

Will Divestment from Employment-Based Health Insurance Save Employers Money? The Case of State and Local Governments^{*}

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ABSTRACT

Reforms introduced by the Affordable Care and Patient Protection Act (ACA) build new sources of coverage around employment-based health insurance. But what if firms find it cheaper to have their employees obtain insurance from these sources, even after accounting for penalties (for non-provision of insurance) and employee bonuses (to ensure the shift is cost neutral for them)? State and local governments (SLGs) have strong incentives to consider the economics of such “divestment”; many have large unfunded benefits liabilities. We investigated whether SLGs would save under two scenarios: (1) shifting all employees and under-65-retirees to alternative sources of coverage; (2) shifting only employees whose household incomes indicate they would be eligible for federally subsidized coverage and all under-65-retirees. Full divestment would cost SLGs more than they currently pay, due primarily to penalty costs. Selective divestment could save SLGs nearly \$129 billion over 10 years at the expense of the federal government.

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I. INTRODUCTION

Sweeping national policy reforms often reset the division of fiscal responsibilities between the public and private sectors, and between different levels of government.[1] They may also create strong incentives for cost shifting, particularly in immediate post-reform periods when “loopholes” abound in evolving regulations.[2] The Patient Protection and Affordable Care Act (ACA) is no exception. The federal government’s role in healthcare financing expands substantially as it takes on subsidies and cost-sharing for lower income households, as well as the lion’s share of the costs of Medicaid expansions.

The enhanced role for federal government financing has the potential to chill employers’ willingness to offer health insurance.[3] With coverage for most workers and their families available through the health insurance exchanges or expanded Medicaid programs, it may be appealing for firms to curtail their own offerings. For this to be a cost-saving move, however, any savings from having employees obtain insurance elsewhere would need to exceed penalties levied under the ACA.¹ Such health insurance “divestment” by employers is not what the ACA’s architects intended, but the potential for firms to have financial incentives to pursue it cannot be ignored.

One large group of employers with pressing reasons to consider health insurance divestment is state and local government (SLG). Of critical importance, SLGs were particularly hard hit by the most recent financial crisis. Between 2009 and 2012, budget shortfalls among state governments exceeded \$540 billion [4], prompting deep cuts to spending and services. Although the fiscal position of SLG has generally improved since 2012, many will take years to return to a stable financial position.[4]

Health insurance benefits constitute a substantial component of SLG budgets. In 2013, most SLGs offered health insurance to their employees, and many extended benefits to retirees under age 65, but continuing to do so will be challenging.[5] A 2010 Pew Center report estimated that states’ obligations to public sector retiree healthcare benefits exceeded states’ assets by \$627 billion.[6-8] A more recent Pew Center report co-commissioned with the MacArthur foundation finds that SLGs offer more generous insurance than large private employers, covering a greater proportion of their employee’s healthcare costs and being more likely to offer first-dollar coverage.[9] Hence, the weight of SLG healthcare obligations in their current form is particularly heavy.

Would SLGs alleviate their budgetary pressures by shifting current and retired employees into federally-subsidized health insurance plans? If so, how much money might they save? We addressed these questions by combining and analyzing data from three national surveys. We began by estimating the costs to SLGs of continuing to offer coverage in the usual way. Next, we

¹ In addition to the incentives of capturing subsidies and cost-sharing, an important example of how the ACA may raise the cost of maintaining employer sponsored insurance plans relative to cost prior to the ACA is the so-called “Cadillac tax” which taxes overly generous plans. Press coverage has highlighted the risk of SLG insurance plans in facing the “Cadillac tax”; and it is likely given SLG healthcare plan generosity that it will be felt there first. Yet, because the threshold at which the “Cadillac tax” kicks in is indexed to the overall CPI and medical costs have historically grown much more quickly than the overall CPI, it is quite possible that many employers – even non-SLGs – will eventually face the “Cadillac tax” themselves and hence greater incentives to shift away from employer sponsored coverage or at least to reduce the generosity of the plans they offer.

estimated whether SLGs would save by dropping employment-based insurance entirely and supporting employees and retirees to obtain coverage elsewhere. We then estimated potential savings from selectively shifting defined subgroups of beneficiaries to alternative coverage sources. Finally, we considered possible legal barriers to these moves by SLGs, particularly the selective shifting of current employees onto the ACA exchanges.

Our findings should provide useful information to SLGs considering their options in the wake of the ACA. Since savings to SLGs are achieved largely by shifting costs to the federal government, our estimates are also relevant to ongoing debates about projected costs of ACA-related reforms to the federal government.

A. The Divestment Calculus

The calculus of divestment is complex for any employer and may be particularly so for SLGs. It involves evaluating the complex interplay between financial and non-financial incentives for and against such action that flow from a variety of sources, accounting for demand, political climates and the potential for policies to be changed through federal regulatory, legislative or legal processes.

The ACA does not establish special rules for SLGs; essentially, the law treats them like any other employer.² Thus, under the ACA's "play-or-pay" regime, if an SLG with at least 50 full-time equivalent workers does not offer at least one coverage option to every full-time employee, and an employee obtains subsidized coverage through an individual exchange, the employer must pay a \$2,000 penalty for each full-time employee above the first 30. Alternatively, if an SLG with 50 full-time equivalent employees offers coverage but employees choose instead to purchase insurance on the exchange, the SLG faces a penalty if the purchase attracts a subsidy. In this case, the SLG faces the lesser of two penalties: \$3,000 per employee who purchases subsidized coverage or \$2,000 for all full-time employees above the first 30.

Nor does the ACA stipulate special rules or exceptions for SLG employees. They may purchase health insurance offered on the exchange, or enroll in Medicaid provided they meet eligibility criteria. Income thresholds for Medicaid eligibility vary by state, but the ACA sets a floor: states implementing the expansions must accept households with incomes below 138% of the Federal Poverty Level (FPL), which in 2013 corresponded to \$15,856 for an individual or \$26,951 for a family of three. Households with incomes between 138% and 400% FPL are eligible for subsidies and cost-sharing for exchange-purchased plans, calculated on a sliding scale.³

For SLGs and other employers, shifting employees to Medicaid and exchange-purchased plans may be fiscally attractive. However, the calculus is not straightforward. It depends on several factors — principally, how many employees are Medicaid eligible, how many are eligible for subsidies and cost-sharing (and at what level), and the amount of any applicable penalties. Furthermore, these costs and benefits depend upon whether particular states have undertaken

² Rules described in this section come from various provisions of [10]The Patient Protection and Affordable Care Act. U.S.A2010:119.

³ The ACA actually specifies 133% of the federal poverty level as the Medicaid eligibility threshold, but the first 5 percentage points of income are disregarded, effectively making it 138%.

Medicaid expansions. These factors, and the overall cost equation, are amenable to quantitative analysis.

Other implications of health insurance divestment by SLGs — for example, political and reputational costs — are much more difficult to quantify, and we do not incorporate them directly into our estimates. However, recent developments provide some clues. A 2009 50-state survey by the US Government Accountability Office found that SLGs striving to control unfunded liabilities have introduced a variety of changes to their retiree health benefits, including alterations to plan offerings, employer contributions, and eligibility requirements.[7] In addition, recent media reports describe proposals by several cities and counties — including Chicago, Detroit, Sheboygan County (Wisconsin), and Stockton (California) — to utilize ACA provisions to reduce the costs of health insurance benefits to their retirees.[11-14]⁴ Yet, even with these recent developments, the prospect of firms divesting from health insurance in the presence of the ACA has been questioned on a number of grounds including the observation that even when not required, firms provided such benefits voluntarily prior to the ACA.[15]

Despite signs that SLGs are already moving to constrain health insurance benefits, we recognize that simply ceasing to offer them and pointing workers elsewhere would be an unpalatable option for most SLGs, however parlous their financial situation. This is especially true in relation to current employees. Such a move would be criticized on public policy grounds, and may have adverse effects on the health and wellbeing of the tens of millions of people who currently obtain coverage through SLG-based plans.

For these reasons, all of the health insurance divestment strategies we consider incorporate an income supplement paid by SLGs to their employees who purchase insurance on the exchanges. The purpose of these supplements is to bridge any cost differences employees may encounter (i.e., the difference between premiums in their employment-based plan and premium costs in products found on the exchange, less any subsidies received). In other words, our calculations are designed to ensure SLG employees who shift to federally subsidized forms of coverage are no worse off financially than they were under employment-based coverage.

We also recognize that forcing subgroups of employees to shift from employment-based coverage is likely to be unpopular. In the selective divestment scenarios we consider, SLGs need not impose bars on employment-based purchasing. Rather, we imagine a suite of inducements that would lead most or all members of certain subgroups to seek non employment-based coverage, and if they do, fair income supplements would be provided to make this a cost-neutral move.

In addition, income supplements will have tax consequences. Employer contributions to coverage purchased on an exchange must be paid with post-tax income, whereas traditional employer sponsored coverage can generally be made with pre-tax income. With some exceptions, employee contributions are taxable.⁵[17, 18] Consequently, the tax treatment of any

⁴ We are not aware of any SLGs actively considering this strategy for current employees.

⁵ Payments that exceed 10% of the employee's Adjusted Gross Income (AGI) are tax deductible. Under section 125 of the Internal Revenue Code, the Internal Revenue Service also permits certain "qualified expenses", including some medical and premium costs, to be paid on a pre-tax basis. For a discussion of "cafeteria plans" see [16] Hall M, Monahan A. Paying for Individual Health Insurance through Tax-sheltered Cafeteria Plans. Inquiry. 2010; 47(3):252-61.

income supplements to SLG employees must also be considered in a divestment calculus that seeks to leave the SLG employees financially no worse off.

Finally, for a variety of reasons including their own overall strategy on healthcare for all citizens within their jurisdiction, some SLGs may simply be more inclined and ready to consider shifting their own employees towards ACA exchanges. One indication of this is whether a state has established its own insurance exchange or instead has a federal exchange imposed. Another is whether a State has taken up the ACA Medicaid expansion. Hence, we examine scenarios in which divestment strategies are confined to States that have their own exchanges, all but one having undertaken a Medicaid expansion as well.

II. DATA AND METHODS

A. Data

Our analyses use the Current Population Survey (CPS), Medical Expenditure Panel Survey Household Component (MEPS), and Annual Survey of Public Employment & Payroll (APES).

The CPS is a monthly survey of about 60,000 households conducted by the US Bureau of Labor Statistics and the Census Bureau. It provides information on a wide range of labor and income statistics; and includes data on respondents' demographic and household characteristics. We used the CPS to estimate the size of the study population, and to determine the incomes and household composition of SLG employees and retirees.

The MEPS, conducted by the Agency for Health Care Research and Quality, is a comprehensive source of information on healthcare utilization and costs. We used the household component of the MEPS to estimate healthcare expenditures for our study population.

The APES, conducted by the US Census Bureau, provides comprehensive data on government employment. The survey covers US federal, state and local civilian government employees, and permits reliable estimates of the number of full-time employees and full-time equivalents for each type of government entity. We used APES data to sort SLG employees into government entities of varying sizes, and to validate our estimates of the total number of SLG workers.

B. Study Population

We used the CPS to identify two groups: 1) current SLG employees under the age of 65 who have health insurance coverage provided by their employer; 2) SLG retirees under the age of 65 who report an SLG as their primary source of retirement income. The CPS's representative design permitted extrapolation of national estimates of the size of both groups (**Figure 1** and **Appendix Tables 1**). We also extracted data on the number of persons under 65 in the households of each member of each group, as well as their demographic information (e.g., age and sex). Values for all CPS measures were based on averages derived from surveys conducted between 2010 and 2013.

Results of analyses of both CPS and MEPS data were weighted to represent the civilian non-institutionalized US population.⁶ We express all monetary outcomes in 2013 dollars, adjusting inflation for non-healthcare quantities (e.g., income) using the consumer price index (CPI) and adjusting healthcare costs using the medical component of the CPI.[19]

C. Health Insurance Costs

Estimated household healthcare costs were used as a proxy for the cost of health insurance for members of the study population, whether they obtained it through employment-based plans or on the exchanges. We predicted healthcare costs for SLG plan enrollees using MEPS data on average annual healthcare expenditures (including pharmaceuticals).

For every worker, retiree, and family member identified in the CPS analyses, we predicted an average annual healthcare expenditure, based on the individual's age, sex, and geographical region. The prediction model used an ordinary least squares regression applied to the adjusted MEPS expenditure data with restricted cubic splines for age, with knots starting at 0 and then in 15-year increments. The regression specification was a fully interacted model between the splines and indicators for sex and for region (**Appendix Figure 1**). Predicted expenditures were then aggregated at the household level, and expenditures on family members aged 65 years or older were excluded from the tallies.

Three main factors create some divergence between direct MEPS-based cost estimates and the true costs of health insurance to SLGs, and necessitate adjustments. Several studies have found that MEPS underestimates health care costs by up to 10%; additionally, MEPS data does not reflect insurance company loading fees, which for SLG workforces may be in the order of 25%. [20-27] Beyond this, SLG employees make some contributions (e.g. copayments, deductibles) to the costs of their health care (although these contribution levels tend to be quite low by national standards). Specifically, survey data suggests SLGs, on average, cover about 80% of the costs.[28] To account for these three factors, we adjusted our cost estimates accordingly (i.e. $MEPS * 1.10 * 1.25 * 0.80$).

It is worth noting that the final costs we estimate exceed the premiums charged for silver plans in every state; they are closer to the cost of gold plans (**Appendix Table 2**).

D. Ledger Losses to SLGs from Divestment

1. Penalties

The penalty regime prescribed under the ACA fines firms that do not offer insurance options current employees, and firms that offer options that are “unaffordable” or do not provide “minimum value”.⁷ However, there are two necessary conditions for penalty imposition: the employer must have more than 50 full-time equivalent workers, and at least one employee must

⁶ The chief sources of uncertainty in our estimates are the estimated sizes of the study population and the precision of the predictions of the expected individual healthcare costs. The consistency of the estimated size of our study population with counts from the APES provides confidence about the precision of this estimate, at least in relation to current SLG employees. The large-scale, national representativeness of MEPS permits robust healthcare cost predictions.

⁷ “Unaffordability” is defined as premiums that exceed 9.5% of an employee’s household income. “Minimum value” is defined as covering at least 60% of the total allowed costs of benefits expected to be incurred under the plan.

have purchased a policy on the exchange and attracted a subsidy or cost-sharing. Our analysis had to account for how often these conditions were met.

Because the CPS does not identify specific SLGs, we could not directly link the profiles of individuals in our study population to characteristics of their SLGs, such as workforce size (although 2011 APES data showed that >99% of SLG employees worked in entities with more than 30 full-time equivalent employees). We therefore made a conservative pair of assumptions: all SLGs had enough employees to expose them to penalties, and all SLGs would have at least one employee who qualified for exchange subsidies or cost-sharing. Hence, for the scenario in which SLGs cease to offer coverage entirely, we set the penalty at \$2,000 per full-time employee above the first 30 full-time employees. For scenarios in which SLGs selectively shift employees away from employment-based options, we set the penalty at \$3,000 per shifted employee eligible for a federal subsidy and/or cost-sharing. We chose the \$3,000 formulation over the \$2,000 one because, for most SLGs, it is likely to produce the lesser total penalty. Finally, we used APES data to compute the per-capita penalties according to size of SLGs' full-time workforce (**Appendix Table 3**).

One important caveat to the penalty calculations outlined above is that the “lesser penalty” provisions are designed to apply in situations in which the employer has offered health insurance to all full-time employees. This bears upon the question of what firms may do to selectively divest. Stripping a subset of employees of any opportunity to purchase employment-based policies would immediately trigger the \$2,000 version of the penalty; it may also be illegal.⁸ For these reasons, selective shifting strategies are likely to be most advantageous if they are pursued through inducements that preserve employees' voluntary choices about where to purchase their health insurance. We assume such inducements, coupled with the income supplements described below, could drive shifts away from employment-based coverage options. However, our calculations do not consider the costs of such inducements.

2. Income Supplements

To calculate the size of the income supplements SLGs would have to pay to make employees “whole” for premium costs they incurred in purchasing coverage on the exchange, we computed the SLG employer share (80%) of each household's expected healthcare costs minus any subsidies and cost-sharing it would attract.

It was also necessary to consider that such income supplements may alter the tax position of SLG employees. One change is virtually certain; two others are possible. First, by increasing an employee's gross income, the supplements would increase the employee's total tax liability. Second, the additional income may bump an employee into a higher marginal tax bracket. Finally, the supplements may affect the tax deductibility of premium payments. Non-self-employed workers may deduct premium payments in excess of 10% of their adjusted gross income (AGI). Hence, increases to AGI caused by the income supplements may reduce or eliminate the tax-deductible premiums.

Our estimates of the appropriate level of income supplementation for each SLG employee were adjusted for these three potential tax effects to ensure the supplements left employees “whole”

⁸ See discussion of potential legal barriers below.

(**Appendix Sections 6-7**). We did not adjust income supplements to SLG retirees for tax effects because retirees already pay tax on those benefits.

E. Ledger Gains to SLGs from Divestment

1. Medicaid Coverage

To calculate household income as a percentage of the FPL, we used CPS data on total household income for SLG employees and under-65-retirees. For households with income below 138% FPL, we assumed household members younger than 65 years would be eligible for Medicaid, thereby shifting costs from SLGs to those programs. In our base calculation this assumption applied only to the 26 states (including the District of Columbia) implementing Medicaid expansions as of January 28, 2014 as the federal government covers the overwhelming majority of the healthcare costs for individuals newly enrolled in states expanding Medicaid (**Appendix Table 4**).^[29] In a secondary calculation, we examined the implication for financial incentives to divest if one assumed that all states would expand Medicaid.

Both assumptions are imperfect. Income eligibility thresholds for Medicaid programs vary across states and population subgroups (children, pregnant women, etc.).^[30] In certain states and for certain subgroups, income eligibility thresholds are above 138% FPL. The main consequence of not accounting for these nuances is that we counted fewer individuals in the study population as Medicaid eligible than was truly the case, which, all else equal, would tend to bias downward our estimates of any SLG savings from divestment. Finally, even in states that continue to bear a substantial share of Medicaid costs (because they have not expanded Medicaid) and hence may not find it financially advantageous to shift workers on to this source of coverage, local governments are not so constrained. Thus, we were conservative in assuming that local governments would behave like their state counterparts.⁹

2. Subsidies and Cost-Sharing for Individual Purchasers

For households with incomes between 138-400% FPL, we followed ACA rules for determining the amounts of subsidies and cost-sharing (**Appendix Section 5**).^[31] For households with income above 400% FPL, we assumed no subsidies or cost-sharing.

Household income determines the levels of both subsidies and cost-sharing. Therefore, if SLGs provide income supplements to offset any additional costs employees and retirees face in purchasing insurance on the exchange, this may in turn affect eligibility for subsidies and cost-sharing. The relationship between these variables is dynamic. As income supplements boost total household income, subsidies and cost-sharing drop, necessitating larger supplements to achieve status quo. Tax effects are an additional variable in this dynamic equation. We solved for the stable levels of subsidies, cost-sharing, and income supplements using a two-step, fixed point method (**Appendix Section 7**).

3. Eligibility for Exchange Subsidies and Cost-Sharing

The ACA explicitly authorized subsidies for policies purchased through state-operated exchanges, but included no such explicit authorization for purchases on federally operated

⁹ Admittedly, this assumption was a necessity because the CPS data did not permit separation of households with state government employees from those with local government employees.

exchanges.¹⁰ On July 22 2014, the US Court of Appeals for the District of Columbia struck down an IRS ruling that had declared subsidies were available on federal exchanges.[32] Hours later the Fourth Circuit Court of Appeals in another decision upheld the IRS's interpretation, ruling that the statutory language was ambiguous.[33] In November 2014, the US Supreme Court granted certiorari in *King*, and a decision is expected in mid-2015.

What effects would success for the plaintiffs-appellants in *King* have on our estimates? There are actually four different types of exchanges: (1) state-based marketplaces; (2) federally-supported state-based marketplaces (in state exchanges use the federal information technology platform); (3) state-partnership marketplaces (in which states provide consumer assistance but the federal government does the rest); and (4) federally-facilitated marketplaces. A win for the plaintiffs-appellants in *King* would likely invalidate subsidies for federally-facilitated exchanges and probably also invalidate them for partnership exchanges, but projecting implications beyond that is difficult. We performed a sub-analysis that assessed SLG employer savings in the event that subsidies became available only on state-based-marketplaces (n=14) and federally-support state-based marketplaces (n=3).¹¹

III. RESULTS

A. Status Quo

SLGs in the US employ approximately 12 million workers and have 1.5 million retirees under the age of 65 (**Figure 1**). The average household size is 3.5 persons for workers and 2.5 for retirees. Thus, SLGs provide health insurance benefits to up to 45 million individuals.

We estimate that the study population — SLG employees, SLG retirees under 65 years of age, and the families of both groups — will incur approximately \$1.8 trillion in healthcare costs over the next 10 years (**Appendix Table 6**). This total consists of \$1.59 trillion for employees and their families and \$250 billion for retirees and their families. For context, this equates to 6% of the total cost of the US healthcare system over the decade. [35] [35]

B. Household Income and Eligibility for Financial Assistance

Thirty nine percent of the study population had household incomes low enough to qualify for subsidies and/or cost-sharing on the health insurance exchanges (**Figure 2** and **Appendix Table 6**). Nationally, 40% of SLG employees had household incomes in the 138-400% FPL range and 33% of retirees did. An additional 3% of households met the ACA's Medicaid income eligibility threshold. There was substantial variation across states in the proportion of SLG employees and retirees whose household incomes fell within these bands (**Appendix Table 7**).

C. Full Divestment

¹⁰ The ACA provides for establishment of state exchanges under §1311. In the event a state does not establish an exchange, §1321 authorizes the federal government to do so. At issue in *Halbig* and *King* were the final regulations the IRS released on section 36B of the Internal Revenue Code, which extended the ACA's premium assistance program to exchanges established under both §1311 and §1321.

¹¹ The status of states exchanges came from the most recent version of a tracking report published by the Kaiser Family Foundation with the list reproduced in **Appendix Table 5**. [34] State Health Insurance Marketplace Types, 2015. 2015 Available from: <http://kff.org/health-reform/state-indicator/state-health-insurance-marketplace-types/>

Exiting employment-based health insurance altogether would be a more expensive proposition than the status quo for SLGs in almost all states and the District of Columbia (**Appendix Tables 8-10**). This result is primarily driven by the size of the employer penalties. But penalties aside, in 29 states, the size the income supplements required to leave employees and retirees no worse off outstrip the combined savings reaped from subsidies and Medicaid displacement. A recalculation that assumed all states proceeded with Medicaid expansions (as opposed to the 26 jurisdictions that currently are) did not eliminate the net losses associated with full divestment (**Appendix Tables 11-13**).

D. Selective Divestment

An alternative strategy for SLGs is to encourage particular subgroups of beneficiaries to seek coverage elsewhere. There are many possibilities for construction of the subgroups. We focused on the cost implications of shifting two clearly defined subgroups: (1) under-65-retirees, and (2) employees whose household income levels make them eligible for either Medicaid coverage or subsidies on the exchanges.

1. Retirees

It should not be surprising that several cities and municipalities have already signaled interest in shifting under-65 retirees to alternative sources of coverage. Several elements of the cost equation suggest it may be particularly advantageous to do so. In particular, employer penalties do not apply and the tax effects of income supplementation are minimal or nil.

We estimated that shifting retirees and their households to health insurance purchased on the exchanges could save SLGs more than \$18 billion over 10 years (**Table 1** and **Appendix Table 9**). Every state would save. Approximately 80% of these savings stem from subsidies and cost-sharing; the rest come from Medicaid displacement of SLG coverage. Total savings rise to more than \$21 billion over 10 years under the assumption that all states undertake Medicaid expansions (**Table 1** and **Appendix Table 12**).

2. Medicaid- or Subsidy-Eligible Employees

Because current employees account for most of SLGs' healthcare costs, the savings attained by any selective shifts of them are potentially much larger than those attainable from shifting retirees. The cost equation employed in our model lays bare which groups of employees will provide the most lucrative returns to selective divestment: employees who are Medicaid eligible, or who attract substantial subsidies and cost-sharing on the exchanges.

We estimate that shifting this subgroup of workers from employment-based coverage would save SLGs more than \$100 billion over 10 years (**Table 1** and **Appendix Tables 14**). Despite paying \$88 billion in penalties and almost \$30 billion in income supplements over the decade, the \$197 billion gained in subsidies and cost-sharing and the \$21 billion absorbed by federal support of Medicaid expansions, overwhelm these losses. Total savings would increase to more than \$130 billion over 10 years if all states undertook Medicaid expansions (**Table 1** and **Appendix Table 15**).

E. Divestment in a World Where Only State-Based Exchanges May Provide Subsidies

In states where subsidies (and the associated penalties) are unavailable, divestment will always look financially unattractive to SLGs, relative to the status quo. In the 17 states that have implemented exchanges, full divestment was less financially attractive than selective divestment. **Table 2** shows that shifting all under-65 retirees to alternative forms of health insurance coverage could save SLGs more than \$8 billion over 10 years. Selective divestment from coverage for Medicaid- or Subsidy-Eligible employees in these states could save SLGs more than \$42 billion over 10 years.

V. DISCUSSION

A. Overview of Findings

This study estimated that completely exiting the direct provision of employment-based health insurance would not save SLGs money. However, selective divestment to take advantage of coverage options introduced by the ACA could save SLGs nearly \$119 billion over the next 10 years (or \$150 billion if all states implemented Medicaid expansions). Savings of this magnitude could substantially improve the weak financial position of many SLGs.

The vast majority of the savings we have identified would come from costs shifted to the federal government. Hence, if SLGs were to follow *en masse* the selective divestment strategies we have outlined, it could add more than 10% to the projected costs of ACA reforms.[36] For the kinds of political and practical reasons mentioned earlier, divestment *en masse* seems unlikely, at least in relation to current employees. Therefore the SLG savings and additional costs to the federal government we have estimated are best interpreted as upper bounds.

B. Assumptions and Limitations

Our analysis makes a number of simplifying assumptions. One is that removing any differences in the costs of health insurance will make SLG employees indifferent to the prospect of obtaining insurance elsewhere. This does not necessarily follow. Plans purchased on the exchange may have smaller networks and may require SLG employees and retirees to switch from physicians they know and like. Further, employees who shift to Medicaid coverage may have trouble finding willing providers.[37, 38]

It is possible that an accumulation of such non-monetary factors may prompt some beneficiaries to respond strategically — for example, by seeking employment elsewhere, shifting to coverage available through a spouse's policy, even dropping coverage and pocketing the income supplement. The theoretical effects of such behavioral responses on our estimates are unclear; they run in both directions and disentangling and quantifying them requires further research.

Employers, too, may engage in strategic behavior. Salary adjustments or hiring practices may be used to alter the mix of employees eligible for the federally-subsidized coverage. SLGs may also seek to minimize their exposure to penalties by reducing the size of their full-time or full-time equivalent workforce, turning to part-time workers, outsourcing, and other measures. However, employers' latitude to take such action is constrained. Unions would vigorously resist any such large-scale changes. Moreover, since SLGs tend to be relatively large employers, workforce

changes could reduce the size of penalties based on employee multipliers, but it would be infeasible for most to shrink below the thresholds that trigger mandates and penalties.

Another simplifying assumption is that all SLGs currently offer coverage to their employees and retirees, all of whom take it up. This is not the case. The Kaiser Family Foundation's 2013 health insurance survey estimated that, although virtually every SLG had some offering, 80% of workers were eligible, of whom 91% took up insurance, resulting in a coverage proportion of 73%.^[5, 39] Uptake rates for eligible employees are high chiefly because SLG plans tend to be generous. The number of under-65-retirees who receive health insurance benefits from SLGs is more difficult to estimate. As a proxy, we used the proportion who, according to the CPS, received SLG retirement benefits. Overestimating the number of employees and retirees to whom insurance is currently provided would result in overestimates of the size of current obligations and total savings attainable, but it should have little effect on the size of per-person savings.

It should also be acknowledged that, while divestment incentives may confront all employers, SLGs are distinctive in a number of ways that may limit the direct generalizability of our analysis to non-public sector firms. Perhaps the most salient of these distinctions is that shifts of beneficiaries to Medicaid are not costless for state governments because they share the costs of this program with the federal government. For states that have expanded Medicaid under the ACA, the share is small (0% through 2017, and 10% thereafter). For states that have not, the state contribution to Medicaid averages ~45% but varies considerably across states. Such cost-sharing implications may alter the financial incentives state governments face to divest in unique ways.

Our estimates of SLG financial incentives over a 10-year time horizon do not take account of other factors that may change over this period and affect the financial incentives to divest that SLGs face. The main time-varying determinants of the magnitude of incentives are: (1) Pace of medical cost growth; (2) SLG workforce size; (3) Demography of the SLG workforce; (4) Overall health/pace of the economy; and (5) Political/legal shifts that may change the ACA at the national level or the preferences of particular State and Local Governments. In principal, it would be possible using our approach or dynamic microsimulations to incorporate trends in (1) through (3) based on the historical experience as represented by datasets like MEPS and CPS. Even for these, we note that SLG worker tenure and retirement prior to age 65 (i.e., (2) and (3)) may depend in complex ways on (1) and its interaction with SLG policies in regard to health insurance provision. The latter two determinants ((4) and (5)) do not lend themselves as readily to modeling based on historical data. Hence, we elected not to incorporate trends into our estimates but instead to properly contextualize them.

C. Legal Issues

Our analyses also rest on several legal assumptions that warrant closer scrutiny and justification. An in-depth analysis of the legal issues raised by divestment from employment-based insurance under the ACA is beyond the scope of this paper. We merely describe three areas of legal uncertainty that may arise.

1. Challenges to Key ACA Provisions

One assumption the estimates of our main analysis make is that, with the exception of the Medicaid expansions (which the US Supreme Court has already ruled cannot be forced upon states [40]), the reforms introduced by the ACA will survive more-or-less intact. A bevy of challenges to various provisions of the ACA continue to move through state and federal courts across the country.[41] If successful, some of these challenges could alter the structure of ACA reforms in ways that would significantly affect our calculations.

We tested the robustness of our estimates to the effects of the line of attack to which the ACA reforms appear most vulnerable today—namely, elimination of subsidies and penalties in states that have not established their own exchanges. This sub-analysis shows that elimination of subsidies on the federal exchanges would have dramatic effects: 27 states currently have them (with a further 7 states operate joint state-federal “partnership” exchanges), and divestment becomes a uniformly losing proposition in those states.

There are other types of challenges whose effects on our estimates we did not explore. For example, we assumed that SLGs, like private sector employers, are liable to pay the ACA penalties for failing to provide insurance, or for offering “unaffordable” insurance. Several legal challenges currently on foot argue that forcing SLGs to pay penalties violates the 10th Amendment of the U.S. Constitution.[42] If tax penalties against SLGs were found to be unconstitutional, and subsidies survived the *King* challenge, our calculations would underestimate potential savings from divestment.

2. Legality of Selective Divestment

We assumed the divestment strategies we analyzed would be lawful. For some SLGs, however, divestment may breach contracts in force with public sector unions or other employee groups. We could not observe, and so did not consider, the constraints such private arrangements may place on SLGs’ discretion to divestment.

Private agreements aside, it is difficult to imagine a scenario in which full divestment would be considered unlawful. The employer mandate is a “play or pay” rule, not a true mandate. Opting completely out of health benefits offerings is therefore permitted, provided the employer pays any applicable penalties. Similarly, divestment focused on under-65 retirees would also lawful; SLGs are not bound, at least not under federal law, to provide health benefits to retirees. A selective divestment strategy aimed at employees eligible for Medicaid or subsidies on the exchange presents a somewhat more difficult case.

The two main federal laws that govern employer-based health insurance are the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code of 1986 (IRC). ERISA also incorporates the non-discrimination provisions of the Health Insurance Portability and Accountability Act, which prohibit group health plans from structuring eligibility, benefits, or premiums in ways that discriminate among employees on the basis of health-related factors. In addition, the ACA itself includes a number of provisions that limit the ability of employers to undertake “risk based” classifications of employees when providing health benefits (although nearly all of these restrictions overlap with ones that were already in place pre-ACA under ERISA and the IRC [43]).

Would any of these federal laws bar selective divestment? Firm answers to that question require a more comprehensive legal analysis than we have the space (or expertise) to undertake here. However, several observations are relevant.

Although ERISA regulates many aspects of plan administration, and certain of its provisions may bear upon employers' latitude to divest, it does not apply to SLGs.

The primary focus of the HIPAA and ACA non-discrimination rules is disparate treatment of employees who are sick or costly. That is not an accurate characterization of the selective divestment strategy we have considered for two reasons. First, in the scenario we analyzed, employees eligible for cost-sharing are incentivized to purchase insurance elsewhere but they are not excluded from employment-based coverage. Second, the defining characteristic of the subgroup we constructed was the availability of external cost-sharing, not bad insurance risk. While it may be tempting to assume the two overlap, our data suggest this is not the case: the average health care costs we estimate for SLG employees eligible for Medicaid and subsidies appear to quite similar, on average, than the costs estimated for employees who are not (**Appendix Table 15**). Subsidy-eligible employees tend to be younger, and this age effect may counter-balance any association between lower income and ill health.

The IRC prohibits self-insured health plans from discriminating in favor of “highly-compensated individuals” with respect to eligibility, contributions, and benefits.¹² The ACA extends this prohibition to sponsors of group health plans (other than self-insured plans).¹³ At first glance, these rules come much closer than risk classification prohibitions do to a selective divestment strategy centered on subsidy-eligible employees. However, the match is still doubtful.¹⁴ “Highly compensated individuals” are a defined group (a top-five paid officer, a more-than-10 percent shareholder, and 25 percent of employees with the highest salaries), which is unlikely to align well with the profile of SLG employees not incentivized to switch plans. More importantly, SLGs' use of incentive structures and sponsorship of benefits obtained from other sources seems tangential to the kind of “rules” and “eligibility” exclusions addressed by the IRC and ACA nondiscrimination provisions.

3. Legality of Income Supplements

The IRS, joined by the Department of Labor and the Department of Health and Human Services, recently issued a guidance clarifying that, under the ACA, payments employers make to employees for purposes of covering the costs of health insurance purchased on the exchanges will not enjoy preferential tax treatment.^[44] Under section 125 of the IRC, compensation funneled through “employer payment plans” qualified for the same tax exemptions as other kinds of employer contributions to the costs of employee health insurance. However, regulators have moved to block this under the ACA, in part to blunt incentives for employers to send employees elsewhere.

12, Internal Revenue Code, §105(h).

13. ACA, §2716. At the date of writing, this provision is not yet active. In Notice 2011-1, the IRS delayed the effective date of this provision until guidance on how the section applies in the fully insured context is issued, and none has been.

14. In addition to the questions of applicability outlined in this section, the applicability of these nondiscrimination provisions to SLGs is uncertain. Formerly, SLGs were exempted from the rule (see Taxpayer Relief Act of 1997 (P.L. 105-34), §1505), although there is no exception mentioned in ACA provision. Thus, technically, HHS appears to have the authority to enforce the nondiscrimination rules against insured non-federal governmental plans, but it is not yet clear whether it will do so.

The ruling does not directly affect our calculations because we assumed income supplements would be paid with after-tax monies. It does, however, highlight a factor that we did not take into account. If SLGs' contributions to the costs of health insurance are tax exempt in the status quo, but the income supplements incur payroll and other taxes (e.g., the Federal Insurance Contributions Act (FICA) tax), this difference should be included in the tally of ledger losses. To the extent we did not do this, we may have overestimated savings.¹⁵

VI. CONCLUSION

Employment-based health insurance is a central pillar of the U.S. healthcare system. Its existence has long framed options for reform. Although the ACA sought to expand coverage by building around and strengthening employment-based insurance, the changes it introduces to the sources and financing of coverage have the potential to reset the playing field entirely. How employers will respond remains to be seen.

This study considered possible reactions by one large employer group with strong motives to reduce the burden of health insurance costs. We found that SLGs may save nearly \$119 billion over the next 10 years by shifting under-65-retirees and segments of their workforce to comparable plans on the exchanges and Medicaid programs. Such savings would be gained at the expense of the federal government.

SLGs garner no special treatment under the ACA. The cost advantages projected for them may apply to greater or lesser extents to other employers, depending on the demographic, income and healthcare utilization profiles of workers in those firms. General divestment is not barred by state or federal law, but SLGs may have contracts in force with employees that limit their ability to pursue this strategy. Selective divestment does not face clear legal barriers either, although this depends on how subgroups of interest are constructed; certain forms of selectivity, such as targeting employees with the highest health care expenses — a strategy we do not consider (or in any way endorse) — would probably violate federal nondiscrimination protections.

The federal government could probably stem any rush toward divestment by changing key rules, such as penalty levels and eligibility for subsidies and cost-sharing. But until that happens, divestment is a strategic option that diligent business leaders may find difficult to ignore.

¹⁵ In the selective divestment scenario, the income supplement provided by the SLGs would increase the size of the FICA tax owed. As the goal of selective divestment is not to make the employee worse off, the SLG might cover both the employer and employee portions – roughly 15%. However, as FICA is deducted prior to computing total income for the purpose of income taxes, the income tax supplement from the SLG would be lowered by roughly the marginal tax rate (~25% in our group). Hence our estimates of savings may be ~11% too high depending on how SLGs choose to compensate employees for these amounts. It is not entirely clear that compensation is necessary as Social Security and Medicare could be viewed as benefits that employees receive later in life and hence their benefit offsets greater withholding now.

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Table 1. Estimated savings to state and local governments from selective divestment strategies (\$1,000,000s)

State	Shifting only under-65-retirees		Shifting only employees eligible for subsidies or Medicaid	
	26 states expand Medicaid	All states expand Medicaid **	26 states expand Medicaid	All states expand Medicaid **
	(1a)	(1b)	(2a)	(2b)
Alabama	46	60	268	412
Alaska	11	14	13	33
Arizona	75		367	
Arkansas	39		199	
California	202		1,389	
Colorado	38		187	
Connecticut	12		110	
Delaware	7		27	
District Of Columbia	3		9	
Florida	133	154	482	746
Georgia	68	75	360	702
Hawaii	34		64	
Idaho	12	12	79	107
Illinois	23		306	
Indiana	35	46	217	294
Iowa	15		121	
Kansas	15	19	82	229
Kentucky	33		293	
Louisiana	42	113	210	362
Maine	11	15	33	41
Maryland	38		216	
Massachusetts	33		182	
Michigan	48		252	
Minnesota	21		87	
Mississippi	33	43	173	341
Missouri	24	42	180	221
Montana	10	15	43	59
Nebraska	7	13	52	71
Nevada	11		44	
New Hampshire	4	12	17	28
New Jersey	51		224	
New Mexico	40		163	
New York	215		987	
North Carolina	91	99	457	647
North Dakota	2		19	
Ohio	100		452	
Oklahoma	15	35	133	241
Oregon	25		176	
Pennsylvania	86	114	161	227
Rhode Island	8		22	
South Carolina	81	93	149	250
South Dakota	5	5	17	29
Tennessee	22	44	170	345
Texas	137	161	833	1,499
Utah	8	8	104	141
Vermont	7		17	
Virginia	37	82	144	234
Washington	31		218	
West Virginia	24		136	
Wisconsin	15	21	141	289

Wyoming	9	11	23	33
NATIONAL	2,095	2,442	10,804	13,847
10 YEARS	20,946	24,419	108,039	138,466

* State and local government totals for these states are only positive because of savings from retirees under age 65 years. The costs of terminating all employment-based coverage options for current state and local government workers in these states due to employer penalties and increased liabilities for taxes more than offset the gains from federal subsidies and cost-sharing.

** Estimates are only shown in the "All States Medicaid Expansion" columns for states that do not currently have a Medicaid expansion planned for 2014. Under a Medicaid expansion, the estimates are different than the previous column and hence are shown.

Note: The table shows the magnitude of savings to state and local governments from divestment strategies shifting SLG workers and/or under-65 retirees onto health insurance exchanges or into federally supported Medicaid expansions under two scenarios – current Medicaid expansions or else full Medicaid expansions in all states. The results are shown by state and for the nation as a whole as well as nationally over 10 years.

Sources for this data involve authors' calculations using MEPS and CPS data collected by the US government along with data from the Kaiser Family Foundation on states' Medicaid expansion statuses.

Table 2. Estimated savings to state and local governments from selective divestment strategies (\$1,000,000s) in states implementing Medicaid expansions and not using federal exchanges

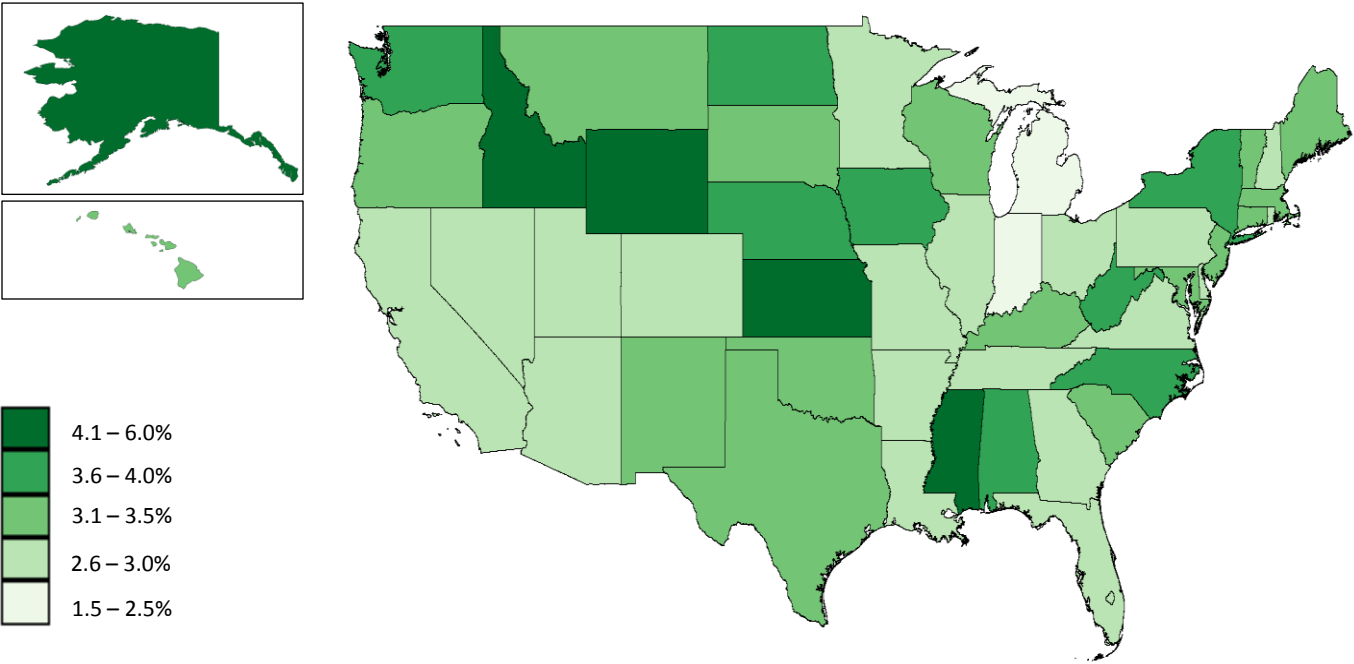
	Shifting only under-65-retirees	Shifting only employees eligible for subsidies or Medicaid
State	26 states expand Medicaid	26 states expand Medicaid
Alabama		
Alaska		
Arizona		
Arkansas		
California	202	1,389
Colorado	38	187
Connecticut	12	110
Delaware		
District Of Columbia	3	9
Florida		
Georgia		
Hawaii	34	64
Idaho	12	79
Illinois		
Indiana		
Iowa		
Kansas		
Kentucky	33	293
Louisiana		
Maine		
Maryland	38	216
Massachusetts	33	182
Michigan		
Minnesota	21	87
Mississippi		
Missouri		
Montana		
Nebraska		
Nevada	11	44
New Hampshire		
New Jersey		
New Mexico	40	163
New York	215	987
North Carolina		
North Dakota		
Ohio		
Oklahoma		
Oregon	25	176
Pennsylvania		
Rhode Island	8	22
South Carolina		
South Dakota		
Tennessee		
Texas		
Utah		
Vermont	7	17
Virginia		

Washington	31	218
West Virginia		
Wisconsin		
Wyoming		
NATIONAL	764	4,243
10 YEARS	7,643	42,425

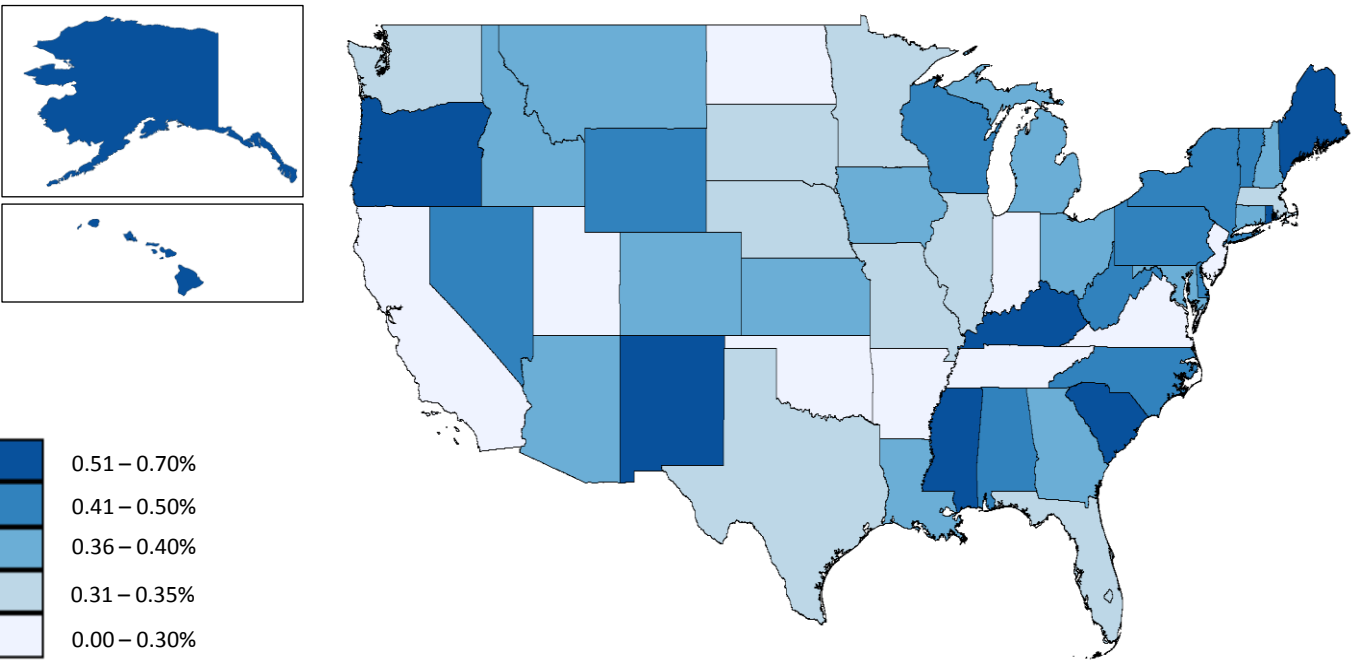
Note: The table shows the magnitude of savings to state and local governments from divestment strategies shifting SLG workers and/or under-65 retirees onto health insurance exchanges or into federally supported Medicaid expansions. The scenario shown in the table involves only states that have their own exchanges – the type not at risk if Supreme Court decisions invalidate subsidies and cost-sharing for federally administered exchanges. The results are shown by state and for the nation as a whole as well as nationally over 10 years. Sources for this data involve authors' calculations using MEPS and CPS data collected by the US government along with data from the Kaiser Family Foundation on the type of exchanges operating in each state along with their Medicaid expansion status.

Figure 1: State and local governments workers and retirees below 65 years of age as % of state population age 18-65 years

A) State and Local Government Employees



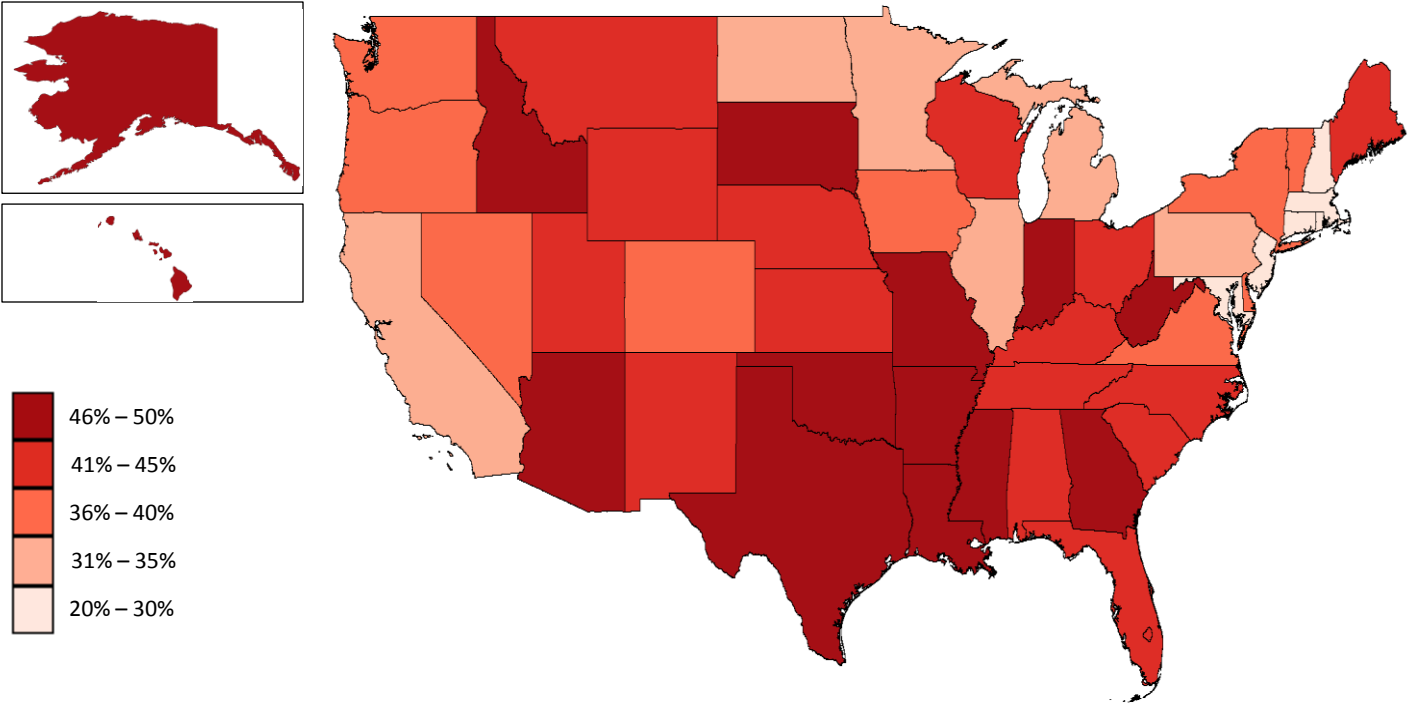
B) State and Local Government Retirees under Age 65 Years



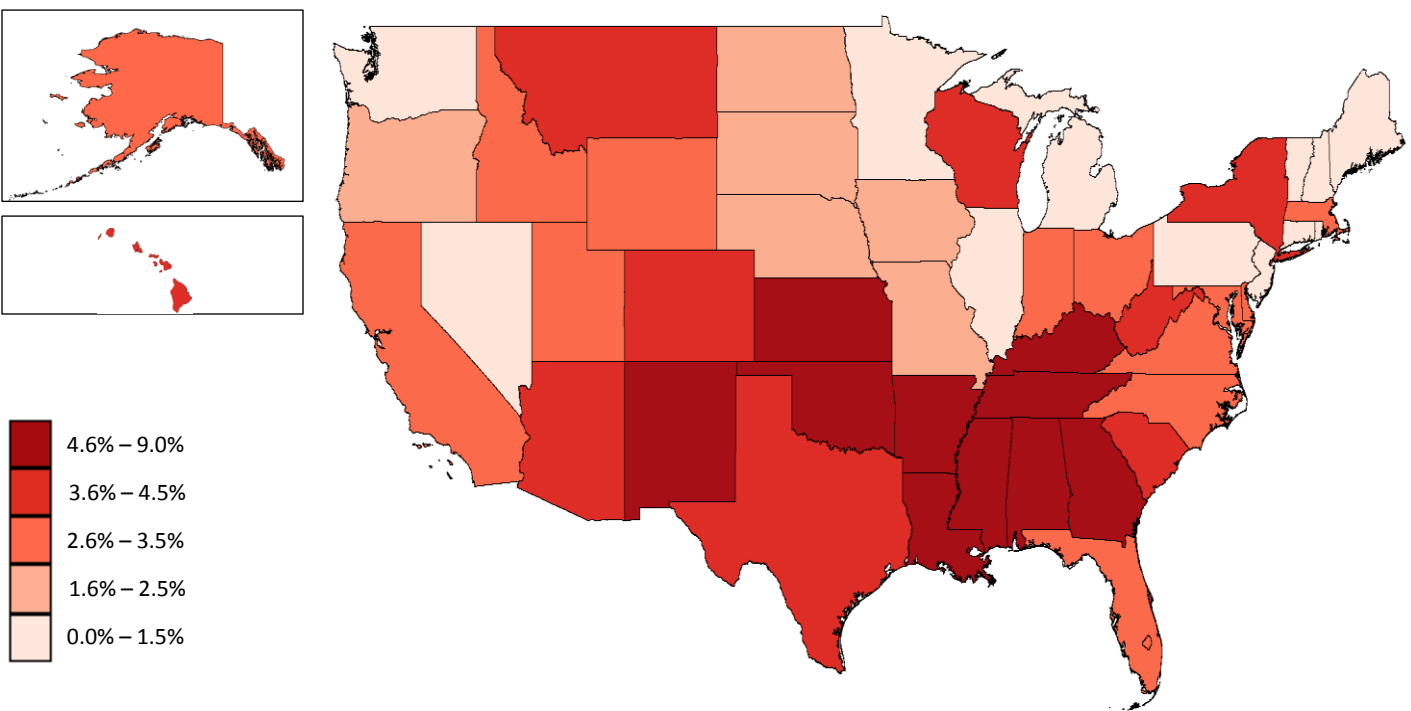
Note: This figures shows the proportions of each state’s adult population that are state and local government workers or retirees below the age of 65 from such positions. Variation shown in the figures indicates substantial variation in the exposure states face to healthcare costs of their employees and retirees and consequently incentives from divestment. Source of data: Authors’ calculations with U.S. Current Population Survey and Census Data on age-specific state populations

Figure 2: Households of state and local governments workers and retirees below 65 years of age falling below 400% of the Federal Poverty Level

A) Employees and Retirees with Household Incomes between 138-400% of the Federal Poverty Line



B) Employees and Retirees with Household Incomes below 138% of the Federal Poverty Line



Note: This figures shows the proportions of state sand local government workers or retirees below the age of 65 from such positions whose households fall below 138% of the Federal Poverty Limit (FPL) – hence potentially eligible for federally subsidized Medicaid expansions – or within 138-400% of the FPL – hence potentially eligible for federal subsidies and cost-sharing for insurance purchased on ACA exchanges. Variation shown in the figures indicates substantial variation in the potential for states to capture federal dollars through health insurance divestment. Source of data: Authors’ calculations using U.S. Current Population Survey

**Appendix for “Will Divestment from Employment-Based Health Insurance Save
Employers Money? The Case of State and Local Governments”**

by

Jeremy D. Goldhaber-Fiebert, Monica Farid,
David Studdert, Jay Bhattacharya

Appendix Sections:

- 1. Study Population**
- 2. Average Annual Healthcare Expenditures**
- 3. Workforces Sizes of State and Local Governments in Relationship to ACA Employer Penalties**
- 4. Medicaid Expansions and Development of State Exchanges**
- 5. Federal Subsidy and Cost-Sharing for ACA Exchange-Purchased Health Insurance Plans**
- 6. Tax Effects of Income Supplements from State and Local Governments Whose Workers Move to Purchase Insurance on ACA Exchanges**
- 7. State and Local Government Income Supplements, Federal Subsidies and Cost-Sharing, and Tax Consequences: Two-Stage Fixed Point Method Technical Details**
- 8. Additional Results and Supplemental Analyses**
 - a. Status Quo Estimates**
 - b. Full Divestment Strategy**
 - c. Selective Divestment Strategy**
 - d. Comparison of Healthcare Costs of Employee Households Shifting to Coverage under Exchange Plans and Those Continuing on State and Local Government-Provided Plans with the Selective Divestment Strategy**

1. Study Population

We consider two groups in our analysis, whose size we estimated using the CPS. The first group is current employees of State and Local Governments. The second group is made up of retirees from State and Local Governments. Additionally, we estimate the size of households of these individuals. The table below shows the estimated size of these groups.

Appendix Table 1. Estimates of the Number of Current Workers and Retirees from State and Local Governments under 65 Years of Age

State	Current Workers		Retirees below Age 65	
	#	Average Household Size	#	Average Household Size
Alabama	217,000	3.4	30,000	3.0
Alaska	53,000	3.6	6,000	2.9
Arizona	222,000	3.8	31,000	2.4
Arkansas	95,000	3.2	8,000	2.1
California	1,397,000	3.8	134,000	2.5
Colorado	199,000	3.4	26,000	2.3
Connecticut	148,000	3.6	17,000	2.7
Delaware	30,000	3.3	5,000	2.1
District Of Columbia	16,000	2.6	1,000	1.5
Florida	636,000	3.2	74,000	2.6
Georgia	375,000	3.5	49,000	2.4
Hawaii	53,000	4.5	10,000	4.7
Idaho	80,000	3.4	7,000	2.9
Illinois	426,000	3.3	53,000	2.3
Indiana	197,000	3.2	22,000	2.3
Iowa	150,000	3.2	15,000	2.2
Kansas	153,000	3.6	14,000	2.2
Kentucky	172,000	3.1	34,000	2.4
Louisiana	161,000	3.5	21,000	2.7
Maine	53,000	3.2	9,000	2.6
Maryland	236,000	3.6	29,000	3.1
Massachusetts	266,000	3.4	30,000	2.2
Michigan	299,000	3.6	48,000	2.6
Minnesota	190,000	3.5	24,000	2.2
Mississippi	157,000	3.4	23,000	2.2
Missouri	213,000	3.6	24,000	2.5
Montana	44,000	3.2	5,000	2.0
Nebraska	86,000	3.4	7,000	3.0
Nevada	95,000	3.8	15,000	2.5
New Hampshire	48,000	3.3	7,000	2.6
New Jersey	341,000	3.6	30,000	3.0
New Mexico	90,000	3.5	15,000	2.5
New York	921,000	3.6	108,000	2.7
North Carolina	474,000	3.3	54,000	2.3
North Dakota	34,000	3.3	3,000	2.2
Ohio	397,000	3.5	56,000	2.6
Oklahoma	161,000	3.5	10,000	2.8

Oregon	173,000	3.3	32,000	2.2
Pennsylvania	418,000	3.4	77,000	2.8
Rhode Island	37,000	3.5	8,000	2.5
South Carolina	195,000	3.3	41,000	2.4
South Dakota	33,000	3.5	3,000	2.2
Tennessee	209,000	3.2	15,000	2.2
Texas	999,000	3.6	108,000	2.6
Utah	91,000	4.1	9,000	2.6
Vermont	27,000	3.3	3,000	2.7
Virginia	266,000	3.3	28,000	2.2
Washington	316,000	3.4	29,000	2.5
West Virginia	93,000	3.1	10,000	1.9
Wisconsin	228,000	3.6	31,000	2.2
Wyoming	40,000	3.3	3,000	2.8
NATIONAL	12,008,000	3.5	1,455,000	2.5

2. Average Annual Healthcare Expenditures

An individual's healthcare expenditures and those of his or her household act as reasonably close proxy for total health insurance premium payments. We used data from MEPS to estimate average annual medical expenditures for individuals conditional on their age, sex, and region of the country in which they reside (see description further below). With these estimates we predicted the average annual total healthcare costs of current State and Local Government Employees, Retirees from these jobs under age 65 years, and the households of these individuals. As a face validity check, we compared these predictions to the price of Silver Plans on ACA Exchanges with the knowledge that State and Local Government benefits and insurance are typically more generous than for comparable jobs in the private sector and hence expenditures in these households may be higher than average. Appendix Table 2 shows a comparison of our predictions to the premiums for a Silver Plan confirming that predicted average healthcare spending (our proxy for premiums) in our group was higher than the Silver Plan premium amounts, often closer to the Gold or Platinum Plans. Of note, these comparisons are made with the total healthcare expenditures and not only the percentage of insurance premiums typically covered by the State and Local Government employer.

Appendix Table 2. How Much Do Estimated Average Annual Healthcare Expenditures Exceed Silver Plans on ACA Exchanges for Comparable Household Sizes

	Household Size	
	1 person	4 people
Alabama	\$1,453	\$787
Alaska	\$1,778	\$1,649
Arizona	\$936	\$546
Arkansas	\$1,000	\$2,529
California	\$1,431	\$1,533
Colorado	\$1,099	\$540
Connecticut	\$1,224	\$4,285
Delaware	\$2,342	\$1,501
District Of Columbia	\$811	\$1,427
Florida	\$1,534	\$1,180
Georgia	\$1,507	\$1,183
Hawaii	\$1,631	\$2,875
Idaho	\$1,683	\$125
Illinois	\$2,756	\$3,930
Indiana	\$2,547	\$3,612
Iowa	\$2,431	\$2,990
Kansas	\$2,423	\$3,129
Kentucky	\$280	\$780
Louisiana	\$786	\$886
Maine	\$2,863	\$3,524
Maryland	\$1,547	\$1,643
Massachusetts	\$1,492	\$3,322
Michigan	\$2,179	\$3,748
Minnesota	\$2,681	\$4,181
Mississippi	\$1,319	\$1,321
Missouri	\$1,980	\$3,082
Montana	\$1,373	\$775
Nebraska	\$2,357	\$2,915
Nevada	\$1,756	\$973

New Hampshire	\$2,246	\$3,210
New Jersey	\$1,536	\$4,209
New Mexico	\$1,581	\$202
New York	\$1,810	\$3,671
North Carolina	\$1,509	\$597
North Dakota	\$1,964	\$2,936
Ohio	\$1,610	\$3,275
Oklahoma	\$2,017	(\$120)
Oregon	\$1,110	\$232
Pennsylvania	\$1,607	\$3,255
Rhode Island	\$2,129	\$4,113
South Carolina	\$2,198	\$1,667
South Dakota	\$2,562	\$2,364
Tennessee	\$1,542	\$1,554
Texas	\$1,421	\$1,186
Utah	\$947	\$459
Vermont	\$2,105	\$3,175
Virginia	\$1,861	\$1,592
Washington	\$1,457	\$700
West Virginia	\$1,624	\$990
Wisconsin	\$2,786	\$2,794
Wyoming	\$1,558	\$604

We used the MEPS annual individual total healthcare expenditure inflated to 2013 US dollars using the medical component of the Consumer Price Index and adjusted, as described in the manuscript, to account for loading fees and undercounts of pharmaceutical costs along with data on the age, sex, and region (Northeast, South, Midwest, or West) to form our predictions of annual individual expenditure for our two study populations. To allow for a flexible non-linear relationship between age and medical expenditures, the regression used restricted cubic splines for age in years with knots placed at 15 year intervals from age 0 through age 75 and an additional knot at age 85, though notably since the analysis focused on individuals below retirement age, predictions on the under-65 populations were all that was used. Region entered the regression as a set of dummy variables (reference category is Northeast) as did sex (reference category is Female). The dummy variables were interacted with each other, age splines, and the combination of the three. The regression model results are shown below and for greater clarity and ease of interpretation, the predicted expenditure patterns by age, sex, and region are shown in Appendix Figure 1 below.

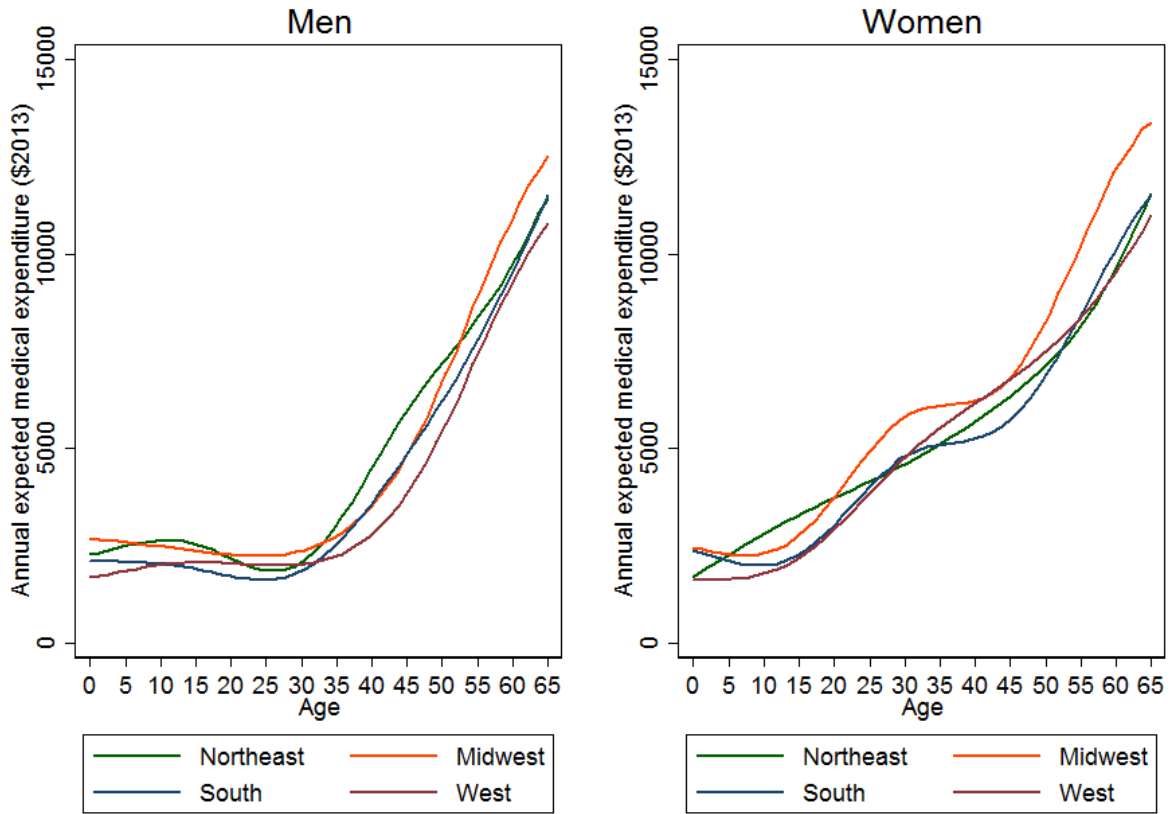
Coefficient	Beta	Robust Standard Error	p-value	95% CI	
Age Spline 0-15	113.6236	54.98912	2.07	0.039	5.8461
Age Spline 15-30	-221.6278	668.247	-0.33	0.74	-1531.377
Age Spline 30-45	681.3117	2095.15	0.33	0.745	-3425.136
Age Spline 45-60	-424.8395	3128.349	-0.14	0.892	-6556.335
Age Spline 60-75	1562.184	4151.349	0.38	0.707	-6574.369
Age Spline 75-85	-5999.623	6148.192	-0.98	0.329	-18049.94
Region					
Midwest	769.0377	717.037	1.07	0.283	-636.3392
South	727.1344	731.9545	0.99	0.321	-707.4804
West	-87.49932	480.9301	-0.18	0.856	-1030.112

Region * Age Spline (0-15)					
Midwest	-159.6188	87.44735	-1.83	0.068	-331.0137
South	-183.982	82.7739	-2.22	0.026	-346.217
West	-113.6085	64.16526	-1.77	0.077	-239.371
Region * Age Spline (15-30)					
Midwest	2327.005	955.3503	2.44	0.015	454.5391
South	2149.976	872.9558	2.46	0.014	439.0022
West	1459.76	809.3271	1.8	0.071	-126.503
Region * Age Spline (30-45)					
Midwest	-7397.975	2937.612	-2.52	0.012	-13155.63
South	-6506.44	2646.13	-2.46	0.014	-11692.8
West	-3825.126	2790.103	-1.37	0.17	-9293.667
Region * Age Spline (45-60)					
Midwest	11057.04	4402.151	2.51	0.012	2428.917
South	8843.475	3834.575	2.31	0.021	1327.792
West	3251.278	5161.049	0.63	0.529	-6864.266
Region * Age Spline (60-75)					
Midwest	-13346.48	5883.159	-2.27	0.023	-24877.35
South	-9512.011	4967.089	-1.92	0.055	-19247.4
West	-1571.384	7656.267	-0.21	0.837	-16577.5
Region * Age Spline (75-85)					
Midwest	13649.34	8240.647	1.66	0.098	-2502.15
South	9871.189	7235.822	1.36	0.173	-4310.865
West	2217.815	10188.96	0.22	0.828	-17752.32
Male	529.6052	551.7665	0.96	0.337	-551.845
Male * Age Spline (0-15)					
Male	-56.0196	76.7225	-0.73	0.465	-206.394
Male * Age Spline (15-30)					
Male	-960.8822	974.2302	-0.99	0.324	-2870.352
Male * Age Spline (30-45)					
Male	4688.839	3349.559	1.4	0.162	-1876.224
Male * Age Spline (45-60)					
Male	-8097.658	6199.041	-1.31	0.191	-20247.64
Male * Age Spline (60-75)					
Male	5973.889	9816.104	0.61	0.543	-13265.46
Male * Age Spline (75-85)					
Male	-2442.451	13689.86	-0.18	0.858	-29274.28
Region * Male					
Midwest, Male	-310.9885	929.8945	-0.33	0.738	-2133.561
South, Male	-858.9727	846.022	-1.02	0.31	-2517.157
West, Male	-485.8696	664.8764	-0.73	0.465	-1789.013
Region * Male * Age Spline (0-15)					
Midwest, Male	81.54219	117.1654	0.7	0.486	-148.0994
South, Male	124.5319	103.5665	1.2	0.229	-78.45623

West, Male	96.6155	95.29748	1.01	0.311	-90.16548
Region * Male * Age Spline (15-30)					
Midwest, Male	-1172.715	1338.257	-0.88	0.381	-3795.669
South, Male	-1319.967	1190.05	-1.11	0.267	-3652.439
West, Male	-683.0241	1194.532	-0.57	0.567	-3024.281
Region * Male * Age Spline (30-45)					
Midwest, Male	2882.241	4371.593	0.66	0.51	-5685.986
South, Male	3532.036	3932.19	0.9	0.369	-4174.97
West, Male	-133.6795	4154.981	-0.03	0.974	-8277.352
Region * Male * Age Spline (45-60)					
Midwest, Male	-2012.342	7531.788	-0.27	0.789	-16774.48
South, Male	-3853.203	6903.38	-0.56	0.577	-17383.68
West, Male	5739.409	7886.26	0.73	0.467	-9717.488
Region * Male * Age Spline (60-75)					
Midwest, Male	686.8747	11417.13	0.06	0.952	-21690.45
South, Male	4239.114	10635.73	0.4	0.69	-16606.69
West, Male	-10748.51	12392.24	-0.87	0.386	-35037.02
Region * Male * Age Spline (75-85)					
Midwest, Male	1135.603	16118.24	0.07	0.944	-30455.8
South, Male	-4350.547	15120	-0.29	0.774	-33985.41
West, Male	11140.72	17229.77	0.65	0.518	-22629.26
Constant	1697.256	413.875	4.1	0	886.0698

N = 167,279; F(55,167223) = 113.38; Prob > F < 0.0001; R-squared = 0.0624; Root MSE = 16,105

Appendix Figure 1. Average Annual Medical Expenditures Including Pharmaceuticals (USD 2013) By Age, Sex, and US Geographic Region



3. Workforces Sizes of State and Local Governments in Relationship to ACA Employer Penalties

We used 2011 APES data to provide an independent estimate of the size of our study population as a face validation check and more importantly to characterize the percentage of state and local government workers working for governments of different sizes. The latter was particularly relevant because employer penalties are determined by the number of full-time workers above 30. Since the CPS does not allow linking individual workers to specific State or Local Government entities, it was important to establish that the overwhelming majority of workers work for governments whose total number of employees exceeds several hundred. This would mean that the likelihood of at least one employee receiving subsidies or cost-sharing for purchasing insurance on ACA exchanges is high and that the average per-capita penalty for that government entity would be very close to \$2,000 should it choose to cancel its provision of insurance entirely. Appendix Table 3 shows both of these assumptions to be highly credible.

Appendix Table 3. Distribution of Sizes of State and Local Government Workforces According to the 2011 APES and the Implied size of the Employer Penalty for Firms of Corresponding Sizes

Size of Government Workforce (Number of Full-time Employees)	Average Per-Capita Penalty (\$)	Total Number of State and Local Governments	Total Number of Full-Time Employees
30 and below	0	3,290	41,914
31	65	1	31
32-33	163	6	196
34-35	264	7	242
36-37	356	6	219
38-39	451	11	426
40-42	533	23	941
43-46	658	47	2,102
47-49	749	40	1,919
50-54	846	122	6,344
55-59	944	125	7,103
60-66	1,050	162	10,229
67-74	1,148	156	10,989
75-85	1,252	243	19,489
86-99	1,352	281	26,034
100-119	1,452	315	34,508
120-149	1,552	450	60,252
150-199	1,654	642	111,263
200-299	1,757	834	206,306
300-599	1,861	1,229	532,079
600+	1,985	2,522	10,400,000
TOTAL		10,512	11,472,568

4. Medicaid Expansions and Development of State Exchanges

State Medicaid expansions are important given that under the ACA the federal government supports these expansions. However, such expansions are a moving target – as some states have not implemented them without any current intention of doing so and others have not implemented but are contemplating expansions more actively. We used data reported by the Kaiser Family Foundation monitoring current implementations of Medicaid expansions as of January 28, 2014 as shown in the table below.

Appendix Table 4. Medicaid Expansions for Implementation in 2014 According to the Kaiser Family Foundation

State	Implementing Expansion in 2014
Alabama	No
Alaska	No
Arizona	Yes
Arkansas	Yes
California	Yes
Colorado	Yes
Connecticut	Yes
Delaware	Yes
District of Columbia	Yes
Florida	No
Georgia	No
Hawaii	Yes
Idaho	No
Illinois	Yes
Indiana	No
Iowa	Yes
Kansas	No
Kentucky	Yes
Louisiana	No
Maine	No
Maryland	Yes
Massachusetts	Yes
Michigan	Yes
Minnesota	Yes
Mississippi	No
Missouri	No
Montana	No
Nebraska	No
Nevada	Yes
New Hampshire	No
New Jersey	Yes
New Mexico	Yes
New York	Yes
North Carolina	No
North Dakota	Yes
Ohio	Yes
Oklahoma	No
Oregon	Yes
Pennsylvania	No

Rhode Island	Yes
South Carolina	No
South Dakota	No
Tennessee	No
Texas	No
Utah	No
Vermont	Yes
Virginia	No
Washington	Yes
West Virginia	Yes
Wisconsin	No
Wyoming	No

Likewise, given Supreme Court considerations in cases like *King v Burwell*, the type of ACA exchange in a state may determine whether subsidies and cost-sharing are available to otherwise qualifying individuals purchasing insurance via the exchange. Given uncertainty in the availability of subsidies and cost-sharing should the case be decided that federal exchanges do not qualify, we performed a sensitivity analysis only estimating savings in states that had such exchanges. For this sensitivity analysis, we use data from a Kaiser Family Foundation report characterizing state exchange types.

Appendix Table 5. State Exchange Type in 2014 According to the Kaiser Family Foundation

State	Exchange Type	Subsidy Eligible Regardless of Supreme Court Ruling
Alabama	Federally-facilitated Marketplace	No
Alaska	Federally-facilitated Marketplace	No
Arizona	Federally-facilitated Marketplace	No
Arkansas	State-Partnership Marketplace	No
California	State-based Marketplace	Yes
Colorado	State-based Marketplace	Yes
Connecticut	State-based Marketplace	Yes
Delaware	State-Partnership Marketplace	No
District of Columbia	State-based Marketplace	Yes
Florida	Federally-facilitated Marketplace	No
Georgia	Federally-facilitated Marketplace	No
Hawaii	State-based Marketplace	Yes
Idaho	State-based Marketplace	Yes
Illinois	State-Partnership Marketplace	No
Indiana	Federally-facilitated Marketplace	No
Iowa	State-Partnership Marketplace	No
Kansas	Federally-facilitated Marketplace	No
Kentucky	State-based Marketplace	Yes
Louisiana	Federally-facilitated Marketplace	No
Maine	Federally-facilitated Marketplace	No
Maryland	State-based Marketplace	Yes
Massachusetts	State-based Marketplace	Yes
Michigan	State-Partnership Marketplace	No
Minnesota	State-based Marketplace	Yes
Mississippi	Federally-facilitated Marketplace	No
Missouri	Federally-facilitated Marketplace	No
Montana	Federally-facilitated Marketplace	No

Nebraska	Federally-facilitated Marketplace	No
Nevada	Federally-supported State-based Marketplace	Yes
New Hampshire	State-Partnership Marketplace	No
New Jersey	Federally-facilitated Marketplace	No
New Mexico	Federally-supported State-based Marketplace	Yes
New York	State-based Marketplace	Yes
North Carolina	Federally-facilitated Marketplace	No
North Dakota	Federally-facilitated Marketplace	No
Ohio	Federally-facilitated Marketplace	No
Oklahoma	Federally-facilitated Marketplace	No
Oregon	Federally-supported State-based Marketplace	Yes
Pennsylvania	Federally-facilitated Marketplace	No
Rhode Island	State-based Marketplace	Yes
South Carolina	Federally-facilitated Marketplace	No
South Dakota	Federally-facilitated Marketplace	No
Tennessee	Federally-facilitated Marketplace	No
Texas	Federally-facilitated Marketplace	No
Utah	Federally-facilitated Marketplace	No
Vermont	State-based Marketplace	Yes
Virginia	Federally-facilitated Marketplace	No
Washington	State-based Marketplace	Yes
West Virginia	State-Partnership Marketplace	No
Wisconsin	Federally-facilitated Marketplace	No
Wyoming	Federally-facilitated Marketplace	No

5. Federal Subsidy and Cost-Sharing for ACA Exchange-Purchased Health Insurance Plans

For individuals purchasing health insurance on the ACA exchanges, federal subsidies and cost sharing may be available depending on their household income and their expected medical expenditures relative to the Silver Plan premium payments for households of equivalent size. Subsidies are computed based on tiers of household income as a percentage of the Federal Poverty Level: 138-149, 150-199, 200-249, 250-299, and 300-400 percent of the Federal Poverty Level respectively. To determine the subsidy amount, the subsidy percentage is multiplied by the total household income, and this amount is then subtracted from the price of a Silver Plan for a household of size 1, 2, or 3+ individuals according to the size of each household in the affected population. The price of the Silver Plan for a household of one individual is \$4,914 and \$13,591 for a household of 4 in in 2013 dollars. Likewise, cost-sharing percentages are based on tiers from 138-149, 150-199, 200-249, and 250-400 percent of the Federal Poverty Level. To determine the cost-sharing amount, the cost-sharing percentage is multiplied by the total expected annual household medical expenditure.

6. Tax Effects of Income Supplements from State and Local Governments Whose Workers Move to Purchase Insurance on ACA Exchanges

For federal income taxes, we classified each CPS household as being a single filer, married joint filer, or head of household filer. Then, based on their Adjusted Gross Income (AGI), we computed their total tax burden based on 2013 AGI cutoffs for marginal tax rates of 10%, 15%, 25%, 28%, 33%, 35%, and 39.6%. Assuming State and Local Governments wanted to make their current workers as well off as they currently are after divesting from health care coverage, we computed the amount of additional compensation that would need to be paid by SLGs to their employees to offset both the cost of health insurance premium payments (net federal subsidies and cost-sharing which also depend on the amount of the additional compensation) as well as to cover increases in tax liabilities, using a two-step fixed point method (detailed below).

7. State and Local Government Income Supplements, Federal Subsidies and Cost-Sharing, and Tax Consequences: Two-Stage Fixed Point Method Technical Details

To make our estimates of State and Local Government savings by divesting from the provision of health insurance, we needed to compute the amount State and Local Government income supplements net of federal subsidies and cost-sharing and compensating for their impact on an individual's federal tax bill. As federal subsidies and cost-sharing depended on total household income relative to the Federal Poverty Level and the tax bill depended on Adjusted Gross Income, simultaneously computing these quantities implied dealing with their interdependency. To do so, we used an iterative, two-step, fixed point method.

First, we define three functions of Household Income (I) and Household Size and Demographic Structure (F).

- 1) Subsidies (Federal Subsidy and Cost-Sharing) Function: $\theta_S: (I, F) \rightarrow S$
- 2) Health Insurance Premium Payment Function: $\theta_P: (I, F) \rightarrow P$
- 3) Federal Tax Bill Function: $\theta_\tau: (I, F) \rightarrow \tau$

We compute initial values for Premium Payments (P_0), Subsidies (S_0) and Taxes (T_0) independent of one another:

$$P_0 = \theta_P(I, F)$$

$$S_0 = \theta_S(I, F)$$

$$\tau_0 = \theta_\tau(I, F)$$

We notice that Premium Payments are determined entirely by the Household Size and Demographic Structure so P_0 will remain fixed at P which we use unsubscripted for the subsequent description below.

In our first step of our two-step approach, we update the Subsidies to account for premium support that increases income provided by the State and Local government and likewise recomputed Taxes based on this increase to income:

$$S_1 = \theta_S(I + P - S_0, F)$$

$$\tau_1 = \theta_\tau(I + P - S_0, F)$$

In our second step of our two-step approach, to ensure that the individual receives enough additional income so that increases to the tax bill are compensated for, we update the Taxes based on the following:

$$\Delta\tau = \tau_1 - \tau_0$$

$$S_2 = \theta_S(I + P - S_2 + \Delta\tau, F)$$

$$\tau_2 = \theta_\tau(I + P - S_2 + \Delta\tau, F)$$

The system of equations has a fixed point. First, the Health Insurance Premium Payments (P) for a fixed value of F and do not depend on income. Second, the Subsidies (S) are a declining function of income for a fixed value of F . Third, Taxes is an increasing function of income for a fixed value of F , but stabilizes to a function of elements that do not depend on subsidies once income exceeds 400% of the Federal Poverty Level and hence subsidies are 0.

We rely on a numerical approximation of this fixed point by iteratively repeating this two-step computation 50 times S_2 in a given iteration replaces S_0 for the start of the next iteration. After the 50 iterations, we examine the values of subsidies and taxes after each iteration to ensure that they have reached stable values by end whose changes from iteration 49 to 50 are approaching \$0 on average for all U.S. states (i.e., examining patterns of changes for each sequential pair of iterations) and are very small in the last pair of iterations (i.e., <\$1 on average for each state between iteration 49 and 50).

Finally, with the values of the federal subsidies and cost-sharing estimated along with the change in taxes for each household at the 50th iteration, we can compute the State and Local Government income supplement to offset the difference between health insurance premium payments as:

$$SLG_{supplement} = P - S_2 + \Delta\tau$$

8. Additional Results and Supplemental Analyses

8a. Status Quo Estimates

Appendix Table 6 shows the estimates of the total healthcare costs for households of SLGs workers and retirees below the age 65 as a proxy for their premium costs. As noted in the manuscript, we assume that SLGs cover 80% of the premium costs and hence have scaled Appendix Table 6 accordingly, hence representing the costs borne by the SLGs. These estimates represent the status quo costs against which potential savings and additional costs to SLGs of various divestment strategies are benchmarked. Likewise, Appendix Table 7 shows the percentage of households of SLG current workers and retirees below the age of 65 that fall below important Federal Poverty Level thresholds (i.e., those for which ACA federal subsidies and cost-sharing would apply; those for which federal support of Medicaid expansions would apply if the state implements such an expansion). Of note, under various divestment strategies that involve transfers to workers or retirees from SLGs in the form of income supplements in lieu of providing health insurance directly, these percentages can change in ways that shift eligibility and sizes of subsidies and of cost-sharing (see Appendix Section 7 above on the dynamic calculation of these levels).

Appendix Table 6. Estimated Total Premium Costs (in \$1,000,000s) for Households of State and Local Government Current Workers and Retirees under Age 65

State	Current Workers	Retirees
Alabama	2,253	488
Alaska	494	99
Arizona	2,177	425
Arkansas	916	132
California	13,876	2,044
Colorado	1,778	391
Connecticut	1,647	309
Delaware	319	67
District Of Columbia	117	17
Florida	5,836	1,091
Georgia	3,664	803
Hawaii	565	172
Idaho	717	117
Illinois	4,746	980
Indiana	2,337	352
Iowa	1,690	310
Kansas	1,690	263
Kentucky	1,596	533
Louisiana	1,558	398
Maine	586	151
Maryland	2,319	430
Massachusetts	2,936	479
Michigan	3,498	861
Minnesota	2,253	438
Mississippi	1,412	350
Missouri	2,379	426
Montana	414	76
Nebraska	982	154
Nevada	930	228

New Hampshire	565	110
New Jersey	4,027	524
New Mexico	822	224
New York	9,908	1,702
North Carolina	4,195	844
North Dakota	369	53
Ohio	4,454	905
Oklahoma	1,442	214
Oregon	1,557	488
Pennsylvania	4,307	1,244
Rhode Island	426	113
South Carolina	1,855	603
South Dakota	352	62
Tennessee	2,060	243
Texas	9,198	1,556
Utah	893	145
Vermont	300	62
Virginia	2,574	399
Washington	2,920	478
West Virginia	926	165
Wisconsin	2,606	622
Wyoming	368	58
NATIONAL	121,807	23,398
10 YEARS	1,218,066	233,980

Appendix Table 7. Household Incomes Relative to the 2013 Federal Poverty Line (FPL) for Current Workers and Retirees from State and Local Governments under 65 Years of Age

State	Current Workers		Retirees	
	% between 138-400% of FPL	% below 138% of FPL	% between 138-400% of FPL	% below 138% of FPL
Alabama	47%	5%	28%	2%
Alaska	47%	3%	44%	5%
Arizona	51%	3%	27%	8%
Arkansas	47%	5%	54%	9%
California	35%	3%	29%	2%
Colorado	36%	4%	31%	2%
Connecticut	31%	1%	17%	0%
Delaware	36%	3%	32%	5%
District Of Columbia	33%	2%	47%	10%
Florida	43%	3%	34%	3%
Georgia	50%	7%	31%	2%
Hawaii	50%	4%	30%	5%
Idaho	50%	3%	40%	0%
Illinois	34%	1%	23%	0%
Indiana	45%	3%	51%	5%
Iowa	38%	2%	29%	2%
Kansas	46%	7%	28%	3%
Kentucky	46%	6%	36%	0%
Louisiana	47%	7%	33%	18%
Maine	40%	1%	42%	2%
Maryland	29%	3%	36%	2%
Massachusetts	26%	2%	17%	7%
Michigan	34%	2%	34%	0%
Minnesota	34%	1%	30%	2%
Mississippi	48%	10%	45%	4%
Missouri	46%	2%	39%	6%
Montana	43%	3%	29%	10%
Nebraska	42%	2%	36%	3%
Nevada	39%	1%	27%	0%
New Hampshire	29%	1%	21%	6%
New Jersey	24%	1%	32%	3%
New Mexico	40%	9%	45%	7%
New York	36%	3%	33%	5%
North Carolina	44%	3%	31%	2%
North Dakota	35%	2%	22%	0%
Ohio	43%	2%	35%	8%
Oklahoma	48%	5%	35%	12%
Oregon	39%	3%	29%	0%
Pennsylvania	32%	1%	31%	2%
Rhode Island	25%	1%	20%	3%
South Carolina	40%	4%	48%	3%
South Dakota	49%	2%	34%	0%
Tennessee	46%	6%	35%	10%
Texas	48%	5%	33%	2%
Utah	47%	3%	17%	0%
Vermont	34%	1%	41%	2%
Virginia	38%	3%	35%	10%
Washington	38%	1%	47%	2%

West Virginia	47%	4%	34%	4%
Wisconsin	42%	4%	29%	3%
Wyoming	41%	2%	41%	6%
NATIONAL	40%	3%	33%	3%

8b. Full Divestment Strategy

We consider the Full Divestment Strategy in the context of current state Medicaid expansions which would be federally supported under the ACA. Columns in the tables generally show individual components of savings (costs) that the strategies induce. They are shown in green if they result in saving from the SLGs perspective and in red if they result in a cost. For the current Medicaid expansion scenarios in states that have not expanded Medicaid, we make two assumptions: 1) no savings from federal support for Medicaid expansions; 2) SLGs in states without Medicaid expansions increase compensation to households below 138% of the FPL so that their household falls at 138% of the FPL and hence they qualify for maximal exchange subsidies and cost-sharing. For current workers, assumption #2 induces some increases in federal taxes that the SLGs must also offset because of increased incomes. The component costs and savings are shown in Appendix Tables 8-9.

In the Full Divestment Strategy, we sum the component savings and costs for current worker and retiree subgroups. Then, for each state, we subtract employer penalties (approximately \$2,000 per worker times the number of workers in Appendix Table 1) to compute the net savings (or cost) (Appendix Table 10). We repeat this step examining a set of hypotheticals in which the employer penalty per worker is lowered or even \$0. The relevance of these hypotheticals is that some smaller to mid-size SLGs may face a lower per-worker employer penalty than \$2,000 given that the penalty is levied for workers above the first 30. Additionally, the \$0 penalty may be relevant if SLGs were to successfully challenge the applicability of the penalty to them.

We also consider the Full Divestment Strategy under a hypothetical scenario in which all states implement Medicaid expansions. These results are shown in Appendix Tables 11-13. Note that in the full Medicaid expansion scenario, SLGs do not increase the household incomes of those below 138% of FPL up to 138% since those falling below 138% of FPL qualify for federal support under Medicaid which produces larger savings for the SLGs.

Appendix Table 8. Component Savings and Costs from Divestment for Current Employees Assuming Current Medicaid Expansions Only (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions*	Additional Federal Taxes Compensated by State and Local Governments	Additional Compensation to bring Household below 138% of the Federal Poverty Level up to That Level*
Alabama	587	0	406	17
Alaska	72	0	110	1
Arizona	585	83	386	0
Arkansas	255	58	143	0
California	2,169	479	3,026	0
Colorado	275	75	393	0
Connecticut	197	23	359	0
Delaware	48	9	64	0
District of Columbia	20	1	28	0
Florida	1,207	0	1,095	43
Georgia	956	0	642	76
Hawaii	105	30	108	0
Idaho	174	0	117	3
Illinois	621	69	968	0
Indiana	483	0	373	14
Iowa	221	37	304	0
Kansas	287	0	270	27
Kentucky	403	95	266	0
Louisiana	473	0	274	21
Maine	87	0	113	2
Maryland	299	83	533	0
Massachusetts	289	52	647	0
Michigan	436	69	707	0
Minnesota	220	14	446	0
Mississippi	416	0	216	23
Missouri	434	0	408	4
Montana	91	0	76	3
Nebraska	147	0	176	3
Nevada	127	6	194	0
New Hampshire	56	0	117	4
New Jersey	418	35	930	0
New Mexico	181	81	142	0
New York	1,396	430	2,006	0
North Carolina	1,035	0	748	34
North Dakota	39	10	70	0
Ohio	801	100	799	0
Oklahoma	336	0	240	22
Oregon	295	52	300	0
Pennsylvania	507	0	893	14
Rhode Island	38	7	96	0
South Carolina	371	0	335	4
South Dakota	62	0	60	3
Tennessee	473	0	344	34
Texas	2,141	0	1,609	130
Utah	213	0	174	4
Vermont	33	3	58	0
Virginia	427	0	514	5

Washington	457	33	605	0
West Virginia	208	43	149	0
Wisconsin	387	0	473	12
Wyoming	64	0	71	1

* For states without Medicaid expansions, savings from federal support of Medicaid is \$0 but additional savings are captured by increasing the household incomes of workers falling below 138% of the federal poverty lines up to 138% such that these households qualify for federal subsidies and cost-sharing for exchange-purchased plans.

Appendix Table 9. Component Savings and Costs from Divestment for Retirees under Age 65 Assuming Current Medicaid Expansions Only (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions*	Additional Compensation to bring Household below 138% of the Federal Poverty Level up to That Level*
Alabama	52	0	5
Alaska	11	0	0
Arizona	42	33	0
Arkansas	23	16	0
California	175	27	0
Colorado	32	6	0
Connecticut	12	0	0
Delaware	4	4	0
District of Columbia	2	2	0
Florida	133	0	0
Georgia	68	0	1
Hawaii	18	16	0
Idaho	12	0	0
Illinois	23	0	0
Indiana	37	0	2
Iowa	10	5	0
Kansas	15	0	0
Kentucky	33	0	0
Louisiana	49	0	7
Maine	12	0	1
Maryland	31	7	0
Massachusetts	16	17	0
Michigan	48	0	0
Minnesota	14	7	0
Mississippi	36	0	3
Missouri	34	0	10
Montana	10	0	0
Nebraska	7	0	0
Nevada	11	0	0
New Hampshire	5	0	2
New Jersey	43	8	0
New Mexico	25	15	0
New York	132	83	0
North Carolina	91	0	0
North Dakota	2	0	0
Ohio	54	46	0
Oklahoma	18	0	4
Oregon	25	0	0
Pennsylvania	95	0	9
Rhode Island	5	3	0
South Carolina	81	0	0
South Dakota	5	0	0
Tennessee	32	0	11
Texas	140	0	3
Utah	8	0	0
Vermont	5	2	0

Virginia	43	0	6
Washington	24	8	0
West Virginia	15	9	0
Wisconsin	15	0	0
Wyoming	9	0	0

* For states without Medicaid expansions, savings from federal support of Medicaid is \$0 but additional savings are captured by increasing the household incomes of workers falling below 138% of the federal poverty lines up to 138% such that these households qualify for federal subsidies and cost-sharing for exchange-purchased plans.

Appendix Table 10. Savings from Divestment for Current Employees and Retirees under Age 65 Assuming Current Medicaid Expansions Only and Depending on Employer Penalty Level (\$1,000,000s)*

	Savings with Employer Penalty of \$2,000*	Savings with Employer Penalty of \$1,750	Savings with Employer Penalty of \$1,500	Savings with Employer Penalty of \$1,000	Savings with Employer Penalty of \$0
Alabama	-224	-170	-116	-7	210
Alaska	-134	-121	-107	-81	-28
Arizona	-87	-32	24	135	357
Arkansas	19	43	66	114	209
California	-2,970	-2,621	-2,272	-1,573	-176
Colorado	-402	-352	-302	-203	-4
Connecticut	-423	-386	-349	-275	-127
Delaware	-59	-52	-44	-29	1
District of Columbia	-35	-31	-27	-19	-3
Florida	-1,069	-910	-751	-433	203
Georgia	-445	-351	-257	-70	305
Hawaii	-45	-32	-19	8	61
Idaho	-95	-75	-55	-15	65
Illinois	-1,107	-1,001	-894	-681	-255
Indiana	-263	-213	-164	-66	131
Iowa	-331	-294	-256	-181	-31
Kansas	-299	-261	-223	-146	7
Kentucky	-80	-37	6	92	264
Louisiana	-102	-62	-22	59	220
Maine	-123	-110	-97	-70	-17
Maryland	-585	-526	-467	-349	-113
Massachusetts	-805	-739	-672	-539	-273
Michigan	-752	-677	-603	-453	-154
Minnesota	-571	-523	-476	-381	-191
Mississippi	-104	-65	-25	53	210
Missouri	-379	-326	-273	-166	47
Montana	-66	-55	-44	-22	22
Nebraska	-196	-175	-153	-110	-24
Nevada	-240	-217	-193	-145	-50
New Hampshire	-157	-145	-133	-109	-61
New Jersey	-1,107	-1,022	-937	-766	-425
New Mexico	-19	3	26	71	161
New York	-1,807	-1,577	-1,346	-886	35
North Carolina	-604	-485	-367	-130	344
North Dakota	-87	-79	-70	-53	-19
Ohio	-592	-492	-393	-195	202
Oklahoma	-233	-193	-153	-72	89
Oregon	-273	-230	-187	-100	73
Pennsylvania	-1,151	-1,046	-942	-733	-315
Rhode Island	-116	-107	-98	-79	-42
South Carolina	-278	-229	-181	-83	112
South Dakota	-62	-54	-46	-29	4
Tennessee	-302	-249	-197	-93	116
Texas	-1,457	-1,208	-958	-458	541
Utah	-138	-116	-93	-47	44
Vermont	-68	-62	-55	-41	-14

Virginia	-588	-521	-455	-322	-56
Washington	-716	-637	-558	-400	-84
West Virginia	-60	-37	-14	33	126
Wisconsin	-539	-482	-425	-311	-83
Wyoming	-79	-69	-59	-39	1
NATIONAL*	19	46	122	565	4,160
10 YEARS*	190	460	1,220	5,650	41,600

* The first column of estimates (\$2,000 employer penalty per worker) is shown in bold as it is the assumption made in the main analyses as shown in the manuscript.

Appendix Table 11. Component Savings and Costs from Divestment for Current Employees Assuming Medicaid Expansions in All States (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions	Additional Federal Taxes Compensated by State and Local Governments
Alabama	551	156	403
Alaska	71	19	109
Arizona	585	83	386
Arkansas	255	58	143
California	2,169	479	3,026
Colorado	275	75	393
Connecticut	197	23	359
Delaware	48	9	64
District of Columbia	20	1	28
Florida	1,185	233	1,090
Georgia	932	282	632
Hawaii	105	30	108
Idaho	174	25	117
Illinois	621	69	968
Indiana	463	78	371
Iowa	221	37	304
Kansas	287	120	266
Kentucky	403	95	266
Louisiana	473	130	272
Maine	85	7	112
Maryland	299	83	533
Massachusetts	289	52	647
Michigan	436	69	707
Minnesota	220	14	446
Mississippi	401	158	212
Missouri	434	38	408
Montana	90	14	76
Nebraska	146	16	175
Nevada	127	6	194
New Hampshire	56	7	117
New Jersey	418	35	930
New Mexico	181	81	142
New York	1,396	430	2,006
North Carolina	1,030	158	743
North Dakota	39	10	70
Ohio	801	100	799
Oklahoma	331	89	237
Oregon	295	52	300
Pennsylvania	501	54	892
Rhode Island	38	7	96
South Carolina	371	97	335
South Dakota	57	12	59
Tennessee	473	141	340
Texas	2,106	564	1,588
Utah	205	39	173
Vermont	33	3	58
Virginia	414	95	513
Washington	457	33	605

West Virginia	208	43	149
Wisconsin	387	136	471
Wyoming	62	10	70

Appendix Table 12. Component Savings and Costs from Divestment for Retirees under Age 65 Assuming Medicaid Expansions in All States (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions
Alabama	52	9
Alaska	10	5
Arizona	42	33
Arkansas	23	16
California	175	27
Colorado	32	6
Connecticut	12	0
Delaware	4	4
District of Columbia	2	2
Florida	125	29
Georgia	68	6
Hawaii	18	16
Idaho	12	0
Illinois	23	0
Indiana	37	8
Iowa	10	5
Kansas	15	4
Kentucky	33	0
Louisiana	43	70
Maine	12	3
Maryland	31	7
Massachusetts	16	17
Michigan	48	0
Minnesota	14	7
Mississippi	36	7
Missouri	20	22
Montana	10	5
Nebraska	7	5
Nevada	11	0
New Hampshire	5	7
New Jersey	43	8
New Mexico	25	15
New York	132	83
North Carolina	81	18
North Dakota	2	0
Ohio	54	46
Oklahoma	9	26
Oregon	25	0
Pennsylvania	95	20
Rhode Island	5	3
South Carolina	81	12
South Dakota	5	0
Tennessee	32	11
Texas	140	21
Utah	8	0
Vermont	5	2
Virginia	43	40
Washington	24	8
West Virginia	15	9

Wisconsin	8	13
Wyoming	7	4

Appendix Table 13. Savings from Divestment for Current Employees and Retirees under Age 65 Assuming Medicaid Expansions in All States and Depending on Employer Penalty Level (\$1,000,000s)*

	Savings with Employer Penalty of \$2,000	Savings with Employer Penalty of \$1,750	Savings with Employer Penalty of \$1,500	Savings with Employer Penalty of \$1,000	Savings with Employer Penalty of \$0
Alabama	-69	-15	39	148	365
Alaska	-111	-98	-84	-58	-5
Arizona	-87	-32	24	135	357
Arkansas	19	43	66	114	209
California	-2,970	-2,621	-2,272	-1,573	-176
Colorado	-402	-352	-302	-203	-4
Connecticut	-423	-386	-349	-275	-127
Delaware	-59	-52	-44	-29	1
District of Columbia	-35	-31	-27	-19	-3
Florida	-790	-631	-472	-154	482
Georgia	-94	-1	93	281	656
Hawaii	-45	-32	-19	8	61
Idaho	-67	-47	-27	13	93
Illinois	-1,107	-1,001	-894	-681	-255
Indiana	-178	-129	-79	19	216
Iowa	-331	-294	-256	-181	-31
Kansas	-145	-107	-69	8	161
Kentucky	-80	-37	6	92	264
Louisiana	123	163	203	284	445
Maine	-112	-98	-85	-59	-6
Maryland	-585	-526	-467	-349	-113
Massachusetts	-805	-739	-672	-539	-273
Michigan	-752	-677	-603	-453	-154
Minnesota	-571	-523	-476	-381	-191
Mississippi	75	114	154	232	389
Missouri	-319	-266	-213	-106	107
Montana	-45	-34	-23	-1	43
Nebraska	-173	-151	-130	-87	-1
Nevada	-240	-217	-193	-145	-50
New Hampshire	-138	-126	-114	-90	-42
New Jersey	-1,107	-1,022	-937	-766	-425
New Mexico	-19	3	26	71	161
New York	-1,807	-1,577	-1,346	-886	35
North Carolina	-404	-286	-167	70	544
North Dakota	-87	-79	-70	-53	-19
Ohio	-592	-492	-393	-195	202
Oklahoma	-104	-64	-24	57	218
Oregon	-273	-230	-187	-100	73
Pennsylvania	-1,059	-954	-850	-641	-223
Rhode Island	-116	-107	-98	-79	-42
South Carolina	-164	-115	-66	31	226
South Dakota	-51	-43	-35	-18	15
Tennessee	-100	-48	4	109	318
Texas	-756	-506	-257	243	1,242
Utah	-102	-80	-57	-11	80
Vermont	-68	-62	-55	-41	-14

Virginia	-453	-387	-320	-187	79
Washington	-716	-637	-558	-400	-84
West Virginia	-60	-37	-14	33	126
Wisconsin	-383	-326	-269	-155	73
Wyoming	-68	-58	-48	-28	12
NATIONAL*	217	323	615	1,948	7,253
10 YEARS*	2,170	3,230	6,150	19,480	72,530

* The first column of estimates (\$2,000 employer penalty per worker) is shown in bold as it is the assumption made in the main analyses as shown in the manuscript.

8c. Selective Divestment Strategy

We consider the Selective Divestment Strategy in the context of current state Medicaid expansions which would be federally supported under the ACA. Columns in the tables generally show individual components of savings (costs) that the strategies induce. They are shown in green if they result in saving from the SLGs perspective and in red if they result in a cost. For the current Medicaid expansion scenarios in states that have not expanded Medicaid, we make two assumptions: 1) no savings from federal support for Medicaid expansions; 2) SLGs in states without Medicaid expansions increase compensation to households below 138% of the FPL so that their household falls at 138% of the FPL and hence they qualify for maximal exchange subsidies and cost-sharing. For current workers, assumption #2 induces some increases in federal taxes that the SLGs must also offset because of increased incomes. The component costs and savings for current workers are shown in Appendix Tables 14. Of note, since full divestment for retirees under age 65 is cost saving and no employer penalties are relevant to this subgroup, we use the data presented in Appendix Table 9 for the retiree portion of this strategy as well.

In the Selective Divestment Strategy, we sum the component savings and costs for current worker and retiree subgroups. Unlike the Full Divestment Strategy, penalties are assessed for workers who qualify for federal subsidies or cost-sharing, so these penalty estimates are reported in the tables directly. Of note, like the Full Divestment Strategy, a \$0 penalty may be relevant if SLGs were to successfully challenge the applicability of the penalty to them – if so, the component costs and savings could be summed omitting the employer penalty column.

We also consider the Selective Divestment Strategy under a hypothetical scenario in which all states implement Medicaid expansions. These results are shown in Appendix Tables 15, with those relevant to retirees the same as Appendix Table 12. Note that in the full Medicaid expansion scenario, SLGs do not increase the household incomes of those below 138% of FPL up to 138% since those falling below 138% of FPL qualify for federal support under Medicaid which produces larger savings for the SLGs.

Appendix Table 14. Component Savings and Costs from Selective Divestment for Current Employees below 400% of the Federal Poverty Level Assuming Current Medicaid Expansions Only (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions*	Additional Federal Taxes Compensated by State and Local Governments	Employer Penalties Paid to the Federal Government	Additional Compensation to bring Household below 138% of the Federal Poverty Level up to That Level*
Alabama	576	0	52	239	17
Alaska	70	0	16	39	1
Arizona	578	83	60	234	0
Arkansas	244	58	13	90	0
California	2,132	479	282	940	0
Colorado	272	75	33	127	0
Connecticut	195	23	25	84	0
Delaware	48	9	6	23	0
District of Columbia	19	1	2	10	0
Florida	1,163	0	107	531	43
Georgia	943	0	103	404	76
Hawaii	101	30	19	49	0
Idaho	171	0	15	74	3
Illinois	601	69	84	279	0
Indiana	482	0	50	201	14
Iowa	218	37	30	104	0
Kansas	282	0	39	135	27
Kentucky	393	95	29	166	0
Louisiana	462	0	42	189	21
Maine	86	0	11	40	2
Maryland	292	83	32	127	0
Massachusetts	289	52	35	125	0
Michigan	432	69	57	192	0
Minnesota	217	14	36	109	0
Mississippi	400	0	36	168	23
Missouri	426	0	54	189	4
Montana	90	0	8	36	3
Nebraska	145	0	20	69	3
Nevada	127	6	23	65	0
New Hampshire	56	0	7	28	4
New Jersey	414	35	48	177	0
New Mexico	181	81	16	83	0
New York	1,379	430	185	637	0
North Carolina	1,016	0	88	437	34
North Dakota	37	10	7	21	0
Ohio	773	100	92	329	0
Oklahoma	329	0	32	141	22
Oregon	287	52	31	131	0
Pennsylvania	494	0	72	247	14
Rhode Island	37	7	6	17	0
South Carolina	362	0	38	172	4

South Dakota	61	0	10	31	3
Tennessee	449	0	42	203	34
Texas	2,099	0	234	902	130
Utah	211	0	22	81	4
Vermont	33	3	4	15	0
Virginia	418	0	61	208	5
Washington	445	33	57	202	0
West Virginia	207	43	19	94	0
Wisconsin	382	0	54	176	12
Wyoming	61	0	7	29	1

* For states without Medicaid expansions, savings from federal support of Medicaid is \$0 but additional savings are captured by increasing the household incomes of workers falling below 138% of the federal poverty lines up to 138% such that these households qualify for federal subsidies and cost-sharing for exchange-purchased plans.

Appendix Table 15. Component Savings and Costs from Selective Divestment for Current Employees below 400% of the Federal Poverty Level Assuming Medicaid Expansions in All States (\$1,000,000s)

	Savings from Federal Government Subsidies and Cost-Sharing	Savings from Federal Support of Medicaid Expansions	Additional Federal Taxes Compensated by State and Local Governments	Employer Penalties Paid to the Federal Government
Alabama	541	156	51	233
Alaska	69	19	16	39
Arizona	578	83	60	234
Arkansas	244	58	13	90
California	2,132	479	282	940
Colorado	272	75	33	127
Connecticut	195	23	25	84
Delaware	48	9	6	23
District of Columbia	19	1	2	10
Florida	1,143	233	107	523
Georgia	921	282	102	398
Hawaii	101	30	19	49
Idaho	171	25	15	74
Illinois	601	69	84	279
Indiana	462	78	49	197
Iowa	218	37	30	104
Kansas	282	120	39	135
Kentucky	393	95	29	166
Louisiana	462	130	42	189
Maine	84	7	11	40
Maryland	292	83	32	127
Massachusetts	289	52	35	125
Michigan	432	69	57	192
Minnesota	217	14	36	109
Mississippi	385	158	36	165
Missouri	426	38	54	189
Montana	88	14	7	36
Nebraska	143	16	20	68
Nevada	127	6	23	65
New Hampshire	56	7	7	28
New Jersey	414	35	48	177
New Mexico	181	81	16	83
New York	1,379	430	185	637
North Carolina	1,011	158	88	434
North Dakota	37	10	7	21
Ohio	773	100	92	329
Oklahoma	323	89	32	140
Oregon	287	52	31	131
Pennsylvania	488	54	71	245
Rhode Island	37	7	6	17
South Carolina	362	97	38	172
South Dakota	56	12	10	30
Tennessee	449	141	42	203
Texas	2,063	564	231	897
Utah	203	39	21	80
Vermont	33	3	4	15

Virginia	405	95	60	206
Washington	445	33	57	202
West Virginia	207	43	19	94
Wisconsin	382	136	54	176
Wyoming	59	10	7	29

8d. Comparison of Healthcare Costs of Employee Households Shifting to Coverage under Exchange Plans and Those Continuing on State and Local Government-Provided Plans with the Selective Divestment Strategy

We examine the projections of total household healthcare costs for groups of employee households defined in terms of whether they are subsidy eligible and hence would receive coverage under exchange-purchased plans in the selective divestment strategy. In general, for most states, the projections of total healthcare spending we use in our analysis are reasonably similar in magnitude, though slightly higher on average for SLG employee households falling below 400% of the Federal Poverty Level (likely to qualify for subsidies, cost-sharing, or Medicaid) compared SLG employee households above this level. Notable large state exceptions include California and New York where those below 400% have lower total healthcare spending on average. Note that these comparisons are made on total healthcare spending and not just the share of these costs covered by the SLG employers.

Appendix Table 16. Average Annual Household Healthcare Expenditures Projected for Employee Households Shifting to Coverage under Exchange Plans and Those Continuing on State and Local Government-Provided Plans with the Selective Divestment Strategy

	Shifting to Exchange Plans (≤400% of Federal Poverty Level)	Continuing on Employer Provided Plans (>400% of Federal Poverty Level)
Alabama	13,605	12,120
Alaska	12,686	12,649
Arizona	12,978	12,616
Arkansas	13,307	12,045
California	13,198	13,400
Colorado	12,475	11,290
Connecticut	14,256	15,349
Delaware	13,745	12,719
District of Columbia	8,990	10,039
Florida	12,554	11,570
Georgia	12,729	12,355
Hawaii	14,245	14,609
Idaho	13,249	12,104
Illinois	14,881	13,367
Indiana	15,317	14,150
Iowa	15,863	13,603
Kansas	15,601	13,988
Kentucky	12,891	11,438
Louisiana	12,129	12,095
Maine	14,988	14,279
Maryland	12,930	12,671
Massachusetts	14,238	14,577
Michigan	15,395	14,705
Minnesota	16,349	14,587
Mississippi	13,063	11,686
Missouri	16,388	13,374
Montana	13,188	11,552
Nebraska	16,415	13,438
Nevada	12,927	13,056
New Hampshire	15,206	13,934

New Jersey	15,262	14,124
New Mexico	12,581	11,274
New York	13,895	14,338
North Carolina	12,865	11,880
North Dakota	15,682	12,977
Ohio	15,562	13,714
Oklahoma	12,704	12,215
Oregon	12,268	11,764
Pennsylvania	13,763	12,973
Rhode Island	14,674	15,190
South Carolina	13,010	11,925
South Dakota	14,358	13,808
Tennessee	13,673	12,110
Texas	12,800	12,713
Utah	14,151	12,637
Vermont	15,120	13,579
Virginia	12,716	12,436
Washington	12,950	12,290
West Virginia	13,539	11,891
Wisconsin	15,196	14,391
Wyoming	12,760	12,057