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Exploring the Potential of Tax Credits for Funding Population Health

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*This paper was developed as a team effort of ReThink Health, and was made possible by the research, writing and support of Ella Auchincloss, Nina Burke, Maggie Cooke, Amanda McIntosh, and Katherine Wright.

Summary

Over the past several years, hundreds of regional multisector partnerships have been forming across the country to improve population health. These partnerships recognize that the health and well-being of the populations in their regions are produced by a variety of conditions and determinants—including safe environments, housing, education, and economic conditions—and that clinical health care is but one of these. Absent a shift in focus to population health, chronic conditions and health care costs will continue to rise, productivity will suffer, and deep health inequities will remain. Yet, despite the critical nature of this mission, most partnerships are funded on a shoestring budget, and overwhelmingly by grants (ReThink Health 2017).

There are a number of more substantial and sustainable funding sources to which we might turn, but none are especially easy to develop. This paper explores one possibility: tax credits. Tax credits are one type of tax break that work by reducing the cost of a good or service, thereby stimulating the markets for those goods/services, leveraging private capital in the process. We sought to identify the conditions under which a tax credit policy would provide: 1) a sound and sustainable financing source for population health, and 2) a sound investment for taxpayers. Some of the key findings in this paper are summarized here.

Tax breaks are widely used at both the state and federal levels, spanning numerous sectors including health. At the federal level, tax breaks were claimed on 169 million tax returns, estimated to total \$1.5 trillion in 2017. But, outside some notable and important tax credits that impact the social determinants of health, such as the Earned Income Tax Credit and the Low Income Housing Tax Credit, this ubiquitous instrument is not being used for population health.

The design of a tax credit program matters greatly to its success, and we can pinpoint what those design features are. It's important to acknowledge that not all tax credit programs are effective at producing the desired outcomes. Indeed, certain types of tax breaks, especially the \$45 billion in business incentives offered by state and local governments each year, have been shown **not** to be effective at creating jobs and economic growth.

A tax credit program for population health could be constructed to ensure positive returns on investment for taxpayers. There is a sizeable and growing set of evidence-based population health interventions with enough financial return on investment (ROI) to be stimulated by tax credits. Limiting the tax credit to evidenced-based interventions with positive ROI ensures that the tax credit serves as a sound investment for taxpayers *and* accomplishes its health objectives.

One constraint on the use of tax credits for population health: most service providers are based in the nonprofit or public sectors. A tax credit will not be valuable to them because they have zero or limited tax liability. Our analysis focused on how tax credits might help fund a *portfolio* of population health investments (which can be tailored to local needs) and identified two possibilities.

- One possibility is providing tax credits to health plans and/or self-insured employers, both of whom have huge financial interests in containing health care costs. While the population covered by such a tax credit is limited to those with private insurance, it is quite significant. For-profit health plans fully insure 62 million Americans (with total enrollment of 122 million Americans), and an estimated 100 million Americans are covered by self-funded employer plans. We should also expect that these private companies would be primarily interested in interventions with relatively short payback periods. Nonetheless there are many important investments that could be made.

For example, an evidence-based opioid program analyzed by the Washington State Institute for Public Policy was shown to have a total cost of \$356 per person and was shown to create financial benefits of almost \$2,700 and social benefits of \$5,300, both accruing over two years. But these returns are split between a number of beneficiaries, including taxpayers who save \$370 in health care costs and health plans that save \$383 in health care costs. (Participants in the program save \$79 in health care costs and earn an additional \$1,279.) As it stands, neither the taxpayers nor the health plans have much of an incentive to invest because their returns are about the same as their costs, and it takes two years to break even. Now imagine the cost of the program is split between a health plan and taxpayers with the use of a 50% tax credit. The net cost to each would become \$178 and both would more than double their money in two years.

- A second possibility is using tax credits to spur charitable giving, such as to wellness funds. A number of states offer tax credits for donations to specific organizations and/or purposes. The largest of the state programs raised \$20 million in Arizona (for specified antipoverty organizations), \$40 million in Michigan (for homeless shelters and food banks, a program ended in 2011), and \$24 million per year in Iowa for community foundations. Colorado's tax credit for donations to child care providers has raised an average of \$12.6 million in each of the past eight years.

Research suggests that the demand for charitable giving can be spurred through tax credits, although giving seems to respond to a variety of factors: the health of the economy, the sector being donated to, the income of the giver, whether it is structured as a match, and other features of the state tax code. If a tax credit were offered for population health donations, we would want to ensure through the design of the program that the amount of giving will actually *increase*. A poor outcome would be paying for a donation that already occurs and/or shifting the donation from one sector to another without increasing the overall level of giving.

Compared to the federal government, states have a unique set of incentives and opportunities to enact a tax credit for population health. First, containing Medicaid costs is increasingly important for states. All states except Vermont have some type of a balanced budget requirement, and Medicaid is the second largest expenditure item behind K-12 education. Second, states are becoming increasingly aware that their \$45 billion investment in business incentives is failing to produce as expected. The Pew Charitable Trusts has called for improved accountability measures and evaluation, and since 2012, 21 states have enacted laws requiring regular evaluation. Because health and the economy are linked, states desiring higher ROI could choose to redeploy their tax credit dollars in population health instead. Finally, some states are showing willingness to use tax credits for singular population health investments, including the administration of an opioid program in New Hampshire and a lead abatement program in Massachusetts.

Introduction

Over the past several years, hundreds of regional multisector partnerships have been forming across the country to improve population health. These partnerships recognize that the health and well-being of the populations in their regions are produced by a variety of conditions and determinants—including environmental conditions, housing, education, and economic conditions—and that clinical health care is but one of these. Absent a shift in focus to population health, chronic conditions, and health care costs will continue to rise, productivity will suffer, and deep health inequities will remain. Yet, despite the critical nature of this mission, most partnerships are funded efforts on a shoestring budget, and overwhelmingly by grants (ReThink Health 2017).

This paper is based on the premise that, if we want healthy people and communities, we must change our spending and investment patterns to invest in effective population health interventions. Affordability is not the issue; after all, as a nation, we spend \$3 trillion a year on health care. Rather, the question is *how*? Through what financing sources can we begin to make investments with high returns for health and well-being?

There are a number of substantial and sustainable funding sources to which we might turn, but none are especially easy to develop. Nonetheless the stakes are high, and it behooves us to vigorously imagine possibilities. This paper explores one possibility to bring funding to scale for population health: tax credits.

Tax Expenditure Policy

Tax policy is two-sided, much like an old-fashioned vinyl record. Side A concerns the imposition of taxes—who should pay and how much—and plays out amid hot public debate and attention. Side B concerns “tax expenditures,” commonly known as tax breaks—and typically receives much less attention. It might come as a surprise that the growth of federal tax expenditures has exceeded that of federal discretionary funding over the last 40 years (Marbles 2015). Tax expenditures were claimed on 169 million federal tax returns in 2016, netting out at around \$1.5 trillion, roughly the same size as total discretionary spending in the federal budget. (See Exhibit 1: Revenues, Tax Expenditures, and Selected Components of Spending in 2017.)

The Federal Tax Code has allowances for around 170 tax expenditures, across sectors as diverse as national defense, agriculture, housing, energy, natural resources, international affairs, health care, transportation, community development, education, income security, and more. State tax structures often mirror the federal structure, allowing the same deductions, exclusions, and credits. In addition, states operate their own tax programs, especially business incentives such as enterprise zones and film production credits, which totaled an estimated \$45 billion in 2015 at the state and local levels.

Exhibit 1. Revenues, Tax Expenditures, and Selected Components of Spending in 2017

Tax expenditures, projected to total more than \$1.5 trillion in 2017, cause revenues to be lower than they would be otherwise and, like spending programs, contribute to the deficit.

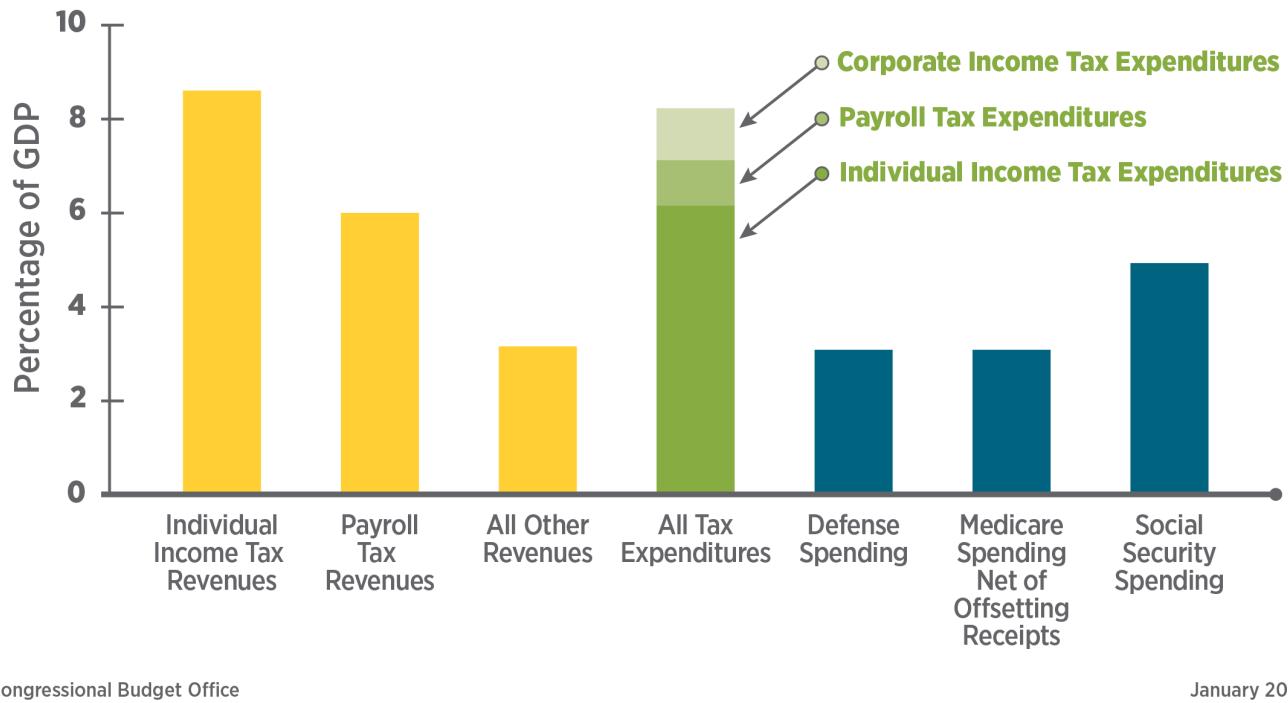


Illustration by Joshua Shakin for Congressional Budget Office (blog), "Tax Expenditures" (March 2017)

Despite the ubiquitous use of tax breaks, few are specifically aimed at improving population health. But, why couldn't there be a tax credit for interventions shown to improve population health? And what would it take?

This paper explores the potential use of tax credits—a particular form of tax expenditure—as an effective means to finance and promote investments in population health. We seek to identify the conditions under which a tax credit policy would provide:

- a sound and sustainable financing source for population health; and
- a sound investment for taxpayers.

This paper makes two claims. First, tax expenditures represent an investment by taxpayers. Taxpayers should be able to expect positive returns to public welfare; if not, why grant the tax break? "Everybody else gets a tax break" is not a good reason for creating a tax expenditure for population health. It must be held to the standard of producing positive public returns.

This is a (relatively) high standard. The Government Accountability Office (GAO) reported in 2016 that federal agencies named only 11 tax expenditures as contributing to their mission or goals (GAO 2016). In its review of the \$45 billion in state and local business incentives, the UpJohn Institute wrote: "Incentives do not have a large correlation with a state's current or past unemployment or income levels, or with future economic growth" (Bartik 2017).

Second, the effectiveness of a tax expenditure program is largely contingent on its design. Despite less than stellar performance in many instances, tax expenditures are not an inherently inferior instrument. Many tax expenditure programs suffer from weak design, namely: inattention to the structure and strength of underlying markets, vague goals, imprecise criteria for claiming the tax break, and lack of accountability mechanisms.

This paper first provides a brief review of how tax expenditures work, then suggests why population health is a good candidate for a tax credit—a specific form of tax expenditure. The bulk of the paper explores the strengths and weakness of various tax credit design elements, and concludes by suggesting key design features for a successful population health tax credit.

How Do Tax Expenditures Work?

The simplest way to think of tax expenditures is as a set of gigantic rebate programs. Some of the rebate programs are straightforward and simple, while others require a great deal of paperwork, accounting, and legal counsel. Some programs offer rebates to corporations, some to individuals, and some to both. The “expenditure” of tax breaks comes in the form of reduced revenue to the treasury.

Tax expenditures are of numerous types. Three common types of tax expenditures are: tax deductions (where certain expenses, such as charitable giving reduce taxable income); exclusions (where sources of income, such as social security income, are not counted in taxable income); and tax credits (a dollar-for-dollar reduction in tax liability, such as the child care tax credit). Of the three, tax credits provide the most powerful and predictable financial incentive because they reduce one’s tax liability on a dollar-for dollar basis (a \$100 credit reduces taxes by \$100).¹

Unlike government appropriations that pay directly for goods and services, tax expenditures incentivize the supply or demand for goods and services in the private market, leveraging private capital. Through the “rebate,” tax expenditures reduce the cost of producing or consuming a good or service, thereby encouraging more supply or demand.

Is Population Health a Good Candidate for Tax Credits?

What would a population health tax credit fund? Population health is not a good or service itself, but an outcome from an array of interventions. One might think of investments in population health as a *portfolio* of services designed to improve the health and well-being of the community at large, much like employer wellness programs pay for a basket of services to improve employee health.² Population health is a good candidate for tax credits for two reasons. First, as a “merit good,” society at large stands to gain from additional investment in population health. Second, there are numerous interventions that offer taxpayers and private investors enough financial and/or social returns such that certain markets could be activated to produce improved population health.

Population health interventions, as a set of desirable goods and services, currently reside in a state of market failure: the private market is “incomplete” in producing too few of these goods and services. An incomplete market is one where some of the necessary conditions for market formation exist, but not all of them. In the case of incomplete markets, total supply is insufficient to meet the needs of consumers.

¹ Compare this for example to a \$100 deduction. It reduces taxable income by \$100, so if a taxpayer is paying a 15% marginal tax rate, the deduction is worth \$15).

² The Healthy Workforce Act of 2009 proposed a tax credit for businesses offering comprehensive employee wellness programs, including programs that raise health awareness among employees, encourage employee behavioral changes, and prompt employee participation through an incentive. The proposed credit was \$200 per employee for the first 200 employees and up to \$100 per employee, thereafter. <http://www.uswwa.org/legislation>

More specifically, population health interventions have the attributes of a “merit good,” specifically: 1) the benefits/returns accrue over time, so they are undervalued when making consumption decisions; 2) benefits/returns are captured by numerous entities other than the buyer; and 3) low-income individuals are not able to afford the full market price, which means they will under consume. In short, merit goods are under valued by the consumer, leading to too little supply.

It is not the purpose of this paper to make the case that population health spending falls short of socially optimal levels. A wide body of evidence attests to this fact.³ While it may not be possible to specify exactly where the optimal level lies, various studies have shown positive return on investment (ROI) from as little as \$10 per capita to \$400 per capita. For a frame of reference, in the U.S. health care system, per capita spending on personal health care is \$7,500, with administrative costs alone estimated at \$650 per capita. Employer wellness programs average about \$700 a year per employee (The Commonwealth Fund n.d.).

At the intervention level, numerous population health investments have been demonstrated to have positive ROI for taxpayers and society at large. For example, the Washington State Institute for Public Policy (WSIPP) has conducted meta-analyses of hundreds of social/health interventions to estimate expected yields from any given intervention, and thus to identify the best candidates for investment. This robust, evidence-based database indicates for each intervention the costs, the benefits, the recipients of benefits (i.e., taxpayers, individuals, or others), the sector to which the benefits accrue (e.g., education, health, employment), and the time frame over which the benefits materialize (WSIPP 2017). Interventions with proven effectiveness can be found in numerous sectors, including, but not limited to, certain mental health treatments for adults and children, maternal health, substance abuse prevention and treatment, lead abatement, child welfare, K-12 education, healthy eating and weight loss programs, and criminal justice programs.

For these high ROI interventions, it is the “split” of the returns across sectors, beneficiaries, and time that makes population health a suitable candidate for tax credit funding. For example, an evidence-based opioid program analyzed by the WSIPP has demonstrated a total cost of \$356 per person, creating financial benefits of almost \$2,700 and social benefits of \$5,300, accruing over over two years. But these returns are split between a number of beneficiaries and sectors, including taxpayers who save \$370 in health care costs and health plans that save \$383 in health care costs.⁴ As it stands, neither the taxpayers nor the health plans have much of an incentive to invest because their returns are about the same as the costs of the program, and it takes two years to break even. Now imagine the cost of the program is split between health plans and taxpayers with the use of a 50% tax credit (half of the cost is rebated). The net cost to each would be \$178; both would more than double their money in two years.

With such strong returns to be had, one might wonder why governments are not investing more heavily in population health, whether through direct appropriations or tax expenditures. All states except Vermont have some type of balanced budget requirement. Tax credits reduce the revenue available to governments, thereby making it more difficult to balance budgets in the short term. There are, however, two situations in which states might use tax credits to invest in population health. The first would establish a new tax credit, with a corresponding reduction in revenues to the treasury. The second would repurpose an existing tax credit away from its current use and apply it to population health. The first case is like adding money to your stock market holdings; the second is rebalancing your portfolio—thinning some stocks and adding others. In the first case, you seek positive returns above some threshold; in the second case, you seek higher returns than your current portfolio is yielding. The second situation offers states the opportunity to improve their financial situations over time with no added costs to their treasuries.

³ See for example: cites for WSIPP; RTH Health Affairs paper; CDC: <https://www.cdc.gov/media/dpk/healthy-living/community-guide/community-guide.html>; http://eprints.whiterose.ac.uk/116811/1/jech_2016_208141.full.pdf

⁴ Participants in the program save \$79 in health care costs and earn an additional \$1,279.

Methodology

Tax credit policies are so numerous, and of so many different types, designs, and intended objectives that the application of tax credits to population health is not immediately clear. In order to make the analysis manageable, this paper characterizes tax expenditures and credits into four classes according to the manner by which they operate to increase the supply and demand for goods and services.

1. *Demand credits*, such as solar energy tax credits, operate similarly to consumer rebates by reducing the price of a good or service to consumers.
2. *Supply (or production) credits* subsidize the cost of producing a good or service, such as cellulosic ethanol tax credits.
3. *Investable tax credits* are a form of production credit in which claimants deduct a percentage of investment costs from their tax liability. Investable tax credits often create a marketable financial asset in the process because these tax credits are transferrable. The most prominent example is the Low Income Housing Tax Credit (LIHTC).
4. *Charitable tax credits* are a lesser-known form of credit offered by some states to increase the supply of charitable giving. It is similar to the well-known deduction for charitable giving, although in a more financially powerful tax credit form because it offers the donor the opportunity to lower their cost of giving by a greater amount than the deduction. Examples include community foundation tax credits (Iowa) and the Arizona anti-poverty tax credit.

A fifth type of credit has the primary purpose of providing income support, as in the Earned Income Tax Credit, which in dollar terms is the largest single tax credit (Desilver 2016). This class is not considered here because it cannot be used as a financing source for population health interventions, although one could clearly make the case that income support helps improve population health.

To better understand the drivers of a successful tax credit, we examined the literature for each of the four classes of tax credits named above. In addition to focusing on evaluative research, we reviewed specific tax credit programs to gain insights. We also sought out emerging examples of credits used to support population health. Exhibit 2, below, outlines this review; the detailed reviews can be found at (forthcoming).

Exhibit 2. A Typology of Tax Credits

	Current Examples	Emerging Pop Health Examples
Demand	<ul style="list-style-type: none"> • Solar Investment Tax Credit (federal; individual and corporate) • Health Premium Tax Credit (federal; individual) 	<ul style="list-style-type: none"> • Canada's healthy behavior tax credit (federal; individual)
Production	<ul style="list-style-type: none"> • Enterprise Zones (state; corporate) • Cellulosic ethanol (federal; corporate) 	<ul style="list-style-type: none"> • Health Enterprise Zones (state; individual and corporate) • New York farm credit (state; corporate)
Investor	<ul style="list-style-type: none"> • Low Income Housing Tax Credit (federal; corporate) • New Markets Tax Credit (federal; corporate) 	<ul style="list-style-type: none"> • Mid-State Health used a \$3.4 million New Markets Tax Credit to find funding to build a community health center in rural Plymouth, NH (federal; corporate)
Charitable Giving	<ul style="list-style-type: none"> • State credits such as the Arizona credit for donations to anti-poverty agencies (individual and corporate) 	<ul style="list-style-type: none"> • New Hampshire credit for opioid program coordination (state; corporate)

Critical Features to Consider in Designing a Population Health Tax Credit

Numerous design elements factor into creating a successful tax credit for population health. This paper is hardly exhaustive, but it identifies some of the more salient considerations and programmatic design features to consider:

- Source of Funds: is there a taxpayer?
- Market Conditions: is there an underlying market for population health?
- Price Sensitivity: how big should the tax credit be?
- Distributional Impacts: who claims the tax credit and who benefits from the proceeds?
- Simplicity: what is required to administer the tax credit?
- Accountability: how do we know the tax credit is achieving its aims?

Source of Funds: Is There a Taxpayer?

While it seems glaringly obvious, tax credits only have value for those who pay taxes. Many population health interventions are rooted in the public and/or nonprofit sectors, such as promoting healthy behaviors, reducing poverty, addressing childhood trauma and welfare, curbing substance abuse, promoting educational achievement, providing good housing, and so on. Neither public sector nor nonprofit providers pay income or property taxes. Thus, the first task is to identify taxpayers with a stake in population health outcomes.

Market Conditions: Is There an Underlying Market for Population Health?

A tax credit is a subsidy designed to shift markets and leverage private sector capital. Is there a market that can be stimulated for population health? Tax credits will be ineffective when market conditions are weak or not aligned with the purpose of the credit. For example, the cellulosic ethanol (biofuels from plant fibers) credit failed to produce energy at the targeted levels in part because manufacturing capacity was too immature to take advantage of the incentive (Gecan 2010, Reuters 2011). Job creation in enterprise zones have often failed to materialize as intended because the jobs being created did not match the skill sets of residents in the zone (Greenbaum and Landers 2009, Peters and Fisher 2002, Department of Legislative Services 2013).

On the other hand, by spurring demand, the Solar Tax Credit successfully grew the market for solar energy. The emerging solar industry required volume sales to reduce production costs so that solar could be offered at a price attractive to consumers. The tax credit provided temporary price reductions (of 30%) to achieve that volume. The number of solar installations has increased by 1600% since 2006, the cost of installation has decreased more than 70%, and the solar job market has boomed (ITC 2017). Solar employs over 260,000 people and employment has grown by 123% since 2010 (The Solar Foundation 2016). Grid parity, or better, is expected for solar by 2020 (meaning solar will be cheaper than fossil fuels), suggesting that the market can remain successful beyond the tax credit, which will sunset by 2021 for residential solar and continue at 10% beyond 2022 for corporations (Nelder and Silberg 2015).

Likewise, the Low Income Housing Tax Credit (LIHTC) has been widely lauded for creating a market for affordable housing. Since its inception in 1986, the LIHTC has provided over 3 million affordable housing units, becoming “the single most important form of federal assistance to preserve and expand the supply of affordable rental housing for low-income households” and has done so with bi-partisan support (Zigas 2013). In addition to providing affordable housing, the program has created jobs. According to the National Association of Home Builders, in a typical year, LIHTC development supports approximately 95,700 jobs; \$3.5 billion in federal, state, and local taxes; and \$9.1 billion in wages and business income (Berger n.d.).

Merit goods suffer from too little demand and supply. Yet it is possible to imagine a set of markets that could be stimulated through a tax credit to improve population health.

Stimulating Private Sector Investment in Population Health

Health care insurers and self-insured employers have huge financial interests in population health because effective population health investments reduce health care costs and improve productivity. For-profit health plans fully insure 62 million Americans (with total enrollment of 122 million Americans). An estimated 100 million Americans are covered by self-funded employer plans (Hill n.d.). At an average of \$7,500 in personal health care spending per capita, this “market” covers 162 million Americans and totals \$1.2 trillion. A modest tax credit of $\frac{1}{2}$ of one percent (\$50 per covered life), for example, would yield roughly \$80 billion annually⁵ for population health investments. Compare this to employee wellness programs, which are offered by nearly 80% of employers, at an average cost of nearly \$700 per employee annually, even though the ROI of many such programs is questionable (Healthcare Finance 2015).

Even though population health investments could reduce health care costs and improve productivity, current investments by these stakeholders is limited (notwithstanding sizeable investments in employee wellness programs). One important factor limiting demand is the time horizon. Corporations of all types are under intense pressure to produce financial results in the short run. Financial returns from population health investments can take anywhere from a year (e.g., prenatal care for Medicaid mothers) to a few years (e.g., improving adherence to medication for those suffering from hypertension or diabetes) to decades (e.g., preventing tobacco use among adolescents and teenagers). Moreover, private health plans experience considerable “churn” in that patients enrolled today may not be enrolled tomorrow. In the commercial market, patient turnover has been estimated at about 15% per year (Partners n.d., J.D. Power 2015). Churn is exceptionally high in the Medicaid market—as high as 50% per year. The instability in their patient base leaves some insurers reluctant to invest in population health measures because if patients leave, they fear they will not capture their expected ROI.

A second factor limiting demand is the widespread distribution of benefits, often called “the wrong pocket” problem. Many population health interventions create positive returns, but these returns are often spread across numerous sectors and beneficiaries. In the case of lead paint hazard control, for example, benefits far outstrip costs, accruing in the form of health care savings, reduced crime, lower special education costs, higher lifetime earnings, and higher tax revenue (Gould 2009). Costs are typically born by a single payer, however, and the subset of benefits that accrue to *that* payer may not fully compensate those costs.

Nonetheless, to the extent that population health interventions create financial gains in the form of lower health care costs and/or productivity improvements—and a great many do—the time horizon, churn, and wrong pocket problems could be mitigated with a properly designed tax credit. This is because tax credits increase the ROI to the investor, as illustrated above with the opioid treatment program. Moreover, corporations can and do make investments with longer-term payback periods, if they can be convinced that the numbers make sense. For example, the LIHTC is not received in a lump sum by investors, but over a period of ten years.

Stimulating Investment Funding in Population Health

Individuals and businesses wishing to contribute to their community provide a potential supply of investment funding for population health. Charitable giving totaled \$358 billion in 2014, which included \$258 billion of donations by individuals and \$18 billion by corporations (Radde 2015). Since 1968, growth of charitable giving in the United States has been roughly twice that of the S&P 500 (List 2011).

A number of states offer tax credits for specific organizations and/or purposes (see Appendix A: Exhibit 3). The largest of the state programs provided credits for donations totaling \$20 million in Arizona (for specified antipoverty organizations), \$40 million in Michigan (for homeless shelters and food banks, a program ended in 2011), and \$24 million per year in Iowa for community foundations (Teles 2016). Colorado’s tax credit for

⁵ Depending on the size of the tax credit, much greater investment might occur. See the pricing discussion.

donations to child care providers has raised on average \$12.6 million in each of the past eight years (EPIC n.d.).

Research suggests that charitable giving can be spurred through tax credits, although giving seems to respond to a variety of factors: the health of the economy, the sector being donated to, the income of the giver, whether it is structured as a match, and other features of the state tax code (List 2011). Thus giving can vary sizeably from year-to-year. For example, Exhibit 4 in Appendix A, illustrates donations to community foundations in Michigan, Iowa, and the United States. The chart suggests that a primary source of variability is the economy, small dips in giving occurred during the 2002-2003 recession, whereas large declines occurred during the Great Recession of 2008-2009. Research suggests that giving is more sensitive to upturns in the economy than to downturns (List 2011).

Other Types of Credits Offer Limited Opportunities

The effectiveness of a tax credit to service providers is more difficult to imagine in the population health context. Absent some level of latent demand for population health, production won't materialize because the provider lacks a willing buyer. An example of this is the paucity of opioid treatments. Thus, we must look at the production potential of corollary markets.

Health Enterprise Zones, for example, offer tax credits to health care providers, both corporate and individuals, who locate in underserved markets. As designed, they are expanding "the production of health care" to include community health workers and, in Philadelphia for example, to address the social determinants of health as well (DHMH and CHRC 2017, GSI Health n.d.). Another possible market is the food market. The Farm to Food Bank Tax credit allows New York farmers a 25% refundable credit up to \$5,000 annually for donations to emergency food programs (Brown 2017). One might also imagine subsidizing grocery stores in food deserts, or look to the labor market and imagine tax credits as an alternative to spurring living wages through regulation. What's important to note is that suppliers produce singular goods and services, not baskets of goods and services, and thus to achieve widespread investment in population health through production credits, numerous programs would be necessary.

Investor tax credits offer a particular challenge for population health. They are structured to offer two types of yield—one from the tax credit and one from the underlying investment, such as affordable housing, historic buildings, and renewable energy. This means that the investment either creates a physical asset with value and/or it generates a reliable revenue stream, such as rents or the purchase of energy. Most population health interventions are services, not goods and, thus, they do not create physical assets. And if population health interventions could generate profitable income streams through sales to customers, the market would not be incomplete.

Price Sensitivity: How Big Should the Subsidy Be?

Tax credits are subsidies. The Solar Tax Credit, for example, seems to have successfully matured the market for solar energy with a 30% tax credit—that is, consumers received a rebate equal to 30% of the cost of the solar installations. While price sensitivity is a function of the underlying markets, the question of "do we need a big subsidy to shift supply and demand or will a small subsidy suffice?" bears special attention for three reasons.

First, we don't want to waste money by investing more than necessary—or worse, paying for activity that would have occurred anyway. This is the taxpayers' money after all. Second, we don't want to invest too little and fail in our objectives. Third, there are "opportunity costs." Unless tax credit funds are unlimited, which they are not, we want to target our funds where they are most productive. It would be imprudent to target interventions where the market is stubborn—that is, where large subsidies are needed to move markets—when there are alternatives that would require smaller subsidies given the same returns.

The charitable tax credit provides a good case in point. If a tax credit were offered for population health donations, we would want to ensure that the amount of giving will increase. A poor outcome would be paying for donations that already occur and/or shifting the donation from one sector to another without increasing the overall level of giving. [For what it's worth, the very act of charitable giving seems to improve health—a 10% increase in charitable giving improves a health index by 1% (Blackman 2015).]

Survey research suggests that people give for reasons other than the tax break and the importance of the financial benefit is a secondary matter. But the tax subsidy does matter: while the results have been mixed, the sum of the literature suggests that charitable giving is sensitive to price, especially among higher income individuals (Radde 2015). Other research has found that charitable donations are influenced significantly by tax incentives (Bakija and Heim 2011).

(See Appendix A: Exhibit 3, which summarizes charitable tax credit programs in a number of states.) The size of the credit (the “price”) varies from 15% in Nebraska to 100% in Arizona, meaning that Nebraskans could claim \$15 of credit for every \$100 of giving, and Arizonans could claim the full amount (subject to very limited caps of \$400 per individual). One evaluation study estimated that the Arizona tax credit did little to increase overall giving, while Iowa’s charitable giving credit of 25%, with a more generous cap of \$300,000, increased donations by 125%. Even though the size of Iowa’s tax credit is much smaller than Arizona’s, it appears that other program design features such as caps may matter more than the size of the credit (Teles 2016).

The Health Premium Tax Credit (HPTC) provides another good example of how price sensitivity can impact effectiveness. Launched in 2014 as part of the *Affordable Care Act*, the HPTC assists individuals and families at 138%-400%⁶ of the federal poverty level (individual income between \$16,400 and \$47,550) in paying for health insurance. The tax credit increased insurance coverage among the lowest income individuals (who received an 80% subsidy), but spurred no significant changes in insurance for those at higher income levels who would only receive a 10% subsidy (Hinde 2016).

It’s important to note that tax credits are sometimes enhanced with additional financial benefits and/or regulatory requirements. Households at the lower income range for the HPTC have also been eligible for cost-sharing for out-of-pocket costs such as with co-pays, prescriptions, etc. The LIHTC and the New Markets Tax Credit allows investors to meet requirements imposed by the Community Reinvestment Act.

Distributional Impacts: Who Claims the Tax Credit and Who Benefits from the Proceeds?

Federal tax expenditure data shows that, with a few notable exceptions, individual claimants tend to skew heavily toward those in upper incomes. Of the 10 largest individual tax expenditures in dollars, 50% were claimed by households in the top 20% of income and 17% were claimed by households in the top 1% income bracket.

There are straightforward reasons for this. First, the “rebate” requires itemization on one’s tax return. Most lower income households do not itemize; they take the standard deduction. Second, consumers must have the money up front to pay for the service or good in question, which may not be possible for many lower income households. Third, the tax break has no value if there is no tax liability, which is often the case for low-income households.⁷

There are notable exceptions, however, which are accomplished through a design feature known as a “refundable” credit. Refundability means that the claimant receives the full value of the tax credit even if the

⁶ (100%-400% in non-Medicaid expansion states)

⁷ Also, for tax deductions and exclusions (unlike credits) the tax break is worth more for higher income households because they tend to be in higher marginal tax brackets.

claimant's tax liability is less than the value of the credit. Two very large tax credits are refundable: the Health Premium Tax Credit and the Earned Income Tax Credit. For this reason, if one looks at just tax credits rather than the full range of tax expenditures, a very different distribution emerges—one skewed toward the lower range of incomes.

Charitable tax deductions are claimed across the income spectrum. Giving rises with household income, both as a percentage of households that donate as well as the average donation. However, charitable giving falls as a percentage of household income as income levels rise (Blackman 2015). In the case of investor tax credits such as the LIHTC, claimants tend to be sophisticated investors given the complexity of the credit and its function as an asset in financial markets. The majority of LIHTC credits are claimed by corporations in two sectors: finance and insurance and "management of companies (holding companies)" (Desai, Dharmapala, Singhal 2008).

Presumably, no corporation or individual would claim a tax credit unless they found the activity generating the credit it to be beneficial. Untangling who benefits from the proceeds of a tax credit (i.e., the use to which the tax credit funds are put) can be quite complicated, however, and here we must be alert for unintended consequences. The LIHTC provides numerous examples. Housing projects must generate positive cash flow in order to entice investors, which often means the housing projects cannot serve the lowest income individuals without significant forms of other subsidies. This has the effect of limiting the LIHTC's capacity to serve the lowest income households. LIHTC family housing units are predominantly located in low-school-quality areas (Deng 2007), arguably contributing to the perpetuation of cycles of poverty and segregation of neighborhoods. Finally, the transferability of the LIHTC has created a secondary market that benefits the syndicators who may consume 10-27% of the total equity investment (GAO 1997; Desai, Dharmapala, Singhal 2008).

Questions have also been raised about the distributive impacts of enterprise zones. In its March 2015 Economic Letter addressing enterprise zone programs, the Federal Reserve Bank of San Francisco wrote, "Our overall view of the evidence is that state enterprise zone programs have generally not been effective at creating jobs...even if there is job creation, it is hard to make the case that [tax advantaged] enterprise zones have furthered distributional goals of reducing poverty in the zones...it is likely that they have generated benefits for the real estate owners who are not the intended beneficiaries" (Neumark and Simpson 2015).

One of the distributional impacts to be alert to with population health is that the beneficiaries might be determined by who chooses to invest. Higher income communities and more profitable businesses will have more funds to invest than lower income communities and smaller or less profitable businesses. This tendency could be ameliorated with a refundable credit and/or a process that allocates tax credits, with the explicit intent of ensuring that lower income communities are not disadvantaged in the allocation.

Simplicity: What Is Required to Administer the Tax Credit?

The simplicity of administration varies greatly depending on the type of credit and the specific design of the credit. At one end of the spectrum, the simplest tax credits are non-refundable demand credits, such as the Solar Tax Credit. The taxpayer claims the credit on his/her tax return. Refundable demand credits such as the Health Premium Tax Credit or the Earned Income Tax Credit are more complicated because eligibility for the credit must be ascertained.

In some cases, the dollar amount of tax credits is predetermined and then distributed in an allocation process, complicating tax credit administration. The use of tax credits in New Hampshire, for example, involves administration by the Community Development Financing Authority (CDFA), intermediary applicants for tax credit allocations, businesses purchasing from intermediaries, and finally the cash flow back up to the state that ultimately funds the requested program (NHCDFA 2017).

Each state has its own processes for business tax credits, but evaluations suggest that certification processes in some states are cumbersome, increase administrative costs, and may discourage participation. For example, in New Jersey the evaluation of the Urban Enterprise Zone stated, “administrative inefficiencies result from complex and bureaucratic processing” and the “cumbersome certification processes increased administrative costs and discourage business participation” (Delta Development Group, Inc. and HR&A Advisors, Inc. 2011).

In terms of simplicity, investor tax credits sit at the opposite end of the spectrum from demand credits. They are very complex to administer and typically require experts to assist in navigating the system. All of these moving parts come at a cost. For example, there is considerable “leakage” or inefficient diversion of funds caused by multiple and complex layers of housing agencies, sponsors, syndicators, lawyers, accountants, and others needed to allocate, create, track, and document the LIHTC (Zigas 2013). Industry representatives told NPR and *Frontline* that syndicators earned more than \$300 million in fees in 2016 (Sherwin 2017).

Accountability: How Do We Know the Tax Credit is Achieving Its Aims?

Accountability may well be one of the biggest criticisms of tax credit programs, but accountability can be, and has been, built into the design of some programs. Tax credits, or expenditures more broadly, are known to be “off budget,” which means that the expenditures occur outside the scrutiny of annual budgeting processes. That is, once a tax credit is approved, the expenditures take place more or less automatically unless they are expiring. A number of agencies have been drawing attention to tax expenditures and calling for greater accountability (GAO 2012, The Pew Charitable Trusts 2017).

In evaluating a credit, we’d like to know whether the credit induced the targeted activity, and ideally, its ROI. Business tax incentives (including film credits, enterprise zones, and research and development credits, among others) have been among the most highly criticized for lack of accountability in the past. For example, in Maryland’s Enterprise Zone, administrators had no effective method to track whether the jobs created were a result of the zone (Department of Legislative Services 2013). An evaluation of New Jersey’s Urban Enterprise Zone program found that “accountability for use of funding is either non-existent or often is not monitored,” and the program produced a “negative return on State investment” (Delta Development Group, Inc. and HR&A Advisors, Inc. 2011). In California, evaluators found no impact on job growth or business creation, on average, and that “little is required of the state or its local zones in the way of evaluation” (Kokko and Neumark 2010). Florida found that it was rewarding businesses for activity that would likely have occurred anyway (The Pew Charitable Trusts 2017). Evaluations of state research and development tax credits suggest that the credit does induce research and development activity, but the impact on states’ economics remains unclear (SSTI 2013). The Pew Charitable Trusts has called for improved accountability measures and evaluation, and has reported on the progress being made in each state. Since 2012, 21 states have enacted laws requiring regular evaluation (The Pew Charitable Trusts 2017).

One mechanism for building accountability into charitable giving tax credit programs is to limit donations to agencies that are pre-qualified by the state. In Arizona, for example, the state posts the list of qualifying organizations on the Department of Revenue website. However, ascertaining whether the donations increase charitable giving is another matter. Few evaluations have been conducted on state charitable giving tax credits, although research on charitable giving is quite robust.

While compliance mechanisms for the LIHTC are complex, they are built into the administration of the LIHTC because investors lose their tax credits for noncompliance. Monitoring is conducted by investors and their agents (typically accounting firms) to ensure that their 10-year investment is not at-risk due to noncompliance. The resulting default rate of LIHTC properties is less than 0.1%.

Thus, there are numerous ways to build accountability into a tax credit program: 1) set very clear population health and ROI goals; 2) limit the credit to specified evidence-based population health interventions with

threshold ROIs; 3) certify agencies that can receive the charitable donation; the selection of which should vary with state institutional structures (examples: designated Accountable Communities for Health, Special Districts (as in California), Community Health Network Areas (Massachusetts), or Community Development Finance Agencies; 4) impose a small participation fee for state evaluation and monitoring; 5) sunset the program after 7-10 years, requiring renewal if successful.

Additional Design Elements

The design features described above are not exhaustive. Other considerations include awareness, predictability and sustainability, local control and input, and spending caps.

Awareness of the Tax Credit

In order to claim a tax credit, taxpayers must be aware of the credit. This generally is not an issue for higher income taxpayers and corporations who consult with experts knowledgeable about tax policy, but can be a hindrance for low-income households. Healthcare.gov, for example, is a fairly easy-to-use website that guides people through the process of obtaining health insurance on the exchanges, but learning about the tax credit details takes a bit more sleuthing. A review of the California insurance marketplace found that almost one-third of enrollees in the California health exchange who were eligible for financial assistance ended up forfeiting assistance due to purchasing a non-compliant health plan (Fung, Liang, Donelan, et al. 2017). Marketing is another avenue of promoting awareness. Solar companies advertised intensely to consumers for solar panels and the “30% discount.” Federal and state government agencies conduct outreach for insurance enrollment and the HPTC, although the federal budget for doing so has been reduced by 90% under the current administration (Jost 2017).

Predictability and Sustainability

Predictability is important for both demand and production credits, as it sustains the financing necessary to underwrite long-term investment. If producers are highly uncertain about whether the tax credit will remain available over the longer term, whether it is a demand credit for their customers or a production credit, they will be less likely to invest. For example, ethanol fuel investors were reluctant to invest in commercial-scale, production plants without assurance that the tax credit would remain place for several years (Reuters 2011). In population health, we are interested in scaling the production of a variety of interventions over the longer term. Providers will be unlikely to build this capacity if there is question about the level of funding from year to year.

Local Control and Input

Population health needs vary from region to region—hence the federal requirement for Community Health Needs Assessments. To maximize the impact of tax credits, local input or even administration may be important in determining who makes the decisions about how funds from tax credits are used, and who is trusted to make the most productive use of funds.

Arizona set parameters for donations by identifying a list of qualified agencies, but the receiving agencies ultimately decided how to spend the donated funds. New Hampshire sets objectives each year for its tax credits and then takes applications from local agencies about how they would use the credits to achieve those objectives.

Spending Caps

Tax credits work by redirecting funds that would otherwise flow to the treasury. Their immediate impact is to reduce the money available for other programs. It seems reasonable that state and federal officials might be reluctant to approve yet another tax credit.

Approaches to addressing this concern include capping the amount a taxpayer can claim, capping the total amount of money available through the tax credit, and/or sunsetting the credit. For example, Arizona’s charitable donation credit is capped at \$400 per person, and New York’s Farm to Food credit is capped at \$5,000 per year (Teles 2016, Brown 2017). Total spending can also be capped, although this usually

requires some sort of allocation procedure to distribute the credits, a process that can create considerable complexity in administering the credit. Sunsetting a credit helps limit the total amount of spending over time. The Solar Tax Credit, for example, is due to sunset in 2021 for individual taxpayers. However, sunsetting occurs through legislative processes, where political pressure is often brought to bear to extend tax credits.

Conclusions and Illustrative Prototypes

Based on the analysis presented in this paper, we believe that a tax credit could be designed to be: 1) a sound and sustainable financing source for population health, and 2) a sound investment for taxpayers. Our analysis shows:

- Tax expenditures are a common financial policy tool, totaling trillions of dollars annually in the United States.
- Some tax credits achieve their intended aims, some do not.
- It is highly feasible to construct a population health portfolio of interventions that warrant investment by taxpayers.
- There is a wide array of tax credit design options, and these designs are critical to the success of the tax credit.

The purpose of this paper was to raise the possibility of, and assess the potential for, a tax credit for population health. As this paper demonstrates, actual design of the tax credit is paramount, and this design will vary by state. We conclude this paper by initiating this process for interested readers. We offer two possible prototypes for a population health tax credit. The first is a credit for self-insured employers; the second is a credit for charitable giving to a Wellness Fund. Illustrative legislation for these two prototypes can be found (forthcoming).

An Act Establishing a Tax Credit for Self-insured Employers.

The purpose this Act is to engage self-insured employers in investing more broadly in the health of employees and their families. The Act establishes a tax credit for self-insured employers to invest in certified population health interventions for employees and their families for the purposes of improving health, reducing health care costs, increasing productivity, and receiving a ROI. Private sector self-insured employers are eligible to receive a 50% credit, capped according to the number of employees. The Department of Health shall create and maintain a list of certified interventions, which shall be evidence-based and have a demonstrated financial ROI for state taxpayers of at least 100% within five years of implementation. Each year the state shall report to the legislature with an evaluation of the tax credit's effectiveness. Prior to the sunset scheduled for January 1, 2023, the legislature shall review all five annual reports to determine whether this tax credit is serving the residents and employers of the state, recognizing that some positive effects will not yet be seen in the first five years. The legislature shall determine the continuation of the tax credit no later than October 1, 2022.

An Act Establishing a Tax Credit to Support Wellness Funds.

The purpose of this Act is to encourage individuals, businesses, and financial institutions to contribute to local investments in evidence-based population health interventions to improve health outcomes and reduce health inequities. The Act establishes a 60% tax credit to incentivize charitable donations to regional accountable communities for health that operate 501(c)(3) "Wellness Funds." The credit increases by 3% in value over five years of consecutive giving to mitigate volatility in giving from year-to year. Allowable uses of the donated funds are stipulated as: no less than 70% in certified interventions; up to 12% for backbone/integrator expenses, capped at \$2.5 million; up to 5% for marketing the credit to potential donors, capped at \$1 million; and 8% to revert to the state for reallocation to other areas of the state that may not have equitable conditions for donor activity. The state shall create and maintain a list of certified interventions, which shall be evidence-based and meet certain ROI thresholds as well as other health

objectives. Each year the state shall report to the legislature with an evaluation of the tax credit's effectiveness. The tax credit sunsets on October 1, 2022 and may be renewed upon a determination that it has met its stated objectives.

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Appendix A

Exhibit 3. Summary of Selected Charitable Tax Credits

Credit	State	Effective	Ended	Issued (2012)	Qualifying Organizations	Pre-Quality- ing Required?	Project Specific?	Personal/Business	Percentage	Cap	Refundable?	Carry Over?	Reference
Education Tax Credit	AK	1987	—	\$3.8 million	Nonprofit or public schools and colleges	No	No	Business	50%*	\$5 million	No	No	(Alaska Department of Revenue, 2014) (Alaska Department of Revenue, 2015)
Working Poor Tax Credit	AZ	1998	—	\$21.8 million	Varied	Yes	No	Personal	100%	\$400/\$800	No	Forward 5 years	(Gene, 2013) (Office of Economic Research and Analysis, 2014)
Neighborhood Assistance Tax Credit	CT	1982	—	\$5 million	Varied	Yes	Yes	Business	60%**	\$150,000	No	Back 2 years	(Office of Fiscal Analysis, 2012) (Conn. Gen. Stat. tit. 12 Ch. 2 28a §12-630aa-638)
Neighborhood Assistance Tax Credit	DE	2000	—	est. \$200,000-\$300,000	Varied	Yes	Yes	Business	50%	\$100,000	No	Forward 5 years	(Division of Revenue. State of Delaware, 1999) (Del. Code tit. 30 Ch. 11 d. 2001-2007) (Department of Finance, 2011)
Endow Iowa Tax Credit	IA	2003	—	\$5.8 million	Community Foundations	Yes	No	Both	25%	\$300,000	No	Forward 5 years	(Gullickson and Tilkes, 2013)
Community Services Tax Credit Program	KS	1994	—	\$4.1 million	Community Service, Crime Prevention, and Health Care Nonprofits	Yes	Yes	Both	50%***	\$250,000 per Organization	Yes	No	(Kansas Department of Commerce, 2014)
Endow Kentucky	KY	2011	—	\$200,000	Community Foundations	Yes****	No	Both	20%	\$10,000	No	Forward 5 years	(Governor's Office For Economic Analysis, Office of State Budget Directory, 2011) (Ky. Rev. Stat. 5141.438)
Donations to Resource and Referral Agencies	LA	2008	—	\$218,539	Private Agencies with contracts through the Department of Social Services	Yes	No	Business	100%	\$5,000	Yes	No	(Louisiana Department of Revenue, 2013) (Louisiana Department of Revenue, 2015)
Homeless Shelter/Food Bank Credit	MI	1992	2011	\$20.0 million (2011)	Homeless Shelters and Food Banks			Both	50%	\$100/\$200 (Individuals) \$5,000 (Businesses)			(Tax Analysis Division, Office of Revenue and Tax Analysis, 2014)
Community Foundation/ Education Credit	MI	1989	2011	\$3.8 million (2011)	Community and Education Foundations			Both	50%	\$100/\$200 (Individuals) \$5,000 (Businesses)	No	No	(Tax Analysis Division, Office of Revenue and Tax Analysis, 2014)
Youth Opportunities Program	MO	1996	—	\$793,794 (2010)	Varied	Yes	Yes	Both	50%	\$200,000	No	Forward 5 years	(Missouri Department of Economic Development, 2015) (Missouri Department of Economic Development, 2013)
Food Pantry Tax Credit	MO	2007	2011	\$150,000 (2008)	Food Pantries	No	No	Both	50%	\$2,500	No	Forward 3 years	(Oversight Division, 2011)
Qualified Endowment Credit	NE	2006	2009	\$514,000	Any 501(c)3 with an endowment	No	No	Both	15*****	\$5,000	No	No	(Nebraska Department of Revenue Research Division, 2008) (Nebraska Department of Revenue, 2010)
Donations to Biomedical Research Institutes	OK	2005	—		Medical Research Institutes	No	No	Both	50%	\$1,000	No	Forward 4 years	(The Tax Policy Division of The Oklahoma Tax Commission, 2012) (Okla. Admin. Code §70:50-15-113)

* Alaska Education Credit is available for up to 50% of annual contributions up to \$100,000, 100% of the next \$200,000, and 50% of annual contributions beyond \$300,000.

** Connecticut provides a 100% credit for energy conservation projects and construction or rehabilitation of low-income housing units.

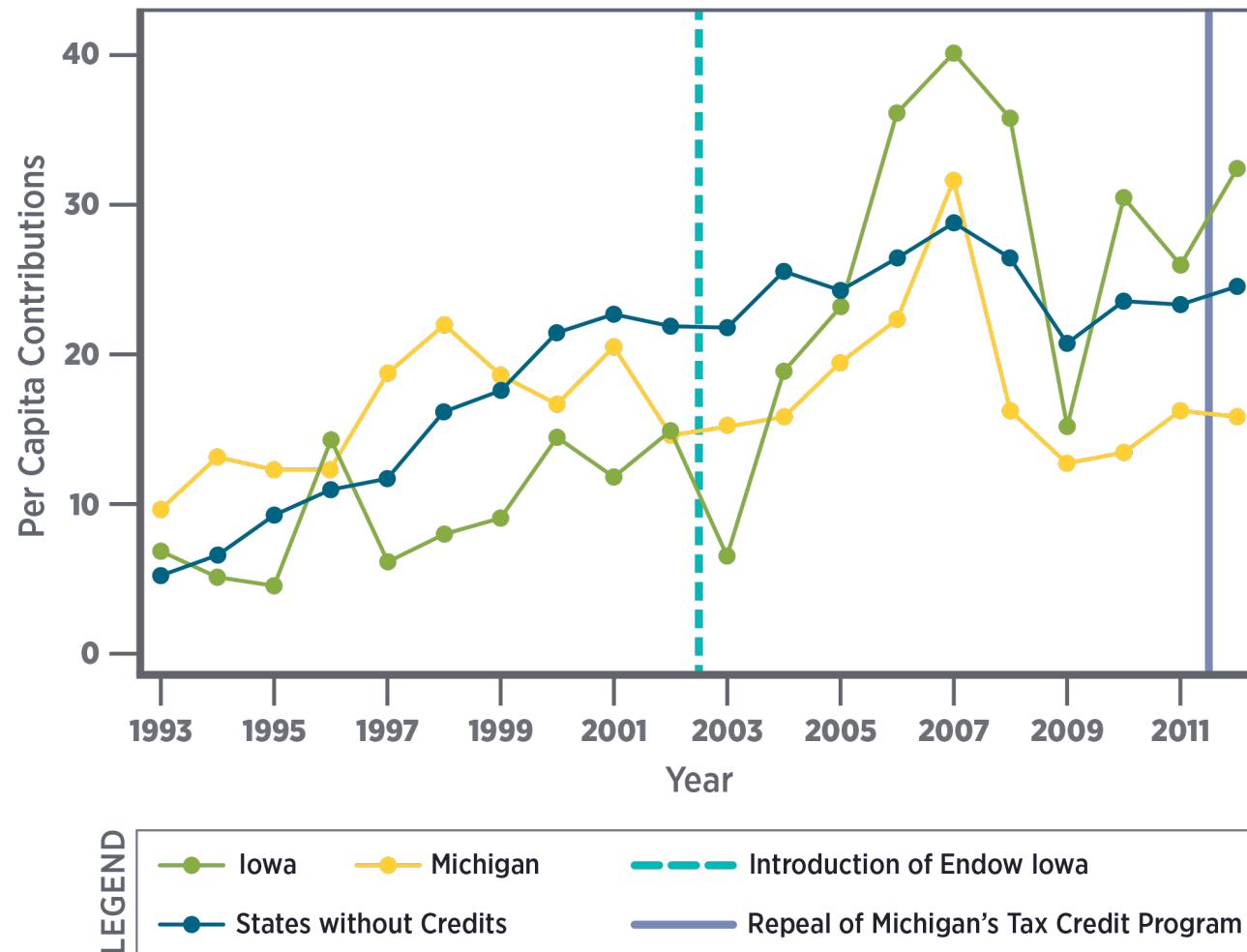
*** The Kansas Community Service Program 70% credits for contributions in rural areas.

**** Endow Kentucky requires preliminary authorization be requested by the donor rather than the grantee organization.

***** Nebraska's Qualified Endowment Credit provided a 15% credit for individuals, S corporations, partnerships and limited liability companies and a 10% credit for C corporations.

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Exhibit 4. Per Capita Contributions to Community Foundations in Michigan, Iowa and the United States, 1993–2012



Lines in the figure represent total per capita contributions reported by community foundations on IRS Form 990. Vertical lines represent the introduction of Endow Iowa and the repeal of Michigan's tax credit programs.

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**The National Academies' Roundtable
on Population Health Improvement**
Oakland, California

Tax Policy 101
by Pete Davis

Over the next 50 minutes, we're going to examine how well some taxes adhere to the principles of taxation. My objective is to give you enough practice so that, in the future, you will ask the right questions and be aware of the pitfalls in formulating tax policy.

Let's run this like a seminar. You respond to my questions, and I will to yours throughout, and we'll make this the most productive session we can.

The main point of my talk: Tax policy is a balancing act among competing objectives. Just as all the characters in the 1966 Western, "[The Good, the Bad, and the Ugly](#)," were flawed and violently in conflict, so is our tax system. There are no perfect taxes. Everything is a trade-off. Every time you establish or change a tax, you create winners and losers. Every time you bolster one tax principle you violate another.

What did Machiavelli and behavioral economists teach us about winners and losers? Losers hate losing a lot more than winners like winning by two or three to one. So, to be politically viable, gains have to well exceed losses.

Tax Policy Principles:

- 1. Raise Revenue**
- 2. Fairly**
 - 1. Vertically** -- based upon ability to pay; progressively
 - 2. Horizontally** -- so similarly situated taxpayers pay the same tax
- 3. Simply** -- so taxpayers can comply without resort to professional help
- 4. Efficiently** -- with a minimum of administrative and enforcement costs

The U.S. Tax Code does none of these very well.

- It raises revenue, but not enough to balance the budget. Entitlement spending, particularly for health care, is the main driver of our deficits. The Fiscal Year 2017 deficit was \$666 b., or 3.5% of GDP. Our accumulated deficits, the debt held by the public, ended FY17 at 77% of GDP. Our kids will pay.
- Although our income tax is progressive, when you add payroll taxes, it's only mildly progressive.
- Loopholes cause wide variations in tax rates paid at each income level.
- Our income tax is so complicated that 56% of filers use paid preparers, and 34% use software. Only 10% do them without professional help.
- So our income tax is hugely inefficient for taxpayers. However, the government's expense is only 0.7% of revenue collected.

Our Tax Code heavily subsidizes and distorts health care. Every January, the Joint Committee on Taxation estimates **tax expenditures**, defined by the Congressional Budget and Impoundment Control Act of 1974 as “revenue losses attributable to provisions of the Federal tax laws which allow a special exclusion, exemption, or deduction from gross income or which provide a special credit, a preferential rate of tax, or a deferral of tax liability.”

Health "tax expenditures"	Fiscal Year 2017, \$-Billion
• Exclusion of employer contributions	\$165
• Exclusion of medical care and TRICARE medical insurance for military dependents, retirees, and retiree dependents not enrolled in Medicare	\$3
• Exclusion of health insurance benefits for military retirees and retiree dependents enrolled in Medicare	\$1
• Deduction for health insurance premiums and long-term care insurance premiums by the self-employed	\$6
• Deduction for medical expenses and long-term care expenses	\$10
• Exclusion of workers' compensation medical benefits	\$5
• Health savings accounts	\$3
• Exclusion of interest on State and local government qualified private activity bonds for private nonprofit hospital facilities	\$3

• Deduction for charitable contributions to health organizations	\$6
• Credit for purchase of health insurance by displaced persons	*
• Credit for orphan drug research	\$2
• Tax credit for small businesses purchasing employer insurance	\$1
• Subsidies for insurance purchased via health benefit exchanges	\$56

Source: Joint Committee on Taxation, [JCX-3-17](#).

Federal health care spending:	Fiscal Year 2017, \$-Billion
• Medicare	\$701
• Medicaid	\$385
• Health insurance subsidies and related spending	\$51
• Children's Health Insurance Program	\$15

Source: Congressional Budget Office [August Update](#)

States with income taxes generally "piggyback" on the federal system. Nine states have no income tax (counting two that only tax interest and dividends). The remaining 41 states collected \$355 b. in FY17, 22% of the \$1,587 b. collected by the federal government as recorded in the National Association of State Budget Officers (NASBO) [Fiscal Survey of the States, Spring 2017](#). Multiplying that percentage times the \$205 b. of federal health tax expenditures (not counting the \$56 b. of ObamaCare subsidies) gives us a rough idea of the states' tax expenditure, \$46 b.

State health spending	Fiscal Year 2017, \$-Billion
Medicaid	\$574
That's 29% of total state spending as reported (Tables 28 & 29, pp.48-49) by NASBO. 31 states expanded Medicaid under the Affordable Care Act. Their 5% match amounts to an estimated \$8.5 b.	
Children's Health Insurance Program (CHIP)	\$14

Externalities lead us to make exceptions to the principles of taxation.

Externalities are benefits or costs affecting those not part of the transaction. Pollution is the usual example of an external cost, but financial institution risk-taking and overfishing are others. Examples of external benefits include vaccination, education, and R&D. Economists say, to be "fair," we should tax the producers of those external costs. Take smoking. Smoking increases

health care costs for all, so it makes sense to tax smokers. Some of them, like President Obama, sneak their cigarettes or bum them from friends, so let's tax the sale of cigarettes. However, if we tax them too much, it's a jobs killer for the tobacco industry in Kentucky and North Carolina. Do a greater proportion of poor people smoke than rich people? Yes, by a lot. So fully taxing cigarettes would be "regressive," an unfair burden on the poor, improving one measure of fairness, but hurting another. It's a balancing act. Some have proposed remitting to the revenues from regressive taxes, such as the tobacco tax, to the poor. That would open another can of worms, determining who is deserving and who isn't.

How do taxpayers react to taxes?

- 1. Avoid** -- Stop buying or doing what is taxed
- 2. Evade** -- Cheat, voluntary compliance and enforcement are important
- 3. Pass them on** -- Producers raise their prices by the tax
- 4. Lobby** -- Get an exemption or repeal from lawmakers

So, taxpayers avoid the tax legally, which is what you want, or they evade it in violation of the law, in which case enforcement is essential, e.g. stopping trucks of bootleg cigarettes on the way from North Carolina to New York, where an estimated [57% of cigarettes are smuggled](#). Or opponents of the tax lobby to get the tax reduced or eliminated, e.g. cigars. Taxes are only one tool. What you're really after is changed behavior by patients and by providers. That comes with the application of a wide range of tools. Taxes are an incentive, but so are NIH research, public education, and regulations outlawing advertising on TV and requiring warning labels on cigarettes.

Tax typology: Every government taxes, spends, and regulates.

- **Income** -- Federal, State, and localities in 17 States, e.g. NYC
- **Payroll, Social Security, Disability, Medicare (OASDHI)**
- **Excise** -- Federal, State fuel, airport, alcohol, tobacco, firearms
- **Sales** -- most sales with lots of exceptions, food, clothing, Rx
- **Estate & Gift, Inheritance**
- **Property** -- 26 states tax cars, boats, etc. Local govts. tax real estate.
- **Some taxes are really fees for services**, National Parks, FDA
- **Customs Duties** on imports

Sin taxes: Everybody's against sin, aren't they? There's broad agreement that, in excess, tobacco, alcohol, and now soda and maybe marijuana are bad for you and impose external costs on society. Check out this ATF [chart](#) of varying federal taxes. The variation in state sin taxes, listed below, are worse.

Let's design a tobacco tax. Smoking has very negative health externalities. Let's say the elasticity of demand for smokers is -0.4 for a \$5 pack of cigarettes. That would mean that a \$1 tax, a 20% increase in price, would raise the most possible revenue (according to economic theory I won't explain here) and would decrease smoking on average by $-0.4 \times 20\% = -8\%$. However, upon more careful analysis, it turns out that that elasticity is composed of a -1.0 elasticity for teen smokers and a -0.1 elasticity for older smokers. Weight that by the number of each, 33% teens and 67% older, and you get -0.4. Then the optimal revenue maximizing tax would be 80%. Then you get into the battle with the states that impose their own tobacco taxes and don't want the federal government horning in on their revenues. The current federal cigarette tax is \$1.01 per pack, and [state taxes](#) vary from \$0.37 per pack in George to \$4.35 in New York. So we end up with separate [tobacco taxes](#) on 8 different kinds of cigarettes, smokeless tobacco, snuff, and large and small cigars. A few states and localities have started [vapor taxes](#).

So, back in 1982, how did we decide how much to raise the tobacco tax? We showed that inflation had eroded its value by half since the previous increase in 1951, so we doubled it.

Inflation erodes the value of fixed dollar taxes. The 1981 Reagan tax cuts, which I formulated, indexed the individual income tax for inflation, but federal excise taxes, except for airline ticket taxes, are not indexed.

Let's design an alcohol tax. Here again alcohol has very negative health externalities, but those costs vary a lot more than tobacco by the amount consumed. Here again elasticities vary a lot between young and old. It makes sense to vary the tax by the concentration of alcohol. However, as the Congressional Budget Office [reported](#) recently:

The current excise tax levied on those spirits, \$13.50 per proof gallon,

translates to about 21 cents per ounce of alcohol. Beer, by contrast, is measured by the barrel, and the current tax rate of \$18 per barrel translates to about 10 cents per ounce of alcohol (under the assumption that the average alcohol content of beer is 4.5 percent). The current levy on wine is \$1.07 per gallon, or about 8 cents per ounce of alcohol (assuming an average alcohol content of 11 percent). Last raised in 1991, current excise tax rates on alcohol are far lower than historical levels when adjusted for inflation.

Equalizing these taxes at \$16 per proof gallon would raise about \$7 b./year.

Since 1976, small brewers, those producing less than 60,000 barrels, or 1.86 million gallons, per year, have paid \$7 per barrel. This reduced rate launched the craft beer revolution. Grape vines take years of growth before they become productive, so they get a special depreciation deduction. Hard cider pays 22.6 cents per gallon, but small producers pay 15.0 cents. These wildly varying tax rates are a good example of lobbying power at work.

State alcohol taxes vary a lot more than federal taxes as shown in these Tax Foundation maps: [distilled spirits](#); [beer](#); and [wine](#).

Let's design a soda tax. Diabetics are some of the most expensive patients to treat long term. Seattle, Philadelphia, Boulder, CO, San Francisco and three other CA cities, and Chicago have imposed soda taxes based upon sugar content and size. The complications in defining what is taxed and what isn't are legion as described in this Pew Charitable Trust [article](#). Chicago ended up repealing its soda tax on October 11, 2017, two months after it was imposed, in part because the tax can't be imposed on SNAP (food stamp) purchases.

Let's design a marijuana tax. Eight states have legalized marijuana so far: Alaska, California, Colorado, Massachusetts, Maine, Oregon, Nevada, and Washington, and D.C. All except Alaska's \$50/oz., impose sales taxes varying from 3.75% in Massachusetts to 37% in Washington as described in this Tax Foundation [report](#). Most reduce their tax on medical marijuana, and high tax states have found a black market sales on the rise.

Enough on excise taxes. Let's talk about income taxes. Income taxes are more complicated than excise taxes because you're taxing income less deductions. These are much more difficult to measure than retail sales.

Income "tax expenditures" come in several forms:

Deductions -- reduce taxable income, value varies by marginal rate

- 1. Above the line** -- for all taxpayers, expense of producing income
- 2. Below the line** -- only for those who itemize their deductions, about 25% of mostly higher income taxpayers

Credits -- reduce tax, don't vary by marginal rate

Reduced rates -- for capital gains

Deferrals -- for capital gains until the asset is sold,
for overseas income til repatriated.

Don't touch my mortgage interest deduction. In theory, income taxes should either ignore interest or tax interest income and deduct interest paid, but our system does neither. We exempt municipal bond interest income, and we defer interest income earned in retirements accounts. We allow mortgage interest to be deducted, but only for about 25% of taxpayers who itemize their deductions. So renters pay higher taxes to subsidize home ownership of generally wealthier taxpayers. The value of those homes increases by the amount of the subsidy. **Remember, the value of a deduction depends upon the marginal tax rate.** The Joint Committee on Taxation's estimates that the home mortgage interest deductions costs about \$70 b. annually. Try taking that away, or even reducing it as proposed in recent tax reform bills, and politically powerful homebuilders and realtors will descend on lawmakers.

The charitable deduction is a powerful way to subsidize public hospitals, universities, religious and social organizations, but it has problems too.

In FY18, the Joint Committee on Taxation estimates that tax expenditures for charitable contributions will total \$62.6 billion, \$5.7 billion for health, \$10.8 billion for education, and \$46.1 billion for other charitable institutions, mostly religious. So the amount of underlying giving, dividing by an average marginal tax rate of say 25% is 4 times those amounts. There are some limits on large donations, but, clearly, this is a big source of tax subsidized funding.

Tax-exempt bonds subsidize those groups too. The tax expenditure for tax-exempt private activity bonds to build hospitals was estimated at \$2.7 billion in FY18.

So what social benefit do we get from charitable contributions? That's very hard to measure. Many inner city and rural hospitals provide much of their health care to those who can't pay. However, there are exceptions.

The City of Pittsburgh sued its hospital back in 2013 in an attempt to strip its tax-exempt status after revelations of lavish executive compensation, increasingly limited care for the poor, and anti-union activities. The lawsuit was dropped in 2014 by the new mayor after a judge threw it out on technicalities and after talks progressed on how the hospital could become a better neighbor. More in this Pittsburgh *Post-Gazette* [article](#).

So are deductions the way to go? Itemized deductions only go to about 25% of mostly upper middle and high income taxpayers. You need a computer model using IRS data with marginal tax rate information to estimate how much a deduction costs and who claims it. Even if you do have such a model, its estimates are only as good as the sample of tax returns in the model. Those samples generally don't support state by state estimates, although many states have created their own models. Tax credits are better.

My experience formulating the Earned Income Tax Credit in 1975. Professor Milton Friedman of the University of Chicago proposed a negative income tax to deal with the externality that some poor people rationally chose living on welfare over working. When you combined the loss of welfare benefits with the payroll taxes they would pay, they would lose more than they would gain by finding a minimum wage job. Pat Moynihan picked up on the idea when he worked in the White House for President Nixon, but Watergate intervened. At the end of 1974, after soaring gasoline prices and long lines at the pump, we went home with Whip Inflation buttons and came back a few weeks later to find the economy in free fall. A quick tax cut was ordered, and that provided the opportunity to establish the Earned Income Tax Credit. I was given a budget of \$8 billion and told to formulate it. The

Treasury individual income tax model has a well designed sample of actual tax return data (no names or addresses), but it lacked any data on those not subject to withholding and who were below the minimum level of income required to file a tax return. We patched in data from the Department of Health, Education, and Welfare's Transfer Income Model and prayed that we correctly estimated the number of the non-filers who might claim the credit. We were very surprised two years later, when the first data arrived from the IRS to find that \$8.125 b. of Earned Income Tax Credits were claimed.

Then, Congress kept changing the EITC, expanding it to the point that it became a very complicated \$77 b. a year program. With that expansion came fraud of over 20% of that \$77 b. In 2014, despite stopping much of the fraud, the IRS paid out \$3.1 b. of EITC to identity thieves. So Congress and the IRS have repeatedly acted to reduce fraud. Meanwhile, poor people have trouble filing for the EITC and don't want to wait for their check to come in the mail, so tax preparers charge them fees to loan them money that will be paid off when their refund arrives. On balance, the EITC is one of the better "tax expenditures" in achieving its stated goals.

Let's attract investors into building low income housing. The Tax Reform Act of 1986 established the Low Income Housing Tax Credit (LIHTC), which provides a tax credit equal to 70% of the construction cost of new housing or 30% of the cost of rehabbing, 20% of the units of which had to be rented to those with incomes under 50% of the local median income, and 40% under 60% of the median, all adjusted for family size. Rents must not exceed 30% of those incomes. The program costs taxpayers approximately \$9 b. annually. More in the Congressional Research Service [report](#).

However, renters get little of the benefit of the LIHTC, and the stock of low income housing is declining rapidly. Several studies, including this 1996 Congressional Budget Office [study](#), show that builders, syndicators, and lawyers capture most of the benefit of the Low Income Housing Tax Credit and that giving vouchers to low income renters is much more efficient. Since 2010, the stock of low income housing has declined 60% as reported in this Freddie Mac [study](#).

The Targeted Jobs Tax Credit to help employ the unemployable. A tax credit of up to \$9,600 can be claimed by employers who hire veterans, ex-felons, long-term unemployed, the disabled, those living in empowerment zones, and recipients of TANF, SNAP, and SSI. This 2005 Tax Policy Center [brief](#) concluded: "The evidence suggests that the programs are vastly underutilized and have not had a meaningful effect on employment rates among the disadvantaged. However, those relatively few workers whose employers participate do appear to experience a modest earnings increase as a result of the subsidies."

So are tax credits the way to go? They're easier to target and to keep track of than deductions and other tax expenditures, but they are not a magic bullet.

Tax expenditures usually expand over time. Notice that once created, tax expenditures almost always grow over time. Unlike federal, state, and local discretionary spending programs that must be budgeted and appropriated annually, tax expenditures are an entitlement. Once in the law, they usually stay there.

Are we just throwing more gasoline on the fire? Whenever you subsidize anything, you set off a fight among consumers and producers and investors to capture that subsidy. Look at higher education. We started with Pell Grants in 1965. That grew from a \$122 million program in FY73 to \$36.6 billion in FY12 to around \$30 billion today. Colleges and universities reacted by raising tuition and fees. So now, students owe \$1.6 trillion in student loan debt, and too many are defaulting, so they'll be foreclosed from buying homes and from taking on additional debt. The lesson for health care is that tax expenditures and spending programs for health care may or may not benefit patients more than providers.

Should we tax robots? Don't laugh. This is a serious line of discussion. Three years ago, MIT Professors Erik Brynjolfsson and Andrew McAfee published the [The Second Machine Age](#). I was surprised to find a major segment of the book devoted to tax policy. They forecast that one-third of workers will

become unemployable when robots take over menial tasks, like driving, agricultural work, and retail, as it already has in manufacturing. They suggest that we will be forced to tax robots to fund a minimum incomes for those unemployed. Talk about provocative! I can imagine the debate. Will we graduate the tax for how many jobs a robot is estimated to replace? Will we exempt robots that care for the sick and elderly? Military robots will be exempt won't they? What about dual use robots?

So be careful what you ask for. I hope the above has convinced you there are no magic bullets, no perfect tax or spending policies, and there are plenty of unintended consequences if you're not careful. Even if you get the tax policies you want, they will become distorted over time as people avoid them, evade them, or take advantage of them in ways you didn't anticipate. I've been in enough drafting sessions on Capitol Hill with some of the best tax lawyers in the country to know that no matter how tightly you draft a loophole, no matter how strong the "bright line" definitions, there's an army of tax lawyers out there who will turn that language to their clients' benefit.

My thoughts on political strategy. Our federal government is broken. All three branches are broken. Lately, Congress has failed to carry out its most basic functions, e.g. to pass appropriations bills instead of continuing resolutions; to fully respond to disasters; to respond to the opioid crisis; to reauthorize the Children's Health Insurance Program (CHIP); to confirm executive branch officials; and that's just the short list. The "sewer of campaign finance," gerrymandering of House district, and primary election systems that advantage incumbents have led to lifetime careers in Congress -- the opposite of what the Founding Fathers intended. The Judicial Branch is broken mainly because one-third of federal judgeships are vacant, leading to multi-year delays in hearing cases. Justice delayed is justice denied. The Executive Branch is broken in having failed to develop coherent policies that later get struck down by the courts and Congress or leave our allies in confusion over our defense and trade policies: failed to nominate qualified candidate for high office (We only got a permanent FEMA Director a few weeks ago.); failed to file basic reports; and about to botch the 2020 Census.

My advice on political action: Express your views to the Administration and to Congress, but put most of your effort into getting action from state and governments and into building public support back home. That's what my lobbyist friends are doing.

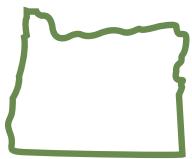
Is health care a private good, a public good, or a right? I highly recommend that you read Dr. Atul Gawande's [article](#) in the October 2, 2017 *New Yorker* magazine. It doesn't matter what you or I or Congress thinks on this issue. What the voters think is what matters. The rest will follow.

A private good is one that can be appropriated by individuals or groups of individuals. Consuming it means less for everyone else.

A public good, once provided, benefits everyone. With some exceptions, it can't easily be appropriated by individuals, e.g. national defense.

Gawande ends up recommending allowing individuals to buy into Medicare or Medicaid, and making those the standard means of providing health care.

Revolution or Evolution? In college, I studied [Leuchtenburg's book](#) on the New Deal, where the main question was revolution or evolution? After a long career in tax and budget policy, I can safely say we follow Churchill's famous quip, "You can always count on Americans to do the right thing - after they've tried everything else!" We too often grab for revolution without realizing that we're slowly evolving. The only question is: Are we evolving toward a better system or toward a worse one?



Considering the Health Impacts of Tax Reform in Oregon

January 2017

Published by:
Mosbaek Consulting

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The report was developed to assist the public and policy makers in understanding how tax structures impact health outcomes. This information on taxes and health can be helpful as Oregonians continue the conversation around comprehensive tax reform in the state. The views presented are solely those of the authors.

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Considering the Health Impacts of Tax Reform in Oregon - Summary

Craig Mosbaek, MPH
Executive Editor

To assist policy makers with their deliberations on tax issues, this report outlines the health impacts of some possible changes to Oregon's tax structures. The four policy briefs, written by national experts in the field, specifically address excise taxes, sales taxes, income taxes, and the Earned Income Tax Credit.

Elected officials, advocacy organizations, and citizens have been pondering comprehensive tax reform in Oregon for decades. Commonly cited goals of tax reform include increasing tax fairness, decreasing the volatility of tax revenues during hard economic times, and changing (or not) the total revenue garnered from the sum of various taxes. Often missing in these debates is discussion of the effects of taxes on the health of Oregonians and on health care costs.

The health impacts of some taxes, for example, excise taxes on tobacco, have been studied extensively. Research has conclusively shown that increasing tobacco taxes leads to reduced tobacco use. And, the health benefits of quitting tobacco are widely known. The impacts of some other taxes are less direct. Studies have shown that increasing the income of families living in poverty improves health outcomes, though the exact mechanisms are not always clear. The taxing structures can be modified to boost the after-tax incomes of families in poverty, thus improving health.

All states have a total tax burden that is regressive, i.e., lower-income households pay a larger percentage of their income in taxes than higher income households. In Oregon, families in the lowest 20% of income pay 8.1% of their income in state and local taxes. And Oregon families in the top 1% of income pay 6.5% of their income in state and local taxes – a rate that is 20% less.¹

Some taxes are not addressed in this report, such as business income taxes and property taxes, so the analyses here are not complete. In addition, quantifying the health impacts of government expenditures is a valuable exercise, but a thorough examination is beyond the scope of this report. However, the policy briefs in this report highlight important mechanisms to consider in terms of expenditures, such as:

- Tobacco excise tax revenue can be used to fund tobacco control programs that encourage smokers to quit and prevent youth from starting to smoke.
- Income tax revenues can be used to boost the wage income of low-income families through the Earned Income Tax Credit.

This report is designed to assist policy makers and the public in understanding the health impacts of specific taxing mechanisms. Additional research to more accurately quantify these health impacts would further inform the debate on potential modifications to the taxing structures in Oregon.

We would like to acknowledge the authors of the policy briefs, who volunteered their time and expertise to this project.

1. Institute on Taxation & Economic Policy. Who Pays? A Distributional Analysis of the Tax Systems in All 50 States. January 2015. <http://www.itep.org/whopays/>.

Health Impacts of Income Taxes

Ichiro Kawachi, PhD
Rourke O'Brien, PhD
Jessica Allia Williams, PhD

In the United States, taxes are imposed on incomes by the federal, most state, and many local governments. The federal income tax structure has become more regressive in recent decades, with large reductions in the tax burden for high-income households. However, the federal income tax system is still more progressive than most state income tax systems. For example, in Oregon, the vast majority of wage earners (e.g., couples earning between \$16,300 and \$250,000) pay the same marginal state income tax rate of 9%.

Income taxes can affect population health in two ways: by impacting the level of disposable income available to low-income families, and (b) by modifying the level of income distribution in society.

Reducing poverty through income tax policy

Income poverty is linked to a multitude of adverse health outcomes, from childhood obesity to psychological distress. Lowering the income tax on the poor would alleviate the burden of ill health associated with economic disadvantage. However, income taxes cannot be viewed in isolation – rather, the effects of the total tax system must be considered, i.e. income, sales, excise, and local property taxes. The key issue is the overall tax burden faced by low-income families. In addition to lowering (or removing) income tax rates for low-income households, the tax system can be used to boost incomes for

poor families through programs such as the Earned Income Tax Credit (see separate brief).

Lowering income inequality through income tax policy

Income inequality refers to the extent to which income is distributed in an uneven manner across a population. A growing (although debated) body of evidence suggests that income inequality is detrimental to population health.¹ A policy that increases tax rates on higher incomes and decreases tax rates on lower incomes could help reduce income inequality.

There are three distinct reasons to explain the relation between growing income inequality and worse population health:

Societies with a fairer distribution of incomes enjoy higher average health achievement. Having a sufficient level of income to purchase the necessities of life -- such as food, clothing, and shelter -- is a pre-requisite for good health. However, as household income rises, there are diminishing returns to health as basic needs are successively met. This means that each additional dollar translates to a greater health impact for the poor than for the affluent. The implication is that redistribution of income from the rich to the poor will elevate the health of the most vulnerable populations in society, whilst having little impact on the health of those who are already well off.

Income inequality is linked to rising levels of stress and frustration. The majority of Americans still subscribe to the ideal that if they work hard, they will be rewarded. Contrary to the American Dream, the reality is that the economic situation for the bottom half of American society has stagnated, even as fortunes at the top have soared. When this happens, those who are left behind (who still believe in the American Dream) blame themselves for their lack of advancement. The resulting psychological frustration becomes manifest in terms of mental health impacts, drug and alcohol abuse, and violence.² American society has one of the lowest life expectancies in the developed world. A substantial fraction of America's

poor health statistics can be explained by high rates of violence, drug overdose, and suicide deaths.

Erosion of social cohesion. As Stiglitz³ and others have argued, inequality erodes social cohesion that threatens the general welfare of society. Recent income growth in the United States has been mainly limited to the top 1%. Incomes in the middle have stagnated, while those in the bottom 20% have fallen behind in real terms. This divergence of incomes has created a divergence of political interests. When the very wealthy pull away from the rest of society, many of them effectively “secede” from the mainstream by providing for their children’s private education, their private health services, and even private security services by retreating to gated communities. Since they can take care of many things for themselves, the top 1% sees little reason to support everyone else. Pressure to lower the taxes on the rich has resulted in a declining tax base which supports the quality of public life. The concentration of wealth has led to the skewing of political priorities to support the affluent at the expense of the rest of society.

Income tax policy and public health

There is sparse empirical evidence on the relation between income tax policy and health. Newman & O’Brien⁴ report a correlation between increasing total state and local tax burden on the poor and worse outcomes on a range of measures including all-cause mortality. Reducing the income tax burden on low-income households would help to raise their standard of living and improve their health. For example, Galea et al.⁵ estimated that approximately 133,000 excess premature deaths in the United States were attributable to income poverty. However no quantitative estimates are available for the impact of changes in income taxation on reductions in mortality among low-income households.

It is important to note that there are alternative ways to raise the incomes of the poor, e.g. via improving the generosity of the Earned Income Tax Credit.

Two related ideas associated with state tax reform include:

Introducing a **nonrefundable renters' credit**. In California, for example, a low income tax filer can use the state's Nonrefundable Renter's Credit to reduce her tax. Eligibility criteria include: (a) being a California resident for the entire year; (b) annual adjusted gross income of \$73,910 or less if married or head of household; (c) rent was paid for at least half the year for the property in California that was the tax-filer's principal residence - see <https://www.ftb.ca.gov/individuals/faq/ivr/203.shtml>.

Incentivizing low income households to save a portion of their annual tax refund (as opposed to relying on them to pay down debt accumulated during the course of the year). Each year more than 100 million American households receive an income tax refund. The refunds for federal income taxes average more than \$2,000 each, representing the single largest payment many Americans will receive all year. These refunds present an opportunity — a “savable moment” — to boost personal saving for low income households, either for retirement or for shorter-term needs (see - https://www.brookings.edu/wp-content/uploads/2016/07/02_split_refund.pdf).

Another boost to the wealth of low-income families would be to provide working families with a *refundable* tax credit for putting money into a retirement account. Currently, this tax credit is non-refundable, i.e., it is available only to offset a taxpayer's income tax liability, which makes the credit unavailable to the millions of working households who pay payroll taxes but pay no federal income tax. The credit could be made refundable, possibly with a requirement that the credit is deposited directly into an IRA or 401(k) to which the household is contributing.

Better money management could be facilitated by making it easier to open safe transaction and savings products directly on the tax form. Another benefit to low-income families would be to allow families to borrow against their EITC for short term emergency needs, thereby reducing their reliance on high-cost consumer credit such as payday loans. This is currently being piloted in the city of Chicago.

Health outcomes in Oregon could be improved by modifying the income tax structure to be more progressive, shifting the tax burden from low-income to high-income households. This tax shift can be accomplished by changing marginal tax rates, as well as implementing tax reduction measures aimed at low-income families.

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Health Impacts of Excise Taxes

Frank J. Chaloupka, PhD

Unhealthy behaviors, such as cigarette smoking and other tobacco use, excessive alcohol drinking, and poor diets, are significant causes of numerous health problems. These unhealthy behaviors contribute to thousands of premature deaths in Oregon each year, while costing the state billions of dollars in additional health care spending and lost productivity. Each year in Oregon:

Cigarette smoking causes 7,000 premature deaths, and costs \$2.5 billion in health care spending to treat the diseases caused by smoking, and lost productivity from the premature deaths caused by smoking.¹

Excessive alcohol use kills over 1,300 Oregonians, adds over \$400 million to health care spending, costs nearly \$2 billion in lost productivity, and adds nearly \$500 million in criminal justice and other costs.^{2,3}

The poor diets and physical inactivity that contribute to obesity cause over 1,400 deaths and add over \$1.6 billion to health care spending in Oregon each year.⁴

The burden of disease and suffering is not distributed evenly across the population. For example, the adult smoking prevalence in Oregon is higher among American Indians/Alaska Natives (35%) and African Americans (33%) compared to non-Hispanic Whites (21%). The smoking prevalence for adults with annual household income less than \$15,000 is almost three times the prevalence for those with annual household incomes of \$50,000 or more (33% vs. 11%).

All Oregonians share the excess health care costs resulting from these unhealthy behaviors, whether or not they engage in them. Most workers have health insurance that is purchased by their employer. When health insurance costs increase, businesses must either increase prices for the goods and services being sold or suffer lower profits. And, some of the health care costs are paid by government-funded insurance programs, such as Medicare and Medicaid.

One of the most effective strategies for curbing unhealthy behaviors and their public health and economic consequences is to raise the cost of engaging in these behaviors by using excise taxes. Excise taxes are taxes that are levied on particular products, which are usually calculated based on the amount of product purchased or as a percentage of the product's price. For example, every state imposes excise taxes on gasoline, calculated as a tax on every gallon you purchase. Often, the revenue from excise taxes is used for purposes that relate to the product that is taxed. For gasoline taxes, Oregon law requires this revenue to be spent on the building and maintenance of roads.

Extensive economic research and other evidence shows that higher tobacco excise taxes encourage current tobacco users to try to quit, deter former users from restarting, prevent young people from taking up tobacco use, and reduce consumption among those who continue to use.⁵ Thus, these excise taxes lead to significant reductions in the death, disease, and economic costs caused by tobacco.

Similar research has demonstrated the effectiveness of increases in alcoholic beverage excise taxes in reducing excessive drinking, including binge drinking and chronic heavy drinking.⁶ Increasing alcohol excise taxes reduce the myriad health consequences of excessive drinking, including traffic crashes, violent crime, numerous chronic diseases, sexually transmitted diseases, teenage pregnancies, and workplace and other accidents.⁷ Other research shows that higher alcohol taxes improve educational attainment by increasing the likelihood of high school and college graduation, and improving study habits and academic performance.⁸

Growing evidence shows that raising the prices of unhealthy foods and beverages significantly reduces their consumption, and can lead to reductions in obesity and the resulting chronic diseases caused by obesity. Moreover, this research demonstrates that specific populations experiencing higher rates of chronic diseases respond more to increases in taxes and prices, such as low-income households and people of color. In addition, taxes appear to be especially effective at preventing young people from starting unhealthy behaviors.

All states have had tobacco and alcohol excise taxes in place for many decades, but Oregon has lagged behind much of the country when it comes to the levels of and increases in these taxes. For example, Oregon's cigarette excise tax is \$1.32 per pack, 37 cents below the average state tax and well behind New York's highest in the nation \$4.35 per pack tax. While the Oregon tax was increased from \$1.18 to \$1.31 per pack in 2014, the inflation-adjusted value of the tax is below historical levels. Oregon reduced its cigarette tax in 2004 by 10 cents, so the state cigarette tax has increased only a few cents per pack since 2002. Similarly, Oregon's beer excise tax is less than 1 cent per 12 ounce serving (8.4 cents per gallon), well below the average state tax of 28 cents per gallon, and far behind Tennessee's \$1.29 per gallon. The last increase in Oregon's beer tax was in 1977, so the real value of the beer excise tax, its value after accounting for inflation, has fallen considerably over time.

The growing obesity epidemic has stimulated interest in using food and beverage excise taxes to promote healthier diets and reduce obesity. Globally, Mexico is leading the way, implementing a one-peso per liter excise tax on sugar-sweetened beverages and an 8 percent tax on non-essential foods that are high in sodium, added sugars, or solid fats. In the United States, Berkeley, CA, has adopted a significant excise tax on sugar-sweetened beverages, with voters approving a penny per ounce tax in November 2014. In the November 2016 election, four more cities passed similar taxes. Recent economic research suggests that increases in the prices for unhealthy foods and beverages, including sugar-sweetened beverages and fast foods, lead to reductions in consumption of these products, as well as to healthier weight.⁹

Economists use the price elasticity of demand to quantify the changes in consumption that result from price changes. Formally, price elasticity of demand is defined as the percentage reduction in consumption resulting from a one percent increase in price. For example, the consensus price elasticity for cigarette demand is -0.4, implying that a ten percent increase in cigarette prices would reduce cigarette consumption by 4 percent. State cigarette taxes in Oregon account for about 25 percent of the retail price of cigarettes. So, a doubling of the tax, if fully passed through to consumers, would increase prices by about 25 percent, leading to an approximately 10 percent reduction in consumption.

Significantly increasing Oregon's tobacco and alcoholic beverage excise taxes or adopting a sizable sugar-sweetened beverage tax would both improve health outcomes and generate substantial new tax revenue. Raising the state's cigarette excise tax by a dollar per pack, for example, would prevent about 14,000 youth from taking up smoking, induce about 17,500 adults to quit, preventing thousands of deaths that would have otherwise been caused by smoking.¹⁰ At the same time, the dollar per pack increase would generate additional cigarette excise tax revenues of over \$85 million annually, or \$170 million each biennium.¹¹ Similarly, a nickel-a-drink increase in beer, wine and spirits excise taxes in Oregon would generate nearly \$87 million in new revenues in the first year,¹² while reducing excessive drinking and its numerous consequences. A penny-per-ounce tax on sugar-sweetened beverages would significantly reduce consumption of sugary drinks, decrease the risks of diabetes and other chronic diseases, and generate over \$110 million in new tax revenues.¹³

Some underserved communities will end up paying a higher proportion of their income towards these types of excise taxes, including low-income households and people of color. This will ultimately affect their short-term disposable income, which may have negative health effects. It is therefore critical that policy packages that contain excise taxes include mechanisms that ensure the funds raised will benefit low-income households. For example, the 2007 ballot referendum Measure 50 would have raised tobacco taxes, which would have a disproportionate impact on low-income populations that use

tobacco at a higher rate. However, most of the revenue would have gone to healthcare programs for families below 200% of the federal poverty level. It was estimated that, overall, families under 200% of the poverty level would pay \$20 million more in tobacco taxes and receive over \$180 million in new healthcare benefits¹⁴. Although the tax by itself was financially regressive, the tax and spending package as a whole was very progressive in both its financial and health impact.

The health and equity benefits would best accrue if the money raised from the excise taxes were spent on evidence-based programs to prevent the diseases caused by these products.

The reductions in diseases resulting from these taxes would generate considerable economic benefits for Oregon, saving tens of millions of dollars in health care spending while improving worker productivity. Families, businesses, and governments would all benefit as health is improved while healthcare costs are reduced.

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Health Impacts of Earned Income Tax Credit

David H. Rehkopf, PhD

What is the Earned Income Tax Credit?

The Earned Income Tax Credit (EITC) is a tax credit for low-income working families that started at the federal level in 1975, with additional state credits beginning in 1986. After submitting federal and state income tax forms, eligible families can receive as much as a \$6,269 credit per year. The amount of credit is primarily determined by the amount of earned income for the household. No credit is earned if no wages are earned, up to a maximum amount of credit for married households with annual earnings in the range of \$14,000 to \$24,000 per year. This is in the range of one worker in the household working full time at the minimum wage. The amount of credit then diminishes with more earned income, with no eligibility for credit after \$53,505 annual earnings for married filing jointly. Households also cannot qualify if they have greater than \$3,400 from investment income. There are only very small credits for households without qualifying children, and the credit is almost twice as large for households with two or three as compared to one child, but there are no larger benefits for households with more than three dependent children.

The EITC is unique in that it is connected to work, i.e., participants must be employed. The program has been proven to encourage work and increase labor force participation, at the same time functioning as an effective way of keeping working families out of poverty.^{1,2} The EITC enables hard-working parents to

meet the basic needs of their families.

What is the current EITC in Oregon?

In addition to the federal credit, 26 states also have a state EITC. Like most states, the Oregon state EITC calculates additional credit based on the same qualification rules as the federal credit. The state EITC in Oregon was enacted in 1997, and increased to 6% of the federal credit in 2005. In 2013, the Oregon legislature extended it for an additional 6 years, and increased the credit from 6% of the federal credit to 8% of the federal credit. Thus, the maximum state credit in Oregon for the 2015 tax year was \$502 per family (8% of \$6,269). Recently passed legislation will raise the maximum state credit in Oregon to 11% for families with children under the age of three, starting in the 2016 tax year.

This amount of state credit puts Oregon near the bottom among states that have a state EITC. The only states with lower EITCs are Louisiana (3.5% of the federal credit), Maine (5%), Oklahoma (5%), and Michigan (6%). In contrast, most states have higher EITCs such as Wisconsin (34%), Vermont (32%), and Connecticut (30%). Among the 26 states that have a state EITC, the average state EITC is 18% of the federal credit.

How does the EITC improve health?

A growing number of studies have shown that allowing working parents to meet their household needs improves their own health and the health of their children. These benefits begin early in life. An analysis of over 4 million births showed that state EITCs specifically decrease the number low birth weight babies, giving children a healthy start in life.^{3,4} Among adults, in addition to decreasing food insecurity, the EITC decreases smoking as well as increases the number of individuals who are trying to lose weight.⁵ There have also been demonstrated effects on improving mental health among mothers.⁶ Finally, there have been shown to be improvements in levels of inflammation, which is considered to be an important risk factor for long term chronic diseases.⁵

How would changing Oregon's EITC improve the health of Oregon residents?

If the results from national studies also apply in Oregon, increasing the state's EITC could result in small but important benefits to health in the areas of improving health behaviors, birth outcomes, and maternal mental health. Importantly, some of these improvements have been found with the smaller state credits, suggesting that even a small increase in the credit may improve health outcomes.⁵

How would potential EITC changes impact health care costs?

The annual cost for increasing Oregon's EITC to 12% would be 21 million dollars, increasing it to 18% would cost 53 million dollars. To put this in a broader perspective of health care costs, total Medicaid spending in Oregon (both the state and federal contribution) is about 5 billion dollars annually. Thus the cost of a large increase in the EITC, to be competitive with EITC levels in other states, to 18% would be around 1% of yearly Medicaid spending. Based upon the benefits to health that have been observed by studies of the effects of money from the EITC on health, this may be a cost effective approach to saving money on health care spending while at the same time improving the health of the population.

Summary

The EITC adds to the income benefits of working parents. Currently the Oregon EITC is less than half that of the average state EITC. Increasing it is likely to improve health outcomes and benefit families. In addition, this could lead to reduced healthcare costs, some of which are paid by Medicaid.

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Health Impacts of Sales Taxes

Katherine Newman, PhD

In a sea of unpopular alternatives, one particular kind of taxation has been relatively insulated from public ire around the country: sales tax. As far back as the Civil War era, the tug of war between progressive and regressive taxation has been with us. Radical Reconstruction imposed a set of progressive taxes to fund health care, education and other services for the poor and for newly freed slaves. When conservatives re-established control of southern state governments in the period popularly known as “Redemption,” they rolled back nearly all of these taxes, leading to anemic revenue levels. They solved the problem through excise taxes. The first states would not enact income taxes until the early 1900s.

Nearly 100 years later, in the 1970s, the Nixon administration commissioned opinion polls to determine what kinds of taxes citizens would endorse. They found durable support for sales tax, across the income spectrum. Whether rich or working class, Americans seem to see sales taxes as one of the “least worst” approaches for funding the basic functions of government. The tax Americans love to hate is the local property tax.¹

The political popularity of sales taxes derives from the public perception that everyone contributes and no one is exempt. If a millionaire buys \$40 worth of groceries, a 5% sales tax costs him the same \$2 as a single mother living on a poverty wage. Everyone participates, everyone pays – equally. Of course, the *impact* is far from equal. That millionaire is not likely to miss the \$2. But the single mother will, especially when she is faced with a grocery bill that is 5% higher than it would be without a sales tax.

That is a common experience in the American South today, where the legacy of the post Reconstruction state constitutional amendments inserted super-majority rules that make it very difficult to increase property and income taxes. For example, following the passage of the Voting Rights Act of 1965, Louisiana adopted a constitutional amendment requiring a 2/3 majority to increase any tax in the state. Mississippi followed suit, requiring a 3/5 majority.²

The legacy of these constitutional provisions in the South, and in the western states that pursued tax reductions catalyzed by California's Proposition 13 in 1978, has been a steady increase in sales taxes. Super majority rules and the compelling desire not to be the high tax state in the region, stand in the way of tax increases of a more progressive kind (property and income taxes). What is left is an inexorable increase in dependence on sales taxes and fees, both of which are regressive because of their disparate impact on the least affluent consumers. These taxes are levied regardless of income and hence exact a higher burden on the less affluent.

As policy-makers move to reform Oregon's tax structure, they would do well to consider what an increasing reliance sales tax means for inequality in general, and health outcomes in particular. When people at the bottom of the income distribution have to absorb the bite of sales taxes, they don't have the luxury to ignore the consequences for their household budgets. They do what all "rational" consumers do: they start looking for less expensive substitutes. And that often means food that isn't healthy, such as canned goods that are full of salt, sugar and fat.

It turns out that there is a pernicious relationship between how we tax the poor and poor health outcomes. Examining the period from 1982-2006, we can see how state tax liabilities have changed in ways that negatively affect the most vulnerable citizens. In the states with the highest taxes on the poor, we also see the highest rates of infant mortality, childhood and adult obesity, heart disease, and deaths due to cerebrovascular disease and strokes.³ In truth, the whole country has been improving on many of these health-related metrics. But that improvement, which translates into lower health care expenditures, higher labor market participation, and even better educational outcomes, was

most pronounced in the states that exact the least in tax burdens on their poorest citizens.

This finding is not because of pre-existing differences in the “better” states versus the worse ones or in other changes they have experience (in the composition of their populations, patterns of state expenditures, or even levels of inequality). After we factor out all of those changes, the relationship between taxation and these poverty-related conditions stands. For every \$100 increase in taxes on the poor, the mortality rate increased by 6.6 per 100,000 people.⁴ This is particularly true when we look at obesity rates. For every \$100 increase in sales tax between 1995-2006, state obesity rates increased by .57 percent.⁵ These findings hold after accounting for the impact of changes in racial composition, poverty rates, unemployment, and, importantly, state government spending. This research suggests that the structure of tax systems can have a direct effect on poverty and poverty-related outcomes, and net of levels of government spending.

Regressive tax structures often make poverty worse

Historically, Oregon has shied away from the sales tax solution. Although it exacts high income taxes from families at the poverty line, as high as the states of the Old South, it has eschewed the temptation of a general sales tax. Moreover, the total tax liability of its poorest residence has been low, indeed on a par with other traditionally progressive states.⁶

In many states where supermajority rules prevail, the politics of progressive tax increases block the possibilities for increasing property or income taxes. These kinds of taxes are generally unpopular because the poor are less likely to be subject to them and because they tend to be due all at once, thus raising their salience in the eyes of citizens. The lion’s share of these taxes falls on the shoulders of families in the middle class and above who are the owners of most property and for whom higher income taxes are relevant. These are also the consumers who have the kind of political clout to pressure politicians to spare them, while the poor, who are disproportionately hard hit by sales taxes and fees, are often have a weaker political voice.

For all these reasons, politicians are often tempted to move in the direction of the relatively popular “shared tax” on consumer spending. This is a bad idea for many reasons, but where it prevails it is particularly important to shield the poorest citizens from the punishing consequences, as many states do.

The options are myriad:

Exempt food, medicine, and children’s clothing from sales taxes. This avoids burdening the poor on purchases that are regarded as life’s necessities.

Create a means tested rebate program that refunds taxes on these expenditures for those who are most needy. Rebates return money to the low-income families but retain sales taxes on those who are more affluent.

Exact a sales tax and then return at least some of it through an increase in the state’s earned income tax credit. Following the logic of the EITC itself, this approach assists low wage workers (see other brief on EITC). However, it offers no relief to those who are out of the labor market, including the elderly and the disabled.

Of all of these possibilities, the most efficacious is exemption of critical goods because the poorest of the poor often don’t file tax returns and hence cannot receive tax rebates or state EITC payments.

The research is clear that increasing taxes on low-income families leads to worse health outcomes and more (expensive) problems than it solves. Sales taxes are inherently regressive, though this can be mitigated by exempting household necessities such as food. To prevent adverse health impacts, a comprehensive reform of Oregon’s tax system would need to avoid adding to the total tax burden of low-income households.

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