

Rent-Seeking and the Volume of Tax Laws: The Tax Cuts and Jobs Act of 2017

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Abstract

Taxes have a significant impact on individuals and firms. Unfortunately, complexity in the tax law has led to economic inefficiency due to inefficient use of tax breaks and increased audits and related penalties. Part of such complexity is driven by the sheer volume of tax law. To explain this phenomenon, we model tax law volume as a function of wealth transfers from the rent seeking/theory of regulation literature. Our models predict that both overall volume and the number of specific terms (defined by words in our specific “dictionary”) is higher for groups receiving tax breaks, and lower for more heavily taxed groups. The specific terms attempt to control for free riding *across groups*, and to limit tax breaks *within groups*. Using textual analysis, these predictions are supported in tests using the Tax Cuts and Jobs Act of 2017. Also, consistent with theory, we find that tax breaks are given to relatively smaller groups, and tax increases are spread across relatively larger groups.

Keywords: tax law, economics, law complexity

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1. Introduction

Taxes have a significant impact on individuals and firms. Unfortunately, complexity in the tax law has led to economic inefficiency, including the inefficient use of tax breaks. An example is Zwick (2021) who demonstrates that tax benefits from net operating losses (NOLs) are underutilized by less sophisticated business taxpayers, or those with less professional help, due to the complexity of the law. A similar example is found in Kitchen and Knittel (2011), who show that complexity can induce the imperfect use of tax breaks from accelerated depreciation.. Also, if complex tax Code rules lead to complexity in more commonly-accessed sources of tax rules (e.g., tax form instructions), then taxpayers (of all sorts) can be expected to behave suboptimally to taxes; see Balufus, Chirvi, Huber and Maiterth (2020) who, surveying the empirical literature, find that taxpayers as a whole act in suboptimal manners because they misperceive tax rules. Such complexity-driven misperceptions can sometimes lead to an understatement of tax which attracts additional audit scrutiny.^{1,2}

The U.S. tax law has long been criticized as overly complex, and continues to get increasingly complex. One aspect of such complexity is sheer volume: the Internal Revenue Code (the basic law) contains over 9,800 sections and 2.4

¹ For example, the IRS currently has high audit rates on the earned income credit (EIC) for lower income individuals, since error rates on tax returns claiming EITC are around 50%; see <https://www.irs.gov/about-irs/irs-audit-rates-significantly-increase-as-income-rises>

² Whether increased complexity has led to more audit activity is difficult to determine, since in general, audit rates have fallen over time (see, for example, <https://www.cnbc.com/2020/01/08/attention-taxpayers-irs-audits-have-fallen-significantly.html>). On the other hand, since the IRS' focus is on tax understatements, this suggests that there is a link between complexity (which is higher for credits, deductions, exclusions, etc.) and audit *focus*.

million words, and the Treasury Regulations, which add detail to the Code, have over 7.6 million words, with both estimated by one source as having an eight-fold increase since 1955.³ Combined with thousands of IRS Revenue Rulings Revenue Procedures and tax cases, the total volume of the tax law has been estimated to be in excess of 70 thousand pages.⁴ Such volume-induced complexity gives uncertainty to individuals and businesses, and complying with these laws—on tax returns and otherwise—results in a significant deadweight loss. Conventional thinking (there is no extant theory on such complexity) simply suggests that the world is complex, so laws are as well, a phenomenon which worsens as situations change over time.

We propose instead that the volume of tax law is in large part driven by the desire to limit the scale and scope of the law which can in part be explained by theory from political economy. The scale is the amount of tax (or tax break) which is intended for a targeted group. The scope means that the law does not inadvertently apply outside of the intended group, i.e., “free-riding” on tax breaks. That is, the resource transfers inherent in tax laws are intended to affect specific groups in specific amounts, and “terms and conditions” are included in laws to make sure that laws resulting in lower taxes (e.g., deductions, exclusions, credits, special breaks, etc.) are not utilized by other taxpayers or over/underused by targeted taxpayers.

We develop an analytic model using as starting point models from the rent-seeking/theory of regulation perspective. The lawmaker’s objective function is to maximize a majority of support. Tax breaks generate support, whereas increased offsetting taxes (to support tax breaks) generate opposition. In both cases, more regulation, in the form of more rules, are required to minimize free riding /collateral taxation. More rules of course translate into more volume. Such volume (in the form of more rules) increases with the amount of wealth transfer at stake. The effect of number taxpayers affected (or potentially free-riding/collaterally-taxed) has a more complex relationship on volume.

Note that the volume of tax law can also occur insofar as more new laws are created to achieve overall tax law objectives such as revenue raising, encouraging/discouraging certain behaviors, creating equity or wealth redistributions in general, etc. Each such objective may create a new Code section or add length to an existing one. For example, a law to encourage investment in research creates a new Code section on R&D tax credits; a law to benefit lower income people could be a child tax credit; or a law to redistribute wealth could be the alternative minimum tax. Here, we acknowledge that volume is created by the sheer number of such provisions, and we instead examine the lengthiness of any such rule (i.e., we are agnostic as to objectives of laws) and focus on the free rider problem. Thus, our “agnostic” approach to the general policy objective of any particular law section allows us to examine lengthiness *within any such law*, which can vary significantly. Free riding increases over time as taxpayers learn and devote resources (tax planning) to finding “loopholes”, which is a function of taxes (wealth) at stake, resources of the taxpayer, and number of free riding rules in place. Lawmakers add more verbiage to close such loopholes. Similarly, lawmakers add more verbiage to avert collateral taxation. Finally, lawmakers add rules to limit the amount of tax break (or tax increase) to a targeted group.

The model generates testable hypotheses, and we examine the text of recently-passed Tax Cuts and Jobs Tax Act (TCJA) of 2017. This new U.S. law provides a natural experiment since many aspects of existing laws (both tax increasing and tax break generating) were changed, and new provisions were introduced. Importantly, the Congressional Budget Office (CBO) provided wealth effects of each such provision. The number of taxpayers affected is estimated from Statistics of Income data (US Treasury) and other public data. The goal of this paper is to explain the TCJA in the context of political economy theory.

The volume of any one tax provision is increased by the specificity of the group targeted for a tax break, or increased tax. The more precisely defined is the group, and the more specific the limitations on such breaks (taxes), the more verbiage necessary. Additionally, more specific verbiage will require language clearly placing limits on the targeted group, and the magnitudes of the breaks (or taxes). Such volume, by law section, is measured two ways: total number of words; and by a word “dictionary” which we develop containing a library of words which indicate references to other laws, such as number of Code sections cross-referenced, and specific limitation terms. The results are consistent with predictions of the model: volume (using both measures) is negatively related to the size of the targeted group; is positively related to the tax benefit (or cost) per targeted member; and is more pronounced for business-related laws. The seemingly “obvious” positive relationships between the length of laws and magnitude of tax break (or cost), and number of taxpayers affected, are not supported, consistent with the model.

³ See <https://taxfoundation.org/federal-tax-laws-and-regulations-are-now-over-10-million-w>

⁴ Ibid.

2. Theory and Measurement

2.1 Law Length and Complexity

The rising sophistication in the tax law in terms of both readability and volume increases tax complexity. Although overall complexity is a function of many factors, one such factor is the length of a law. There are many dimensions of tax complexity due to computation, design of the forms (American Institute of Certified Public Accountants, 1992), compliance and rule requirement (Carnes & Cuccia, 1996), procedural of the tax system (Cox & Eger, 2006), and readability (Pau, Sawyer, & Maples, 2007; Richardson & Sawyer, 1998; Saw & Sawyer, 2010). Strader & Fogliasso (1989) argues that Japan, United Kingdom, France, Italy, and the United States all have complex tax systems which contribute to taxpayer non-compliance. Despite the cost complex tax systems can induce, little effort has been made by countries to reduce their tax complexity. One country, New Zealand, instituted various tax reforms starting in mid-1980s (Hasseldine & Bebbington, 1991), and except for the Tax Return Guides, those efforts appeared a failure.

Little theoretical attention has been paid explicitly to complexity in the tax law from an economics perspective. Weisbach (1999) notes that the obvious benefit of complexity is that the law will be more efficient and/or fair than a less complex law. He notes that complex law reduces under- or over-taxation of particular activities relative to the desired amount as compared to simple law. Additionally, tax laws need address uncommon situations; unlike most areas of law (e.g., tort or safety regulations) analysis of the costs and benefits of complexity suggests that laws should be drafted to fit common circumstances including the use of less lengthy standards (instead of rules). Here, rare and unusual facts might be miss-regulated, but under- or over-deterrence in these cases is not costly because the transactions are unusual. In tax law, increasing complexity is partly the result of increasing rules for “anti-abuse” (misuse of tax rules). Eggeston, Posner, and Zeckhauser (2000) show that in contract law, complexity is often a necessary condition to deal with uncertainties, asymmetric information, and contingencies. While tax laws are not contracts per se, in the context of political economy (discussed below), they bear some similarities to contracts between politicians and their constituency groups. Similarly, Kades (1996), framing the argument from the rapidly expanding field of computational complexity theory in law and economics, suggests that since there are many agents who are part of any tax law, complexity is a necessary outcome.⁵

The above suggests that complexity is necessary to restrict who is taxed/or benefits from a tax provision. It also follows that such complexity, via specific rules, is the result of limiting the magnitude or scale of tax costs or benefits for the intended group. Next, we consider more specifically how such complexity can vary depending on the size of the group taxed (or conferred benefits), the type of taxpayer, and whether the law is tax increasing or tax decreasing.

2.2 Textual Analysis

To examine tax law verbosity, we use computer programs to perform textual analysis. The method of textual analysis has long been used in law and other fields to more closely examine meanings in laws, cases, and other documents.⁶ With the recent advent of text reading software which can rapidly search for text on a large scale (R, PERL, and other applications) text analysis has recently blossomed in a number of fields, with a robust literature in finance and accounting. These studies have used text analysis to attempt to glean non-quantitative economic information from earnings calls to shareholders, financial statements, etc. with a focus and “tone”/sentiment via various dictionaries. (see literature reviews in Loughran and McDonald, 2014, 2016). Examples include Antweiler and Frank (2004) who investigated Dow Jones companies associated with RagingBull.com and Yahoo finance and found that message posting helps predict volatility, and that higher negative postings helps predict negative subsequent returns. Sabherwal, Sakar, and Zhang (2008) showed that there are abnormal returns if the stock were discussed more on “TheLion.com”. Tetlock, Saar-Tsechansky, and Macskassy (2008) found that the fraction of negative words in news stories forecasted firm earnings and stock prices underreact to information in negative words.

Li (2008) was among the first to employ textual analysis to measure disclosure readability by the use the Gunning FOG index, which is a function of the number of words. Kothari, Li, and Short (2009) find that negative disclosures from the business press result in increased cost of capital and volatility of returns, while positive disclosures reduce cost of capital and volatility of returns. Feldman, Govindaraj, Livnat, and Segal (2010) measured tone change in the management’s discussion and analysis section of Forms 10-Q and 10-K and find a short window market reaction.

⁵ There is an extensive literature on tax compliance, uncertainty, and complexity (see cites in Selmrod and Yitzhaki, 2002, for example). If it is the case that lawmakers explicitly consider complexity to encourage compliance, then this can be viewed as designed complexity to limit free-riding and overuse of tax benefits which is consistent with the theory in the next subsection.

⁶ Relatedly, content analysis has been used to analyze “big data” resulting from numerous sources of communication; see Neuendorf (2016) for a literature summary.

Loughran and McDonald (2011) illustrate that generic word lists misclassify some common words in finance, and they develop a large set of dictionaries to facilitate future research. Using both general purpose and context-specific dictionaries to quantify tone, Rogers, Buskirk, and Zechman (2011) find incrementally greater litigation risk when managers are both unusually optimistic and engage in abnormal selling. Davis, Piger, and Sedor (2012) used a measure based on optimistic and pessimistic words to find that measure positively associated with future ROA and a significant market response in a short window around the earnings announcement date.

Price, Doran, Peterson, and Bliss (2012) found that a linguistic tone measure used on conference call text can predict abnormal returns and trading volume. Kravet and Muslu (2013) use a dictionary to measure risk. Larcker and Zakolyukina (2012) used a dictionary to measure deception. Li, Lundholm, Nagar, and Minnis (2014) count the number of uses of the word “competition” is written in the MD&A section. Campbell, Chen, Dhaliwal, Lu, and Steele (2014) use tone to investigate mandatory risk factor disclosures. Bodnaruk, Loughran and McDonald (2015) create a constraining word list to help other researchers identifying whether or not a firm is financially constrained. Allee and DeAngelis (2015) examine tone dispersion and find that it both reflects and affects the information that managers convey through their narratives.

Here, we use textual analysis to examine the volume of tax laws. Complexity, by law section, is measured two ways: number of words; and by a word “dictionary” which contains a library of limiting and restricting words, discussed later.

2.3 Modeling Wealth Transfers and Volume of the Law

Innumerable popular press articles and books have noted that the tax system is affected by the political process. In terms of rigorous studies, a few such empirical papers have examined this issue from the demand side, primarily looking at firm effective tax rates, demonstrating a connection between campaign contributions and favorable tax legislation. A number of studies have also investigated the overall effects of corporate lobbying for tax benefits, by examining overall effective tax rates; see Meade and Lin (2015), Desai and Darmapala (2006), Brown, Drake, and Wellman (2014), and cites therein. Although many popular press articles discuss lobbying for specific benefits⁷ or avoiding additional taxation⁸, due to limitations on observable activities and data (PAC contributions and lobbying expenses), there is a dearth of peer-reviewed empirical evidence linking lobbying and *specific* tax rules (and Code sections). Examples include Gupta and Swenson (2003), who examined DISC income forgiveness (thus was tied to Code sections 955 through 959) and found a strong link between campaign contributions to tax-writing members of Congress, and whether firms stood to gain from such a provision. Alexander, Mazza, and Scholz (2019) examined lobbying relating to a tax holiday on repatriated earnings created by the American Jobs Creation Act of 2004 (IRC section 965). They found firms lobbying for this provision had a return in excess of \$220 for every \$1 spent on lobbying, or 22,000%. Chen, Dyreng, and Li (2018) examined campaign contributions and “rifle shot” (benefitting a single firm) legislation for the Tax Reform Act of 1986, and found a strong link to such successful outcomes and campaign contributions. While the aforementioned studies largely focus on business tax breaks, it is important to note that there are innumerable tax breaks for individuals, many of which focus on smaller groups. Accordingly, the below theory, in addressing tax breaks, includes both the individual and business sectors.

We begin by adapting the voting models from political economy (Hettich & Winer, 1984; 1988; 2005) and models from rent-seeking (Stigler, 1971; Peltzman, 1976; and Becker, 1983) to explain the actual *wealth transfers* (tax breaks versus increased taxes) across groups, then modify them to explain the *detailed structure* of statutory tax laws themselves.⁹ We start with the presumption that, given an attempt to have a *roughly* balanced budget, what occurs in tax legislation is

⁷ See “Business Groups Spent Big on Lobbying During the Tax Overhaul”, Bloomberg, (January 23, 2018) <https://www.bloomberg.com/news/articles/2018-01-23/tax-bill-prompts-business-to-pay-heavily-for-lobbying-campaigns> which discusses group lobbying efforts for tax reductions relating to the Tax Cuts and Jobs Act of 2017.

⁸ See “U.S. Lobby Groups Write Battle Plan to Beat Biden Tax Hikes” Reuters, July 6, 2021. <https://www.reuters.com/legal/government/us-lobby-groups-write-battle-plan-beat-biden-tax-hikes-2021-07-06/> which discusses lobbying efforts to avoid additional taxation under Democratic proposals in 2021.

⁹ Since the pioneering work of Tullock (1967), empirical tests of the theory are generally supportive predictions in a variety of settings; see Bender and Lott (1996) for a literature review and the October 2019 issue of *Public Choice*. We assert that such theories can be applied to the tax law setting as well. We do not claim that tax laws are written solely from a vote-maximizing/wealth transfer perspective. Lawmakers pass laws for a number of more general reasons, including encouraging overall economic growth, revenue raising, encouraging general behaviors (on-shoring of production, clean energy production, etc.), social equity, etc. On the other hand, we argue that political rent-seeking behavior is prevalent over time and should be detectible in the data. Moreover, the theory here has been found to be robust in a number of tax and non-tax settings.

essentially a transfer of wealth. Beneficiaries are assumed to pay with both votes and dollars, and the productivity of the dollars to a politician lies in mitigation of opposition.¹⁰ Votes, which is the direct political support, is the lawmaker's ultimate objective, and specifically the lawmaker seeks to maximize net votes or a majority in his favor. The second derivative in this function is assumed non-negative; more votes are always assumed to be preferred.¹¹ The lawmaker's problem boils down to the size of the group he benefits as well as the magnitude, which also implies which group he will tax and the magnitude of the tax. Or:

$$\max M = n * s - (N - n) * o, \quad (1)$$

where M is the majority, n is the number of potential voters in the beneficiary group, s is the net probability that a beneficiary will grant support, N is total number of potential voters, o is the net probability that potential voters not in the beneficiary group opposes. Gainers and losers both face transaction and information costs, thus s and o are neither zero nor unity, and based on the the group member's gain or loss. Face transaction and information costs also apply to lawmaker so he cannot exclude non-supporting beneficiaries. With the simplified model we assume that gains and losses are equal per capita within groups.¹²

The probability of support is

$$s = f(g), \quad (2)$$

where g is the per capita net benefit, and is

$$g = (T - K - C(n)) * n^{-1} \quad (3)$$

with T = total tax dollar amount transferred to the beneficiary group, K = dollars spent by beneficiaries in campaign funds, lobbying, and so on, to support the lawmaker and to mitigate opposition, and $C(n)$ = cost of organizing both direct support of beneficiaries and efforts to mitigate opposition. This latter cost increases with n , where the shape of the marginal cost curve may or may not be strictly increasing, and with any coalition of size n facing the same costs of organization and having members with the same responsiveness to benefits. Accordingly, the number of votes in support depends on n in two offsetting ways: a larger n provides a larger base for support, but dilutes the net gain per member and so the probability of a member's support. We assume that the lawmaker chooses K as well as T .¹³ The tax break (wealth transfer) is assumed generated by a tax at the rate t on the wealth (B) of each member outside the benefited group,

$$T = t * B(N - n), \text{ or } t = T / B(N - n), \quad (4)$$

where B is a negative function of t . The opposition assumed generated by the tax rate mitigated by voter education expenditures per capita (z):

$$o = f(t, z), \quad (5)$$

¹⁰ More generally the dollars may be used for campaign contributions, and/or include, for example, employment of former lawmaker a source of direct as well as indirect utility to the lawmaker.

¹¹ More votes imply higher likelihood of tenure in office, ability to obtain more "plum" committee duties, greater negotiating power, etc.

¹² The stylized model also assumes that ignorance does not lead to perverse or biased voting. Here, he can skip voting, or vote by tossing a fair coin. In either case, the f in equation (1) will be zero, and M will be the (same) difference between votes for and votes against. With nonparticipation by the ignorant, f (or h) is simply the probability that a beneficiary (or loser) votes, while with random voting by the ignorant f is the difference between the probability of a favorable and unfavorable vote by the beneficiary.

¹³ Tax legislation could be modeled with the benefited group itself determining the appropriate K , but in doing so it would be motivated by the same forces affecting a lawmaker who would ask K as a price for providing a tax break.

$$z = K/(N - n). \tag{6}$$

Within the relevant range, tax benefits are subject to decreasing returns thus

$$\partial s/\partial g > 0, \text{ and } \partial^2 s/\partial g^2 < 0. \tag{7}$$

A complementary assumption is made for z :

$$\partial s/\partial z > 0, \partial^2 s/\partial z^2 < 0, \tag{8}$$

and there are assumed to be strictly increasing political costs to taxation:

$$\partial o/\partial t > 0, \partial^2 o/\partial t^2 > 0. \tag{9}$$

The lawmaker thus picks the size (n) of the group they will benefit, the amount (K) they will ask that group to spend for mitigating opposition, and the total tax break (T) they will transfer to the beneficiary group. As a function of the above, the lawmaker calibrates rules (or complexity) to assure that n and T (and thereby $N-n$ and t) exclude free riding (or collateral taxation) and that the size of the benefit (for the winning group) or tax cost (for the losing group) is well-defined. Accordingly, we have

$$n=f(R_n), \tag{10}$$

where the lawmaker restricts the size of the winning group by rules R_n which is increasing in the number of the $N-n$ group. Here, more rules inhibit free riding, with potentially a rule for each member of the losing group. Further,

$$T/n=f(L_n), \tag{11}$$

where the lawmaker limits the amount of the total tax break per member of the winning group by a series of rules L_n which prevents over-use of the tax break. A complimentary set of rule conditions exist for members of the losing or taxed group:

$$(N-n)=f(R_{N-n}), \tag{12}$$

where R_{N-n} are rules restricting size of the taxed group, and

$$t=f(L_{N-n}), \tag{13}$$

where L_{N-n} are rules limiting the magnitude tax of the taxed group.

The necessary conditions for these choices to yield the maximum majority for the politician, are:

$$\partial M/\partial n = 0 = -(g+m)\partial s/\partial g + s - \partial o/\partial t \left(\frac{tB}{B+t\partial B/\partial t} \right) - \partial o/\partial z + o, \tag{14}$$

$$\partial M/\partial T = 0 = \partial s/\partial g - \partial o/\partial t \left(\frac{1}{B+t\partial B/\partial t} \right), \tag{15}$$

$$\partial M/\partial K = 0 = -\partial s/\partial g - \partial o/\partial z, \tag{16}$$

where $m = \partial C/\partial n$ or the marginal cost of group organization. Combining equations (10)-(16) and making use of the definitions yields the following solution for n :

$$\frac{n}{N} = 1 - \frac{\frac{\partial f}{\partial s}(g+a)}{s+g - \left(\frac{\partial f}{\partial g}(s-a) \right)} \tag{17}$$

where $a =$ average cost of organization (C/n). If there are no organization costs ($a = m = 0$), the ratio is less than one because of diminishing returns ($\partial s/\partial g * g < s$), and diseconomies of scale in organization ($m > a$) tend to reduce the ratio further. The condition in (17) requires that the marginal political return equals the marginal political cost of the tax.

Since both $\partial s/\partial g$ and $\partial o/\partial t$ are positive, an interior maximum can occur only if the term $(B + tBt)$ is also positive. This term is the marginal product of t in raising revenue from a member of the losing group. That it must be positive implies that these losers must be taxed less than the interests of the winners would dictate (a revenue maximizing tax—that is, $B + tBt = 0$).

To see this, define the proportional support function $P(t)$ as $(\partial o/\partial t)/(\partial s/\partial g)$. The marginal revenue from t , or $B + (t * \partial B/\partial t)$, is decreasing in t , and the revenue maximizing tax is $\partial T/\partial M$, where this marginal revenue is zero. However, with $P(t)$ positive at any $t > 0$, $\partial T/\partial M$ cannot be a political equilibrium. The equilibrium, from equation (17), occurs where $\partial t/\partial n < \partial t/\partial m$.¹⁴ Imperfect information about both the gains and losses of tax decisions and of costs of organizing for tax breaks results in a restricted the size of the winning group. Finally, even if groups organize according to an economic interest (business versus individual taxpayers), political entrepreneurship will produce a coalition which admits some members of the taxed group into the tax-break group. This gives rise to:

H_1 : the size of the tax-break receiving group is smaller than the size of the taxed group.

We also see that $R_n > R_{N-n}$ and $L_n > L_{N-n}$. The former condition must hold since $N-n > n$ in (17) and that there is potentially a rule R each member of either group. The second condition holds due to decreasing marginal returns to the lawmaker to g relative to the magnitude of the marginal cost of T (via o) at all levels. Intuitively, the political cost of under-delivering tax breaks to a smaller group is much higher than the cost of overtaxing a larger group, due to all of the conditions explained above. Thus the lawmaker must have more carefully crafted laws in the tax break setting, which entails more overall wording and more restrictive words. Thus, we have:

H_2 : Complex words (restricting and limiting words, R and L) are larger for tax-break receiving groups than for taxed groups. Since such terms result in additional verbiage (driven by the words themselves, and by sentences needed to “deliver” them), the volume of tax laws related to tax break groups will also be larger. Also

H_3 : The above volume is increasing in magnitude as the size of the tax-break group increases, and decreases in size as the size of the taxed group increases.

There are clearly tensions in the above predictions. It may be the case that *Prediction 1* holds only weakly, or not at all. For the taxed group, members can lobby for “carve-outs” from taxation, and the lawmaker may grant them if $\partial o/\partial t$ is much higher than that of other members of the group. Here, the lawmaker creates a winning group within the losing group, so to speak. Similarly, the lawmaker can exclude taxpayers from the winning (tax-break) group based on wealth differences and/or a lower relative s . To the extent such “leakages” occur, the magnitudes of differences in tax break rules versus taxing rules are diminished.¹⁵

Indeed, Becker (1983) analytically predicts that due to competition between groups for rents, even heavily taxed groups can raise their influence and reduce their taxes (or increase subsidies) elsewhere. Similarly, increased deadweight costs on taxed groups cause them to increase rent-seeking behavior, and low deadweight costs to tax-favored groups cause them to reduce rent-seeking. Similarly, Hettich and Weiner (1984; 1988; 2005) discuss how the politician spreads tax breaks across a wide variety of voters in accordance with their marginal utilities, which then maximizes votes. In their framework, it is entirely possible that the politician can maximize votes by giving small tax breaks to very large groups and pay for this by tax increases on smaller groups, where the disutility of the tax increase for the smaller group is relatively small. For example, the politician could cut tax rates on all individuals by a small percent, and increase taxes on a high-profit industry (e.g., large oil producers).

The effect of all of this is that more tax-favored groups will also have tax increases, and more taxed groups will also have some tax subsidies. This can occur through different tax provisions or via the same tax rule; i.e., a tax subsidy law/rule intended for a particular group will also include some benefits for other groups, and a tax on certain groups may also include other groups. Over time, political pressure could essentially equilibrate taxes across many groups for any number of tax provisions (Code sections), counter to *Prediction 1*.

¹⁴ Thus, even if group gets all the benefits of a tax break, it will be less than a perfect broker for the group would obtain. The best organized group will yield less to the membership if the government organizes it than if it were (could be) organized privately. This is independent of organization or campaigning costs, and instead is the political process must pay to marginal position. Note that (11) holds even if K and C are assumed zero.)

¹⁵ The above analysis also does not consider the role of committees and shaping tax legislation; see Dharmapal (1999) for an example.

Predictions 2 and 3 might not hold as a function of *Prediction 1* not holding. If a tax break is intended for a large group, keeping the size of the group smaller via limiting terms is not necessary. Referring to the above example, a tax reduction intended for all individuals (and paid for via a tax on a small group) would only need a minimum of restrictive terms, and thus verbiage and complexity. Additionally, the maintained hypotheses that more limiting/restricting terms lead to more overall verbiage, may not be the case. For example, a few well-written sentences using such terms may obviate wordy language, which would otherwise be used to create such limitations and restrictions. Finally, taxpayers put pressure on lawmakers for carve-outs from taxation when it comes to tax-increasing rules such as income inclusions; examples of lobbying behavior to avoid taxation abound, including most recently (in 2021) Democrat-led proposals to increase taxes on the wealthy and certain types of business.¹⁶ If such pressure is successful, income increasing-Code sections will also grow larger, perhaps to the point that they are larger and more complex than tax-reducing sections.

3. Institutional Background

Description of the Tax Cuts and Job Creation Act of 2017

If the theory is robust, we should be able to detect results when there is a new tax law. Such was the case with the Tax Cuts and Job Creation Act of 2017, also known as the Budget Reconciliation Act of 2017. Unlike the existing Code, Act sections have not been adjusted over time and present a clear picture of Congress' original intents. Analysis of the Act also has the advantage of providing actual wealth transfer data for us to examine, since such budgetary information is required to be reported.¹⁷ Similar to other tax acts, lobbyists spent significantly to preserve existing tax breaks and/or to create new ones prior to JCTA.¹⁸ This rent-seeking became even more clear when some of the writers of the Act were subsequently hired as lobbyists.¹⁹

This 560-page document created the most sweeping tax law change in the U.S. since 1986. Signed into law in December 2017, its provisions generally went into effect in January 2018. It changed how individuals, businesses, estates, nonprofit organizations, etc. are taxed, including tax rates, tax deductions, credits, and more. The final bill was a compromise between House and Senate bills which were begun in October of 2017. The following is a high-level summary of the law for individuals, businesses, and tax-exempt organizations.

For individuals, there were a number of tax-reducing measures. These included a reduction in tax rates²⁰ as well as some other increases in deductions and other tax breaks.²¹ On the other hand, there were a number of tax-increasing measures on individuals. Standard deductions and personal exemptions were eliminated. Itemized deductions for home mortgage interest were reduced to (for new purchases) to \$750,000 in mortgage debt, and the deduction interest on for equity debt was eliminated. The state and local tax deduction was now limited to \$10,000. The moving expense deduction was repealed as was the alimony deduction effective 2019 (though those receiving alimony no longer count it as income). All itemized deductions subject to the 2% floor (such home office, license and regulatory fees, professional dues) were repealed.

In the business sector, the following were tax-reducing measures. The corporate tax rate was cut from 35% to 21%, and the corporate alternative minimum tax (AMT) was repealed. For capital investments, a full (100 percent) immediate

¹⁶ "U.S. Lobby Groups Write Battle Plan to Beat Biden Tax Hikes" Reuters, July 6, 2021. <https://www.reuters.com/legal/government/us-lobby-groups-write-battle-plan-beat-biden-tax-hikes-2021-07-06/>

¹⁷ We note that while not all the sections of the Act are Code sections per se which will appear in the Code, they do contain amendments to existing sections which will appear in the Code using the same language. As such, we believe they are a representative sample of Code section complexity.

¹⁸ "Business Groups Spent Big on Lobbying During the Tax Overhaul", Bloomberg, (January 23, 2018) <https://www.bloomberg.com/news/articles/2018-01-23/tax-bill-prompts-business-to-pay-heavily-for-lobbying-campaigns>

¹⁹ "GOP staffers who wrote the tax bill cash in with lobbying gigs" Politico (June 4, 2018) <https://www.politico.com/story/2018/06/04/trump-tax-bill-lobbying-jobs-623656>

²⁰ The previous rates of 10%, 15%, 25%, 28%, 33%, 35%, 39.6% rates were replaced with tax rates of 10%, 12%, 22%, 24%, 32%, 35%, and 37%, and incomes falling with such rates will be indexed for inflation.

²¹ The medical expense deduction threshold was lowered to 7.5 percent for 2018, and the alternative minimum tax was effectively lowered by increasing the exemption to \$70,300 and lowering some "phaseout" provisions. The child tax credit was increased to \$2,000, with other dependents eligible for a \$200 credit each. There was an expansion of the use of 529 accounts to cover tuition for students in K-12 private schools. The tax on those not enrolling in health insurance (under the Affordable Health Care Act) was eliminated. It is noteworthy that a number of such breaks, for budgetary reasons, are due to expire after 2025. Finally, for wealthy individuals, the estate tax was reduced by doubling the estate tax exemption in 2018 (would continue to be adjusted for inflation).

write-off of short-lived capital investment was allowed, such as machinery and equipment²², and a specific equipment write-off designed for small businesses (Section 179) was increased to a \$1 million maximum.²³ However, there were a number of tax-increasing changes for businesses under the law.²⁴

The above rules apply to all businesses including sole proprietorships, corporations, and so-called pass through entities such as limited liability companies, partnerships, and S corporations. However, the law also had some provisions which affected such pass-through entities specifically. The primary tax decreasing law change was a new 20% deduction for pass-through income was created; it allows individual taxpayers to deduct 20% of domestic “qualified business income” (QBI) from a partnership, S corporation, or sole proprietorship (“qualified businesses”) subject to certain limitations and thresholds. On the other hand, there were some minor tax-increasing laws affecting pass-through entities.²⁵

Perhaps the most sweeping changes were to business having international income. These changes were in addition to the above general business tax changes listed above. On the tax reducing side, U.S. corporations were now allowed a deduction against foreign-derived intangible income (37.5% deduction initially, reduced to 21.875% for tax years beginning after 12/31/25).²⁶ In contrast, the tax-increasing measures for multinationals were more prevalent.^{27 28}

²² This is in place for five years, then phases out the provision over the subsequent five.

²³ For the above expensing, the definition of “qualified property” is expanded to include certain depreciable personal property used to furnish lodging, and improvements to nonresidential real property (such as roofs, heating, and property protection systems). Other business breaks included an increased number of small business who could use the cash method of accounting, which is much simpler than the accrual method required of most businesses. The new law also provides a tax credit to certain employers who provide family and medical leave (for 2018 and 2019 only).

²⁴ The deduction for dividends received from other than certain small businesses or those treated as “qualifying dividends” was reduced. Interest deductions were limited; the law capped net interest deduction at 30 percent of earnings before interest, taxes, depreciation, and amortization (EBITDA). The law eliminated net operating loss carrybacks as a deduction, and the ability to postpone taxes on like-kind exchanges was limited to real property. Domestic research expenses were required to be written off over 5 years (previously they could be fully deducted); the rehabilitation credit and the orphan drug credit were reduced, and the Domestic Production Deduction (Sec. 199) was repealed. Others tax increasing measures included: limits on meals and entertainment expenses; the elimination of deduction for qualified transportation fringes, including commuting except as necessary for employee’s safety; and decreases in the amounts that companies can deduct with respect to executive compensation. The law eliminated deductions for certain fringe benefit expenses, as well as business entertainment activities and membership dues. Transportation or commuting expenses became non-excludable from income or deductible by the employer. Employee achievement awards were no longer deductible or excludable from income if the award is paid in cash, gift cards, meals, lodging, tickets, securities, or other similar items. Tax breaks for employer-provided eating facilities were curtailed or eliminated, and law added a new income inclusion deferral election allowing deferral of tax for options and restricted stock units issued to qualified employees of private companies.

²⁵ Tax-increasing changes for pass-throughs included rule imposing a three-year holding period to treat capital gain as long-term capital gain for certain partnership interests held in connection with the performance of certain services; and a rule limiting taxpayers (other than C corporations) ability to deduct business losses similar to laws affecting corporations. This latter law also disallows active pass-through losses in excess of \$500,000 for joint filers; \$250,000 for all others. Other tax increasers include a tax on sale (gains) of a partnership interest on “look-thru” basis, and charitable contributions and foreign taxes would now be taken into account in determining limitation on allowance of partner’s share of loss. Other tax increases included expanding the definition of substantial built-in loss for purposes of partnership loss transfers, a modification of the treatment of S corporation conversions into C corporations, and a recharacterization of certain gains on property held for fewer than 3 years in the case of partnership profits interest held in connection with performance of investment services.

²⁶ For so-called GILT, there is a mandatory GILTI inclusion (50% deduction initially, reduced to 37% for tax years beginning after 12/31/25). For overseas earnings prior to 2018, companies could repatriate currently deferred foreign profits at a rate of 15.5 percent for liquid assets and 8.0 percent for illiquid assets, instead of at the higher regular corporate tax rates

²⁷ Overseas subsidiaries would now be taxed immediately, there were new anti-abuse rules and a base erosion anti-abuse tax (BEAT) were imposed, The tax is imposed at a standard rate of 5 percent of modified taxable income over an amount equal to regular tax liability for the first year, then 10 percent through 2025 and 12.5 percent thereafter, with higher rates for banks. A new tax increases on foreign derived intangible income (including on so-called patent boxes”) were created. There were new mandatory annual inclusions of “global intangible low-taxed income” (GILTI)

The text of this bill is provided by the House of Representatives, and the Congressional Budget Office (CBO) provided tax impacts by provision. While it may be the case that some of the laws, or aspects of a section, had some political agendas, there were a number of explicit policy agendas proffered by the Congress which generally shaped the law. These included lowering tax rates and encouraging businesses to operate more in the U.S and less overseas. Because the legislation was designed to have some revenue neutrality, any tax breaks were offset (at least in part) by tax increasing provisions. In that sense the Act provides a rich setting for testing theories of complexity which examine the effects of tax increases and decreases, the number of taxpayers affected, etc. As the bill progressed through Congress and various tax breaks and taxing proposals became possible, various groups presented their cases to lawmakers: businesses though industry trade groups, and the individual sector though various associations like AARP, unions, etc. This lobbying behavior certainly affected lawmakers' decisions which fits nicely with theory from rent seeking/regulation.

4. Methodology

We download the full text of TCJA by sections from the US congress website (www.congress.gov). Using “bag of words” method, our textual analysis parse the whole text of TCJA into vectors of words and word counts by sections. As discussed in section 2, the tax law complexity is a result of the desire to limit the scale and scope of the law. As resource transfers inherent in tax laws are intended to affect specific groups in specific amounts, limiting and restrictive are included in laws to make sure that lower taxes apply to the intended groups of tax payers. We examine the text of the Act for both volume of words, and “complex” words which are composed of limiting plus restrictive words.

To be specific, for each section in the TCJA, we calculate the total number of limiting and restrictive words based on our dictionary. Appendix A lists our “bag of words” for restrictive and limiting words. These words were developed in consultation with tax faculty at a major metropolitan university. In addition, we also use the same technique to examine the entire Code before and after TCJA to exam if simplification occurs.

To capture the targeted tax payers of the tax law, we check each section in the TCJA manually to decide whether it's targeting business sector, whether it is tax reducing ,and how many tax payers are subject to the section. With these variables we are able to examine how the length and complexity of the tax law is associated with tax-break group and taxed group.

5. Results and Discussion

5.1 Analysis of TCJA

Table 1 reports descriptive statistics. There are 123 law sections analyzed²⁹. On average, each section has 117.96 words, and ranges from 31 to 493 words. The average section has 37.41 limiting/restricting words, and ranges from 0 to 402. The variable “Bus” is an indicator for business-targeted sections; here, percent are 65 percent business related. The dummy variable “Tax reducing” indicates the percent of sections which result in tax reductions; this is 33 percent. “n” is the number of taxpayers targeted by the section; the mean is over 72 million, and ranges from 535³⁰ to over 199 million.³¹ The average (in absolute dollars, i.e., tax increase or tax decrease) was \$11.39 million gain per targeted taxpayer, over a ten-year horizon.³²

determined on an aggregate basis for all controlled foreign corporations owned by the same US shareholder (with partial credits for foreign taxes properly attributable to the GILTI amount allowed as offsets). Deduction were disallowed for certain related party payments made pursuant to a “hybrid” transaction or entity, and if certain thresholds are met, a “base erosion minimum tax” levied on an applicable taxpayer's taxable income determined without regard to certain deductible amounts paid or accrued to foreign related persons. Limitations were placed on depreciation or amortization on property purchased from foreign related persons, as well as deductions for certain reinsurance payments to foreign related persons.

²⁸ Tax exempt organizations generally saw tax increases from the new law. A new 21% excise tax on excess tax-exempt organization executive compensation (certain exceptions provided to non-highly compensated employees and for certain medical services) was created. Unrelated business income separately computed for each trade or business activity, and charitable deduction not allowed for amounts paid in exchange for college athletic event seating rights. Finally, a new excise tax was created based on investment income of private colleges and universities with endowment per student of at least \$500,000.

²⁹ Non-tax sections in the bill are not analyzed, e.g., drilling rights in Alaska.

³⁰ Tax treatment of Native Alaska Corporations

³¹ The method for determining N for each section is shown in Appendix B.

³² The text of the Act was accompanied by a Congressional Budget Office (CBO) fiscal analysis which detailed revenue gains/losses by Act sections. The Act was not revenue-neutral, and was expected to cost in excess of \$1 trillion.

Table 1. Summary Statistics

| variable | N | Mean | Median | SD | Min | Max |
|-----------------------------|-----|------------|------------|------------|----------|-------------|
| Limiting | | | | | | |
| /restricting words | 123 | 37.41 | 17.00 | 53.09 | 0.00 | 402.00 |
| Words | 123 | 117.96 | 83.00 | 93.06 | 31.00 | 493.00 |
| Business | 123 | 0.65 | 1.00 | 0.48 | 0.00 | 1.00 |
| Tax_reducing | 123 | 0.33 | 0.00 | 0.47 | 0.00 | 1.00 |
| N | 123 | 72,403,083 | 47,478,762 | 52,344,943 | 535 | 199,543,082 |
| n: N ratio | 123 | 0.19 | 0.00 | 0.35 | 0.00 | 1.13 |
| multiyear cost (\$millions) | 123 | -11.39 | 0.20 | 233.41 | -1348.50 | 1211.50 |

Table 2 provides support for H_1 . We see that tax decreases occurred largely for smaller groups, and tax increases were spread over larger groups. The tax-increased group was 23% larger than the tax-reduced group, significant at .01 or better, consistent with H_1 .

Table 2. Tests of Basic Wealth Transfer Hypotheses

| | Taxpayers with Tax Increases: | Taxpayers with Tax Decreases: | Difference (%) |
|--|-------------------------------|-------------------------------|-------------------------|
| Average 10-year wealth effect per taxpayer | \$-1,455,462 | \$2,879,664 | |
| Average number of taxpayers affected | 14,252,516 | 11,536,489 | 2,716,027*** (23.54) |

Standard error in parentheses. *** Significant at .001 or better.

Table 3. Complexity: Tax Decreasing vs. Tax Increasing Law Sections

| Panel A: Business Sector | | | |
|---|--------------------------|--------------------------|----------------|
| | Tax Decreasing Sections: | Tax Increasing Sections: | Difference |
| Mean limiting/restricting words per law section | 49.96 | 40.36 | 9.60(19.2%) |
| Mean number of words per law section | 145.11 | 122.09 | 23.02(15.9%) |
| Number of business tax law sections | 27.00 | 53.00 | |
| Panel B: Individual Sector | | | |
| | Tax Decreasing Sections: | Tax Increasing Sections: | Difference (%) |
| Mean limiting/restricting words per law section | 39 | 19.59 | 19.41(49.8%) |
| Mean number of words per law section | 122.14 | 83.10 | 39.04(32.9%) |
| Number of individual tax law sections | 14.00 | 29.00 | |

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

We can test the model’s predictions in H_2 by looking at means. Table 3 reports mean limiting/restricting words and total words depending on whether the targeted taxpayer group has a tax increase or a decrease (this is similar to the “gain” variable). We predict a different complexity level for business-related sections, versus individual-related sections. For the business sector, sections dealing with businesses and having tax cuts have 19.2% and 15.9% higher limiting/restricting and total words, respectively, than sections dealing with businesses and having tax increases. Similarly, sections dealing with individuals and having tax cuts have 49.8% and 32.9% higher limiting/restricting and total words, respectively, than sections dealing with individuals and having tax increases. All are supportive of predictions.

Table 4 reports regression results using the following regression model:

$$WORDS_i = \alpha + \beta_1 BUS_{it} + \beta_2 Tax_Reducing_i + \epsilon_{it}, \tag{18}$$

where $WORDS_i$ is either total words per section i , or limiting/restricting words per section i , and $Tax_Reducing$ stands

for a tax-reducing section. Thus, we examine the two types of law sections (tax-reducing and tax-increasing), with a dummy variable set to 1 for tax decreasing sections. We also examine the two general *types of groups* affected as well; *BUS* is a dummy variable set to 1 if the section is targeted for the individual sector, with individual sector as the omitted group.

Because of the small sample size (123 observations, or the number of law sections) the tests will have relatively low power. Despite the potentially low power of the tests (high standard errors), the regression results shown in Table 4 are consistent with predictions. Law sections creating tax reductions have 28.55 extra words and 12.99 more limiting/restricting words than other sections. Since the mean number of words (limiting/restricting words) across the law are 118 (37), there is an average 29% increase in verbiage when a tax-reducing section is created.

Table 4. Regressions Results

| | Total Words | Limiting/ Restricting Words |
|----------------|---------------------|-----------------------------|
| Tax reducing | 28.552** (11.36) | 12.993* (5.93) |
| Business | 33.708*** (5.01) | 17.538*** (1.21) |
| Constant | 86.518*** (7.02) | 21.677*** (1.75) |
| Observations | 123 | 123 |
| R ² | 0.052 | 0.039 |

*** p < 0.01, ** p < 0.05, * p < 0.1 Standard errors clustered on N

Table 5. Complexity and Concentration of Costs/Benefits

| Panel A: Business Sector | | | |
|--|--|---|--------------|
| | Business Tax Law Sections in Top 50% of limiting/restricting words | Business Tax Law Sections in Bottom 50% of limiting/restricting words | % Difference |
| Mean <i>n</i> : <i>N</i> ratio | 0.146 | 0.171 | 17.12 |
| Mean multiyear cost(benefit): <i>N</i> ratio | 4.535 | -20.664 | -556.27 |
| Number of business tax law sections | 39 | 41 | |
| Panel B: Individual Sector | | | |
| | Individual Tax Law Sections in Top 50% of limiting/restricting words | Individual Tax Law Sections in Bottom 50% of limiting/restricting words | % Difference |
| Mean <i>n</i> : <i>N</i> ratio | 0.187 | 0.291 | 55.62 |
| Mean multiyear cost(benefit): <i>N</i> ratio | -11.082 | -23.812 | 107.69 |
| Number of business tax law sections | 23 | 20 | |

Table 5 reports on the relationships between limiting/restricting words and the *n/N* (concentration ratio), and mean cost: benefit ratio for targeted groups (recall that *n* is the targeted group, and *N* is all taxpayers). For businesses, Act sections in the top 50% of limiting/restricting words are characterized by 14.6%% lower *n/N* ratios and 556.3% higher cost/benefit/taxpayer ratios, i.e., a concentration effect predicted by theory. Similarly for individuals, Act sections in the top 50% of limiting/restricting words are characterized by 55.62% lower *n/N* ratios i.e., a concentration effect predicted by theory. On the other hand, the cost/benefit/taxpayer ratio for Act sections for individuals is actually higher. These results are generally consistent with the predictions of *H*₃.

5.2 Discussion - Effects of the TCJA on the Overall Code

Numerous groups, including the lawmakers themselves, claimed that the overall law would be simplified. One claimed simplification was the creation of a higher standard deduction, obviating the need to itemize deductions.³³ To examine whether simplification occurred, we use textual analysis to examine the entire Code before and after the TCJA. Here,

³³ An example is that of the Tax Foundation: see <https://taxfoundation.org/the-tax-cuts-and-jobs-act-simplified-the-tax-filing-process-for-millions-of-americans/>

we compare totals for these volume and complex terms for two years before TCJA (2015 and 2016) to the two years after (2018 and 2019). For overall words, average pre and post TCJA totals were 4,388,573 and 4,384,520, respectively; thus, the TCJA reduced total words by 4,053. Total pre and post TCJA limiting words were 115,511 and 113,139, respectively; TJCA decreased such words by 2,372. Total pre and post TCJA restricting words were 154,332 and 154,872, respectively; thus, TCJA increased such words by 550. While *t*-tests of differences in means indicated all of the above were statistically significant, none of the above indicate meaningful changes, when we look at percentage changes. Overall, the TCJA did not meaningfully reduce complexity.

6. Conclusion

This paper models tax complexity as a function of wealth transfers using theory from the rent-seeking and regulation literature. Our models predict that such complexity (in terms of volume and as defined by words in our specific “dictionary”) is higher for groups receiving tax breaks, and lower for more heavily taxed groups. Further, the tax-favored groups should be smaller than the taxed groups. These predictions are supported in tests the recently-enacted Tax Cuts and Jobs Act of 2017. Since the volume and complexity of the law appears driven by lawmakers’ intent to limit the scale and scope (free ridership) of tax-reducing laws (indeed, half of the laws’ text deals with tax-reducing provisions), so long as tax-reducing provisions are desired, complexity will be unavoidable.

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Appendix A: Limiting and Restricting Terms (or “complex” terms)

Table A1

| Number of words <i>limiting</i> amount/context <i>within</i> sections (L_n and $L_{N,n}$) with number of occurrences below each word: | | | | | |
|--|---------------|-----------------|------------|-----------------|-------------|
| alternative | alternatives | amount | assign | authority | ceases |
| 16 | 2 | 529 | 3 | 8 | 5 |
| ceiling | check | define | demarcate | diminish | disallow |
| 0 | 1 | 0 | 0 | 0 | 12 |
| enclose | exceed | except | exception | fix | hamper |
| 0 | 42 | 74 | 38 | 1 | 0 |
| hold | if | impede | less | lessen | lesser |
| 0 | 244 | 0 | 28 | 0 | 16 |
| limit | limitation | moderate | narrow | neither | no |
| 9 | 81 | 0 | 0 | 2 | 71 |
| nondeductibility | not | not.entitled | nothing | notwithstanding | only |
| 0 | 437 | 0 | 2 | 14 | 44 |
| qualify | reduce | reduced | reduction | restrain | subject |
| 1 | 1 | 64 | 19 | 1 | 38 |
| terminate | termination | unless | until | | |
| 0 | 12 | 19 | 5 | | |
| Number of words restricting applicability across taxpayers by cross-reference, i.e., restricting free riding and collateral taxation (R_n and $R_{N,n}$) with number of occurrences below each word: | | | | | |
| act | acts | chapter | chapters | code | commission |
| 64 | 1 | 91 | 1 | 52 | 5 |
| commissioner | commissioners | cross.reference | federal | fix | government |
| 0 | 10 | 1 | 6 | 1 | 15 |
| law | paragraph | paragraphs | reg | regulate | regulation |
| 20 | 532 | 74 | 0 | 1 | 4 |
| regulations | secretary | secretaries | section | sections | sentence |
| 70 | 151 | 0 | 1533 | 70 | 59 |
| sentences | state | statute | subchapter | subchapters | subdivision |
| 2 | 23 | 1 | 74 | 2 | 2 |
| subject | subparagraph | subparagraphs | subsection | subsections | subtitle |
| 38 | 390 | 38 | 551 | 32 | 9 |
| subtitles | title | titles | treaty | united.states | us |
| 0 | 30 | 0 | 0 | 179 | 0 |
| usc | | | | | |
| 11 | | | | | |

Appendix B: Determining the Number of Taxpayers (N) Affected by Each Act Section

Broad Applicability Act Sections: We can examine the number of tax returns filed in 2016 to obtain N for these Act Sections.³⁴ For example, Act Section 11041 suspends the deduction for personal exemptions. Since there were 150,493,263 individual returns filed in 2016, N is then 150,493,263. Similarly, Section 11021 increases the standard deduction, obviating the need for many taxpayers to itemize. Since the 2016 IRS data shows that there were 103,553,524 itemizers, this becomes N for this Section.

More Focused Act Sections: The IRS Statistics of Income reports, for each major tax form and schedule filed, the number of taxpayers recording in an amount in each line of each such form. Here, we set N at that number. For example, Section 13602 adds a tax on large tax exempt organizations. Here, we look at the number of Form 990 filed to 2016, and look at data by size. Where the IRS data on N is missing, we utilize industry data (at the 6 digit NAICS level) from the US. Census³⁵ where possible. Such data gives total N for an industry, and in some cases, may overstate N, if a Section does not apply to an entire industry. Where Census data is inappropriate, Google text searches often lead to reasonable estimates.

³⁴ For individuals, this was provided in Individual Income Tax Returns, Line Item Estimates, 2016 available at <https://www.irs.gov/pub/irs-soi/16inlinecount.pdf> ; for corporations, Corporate Income Tax Returns, Line Item Estimates, 2016 , <https://www.irs.gov/pub/irs-prior/p5108--2020.pdf>; and for partnerships, Partnership Income Tax Returns, Line Item Estimates, 2016 available at <https://www.irs.gov/pub/irs-prior/p5035--2018.pdf>. In some cases, N for a law was taken from the regulatory tax burden data for specific tax forms at <https://www.reginfo.gov/public/do/PRAMain>

³⁵ <https://www.census.gov/data/tables/2016/econ/susb/2016-susb-annual.html>

The below table shows the top and bottom 5 N and the related Act section:

Table B1

| Top and Bottom 5 Number of Taxpayers Affected (N) by Act Section | | | |
|---|--------------------------------------|--------------------|---|
| N | Data Description | Act Section | Section Brief Title |
| <i>Top 5</i> | | | |
| 197,972,026 | all rtns. filed | 13310 | PROHIBITION ON CASH, GIFT CARDS, AND..... |
| 150,493,263 | all 1040s | 11041 | SUSPENSION OF DEDUCTION FOR PERSONAL EXEMP. |
| 150,493,263 | all 1040s | 11001 | MODIFICATION OF RATES |
| 150,493,263 | all 1040s | 11002 | INFLATION ADJUSTMENTS BASED ON CHAINED... |
| 103,553,524 | all 1040s itemizing | 11021 | INCREASE IN STANDARD DEDUCTION |
| <i>Bottom 5</i> | | | |
| 75 | no.of large tax exempt org's | 13602 | TAX ON EXCESS TAX-EXEMPT ORGANIZATION. |
| 47 | no. of corporate inversions | 13604 | INCREASE IN EXCISE TAX RATE FOR STOCK COMP. |
| 30 | no. of colleges with endowments>500m | 13701 | EXCISE TAX INVESTMENT INCOME OF PRIV. UNIV. |
| 12 | no of co's in that industry | 13822 | AMOUNTS PAID FOR AIRCRAFT MGT. SERVICES |
| 12 | no. of AK native corps | 13821 | MODIFICATION TAX TREATMENT ALASKA NATIVE.. |

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