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# Tax Complexity and Technology

DAVID I. WALKER\*

*The Federal Income Tax Code has become increasingly complex over time with the implication that many taxpayers no longer understand the connection between their life decisions and their taxes. Some commentators have suggested that increasing computational complexity may be attributable in part to the proliferation of tax preparation software that renders such complexity manageable at filing time, but otherwise does nothing to mitigate the “black box” nature of the tax system. While such complexity and opacity undercut explicit incentives embedded in the Code, make planning more difficult, and undermine political accountability for taxes, they may also reduce the inefficient distortion or deadweight loss of the income tax, particularly with respect to higher-income taxpayers.*

*This Article argues that technology represents a potential response to tax complexity and opacity as well as a contributing factor. It argues that tax planning software can and likely will be used to restore “functional transparency” to the Code, for good or bad, alerting taxpayers to explicit incentives, allowing taxpayers to easily determine the tax consequences of their life decisions, and providing a means for improving fiscal citizenship, but also highlighting tax burdens in such a way as to increase deadweight loss. This Article also makes the case for government provision or subsidization of planning software targeted at lower-income taxpayers. Such a targeted approach will help level the tax planning playing field and improve the take-up of tax incentives by this population, while avoiding facilitating social welfare reducing tax planning by higher-income taxpayers.*

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\* Professor of Law and Maurice Poch Faculty Research Scholar, Boston University School of Law. I thank Leigh Osofsky, Rory van Loo, Larry Zelenak and workshop participants at Boston University School of Law, Harvard Law School, and Law and Society for helpful comments on earlier drafts. I thank Jordan Paine (BUSL J.D. 2021) for excellent research assistance.

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## INTRODUCTION

It is well known that the Federal Income Tax Code has become increasingly complex over time with the implication that many taxpayers no longer understand the connection between their life decisions and their tax obligations. The Tax Code, it is sometimes said, now resembles a black box.<sup>1</sup> Some commentators argue that increasing computational complexity of the Code is attributable in part to the proliferation of tax preparation software.<sup>2</sup> The idea is that tax provisions requiring complex calculations, such as phase-outs of deductions or credits or the alternative minimum tax, would have encountered resistance in the past when most taxpayers filled out forms by hand. But now that most filers use tax preparation software, such as TurboTax, or employ professional preparers who use such software, this computational complexity is trivial and acceptable.<sup>3</sup>

The increasing complexity of the Code creates benefits as well as costs.<sup>4</sup> On the positive side, a more complex tax system can increase accuracy in the sense of drawing sharper distinctions between taxpayers along relevant metrics, such as ability to pay. Plus, to the extent that complexity reduces the salience of income taxes or leads taxpayers to systematically underestimate their effective marginal tax rates (MTRs),<sup>5</sup> this complexity may reduce the inefficient distortion, known as excess burden or deadweight loss, that arises when taxpayers shift their behavior away from a taxed good or activity, in this case labor, to an untaxed activity, in this case leisure.

But there are a number of downsides to this complexity-driven opacity.<sup>6</sup> If the complexity leads taxpayers to systematically overestimate their MTRs, this feature may increase the inefficient distortion of the income tax. But even if increased complexity and opacity have the opposite effect of reducing excess burden, there are

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1. See LAWRENCE ZELENAK, LEARNING TO LOVE FORM 1040: TWO CHEERS FOR THE RETURN-BASED MASS INCOME TAX 11–38 (2013).

2. See *id.*

3. See *id.*

4. See *infra* Part II.

5. I use effective marginal tax rate, or MTR, to denote the actual impact of the next or last dollar of income on an individual's tax liability and to distinguish this from the statutory marginal tax rates that are easily found from tax tables or online. Statutory rates are sometimes referred to as tax brackets. MTR is the appropriate tax rate for most decision-making. Both MTR and statutory rate should be distinguished from the average tax rate, which is total tax divided by total income.

6. See *infra* Part II.

several negatives. The Tax Code contains many explicit incentives and subsidies. Incentives are less effective if taxpayers who are simply responding to prompts from TurboTax do not recognize them. Similarly, complexity and opacity increase the difficulty of factoring taxes into major life decisions, such as buying a house or having children. In addition, a more complex and opaque tax system may make it easier for Congress to obfuscate tax burdens and reduce political accountability for taxes. It is even possible that complexity and opacity could result in suboptimally large government through the “fiscal illusion” that taxes are lower than they are in actuality.

To be sure, whether these positive or negative effects of complexity and opacity are real or just theoretical depends on a number of factors, such as whether taxpayers respond to MTRs, or to what they believe to be their MTRs; whether the salience of taxation affects behavior; whether taxpayers systematically under or overestimate MTRs or whether their errors are random; and whether increasing complexity affects these estimations and responses.<sup>7</sup> There is a large literature on these questions, and they remain somewhat unresolved. In short, however, the evidence suggests that taxes do affect behavior, but salience matters, as one would expect. Taxpayers—particularly high-income taxpayers—appear to systematically underestimate MTRs, and one would expect that the complex provisions of the Code that affect MTRs and create opacity, such as deduction phase-outs, more often lead to underestimation of MTRs than the reverse. Thus, while there are many open empirical questions, it seems likely that today, complexity and opacity result in a tradeoff between reduced excess burden of taxation, on the one hand, and impaired tax incentives, personal planning and optimization, and perhaps political accountability, on the other.

But need this be the case, and will this continue to be the case? While a number of commentators have argued that technology is a leading culprit in this story, this Article argues that technology will also provide the response—that technology can render the income tax black box functionally transparent and, to some extent, will do so whether so doing is in the overall interest of society, or not.<sup>8</sup>

This is the first academic article to look closely at tax *planning* software, as opposed to tax *preparation* software.<sup>9</sup> At the extreme, the latter renders the tax system opaque by reducing the taxpayer to a clerk who simply inputs figures from various documents when queried by the software. Out pops a net tax amount owed or a tax refund figure with little or no insight into how that amount was determined.<sup>10</sup> Tax planning software, on the other hand, can be designed to allow taxpayers to easily run “what if” scenarios, adjusting inputs to determine the tax impact of various life decisions, such as starting a family, taking a higher paying job, sending a kid to college, etc. When integrated with preparation software, tax planning software could also be designed to alert taxpayers to various tax incentives, explaining, for example,

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7. See *infra* Part II.B.

8. See *infra* Part III.

9. See *infra* Part IV.

10. This is a bit of a caricature of tax preparation software. In reality, the realms of tax preparation and planning software overlap considerably. For example, both preparation and planning software serve an educative function, but preparation software tends to do so in a generic fashion while planning software can better tailor advice and education to a particular taxpayer's situation. See *infra* Part IV.

that an earned income tax credit (EITC) recipient can take home more than a dollar from an increased dollar in wages,<sup>11</sup> that education credits may be available for a child nearing college age, or that charitable contributions will have no tax impact if the standard deduction will exceed a taxpayer's total itemized deductions.

The general idea here is that what is important is that taxpayers understand the impact that their life decisions will have on their tax burden, not that they understand the mechanics of, for example, the earned income credit phase-out. Throughout this Article, I refer to the ability to make connections between life decisions and tax as functional transparency.

Does tax planning software serve this function today?<sup>12</sup> Yes and no. Planning software currently marketed to individual taxpayers is too simplistic to create functional transparency. These products appear to serve as little more than marketing devices for the tax preparation software companies that provide them. However, the planning software marketed to professional preparers is generally much more sophisticated. The best products facilitate detailed "what if" scenario analysis and generate recommendations tailored to individual taxpayer situations. Combined with the knowledge and foresight of professional preparers, these products could create functional transparency. Somewhat surprisingly, however, the limited empirical evidence suggests that the taxpayer clients of professional preparers may be less knowledgeable about taxes than other taxpayers.<sup>13</sup>

For this and a number of other reasons, I am somewhat skeptical about the prospects for commercially available tax planning software. If enough high-income taxpayers see value in piercing through the black box, one would expect the promulgation of commercial planning software aimed at individual taxpayers and that the use of planning software would expand more generally. But will the private goals and incentives driving these developments match public goals? Will commercially available products optimally highlight tax incentives? Will these products be available at a price affordable to low-income taxpayers? And, of course, even if commercially available tax planning software works perfectly, increasing functional transparency undermines the potential positive impact that opacity has on reducing the excess burden of the income tax.

Indeed, there may be a case for government intervention in the tax planning software market, perhaps even for government provision or subsidization of such software.<sup>14</sup> Software could be designed to further the government's objectives in addition to furthering taxpayer objectives by, for example, highlighting explicit tax incentives incorporated in the Code. Ideally, this software would be targeted at

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11. The EITC, which is an important example used throughout this Article, has become the federal government's largest anti-poverty program, lifting about 5.6 million people, including about 3 million children, out of poverty in 2018. *Policy Basics: The Earned Income Tax Credit*, CTR. ON BUDGET & POLICY PRIORITIES (Dec. 10, 2019), <https://www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit> [https://perma.cc/Z2P3-B9BS].

12. See *infra* Part IV.

13. The proffered explanation is that some taxpayers who enlist professional preparers delegate tax compliance to these professionals and as a result have little grasp of the intricacies of taxation. See *infra* Part IV.

14. See *infra* Part V.

taxpayers at the lower end of the income spectrum in order to level the tax planning playing field between low- and high-income taxpayers, address the particular complexities associated with low-income tax situations, and avoid undermining the efficiency benefits of opacity at the high-end of the income spectrum.<sup>15</sup>

Suppose, for example, that the federal government were to adopt a pre-populated tax return scheme for low-income taxpayers along the lines of California's Ready Return experiment, which provided 50,000 low-income California taxpayers with pre-prepared state income tax returns based on third party reported income and other data during the mid-2000s.<sup>16</sup> While pre-populated returns would massively reduce compliance burdens, they would likely heighten the black box nature of the tax system for participants. Taxpayers taking advantage of pre-populated return filing could be offered simplified tax planning software—perhaps smartphone based—to help offset the increased black box effect, or such software could be provided to low-income taxpayers generally if these taxpayers were priced out of the commercial tax planning software market. Targeting government-provided planning software at lower-income taxpayers would have the added bonus of not facilitating social welfare reducing planning by high-income taxpayers.

To be sure, even government provision or subsidization of tax planning software would not necessarily resolve all of the issues arising from the increasing complexity and opacity of the Code. One might still question whether the mere availability of such software sufficiently addresses the political accountability, fiscal citizenship, and even personal planning concerns arising from opacity, or whether it would be a sufficient response to these concerns that taxpayers could readily associate their life decisions with their tax burdens, even if they did not choose or pay to do so.<sup>17</sup>

In my view, technology-driven responses to the increasing complexity and opacity of the Code are probably inevitable. The important questions are who gets to shape these responses—commercial concerns or the government—and what does the answer to that question mean for equality, fairness, democracy, and efficiency?

The remainder of this article is organized as follows. Parts I and II provide background on the growth in tax complexity and opacity over time and explore how complexity and opacity impact taxpayer behavior, generating benefits as well as costs. Parts III and IV turn to the potential for tax planning software to restore functional transparency to a tax code burdened by complexity and opacity, and the current state of planning software technology. Part V makes the case for government provision or subsidization of planning software focused on low-income taxpayers as best balancing the benefits and costs of restoring functional transparency. Part VI

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15. I believe that the arguments for providing IRS tax planning software to low-income taxpayers and not to high-income taxpayers are persuasive, but the merits of providing such software to middle-income taxpayers are somewhat less clear. I will generally use the term "lower-income" taxpayers in this Article to exclude high-income taxpayers while leaving the line-drawing question for another day.

16. As discussed *infra* text accompanying notes 37–40, a taxing authority may "pre-populate" tax returns using data reported by third parties, such as wages, and distribute these returns to taxpayers who may sign and file the return or provide their own return instead.

17. These questions are asked in somewhat greater detail but are only provisionally answered *infra* Part VI.



briefly discusses broader societal implications of a technological response to tax complexity and opacity, and Part VII concludes.

#### I. THE INCREASING COMPLEXITY AND OPACITY OF THE FEDERAL INCOME TAX

There is widespread agreement that the Federal Income Tax Code has become increasingly complex over time and increasingly opaque to individual taxpayers.<sup>18</sup> This Part will define the terms “complexity” and “opacity” as I intend to use them in this Article and discuss their sources and growth.<sup>19</sup>

Complexity, it has been remarked, is complex.<sup>20</sup> Tax complexity has been broken down into numerous subcategories.<sup>21</sup> This Article is chiefly concerned with two types of complexity—computational complexity and planning complexity. Jacob Goldin defines computational complexity as the difficulty of determining one’s eligibility for a tax benefit and the amount of that benefit and distinguishes computational complexity from informational complexity—the difficulty of acquiring the information needed to determine a tax benefit.<sup>22</sup> Both of these types of complexity fall within a larger category known as compliance complexity, which may be distinguished from tax planning complexity—the cost or difficulty of arranging one’s affairs in response to tax rules.<sup>23</sup>

The alternative minimum tax (AMT) has long been seen as the paradigm of computational complexity. Although the reach of this provision was significantly curtailed by the 2017 Tax Cuts and Jobs Act (“Jobs Act”), taxpayers potentially subject to the AMT must essentially calculate their taxes twice—once using the regular set of inclusions, exclusions, deductions, and tax rates and the second time using modified AMT inclusions, exclusions, deductions, and rates. Close behind the AMT as the poster children for computational complexity are the myriad phase-outs of various deductions, credits, and exemptions in the Code.

All of this computational complexity increases the opacity of the tax code for individual filers and makes it more difficult to include tax consequences in one’s planning. Taxpayers may be aware of the earned income tax credit (EITC) but not be

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18. Whether the Code is too complex for the job is debatable. See J.B. Ruhl & Daniel Martin Katz, *Measuring, Monitoring, and Managing Legal Complexity*, 101 IOWA L. REV. 191, 195 (2015). Ruhl and Katz also distinguish between a legal system being complicated, which the Code clearly is, and being complex in the sense of interdependence between its elements. As will be apparent, this Article uses complexity in its more general sense.

19. This Article focuses on the individual federal income tax. While the corporate income tax may also suffer from increasing complexity, I assume that corporations generally have the resources and incentives to deal with the complexity and do not experience the same pathologies as individual taxpayers.

20. See, e.g., Binh Tran-Nam, *Tax Reform and Tax Simplicity: A New and ‘Simpler’ Tax System*, 23 UNIV. NEW S. WALES L.J. 241, 242 (2000) (observing that “tax simplicity (and hence its mirror image, tax complexity) is itself a complicated notion”).

21. See, e.g., Kathleen DeLaney Thomas, *User-Friendly Taxpaying*, 92 IND. L.J. 1509, 1514–15 (2017) (surveying the literature and describing rule-based complexity, computational complexity, structural complexity, and compliance complexity).

22. Jacob Goldin, *Tax Benefit Complexity and Take-up: Lessons from the Earned Income Tax Credit*, 72 TAX L. REV. 59, 74, 81 (2018).

23. *Id.* at 73–74, n.77.

aware of whether, given their income, they are eligible for the maximum credit, some fraction of the maximum, or no credit at all.<sup>24</sup> Taxpayers on the cusp of the AMT may not know whether various potential tax deductions, for example, state and local income taxes or real estate taxes, will reduce their ultimate tax liability. None of these taxpayers may have an accurate conception of their marginal tax rate (MTR) and the after-tax implications of marginal adjustments to income or various expenses.

Another closely related concept is tax salience. As Deborah Schenk describes, salience refers to the visibility or prominence of a tax provision.<sup>25</sup> Tax provisions that are more economically salient have a greater effect on taxpayer behavior.<sup>26</sup> More computationally complex tax provisions are likely to be less salient.<sup>27</sup>

It is, I believe, universally agreed that the Tax Code has become more computationally complex over time. Whether measured in terms of pages devoted to the Federal Income Tax Code and regulations or the amount of time expended in complying with the Code, complexity seems to rise inexorably.<sup>28</sup> To be sure, the

24. The EITC is a refundable tax credit. The design includes a phase-in range across which recipients receive a credit equal to a percentage of earnings up to a maximum credit level, a plateau across which the credit—the maximum credit—does not vary with income, and a phase-out range across which the credit declines at a fixed percentage of income. The phase-in and phase-out percentages are a function of the number of qualifying children in the household. See I.R.C. § 32; see also Goldin, *supra* note 22, at 63–66 (describing the design of the EITC).

25. Deborah H. Schenk, *Exploiting the Salience Bias in Designing Taxes*, 28 YALE J. ON REGUL. 253, 253 (2011).

26. *Id.* at 263. Gamage and Shanske refer to this type of salience as market salience. David Gamage & Darien Shanske, *Three Essays on Tax Salience: Market Salience and Political Science*, 65 TAX L. REV. 19, 20 (2011).

27. Schenk, *supra* note 25, at 263. Salience is related to the availability heuristic. According to the availability heuristic as described by Tversky and Kahneman, individuals tend to “assess the frequency of a class or the probability of an event by the ease with which instances or occurrences can be brought to mind.” Amos Tversky & Daniel Kahneman, *Judgment Under Uncertainty: Heuristics and Biases*, 185 SCI. 1124, 1127 (1974). One factor that affects availability is salience. *Id.* McCaffery suggests that complexity acts as a multiplier on the availability bias. Edward J. McCaffery, *Cognitive Theory and Tax*, 41 UCLA L. REV. 1861, 1926 (1994). For further discussion of the relationship between salience and the availability bias in the tax context, see Schenk, *supra* note 25, at 264.

28. See Andrew Lundeen, *A Lot Has Changed in the 27 Years Since the Last Major Tax Reform*, TAX FOUND. (Oct. 22, 2013), <https://taxfoundation.org/lot-has-changed-27-years-last-major-tax-reform/> (stating that between 1986 and 2013 the Tax Code has increased from less than 30,000 pages to over 70,000 pages); Annette Nellen & Jeffrey A. Porter, *30 Years After the Tax Reform Act: Still Aiming for a Better Tax System*, J. ACCT. (Oct. 1, 2016), <https://www.journalofaccountancy.com/issues/2016/oct/tax-reform-act.html> [<https://perma.cc/WKB7-LRH8>] (referencing a press release from Sen. Max Baucus, then chair of the Senate Finance Committee, stating between 1986 and 2012, “Congress has made 15,000 changes to the tax code”); Scott Greenberg, *Federal Tax Laws and Regulations are Now Over 10 Million Words Long*, TAX FOUND. (Oct. 8, 2015), <https://taxfoundation.org/federal-tax-laws-and-regulations-are-now-over-10-million-words-long> [<https://perma.cc/PP8V-6UYJ>] (stating that “as of 2015, federal tax laws and regulations have grown to over 10 million words in length” and describing how the length has grown steadily over the past 60 years from 1.4 million in 1955); *id.* (“Americans spend 6.1 billion hours and \$233.8 billion

recently enacted Jobs Act included some simplifying changes. By reducing the personal exemption amount to zero through 2025, the Jobs Act effectively suspended the phase-out of personal exemptions.<sup>29</sup> The Jobs Act also suspended through 2025 the phase-down of itemized deductions for high-income taxpayers<sup>30</sup> and, by doubling the standard deduction, dramatically reduced the number of taxpayers who will itemize. Finally, the Jobs Act raised the AMT exemption levels and exemption phase-out thresholds, drastically reducing the number of taxpayers potentially subject to the AMT.<sup>31</sup> Of course, only time will tell whether these reforms will stick. Moreover, the Jobs Act ushered in an incredibly complex set of provisions—the §199A qualified business income deduction—which is now available to a large number of individual taxpayers.

There are undoubtedly many reasons for the complexity of the Code.<sup>32</sup> Congress's propensity for locating social programs and incentives in the Tax Code, generally referred to as tax expenditures, certainly adds complexity. Critics, beginning with Stanley Surrey, have lamented this use of the Code for a variety of reasons, including the resulting increase in complexity.<sup>33</sup> On this score, I share the view of Jacob Nussim and David Weisbach—that tax expenditures are not inherently objectionable, and that the tax system may be the most appropriate means of administering certain social programs, such as the EITC, for example.<sup>34</sup> But whatever one's take on that question, undoubtedly tax expenditures add complexity.<sup>35</sup>

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complying with the tax code.”).

29. I.R.C. § 151(d)(5).

30. I.R.C. § 68(f).

31. Scott Eastman, *The Alternative Minimum Tax Still Burdens Taxpayers with Compliance Costs*, 647 TAX FOUND. 8 (Apr. 2019), <https://files.taxfoundation.org/20190404102039/The-Alternative-Minimum-Tax-Still-Burdens-Taxpayers-with-Compliance-Costs.pdf> [<https://perma.cc/78X7-PVVU>] (reporting that these AMT reforms are expected to reduce the number of taxpayers paying the AMT from five million to 200,000).

32. In addition to Congress's propensity to situate social welfare programs in the Tax Code, Gale and Holtzblatt ascribe complexity to an unavoidable conflict between simplicity and fairness, to politics, and to the inherent complexity of the income tax base. WILLIAM G. GALE & JANET HOLTZBLATT, *The Role of Administrative Factors in Tax Reform: Simplicity, Compliance and Enforcement*, in UNITED STATES TAX REFORM IN THE 21ST CENTURY 179, 181–83 (George R. Zodrow & Peter Mieszkowski eds., 2002).

33. Stanley S. Surrey, *Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures*, 83 HARV. L. REV. 705, 731 (1970) (arguing that “the tax system is complex enough as it is, and to have a large number of tax incentives side by side with the provisions making up the structure of the tax itself can only cause confusion and a blurring of concepts and objectives”). Surrey described a number of other disadvantages of tax expenditures including the “upside down” effect of subsidies framed as tax deductions as these are worth more to high-income individuals in high tax brackets than they are to low-income individuals who are in low brackets or who do not pay tax at all. *Id.* at 720–24.

34. David A. Weisbach & Jacob Nussim, *The Integration of Tax and Spending Programs*, 113 YALE L.J. 955 (2004).

35. THOMAS L. HUNGERFORD, CONG. RSCH. SERV., RL 33641, TAX EXPENDITURES: TRENDS AND CRITIQUES 13 (2006). While many tax expenditure provisions arguably are appropriately situated in the Code, most tax expenditures include phase-out provisions that increase complexity. These phase-outs are justified as limiting benefits to low-income

Larry Zelenak has argued that there may be a link between technology and computational complexity.<sup>36</sup> His quite plausible idea, as noted in the introduction, is that technology has reduced the cost to taxpayers of complying with complex tax provisions, which has made such provisions more palatable, and made it easier for Congress to enact complex provisions.

However, while TurboTax and other tax preparation software products have reduced the cost of complying with complex provisions—have reduced computational complexity—they have done little to address opacity and planning complexity. Taxpayers preparing their taxes using TurboTax may simply input data on income and expenses following software prompts and easily arrive at a net tax amount owed or to be refunded, but this sort of blind use of tax preparation software renders the process a black box. A taxpayer using these tools would not necessarily know, for example, whether her various expenses actually reduced her taxes or by how much. To be sure, modern tax preparation software marketed to individuals typically includes tax tips that serve an educative function, but as discussed below, these are unlikely to produce much transparency. Tax preparation software also reduces the compliance cost of taxpayers who enlist professional preparers, but again, this use of software is unlikely to illuminate the black box.

Another technological innovation—pre-populated return generation—shares these properties, reducing compliance costs but increasing or failing to reduce opacity in the face of complex tax provisions. California experimented with pre-populated return filing, known as Ready Return, in 2004 and 2005.<sup>37</sup> Taking advantage of the prevalence of third-party reporting of wage and salary income, California sent pre-populated state income tax returns to 50,000 taxpayers with the simplest tax situations based on prior years' returns.<sup>38</sup> The recipients were free to sign and file the pre-populated return or submit their own return instead. The program was successful by most metrics with participation exceeding projections and satisfaction ratings in the high nineties.<sup>39</sup> Today, elements of Ready Return are incorporated in California's CalFile electronic tax filing system, but Ready Return has not achieved its promise, due in large part to opposition from the providers of tax preparation software.<sup>40</sup>

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taxpayers, but as Daniel Shaviro has argued, this justification is flawed in the sense that a better, more efficient policy would be to eschew phase-outs and adjust statutory marginal tax rates accordingly. *See* Daniel Shaviro, *The Minimum Wage, the Earned Income Tax Credit and Optimal Subsidy Policy*, 64 U. CHI. L. REV. 405, 408–09 (1997); *see also* Lawrence Zelenak, *Complex Tax Legislation in the TurboTax Era*, 1 COLUM. J. TAX L. 91, 113–16 (2010). Of course, if adjusting statutory rates is politically impossible, tax expenditures with phase-outs may be better than no tax expenditures at all. *See* Shaviro, *supra*, at 409–10; Zelenak, *supra*, at 114–15.

36. Zelenak, *supra* note 35.

37. Joseph Bankman, *Using Technology to Simplify Individual Tax Filing*, LXI(4) NAT'L TAX J. 773, 783 (2008).

38. *Id.*

39. *Id.* at 784.

40. *See* Joseph Bankman, Clifford Nass & Joel Slemrod, *Using the "Smart Return" to Reduce Evasion and Simplify Filing*, 69 TAX L. REV. 459, 481 (2016) (noting that elements of Ready Return were consolidated into CalFile in 2014); Joseph Bankman, *Simplified Filing Would be a Boon for All Taxpayers, Not Just those who File the Simplest Returns, and Would*

Despite the current setback, given increasing third-party reporting and advances in technology, one can imagine a future in which pre-populated returns are an option for a large number of taxpayers. Some of these taxpayers will put in the time and effort to understand their tax situation and determine whether the pre-populated return is correct. But others are likely to simply sign and file the pre-populated return. For these taxpayers, compliance costs will be vanishingly small, but the tax system will likely be a complete black box yielding high planning complexity.

Looking further ahead, Joshua Blank and Leigh Osofsky envision a day in which artificial intelligence (AI) has developed to such a degree that taxes may be calculated automatically even for individuals with complex tax situations, obviously reducing compliance costs, but with the result that “the public stops understanding what the law is.”<sup>41</sup> As with pre-populated return filing, in Blank and Osofsky’s world of return-free compliance, computational complexity is likely high but the costs of managing that complexity are minimal. Planning complexity, however, would seem to continue to be significant.

## II. THE BENEFITS AND COSTS OF INCREASED COMPLEXITY AND OPACITY

While some will simply bleat “complexity bad, simplicity good,” in reality, complexity is more complex than that. There are benefits as well as costs to tax complexity, which are explored in this Part. The primary benefit has to do with improving the efficiency of the income tax. Thus, this Part begins with a brief introduction to efficiency analysis of income tax provisions and an exploration of taxpayer responsiveness to taxation, before considering the benefits and costs of complexity and opacity, per se. Understanding these costs and benefits is a prerequisite to effective evaluation of potential technological responses to tax complexity and opacity.

### *A. Efficiency of the Labor Income Tax*<sup>42</sup>

Taxes affect behavior. Most obviously, an individual who has \$100 of income before tax will consume or save differently depending on whether she faces a tax of

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*Save Substantially on Filing Costs*, 34 ABA: POINT & COUNTERPOINT (Aug. 25, 2016), [https://www.americanbar.org/groups/taxation/publications/abataxtimes\\_home/16aug/16aug-ppp-bankman-maule-perspectives-on-two-proposals-for-filing-tax-simplification/](https://www.americanbar.org/groups/taxation/publications/abataxtimes_home/16aug/16aug-ppp-bankman-maule-perspectives-on-two-proposals-for-filing-tax-simplification/) [<https://perma.cc/G6ZJ-GT4W>] (discussing Intuit’s opposition to Ready Return and other similar systems); Joseph Bankman, *Simple Filing for Average Citizens the California ReadyReturn*, 107 TAX NOTES 1431, 1434 (2005) (discussing the tax preparation business’s opposition to ReadyReturn).

41. Joshua D. Blank & Leigh Osofsky, *Automated Legal Guidance*, 106 CORNELL L. REV. 179, 187 (2020).

42. See generally, HARVEY S. ROSEN, PUBLIC FINANCE (1985); JOSEPH E. STIGLITZ & JAY K. ROSENGARD, ECONOMICS OF THE PUBLIC SECTOR (4th ed. 2015). For helpful and concise discussions of efficiency analysis of taxation, see Jacob Nussim, *To Confuse and Protect: Taxes and Consumer Protection*, 1 COLUM. J. TAX L. 218, 234–37 (2010); David A. Weisbach, *Line Drawing, Doctrine, and Efficiency in the Tax Law*, 84 CORNELL L. REV. 1627, 1650–55 (1999).

\$0, \$20 or \$40, because taxes affect her wealth. But this “income” effect of taxation is unavoidable if society is to fund public goods, and it is a function of the amount of tax raised, not the method. In a revenue-neutral analysis, for example, we extract \$20 of tax and return \$20 in public goods, the income effect falls away. Thus, efficiency analysis of taxation focuses not on the income effect of taxation but on a second effect—the “substitution” effect.<sup>43</sup>

The substitution effect refers to the change in behavior resulting from differential taxation. For example, our income tax taxes returns to labor (and savings) but not our enjoyment of leisure. As a result, we work less and “consume” more leisure under a labor income tax than we would in a no tax world. This makes sense; we are all maximizing our utility given the tax system we face, but this distortion in consumption patterns (not amount) reduces our aggregate utility beyond that simply associated with the income effect of taxation. We would, taxes aside, prefer to work a little more and recreate a little less, but the tax on wages distorts that choice. Economists refer to the additional loss of utility resulting from the distortion in behavior as the excess burden of taxation or deadweight loss.<sup>44</sup>

Consider a uniform lump sum or head tax. Such a tax produces an income effect but no substitution effect because the tax is essentially unavoidable.<sup>45</sup> It can be avoided only by dying or expatriating. If we take these two options off the table, a lump-sum tax does not distort taxpayer behavior beyond the change arising from the income effect. Thus, a lump-sum tax is an efficient tax that creates no excess burden. Of course, a lump-sum tax is also patently unjust as it totally ignores an individual’s ability to pay taxes. Real world taxes that are based on measures of income, consumption, or wealth, are fairer in that regard, but because they are by definition not uniform, they inevitably create substitution effects and excess burden. In this decidedly second-best world, the efficiency goal is to minimize the distortion and excess burden for a given amount of revenue raised.<sup>46</sup>

Under an income tax, the primary distortion that we are concerned about is along the labor/leisure front and the degree of distortion or excess burden in theory is a function of the MTR—the tax on the next or last dollar earned by the taxpayer—because it is the MTR that determines the relative after-tax value of labor and leisure and the distortions in behavior that arise from taxing the one but not the other.<sup>47</sup> Importantly, however, the relationship between the MTR and excess burden is not linear; excess burden increases with the square of the tax rate.<sup>48</sup>

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43. Weisbach, *supra* note 42, at 1653–54; Nussim, *supra* note 42, at 235.

44. Weisbach, *supra* note 42, at 1651 (“The deadweight loss of the tax is the loss in value to consumers in excess of the revenue raised by the government.”).

45. Nussim, *supra* note 42, at 236.

46. Nussim, *supra* note 42, at 237; Weisbach, *supra* note 42, at 1653. Obviously, there are other considerations in selecting or designing tax schemes including compliance costs incurred by taxpayers and enforcement costs incurred by taxing authorities. These add to the total deadweight loss of taxation.

47. Note again that I use the term “effective marginal tax rate,” abbreviated as MTR, in this Article to refer to a taxpayer’s actual marginal rate taking into account phase-in and phase-out provisions and similar adjustments and to distinguish this rate from statutory marginal rates or tax brackets.

48. See Weisbach, *supra* note 42, at 1651; Martin Feldstein, *Tax Avoidance and the*

*B. Do Taxpayers Understand and Respond to Taxation?*

The forgoing is theoretically sound. But does it reflect reality? Do taxpayers understand and respond to the economic incentives created by taxation? Are distortions real? Because if taxpayer behavior is not distorted in actuality, taxes don't create inefficiencies. But the evidence suggests that while taxpayers don't respond to taxes as perfectly informed, rational economic actors, taxes do distort behavior.

The primary distortion we would expect from a labor income tax is to labor supply. Increasing taxes on labor should result in less work and more leisure. Economists capture the effect of taxes on labor supply by measuring labor supply elasticity—the effect of taxes on employment rates and hours worked.<sup>49</sup> However, historically, studies have found fairly low labor supply elasticities along the intensive margin (hours worked), suggesting that hours worked are not terribly sensitive to tax rates.<sup>50</sup> To be sure, there are several possible explanations for this finding that do not run counter to standard economic theory. Perhaps incentives to keep one's job or to be promoted have more to do with labor supply than tax rates. Raj Chetty has suggested that various frictions could explain low labor supply elasticities.<sup>51</sup> Or perhaps taxes affect labor supply but over a longer time horizon than can be captured in empirical studies.<sup>52</sup>

In an important paper, however, Martin Feldstein argued that focusing on labor supply alone is too narrow a perspective and that all responses to taxes should be considered in evaluating the deadweight loss of taxation.<sup>53</sup> Feldstein found, and later work confirms, that elasticities of taxable income to tax are significantly larger than labor supply elasticities.<sup>54</sup> For example, if taxpayers increase charitable contributions or contributions to retirement plans as tax rates increase, these distortions would be reflected in measures of taxable income, but not in labor supply. Emmanuel Saez,

*Deadweight Loss of the Income Tax*, 81 REV. OF ECON. & STAT. 674, 678, n.15 (1999). It is difficult to explain exactly why deadweight loss is a function of the square of the tax rate and the concept is generally demonstrated graphically using demand curves. Deadweight loss is the area of a right triangle under a downward sloping demand curve with height equal to the amount of tax imposed and base equal to the reduction in quantity demanded given the tax. If the tax is raised by an increment  $t$ , there is an increase in both the height and base of the deadweight loss triangle. Since the area of a right triangle is equal to  $(b \times h)/2$ , and both  $b$  and  $h$  increase with  $t$ , deadweight loss increases with  $t^2$ . See Weisbach, *supra* note 42, for an example of the graphical depiction of deadweight loss.

49. Raj Chetty, *Bounds on Elasticities with Optimization Frictions: A Synthesis of Micro and Macro Evidence on Labor Supply*, 80 ECONOMETRICA 969, 971–72 (2012). The effect of taxes on employment rates is known as the extensive margin elasticity and the effect on hours worked by those employed is known as the intensive margin elasticity. *Id.*

50. See Emmanuel Saez, Joel Slemrod & Seth H. Giertz, *The Elasticity of Taxable Income with Respect to Marginal Tax Rates: A Critical Review*, 50 J. ECON. LIT. 3, 3–4 (2012) (“[T]he profession has settled on a value for this elasticity close to zero for prime-age males, although for married women the responsiveness of labor force participation appears to be significant.”).

51. Chetty, *supra* note 49.

52. LOUIS KAPLOW, *THE THEORY OF TAXATION AND PUBLIC ECONOMICS* 87–89 (2008).

53. Feldstein, *supra* note 48.

54. Feldstein, *supra* note 48; Saez et al., *supra* note 50, at 42 (noting that the best available estimates of the elasticity of taxable income range from 0.12 to 0.40).

Joel Slemrod, and Seth Giertz caution that some taxable income elasticity may simply reflect time shifting (as in the retirement funding example) or entity shifting (from individual to corporate form, for example), which represent tax-induced distortions but not of the type that create significant deadweight losses.<sup>55</sup>

In addition, there is survey and experimental evidence that sheds some light on taxpayer understanding of (but not responsiveness to) tax rate schedules. The bottom line is that most taxpayers lack a solid grasp on their MTRs and, while some studies find overestimation, most studies find underestimation, particularly for high-income taxpayers. In survey evidence reported in 1988, Fujii and Hawley found that of the 65% of subjects who reported an estimated MTR, on average these respondents underestimated their MTRs by about 3 percentage points,<sup>56</sup> a result that the authors characterized as evidence that taxpayers know their MTRs (glass half full),<sup>57</sup> and which Emmanuel Saez characterized as evidence that taxpayers don't know their MTRs or report them with substantial error (glass half empty).<sup>58</sup> In 1995, Rupert and Fischer provided survey evidence suggesting both over and underestimation of

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55. Saez et al., *supra* note 50, at 10. Other research has explored whether taxpayers respond to more discrete tax incentives created by “kinks” in the income tax schedule. The federal income tax system includes numerous kinks—points at which the MTR changes abruptly—such as the point at which marginal income goes from being taxed at a zero rate to being taxed at a 10% rate, or the point at which an EITC eligible worker's income subsidy is capped. In theory, if taxpayers are both aware of the details of the tax schedule and respond to these details by, for example, adjusting their labor supply, these kinks in the tax schedule should result in taxpayers reporting income that is bunched at the kinks. See Raj Chetty, John N. Friedman, Tore Olsen & Luigi Pistaferri, *Adjustment Costs, Firm Responses, and Micro vs. Macro Labor Supply Elasticities: Evidence from Danish Tax Records*, 126 Q.J. ECON. 749, 749–56 & n.12 (2011) (providing the following quote in explaining the rationale for the expectation of bunching at a large MTR kink point in the Danish tax system: “By the end of November, some of my colleagues stop working. It does not pay anymore because they have reached the high tax bracket.”). In a 2010 paper, however, Emmanuel Saez finds very little evidence of bunching at kinks in the U.S. federal income tax. See Emmanuel Saez, *Do Taxpayers Bunch at Kink Points*, 2 AM. ECON. J.: ECON. POL'Y 180 (2010). He finds some bunching at the first kink in the EITC schedule, the income level at which the EITC reaches its maximum level, and some bunching at the first income tax bracket kink (the point at which the 10% rate kicks in) but little evidence of bunching otherwise. *Id.* at 181. Moreover, he speculates that the bunching at the first EITC kink may reflect misreporting of income (i.e., cheating) rather than an actual impact on labor supply. *Id.* at 193 (noting that most of the bunching at the first EITC kink is associated with self-employed workers whose income is not verified by third party reporting). On the other hand, Raj Chetty and colleagues do find substantial bunching at a very significant kink in the Danish income tax schedule. Chetty et al., *supra*, at 751. Saez speculates that the differences in outcomes of the two studies may have to do with the relative simplicity of the Danish tax system and the greater economic significance of the Danish tax kink. Saez, *supra*, at 182 n.6 (noting that the threshold for the top Danish income tax bracket is uniform for all individuals and that Danish taxes are based on individual (not family) income).

56. Edwin T. Fujii & Clifford B. Hawley, *On the Accuracy of Tax Perceptions*, 70 REV. ECON. & STAT. 344, 346 (1988).

57. See *id.* at 346–47.

58. Saez, *supra* note 55, at 182.



MTRs based on a population of mostly low- and middle-income taxpayers.<sup>59</sup> More recently, in 2015, Gideon tested taxpayer perception of their statutory rates and found that low-income taxpayers tended to overestimate their statutory rates, while high-income taxpayers tended to underestimate.<sup>60</sup> However, MTRs for both groups of taxpayers are likely to be greater than statutory rates given numerous deduction and credit phase-outs.<sup>61</sup>

Several studies find that taxpayers frequently employ average rates in decision making instead of marginal rates. Because average rates are generally lower than MTRs in a progressive system, this error is essentially equivalent to underestimation of MTRs.<sup>62</sup> In 1995, de Bartolome reported experimental evidence that subjects presented with a tax table that highlighted average rates, but not MTRs, tended to use average rates in decision making.<sup>63</sup> Subjects presented with a tax schedule that highlighted MTRs did not make the same error.<sup>64</sup> Of course, today only about 10% of taxpayers file returns without assistance and use the tables or worksheets provided by the IRS.<sup>65</sup> In a 2005 working paper, Feldman and Katuscak also found evidence, based on survey data, that taxpayers tend to use average rates in place of MTRs, a result that the authors attributed to the complexity of the Code.<sup>66</sup>

In an intriguing experiment reported in 2003, Rupert, Single, and Wright found that subjects failed to adjust their estimates of their MTRs for floors and phase-outs of deductions and credits and thus tended to underestimate their MTRs.<sup>67</sup> Subjects presented with less complex adjustments to statutory rates made smaller errors than those presented with more complex adjustments.<sup>68</sup>

To be sure, several of these studies are quite old. On the other hand, the Code is more complex and opaque today, which does not bode well for the level of current taxpayer understanding and use of MTRs. As further discussed below, the factors

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59. Timothy J. Rupert & Carol M. Fischer, *An Empirical Investigation of Taxpayer Awareness of Marginal Tax Rates*, 17 J. AM. TAX ASS'N 36 (1995).

60. Michael Gideon, *Do Individuals Perceive Income Tax Rates Correctly*, 45 PUB. FIN. REV. 97, 99 (2017).

61. See *infra* notes 92–104 and accompanying text.

62. Offsetting this effect to some degree is survey evidence suggesting that taxpayers systematically overestimate average rates. Charles L. Ballard & Sanjay Gupta, *Perceptions and Realities of Average Tax Rates in the Federal Income Tax: Evidence from Michigan*, 71 NAT'L TAX J. 263 (2018).

63. Charles A.M. de Bartolome, *Which Tax Rate Do People Use: Average or Marginal?*, 56 J. PUB. ECON, 79, 79–80 (1995).

64. *Id.*

65. *Protecting Taxpayers from Incompetent and Unethical Return Preparers: Hearing Before the S. Comm. on Fin.*, 113th Cong. 131 (2014) (testimony of John A. Koskinen, Comm'r of Internal Revenue Service), <https://www.finance.senate.gov/imo/media/doc/90922.pdf> [<https://perma.cc/42CF-Q25R>] [hereinafter *Protecting Taxpayers*].

66. Naomi E. Feldman & Peter Katuscak, *Should the Average Tax Be Marginalized?* 8–9 (Working Paper, 2005).

67. Timothy J. Rupert, Louise E. Single & Arnold M. Wright, *The Impact of Floors and Phase-Outs on Taxpayers' Decisions and Understanding of Marginal Tax Rates*, 25 J. AM. TAX ASS'N 72, 73 (2003).

68. *Id.* at 79.

that make the Code computationally complex tend to reduce MTRs below statutory rates, generally resulting in underestimation of MTRs.

In sum, it is clear that taxpayers respond to taxes. Elasticities of taxable income to tax rates are significant and deadweight loss from differential taxation is real. The accuracy of taxpayer perception of MTRs and the speed and degree of responsiveness to changes in MTRs remain somewhat open questions.

*C. Positive Aspects of the Complexity and Opacity of the Federal Income Tax*

With that brief primer on efficiency of taxation and equally brief review of evidence regarding taxpayer understanding of and responsiveness to taxes, we now consider how the complexity of the federal income tax could actually increase social welfare.

1. Increased Accuracy

First, a more complex tax system can support a more accurate tax system that makes finer gradations between taxpayers based on relevant metrics, such as ability to pay. As Louis Kaplow describes, a more accurate tax system improves the distribution of the tax burden making it “more likely that high-income individuals pay high taxes and low-income individuals pay low taxes.”<sup>69</sup> Compare, for example, a lump sum head tax to even a rudimentary wage tax. The latter is more complex and while still far from perfect, obviously better recognizes ability to pay.

But Kaplow focuses on another benefit of improving accuracy, which is that a more accurate tax is more efficient.<sup>70</sup> Because excess burden is a function of the square of the tax rate,<sup>71</sup> errors in determining income that result in a higher tax rate cause greater increases in distortion and excess burden than is avoided by errors that result in a lower rate.<sup>72</sup> Random errors, in other words, do not even out. As a result, increasing accuracy reduces aggregate excess burden.<sup>73</sup> This result holds, Kaplow notes, as long as taxpayers are aware of mismeasurement and act accordingly.<sup>74</sup>

The accuracy theme has been repeated in more recent commentary that focuses on the potential for AI to disrupt tax design and assessment. The idea here is that AI-based tools will eventually be able to quickly and inexpensively answer all tax questions, incorporating all relevant tax materials—the Code, regulations, other written guidance, and caselaw.<sup>75</sup> Commentators suggest that such technology could

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69. Louis Kaplow, *Accuracy, Complexity and the Income Tax* 2 (Nat'l Bureau of Econ. Rsch., Working Paper No. 4631, 1994).

70. *See id.* at 3.

71. *See* Feldstein, *supra* note 48.

72. Kaplow, *supra* note 69, at 2.

73. Suppose, for example, that the accurate tax for each of two taxpayers is 10. Deadweight loss would be a function of  $2 \times 10^2$  or 200. Suppose instead that one taxpayer is taxed at 8 and the other at 12. The total deadweight loss in this scenario is a function of  $8^2$  plus  $12^2$ , which is 208.

74. Kaplow, *supra* note 69, at 2.

75. *See* Anthony J. Casey & Anthony Niblett, *The Death of Rules and Standards*, 92 IND. L.J. 1401, 1419 (2017); Benjamin Alarie, *The Path of the Law: Towards Legal Singularity*, 66

be used to generate optimal tax rules that yield greater revenue with minimal distortions.<sup>76</sup> While the underlying tax rules would be extremely complex and perhaps even individualized, the directives to taxpayers, for example, pay \$X, would be simple.<sup>77</sup>

## 2. Reduced Deadweight Loss

Of course, this AI-based tax system would be opaque, which leads to consideration of the potential benefits of complex *and opaque* tax provisions. In short, such provisions can reduce the excess burden of the income tax if they lead taxpayers to either ignore taxes in their decision making or to consider taxes in their decision making but to underestimate their MTRs.

One approach to a tax system that is a complete black box is to pay one's taxes when due but to ignore taxes in decision making. While ignoring taxes in decision making would have obvious drawbacks, which are considered in the following sections, doing so would reduce or eliminate the inefficient distortions that arise when individuals respond to taxes.<sup>78</sup>

There is some evidence that individuals respond less to hidden or low-salience taxes. For example, Chetty, Looney, and Kroft conducted an experiment in which certain products in stores were labelled with sales tax inclusive prices while labels on other products did not include sales taxes.<sup>79</sup> Although consumers had an accurate understanding of sales taxes in the abstract,<sup>80</sup> they reduced purchases of sales tax inclusive labelled goods relative to goods that lacked such labels.<sup>81</sup> The authors attributed this result not to information, but to salience and bounded rationality,<sup>82</sup> an effect that Brian Galle refers to as "cognitive loafing."<sup>83</sup> Chetty, Looney, and Kroft also found in a separate study reported in the same paper that increases in beer excise taxes, which are included in posted prices, reduced demand for beer more than increases in beer sales taxes, which were not posted at the shelf but only added at checkout.<sup>84</sup> Similarly, Amy Finkelstein found that the introduction of automated highway toll collection such as EZ Pass led to higher tolls, presumably because the elimination of toll collection at toll booths reduced drivers' awareness of tolls or the salience of these tolls.<sup>85</sup>

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U. TORONTO L.J. 443, 443 (2016).

76. See Casey & Niblett, *supra* note 75, at 1419; Alarie, *supra* note 75, at 443.

77. See Casey & Niblett, *supra* note 75, at 1419; Alarie, *supra* note 75, at 443.

78. See Austan Goolsbee, *The TurboTax Revolution: Can Technology Solve Tax Complexity*, in *THE CRISIS IN TAX ADMINISTRATION* 124, 138 (Henry J. Aaron & Joel Slemrod eds., 2004).

79. Raj Chetty, Adam Looney & Kory Kroft, *Salience and Taxation: Theory and Evidence*, 99 AM. ECON. REV. 1145 (2009).

80. The authors surveyed shoppers about sales tax rates and found that the median subject correctly answered seven of eight questions about the taxable status of goods. *Id.* at 1165.

81. *Id.* at 1146.

82. *Id.* at 1147.

83. Brian Galle, *Hidden Taxes*, 87 WASH. U.L. REV. 59, 75 (2009).

84. Chetty et al., *supra* note 79, at 1146.

85. Amy Finkelstein, *E-ZTax: Tax Salience and Tax Rates*, 124 Q.J. ECON. 969, 1008–09

Commentators generally agree that low-salience taxes can be used to improve the efficiency of taxation by reducing distortions and deadweight loss.<sup>86</sup> It seems unlikely, of course, that individuals would totally ignore the federal income tax. But this isn't what's required for salience to matter. Individuals may be fully aware of the income tax, but if the complexity and opacity of the Code reduce the salience of the tax at the time that these individuals make life decisions, that reduction in salience could lead to smaller distortions and deadweight loss.<sup>87</sup>

Relatedly, Deborah Schenk argues that while the federal income tax is salient, in the sense of being prominent, distortions in behavior and deadweight loss may be limited, and social welfare enhanced, if as a result of complexity and opacity individuals underestimate their MTRs.<sup>88</sup>

The basic idea here, as explained by de Bartolome and by Feldman and Katuscak, is that if a sizable number of taxpayers in a particular group underestimate their MTRs, they will supply more labor than they otherwise would, reducing distortions and excess burden and generating greater tax revenue.<sup>89</sup> Any particular taxpayer would be better off if she accurately understood her MTR and reduced her labor supply accordingly. However, if most or all taxpayers in this group accurately understand their MTRs and reduce their labor supply, this will result in significantly reduced tax revenue collected from this group. If the revenue requirement is fixed, tax rates will have to be increased to generate the same revenue and all taxpayers in this cohort will be worse off than they were when all mistakenly underestimated their MTRs.<sup>90</sup>

As discussed above, the limited survey evidence suggests that many taxpayers do not have an accurate understanding of their MTRs and tend to underestimate, if anything.<sup>91</sup> But this evidence is somewhat dated and limited, so let us return to theory.

To the extent that taxpayers make an effort to understand their tax situation, would complexity tend to lead taxpayers to under or overestimate their MTRs? One cannot

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(2009).

86. Galle, *supra* note 83, at 112; Gamage & Shanske, *supra* note 26, at 60; Schenk, *supra* note 25, at 255.

87. This situation would mirror Chetty et al.'s findings regarding sales tax salience. Shoppers were well aware of sales tax rules and rates but nonetheless responded differently when their attention was called to them in the shopping aisle. Chetty et al., *supra* note 79, at 1146.

88. Schenk, *supra* note 25, at 273, 283. But Schenk adds that "the conclusion that a low-salience income tax provision is efficiency-enhancing is not sufficiently robust to be the sole support for intentionally exploiting the salience bias." *Id.* at 284.

89. See *supra* note 88 and accompanying text.

90. De Bartolome, *supra* note 63, at 91–94; Feldman & Katuscak, *supra* note 66, at 10–12. These authors focus on the case in which taxpayers misperceive average rates as marginal rates, a special case of underestimation of marginal rates. Both sets of authors specifically claim that underestimation is welfare enhancing. Liebman and Zeckhauser conduct a similar analysis of the average/marginal rate confusion and generate similar results for the impact on excess burden without addressing social welfare implications directly. Jeffrey B. Liebman & Richard J. Zeckhauser, *Scheduling* 25–26 (Harvard Univ. & NBER, Working Paper, 2004). I should note that of these three papers, only de Bartolome's article is published.

91. See *supra* text accompanying notes 56–67.

be sure without more evidence, but two factors suggest that increasing complexity would be associated with underestimation and thus with reduced distortion and deadweight loss, at least for middle- to high-income taxpayers. The first factor is the proliferation of deduction and credit phase-outs and floors on various deductions under the regular income tax.

In recent years,<sup>92</sup> numerous regular tax deductions and credits have been phased out (or down) with income, including the EITC,<sup>93</sup> personal exemptions,<sup>94</sup> itemized deductions,<sup>95</sup> the dependent care credit,<sup>96</sup> the child tax credit,<sup>97</sup> the adoption credit,<sup>98</sup> the making work pay credit,<sup>99</sup> and various education<sup>100</sup> and retirement<sup>101</sup> deductions and credits.<sup>102</sup> Phasing out a deduction or credit increases a taxpayer's MTR above the statutory rate otherwise applicable. Suppose, for example, that certain taxpayers are entitled to a \$10,000 credit for some expenditure if their adjusted gross income (AGI) does not exceed \$100,000, but that the credit phases down at a rate of 20 cents for each dollar of AGI in excess of \$100,000, being reduced to zero for taxpayers with AGI of \$150,000. Also suppose that the marginal statutory rate applicable to all of these taxpayers is 25%.<sup>103</sup> Within the phase-out range, for each additional dollar of income, taxpayers will lose 20 cents of their credit in addition to facing a tax of 25 cents. Thus, the MTR in the phase-out range will be 45%.<sup>104</sup> Taxpayers in this situation who focus on the statutory rate (the posted price, if you will), will

92. As Zelenak notes, although “[p]hase-outs became a significant feature of the income tax in the 1980s, . . . the most dramatic growth in phase-outs occurred” in the 1990s. Zelenak, *supra* note 35, at 106.

93. I.R.C. § 32.

94. I.R.C. § 151(d) (suspended until 2025).

95. I.R.C. § 68 (suspended until 2025).

96. I.R.C. § 21.

97. I.R.C. § 24.

98. I.R.C. § 23.

99. In place in 2009 and 2010. *See* CONGR. RES. SERV., R40969 WITHHOLDING OF INCOME TAXES AND THE MAKING WORK PAY TAX CREDIT (Jan. 30, 2013), [https://www.everycrsreport.com/files/20130130\\_R40969\\_0e50564ebded07e5b21af3f38e80928bdfc21714.pdf](https://www.everycrsreport.com/files/20130130_R40969_0e50564ebded07e5b21af3f38e80928bdfc21714.pdf) [<https://perma.cc/887P-FMCG>].

100. These include the American Opportunity and Lifetime Learning Credits, I.R.C. § 25A, the deduction for qualified tuition and related expenses, I.R.C. § 222, the deduction for interest on education loans, I.R.C. § 221, and the deduction for contributions to Coverdell Education Savings Accounts, I.R.C. § 530.

101. These include the so-called “saver’s credit,” I.R.C. § 25B, and deductible contributions to traditional and Roth IRAs, I.R.C. §§ 219, 408A.

102. For a snapshot of current phase-out provisions of the IRC, see *Briefing Book: Key Elements of the U.S. Tax System: How Do Phaseouts of Tax Provisions Affect Taxpayers?* TAX POL’Y CTR. (May 2020), <https://www.taxpolicycenter.org/briefing-book/how-do-phaseouts-tax-provisions-affect-taxpayers> [<https://perma.cc/XZZ5-JFWU>].

103. Most floors and phase-outs in the Code are based on some measure of adjusted gross income, which is gross income less a certain set of specified deductions. *See, e.g.*, I.R.C. § 32(a) (phasing out the EITC based on a percentage of AGI in excess of a threshold); I.R.C. § 213(a) (setting a floor on deductibility of medical expenses at 7.5% of AGI).

104. Because the phase-out here is of a credit, the credit phase-out percentage and the statutory MTR can simply be added to calculate an effective MTR.

underestimate their actual MTR, potentially reducing distortions in their supply of labor relative to the distortions that would occur under a fully transparent tax scheme.

Floors placed on various deductions have a similar impact on MTRs. Medical and dental expenses, for example, are deductible only to the extent that their aggregate amount exceeds 7.5% of a taxpayer's AGI.<sup>105</sup> Suppose a taxpayer has AGI of \$100,000 and medical expenses of \$10,000. Of that amount, \$2500 of medical expenses would be deductible.<sup>106</sup> But for each additional dollar of gross income, the taxpayer will lose seven and a half cents of her deduction for medical expenses because of the seven and a half cent increase in the floor. As a result, her MTR will be 7.5% greater than the statutory rate.<sup>107</sup> Again, if a taxpayer focuses on her statutory rate but is subject to a floor on deductions, she will underestimate her MTR.

Moving beyond the regular income tax, a second factor that in recent years has tended to result in MTRs in excess of statutory rates is the alternative minimum tax. Prior to the enactment of the Jobs Act, over five million U.S. taxpayers paid the AMT.<sup>108</sup> The AMT is essentially a second tax system incorporating a broader base, large exemptions, and nominally lower tax rates. But because the AMT exemption amounts phase out for higher-income taxpayers, MTRs under the AMT are often higher than non-AMT statutory rates. The Tax Policy Center reported that about 77% of households subject to the AMT faced a higher MTR in 2015 than they would have

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105. I.R.C. § 213. Other deductions subject to floors include miscellaneous itemized deductions and casualty losses. Miscellaneous itemized deductions, including unreimbursed business expenses of employees, are allowed only to the extent that their aggregate exceeds 2% of AGI. I.R.C. § 67(a). However, the deduction for miscellaneous itemized deductions is completely suspended through 2025. I.R.C. § 67(g). Deductions for net personal casualty losses of individuals are allowed only to the extent that their aggregate exceeds 10% of AGI. I.R.C. § 165(h)(2). Through 2025, deductions for casualty losses are generally limited to losses from federally declared disasters. I.R.C. § 165(h)(5).

106. This is because the floor on the deduction would be 7.5% of \$100,000, or \$7500.

107. To keep things simple, suppose in this example that the taxpayer's statutory and average tax rates are 25% and that medical expenses are the taxpayer's only itemized deductions. (These simplifications do not affect the analysis.) At AGI of \$100,000, taxable income would be \$97,500 (\$100,000—\$2500 deduction after the 7.5% of AGI floor), and tax would be \$24,375. At AGI of \$100,001, taxable income would be \$97,501.075 (\$100,001—\$2499.924 deduction after the 7.5% of AGI floor), and tax would be \$24,375.2688. In other words, a \$1 increase in gross income increases tax by 26.9 cents for a 26.9% MTR, 7.5% higher than the 25% statutory rate.

108. Reed Shuldiner, *Was the AMT Effectively Repealed?*, 159 TAX NOTES 495, 498 (2018). The Jobs Act reduced the reach of the AMT to about 200,000 taxpayers in 2018, but the changes are due to expire at the end of 2025. Barring further legislative action, the old AMT rules will be restored in 2026 and the provision is estimated to affect 6.7 million taxpayers in 2026. *Briefing Book: Key Elements of the U.S. Tax System: What is the AMT?* TAX POL'Y CTR. (May 2020), <https://www.taxpolicycenter.org/briefing-book/what-amt> [https://perma.cc/5B5P-X25K].

faced under the regular income tax.<sup>109</sup> As Burman, Gale, and Rohaly note, the idea that the AMT broadens the base and reduces rates is, or was, a myth.<sup>110</sup>

As a result of these provisions, middle- and upper-income taxpayers whose MTRs differ from their statutory rates more often face an MTR that exceeds their statutory rate, rather than the reverse.<sup>111</sup> And for these taxpayers, it seems likely that complexity and opacity lead to underestimation of MTRs, on average, and to reduced labor supply distortions.<sup>112</sup> In other words, the underestimation of MTR would mitigate the reduction in labor supply that would follow if high-income individuals understood their actual MTRs and acted accordingly.

For low-income individuals the picture is somewhat more complex. First, it is not only high-income taxpayers who experience MTRs in excess of statutory rates and who would underestimate their MTRs if they focused on the latter. Low-income individuals often face exceptionally high MTRs as a result of a confluence of phase-outs. For example, examining 2010 data, Molly Sherlock finds that 20% of taxpayers in the 10% statutory bracket faced an MTR at least 10 percentage points higher.<sup>113</sup> In other words, for these taxpayers, MTRs are twice statutory rates or more.

109. *Briefing Book: Key Elements of the U.S. Tax System: Should the AMT Replace the Regular Income Tax?* TAX POL'Y CTR. (May 2020), [http://www.taxpolicycenter.org/sites/default/files/briefing-book/4.5.5-should\\_the\\_amt\\_replace\\_the\\_regular\\_income\\_tax.pdf](http://www.taxpolicycenter.org/sites/default/files/briefing-book/4.5.5-should_the_amt_replace_the_regular_income_tax.pdf) [<https://perma.cc/ZYZ5-YDSC>]; see also Rosanne Altshuler & Jacob Goldin, *The Opacity of Marginal Tax Rates*, 125 TAX NOTES 335, 335 (2009) (using the Urban-Brookings Tax Policy Center Microsimulation Model and estimating that 80% of AMT-paying taxpayers faced an EMTR in excess of their statutory rate for 2009).

110. Leonard E. Burman, William G. Gale & Jeffrey Rohaly, *The AMT: Projections and Problems*, 100 TAX NOTES 105, 115 (2003).

111. Using 2010 IRS Statistics of Income data, Sherlock estimates that 42.5% of taxpayers in the 25% bracket faced an MTR above their statutory rate and only 1.8% below; that 54% of taxpayers in the 28% bracket faced a higher MTR and only 1% a lower; and that 76.8% of taxpayers in the 33% bracket faced a higher MTR and 9.6% a lower. To be sure, because very high-income taxpayers would have fully passed through the AMT exemption phase-out, only 3.6% of taxpayers in the 35% bracket faced an MTR in excess of statutory rates in 2010, while 45.5% faced a lower MTR. However, fewer than 1% of taxpayers were in the 35% bracket in 2010. Note also that, like today, the personal exemption and itemized deduction phase-outs were not in place in 2010. MOLLY F. SHERLOCK, CONG. RES. SERV., R44787, STATUTORY AVERAGE AND EFFECTIVE MARGINAL TAX RATES IN THE FEDERAL INDIVIDUAL INCOME TAX: BACKGROUND AND ANALYSIS 32 (Mar. 16, 2017).

112. An important set of provisions of the Jobs Act complicates this picture somewhat. Newly enacted § 199A provides a 20% deduction for the qualified business income of certain taxpayers. For taxpayers entitled to the full deduction, this provision effectively reduces MTRs by 20% of the statutory rate. A taxpayer who was unaware of this provision and focused on the statutory rate would overestimate MTR and potentially oversupply labor, all else equal. However, the § 199A deduction phases out with income. Section 199A eligible taxpayers within the phase-out range can face MTRs well in excess of statutory rates. Libin Zhang, *Marginal Income Tax Rates of the Passthrough Business Deduction*, 159 TAX NOTES 1139, 1139 (2018). In these situations, of course, a taxpayer focused on her statutory rate would underestimate MTR and potentially undersupply labor. See *id.* (estimating that in the § 199A phase-out range, EMTRs in 2018 can exceed 60%).

113. SHERLOCK, *supra* note 111, at 13. See also David Altig, Alan J. Auerbach, Laurence

But two factors run in the other direction for low-income taxpayers. First, tax expenditures sometimes incorporate phase-in provisions that create wage subsidies across a significant income range for low-income taxpayers. Consider the EITC. The EITC phase-in reduces MTRs in a fashion analogous to the increase in MTR that flows from the phase-out. For example, the EITC phases in at a 34% rate for taxpayers with one qualifying child.<sup>114</sup> Within the phase-in range, these taxpayers receive a credit of 34 cents for every additional dollar earned. Generally, taxpayers within the EITC phase-in range face a zero statutory rate and thus an MTR of negative 34% once the EITC phase-in is factored in.<sup>115</sup> Individuals who fail to consider the EITC phase-in might overestimate their MTR and work less than they would if their MTR were transparent. In this case complexity and opacity amplify the distortions of the labor income tax.<sup>116</sup>

In addition, some studies have found that the tax rate that is most salient for individuals is the highest statutory rate.<sup>117</sup> If low-income individuals make labor supply decisions based on this rate rather than their lower statutory rate or even MTR, they will again undersupply labor amplifying the distortion of the income tax. This is less of a problem for high-income taxpayers whose income places them in or near the highest bracket to begin with.

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In sum, although the evidence that taxpayers tend to underestimate their MTRs is less than fully robust, it is consistent with the observation that the complicated phase-outs of deductions, credits, and AMT exemptions are more likely to result in underestimation than the reverse, at least for middle to high-income taxpayers. To the extent that taxpayers respond to these lower perceived MTRs, complexity and opacity likely reduce distortions and excess burden. In this sense, complexity and opacity may serve to increase social welfare.

### 3. Deterred Cheating and Welfare-Reducing Planning

Transparency facilitates tax planning and certainly not all tax planning is welfare enhancing. Indeed, David Weisbach argues that tax planning is worse than worthless.<sup>118</sup> Tax planning, in his view, is equivalent to taxpayers doing backflips to

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J. Kotlikoff, Elias Ilin & Victor Ye, *Marginal Taxation of American's Labor Supply* (Nat. Bureau of Econ. Res., Working Paper No. 27164, 2020) (taking into account phase-outs of non-tax benefits as well as phase-outs under state and federal tax law and finding that one in four low-income workers faced EMTRs in excess of 70%) [https://www.nber.org/system/files/working\\_papers/w27164/w27164.pdf](https://www.nber.org/system/files/working_papers/w27164/w27164.pdf) [<https://perma.cc/MU53-C5WV>].

114. I.R.C. § 32(b).

115. Likely as a result of the EITC phase-in, Sherlock finds that 44% of taxpayers in the 0% bracket in 2010 faced a negative MTR. SHERLOCK, *supra* note 111, at 32.

116. Similarly, the refundable portion of the Child Tax Credit phases in at a 15% rate for taxpayers with earned income above \$3000. See I.R.C. § 24(d)(1).

117. See McCaffery, *supra* note 27, at 1887.

118. David A. Weisbach, *Ten Truths About Tax Shelters*, 55 TAX L. REV. 215, 222 (2002).



reduce taxes.<sup>119</sup> If everyone does backflips, the revenue raised from each taxpayer must be unaffected in equilibrium.<sup>120</sup> The only difference, before and after, is all the backflips. If only some taxpayers do backflips, these taxpayers impose externalities on those that abstain.<sup>121</sup> While there are certainly exceptions, which even Weisbach notes, there is truth to his observation.<sup>122</sup> Given a fixed revenue requirement, a taxpayer's expenditure of time and energy to reduce her taxes is socially wasteful. And whatever one thinks about "good" tax planning, some tax planning, equating to evasion or cheating, clearly is socially wasteful.

If transparency facilitates planning (including cheating) by laying out a roadmap for technical compliance or reported compliance, as some have argued,<sup>123</sup> then complexity and opacity deter planning. Again consider the EITC. An EITC recipient's credit is maximized when her earned income reaches a certain threshold. That threshold is an inflation adjusted figure that depends on whether the taxpayer has qualifying children and, if so, the number of qualifying children.<sup>124</sup> Given the annual inflation adjustments, the threshold is a moving target. Suppose a taxpayer with non-wage income (and a less than finely tuned moral compass) decides that she would like to report income equal to the threshold in order to maximize her tax credit.<sup>125</sup> If the threshold were a fixed, transparent, round number amount widely understood within the community, doing so would be fairly easy. But it is much more difficult to hit an obscure moving target. In fact, if one Googles "EITC" or "EITC maximum credit" one can quickly learn the maximum credit for a given year and the income level at which the credit completely phases out, but not the income level associated with achieving the maximum credit.<sup>126</sup> One has to work very hard, I found, to uncover this critical bit of information.

#### *D. Negative Aspects of Increasing Tax Complexity and Opacity*

Complexity can support a more accurate tax system and complexity and opacity can work to mitigate labor supply distortions and deadweight loss if taxpayers systematically underestimate MTRs and deter, or at least not promote, cheating. But there are many countervailing costs. First, as noted above, if individuals

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119. *Id.*

120. *Id.* at 223 ("Holding government spending constant, everyone's taxes are exactly the same with and without the backflip shelter, except that with the backflip, nominal taxes are higher and then are reduced by the tax gymnastics.").

121. *Id.* at 223 (viewing tax planning by some as an externality imposed on others).

122. *See id.* at 224 (recognizing that changes in behavior intended to satisfy explicit tax incentives may be socially valuable); *see also*, Manoj Viswanathan, *Lower-Income Tax Planning*, 2020 U. ILL. L. REV. 195 (arguing that low-income tax planning is often efficient).

123. *See, e.g.*, Casey & Niblett, *supra* note 75, at 1420 n.63 ("If the law provides a clear rule and the regulated individual would prefer to circumvent that rule, then certainty provides a road map for avoidance.").

124. I.R.C. § 32.

125. Given third party reporting of W-2 wage income to the IRS, taxpayers reporting only W-2 wages have no real scope for misreporting their income for EITC purposes.

126. *EITC Maximum Credit*, GOOGLE, <http://google.com> [<https://perma.cc/3DVG-7C6H>] (search for EITC Maximum Credit and open the first several links).

systematically overestimate MTRs, this would amplify labor supply distortions and increase deadweight loss. This scenario seems unlikely for high-income individuals, but possible for low-income individuals in the EITC phase-in range. But even assuming systematic underestimation of MTR across the board and reduction of deadweight loss, there are a number of potentially offsetting negative factors.

### 1. Suboptimal Decision Making

Tax complexity and opacity could lead to suboptimal decision making. Most obviously, systematic underestimation of MTRs may lead to individuals working more than they would if fully and accurately informed. This may be personally suboptimal, but obviously this is just the flip side of reduced labor supply distortion, which we generally view as a plus. But more generally, complexity and opacity impede basic tax planning and decision making that no one would find objectionable. A taxpayer who is unaware of phase-outs and underestimates her MTR may sock away less of her earnings in qualified retirement vehicles or give less of her money to charity than she would if she understood that the after-tax cost of these decisions was much less than she anticipated. A taxpayer on the cusp of the AMT may be unable to determine the tax benefit associated with various expenditures, such as the property taxes she would pay if she purchased a home.<sup>127</sup> Other opaque limitations on deductions or credits may result in taxpayers making suboptimally large expenditures on, for example, higher education or home improvements, without realizing that the purported tax benefits are limited or largely illusory.<sup>128</sup>

### 2. Ineffective Tax Incentives

Many of the most complex tax provisions faced by individuals involve explicit tax incentives or subsidies that Congress has elected to implement through the

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127. See, e.g., Zelenak, *supra* note 35, at 103.

128. Tax complexity and opacity could also potentially lead to suboptimal budgeting and consumption choices if individuals who underestimate their MTRs also underestimate their aggregate tax burden. This possibility has received considerable attention in the context of low-salience consumption taxes. Chetty et al., *supra* note 79, at 1173–74; Gamage & Shanske, *supra* note 26, at 66–68; Nussim, *supra* note 42, at 242. Chetty, Looney, and Kroft provide an example in which a consumer purchases a certain car, unaware of a tax on the car purchase that will leave insufficient funds for necessities. Chetty et al., *supra* note 79, at 1174 (noting that the effect of inattention depends on how the consumer adjusts her budget in light of the tax, whether the consumer is credit constrained, etc.). Other commentators have questioned the significance of this distortionary income effect, however, and have argued that it is less likely to arise from misperception of income tax rates. Gamage & Shanske, *supra* note 26, at 67–68 (arguing that given taxpayer learning these distortionary income effects are of limited importance unless low-salience taxes affect irregular expenditures and there are long delays between purchase and assessment of tax); Nussim, *supra* note 42, at 254 (arguing that the potential drawbacks of misperceived consumption taxes generally do not apply to wage taxes given, inter alia, taxpayers' ability to learn and respond to nontransparent taxation). Accurate withholding would seem to resolve budgeting problems even in the face of complexity and opacity. I thank Leigh Osofsky for this observation.

income tax. These incentives and subsidies include the EITC, education credits, and retirement savings incentives.<sup>129</sup> As Larry Zelenak notes, tax incentives are less effective if taxpayers don't recognize them.<sup>130</sup> The sheer number of incentives, their individual complexities, and the interplay between them<sup>131</sup> undermine taxpayer recognition, understanding, and take-up. Commentators have recognized the tension between the general goals of reducing behavioral distortions and increasing the efficiency of the income tax, on the one hand, and promoting the goals underlying these tax expenditures, on the other. For example, Jacob Goldin has remarked that raising awareness of the EITC creates a tradeoff between improving the effectiveness of the incentive and facilitating individual optimization, on the one hand, and minimizing deadweight loss, on the other.<sup>132</sup>

### 3. Undermined Political Accountability and Fiscal Citizenship

The complexity and opacity of the Code enables Congress to purposefully obfuscate tax burdens, reduces political accountability, and undermines fiscal citizenship. While it is often difficult to glean congressional motives from complex tax provisions, sometimes it isn't. Although temporarily in abeyance, the poster children for purposeful obfuscation of tax rates have to be the phase-outs of personal exemptions and itemized deductions.<sup>133</sup> The two are roughly similar in apparent intent and effect, so we will consider only the phase-out of personal exemptions.

A deduction for personal exemptions—a set amount each year based on the number of individuals in the filing unit—has been a feature of the income tax since 1913.<sup>134</sup> Since 1985, the personal exemption amount for each member of the filing unit has been indexed for inflation,<sup>135</sup> reaching \$4,050 prior to the enactment of the Jobs Act.<sup>136</sup> Between 1988 and 2009, and again between 2013 and 2017, the personal exemption amount was phased down or out for high-income taxpayers.<sup>137</sup> Why?

129. *See supra* notes 92–102 and accompanying text.

130. Zelenak, *supra* note 35, at 103–04.

131. To provide just one example, consider the interplay between the § 21 dependent care credit and the § 129 exclusion for employer-provided dependent care. The maximum amount creditable under § 21 is reduced by any exclusion under § 129.

132. Goldin, *supra* note 22, at 106. The EITC creates a tension because it includes a phase-out provision that increases MTRs and reduces work incentives as well as a phase-in provision with the opposite effect. *See* § 32(a)–(b).

133. Technically, § 68 phases down itemized deductions to a floor equal to 20% of itemized deductions before the phase-down and is not truly a phase-out. However, I will refer to both as phase-out provisions for simplicity.

134. *Briefing Book: Key Elements of the U.S. Tax System: What are Personal Exemptions?*, TAX POL'Y CTR., <https://www.taxpolicycenter.org/briefing-book/what-are-personal-exemptions> [https://perma.cc/SE3W-5F5G] (May 2020).

135. Stephen J. Entin, *Tax Indexing Turns 30*, TAX FOUND. (Mar. 11, 2015), <https://taxfoundation.org/tax-indexing-turns-30/> [https://perma.cc/7JKW-BJBV].

136. IRS, BULL. 2016-45 707 (2016) (providing inflation-adjusted figures for tax years beginning in 2017).

137. During some years the phase-out was in effect, there were limits to the amount of reduction. For a detailed explanation, see IRS, TABLE 23. U.S. INDIVIDUAL INCOME TAX: PERSONAL EXEMPTIONS AND LOWEST AND HIGHEST TAX BRACKET TAX RATES AND TAX BASE

There is no plausible reason other than as a hidden or low-salience means of raising additional tax revenue from this population of taxpayers. The highest statutory MTR has high political salience.<sup>138</sup> It is this number that citizens generally focus upon in considering whether “taxes” are too high, too low, or about right, and, of course, a significant fraction of the population generally believes the answer to be “too high.” Thus, it is no surprise that a means of raising additional tax revenue from taxpayers in the highest bracket, without adjusting that bracket, would be a means of avoiding political accountability for taxes and a particularly popular option for policy makers. And that is just what Congress has done, repeatedly, by phasing out personal exemptions and itemized deductions.

How might complexity facilitate this move? If one can imagine a truly simple tax system focused on measuring income and including no tax expenditures, the enactment of phase-outs of personal exemptions or itemized deductions would likely be a fairly transparent end run around statutory rate increases and for that reason might never have happened. But given an already complicated Code with numerous phase-outs of tax expenditure deductions and credits, the addition of two more phase-outs may have seemed less exceptional and notable.

The personal exemption and itemized deduction phase-outs are examples of purposeful obfuscation that both benefit from and increase tax complexity and reduce political accountability. But tax complexity may undermine fiscal citizenship even when the effect is unintended. In his excellent book, *Learning to Love Form 1040: Two Cheers for the Return-Based Mass Income Tax*, Larry Zelenak defends our broadly applicable, return-based tax system against critics such as Michael Graetz, who would prefer to return the income tax to its roots as a tax on high-income individuals only.<sup>139</sup> Zelenak’s defense is based primarily on fiscal citizenship and the idea that the process of filing taxes encourages citizens to think more deeply about the tax system and about the fiscal state more generally. Excessive complexity undermines fiscal citizenship, in Zelenak’s view. “Taxation without comprehension,” he argues, “is as inimical to democracy as taxation without representation.”<sup>140</sup>

#### 4. The Leviathan and Fiscal Illusion Problems

Related to the forgoing, some commentators argue that complexity and opacity, particularly when remedied by black box software, may lead to suboptimally large government. The idea here is that if taxpayers don’t comprehend their liability—if taxes are low salience and if compliance is relatively painless—and if public goods

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FOR REGULAR TAX, TAX YEARS 1913-2018, <https://www.irs.gov/statistics/soi-tax-stats-historical-table-23> [https://perma.cc/KBD7-QBCF] (Nov. 5, 2021).

138. McCaffery refers to the highest rate bracket as being “socially prominent” and argues this prominence places constraints on legislators. See McCaffery, *supra* note 27, at 1887, 1905.

139. See ZELENAK, *supra* note 1 (reacting to MICHAEL J. GRAETZ, 100 MILLION UNNECESSARY RETURNS: A SIMPLE, FAIR, AND COMPETITIVE TAX PLAN FOR THE UNITED STATES (2008)).

140. *Id.* at 114. Interestingly, Zelenak is a fan of prepopulated return systems, such as California’s Ready Return experiment. In his view, the minimal requirement that citizens at least sign and return pre-populated returns is sufficient to engender fiscal citizenship. *Id.* at 6.

are more salient, taxpayers may support a larger government providing more services than they would if all were transparent and clearly understood.<sup>141</sup>

These arguments stem from the Leviathan hypothesis and the theory of fiscal illusion. As Edward McCaffery describes,

The basic idea of the Leviathan hypothesis is that governments, or any bureaucracy generally, continually expand. It is as if a government were a living organism . . . . Fiscal illusion is a more specific theory that holds that individuals are likely to exaggerate the benefits and underestimate the costs of certain large public projects or public goods generally. . . . Taxes add to and enrich the basic fiscal illusion/ Leviathan story. Any degree of hiddenness [sic] in a tax structure plays directly into the prominence aspects of the fiscal illusion effect . . . .<sup>142</sup>

While this fiscal illusion or Leviathan theory of the size of government is possible, Galle notes that evidence supporting this story is inconclusive.<sup>143</sup> Moreover, David Gamage and Darien Shanske argue that there is no baseline for determining whether the political salience of taxes is too high or too low, and thus we can draw no useful conclusions about whether any relationship between tax salience and the size of government is socially valuable or costly, assuming that such a linkage exists at all.<sup>144</sup>

#### 5. Impact on Taxpayer Autonomy, Rights to Transparency, and Fairness

Related to the problem of impaired decision-making, but broader, is a concern that complexity and opacity undermine taxpayer autonomy. McCaffery, for one, questions the purposeful use of cognitive error, such as employing low-salience taxes, even in pursuit of noble, liberal goals.<sup>145</sup> Joshua Blank and Leigh Osofsky note that the IRS has adopted a taxpayer bill of rights, which includes a right to be informed and a right to clear explanation of tax laws and IRS procedures.<sup>146</sup> In contemplating a world in which technology may allow the production of tax returns with little or no input from taxpayers, Blank and Osofsky worry that “the public stops

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141. Milton Friedman publicly regretted his role in the introduction of the federal income tax withholding system during World War II. In Friedman’s view, the withholding system made the income tax less visible and more acceptable, leading to growth in government. *See* MILTON FRIEDMAN & ROSE D. FRIEDMAN, *TWO LUCKY PEOPLE: MEMOIRS* 123 (1998); *see also*, PRESIDENT’S ADVISORY PANEL ON FED. TAX REFORM, NINTH MEETING 119 (May 17, 2005) (statement of Grover G. Norquist, President, Americans for Tax Reform) (“[M]oving to a so-called return-free system will reduce people’s understanding of what exactly they’re paying and their [reduced] focus on it will make it easier to raise taxes.”).

142. McCaffery, *supra* note 27, at 1927–28 (citations omitted). Finkelstein traces the theory of fiscal illusion to John Stuart Mill and notes the importance of James Buchanan’s work in this area. Finkelstein, *supra* note 85, at 970.

143. Galle, *supra* note 83, at 98.

144. Gamage & Shanske, *supra* note 26, at 79–80.

145. McCaffery, *supra* note 27, at 1943.

146. Joshua D. Blank & Leigh Osofsky, *Simplexity: Plain Language and the Tax Law*, 66 EMORY L.J. 189, 199 (2017); Blank & Osofsky, *supra* note 41, at 194.

understanding what the law is,” which seems to run counter to the right to be informed.<sup>147</sup>

Finally, opacity and complexity will often lead to outcomes for taxpayers that many will view as unfair. If taxpayers make expenditures that they reasonably expect will provide tax benefits, perhaps in response to specific incentives created by Congress, but later learn that the tax benefit was subject to an opaque limitation and thus was reduced or eliminated, this simply seems unfair.<sup>148</sup>

*E. Weighing the Costs and Benefits of Tax Complexity and Opacity*

In terms of overall social welfare, the complexity and opacity of the Code likely result in a tradeoff between reduced excess burden, on the one hand, and individual losses due to suboptimization and perhaps impeded political accountability, on the other. Commentators vary in their assessment of the net impact on social welfare.<sup>149</sup> In my view, the potential reductions in labor supply distortion and cheating associated with complexity and opacity are attractive features. On the other hand, I worry about suboptimal decision making and impairment of tax incentives, particularly at the low end of the income distribution. Further, although it simply

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147. Blank & Osofsky, *supra* note 41, at 187.

148. This situation can arise even with relatively straightforward Code provisions. Itemized deductions, for example, provide tax benefits only to the extent that they exceed the standard deduction, in aggregate. Thus, taxpayers who donate used vehicles to charity in response to advertisements touting tax benefits and later find that the tax benefit is small or nonexistent may feel aggrieved. See Lilian V. Faulhaber, *The Hidden Limits of the Charitable Deduction: An Introduction to Hypersalience*, 92 B.U. L. REV. 1307, 1320–23 (2012). However, as long as the tax rules are straightforward and easily accessible, sympathy will likely be limited. Once the complexity of the rules and interplay of rules creates a high degree of opacity, fairness arguments seem more compelling.

149. For example, Gamage and Shanske argue that reducing the economic or “market” salience of taxes is socially valuable because the reduction in distortions and deadweight loss is a first-order effect, while income effects, externalities, and distributional effects are second order. See Gamage & Shanske, *supra* note 26, at 60–79. With respect to political salience, Gamage and Shanske are agnostic, emphasizing that there is no coherent baseline for determining the optimal political salience of taxes. *Id.* at 79. To be sure, Gamage and Shanske focus on salience, not complexity, and the additional downsides of complexity might suggest a different result for them. Galle concludes that the social welfare effects of hidden taxes are indeterminate and that the answer depends, at least in part, on the mechanism through which taxes are hidden. Galle, *supra* note 83, at 64 (arguing that “[h]idden taxes are likely progressive in a rational ignorance model, but regressive otherwise”). Again, there is not one-to-one correspondence between complex taxes and hidden taxes, but significant overlap. Schenk cautiously supports exploitation of low-salience taxes, primarily on political economy grounds. Schenk, *supra* note 25, at 284. She is somewhat more cautious about the use of complexity to reduce salience given other costs to complexity. *Id.* at 286. Zelenak, on the other hand, tends to focus on the downsides of complexity; in particular, the adverse impact on fiscal citizenship. Zelenak, *supra* note 35, at 102–03; Lawrence Zelenak, *Justice Holmes, Ralph Kramden, and the Civic Virtues of a Return Filing Requirement*, 61 TAX L. REV. 53, 66 (2007). McCaffery, as noted above, has expressed discomfort with purposeful exploitation of cognitive error, i.e., exploitation of complex and low-salience taxes, on both practical and moral grounds. McCaffery, *supra* note 27, at 1943.

reflects my own biases, I am less concerned about a high-income taxpayer underestimating her MTR and working “too much” as a result of deduction or credit phase-outs or the AMT than I am about a low-income taxpayer missing out on the EITC.

### III. HOW TAX PLANNING SOFTWARE CAN (AND LIKELY WILL) ADDRESS THE COMPLEXITY AND OPACITY OF THE INCOME TAX

It is important to understand the costs and benefits of tax complexity, but ultimately the question of whether complexity and opacity, on net, reduce or increase social welfare is in one sense beside the point of this Article. A primary claim here is that technology can, and likely will, render the black box functionally transparent, at least for high-income taxpayers who are willing to pay the fare, for good or ill. This Part discusses the potential of tax planning software to re-create transparency. The following Parts evaluate currently available technology and make the case for government intervention in this arena and bring us back to the costs and benefits of complexity, asking if we can preserve the benefits while mitigating the costs.

I start with the proposition that the primary concern with a federal income tax black box is that taxpayers cannot readily understand the relationship between their life decisions and their tax burdens, which I refer to as a lack of functional transparency. The problem is not that taxpayers can’t master the calculation of the phase-out of personal exemptions, for example, but that taxpayers don’t understand how much of their next dollar of income they’ll keep after tax. It isn’t that the EITC phase-in calculations are complex, per se, but that taxpayers don’t realize how much additional income they’ll receive on net from taking a higher-paying job. The problem isn’t so much the difficulty of wading through the plethora of mutually exclusive education incentives, as it is just knowing that tax incentives for higher education exist and estimating the tax benefit.

Technology can easily address these problems. It can do so in three basic ways. First, tax planning software can be used to run “what if” scenarios illuminating the association between life decisions and tax. Second, planning software can be used to alert taxpayers to tax incentives, both recurring and one-time incentives. Third, and more generally, software can be used to educate taxpayers, to improve their understanding of the tax system from a functional perspective.

#### *A. Running “What If” Scenarios*

Many of us use software to prepare our tax returns. We input or download our various items of income and expense, and our withheld or estimated tax payments, or both, and the software calculates how much additional tax we owe or the amount of our refund. And then we have a beer and celebrate the fact that that chore is done for another year.

But what most of us fail to realize is that we have also created a tool that could be used for tax planning. Once all of this information has been collected, we could easily run “what if” scenarios to determine the marginal effect of our decisions.<sup>150</sup> To be

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150. This statement assumes, of course, that the software was designed to support “what

sure, what we have done is to create a baseline for the year past, not the year ahead, but for many of us, the past year is a reasonable starting place for thinking about the year or years ahead, and the tax impact of marginal adjustments to the past year's data is likely to carry over to the next year.

The range of "what ifs" is almost limitless. How will my taxes be affected if I earn another \$1000? If I have another child? If I donate a used car to charity? This is the sort of information that taxpayers need in order to make decisions in an optimal fashion. Of course, taxpayers who are fully informed in this fashion are more likely to adjust their labor supply to reflect their actual MTR,<sup>151</sup> which may not be socially optimal. But at this stage, I am evaluating what planning software can do to render the black box functionally transparent, not whether it should be done.

As long as the relationship between life decisions and tax is a continuous function, "what if" scenario exploration should provide the information that taxpayers need to make those decisions effectively. And generally, those relationships are continuous. Phase-outs are typically smooth. Consider, for example, the phase-out of the EITC.<sup>152</sup> For taxpayers with two qualifying children, the EITC phases out at a 21.06% rate; that is, for each dollar of income above the phase-out threshold, these taxpayers lose about 21 cents of credit until the credit vanishes.<sup>153</sup>

Some tax provisions, however, create cliff effects that make planning somewhat more difficult. For example, § 222 provides up to a \$4000 deduction for qualified college tuition and related expenses for single taxpayers with AGI of \$65,000 or less and a \$2000 deduction for single taxpayers with AGI between \$65,000 and \$80,000.<sup>154</sup> A single taxpayer with AGI of \$65,000 who added another \$1000 of income would see her § 222 deduction reduced by \$2000, which would mean, all else equal, that \$1000 of additional pretax income would result in \$1000 *less* income after tax. Given the cliff and the many other factors that could affect on which side of the cliff the taxpayer fell, planning for this taxpayer is complicated.

Nonetheless, in cases in which tax provisions create discontinuities, planning software could alert taxpayers who are near a cliff as to the issue. For taxpayers far from the cliff, the provisions are essentially continuous and no more problematic than smooth phase-outs.

### *B. Tax Incentive Alerts*

A second problem with tax system opacity is that taxpayers may misperceive tax incentives or even have no idea that certain tax incentives exist. Here again, planning software can largely mitigate the problem by highlighting these incentives.

Let's return to our taxpayer who has just prepared and submitted her return using software that supports "what if" planning. Suppose the taxpayer is an EITC recipient. Of course, the taxpayer might run a "what if" scenario that would reveal her actual

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if" planning. Whether and to what extent commercially available planning software does so is the topic of the following Part.

151. *See supra* Part II.B.

152. I.R.C. § 32.

153. *Id.* § 32(b).

154. *Id.* § 222 (2012). The § 222 deduction expired on December 31, 2020. However, the provision has expired before, and in each case, Congress opted to extend the provision.



MTR given her position along the phase-in, plateau, or phase-out range of the EITC,<sup>155</sup> but the taxpayer might not think to do so. Given the complexity of the EITC and the likelihood that a recipient's MTR will differ from her statutory rate, planning software could be used to proactively alert and educate taxpayers as to the EITC. The software could specify the break points in the EITC schedule for the following year, explain in simple terms the size of the tax subsidy or penalty in the phase-in and phase-out range, and provide generally useful information about the EITC, e.g., that it varies with number of kids and marital status, etc.

Suppose a taxpayer has listed a number of itemized deductions, but the standard deduction exceeds (or is slightly less than) the total of itemized deductions. Again, the taxpayer might or might not run a "what if" scenario that reveals that her itemized deductions are not reducing her taxes (or reducing tax only minimally), but she might fail to do so. Given this common situation, the software might be designed to affirmatively alert the taxpayer that only deductions in excess of a calculated dollar amount for the following year will reduce her taxes.<sup>156</sup>

Suppose a taxpayer lists a dependent child who is in her early or mid-teens. The taxpayer may be unaware of the various tax credits and other tax incentives available for higher education. The child's age could trigger an alert that highlights these incentives and directs the taxpayer to other sources for further information.

### *C. Improving Taxpayer Understanding of the Tax System*

In each of these cases, software could be used to mitigate the opacity and complexity of the Code, returning taxpayers to the level of understanding that they held when the system was simpler and most returns were prepared by hand. But in some cases, the software could potentially go further, rendering the tax system more transparent and understandable than in the hand-prepared return "golden age." And this brings me to the third way that technology can address complexity—by improving taxpayer understanding of the tax system from a functional perspective—a substitute for and improvement upon learning by doing.

One of the purported benefits of filling out tax returns by hand is that by so doing the taxpayer learns about the provisions that are applicable to her situation. This could very well be true for repetitive situations. For example, a taxpayer might think that her \$500 donation to the Red Cross would reduce her taxes, but after completing her return by hand, she might learn that the standard deduction was greater than her total itemized deductions, and as a result her donation provided her no tax benefit.

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155. As discussed *supra* note 24, the design of the EITC includes an income range across which the credit phases in and acts as a wage subsidy, an income range across which a recipient receives the maximum credit (the plateau), and an income range across which the credit is phased out.

156. It is even conceivable that the software could explain that creating a donor-advised fund and bunching charitable contributions into a single year could minimize taxes, given the Jobs Act increase in the standard deduction and other modifications to itemized deductions. See, e.g., *Donor-Advised Funds and Tax Law Changes: Understanding How New Tax Law Changes May Impact Your Philanthropy*, NAT'L PHILANTHROPIC TR., <https://www.nptrust.org/wp-content/uploads/2018/12/DAFs-and-Tax-Law-Changes-NPT.pdf> [<https://perma.cc/ZAV2-WRU8>].

Going forward, she would understand this and potentially modify her behavior if the lack of a tax benefit was important to her.

But what about new situations? The first year that a taxpayer preparing her own return by hand pays college tuition for a dependent child, she may learn about education tax credits (if she is diligent), but she's less likely to learn about education credits in the years leading up to her child's matriculation when the prospect of the credit might have affected the decision of when and where to attend college. In this situation, software that alerts taxpayers to potentially applicable tax provisions on the horizon is better than learning by doing taxes.

Another way that planning software could improve upon learning by doing is by mitigating common taxpayer errors. Tax planning software can play an important role in distinguishing MTRs from statutory rates in cases in which taxpayers are subject to various floors, phase-ins, phase-outs, or the AMT. Well-informed, economically sophisticated taxpayers will, of course, make incremental decisions based upon their MTRs, but some research suggests that taxpayers fail to account for these adjustments.<sup>157</sup> Other research suggests that some taxpayers fail to understand the basic difference between average and marginal tax rates and erroneously make decisions based on average rates.<sup>158</sup> As long as we have a tax system with a progressive rate schedule, which is important in maintaining progressivity,<sup>159</sup> MTRs will exceed average rates on ordinary income, and the potential for misapplying average rates will exist. Learning by doing will not correct the error, but software that explicitly determines effective MTRs and, more importantly, frames this rate as the fraction of the next \$100 or \$1000 earned that goes to federal taxes could help mitigate this problem.

#### IV. TAX PLANNING SOFTWARE TODAY

Tax *preparation* software is now ubiquitous. In a 2014 hearing, the Commissioner of the IRS reported that 34% of individual filers utilized tax preparation software, while another 56% turned to professional preparers, almost all of whom would have utilized software to prepare these returns.<sup>160</sup> That leaves about 10% of individual taxpayers using paper and pencil. While the software providers seem to be focused primarily on tax preparation products, many also offer tax *planning* products. There are at least thirty-nine tax planning software products on the market today.<sup>161</sup>

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157. See *supra* text accompanying notes 67–68.

158. See *supra* text accompanying notes 62–66.

159. A progressive rate schedule is not vital to progressivity. Progressivity could be accomplished with a single tax rate and large uniform cash transfers or “demogrants.” See Joseph Bankman & Thomas Griffith, *Social Welfare and the Rate Structure: A New Look at Progressive Taxation*, 75 CALIF. L. REV. 1905, 1945 (1987) (stating that one result of the optimal tax model is that “a progressive tax is best implemented through demogrants combined with constant or even declining marginal rates”). But the demogrant approach to progressivity is likely to be a nonstarter politically.

160. *Protecting Taxpayers*, *supra* note 65, at 131.

161. A list of these products is provided in the Appendix. This list does not include a number of tax preparation software products that include no tax-planning functions.

Tax planning software ranges from simplistic to highly sophisticated. The most sophisticated products are marketed to professional preparers who advise multiple taxpayers. In many cases, professional planning software is integrated with tax preparation software, or the preparer can export data from the preparation software to the planning software. If broadly utilized, the most sophisticated tax planning software available today would go some way towards restoring the functional transparency of the tax system. However, the products currently offered to individual taxpayers certainly do not meet that standard, and the extent to which professional preparers use planning software to improve their clients' understanding of the tax system is unclear.

There is great variety in the functionality of tax planning software, and the line between tax preparation software and tax planning software is murky. Consider products like TurboTax and TaxAct.<sup>162</sup> These are tax preparation software products aimed at individual taxpayers eschewing the use of professional preparers. The emphasis is on ensuring that users identify all possible deductions and credits (as well as income items, of course) for the current tax year, so as to avoid paying more tax than is owed. These products include numerous prompts to help users identify allowable credits and deductions, and these prompts serve an educative function in addition to their primary function of minimizing reported taxable income.<sup>163</sup> These products could even be used to run "what if" scenarios to illuminate the impact of various life decisions on tax burdens, but these products are not designed for this function and using them in this manner would be inconvenient, to say the least. Aside from alerting users to current-year deductions and credits, these programs do nothing to highlight tax incentives or issues that might be on the horizon.

The makers of both TurboTax and TaxAct offer rudimentary tax planning software as well. TurboTax offers TaxCaster, which it bills as a tax refund estimator.<sup>164</sup> TaxCaster is a free, stand-alone product. It is not integrated with TurboTax's preparation software, and it allows users to input various items of income and expense, withholding, and other information that it uses to generate a bottom-line tax owed or refunded figure. Because TaxCaster utilizes fewer fields than TurboTax, it is conceivably easier to use for simple tax planning. However, a user cannot adjust inputs without starting the process over, so TaxCaster's utility in this service is limited. The product seems to exist largely as advertising for TurboTax's tax preparation software.

TaxAct offers a simplistic but potentially educative Tax Bracket Calculator that determines a user's statutory tax rate and average tax rate based on seven inputs as well as a thirty-field Tax Refund Calculator that allows users to vary inputs and

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162. *TurboTax*, INTUIT, <https://turbotax.intuit.com/>; *TAXACT*, <https://www.taxact.com/>.

163. To provide just a few examples, TaxAct's input screens note that contributions to a traditional IRA can reduce taxes, while contributions to a Roth IRA would not; highlight the floor on deductions for medical expenses; and explain that itemized deductions are only useful to the extent they exceed the standard deduction. See *TAXACT*, <https://www.taxact.com/> (showing "Pro Tips" as users input their data). TurboTax's input screens provide similarly useful and educative notes. See *TurboTax*, INTUIT, <https://turbotax.intuit.com/> [<https://perma.cc/3FPT-UGDD>] (showing "explain why" tips as users input their data).

164. *Tax Calculator 2021: TaxCaster*, INTUIT, <https://turbotax.intuit.com/tax-tools/calculators/taxcaster/> [<https://perma.cc/CP7R-RDRZ>].

recalculate tax owed. This product could be used to run “what if” scenarios by taxpayers with relatively simple tax situations.<sup>165</sup>

The bottom line, however, is that “tax planning” products aimed at individual taxpayers do not provide the tools needed to render the Code functionally transparent. Tax planning software marketed to professional preparers, on the other hand, is much more powerful.

The leading products in this class, including Lacerte Tax Planner, CCH ProSystem fx Planning, and Drake Tax Planner, are sophisticated, integrated planning products.<sup>166</sup> Because these products are offered to professional preparers, who presumably know the tax laws, there is relatively less emphasis on providing the kinds of educative tax “tips” that one finds in TurboTax and TaxAct. But this function is not entirely absent either, and, because these planning products are integrated with tax preparation software or start with data exported from taxpayer returns, these tips are not generic, but are tailored to particular taxpayer circumstances.<sup>167</sup>

Planning software aimed at professional preparers generally provides little guidance with respect to tax incentives that lie beyond the immediate horizon of the current tax year and next. I found no examples of software that would alert a preparer with respect to education credits that might soon come into play for a taxpayer with a teenage child, for example. This is not too surprising, given that the audience for these products is professional preparers who would not typically need this kind of prompt to have a conversation with their clients about topics such as this. This should be bread-and-butter work for tax advisors.

Where the best planning products really shine, however, is in facilitating “what if” planning. Again, because these products are integrated with tax preparation software, they start with a taxpayer’s actual tax situation and allow preparers to hypothetically adjust for a new job, a new child, a move to a different state, etc., and quickly and easily compare the tax consequences of the various scenarios. Lacerte, for example, boasts that its planning software allows preparers to “compare multiple, complex scenarios using actual current and future year tax rates.”<sup>168</sup> CCH ProSystem fx Planning allows a planner to “forecast and compare up to 30 different tax scenarios with 8 years of projection data per plan.”<sup>169</sup> These products even include features

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165. Taxpayers with more complex situations would likely be stymied by, for example, the prompt to enter their qualified business income deduction.

166. See, e.g., *Lacerte Tax*, INTUIT, <https://proconnect.intuit.com/lacerte/> [<https://perma.cc/AG5Y-USS9>]; *The CCH ProSystem fx Suite*, WOLTERS KLUWER, <https://taxna.wolterskluwer.com/professional-tax-software/prosystem-fx> [<https://perma.cc/7ERF-RBMK>]; *DRAKE SOFTWARE*, [drakesoftware.com](https://drakesoftware.com) [<https://perma.cc/SGD7-ZF4B>].

167. For example, in its marketing materials, Lacerte provides an analysis of the tax return for a hypothetical taxpayer that highlights unused opportunities to reduce tax by, e.g., fully participating in qualified retirement plans, accelerating certain itemized deductions, or even employing a child under the age of eighteen in the family business. *Lacerte*, *supra* note 166.

168. *Lacerte*, *supra* note 166.

169. *Tax & Accounting Software: The CCH Prosystem fx Suite*, WOLTERS KLUWER, <https://www.wolterskluwer.com/en/solutions/cch-prosystem-fx> [<https://perma.cc/LC3S-3Y6L>].

allowing preparers to quickly prepare reports for their clients, including charts comparing the outcomes of various scenarios.<sup>170</sup>

To what extent does tax planning software bring clarity to the black box of federal income taxation today? Software aimed at individuals preparing their own returns—both preparation and planning software—serves an educative function by highlighting generic tax tips and providing simple bracket analyses. This software is focused, however, on identifying current tax year deductions and credits and estimating or determining tax. This software is not useful for conducting “what if” scenario analyses or for calling taxpayers’ attention to tax incentives that may be approaching on the horizon. These products certainly simplify compliance, but users are still likely to see the tax system as a black box.

Professional preparers could bring clarity to their clients by combining their knowledge and experience with the sophisticated planning products at their disposal. Their knowledge and experience would allow them to advise their clients with respect to tax provisions with which their clients may not be aware, and the planning software would allow them to easily illuminate the tax consequences of various life decisions their clients face. Given this, one might expect that taxpayers who utilize professional preparers would be better informed. But as several commentators have observed, the use of professional preparers may actually reduce taxpayer awareness of tax considerations if taxpayers essentially delegate return preparation and filing to professional preparers.<sup>171</sup>

The limited empirical evidence supports this more pessimistic view. In a survey-based study of taxpayer awareness of their MTRs reported in 1995, Rupert and Fischer found that taxpayers who used professional preparers were less accurate than other taxpayers in estimating their MTRs.<sup>172</sup> More recently, Ballard and Gupta surveyed 978 adult residents of Michigan, soliciting their estimation of their average federal income tax rate.<sup>173</sup> Almost 85% of respondents overestimated their average rates, with a mean over-estimation of 11.6 percentage points.<sup>174</sup> Respondents who reported using a professional preparer overestimated their average rates by nearly three percentage points more than self-preparers, all else equal.<sup>175</sup>

Before concluding this Part, I would be remiss if I did not mention one very different and very promising technological advance in tax analysis offered by Blue J Legal.<sup>176</sup> Blue J Legal harnesses artificial intelligence and big data to predict the results of difficult borderline tax questions, such as whether a financial instrument would be characterized as debt or equity or whether a worker would be classified as an employee or independent contractor.<sup>177</sup> To be sure, Blue J Legal is itself a black box, but the software provides probabilities that its characterizations are correct and allows users to test various sensitivities, which assists in effective planning and

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170. *Id.*

171. Rupert & Fischer, *supra* note 59, at 40; Feldman & Katuscak, *supra* note 66, at 3.

172. Rupert & Fischer, *supra* note 59, at 51 (survey of 108 taxpayers who responded to a survey instrument and provided tax return information).

173. Ballard & Gupta, *supra* note 62, at 270.

174. *Id.* at 264.

175. *See id.* at 278–79.

176. BLUE J LEGAL, <https://www.bluejlegal.com/> [<https://perma.cc/W5KJ-T2U8>].

177. *See id.*

structuring. Although as currently configured, Blue J Legal is targeted at a specific set of difficult questions and is not a multi-purpose tax planning tool, it suggests an alternative path forward for tax planning technology.<sup>178</sup>

#### V. THE CASE FOR GOVERNMENT-PROVIDED OR SUBSIDIZED TAX PLANNING SOFTWARE

Even without AI, existing technology seems sufficient to restore functional transparency to the increasingly complex tax system. Planning software currently available to professional preparers is more than adequate for “what if” scenario analyses that would not only calculate a taxpayer’s MTR in various situations but would explain the relationship between life decisions and tax in a fashion that is easily digestible and actionable. And it would be straightforward to add individually tailored prompts highlighting tax incentives that are currently available or that may be on the horizon. One can think of this as a combination of professional preparer planning software and professional preparer experience and foresight. This combination of information could mitigate the black box nature of our tax system to a significant degree, for good or ill.

This Part of the Article presents the case for government provision or subsidization of just such software. The argument, in brief, is that the development of such technology and its availability to high-income taxpayers are probably inevitable, and as a result, the downsides of widely available software are to some extent unavoidable, but that government intervention can help shape the technology in ways that increase social welfare and improve distributional outcomes. I also argue that government-provided or subsidized planning software should be targeted at lower-income taxpayers in order to avoid facilitating social welfare reducing tax planning by high-income taxpayers, and to level the tax planning playing field for lower-income taxpayers.

Such software could be provided directly by the IRS to lower-income taxpayers or the government could subsidize the production of such software by for-profit entities such as Intuit, the maker of TurboTax. I will discuss the pros and cons of government subsidy versus direct provision in Subsection F, below.

I am not the first to advocate for government-provided tax software. In a 1999 article, Joshua Rosenberg envisioned government-provided tax preparation software that would be focused on accurate compliance and would highlight tax incentives.<sup>179</sup> Like me, Rosenberg viewed government-provided software as a response to the

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178. *See id.* Ben Alarie, one of the founders of Blue J Legal, foresees AI reducing the cost of information and increasing the democratization of tax law. Benjamin Alarie, Anthony Niblett & Albert H. Yoon, *Law in the Future*, 66 U. TORONTO L.J. 423, 426 (2016). I am less sanguine. The fact that technology is available does not mean that it will become affordable and ubiquitous.

179. Joshua D. Rosenberg, *A Helpful and Efficient IRS: Some Simple and Powerful Suggestions*, 88 KY. L.J. 33, 42, 51 (1999). I am also far from the first to discuss how government-provided software can aid individual decision making. *See, e.g.*, Rory Van Loo, *Rise of the Digital Regulator*, 66 DUKE L.J. 1267, 1297 (2017) (discussing and evaluating government-provided digital intermediaries directed towards assisting consumers with a range of decisions, including, inter alia, college and mortgage selection).

increasing complexity and opacity of the Code.<sup>180</sup> More recently and further afield but in a similar spirit, Marjorie Kornhauser proposed in 2005 that the IRS provide taxpayers with an annual statement of their income tax burden, similar to the statement we receive annually from the Social Security Administration.<sup>181</sup> This statement would highlight key data, such as gross income, deductions, taxable income, and credits and provide and explain the difference between the taxpayer's average rate and MTR.<sup>182</sup> In some ways, the government-provided or subsidized tax planning software envisioned here is a high-tech extension of Kornhauser's proposal, but a potentially important and powerful extension.

*A. Further Development/Proliferation of Tax Planning Software Likely is Inevitable*

Given the increasing complexity of the Code, the increasing power and decreasing cost of technology, and the amount of money (and leisure) at stake, it is probably inevitable that tax software vendors will continue to develop and market planning software. In fact, it is surprising that sophisticated tax planning software is not currently marketed to high-income individuals. Intuit, for example, offers such software to professional preparers through its Lacerte line, but offers nothing comparable to individuals utilizing its TurboTax line of products.<sup>183</sup>

Why is this? The answer has to be that individual purchasers of tax preparation software don't yet demand this kind of analysis. Perhaps taxpayers who want this information receive it indirectly from professional preparers. And, indeed, there must be demand for these services by the clients of professional preparers, or Lacerte, Drake, CCH, and the other vendors of professional tax software would not include these features in their products either.

Meanwhile, a number of technologically savvy commentators envision a future in which technology will have a much more dramatic influence on tax and other areas of the law. Ben Alarie, for example, predicts that technological advances will lead to increasing democratization of the law as lower costs of producing information will make it less expensive to understand legal rights and obligations.<sup>184</sup>

If this is right, if we are approaching "legal singularity" in Alarie's evocative phrasing,<sup>185</sup> then the costs associated with functional transparency—principally increased excess burden and cheating—may be largely unavoidable. If so, the important questions have to do with who shapes the innovation and for whose benefit.

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180. See Rosenberg, *supra* note 179, at 51.

181. Marjorie Kornhauser, *Doing the Full Monty: Will Publicizing Tax Information Increase Compliance?*, 18 CANADIAN J.L. & JURIS. 95, 106–07 (2005).

182. See *id.* at 107–08.

183. TurboTax offers Free, Deluxe, Premium, and Self-Employed editions, which are increasingly costly. The higher-end products tackle increasingly complicated tasks, such as dealing with securities transactions, but none offer the "what if" scenario analysis found in Lacerte. See *TurboTax*, *supra* note 162.

184. Alarie et al., *supra* note 178, at 426.

185. *Id.* at 443.

*B. Tax Planning Software Could Be Designed to Advance Government Policies*

Commercial tax planning software will be designed to maximize revenue for the vendor, which likely translates into software that maximizes the utility of the software's end users. There is no reason that vendors would take into account overall social welfare in designing such software, but the government could. This Section highlights several ways in which government-provided or subsidized tax planning software could focus on meeting government and social welfare objectives that commercial products might not.

1. Increasing the Efficacy of Tax Incentives

The Code contains numerous clear-cut tax incentives aimed at individual taxpayers.<sup>186</sup> Given the complexity and opacity of the Code, many taxpayers are unaware of these incentives or fail to take full advantage. For example, 20% of taxpayers eligible for the EITC fail to claim the credit, primarily because they fail to file returns.<sup>187</sup> As Jacob Goldin notes, incomplete EITC take-up means that many individuals fail to receive the EITC tax benefit and, in all likelihood, "at least some individuals are not aware of the pro-work incentives the credit creates, and hence, work less than they would if they were to take the credit's incentives into account."<sup>188</sup> Presumably, Congress would prefer full take-up and more effective incentives.<sup>189</sup> Because EITC-eligible taxpayers who file returns typically use professional preparers or tax preparation software that ensures that the taxpayer will receive her full credit, Goldin argues that "efforts to increase EITC take-up should focus on inducing EITC-eligible individuals to file a tax return."<sup>190</sup>

This prescription makes sense as a means of ensuring that individuals receive the EITC to which they are entitled, but encouraging filing alone would not ensure that individuals understand and respond to the EITC's work incentives. Suppose, for example, that a federal EITC-capable prepopulated return system was to be established. Such a system would largely mitigate computational complexity and ensure payment of full EITC benefits to workers with W-2 earnings reported to the IRS,<sup>191</sup> but it would not provide the information that individuals need to make informed decisions about work effort. It would not even ensure that EITC recipients were aware of the credit at all.

In order to ensure that tax incentives are as effective as possible, individuals need to be made aware of the incentives and brought to understand how their potential

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186. See *supra* text accompanying notes 92–102.

187. Goldin, *supra* note 22, at 60–61, 70.

188. *Id.* at 66.

189. The government spends hundreds of millions of dollars a year on EITC outreach and enforcement. See Saurabh Bhargava & Dayanand Manoli, *Psychological Frictions and the Incomplete Take-up of Social Benefits: Evidence from an IRS Field Experiment*, 105 AM. ECON. REV. 3489, 3523 (2015) (reporting that Congress appropriated \$716 million in 1997 for EITC outreach and enforcement over a five-year period).

190. Goldin, *supra* note 22, at 107.

191. Workers with self-employment income not reported to the government by third parties would not be issued prepopulated returns and might continue to miss out on the EITC.



responses to the incentives would affect their after-tax income. Government-provided or subsidized planning software could (1) alert individuals that they are or may be eligible for various incentives, and (2) allow these individuals to quickly and easily calculate the after-tax income associated with their potential responses to the incentive.

If a taxpayer can be induced to use government-provided or subsidized tax planning software that accesses her tax return data, the first step—alerting the taxpayer as to incentive eligibility—is fairly trivial. The software could be designed to determine whether, based on her reported income and other reported characteristics, e.g., number and age of dependent children, the taxpayer is eligible or close to being eligible for the various discrete federal income tax incentives—the EITC, education credits, retirement credits, etc. And the software presumably could be designed to make these determinations automatically and prompt the taxpayer without the need for an affirmative inquiry.<sup>192</sup>

To be sure, simply making such software available does not solve the particular EITC take-up problem highlighted by Goldin. EITC-eligible individuals who fail to file returns are unlikely to utilize tax planning software to determine how much money they are leaving on the table. It is conceivable, although somewhat big brother-ish, that the IRS would use third-party reported income data to alert non-filers as to the possibility that they would be eligible for the EITC and direct them to simple tax planning software that would provide a more definitive answer.<sup>193</sup>

The second step—associating potential responses to incentives with after-tax income—falls squarely within the domain of current professional tax planning software and specifically “what if” scenario analysis and can clearly be accomplished with current technology.<sup>194</sup> In the EITC example, the software could provide the taxpayer with her current tax credit based on her current income and with the credit she would receive if her income were to increase or decrease by, say, 10%.

Of course, there are potential downsides to such a program. Continuing with the EITC example, first, total EITC benefits would likely increase, but to the extent that this is a product of greater work effort, we should count this as a feature, not a bug. Second, making it easier for taxpayers to understand how the EITC works could

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192. Sophisticated tax planning software products marketed to professional taxpayers today automatically conduct these sorts of analyses and provide alerts. *E.g.* *Tax Planner Pro*, INTUIT, <https://quickbooks.intuit.com/app/apps/appdetails/taxplanner/en-us/> [<https://perma.cc/QP43-EDJX>]; *Lacerte Tax*, INTUIT, <https://proconnect.intuit.com/lacerte/> [<https://perma.cc/C3NW-G35R>] (including a deduction finder); *ProConnect Tax*, INTUIT, <https://proconnect.intuit.com/tax-online/> [<https://perma.cc/UR85-PCTS>] (using pop-ups to show potential deductions or credits); *Checkpoint Products*, THOMSON REUTERS, <https://tax.thomsonreuters.com/checkpoint> [<https://perma.cc/E33Q-RR67>]; *Tax Software*, WOLTERS KLUWER, <https://taxna.wolterskluwer.com/professional-tax-software/atx> [<https://perma.cc/A32E-BW6T>].

193. Again, this process would not assist taxpayers eligible for the EITC based on income from self-employment that is not reported to the IRS by third parties. Although not directly responsive to the non-filer problem, combining government-provided or subsidized planning software with tax preparation software could increase use generally and provide a platform for providing taxpayers with income and tax scenarios generated automatically. *See infra* Subsection F.

194. *See supra* text accompanying notes 168–170.

increase cheating. If it is easier for an EITC recipient to determine the income level that maximizes her credit in her particular situation, she may be more likely to report that level of income. Third, as Goldin notes, some behavioral responses increase deadweight loss; in this case, that would include the negative impact of the EITC phase-out on work incentives.<sup>195</sup> I will address these concerns in subsequent sections.

## 2. Highlighting Cases in Which MTR is Less than the Statutory Rate

While tax expenditure provisions more often result in MTRs exceeding statutory rates because of phase-outs, there are cases in which the opposite is true and when it would be in the interest of the taxpayer and society for the taxpayer to recognize this situation and increase her labor supply. Government planning software could be designed to expressly highlight these situations and illustrate to the taxpayer that her after-tax income may be a larger fraction of pre-tax income than she had realized. One example of this phenomenon, of course, is the EITC phase-in that we have just discussed.<sup>196</sup> In the EITC phase-in range, taxpayers' MTRs are significantly lower than statutory rates.<sup>197</sup> Taxpayers who fail to understand this and believe their tax rate to be the statutory rate (or in some cases the highest statutory rate, which may be more salient) may be leaving money on the table personally and creating needless deadweight loss.

At the opposite end of the income spectrum, AMT paying taxpayers who are not subject to the AMT exemption phase-out (because the phase-out has not been triggered or because their exemptions have been fully phased out) also likely face an MTR that is less than their statutory rate.<sup>198</sup> Again, both individual utility and social welfare are improved if these taxpayers are made aware of the lower MTR and respond accordingly. Simple tax planning software can alert taxpayers to these circumstances and illustrate the relationship between pre- and post-tax income, correcting misperceptions and increasing social welfare.

## 3. Not Highlighting Cases in Which MTR Exceeds the Statutory Rate

What about situations in which a taxpayer's MTR exceeds her statutory rate? This will commonly be the case for taxpayers whose itemized deductions are curtailed by a floor or whose income places them in the phase-out range for one or more provisions such as the EITC, the AMT, education credits, etc. In these cases, a taxpayer who understood her true MTR might work less than she would under the mistaken belief that her statutory rate was her MTR, improving her personal utility but increasing the aggregate deadweight loss from taxation. Presumably, commercially available software would treat the two cases—cases in which the MTR exceeds the statutory rate and cases in which the MTR is less than the statutory rate—symmetrically, promoting individual utility maximization in both cases and ignoring

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195. See Goldin, *supra* note 22, at 62.

196. Another example is the refundable portion of the child tax credit. See *supra* note 116.

197. See *supra* text accompanying notes 114–116.

198. Recall that the nominal rates under the AMT are less than the highest rates under the regular income tax. See *supra* text accompanying note 109.

social welfare. Must government-provided or subsidized software take the same tack? Probably, but not necessarily. Let me elaborate.

Clearly, the government cannot misrepresent the tax laws to taxpayers. If a taxpayer in a phase-out range uses government software to determine the marginal impact of additional income, the software must provide the correct answer. But must the software prompt the taxpayer that her income places her in a phase-out range and, as a result, her MTR may be higher than she realizes? The argument that the software must alert the taxpayer would likely be grounded in an implicit promise that the software would promote individual optimization. Some might argue that if the software alerts taxpayers to incentives that benefit the government and society, in fairness, it must highlight incentives that do not benefit the government and society.

But there are at least two possible counterarguments. First, the IRS could simply disclaim any such obligation. Taxpayers would not be bound to use the IRS's software, and the software could clearly indicate what it is designed to do and not to do. Second, in some cases, the symmetry may be false. Explicit tax expenditures, such as the EITC, education credits, retirement incentives, and the like, which the government would want to affirmatively highlight, are different in kind than the phase-out of the AMT exemption amounts, which is, in effect, a rate adjustment. To be sure, some would argue that the government's obligation to highlight hidden tax rate adjustments, such as the phase-out of AMT exemptions, personal exemptions, or itemized deductions, should actually be greater, but the government has never been obligated to highlight the impact of these phase-outs and it is not clear why government provision or subsidization of planning software would impose such an obligation.<sup>199</sup>

Ultimately, however, I suspect that the asymmetric treatment of tax incentives and disincentives would be a nonstarter politically and thus untenable. And there is, to be sure, one other constraint on the IRS's ability to shape tax planning software to serve social welfare instead of personal welfare. Use of this software would be voluntary. If taxpayers, specifically high-income taxpayers, do not believe that the government's software serves their interests, they can purchase a commercial product, or given the current dearth of sophisticated planning software marketed to individuals, consult a tax professional for advice.<sup>200</sup>

Given this reality, and in order to avoid facilitating social welfare reducing planning by high-income taxpayers, the better and more achievable course might be to target government-provided or subsidized planning software at low-income taxpayers. The following Sections provide other potential justifications for such targeting.

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199. I use the personal exemption, itemized deduction, and AMT exemption phase-outs as familiar examples recognizing that the first two are currently inapplicable and that the AMT and AMT exemption phase-outs currently apply to only a very small number of taxpayers.

200. See *supra* text accompanying notes 168–70 (discussing planning features included in software marketed to professional preparers).

*C. IRS Provision or Subsidization of Tax Planning Software Could Improve Distribution*

As noted above, while vendors do not market sophisticated tax planning software to individual taxpayers, they do market such software to professional preparers who presumably use these features in advising their clients.<sup>201</sup> Reliance on professional preparers is not limited to high-income taxpayers. Principally, because of the complexity of the EITC, many low-income taxpayers turn to professionals, as well. Logic and intuition suggest, however, that high-income clients would make greater use of scenario planning services offered by their preparers than low-income clients because more dollars would generally be at stake and because high-income taxpayers would be better able to pay for additional planning services beyond simple tax preparation.

If this is an accurate portrayal, this pattern would be troubling from a distributional perspective. High-income taxpayers who receive and act on accurate information about the tax consequences of their life decisions will make more utility-enhancing decisions than low-income taxpayers who fail to utilize these services. By providing free or subsidized planning software to low-income taxpayers, the IRS could level this playing field.

In recent work, Manoj Viswanathan argues that the IRS should support low-income tax planning.<sup>202</sup> He argues that low-income tax planning is more likely to be welfare enhancing than high-income planning and that, even when it isn't, it's unfair for low-income taxpayers not to be able to plan when high-income taxpayers do.<sup>203</sup> Viswanathan notes that the Jobs Act introduced complex provisions that apply to low-income taxpayers, such as § 199A, and he encourages the IRS to sponsor programs to advise these taxpayers *ex ante*.<sup>204</sup> Government provision or subsidization of simple, user-friendly tax planning software to low-income taxpayers would be perfectly consistent with this effort.

But there may be an even stronger argument for government provision or subsidization of planning software to low-income individuals. Given numerous phase-outs of tax expenditures targeted at lower-income taxpayers, the Code may be more of a black box for these taxpayers than for middle- and upper-income taxpayers.<sup>205</sup> So the need may be greater. Moreover, while I support the adoption of

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201. See *supra* text accompanying notes 168–70.

202. Viswanathan, *supra* note 122, at 195.

203. *Id.* at 203.

204. *Id.* at 210–11 (suggesting, for example, that law school clinics “could and should provide tax planning assistance for lower-income taxpayers beyond what [low-income tax preparation assistance] centers currently provide”).

205. Low-income taxpayers are often eligible for non-tax direct benefits, such as housing and nutrition assistance, that are based on need and are reduced with increasing income. See POLICY BASICS: THE SUPPLEMENTAL NUTRITION ASSISTANCE PROGRAM (SNAP), CTR. ON BUDGET & POL’Y PRIORITIES, <https://www.cbpp.org/sites/default/files/atoms/files/policybasics-foodstamps.pdf> [https://perma.cc/8NKX-ERQE] (2019) (detailing gradual phase-out of SNAP benefits with earnings); *Policy Basics: Federal Rental Assistance*, CTR. ON BUDGET & POL’Y PRIORITIES, <https://www.cbpp.org/research/housing/policy-basics-federal-rental-assistance> [https://perma.cc/C6FV-AQBD] (Jan. 11, 2022) (noting that most

pre-populated return programs, I recognize that if these programs become reality, the Code will become even more of a black box for the typically lower-income taxpayers who would be eligible to participate, again increasing the need and justification for government-provided or subsidized planning software.

#### *D. Getting the IRS into the Tax Preparation Software Game*

In 2002, the IRS entered into the Free Online Electronic Tax Filing Agreement with the Free File Alliance, a collection of vendors of tax preparation software products.<sup>206</sup> The vendors committed to providing free tax preparation and filing software through the IRS's website for 60% of U.S. taxpayers.<sup>207</sup> The IRS committed to staying out of the tax preparation software business. Although the term of the agreement has been extended several times,<sup>208</sup> the program has not lived up to expectations. A recent report issued by the Treasury Inspector General for Tax Administration found that only 2.4% of 104 million eligible taxpayers utilized the program and filed their returns for free, while 33.2% of these taxpayers filed using Alliance members' commercial software products.<sup>209</sup> One reason for a lack of taxpayer participation, the Inspector General found, was that some Free File Alliance members edited the code in their Free File web pages to ensure that taxpayers searching the internet for free return filing would not find the members' Free File page.<sup>210</sup> More generally, the Inspector General attributed this low level of participation in the Free File program to "complexity, confusion, and lack of taxpayer awareness about [the program's] operation and requirements."<sup>211</sup>

Undoubtedly, integrated tax-preparation and tax-planning software is more efficient and effective than stand-alone products. Perhaps this is the moment for the IRS to abandon the Free File Program and get into the tax-preparation software game.<sup>212</sup> The IRS could provide tax preparation software as well as planning software

participating households pay 30% of their income for rent and utilities with the balance coming from federal rental assistance). An ideal planning tool for low-income individuals would include these non-tax programs as well, but a tool incorporating income tax provisions alone would be a good first step.

206. Memorandum from the Permanent Subcommittee on Investigations on IRS Oversight of Free File Program 1 (June 9, 2020), <https://www.portman.senate.gov/sites/default/files/2020-06/90FEC84C7C59179A55F309CD0CA45225.psi-staff-memo-free-file.pdf> [<https://perma.cc/3D4N-H8F7>].

207. *Id.* at 1.

208. *Id.* at 1–2 (noting that the 2005 extension expanded coverage to 70% of taxpayers).

209. TREASURY INSPECTOR GEN. FOR TAX ADMIN., 2020-40-009, COMPLEXITY AND INSUFFICIENT OVERSIGHT OF THE FREE FILE PROGRAM RESULT IN LOW TAXPAYER PARTICIPATION 4–5 (2020).

210. *Id.* at 9–10.

211. TREASURY INSPECTOR GEN. FOR TAX ADMIN., HIGHLIGHTS: COMPLEXITY AND INSUFFICIENT OVERSIGHT OF THE FREE FILE PROGRAM RESULT IN LOW TAXPAYER PARTICIPATION (2020), [https://www.treasury.gov/tigta/auditreports/2020reports/202040009\\_oa\\_highlights.html](https://www.treasury.gov/tigta/auditreports/2020reports/202040009_oa_highlights.html) [<https://perma.cc/87LJ-JTGP>].

212. The timing may also be propitious as Intuit announced in July 2021 that it would leave the Free File Program at the end of the tax filing season in October 2021. Justin Elliott & Paul Kiel, *TurboTax-Maker Intuit Will Leave Free Tax Filing Partnership with IRS*, PROPUBLICA

targeted at lower-income taxpayers who, phase-ins and phase-outs aside, typically face less complex tax situations.<sup>213</sup> The combination of products would focus on achieving accurate compliance but also promoting functional transparency of the tax system, particularly for low-income taxpayers who are less likely to have access to affordable commercial services.<sup>214</sup>

*E. The Costs of Government-Provided or Subsidized Tax Planning Software*

Part III of this Article described several positive aspects of increased complexity and opacity—supporting a more accurate tax system, reducing distortions in taxpayer behavior and deadweight loss, and reducing cheating. Effective government-provided or subsidized planning software that restored functional transparency would undermine the second and third of these benefits of complexity, resulting in greater deadweight loss and more cheating.

To be sure, these downsides are not unique to government planning software. Commercial planning software already exists that implicates these costs. But by definition, if government-provided or subsidized software achieves greater penetration, more taxpayers will understand and presumably act upon the various incentives embedded in the Code, some by reducing work effort when they realize that their MTR is significantly higher than they believed, some by misreporting income from self-employment in order to maximize receipt of tax benefits. These, then, are the behavioral costs of government software. Obviously, there would be additional costs of software development, promulgation, and maintenance, all of which would be reduced if government software is provided to or subsidized for lower-income taxpayers only.

*F. Further Potential Objections to Government-Provided or Subsidized Tax Planning Software*

This subsection addresses three potential objections to government-provided or subsidized tax planning software directed towards lower income taxpayers.

1. Why Should the Government Intervene? Why Not Leave This to the Market?

Economists generally disfavor government intervention absent some market failure or externality.<sup>215</sup> Arguably there is an externality here, which is protecting or advancing the legitimacy of the tax system. If taxpayers do not understand, even from

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(July 16, 2021), <https://www.propublica.org/article/turbotax-maker-intuit-will-leave-free-tax-filing-partnership-with-irs> [<https://perma.cc/K6S5-3NT5>].

213. Whether the IRS creates tax preparation software or not, any IRS planning software should be designed to receive data directly from commercial preparation products such as TurboTax.

214. See Rosenberg, *supra* note 179 (advocating IRS promulgation of tax preparation software focused on achieving accurate compliance).

215. See, e.g., Tyler Cowen, *Public Goods and Externalities*, in THE CONCISE ENCYCLOPEDIA OF ECONOMICS (“Most economic arguments for government intervention are based on the idea that the marketplace cannot provide public goods or handle externalities.”).

a functional perspective, the relationship between their life decisions and their tax burden, they may become demoralized with the tax system, and compliance may fall as a result.

Externalities aside, one may also view it to be a moral obligation of the government to provide taxpayers with the tools to navigate an increasingly complex tax system. As discussed in Subsection G, below, the IRS has embraced such a commitment through its Taxpayer Bill of Rights.

## 2. Why Not Just Give Lower-Income Taxpayers Cash That They Can Use as They Like (Instead of Software)?

If it isn't clear that lower-income taxpayers will value tax planning software, providing or subsidizing that software could be wasteful. If so, some might argue, it might be more efficient to provide cash to offset the disutility of tax complexity and opacity. This line of argument is commonly encountered with respect to proposed provision of benefits in kind, and there is certainly a large element of truth to it.<sup>216</sup> One response, in this context and often others, is that it may well be more feasible politically to provide in kind benefits rather than cash. My intuition is that this factor would be compelling in this instance—that politicians would much more readily accept a program of government provision or subsidization of planning software directed at addressing the complexity of the tax system they have wrought than simply increasing cash subsidies to lower income citizens.

Moreover, to the extent that lower-income taxpayers who use the software discover that they have previously over-estimated their tax burdens and increase their labor supply (and tax payments) once they discover the truth, this shift in behavior results in a social as well as a personal benefit. Cash transfers lack this feature.

## 3. Are Lower-Income Taxpayers Likely to Use Tax Planning Software Even If It is Free?

What if we build it and they don't come?<sup>217</sup> The degree to which lower-income taxpayers will utilize even free planning software is, of course, unknown. However, several factors suggest that use could be considerable. Thinking hard about usage, however, does lead to potentially important program design considerations.

Some potential users might refrain just because they lack interest or have better or more important things to do with their time. Thus, it will obviously be important to make the software as easy and convenient as possible. But this may not be enough. It may be necessary to nudge taxpayers toward use. Nudging will be easiest if free tax planning software is combined with free preparation software. Many lower-income taxpayers must file a return to take advantage of the refundable portion of the EITC. That should be sufficient enticement to get them to use the tax preparation software. But once taxpayers are using the preparation software, the combined

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216. See, e.g., Lester C. Thurow, *Government Expenditures: Cash or In-Kind Aid?*, 5 PHIL. & PUB. AFFAIRS 361 (1976) (arguing that cash transfers dominate in-kind aid except in the case of pure public goods).

217. Paraphrasing an often misquoted line from "Field of Dreams."

planning software could, for example, generate automated planning scenarios. For example, the software could automatically provide a taxpayer qualifying for the EITC with scenarios demonstrating how much they will take home after tax if they earn, say, 5% or 10% more money the following tax year. This consideration weighs strongly in favor of combined planning and preparation software.

Other taxpayers might be deterred from using IRS-issued planning (and perhaps even preparation) software by fear of government intrusion and misuse of their personal financial data. If most lower-income taxpayers place greater trust in Intuit/TurboTax than in the federal government, which may seem perverse, but possible, this consideration might suggest government subsidy rather than government provision of combined preparation/planning software, despite the arguments to the contrary highlighted above.<sup>218</sup>

Finally, it is worth recognizing that in general the populace is becoming ever more comfortable managing their lives online. Comfort levels with either subsidized private software or government-provided software seem likely to rise over time.

*G. Summing Up the Case for Targeting Government-Provided Planning Software at Lower-Income Taxpayers*

In sum, while the government could endeavor to provide or subsidize tax planning software for all taxpayers, high-income taxpayers already have access to commercial planning software through professional preparers and the resources to command these services. The need is greater at the lower end of the income spectrum. Moreover, increasing functional transparency through the provision of planning software will likely lead to greater deadweight loss, particularly at the higher end of the income spectrum, as, absent transparency, high-income taxpayers tend to underestimate their MTRs as a result of various deduction and credit floors and phase-outs. To be sure, increasing functional transparency for lower-income taxpayers will also increase deadweight loss in some cases, but not in all cases given various phase-in provisions applicable to low-income taxpayers. Weighing the costs and benefits suggests that targeting government-provided or subsidized planning software at low-income taxpayers may be the most sensible path forward.

VI. FURTHER DISCUSSION OF PLANNING SOFTWARE AS A RESPONSE TO TAX COMPLEXITY

As I've argued above, technological responses to tax complexity are probably inevitable. Indeed, they exist today for some taxpayers, and one would think that their use would increase as tax complexity grows and the cost of technology falls. If so, the important questions going forward are (1) who gets to shape these responses—the government or private parties? And (2) who will be in a position to take advantage of this technology—all taxpayers or just high-income taxpayers who can afford the bill?

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218. See *supra* Part V.D. (discussing the failure of the Free File Alliance and the rationale for government provision of combined preparation and planning software).



For the moment, however, let's envision a world in which planning software—commercial and/or government-provided—is widely available and broadly used, creating functional transparency for many taxpayers. I have discussed the implications for tax efficiency and distribution, but other questions remain. Does the functional transparency generated by planning software address all of the concerns created by complexity?

Joshua Blank and Leigh Osofsky have noted that the Taxpayer Bill of Rights commits the IRS to a certain level of transparency, a commitment that in their view is not being met today.<sup>219</sup> Would government provision or subsidization of planning software meet this commitment? Does this commitment require that taxpayers be able to understand how phase-outs work or is it sufficient that they be able to easily associate life decisions with their tax burden? Is functional transparency, in other words, sufficient to meet the IRS's commitment? Although the Taxpayer Bill of Rights speaks of the right to "clear explanations of the laws," which might suggest a sort of granular clarity, the underlying commitment is to a right to be informed.<sup>220</sup> In my view, the kind of functional transparency that can be achieved through the sophisticated tax planning software I've described above should be sufficient to meet that commitment.

Other complexity-related concerns lie in the political and philosophical spheres. Would widespread availability of planning software sufficiently address the democratization, political accountability, and autonomy concerns arising from complexity and opacity? Would government-provided or subsidized software more adequately address these concerns than leaving all of this to the marketplace? Is it a sufficient response to these concerns that taxpayers *can* readily associate life decisions with tax burdens even if they do not choose (or perhaps pay) to do so?

Again, I would think that functional transparency created through planning software would constitute a sufficient response to these concerns, but I am somewhat less confident here. Take political accountability, for example. One concern is that policy makers can raise taxes surreptitiously by, for example, phasing out deductions, and thus avoid the ire of taxpayers who are hoodwinked into thinking that their MTRs, and perhaps average rates, are lower than they are in reality. With planning software, taxpayers can easily determine their true MTR and average rate, and those who do so would not be hoodwinked. But even if free, easy, and effective planning software were readily available, would taxpayers use the software to figure this out? Software makes it easier for an interested citizen to cut through the opacity but does nothing to combat the persistent misapprehensions of the lazy taxpayer-voter in the face of surreptitious tax increases.<sup>221</sup>

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219. Blank & Osofsky, *supra* note 146, at 194, 199 (arguing that IRS publications engage in "simplicity," simplified descriptions that "have the unintended effect of obscuring individuals' knowledge of the underlying tax law").

220. *Taxpayer Bill of Rights: 1: The Right to be Informed*, IRS (2020), <https://www.irs.gov/newsroom/taxpayer-bill-of-rights-1-the-right-to-be-informed-0> [<https://perma.cc/2USP-D5WY>].

221. Perhaps, however, journalists or other intermediaries could use planning software to educate taxpayers and voters who lack the motivation to do the analyses themselves.

Not all commentators are concerned with exploitation of tax provisions with low political salience.<sup>222</sup> But if one shares these concerns, one might fairly conclude that planning software has greater promise as a tool for addressing the adverse impact of complexity on decision making and tax incentives than on political accountability and the size of government.

#### CONCLUSION

Our complex and opaque tax system has been described as a black box. In reality, it is more of a gray translucent box. The black box label is appropriately placed on algorithms derived from the application of machine learning to big data. The algorithms are said to flow from a black box because “they discern patterns and make predictions in a way that cannot be intuitively understood or explained in the same way as conventional analysis can be.”<sup>223</sup>

Our tax system is complex and opaque, but it is not like a machine learning black box. The result of any tax calculation can be explained if one is willing to take the time and make the effort.<sup>224</sup> But individual Code provisions and the interplay of provisions can be extraordinarily complicated. And while compliance is made manageable by the use of tax preparation software and professional preparers (and possibly in the future by distribution of pre-populated returns), these “solutions” may leave taxpayers in the dark with respect to the underlying tax law.

I have argued that planning software can be used to restore functional transparency to the Code, alerting taxpayers to various tax incentives and allowing taxpayers to associate their life decisions with tax burdens. This is a different type of transparency than that which purportedly existed in the prior “golden age” when tax rules were simple, individuals filled out their own returns by hand, and taxpayers learned about tax by doing their taxes, and in some ways, functional transparency is superior.

But I have also argued that there are costs and benefits to creating this functional transparency because there are benefits as well as costs to complexity and opacity. Be that as it may, such software exists today, and its use will only increase as complexity increases and as high-income taxpayers realize what’s at stake.

I have also made the case for government provision or subsidization of tax planning (and preparation) software that would be targeted at low-income taxpayers in order to address the particular complexities of taxation at the low end of the income spectrum and level the tax planning playing field between high- and low-income

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222. See *supra* note 149.

223. Cary Coglianese & David Lehr, *Transparency and Algorithmic Governance*, 71 ADMIN L. REV. 1, 14 (2019).

224. This is not to suggest that there are no ambiguities in the tax rules applicable to individual taxpayers. It may be ambiguous, for example, whether a certain gig economy worker is an employee or an independent contractor, and that determination has important tax and other legal consequences. See e.g., Shu-Yi Oei & Diane M. Ring, *Can Sharing Be Taxed?*, 93 WASH. U. L. REV. 989, 1019 (2016); see also, Blank & Osofsky, *supra* note 146 (explaining that the IRS often presents complex and ambiguous tax questions as simple and clear cut). However, the computational complexity associated with floors, phase-ins and phase-outs, and the AMT does not arise from ambiguity.

taxpayers, while avoiding facilitating social welfare reducing tax planning by high-income taxpayers.

Some have argued that technology led us to the complex and opaque tax system we have today.<sup>225</sup> The primary argument of this Article is that technology can help supply the remedy as well as the injury.

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225. See Zelenak, *supra* note 35.

## APPENDIX

<b>Tax Software</b>	<b>Website</b>
1. Abacus	<a href="http://abacus.tax/">http://abacus.tax/</a>
2. ATX- Wolters Kluwer	<a href="http://cchsf.com">cchsf.com</a>
3. Bloomberg Law: Tax	<a href="http://bloomberglaw.com/product/tax">bloomberglaw.com/product/tax</a>
4. Blue J Legal	<a href="http://www.bluejlegal.com">www.bluejlegal.com</a>
5. BNA Income Tax Planner (Calc-Q-Tax)	<a href="http://www.bna.com/tax">www.bna.com/tax</a>
6. CCH Access Tax-Wolters Kluwer	<a href="http://cchgroup.com">cchgroup.com</a>
7. CCH ProSystemfx-Wolters Kluwer	<a href="https://taxna.wolterskluwer.com/professional-tax-software/prosystem-fx">https://taxna.wolterskluwer.com/professional-tax-software/prosystem-fx</a>
8. Checkpoint-Thomson Reuters	<a href="http://tax.thomsonreuters.com/checkpoint">tax.thomsonreuters.com/checkpoint</a>
9. Clarus R+D	<a href="http://clarusrd.com">clarusrd.com</a>
10. Comtax	<a href="https://www.comtaxit.com/">https://www.comtaxit.com/</a>
11. Credit Karma	<a href="http://creditkarma.com">creditkarma.com</a>
12. Drake Software	<a href="http://drakesoftware.com">drakesoftware.com</a>
13. EZ Tax Return	<a href="https://www.6.eztaxreturn.com/scriptsez/start.exe/eztax/p/alliance2020/start.html?r_link=www.eztaxreturn.com">https://www.6.eztaxreturn.com/scriptsez/start.exe/eztax/p/alliance2020/start.html?r_link=www.eztaxreturn.com</a>
14. FreeTaxUSA	<a href="http://freetaxusa.com">freetaxusa.com</a>
15. Genius Software	<a href="https://saginfotech.com/">https://saginfotech.com/</a>
16. GoSystem Rs-Thomson Reuters	<a href="http://tax.thomsonreuters.com/gosystem">tax.thomsonreuters.com/gosystem</a>
17. H&R Block	<a href="http://hrblock.com">hrblock.com</a>
18. inDinero	<a href="http://indinero.com">indinero.com</a>
19. Jackson Hewitt	<a href="https://www.jacksonhewitt.com/">https://www.jacksonhewitt.com/</a>
20. Lacerte-Intuit	<a href="http://proconnect.intuit.com/lacerte">proconnect.intuit.com/lacerte</a>
21. Liberty Tax	<a href="http://libertytax.com">libertytax.com</a>
22. Online Taxes	<a href="http://OLT.com">OLT.com</a>
23. OneSource-Thomson Reuters	<a href="http://tax.thomsonreuters.com/onesource/tax">tax.thomsonreuters.com/onesource/tax</a>
24. Petz Crossling	<a href="http://www.crosslinktax.com">http://www.crosslinktax.com</a>
25. PowerTax	<a href="http://www.powertaxsolution.com/">http://www.powertaxsolution.com/</a>
26. ProConnect Tax-Intuit	<a href="http://proconnect.intuit.com">proconnect.intuit.com</a>
27. ProSeries Cloud Hosting	<a href="https://proconnect.intuit.com/proseries/">https://proconnect.intuit.com/proseries/</a>
28. QuickBooks-TaxPlanner Pro	<a href="https://quickbooks.intuit.com/app/apps/appdetails/taxplanner/en-us/">https://quickbooks.intuit.com/app/apps/appdetails/taxplanner/en-us/</a>
29. Redwing Software	<a href="https://www.redwingsoftware.com/home/home.aspx">https://www.redwingsoftware.com/home/home.aspx</a>
30. Sage50-Cloud	<a href="https://www.sage.com/en-us/products/sage-50cloud/">https://www.sage.com/en-us/products/sage-50cloud/</a>
31. TaxAct	<a href="http://ww.taxact.com">ww.taxact.com</a>
32. Taxfyle	<a href="https://taxfyle.com">https://taxfyle.com</a>

33. Taxmaster	<a href="http://www.taxmaster.com/">http://www.taxmaster.com/</a>
34. TaxSlayer-Professional	<a href="http://www.taxslayerpro.com">www.taxslayerpro.com</a>
35. TaxSlayer-Individual	<a href="http://www.taxslayer.com">www.taxslayer.com</a>
36. Taxwise-Wolters Kluwer	<a href="http://cchsfs.com">cchsfs.com</a>
37. TurboTax-TaxCaster	<a href="https://turbotax.intuit.com/tax-tools/calculators/taxcaster/">https://turbotax.intuit.com/tax-tools/calculators/taxcaster/</a>
38. UltraTax CS-Thomson Reuters	<a href="http://tax.thomsonreuters.com/ultratax">tax.thomsonreuters.com/ultratax</a>
39. VeriPlan	<a href="http://www.theskilledinvestor.com/VeriPlan/">http://www.theskilledinvestor.com/VeriPlan/</a>

