Assessing the Compliance Costs of IRS Post-Filing Processes

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Abstract
Measuring the costs of tax administration better will improve our understanding of factors influencing a tax system and its outputs. As discussed in Slemrod and Yitzhaki (2002), the public's compliance costs are considerably larger than the budget of the tax administrator, hereafter the IRS. The public's compliance costs are typically related to the filing of a tax return. However, there are instances when additional information is required by the IRS after a tax return has been filed, so additional costs are incurred. Since it is impractical to measure these costs directly, they must be estimated. This paper addresses the estimation of these post-filing compliance costs and how they vary based on taxpayer characteristics and administrative treatments.

Key Words: Cognitive Interviews, IRS, Compliance Costs, Administrative Data, Modeling

Introduction

Better measurement of tax administration costs will improve our understanding of factors that influence a tax system. As discussed in Slemrod and Yitzhaki (2002), the public's compliance costs are considerably larger than the budget of the tax administrator (e.g., Internal Revenue Service). The public's compliance costs are typically related to the filing of a tax return. However, there are instances when additional information is required by the tax administrator after a tax return has been filed, and as a result additional costs are incurred. Because it is impractical to measure these costs directly, they must be estimated. This paper provides a methodology and preliminary estimates of these post-filing compliance costs for U.S. federal individual income taxpayers and how they vary based on taxpayer characteristics and post-filing experiences.

Prior IRS individual taxpayer compliance cost research has focused on compliance costs incurred during pre-filing and filing activities [cf. Contos et al. (2010) and Marcuss et al. (2013)]. An earlier effort (Connors et al. 2007) compared discrete event simulation and econometric microsimulation as potential modeling frameworks for IRS post-filing processes. This paper extends the 2007 study by describing the associated data collection, modeling, and estimation efforts.

Pre-Filing and Filing

The IRS Office of Research conducts surveys to collect data from taxpayers regarding the time and money spent in complying with U.S. federal tax laws. To provide comparability across return preparation methods, the IRS Office of Research monetizes time and produces a single measure of compliance costs, i.e., total monetized compliance costs.

Marcuss et al. (2013) estimated average total monetized compliance costs for individual taxpayers at $373 incurred during the pre-filing through filing period. In this study, available IRS taxpayer-level administrative data allowed the IRS to produce a population of individuals who had completed the pre-filing and filing components of the compliance process for a particular tax year. Those identified individuals were sampled and survey data was used in conjunction with IRS administrative data to develop models capable of producing population estimates of pre-filing and filing compliance costs. The survey collected compliance data in reference to a particular tax year. Framing questions were included in the survey instrument to help taxpayers recall the pre-filing and filing compliance activities associated with that year's tax return.

Post-Filing

For this study, our goal was to develop modeling capabilities that would allow us to produce compliance costs estimates for: individual taxpayers who (1) filed an amended tax return, (2) had accounts receivable with the IRS and made an attempt to reach an agreement as to how the account could reach resolution, (3) had a return examined and interacted with IRS examiners, or (4) appealed an IRS decision. Our ability to accomplish this task relied heavily on available administrative data related to relevant IRS post-filing processes. Beyond data availability, we carefully considered how to efficiently represent essential characteristics of what can be a very complex administrative process.

From a tax administration perspective, post-filing can be complex because a taxpayer who experiences a post-filing issue may interact with multiple IRS post-filing functions during the post-filing compliance period. For example, a tax return may be examined resulting in the taxpayer being found to be liable for additional tax. Upon this determination the taxpayer may both appeal the assessment and apply for various forms of relief with respect to the terms of meeting the financial obligation. In this instance, the taxpayer interacts with the examination function, the appeals function, and possibly more than one process within the collection function.

Each IRS post-filing function has its respective processes. Representing differences across and within these processes informs our understanding of how the associated taxpayer experience can vary. As an example, an examination may be conducted solely via correspondence or as a face-to-face meeting. These processes are very different in terms of the taxpayer experience. In certain instances, there may be differences within sub-processes as well. Consider for example, two taxpayers each undergoing a correspondence examination, where the two examinations focus on different issues. The actions necessary to resolve the two cases may be different.

As in the sample frame for IRS pre-filing and filing compliance cost research, something similar was required for the post-filing compliance period as well. However, significant heterogeneity in both activity and duration within the post-filing process made framing the compliance period difficult. To address these issues, we developed an analog sample frame for the post-filing process that considered data availability and allowed for the development of appropriate reference period framing questions on the survey instrument.

Defining the Post-Filing Period

The post-filing period begins when a taxpayer is made aware of an issue with an already-filed tax return and concludes when the issue has been resolved. The post-filing period is typically initiated by one of the Internal Revenue Service's enforcement functions through official correspondence sent to the taxpayer. Post-filing activities can also be taxpayer-initiated when a taxpayer files an amended tax return. Identifying individuals who have a post-filing issue is the first step, but we are much more interested in those taxpayers who have completed the post-filing process and have actively worked to resolve their post-filing issue. Doing so is analogous to the pre-filing and filing compliance cost studies that use a filed tax return as an indication that the pre-filing and filing compliance period has concluded and the taxpayer has taken an active role in that process. Instances in which post-filing issues were resolved without any action on the taxpayer's part were excluded from this study (e.g., as when a taxpayer never responds to an IRS notification.)

Post-Filing Population

Although using a single tax year for the post-filing study is conceptually desirable, using the tax year as the primary survey frame poses some challenges. The enforcement process can be protracted, spanning many years in some cases. Because a small number of cases can take a decade or more to close, practical research considerations, such as limiting survey recall bias, dictate truncating the enforcement tail in some way for any tax year in the study. To aid us in determining a practical truncation point, we examined the calendar years within which a specific tax year's post-filing cases closed [See Table 1].

Table 1: Post-Filing Case Closures[1]

		Calendar Year					
		2006	**2007**	**2008**	**2009**	**2010**	**2011**
Tax Year	**2005**	5,108,112	5,689,535	3,115,522	1,084,553	625,548	469,680
	2006	-	5,495,097	6,466,352	3,009,229	1,261,479	713,610
	2007	-	-	6,862,927	6,057,428	3,305,672	1,332,291
	2008	-	-	-	5,548,190	6,548,077	4,215,732
	2009	-	-	-	-	3,852,163	6,158,960
	2010	-	-	-	-	-	3,456,278

Upon reviewing the case closure data, we noticed that the vast majority of post-filing cases closed within a span of three calendar years immediately following a given tax year (e.g., for TY 2005 the span would be CY 2006-2008). Even this truncation of the tail of the case closure distribution would require asking taxpayers about their experience with cases that may have closed over two years earlier, if the tax year were the basis of the sample frame. Viewed instead from the perspective of the case closure year, we find the vast majority of post-filing cases that closed during a particular calendar year stemmed from returns filed in one of the three most recent tax years. By focusing our study on cases that closed in calendar year 2011 for tax returns from tax years 2008, 2009, and 2010 we were able to obtain an adequate population size while mitigating the challenges of recall bias.

Survey Sample Design

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[1] Case closures are across multiple IRS post-filing functions (e.g. Examination and Collection), taxpayers may be counted multiple times

Having determined the study population, we next needed a sample design capable of producing estimates for both the overall population as well as a wide variety of subpopulations of interest. The goal would be an efficient design yielding data sufficient to estimate the model coefficients of interest. To design an adequate sample we considered how a taxpayer's particular post-filing experience could impact his compliance costs. IRS post-filing processes were categorized as follows: (1) the amended returns process; (2) the collection process; (3) the audit process; and (4) the appeals process. To efficiently represent the heterogeneity within these processes, we sought to reflect important qualitative differences among the taxpayer paths within these processes. For instance, the IRS Collection function seeks to have taxpayers settle open accounts. However there are different ways by which taxpayers come into full payment compliance. Compliance costs are likely to differ depending on a taxpayer's behavior. Once it has been determined that a liability is owed, a taxpayer may pay immediately and there is typically little direct effort involved in doing so. Alternatively, a taxpayer may enter into an installment agreement arrangement with the IRS where the taxpayer agrees to pay the liability over time. Applying for and paying the fee for an installment agreement results in additional activities and costs beyond actually making payments.

There are substantial differences within the Examination process as well. The majority of examinations are conducted via correspondence, but other examinations are conducted in person at an IRS office or the taxpayer's place of business. The scopes of these types of examinations differ because face-to-face examinations are generally reserved for more complex examination issues while less complex issues can be examined remotely. Both taxpayer response to collection activity and IRS selection of examination method are expected to influence taxpayer post-filing compliance costs. By reflecting this process in the sample design, we can more efficiently control for these differences in taxpayer experience.

The sample design affects our ability to model differences in post-filing compliance costs across these segments of the post-filing population. Our sample design accounted for differences in three categories: (1) original return complexity, (2) post-filing issue (resolution) complexity, and (3) original return preparation method.

Survey Development

IRS administrative data is a crucial element of this study because they allow us to determine our pool of potential respondents and reconstruct many of the key events in a taxpayer's post-filing compliance experience. However, these data represent only a portion of what is necessary to successfully conduct a study of this nature. Linking administrative data with survey data on taxpayer costs allows us to associate and model differences in costs with differences in post-filing experiences. Therefore, the survey had to adequately frame the post-filing period so the respondent could provide reasonable estimates of time and money spent resolving their associated post-filing issues.

Recall that taxpayers who experience post-filing activity are likely to have widely different experiences. Heterogeneity of the post-filing population and lack of broad awareness of the different post-filing sub-processes made developing tailored surveys based on a taxpayer's unique post-filing experience impractical. However, we were able to personalize each survey such that the appropriate tax year was referenced throughout the survey.

Because we could not take into account all aspects of a taxpayer's post-filing experience, we approached survey development from the perspective of how taxpayers would resolve their post-filing issue. Prior to asking questions about the post-filing issue resolution process we provided a uniform definition of "post-filing" and specifically stated the tax year being surveyed in order to aid respondents in providing time and money estimates for the appropriate time period. If taxpayers received a notice from the IRS regarding a particular tax year income tax return post-filing was defined as the time beginning with IRS notification about an issue with the already-filed tax return, and ending with the resolution of the issue. If taxpayers amended a tax return post-filing was defined as the time beginning with filing of the original tax return and ending with the filing of the amended tax return.

The survey was developed in an iterative process beginning with reviewing information from previously conducted compliance studies, background interviews with subject matter experts, expert review by survey methodologists, and cognitive testing of survey items with actual taxpayers. This section describes these steps in more detail.

The first step was to review material from two previous post-filing compliance studies conducted in 2001 and 2005 to review lessons learned and the types of activities that occur during the different post-filing compliance period functions (e.g., examinations, collections.) A list of general activities was generated (e.g., read IRS notice, call IRS office, locate a tax professional) to develop a taxonomy of the activities that occur in the different post-filing functions. The purpose of this initial taxonomy was to help determine the extent to which one survey could be used to capture the activities across different post filing functions. Our analysis of post-filing activities revealed substantial overlap of the general activities taxpayers may engage in for the different post-filing compliance functions. Therefore, development of the survey moved forward with the goal of having one survey for different types of post-filing compliance functions.

We then conducted a series of seven one-hour background interviews with subject matter experts that worked in the different post-filing compliance functions to determine the processes involved from the IRS perspective, how taxpayers enter their IRS function, how taxpayers leave their IRS function and what other functions they might enter if the post-filing compliance issue was not closed. These subject matter experts also provided their estimate of the taxpayer experiences and where the most compliance costs may be for the taxpayer.

Based on these efforts, a draft instrument was prepared for expert review by two survey methodologists. These experts reviewed the survey for consistency, proper item wording, clarity of item stems and response options, item flow, and other areas that, based on their expertise, may pose problems for respondents. Edits were made based on the expert reviews and the surveys were prepared for pre-testing via cognitive interviews with taxpayers.

> The survey underwent two rounds of cognitive interviews with 18 taxpayers to help identify and remove potential causes of response error. We attempted to recruit individuals experiencing a range of post-filing issues.

The IRS recruited respondents through their contacts working at tax professional associations. Additional respondents were recruited by posting a flyer in tax professional offices in the metropolitan Washington D.C. area as well as by posting an ad on Craigslist. To be eligible, respondents had to be at least 18 years old, had experienced a post-filing compliance issue (i.e., an IRS audit, entered an agreement with IRS collections, appealed a decision from an IRS audit or collection, or filed an amended tax return) and had resolved the issue.

Respondents were asked to complete the survey prior to participating in a one-hour interview. Each respondent received $75 for their time. The interviews were completed both in-person and over the telephone, depending on the location of the respondent. If the respondent did not reside in the Washington DC Metropolitan area the interview was conducted by telephone. During the course of the interviews, respondents were asked their overall impressions of the survey, as well as how they interpreted key items and phrases. Interviewers administered a series of scripted probes addressing potential areas of concern and also asked follow-up probes on any unanticipated issues raised by participants. After the first 9 cognitive interviews, the survey development team met to discuss all issues and the survey was revised for the second round of testing. Based on the testing results, the survey and accompanying materials were extensively revised and finalized in June 2012.

The final survey items were grouped into the following sections: (1) General Questions about Your Post-Filing Issue, (2) Reviewing and Gathering Tax-Related Materials, (3) Interacting with the IRS and using IRS resources, (4) Working with a Tax Professional, (5) Time Spent Resolving Your Post-Filing Issue, and (6) Money Spent Resolving Your Post-Filing Issue. By using these generalized representations of actions, interactions, and available resources that would be necessary to resolve a post-filing issue, we were able to make our survey instrument broad, yet comprehensive enough to be appropriate for any post-filing issue. Further, while the focus was on time and money spent, the first four sections were used to frame the post-filing compliance issues for the respondent so they could provide time and money estimates more accurately. Note that for time estimates we asked respondents to exclude elapsed time when they were waiting for an IRS response. For money estimates we asked respondents to exclude any tax, penalties, or interest paid to resolve their post-filing issue.

Data Set

The compliance cost data used to develop the post-filing compliance cost model are from the IRS Taxpayer Compliance Burden Survey conducted in 2012. As discussed above, the sampling frame was comprised of tax year 2008, 2009 and 2010 individual taxpayers who resolved a post-filing issue during calendar year 2011. We employed a stratified sample design, which when weighted represents this population.

The surveys collected data on the time and money taxpayers spent resolving issues related to a specific, already-filed federal income tax return. Each survey response was then linked to that taxpayer’s IRS administrative records. These records contain information from the original tax return and information regarding a taxpayer’s post-filing experience. The linked survey data and IRS administrative data allowed us to create an estimation data set, which was used to estimate model coefficients. Survey and IRS administrative data were both cleaned to improve data quality.

Modeling Approach

The modeling approach used for this study is similar to the one used by the IRS for modeling pre-filing and filing compliance costs for small businesses as described in Contos et al. (2009) and Marcuss et al. (2013). The goal of this research is to develop a more comprehensive understanding of compliance costs. This study seeks to explain compliance costs incurred during post-filing across a wide variety of taxpayer experiences. Furthermore, we wanted to develop a model capable of estimating expected changes in these costs due to changes within the tax system, particularly changes in IRS post-filing processes.

Econometric Model

To model the conditional distribution of post-filing compliance costs, we employed a log-linear regression specification in which the natural log of post-filing compliance costs is linearly related to a set of explanatory variables, following the approach used in Contos et al. (2009). Post-filing compliance cost data were collected from respondents to the survey. It was important that the explanatory variables in the model be based on IRS administrative data as this will allow us to apply the model to populations outside the respondent data set. The dependent variable, *Log Post-Filing Compliance Costs*, is based on survey data, and represents a combination of monetized time and money spent. A description of how reported time was monetized follows below.

We wanted to control for the substitution of time for money across different compliance methods so we created a combined measure of compliance costs. Following the approach taken in Marcuss et al. (2013), we used the taxpayer's after-tax income as a monetization rate. This has the virtue of consistency with the process for estimating pre-filing and filing compliance costs. There is also a downside because some taxpayers in the post-filing population have misstated their tax characteristics. This limitation likely results in a misstatement of the resulting monetized compliance cost estimates. Refinement to the monetization method remains an area for further consideration.

Contos et al. (2009) employed a modeling framework for business taxpayers similar to the approach used in this study. Contos et al. controlled for various taxpayer characteristics such as return preparation method, industry classification, total assets, type of return filed, etc. The approach developed and used complexity categories as a means to both control and account for the volume and type of activities a taxpayer performs in complying with the federal tax laws. This allowed a reduced form representation of a wide variety of form and schedules while also providing a framework for representing new forms or significant changes to existing ones. For this study, we have used a similar approach because post-filing compliance costs are largely driven by the processes that a taxpayer experiences as well as the resources available to them. It was from this perspective that we began model development.

As a first step in model development, we considered the IRS post-filing process and its goals. Major goals of this portion of tax administration are to determine liability by collecting additional tax-related information or collect a determined liability. These goals may be met by a variety of means, and it is the differences that affect compliance costs. Post-filing is a continuation of the overall compliance process, so some at-filing characteristics are expected to affect compliance costs in the post-filing period. At a high-level the model controls for: (1) at-filing characteristics (such as original tax return complexity and preparation method, third-party designee, etc.), (2) post-filing characteristics (third-party representation, IRS administrative costs, post-filing results and post-filing case type), and (3) collection-related resolutions.

Estimated Coefficients

Table 2 shows the coefficients of the post-filing compliance cost model. The model is intended to be comprehensive in the sense that it represents in some form or another all major components of IRS post-filing processes.[2] Recall that this study was meant to encompass individual taxpayers who have: (1) amended a tax return, (2) a tax return that has been examined by the IRS, regardless of examination technique, (3) attempted to resolve a collection issue with the IRS or (4) have appealed an IRS decision.

The Post-Filing Characteristics category contains variables that address the IRS post-filing processes related to the goals of this study mentioned above. All of these variables are positive and statistically significant as we would expect, but some of these variables warrant further discussion.

The variable, *Power of Attorney (Post-Filing),* indicates that a taxpayer had a Power of Attorney on file with the IRS with an effective date following the onset of post-filing. Its presence can indicate a certain level of difficulty, such that the taxpayer seeks third-party assistance in order to resolve them.

During the post-filing process, a taxpayer may interact with various IRS functions, provide additional tax-related information, and yet not owe any additional tax. The model controls for this scenario with the *No Post-Filing Tax Assessed Indicator* dummy variable.

Cases in which the taxpayer was found to owe additional tax are represented by the *Log Post-Filing Tax Assessments* variable. This variable is the natural logarithm of the sum of all tax assessments for that taxpayer by IRS enforcement functions. Its coefficient, which is positive and statistically significant, suggests that as a taxpayer's post-filing tax assessment increases so do their compliance costs, but at a decreasing rate. This result is intuitive in that the more at stake for a taxpayer in terms of potential post-filing tax assessments the more incentive the taxpayer has to incur compliance costs to avoid the additional tax assessment.

We estimate coefficients for two administrative cost variables, examination and appeals. The motivation for including these variables is as follows. If the IRS is expending resources to request additional information to resolve post-filing issues then the taxpayer must expend resources as well. To create the administrative cost variables, we use information on the time expended by IRS staff on a particular tax return and monetize the staff time to create a measure of administrative costs using a natural logarithmic transformation. As expected, these coefficients are positive and statistically significant.

Several dummy variables were also included in the model. The *Account Balance Due Indicator* denotes a taxpayer with an unpaid tax liability related to the post-filing issue. How and when a taxpayer chooses to respond to the balance due drives much of the collection-related compliance costs. The Collection Resolutions category addresses these differences. Taxpayers may pay now or pay later, or they may not be able to pay it all. If a taxpayer decides to take the "pay now" option they simply remit the balance due and the collection issue is resolved. We expect the "pay now" option to require only modest compliance costs and our model supports that. The *Account Full Paid* variable is negative and statistically significant, which in isolation does not fit with our intuition. However, a more reasonable explanation is that if a taxpayer has a balance due and pays that balance in full, the net effect is close to zero. A comparison of the coefficients reveals that the

[2] As discussed in Contos et al. 2009, transforming from log(costs) back to costs requires not only predicted log(costs) but also the predicted variance of log(costs).

Account Full Paid variable offsets the *Account Balance Due Indicator* variable almost exactly.

For those taxpayers who are unable to pay in full immediately, the IRS generally allows these taxpayers to pay the balance due in installments. In some instances, the IRS and taxpayer reach a compromise on the original account balance due and the taxpayer is allowed to pay less than the original balance. In order for a taxpayer to take advantage of these particular collection resolutions, unlike the full pay scenario, additional compliance costs are incurred. In order to set up an installment agreement with the IRS or to submit an offer in compromise the taxpayer must complete the appropriate form and pay a user fee. These requirements represent post-filing compliance costs because they require the taxpayer to expend both time and money in an effort to resolve their post-filing issue. Thus, it is not surprising that both the *Installment Agreement Indicator* and *Offer in Compromise Indicator* variables are positive and statistically significant. However the difference in the magnitudes of these variables is encouraging and supports our intuition. We expect the *Installment Agreement Indicator* variable to be smaller in magnitude than the *Offer in Compromise Indicator* as the user fee for completing an installment agreement is smaller and the installment agreement form requires the taxpayer to provide less information than does the form for an offer in compromise.

At-filing characteristics may impact post-filing compliance costs as well. In choosing these variables we wanted to use variables that could provide causal interpretations about post-filing compliance costs, but also serve as key variables that control and account for differences in taxpayer characteristics. We also selected variables that could support integration with available models of pre-filing and filing compliance costs.

The *Log Income* variable suggests that as income increases, post-filing compliance costs also increase, albeit at a decreasing rate. Higher income suggests that a taxpayer has both more at stake and additional resources to invest in pursuing a more favorable post-filing resolution. The income variable we used is “modified positive income” as defined in Marcuss et al (2013).
The return complexity dummy variables, *Medium Complexity Indicator* and *High Complexity Indicator,* control for taxpayer differences in the complexity of tax planning and recordkeeping and are derived from pre-filing and filing compliance cost research. These coefficients are positive and statistically significant and suggest that when tax planning and recordkeeping are more complex during pre-filing and filing, then substantiating the associated reported amounts during post-filing is typically more complex as well.

We also included two preparation method variables in the model, *Paid Indicator* and *Software Indicator*. We do not view these variables as having causal interpretations for post-filing compliance costs. Rather the coefficients seem to control for differences in taxpayers and may also proxy for post-filing issue complexities not picked up by the complexity variables mentioned above. The *Power of Attorney (At Filing)* variable, which is the counterpart to the *Power of Attorney (Post-Filing)* variable, can be viewed as an additional preparation method variable and its coefficient would be better viewed as a further control variable.

Table 2: Post-Filing Compliance Cost Coefficients

	Variable	Estimate	T Statistic
	Intercept	1.3569	**5.49**
At-Filing Return Characteristics	Log Income	0.18	**7.61**
	Medium Complexity Indicator	0.2067	**4.28**
	High Complexity Indicator	0.6103	**8.33**
	Paid Indicator	0.2097	**2.84**
	Software Indicator	-0.1301	-1.64
	Power of Attorney (At Filing)	1.3225	**8.13**
Post-Filing Characteristics	Power of Attorney (Post-Filing)	1.0271	**10.99**
	No Post-Filing Tax Assessed Indicator	0.4698	**2.75**
	Log Post-Filing Tax Assessments	0.0452	**2.11**
	Automated Underreporter Indicator	0.1525	**2.36**
	Log Administrative Costs - Examination	0.1886	**10.61**
	Log Administrative Costs - Appeals	0.2095	**2.94**
	Amended Tax Return	0.3808	**4.88**
	Account Balance Due Indicator	0.9324	**3.48**
Collection Resolutions	Account Full Paid	-0.9732	**-3.69**
	Installment Agreement Indicator	0.8103	**3.14**
	Offer in Compromise Indicator	1.337	**4.50**
	Collection Due Process Indicator	0.7938	1.95
	Currently Not Collectible - Hardship Indicator	0.0558	0.27
	Lien Release Indicator	0.2934	0.86
Adj. R^2 = 0.424			

Survey Respondent Population Estimates

A goal of the post-filing compliance cost model is to produce population-level estimates of post-filing compliance costs. For the study population, the current version of the model estimates these compliance costs to be on average $400 per taxpayer with a median post-filing compliance cost of $125. This amount is comparable to, but higher than, the average pre-filing and filing compliance costs of $373 estimated in Marcuss et al. (2013). A total of 11.44 million unique taxpayers resolved a post-filing issue in 2011 for tax year 2008, 2009, or 2010 and incurred an estimated $4.56 billion in post-filing compliance costs [See Table 3].[3] As cases taking four or more years to close were excluded from the

[3] By way of comparison, application of the regression coefficients to weighted survey population yields an estimated average compliance cost of $410 after the anti-log transformation as discussed in Contos et al., 2009. This compares with the weighted average post-filing compliance cost of $400 reported in Table 3.

sample frame, this estimate provides a lower bound of the total post-filing compliance costs for individual taxpayers for a given year.[4]

Fortunately, available administrative data allow for a detailed look into post-filing compliance costs. We are able to estimate post-filing compliance costs based on the initial IRS post-filing process as well as the final IRS post-filing issue resolution. Available administrative data allow us to allocate post-filing compliance costs across particular post-filing processes (e.g., of the total post-filing compliance costs, how much can be allocated to IRS examinations). This allocation process is the subject of current research efforts.

Table 3: Estimates of the Compliance Costs of IRS Post-Filing Processes for Taxpayers Resolving a Post-Filing Issue in 2011 Covering Tax Year 2008, 2009, or 2010

	Population	**Average Compliance Cost**	**Median Compliance Cost**	**Total Compliance Cost**
Total	11,445,000	$400	$125	$4,578,000,000

Comparison with Pre-Filing and Filing Compliance Costs

As mentioned above, the previous IRS Office of Research studies have represented pre-filing and filing compliance costs. Compliance cost models have been developed using these survey data linked with IRS administrative data. For these pre-filing and filing models, the explanatory variables are from filed tax returns. This places us in a unique position to be able to estimate pre-filing and filing compliance costs as well as post-filing compliance costs for the present survey respondents. It should be noted that because post-filing survey respondents did not receive the pre-filing and filing survey, we assume that their pre-filing and filing compliance costs are similar to taxpayers with similar reported tax return characteristics. That being said, we must emphasize that the post-filing survey respondent population is not representative of the overall filing population. The estimated average pre-filing and filing costs for the post-filing population are $640, much higher than the $373 average pre-filing and filing compliance costs estimated for the general filing population [See Table 4].

Table 4: Estimates of Pre-Filing & Filing Compliance Costs [Post-filing Survey Respondents]

	Population	**Average Compliance Cost**	**Median Compliance Cost**	**Total Compliance Cost**
Total	11,445,000	$640	$260	$7,300,000,000

Comparison with the population-level estimates for pre-filing and filing compliance costs meets our expectations in two ways. First, we expected these costs to be higher, on average, than the general population because these returns typically report higher income and are more complex than the average return. Secondly, we expected these costs to be higher, on average, than the post-filing compliance costs for this same population because

[4] Excluding the cases taking four or more years to close from the sample frame is expected to understate the estimated total in two ways. First, these cases tend to be more complex and are thus expected to require more resources on average. Second, excluding these cases reduces the population count represented by the estimate.

generally only some of the activity reported on the return is revisited during post-filing. This holds particularly true for taxpayers who are resolving post-filing issues that do not require them to gather material or otherwise substantiate material related to the original tax return. Table 5 shows a comparison of the average post-filing compliance costs for select post-filing categories. It should be noted that post-filing compliance costs reported here include both compliance costs associated with the function where the post-filing case initiated as well as all additional post-filing compliance costs associated with downstream IRS post-filing processes.

Table 5: Comparison of Pre- and Post-Filing Compliance Costsfor Selected Case Types

Initial Post-Filing Case Type	Average Pre-Filing and Filing Compliance Cost	Average Post-Filing Compliance Cost
Automated Underreporter	\$435	\$195
Correspondence Examination	\$590	\$580
Office Examination	\$1,295	\$1,550
Field Examination	\$3,095	\$4,000
Amended Return	\$1,040	\$340

Automated Underreporter cases typically do not require large amounts of return information to be gathered or substantiated. These cases are typically instances where the IRS uses third-party information reporting to identify discrepancies between what a taxpayer reported and what should have been reported. The third-party information documents are provided to both the IRS and taxpayer. To resolve these issues, a taxpayer may have to request an updated information document, explain the discrepancies, or simply agree with the IRS' determination. Regardless of the resolution, we do not anticipate the post-filing compliance costs to be greater than pre-filing and filing compliance costs for this population.

Typically a taxpayer files an *Amended Return* when (1) something has been omitted from the original tax return or (2) additional information is acquired and the taxpayer wishes to change the original tax return. When a taxpayer amends an original tax return typically only a portion of the information reported on the original filed return is updated. As such, we would typically expect these costs to be less than those of filing an entire original return. Further, *Automated Underreporter* cases and *Amended Return* cases are also less likely to have substantial downstream post-filing compliance costs.

In an examination, the IRS typically identifies specific issues with a tax return and requests information related to these issues. The taxpayer may or may not have the information at their disposal when the request is made. If the information is unavailable, the taxpayer may expend some effort to acquire the information. Further, complexity and the number of issues being examined are likely to impact the taxpayer's ability to quickly gather the necessary documentation. *Field Examinations* cover the most complex issues, followed by *Office Examinations*, with *Correspondence Examinations* typically covering the simplest issues. Further, *Field Examinations* and *Office Examinations* also cover more issues than *Correspondence Examinations*.

We would generally expect taxpayers under IRS field or office examination to have to (1) interact with multiple functions within the IRS; (2) have more complex returns; (3) face a number of examined issues; and/or (4) incur additional downstream post-filing compliance costs. Thus, it is not surprising that post-filing compliance costs for complex returns subject to field or office examination would, on average, exceed the associated pre-filing and filing compliance costs. We predict that, controlling for the return characteristics, the post-filing compliance costs would be higher on average for office and field exams than for correspondence exams. The data presented in Table 5 support these predictions.

Time and Out-of-Pocket Cost Estimates

Survey respondents were asked about time and out-of-pocket money spent resolving post-filing issues. We have monetized time to create a single measure of total monetized compliance costs and compared how those costs differ across taxpayer case types. We wanted to examine further how these costs differ across the components of our single compliance cost measure [see Table 6] as different populations may respond differently to direct out-of-pocket costs incurred versus the opportunity costs of time spent.

In the previous section we discussed how total compliance costs differ across case types and provided some motivations as to why this may be. The table below gives further insight into why these costs differ. It is interesting to note, not surprisingly, that both the time and out-of-pocket cost components differ in terms of magnitude just as total monetized compliance costs. There are differences in terms of the monetization rates this is driven by the composition of taxpayers who find themselves with a particular case type as the monetization rate is derived from taxpayer characteristics. The differences across monetization rates differ in a way that we would expect. For instance, *Field Examination* cases deal with much more complex issues and taxpayers with more complex issues typically are typically higher income taxpayers with business income. Whereas taxpayers with an *Automated Underreporter* case would typically have lower income as much of their income is derived from sources with third-party reporting.

The case types mentioned in the previous section are those that required taxpayers to substantiate information regarding a previously filed tax return. We use those same case types for comparison of the time and out-of-pocket estimates.

Table 6: Post-Filing Time and Out-of-Pocket Cost Estimates [Select Case Types][5]

Initial Post-Filing Case Type	Average Monetization Rate ($/Hour)	Total Time (Hours)	Total Out-of-Pocket Costs	Total Monetized Compliance Costs ($)
Automated Underreporter	20	7	$60	$195
Correspondence Examination	15	30	$130	$580
Office Examination	25	38	$600	$1,550
Field Examination	60	34	$1,950	$4,000
Amended Return	20	9	$115	$340

[5] Totals may not add due to rounding.

Conclusion

The goal of this study was to develop a model and produce preliminary estimates of compliance costs for individuals who must resolve issues with an already-filed income tax return. This is the first IRS study to have collected post-filing compliance cost data and built an econometric model using the collected data and available IRS administrative data. The post-filing compliance model has estimated coefficients for variables that the IRS has in available administrative data, thus making model deployment and population-level estimation a relatively straightforward task for any population of relevant interest. We find that taxpayer compliance costs differ not only across different taxpayer types, but differ across the variety of post-filing experiences encountered by different taxpayer types in expected ways. In particular we find that the relationship between pre-filing/filing costs and post-filing costs depends on the degree of post-filing substantiation required from the taxpayer. This research has provided not only great insight into the additional costs incurred by taxpayers experiencing post-filing issues, but provides insight into the additional administrative costs incurred by the IRS in conjunction with these taxpayer compliance costs. Current research involves refinements of the monetization method, integration of the modeling with pre-filing and filing compliance, related compliance cost research, IRS process redesign support, and extending the research to cover post-filing compliance costs for corporations and partnerships.

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