plans, and other explanatory variables – and Y_t is a year trend from 2005-2019. The β_1 coefficient represents the annual change in each factor during the period. Another scenario, in which the shares of each factor will remain at their 2019 levels, will also be presented.

Results of Historical Analysis: 1996-2005 and 2005-2019

The first step in quantifying how much each of the factors – overall healthcare costs, the compensation distribution of ESHI participants, family vs. single plan enrollment – contributed to trends in the ESHI-to-compensation ratio is to estimate OLS regressions. The results are as expected (see Table 2). As NHE as a share of GDP increases, so does the ratio of ESHI to compensation. Increased participation among higher-compensated workers has a smaller effect on the ratio than increased participation among lower-compensated workers. This pattern is consistent with the fact that ESHI represents a larger share of the compensation of low earners than high earners. The higher the share of workers enrolled in a family plan, the higher ESHI costs are as a percentage of contributions, since family plans are more expensive. But, if a larger share of those who do have a family plan are higher-compensated workers, average ESHI costs

[11] We ignore the role of changes in coefficients. However, as shown later, the coefficients for the factors are relatively consistent across different periods.

will not go up by as much because ESHI represents a smaller share of compensation for higher-earners. Public sector workers have slightly higher ESHI costs, although being enrolled in a union has zero effect.[12] Demographic factors also impact ESHI costs, but to a much smaller degree. The coefficients are fairly consistent regardless of the period examined.

The contribution of each factor is determined by multiplying the coefficients (see Table 2) with the change in each factor over the period (see Table 3). For example, to determine the contribution of nationwide health expenditures on ESHI trends during 1996-2005, the change in NHE expenditures as a percentage of GDP over the period (0.155-0.133 = 0.022) is multiplied by the coefficient for NHE expenditures (0.81) to get 1.8 percentage points.

A summary of how all the factors contributed to rising ESHI as a share of compensation between 1996 and 2005 is shown in Figure 10. The ratio grew by 1.9 percentage points between 1996 and 2005. The growth of NHE as a share of GDP increased the ratio by 1.8 percentage points. But pushing in the other direction is a: 1) a decline in the share of low earners who have health insurance through their employer; and 2) a decline in the share of workers enrolled in family plans. These two trends each reduced ESHI as a percentage of compensation by 0.2 percentage points. On net, the factors combined explain 1.4 of the 1.9-percentage-point growth in ESHI as a percentage of compensation over the 1996-2005 period.

The exercise is repeated for the period 2005-2019, when ESHI as a percentage of compensation slowed. Over the period, the ratio only grew by 0.2 percentage points. One reason is the slowdown in the growth of NHE as a percentage of GDP (see Figure 11). Although growth slowed, NHE/GDP still increased ESHI as a percentage of compensation by 1.3 percentage points. Once again, the continued decline in low earners participating in employer health insurance pushed down ESHI costs. The effect during this period, however, is much larger, reducing the ESHI-to-compensation ratio by 0.4 percentage points. The share of higher earners also decreased slightly, pushing the ratio of ESHI to compensation down by 0.1 percentage points.

The decline in family plan enrollment has competing effects, because during this period higher earners also opted out of family plans. Previously, most of the decline in family plan enrollment was driven by workers in the bottom half of the compensation distribution. However, in the 2010s, enrollment in family plans also declined among higher-compensated workers (see

[12] This result is consistent with Zawacki, Vistnes, and Buchmueller (2018)

Figure 12). Since ESHI costs represent a lower share of compensation for higher earners, a shift of family plan enrollment away from higher earners increases the ratio of ESHI to compensation by 0.2 percentage points. But a general decline in family plan enrollment continues to push ESHI costs down by 0.6 percentage points. On net, the impact of the competing factors predicted ESHI as a percentage of compensation grew by only 0.3 percentage points, almost identical to the 0.2-percentage-point growth observed over the 2005-2019 period.

In short, three major factors – aggregate health expenditures, distribution of ESHI participation, and family plan enrollment – can explain both the growth in ESHI as a share of compensation between 1996-2005 as well as the slowdown between 2005-2019. The biggest driver of the ratio of ESHI to compensation is NHE as a percentage of GDP. But fewer low earners with ESHI and a decline in family plan participation has placed increasing downward pressure on the ratio.

Results of Projection: 2019-2031

Projecting the ESHI-to-compensation ratio in 2031 requires projections for each of the contributing factors. For the most important factor, NHE as a share of GDP, CMS provides projections that incorporate the most recent trends and potential legislative impacts (see Figure 13).[13] For the other two major factors – ESHI participation and demand for family plans – our baseline assumption is that both will continue to decline at the rate observed between 2005-2019.

The predicted values for participation and plan type are determined by multiplying the coefficient estimate (average annual change) from equation (3) by 12 (number of years from 2019 to 2031) and adding it to the level in 2019. For example, the share of workers with a family plan declined by an average of 0.2 percent a year over the period 2005-2019. If this trend continues, only 21.7 percent (-0.002*12+ 0.244) of workers would have a family plan in 2031. The projections for all the factors are summarized in Table 4. [14] An alternative is that ESHI participation and demand for family plans remain at 2019 levels.

Once we have an estimate of ESHI participation and demand for family plans in 2031, the next step is to determine how each might impact ESHI as a share of compensation going

[13] For example, the CMS projections incorporate the potential impact of the Inflation Reduction Act of 2022.
[14] We also predict the values for all other explanatory variables but they have a much smaller effect on the ESHI-to-compensation ratio and so are not discussed in the text.

forward. The most straightforward assumption is that the relationship between the two factors and ESHI will be similar to that observed between 2005-2019.

With these two components, we can project ESHI as a share of compensation in 2031. As with the exercise described earlier, the contribution of each factor is determined by multiplying the coefficients (see Table 2) with the predicted values of our three major factors – NHE as a percentage of GDP, ESHI participation, and demand for family plans. The projected ESHI-to-compensation ratio in 2031 is the sum of all the factors plus the constant (see Table 5 for components).

The projections under the two scenarios are shown in Figure 14. If recent declines in participation in ESHI among lower-compensated workers and family plans continue until 2031, the ratio of ESHI to compensation will stabilize at 7.8 percent, largely cancelling out the effect of rising NHE/GDP in future years. In contrast, if the declines in ESHI participation stop – because participation among lower-compensated workers is already approaching zero – and family plan coverage remains at 2019 levels – because, despite the decline in marriage, parents will still want to obtain coverage for their children – the ratio of ESHI to compensation could increase to 8.9 percent.[15]

Both of the scenarios discussed so far assume that ESHI participation and demand for family plans will evolve based on historical patterns. However, patterns could differ from what was observed in recent years for several reasons. First, COVID disrupted many pre-existing trends in 2020 (see Table 6). Many people lost their jobs as the economy came to a halt and businesses shut down, so the share of people with ESHI plummeted and so did employer costs.[16] But, the early COVID response was likely a short-term anomaly. As employment-to-population ratios recovered, many workers who lost their ESHI coverage have regained it. Indeed, the Kaiser Family Foundation confirms that the uninsured rate and the share with non-group insurance has stabilized. A remaining question is how workers who were able to stay on Medicaid due to the pandemic-related policy of "continuous enrollment" will respond now that this policy has expired. If those who lose their Medicaid eligibility return to ESHI plans, then

[15] The share of workers opting for family plans increased slightly between 2015 and 2019.

[16] The COVID pandemic also resulted in a spike in healthcare costs (Banthin et al. 2020; Banthin and Holahan 2020; Bundorf, Gupta, and Kim 2021; Cutler 2021; and Hartman et al., 2022) before coming down again (Keehan et al. 2023). But this spike should already be incorporated in the CMS NHE projections.

the ratio of ESHI to compensation may increase to pre-COVID levels. But if they opt to buy insurance on the marketplace or become uninsured, the ratio will be lower.

Second, the repeal of many provisions of the ACA may also impact the ESHI-to-compensation ratio in the future. The biggest impact of the ACA was in reducing the share of the population without health insurance through the expansion of Medicaid, an individual mandate and penalties for larger employers, and subsidies for purchasing coverage in a marketplace. Although the individual mandate was repealed, it should have minimal effect on ESHI participation as most of the gains in coverage were through Medicaid and non-group insurance. What remains unknown is how workers, particularly lower-wage workers may respond as healthcare costs continue to rise. Prior studies have found that as premiums increase, workers opt out of the health insurance marketplace and become uninsured, even when the individual mandate was in place.[17]

Conclusion

The rising cost of employer contributions to employee health insurance was a major reason for wage stagnation and the erosion of the Social Security wage base. Both these effects were evident in the decades before 2005, as ESHI increased as a share of compensation. Fortunately, the ratio of ESHI contributions to compensation plateaued after 2005, stabilizing wages and halting the erosion of the share of labor compensation subject to Social Security's taxable base.

The growth in NHE was the major driver of the ESHI-to-compensation ratio both before and after 2005, but after 2005 this impact was largely offset by the decline in participation among lower earners and the decline in demand for family plans. Looking forward, CMS projects that NHE as a percentage of GDP will increase from 17.6 percent in 2019 to 19.6 in 2031. If nothing else changes, ESHI as a share of compensation will increase as well. But, if ESHI participation and demand for family plans decline as they have in recent years, these two factors should offset the growth in healthcare expenditures and the ratio of ESHI to compensation should remain stable. What remains to be seen is whether COVID and the repeal

[17] Sommers (2020) notes that marketplace premium growth peaked from 2017-2018 resulting in a decline in enrollment in 2018.

of parts of the ACA will have lasting impacts on ESHI participation. But all signs so far seem to show that both will have a limited long-run impact on participation.

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Table 1. *MEPs Analysis Sample Size*

	Individuals
1996-2019 sample	309,353
(-) changes in coverage	21,719
(-) changes in plan type	7,065
(-) missing/ inconsistent data	6,406
Final 1996-2019 sample	274,163

Source: Authors' calculations.

Table 2. *OLS Regression of ESHI Costs as Percentage of Compensation, 1996-2005 and 2005-2019*

	1996-2005	2005-2019
NHE % GDP	0.81***	0.66***
Has ESHI, comp decile 5-10	0.06***	0.08***
Has ESHI, comp decile 1-4	0.15***	0.20***
Family plan	0.16***	0.21***
Family plan, comp decile 5-10	-0.09***	-0.12***
Public sector worker	0.00***	0.01***
In a union	0.00*	0.00**
Age 55-64	0.00***	0.00***
Married	0.00***	0.00***
Female	0.01***	0.01***
Constant	-0.12***	-0.12***
R-squared	0.81	0.81

Note: *** p<0.01, ** p<0.05, * p<0.1.
Source: Authors' calculations.

Table 3. *Summary Statistics, 1996, 2005, and 2019*

	1996	2005	2019
NHE % GDP	13.3%	15.5%	17.6%
Has ESHI, comp decile 5-10	43.0	43.6	42.7
Has ESHI, comp decile 1-4	9.6	8.3	6.0
Family plan	28.8	27.5	24.4
Family plan, comp decile 5-10	24.8	24.9	23.4
Public sector worker	18.4	17.2	17.0
In a union	13.5	12.6	10.5
Age 55-64	17.5	24.3	26.7
Married	56.0	55.4	51.1
Female	49.4	49.5	49.2

Source: Authors' calculations.

Table 4. *Predicted Shares of Explanatory Factors in 2031*

	Average annual change 2005-2019	Share in 2019	Predicted share in 2031
Has ESHI, comp decile 5-10	-0.1%	42.7%	41.8%
Has ESHI, comp decile 1-4	-0.3	6.0	3.0
Family plan	-0.2	24.4	21.7
Family plan, comp decile 5-10	-0.1	23.4	22.3
Public sector worker	-0.1	17.0	16.4
In a union	-0.1	10.5	9.0
Age 55-64	0.1	26.7	28.2
Married	-0.3	51.1	47.5
Female	0.0	49.2	49.5

Note: The average annual change is derived from the coefficient in equation (3).
Source: Authors' calculations.

Table 5. *Predicted ESHI-to-Compensation Ratio in 2031 Under Two Scenarios*

	2005-2019 coefficient	Factors follow 2005-2019 trend	Factors remain at 2019 levels
NHE % GDP	0.66	19.6%*	19.6%*
Has ESHI, comp decile 5-10	0.08	41.8	42.7
Has ESHI, comp decile 1-4	0.20	3.0	6.0
Family plan	0.21	21.7	24.4
Family plan, comp decile 5-10	-0.12	22.3	23.4
Public sector worker	0.01	16.4	17.0
In a union	0.00	9.0	10.5
Age 55-64	0.00	28.2	26.7
Married	0.00	47.5	51.1
Female	0.01	49.5	49.2
Constant	-0.12		
Predicted ESHI-to-compensation in 2031		7.8	8.9

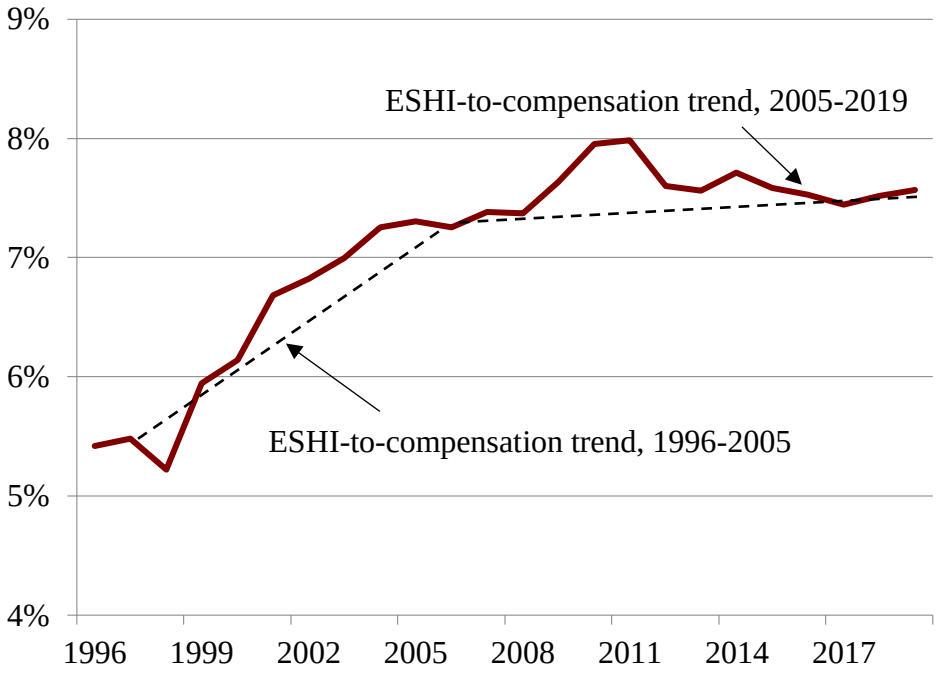
* NHE as a percentage of GDP are the same for both scenarios and are from the CMS.
Source: Authors' calculations.

Table 6. *Average Annual Change in Factors, 2005-2019 vs. 2019-2020*

	2005-2019	2019-2020
NHE % GDP	0.1%	2.1%
Has ESHI, comp decile 5-10	-0.1	-8.1
Has ESHI, comp decile 1-4	-0.3	-0.4
Family plan	-0.2	-4.4
Family plan, comp decile 5-10	-0.1	-4.3
Public sector worker	-0.1	-0.8
In a union	-0.1	-1.0
Age 55-64	0.1	-1.6
Married	-0.3	0.2
Female	0.0	0.8

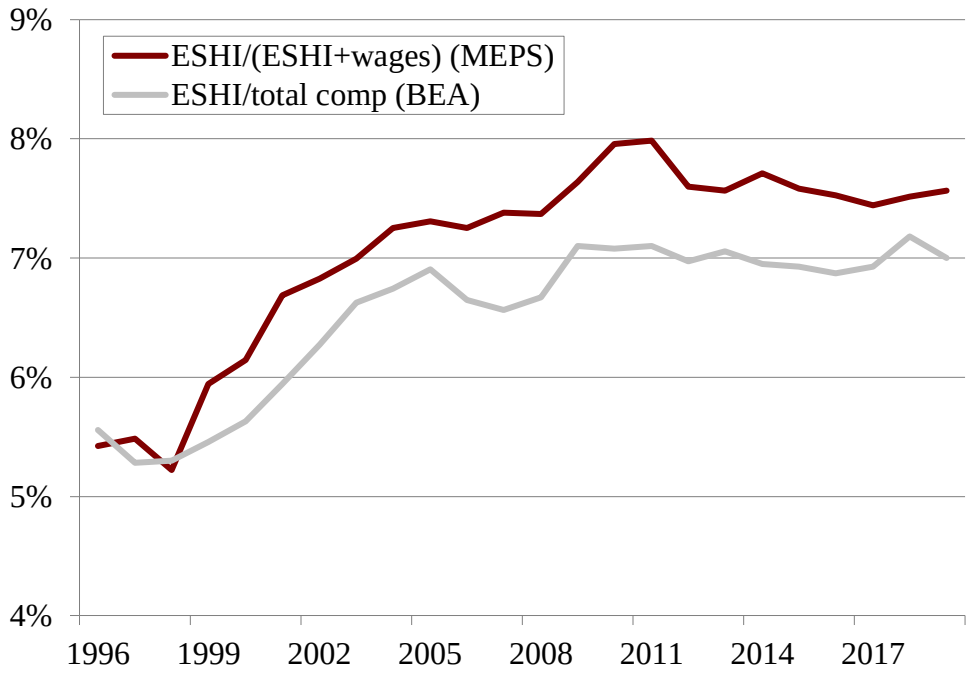
Source: Authors' calculations.

Figure 1. *Employer Cost of ESHI as Share of Compensation, 1996-2019*



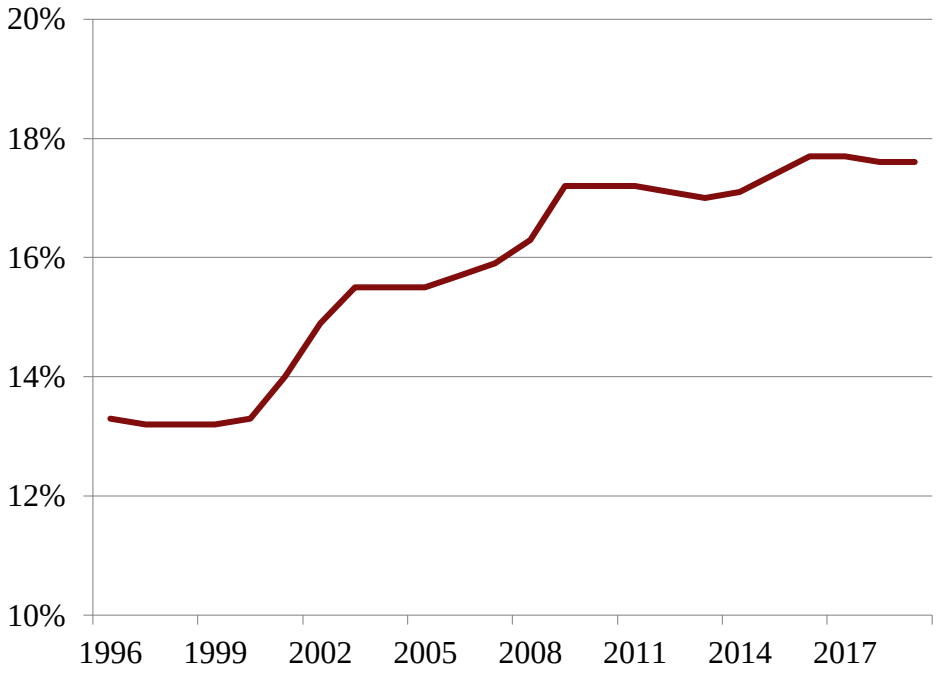
Source: Authors' calculations from U.S. Department of Health & Human Services, *Medical Expenditure Panel Survey Household Component* (MEPS-HC) (1996-2019).

Figure 2. *Employer Cost of ESHI as Share of Compensation vs. Employer Cost of ESHI as a Share of Total Compensation, 1996-2019*



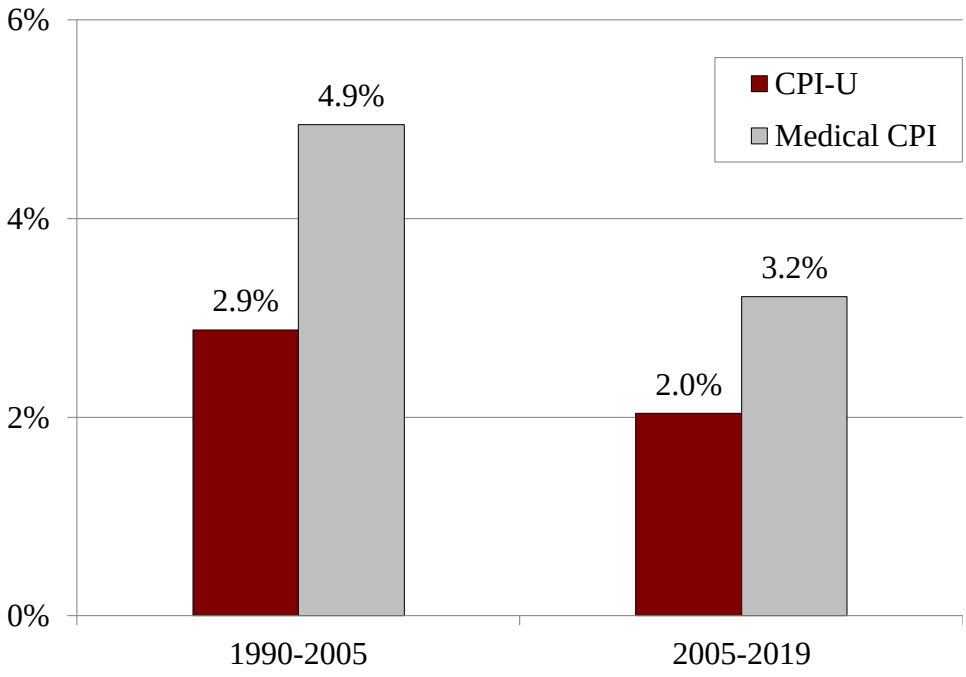
Source: Authors' calculations from MEPS-HC and Bureau of Economic Analysis (BEA) (1996-2019).

Figure 3. *National Health Expenditures as Share of GDP, 1996-2019*



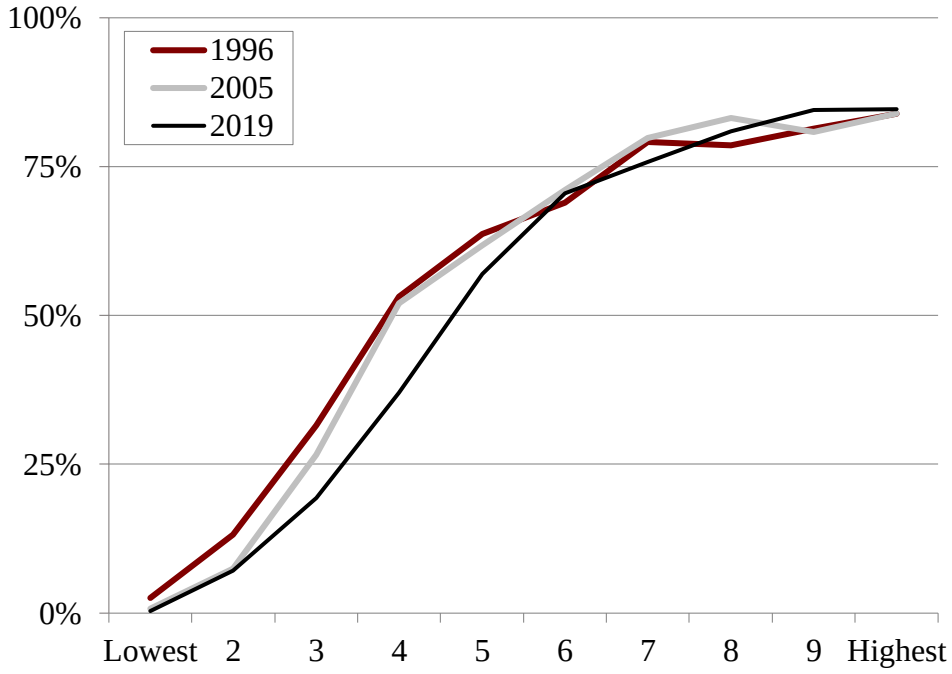
Source: Centers for Medicare & Medicaid Services, National Health Expenditures (2023).

Figure 4. *Medical Inflation vs. CPI-U, 1990-2005 and 2005-2019*



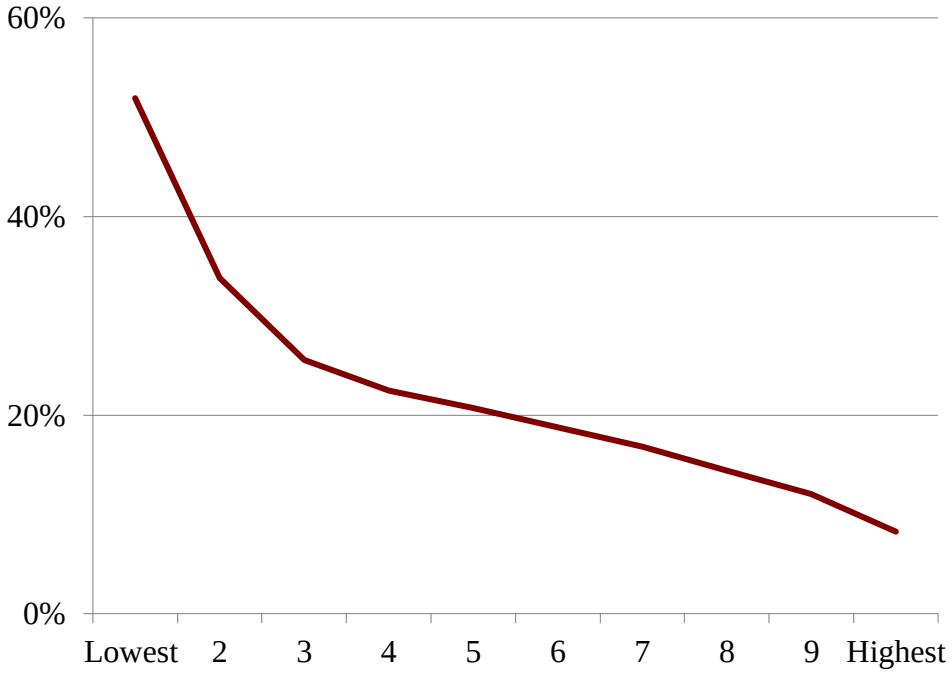
Source: U.S. Bureau of Labor Statistics (1990-2019).

Figure 5. *Percentage of Workers Participating in ESHI, by Compensation Decile, Select Years*



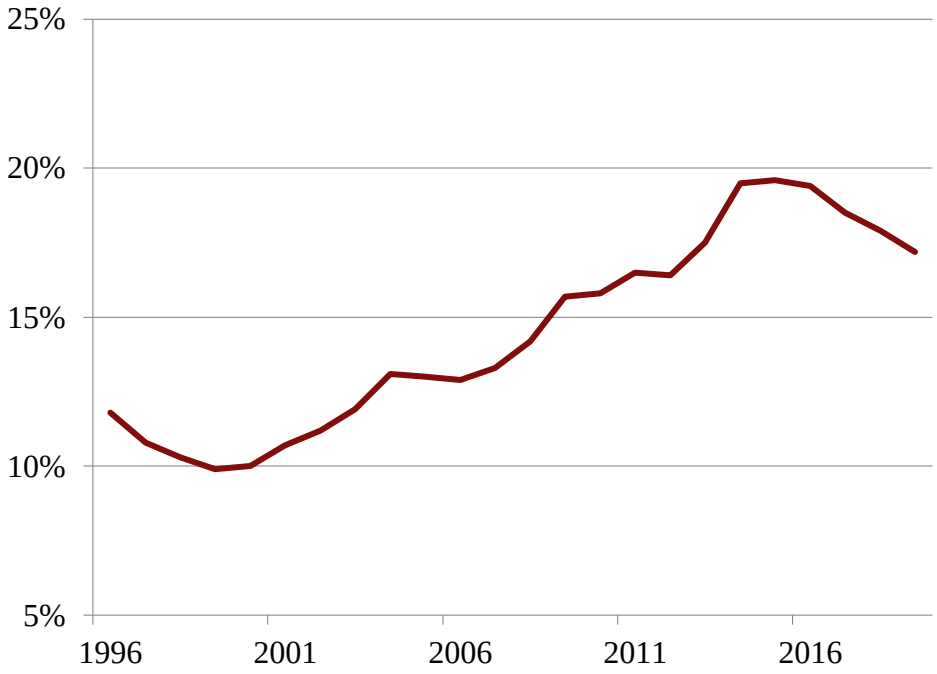
Source: Authors' calculations from MEPS-HC (1996-2019).

Figure 6. *ESHI Costs as Share of Compensation, by Compensation Decile, 2019*



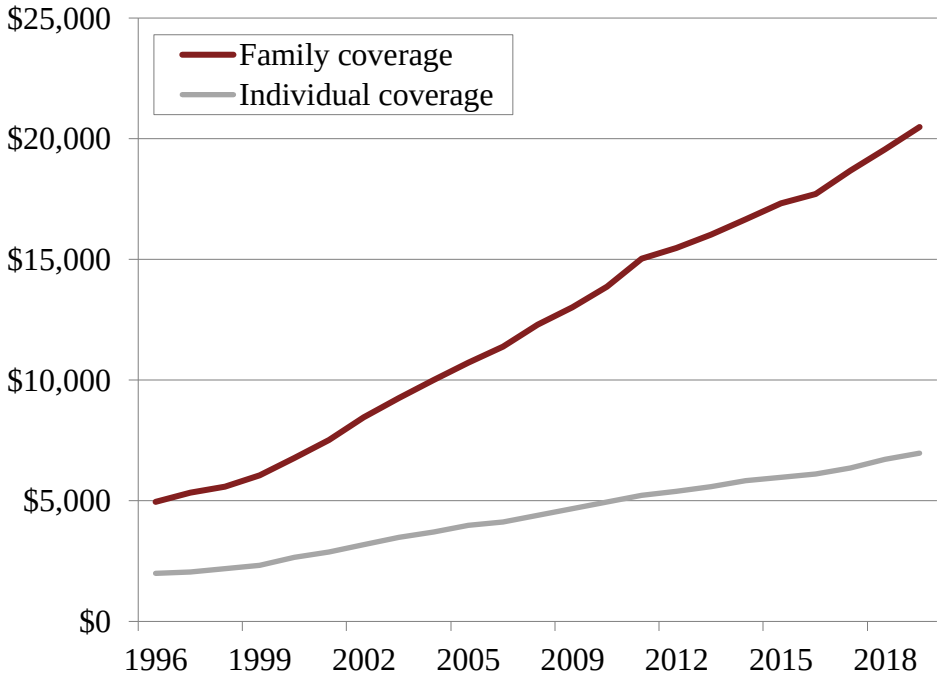
Source: Authors' calculations from MEPS-HC (2019).

Figure 7. *Percentage of Population Covered by Medicaid, 1996-2019*



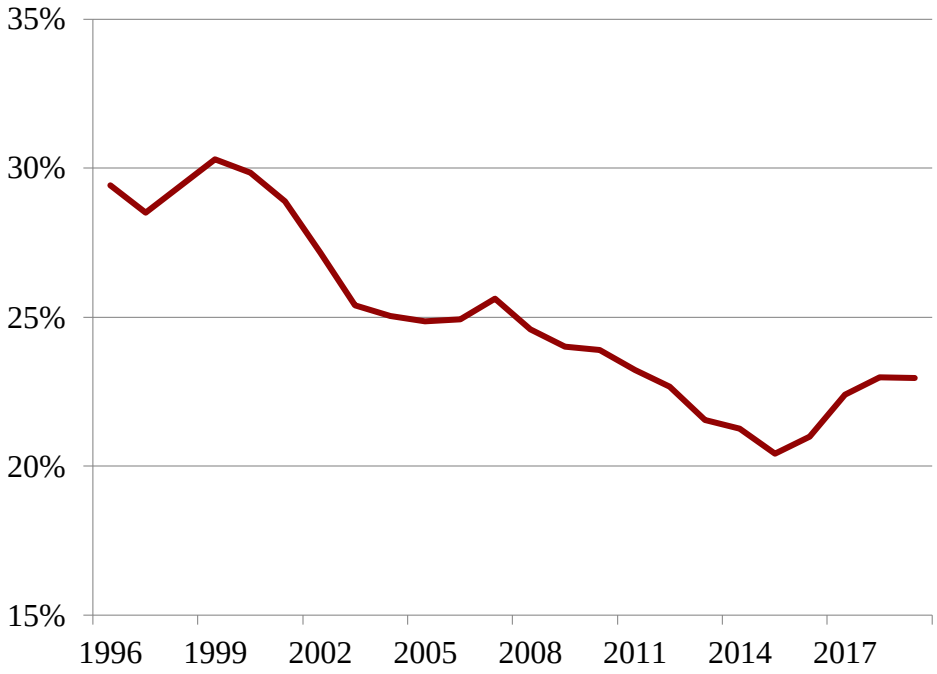
Source: U.S. Census Bureau, *Health Insurance Coverage in the United States* (1996-2019).

Figure 8. *Average Private Sector Premiums for Individual and Family Coverage (Nominal Dollars), 1996-2019*



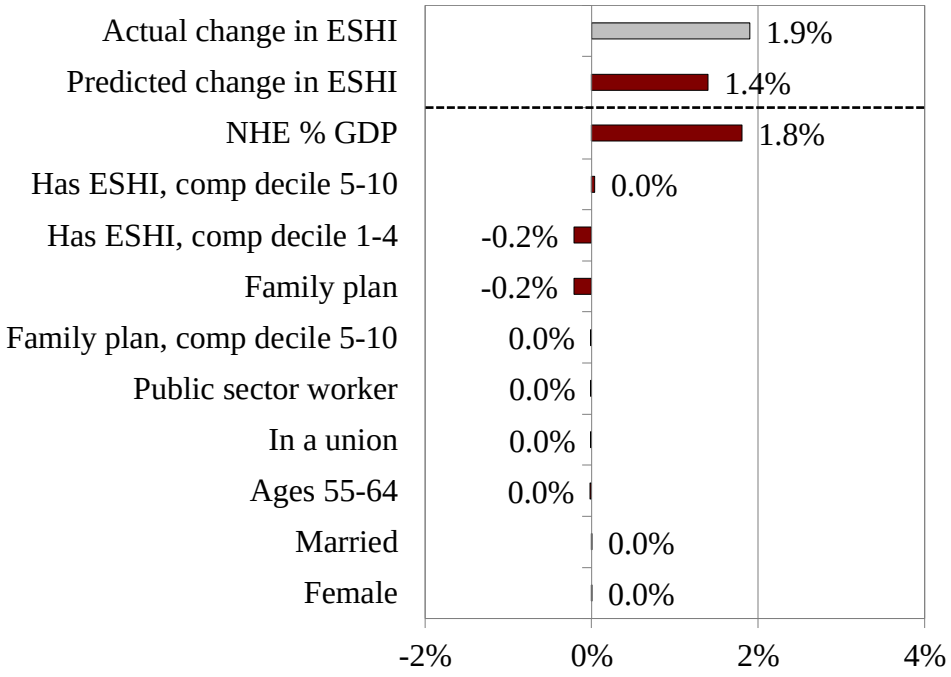
Note: MEPS data not available for 2007.
Source: MEPS employer survey files.

Figure 9. *Share of Workers with Family Plans, 1996-2019*



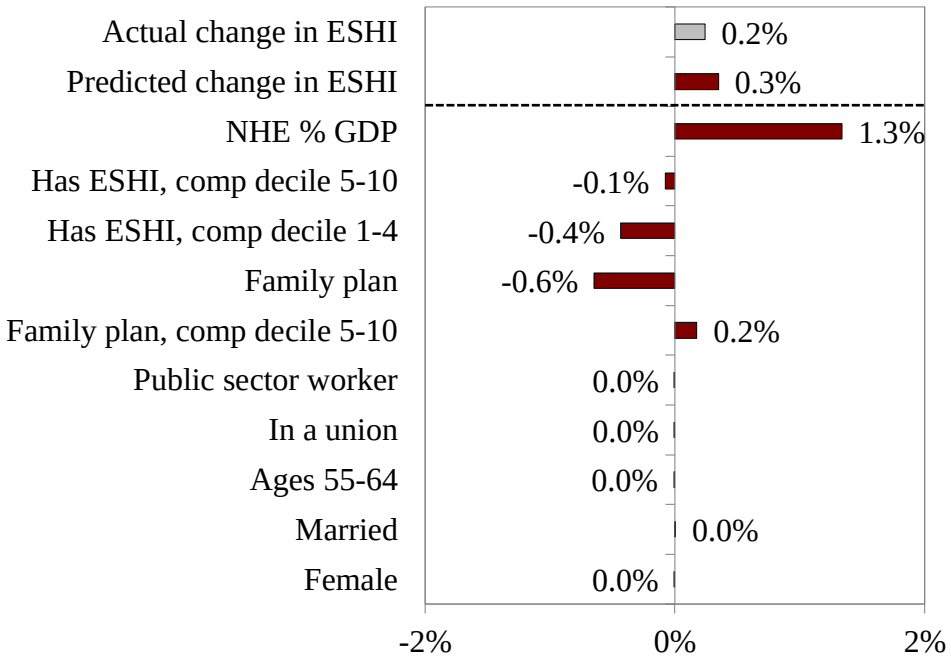
Note: Because of a data inconsistency for 1998, the share enrolled in family and single plans for 1998 is the average of the share enrolled in 1997 and 1999.
Source: Authors' calculations from MEPS-HC (1996-2019).

Figure 10. *Contribution of Various Factors to Change in the Ratio of ESHI to Compensation, 1996-2005*



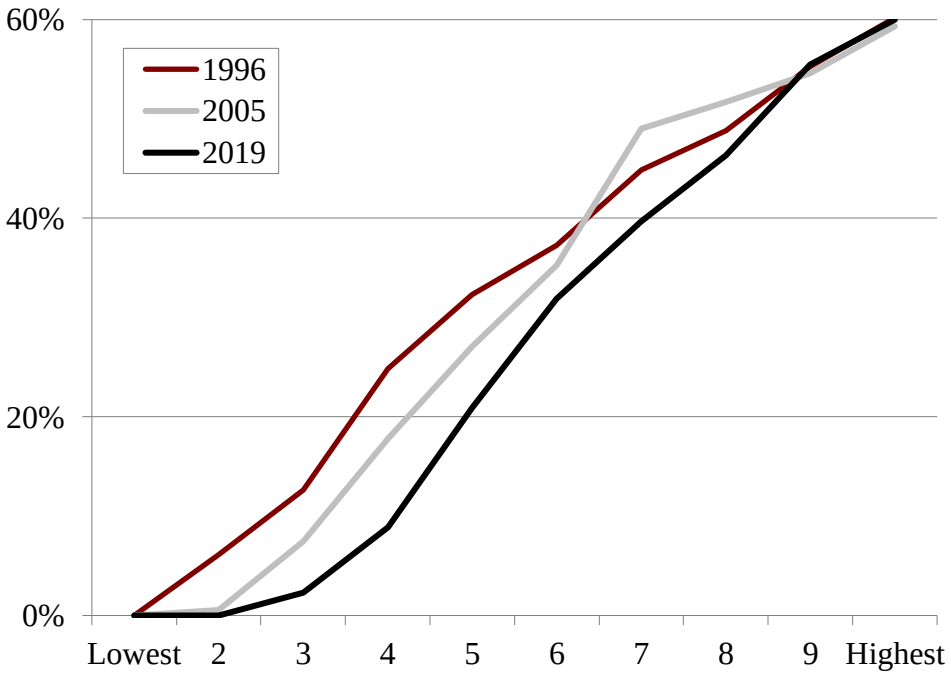
Source: Authors' calculations.

Figure 11. *Contribution of Various Factors to Change in the Ratio of ESHI to Compensation, 2005-2019*



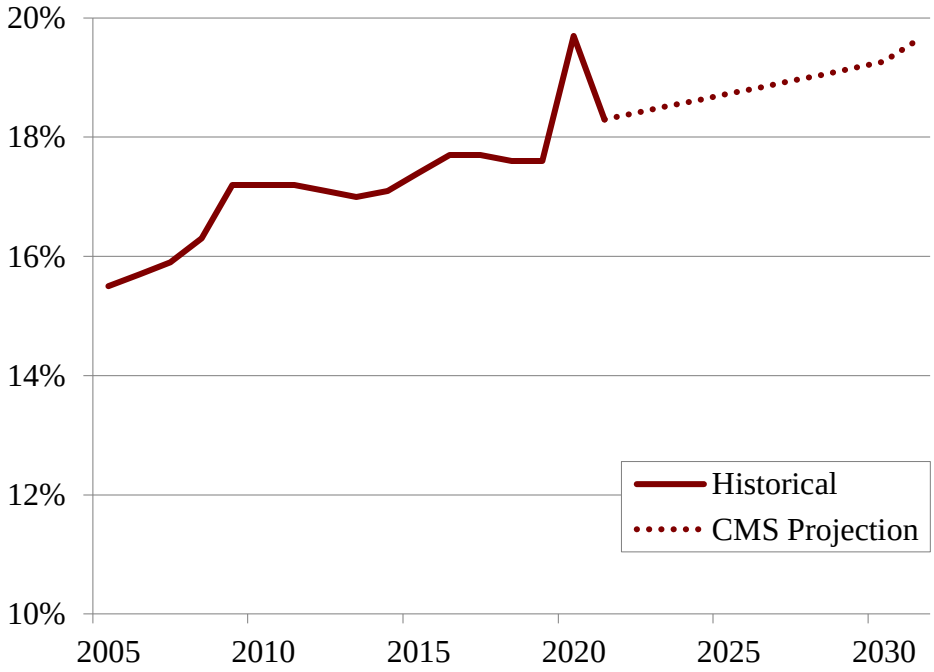
Source: Authors' calculations.

Figure 12. *Percentage of Workers Enrolled in a Family Plan, by Compensation Decile, Select Years*



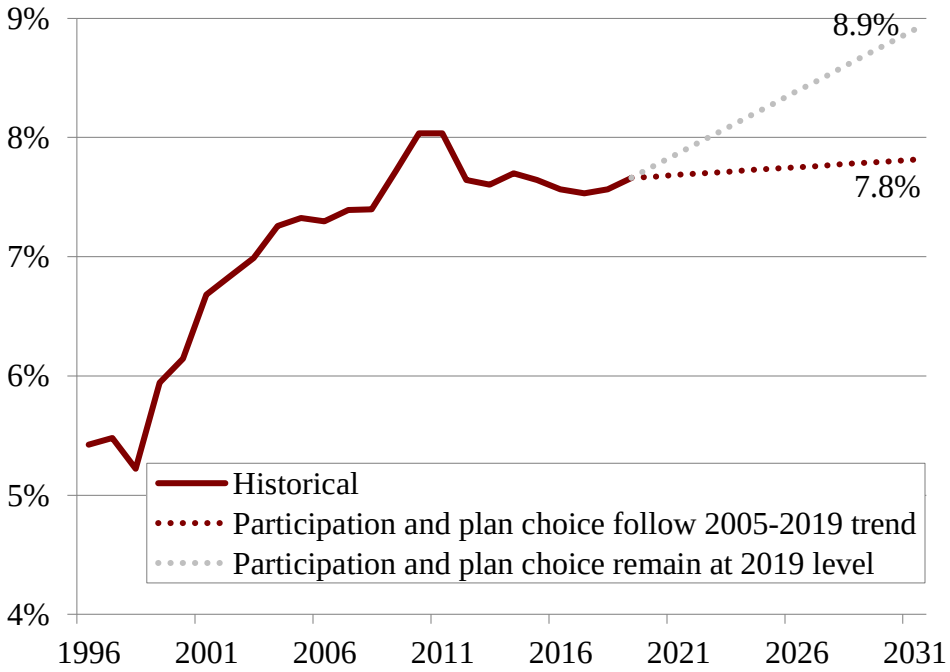
Source: Authors' calculations from MEPS-HC (1996-2019).

Figure 13. *Historical and Projected National Health Expenditures as Share of GDP, 2005-2031*



Source: Centers for Medicare & Medicaid Services' National Health Expenditures (2023).

Figure 14. *Historical and Projected ESHI Costs as Share of Compensation Under Various Scenarios, 1996-2031*



Note: Other explanatory variables are also included in the projections but they have a minimal effect on the projected values.
Source: Authors' calculations from MEPS-HC and Centers for Medicare & Medicaid Services' National Health Expenditures (2023).

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