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Cutting the Gordian Knot of Employee Health Care Benefits and Costs: A Corporate Model Built on Employee Choice

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Abstract

The US employer-based health insurance tax exclusion created a system of employer-sponsored insurance (ESI) with limited insurance choices and transparency that may lock employed households into health plans that are costlier or different from those they prefer to purchase. It may also prevent them from adding to their take-home pay. The tax exclusion is also regressive and has diverted excessive resources into health insurance that could accrue greater value elsewhere.

We propose creating a platform that builds on recently enacted federal rules and the requirements of the Affordable Care Act. We would give workers in large self-insured groups expanded ACA-compliant ESI choices that would allow employees to control their ESI funds and tradeoff pre-tax ESI funds for taxable wages. We further propose regulations that would more thoroughly inform employees of their historical expenditures on health insurance, avail them of many choices currently available in the market, and arm them with the wherewithal to make informed choices.

Our simulation of the economic results found that workers, especially those earning less than \$50,000 annually, would benefit substantially. (The policies are priced with a holdback , that reflects the firm's concentration of risk, so that employers' current ESI funds are sufficient to cross subsidize high cost enrollees with low cost ones.) If workers were allowed to trade untaxed insurance dollars for taxed wages, our simulation indicates that nationwide annual federal income and after-tax household income would grow by \$101–\$252 billion, and most income and payroll tax revenues increase by more than \$39–\$163 billion annually.

Further, giving workers greater autonomy in purchasing health insurance could lead to longer-term structural reforms in the insurance marketplace. Following the changes in the retirement investment market as it transitioned from pension investments purchased by employers to those purchased by employees, our platform would stimulate the introduction of more affordable offerings, trigger more price competition, and usher in innovative insurance and transparency products.

Our simulation conservatively pegged the downstream savings in the cost of medical care at upwards of \$100 billion. Because of the mammoth size of the ESI market, these savings may

well spill over to the rest of the health care system, thus eventually affecting Medicare, Medicaid, and ACA enrollees.

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INTRODUCTION

In 2018,¹ American corporations spent \$962 billion on health care, a mammoth sum that should exert a significant influence on the health care system. Yet, despite this leverage, US firms continue to struggle with spiraling costs inequitably spread across their employees. From 2013 to 2019, the price of health insurance premiums for corporate family plans inflated by 22%, dwarfing the growth in overall inflation, 8%, and workers' earnings, 14%², as a percentage of income.³

Although the funds employers use to purchase insurance are widely recognized to come in part from reductions in employees' take-home pay,⁴ the purchase came to be known as Employer-Sponsored Insurance (ESI), likely because employers chose the plans offered to their employees. That became perception. Employees thought that "Good jobs" included health care benefits, even though employers in effect, paid for insurance through reductions in employee compensation.

The corporate purchase of health insurance was created with an obscure post-World War II regulation that enabled employers to purchase health insurance for their employees using tax-free income.^a Yet, people who bought health insurance individually could not deduct the

^a In 1943, the World War II Labor Board ruled that controls over wages and prices imposed by an earlier Act did not apply to fringe benefits such as health insurance. In response, many employers used insurance benefits to attract and retain scarce labor. In 1954, the Internal Revenue Service clarified an earlier administrative court ruling by exempting ESI benefits from income taxation and adding this provision to the tax code. Helms, Robert, "Tax Policy

expense from their income taxes, except under rare circumstances.⁶ Tax policy changes behavior, and so it was for the health insurance market.

The exclusion required employers to become health plan administrators and managers, an undesired organizational bolt on to their core business. Businesses thrive when the right personnel are in the right seats doing the right jobs. The practice of offering health plans and enrolling employees became the employer HR offices' province. Come enrollment season, the HR VPs did their best: they shopped for their best deal from the big insurance companies, and then offered a narrow set of plan options they hoped would meet the diverse needs of their employees.

By 2019, this tax preference caused up to 153 million employees and their families^{7 8} to obtain their health insurance through their employer, rather than in markets for individual health insurance as they do for most other goods and services. It also stopped one of five adults who said that they or a partner who lost their with ESI coverage due to COVID-19 from buying health insurance on a tax-free basis.⁹

We propose a new approach that would give American workers and their families greater choice of insurers and plans, with the additional benefit of increasing their income through health insurance plans better suited to their needs. This approach would also enable employers to offer more attractive compensation packages to recruit employees in the war for talent.

We can do this based on a newly-enacted federal rule that grants workers control, pre-tax, of their ESI funds. We would add a wider variety of Affordable Care Act (ACA) compliant, pre-

and the History of the Health Insurance Industry,” in Henry J. Aaron and Leonard E. Burman (eds.), *Using Taxes to Reform Health Insurance: Pitfalls and Promises* (Washington, DC: Brookings Institution Press, 2008), 13–35.

tax health insurance plans and increased transparency that reveals the impact of different choices on their after-tax income and coverage. Our proposal would enable the employee to keep whatever dollars are not spent on health insurance, after-tax. (Mirroring current practice, the plans are priced with a holdback, which employees may not spend, to assure that the employer retains sufficient ESI funds to cross subsidize the expenses of high cost employees with those of low-cost ones.)

Simple changes to current law, one already embodied in a little-noticed 2019 Rule change by the government,¹⁰ could create this platform. The rule allows employers to give a lump sum of cash to employees for purchasing health insurance, which they could use, pre-tax, through health reimbursement arrangements (HRAs). (Until recently, any lump-sum payment given to an employee, even if it were intended exclusively for buying health insurance, would be counted as taxable income.^b)

This structurally modest but economically significant platform would give workers fuller control of ESI funds, introduce substantial competition among plans/insurers, and enable shopping and navigation tools so that employees could spend their ESI health dollars more effectively. When applying these control, choice, and transparency reforms to all American workers receiving ESI, our simulation projects 2018 increases in total annual after-tax worker income of \$101–\$252 billion and of federal income and most federal payroll taxes of \$39–\$163 billion, depending on the concentration of risk in the employer’s pool of insured employees and the resulting size of the holdback.

^b This restriction was furthered in IRS Notice 2013-54, which offered a restrictive interpretation to the Affordable Care Act’s “annual limit restriction” (IRS Notice 2013-54).

These increases in after-tax income accrue disproportionately to lower-income employees. The simulation also shows that as employees buy lower-cost health insurance, total medical care expenses decline by 7.3%–25.1%, sums that generally exceed hundreds of billions of dollars.

ANALYSIS: INTRODUCING CONTROL AND CHOICE

Virtually all of the corporate health insurance solutions to date place limitations on employees' choice of plans, providers, employee income, insurers, and plan' coverage.

But a different solution remains untapped: increasing employee choice and control. Our proposal would increase supply--instead of limiting options of plans and insurers, it would increase them - and increase demand -- by allowing the millions of employees to decide how much of the ESI funds they want to spend on health care. Employees would choose between pre-tax health plans versus more after-tax take-home pay. Employees who reflect a diverse set of economic priorities and various preferences would scrutinize plans and usher in consumer and price competition that currently does not exist.

WHY NOW?

Why has this not been proposed before? One important reason is the existence of the new federal rule.

Then too , surprisingly ,all-too-many CEOs have little direct interest in health insurance selection ,despite its high cost and importance to their employees. Instead, they delegate this function to their Human Resource (HR) staff.¹¹ HR staff generally select a plan that would be acceptable to the CEOs' family -a stratagem known as “CEO's Partner's Plan ”

because it is designed to limit complaints from the partner. But the CEO's plan is likely not one that a woman who heads a family and earns \$50,000 a year would choose.

HR offers at most one or two plans. In 2019, employers provided only 20% of employees in all firms a choice of three or more plans, and offered only one plan to 36% of employees.¹² Employers also tend to provide few choices among insurers: six in ten self-funded plans are managed by a third-party administrator owned by an insurance firm.¹³ These intermediaries may well be incentivized to restrict the plans to the offerings of their owner. As one expert noted, "self-funding administrators ... tend to be still very much under the wing of the parent insurance company."¹⁴

For employees, the purchase of health insurance is like car shopping with the choice limited to the Chevy Impala or the Chevy Malibu. The expansion of choice and competition among plans/insurers that we propose does not appear to be part of the HR mindset: the leading professional HR journal did not include it in a review article about health care cost controlling strategy.¹⁵

Another reason this strategy has not been proposed before may be that while firms have been getting better prices from insurers for health plans by increasing out-of-pocket employee payments, all-too-many are not passing on the savings to employees. By 2019, employees' share of health insurance premiums grew from 26% in 2005 to 30%, and deductibles than tripled.¹⁶ Thirty percent of covered employees were in plans with deductibles averaging a hefty \$4,673- \$5,335 for various family high-deductible health plans.¹⁷ Underinsurance grew, with 28% of workers lacking complete financial protection.¹⁸ Not surprisingly, employers offered employees little transparency about their

increased contributions to the price of plans with diminished coverage. While businesses are within their rights, the transparency inherent in our proposal would clearly reveal that employees have been paying more of the total price for less coverage.

This diversion of employee money to pay for health insurance is a little-discussed factor in stagnant wages among wage-earning employees.¹⁹ Premiums hit lower-income employees especially hard, exacerbating income inequality because workers' contributions for health insurance premiums are typically not adjusted for income. The cost shifting may also have affected the considerable decrease in lower-income employees' accepting the employers' health insurance.²⁰

HOW TO MAKE THIS HAPPEN

- Employers transfer to employees the funds they now spend on ESI , tax-free;
- Employees who chose to spend less than the ESI funds could save the money as taxable income.
- To ensure that the plans provide adequate coverage, they would comply with the Affordable Care Act's essential benefits and coverage.
- Employees who chose not to buy health insurance from their employer would be ineligible.

As it stands, the new rule reaches only a fraction of American employees because it is allotted to purchase individual health plans rather than group plans.^c This is a small share of the population, the market, and the problem.

Insurers sell individual plans on a “full-risk” basis in which they bear the underwriting risk of health costs, unlike the group plans of large employers that mostly carry the risk themselves (called “self-insured” or “self-funded” plans.)^{21 22} Full-risk insurance is higher priced than self-insured plans.²³ Thus, the large employers that provide the majority of US ESI are unlikely to pursue the opportunities under the new rule because the shift would cause them to spend more for health care benefits or continue present spending levels by offering fewer medical benefits.

But this shortcoming can be easily remedied by expanding the rule to allow the self-insured employers to issue tax-free ESI funds in HRAs so employees can purchase from an expanded menu of group plans offered by the employer. This arrangement would allow the six in ten employees who receive health insurance through self-insured employers to purchase their health insurance more directly and to weigh pre-tax health insurance against after-tax income.²⁴

To further inform their insurance selection, employers should arm employees with market information we want every purchaser of insurance to know. This includes how much they and their employers are paying for their current health insurance, the actuarial value of their current insurance, and how much they would increase after-tax take-home pay by selecting an alternative

^c The Treasury Department estimated that fewer than one million people would be affected in 2020 and 10 million in 2028. U.S. Internal Revenue Service. FAQs on New Health Coverage Options for Employers and Employees, June 13, 2019. Retrieved from https://www.irs.gov/pub/irs-utl/health_reimbursement_arrangements_faqs.pdf

plan. They should know some comparative data as well: how much the prices of their insurance plan, and their region’s average insurance plans, have risen over the past decade compared to general metrics of inflation.

This information could be neatly provided in a revised W-2 form, which under the ACA, added Box 12 to disclose the total cost of an employee’s health insurance. The intention was to make consumers aware of how much health insurance cuts into their wages.

All-too-many employees do not view the information in Box 12 as a number that cuts into their wages. The increased transparency we recommend would help insured working Americans to understand the impact of their choice of insurance on their income, and likely unleash untapped competition in the insurance market.

An illustration of this disclosure is in Table I.

(INSERT TABLE I ABOUT HERE)

TABLE I
ILLUSTRATIVE EXPANDED BOX 12 DISCLOSURE

| Plan | A | B |
|---------------------------------|------------|------------|
| Your Contribution | \$ 5,000 | \$ 7,000 |
| Employer Contribution | \$15,000 | \$15,000 |
| Effect on Your Income | (\$ 5,000) | (\$ 7,000) |
| Change in Your Contribution* | +4% | +6% |
| Change in Employer Contribution | -3% | -5% |
| Current Actuarial Value** | .91 | .91 |
| Change in Actuarial Value | -2% | -1% |

**ADDITION TO YOUR PRE-TAX INCOME IF YOU CHOOSE PLAN A
RATHER THAN PLAN B:**

INCREASE OF \$2,000

BOTH PLANS REQUIRE REFERRALS BEFORE YOU CAN SEE A
DOCTOR OR ENTER A SITE OF CARE.

*CAGR over past X years.

**Percent of estimated health care costs the plan will cover.

A SMALL RULE CHANGE TO TRIGGER BETTER COSTS AND QUALITY

These proposed rule changes would give 153 million employees tax-free control of what likely is their most significant annual purchase. These employees would then be the target of insurance marketing and not the HR departments that report to executive supervisors.

Below we review the research about whether individuals benefit from choice among multiple health plan offerings and assess the effects of a similar move to defined contribution in pension plans. We then describe the simulated results on America's workers' income, federal tax revenues, and health care costs of our ESI reforms, which build on the new policy that integrates HRAs with insurance by expanding it to all self-insured employers, most of whom are large.²⁵

Because building atop current ESI risk pools is central to the model, we describe a required cross-subsidization "holdback" from the funds available to employees to avoid our proposal's requiring employers to pay substantially more than their prior ESI contribution as

healthy employees cash out the funds the employers once used to cross subsidize others in the risk pools. We conclude by discussing how employers and policymakers can make it happen.

THE RESULTS OF CHOICE OF PLANS AND INSURERS

Prior research provides general, but not universal, evidence that choice of health plans and insurers generates benefits to enrollees.

In 2019, few of the millions of Americans covered by self-insured employers could select from a meaningful choice of health insurance plans. Only one-fifth of insured workers in all firms had a choice of more than two plans, half in large firms, and 28% in small firms had only two plans, and 36% overall had no choice.²⁶ (Although some may see choice as an employer is offering a variety of deductibles and copays in one type of plan, for example, a PPO, this kind of choice is akin to an automobile market that offers only a Toyota with different trim and interior options.) This paucity of choice contrasts with the 27 options for investments offered in the average employer's defined contribution pension plan.²⁷

Limited choice also extends to the characteristics of the offered plans. In 2018, employers offered most employees insurance policies with one-year terms that differed only in the deductible and the ease of accessing and price for providers.²⁸ Employees could not buy plans they might prefer such as longer-term ones that focused on prevention because of their longer relation with the insured or plans that focused on their chronic diseases/disabilities and their comorbidities .

Yet, some studies found that employees with ESI would meaningfully benefit from receiving a broad set of health insurance choices. One study, for example, found that the median employee would be willing to forego roughly 27 percent of her subsidy for the right to apply the

remainder to any plan she chooses.²⁹ Other research found that when workers are given choices among competing health plans, they exhibit the price sensitivity that consumers display elsewhere.³⁰

Choice and competition among health insurers also control costs. Adding a single insurer offering to the Affordable Health Act's health exchange plans in 2014, for example, reduced premiums by 4.5% on average.³¹ Premiums in these exchanges were 50% higher, on average, in areas with only one insurer than those with more than two insurers.^{32 33} Similarly, in the employer market for health insurance, premiums in average markets were approximately 7 percentage points higher due to increases in local concentration of health insurers from 1998 through 2000.^{34 35}

However, there are objections. Some analysts maintain that the firm's costs for administering health insurance will increase as the choice of plans increases.³⁶ However, while administrative costs may increase overall prices typically fall as competition increases,³⁷ especially in a market with millions of participants. For this reason, fund expenses and management fees continued to drop for defined contribution pension plans, aided by the required transparency about administrative fees.³⁸

Others argue that choice overload leads to suboptimal selection of plans and thus recommend minimizing choice.³⁹ Empirical research about choice overload yields conflicting results. An analysis of 2006–2010 Medicare pharmaceutical benefits results, for example,⁴⁰ found that larger choice sets increased switching unless the additional plans were relatively expensive. Enrollees who could choose from 45 to 66 plans increased the value of their

preferences over time.⁴¹ Others, however, found little evidence of learning at either the individual or cohort level.⁴² Their analysis estimated that restricting choice significantly cut the employees' foregone savings and total costs. However, this improvement was not caused by individuals' making worse choices with larger choice sets, but rather because the larger choice sets featured worse choices on average.⁴³

It is likely that the differences in the transparency and navigational tools available to enrollees in these different plans play an important role in explaining the differing results about the ability of enrollees to manage choice. These tools vary in many aspects, including the trust placed in the source (data from health insurance plans likely engender lower trust than those from health care providers, for example⁴⁴), and the timeliness, presentation, and intuitiveness of the information provided.

Research of health insurance markets frequently, but not universally, suggests that if employees could use ESI funds to pursue their own preferences, they would choose plans that better meet their needs and that competition among plans and insurers would better control costs. Making robust, trustworthy transparency and navigational tools available to enrollees would play an important role in achieving these results.

DEFINED CONTRIBUTION PENSIONS

The shift we propose to enable and incentivize individuals to make their own choices in purchasing health insurance is similar to the changes in how employed individuals saved for retirement. Americans moved from relying on defined benefit (DB) plans, in which employers invested their employees' pension funds, to defined contribution (DC) ones, in which individuals invested these funds.⁴⁵

The broad shift to consumer-controlled DC plans stimulated substantial growth in the availability, diversity, and cost of investment options for workers⁴⁶, and fund expenses and management fees continued to drop. Many invested in mutual funds. By 2019, the funds held \$25.7 trillion in assets,⁴⁷ growing from \$48 billion in 1970.⁴⁸ The period also saw a substantial increase in sources of financial investment advice.⁴⁹ ^d

The emergence of new, different investment vehicles and educational resources after a shift to defined contribution pension plans indicates that the market responds to individual workers' heterogeneous preferences.

We expect the market for health insurance to behave similarly: new insurance products and educational mechanisms likely will emerge in a consumer controlled ESI environment. If the adoption rate follows that of defined contribution pension plans it will grow in five years to 70% and then gradually increase over the next 35 years to 95% of the market.⁵⁰

^d The difference in returns between DB and DC plans has been attributed primarily to the fees paid. ("Here's the Real Reason Why Your 401(k) Fees Are Falling," (2018). <https://www.cnbc.com/2018/05/09/401k-fees-are-falling-due-to-lawsuits-over-charges.html>

RESULTS OF A SIMULATION OF INSTITUTING EMPLOYEE CHOICE AND CONTROL IN ESI

This section reports on the results of a simulation of the economic effects on workers given full control over their ESI premium contribution, including adequate choice and robust transparency. They then purchase tax-free health insurance and retain any difference between the ESI funds transferred and the cost of their health insurance as taxable income. We estimate the effects for both individual families and national tax revenue.

The transfer includes a “holdback” of the funds needed to maintain cross-subsidies from members of the pool of insured employees with lower health care costs to those with higher health care expenses. Employees can use this holdback to purchase a health plan but cannot save any part of it because the holdback enables self-insured employers to maintain a stable risk pool and spares their paying substantially more for ESI if healthier employees cash out an amount once used to subsidize higher cost ones.

THE SIMULATION MODEL

We based the simulation on the following mechanics:

*Employers give employees a lump-sum “credit” in the amount of an average ESI premium, adjusted for a holdback needed to assure stability in the ESI risk pool;

*Each employee now has funds in a Health Reimbursement Account to shop for coverage that meets ACA standards;

*Employers then disclose historical trends in employer and employee contributions to health insurance, average prices and features of local insurance plans, regional healthcare price inflation, and the historical impact of rising health insurance costs on worker wages;

*Employers provide employees with a wide variety of different, ACA compliant health plans from which to choose, including those available on local health insurance exchanges, and disclose the actuarial value of each plan;

*Employees have navigational aids available to help them use this information to purchase health insurance with the provided credit, which is recorded as pre-tax income (the credit is withdrawn if health insurance is not purchased); and

*Any savings resulting from the purchase of health insurance that costs less than the transferred amount, adjusted for the needed cross-subsidization holdback, are provided as a credit to the employee and taxed as income, with commensurate Social Security and Medicare payments.

Employers need to holdback the funds that lower cost employees once paid to subsidize higher cost ones, or they will pay substantially more for costly insureds because lower-cost employees have cashed out their ESI and thus eliminated funds once used for cross-subsidization.^c

^c Our simulation follows the pricing practices of employers. The price of a full-coverage plan is composed of a cross-subsidization component, which is the same for all plans, and a variable component that reflects the usage behavior induced by the plan's characteristics and the employee's strategic pricing preferences. Thus, for example, the differential price of a full-coverage plan relative to other plans will depend on the extent of moral hazard it induces; e.g., the greater usage induced by a no out-of-pocket expense plan. Employers may also choose to subsidize or over-price some plans to influence enrollment for strategic reasons.

In practice, employer or insurer actuaries implement this pricing by projecting the expected results of enrollment in different kinds of plans from past offerings of a menu of policies with different prices and characteristics, which induce policyholders to reveal their

Because the transfer must hold back the amount needed so lower-cost employees subsidize employees with higher health care expenses, we reduce part of the employer's contribution by the funds required to effect the holdback. Funds above this holdback can accrue to the employee as income. For example, if the employer's contribution is \$10, and the holdback is \$6, the employee can increase her pre-tax income by \$3 if she buys a \$7 policy. She cannot buy a policy that costs less than \$6.

The amount of the holdback is a function of the concentration of risk in the plan. This concentration differs by firm.^f

assessment of their risk status. These analyses and enable the actuaries to correlate revealed risk status with actual health expenses (Rothschild and Stiglitz 1976). They project future costs at a fairly granular level, by medical cost category (e.g., in patient care, specialty care, pharmacy).^f We illustrate its calculation for a population whose concentration of risk follows Pareto's law (the 80/20 rule) (Investopedia, Updated 2019) for a Bronze-level Affordable Care plan.

To compute the costs of healthier and sicker households:

Let $C = \$15,115$ be the average household premium price under a Bronze-level plan.^f

Let $p = 20\%$ be the proportion of households who are sicker.

Let $c = 80\%$ be the proportion of costs associated with sicker households.

Each sicker household, S , costs

$$(1) \quad S = \frac{0.8 \times \$15,115}{0.2} = \$60,460.$$

Each healthier household, H , costs

$$(2) \quad H = \frac{0.2 \times \$15,115}{0.8} = \$3,779.$$

The holdback, B , is

$$(3) \quad B = p \times (S - H) = 0.2 \times (\$60,460 - \$3,779) = \$11,336.$$

If the employer was contributing \$14,069 before, (Henry J. Kaiser Family Foundation 2018), the excess contribution, net of the holdback, is transferred to the employee (Henry J. Kaiser Family Foundation 2018). She can use it for the purchase health insurance and/or retain it as taxable income.

We term this excess as the flexible transfer, FT . It is

$$(4) \quad FT = \$14,069 - \$11,336 = \$2,733.$$

By reducing the flexible portion of the employer contribution, the effective price the employee must pay to receive the same health insurance plan has increased. If the original employee contribution was \$5,547 (Henry J. Kaiser Family Foundation 2018), then, using the

Our simulation’s construction of a holdback resembles how employers currently set the premiums for their health insurance plans. Actuaries project the concentrations of risk in the employer’s pool in the next period based on an analysis of past usage patterns and related costs.^g The actuaries use these employer-specific data to compute the magnitude of the funds that lower

midpoint method for computing percent changes (quickonomics.com 2018), the percent change in price, $\% \Delta P$, is

$$(5) \quad \% \Delta P = \frac{FT}{P + \frac{FT}{2}} = \frac{\$2,733}{\$5,547 + \$1,366} = 40\%.$$

Assuming a household income of $I = \$37,903^f$ (Flood et al. 2018), then the percent change in income, $\% \Delta I$, is

$$(6) \quad \% \Delta I = \frac{FT}{I + \frac{FT}{2}} = \frac{\$2,733}{\$37,903 + \$1,366} = 7\%.$$

By incorporating the income effects of this policy change, we can calculate the percent change in the amount of insurance purchased, $\% \Delta Q$. We apply price (-.4) and income (.15) elasticity estimates to this new level of income.

Let ϵ_P and ϵ_I be the price and income elasticities, at -.4 and +.15 respectively.

$$(7) \quad \% \Delta Q = \epsilon_P \times \% \Delta P + \epsilon_I \times \% \Delta I = -0.4 \times 40\% + 0.15 \times 7\% = -15\%$$

Before the policy change, the household purchased insurance with a total price (employee plus employer contributions) of \$19,616 (Henry J. Kaiser Family Foundation 2018). After the policy change, the household chooses to purchase a less generous insurance plan. If the household purchases 15% less insurance, it will spend \$16,674 on health insurance. The difference of \$2,942 in the price of insurance will be transferred to the employee as additional income, subject to Federal income and payroll taxes.

Applying the household’s marginal income tax rate, the Federal Government will collect 15% of the new income as income tax ($15\% \times \$2,942 = \441), and 15.3% as payroll tax (half to be paid by the employee and half to be paid by the employer) $15.3\% \times \$2,942 = \450 . The employee’s after-tax income will increase by $(100\% - 15\% - 7.65\%) \times \$2,942 = \$2,276$ (El-Sibaie 2018 and IRS, Topic Number 751).

^g The persistence of the concentration of risk in some employer pools enhances the accuracy of the usage projections. Nationally, over a six-year period, in the privately-insured, under-65 population, 69.8% of enrollees never had annual spending in the top 10% of the distribution and the bottom 50% of spenders accounted for less than 10% of spending. These patterns were quite persistent: those in the top 10 in 2003 were almost as likely (34.4%) to be in the top 10% five years later as one year later (43.4%). Many comorbid conditions retained much of their predictive power even five years later. (Hirth et al 2015)

cost users contribute to subsidize the higher-cost users in the pool. They include this cross-subsidization fund as a cost component of each plan.

Our simulation assumes that employers will offer a reasonably broad choice of insurance plans, that required disclosures will adequately inform employees of health plan availability and prices in the market, that employees will have adequate navigational and educational support to synthesize market offerings, and that these disclosed opportunities will lead some employees to make economizing selections.

RESULTS: SHORT-TERM EFFECTS OF THE ESI TRANSFER ON HEALTH INSURANCE PRICES, AFTER-TAX-INCOME, HEALTH CARE COSTS, AND TAX REVENUES

In the simulation, we apply two different price elasticities for insurance demand and one for income to the baseline data.^h We rely on 2018 income and premium data, (see Table II and Appendix A for other data sources used for the simulation).

The results differ by the concentration of risk in the employer’s pool and holdback. To illustrate this computation, we use three common estimates of the concentration of risk:

- 20% account for 80% of costs,⁵¹
- 11% account for 69% of costs,⁵²
- Five% account for 50% of costs.⁵³

^h The simulation included those whose income would qualify for ACA subsidies because the subsidies are not available for those whose ESI is affordable and meets the ACA standards. HealthCare.gov notes, “most (ESI plans) meet those standards” (Healthcare.gov website).

The data sources for our concentration of risk assumptions are illustrative and not perfectly suited for our purposes.ⁱ

RESULTS

The cash a worker puts in her purse depends on the price of the premium as well as the holdback, which corresponds to the concentration of risk. In the Tables below, we assume the purchase of an ACA bronze-level policy, which covers 60% of expected expenses, and employer contribution of \$14,069, under our three different concentration of risk assumptions and two estimates of price elasticity. Results vary by each of the specifications. Tables III -VIII illustrate the holdback and pre-tax income increment. The increase in income ranges from a high of 31.7% to a low of 4.73%, depending on the concentration of risk and elasticity estimates. The largest percentage income increase accrues to those earning less than \$50,000 annually. The lowest percentage increases accrue to those earning more than \$100,000, which range from 0.72% to 2.3%, depending on the concentration of risk and elasticity estimates. Medical care expenses decrease by \$90- \$305 billion. We estimated medical care expenses at 85% of the premium, as required by the ACA, and they declined commensurately with health insurance premiums.

The six simulations—based on three different risk estimates and two different price elasticities—yielded premium price declines ranging from 7.31% to 25.1 (Appendix B and Tables IX-XII.) We tested whether these reduced prices are sufficient to enable enrollees to buy full-risk ACA plans. Our results, which compare these reduced premium prices per household to

ⁱ The 5% and 20% concentration data are for the population as a whole, rather than for an employer pool. To the extent that the employed population is healthier than the population as a whole, they may misspecify the concentration of risk. Although the 11% data are for an employer pool, the data are from 2005 and may misspecify the concentration of risk if the employed population's health status has changed since that date.

the 2018 price per enrollee for the ACA exchanges' plans, indicate that the new premium prices were generally more than sufficient to buy a bronze plan^j (see Tables XIII-XVI).

CONCLUSIONS: HOW TO MAKE IT HAPPEN

Our simulation indicates that giving employees more control and choice over the full amount of their health insurance premium dollars would increase their income and Federal tax revenues while controlling health care costs.

However, these results will not accrue on their own. To capitalize on the promise of employee purchasing, employers and policymakers should pursue these additional objectives:

CREATING MEANINGFUL HEALTH INSURANCE OPTIONS

Our simulation rests on employees' having adequate options available from which to choose. Therefore, employers should ensure that employees have a sufficient number of reasonable plans available. The ACA requires insurers participating in ACA exchanges to offer plans with actuarial values of at least 70% and 80% depending on employer size. Because our simulation finds that many would opt for a bronze-level plan (60% of actuarial value), employees would benefit from access to such lower-cost plans. At the very least, employers

^j Except for the simulation with a baseline elasticity with a 5%/50% concentration of risk which yields a premium price of \$14,697, which is insufficient to buy the bronze plan priced at \$15,115. But the ACA bronze plan is a full risk one and thus higher priced than the self-insured plans that employers would offer.

should ensure that their employees may avail themselves of bronze plans, including those offered in the regional ACA exchange.

Employers might also offer plans that protect against switching costs, such as employees' failure to update their insurance plan as they age. Just as retirement plans frequently offer a default lifecycle option that reflects asset allocations that adjust for age, insurance purchasing plans can similarly offer age-appropriate default options. The default plan could encourage more comprehensive coverage, with lower copayments, as the employee ages. Employees could additionally select a lifecycle option that automatically updates their annual insurance selections. A similarly structured wealth-adjusted option could automatically update an employee's insurance selections as she earns higher wages, with more spent on health insurance as the employee's total compensation rises (both the diminishing marginal utility of income and the increasing marginal tax rate would suggest such a default). These default options are potential safeguards against the consumer inertia, inattention, or confusion described above. Last, additional regulatory reforms would be necessary to integrate HRAs with group health plans, such as providing adequate holdback.

CREATING PRICE AND QUALITY TRANSPARENCY, AND NAVIGATIONAL AIDS

Enabling employees to purchase health insurance requires arming them with the information necessary to make informed decisions, not a strength of the American health care system. Current law features few transparency requirements and provides scant resources for employees to guide their choices.

Meaningful transparency could be advanced through prior authorizations to enhance price and quality transparency. The ACA instructs exchanges to maintain "transparency in coverage" regarding all costs associated with qualified health plans.⁵⁴ Additionally, the ACA⁵⁵ and the

American Taxpayer Relief Act of 2012⁵⁶ allocated funds to the National Quality Forum to develop quality measurements to assess quality of care. Employers, or coalition of employers, could use this funding to institute their own offerings to educate and guide their employees, much as they supply mechanisms to inform their employees through retirement offerings.

Existing law could also encourage effective navigation in the private exchanges. The ACA requires federal exchanges to establish navigator programs and authorizes the USS Department of Health and Human Services to distribute grants to private or public entities to serve as navigators for ACA exchanges. Nothing in the statute or its implementing regulation⁵⁷ prohibits HHS from distributing grants to navigators for private exchanges. Therefore, these exchanges could offer employees meaningful choices while taking advantage of federal programs designed to inform employees who make such choices.

UTILIZING BOX 12: TRANSPARENCY OF HISTORICAL ESI CONTRIBUTIONS AND ACTUARIAL PLAN VALUES

Employees are deprived of information and context regarding historical price inflation and the amount of take-home pay withheld to purchase ESI. Currently, the only information supplied to employees about the total costs of their ESI lies in Box 12 of the W-2, but it reveals little and offers little context.⁵⁸ Further, the information arrives at tax time rather than when employees select health insurance.

It is likely that the more good disclosure offered, the greater the demand for a larger choice of plans. Studies of the effect of disclosure in equity financial markets reveal that transparency reduces capital cost⁵⁹ and facilitates financing, investment, and growth. If disclosure occasions the same result in ESI markets, it will reduce transactional cost and enable the growth of additional plans.⁶⁰

The expanded use of Box-12, or other devices that enhance disclosure could also deter employers from the surreptitious cost-shifting we described earlier, by listing their past contributions and the actuarial value of their plans and those in peer institutions, such as those readily available in the ACA exchanges, so that employees could see whether employers are shifting more of the cost to them or reducing the value of the insurance plan relative to their past and those offered by peer institutions.

These price, actuarial value, employer and employee contributions, and transparency disclosures, coupled with navigational resources, would support employees in using their health insurance dollars to advance their individual needs.

CONCLUSIONS

The employer-based health insurance tax exclusion created a system of employer-sponsored insurance (ESI) with limited insurance choices and transparency that may lock employed households into health plans that are costlier or different from those they prefer to purchase. It may also prevent them from adding to their take-home pay. In denying these workers an opportunity to better control their own resources, ESI has sapped the dynamism of a freer insurance market. The tax exclusion is also regressive and has diverted excessive resources into health insurance that could accrue greater value elsewhere.

We propose creating a platform that builds on recently enacted federal rules and the requirements of the Affordable Care Act. We would give workers in large self-insured groups expanded ESI choices that would allow employees to control their ESI funds and tradeoff pre-tax ESI funds for taxable wages. We further propose regulations that would more thoroughly inform

employees of their historical expenditures on health insurance, avail them of many choices currently available in the market, and arm them with the wherewithal to make informed choices.

Our simulation quantifies the economic benefits that would accrue to these workers and to the nation as a whole if employees had access to a convenient and transparent market of insurance plans. It found that workers, especially those earning less than \$50,000 annually, could benefit substantially from purchasing less expensive health insurance and retaining some taxable income for take-home pay. Each person or head of household knows best what health care coverage they need. If workers were allowed to trade untaxed insurance dollars for taxed wages, our simulation indicates that nationwide annual federal income and after-tax household income would grow by \$101–\$252 billion, and most income and payroll tax revenues increase by more than \$39–\$163 billion annually.

Further, giving workers greater autonomy in purchasing health insurance could lead to longer-term structural reforms in the insurance marketplace. It would trigger more price competition, stimulate the introduction of more affordable offerings, and usher in innovative insurance and transparency products. Our simulation conservatively pegged the downstream savings in the cost of medical care at upwards of \$100 billion. (Recall, however, that our simulation is based on three different concentrations of risks, which may inappropriately characterize the risk concentration for the US employer sector; assumes immediate, complete adoption of our proposal, which is unlikely; and excludes some taxes from these results.) Because of the mammoth size of the ESI market, these savings may well spill over to the rest of the health care system, thus eventually affecting Medicare, Medicaid, and ACA enrollees.

The reforms we describe would produce insurance platforms that resemble those available in consumer-driven, universal coverage health systems in Germany, Switzerland, and the Netherlands. These nations are home to well-regarded insurance markets that allow individuals to make tax-free insurance purchases directly from a generally large array of insurance options within a competitive private health insurance market.⁶¹

Americans have always preferred the private financing of healthcare, which is why the US health system was built atop a network of private health insurance. But we should express disappointment that this market system of private insurance has not exerted the economic prowess we would expect. Infusing hundreds of millions of well-informed, price-sensitive Americans into the market is the swiftest and most effective way to exert market dynamism that has been sadly absent thus far. If we want to benefit from the fruits of choice and control, we should assure that employees have what they need to make it work.

TABLE II

BASELINE DATA

| Income Group | Number of Households | Mean Income | Employee Contribution | Employer Contribution | Income Elasticity | Price Elasticity |
|----------------------|----------------------|-------------|-----------------------|-----------------------|-------------------|------------------|
| | 3,732,638 | \$15,284 | \$5,547 | \$14,069 | 0.15 | -0.4 |
| \$25,000 to \$49,999 | 12,103,920 | 37,903 | 5,547 | 14,069 | 0.15 | -0.4 |
| \$50,000 to \$74,999 | 13,640,120 | 61,862 | 5,547 | 14,069 | 0.15 | -0.33 |
| \$75,000 to \$99,999 | 12,095,020 | 86,309 | 5,547 | 14,069 | 0.15 | -0.33 |
| \$100,000 or more | 31,145,860 | 188,332 | 5,547 | 14,069 | 0.15 | -0.33 |

Source: See section “Simulation Inputs.”

TABLE III

PRE-TAX INCOME: PERCENTAGE INCREMENT, AFTER-TAX, BY INCOME CLASS;
 HOLDBACK NEEDED AT DIFFERENT CONCENTRATIONS OF RISK ASSUMPTIONS
 AND PRICE ELASTICITIES, FOR A BRONZE-LEVEL ACA PLAN

| | (1) | (2) | (3) |
|--|----------|----------|----------|
| Proportion of High Cost Population: p | 20% | 11% | 5% |
| Proportion of Costs of p : c | 80% | 69% | 50% |
| Price of Bronze Level Plan: C | \$15,115 | \$15,115 | \$15,115 |
| Cost of High Cost Household: $S = c \times \frac{c}{p}$ | 60,460 | 94,812 | 151,150 |
| Cost of Lower Cost Household: $H = (1 - c) \times \frac{c}{1-p}$ | 3,779 | 5,265 | 7,955 |
| Holdback: $B = p \times (S - H)$ | 11,336 | 9,850 | 7,160 |
| Employer Contribution: E | 14,069 | 14,069 | 14,069 |
| Pretax Employee Income Increment = $E - B$ | 2,733 | 4,219 | 6,909 |

TABLE IV

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 11%/69%, PRICE ELASTICITY = BASELINE

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|----------------------|--------------------|-------------------|----------------------|------------------|-----------------|------------------|----------------------|
| Less than \$25,000 | \$12,586 | \$15,547 | 23.5% | \$ 46.98 | \$ 58.03 | \$ 11.05 | 6.1% |
| \$25,000 to \$49,999 | 30,251 | 33,355 | 10.3 | 366.15 | 403.72 | 37.57 | 20.6 |
| \$50,000 to \$74,999 | 48,783 | 51,392 | 5.3 | 665.40 | 700.99 | 35.59 | 19.5 |
| \$75,000 to \$99,999 | 66,652 | 68,960 | 3.5 | 806.16 | 834.07 | 27.91 | 15.3 |
| \$100,000 or more | 134,308 | 136,561 | 1.7 | 4,183.13 | 4,253.31 | 70.18 | 38.5 |
| All Incomes | \$83,444 | \$85,951 | 3.0% | \$6,067.83 | \$6,250.13 | \$182.30 | 100.0% |

TABLE V

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 20%/80%, PRICE ELASTICITY = BASELINE

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|----------------------|--------------------|-------------------|----------------------|------------------|-----------------|------------------|----------------------|
| Less than \$25,000 | \$12,586 | \$14,743 | 17.1% | \$ 46.98 | \$ 55.03 | \$ 8.05 | 6.1% |
| \$25,000 to \$49,999 | 30,251 | 32,491 | 7.4 | 366.15 | 393.27 | 27.12 | 20.6 |
| \$50,000 to \$74,999 | 48,783 | 50,664 | 3.9 | 665.40 | 691.06 | 25.66 | 19.5 |
| \$75,000 to \$99,999 | 66,652 | 68,314 | 2.5 | 806.16 | 826.25 | 20.10 | 15.3 |
| \$100,000 or more | 134,308 | 135,927 | 1.2 | 4,183.13 | 4,233.57 | 50.43 | 38.4 |
| All Incomes | 83,444 | 85,250 | 2.2 | 6,067.83 | 6,199.18 | 131.36 | 100.0 |

TABLE VI

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 5%/50%, PRICE ELASTICITY = BASELINE

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|----------------------|-----------------|----------------|-------------------|---------------|--------------|---------------|-------------------|
| Less than \$25,000 | \$ 12,586 | \$ 16,574 | 31.7% | \$ 46.98 | \$ 61.87 | \$ 14.88 | 5.9% |
| \$25,000 to \$49,999 | 30,251 | 34,529 | 14.1 | 366.15 | 417.93 | 51.78 | 20.6 |
| \$50,000 to \$74,999 | 48,783 | 52,385 | 7.4 | 665.40 | 714.54 | 49.14 | 19.5 |
| \$75,000 to \$99,999 | 66,652 | 69,846 | 4.8 | 806.16 | 844.79 | 38.63 | 15.3 |
| \$100,000 or more | 134,308 | 137,437 | 2.3 | 4,183.13 | 4,280.59 | 97.46 | 38.7 |
| All Incomes | 83,444 | 86,908 | 4.2 | 6,067.83 | 6,319.72 | 251.89 | 100.0 |

TABLE VII

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 11%/69%, PRICE ELASTICITY = -0.2

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|----------------------|--------------------|-------------------|----------------------|------------------|-----------------|------------------|----------------------|
| Less than \$25,000 | \$12,586 | \$13,779 | 9.47% | \$ 46.98 | \$ 51.43 | \$ 4.45 | 4.4% |
| \$25,000 to \$49,999 | 30,251 | 31,683 | 4.73 | 366.15 | 383.49 | 17.33 | 17.2 |
| \$50,000 to \$74,999 | 48,783 | 50,305 | 3.12 | 665.40 | 686.17 | 20.76 | 20.5 |
| \$75,000 to \$99,999 | 66,652 | 68,013 | 2.04 | 806.16 | 822.62 | 16.47 | 16.3 |
| \$100,000 or more | 134,308 | 135,657 | 1.00 | 4,183.13 | 4,225.15 | 42.02 | 41.6 |
| All Incomes | 83,444 | 84,833 | 1.67 | 6,067.83 | 6,168.86 | 101.03 | 100.0 |

TABLE VIII

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 20%/80%, PRICE ELASTICITY = -0.2

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|--------------------|--------------------|-------------------|----------------------|------------------|-----------------|------------------|----------------------|
| Less than \$25,000 | \$ 12,586 | \$ 13,466 | 6.99% | \$ 46.98 | \$ 50.26 | \$ 3.28 | 4.5% |
| 25,000 to 49,999 | 30,251 | 31,292 | 3.44 | 366.15 | 378.75 | 12.60 | 17.3 |
| 50,000 to 74,999 | 48,783 | 49,884 | 2.26 | 665.40 | 680.42 | 15.02 | 20.6 |
| 75,000 to 99,999 | 66,652 | 67,635 | 1.47 | 806.16 | 818.04 | 11.89 | 16.3 |
| 100,000 or more | 134,308 | 135,278 | 0.72 | 4,183.13 | 4,213.36 | 30.23 | 41.4 |
| All Incomes | 83,444 | 84,448 | 1.20 | 6,067.83 | 6,140.85 | 73.02 | 100.0 |

TABLE IX

AFTER-TAX INCOME BY HOUSEHOLD INCOME. TOTALS REPORTED IN BILLIONS OF DOLLARS.

COST CONCENTRATION = 5%/50%, PRICE ELASTICITY = -0.2

| Income Group | Average, Before | Average, After | Average, % Change | Total, Before | Total, After | Total, Change | % of Total Change |
|----------------------|--------------------|-------------------|----------------------|------------------|-----------------|------------------|----------------------|
| Less than \$25,000 | \$ 12,586 | \$ 14,173 | 12.6% | \$ 46.98 | \$ 52.90 | \$ 5.92 | 4.3% |
| \$25,000 to \$49,999 | 30,251 | 32,200 | 6.4 | 366.15 | 389.74 | 23.59 | 17.0 |
| \$50,000 to \$74,999 | 48,783 | 50,871 | 4.3 | 665.40 | 693.89 | 28.49 | 20.5 |
| \$75,000 to \$99,999 | 66,652 | 68,528 | 2.8 | 806.16 | 828.84 | 22.68 | 16.3 |
| \$100,000 or more | 134,308 | 136,177 | 1.4 | 4,183.13 | 4,241.36 | 58.23 | 41.9 |
| All Incomes | 83,444 | 85,354 | 2.3 | 6,067.83 | 6,206.74 | 138.91 | 100.0 |

TABLE X
SUMMARY OF SIMULATION RESULTS: 20% OF POPULATION ACCOUNT FOR
80% OF HEALTH CARE COSTS

| Price Elasticity | Level | Variable | Before | After | Change |
|------------------|-----------|---------------------------|-------------------|-------------------|--------|
| Baseline | Household | After-Tax Income | \$ 83,444 | \$ 85,250 | 2.2% |
| Baseline | Household | Health Insurance Premiums | 19,616 | 17,055 | -13.1 |
| Baseline | Household | Income Tax | 21,575 | 22,133 | 2.6 |
| Baseline | Household | Medical Care Expenses | 16,674 | 14,497 | -13.1 |
| Baseline | Household | Payroll Tax | 17,399 | 17,791 | 2.3 |
| Baseline | Total | After-Tax Income | 6,067,826,206,835 | 6,199,182,854,060 | 2.2 |
| Baseline | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,240,208,270,113 | -13.1 |
| Baseline | Total | Income Tax | 1,568,873,090,361 | 1,609,490,010,659 | 2.6 |
| Baseline | Total | Medical Care Expenses | 1,212,463,475,069 | 1,054,177,029,596 | -13.1 |
| Baseline | Total | Payroll Tax | 1,265,203,023,791 | 1,293,694,583,976 | 2.3 |
| -0.2 | Household | After-Tax Income | 83,444 | 84,448 | 1.20 |
| -0.2 | Household | Health Insurance Premiums | 19,616 | 18,181 | -7.31 |
| -0.2 | Household | Income Tax | 21,575 | 21,896 | 1.49 |
| -0.2 | Household | Medical Care Expenses | 16,674 | 15,454 | -7.31 |
| -0.2 | Household | Payroll Tax | 17,399 | 17,618 | 1.26 |
| -0.2 | Total | After-Tax Income | 6,067,826,206,835 | 6,140,847,850,201 | 1.20 |
| -0.2 | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,322,103,742,231 | -7.31 |
| -0.2 | Total | Income Tax | 1,568,873,090,361 | 1,592,194,546,017 | 1.49 |
| -0.2 | Total | Medical Care Expenses | 1,212,463,475,069 | 1,123,788,180,896 | -7.3 |
| -0.2 | Total | Payroll Tax | 1,265,203,023,791 | 1,281,164,576,742 | 1.26 |

TABLE XI

SUMMARY OF SIMULATION RESULTS, 11% OF POPULATION ACCOUNT FOR 69% OF COSTS

| Price Elasticity | Level | Variable | Before | After | Change |
|------------------|-----------|---------------------------|-------------------|-------------------|--------|
| Baseline | Household | After-Tax Income | \$ 83,444 | \$ 85,951 | 3.0% |
| Baseline | Household | Health Insurance Premiums | 19,616 | 16,060 | -18.1 |
| Baseline | Household | Income Tax | 21,575 | 22,352 | 3.6 |
| Baseline | Household | Medical Care Expenses | 16,674 | 13,651 | -18.1 |
| Baseline | Household | Payroll Tax | 17,399 | 17,943 | 3.1 |
| Baseline | Total | After-Tax Income | 6,067,826,206,835 | 6,250,130,089,186 | 3.0 |
| Baseline | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,167,865,712,012 | -18.1 |
| Baseline | Total | Income Tax | 1,568,873,090,361 | 1,625,351,127,938 | 3.6 |
| Baseline | Total | Medical Care Expenses | 1,212,463,475,069 | 992,685,855,211 | -18.1 |
| Baseline | Total | Payroll Tax | 1,265,203,023,791 | 1,304,762,995,366 | 3.1 |
| -0.2 | Household | After-Tax Income | 83,444 | 84,833 | 1.7 |
| -0.2 | Household | Health Insurance Premiums | 19,616 | 17,630 | -10.1 |
| -0.2 | Household | Income Tax | 21,575 | 22,019 | 2.1 |
| -0.2 | Household | Medical Care Expenses | 16,674 | 14,986 | -10.1 |
| -0.2 | Household | Payroll Tax | 17,399 | 17,703 | 1.7 |
| -0.2 | Total | After-Tax Income | 6,067,826,206,835 | 6,168,857,921,570 | 1.7 |
| -0.2 | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,282,025,349,740 | -10.1 |
| -0.2 | Total | Income Tax | 1,568,873,090,361 | 1,601,196,870,114 | 2.1 |
| -0.2 | Total | Medical Care Expenses | 1,212,463,475,069 | 1,089,721,547,279 | -10.1 |
| -0.2 | Total | Payroll Tax | 1,265,203,023,791 | 1,287,296,570,793 | 1.7 |

TABLE XII

Summary of Simulation Results, 5% of Population Account for 50% of Costs

| Price Elasticity | Level | Variable | Before | After | Change |
|------------------|-----------|---------------------------|---------------------|---------------------|--------|
| Baseline | Household | After-Tax Income | \$ 83,444 | \$ 86,908 | 4.2% |
| Baseline | Household | Health Insurance Premiums | 19,616 | 14,697 | -25.1 |
| Baseline | Household | Income Tax | 21,575 | 22,654 | 5.0 |
| Baseline | Household | Medical Care Expenses | 16,674 | 12,492 | -25.1 |
| Baseline | Household | Payroll Tax | 17,399 | 18,152 | 4.3 |
| Baseline | Total | After-Tax Income | 6,067,826,206,835 | 6,319,719,790,429 | 4.2 |
| Baseline | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,068,717,279,700 | -25.1 |
| Baseline | Total | Income Tax | 1,568,873,090,361 | 1,647,325,003,936 | 5.0 |
| Baseline | Total | Medical Care Expenses | 1,212,463,475,069 | 908,409,687,745 | -25.1 |
| Baseline | Total | Payroll Tax | 1,265,203,023,791 | 1,319,932,705,509 | 4.3 |
| -0.2 | Household | After-Tax Income | 83,444 | 85,354 | 2.3 |
| -0.2 | Household | Health Insurance Premiums | 19,616 | 16,884 | -13.9 |
| -0.2 | Household | Income Tax | 21,575 | 22,188 | 2.8 |
| -0.2 | Household | Medical Care Expenses | 16,674 | 14,351 | -13.9 |
| -0.2 | Household | Payroll Tax | 17,399 | 17,817 | 2.4 |
| -0.2 | Total | After-Tax Income | 6,067,826,206,835 | 6,206,738,625,839 | 2.3 |
| -0.2 | Total | Health Insurance Premiums | 1,426,427,617,728 | 1,227,740,521,636 | -13.9 |
| -0.2 | Total | Income Tax | 1,568,873,090,361 | 1,613,448,204,598 | 2.8 |
| -0.2 | Total | Medical Care Expenses | \$1,212,463,475,069 | \$1,043,579,443,391 | -13.9% |
| -0.2 | Total | Payroll Tax | \$1,265,203,023,791 | \$1,295,602,149,493 | 2.4% |

TABLE XIII

ACA METALLIC BANDS: AVERAGE COST PER ENROLLEE

| Cost Group | Bronze | Silver | Gold | Platinum |
|-----------------|----------|----------|----------|----------|
| Actuarial Value | 60% | 70% | 80% | 90% |
| Top 20% | \$20,390 | \$27,008 | \$31,820 | \$39,212 |
| All | \$4,687 | \$6,509 | \$7,736 | \$9,387 |
| Bottom 80% | \$761 | \$1,384 | \$1,715 | \$1,931 |

Source: Centers for Medicare & Medicaid Services, Actuarial Value Calculation, Centers for Medicare & Medicaid Services. Actuarial Value Calculator, <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/Final-2018-AV-Calculator.xlsm>, accessed April 2019. For more information regarding CMS's AV Calculator see the corresponding methodology document. Centers for Medicare & Medicaid Services. Final 2019 Actuarial Value Calculator Methodology. December 28, 2017. <https://www.cms.gov/CCIIO/Resources/Regulations-and-Guidance/Downloads/Final-2019-AV-Calculator-Methodology.pdf>, accessed April 2019.

TABLE XIV

AVERAGE COST PER HOUSEHOLD = 2.58 × AVERAGE COST PER ENROLLEE

| Cost Group | Bronze | Silver | Gold | Platinum |
|------------|----------|----------|----------|-----------|
| Top 20% | \$52,607 | \$69,681 | \$82,096 | \$101,166 |
| All | 12,092 | 16,792 | 19,960 | 24,219 |
| Bottom 80% | 1,964 | 3,570 | 4,426 | 4,983 |

Source: Average household size of 2.58 people per household, *2010 U.S. Census*. U.S. Department of Commerce, Economics and Statistics Administration. Households and Families: 2010. Issued April 2012. <https://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf>, accessed April 2019.

TABLE XV

AVERAGE PRICE PER HOUSEHOLD $\leq 1.25 \times$ AVERAGE COST PER HOUSEHOLD

| Cost Group | Bronze | Silver | Gold | Platinum |
|------------|----------|----------|-----------|-----------|
| Top 20% | \$65,759 | \$87,101 | \$102,620 | \$126,458 |
| All | 15,115 | 20,991 | 24,950 | 30,274 |
| Bottom 80% | 2,454 | 4,463 | 5,532 | 6,228 |

TABLE XVI
SIMULATION PRICE OF NEW CORPORATE PLANS VERSUS
AVERAGE PRICES OF ACA METALLIC BAND PLANS

| Cost Concentration | Price Elasticity | New Premium Price | ACA Bronze Price | ACA Silver Price | ACA Gold Price | ACA Platinum Price |
|--------------------|------------------|-------------------|------------------|------------------|----------------|--------------------|
| 20/80 | Baseline | \$17,055 | \$15,115 | \$20,991 | \$24,950 | \$30,274 |
| 20/80 | -0.2 | 18,181 | 15,115 | 20,991 | 24,950 | 30,274 |
| 11/69 | Baseline | 16,060 | 15,115 | 20,991 | 24,950 | 30,274 |
| 11/69 | -0.2 | 17,630 | 15,115 | 20,991 | 24,950 | 30,274 |
| 5/50 | Baseline | 14,697 | 15,115 | 20,991 | 24,950 | 30,274 |
| 5/50 | -0.2 | 16,884 | 15,115 | 20,991 | 24,950 | 30,274 |

Source: United States Department of Labor, Private Pension Plan Bulletin Historical Tables and Graphs 1975–2016. <https://www.dol.gov/agencies/ebsa/researchers/statistics/retirement-bulletins/private-pension-plan>.

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APPENDIX A: SIMULATION INPUTS

This section describes the sources of the input data for the simulation.

Price Elasticity. Because, unlike most other elasticity estimators, Marquis and Long used non-group data and derived elasticity by income as well as price, our simulations apply their estimates.⁶² From Current Population Survey data, they estimate the price elasticity for families with income below 200% of the poverty line to be -0.40, and the price elasticity for families with income above 200% of the poverty line to be -0.33 (The HHS poverty guidelines for 2018 (US Department of Health and Human Services, 2018) set the poverty guideline for a family of four at \$25,100.) We additionally used a more conservative elasticity estimate of -0.20.

Our elasticity estimates are within the bounds of those identified elsewhere in the literature. Two studies of elasticities derived under conditions similar to ours, in which households bore the incremental cost of their plan choices, reported elasticities of between -0.28 and -0.62 in one (Royalty and Solomon, 1999), and -0.30 to -0.60 in the other.⁶³ A study of 10 million enrollees found elasticities that ranged from -0.08 in the telecommunications industry to -0.49 in retailing with an average of -0.28.⁶⁴ A review of empirical studies showed a range between -0.20 and -1.00 for optional primary health insurance in the US.⁶⁵

Income Elasticity. As explained above, the estimate of the income elasticity of demand for health insurance of 0.15 comes from Marquis and Long.⁶⁶

Number of Households and Mean Income. The number of households and mean income were based on data from the 2018 Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS)⁶⁷

Health Insurance Premiums: Employee and Employer Contribution. The data for the variables of employee contribution and employer contribution come from the Kaiser Family Foundation.⁶⁸

Marginal Tax Rates. The 2018 marginal income tax rates come from the Tax Foundation.⁶⁹

Payroll Taxes. As employees reallocate compensation from health insurance premiums to wages, they will be subject to additional payroll taxes (Social Security and Medicare). Every dollar of increased wages will be decreased by \$0.0765 to cover Social Security and Medicare requirements. These employee payments will be matched by employers, thus increasing Federal tax revenues by \$0.153 for every dollar of increased wages. The current tax rate for Social Security is 6.2% for the employer and 6.2% for the employee, or 12.4% total. The current rate for Medicare is 1.45% for the employer and 1.45% for the employee, or 2.9% total.⁷⁰

Medical Care Expenses: Estimated, as per the ACA's requirements, at 85% of the health insurance premium.⁷¹

APPENDIX B: ARE THE LOWER-PRICED PREMIUMS SUGGESTED BY THE
SIMULATION SUFFICIENT FOR PURCHASE OF AFFORDABLE CARE ACT (ACA) PLANS?

Our simulations yielded six premium price declines (13.1%, 7.31%, 18.1%, 10.1%, 25.1%, and 13.9%) based on three different estimates of concentration of risk and two different estimates of price elasticity.^k To test whether these prices are sufficient to enable enrollees to buy the full-risk ACA plans, we compared the new premium prices per household to the 2018 price per enrollee for the four metallic bands, each with a differing actuarial value, offered on the ACA exchanges (see Table VII).

(INSERT TABLE VII ABOUT HERE)

To convert the government's per enrollee data to the cost per household, we multiplied them by 2.58, the 2018 average size of a household (see Table VIII).

(INSERT TABLE VIII ABOUT HERE)

We then converted the government's cost data to price data by multiplying the household cost by 1.25 (see Table IX). The ACA requires health insurance firms to spend at least 80% of premiums on health care costs and quality improvement activities. Consequently, the average price per household cannot exceed 1.25 of the average cost per household. (This adjustment provides an upper bound for the average price per household. Insurance firms selling to large groups must spend at least 85% of premiums on care and quality improvement. For large groups, average price per household must be less than 1.18 times the average cost per household.)

(INSERT TABLE IX ABOUT HERE)

^k The price changes can be found in Tables IV, V, and VI.

As shown in Table X below, our simulation prices for policies indicate that corporate enrollees will be able to buy only full risk, bronze-level ACA plans (priced at 60% of estimated actuarial value) with their new policy prices; but, because large employers primarily offer ASO plans, which are lower priced, corporate enrollees will be able to buy plans with a higher actuarial value.

(INSERT TABLE X ABOUT HERE)

Realistically, if each corporation's ESI plan is priced with its concentration of risk appropriately estimated, the relevant factors in determining affordability of different policies are the amount of employer and employee contribution and the holdback required for the employer pool's concentration of risk.

Endnotes

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