

ARTICLES

Cross-Subsidies: Government’s Hidden Pocketbook

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Governments can use regulation to pay for public goods out of the pockets of consumers rather than taxpayers. For example, the Affordable Care Act (ACA) underwrites care for women and the infirm through higher insurance premium payments by healthy men. Building on a classic article from Richard Posner, we show that these “cross-subsidies” between consumers are a common feature of modern law, ranging from telecommunications to intellectual property to employee benefits.

Critics of the ACA, and even some of its supporters, argue that taxes would be a better choice. Taxes are said to be more transparent and to fit better with the recommendations of public finance economics. We show how these same arguments can be extended to many other contemporary cross-subsidies.

We also argue, however, that the critics may well be wrong. Drawing on recent theoretical and empirical advances, we show that cross-subsidies can be more efficient than taxes, especially when they are used to redistribute wealth on grounds other than income, such as the ACA’s transfer from men to women. We then apply our analysis to several key contemporary cross-subsidies, including personal injury law, patents, class action lawsuits, paid family leave, and, of course, the ACA.

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INTRODUCTION

What does the Affordable Care Act (ACA) have in common with local telephone service? What common factor unites tort law and net neutrality? Patents and paid family leave? Higher education financing and postal deliveries? The answer in all cases is that lawmakers have chosen to use cross-subsidies rather than general tax revenues as a way to underwrite their chosen policy goals. A cross-subsidy arises when two similar consumers of a good pay different prices—or, equivalently, when two consumers impose different costs on a service provider but are charged the same price—and the excess funds from one are used to make up the shortfall for the other.¹ Cross-subsidies, in other words, are a way of paying for public goods out of the pockets of consumers (or other private actors) rather than taxpayers.²

Although cross-subsidies are a pervasive phenomenon, scholarly analysis of them is not.³ Some fundamental principles of public finance economics suggest that cross-subsidies are usually the wrong policy choice. Though this is a point that has been made recently by critics of the ACA, it has yet to be extended to all the other modern instances in which the legal system relies on cross-subsidies.⁴

1. See Gerald R. Faulhaber, *Cross-Subsidization: Pricing in Public Enterprises*, 65 AM. ECON. REV. 966, 968–69 (1975).

2. See Richard A. Posner, *Taxation by Regulation*, 2 BELL J. ECON. & MGMT. SCI. 22, 23–24 (1971).

3. Leading public finance economists have noted this gap. See, e.g., Raj Chetty & Amy Finkelstein, *Social Insurance: Connecting Theory to Data*, in 5 HANDBOOK OF PUBLIC ECONOMICS 111, 185 (Alan J. Auerbach et al. eds., 2013); Amy Finkelstein et al., *Redistribution by Insurance Market Regulation: Analyzing a Ban on Gender-Based Retirement Annuities*, 91 J. FIN. ECON. 38, 54 (2009) (“[W]hy insurance markets rather than, say, the tax system, are a natural locus for . . . transfers . . . warrant[s] discussion and research.”).

4. By far our closest antecedent is Kyle Logue & Ronen Avraham, *Redistributing Optimally: Of Tax Rules, Legal Rules, and Insurance*, 56 TAX L. REV. 157 (2003). Logue and Avraham consider whether insurers should be permitted to price according to an insured’s genetic information, as well as whether the tort system should include compensation for pain and suffering damages. See *id.* at 208–48. In both these contexts, their analysis centers on whether the government should use “pooling” or “cross-subsidization,” to redistribute or whether it should instead use the “tax-and-transfer system.” *Id.* at 248–49. We build on their key insight that redistribution based on factors that do not correlate with incentives to work will function differently than redistribution based on income. See *id.* at 169. We also expand the discussion to cover many other legal contexts and work in a variety of other analytic considerations, such as the last fifteen years of development in the public finance economics literature.

Somewhat further removed from our analysis, Yoram Margalioth argues that cross-subsidies can have tax-like effects on efficiency and that these should be compared to the impacts of a formal tax alternative, without exploring closely how that comparison should be made. See Yoram Margalioth, *The Many Faces of Mandates: Beyond Traditional Accommodation Mandates and Other Classic Cases*, 40 SAN DIEGO L. REV. 645, 648–49 (2003).

Even further are scholars who acknowledge that redistribution can be effected through either taxes or cross-subsidies, but do not analyze which option is superior, Christine Jolls, *Law and the Labor Market*,

Our first goal, therefore, is to identify the many legal rules that essentially duplicate the ACA's underlying structure.

We also want to show, however, that the criticism directed at the ACA's cross-subsidy system is far too simple in most cases. A more nuanced understanding of the economics of cross-subsidies reveals that there are times when cross-subsidies are at least defensible and sometimes the best policy choice. That said, for all their commonalities, policies that rely on cross-subsidies can also differ in important ways. Thus, our second, larger goal is to encourage lawmakers to consider the pros and cons of cross-subsidies, in all their complexity, for each policy that relies on them. We begin that process by analyzing a handful of cross-subsidies with the new array of tools we lay out.

This is the big picture of our argument; let us now say a bit more about the details. Because it is helpful to be concrete, we focus our analysis on the ACA, which is probably the example most familiar to our readers. Critics of the ACA suggest that the law inefficiently relies on cross-subsidies rather than on general tax revenues.⁵ What kind of cross-subsidies does the ACA use? For one, the ACA requires insurers to cover everyone who applies for insurance, regardless of how expensive it will be to cover any particular person.⁶ And, with a couple of exceptions, an insurer must charge everyone in a given plan the same rate, even if it expects that any one member of the pool is likely to cost more.⁷ The result, on average, is that customers likely to have high healthcare costs will pay less than they would have in the absence of the ACA.⁸ For example, early ACA data report that premiums for women of childbearing age are relatively cheaper than before the Act.⁹ But if the pool is to break even, this means that premiums for everyone else in the pool are now relatively more expensive. In other words, the ACA finances the healthcare of young women and families in part by collecting higher insurance premiums from single men and women not of childbearing age.

2 ANN. REV. L. SOC. SCI. 359, 376 (2006) [hereinafter Jolls, *Labor Market*]; Christine Jolls, *Accommodation Mandates*, 53 STAN. L. REV. 223, 250 (2000) [hereinafter Jolls, *Accommodation*]; Pierre Picard, *Natural Disaster Insurance and the Equity-Efficiency Trade-Off*, 75 J. RISK & INS. 17, 23 (2008); Sharon Rabin-Margalioth, *Anti-Discrimination, Accommodation and Universal Mandates—Aren't They All the Same?*, 24 BERKELEY J. EMP. & LAB. L. 111, 134–36 (2003); or offer only passing analysis, Ronen Avraham et al., *Understanding Insurance Antidiscrimination Laws*, 87 S. CAL. L. REV. 195, 210–11 (2014) (explaining insurance antidiscrimination laws may be preferable because the desired transfer occurs without the distortion of individuals' incentives that is typical of income tax redistribution); Gillian Lester, *A Defense of Paid Family Leave*, 28 HARV. J.L. & GENDER 1, 63–65 (2005) (arguing that all of society should pay for family leave because all of society benefits).

5. See, e.g., Richard A. Epstein & David A. Hyman, *Fixing Obamacare: The Virtues of Choice, Competition, and Deregulation*, 68 N.Y.U. ANN. SURV. AM. L. 493, 514–15 (2013).

6. See Tom Baker, *Health Insurance, Risk, and Responsibility After the Patient Protection and Affordable Care Act*, 159 U. PA. L. REV. 1577, 1588 (2011).

7. *Id.* at 1589–90.

8. *Cf. id.* at 1602.

9. See Kevin Quealy & Margot Sanger-Katz, *Obama's Health Law: Who Was Helped Most*, N.Y. TIMES (Oct. 29, 2014), <http://www.nytimes.com/interactive/2014/10/29/upshot/obamacare-who-was-helped-most.html> [https://nyti.ms/2jTIQmu].

Most economists view this structure as an unfortunate choice, albeit one that was perhaps driven by political necessity.¹⁰ Their objection, however, is not to the decision to support women's health, but instead to how that choice was paid for. The basic argument is that it would have been more economically efficient to allow insurers to charge an actuarially fair price¹¹—that is, to let women pay more—but have the government later write checks to women to make up the difference. We call this alternative approach the “tax-and-transfer” method.

The putative superiority of tax and transfer over cross-subsidies rests on two central theories from the public finance and law-and-economics literatures. The first theory, sometimes known as the “double-distortion” argument, derives from a key 1976 work by economists Anthony Atkinson and Joseph Stiglitz.¹² Atkinson and Stiglitz show that, in many situations, it is inefficient for the government to impose a differentiated consumption tax, a tax on consumer goods whose rate varies by the product purchased.¹³ The intuition is simple: such a tax distorts consumers' choices about what to buy, whereas many alternatives, such as the income tax, do not.¹⁴ Although the income tax has its own unwanted effects, such as potentially reducing workers' incentives to earn income, Atkinson and Stiglitz show that consumption taxes also have these same unwanted effects. Thus, they argue, that the differentiated consumption tax is always at least as bad as, and usually worse than, an income tax.

The second central result is that taxes, and risks of loss more generally, should be spread as widely as possible across the potential taxpaying public. Doing so allows taxes to be imposed at lower rates and, therefore, to have less impact on the economy. Cross-subsidies seem to violate both these prescriptions. By charging groups with low healthcare costs, such as healthy young men, more than they would otherwise pay, the ACA imposes a sales tax on young men's purchase of healthcare.¹⁵ We could instead spread the costs around and collect a much smaller amount from each taxpayer by switching to a tax-and-transfer system. Doing so could limit the negative effects of the higher sales tax on young men while still raising enough revenue to fund women's health. We could say much the same

10. See, e.g., Roger Feldman & Bryan E. Dowd, *Biased Selection—Fairness and Efficiency in Health Insurance Markets*, in AMERICAN HEALTH POLICY: CRITICAL ISSUES FOR REFORM 64, 75–79 (Robert B. Helms ed., 1993); Alan B. Krueger, *Observations on Employment-Based Government Mandates, with Particular Reference to Health Insurance* 36 (Princeton Univ. Indus. Relations Sec., Working Paper No. 323, 1993); see also Jerry Hausman, *Taxation by Telecommunications Regulation*, in 12 TAX POLICY AND THE ECONOMY 29, 41–42 (James M. Poterba ed., 1998) (critiquing U.S. telecommunications policy on this basis); Sharon Rabin-Margalioth, *Cross-Employee Redistribution Effects of Employee Mandated Benefits*, 20 HOFSTRA LAB. & EMP. L.J. 311, 311 (2003).

11. In insurance lingo, a premium is “actuarially fair” if the total premiums paid equal the expected value of any payments from the insurer. In expectation and on average, the transaction would be a wash, even though a given insured might receive more or less than she paid in.

12. A.B. Atkinson & J.E. Stiglitz, *The Design of Tax Structure: Direct Versus Indirect Taxation*, 6 J. PUB. ECON. 55 (1976).

13. *Id.* at 68.

14. LOUIS KAPLOW, *THE THEORY OF TAXATION AND PUBLIC ECONOMICS* 123–24 (2008).

15. See Krueger, *supra* note 10, at 20–21 (explaining potential labor distortions of health insurance mandate).

about any number of other government policies.¹⁶ Net neutrality rules shift some of the cost of heavy Internet users onto low-intensity subscribers. Modern student loan programs shift some of the cost of educating public interest lawyers onto corporate law partners. Product liability torts shift some of the cost of paying for harms inflicted on the most vulnerable purchasers to other purchasers who are at less risk.¹⁷ Each of these subsidies could instead be paid for with tax and transfer.¹⁸

Although this standard narrative suggests that tax and transfer is superior to cross-subsidization, the practical realities of these systems are not so simple. In several important instances, the assumptions that underlie the double-distortion and tax-spreading arguments might not hold. In many cases, we find that cross-subsidies can be justified at least some of the time, as we illustrate with a series of real-world examples.

We see four key reasons why cross-subsidies can sometimes be the best choice, economically speaking. The first two have been recognized already in the literature, though we provide some important corrections and complications; the second two are mostly new.

First, there can be times when a cross-subsidy works as a better income tax than the income tax itself—that is, the cross-subsidy is better than the traditional income-tax system at identifying taxpayers with a higher ability to pay, or is able to do so with fewer distortions and bad incentives.

Second, cross-subsidies can serve as a kind of “benefit” tax, in which people willingly bear a cost because it is the only way they can get something they want. This argument is based on a well-known 1989 paper by Lawrence Summers.¹⁹ We show, however, that Summers and most of the literature that follows neglect parts of both the Atkinson–Stiglitz and risk-spreading arguments we just mentioned, so his claims may apply less widely than is usually understood.

Third, cross-subsidies may be a way of rooting out “inframarginal” beneficiaries of government transfers—people who would have engaged in an activity the government wants to subsidize even without a subsidy. By reducing the amount spent on these beneficiaries, cross-subsidies help to shrink the total amount of the bill imposed on individuals.

Fourth, cross-subsidies can operate as a kind of “hidden tax.” Others have mentioned the hidden features of cross-subsidies but only in the context of arguing that such features make cross-subsidies easier to enact.²⁰ We show that the

16. See Posner, *supra* note 2, at 23–24 (discussing the impact of subsidies as part of numerous government policies).

17. Logue & Avraham, *supra* note 4, at 229.

18. For example, in New Zealand, the government compensates tort victims directly. See Peter H. Schuck, *Tort Reform, Kiwi-Style*, 27 *YALE L. & POL'Y REV.* 187, 190 (2008).

19. See Lawrence H. Summers, *Some Simple Economics of Mandated Benefits*, 79 *AM. ECON. REV.* 177, 181 (1989).

20. Most notoriously, the ACA architect Jonathan Gruber has joked that cross-subsidies work politically because of the “stupidity of the American voter.” See Jose A. DelReal, *Obamacare Consultant Under Fire for ‘Stupidity of the American Voter’ Comment*, *WASH. POST* (Nov. 11, 2014,

opacity of cross-subsidies is not only politically useful but also more efficient in some cases.

Continuing with the ACA, our primary example, we can see these effects at work to some degree. First, the ACA is a better income tax than the formal income tax because, rather than taxing only those with high income, the ACA's cross-subsidy structure imposes some costs on those with good health; it is, essentially, a health tax rather than an income tax. This mitigates some of the potentially negative effects of income taxation because individuals are less likely—and less able—to manipulate their health than their taxable incomes. In addition, as we will explain, using multiple tax (and tax-like) instruments can tax the ability to earn income more effectively than a formal income tax alone. Second, the ACA has some advantages of a benefit tax: although the mandate to buy health insurance is analogous to a tax, it comes with the benefits of insurance, and thus any negative effects are further mitigated. Last, there is a salience aspect of the ACA in that, for all the political pain of its enactment, it was probably easier to pass than a single-payer tax-and-transfer alternative. Moreover, the degree of redistribution within the program is still somewhat opaque, again mitigating the distortion of a redistributive income tax.

We expand on these and other points below. In Part I we explain more about what cross-subsidies are and provide the standard economic argument against them. Part II complicates the story by showing that policymakers have used cross-subsidies frequently, and across a number of different policy spaces. Demonstrating the ubiquity of cross-subsidization is one of the contributions of this Article. If cross-subsidies are an inferior policy instrument, why are they so common? Part III answers this question by presenting our four reasons why cross-subsidies can work well and may even be superior to tax and transfer. Part IV applies these insights in short case studies, including the ACA, paid family leave laws, intellectual property incentives, tort payments for pain and suffering, and class action lawsuits.

I. BACKGROUND

A. WHAT IS A CROSS-SUBSIDY?

A cross-subsidy exists when, within a pool of people (most often consumers), one segment of the pool pays more than they would pay outside the pool so that another segment of the pool pays less than they would pay outside the pool.²¹ The

2:00 PM), <https://www.washingtonpost.com/news/post-politics/wp/2014/11/11/obamacare-consultant-under-fire-for-stupidity-of-the-american-voter-comment> [<https://perma.cc/WGH2-MRZH>]; see also Krueger, *supra* note 10, at 3 (“The costs of mandates are hidden, which makes them politically feasible.”).

21. Faulhaber, *supra* note 1, at 968–69. This assumes that the good or service is functionally the same across the pool; if, for example, the good being sold to the transferees is really a worse good, then the price adjustment is attributable to quality, not a subsidy. H. Cremer et al., *Universal Service: An Economic Perspective*, 72 ANNALS PUB. & COOP. ECON. 5, 11–12 (2001). Further, as Faulhaber shows, in some cases adding new customers allows fixed costs to be spread over more payors; even if these new payors are charged less, there is no cross-subsidy so long as their inclusion in the pool reduces costs to

former group are “transferors” (or “payors”); the latter are “transferees” (or “payees”). The key is that prices paid by the transferors effectively subsidize the transferees.²² Although with most cross-subsidies everyone in the pool pays the same price, that does not have to be the case; strictly speaking, a cross-subsidy involves any situation in which one pool segment pays more than it would outside the pool so that another segment pays less.²³

Cross-subsidies have some well-known manifestations—a few of which we will discuss shortly—but are for the most part undertheorized. Absent some market failure or regulation, the presumption is that cross-subsidies will quickly vanish because transferors will refuse to pay an inflated price.²⁴ Although that is mostly true, there are still many instances in which market irregularities or regulation—often regulation enacted for some purpose other than to create a cross-subsidy—operate to sustain cross-subsidies.

In contemporary times, the best-known examples of cross-subsidies are in health insurance markets. Asymmetric information and adverse selection make it extremely difficult for insurers to sell actuarially fair policies in an open market.²⁵ Those most likely to seek insurance are those most likely to use it, and because of natural and legal limits on the ability of insurers to underwrite, that reality makes it difficult to properly price a policy for any one individual.²⁶ Insurers protect themselves by charging higher premiums, but those premiums drive away the lower-risk individuals, and quickly the insurance market breaks down.²⁷ We oversimplify, but that is the gist.

One solution is the public provision of health care (or, relatedly, health insurance), which the United States does with respect to the elderly, poor, and disabled populations through Medicare and Medicaid. For everyone else, the nation relies on cross-subsidies to make private insurance work.²⁸

For employed persons (and their dependents), the law aims to make the insurance purchasing unit the employee group.²⁹ Groups reduce risk variance and

the initial payors by more than the incremental cost of providing service to the newcomer. Faulhaber, *supra* note 1, at 968–70.

22. In contrast, a direct government subsidy is one in which public funds are used to lower the prices paid by one group without any direct effect on the price paid by those in any other group.

23. Faulhaber, *supra* note 1, at 968–70.

24. Gerald R. Faulhaber, *Cross-Subsidy Analysis with More than Two Services*, 1 J. COMPETITION L. & ECON. 441, 442 (2005); Posner, *supra* note 2, at 29.

25. See Jonathan Gruber, *Health Insurance and the Labor Market*, in 1A HANDBOOK OF HEALTH ECONOMICS 645, 651 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000); Brendan S. Maher, *Regulating Employment-Based Anything*, 100 MINN. L. REV. 1257, 1280–81 (2016).

26. Brendan S. Maher, *Unlocking Exchanges*, 24 CONN. INS. L.J. 125, 128–30, 145 (2017).

27. See *id.* at 129.

28. Cross-subsidies often exist in insurance markets, but they are most prominent in the health insurance context. When insurance uses perfect experience rating—in other words, charging each insured based on the insured’s own risk factors—there would be no cross-subsidy. But insurance rarely uses perfect experience rating because doing so is difficult and because it would probably make the overall market smaller than it would be using hidden cross-subsidies. Thus, some level of cross-subsidy occurs in many insurance or quasi-insurance settings.

29. See 29 U.S.C. § 1001a (2012).

make underwriting easier. The larger the group, the closer the group risk comes to matching the community risk—the risk an average member of the community would present. Because community risk is, actuarially speaking, easy to determine,³⁰ so is the risk for large groups. This system uses a cross-subsidy to create a stable insurance market; some employees, on their own, would be highly risky insureds who would pay higher rates on their own rather than the group rate; others would be low-risk insureds who would pay lower rates. The group rate is thus a cross-subsidy from the low-risk members of the pool to the high-risk members.

Much of the hysteria associated with the ACA stemmed from its effort to use cross-subsidies in the non-group market. Two of the ACA's central reforms were its requirements that health insurance be both guaranteed and made available without underwriting—that is, at community rates. The problem with the ACA's reforms, however, is that no insurance company could survive if it wrote policies on such unfavorable terms. The pool of people that would buy insurance under those circumstances are those who are already sick or most likely to become sick. In contrast, the incentive for good risks to buy insurance would be extremely small. In other words, the resulting pool would lack a sufficient cross-subsidy to allow insurers to profitably sell policies at community-rated prices. The individual mandate (and associated penalty tax) was the primary regulatory means by which the government intended to create a non-group pool large and healthy enough for the cross-subsidy to permit insurers to sell into that market at community rates. Some did not find that approach congenial.³¹

One might be tempted to conclude that cross-subsidies can only live in a regulatory regime where we compel transferors to purchase the good or service we seek to cross-subsidize.³² Otherwise, why would the transferors willingly submit to cross-subsidizing? But, although cross-subsidies are often created by mandates, they can and do arise in other settings. Indeed, for decades employment-based insurance has existed because of the underlying cross-subsidy that permits insurers to sell into that market, and before 2010 there was no insurance mandate of any kind. In other words, before 2010, no employer had any obligation to offer health

30. Gruber, *supra* note 25, at 651.

31. See, e.g., Sheryl Gay Stolberg, *Insurance Mandate May Be Health Bill's Undoing*, N.Y. TIMES (Nov. 15, 2011), <http://www.nytimes.com/2011/11/16/health/policy/insurance-mandate-may-be-health-bills-undoing.html> [<https://nyti.ms/2oDZLLF>] (noting individual mandate is unpopular and “the public unhappily over the provision”); Martha Shanahan, *5 Memorable Moments When Town Hall Meetings Turned to Rage*, NAT'L PUB. RADIO (Aug. 7, 2013, 6:25 PM), <https://www.npr.org/sections/itsallpolitics/2013/08/07/209919206/5-memorable-moments-when-town-hall-meetings-turned-to-rage> [<https://perma.cc/H35M-Q9Z4>] (noting extreme reactions to ACA).

32. Cf. Faulhaber, *supra* note 1, at 972 (arguing that the government must ban competition to prevent entrepreneurs from undercutting industries with cross-subsidies); Lynne Holt & Mary Galligan, *Mapping the Field: Retrospective of the Federal Universal Service Programs*, 37 TELECOMMS. POL'Y 773, 774 (2013) (noting competitive disadvantages associated with cross-subsidization). For more in-depth analysis of when competitors not subject to cross-subsidies would enter a market to undercut the subsidy, see generally Jean-Jacques Laffont & Jean Tirole, *Optimal Bypass and Cream Skimming*, 80 AM. ECON. REV. 1042 (1990).

insurance as a benefit,³³ yet most employers provided health insurance regardless, at the demands of even their low-risk employees.³⁴ Other employment-based benefits—particularly traditional pensions, which are nothing more than annuities—owe part of their stability and frequency to cross-subsidies at play in the employee group, again, without any mandate.³⁵ When non-group markets are impaired by adverse selection or other market failures, the appeal of group participation can overcome the pain of the cross-subsidy.³⁶

Furthermore, the involvement of an employer is not required. As we explain below, cross-subsidies appear in numerous settings, including with respect to student loans, legal remedies, consumer bankruptcy, and quasi-public utilities. Cross-subsidies can arise in a variety of market and regulatory settings—far more, we think, than has been commonly understood. In addition, cross-subsidies are an interesting regulatory tool for another reason: as some of the examples we have noted reveal, cross-subsidies often do not involve transfers from “rich” to “poor” players; rather, the transfers in question are frequently orthogonal to wealth. A more robust theoretical treatment of cross-subsidies, therefore, will be broadly useful to policymakers beyond those fields in which they have most famously attracted attention.³⁷

B. THE STANDARD ECONOMIC ACCOUNT OF CROSS-SUBSIDIES IN HEALTH INSURANCE

A number of economic commentators have argued that cross-subsidies in health insurance are inefficient.³⁸ Instead, this account holds, the government should underwrite health insurance benefits through general tax revenues.³⁹ That claim rests on two central pillars of modern public finance economics. First, governments should not impose differentiated consumption taxes, and a cross-

33. See David Blumenthal, *Employer-Sponsored Health Insurance in the United States—Origins and Implications*, 355 NEW ENG. J. MED. 82, 82–84 (2006).

34. See *id.* at 84.

35. See Michael A. Morrisey, *Mandated Benefits and Compensating Differentials—Taxing the Uninsured*, in AMERICAN HEALTH POLICY 133, 137–38 (Robert B. Helms ed., 1993).

36. Prior to the ACA, the Employee Retirement Income Security Act (ERISA) had for some years required that members of the employment group be treated equally—that is, although an insurer could underwrite across groups, it could not underwrite within groups. See 29 U.S.C. § 1182(b) (2012) (enacted in 2009). A group of miners, for example, could be charged more than a group of accountants, but there could be no rate differentiation within each group.

37. That is, our analysis has some common elements with, but ultimately neither agrees nor disagrees with, the claim that legal rules should not be used to redistribute on the basis of wealth. See Louis Kaplow & Steven Shavell, *Why the Legal System is Less Efficient Than the Income Tax in Redistributing Income*, 23 J. LEGAL STUD. 667, 667–68 (1994).

38. See, e.g., CASEY B. MULLIGAN, *SIDE EFFECTS AND COMPLICATIONS: THE ECONOMIC CONSEQUENCES OF HEALTH-CARE REFORM* 174–79 (2015); Peter Diamond, *Organizing the Health Insurance Market*, 60 ECONOMETRICA 1233, 1243 (1992); Mark V. Pauly, *The Welfare Economics of Community Rating*, 37 J. RISK & INS. 407, 410 (1970); see also *supra* note 10 and accompanying text.

39. Commentators have mostly overlooked the fact that even cross-subsidies can be partly financed through tax revenue. Health insurance is not taxed to workers when paid by employers, see I.R.C. § 106 (2012), and is deductible when paid by the self-employed, *id.* § 162(a)(1). As a result of these provisions, the government effectively pays a portion of the incremental costs of cross-subsidies. Cf. Morrisey, *supra* note 35, at 140 (explaining that tax exclusions are government copays for health insurance costs).

subsidy is essentially that.⁴⁰ Second, tax burdens should be spread out over as many taxpayers as possible, and cross-subsidies are a tax imposed on a narrow base of payors.⁴¹ For readers without a deep acquaintance with public finance economics, we address these points in greater detail in the following sections.

1. Avoid Differentiated Consumption Taxes

Anthony Atkinson and Joseph Stiglitz, in their foundational 1976 article, set out the case against imposing taxes on some consumption goods but not others.⁴² In the legal literature, these arguments have come to be called the “double-distortion” claim,⁴³ and are best known through the work of Louis Kaplow and Steven Shavell.⁴⁴ The claim begins with the premise that, though taxes distort private decisions to some degree, the most efficient tax system is one that minimizes these distortions.⁴⁵ For example, taxes imposed on the products of our labor, such as the income tax, tend to discourage work by reducing the after-tax payoff to those labors.

A key premise on which Atkinson and Stiglitz rely is that the government cannot escape these labor distortions even if it nominally imposes its tax on the purchase of goods rather than on labor itself.⁴⁶ The reason is that, for the most part, we do not want money for its own sake, but rather because it allows us to buy other things.⁴⁷ Taxes on consumption therefore reduce our incentive to work, just as the tax on labor itself does. To Atkinson and Stiglitz, a labor income tax is no different than a uniform tax on all possible consumption choices.⁴⁸

In the real world, many sales tax regimes impose different prices on different goods, a choice which Atkinson and Stiglitz argue is inefficient.⁴⁹ By taxing some products and not others, the government is distorting consumers' choices between the taxed and untaxed goods.⁵⁰ And, because the sales tax will also reduce labor supply to the same extent as an income tax that raised the same

40. See Pauly, *supra* note 38, at 407–11.

41. See Jonathan Gruber, *The Incidence of Mandated Maternity Benefits*, 84 AM. ECON. REV. 622, 626 (1994) [hereinafter Gruber, *Incidence*]; Jonathan Gruber, *The Efficiency of a Group-Specific Mandated Benefit: Evidence from Health Insurance Benefits for Maternity* 12–14 (Nat'l Bureau of Econ. Research, Working Paper No. 4157, 1992).

42. See Atkinson & Stiglitz, *supra* note 12, at 74.

43. See Chris William Sanchirico, *Deconstructing the New Efficiency Rationale*, 86 CORNELL L. REV. 1003, 1008 (2001) (first using the term “double-distortion”).

44. See Kaplow & Shavell, *supra* note 37, at 667–68; cf. Louis Kaplow & Steven Shavell, *Fairness Versus Welfare*, 114 HARV. L. REV. 961 (2001) (noting income tax-and-transfer programs “tend to involve less distortion”).

45. Alan J. Auerbach & James R. Hines Jr., *Taxation and Economic Efficiency*, in 3 HANDBOOK OF PUBLIC ECONOMICS 1347, 1349 (Alan J. Auerbach & Martin Feldstein eds., 2002).

46. See Atkinson & Stiglitz, *supra* note 12, at 70.

47. See *Buffy the Vampire Slayer: Triangle* (Warner Bros. television broadcast Jan. 9, 2001) (“I like money better than people. People can so rarely be exchanged for goods and/or services.”).

48. Atkinson & Stiglitz, *supra* note 12, at 64; see also Ian Crawford et al., *Value Added Tax and Excises*, in DIMENSIONS OF TAX DESIGN 275, 281 (James A. Mirrlees et al. eds., 2010).

49. See Atkinson & Stiglitz, *supra* note 12, at 70.

50. See *id.*

revenue, under some basic assumptions the “differentiated” consumption tax can never be as efficient as a tax on labor alone.⁵¹

It is worth emphasizing that this double-distortion result depends on the assumptions that underlie it. In particular, Atkinson and Stiglitz assume that individuals do not differ in their consumption preferences, and that the consumption goods that are taxed do not have any direct effect on an individual’s choice about how much labor to supply.⁵² As we will explore in section III.A below, Atkinson and Stiglitz and many subsequent authors have acknowledged that their result—labor taxes are always more efficient than a differentiated consumption tax—would not necessarily hold if these assumptions failed.

In any event, a cross-subsidy has the same economic effects as a differentiated consumption tax in the Atkinson–Stiglitz sense. Net payors in the pool pay more as a result of their consumption of the pooled good, discouraging their participation in the pool.⁵³ We would add to this story that the differentiated impact of cross-subsidies (and of more formal consumption taxes) are particularly problematic in the special context where many cross-subsidies are employed. Government subsidies are often used to encourage the production of positive externalities.⁵⁴ Cross-subsidies, then, often burden some positive externalities and subsidize others.⁵⁵ Imagine, for example, that Congress wants to encourage home installation of solar cells. It awards grants of \$100 per cell for 10,000 households, funded by a tax of \$100 per cell on another 10,000 households. As we will see in section III.C, it is possible to imagine scenarios where this would not be absurd. But at least at first blush, it is not a promising plan.

Finally, we should note that the Atkinson–Stiglitz result is itself open to criticism and is not necessarily the final word on this subject. Here, we take it as a given because of the force and intuition of the arguments in its favor and because it has become a touchstone in the legal academy, especially among tax scholars.

51. KAPLOW, *supra* note 14, at 5.

52. This is sometimes known as the “separability” assumption. *See* Atkinson & Stiglitz, *supra* note 12, at 68.

53. *See* KRISTIN KOMIVES ET AL., WORLD BANK, WATER, ELECTRICITY, AND THE POOR: WHO BENEFITS FROM UTILITY SUBSIDIES? 17 (2005); Posner, *supra* note 2, at 23–24. Posner argued that “it is not obvious that raising income tax rates would be a more efficient method of providing . . . services . . . than [cross-]subsidization,” but he was writing well before Atkinson and Stiglitz. *See* Posner, *supra* note 2, at 42.

We do not mean to suggest that estimating the deadweight loss of cross-subsidies is always straightforward, especially in complex markets. *See* Finkelstein et al., *supra* note 3, at 47–53 (examining welfare effects of gender nondiscrimination rules for pension annuities when annuity sellers can offset distortions with contracts).

54. Brian Galle, *The Tragedy of the Carrots: Economics and Politics in the Choice of Price Instruments*, 64 STAN. L. REV. 797, 832, 840 (2012).

55. *Cf.* Ross C. Eriksson et al., *Targeted and Untargeted Subsidy Schemes: Evidence from Postdivestiture Efforts to Promote Universal Telephone Service*, 41 J.L. & ECON. 477, 500 (1998) (noting that if cross-subsidies for telecommunications services are justified by network externalities, price increases for some may offset benefits of price reductions for others); Daniel Shaviro, *The Minimum Wage, the Earned Income Tax Credit, and Optimal Subsidy Policy*, 64 U. CHI. L. REV. 405, 408 (1997) (criticizing minimum wage because it aids low-wage work through a tax on low-wage workers).

But it is also highly stylized and relies on some simplistic assumptions, some of which we address in Part IV below. We use it here as much as an organizing device for analysis as we do for the result itself. That said, we still take as a starting point the general conclusion that, all else equal, differentiated consumption taxes should be avoided.

2. Broaden the Tax Base

We turn now to the second pillar of public finance economics, which is that the tax base should include as many taxpayers as possible. As with the Atkinson–Stiglitz argument, this is a theory about the distortiveness of the tax system. In general, the social cost of taxes increases exponentially with the tax rate.⁵⁶ One hundred dollars raised from Jake alone is twice as distortive as if we collected fifty each from Jake and Brendan.⁵⁷ If we distribute the burden of paying for government as widely as possible, each individual contributor can face a lower rate, allowing for a lower social cost for any given amount of revenue.⁵⁸ This same point can also be put in terms of risk, as in Guido Calabresi's account of the costs of accidents: because of the diminishing marginal utility of wealth and related factors, societies should strive to distribute risk, including the risk of having to support government, as widely and thinly as possible.⁵⁹

Cross-subsidies often violate this principle.⁶⁰ Usually, the net payor members of a pool will number much fewer than all taxpayers.⁶¹ Those payors therefore face a higher tax rate increase than would be needed if the same total payments were contributed from general revenues.⁶² A lesser-known but related point is that by assigning costs to the Treasury rather than to a pool, policymakers can also spread the resulting tax burden out over time, through government borrowing.⁶³ Cross-subsidies make this kind of intertemporal burden sharing more complex, if not impossible.

56. Auerbach & Hines, *supra* note 45, at 1349–55.

57. *See id.*

58. Cremer et al., *supra* note 21, at 29 & n.38; *see also* Gruber, *Incidence*, *supra* note 41, at 626.

This claim assumes that the administrative costs of the tax system are unaffected by the number of taxpayers. It is plausible that there are relatively fixed costs of tax compliance per taxpayer, which would imply that adding new taxpayers will slightly increase the costs of the tax system as a whole. Similarly, it may be that greater numbers of taxpayers make for more difficult enforcement and collections. These costs would have to be weighed against the gains from base-broadening.

59. GUIDO CALABRESI, *THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* 39–40, 45 (1970).

60. *See* KOMIVES ET AL., *supra* note 53, at 18–19; Gruber, *Incidence*, *supra* note 41, at 626; Lester, *supra* note 4, at 62. The story may be more complicated in markets with many interacting factors, such as in private annuity sales. *See* Finkelstein et al., *supra* note 3, at 52.

61. *Cf.* Finkelstein et al., *supra* note 3, at 52. This might not be the case, if the pool includes individuals from outside the taxing jurisdiction.

62. *See* Gruber, *Incidence*, *supra* note 41, at 626; *see also* John Holahan et al., *A New Approach to Risk-Spreading via Coverage-Expansion Subsidies*, 93 AM. ECON. REV. 277, 280 (2003).

63. *See* Chetty & Finkelstein, *supra* note 3, at 141 (describing government's ability to transfer between generations).

Calabresi recognized that his argument about risk spreading implied that the costs of accidents should be borne by society as a whole, but suggested that the necessary risk spreading could often be accomplished without the need to impose taxes.⁶⁴ Instead, Calabresi claimed, private arrangements with and between insurers could accomplish the same task.⁶⁵ Consider the tort liability of careless drivers. The driver can distribute the risk of paying a tort award by buying auto insurance, which shares the costs of payment among other customers of the insurer. The insurer, in turn, can purchase reinsurance to help cover itself against the risk of claims in excess of paid-in premiums.⁶⁶ Reinsurers can themselves reinsure further, often by dipping into a global investor market.⁶⁷ The ability to recapitalize also gives insurers the capacity, like governments, to share current payment burdens with future contributors.⁶⁸

The burden-spreading argument against cross-subsidies, then, turns on the efficacy of private substitutes for taxation.⁶⁹ If insurance and reinsurance markets work perfectly, the burdens of a cross-subsidy can potentially be shifted to be at least as broad as a general tax on the population.⁷⁰ On the other hand, if there are failures at any step along the way, whether between the insured and the primary insurer or between insurer and reinsurer, general revenues might be preferable to pooling.

In many cases, however, insurance markets are incomplete or nonexistent. Asymmetric information is the usual culprit: if the insured knows more about his or her own risks than the insurer can observe, the insurer may be unable to price its policy appropriately.⁷¹ Moral hazard, or the tendency of those with insurance to neglect to minimize their exposure to risk, is also a concern.⁷² These factors combine to eliminate private credit or insurance markets in many essential areas, such as unemployment risk, and to severely curtail them in others, such as student borrowing and long-term disability.⁷³

64. See CALABRESI, *supra* note 59, at 45, 47–48.

65. See *id.* at 47–48.

66. See Aviva Abramovsky, *Reinsurance: The Silent Regulator?*, 15 CONN. INS. L.J. 345, 350–68 (2009).

67. See FED. INS. OFFICE, U.S. DEP'T OF TREASURY, *THE BREADTH AND SCOPE OF THE GLOBAL REINSURANCE MARKET AND THE CRITICAL ROLE SUCH MARKET PLAYS IN SUPPORTING INSURANCE IN THE UNITED STATES 12–14* (2014), <https://www.treasury.gov/initiatives/fio/reports-and-notice/ Documents/FIO%20-%20Reinsurance%20Report.pdf> [<https://perma.cc/379L-8EDD>].

68. See J. David Cummins & Mary A. Weiss, *The Global Market for Reinsurance: Consolidation, Capacity, and Efficiency*, in BROOKINGS-WHARTON PAPERS ON FINANCIAL SERVICES 159, 165 (2000).

69. See Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 583–84 (1986) (making this point about takings).

70. Cf. Scott E. Harrington & Helen I. Doeringhaus, *The Economics and Politics of Automobile Insurance Rate Classification*, 60 J. RISK & INS. 59, 74 (1993) (pointing out that reinsurance will mitigate costs of any ban on discrimination in auto insurance underwriting).

71. See generally Michael Rothschild & Joseph Stiglitz, *Equilibrium in Competitive Insurance Markets: An Essay on the Economics of Imperfect Information*, 90 Q.J. ECON. 629 (1976) (discussing the difficulties asymmetric information creates in markets).

72. See Joseph E. Stiglitz, *Risk, Incentives and Insurance: The Pure Theory of Moral Hazard*, 8 GENEVA PAPERS ON RISK & INS. 4, 6 (1983).

73. See Chetty & Finkelstein, *supra* note 3, at 118–19.

One last point to raise is that taxes and cross-subsidy payments do not always burden the party who bears the legal obligation to pay them.⁷⁴ This question of who bears the real economic burden of a tax, called the “incidence” of the tax,⁷⁵ goes directly to the burden-spreading critique of cross-subsidies. If the economic incidence of a cross-subsidy payment is shifted to others, the effective tax rate on the pool’s payors may be much less than it seems at first glance.⁷⁶ For example, many cities “pay” for affordable housing by requiring developers of new housing to set aside some number of units as affordable.⁷⁷ This mandate looks to be underwritten by a cross-subsidy, in which developers and purchasers of market-rate housing subsidize homes for low-income residents. Superficially, it seems as though this imposes a needlessly high tax rate on the market-rate buyers, relative to financing that drew on all of the city’s taxpayers. But what is the incidence of the affordable-housing mandate? Some economists believe that taxes on real estate are actually borne by all investors in capital⁷⁸—a much wider pool than the city’s own taxpayers. In short, we have to know the incidence of any given cross-subsidy payment before we know whether a base-broadening critique of it makes sense.

II. THE UBIQUITY OF CROSS-SUBSIDIES

If critics of the ACA are right, then many aspects of the U.S. legal system are also problematic. As we have just seen, any policy in which resources are transferred “horizontally” between consumers of the same good or suppliers of the same service or product can be a cross-subsidy. If that transfer of resources could instead have been funded with taxpayer dollars, it is open to the same critique that commentators have offered for the ACA. In his influential early article,

74. JONATHAN GRUBER, *PUBLIC FINANCE AND PUBLIC POLICY* 586, 607–12 (5th ed. 2016) (discussing taxes); John J. Donohue III, *Understanding the Reasons for and Impact of Legislatively Mandated Benefits for Selected Workers*, 53 *STAN. L. REV.* 897, 911–12 (2001) (discussing cross-subsidies).

Think of two parallel roads, one of which is newly subject to a toll. Traffic will predictably shift to the other road. We should expect drivers to choose the toll-free road up to the point at which the hassle and delay of the added traffic “costs” them (in intangible aggravation and real lost wages) exactly the toll amount—that is, in equilibrium, it will always be equally costly to drive on either road. Drivers on the toll road will get back some of their toll in the form of a faster ride. Drivers on the toll-free road, meanwhile, are paying some of the new toll.

75. See GRUBER, *supra* note 74, at 586.

76. See Alfred E. Kahn, *The Road to More Intelligent Telephone Pricing*, 1 *YALE J. ON REG.* 139, 144 (1984) (observing cross-subsidy that was burdening business was actually passed on to business customers).

77. See Michael Floryan, *Cracking the Foundation: Highlighting and Criticizing the Shortcomings of Mandatory Inclusionary Zoning Practices*, 37 *PEPP. L. REV.* 1039, 1051 (2010).

78. See, e.g., Don Fullerton & Gilbert E. Metcalf, *Tax Incidence*, in 4 *HANDBOOK OF PUBLIC ECONOMICS* 1787, 1815–16 (Alan J. Auerbach & Martin Feldstein eds., 2002). The theory is that, by making housing less desirable as an investment, money is channeled to other places; given the law of supply and demand, these alternative investments will no longer need to pay as much. See *id.* at 1816. Consumers may bear a portion of the affordable-housing mandate, however, to the extent that it is imposed non-uniformly. *Id.*

Richard Posner identified a wide variety of potential cross-subsidies.⁷⁹ In this Part, we wish to highlight some of these cross-subsidies and point out a number of others.

First, there are a number of policies that are recognized as cross-subsidies, at least among sophisticated commentators. Public utilities are a classic example.⁸⁰ Because they depend on a physical infrastructure for transmission, telephone, electricity, gas, and water are all more costly to provide to rural customers.⁸¹ Nonetheless, in most countries, customers pay a uniform rate for such public utilities, with urban customers paying a portion of the cost of delivering service to rural households.⁸² The same is broadly true, by statute and FCC regulation, of other modern telecommunications services in the United States.⁸³ Likewise, the U.S. Postal Service charges the same delivery fee for every household even though delivering to suburban and rural areas is more expensive than delivering to urban areas.⁸⁴

Commentators have also noted that many workplace regulations, including antidiscrimination laws and wage and hour regulations, similarly use cross-subsidies to redistribute income among workers.⁸⁵ For example, the Americans with Disabilities Act (ADA) requires employers to make reasonable accommodations for individuals who meet the essential qualifications of a position;⁸⁶ these expenses likely reduce average wages.⁸⁷ Minimum wage laws transfer income to low-wage workers from those who just missed out on landing an entry-level job.⁸⁸

79. See Posner, *supra* note 2, at 23–24 (providing examples including automobile liability insurance, uniform telephone rates, distance-based airline and rail passenger rates, and flat rates in urban transit systems).

80. See KOMIVES ET AL., *supra* note 53, at 1; see also Faulhaber, *supra* note 1, at 966 (discussing railroad services).

81. KOMIVES ET AL., *supra* note 53, at 10; Hausman, *supra* note 10, at 34 n.17.

82. KOMIVES ET AL., *supra* note 53, at 19–27 (discussing this phenomenon in the context of water and electricity utilities). The World Bank's monograph discusses other cross-subsidy vectors in utilities, such as deliberate failure to shut off households that illegally connect to the network. See *id.* at 11.

83. Cremer et al., *supra* note 21, at 6 & n.1; Eriksson et al., *supra* note 55, at 480.

84. Cremer et al., *supra* note 21, at 16–17.

85. See, e.g., Jolls, *Labor Market*, *supra* note 4, at 375–76. See generally Rabin-Margalioth, *supra* note 10, at 336–43 (discussing redistribution effects of fixed-cost mandated benefits). Nondiscriminatory employer-provided pensions offer another example. Finkelstein et al., *supra* note 3, at 39.

86. See 42 U.S.C. § 12112(b)(5) (2012).

87. See Jolls, *Labor Market*, *supra* note 4, at 376. As Professor Jolls emphasizes, however, to the extent that antidiscrimination laws are not fully enforceable, other workplace rules benefitting protected groups, such as the ADA or the Family and Medical Leave Act, may not result in cross-subsidies. See Jolls, *Accommodation*, *supra* note 4, at 248. Rather, if employers are somewhat free to do so, they will impose the costs of those mandates on the protected group itself, resulting in no or only partial net welfare gains. See *id.* Jolls argues that empirical evidence implies that policies aimed at redistributing to women tend to fail for this reason. *Id.* at 284–87. Whether the ADA had net benefits for individuals with disabilities is more contentious, but we agree with the assessment that it likely did. See Samuel R. Bagenstos, *Has the Americans with Disabilities Act Reduced Employment for People with Disabilities?*, 25 BERKELEY J. EMPL. & LAB. L. 527, 530 (2004).

88. Rabin-Margalioth, *supra* note 10, at 343; Shaviro, *supra* note 55, at 416–17.

Kyle Logue and Ronen Avraham have shown that products-liability torts additionally create cross-subsidies.⁸⁹ The tort system is effectively a form of mandatory insurance for an injury, such as pain and suffering, that consumers would otherwise find difficult to insure.⁹⁰ When consumers buy a product, they are also purchasing the unwaivable right to sue the manufacturer in the event the consumer is injured by actionable design or other defects.⁹¹ This contract, however, is not priced differently for insureds who present different risks for the insurer.⁹² Therefore, low-risk purchasers of the product are paying a premium to cover the expected costs of high-risk purchasers.⁹³

We would add to Logue and Avraham's account by observing that the tax system shifts some of these costs to the general public. Tort awards other than punitive damages are not usually taxed, which often allows the tortfeasor to make a less than fully compensatory payment.⁹⁴ In effect, a portion of the tort award is paid from the Treasury: the injured person takes home the same after-tax award, but the tortfeasor pays less.⁹⁵ Further, in the case of business-to-business sales, the cost of the cross-subsidy can be deducted from the payor's tax, providing a twenty-one percent⁹⁶ federal contribution to the cost for contemporary corporations.⁹⁷

In prior work, we have pointed out yet other cross-subsidies. As Maher observes, defined-benefit pensions, such as those still widespread in public sector

89. See Logue & Avraham, *supra* note 4, at 229.

90. See A. Mitchell Polinsky & Steven Shavell, *The Uneasy Case for Product Liability*, 123 HARV. L. REV. 1437, 1462–63, 1466–67 (2010).

91. The widespread use of mandatory arbitration provisions has recently moved us towards a world of at least partial waiver, at least for claims that are impracticable without a class action.

92. Keith N. Hylton, *The Law and Economics of Products Liability*, 88 NOTRE DAME L. REV. 2457, 2483–84 (2013); cf. Richard Craswell, *Passing On the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships*, 43 STAN. L. REV. 361, 373 (1991) (explaining why sellers usually cannot distinguish among consumers).

93. See Albert H. Choi & Kathryn E. Spier, *Should Consumers Be Permitted to Waive Products Liability? Product Safety, Private Contracts, and Adverse Selection*, 30 J.L. ECON. & ORG. 734, 735 (2014) (discussing whether firms and consumers should be free to design their own liability schemes for defective products). For more information on the possible sources of risk variation among consumers, see *id.* at 736–37.

94. Cf. Laura Sager & Stephen Cohen, *How the Income Tax Undermines Civil Rights Law*, 73 S. CAL. L. REV. 1075, 1101–02 (2000) (discussing division of tax-favorable treatment between plaintiff and defendant). For critical discussion of the traditional rationales for the exclusion of tort damage awards, see Joseph M. Dodge, *Taxes and Torts*, 77 CORNELL L. REV. 143, 182–87 (1992).

95. States can upend this rule if they instruct juries to take taxability into account when awarding damages. See Gregg D. Polsky & Dan Markel, *Taxing Punitive Damages*, 96 VA. L. REV. 1295, 1305–06 (2010) (discussing jury awareness of tax consequences of awards they render).

96. See Kelsey Snell, *Final Version of GOP Tax Bill Cuts Corporate Tax Rate to 21 Percent*, NAT'L PUB. RADIO (Dec. 15, 2017, 7:16 PM), <https://www.npr.org/2017/12/15/571257526/final-version-of-gop-tax-bill-cuts-corporate-tax-rate-to-21-percent> [<https://perma.cc/E5MU-ZYDG>].

97. See Dodge, *supra* note 94, at 174. Dodge and Polinsky and Shavell each argue that a deduction is not a subsidy because tort damages substitute for precautions, and precautions are deductible. See *id.* at 176; A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869, 929–30 (1998). This is wrong. Most precautions are capital investments and must be capitalized (deducted slowly over time) rather than deducted. See I.R.C. §§ 263, 263A. Thus, a deduction is a subsidy at least to the extent that it accelerates the claiming of precaution costs.

jobs, promise an annuity, or fixed annual payment, for the life of the retiree.⁹⁸ Defined-benefit pensions are far more valuable to long-lived employees, yet an employer likely cannot individually adjust the salary paid to those it expects to live longest to reflect this higher expected payout.⁹⁹ In addition, Brooks shows that the contemporary financing structure of student loans—including income-driven repayment programs, such as Income-Based Repayment (IBR) and Pay As You Earn (PAYE)—underwrites poets (and other students at greater risk of drop-out or default) at the expense of engineers (and other safer bets).¹⁰⁰

We now will detail several other important areas in which cross-subsidies play an important, but so far neglected, role.

A. FAMILY LEAVE BENEFITS

When it comes to family leave policies, the United States is among the least generous developed countries in the world.¹⁰¹ For the most part, U.S. employers have no legal obligation to pay workers on leave to care for family members unless specifically bargained for, though California, New Jersey, Rhode Island, New York, the District of Columbia, and Washington provide notable exceptions.¹⁰² Both of the two leading Democratic Party candidates for President in 2016 proposed large expansions of paid family leave as part of their platforms.¹⁰³ The U.S. requires employers to offer unpaid family leave for up to twelve weeks, but that duration is modest by global standards.¹⁰⁴

As Gillian Lester has pointed out, family leave benefits, in combination with other rules prohibiting wage and hiring discrimination on the basis of gender, tend to create cross-subsidies in favor of households that include working women.¹⁰⁵ The cost of these transfers is not limited just to paying wages for workers who are not working, but also includes the burden of arranging the workforce to account for the possibility of family leave, such as by training employees to have overlapping skills, designing production processes to accommodate missing

98. Maher, *supra* note 25, at 1269–70.

99. *Id.* at 1281–82.

100. John R. Brooks, *Student Loans as Taxes*, 151 TAX NOTES 513, 516 (2016); John R. Brooks, *Income-Driven Repayment and the Public Financing of Higher Education*, 104 GEO. L.J. 229, 271–72 (2016) [hereinafter Brooks, *Income-Driven Repayment*].

101. Lester, *supra* note 4, at 3.

102. See *State Family and Medical Leave Laws*, NAT'L CONFERENCE OF STATE LEGISLATURES (July 19, 2016), <http://www.ncsl.org/research/labor-and-employment/state-family-and-medical-leave-laws.aspx> [https://perma.cc/77Q6-NPJM]; Adam Lidgett, *Washington Gov. Signs Paid Family Leave Plan into Law*, LAW360 (July 6, 2017, 3:11 PM), <https://www.law360.com/articles/941663/washington-gov-signs-paid-family-leave-plan-into-law> [https://perma.cc/Z4BV-7ZRS]; Bill Miossi & Scott Phillips, *Deciphering DC's New Universal Paid Leave Law*, LAW360 (Apr. 24, 2017, 6:30 PM), <https://www.law360.com/articles/915070/deciphering-dc-snew-universal-paid-leave-law> [https://perma.cc/AVW4-VMM4].

103. See Alice Miranda Ollstein, *Bernie Sanders and Hillary Clinton Face Off on Who Should Pay for Paid Family Leave*, THINKPROGRESS (Jan. 8, 2016, 3:14 PM), <https://thinkprogress.org/bernie-sanders-and-hillary-clinton-face-off-on-who-should-pay-for-paid-family-leave-97781198cd61> [https://perma.cc/U3WV-947Q].

104. Lester, *supra* note 4, at 2–3.

105. See Lester, *supra* note 4, at 58.

essential employees, or simply hiring temporary fill-in workers. In the absence of antidiscrimination laws, some employers might shift the costs of mandatory leave to working women, who claim the bulk of family leave benefits.¹⁰⁶ An employer focused only on its bottom line might try to pay women less or even refuse to hire women in an effort to try to control those costs.¹⁰⁷ Because both these policies are at least officially illegal, employers under economic pressure may seek to pay all workers less instead.¹⁰⁸ Thus, the costs of family leave policy are borne, in part by all workers rather than just by those most likely to utilize it.¹⁰⁹

B. PATENT LAW

Patent law and related intellectual property protections, such as copyright, offer interesting examples of cross-subsidies that support the future at the cost of the present. Because many inventions could easily be copied, inventors may not be inclined to innovate at socially optimal levels.¹¹⁰ Intellectual property aims to reverse this market failure by granting inventors a temporary monopoly—for most U.S. patents, twenty years from the date of filing,¹¹¹ and for most copyrights, the life of the creator plus seventy years.¹¹² All individuals who purchase or make use of the invention benefit from its creation, but only those who pay for it during the monopoly period are contributing to the financing of the government's

106. See Jolls, *Labor Market*, *supra* note 4, at 374–75, 379 (summarizing studies suggesting that family-leave mandates may reduce women's wages).

107. Employers likely do not value paid leave at its cost to them because many of its benefits are externalities—they benefit individuals outside the firm, such as those who value gender equality. In this case, the employer will only offer benefits if workers will accept a corresponding salary reduction, but bargaining and other market failures often preclude that outcome. See Lester, *supra* note 4, at 10–11, 14–15. Society as a whole would benefit from expanding female workforce participation and from prenatal policies (and from gender equality more generally), but in many cases these policies would benefit a given company only marginally. See *id.* at 18–33. Government action may be needed to overcome this collective-action problem. See Jolls, *Labor Market*, *supra* note 4, at 364 (discussing externality rationales for workplace regulation).

108. François Melese, *Government-Mandated Benefits, Taxes, and Wages*, 62 S. ECON. J. 53, 63 (1995). Employers could also attempt to reduce workforce, raise prices, accept lower profits, or some combination of all these. The economic burden of a tax or regulatory burden will tend to fall on the least elastic party. For instance, if consumer demand for the product regulated employers make is highly inelastic (for example, oxygen on Mars), most of the cost of regulation can be passed to consumers. Our analysis of “cross-subsidies” assumes that at least some portion of the cost of regulation is paid for by actors in a comparable position to the beneficiary—that workers bear the costs of worker protections, for instance.

109. See Jolls, *Labor Market*, *supra* note 4, at 376 (describing “targeted” workplace benefits). Some have questioned whether we should truly consider this a cross-subsidy from men (and women without children) toward women with children, because the proper baseline should not be a world in which childbearing women bear all of the costs of child care. But we could instead describe mandatory family leave as correcting a cross-penalty rather than introducing a cross-subsidy without altering our fundamental point. Our point is not about whether to share costs of child-rearing collectively; our point is, having decided to do so, cross-subsidization is one policy instrument that should be analyzed and compared to others.

110. Stanley M. Besen & Leo J. Raskind, *An Introduction to the Law and Economics of Intellectual Property*, 5 J. ECON. PERSP. 3, 5 (1991).

111. 35 U.S.C. § 154(a)(2) (2012).

112. 17 U.S.C. § 302(a) (2012).

incentive. In other words, those who pay while the invention is on patent underwrite those who buy a later generic.

Patent scholars recognize that granting patent holders a monopoly right in their invention is only one of several possible ways that governments could encourage innovation.¹¹³ Like taxes, monopolies create deadweight loss.¹¹⁴ Because the seller limits quantity to keep prices artificially high, there will be some consumers who will not buy the product but who might have otherwise been willing to do so at a competitive price.¹¹⁵ Competitors who might have earned profits in an open market also lose out.¹¹⁶ Whether this cost is greater or less than the social cost of simply awarding grants—paid for with general tax revenues—is a subject of intense recent debate.¹¹⁷

C. CLASS ACTIONS

The central conceit of the class action is to provide a procedural device that permits numerous, similar, small-value claims to be aggregated and litigated together. Given relatively fixed litigation and other costs, many small-value suits would not generate a positive expected value for individual litigants.¹¹⁸ Grouping claims together economizes these costs and permits a remedy and a potential deterrent effect where none might otherwise arise.¹¹⁹ To be sure, there are other contending considerations to the class-action model;¹²⁰ but we need not explore the intricacies of those considerations, other than to point out that whatever the intent or merits of the class-action device, it cannot and does not afford the type of individualized relief one commonly expects the American system to provide.¹²¹

113. See generally Nancy Gallini & Suzanne Scotchmer, *Intellectual Property: When Is It the Best Incentive System?*, in 2 INNOVATION POLICY AND THE ECONOMY 51 (Adam B. Jaffe et al. eds., 2002) (comparing intellectual property and alternative incentive mechanisms, namely prizes and procurement contracts); Brian D. Wright, *The Economics of Invention Incentives: Patents, Prizes, and Research Contracts*, 73 AM. ECON. REV. 691 (1983) (same).

114. Gallini & Scotchmer, *supra* note 113, at 54.

115. See *id.*

116. The patent's cost may also fall on consumers who shift to substitute, unpatented products. As demand rises for the substitute product, so do prices.

117. See Daniel J. Hemel & Lisa Larrimore Ouellette, *Beyond the Patents-Prizes Debate*, 92 TEX. L. REV. 303, 305 (2013); Benjamin N. Roin, *Intellectual Property Versus Prizes: Reframing the Debate*, 81 U. CHI. L. REV. 999, 1001–08 (2014).

118. See, e.g., *Carnegie v. Household Int'l, Inc.*, 376 F.3d 656, 661 (7th Cir. 2004) (“The . . . alternative to a class action is not 17 million individual suits, but zero individual suits, as only a lunatic or a fanatic sues for \$30.”).

119. See, e.g., *id.*; Harry Kalven, Jr. & Maurice Rosenfield, *The Contemporary Function of the Class Suit*, 8 U. CHI. L. REV. 684, 684–86 (1941).

120. See, e.g., Linda S. Mullenix, *Ending Class Actions as We Know Them: Rethinking the American Class Action*, 64 EMORY L.J. 399, 413–17 (2014) (discussing class actions as unnecessary litigation created to benefit attorneys rather than plaintiffs). See generally MARTIN H. REDISH, *WHOLESALE JUSTICE: CONSTITUTIONAL DEMOCRACY AND THE PROBLEM OF THE CLASS ACTION LAWSUIT* (2009) (discussing benefits and drawbacks of class-action model).

121. See David Rosenberg, *Class Actions for Mass Torts: Doing Individual Justice by Collective Means*, 62 IND. L.J. 561, 562, 565–66 (1987) (noting that class actions “average” claims in a way that is hostile to the “individual justice tradition”).

As a result, the necessary practical consequence of the class-action model is that stronger claims are packaged with weaker claims in constructing the true unit of relief: the class.¹²² It is precisely that bundling which motivates the class-action attorney to embark upon the litigation: the attorney has only to establish that class claims are sufficiently similar to satisfy Federal Rule of Civil Procedure 23.¹²³ Similarly, in certifying and resolving the case, there is little real effort to distinguish claims beyond some modest categorization, which cannot possibly correspond to the actual merit and value one would assign to each individualized claim.¹²⁴ By authorizing the class attorney and the court to present and certify a class, the Federal Rules and other governing statutes greenlight a cross-subsidy as part of a larger strategy to advance socially valuable aims.¹²⁵

A class-action system is not the only possible way to achieve these aims, however. Why use the class action rather than, say, public financing of attorneys who could bring small-value claims individually, which would avoid the downsides of cross-subsidization? That question has never been explored satisfactorily in all the extensive literature on class actions.

III. WHEN ARE CROSS-SUBSIDIES EFFICIENT?

The prior Parts set up the main question this Article attempts to answer: If cross-subsidization is an inferior way of paying for public and social programs, why is it so ubiquitous? The answer in this Part is that cross-subsidization may not be so bad and, in some cases, may actually be the preferred policy design choice. We describe four reasons that cross-subsidization may be a more efficient form of public financing than tax and transfer: it can better address exceptions to and weaknesses in the Atkinson–Stiglitz framework, it can better approximate nondistortionary benefit taxation, it can avoid oversubsidizing inframarginal consumers, and it can take advantage of both the pure and political economic benefits of being less salient to individuals. We address each of these reasons in turn below.

A. KNOWN EXCEPTIONS TO THE ATKINSON–STIGLITZ FRAMEWORK AND THEIR APPLICATION TO CROSS-SUBSIDIES

Although the conventional wisdom, as we have said, is that governments should avoid differentiated consumption taxes, the existing literature recognizes

122. That fact that plaintiffs may opt out in some cases, or the use of sub-classes or damage formulas, does not undo the reality that the class is the true unit of relief.

123. See FED. R. CIV. P. 23.

124. Allan Erbsen, *From “Predominance” to “Resolvability”: A New Approach to Regulating Class Actions*, 58 VAND. L. REV. 995, 1072–73 (2005).

125. In addition, some may explain the fact that fewer “strong” plaintiffs than one would expect opt out as a consequence of ignorance or apathy, but these plaintiffs may actually be willing to forego pursuing a stronger claim in exchange for increasing the strength of the class-action suit as a means to “stick it” to wrongdoers. Cf. Brendan S. Maher, *The Civil Judicial Subsidy*, 85 IND. L.J. 1527, 1535 (2010) (discussing “Ultimatum Game” studies in which participants chose to be worse off to prevent unfairness). Players willing to pay a fairness premium are, in our parlance, inframarginal actors who might be desirably employed as regulatory adjuncts.

three key exceptions to that principle. Two of these are long-standing and indeed are mentioned by Atkinson and Stiglitz in their original article.¹²⁶ We call these the “informational advantage” and “leisure complement” theories, respectively. The third theory, dealing with the possibility that tax avoidance is more important than labor/leisure distortions, is relatively recent, and has been developed most comprehensively by David Gamage.¹²⁷ All three theories describe ways in which consumption taxes—and thus, potentially, cross-subsidies—can sometimes solve or improve on problems created by the income tax. Because the first two exceptions are well-known, our discussion of them will be brief and limited to highlighting the aspects that are most important for cross-subsidies.¹²⁸

1. Informational Advantages of Cross-Subsidies

Many commentators recognize that a differentiated consumption tax can sometimes help to overcome the informational shortcomings of an income tax.¹²⁹ The basic problem is that governments usually cannot observe our underlying ability to earn money.¹³⁰ An individual might have what it takes to be an investment banker, but envy the lifestyle of a beachcomber. Because bankers earn more money, they also face higher tax rates, encouraging our would-be investment banker to hit the beach.¹³¹

Ideally, taxing authorities would prefer that the tax system not influence our choice of careers, especially if tax pushes us in less productive directions.¹³² One way to achieve that goal would be to tax not income itself, but the underlying ability to earn income.¹³³ If the government could observe an individual’s banking chops, it could impose a banker’s higher tax rate on that individual regardless of whether she actually wears pinstripes, thereby eliminating the tax incentive to

126. See Atkinson & Stiglitz, *supra* note 12.

127. See generally David Gamage, *How Should Governments Promote Distributive Justice?: A Framework for Analyzing the Optimal Choice of Tax Instruments*, 68 TAX L. REV. 1 (2014) [hereinafter Gamage, *Framework*]; David Gamage, *The Case for Taxing (All of) Labor Income, Consumption, Capital Income, and Wealth*, 68 TAX L. REV. 355 (2015) [hereinafter Gamage, *The Case*].

128. For a cogent summary on how taxing authorities should apply the first two exceptions to the design of tax systems, see Chris William Sanchirico, *Tax Eclecticism*, 64 TAX L. REV. 149, 194–218 (2011).

129. See, e.g., Robin Boadway & Maurice Marchand, *The Use of Public Expenditures for Redistributive Purposes*, 47 OXFORD ECON. PAPERS 45, 51 (1995); Helmuth Cremer & Firouz Gahvari, *In-Kind Transfers, Self-Selection and Optimal Tax Policy*, 41 EUR. ECON. REV. 97, 101–02, 112–13 (1997); Louis Kaplow, *Optimal Policy with Heterogeneous Preferences*, 8 B.E. J. ECON. ANALYSIS & POL’Y 1, 15–16 (2008); J.A. Mirrlees, *Optimal Tax Theory: A Synthesis*, 6 J. PUB. ECON. 327, 328–56 (1976); Emmanuel Saez, *The Desirability of Commodity Taxation Under Non-Linear Income Taxation and Heterogeneous Tastes*, 83 J. PUB. ECON. 217, 226 (2002).

130. Joseph E. Stiglitz, *Self-Selection and Pareto Efficient Taxation*, 17 J. PUB. ECON. 213, 214 (1982).

131. See *id.* at 221 (describing the government’s problem as choosing policies so that “the more able do not wish to pretend to be less able”).

132. See *id.*

133. See Aanund Hylland & Richard Zeckhauser, *Distributional Objectives Should Affect Taxes but Not Program Choice or Design*, 81 SCANDINAVIAN J. ECON. 264, 279–80 (1979).

beachcomb.¹³⁴ That is usually impossible (and, perhaps morally objectionable), but there may be some forms of consumption that are favored by individuals with high, but not low, ability.¹³⁵ Taxing these forms of consumption would be, then, a tax based on ability.¹³⁶

For example, suppose that sugar-sweetened beverages are favored by impatient or inattentive individuals who tend to have lower lifetime earnings.¹³⁷ Taxes on bottled water might in effect tax earning ability, though they might be undesirable from a public health perspective.¹³⁸

In some cases, cross-subsidies may similarly serve as a tax on the ability to earn.¹³⁹ Most straightforwardly, consider workplace rules guaranteeing paid family leave, sick time, and freedom from discrimination against individuals with disabilities.¹⁴⁰ In an unregulated workplace, the beneficiaries of these rules likely have lower earning power, owing to employer discrimination or higher perceived costs of employing these groups, than do other members of the pool. If the incidence of the mandate instead falls on all workers, not just the main beneficiaries, it can serve as a tax on the higher “ability” workers.¹⁴¹ Subsidized water and other utilities for impoverished areas similarly channel resources to individuals who otherwise would have low lifetime productivity.¹⁴²

134. Ability taxes are most efficient when the underlying characteristic that is taxed is not readily changeable, so that there is little new distortion from the ability tax. But this need not be the case as long as the distortion created by the ability tax is less costly overall than the distortions caused by the income taxes it replaces.

135. Stiglitz, *supra* note 130, at 237–38; Albert L. Nichols & Richard J. Zeckhauser, *Targeting Transfers Through Restrictions on Recipients*, 72 AM. ECON. REV. 372, 372–73 (1982).

136. Saez, *supra* note 129, at 226; Stiglitz, *supra* note 130, at 238. Kaplow extends this framework to cases in which the government wishes to tax individuals differently on bases other than ability to earn, such as variations in their preferences. See Kaplow, *supra* note 129, at 15–19.

In a similar spirit are proposals that the government provide in-kind benefits to low-ability earners, where those benefits would not be valued by individuals with high ability. See Boadway & Marchand, *supra* note 129, at 51, 54; Janet Currie & Firouz Gahvari, *Transfers in Cash and In-Kind: Theory Meets the Data*, 46 J. ECON. LIT. 333, 353–56 (2008) (providing an exhaustive survey); Nichols & Zeckhauser, *supra* note 135, at 376.

137. Cf. James J. Heckman et al., *The Rate of Return to the HighScope Perry Preschool Program*, 94 J. PUB. ECON. 114 (2010) (estimating adult benefits of childhood development of patience and persistence); Walter Mischel et al., *Delay of Gratification in Children*, 244 SCIENCE 933 (1989) (examining impact of impatience on learning).

138. An example in the cross-subsidy context is a law prohibiting insurer or employer discrimination based on genetic information. See Kyle Logue & Joel Slemrod, *Genes as Tags: The Tax Implications of Widely Available Genetic Information*, 61 NAT'L TAX J. 843, 858 (2008). Logue and Slemrod defend these rules as potentially efficient taxes on those with higher-value genes. See *id.* at 861.

139. HELMUTH CREMER ET AL., *THE ECONOMICS OF UNIVERSAL SERVICE: THEORY 4–5* (World Bank 1998); Boadway & Marchand, *supra* note 129, at 57–58; Cremer et al., *supra* note 21, at 15.

140. See Avraham et al., *supra* note 4, at 211; Hila Shamir, *Between Home and Work: Assessing the Distributive Effects of Employment Law in Markets of Care*, 30 BERKELEY J. EMP. & LAB. L. 404, 407–15 (2009).

141. Jolls, *Accommodation*, *supra* note 4, at 251. To be clear, “ability” in this context is not intended to convey any judgment about the worth of the individual but is rather merely a description of the worker’s likely maximum salary.

142. Cf. KOMIVES ET AL., *supra* note 53, at 5, 153 (arguing that subsidized utilities redistribute to the poor on average). Public utilities in developing countries may also be inferior goods, which is to say that

2. Taxing Leisure Complements

Another well-known limit on the Atkinson–Stiglitz result is that it may sometimes be appropriate for the government to impose a higher burden on so-called “leisure complements.”¹⁴³ Income taxes make it more appealing to skip work and go to the park instead; to counter this distortion, the government could charge an entry fee at the park.

Implementing this tactic through cross-subsidies is tricky because, by definition, everyone in the pool is buying the same good. For instance, if access to high-speed Internet is, on net, a leisure complement, then by taxing it, the government could encourage work by making leisure somewhat more expensive.¹⁴⁴ Rules that require uniform Internet access pricing for rural or otherwise high-cost users would subsidize those users at the expense of others. In effect, the government is taxing the low-cost urban users, encouraging them to work, but it is also encouraging rural households to stay home and binge-watch Netflix. The labor losses from the subsidized users, in other words, may reduce or even outweigh any labor gains from the transferors.¹⁴⁵

We see a few possible instances where pooling could still serve as an effective tax on leisure complements. For one, net gains are possible when the labor response of transferees is less elastic than the labor response of transferors—that is, if transferees do not change, or hardly change, their labor supply as a result of the new subsidy. If transferees reduce labor by fifty while transferors increase it by one hundred, we have a net gain in labor supply.

Differences like this are possible if we have some existing distortion that weighs more heavily on one group than another. A common example might be when transferees face lower effective income tax rates than the transferors. Recall that we expect the behavioral impact of a tax to rise exponentially with the effective rate.¹⁴⁶ A cross-subsidy that changes the effective tax rate from thirty-nine percent to forty percent will affect overall behavior by much more than a cross-subsidy that changes the effective tax rate from ten percent to nine percent. This makes it possible that an Internet cross-subsidy could increase the labor

households with higher earnings prefer private consumption. *Cf. id.* at 46–47, 116 (noting that wealthier households in developing countries opt out of public utility systems). This further improves the “tagging” accuracy of the public system. *Cf. id.* (arguing that inferior goods are better targeted at poor populations). *But see id.* at 70 (reporting that many utility programs aimed at the poor do not effectively target money to the poor).

143. Atkinson & Stiglitz, *supra* note 12, at 68; see Robin Boadway et al., *Subsidies Versus Public Provision of Private Goods as Instruments for Redistribution*, 100 SCANDINAVIAN J. ECON. 545, 546, 555 (1998); Vidar Christiansen, *Which Commodity Taxes Should Supplement the Income Tax?*, 24 J. PUB. ECON. 195 (1984); Saez, *supra* note 129, at 223–26.

144. We do not intend to rule out the possibility that access to a good streaming service could also encourage work productivity. Galle recommends a “Walking on Sunshine” Pandora station, but the other two of us think that he is a dork.

145. This same problem also interferes with a similar strategy, noted in Boadway & Marchand, *supra* note 129, at 57–58, of subsidizing a good that competes with leisure.

146. See Auerbach & Hines, *supra* note 56 and accompanying text.

supply of high-tax households by more than it reduces the labor of low-tax households, even if those groups are equally numerous.¹⁴⁷

By similar logic, taxing leisure complements might work when transferees greatly outnumber transferors. If there are only a few transferors and many transferees, the tax bill for each transferor is relatively big and the subsidy for each transferee relatively small. Because labor effects grow exponentially with the size of the tax or subsidy, the added labor effects for the few transferors will be larger, in the aggregate, than the lost labor of the transferees.¹⁴⁸

3. Minimizing Total Avoidance Costs

The third scenario in which cross-subsidies can improve over the traditional income tax is when cross-subsidies and income taxes distort different behaviors. In that case, shifting some of the burden from an income tax onto a cross-subsidy (or other form of consumption tax) will be more efficient than relying on an income tax alone. We have seen that the Atkinson–Stiglitz “double-distortion” argument assumes that a consumption tax has just as much effect on labor decisions as does an income tax.¹⁴⁹ In that case, it will make no difference if we use an income tax, a consumption tax, or a combination of the two—labor market decisions will be distorted the same no matter what. A twenty percent income tax, a twenty percent consumption tax, or a combination of two ten percent taxes will all impose the same burden on labor market decisions—each dollar earned will take a twenty percent cut before being consumed.

But, as David Gamage has argued, an income tax and a consumption tax may actually affect different behaviors.¹⁵⁰ There is limited evidence that income taxes reduce labor supply for most workers.¹⁵¹ If an individual wants to reduce her income taxes, she is more likely to resort to other behaviors, such as under-reporting income, over-reporting deductions, or engaging in outright evasion. Similarly, an individual wanting to reduce consumption taxes is more likely to, for example, go to a cash-only dollar store, or ship purchased fine art

147. See Shaviro, *supra* note 55, at 422. Because most income tax systems are progressive, it may sound like we are saying cross-subsidies should run from people with high incomes to those with low, but our message is a bit more nuanced than that. Our claim is that the cross-subsidy may be more efficient than an income tax when being a beneficiary is *correlated* with lower income, but not if a person can *become* a transferee by lowering their income. If income determines whether a person is a payor or transferor, then the pool is just an income tax in disguise. Our Internet example likely qualifies as a pool that taxes leisure efficiently and escapes this income-tax-in-disguise problem, because it defines the transferor and transferee groups by geography, not income. Rural households are often lower income (and, because they have fewer government amenities, less taxed overall), but one cannot get subsidized Internet just by reducing one's labor effort. See Gary Paul Green, *Sustainability and Rural Communities*, 23 KAN. J.L. & PUB. POL'Y 421, 423 (2014); Lisa R. Pruitt, *Missing the Mark: Welfare Reform and Rural Poverty*, 10 J. GENDER RACE & JUST. 439, 445–47 (2007).

148. This assumes that the labor-elasticity of leisure and the amount transferred is equal on both sides.

149. See *supra* note 52 and accompanying text.

150. Gamage, *Framework*, *supra* note 127, at 24–29.

151. Gamage, *The Case*, *supra* note 127, at 356 n.3, 388–94.

to his New Hampshire office instead of his New York home.¹⁵² In that case, instead of having the labor distortions of a twenty percent tax, we have the distinct evasion behaviors of two ten percent taxes. Because the deadweight loss of taxation increases with the square of the tax rate, we would prefer the latter; here, the whole truly is greater than the sum of the two parts.¹⁵³ Where there are different margins of distortion, as here, the government should keep shifting tax revenue over to the new tax until, at the margin, the next dollar raised through either tax would be equally socially costly.¹⁵⁴

This argument comes with several important caveats, as Gamage recognizes. First, it must actually be the case that the two tax instruments affect different margins of behavior.¹⁵⁵ That is usually an empirical question.¹⁵⁶ Next, there may be extra public administrative and private compliance costs to creating a new tax, which might reduce or eliminate the benefits of adding the new tax.¹⁵⁷ And finally, if the new tax is imposed on fewer people than the old tax, the burden it imposes may quickly catch up to the old tax—that is, Gamage’s overlap point does not eliminate the importance of base-broadening.¹⁵⁸

With these cautions in mind, we turn now to cross-subsidies. Cross-subsidies may create efficiencies, up to a point, by allowing the government to reduce income-tax rates. As cross-subsidies grow in magnitude, the distortions they create will approach and eventually equal the costliness of the distortions created by the income tax.¹⁵⁹ At that point, it will no longer make economic sense to shift from general revenues to cross-subsidies. When the pool of subsidy payers is much smaller than the pool of income-tax payers, the equalization point will occur at a much smaller cross-subsidy than it would if the pools were of similar size.

The central assumption of this efficiency claim, however, is that subsidy payers’ responses to cross-subsidies do not overlap too much with their responses

152. See, e.g., Mark Maremont & Jerry Markon, *Ex-Tyco Chief Evaded \$1 Million in Taxes on Art, Indictment Says*, WALL ST. J., June 5, 2002, at A1.

153. A simple formula for the deadweight loss of taxation in this case is often given as $\frac{1}{2} \eta w l t^2$, where w is the wage rate, l is hours worked, η is the elasticity of substitution between labor and leisure, and t is the tax rate on labor. See, e.g., HARVEY S. ROSEN & TED GAYER, *PUBLIC FINANCE* 336 (10th ed. 2015); see also Auerbach & Hines, *supra* note 45, at 1349–50 (defining deadweight loss as a “[t]ax-induced reduction[] in economic efficiency”). Thus, all else being equal, an increase in tax rates from, for example, five percent to ten percent would increase deadweight loss by seventy-five, but an increase from ten percent to fifteen percent would increase it by 125. Note, however, that this formula is simplified and that individual responses to taxation, both in theory and in evidence, are more complicated. Nonetheless, “it remains true that . . . the magnitude of excess burden is roughly proportional to the square of any . . . departure [from marginal cost pricing]”—for example, a tax. *Id.* at 1415.

154. Gamage, *Framework*, *supra* note 127, at 41–44; see also Crawford et al., *supra* note 48, at 282 (noting that consumption tax may be fallback for evasion of income tax).

155. Gamage, *Framework*, *supra* note 127, at 35–39.

156. Gamage, *The Case*, *supra* note 127, at 387–400.

157. Gamage, *Framework*, *supra* note 127, at 32–34; see also Margalioth, *supra* note 4, at 680–81.

158. See Gamage, *Framework*, *supra* note 127, at 20.

159. Cf. Posner, *supra* note 2, at 43 (noting that businesses may attempt to evade cross-subsidies).

to the income tax. If the ACA strongly motivates young men to avoid earning or reporting high income, there will not be much net gain from relying on cross-subsidies rather than general revenues. In most cases, however, we believe that individuals will respond differently to different instruments.¹⁶⁰ There are no obvious avoidance tactics for simultaneously escaping the burdens of both the tort system and the income tax, for example.¹⁶¹

The “overlap” requirement does imply one significant limitation on the efficiency of cross-subsidies: cross-subsidies likely cannot be used as a tool for redistributing on the basis of income *qua* income. If the government is going to provide health insurance to the poor, it must identify who is poor, which is typically accomplished by measuring household incomes.¹⁶² Even if this measurement is not done directly through the income tax itself,¹⁶³ in most cases, techniques for reducing income taxes will also reduce measured income for purposes of these transfer programs. On the other hand, returning to Gamage’s argument, it may be possible to redistribute to the poor by using some quality that correlates with poverty, and which cannot be manipulated in the same ways income can. In some countries, for instance, transfers from urban to rural areas also on average transfer from rich to poor, and urban dwellers cannot conceal their urbanity by, for example, getting paid in cash.

The “informal economy” may also be a constraint on our overlap argument. Many cross-subsidy systems depend on workplace regulation. It is possible that individuals can escape both from the income tax and from a costly cross-subsidy by working under the table.¹⁶⁴ An employer who pays her employees in cash to evade payroll taxes is probably not offering health benefits or complying with ERISA pension rules, either. In other words, cross-subsidies that rely on a regulated employment relationship may increase incentives to defect to the informal economy.¹⁶⁵

160. See Margalioth, *supra* note 4, at 681 (arguing that typical tax avoidance behavior cannot reduce cross-subsidies).

161. This claim does depend somewhat on how the tax “base” and the regulation are defined. For example, if both are effectively per-unit charges, they may encourage overlapping shifts from quantity to quality. Cf. Henry E. Smith, *Ambiguous Quality Changes from Taxes and Legal Rules*, 67 U. CHI. L. REV. 647, 661–64 (2000) (describing incentives to change quality of products in response to unit charges).

162. *How the Census Bureau Measures Poverty*, U.S. CENSUS BUREAU, <https://www.census.gov/topics/income-poverty/poverty/guidance/poverty-measures.html> [<https://perma.cc/7WJF-A763>].

163. For instance, before the ACA, the definition of “income” for Medicaid eligibility purposes did not follow federal tax definitions, and was administered by states, not the IRS. See *Annual Statistical Supplement, 2008*, SOC. SEC. ADMIN., <https://www.ssa.gov/policy/docs/statcomps/supplement/2008/medicaid.html> [<https://perma.cc/3B9E-B5WL>].

164. For a global overview of the informal economy, see Friedrich Schneider with Dominik Enste, *Hiding in the Shadows: The Growth of the Underground Economy*, 30 INT’L MONETARY FUND ECON. ISSUES (2002), <http://www.imf.org/external/pubs/ft/issues/issues30> [<https://perma.cc/RB4B-SFJT>].

165. See Shaviro, *supra* note 55, at 417 (making this point about the minimum wage); cf. Krueger, *supra* note 10, at 29–30 (discussing compliance problems with workplace mandates).

B. BENEFIT TAXATION

Paying for public goods using cross-subsidies may also be efficient where the cross-subsidy is better at capturing the individualized benefit from the good than a tax is. Essentially, a cross-subsidy regime may come closer to being a nondistortionary “benefit tax”—a tax that is really just a direct purchase of goods and services—than a tax-and-transfer regime.

1. Benefit Taxes Are Nondistortionary

The distortion and deadweight loss from taxation (or cross-subsidization) exists only to the extent that tax payments differ from the benefit received at the margin.¹⁶⁶ Where an additional payment leads to additional benefit, the extra cost that comes from working more (in the case of income taxation) or paying a higher price for the good or service (in the case of cross-subsidization) should not have negative behavioral effects, because the individual receives at least as much in return for that extra payment.¹⁶⁷ To see this, consider the following trivial example: Suppose an individual’s payment of \$X more in tax leads to farm subsidies that make the individual’s groceries exactly \$X cheaper. The individual’s after-tax earnings go down by \$X, but the cost of her consumption bundle also drops by \$X. There is no net effect on her utility from consumption and therefore no additional distortion to her labor effort.

Although, as the example shows, an income tax can theoretically approximate a benefit tax, that approximation is highly unlikely in practice. Income taxation is a blunt instrument used to pay for a huge undifferentiated pool of public goods. A person would rarely associate the decision to work additional hours (or not) with incremental government benefits.¹⁶⁸ Cross-subsidies, on the other hand, can be more narrowly targeted and flexible, thus creating a clearer connection between costs and benefits and leading potentially to less distortion. In the best case, the differential prices paid through the cross-subsidies would line up exactly with benefits and would therefore be essentially a non-distortive benefit tax—despite still being a transfer from those with higher income to fund provision of the good for those with lower income.¹⁶⁹

Consider a government mandate that employers provide paid parental leave to their employees—an example that Lawrence Summers has used.¹⁷⁰ Suppose that the cost of providing the leave is \$0.10 per hour worked (because the employees

166. See, e.g., Louis Kaplow, *The Optimal Supply of Public Goods and the Distortionary Cost of Taxation*, 49 NAT’L TAX J. 513, 514–16 (1996); Margalioth, *supra* note 4, at 658.

167. See Craswell, *supra* note 92, at 369–71.

168. Cf. H. P. Young et al., *Cost Allocation in Water Resources Development*, 18 WATER RESOURCES RES. 463, 465 (1982) (discussing game-theory problems with assigning costs of collective good among self-interested individuals).

169. Cf. Jolls, *Labor Market*, *supra* note 4, at 361–63 (explaining that mandated benefits can increase employment, depending on effects of mandate on labor supply and demand curves).

170. See Summers, *supra* note 19, at 178–81. For a more detailed model of Summers’s argument, see Jonathan Gruber & Alan B. Krueger, *The Incidence of Mandated Employer-Provided Insurance: Lessons from Workers’ Compensation Insurance*, 5 TAX POL’Y & ECON. 111, 115–17 (1991).

earn more leave the more they work). In this case, one would expect in equilibrium that hourly wages would fall by \$0.10—because the employer is substituting the new fringe benefit for wages—but employees that value the benefit would not perceive their total compensation to fall by as much. As long as they put some positive value on the benefit, the “tax” on their labor is really the difference between \$0.10 and their subjective value of the benefit.¹⁷¹ In other words, for each additional hour worked, they might earn \$0.10 less cash than before, but they also gain an incremental amount of paid leave—and only the net of the two is the real cost to the employee and the source of any distortion and deadweight loss.¹⁷² In the case where the employee values the paid leave at exactly \$0.10 per hour, there is no distortion at all.¹⁷³

Contrast this with a tax-and-transfer approach. Suppose instead of mandating parental leave, the government simply imposed an income tax and used the revenue to pay parents during leave. Even if taxpayers value the benefit, divorcing the benefit from the source of funding would cause the full amount of any tax increase to be distortionary. Only the cost, not the benefit, would be tied to labor market decisions—one could work less or hide income but still receive the same benefit.

In theory, however, costs and benefits could be tied together either at the employer level or through government programs. Suppose that the public parental leave program were financed and provided just like the employer-mandated version, with an incremental \$0.10 tax on wages (at the employer or employee level) and paid leave that increased with hours worked. In that case, we would actually not expect any behavioral or distortionary differences between an employer mandate and the tax-benefit program. In both cases, an incremental hour of work carries the same additional costs (the \$0.10 tax) and benefits (the incremental leave), and so it should have the same effects on labor market decisions.¹⁷⁴ The difficulty for this argument, and for Summers, is that not many government programs are designed that way. Our key assumption is that, under both the mandate and the tax-benefit structure, both the value and cost increase

171. Gruber, *supra* note 25, at 659–60. Taxes often further sweeten the deal, because in-kind benefits are typically exempt from income and payroll tax. See Melese, *supra* note 108, at 64.

172. This result holds even if some of the costs of the mandate are passed on to third parties, such as consumers. See Jolls, *Accommodation*, *supra* note 4, at 239.

173. See Gruber, *supra* note 25, at 659–60 (finding no distortion where value to employee equals cost to employer). We simplify. Distortions are possible under a variety of conditions, such as if employers are constrained to offer similar insurance to low- and high-hour employees. In that case, because low-hour workers are made relatively more expensive by the mandate, employers will come to prefer fewer workers working more hours. See *id.* at 661. See generally David M. Cutler & Brigitte C. Madrian, *Labor Market Responses to Rising Health Insurance Costs: Evidence on Hours Worked*, 29 RAND J. ECON. 509 (1998) (measuring effect of health costs on hours).

The mandate case is further helped by the existence of inframarginal workers who may be already receiving the benefit. Those employees who value paid leave at more than \$0.10 per hour may have already negotiated that benefit. The new mandate thus does not affect them at all. Paying for this good through an employer mandate thus leads to expansion of the benefit without affecting those already receiving it. See *infra* Section III.C.

174. See Lester, *supra* note 4, at 59.

proportionately with hours worked. But most government benefits are either flat or based on other factors, such as need or cost. In that case, workers pay more taxes as their labor effort rises, but their benefit remains fixed, or even declines. Workers can dodge taxes or work less and still claim the benefit.

In other words, what distinguishes a successful benefit tax is not whether it is collected by employers or governments, but whether individuals view themselves as having to pay the tax to get the benefit. Income taxes typically cannot establish this link, because taxpayers believe that their small contribution to the fisc does not impact the overall level of services they receive. Their tax payments typically cannot be credibly tied to a specific set of benefits or policies.¹⁷⁵ Furthermore, the income tax plays a particular role in policy discourse, tending to revolve around overall revenue needs and broader distributional goals, rather than targeted program funding.¹⁷⁶ By contrast, an employer mandate (or other form of cross-subsidy, which we discuss further below) can be more tightly bound together with some other benefit; cable fees to support libraries will show up on the cable bill if a household wants cable, and workplace regulations must be borne to get paid for work.

2. Cross-Subsidies Across Large Pools Can Operate as Benefit Taxes

The discussion in this section thus far has focused on employer-mandated benefits. But that is just one category of cross-subsidy programs, though a particularly large one. It encompasses not just employer-provided health care but also family leave, worker's compensation insurance, unemployment insurance, minimum wages, and overtime requirements. It also includes programs that, though not required to be provided, do come with cross-subsidization rules when provided, such as ERISA non-discrimination requirements for pensions and retirement plans. It could even include softer forms of mandates, such as when public relations pressures or fairness norms drive employers to offer a new benefit to everyone in the absence of any legal rule—for example, Starbucks offering its employees online education programs through Arizona State University.¹⁷⁷

But the benefit taxation argument also extends to other forms of cross-subsidization.¹⁷⁸ For example, consider patent law. As noted above, patent law creates a

175. Brian Galle & Kirk J. Stark, *Beyond Bailouts: Federal Tools for Preventing State Budget Crises*, 87 IND. L.J. 599, 626–27 (2012) (discussing challenges in designing mechanisms for credible government spending commitments).

176. A counterexample is the payroll tax, which is tightly linked to Social Security and Medicare. See e.g., SOC. SEC. ADMIN., HOW YOU EARN CREDITS 1 (2018), <https://www.ssa.gov/pubs/EN-05-10072.pdf> [<https://perma.cc/6L24-B5LU>] (“You qualify for Social Security benefits . . . when you work in a job and pay Social Security taxes.”). But this financing system separate from the income tax was created precisely to achieve that linkage, which would not have been available if New Deal reformers had used the income tax. See MOLLY C. MICHELMORE, TAX AND SPEND: THE WELFARE STATE, TAX POLITICS, AND THE LIMITS OF AMERICAN LIBERALISM 39 (2012).

177. See Amanda Ripley, *The Upwardly Mobile Barista*, ATLANTIC MONTHLY (May 2015), <https://www.theatlantic.com/magazine/archive/2015/05/the-upwardly-mobile-barista/389513> [<https://perma.cc/3CJP-7B9D>].

178. See Smith, *supra* note 161, at 658 (applying a similar analysis to the cross-subsidies embedded in product warranties).

way to fund innovation by essentially charging early consumers of a good a near-monopoly price to generate excess returns for the inventor.¹⁷⁹ But by definition, any person paying that price for the good is likely to be receiving at least as much benefit, even at the monopoly price, or else they would not buy the good at all. The cross-subsidy for the inventor essentially comes out of the consumer surplus of the purchaser, but still leaves that purchaser better off than she was before purchasing. Contrast that with a traditional tax (for example, to fund innovation grants) that would fall on everyone, regardless of benefit from the good, leading to a net loss for some individuals.¹⁸⁰

This point leads to an additional complication that others, including Summers, have not considered in defending employer mandates and other forms of cross-subsidization. In particular, the argument above that cross-subsidies can be less distortionary than taxes depends in part on how universal or widespread the use of the good is. This is a point that we do not believe has appeared in the literature, but is an important one to consider in policy design.

Consider the patent case again. In the example above, we conceive of the patent as imposing a tax on the consumer to provide an additional transfer to inventors, and we contrast that to, say, an innovation grant program funded out of income tax revenues. But a tighter apples-to-apples comparison would actually be to a tax on only the *consumption* of the patented product. Suppose that instead of giving patents to Apple on various iPhone components, the government instead imposed a sales tax on iPhones, and distributed the proceeds to Apple. Leaving aside the optics problem, the two policies would be roughly the same. But we have now reintroduced the problem of differential consumption taxation discussed above. The Atkinson–Stiglitz argument would come back into play: wouldn't it be better to fund this public good (such as it is) with an income tax rather than a differential consumption tax? The answer is that it might be, but two points deserve more elaboration.

The first is just that the benefit taxation point is still relevant and can provide another counterpoint to the Atkinson–Stiglitz argument. In other words, the differential consumption tax is, as Summers said, not the full amount of the additional cost, but the difference between the cost and the benefit.¹⁸¹ If the benefit exceeds the additional cost, then there is not really a “tax,” and it is not clear that the Atkinson–Stiglitz argument even applies. For instance, if early adopters of iPhones earn huge consumer surpluses from purchase, they may not be deterred by the government's upcharge.

179. See *infra* Section II.B.

180. Monopolies can create deadweight loss, but it is of a different sort than taxes. The deadweight loss of monopolies derives from destroying some of the surplus that would exist from exchanges under perfect competition; the deadweight loss from taxation (in the simple setting we are discussing) derives from shifts away from labor, toward leisure. For an introduction to the economics of monopoly, see ROGER D. BLAIR & DAVID L. KASERMAN, *ANTITRUST ECONOMICS* (2d ed. 2009).

181. See *supra* notes 170–73 and accompanying text.

Second, this differential cost would not really be differential if the goods were universally consumed by consumers who are equally costly to serve. If everyone owned an iPhone, then imposing a tax on (or charging monopoly prices for) iPhones is really just a lump-sum tax on everyone, and it would not distort consumption or labor market decisions. More realistically, health care is a near-universal service, and thus building additional costs into the price of health-care services would not lead to substitution effects if everyone continued to consume health care.¹⁸² But this is less true of other goods with more limited consumption, such as parental leave and higher education.¹⁸³

In the case of parental leave, the benefit of the program is concentrated on current or future parents and others with dependents. In the Summers example, the assumption is that the generic employee has some positive marginal benefit from the program, but many—those without present or future children—will not perceive any subjective benefit at all. To them, the \$0.10 per hour cost is entirely a “tax.”¹⁸⁴ On the one hand, it may be that concentrating the cost of the program on those who actually use or anticipate using the program would render it closer to a true benefit tax (even if there are still cross-subsidies among differential users). On the other hand, charging everyone spreads the cost more widely, lowering the per-person cost.¹⁸⁵ Implementing this program through the employment system may be a good compromise between these two competing effects. The cost is imposed on a wider group than merely those who use the program, thus keeping per-person costs down, but limited to those who *could* use the program, thus charging those who get at least some insurance benefit even if they never actually take advantage of the program.

In the case of higher education, the United States has long followed a cost-sharing model, splitting the costs between the student and the state (and private donors).¹⁸⁶ This likely reflects some understanding of the large private benefits that accrue to the student and the large public externalities that come from having an educated population. But even if the average benefit from higher education more than offsets the average net tuition, there is substantial variability both among former students (especially non-graduates) and across a former student’s life cycle. The income-driven student loan programs, such as IBR and PAYE, provide for some cross-subsidization from more successful graduates to less

182. Summers has noted, “In the case of health insurance, a lump sum tax is the appropriate benefit tax.” Summers, *supra* note 19, at 181.

183. See Gruber, *Incidence*, *supra* note 41, at 626 (discussing parental leave).

184. Cf. Jolls, *Accommodation*, *supra* note 4, at 248, 257–60 (showing that mandates applicable to fewer than all workers can redistribute across workers); Donohue, *supra* note 74, at 903–05 (applying Jolls’s framework to the sex harassment context). Jolls and Donohue do not explore the argument that these transfers are, in effect, differentiated taxes or consider the implications of that fact in an Atkinson–Stiglitz framework.

185. Gruber, *Incidence*, *supra* note 41, at 626.

186. Brooks, *Income-Driven Repayment*, *supra* note 100, at 245.

successful, as well as from future selves to current selves.¹⁸⁷ One of us has argued that there should be even greater cross-subsidization, especially because the alternative would be to impose additional costs on those who have not had higher education.¹⁸⁸ But again, this would result in costs being spread less widely and would impose differential consumption taxes on some groups and not others.

These are complex tradeoffs, and there likely is no single right answer. But policymakers should understand the tradeoffs. Indeed, it may be that the complex basket of instruments that we use to fund higher education, for example, reflects these difficult tradeoffs and represents a sincere attempt to charge individuals something close to their individualized benefit.

C. REDUCING INEFFECTIVE PAYMENTS

We now will move on to the third general category of reasons cross-subsidies can be efficient. Our argument, which we think we are the first to suggest, is that cross-subsidies may be a way of more effectively targeting government subsidies and reducing wasteful payments.¹⁸⁹ In more technical terms, cross-subsidies may reduce payments to “inframarginal” consumers or producers. By trimming out useless payments, governments are freed to reduce tax burdens or redirect resources to more productive uses.

To show how cross-subsidies solve the problem of inframarginal payments, we first have to explain what that problem is. A “marginal” decision is one that is just on the knife’s edge of flipping from one choice to another: I am willing to pay up to \$200 for a new Android phone, and it is priced at \$199.99. We call consumers “inframarginal” when their decisions are not close to the margin: I would pay up to \$400 for a smart phone that is selling for \$199.99.

Government payments intended to change or facilitate consumer decisions are essentially wasted if the consumer is inframarginal.¹⁹⁰ By definition, the

187. The income-driven repayment programs, like IBR and PAYE, cap monthly payments at a percentage of income (usually ten percent of “discretionary income,” which is adjusted gross income minus 150 percent of the federal poverty line) and will cancel any outstanding debt after ten to twenty-five years, depending on the program. *See id.* at 251–255, 253 n.136 (describing these programs). As a result, borrowers with higher post-graduation income will partially cross-subsidize those with lower post-graduation income.

188. *See id.* at 269–71.

189. Summers hints at this argument when he notes that a tax to fund parental leave would cause employers with existing leave programs to simply drop their programs, thus leading to more overall distortion from the tax. Summers, *supra* note 19, at 181. However, he does not develop the point further.

190. Eriksson et al., *supra* note 55, at 478. We assume, contrary to Kaplow’s analytic approach, that the government does not enact a distributively off-setting tax on the class of individuals who are eligible to receive the subsidy. *See* KAPLOW, *supra* note 14, at 2, 13–34. In that setting, as Kaplow shows, it is optimal to ignore inframarginal actors, as net of the tax-only decisions on the margin matter. *Id.* at 213–15. Although we agree with this point, we focus on the more common setting in which offsets are not enacted.

There are some goods the government encourages, such as charity, for which there may be no fixed target quantity. In that case, it often will not make sense to describe consumers as inframarginal, because even a consumer who was already buying some of the good could be encouraged to buy even more. Our point still applies in this setting, however. The claim is that there are some consumers whose choice is relatively inelastic, and the goal of the cross-subsidy is to identify more elastic consumers. In the charity

inframarginal consumer was already willing and able to buy the good, so the government's payment does nothing except perhaps enrich that consumer.¹⁹¹ To be sure, in some cases enrichment is itself the goal, as in the case of discounted access to essential utilities for the poor. But if the goal is simply to encourage more consumption of the good, transfers to inframarginal consumers are wasteful.¹⁹²

Although the exact portion of government spending wasted on inframarginal consumers is not known and varies from program to program, there are reasons to believe that the dollar figures are large. Chetty and Finkelstein, for example, argue that the costs of underwriting inframarginal consumers may be so large in the health insurance context that no level of subsidy is justifiable.¹⁹³ As many as nine out of ten buyers who claimed federal credits for energy-efficient appliances would have bought such appliances even without the credit.¹⁹⁴

Cross-subsidies can sometimes improve on direct government support by better targeting subsidy dollars to those whose behavior is most likely to be changed by the subsidy.¹⁹⁵ That is, in some cases a pool may transfer money from inframarginal or inelastic consumers to marginal or elastic ones.¹⁹⁶ In that scenario, there is a net increase in consumption of the product. An example here might be student loan programs, which similarly pool high earners with likely dropouts. We might expect that those who later prove to be high earners are for the most part aware of the payoff they will earn from college and so are more likely to

context, for instance, a churchgoer who will tithe ten percent of her income regardless of whether her donation is tax-deductible is an inelastic giver.

191. Subsidies may not even enrich the recipients if producers of the good raise prices to capture the subsidy. *See, e.g.*, Steven C. Bourassa et al., *Mortgage Interest Deductions and Homeownership: An International Survey*, 21 J. REAL EST. LITERATURE 181, 197 (2013) (summarizing studies finding that though home mortgage interest deductions have a positive impact on ownership, capitalization "has an impact on house prices that offsets the tax benefit").

192. KOMIVES ET AL., *supra* note 53, at 13. This is true regardless of whether transfers are funded by taxes or cross-subsidies, assuming the cross-subsidy is a departure from the efficient market price. Eriksson et al., *supra* note 55, at 478.

193. Chetty & Finkelstein, *supra* note 3, at 120.

194. *See* SÉBASTIEN HOUDE & JOSEPH E. ALDY, RES. FOR THE FUTURE, BELT AND SUSPENDERS AND MORE: THE INCREMENTAL IMPACT OF ENERGY EFFICIENCY SUBSIDIES IN THE PRESENCE OF EXISTING POLICY INSTRUMENTS 3 (2014) <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-14-34.pdf> [<https://perma.cc/U7YM-92A7>].

195. *Cf.* Timothy Besley & Stephen Coate, *Public Provision of Private Goods and the Redistribution of Income*, 81 AM. ECON. REV. 979, 984 (1991) (suggesting that an advantage of in-kind provision of benefits could be that only those who could not afford to buy benefits on their own consume them).

196. *See* Rabin-Margalioth, *supra* note 4, at 146; *cf.* Scott Wallsten, *Reverse Auctions and Universal Telecommunications Service: Lessons from Global Experience*, 61 FED. COMM. L.J. 373, 379 (2009) (criticizing telecommunications policy that transfers funds from elastic to inelastic customers).

Our argument here is similar to a point originally made by Ronald Coase about the pricing of utilities. *See* R.H. Coase, *The Marginal Cost Controversy*, 13 ECONOMICA 169 (1946). Coase observed that utility customers might respond elastically on the intensive margin—the amount of water they use, for instance—but inelastically on the extensive margin decision of whether to connect to the water and sewer system at all. *See id.* at 178. He proposed that a connection fee would therefore be the equivalent of a lump-sum tax, and thus more efficient than an income tax as a source of funding for the fixed costs of the utility. *Id.*; *see also* Hausman, *supra* note 10, at 43 (applying this framework to subscriber line charges).

attend. In contrast, students who are at greatest risk of failing to complete school or of failing to earn decent salaries after graduating are marginal, in that some may be unlikely to attend college without encouragement and financial support. That is, if interest rates reflected individual risks, they could deter marginal students from even attending college, thus driving down overall levels of higher education. If there is a positive externality for society from every college graduate, student loan pools are an effective way to fund that goal: large subsidies for marginal consumers are financed, in part, through higher payments from inframarginal attendees. Free college, by contrast, would provide subsidies to both marginal and inframarginal students and would tax everyone more heavily to pay for it.

Another version of the targeting argument is that consumption by some members of the pool may be more socially valuable than others. There might be cases in which transferees, on average, create a larger positive externality for a given level of consumption than transferors, so that shifting money from one group to the other on net increases consumption of the desirable good. For instance, telecommunications law funds Internet access for schools and libraries through higher fees on other telecom services.¹⁹⁷ Arguably, the Internet adds more social value when used for research and education than for Netflix.¹⁹⁸ If higher fees allow for more educational opportunities at the cost of some households skipping *Game of Thrones*,¹⁹⁹ then this is a net social gain.²⁰⁰

A counterargument to both these points might be that, in many cases, targeting would be possible without the pool.²⁰¹ If we know that educational uses are more important than entertainment, why not just give schools grants? One answer is that pools can allow redistribution even when the government cannot observe which members are inframarginal.²⁰² Prior work in the economics of insurance markets has shown that the continued success of an insurance pool can offer indirect information about the preferences of some pool participants. Often, if there are some insureds who are higher cost but unobservably so *ex ante*, the insurance pool will suffer from adverse selection, and may even collapse into a “death spiral.”²⁰³ Death spirals can be avoided, however, if there are low-cost insureds who

197. Hausman, *supra* note 10, at 31 n.11.

198. *But see Stranger Things* (Netflix 2016). No, really, you should see it. *See supra* note 144 (noting that Galle is a dork).

199. *Game of Thrones* (HBO 2011).

200. *See* Cremer et al., *supra* note 21, at 15 (explaining redistribution, in the context of public education and health care, as a means to reduce social inequalities).

201. *See* Yew-Kwang Ng, *Quasi-Pareto Social Improvements*, 74 AM. ECON. REV. 1033, 1042 (1984) (noting that with sufficient information, government can arrange for direct transfers).

202. This is related to, but distinct from, the point that governments cannot always observe an individual's ability. *See infra* Section III.A.1. Cross-subsidies thus help the government overcome its inability to observe two different aspects of its citizens: their earning potential and their preferences for certain goods.

203. For discussion of the “death spiral” phenomenon, see generally David M. Cutler & Richard J. Zeckhauser, *Adverse Selection in Health Insurance*, in 1 FRONTIERS IN HEALTH POLICY RESEARCH (Alan M. Garber ed., 1998), <https://www.nber.org/chapters/c9822> [<https://perma.cc/4QVY-LYHM>]. Markets with greater observability or ready access to contract tools are much less prone to adverse selection. *See*

value insurance highly enough to be willing to pay the extra premiums that come with belonging to a pool of high-cost customers.²⁰⁴ In effect, some of the consumer surplus from those who are high demanders of insurance is transferred to the high-cost customer. The continued existence of the pool is thus evidence that high-demand customers exist and are underwriting their costlier neighbors.²⁰⁵

To see this, consider a worker, Achilles, who knows that he is likely to die relatively young, but no one else can observe that risk.²⁰⁶ Achilles therefore knows that if he participates in his employer's defined-benefit pension program, he is effectively subsidizing his colleague, Methuselah, who is expected to collect pension benefits for many years after retirement. If Achilles gives up salary to participate in the pension plan anyway, and we assume Achilles is a rational actor, we know that Achilles must place a relatively high value on income security during whatever (limited) retirement years he will enjoy. We cannot know until his untimely passing that Achilles was an inframarginal participant. But Achilles's participation in the pool lowers the total costs of the pool nonetheless. Without the pool, the government could not have known that it could pay Achilles less.²⁰⁷

Not all pools have this feature, but we think a fair number do. As we have just suggested, many insurance and retirement benefit systems fit the pattern. Class-action lawsuits arguably do, too: if the best plaintiffs remain in the class, instead of opting out, that suggests that they value the benefits of aggregate resolution at

Peter Siegelman, *Adverse Selection in Insurance Markets: An Exaggerated Threat*, 113 YALE L.J. 1223, 1249, 1278 (2004). Insurers can use contract terms, such as copays and deductibles, to screen out high-cost customers. See generally Keith J. Crocker & Arthur Snow, *Multidimensional Screening in Insurance Markets with Adverse Selection*, 78 J. RISK & INS. 287 (2011) (explaining how insurers' use of contractual bundling of different levels of risks with different levels of coverage efficiently screens insurance applicants, thereby reducing the externality cost of adverse selection). Another route is cost control. If average costs per insured of a plan are always lower than consumer demand, there is no selection effect. Chetty & Finkelstein, *supra* note 3, at 118. This is thought to be difficult to achieve.

204. Alma Cohen & Peter Siegelman, *Testing for Adverse Selection in Insurance Markets*, 77 J. RISK & INS. 39, 67–68 (2010). For a survey of the empirical evidence, see Chetty & Finkelstein, *supra* note 3, at 124–25. Chetty and Finkelstein argue that this “advantageous selection” leads to over-insurance of low-demand individuals. *Id.* at 125–26. Our argument is that “over-insurance” is potentially efficient in cases where the lower demander is higher risk.

205. This assumes that the quality of the underlying product is held constant. Smith, *supra* note 161, at 666–68. Another possible explanation for continued pool viability is if the low-risk members will eventually become high-risk and the pool administrator can credibly promise to continue cross-subsidies in that future state. See Tom Baker, *Containing the Promise of Insurance: Adverse Selection and Risk Classification*, 9 CONN. INS. L.J. 371, 381–82 (2003) (examining methods such as level premium life and disability insurance policies that keep low risks in the pool); see also Cutler & Zeckhauser, *supra* note 203, at 9–10 (noting this possibility).

Alan Krueger argues that pool administrators may also hold private information that could be valuable in targeting benefits. Krueger, *supra* note 10, at 6–9, 9 n.5. We think in many cases this information would also be available if the government funded the program through general revenues and simply hired the pool administrator, but perhaps there are certain kinds of information, such as confidential employee performance evaluations, where operating the pool together with some other function produces economies of scope.

206. See generally HOMER, THE ILIAD bk. 1 (Peter Green trans., Univ. of Cal. Press 2015) (800 B.C.E.); see Edward A. Zelinsky, *The Defined Contribution Paradigm*, 114 YALE L.J. 451, 463 (2004).

207. See Finkelstein et al., *supra* note 3, at 48 (modeling how pool administrators can use contract design to elicit risk preferences).

more than the value transferred to their fellow litigants. And these plaintiffs are most likely to be inframarginal, as by definition they would have had the best chance to succeed on their own. Utilities (and here we include the post office) that charge similar rates per unit consumed to all users are another potential example. The fixed costs of the system's infrastructure are, for the most part, borne by the heaviest users,²⁰⁸ who presumably are the most likely to belong to the network regardless of subsidy and who will remain in the network despite the disproportionate charges they bear.²⁰⁹

Thus far, we have discussed pools that can efficiently route money from inframarginal users to more marginal users through cross-subsidies. On the other hand, some pools may route money in the opposite direction, subsidizing inframarginal users at the expense of the marginal. Net neutrality rules may have something of this flavor. Net neutrality prohibits Internet providers from, among other things, charging heavy-usage customers higher rates.²¹⁰ Although the ultimate impact of the rule depends on several technological and other details, in some settings it has the effect of subsidizing the heavy-usage customers at the expense of others.²¹¹ Even assuming that there are sound policy reasons for encouraging Internet access—network externalities, for instance—this would be a silly way to do it.²¹² The heavy users presumably would demand Internet even without subsidies, whereas the burden of the cross-subsidy reduces the demand for Internet among those casual users who are most likely to be deterred by the higher cost.

Finally, even some pools that do not redistribute between inframarginal and marginal consumers in either direction might be questionable policy choices. As we discussed in section I.B, cross-subsidies imposed on goods with positive externalities diminish production of the externality by the transferors. This distortion could wipe out any gains from transferees' new externality production. When transferors are mostly inframarginal or otherwise inelastic consumers, this problem is diminished: the higher cost does not reduce the transferors' consumption, preserving its spillover benefits.²¹³ But if there is no correlation between

208. See Daniel A. Lyons, *Internet Policy's Next Frontier: Usage-Based Broadband Pricing*, 66 FED. COMM. L.J. 1, 6–7 (2013) (noting the mobile phone industry uses usage-based pricing, which can shift network costs onto the heaviest users); David L. Kaserman & John W. Mayo, *Cross-Subsidies in Telecommunications: Roadblocks on the Road to More Intelligent Telephone Pricing*, 11 YALE J. ON REG. 119, 132 (1994).

209. Kahn, *supra* note 76, at 144–45.

210. Rebecca Curwin, Note, *Unlimited Data, but a Limited Net: How Zero-Rated Partnerships Between Mobile Service Providers and Music-Streaming Apps Violate Net Neutrality*, 17 COLUM. SCI. & TECH. L. REV. 204, 209–10 (2015).

211. Christopher S. Yoo, *Network Neutrality and the Economics of Congestion*, 94 GEO. L.J. 1847, 1853–54 (2006) (noting that net neutrality “allows high-volume users to impose costs on low-volume users, in effect requiring the latter to subsidize the former”); see also Christopher S. Yoo, *Network Neutrality, Consumers, and Innovation*, 2008 U. CHI. LEGAL F. 179, 203.

212. We do not mean to say that net neutrality lacks other virtues, only that it is not a sensible financing mechanism for network externalities.

213. See Shaviro, *supra* note 55, at 422.

inelastic demand and being a transferor—if transferors can be marginal or infra-marginal alike—this problem remains.

D. HIDDEN AND OFF-BUDGET TAXES

A final set of situations where cross-subsidies may be an improvement over the traditional income tax is where any tax embedded in the cross-subsidy is somewhat hidden. We see two main analytical subcategories here. First, the cross-subsidy could be hidden in a private or micro sense: the cross-subsidy may simply be less salient to an individual and therefore less likely to lead to behavioral distortions. Second, the cross-subsidy could be hidden in a public or macro sense: using an off-budget and non-tax instrument might overcome some of the economic, political, and procedural barriers faced by tax instruments.

1. Hidden Taxes and Salience

In section III.B, we discussed how cross-subsidy mechanisms can be designed to approximate benefit taxes and therefore can avoid some of the worst distortionary effects of taxation. But even if the cross-subsidy is in effect an income tax, or close to it, it may still be less distortionary if it is less salient to the individual. If an individual does not consider the cross-subsidy in the same way that she considers an income tax when making labor market decisions, then the cross-subsidy would cause less behavioral distortion.

For example, consider the income-based subsidies for the ACA or the income-driven student loan payments under IBR and PAYE.²¹⁴ Because these subsidies are income-based, they can potentially create the same sort of incentives as an income tax. Just as an individual might try to mimic a low-income person to avoid paying income tax (for example, by working less, substituting for non-taxed forms of compensation, or simply hiding income), so might a person do the same to lower their out-of-pocket health insurance premium or student loan payment.²¹⁵ But there is some reason to think that individuals would treat the programs at least somewhat differently even if they offered income-based payments that exactly mimicked an individual's income tax payments.²¹⁶

First, the timing of payments could affect payors' behavioral responses. The ACA and student loan programs are based in most cases on the prior year's income. The separation in time between earning the income and calculating the

214. See *supra* note 187 and accompanying text.

215. The ACA and IBR and PAYE programs are not exactly equivalent to income taxes. In particular, they are much less progressive, especially at the higher end. Unless someone has relatively low income already (less than 400 percent of the poverty line for the ACA, see I.R.C. § 36B, or a "partial financial hardship" under IBR or PAYE, in which the standard loan service payment exceeds ten percent of the difference between the borrower's adjusted gross income and 150 percent of the relevant poverty level, see 34 C.F.R. § 685.209(a)(5)), then appearing to have lower income will not affect their premium or loan payments.

216. For empirical support, see generally Keith Marzilli Ericson & Judd B. Kessler, *The Articulation of Government Policy: Health Insurance Mandates Versus Taxes*, 124 J. ECON. BEHAV. & ORG. 43, 43–45 (2016) (reporting survey evidence that individuals were more likely to comply with a "mandate" to buy insurance than with a penalty tax for failing to purchase).

income-based payment could lead to some discounting of the effects: earners would have to anticipate the impact of next year's student loan payment on their current year's incentives to work.²¹⁷ By contrast, income taxes are withheld from paychecks or perhaps paid quarterly through estimated taxes or business filings.²¹⁸ Similarly, cross-subsidization payments that are infrequent or irregular should have less of an effect on life-cycle driven choices about career and income paths. Subsidized student loan payments are nice, but taking a lower-paying job just to reduce loan payments will often be counter-productive when the loan payments are only for a fixed number of years.

Second, the form in which these cross-subsidies appear could make them less salient to individuals, and thus less likely to alter behavior. For example, the cost of the cross-subsidy could appear as a lower quality or level of service.²¹⁹ Spending that could make Internet speed faster or college classes smaller instead goes to subsidize rural Internet access and financial aid, respectively. These opportunity costs could potentially be less salient to payors than explicit fees added to an Internet or tuition bill.

Furthermore, even if the cross-subsidy is baked into the price, there is some evidence that consumers respond differently, and sometimes more powerfully, to a tax or fee than to a mere price increase. This could be because the public debate and media coverage of a tax increase is greater than for a price increase, making it more salient for individuals.²²⁰ Alternatively, a tax increase could be more persistent than volatile market price movements and thus be more likely to affect long-term decisions. Finally, for some, there is a negative valence and rhetoric around taxes that does not attach to other policy instruments. In these and similar cases, hiding what is, in effect, a redistributive tax into the price of a good may be more efficient than taxing.

That said, in some situations, the presentation of the cross-subsidy could actually be more salient. Income taxes are thought to affect behavior because of their effects on consumption. If the subsidy (or extra payment) for a good just appears in an annual tax bill, it could have some effect on consumption of that good. But when the subsidy (or extra payment) is baked right into the price of the good, it is likely to be much starker. For example, Raj Chetty, Adam Looney, and Kory Kroft have shown that consumers are more responsive to sales taxes

217. There is evidence that individuals engage in "hyperbolic discounting"—applying a high and increasing discount rate to future events, beyond what a simple "rational" discounting theory would predict. See, e.g., Shane Frederick et al., *Time Discounting and Time Preference: A Critical Review*, 40 J. ECON. LIT. 351, 360 (2002). Other findings suggest that taxpayers fail to properly discount future tax changes. See Sebastien Bradley, *Inattention to Deferred Increases in Tax Bases: How Michigan Home Buyers Are Paying for Assessment Limits*, 99 REV. ECON. & STATS. 53, 53–54 (2017).

218. Of course these timing differences are not inherent to the instruments. Premiums and loan payments could instead adjust weekly based on income, just like tax withholding. But our point is that these sorts of design choices have first-order effects, and that cross-subsidies often provide the additional flexibility to more easily incorporate efficient design choices.

219. Smith, *supra* note 161, at 649.

220. See Shanjun Li et al., *Gasoline Taxes and Consumer Behavior*, 6 AM. ECON. J.: ECON. POL'Y 302, 316 (2014) (describing evidence for this effect).

displayed on the shelves than sales taxes computed at the register.²²¹ Although this type of salience may not affect labor market decisions, it is likely to affect consumption decisions.

To summarize, if a cross-subsidy comes across as less salient to an individual than an equivalent tax, it will be a more efficient funding mechanism, all else equal. But whether that is the case is ultimately an empirical question. The importance of salience in evaluating tax policy is now well-understood, and salience is a frequent topic of empirical study.²²² That work should also be brought to bear on cross-subsidization regimes.

2. Off-Budget and Non-Tax Instruments

Financing policies through cross-subsidies rather than through taxes may also affect the likelihood that the policy will be enacted and sustained over time. Budgeting systems play several key roles in the political economy of most governments. Budgets can serve as a visible means of public accountability for officials, revealing their priorities and obliging them to impose taxes sufficient to pay for their policy choices.²²³ Budget systems also tend to create “vetogates” or choke points where a small number of officials can block legislative action.²²⁴ Cross-subsidies potentially sidestep all these limits.²²⁵

The public accountability function of budgets plays a central role in other legal debates. In each of these contexts, courts or scholars argue that the need to raise tax revenues to pay for government acts as an important check on government actors, forcing the government to take some account of the cost of its decisions.²²⁶ Sometimes, though, we might want to make government action easier, such as

221. See generally Raj Chetty et al., *Salience and Taxation: Theory and Evidence*, 99 AM. ECON. REV. 1145 (2009).

222. See, e.g., *id.*; Amy Finkelstein, *E-ZTax: Tax Salience and Tax Rates*, 124 Q.J. ECON. 969 (2009). See generally David Gamage & Darien Shanske, *Three Essays on Tax Salience: Market Salience and Political Salience*, 65 TAX L. REV. 19 (2011) (providing a survey of these studies).

223. JAMES J. GOSLING, BUDGETARY POLITICS IN AMERICAN GOVERNMENTS 117 (5th ed. 2009); JOHN W. KINGDON, AGENDAS, ALTERNATIVES, AND PUBLIC POLICIES 106–08 (2d ed. 2003); Elizabeth Garrett, *Accountability and Restraint: The Federal Budget Process and the Line Item Veto Act*, 20 CARDOZO L. REV. 871, 925–26 (1999) (noting organized groups follow budget process closely “and will hold representatives accountable if they fail to enact federal programs that benefit them”); Posner, *supra* note 2, at 43–44.

224. For development of the “vetogate” concept, see GEORGE TSEBELIS, VETO PLAYERS: HOW POLITICAL INSTITUTIONS WORK 17–64 (2002), and for a shorter overview of both vetogates and veto players, see Mark Hallerberg, *Empirical Applications of Veto Player Analysis and Institutional Effectiveness*, in REFORM PROCESSES AND POLICY CHANGE: VETO PLAYERS AND DECISION-MAKING IN MODERN DEMOCRACIES 21, 21–29 (Thomas König et al. eds., 2010).

225. See Gruber, *supra* note 25, at 663 (noting that insurance mandates are “politically appealing” in “era of tight fiscal budget constraints”).

226. See Printz v. United States, 512 U.S. 898, 930 (1997); Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569, 620–22 (1984); Robert C. Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L.J. 385, 420 (1977); D. Bruce La Pierre, *Political Accountability in the National Political Process—the Alternative to Judicial Review of Federalism Issues*, 80 NW. U. L. REV. 577, 644–46 (1985); see also PETER H. SCHUCK, SUING GOVERNMENT: CITIZEN REMEDIES FOR OFFICIAL WRONGS 55–81 (1983) (describing relationship between fiscal exposure and government accountability).

when a cohesive lobbying group is likely to block legislation that is good for the public at large. In those cases, allowing regulators to move items “off budget” might be the better choice.²²⁷ There are, however, serious empirical questions about whether budgets really play the key role in limiting or easing government action that these debates assume.²²⁸

We are more confident in the role budget rules play in creating “vetogates” and other obstacles to legislative action. Inertia is a potent political force, particularly when those with power to block progress hold divergent views.²²⁹ Policies that require continual legislative renewal are unlikely to survive in the long term, and those that must run a gauntlet of vetogates are unlikely to come into existence in the first place.²³⁰ The congressional budgeting process offers useful examples. Some federal programs are structured as “entitlements” and are automatically funded, whereas others must be affirmatively provided with funding each year in an annual appropriations bill.²³¹ Appropriations bills historically have had to first pass through a small subject-matter committee before coming to the floor for a vote.²³² Entitlements, not surprisingly, are far more likely to maintain their funding over time than programs subject to annual appropriations.²³³ Furthermore, in the Senate, legislation that lacks any budget effect, or that results in a net addition to the federal deficit of more than \$5 billion, requires sixty votes rather than fifty.²³⁴ Large programs requiring massive annual on-budget expenditures are therefore prone to “raids” because, by cutting them, a new proposal can create savings to offset new expenditures.²³⁵ Off-budget programs take more votes to enact, but are not subject to raids and are more difficult to repeal.

227. See John R. Brooks, *Quasi-Public Spending*, 104 GEO. L.J. 1057, 1084–88 (2016); Brian Galle, *Federal Grants, State Decisions*, 88 B.U. L. REV. 875, 922 n.216 (2008); see also Kaplow, *supra* note 69, at 529–31 (suggesting that requiring the government to pay compensation when it regulates can result in overproduction of negative externalities by private parties).

228. See Galle, *supra* note 227, at 921–30; Daryl J. Levinson, *Making Government Pay: Markets, Politics, and the Allocation of Constitutional Costs*, 67 U. CHI. L. REV. 345, 355–57 (2000); John Rappaport, *How Private Insurers Regulate Public Police*, 130 HARV. L. REV. 1539, 1593–95 (2017); Joanna C. Schwartz, *How Governments Pay: Lawsuits, Budgets, and Police Reform*, 63 UCLA L. REV. 1144, 1151–56 (2016); cf. Lee Anne Fennell & Richard H. McAdams, *The Distributive Deficit in Law and Economics*, 100 MINN. L. REV. 1051, 1121–23 (2016) (observing that claims about relative political salience of different forms of redistributive transfers assume a baseline of transparency that may not exist); Hallerberg, *supra* note 224, at 38 (predicting that government officials do not fully internalize budget effects of their decisions).

229. See TSEBELIS, *supra* note 224, at 165.

230. See generally William N. Eskridge Jr., *Vetogates and American Public Law*, 31 J.L. ECON. & ORG. 756 (2012) (offering overview of vetogates and exploring their ramifications for the legislative process).

231. See George K. Yin, *Temporary-Effect Legislation, Political Accountability, and Fiscal Restraint*, 84 N.Y.U. L. REV. 174, 183 (2009).

232. Elizabeth Garrett, *The Congressional Budget Process: Strengthening the Party-in-Government*, 100 COLUM. L. REV. 702, 721 (2000).

233. See GOSLING, *supra* note 223, at 145.

234. Yin, *supra* note 231, at 215–16, 224; see also Garrett, *supra* note 232, at 719–20 (discussing the “reconciliation” process in which some bills do not need to pass sixty-vote threshold).

235. See Cheryl D. Block, *Pathologies at the Intersection of the Budget and Tax Legislative Processes*, 43 B.C. L. REV. 863, 878 (2002) (describing revenue offset process).

Placing programs off budget, then, can serve as an important tool to commit the government in the future, although this move can also be spun as a negative. It is exceptionally important, but exceptionally difficult, for legislatures to commit themselves.²³⁶ Because off-budget programs are effectively entitlements, are not subject to raids, and require sixty votes for repeal, they are far more likely to survive future political opposition than programs that are on-budget. Off-budget programs may be a rare tool Congress has for making credible promises.²³⁷ On the other hand, this durability has potential downsides, such as greater error costs.²³⁸

Off-budget financing also allows the government to pay for public goods even when there are some strictures on traditional tax instruments. The notion here is that traditional taxes and public spending may be held below their social optimum because of constraints on government action, and non-tax instruments can help to fill the gap.²³⁹ Two primary examples illustrate this principle. First, governments may feel constrained by the economics of interjurisdictional competition to keep their taxes and spending lower than they or their citizens would prefer. This will be especially true at the state level in the United States but can also apply at the federal level. Second, there may be formal (at the state level) and informal (at the federal level) budget constraints on governments that limit their ability to use on-budget forms of financing.²⁴⁰

Regarding competition, the typical view in the literature is that fiscal competition between states will exert downward pressure on tax rates.²⁴¹ At the state level, mobility of individuals and businesses may make it tempting for a state to try to attract high-income individuals and businesses with lower tax rates.²⁴² At the national level, the mobility of capital, especially financial and intellectual capital, exerts a similar pressure on corporate tax rates.²⁴³ Overall levels of

236. Rebecca M. Kysar, *Lasting Legislation*, 159 U. PA. L. REV. 1007, 1023–24, 1063–64 (2011).

237. *But cf.* Yin, *supra* note 231, at 233 (arguing that automatically-expiring legislation may be more predictable during its lifespan because opponents will likely wait until expiration to oppose). Because the alternative we consider here is annual appropriations, not automatic expiration, Yin's argument does not have much force in our context.

Our analysis in this section assumes that the cross-subsidy is enacted by Congress, but cross-subsidies may also arise through regulatory action. *See* Posner, *supra* note 2, at 47. We reserve discussion of the administrative law implications of this phenomenon for later work.

238. Jacob E. Gersen, *Temporary Legislation*, 74 U. CHI. L. REV. 247, 267–72 (2007). *But see* Kysar, *supra* note 236, at 1041–56 (calling into question the purported benefits of sunset provisions and discussing disadvantages of temporary legislation relative to lasting legislation).

239. Brooks, *supra* note 227, at 1084–86.

240. *Cf.* Theodore J. Stumm & Aman Khan, *Effects of Utility Enterprise Fund Subsidization on Municipal Taxes and Expenditures*, 28 ST. & LOC. GOV'T REV. 103, 112 (1996) (observing that local utility revenues can allow municipal governments to spend in excess of property-tax limits imposed by state).

241. *See, e.g.*, John R. Brooks II, *Fiscal Federalism as Risk-Sharing: The Insurance Role of Redistributive Taxation*, 68 TAX L. REV. 89, 111–20 (2014).

242. *See id.* (reviewing theory and evidence on state-level redistributions).

243. For discussion of the international competition for the corporate tax base, including competition over the legal definition of “competition,” see Lilian V. Faulhaber, *The Trouble with Tax Competition: From Practice to Theory*, 71 TAX L. REV. (forthcoming 2018).

taxation and public spending may then end up being lower than a worldwide social planner would choose. If cross-subsidies are more hidden and less salient to individuals and businesses, then they may help to close the gap between the actual and optimal levels of taxation and public spending.²⁴⁴ This is, in part, an expansion of the salience point in the prior subsection,²⁴⁵ but it considers the effects of salience on shifting of income between jurisdictions, as opposed to the overall level of income.

It is an open question whether and how much competition has these effects, however. Some states do not seem all that constrained in their ability to increase traditional taxes. Moreover, other fiscal federalism forces may push the other way. For example, states may in some situations *over-tax* relative to the optimum, because many of the negative effects of taxation fall on individuals and businesses outside of a given state. But these sorts of vertical fiscal externalities may, in turn, cause *federal* tax rates to be too low, because that is where many of these externalities fall.²⁴⁶ If a state has “too high” of a state corporate tax rate, because it does not pay the full price for the effects of that tax, then the federal corporate tax rate may have to compensate to avoid, for example, driving a corporation overseas.²⁴⁷ If the federal government is so constrained, again, more hidden forms of taxation may help to close the gap.

E. PRACTICAL CONSIDERATIONS

In addition to the factors we have discussed so far, policymakers will also want to take into account other considerations that affect whether policies succeed or fail. As we emphasized earlier, we see the cross-subsidy question as mostly an issue of financing. A cross-subsidy can usually be integrated with any combination of other design features. For instance, if legislatures want to pay for innovation through cross-subsidies but prefer to deliver those subsidies before a product comes to market, they can provide innovators with up-front government grants, financed through an excise fee (equivalent in cost to a patent monopolist's markup) collected during the first twenty years a product is on the market. In this subsection, however, we highlight three design features that may be inherent to cross-subsidies, such that if policymakers dislike these features, they might have to choose taxpayer financing instead. In particular, in designing cross-subsidy pools, policymakers need to consider issues of progressivity, incentives, and the features of the pool itself.

244. See Brian Galle, *Hidden Taxes*, 87 WASH. U. L. REV. 59, 105–07 (2009) (making this argument about low-salience taxes at the state level).

245. See *supra* Section III.D.1.

246. See Robin Boadway et al., *The Consequences of Overlapping Tax Bases for Redistribution and Public Spending in a Federation*, 68 J. PUB. ECON. 453, 454 (1998); Roger H. Gordon & Julie Berry Cullen, *Income Redistribution in a Federal System of Governments*, 96 J. PUB. ECON. 1100, 1103, 1108 (2012).

247. Cf. David Gamage & Darien Shanske, *Tax Cannibalization and Fiscal Federalism in the United States*, 111 NW. U. L. REV. 295, 307–08 (2017).

1. Progressivity

Our defense of cross-subsidies has centered on the possibility that they may distribute on a basis other than income, but transfers within a pool may also result in transfers from rich to poor or vice-versa. Some of these transfers may be desirable. Individuals with disabilities are typically poorer in our society, so antidiscrimination rules that protect those with disabilities also tend to increase the overall progressivity of government transfers.²⁴⁸

In some cases, cross-subsidies might favor the poor but to a lesser degree than the general tax system does.²⁴⁹ In those instances, relying on cross-subsidies reduces progressivity, compared to the alternative of tax financing.²⁵⁰ Some commentators criticize the ACA on this basis, pointing out that the cross-subsidies younger men provide usually do not increase much with income, so that blue-collar workers bear a heavier proportionate burden than their white-collar supervisors.²⁵¹ Because men tend to outearn women, there is still some progressivity in these transfers,²⁵² but relying on general tax revenues would be *more* progressive.

Louis Kaplow has argued that these progressivity side-effects should not be a reason to either enact or oppose non-tax policies.²⁵³ Instead, he suggests that unwanted regressivity can be corrected, and desirable progressivity achieved, through the income tax.²⁵⁴ For instance, if cross-subsidies leave one class of individuals richer on average, tax rates could be raised for that group. If that is unrealistic, he says, we should evaluate policies with progressivity implications in two steps: first, is it good policy, and second, would we want to enact a tax reform with these progressivity features?²⁵⁵ In our eyes, he does not take a clear position on what policymakers should do if their answers to these two questions conflict.

Our view is that progressivity can at least be a reason to support a cross-subsidy. As we have shown, cross-subsidies sometimes achieve wealth redistribution more efficiently than the income tax, such as when being in the pool is a “tag” for ability or when cross-subsidization enables governments to undertake

248. See MATTHEW W. BRAULT, U.S. CENSUS BUREAU, CURRENT POPULATION REPORTS, AMERICANS WITH DISABILITIES: 2010, at 11–12 (2012).

249. See Gruber, *Incidence*, *supra* note 41, at 640 (noting that improving maternity health benefit subsidies can result in “large welfare losses”); Kaserman & Mayo, *supra* note 208, at 139 (explaining under the current system of cross-subsidization, that there is “no means of assuring that either the payers or payees of the subsidies are the desired or deserving groups”).

250. KOMIVES ET AL., *supra* note 53, at 19, 132–133; Rabin-Margalioth, *supra* note 4, at 146–47.

251. See, e.g., John Goodman, *Six Problems with the ACA that Aren't Going Away*, HEALTH AFFAIRS BLOG (June 25, 2015), <http://healthaffairs.org/blog/2015/06/25/six-problems-with-the-aca-that-arent-going-away> [<https://perma.cc/9KAQ-4LXE>].

252. *Highlights of Women's Earnings in 2015*, U.S. DEP'T OF LABOR: BUREAU OF LABOR STATISTICS (Nov. 2016), <https://www.bls.gov/opub/reports/womens-earnings/2015/home.htm> [<https://perma.cc/J5VT-TQYE>].

253. KAPLOW, *supra* note 14, at 16–19 & 17 n.7.

254. *Id.* at 20–21.

255. *Id.* at 29–32; see also Cremer et al., *supra* note 21, at 22–23 (modeling comparison of distributive effects of cross-subsidy versus direct cash subsidy).

or commit to more redistribution than they could using an income tax alone. We also think that unwanted regressivity (or excessive progressivity, conceivably) could sometimes be reason to oppose a cross-subsidy proposal. If no correcting tax reform will or could realistically be bundled together with the cross-subsidy, society must be willing to accept that the cross-subsidy's distributive consequences are a price to be paid for other goals.

2. Polluter Pays

Cross-subsidies also have implications for the government's choice of how to design incentives, such as the decision whether to reward or punish. Although commentators usually favor punishment,²⁵⁶ Dari-Mattiacci and De Geest have argued for "carrots" rather than "sticks" in some situations.²⁵⁷ They rely on much the same arguments we describe in section II.A. If society uses carrots to change behavior, the cost of the carrot will typically be borne by all taxpayers, whereas a stick burdens just the bad actor.²⁵⁸ In essence, Dari-Mattiacci and De Geest argue that the costs of government incentives should be financed through the income tax, rather than by transfers among a pool of individuals who might both cause and be harmed by each other's acts.

Although their account is in many ways persuasive, we would further highlight the possible role of moral hazard. Beginning, at least, with Ronald Coase, most commentators have argued that actors who create harms for others should be penalized, rather than being paid to stop.²⁵⁹ Just as insurance may induce those with coverage to take on excess risk, paying the polluter gives others the perverse incentive to begin polluting so that they too can be paid.²⁶⁰ Even where this dynamic is not present, sticks encourage externality producers to anticipate future regulation.²⁶¹ Thus, governments should prefer cross-subsidy financing where that choice tends to leave wrongdoers responsible for paying the bill.

That said, intermediate options may be better than either pure sticks (cross-subsidies) or pure carrots (tax financing).²⁶² Most insurance contracts aim to strike an optimal balance between the risk-spreading benefits of coverage and the moral hazard detriments.²⁶³ Usually, drafters accomplish this goal by requiring

256. Maureen L. Cropper & Wallace E. Oates, *Environmental Economics: A Survey*, 30 J. ECON. LIT. 675, 686 (1992); Cameron Hepburn, *Regulation by Prices, Quantities, or Both: A Review of Instrument Choice*, 22 OXFORD REV. ECON. POL'Y 226, 228–29 (2006).

257. Gerrit De Geest & Giuseppe Dari-Mattiacci, *The Rise of Carrots and the Decline of Sticks*, 80 U. CHI. L. REV. 341, 367–69, 372–73 (2013).

258. *Id.* at 366.

259. *See, e.g.*, Jonathan Baert Wiener, *Global Environmental Regulation: Instrument Choice in Legal Context*, 108 YALE L.J. 677, 726–27 (1999).

260. *Id.*

261. Kaplow, *supra* note 69, at 527–30.

262. *Cf.* CALABRESI, *supra* note 59, at 64–67 (arguing for a balance between risk-spreading and accident prevention).

263. David M. Cutler & Richard J. Zeckhauser, *The Anatomy of Health Insurance*, in 1A HANDBOOK OF HEALTH ECONOMICS 563, 586–97 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000); Mark V. Pauly, *Taxation, Health Insurance, and Market Failure in the Medical Economy*, 24 J. ECON. LIT. 629, 640 (1986).

the insured to bear some of the costs, while the insurer picks up the “tail risk,” the risk of disastrous losses. Copays and deductibles are common examples.²⁶⁴ Similarly, an optimal government financing mechanism might rely partly on cross-subsidies and partly on tax revenue.²⁶⁵ For instance, takings law usually grants either full or zero compensation to condemned properties.²⁶⁶ An arguably better outcome, at least in the case of property taken to prevent negative externalities, would be to provide partial compensation (assuming that parties cannot themselves spread the risk of takings through private arrangements).²⁶⁷ This would mitigate the property owner’s downside risk while also still maintaining owners’ incentives to cure spillovers before they happen, thereby preventing the need for the taking.²⁶⁸

3. The Scope of the Pool

A final point, perhaps obvious but still important, is that cross-subsidies by their nature typically operate only within pools. Payors who lack resources or who are too willing to flee the pool if asked to cross-subsidize others cannot be used as a base of support.²⁶⁹ In addition, that benefits are delivered through a pool often means that beneficiaries have limited choices. Unless the benefit is readily marketable, the transferee of a cross-subsidy must be willing to accept the pooled good to collect any transfer.

Most recipients would likely prefer to receive cash transfers,²⁷⁰ but there can be solid economic reasons for delivering benefits in kind rather than in cash. In addition to the optimal-tax reasons we described earlier, policymakers may want to target resources to goods that produce externalities, paternalistically believe that beneficiaries underconsume some goods, or conclude in-kind transfers reduce fraud.²⁷¹ In-kind provision also may be necessary for goods that could not readily be purchased, such as insurance products subject to serious moral hazard problems.²⁷² Failing any of these arguments, though, paying through a pool may generate extra deadweight loss to the extent that recipients value the pooled good less than they would some other use of the same funds.

Pools may also fail to reach some beneficiaries. Subsidized water and power are only useful to households that can connect to the pipes or wires.²⁷³ Rules

264. See Baker, *supra* note 205, at 374.

265. See *supra* notes 216–21 and accompanying text.

266. See Thomas W. Merrill, *Incomplete Compensation for Takings*, 11 N.Y.U. ENV'T L.J. 110, 116–17, 123 (2002).

267. See *id.* at 131–33. As we mentioned earlier, in the presence of private risk spreading, government efforts to spread risk are unnecessary and usually inefficient. See Kaplow, *supra* note 69, at 541, 583–84.

268. Kaplow, *supra* note 69, at 583.

269. KOMIVES ET AL., *supra* note 53, at 16–17.

270. See Currie & Gahvari, *supra* note 136, at 338.

271. See *id.* at 338–47, 369–73; KAPLOW, *supra* note 14, at 175–78.

272. See Currie & Gahvari, *supra* note 136, at 372 (noting that government may have to provide goods subject to market failure).

273. KOMIVES ET AL., *supra* note 53, at 74–77.

requiring builders to make twenty percent of new units affordable will provide, at best, indirect support to tenants already residing in affordable but low-quality housing.²⁷⁴ To be sure, many transfers also produce externalities. Network effects, for instance, make telecommunications networks more useful as more enroll (to a point).²⁷⁵ Our point is only that cross-subsidies can often only spur these externalities by reaching individuals within the pool, and this group may be fewer than all the people who might benefit from a tax-funded project.

IV. EXAMPLES

We now illustrate our analysis through a series of brief case studies. In all of these examples, we take the underlying distributive choice as given. That is, we accept for the sake of argument that society wants to transfer resources to women, the injured, or inventors. Our limited question is whether this transfer should be effected through taxes and transfers or instead through cross-subsidies.

A. THE AFFORDABLE CARE ACT

In light of our analysis, we now would argue that key portions of the ACA are not only politically pragmatic, but also likely efficient. In particular, the ACA's drafters probably correctly chose to finance better care for women and the sick through "guaranteed issue" and "community rating" rules rather than via a general income tax.²⁷⁶ Although there remain some empirical uncertainties, critics of the ACA should engage more carefully with its potentially pro-efficiency choices.

First, the ACA combines benefit taxation and targeting of inframarginal purchasers in a way that tends to minimize the distortionary impact of its cross-subsidies. Individuals who obtain a large consumer surplus from actuarially fairly priced health insurance should still view its purchase as a bargain, even at a

274. In addition, although cross-subsidies may improve payees' welfare, they may also increase the cash outlay necessary to enter the pool. Craswell, *supra* note 92, at 395–96. For instance, housing codes might transfer resources to residents in the lowest-quality homes, but also raise the prices of those homes (whether by more or less than the welfare gain). This creates a liquidity barrier for potential beneficiaries.

275. S. J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, 8 J. ECON. PERSPECTIVES 133, 138–40 (1994); *see also* KOMIVES ET AL., *supra* note 53, at 2–3 (noting that water and sanitation expenditures improve educational attainment and overall productivity).

276. Although we focus primarily on the impact of guaranteed issue and community rating, our analysis could also be important to other aspects of the ACA. For example, the ACA included a significant expansion of Medicaid. *See Affordable Care Act*, MEDICAID.GOV, <https://www.medicaid.gov/affordable-care-act/index.html> [<https://perma.cc/KH9R-2BXZ>] (last visited Apr. 10, 2018). Prior to Medicaid expansion, many individuals were able to obtain health care, but the economic burden of their unpaid health bills was distributed across other actors in the health system. Allison K. Hoffman, *Oil and Water: Mixing Individual Mandates, Fragmented Markets, and Health Reform*, 36 AM. J.L. & MED. 7, 31–32 (2010). Medicaid shifts these costs to the federal taxpayer and, in small part, to state taxpayers. *See generally* Amy Finkelstein et al., *What Does (Formal) Health Insurance Do, and for Whom?* (Nat'l Bureau of Econ. Research, Working Paper No. 23718, 2017). Medicaid's key impact, then, is not necessarily to expand health insurance coverage, but rather to change how it is financed, from cross-subsidy to income tax.

higher price. If Ricky Riskaverse²⁷⁷ values his \$2,000 annual insurance policy at \$5,000, he will still be willing to purchase it even if it costs \$3,000.²⁷⁸ The obligation is nationwide and applies to everyone, so there are few margins of behavior that it might distort, and shifting to general tax revenues would not much broaden the tax base.²⁷⁹ Although some employees do not value insurance and some employers may find it particularly expensive to provide,²⁸⁰ overall the social costs of financing insurance will plausibly be lower than under an income tax.

A key question for individuals who get their health insurance at work, however, is whether employers may have already extracted this surplus.²⁸¹ If Visecorp knows that Ricky values his policy at \$5,000, they might be able to squeeze Ricky to exchange it for \$5,000 in salary, rather than \$2,000. A mandate that raised annual premiums to \$3,000 would then leave Ricky worse off (assuming he could not renegotiate his salary upwards).²⁸²

But it seems unlikely employers would be able to capture all employee surplus. For one, this surplus is essentially unobservable, making it difficult for employers to make offers tailored to particular employee preferences.²⁸³ For another, tax, labor and employment law, the nature of job markets, and contracting-cost constraints oblige most employers to use relatively uniform bundles of pay and benefits, preventing the fine tailoring of compensation awards to individual employee preferences.²⁸⁴ At best, employers have likely captured only a fraction of the

277. Try saying that five times fast.

278. For an application of Summers's model to the ACA context, see Jonathan T. Kolstad & Amanda E. Kowalski, *Mandate-Based Health Reform and the Labor Market: Evidence from the Massachusetts Reform*, 47 J. HEALTH ECON. 81, 83–85 (2016).

279. Other provisions of the ACA may reduce this pro-efficiency component, however. Again, a key aspect of the benefit tax story is that obtaining health insurance through work offers employees something they cannot get on their own. The ACA offers subsidies for individuals who cannot obtain insurance through their employer, as long as the individual is in a household under 400 percent of the federal poverty level. See I.R.C. § 36B. These policies must be community rated and, thus, they also carry a cross-subsidy. But if the individual is subsidized, the government pays for both the insurance, in part, and the cross-subsidy. Giving up these subsidies would be a cost of accepting employer insurance, partially breaking the tax-benefit link on which our argument depends. See Gruber, *supra* note 25, at 663–64.

280. See Gruber, *supra* note 25, at 663.

281. See *id.* at 657; cf. Jolls, *Labor Market*, *supra* note 4, at 363, 372 (noting that, in functioning markets, employers will already have provided benefits that are worth more than their cash cost to employees, but pointing out that adverse selection issues may prevent this for health insurance).

282. See Margalioth, *supra* note 4, at 683.

283. Gruber, *supra* note 25, at 656; cf. Jolls, *Labor Market*, *supra* note 4, at 378 (making this point about mandated medical leave). *But see* MARK V. PAULY, HEALTH BENEFITS AT WORK: AN ECONOMIC AND POLITICAL ANALYSIS OF EMPLOYMENT-BASED HEALTH INSURANCE 90 (1997) (arguing that employers know that older workers value health insurance more highly and that laws limiting the resulting age discrimination are hard to enforce).

284. See, e.g., Joseph Bankman, *The Effect of Anti-Discrimination Provisions on Rank-and-File Compensation*, 72 WASH. U. L.Q. 597, 599–600 (1994) (discussing uniform benefits for both “rank-and-file” and “highly compensated” employees); Gruber, *supra* note 25, at 656 (explaining “employers are unable to set completely employee-specific compensation packages, offering insurance to some workers and not to others”); Rabin-Margalioth, *supra* note 10, at 339–40 (discussing benefits of distributing benefits and costs among both beneficiary and non-beneficiary employees); see Jolls, *Labor Market*, *supra* note 4, at 380 (observing that “wage stickiness” may prevent employers from fully adjusting

average surplus, leaving room for the ACA to further target inframarginal purchasers.²⁸⁵ Thus, Kolstad and Kowalski, analyzing the Massachusetts precursor to the ACA, report that, based on the benefit tax aspect alone, the mandate produced between two percent and twenty-six percent as much deadweight loss as a comparable tax.²⁸⁶

Next, the ACA reduces the need for distortive tax revenues, and its cross-subsidies likely do not motivate behaviors that overlap with responses to the income tax.²⁸⁷ Few efforts to reduce reported taxable income could affect health insurance premiums. Community rating does not offer much reason to work “off the books” because, one way or another, the worker must still carry insurance, and that insurance will come with cross-subsidies. To the extent that cross-subsidies in insurance increase with health, most individuals are probably unwilling to get sick to reduce their contributions, making the cross-subsidy similar to a tax on earning ability.²⁸⁸

On the other hand, tax penalties for failing to carry health insurance are essential to the community rating scheme and are, in part, based on income.²⁸⁹ They also are enforced mostly through withholding tax refunds—a mechanism that could be avoided if workers never file tax returns.²⁹⁰ However, the originally enacted penalties were, on average, considerably smaller than the cost of the cross-subsidy.²⁹¹ Although this may limit their effectiveness, it also limits the

salary to offset benefits). Thus, for example, it is difficult for employers to observe employee surplus through the use of “menus” of compensation with differing mixes of cash and benefits. However, there may be some stratification at the firm level, with some employers offering benefits and attracting those who value the benefits, and with others paying in cash. Bankman, *supra*, at 610.

285. See Gruber, *supra* note 25, at 656–57 (explaining that under realistic conditions, workers will retain surplus equal to their subjective value, minus the market-wide equilibrium wage differential).

286. Kolstad & Kowalski, *supra* note 278, at 94.

287. Other provisions of the ACA might affect the informal economy, but we focus here on community rating and guaranteed issue. For instance, the so-called “employer mandate” affects firms with fifty or more employees, which adds to the firm’s interest in shifting some workers off the books. See *id.* at 83 (modeling impact of employer mandate on labor demand). This mandate is part of a collection of rules aimed at holding down costs for the subsidies given to low-income households to purchase insurance on the non-group market, David Gamage, *Perverse Incentives Arising from the Tax Provisions of Healthcare Reform: Why Further Reforms Are Needed To Prevent Avoidable Costs to Low- and Moderate-Income Workers*, 65 TAX L. REV. 669, 690–700, 707 (2012), and so the mandate is not directly related to the ACA’s cross-subsidies.

It is possible that the avoidance responses to community rating are more socially destructive than responses to a tax, and, if so, this cuts against our argument. For example, Wynand van de Ven and Frederik Schut argue that community rating creates perverse incentives for insurers to drive away high-cost customers. See WYNAND PMM VAN DE VEN & FREDERIK T. SCHUT, ROBERT WOOD JOHNSON FOUND., RISK EQUALIZATION IN AN INDIVIDUAL HEALTH INSURANCE MARKET: THE ONLY ESCAPE FROM THE TRADEOFF BETWEEN AFFORDABILITY, EFFICIENCY AND SELECTION 10–11 (2007).

288. See Hoffman, *supra* note 276, at 36–37.

289. See 26 U.S.C. § 5000A(c)(2)(B) (2012).

290. See *id.* § 5000A(g).

291. See Peter Long & Jonathan Gruber, *Projecting the Impact of the Affordable Care Act on California*, 30 HEALTH AFFAIRS 63, 68 (2011) (estimating the share of individuals subject to mandate who would choose no insurance). As of the time of this writing, Congress has repealed the penalties on

extent to which the ACA affects any incentive to report income.²⁹²

Finally, although not entirely off-budget, the ACA finances most of its subsidies through tax expenditures, which show up in the national budget as tax reductions rather than spending increases.²⁹³ Moreover, the purchase of the insurance itself is by individuals, rather than the government, which also minimizes the nominal government cost relative to, say, nationalized health care.²⁹⁴ The pragmatic importance of these choices should not be understated. Multibillion-dollar transfers would be unlikely to survive continuing annual appropriations. Experiences with Temporary Assistance for Needy Families (TANF) in the 1990s and more recently with Medicaid show that even highly entrenched entitlements are targets for raids when budgets need balancing.²⁹⁵ Many actors in the health system must make long-range plans based on the expectation of subsidies, and the ACA's more politically durable structure encourages planners to sink investments with greater confidence that the program will still exist in the future. Although the near-repeal of the ACA in 2017²⁹⁶ suggests potential political fragility, the ACA's survival showed its surprising strength.

Progressivity offers the strongest objections to ACA cross-subsidies,²⁹⁷ but even those objections are modest. Premium hikes represent a relatively flat tax on healthier workers.²⁹⁸ This structure is likely less progressive than the overall tax system, though if one takes into account payroll taxes—the bulk of which are imposed at a flat 12.4 percent rate and capped at \$127,200 in wages²⁹⁹—the U.S.

failure to carry insurance, effective for the tax year 2019. Act of Dec. 22, 2017, Pub. L. 115-97, § 11081 (2017).

292. Some commentators believe these limitations are important to the constitutionality of the payments. See Robert D. Cooter & Neil S. Siegel, *Not the Power to Destroy: An Effects Theory of the Tax Power*, 98 VA. L. REV. 1195, 1241 (2012).

293. See SEAN LOWRY, CONG. RESEARCH SERV., R44333, HEALTH-RELATED TAX EXPENDITURES: OVERVIEW AND ANALYSIS (2016).

294. See Brooks, *supra* note 227, at 1068.

295. See David A. Super, *The Quiet "Welfare" Revolution: Resurrecting the Food Stamp Program in the Wake of the 1996 Welfare Law*, 79 N.Y.U. L. REV. 1271, 1299, 1314 (2004) (explaining the role of budget raids in differential fates of Temporary Assistance to Needy Families and food stamp programs).

296. See Dylan Scott, *The Latest Vote to Repeal Obamacare Fails in the Senate*, VOX (July 26, 2017, 4:15 PM), <https://www.vox.com/policy-and-politics/2017/7/26/16034020/senate-health-care-bill-clean-obamacare-repeal-fails> [<https://perma.cc/7MEG-L5SJ>]; Seung Min Kim et al., *Senate Won't Vote on Last-Ditch Obamacare Repeal Bill*, POLITICO (Sept. 26, 2017, 10:20 AM), <https://www.politico.com/story/2017/09/26/obamacare-repeal-failure-republican-senate-243148> [<https://perma.cc/Q67B-XVSG>].

297. Katherine Baicker & Helen Levy, *Employer Health Insurance Mandates and the Risk of Unemployment*, 11 RISK MGMT. & INS. REV. 109, 110 (2008); Mark V. Pauly et al., *A Plan for 'Responsible National Health Insurance'*, 10 HEALTH AFFAIRS 5, 19 (1991); see Gruber, *supra* note 25, at 664 (noting that mandates are "particularly burdensome" for low-wage workers).

298. See Josh Barro, *Why 'Rate Shock' Is an Essential Part of Health Care Reform*, BUS. INSIDER (Oct. 28, 2013, 1:47 PM), <http://www.businessinsider.com/why-rate-shock-is-an-essential-part-of-health-reform-2013-10> [<https://perma.cc/L7EV-8GXT>].

299. See *Contribution and Benefit Base*, SOC. SEC. ADMIN., <https://www.ssa.gov/oact/cola/cbb.html> [<https://perma.cc/6TZJ-LYEC>]. The payroll tax also includes an uncapped total 2.9 percent Medicare payroll tax. *Id.*

tax system is not as progressive as popularly believed.³⁰⁰ At the same time, the ACA also added a 3.8 percent tax on the net investment income of households earning above \$250,000, which adds significantly to overall progressivity.³⁰¹ Further, the ACA's net transfer to women and the infirm is itself likely progressive relative to a baseline in which there is no ACA.³⁰² Although we would have favored a middle-class tax cut to further offset any regressive impact of the ACA, we think that, overall, the progressivity critique is minor in comparison to the benefits cross-subsidies offer.

B. FAMILY LEAVE LAWS

Should governments pay the salaries of individuals who are granted paid family leave, or should workers and their employers have to bear those costs? To make this question more concrete, we consider the recent paid-leave law enacted by the District of Columbia.³⁰³ D.C.'s law guarantees paid leave for workers in qualifying circumstances. Instead of being paid by employers during this period, workers are compensated out of a District-wide fund, which in turn is financed by a 0.62 percent payroll tax on D.C. workers.³⁰⁴ Although this structure follows the classic public finance prescription to pay benefits out of general tax revenues, we think there is much to be said for an alternate cross-subsidy version, previously considered and rejected by the District, in which employers would have been obligated to pay.³⁰⁵

The "employer mandate" version of the paid-leave law would have some of the same costs as an income or payroll tax. It would reduce the wages of workers, driving down their incentives to work, and this disincentive is piled on top of existing, high, D.C. income taxes.³⁰⁶ It also likely duplicates an income tax's

300. See *Are Federal Taxes Progressive?*, TAX POLICY CTR., <http://www.taxpolicycenter.org/briefing-book/are-federal-taxes-progressive> [https://perma.cc/WK6Z-FV8S] (last visited Apr. 10, 2018).

301. *T16-0310 - Repeal 3.8 Percent Net Investment Income Tax (NIIT) by Expanded Cash Income Percentile, 2017*, TAX POLICY CTR. (Dec. 15, 2016), <http://www.taxpolicycenter.org/model-estimates/distribution-affordable-care-act-taxes-dec-2016/t16-0310-repeal-38-percent-net> [https://perma.cc/2YDX-S89J].

302. Cf. Robert A. Carolina & M. Gregg Bloche, *Paying for Undercompensated Hospital Care: The Regressive Profile of a "Hidden Tax,"* 2 HEALTH MATRIX 141, 158 (1992) (noting that costs of uninsured care are passed on to paying health-care customers without respect to ability to pay).

303. Universal Paid Leave Amendment Act of 2016, D.C. CODE § 32-541 (2017).

304. *Id.* § 32-541.03.

305. Fenit Nirappil, *Bowser, Council Chair Spar over D.C. Paid Family Leave: 'What Is the Secrecy?'*, WASH. POST (Oct. 25, 2016), https://www.washingtonpost.com/local/dc-politics/bowser-council-chair-spar-over-dc-paid-family-leave-what-is-the-secrecy/2016/10/25/15613068-9ad2-11e6-b3c9-f662adaa0048_story.html [https://perma.cc/Z4LU-GXPU]. As of August 2017, some cross-subsidy proposals remained on the table as possible revisions to the existing bill. See *UPLA v Alternatives*, D.C. PAID FAMILY LEAVE (Jul. 24, 2017), https://drive.google.com/file/d/0B2qt8Qaz_w8BaXNDZmp2VnZtem8/view [https://perma.cc/V6RE-SHKF].

306. Cf. Jolls, *Accommodation*, *supra* note 4, at 246 (describing effects of mandate that preferences one group of workers). Because the benefit is not literally dependent on income, it probably will be somewhat less distortive of work effort than a true income tax. But because presumably higher-paid workers are more expensive to replace and pay while on leave, its impact on salary likely still varies with income, making it tax-like.

incentives to resort to the informal economy: workers who do not value paid leave may prefer to work under the table to earn higher salaries. Nor do mandatory leave laws seem to do an especially good job at targeting marginal beneficiaries; rather, the effect is to compensate those who would have taken leave regardless.³⁰⁷ At the same time, paid leave actually shrinks D.C.'s revenues, because it reduces the wages D.C. taxes.³⁰⁸ Thus, the District's councilmembers do not even gain the political advantage of hiding the true cost of paid leave off-budget.

There are two potential off-setting advantages. For one, mandated paid leave would have some aspects of a benefit tax. Paid leave would make it easier for women (and, increasingly, men) to enter and stay in the workforce, offsetting some of the policy's labor-supply effects.³⁰⁹ Unlike Summers's version of a benefit tax, this benefit would be paid for only in one jurisdiction, so it could create some locational distortions. Employers who would otherwise be indifferent to location—and whose workforces would not value the benefit—might shift jobs to suburban Virginia and Maryland instead of the District. For the most part, however, this would be true no matter how D.C. financed its policy, because any tax it imposed would be similarly limited to D.C.-connected activities and would therefore create similar locational distortions.

This brings us to the second potential advantage. In some respects, this second advantage is unique to D.C., but it illustrates a larger point. Congress prohibits the D.C. government from collecting income taxes on individuals who work in D.C. but reside elsewhere.³¹⁰ The paid-leave mandate, in contrast, would have reached every employee who worked inside the District.³¹¹ In effect, paid leave could have allowed D.C. to collect "tax" on workers it could not directly tax.³¹² The paid-leave mandate, then, is an illustration of how cross-subsidies can sometimes sidestep arbitrary and inefficient budget constraints that would otherwise limit the options open to lawmakers.³¹³

On balance, it is difficult to say which model—payroll tax and transfer or cross-subsidization via employer mandate—is superior. The choice would depend on the size of the competing advantages and disadvantages. Our claim on

307. See Lester, *supra* note 4, at 18–33 (exploring justifications for paid family leave).

308. See D.C. CODE § 47-1806 (2017).

309. See Rabin-Margalioth, *supra* note 4, at 145.

310. See District of Columbia Self-Government and Governmental Reorganization Act, Pub. L. No. 93-198, § 602(a)(5), 87 Stat. 774, 813 (1973); *Banner v. United States*, 428 F.3d 303, 312 (D.C. Cir. 2005) (upholding this provision against constitutional challenges from D.C. city councilmembers).

311. See Miossi & Phillips, *supra* note 102.

312. See *Id.* (funding through payroll tax on all covered D.C. employers); *supra* note 180 and accompanying text (redistribution of cost of mandate applicable to only a subgroup akin to "tax"); *cf. supra* notes 139–42 and accompanying text (employees "taxed" where employer offsets the cost of the mandated benefit by lowering employees' wages).

313. We claim that the tax limit is inefficient because it motivates workers to live in the suburbs, without any obvious offsetting policy gain. Notably, D.C. residents do not have a voting representative in the body—Congress—that imposed the limit.

this front is simply that it is not obvious, as critics contend, that the mandate approach was the worse choice.

According to published reports, D.C. ultimately chose a publicly-financed tax-and-transfer system not for any of these reasons, but for one of the “practical” design issues we mentioned in section III.E.³¹⁴ An employer mandate would have limited benefits to those who worked in multi-employee workplaces. By choosing public financing, D.C. was also able to extend benefits to those who are self-employed or work in one-worker offices.³¹⁵ In the end, this advantage apparently outweighed, for D.C. legislators, any gains from the alternative design. We would note, though, that the District could likely have had the best of both worlds if it had retained its original idea but added a small payroll tax sufficient to pay for the self-employed.

C. PRODUCTS LIABILITY TORTS

As we saw earlier, the tort system obliges consumers to bear a portion of the cost of injuries caused by consumer products, and these costs are difficult for consumers and manufacturers to redirect. In other contexts, governments have funded the costs of injuries directly out of general revenues. New Zealand pays for auto injuries this way,³¹⁶ whereas in the United States, we have used taxpayer-financed victim compensation funds in a few high-profile instances.³¹⁷

We agree with Logue and Avraham that at least a portion of the cost of accidents should be borne by consumers as a class, rather than paid for with public funds.³¹⁸ Logue and Avraham mainly argue for using the tort system to redistribute on the basis of wealth;³¹⁹ we take no view on that question, but their analysis

314. See Emily Crockett, *Washington, DC, Passed One of the Nation's Most Generous Paid Family Leave Laws*, VOX (Dec. 22, 2016, 11:59 AM), <https://www.vox.com/identities/2016/12/22/14038812/washington-dc-paid-family-leave-trump-blue-states> [<https://perma.cc/3LBY-NHRG>].

315. *Press Release: Reactions to Business Lobby Proposal for Employer Mandate of Paid Leave*, DC PAID FAMILY LEAVE (Oct. 6, 2016), <http://www.dcpaidfamilyleave.org/updates/2016/10/28/press-release-paid-family-leave-coalition-reaction-to-employer-mandate-proposal> [<https://perma.cc/XNJ4-6C3F>]. Advocates also argue that an “employer mandate” model would more strongly incentivize employers to undermine the program. See D.C. PAID FAMILY LEAVE, PROTECTING THE UNIVERSAL PAID FAMILY LEAVE ACT: FREQUENTLY ASKED QUESTIONS (2017), https://drive.google.com/file/d/0B2qt8Qaz_w8BcmJRSllR1llWVE/view [<https://perma.cc/H9QA-C9SV>].

316. Schuck, *supra* note 18, at 190. New Zealand does not currently compensate for most pain and suffering claims, however. *Id.* at 196.

317. See Linda S. Mullenix, *Mass Tort Funds and the Election of Remedies: The Need for Informed Consent*, 31 REV. LITIG. 833, 834–35 (2012).

318. See Logue & Avraham, *supra* note 4, at 227–28. To be clear, to achieve an optimal level of precaution, even proponents of pure public financing would require individual injured parties to bear some of their own costs. Our analysis instead focuses on the share of costs borne by consumers overall. We should also note that increases in consumer costs due to the deterrent effect of torts is, for the most part, efficient, at least for products whose dangers are not fully observable by consumers. See Polinsky & Shavell, *supra* note 90, at 1459; see also Hylton, *supra* note 92, at 2476–77. What we analyze here is the *additional* cost imposed on low-risk consumers to finance compensation for injuries to high-risk purchasers. Hylton, *supra* note 92, at 2483–84.

319. Logue & Avraham, *supra* note 4, at 252.

also supports compensating victims for their pain and suffering through cross-subsidies.³²⁰

Although we would quibble with some of the particulars of their argument, we share their bottom-line assessment that tort cross-subsidies would not create “double distortion.”³²¹ Few behaviors that minimize the income tax would also reduce the costs consumers pay into the tort system, or vice-versa.³²² Tort’s implicit insurance pool would also extract surplus from some inframarginal purchasers, although this would be offset in part because, contrary to Summers’s assumption, it differentially burdens products with varying risk levels. On the other hand, the tort system is expensive to administer,³²³ although because we likely would still have some mechanism for detecting and punishing injuries even under a tax-and-transfer model, it is unlikely that the *incremental* costs of using the tort system for compensation are large.

Our analysis also suggests that the current tax treatment of tort awards may be too generous. Again, by excluding most tort awards from the injured person’s income, among other benefits, the government in effect pays a share of the award.³²⁴ If it is more efficient, up to a point, to finance accidents through a cross-subsidy, it is hard to justify a taxpayer contribution of 40 percent or more. Furthermore, to the extent that tortfeasors capture a portion of taxpayers’ contributions, as they likely do, this structure may violate the “polluter pays” principle, or at least may set the injurer’s “co-pay” at lower than the optimal level.³²⁵ In addition, the government’s share of payments depends on the victim’s tax rate, a factor that is unrelated to any part of our efficiency analysis. If the government is going to contribute a fraction of tort award costs, it should do so through a credit that does not vary by tax bracket.

One last note about geography. So far we have assumed a nationwide tort system, but in practice, much tort law is made state-by-state. States should prefer to finance a larger share of consumer protection through cross-subsidies than the

320. *See id.* at 249–50.

321. *See id.* at 189. Specifically, we disagree with the claim Logue and Avraham make about why tort does not create a double distortion. *See id.* at 188–91. They suggest tort claims are not “correlated with” labor effort because a tortfeasor can respond to a potential tort judgment by reducing the amount of tortious activity it engages in—or, presumably, customers can switch away from products with high implicit insurance premiums. *See id.* Both of these responses, however, would distort labor supply under a standard Atkinson–Stiglitz analysis: either way, the individual is changing her behavior away from what she preferred absent tort liability. By definition, her preferences are no longer as fully satisfied; she is no longer getting as much value for her wages, reducing her incentive to work. Our analysis avoids this problem because it depends on tax avoidance behavior, not just labor supply.

322. This might not be true of a tax system that relied mostly on sales taxes, because black market transactions presumably would eliminate both the sales tax and the likelihood that the seller could be brought to trial.

323. Hylton, *supra* note 92, at 2480–81; Polinsky & Shavell, *supra* note 90, at 1470.

324. *See* Dodge, *supra* note 94, at 143. The Tax Code also allows settling parties to escape tax on investment returns nested within a “structured settlement,” I.R.C. § 104, an unjustified subsidy in most cases. *See* Dodge, *supra* note 94, at 159–60.

325. *Cf.* Dodge, *supra* note 94, at 173–74, 174 n.150 (noting that tax subsidies for defendants may encourage tortious conduct).

federal government would—for instance, states might tax tort awards even if awards were federally exempt. State tax systems are less efficient than federal taxes, in part because it is usually easier for taxpayers to shift money across borders.³²⁶ Tort liability overlaps with the sales tax, on which many states depend,³²⁷ which might cut against cross-subsidies. But due to some foibles of federal dormant commerce clause jurisprudence, tort liability is distinct from sales taxes in important ways: it is hard for a merchant to sell into a state without also being subject to tort liability there, whereas it is relatively easy for the same merchant to escape the state's taxes on the sale of and profits from its product.³²⁸ States also face artificial budget constraints, such as balanced-budget rules, that might preclude on-budget insurance for injured consumers.³²⁹

D. INTELLECTUAL PROPERTY LAW

Who should pay for innovation: governments or consumers? As with torts, our answer is “probably both.” Like the right to sue, patent protection, in effect, imposes a sales tax on patented products but not others.³³⁰ Pointing in favor of patents, however, they are often in part benefit taxes.³³¹ Further, they typically have little obvious interaction with the income tax, suggesting that social costs due to avoidance of patents is far smaller than would be caused by comparable funding through the income tax.³³² Thus, there can be substantial savings by relying on patents rather than taxpayer dollars, assuming that these savings in the aggregate are large enough to pay for the (not trivial) cost of the patent administration system.³³³

Again, however, there are limits to this argument. Patents distort economic activity on many margins. For some products, such distortion can become more

326. For discussion, see Brooks, *supra* note 241, at 111–20; Brian Galle & Jonathan Klick, *Recessions and the Social Safety Net: The Alternative Minimum Tax as a Countercyclical Fiscal Stabilizer*, 63 STAN. L. REV. 187, 195–98 (2010).

327. See URBAN-BROOKINGS TAX POLICY CTR., STATE AND LOCAL GENERAL REVENUE 2004–2013 (2015), http://www.taxpolicycenter.org/taxfacts/Content/PDF/dqs_table_64.pdf [<https://perma.cc/3XWM-5HEG>] (listing states' annual revenue sources and revealing, in most states, a substantial portion is sales tax).

328. See generally Brian Galle, Symposium, *Is Local Consumer Protection Law a Better Redistributive Mechanism than the Tax System?*, 65 N.Y.U. ANN. SURV. AM. L. 525, 530–40 (2010).

329. See Galle & Klick, *supra* note 326, at 203.

330. See Joseph E. Stiglitz, *Economic Foundations of Intellectual Property Rights*, 57 DUKE L.J. 1693, 1713 (2008); see also Paul Romer, *When Should We Use Intellectual Property Rights?*, 92 AM. ECON. REV. 213, 215 (2002) (discussing the same features within copyright). Substitutes for the patented product may also rise in price if consumers switch to them. Although the possibility that intellectual property holders might charge customers differing prices depending on individual demand would mitigate a great deal of deadweight loss, most commentators believe that such possibility is mostly impractical. See, e.g., SUZANNE SCOTCHMER, INNOVATION AND INCENTIVES 37 (2004).

331. Stiglitz, *supra* note 330, at 1713.

332. The largest overlap we can think of is the possibility that knock-off products are likely to be traded in the cash economy.

333. Cf. Stiglitz, *supra* note 330, at 1715–16 (discussing costs of IP administration in the United States).

burdensome than the marginal cost of raising public funds.³³⁴ Distortion will be an especially acute burden if only a small group of consumers pays the premium.

Certain products with intellectual property (IP) protections could fall within other exceptions to the Atkinson–Stiglitz framework. For example, IP protections might impose an efficient sales tax on leisure complements. Recent evidence that video games reduce male workforce participation offers a tidbit of empirical support on this front.³³⁵ At the same time, IP also imposes “taxes” on many products that enhance productivity, ranging from the exotic, such as drugs that aid concentration, to the mundane, like the automobile. These are especially undesirable in the Atkinson–Stiglitz analysis.³³⁶

IP also has distributive effects.³³⁷ Consumers of some IP-protected goods may be relatively poor, so switching to taxpayer financing would result in greater overall progressivity.³³⁸ We would add that the cross-temporal nature of IP cross-subsidies implies that the present is paying for the future’s benefits. Based on historical trends, economists expect future taxpayers to be much wealthier than we are.³³⁹ Just as many bridges are built with bond revenues, IP law might therefore justify deficit-financed tax cuts in the present; in effect, we would be borrowing against the future surplus our IP payments are providing to later generations.³⁴⁰

The political economy of IP is also a mixed bag. On the one hand, the government may have difficulty credibly committing to pay an *ex post* award to inventors—especially those who will take many years to bring their product to market. A tax-funded *ex post* grant program might have its funding stripped ten years into a drug or solar-panel development process, and this possibility would discourage some innovators and increase the costs of obtaining outside

334. See Gallini & Scotchmer, *supra* note 113, at 54–55; cf. Paul L. Joskow, *Regulation of Natural Monopoly*, in 2 HANDBOOK OF LAW AND ECONOMICS 1227, 1251 (A. Mitchell Polinsky & Steven Shavell eds., 2007) (explaining that deadweight loss of taxation can be greater or less than the social cost of monopoly).

335. See Mark Aguiar et al., *Leisure Luxuries and the Labor Supply of Young Men 2–3* (Nat’l Bureau of Econ. Research, Working Paper No. 23552, 2017), <http://www.nber.org/papers/w23552.pdf> [<https://perma.cc/3Y9Q-Q54P>]. Once video games are no longer IP protected, gamers would be receiving a subsidy, but few games remain popular that long.

336. Once more, those who purchase after IP protection lapses would be subsidized, which is, here, a desirable result. It is possible these later gains would outweigh the earlier losses, depending on how long generic products and the like remain useful. Taking into account the time value of money, however, future gains would have to be considerably larger to outweigh up-front losses. See David Weisbach & Cass R. Sunstein, *Climate Change and Discounting the Future: A Guide for the Perplexed*, 27 YALE L. & POL’Y REV. 433, 438–40 (2009) (discussing rationale for time discounting in government planning).

337. Stiglitz, *supra* note 330, at 1714–15.

338. See *id.* at 1716.

339. See Weisbach & Sunstein, *supra* note 336, at 440–41. For more in-depth discussion of approaches to intergenerational justice, see Lawrence B. Solum, *To Our Children’s Children’s Children: The Problems of Intergenerational Ethics*, 35 LOY. L.A. L. REV. 163, 169–224 (2001).

340. See Nancy C. Staudt, *Constitutional Politics and Balanced Budgets*, 1998 U. ILL. L. REV. 1105, 1141 (suggesting that debt-financed infrastructure assigns obligation to pay to those who will benefit in the future).

financing for others.³⁴¹ Because patents are off-budget, they offer a more reliable promise of future funding.

On the other hand, the opacity of IP subsidies seems to have contributed to some abuses.³⁴² Infamously, Congress retroactively extended the duration of copyright protections, caving to pressure from powerful existing rights holders.³⁴³ If the social costs of longer monopolies had been estimated in dollars and been subject to appropriations, the giveaway might well have failed. Congress also uses short-duration patents as a form of incentive, such as in the Hatch-Waxman Act scheme of awarding temporary monopolies to generic drug manufacturers who successfully challenge an existing pharmaceutical patent.³⁴⁴ Absent budgeting reforms, we predict more such bills as substitutes for targeted government support.³⁴⁵ Congress's budget process systematically favors monopoly awards. The costs of the monopoly go uncounted, but the revenue benefits from decreased government expenditures on newly unpatented drugs are fully credited.

Overall, the relative efficiency of IP versus taxpayer financing is uncertain and may vary from product to product. These factors may be difficult to predict before a product is on the market,³⁴⁶ but once better information develops, it might become clear that the government should switch regimes, swapping out tax revenues for patent protection. That could be accomplished, among other routes, by the government negotiating to buy the IP or by condemning it and paying "fair value."³⁴⁷ Condemnation is rare but should be on the table when the deadweight loss of patents is clearly greater than the marginal cost of public funds, when the patent is burdening some product that greatly enhances productivity, or when the distributive impact of the patent is great.³⁴⁸

341. See Joskow, *supra* note 334, at 1255 (discussing the potential for the regulator to hold up the entrepreneur with sunk costs).

342. See Romer, *supra* note 330, at 216.

343. See generally Joseph P. Liu, *Copyright and Time: A Proposal*, 101 MICH. L. REV. 409, 413–22 (2002) (describing the 1998 Sonny Bono Copyright Term Extension Act).

344. See Drug Price Competition and Patent Term Restoration Act of 1984, Pub. L. No. 98-417, 98 Stat. 1585. See generally C. Scott Hemphill, *Paying for Delay: Pharmaceutical Patent Settlement as a Regulatory Design Problem*, 81 N.Y.U. L. REV. 1553, 1565–67, 1605–07 (2006) (describing and analyzing the Hatch-Waxman Act).

345. See, e.g., Orphan Drug Act, 21 U.S.C. §§ 360aa–360dd (2000) (granting seven-year exclusive window for treatments for certain rare diseases); 21 U.S.C. § 355a (2000) (adding six-month patent protection to pharmaceutical makers who test products for pediatric use).

346. Cf. Roin, *supra* note 117, at 1053 (arguing that the government needs to observe consumer decisions to have full information on the value of a patent).

347. See generally Michael Kremer, *Patent Buyouts: A Mechanism for Encouraging Innovation*, 113 Q.J. ECON. 1137 (1998) (discussing potential valuation mechanisms); Steven Shavell & Tanguy Van Ypersele, *Rewards Versus Intellectual Property Rights*, 44 J.L. & ECON. 525 (2001) (discussing the government's ability to obtain information and administrative burdens of a reward system). As long as the government pays a fair price, the possibility of buyouts should not affect the *ex ante* incentives for inventors. Public subsidies for purchasers is another similar option. See Roin, *supra* note 117, at 1050–51.

348. Probably not coincidentally, nearly all these align in the case of many vaccine patents, and this is the one area where interest in government condemnation of patents has drawn the most policy attention.

CONCLUSION

Cross-subsidies are an underrecognized and underexamined policy mechanism. They appear far more often—and in far more settings—than virtually all observers have acknowledged. We think this is in part because their theoretical justifications are meaningfully broader than the traditional treatments suggest.

Our contribution is thus twofold. We identified the stubborn frequency with which cross-subsidies appear, in substantive policy areas that otherwise have nothing to do with one another. When a particular species of policy colonizes many fields, that is noteworthy in itself. We are confident that more cross-subsidies exist in the wild than we discuss here; many readers will no doubt find them in places we did not consider.

Our account, however, is more than anthropological. Although cross-subsidies do come with important limitations, current scholarly consideration of their positives and negatives is incomplete. In this Article, we have also fleshed out a theory of cross-subsidy utility that does not deny the limits of the cross-subsidy as a policy tool, but instead more carefully explicates the contours of those limits. We suggest that cross-subsidies might be the right regulatory choice more frequently than has been previously assumed.