Sponsor: IRS
Dept. No.: P181
Contract No.: TIRNO-99-D-00005
Project No.: 2032H5-18-F-00593

McLean, VA

Internal Revenue Service (IRS)
Wage & Investment (W&I)

IRS Free File Program

Independent Assessment of the Free File Program

Appendix A: The Economics of IRS Free File

September 13, 2019

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1.0 Introduction

In 2003, the Internal Revenue Service (IRS) launched the Free File program to provide free online tax preparation and filing services to eligible taxpayers. The federal program was developed under a multi-year partnership agreement (Memorandum of Understanding or MOU) with the Free File Alliance, a coalition of private sector tax software companies registered as Free File, Inc (FFI). Free File's objectives include: [1] [2]

1. Having 80 percent of all federal returns received electronically by 2007;
2. Providing more free online tax filing options to taxpayers;
3. Reducing taxpayer burden and making tax filing and preparation easier; and
4. Providing greater access to tax preparation online services to taxpayers.

These objectives have remained relatively unchanged since the inception of the program, even though electronic filing (e-filing) now accounts for 88 percent of all individual income tax filings. Over 56 million Free File returns have been submitted since 2003. [2]

The 80 percent e-filing target came about as a result of a directive within the Restructuring and Reform Act Of 1998 (RRA 1998) to the IRS. [3] The IRS was asked to cooperate with the private sector to accomplish this target, with the expectation that increased e-filing would improve tax compliance, lower operating costs, and reduce human errors in tax data transcription. In 2001, the Office of Management and Budget (OMB) launched IRS Free File as part of President George W. Bush's Management Agenda [1]. The Free File initiative directed the IRS to provide free and secure online tax return preparation and filing services to taxpayers, in anticipation that reduced cost of tax preparation would increase e-filing. [4] In 2002, Treasury Secretary Paul O'Neill asked the IRS Commissioner Charles Rossotti to partner with the private sector for its established expertise in electronic tax preparation and filing. [5]

While the Free File program was established through political directives, the design and implementation of the program was equally shaped by economic forces. The objective of this white paper is to formalize some fundamental links between economic theory and the Free File Program. Specifically, the analysis shows that the program's approach to achieving its objectives was largely shaped by economic considerations and incentives of the its key stakeholders: taxpayers (consumers), the IRS (administrator), and the U.S. tax preparation industry members (service providers).

Eligible taxpayers' demand for Free File is shown to depend on the relative economic cost (price) of using Free File and other comparable substitutes. [6][1] [2] Similarly, Alliance Members' economic incentives to supply free tax preparation services is shown to be a function of the economic returns the private service providers expect to earn from their program investments. Participation in Free File allows Alliance Members to generate other business opportunities to recover their costs and foregone revenue of free service provision. These opportunities are discussed as a potential economic incentive for the Alliance. [3]

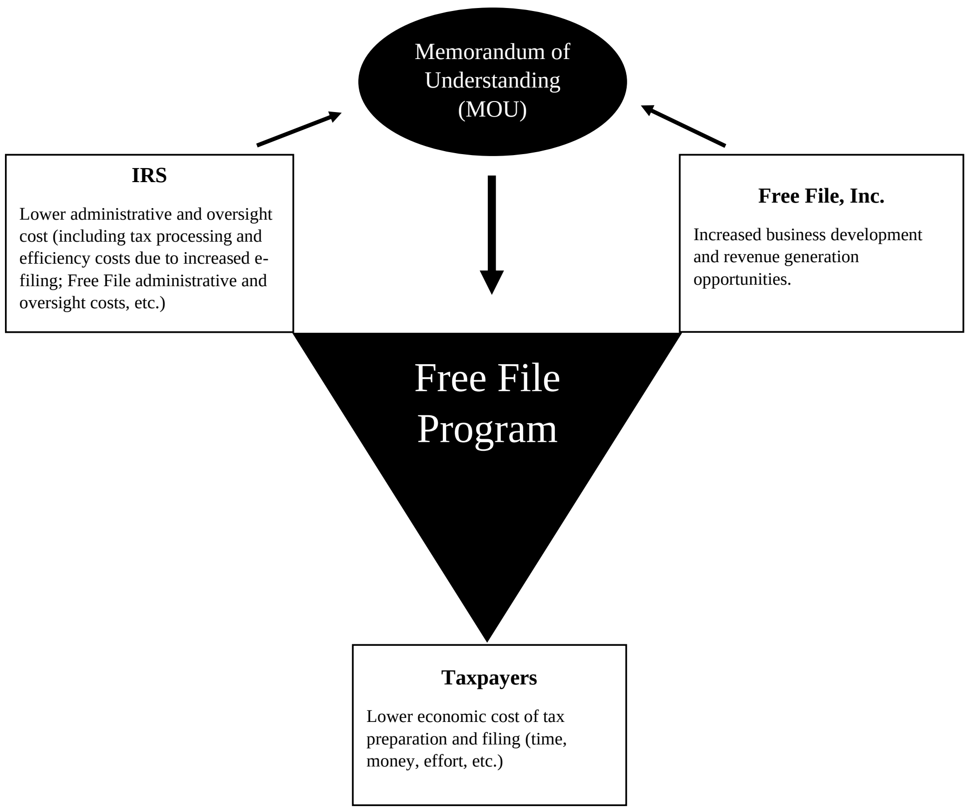

Figure 1: Economic Considerations and Incentives of Free File Stakeholders

IRS's economic incentives are tied to accomplishing the Free File program objectives in the most cost-effective manner by minimizing the administrative and oversight costs associated with

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[1] For the purposes of this analysis, economic costs of tax preparation and filing constitute of both financial and non-financial costs to the taxpayer, including money, time, and other resources needed to comply with the IRS tax code.
[2] The demand for Free File can also depend on other factors, including taxpayer demographics, preferences, and tax return complexity, among others.
[3] The U.S. tax preparation industry is vast, with millions of formal and informal entities offering numerous tax preparation and filing services to individuals and businesses. This analysis is primarily concerned with the industry subgroup to which the Free File Alliance members belong – the online tax preparation and filing industry.

developing and implementing the program. IRS accomplishes this by passing on the bulk of the program costs to the private sector via the public-private partnership (PPP) agreement. IRS is shown to stand in a unique position of having to balance taxpayer expectations from the program with the industry members' outlook for economic gains. Figure 1: Economic Considerations and Incentives of Free File Stakeholders is a simplified depiction of the key economic incentives of Free File stakeholders to participate in the program.

In the context of economic analysis, the MOU serves as a two-way tool for economic negotiations between the IRS and the Free File Alliance, that reflects the incentives of key stakeholders.[4] While taxpayers are not directly involved in the MOU negotiation process, their interests are explicitly captured in the program objectives of increased e-filing options and access and lower taxpayer burden. Essentially, the analysis assumes that IRS negotiates MOU terms to reflect taxpayer and IRS incentives, while the Alliance negotiates the Agreement from the private sector perspective. In turn, MOU terms determine demand and supply of Free File services by affecting taxpayer economic cost of utilizing Free File and the Alliance Members' economic benefits from program participation, respectively.

A large pool of literature discusses the Free File program in the context of program performance, but little is said about the economic links between the program and its key stakeholders. It is difficult to develop a complete economic characterization of Free File without detailed industry-, firm- and taxpayer-level data on electronic tax preparation and filing. Notwithstanding, the paper uses available proprietary and public data, an extensive literature review, and simple economic concepts to establish an economic perspective of the program.

The remainder of this appendix is organized as follows. Section 2.0 describes taxpayers' eligibility to participate in Free File, and their demand for Free File as a function of its economic cost relative to other tax preparation methods. A demographic analysis of taxpayers is also included in this section using data from Tax Year (TY) 2015-2017. Section 3.0 sheds light on the economic motivations of the IRS to partner with private sector companies in providing Free File. In Section 4.0, the analysis sheds light on the tax preparation software industry's market structure and how it potentially shapes Alliance Members' economic incentives for offering free tax preparation and filing services through the program. The MOU and its role as an economic negotiation tool is discussed in Section 5.0. This section also briefly evaluates the economic explanation relative to MITRE's findings on IRS's oversight of the Program as well as the

[4] The Memorandum of Agreement (MOU) between the IRS and the Free File Alliance defines the respective rights and responsibilities of each party with reference to the program's objectives, stakeholders, and the legal framework of the partnership. In this paper, the MOU is viewed in the context of economic analysis.

Alliance Members' compliance with the existing MOU. Finally, Section 5.0 offers conclusions from an economics perspective to help shape recommendations for the IRS.

2.0 Taxpayer Eligibility, Cost, and Demand for Free File

- Taxpayer eligibility depends on terms set by the MOU (e.g. AGI requirement and the "10/50 Rule"), as well as individual business models of Alliance Members.
- Tax compliance imposes substantial economic costs as a share of taxpayer's income. Economic costs constitute of both financial and non-financial costs, including money, time, effort, and other resources needed to comply with the IRS tax code.
- The Free File program and commercial online tax preparation software impose the lowest economic costs on taxpayers relative to other tax preparation methods. Free File has similar non-monetary costs to commercial options but eliminates the financial cost component of tax preparation.
- The low participate rate of Free File is not consistent with its lower economic price relative to other commercial options.
- The perceived number of eligible taxpayers that Free File fails to reach is overstated, as many eligible candidates self-select out of the program.
- Consumer demographics show clear trends among Free File consumers and conveys important characteristics of filers across different methods of filing. However, the IRS needs to look beyond consumer circumstances and examine consumer behavior to understand Free File participation rates relative to other self-preparation methods.

Eligible Consumers of Free File

Eligible, individual income tax filers are the primary consumers of Free File. In 2002, the initial Agreement between the IRS and the Free File Alliance stipulated that Free File be made available to at least 60 percent of U.S. taxpayers (approximately 78 million individuals). [7] [8] After three filing seasons, the IRS and the Alliance extended the agreement for an additional period of four years (October 30, 2005 through 2009) to include taxpayers with an Adjusted Gross Income (AGI) equal to or less than 70 percent of all U.S. taxpayers (approximately 93 million during the 2006 filing season). [9][5] The 2005 Agreement explicitly stated that eligible filers include those "*least able to afford e-filing tax returns, based upon verifiable characteristics in their tax return*". The IRS and the Alliance have maintained the 70 percent, AGI-based target in subsequent amendments to the agreement. The volume of eligible taxpayers has changed each

[5] The IRS defines Adjusted Gross Income as "*gross income minus adjustments to income.*" Individual gross income is the combination of all income earned in a year (e.g. wages, rental income, interest income, dividends, retirement distributions, etc.) AGI accounts for allowable deductions from the gross income. These deductions are subject change each year and can include, for example, pre-tax dependent care deductions and pre-tax retirement contributions.

filing year based on the most current AGI number that equates 70 percent of all individual income taxpayers. [10] Figure 2 shows the maximum AGI of eligible taxpayers from 2008 to 2018. Over the years, the maximum AGI increased in line with inflation and other economic variables.

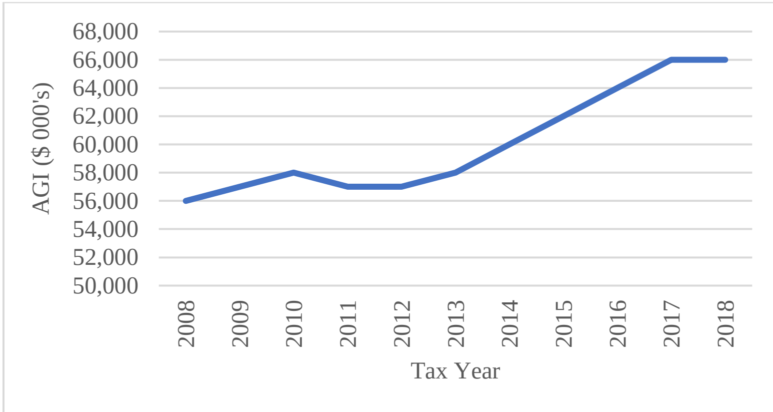

Figure 2: Free File Adjusted Gross Income Criteria (AGI in thousands of dollars)[6]

The 70 percent taxpayer coverage requirement is a combined obligation across all members of the Alliance, and not for each individual member alone. In other words, the Alliance is obligated to provide Free File to eligible taxpayers through individual commercial sites such that, when taken in aggregate these services are offered to the lowest 70 percent of the taxpayer population, calculated using AGI. Moreover, the IRS requires that each company must offer services to at least 10 percent of total eligible taxpayers but to no more than 50 percent of taxpayers – a requirement set to level the playing field for smaller providers.

The volume of eligible taxpayers served by each individual Alliance Member depends on a specific set of criteria based on the companies' individual business models and discretion, as long as they meet the overall requirements across the Alliance. Each member uses a specific set of eligibility measure based on taxpayer characteristics (e.g. income, age, state, foreign address, etc.) to determine the company's Free File customer base.

Table 1 summarizes current eligibility criteria for taxpayers by Alliance Members. Generally, individuals with AGI below $66,000 are able to file income taxes with more than half (six) of the Alliance Member companies. *FileYourTaxes.com* and *Online Taxes at OLT.com* impose minimum AGI requirements for eligibility. Intuit's *TurboTax Free File Program*, which is one of the industry giants, and *FreeTaxUSA®IRS Free File Edition* offer free federal returns to persons at the lower end of the income spectrum with qualifying AGI of $34,000 and $35,000,

[6] AGI information for individual years are collected from multiple sources.

respectively. Given the relative size of Turbo Tax to other Alliance Members, its lower qualifying AGI potentially helps satisfy the 50 percent cap on Free Filer market share.

Table 1: Taxpayer Eligibility Criteria by Free File Alliance Member (as of August 2019)

Free File Alliance Member Company	AGI	Age	Eligibility based on EITC eligibility?	Eligibility dependent on state?	Same eligibility criteria apply when filing with a foreign address?	Free for active military for AGI of $66,000 or less?	Free for state return if eligible for free federal return?
1040NOW.NET	$66,000 or less	Up to 60 years**	No	Yes	Yes	Yes	No free state returns
eSmart Free File Edition	$66,000 or less	Up to 53 years	No	No	No	Yes	No free state returns
ezTaxReturn.com	$66,000 or less	Any age	No	Yes	No	No	No free state returns
FileYourTaxes.com	$9,000 - $66,000	Up to 65 years	No	No	Yes	Yes	Yes, for some states
FreeTax Returns.com	$66,000 or less	Up to 70 years	No	Yes	No	Yes	Yes, for some states
FreeTaxUSA®IRS Free File Edition	$35,000 or less	Any age	Yes	No	No	Yes	Yes, for some states
H&R Block's Free File	$66,000 or less	17 years - 51 years	Yes	No	Yes	Yes	Yes, for all states
Online Taxes at OLT.com	$14,000 - $66,000	Any age	No	No	Yes	Yes	Yes, for all states
TaxAct®Free File	$55,000 or less	Up to 56 years	Yes	No	Yes	Yes	Yes, for all states
TaxSlayer	$66,000 or less	Up to 50 years	No	No	Yes	No	Yes, for some states
TurboTax Free File Program	$34,000 or less	Any age	Yes	No	Yes	Yes	Yes, for all states

** Applicable only for some states

In addition to AGI requirements, some companies require taxpayers to satisfy other conditions such as age and state residency, depending on individual company business models. Age and state residency criteria for eligibility varies significantly across service providers. Only four companies, including the two biggest players (*H&R Block* and *TurboTax*), offer free federal returns based on EITC qualification. A majority (seven) of the companies offer free federal returns to foreign address holders under the same criteria as U.S. address holders. All but two companies (*ezTaxReturn.com* and *TaxSlayer*) offer free federal returns to active Military personnel with AGI $66,000 or less. In 2018, nine companies offered some form of free state returns, although specific eligibility varies company to company.[7]

The Relative Cost of Free File and other Tax Preparation Methods

The term "free" is often associated with the cost of various tax preparation and filing methods available to taxpayers.[8] Irrespective of filing method, however, preparing and filing taxes is expensive and imposes non-trivial economic costs as a percentage of income on all taxpayers. [11] [12]. Economic costs constitute both financial and non-financial costs, including money, time, effort, and other resources needed to comply with the IRS tax code. The out-of-pocket cost of tax compliance, such filing fees or the price of online tax software, only accounts for pecuniary expenses and ignores other psychological and non-monetary costs. These economic costs can far exceed financial costs, as the primary cost involved in preparing and filing taxes is the taxpayers' value of time. [11]

Non-monetary costs could include the feelings of frustration and anxiety in preparing taxes, as tax return preparation demands detailed financial recordkeeping and tedious paperwork that can cause emotional distress. Research shows that finances remain a common stressor for American households, especially among low-income groups. [13] Also, the complexity and perception of constant changes of the tax code adds to the frustration. As income falls below average, the difficulty with self-filing increases. [11] These non-monetary costs are also higher for individuals with lower levels of literacy who lack the required skills to properly comply with the tax code.

The total annual cost of individual filing for taxpayers is estimated to be in the billions of dollars. [11] [14] The demand for services that help taxpayers avoid some of these costs of tax compliance has propelled a billion-dollar industry of tax professionals.

Taxpayers have several tax preparation and filing methods to choose from. They can choose to self-prepare taxes by paper or online or enlist a paid tax professional. These decisions factor in the financial costs, time, effort, and hassle associated with filing. Figure 3 shows a simplified taxpayer decision-tree for different tax preparation methods and summarizes the associated economic costs.

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[7] Overall, taxpayers utilizing Free File have the primary responsibility of identifying the right company based on their eligibility. The IRS offers a lookup tool to help taxpayers in identifying their eligibility across different providers.

[8] For instance, the government provides free tax preparation help through its Volunteer Income Tax Assistance (VITA) program, while private companies offer free online software for tax preparation and filing.

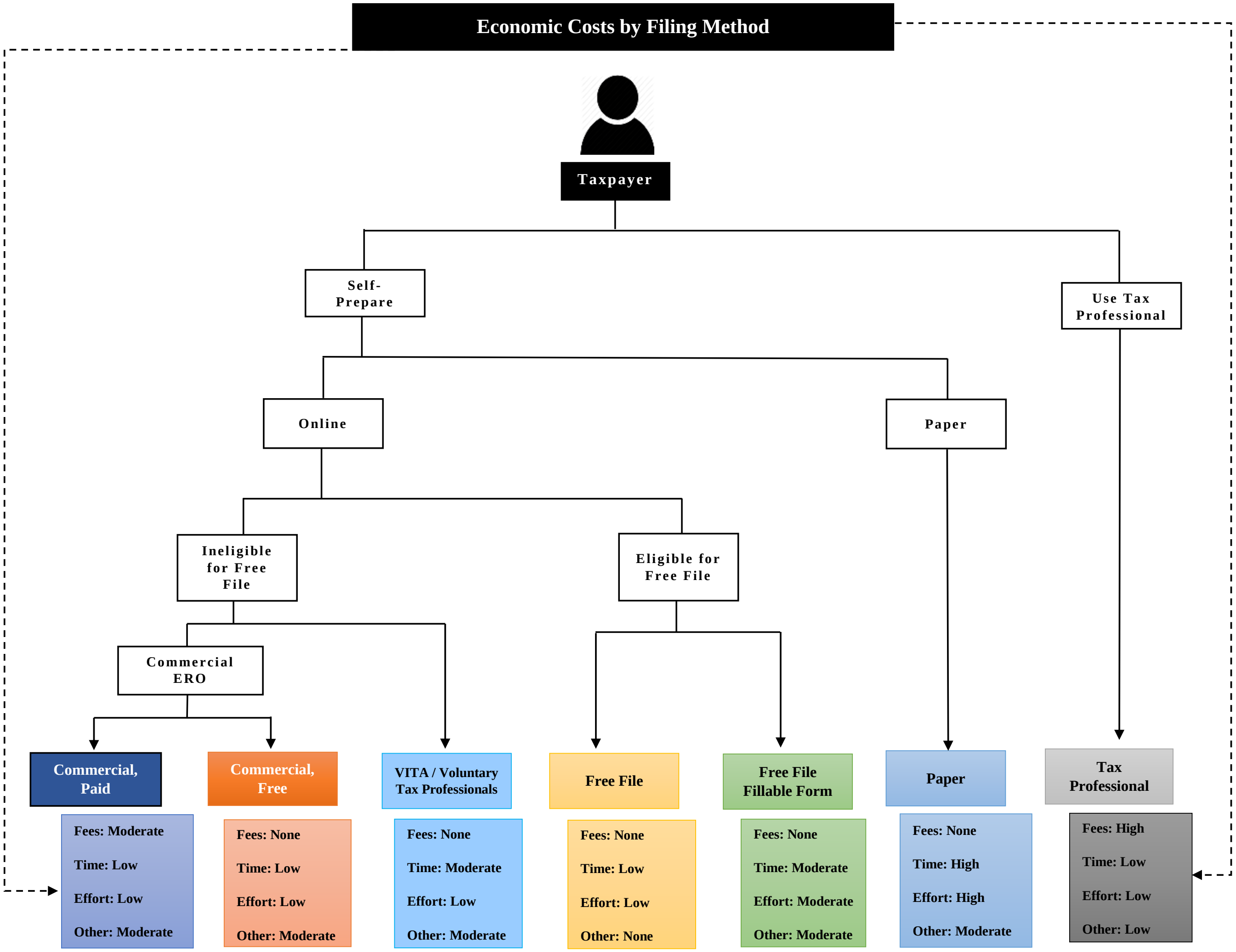

Figure 3: Economic Costs of Tax Preparation by Filing Method

Taxpayers who prefer to avoid the various costs of self-preparation can choose to enlist a paid tax professional and/or Electronic Return Originator (ERO).[9] However, these professional services involve significant financial costs and fees which can be exorbitant or unviable for low- and medium-income filers. [15] The cost of tax professionals also increase with the complexity of returns. In 2017, the National Society of Accountants reported that the average fee for a professional to prepare and submit a Form 1040 and state return with no itemized deductions is $176; the average fee for an itemized Form 1040 with Schedule A and a state tax return is $273, and the average fee for an itemized Form 1040 with Schedule C and a state tax return is $457. [16]

Self-preparation using traditional paper forms imposes high costs for time and effort spent organizing and filling out paperwork. Additional monetary and non-monetary costs are associated with paying for shipping costs and the hassle of mailing the returns. Moreover, taxes submitted via paper forms take longer to process, are more prone to human errors, and can thus lead to unnecessary notices and penalties from the IRS. [5]

E-filing options for self-preparers significantly lower the economic cost of filing taxes relative to traditional methods. E-filing cuts out most of the tedious paperwork from the tax preparation process and lowers filing and refund processing times. Consumers have several e-filing options, each of which imposes different economic costs. [17]

Free File eligible taxpayers, regardless of income, can use the IRS Free File Fillable Forms (FFFF) for tax preparation and submission. This method imposes zero financial costs but may require significant time and effort as it does not include online guidance and the taxpayer is solely responsible for filling out forms correctly. Moreover, the fillable forms only perform basic calculations, do not have extensive error checking options, only allow filing of current year tax returns, and do not include state returns. [17] Simple calculation errors by the taxpayer may also cause IRS to reject the return leading to delays in processing or financial penalties.

In contrast, eligible taxpayers utilizing traditional Free File are able to use brand-name tax software for guided preparation and filing, free of charge. The program provides the same amenities and customer support services that potentially cost hundreds of dollars in the commercial market. [2] The program also comes without hidden fees that are characteristic of other comparable commercial options. Free state returns are also covered by eight of the current Alliance Members under the Free File program. As a government program, it also offers taxpayers with a sense of security in transmitting private financial information over the internet. [4]

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[9] Paid tax professionals may include enrolled agents, certified public accountants (CPAs), and attorneys while EROs are authorized to prepare, transmit and process e-filed returns.

Taxpayers can also choose to use IRS's VITA and Tax Counseling for the Elderly (TCE) programs that offer free tax help and e-filing for qualifying filers. The VITA program is available to filers who earn less than $55,000 and do not currently include all persons who are eligible for Free File. Moreover, filing through this method imposes added cost of transportation to the VITA/TCE sites and the potential hassle of waiting in line for assistance.

Finally, taxpayers can also choose to self-file their taxes online using commercial (free or paid) tax preparation software. These products provide customers with guided preparation and filing and extensive customer service assistance for a fraction of the price of paid preparers. While most of the Free File companies provide free versions of their commercial offerings, taxpayers may be subject to hidden fees and costs of using these programs. Moreover, customers looking to file state returns and more complex returns typically bear additional costs.

The commercial online tax preparation option is the closest substitute to the Free File program. The non-monetary cost and burden of using Free File is likely to be as low as any commercial online tax software since both methods offer similar features and amenities. However, Free File eliminates the monetary cost of filing taxes in the form of guaranteed zero preparation and filing fees. Moreover, unlike the commercial offerings, Free File guarantees protection from hidden costs and fees for using the program. For these reasons, the price of Free File is expected to fall below the market price of commercial software that consumers are willing to pay.

The Relative Demand for Free File and other Tax Preparation Methods

For eligible taxpayers, Free File appears to be a straightforward choice given its lower economic cost relative to other filing methods. However, the existing demand (usage) for Free File does not reflect its relative lower cost to other tax preparation methods, indicating that demand rests on variables beyond prices. Data from IRS shows that not all eligible users are taking advantage of the program. In TY 2017, less than 5 percent of Free File eligible taxpayers utilized the program.[10] A comparison of total e-filings with Free Filed returns highlights some stark gaps in Free File's performance.

Figure 4 shows the increase in e-filings from 2009 to 2018. The total volume and share of e-filings in all individual filings increased substantially over the past decade. In Filing Year (FY) 2018, the IRS received over 154 million individual income tax returns.[11] Among these, more than 135 million (88 percent) were filed electronically, a considerable increase from the 95 million e-filed returns (66 percent) in 2009. After FY 2018, the IRS projected e-filings to grow at an average annual rate of 2.4 percent to reach 217 million by 2026. [18]

[10] The IRS Wage and Investment, Strategies and Solutions Research Group furnished the FY 2016-FY 2018 Free File and Free File Fillable Form profile data, via the Compliance Data Warehouse (CDW).
[11] Data on total e-filings have been compiled from IRS Filing Seasons Statistics by Year, available at: https://www.irs.gov/newsroom/filing-season-statistics-by-year.

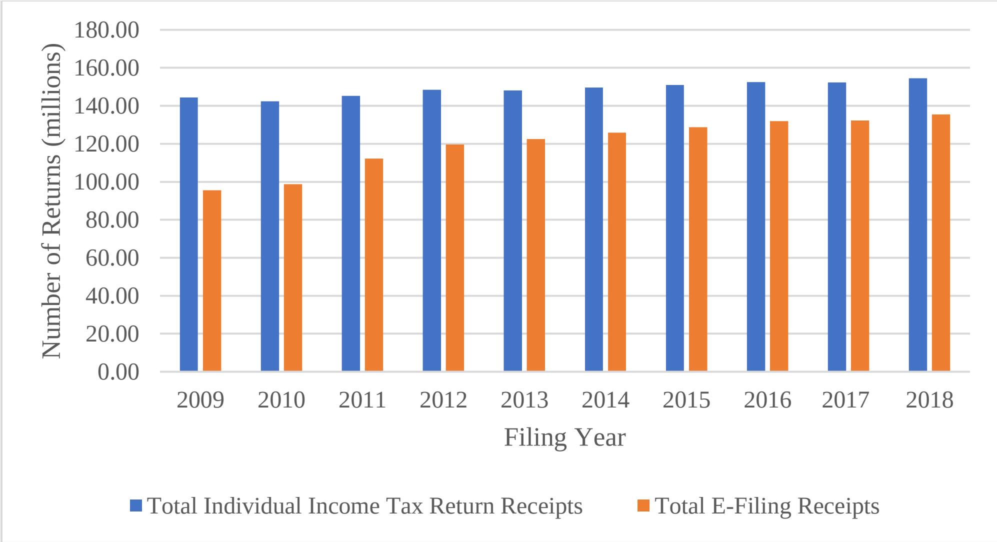

Figure 4: Individual Income Tax Returns Filed Electronically

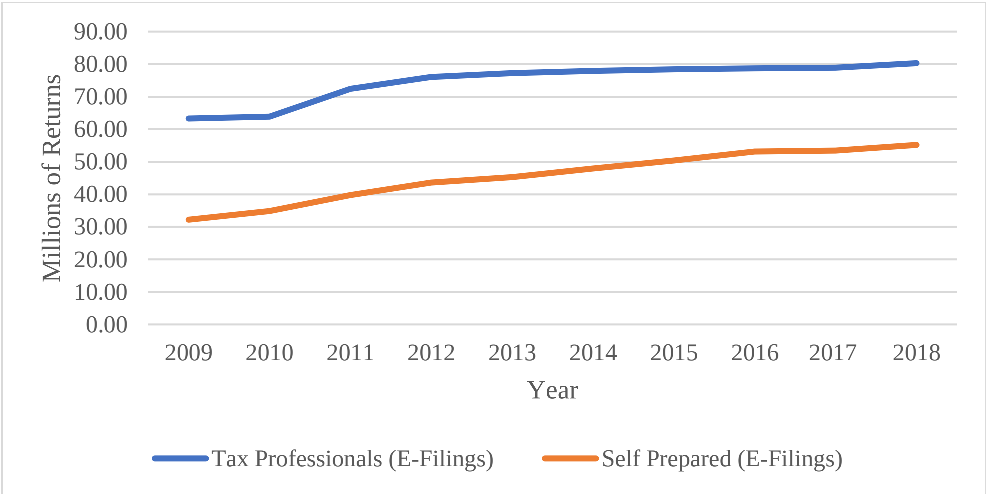

Figure 5: Methods of E-Filing: Tax Professionals and Self Prepared [12]

Among taxes filed electronically in FY 2018, about 59 percent were submitted with the help of tax professionals, while 41 percent were self-prepared returns. Figure 5 shows that the share of e-filings by tax professionals has been the dominant form of e-filings in total electronic returns. On

[12] Data on total Free File have been compiled from IRS Filing Seasons Statistics by Year, available at: https://www.irs.gov/newsroom/filing-season-statistics-by-year.

the other hand, both methods of e-filing have increased at about the same rate, in the same period.

Figure 6 shows the variation of Free Filed returns between FY 2003 and FY 2018 using data from IRS's Electronic Tax Administration Research and Analysis System (ETARAS). Free File was met with considerable success in the first three years since its launch. In Filing FY 2003,[13] which marked the first year of the program, 2.8 million returns were filed though seventeen Alliance Members. While this represented less than 4 percent of eligible filers, the sheer number of Free Filings was considered a huge success given the novelty of the program. In its second year (Filing Season 2004), the program contributed to another 3.5 million returns (an increase of 26 percent) and in the third year (Filing Season 2005) another 5.1 million returns (an increase of 46 percent) were filed. [4][14] Over the course of sixteen years, over 53 million returns have been filed through the Free File program. The IRS reported that Free File saved taxpayers about $1.6 billion dollars in fees. [19]

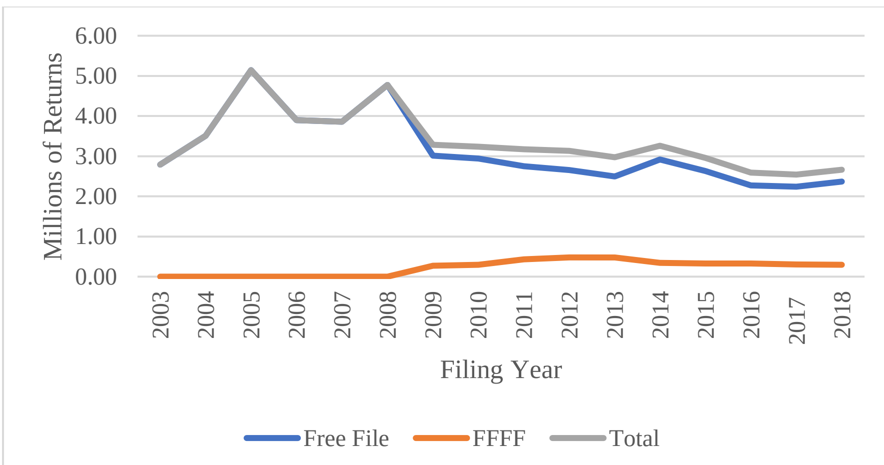

Figure 6: Free File Accepted Returns, FY 2003-2018

However, since TY 2014, the number of Free Filed returns has continued to fall below that of the first year of the program. Figure 7 shows that between TY 2015 and TY 2018, Free File made up less than 2 percent of total e-filings, but Free File numbers have started to show signs of growth since TY 2016. Compared to TY 2017, approximately 74,000 more returns have been filed to date for TY 2018. These numbers are expected to be larger as the filing period for TY 2018 extends until October 2019.[15]

[13] The Filing Season (FS) is the period from January through mid-April, when most individual income tax returns are filed.
[14] Source: IRS Electronic Tax Administration Research and Analysis System (ETARAS)
[15] The Free File Fillable Forms (FFFF) represent only 7 percent of the total number of free returns submitted through the IRS's Free File program. Figure 7 also shows a decline in FFFF returns since FY 2014.

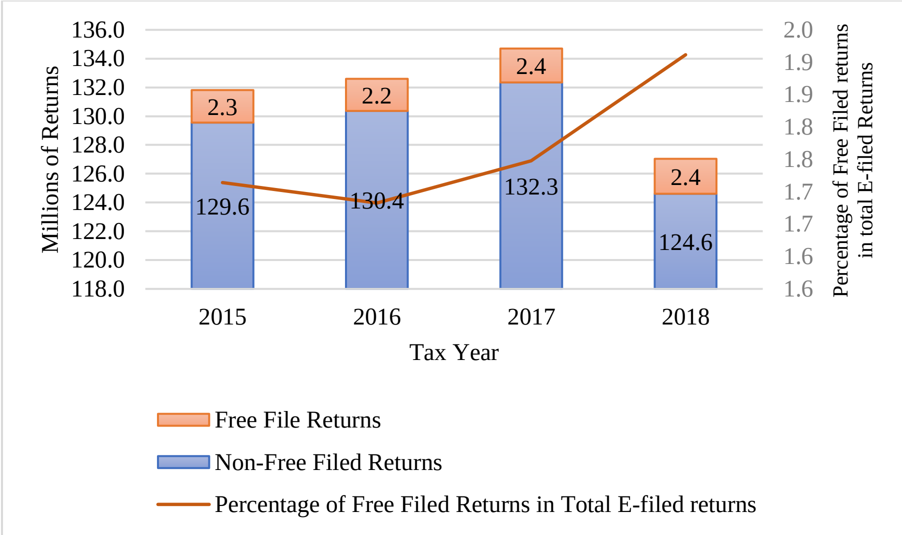

Figure 7: Free Filed Versus Non-Free Filed Returns[16]

Critics of Free File cite the relatively lower participation rate of Free Filers compared to other e-filing methods as a failure of the program to reach its target audience. Proponents of the program argue that it continues to help millions of taxpayers file taxes for free which has contributed towards the 80 percent e-filing target set by RRA 1998. The program has also contributed to the objective of providing more free online tax filing options as well as increased access to these options to millions of low-income taxpayers. For the users of Free File, the program has also helped reduce significant taxpayer burden.

Comparing different pieces of taxpayer data can yield different views on Free File's performance. Many Free File eligible taxpayers make conscious decisions in the tax return process that takes them out of the Free File eligibility pool. For example, many taxpayers choose to receive immediate tax refunds through a Refund Anticipation Check (RAC) or a Refund Anticipation Loan (RAL) which are not allowed though the Free File program. These taxpayers are, therefore, ineligible to use Free File, even if their demographic characteristics satisfy the Free File eligibility requirement. Other taxpayers with knowledge of Free File may also continue to file through their previously preferred method. As a result, the actual number of potential candidates for Free File may be significantly lower than the perceived number of candidates based on demographic criteria set by the program. To understand the true proportion of taxpayers who the program fails to reach, one needs to deduct the following group of taxpayers from the total pool of perceivably eligible candidates: (i) existing free filers; (ii) taxpayers who used a RAL/RAC; and (iii) taxpayers who are aware of Free File and still chose to file using another

[16] Source: Compliance Data Warehouse (CDW)

method (paid preparers, VITA, paper forms).[17] Analysis of taxpayers demographics highlights the differences in taxpayer demand for different filing methods.

Taxpayer Demographic Analysis

In the absence of proprietary data on taxpayer usage of commercial tax software it is difficult to provide a complete consumer demographic analysis. The paper therefore provides a partial analysis using detailed demographic data on self-prepared returns using Free File, Free File Fillable Forms (FFFF), and traditional paper forms between TY 2015-2017.[18] The statistics below exclude the 132 million self-prepared returns that were filed using commercial (free and paid) software from tax software companies.

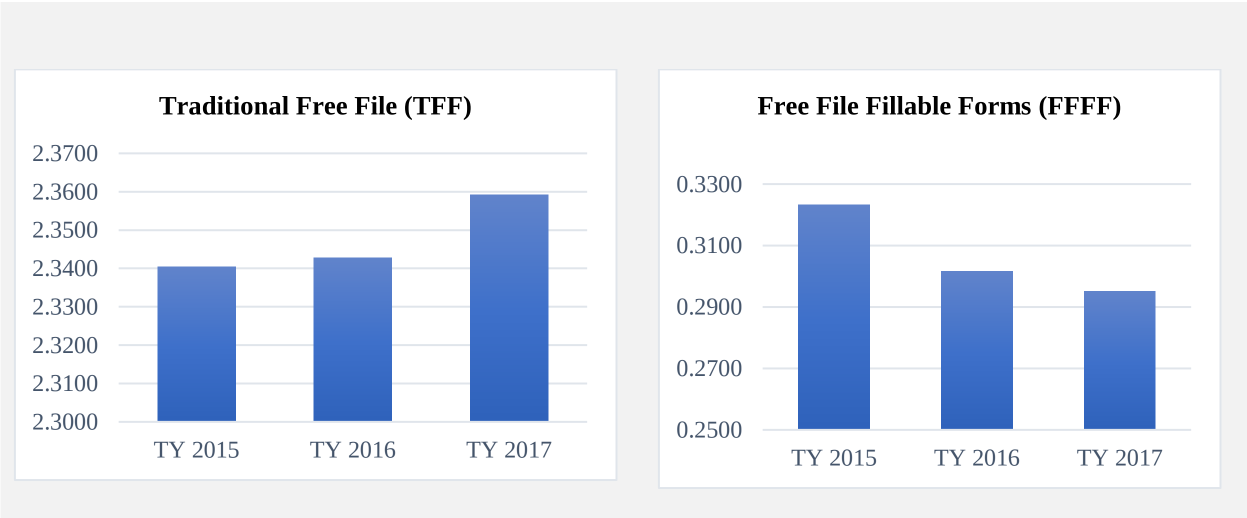

Figure 8: The Number of Users of Free File and Free File Fillable Forms

Figure 8 shows that between TY 2015-2017, the number of Free Filers increased by 0.85 percent from 2.340 million to 2.359 million. Comparatively, the number of users of the FFFF fell by about 28,000 users representing a decline of about 9 percent. The limited growth in Free File is possibly explained by a greater availability of free tax software from commercial tax software companies. A growth in commercial, free options reduces the perceived gap in consumer benefits between using Free File and commercial tax software, potentially making taxpayers indifferent between the two. Similarly, the decline in FFFF could potentially be a result of taxpayers migrating to traditional Free File or free, commercial software.

Figure 9 shows the volume of self-prepared returns by filing method for TY 2017 (excluding self-filed returns through Electronic Return Originators (EROs) of commercial tax preparation

[17] For a more detailed discussion, see Section 4.2 of the report.
[18] The IRS Wage and Investment, Strategies and Solutions Research Group furnished the FY 2016 -FY 2018 Free File and Free File Fillable Form profile data, via the Compliance Data Warehouse (CDW).

software companies). Among these, Free File only accounted for 2.4 million returns and FFFF accounted for 0.3 million returns.

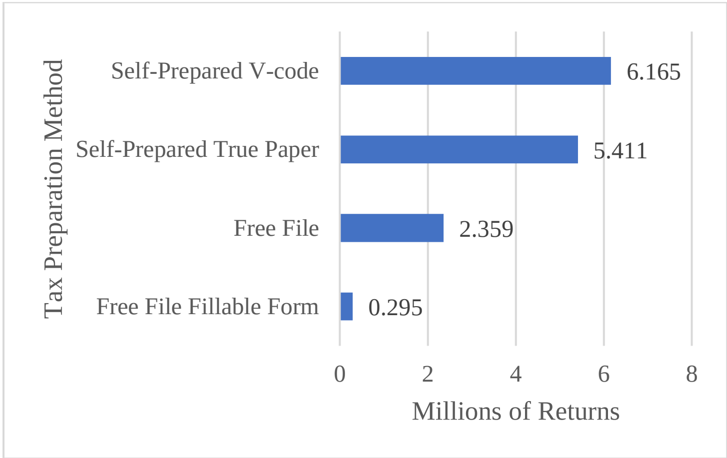

Figure 9: Volume of Self-Prepared Returns by Filing Method, TY 2017

In contrast, over 11.6 million taxpayers were true paper or V-code filers who had not yet embraced the growing trend of e-filing.[19] Because the economic costs of paper filing far exceed those of e-filing, the expected gain in consumer benefit for people migrating to Free File from paper options are considerably higher than for people migrating to Free File from other e-filing options (e.g. commercial, free software or FFFF). As a result, paper filers represent an important target population for the IRS that could benefit significantly from migrating to Free File and FFFF.

Age. Data on the age distribution of taxpayers strongly indicated that the likelihood of existing paper filers switching to Free File and other e-filing options depends on taxpayers' age. Figure 10 shows that almost a third of Free Filers were below the age of 25 years while almost a quarter were between ages 25 – 34 years. The proportion of Free Filers also fell across increasing age-groups. Only about 7 percent of Free Filers were in the 65 years and over age-range. Taxpayers using FFFF were distributed more evenly across the different age groups (between 16 percent – 22 percent), except for taxpayers under 25 years (8 percent).

Older taxpayers showed a clear preference for traditional paper options relative to e-filing options, while younger filers strongly preferred electronic methods - over half of Free Filers are ages 34 and under, while more than half of true paper filers are 55 years and over. The behavior of taxpayers between ages 35 and 55 were more evenly spread across the various filing methods.

[19] V-code filers are taxpayers that use digital forms to fill out tax return information, which are subsequently printed and mailed to the IRS as paper filings.

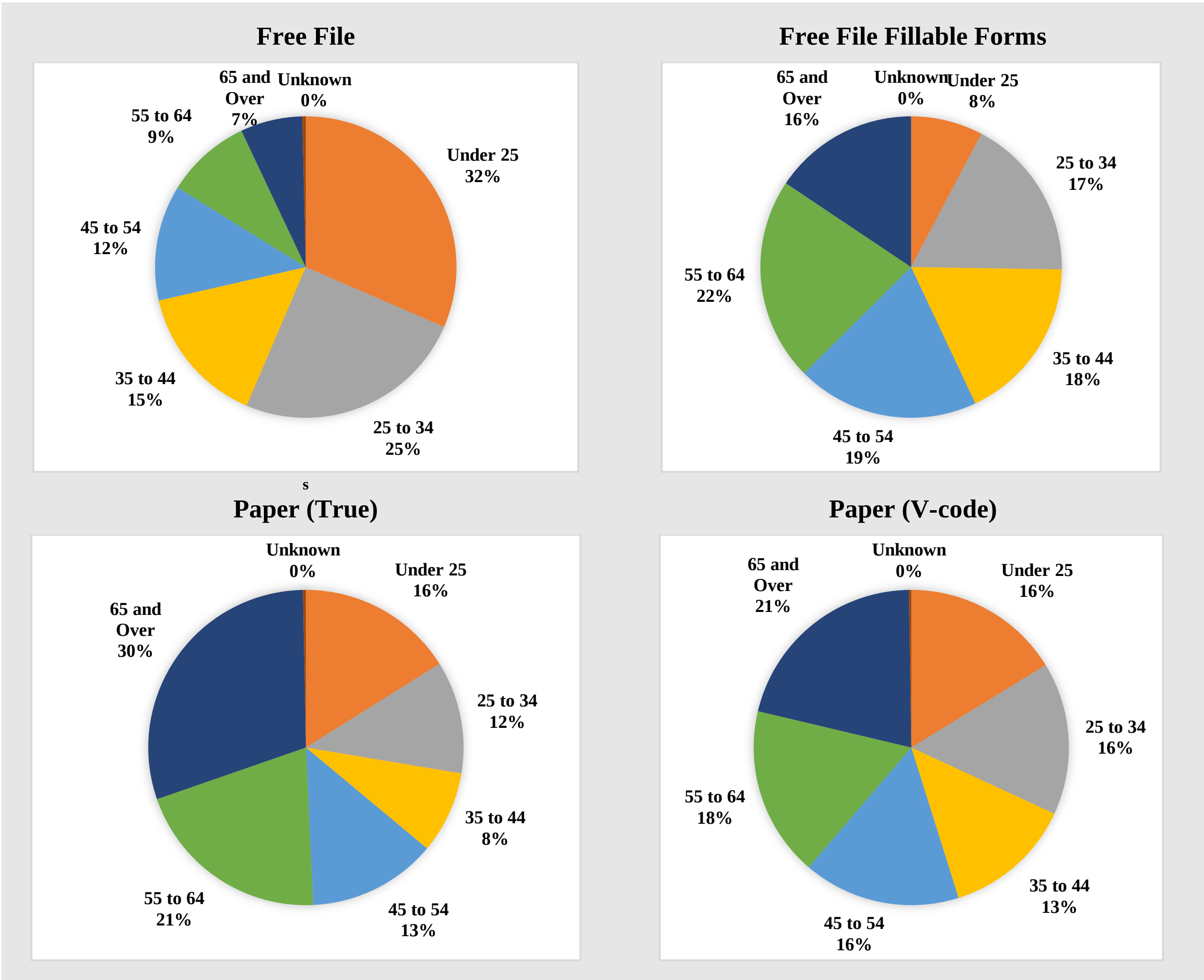

Figure 10: Age Distribution by Filing Method, TY 2017 (Percentage of Filers)

AGI. U.S. median household income from data collected through the 2017 American Community Surveys (ACS) was $60,336. [21]. Figure 10 shows the distribution of AGI of taxpayers by filing method for TY 2017. Almost half of Free Filers fell in the lower income group with AGI below $17,000.[20] These taxpayers represent the highest users of Free File. This observation is consistent with the Free File program's objective of increasing access and use of e-filing among taxpayers that are least able to afford it, as stated in the MOU. A noteworthy and related observation is that the highest proportion of taxpayers who used paper filing (true and v-code) was in the income group with AGI below $17,000. This group of taxpayers could

[20] CDW data showed similar trends for TY 2015 and TY 2016.

potentially incur significant gains in consumer surplus by switching to Free File from paper methods and therefore represents a key target for the IRS for Free File migration.

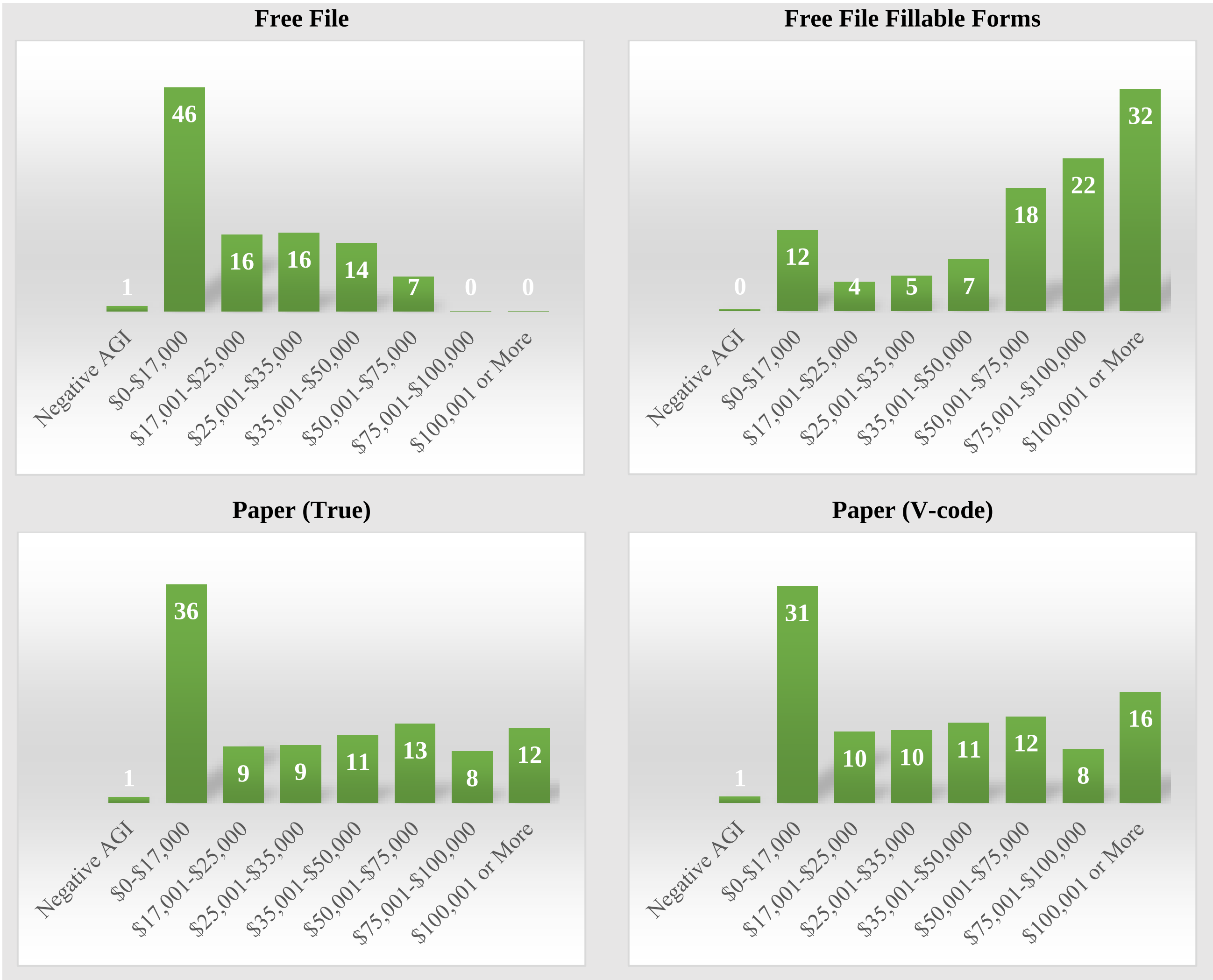

Figure 11: Adjusted Gross Income by Filing Method, TY 2017 (Percentage of Filers)

The share of Free Filers also fell with increasing income. About 14-16 percent of Free Filers were in each of the lower- and lower-middle income groups ($17,000 - $50,000) in TY 2017. Only 6-7 percent of Free Filers reported income over $50,000. Majority of middle- and upper-income taxpayers preferred other methods of filing. These observations are consistent with expectations that wealthier taxpayers are more likely to pay tax professionals to file their returns because they are able to afford professional services and are likely to have more complex tax returns. Moreover, older individuals among wealthier taxpayers that self-file may also prefer traditional paper methods. Similar trends were observed for TY 2015 and TY 2016.

Tax complexity. An examination of tax complexity of filers was consistent with this observation. Most Free Filers had simple (54 percent) or moderately complex (32 percent) tax returns in TY 2017. Similar observations were made on returns filed using FFFF and paper methods – close to 75 percent of returns filed through these methods were of simple or moderate complexity. These patterns were more or less consistent across TY 2015 and TY 2017.

Marital status. In TY 2017, a majority (70 percent) of Free Filers were single filers. A large proportion of taxpayers who used FFFF were also single (40 percent) but a majority (52 percent) were married filing jointly in TY 2017. Similar patterns prevailed in the two prior years. Paper filers were mostly single (above 50 percent) but a significant proportion of filers (31-34 percent) were also married filing jointly.

Dependent status. CDW data shows that 75 percent of Free Filers did not have any dependents in TY 2017. In fact, the use of Free File decreased with an increased number of dependents among Free Filers. Close to zero percent of Free Filers reported four or more dependents. Taxpayers that reported no dependents also made up the highest proportion of FFFF and paper filers. For TY 2017 FFFF filings, 68 percent of taxpayers had no dependents, while for true paper and v-code filers, 87 percent and 72 percent reported zero dependents, respectively. As expected, over 95 percent of Free Filers and users of FFFF and paper methods did not claim child and dependent care expenses in 2017. Similar trends were also observed in the previous two years.

Tax liability. Free Filers had lower tax liability in TY 2017 – About 88 percent of users received tax refunds. A majority of FFFF users and paper filers also received refunds. This is consistent with the earlier finding that lower income taxpayers were primary users of Free File, FFFF, and paper methods.

Tax credit. A high majority (73 percent) of Free Filers and a higher share (95 percent) of FFFF users did not qualify for EITC benefits. Over 85 percent of paper filers also did not receive the EITC benefit. Among users of Free File as well as FFFF and paper methods, more than 93 percent did not claim the education tax credit.

Geography. Figure 12: Free Filers by State, TY 2017 shows the concentration of Free Filers by state. In 2017 the highest usage of Free File occurred in California (186,765; 8 percent of all Free Filers); Texas (163,151; 7 percent of all Free Filers) and New York (146, 093; 6 percent of all Free Filers). While this may simply reflect the larger population sizes of these states, further analysis of state-level demographic data is needed to explore state patterns of usage among Free Filers. In contrast highest usage of FFFF occurred Puerto Rico (9 percent); Georgia (7 percent) and Montana (7 percent). Puerto Rico also accounted for 9 percent of true paper filings and 13 percent of V-code filings. Georgia also ranked high in paper filings (7 percent for true paper filings and 9 percent for V-code returns). North Dakota accounted for 6 percent of true paper filings and 8 percent of V-code filings.

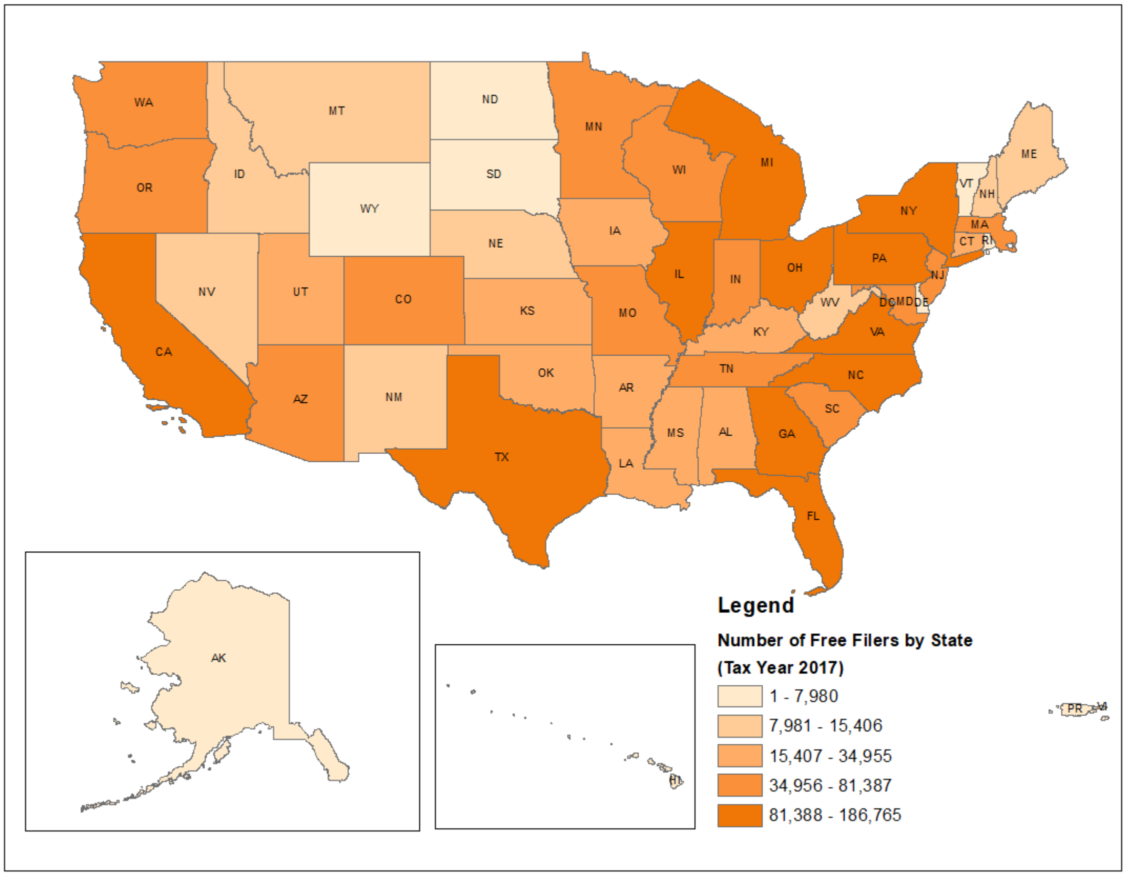

Figure 12: Free Filers by State, TY 2017

Overall, the demographic data shows some clear, concentrated trends among users of Free File. Free Filers mostly belong to lower income groups, and primarily among the income group with an AGI of $17,000 or less. The number of Free Filers tend to decrease in income and is negligible among wealthier filers. Free Filers also have lower tax liability, do not claim EITC and education benefits, and exhibit low or moderately complex returns. Of note is that users of paper methods also mostly belong to lower income groups and could be an important target for migration to Free File. The likelihood of paper filers to migrate to Free File also depends on other demographic characteristics such as age (Free Filers tend to be younger filers) and number of dependents (most Free Filers report no dependents and are single filers). Consumer demographics provide important information on the characteristics of filers across different methods of filing. However, the IRS needs to look beyond consumer circumstances and examine consumer behavior to understand Free File participation rates relative to other self-preparation methods.

3.0 Economic incentives of the IRS

- IRS incentives to partner with the Free File Alliance in developing and implementing Free File is driven by both political and economic forces.
- The public-private partnership (PPP) with the Free File allows IRS to provide Free File to millions of taxpayers at a minimal cost to the agency. It does so by passing on the bulk of the cost of program development and implementation to the private sector.
- Without the PPP arrangement, the IRS would sustain prohibitive costs in funding such a program itself, with added risk of competing with a highly competitive private sector.
- The costs of an IRS e-file program have been largely compared against the expected benefits of the public-private partnership as opposed to the benefits of the potential IRS e-file program. A formal quantitative assessment (such as cost-benefit analysis) is needed to better account for the expected benefits of an IRS developed and administered e-file program.
- The social welfare effects of Free File have not been determined due to limited data availability (IRS only started to identify Free Filed returns in 2006, and Alliance member taxpayer and industry data is proprietary).
- It is difficult to fully characterize IRS's incentives as most of the existing Free File objectives do not have defined target numbers for the agency to work towards. To better fulfill the remaining program goals, these objectives should be revised to set palpable and realistic targets.

The Free File program was a result of multiple directives from the Restructuring and Reform Act Of 1998 (RRA 1998), the Office of Management and Budget (OMB), and the Department of Treasury, that oversees the IRS. At the same time, IRS's public-private partnership with the Free File Alliance to bring the program to fruition was one of economic prudence.

Engaging in PPP arrangements has been a common practice for governments around the world, for a long time. PPPs serve as a means of introducing private sector technology and innovation to provide improved public services. PPPs allow governments to incentivize the private sector to deliver programs within time and budget, while allowing government to ensure budgetary certainty of program costs. They also allow governments to extract greater value for money of programs through transferring the cost of risks to the private sector over the programs' lifetime. [22]

IRS's incentive to partner with private sector firms stems from the determination that the expected costs of IRS entering the tax preparation market largely outweighs the expected benefits. IRS's limited experience and knowledge about the tax preparation and filing business combined with the substantial fixed cost of developing an e-filing program would make entering the tax preparation and filing business very costly and risky. [23] A MITRE 2010 study undertaken for the IRS found that the agency would incur substantial investments in technology, management, and organizational capability in order to enter the tax preparation and submission industry. [24] This would be particularly difficult today, given the series of ongoing cuts in the agency's funding since 2010. [25][21]

A new IRS e-filing program would have to offer tax preparation services comparable to those offered by a highly competitive private sector to ensure sufficient participation and migration of taxpayers from other commercial e-filing methods. In addition, the IRS would need to raise the necessary funds to implement and maintain the e-filing program while remaining competitive with the private sector in terms of technology and customer service. These costs would be significant over the lifetime of the program and would likely be borne by U.S. taxpayers, diminishing the positive impact of reduced taxpayer burden resulting from the program.

Moreover, the IRS would have to offer tax preparation and filing services free of cost, as directed by the OMB and Department of Treasury, implying that it could not rely on user fees to recover the costs. Expected costs aside, there would still remain uncertainty on the number of taxpayers that would use the service, and how well the service would align with IRS's primary, government role of tax collector and enforcer of the Internal Revenue Code.

Against these costs and uncertainties, the benefits of engaging in the current public-private partnership (PPP) with the Alliance appear to be substantial. The existing industry is highly established, with proven success and expertise in the field of electronic tax preparation. The Agreement with the Free File Alliance allows the IRS to pass on the substantial cost of developing and implementing the e-filing program to the private sector, while at the same time providing greater consumer choice and promoting competition in the tax preparation industry.

In traditional PPP arrangements, the private sector typically recovers the cost of providing government services through user fees, or the project is funded in consort with the government using taxpayer funds. [26] However, since the objective of the Free File program is to provide tax preparation and filing services at no cost, this is not an option for the Alliance Members. The Alliance has agreed to bear the full cost of providing free tax preparation and filing services to taxpayers. In return, the IRS has agreed to stay out of the tax preparation market, thus allowing the private sector to retain its market share.[22] This is a non-traditional means of acquiring returns to investment for the private sector but aligns well with IRS's intention of staying out of the tax preparation field.

[21] It may be logical for the IRS to enter the tax preparation market if the net gains of entering are positive. A formal analysis of the expected costs and benefits is needed to estimate the net gains for the IRS in developing its own tax preparation software.
[22] See Section 4.0 for a discussion of the Alliance Member's economic incentives in participating in the Free File program.

The partnership with the Alliance has allowed the IRS to fulfill a would-be-costly obligation at a fraction of the expenses. A successful implementation of the program also increased the proportion of e-filings resulting in further cost savings to the IRS as electronic returns are far cheaper to process than paper forms. [5]

Nonetheless, the costs of an IRS e-file program have been largely compared against the expected benefits of the public-private partnership as opposed to the benefits of the potential IRS e-file program. Limited research shows that the costs of an IRS-developed and administered e-file program are likely to be prohibitive, while the benefits would be minimal. [24] [23] A formal quantitative assessment (such as cost-benefit analysis) is needed to better account for the expected benefits of an IRS developed and administered e-file program. If the expected benefits of an IRS e-filing program outweigh the expected costs, then net gains could justify IRS's decision to enter the tax preparation market. However, the Treasury explicitly stated that the IRS does not intend to enter the tax preparation business.

The social welfare effects of the program have also not been determined due to limited data availability. This lack of data is partly because the IRS only started to identify Free Filed returns in 2006, and partly because Alliance Member taxpayer and industry data is proprietary. [4][23] As a result, it is difficult to determine to what extent IRS's objective of reducing taxpayer burden is achieved, especially as millions of potentially eligible taxpayers continue to e-file taxes through other commercial services.

The Free File program's main objective of increasing the share of e-filers to 80 percent by 1997 has already been achieved. The remaining objectives of the program include increasing e-filing options for taxpayers, enhancing access to the program for more filers, and reducing taxpayer burden of tax compliance. However, these objectives do not have defined target numbers (such as increased access of Free File to *x* number of taxpayers or decreased burden by *y* percent of total taxpayer income) for the IRS to work towards. To better fulfill the remaining program goals, these objectives should be revised to set palpable and realistic targets.

IRS's incentives to partner with the private sector in achieving revised program goals should also be revisited. Moreover, since IRS's entry into the market is not a credible threat to the private sector, the incentives of the Alliance Members to participate in the program should be reevaluated against program objectives. These steps would allow the IRS to better understand its private sector partners and improve the agency's position to negotiate the terms of the Agreement, potentially bringing greater benefits to taxpayers.

[23] Free File returns were self-reported by the companies from 2003-2005.

4.0 Economic Incentives of the Free File Alliance

- Tax return preparers and tax software companies dominate the market for individual tax return preparation and submission.
- The online tax preparation software industry bears characteristics of a monopolistically competitive market, where firms leverage brand differentiation to maximize private returns to investment.
- As private sector companies, Alliance Members' participation in Free File is driven by the economic incentives such as preservation of market share, business development, greater revenues and profit, or a combination of the above.
- IRS's entry into the tax preparation industry is a non-credible threat to the Alliance because IRS has no interest in entering the market as per Treasury's directive, nor is it an economically feasible option for the agency.
- The primary benefit of offering free services through Free File is that FFI members earn additional business through the provision of free services. FFI members employ a combination of digital marketing strategies and business models such as advertising on digital platforms, offering *freemium* products, and three-party market strategies.
- These business strategies allow FFI to make profit despite free service provision to some taxpayers because additional business generation leads to some customers to pay for premium products. The customers who pay for premium products, in turn, subsidize the ones who enjoy it for free. Essentially, Alliance members make profit from free services by shifting the cost of providing the product or service from one person to another or from one point in time to another.
- Advertising network effects and minimal marginal cost of reproducing digital products for additional customers enhances Alliance Member's returns to private investments.
- Some actions of FFI members that critics have called deceptive are indeed common, legal business practices used in the private sector to generate business.
- Alliance members engage in other free market tactics like internet traffic manipulation to remain competitive and increase revenue.

The U.S. tax preparation industry serves as an intermediary between taxpayers and the government. It helps taxpayers fulfill their obligation to report and pay taxes and claim refunds and government benefits, and in turn, helps the IRS with its government role of collecting taxes and enforcing the tax code. [10][24] This section describes the tax preparation industry and briefly highlights some key characteristics of the market structure in which tax software companies operate. The analysis shows that these characteristics are key in explaining business practices of tax software companies and their incentives to participate in the Free File program.

[24] In 2018, the government netted $3 trillion in taxes after paying $0.5 trillion in refunds. Tax revenue and refund amounts are based on IRS data on Returns Filed, Taxes Collected, and Refunds Issued, Tables 1, Collections and Refunds, by Type of Tax, Fiscal Years 2017 and 2018 (XLS), available at https://www.irs.gov/statistics/returns-filed-taxes-collected-and-refunds-issued.

Industry Overview

The tax preparation industry has experienced explosive growth in the last few decades as a result of increased demand for preparation and filing services by individuals and businesses. Taxpayers are increasingly relying on tax industry professionals for assistance with maneuvering an increasingly complex tax code. Others rely on the tax industry to alleviate some of the financial, physical, and psychological costs and burdens of reporting and paying taxes. [27] [28]

According to IBISWorld, there are over 130,000 tax preparation businesses in the U.S. totaling a revenue of about $11 billion. [29] Moreover, there are 768,255 individuals with IRS Preparer Tax Identification Numbers (PTINs). [30] These individuals include attorneys, certified public accountants (CPAs), IRS enrolled agents, enrolled actuaries, and enrolled retirement plan agents.[25] There are also estimated to be millions of return preparers on the informal market. [31]

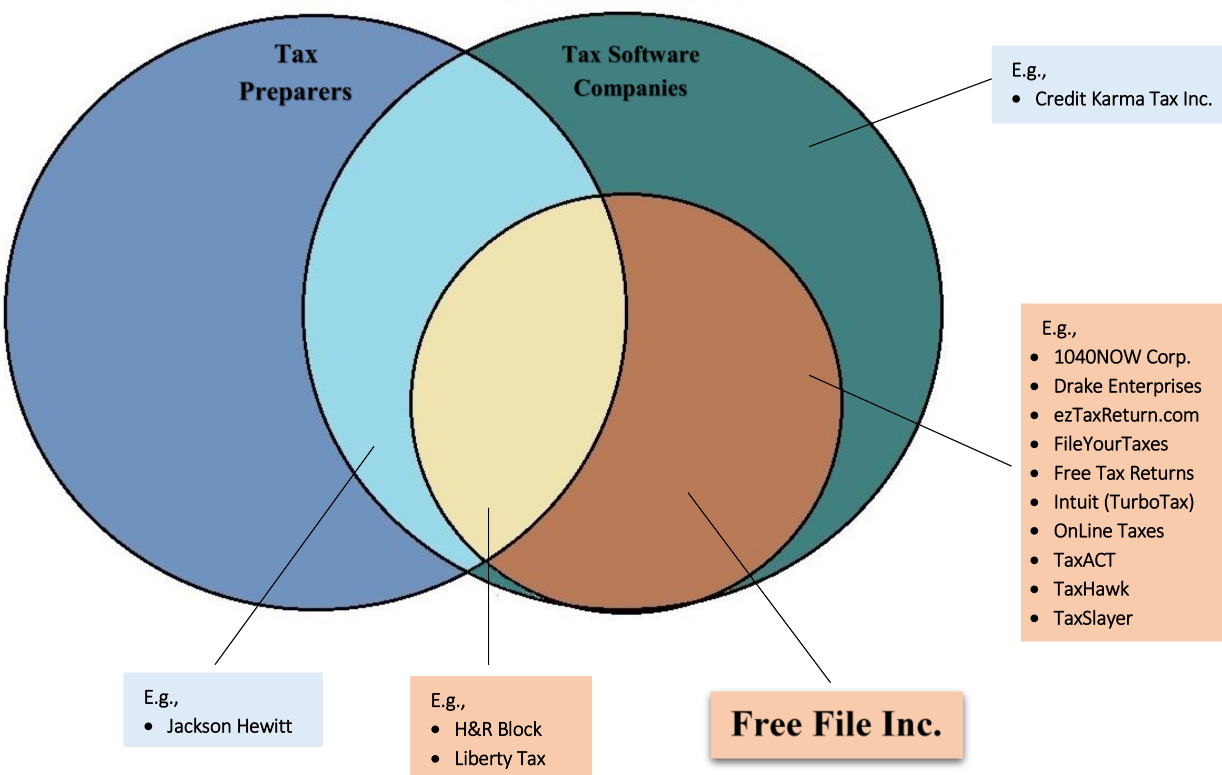

Figure 13: Individual Tax Preparation Industry

[25] More information on authorized return preparers can be found at the IRS website: https://www.irs.gov/tax-professionals/understanding-tax-return-preparer-credentials-and-qualifications.

Tax return preparers and tax software companies dominate the market for individual tax return preparation and submission (mainly Form 1040 - U.S. Individual Income Tax Return). Figure 13 summarizes the industry for individual tax return preparation. Tax preparers help taxpayers through a range of services that cover the entire tax preparation and filing process, while tax software companies provide taxpayers with the required technological tools and online customer service for self-preparation and filing. [10] Some companies like H&R Block, Liberty Tax, and Jackson Hewitt serve as both tax preparers and providers of online tools to facilitate self-preparation and filing.

In FY 2018, the IRS received 154 million individual tax returns, among which 135.5 million (87 percent) were filed electronically. Entities that are authorized to originate electronic submission of a return to the IRS are known as Electronic Return Originators (EROs). [15] By 2010, there were over 200,000 EROs operating in the U.S. [32] In some cases, an ERO originates the electronic submission of a tax return but may or may not be the preparer of transmitted returns. Electronic Transmitters have software and other equipment that connect with IRS computers and are authorized to send tax return data directly to the IRS. Online providers are a type of transmitter that send electronic returns filed from home by taxpayers using tax preparation software. [33]

Twelve Online Providers were members of the Free File Alliance as of January 2019. The Alliance Members operate under the name of Free File, Inc. (FFI) under the Agreement with the IRS. Online providers vary in age, size, and market share. In terms of size, these companies range between one employee to thousands of workers. Founded in 1983, Intuit is the parent company of TurboTax and is the largest provider of online tax preparation and other online financial services, including QuickBooks and Mint. The company employs over 9,000 workers. In FY 2018, Intuit reported $6 billion in global revenue. [34] [35]

H&R Block is the next largest online tax preparation provider, operating company-owned and franchise retail locations throughout the United States, and in U.S. territories and military bases globally. While established almost thirty years before Intuit, H&R Block employs about 2,700 full-time workers, less than a third of Intuit’s workforce, although the former brings on tens of thousands on seasonal workers during tax seasons. [36] During the fiscal year ending April 30, 2018, H&R Block employed 90,700 workers, including seasonal employees. [36] The difference in size between the two largest competitors is possibly explained by the difference in the nature of these companies’ business portfolios and the relative sizes of their international operations. H&R Block operates brick and mortar service locations in addition to selling online software services, while Intuit is primarily engaged in selling digital products and software, making it easier and less costly for the latter to have a wider customer base and international presence. H&R Block only operates in the U.S. and U.S. territories and military bases while Intuit operates in 19 locations across 9 countries. [36] [37]

Using data from IRS's Compliance Data Warehouse (CDW), Figure 14 shows that the Alliance Members' combined market share for e-filers in TY 2017 was 80 percent. Only 21 percent of the market was served by non-Alliance Members.[26] Across the different companies, the number of e-filers ranged from as low as tens of e-filers to millions of e-filers. There was an average of over 4 million e-filers across all ERO's with a median of 215,258.

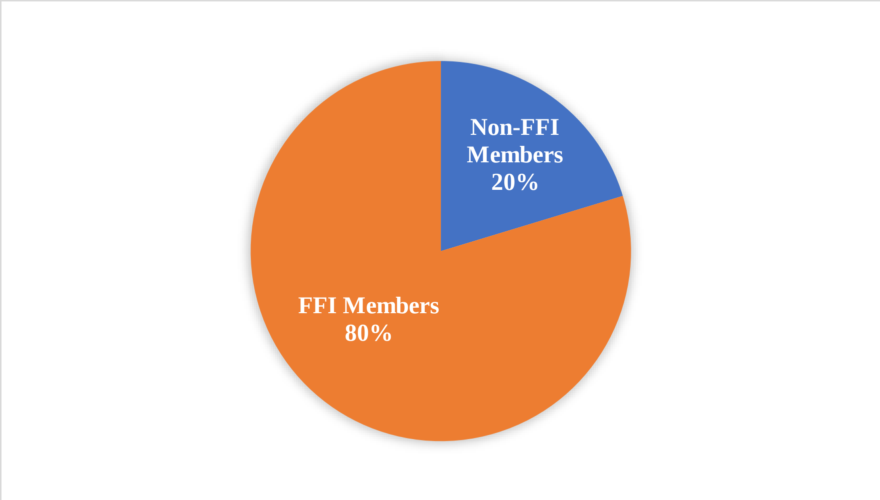

Figure 14: Total E-File Market Share by Vendor (TY 2017)

Market Structure

The online tax preparation software industry bears characteristics of a monopolistically competitive market. Such a market is characterized by a large number of sellers (suppliers) that offer similar but not identical products, i.e., the products are close substitutes to one another. An important feature of monopolistic competition is that products are differentiated on the basis of brands. This product differentiation is a form of non-price competition, i.e. the firms compete with one another on the basis of these brands. Each firm has a limited degree of "monopoly power" over its own brand and therefore can set its own pricing policy. [38] [39]

Another important attribute of this market is that it has relatively low barriers to entry., i.e. firms can enter and exit the market relatively easily. [38] [39] For the tax software industry such barriers to entry may include, for example, fixed costs of becoming a licensed tax professional, fulfilling requirements of becoming an IRS authorized e-file provider, and resources spent in building up a customer base.

Figure 15 illustrates a simplified concept of a monopolistically competitive industry using the demand and cost schedules of firms. Under monopolistic competition, the demand for products

[26] Here, market share is defined as the percentage of e-filers served by each company in the total number of e-filers in a given year.

and services depends on their prices. The demand curve for this industry is downward sloping, meaning that more is demanded at lower prices and vice versa. Customers have preference for the products of one firm but are also aware of close competitors providing similar products. As a result, a rise in the price of the firm's products may lead to the loss of some customers but not all customers. Similarly, a fall in the price may attract some customers from competing firms, but not all customers. [38]

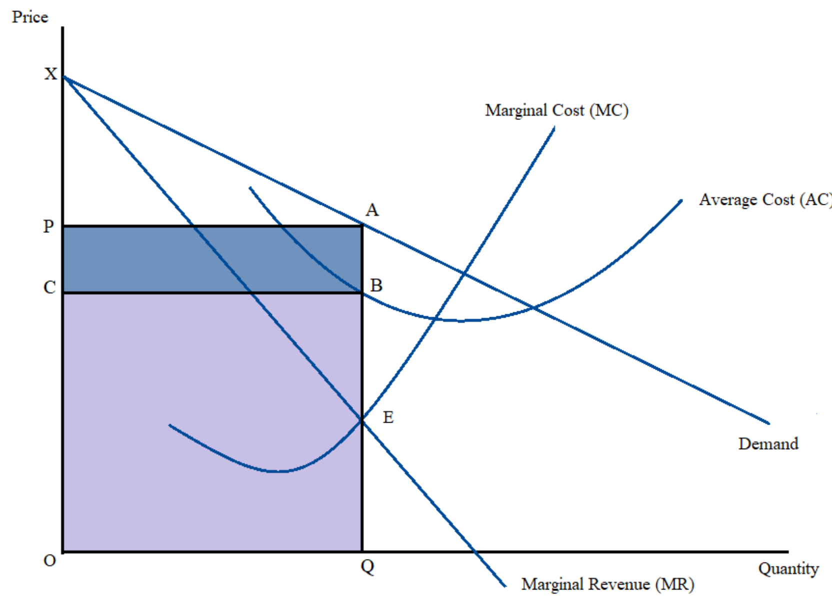

Figure 15: Short Run Equilibrium under Monopolistic Competition[27]

A monopolistically competitive firm maximizes profits where its marginal cost (MC) is equal to its marginal revenues (MR), i.e. at point *E*.[28] [29] In Figure 15, MC = MR at the quantity *Q* and the firm can charge a corresponding price, *P*.[30] The firm incurs cost *C* per unit of quantity sold.[31] At the profit maximizing quantity, *Q*, the firm's total costs are given by the shaded area *OCBQ*,

[27] Figures are not drawn to scale.
[28] For a detailed discussion of profit maximization under monopolistic competition, see N. Gregory Mankiw, *Principals of Microeconomics*, Mason, OH, South-Western Cengage Learning, 2012 and Hal A. Varian, *Intermediate Microeconomics: A Modern Approach*, New York, NY, W. W. Norton & Company, Inc., 2014.
[29] Traditional theory assumes that, in competitive markets, the objective of private firms is to maximize profit, i.e., the difference between a firm's revenue from sales and the costs incurred in producing a good or a service. [58] Other theories of corporate behavior posit that private firms' goals are a combination of attaining a certain level of profit, holding a certain share of the market or sales. [59] Among many such varying theories, a common element is that private sector firms seek to maximize returns on their investments in a particular market. This naturally extends to firms that engage in a public-private partnership (PPP) with the government. For the sake of simplicity, this paper uses the traditional objective of profit maximization to demonstrate firm behavior.
[30] On Figure 15, this is shown as a vertical line reaching from *Q* until it hits the firm's demand curve.
[31] This is shown as a vertical line reaching from *Q* until it hits the firm's average cost (AC) curve.

while the firm's revenues are given by *OPAQ*. In the short run, the firm therefore earns an economic profit of *CPAB*.

In the long-run, supernormal profits attract more firms into the industry and this influx of competitors drives down profits. One assumption of monopolistic competition is that due to the sheer number of sellers present in the market, individual market share of firms is small. [38] This assumption does not align accurately with the current tax software industry in which a few giants like Intuit and H&R Block command significant market share. [29] Given the sheer size and competitive advantage of these larger firms, the imminent loss of market share as a result of new firm entry may not be a straightforward conclusion. In the absence of detailed information on the firms, consumers, and demand elasticities it is difficult to fully characterize the tax preparation software industry. Nonetheless, the above section demonstrates how firms within the tax preparation industry operate with a profit motive and have the ability to set and influence prices on the basis of brand recognition. These concepts will be revisited in discussing economic incentives of FFI.

FFI's Incentives to Participate in the Free File Program

Twelve companies with ERO authorization participated in the Free File program in TY 2017 operating under the name of Free File, Inc. (FFI). Intuit and H&R Block dominated the overall market for Free Filers. The share of Free Filers in the companies' total number of e-filers varied significantly.[32] For the remainder of this section the paper refers to Alliance Members as FFI to highlight their joint corporate-like structure.

In the last few years, FFI members have repeatedly come under attack from tax industry experts, political leaders, and investigative journalists on their business practices related to the provision of Free File. For example, ProPublica and the Office of Senator Elizabeth Warren penned scathing articles describing business practices of FFI members as misleading and deceptive that essentially trick customers into purchasing products that are not Free File. [40] [41] Critics accuse large companies like Intuit and H&R Block of intentionally diverting customers from the Free File site to commercial paid services using deceptive website source codes. ProPublica and Senator Warren's office further noted the power of the tax industry lobby in preventing the IRS from providing easier tax preparation options and suppressing taxpayer interests. [41] [42] [43] In considering these attacks on FFI's business models, it is important to evaluate FFI's objectives and incentives to participate in the Free File program.

First, unlike the IRS, the members are not bound by the RRA 1998 and OMB directive, nor the responsibility of reducing the government's or taxpayers' burden through increased e-filings at

[32] Detailed information on each vendor's filings and market share are suppressed to preserve the proprietary nature of the data.

no cost to the taxpayer. This is solely the government's objective and not the organizational goals of FFI.

Second, tax software companies operate in the interest of maximizing returns to their private investments. As private sector firms in a monopolistically competitive market, FFI members are expected to be driven by the economic incentives such as preservation of market share, business development, greater revenues and profit, or a combination of the above. The incentive for FFI to participate as Free File providers is tied to multiple benefits that align with these private sector incentives.

Market share incentive. Some critics of Free File argue that the primary motive of FFI members is to preserve the private sector's market share, and to prevent the IRS from entering the market. While theoretically possible, IRS's entry into the tax preparation industry is a non-credible threat to private companies. First, given the weight of the RRA 1998 and the OMB directive that IRS work with the private sector in developing Free File, the IRS had little interest in entering the market. Nor is it an economically feasible option for the agency as discussed in the previous section.[33]

Business generation incentive. The primary benefit of offering free services through Free File is that FFI members earn additional business through the provision of free services. As Figure 15 illustrated above, Alliance Members would theoretically incur costs given by the shaded area *OCBQ*, and earn revenues given by *OPAQ* if they were selling tax software products to customers in the commercial market. Hence, in the short run at least, the firms would earn economic profit of *CPAB* from paying, commercial customers. As participants of the Free File program, the FFI members have to forgo at least some revenue and economic profits they could potentially earn if some Free Filers had used their commercial offerings.[34] Moreover, FFI bears the entire cost of providing free services to all Free Filers. In a traditional PPP arrangement, private companies would be able to at least recover costs through user fees. Charging user fees, however, would defeat the purpose of the Free File programs' objective.

As private sector firms, FFI members are expected to rely upon additional business opportunities that allow them to recover these cost and forgone economic profits. Moreover, since the loss of market share to the IRS is not a viable threat, existing FFI members have little incentive to offer free tax services unless these offerings lead to additional business opportunities.

[33] The sheer cost of developing, implementing, and maintaining an e-filing program would be a risky and costly endeavor for the IRS. Even if the IRS were to enter the market for online tax preparation services, given its existing budget constraints the agency would find it difficult to develop and maintain a competitive advantage relative to existing industry giants. As a result, the private sector would likely retain its majority market share.
[34] Note that this is a simplified depiction of a monopolistically competitive industry based on numerous assumptions about firms and consumer behavior. A more accurate characterization would require detailed industry information on firms, consumers, product prices, and other economic indicators.

Online product and service providers, including FFI members, employ a combination of digital marketing strategies and business models to generate business opportunities. These can include advertising on digital platforms, offering *freemium* products, and three-party market strategies, among others. Some online companies follow different strategies and may also change their strategy over a product's lifecycle. [44] When for-profit companies provide free services, it boils down to shifting the cost of providing the product or service from one person to another or from one point in time to another. [45] [46]

Free advertising. In digital markets, providers pay for advertising space on popular, third-party websites to attract customers. Advertising increases visibility to customers and helps expand business. Advertising can also create continuing network effects as customers spread word about a product or service to other potential customers. Moreover, in *Three-party Markets*, advertisers pay to be included in the marketing of a free product (Product 1) in the hope that they will be able to market another product (Product 2) to the consumer. [45] Alliance Members receive these advertising benefits for free when their company names appear on the IRS website as Free File providers. By offering Free File (Product 1), Alliance Members benefit from the potential business generated for their commercial products (Product 2) from taxpayers who are ineligible for Free File as well as taxpayers who are eligible for Free File but choose to use the commercial versions. Alliance Members are also able to create network effects through potential customers who visit the IRS Free File website. In fact, these network effects can extend beyond taxpayers to anyone who clicks on the IRS Free File webpage.

FFI can also benefit from future business from existing Free Filers. As income of some existing Free Filer's grow, they may no longer be eligible for Free File. FFI members that currently provide free services to these taxpayers are likely to benefit from their paid business if they continue to file with the same company. Brand loyalty is a salient feature of the tax preparation software industry.

The "Freemium" business model. This free-to-commercial customer conversion strategy is related to the *freemium* business model that has grown in popularity among online service providers. [45] [47] This strategy is based on offering free and paid subscriptions to a particular product or service. By including fewer functions in the free versions, companies can prompt users to pay for the premium version with upgraded features. [45] [44] The free version is available to anyone, in the hope that some users will then choose to upgrade to the premium version. Once customers upgrade to the premium version of a product, companies can use other marketing strategies to retain paying customers and potentially increase prices over time. [45]

Many companies give away free products in exchange for market share and for generating business. In a smart-phone era, thousands of companies are providing free software in the hope that some customers will upgrade to the premium version. Large companies including Google and Dropbox, use *freemium* business models. Tax software companies like TurboTax, and H&R Block also offer *freemium* tax preparation and filing products. While both established and new companies use the freemium business model, the latter generate the majority of revenue from freemium users. [44]

Producing tax preparation software and customer service support imposes substantial costs on the private tax preparation software companies. However, in digital markets business strategies like *freemium* models work because the marginal cost of reproducing the product for additional customers is almost nothing. [45] So, the minority of customers who pay for the premium service subsidize the majority who do not. [48] Research shows that typical online companies rely on the “5 percent rule”, i.e. 5 percent of customers be willing to pay for premium features who, in turn, will subsidize the 95 percent, non-paying users. [45]

The low volume of Free Filers combined with the high volume of e-filers potentially indicates that a larger proportion of taxpayers are using commercial software. If a sufficient proportion of these customers pay for the commercial software (as opposed to use the free version of the commercial software), then they essentially subsidize the cost of free tax preparation for the fraction of the population that do use the service.

Freemium providers also run their businesses in markets that have network effects. In these markets free users can bring substantial value because they enable network effects and if these network effects are large enough, free users cause almost no marginal cost for the company. [44]

Research shows that users attitudes towards the free version affects their attitudes towards the premium version - greater similarity between the free and premium versions leads to a positive attitude toward the free version. [44] Since Free File is essentially an advertising medium for the company' premium version, a positive attitude towards the free service can attract users to the premium versions. These effects are found to be stronger for customers who expect to gain from small functional differences between the free and the commercial version of the service or product. [44] This advertising effect can be especially important for Alliance Members as over time Free Filers with growing income may become ineligible for the Free version with growing incomes and more complex tax returns.

In the tax software industry, marketing success can depend on maximizing profits from a company’s total customer base. Over time, innovative service companies also learn about different customer groups and their behaviors, desires, and responsiveness to marketing strategies. [49] This allows companies to use innovating marketing strategies to retain existing customers and attract additional ones.

Non-monetary benefits. Finally, the partnership with the IRS also provides FFI with non-monetary benefits. Such benefits include public attention and reputation which affects how high the company website will appear on web searches. These in turn can be turned into monetary benefits through additional business generation. [48]

The above discussion shows that some actions of FFI members that critics have called deceptive are indeed common, legal business practices used in the private sector to improve brand recognition, increase exposure to new customers, and to highlight new products. Some private companies may even use aggressive marketing strategies while others use more conservative approaches.

Ultimately, the revenue and profit motive of FFI members may not be detrimental to the objectives of Free File unless members are actively engaged in redirecting Free File eligible taxpayers to their commercial offerings. Such activities would cause harm to Free File candidates if they were misdirected to paying for premium services. The Agreement with the IRS aims to prevent FFI members from using aggressive tactics to market their commercial products directly through the IRS or the members' Free File landing page. The IRS has explicitly put these terms in place in the MOU to protect taxpayers from mistaking Free File for other commercial tax preparation software services that may or may not charge tax preparation fees. These terms, for example, prohibit the Alliance from marketing and selling commercial offerings to eligible Free Filers through the IRS website.[35] These restrictions are subject to exceptions where taxpayers found to be ineligible for Free File can be directed to Members' commercial sites.

The IRS has little control on the free market and business practices of Alliance Members that are not directly related to Free File, and therefore are not covered under the MOU. Many taxpayers eligible for Free File continue to file taxes through FFI members' commercial offerings. The share of eligible filers that use the paid versions of the commercial offers in unclear. These customers could benefit from migrating to Free File.[36] The discrepancy between eligible and actual Free File customers across the different FFI members also shows that the companies do not actively direct eligible customers to participate in Free File. Indeed, the FFI does not have an incentive to advertise the program as the MOU puts the burden of advertising on the IRS alone.

Other business activities of the Alliance Members include capturing potential customers of competing firms by diverting internet traffic away from competitor sites to their own, individual sites. MITRE's analysis of members' web search tactics discovered that FFI's search related activities were effective in driving traffic to their commercial free tax filing products and services. MITRE found that several Alliance Members bought paid search advertisements at the

[35] For example, Article 4.32.5, "No Other Sales or Selling Activity" of the current FFI-IRS Agreement stipulates that "*No marketing, soliciting, sales or selling activity, or electronic links to such activity, are permitted in the Free File Program, with the exception of the following: (i) the sale of a federal return where, as noted herein, the taxpayer is determined ineligible for the Member's Free File offer and chooses to complete and file his or her return using the Member's commercial offer, or (ii) disclosures or sales (as applicable) related to free or paid state tax preparation offers as specifically provided for in this MOU.*" Moreover, Article, 4.32.6, "Prohibition on 'Value-Added' Button" requires that, "*Members shall not include a "value added" button (i.e., an icon, link or any functionality that provides a taxpayer with access to a Member's commercial products or services) on the Member's Free File Landing Page.*"
[36] Understanding reasons behind this failure to migrate may be an important way for the IRS to understand taxpayer behavior.

top of the search results page that helped drive five times more traffic to their collective sites than the combined total of organic search traffic.[37]

Another effective tactic used to drive traffic to FFI's commercial products and services was to take steps to inhibit indexation of their Free File offering in the main organic search results. One of the more commonly used methods was the insertion of a "meta robots=noindex" directive in the HEAD section of the Free File landing page's source code. This resulted in about thirty-two times more traffic being driven to the commercial products versus the Free File services. FFI members used industry best practices to improve their rank (position) in the paid search and organic search results in an effort to increase traffic to their respective commercial free tax filing products. The larger competitors enjoyed a competitive advantage due to the strength of their brand awareness and the correspondingly high "domain authority" (DA) scores of their websites that search engines use to influence how search results are ranked. Websites with a high DA will typically outrank smaller companies with low DA scores, but it was still possible for the weaker competitors to perform well and pull paid and organic search traffic

Despite these observations, it should be noted that completely free provision of online tax preparation services for 70 percent of Americans may not have existed without the Free File program. In the interest of reducing taxpayer burden and ensuring a greater number of eligible taxpayers actively use Free File, the IRS can seek to make more effective use of the MOU to prevent FFI's actions that put downward pressure on Free File usage. On the other hand, to ensure participation of Free File service providers, the IRS needs to leave room for Alliance Members to benefit from the program.

Given the market incentives of tax preparation companies, it is beneficial for the Alliance Members to remain in the program under most scenarios. Under the (unlikely) scenario of no Free File Program, Alliance Members would lose a significant amount of free advertising opportunities and business development opportunities. While some of the existing Free Filers would have use the commercial tax preparation services, many of them would likely qualify for the free, basic version. Under the status quo, Alliance Members benefit from significantly increased business development opportunities as discussed earlier. In return, they serve a small fraction of Free File eligible taxpayers who are potentially subsidized by new paying customers. The scenario in which the IRS takes over the provision of tax preparation services is impractical and non-feasible. Moreover, it is difficult to predict the economic gains and losses of the Alliance Members in this scenario without detailed information on market actors and how well IRS could compete with industry giants.

While this section provides some insight into the market structure and business models of private companies to participate in the Free File program, a more detailed study of the tax preparation

[37] Based on the available data, MITRE estimated that Alliance members purchased more than 10 million paid search advertisement clicks during FS 2019, at an average cost of $1.69 per click, which put the value of their combined ad spending at over $17 million.

industry and FFI business models can more accurately determine how private firm behavior interacts with Free File objectives and affects program effectiveness.

5.0 An Economics Perspective of the MOU

- The MOU also serves as a powerful tool for economic negotiations between the IRS and FFI, Inc. that reflects the economic incentives of all Free File stakeholders.
- The current Agreement appears to be working for the IRS in increasing options and access to free tax preparation services, as millions continue to use Free File.
- Nonetheless, many eligible taxpayers are not reached by Free File and there is room for improving participation of Free File candidates who currently use paid, commercial services.
- The IRS stands in a unique position of having to balance taxpayer expectations from the program with the industry members' outlook for economic gains.
- While the IRS could use the MOU to negotiate stricter terms to alleviate taxpayer and public concerns about FFI activities, there are limitations to this process - a lax MOU leaves room for the FFI to extract consumer surplus from eligible taxpayers, effectively pushing up the economic price of Free File and, in turn, lowering demand for the service. An overly restrictive MOU reduces FFI's incentives to participate in the program by taking away opportunities of economic returns and may reduce the supply of Free File services available.
- To alleviate existing concerns about low Free File participation, the IRS can explore whether there is room within the MOU to increase taxpayer awareness of Free File without driving out FFI members with strict restrictions on their business practices.
- Greater knowledge of the Alliance Member's business dealings could help the IRS determine the areas of leverage in future negotiations.

The Agreement between the IRS and the Free File Alliance defines the respective rights and responsibilities of each party with reference to the program's objectives, stakeholders, and the legal framework of the partnership.

The MOU also serves as a powerful tool for economic negotiations between the IRS and FFI, Inc. The tool allows IRS to shape how it wants to achieve Free File objectives, taking economic goals into consideration. The IRS has fulfilled its directive from Treasury and OMB to increase free tax preparation services under the existing MOU terms, with little economic burden to the agency by passing on the hefty cost of program development and implementation to the private sector.

Similarly, the FFI members negotiated MOU terms to reflect their private economic incentives. Aside from some limitations on marketing commercial offerings on the IRS or FFI's Free File landing page, the MOU leaves enough room for FFI to pursue other legal means of marketing commercial products to all individuals, including Free File eligible taxpayers. Some of these marketing tactics are discussed in the previous section. Moreover, the responsibility of marketing

Free File lies with the IRS, allowing FFI to avoid additional measures aimed at directing customers to the program. It is beneficial for FFI to continue participating in the program as long as they can recover program costs through additional revenue generated via new business development opportunities. Additional FFI revenues are profit.

The overall agreement between the IRS and FFI members has been considered successful in increasing the number of e-filers, as millions of taxpayers take advantage of the program.[38] However, the Taxpayer Advocate Service noted in its 2018 annual report to Congress that "*the IRS's Free File Offerings Are Underutilized, and the IRS Has Failed to Set Standards for Improvement*". [2] The main concern related to Free File essentially has two parts. The first is that only a small portion of Free File eligible taxpayers actually use the service, while the majority continue to use FFI's commercial offerings. The second, is that the IRS continues to allow this phenomenon to continue by not setting better industry standards in their agreement with FFI.

These criticisms of Free File highlight an important gap between the IRS's objectives and taxpayers' expectations from the program. Since the IRS has already achieved the RRA 1998 target of having at least 80 percent e-filed returns, the agency does not have a specific target for the number returns to be submitted through Free File. Free File is one of many other programs aimed at increasing e-filing access. Under the current MOU, it is beneficial for the IRS to continue the program as long as the financial and economic costs of the program continue to be passed on to the FFI. Even if Free File does not serve all eligible taxpayers uniformly, existing users still accrue significant benefits.

From the taxpayers' point of view, however, the perceived discrepancy between eligible and actual Free Filers appear to be a failure on the part of the IRS to reduce taxpayer burden of tax compliance, which is an explicitly stated objective of the program. ProPublica and other organizations representing the public interest have repeatedly accused the IRS of giving the industry free reign to manipulate access to and cost of online tax preparation services at the expense of taxpayers. These organizations also argue that the IRS needs to ramp up its oversight of the tax software industry to prevent Free File eligible taxpayers from paying for tax preparation services.

While the IRS could use the MOU to negotiate stricter terms to alleviate taxpayer and public concerns about FFI activities, there are limitations to this process. First, the MOU is ultimately a two-way negotiation tool. Moreover, changing MOU provisions that restrict or dictate FFI's business practices may require other concessions to FFI members in return. Individual FFI

[38] Although, the success of Free File in increasing e-filing does not account for how many Free Filers would have e-filed even in the absence of the program. As a result, the perceived increase in e-filing as a result of Free File may be overstated.

members may demand concessions that align with the members' own economic and business incentives adding another layer of complexity to the negotiation process.

Moreover, substantial changes to the MOU that either aim to ease or tighten restrictions on providers of Free File can influence both the demand and supply of Free File services. Figure 16 shows a theoretical demand and supply schedule for the tax software industry. Consistent with a monopolistically competitive market, the demand curve is downward sloping indicating that more products and services are demanded at lower prices. Similarly, the supply curve is upward sloping, implying that tax software companies offer greater quantities of their products at higher prices. The equilibrium price and quantity in the market corresponds to P1 and Q1, respectively, where the quantity demanded equals the quantity supplied in the market (shown by the point *E*).

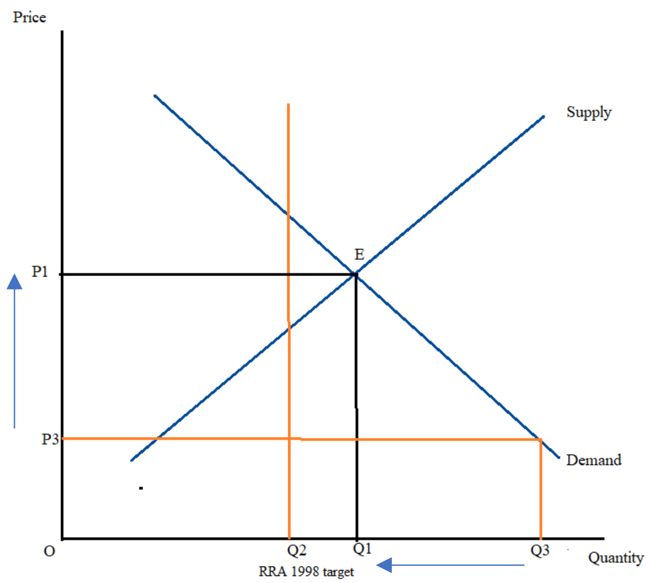

Figure 16: Economic Price of Free File versus Commercial Offerings[39]

As shown in Figure 16, the economic price of Free File, given by *P3*, lies below that of the free market price of comparable commercial tax preparation software. This is because while non-economic costs of Free File are similar to other commercial offerings, the former eliminates the financial cost of online tax preparation. The economic price of Free File is still positive as taxpayers incur other non-economic costs of tax-preparation.

Easing restrictions on FFI members would create opportunities of extracting additional revenue from Free File users through commercial tactics. As a result, the economic price for Free File may be driven up, narrowing the gap between *P1* and *P3*. As the price of Free File approaches the market price, consumers would be indifferent between Free File and comparable commercial

[39] Figures are not drawn to scale.

software, potentially reducing the demand for Free File. This would be a considerable problem at high volumes of Free File usage, because a large drop in the demand for Free File could affect overall e-filing numbers. In the current state of affairs, this is not a significant concern as a drop in the current Free File numbers would not affect overall e-filing figures enough to cause it to fall below the 80 percent overall e-filing target of the IRS.

Figure 17: The MOU as a Negotiation Tool

Figure 17 demonstrates how the provisions in the MOU can impact the supply of Free File services. The number of firms that are willing to participate in the MOU depend on the extent to which the IRS imposes restrictions on the business activities of tax software companies. Under limited restrictions, firms have greater opportunities of extracting economic profits from taxpayers through commercial business tactics. As restrictions on the FFI lessen, the Free File market approaches characteristics of a monopolistically competitive industry with many potential service providers and increased consumer choice.

Conversely, a restrictive MOU that impedes on business development and profit-making activities of tax software companies would drive out firms from participating in Free File, causing the supply curve to shift to the left (i.e. less Free File services would be supplied at the free price). As more and more suppliers leave the program the market would approach characteristics of a regulated monopoly in which both the number of providers as well as consumer choice is limited. A lower number of suppliers may also impact the number of taxpayers that are eligible to participate in the program under the limited eligibility criteria of a fewer firms.

The discussion above demonstrates that IRS stands in a unique position of having to balance taxpayer expectations from the program with the industry members' outlook for economic gains. From taxpayers' perspective, one Free File eligible customer paying for tax preparation services is one too many. From FFI's perspective, the provision of FFI services costs money, and the public-private partnership must leave room for recovering these costs and potentially generate additional business. In other words, the cost of provision of the free services to some customers must be subsidized by other paying customers.

One way for the IRS to potentially improve its negotiation position with the FFI would be to acquire a better, more detailed understanding of the tax preparation software industry and the specific business models of FFI members. Greater knowledge of the partners' business dealings could help the IRS determine the areas of leverage in future negotiations.

The assessment of the FFI member compliance and IRS oversight contained in this report is a step towards acquiring a better understanding of the industry and its practices. The assessment has found that FFI members are overall compliant to the terms of the MOU. The assessment also reveals that IRS carries out significant oversight of FFI members to the extent possible under increasing budget constraints. These findings are consistent with the economic explanations of the Free File program because:

- Member compliance to the MOU aligns with FFI's economic incentives as it allows members to continue receiving advertising and business development opportunities. Moreover, the existing MOU leaves sufficient room for FFI to pursue marketing their commercial services to all taxpayers, including ones who are eligible for Free File, as long as the marketing is done outside of FFI landing pages.

- IRS has significant economic incentives to keep the partnership with FFI in continuing Free File as it allows the agency to fulfil the Free File directive at a fraction of the actual program cost. IRS's existing oversight appears to be sufficient given the high degree of FFI member compliance. This also relieves the IRS from additional oversight which is beneficial since the agency has already suffered severe budget cuts. Moreover, added oversight is not likely to have a significant influence on the free market actions of FFI and may drive out FFI members from providing free services, at the detriment of taxpayers.

A.1 Conclusion

Governments rely on the private sector in delivering important public services through public-private partnerships (PPPs). However, PPP arrangements sometimes raise concerns that private sector interests may not align with the governments objective and public interest. [50] The partnership between the IRS and the Free File Alliance in developing the Free File Program has raised similar concerns time and again. Critics of the program insist that FFI's financial motives impede on the program's objectives of providing free services to eligible taxpayers. They also argue that the tax industry lobby prevents the IRS from providing easier methods of paying taxes by developing its own e-filing program.

This appendix detailed various economic considerations of the Free File program. The analysis revealed that the Free File program serves the interest of eligible Free Filers, IRS, and the tax software industry by reflecting the economic incentives of key stakeholders in the design and implementation of the program. These incentives are manifest in the Agreement between the IRS and the Alliance that defines the rights and responsibilities of each party with reference to the program's objectives, stakeholders, and the legal framework of the PPP.

- For existing Free Filers, the current PPP Agreement makes Free File the cheapest option for preparing and filing taxes using brand-name software and technology.
- For the IRS, the existing Agreement facilitates the provision of Free File to taxpayers at a minimal cost to the agency. It does so by passing on the bulk of the cost of program development and implementation to the private sector. Without the PPP arrangement, the IRS would sustain prohibitive costs in funding such a program itself, with added risk of competing with a highly competitive private sector.
- For the Alliance Members, the current Agreement allows them to provide free services to Free Filers while benefitting from additional business and revenue through common, legal marketing strategies. In turn, the revenue from the additional business compensate the Alliance Members for the cost and forgone profits of free service provision.

While the program serves the interests of existing Free Filers, only a small fraction of eligible taxpayers use Free File, prompting criticism that the tax software industry uses deceiving tactics to divert customers away to their commercial sites through their marketing strategies; the program has failed to reach its target audience; and the IRS has failed to set standards for improving the program.

This analysis notes that the perceived number of eligible taxpayers that the Free File fails to reach may be overstated as many eligible filers self-select out of the program.[40] The existing MOU allows the IRS to balance the various economic incentives of key stakeholders. Moreover, the current Agreement appears to be working for the IRS in fulfilling the objective of increasing options and access to free tax preparation services, as millions continue to use Free File.

Nonetheless, the analysis acknowledges that many eligible taxpayers are not reached by the program and there is room for improvement in terms of increasing participation of Free File candidates that are currently using paid, commercial services.

Short of new congressional action to further regulate the tax preparation industry, the IRS can only limit the actions of FFI members serving these eligible candidates through adjusting terms of the MOU. However, due to the nature of the PPP arrangement, increased restrictions on private business activities may prompt a reduction on the number of companies willing to provide free services, thus leaving taxpayers with a lower pool of providers to choose from. Conversely, a lax MOU leaves room for the FFI to extract consumer surplus from eligible taxpayers, effectively pushing up the economic price of Free File and, in turn, potentially

[40] Recall that many taxpayers that choose to receive immediate tax refunds through a Refund Anticipation Check (RAC) or a Refund Anticipation Loan (RAL) are ineligible to use Free File. Other taxpayers with knowledge of Free File choose to use commercial services.

lowering demand for the service. The IRS, therefore, stands in a unique position of having to balance taxpayer expectations from the program with the industry members' outlook for economic gains.

The analysis concludes that IRS needs to strike the right balance between alleviating taxpayer concerns and affecting supply of Free File services. To alleviate existing concerns, the IRS can explore whether there is room within the MOU to increase taxpayer awareness of Free File without driving out FFI members with strict restrictions on their business practices.

To facilitate this, IRS needs a more holistic understanding of its operating environment with respect to Free File. IRS would benefit from additional studies on taxpayer behavior in choosing Free File relative to other options. Demographic data from taxpayer returns is not sufficient for better understanding taxpayer circumstances and behavior. Greater knowledge of taxpayer costs, constraints, and demand for tax preparation services would help the agency target the eligible taxpayers that would most benefit from and be most likely to utilize Free File.

IRS would also benefit from better knowledge of the tax software industry as well as the business practices of individual members. Enhanced understanding of the agency's private partners would help the IRS identify key areas of leverage when negotiating terms of the Free File program with the private sector and improve its bargaining position with the FFI.

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