



**Research, Applied Analytics,
and Statistics**



TAX POLICY CENTER
URBAN INSTITUTE & BROOKINGS INSTITUTION

10th Annual IRS/TPC Joint Research Conference on Tax Administration

June 18, 2020



Session 3. Advances in Taxpayer Service

Moderator:

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Free Assisted Tax Preparation Outreach Experiments

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Enforcement versus Outreach - Impacts on Taxpayer Burden

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Perspectives on New Forms of Remote Identity Proofing and Authentication for IRS Online Services

Rebecca Scollan
MITRE Corporation

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June 18, 2020
IRS Research Conference

Tax Season 2019 Outreach Experiment on Paper Filers and Nonfilers

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DISCLAIMER: The views and opinions presented in this presentation reflect those of the authors. The do not necessarily reflect the views or the official position of the Internal Revenue Service or the Department of the Treasury.

Agenda

Background

- Tax Preparation Method Usage
- Free Assisted Tax Preparation Methods
- Why Using Assisted Return Preparation Matters
- Filing Season 2017 Experiment and Results

Filing Season 2019 Experiment

- Design
- Issues
- Results

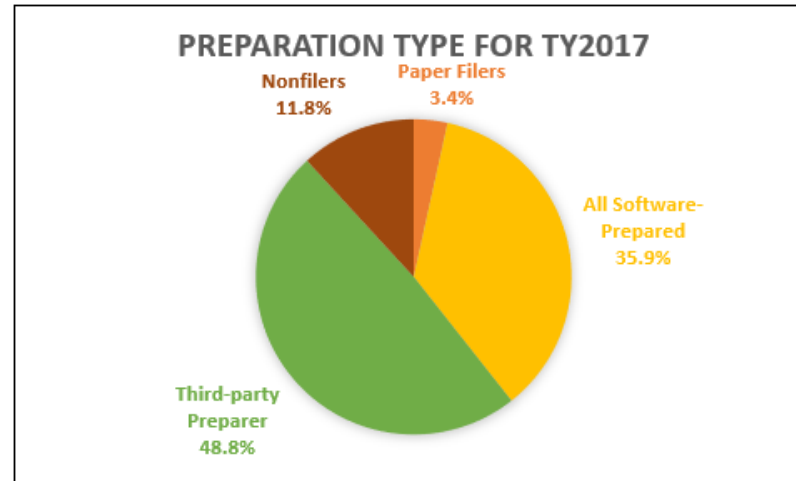
Conclusions and Further Work

Background: Tax Preparation Method Usage

Most taxpayers used an assisted method of tax preparation

- Software (paid, unpaid, or “V-coded”)
- Third-party preparer (paid professional or VITA)

Approximately six million taxpayers prepared their returns on paper in TY2017



Background: Free Assisted Tax Preparation

VITA Program (In-Person Assistance)

- Income must be \leq \$55,000 (for TY2018)
- 64% of paper filers were eligible based on their TY2017 income

Free File Program (Online Assistance)

- Income must be \leq \$66,000 (for TY2018)
- 70% of paper-filers were eligible based on their TY2017 income

Background: Free Assisted Tax Preparation

Less than four percent of apparently-eligible taxpayers used VITA or Free File to prepare their returns in TY2017

Potential Barriers

- Lack of awareness (brief “marketing” period, advertising and outreach efforts may not be reaching eligible taxpayers)
- Stigma of going to a VITA site
- No VITA site near them, limited hours, too busy, language barriers
- Lack of internet connectivity
- No perceived need or benefit (easy return, preparer quality concerns)
- Privacy, security concerns
- Inertia

Background: Why Using Assisted Return Preparation Matters

Taxpayer Compliance Concerns

- Selecting and obtaining forms and instructions may be difficult
 - No access to the Internet or a printer
 - Cost to travel to a site to pick up forms
- Tax law is complex
 - Taxpayer may not read or understand form instructions
 - Confusion may cause missed deductions or credits
- Taxpayer may be unaware of allowed deductions or credits
 - Example: EITC take-up estimates are 92% for assisted methods) and 85% for paper-prepared returns
- Math errors delay refunds
 - 0.5% for assisted vs 16.1% for unassisted

Tax Administration Concerns

- Cost to process electronic return (~\$0.25) vs. paper (~\$4.00)
- Generally higher error rates than assisted preparation

Background: Filing Season 2017 Experiment Design

Outreach Plan

- Send a postcard with information about free assisted tax preparation options
- Message variations promoting VITA, Free File, MyFreeTaxes, and addresses for closest VITA sites to taxpayer
- Mail early postcard in January 2017 (five treatments) and late postcard in March 2017 (three treatments)
- Measure TY2016 return preparation method


Sample Population

- TY2015 paper filers whose AGI were within the VITA eligibility ranges of $\leq \$54,000$
- Restrict sample to taxpayers within 30 miles of at least two Filing Season 2017 VITA sites

Final Sample


- Treatment groups of approximately 80,000 taxpayers each
- Population = 2,041,537
- Treated = 627,268 (31%)

Background: Filing Season 2017 Experiment Design (Publication 5270)





Internal Revenue Service
c/o Westat
1600 Research Blvd. RW2634
Rockville, MD 20850-3129
RETURN SERVICE REQUESTED

PRESORTED
FIRST-CLASS MAIL
POSTAGE & FEES PAID
IRS
PERMIT NO. G-48



2 out of 3 people
qualify for **FREE** tax
preparation services!

*Here are 2 easy options for **FREE** Tax Preparation*

<p>Option 1</p>  <p>File Online</p>	<p>Free tax software helps you prepare your return from home.</p> <ul style="list-style-type: none">> People with income below \$84,000 qualify> Prepare your return from home> Free tax software <p>Step-by-step directions at: www.irs.gov/FreeFile</p>
<p>Option 2</p>  <p>File In-Person</p>	<p>IRS-certified volunteers prepare your taxes for free at a Volunteer Income Tax Assistance site</p> <ul style="list-style-type: none">> Most people with income below \$54,000 qualify <p>Please bring with you:</p> <ul style="list-style-type: none">> Photo Identification> Social Security Card(s)> Tax Documents (e.g., W-2, 1099-MISC) <p>Find locations at: www.irs.gov/vita or call 800-906-9887</p> <div><p><i>Locations near you:</i></p><div><p>Solid Ground 1501 N 45th St Seattle, WA 98103-1234 Opens 1/9/2017; TUE: 5:00PM - 9:00PM; SAT: 10:00AM - 2:00PM</p><p>KC TRAVELING SITE 720 Second Ave Seattle, WA 98104-1234 Opens 1/9/2017; SAT 10:00AM - 3:00PM</p></div></div>

Publication 5270 (12-2016) Catalog Number 69330F Department of the Treasury Internal Revenue Service www.irs.gov

Background: Filing Season 2017 Experiment Results

Postcards including VITA and Free File information led to:

- Modest increase in assisted preparation
- Significant increase in Software and VITA usage
- Significant decrease in use of Paid Preparer
- Significant decrease in likelihood of not filing at all

	Control	Base Treatment	
Any Assisted	21.70	22.33	***
Software	13.10	13.66	***
VITA	1.00	1.20	***
Paid Preparer	7.50	7.36	*
Nonfiler	12.20	12.01	**

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2016 Returns. Data Extracted November 2017.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Design

Outreach Plan

- Send a letter with information about free assisted tax preparation options
- Message variations promoting VITA and Free File
- Mail one letter in March 2019 (five treatments)
- Measure TY2018 return preparation method

Sample Population

- TY2017 paper filers and nonfilers whose AGI were within the VITA eligibility range of $\leq \$55,000$
- Restrict sample to taxpayers within 30 miles of at least two Filing Season 2019 VITA sites

Initial Sample

- Treatment groups of 25,000 taxpayers each split between paper filers and nonfilers

Filing Season 2019 Experiment: Design

Treated taxpayers received one of five letters, while the control group received no letter

- Treatment 1: VITA Addresses and Free File with General Link
- Treatment 2: VITA Addresses and Free File with Wizard Link
- Treatment 3: VITA Addresses Only
- Treatment 4: Free File with General Link Only
- Treatment 5: Free File with Wizard Link Only

Letters with Free File information contain the same general information about the program with a varied link

- The Free File Wizard link takes the taxpayer to a website that allows them to answer questions about their tax situation and generates a list of software that they are eligible to use for free

Filing Season 2019 Experiment: Design (Letter 6168)

According to our records, you may qualify for free tax preparation

What you need to know

Two out of three taxpayers qualify for free in-person or online tax preparation through an IRS-sponsored program.

Benefits you may receive from assisted tax preparation:

- Getting your refund in as few as three business days.
- Access to free commercial software for federal and state returns.
- Less chance of making a mistake on your tax return or missing a tax benefit.

Read below for information about these free IRS-sponsored programs.

VITA/TCE programs

- The Volunteer Income Tax Assistance (VITA) and Tax Counseling for the Elderly (TCE) programs provide free in-person tax preparation assistance by IRS-certified volunteers, regardless of a taxpayer's age.
- Most taxpayers qualify if they earned \$55,000 or less in 2018.
- Help is available near you. Call for hours of operation:

Cranes Mill Retirement Comm...
459 Passaic Ave
West Caldwell, NJ 07006
(973) 372-2077

GPMBC - Montclair United Wa...
60 S Fullerton Ave
Montclair, NJ 07042
(800) 906-9887

- Be sure to bring photo identification, a copy of your last year's return, Social Security cards, and your tax documents (e.g., Forms W-2 and 1099-MISC).
- **For more information, visit www.irs.gov/VITA or call 800-906-9887.**

Free File program

- Free File provides free commercial software to help prepare your return online.
- Most taxpayers qualify if they earned \$66,000 or less in 2018.
- You will need your 2017 tax return, 2018 tax documents, and a valid email address to begin.
- **For more information, visit www.irs.gov/FreeFile.**

Frequently asked questions

- If you have questions about this letter, you can call 855-421-8641 (toll-free).
- You don't need to respond to this letter.

Letter 6168 (02-2019)
Catalog Number 72139K

Filing Season 2019 Experiment: Issues

Government Shutdown (Dec 22, 2018 to Jan 25, 2019)

- Window of measurement reduced to returns posted between March 17, 2017 and May 25, 2017

Data Issue

- “V-coded” or software generated paper returns were not excluded in paper filer sample

Final Sample

	Paper Filers	Nonfilers
Control	89,560	1,660,817
Treatment 1	1,039	9,434
Treatment 2	1,018	9,406
Treatment 3	1,018	9,466
Treatment 4	1,024	9,461
Treatment 5	1,056	9,411
All Treated	5,155	47,178
Population	94,715	1,707,995

Source: IRS, Compliance Data Warehouse.
Individual Return Transaction File. TY2018
Returns. Data Extracted April 2020.

Filing Season 2019 Experiment: Results

The effects of being treated by any letter include:

- Significant increase in filing rates for both prior paper filers and nonfilers
- Significant increase in VITA and Free File use for both paper filers and nonfilers
- Significant decrease in the use of paid preparation for paper filers

	Paper Filers			Nonfilers		
	Control	All Treated		Control	All Treated	
Filing Rates	77.25	78.45	**	15.16	15.58	**
VITA Usage	1.28	2.19	***	0.46	0.62	***
Free File Usage	2.68	3.33	***	0.65	0.77	***
Paid Preparer Usage	9.16	8.56	*	6.11	6.21	

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Results

The effects of being treated by a letter with VITA information include:

- Significant increases in the use of VITA for both prior paper filers and nonfilers treated with any VITA letter
- Largest increase for paper filers from Treatment 2
- Largest increase for nonfilers from Treatment 3
- Treatment 2 for nonfilers the only treatment with no significant increase

	Paper Filers - VITA Usage			Nonfilers - VITA Usage		
	Control	Treated		Control	Treated	
T1: VITA + Free File General	1.28	2.84	***	0.46	0.67	***
T2: VITA + Free File Wizard		2.94	***		0.50	
T3: VITA Only		2.54	***		0.82	***
VITA Treatments: T1, T2, T3		2.77	***		0.66	***

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Results

The effects of being treated by a letter with Free File information include:

- A significant increase in Free File use for both prior paper filers and nonfilers treated with Treatment 1
- Significant increase from Treatment 4 on paper filers
- Significant increase from Treatment 5 on nonfilers

	Paper Filers - Free File Usage			Nonfilers - Free File Usage		
	Control	Treated		Control	Treated	
T1: VITA + Free File General	2.68	4.02	***	0.65	0.84	**
T2: VITA + Free File Wizard		3.10			0.68	
T4: Free File General Only		3.61	*		0.76	
T5: Free File Wizard Only		3.47			0.90	***

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Results

The effects of a combined treatment of letters with the Free File General Link versus the Free File Wizard Link include:

- A higher increase in the use of Free File when the general link was provided to prior paper filers
- Paper filers exhibit significant increase by the combined treatment of letters with the wizard link, but not by the individual treatments (as seen on the previous slide)
- Prior nonfilers experience approximately the same increase whether they received the general link or the wizard link

	Paper Filers - Free File Usage			Nonfilers - Free File Usage		
	Control	Treated		Control	Treated	
Free File Gen Treatments: T1, T4	2.68	3.82	***	0.65	0.80	***
Free File Wiz Treatments: T2, T5		3.29	*		0.79	**

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File, TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Results

The effects of age on VITA usage on treated taxpayers include:

- The largest percentage of VITA users are in the oldest quintile for both prior paper filers and nonfilers
- The largest percentage increases among paper filers was in the second and fifth quintiles
- Nonfilers exhibited a consistent percent increase across four of five quintiles between 30 and 40 percent

	Paper Filers - VITA Usage			Nonfilers - VITA Usage		
	Control	Treated		Control	Treated	
Age: 1st Quintile	0.52	0.28		0.37	0.52	***
Age: 2nd Quintile	0.53	1.24	***	0.41	0.55	**
Age: 3rd Quintile	1.23	1.74		0.35	0.46	*
Age: 4th Quintile	1.90	2.67	*	0.47	0.51	
Age: 5th Quintile	2.37	5.28	***	0.73	1.02	***

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Filing Season 2019 Experiment: Results

The effects of age on Free File usage on treated taxpayers include:

- Users of Free File decrease as age increases among both prior paper filers and nonfilers
- Some significant increases among young paper filers and nonfilers, but no clear pattern

	Paper Filers - Free File Usage			Nonfilers - Free File Usage		
	Control	Treated		Control	Treated	
Age: 1st Quintile	4.66	5.33		1.09	1.24	
Age: 2nd Quintile	2.53	3.52	**	0.89	1.15	**
Age: 3rd Quintile	2.45	2.65		0.51	0.67	**
Age: 4th Quintile	2.18	2.86		0.44	0.40	
Age: 5th Quintile	1.38	1.99		0.27	0.35	

Source: IRS, Compliance Data Warehouse. Individual Return Transaction File. TY2018 Returns. Data Extracted April 2020.

Outcomes are indicator variables with a scale of 0-100.

Significance based on model coefficient: *90 percent significance | **95 percent significance | ***99 percent significance.

Conclusions and Further Research

Conclusions

- Treated taxpayers with information about VITA and Free File was effective increasing filing rates and usage of the free assisted tax preparation methods among both paper filers and nonfilers
- Treatment 1 (VITA Addresses and Free File General Link) seemed to be the most effective individual treatment, when compared to the control, in increasing the use of both VITA and Free File

Further Research

- Analyze data from Filing Season 2020 experiment
 - Potential impact of larger sample size and timely mailing of letters in February 2020
 - Consider impact of Coronavirus Pandemic
- Make recommendations for future potential outreaches

Thank You!

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Research, Applied Analytics, & Statistics (RAAS)

June 18, 2020

Enforcement versus Outreach:

Impacts on Time to File, Penalties, and Call Volume

IRS TPC Research Conference

Presented by: Alex Turk (alex.h.turk@irs.gov)

With Anne Herlache, Ishani Roy, Mark Payne, Stacy Orlett
Internal Revenue Service

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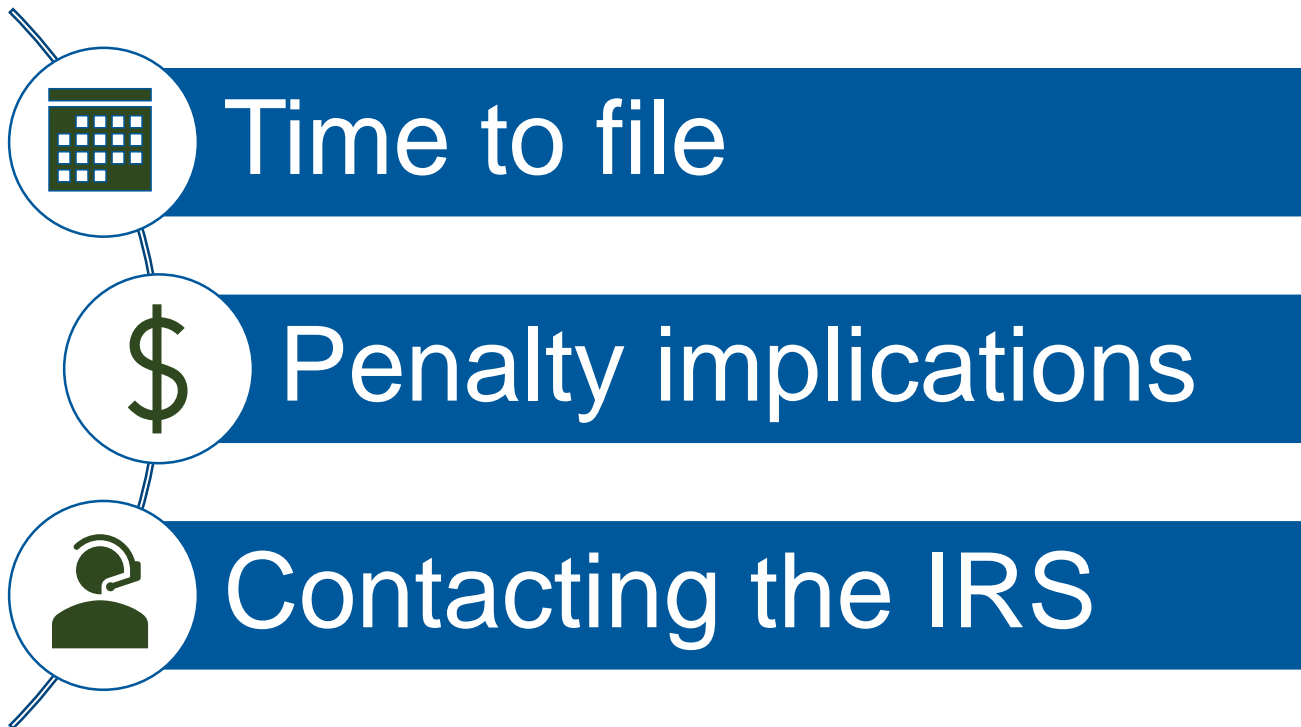


Presentation Outline

- **Background**
- **Design**
- **Results**
- **Conclusions**



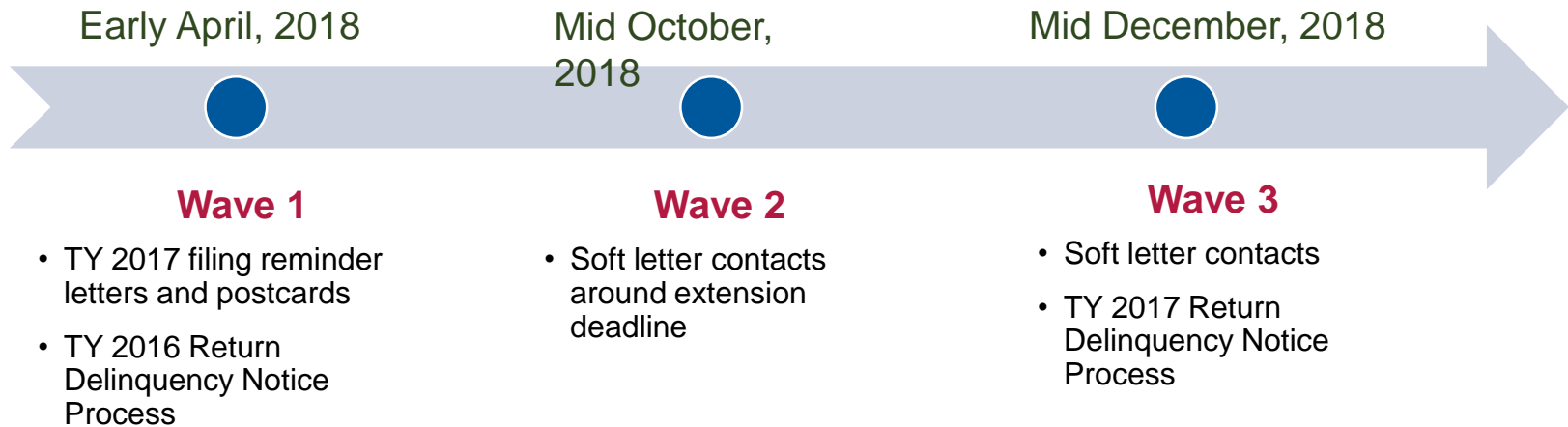
Addressing Taxpayer Burden





Pilot Design

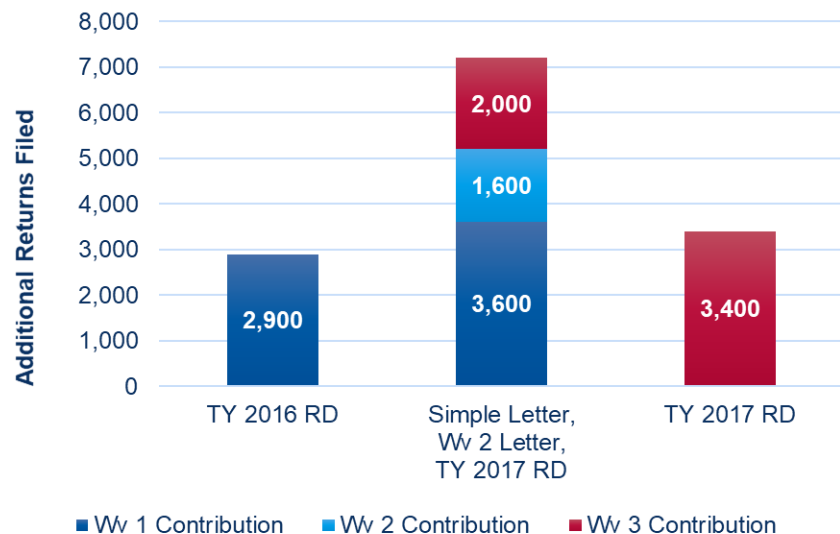
- Randomized control trial
- Conducted during the 2018 filing season
- Observe behavior for Tax Years 2016, 2017, and 2018





Pilot Results: Filings for Current Year

Estimated Treatment Effects
Projected to 100,000 Contacts:
2017 Filed Returns by May 2019



Source: IRS, Herlache et.al.

Regarding outreach, simple is better

- Tradeoffs - message around the filing deadline regarding past noncompliance “crowds out” current year compliance

Timing matters

- The earlier you resolve current year issues, the more likely you are to get voluntary compliance next year

Results indicate beginning with a timely reminder and escalating to an RD start within the same tax year:

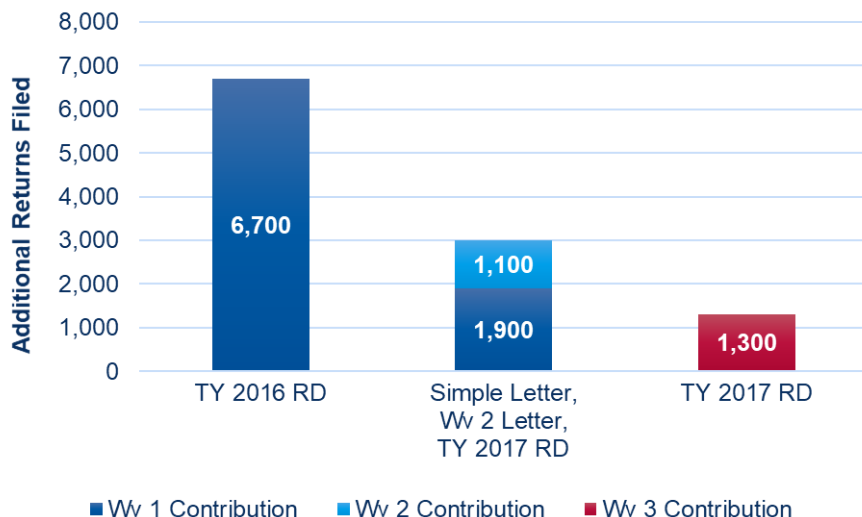
- Secures the most returns overall,
- Has the highest estimated additional assessed balance due, and
- Has the greatest estimated additional dollars collected

June 18, 2020

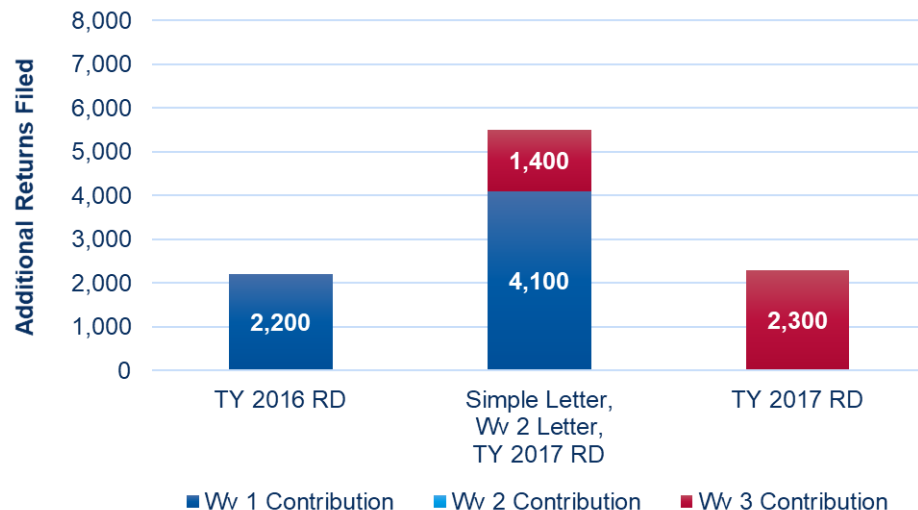


Pilot Results: Filings Prior and Post Years

**Estimated Treatment Effects
Projected to 100,000 Contacts:
2016 Filed Returns by May 2019**



**Estimated Treatment Effects
Projected to 100K Contacts:
2018 Filed Returns or Extensions to File by May 2019**



Source: IRS, Herlache et.al.



Time to File: Methods

Objective: Estimate the average reduction in time to file by using survival analysis to evaluate time-to-event

- Model the hazard of filing a return, that is, the instantaneous rate of filing at any given time

$$\lambda(t) = \lim_{\Delta t \rightarrow 0} P[t < T < t + \Delta t \mid T > t]$$

- where T denotes the time-to-file.
- The hazard $\lambda(t)$ is to be interpreted as the instantaneous filing rate: given that a taxpayer has not filed until time t , what is the probability that he/she will file within another small (Δt) time window.
- There is an exact relation between the hazard of filing and the expected filing time:

$$E(T) = \int_0^{\infty} \exp(-\int_0^t \lambda(u) du) dt.$$

- where $E(T)$ denotes the expected time to filing.
- This relation allows us to study the expected time to filing, the quantity of our interest, by studying the hazard of filing.

We estimate the time-to-file distribution of the nonfiler population by fitting a Cox Proportional Hazard.

For proportional hazard analysis we used

- right censoring** to accommodate observations censored by the end-of-study date (May 31, 2019) and
- left truncation** to adjust for the delayed entry due to the differing time of administration for the three waves.



Time to File: Model Results

Estimates of Select Treatments on Time to File and Hazard Rate, TY 2017

Treatments and Controls	Parameter Estimate	Standard Error	Chi-Square	Pr > ChiSq	Hazard Ratio
TY 2016 Return Delinquency Notice Process	0.0988	0.03495	7.9961	0.0047	1.104
Simple Letter	0.1369	0.04728	8.386	0.0038	1.147
Additional from Wave 2 soft notice after Wave 1 letter (either version)	0.0404	0.05727	0.4997	0.4797	1.041
Additional from Wave 3 TY 2017 return delinquency notice process after Wave 1 letter (either version) and Wave 2 soft notice	0.0799	0.04917	2.6451	0.1039	1.083
TY 2017 Return Delinquency notice process (Wave 3 only)	0.4643	0.06458	51.6837	<.0001	1.591
Control: Secured Return Model Score (SRMODEL)	1.4664	0.06198	559.821	<.0001	4.334
Control: Balance Due Model Score (BDMODEL)	-0.7130	0.15235	21.9024	<.0001	0.49

- Treatments that significantly reduced the time to file TY 2017:
 - Simple letter, and
 - TYs 2016 and 2017 Return Delinquency Notice Process
- Treatments with a Traditional Notice
 - Treating a prior year (TY 2016) versus Current year (TY 2017)
 - TY 2016 focuses on the prior year tax return but did prompt taxpayers to file their TY 2017 return sooner than if they were left to their own devices.
 - Likewise, the TY 2017 process provides an interesting view into taxpayer behavior, as it was directed toward the TY in question (2017) but was rather removed in time from the filing season, being initiated some 8 months after the filing season.

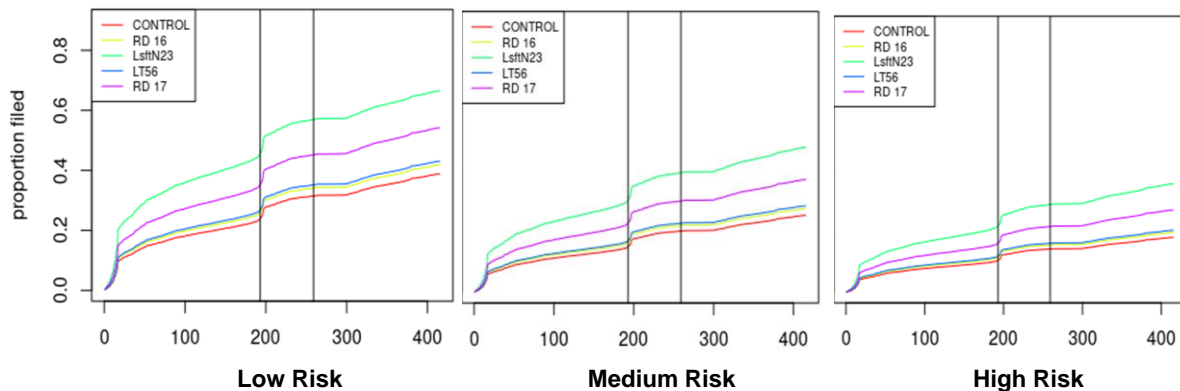


Time to File by Risk

- Risk Groups (Low, Medium, High)
 - Low: likely to file and not have a balance due
 - High: not likely to file and have a balance due
- Tiered treatment path prompted earliest filing:
 - Wave 1 Reminder Letter
 - Wave 2 Soft Notice
 - Wave 3 TY 2017 RD Notice
- Saved 89, 66 and 51 days for low, medium, high risk groups; respectively

Expected Days to File by Treatment Path and Risk Group

Treatment	Days to File: Low Risk	Days to File: Medium Risk	Days to File: High Risk
Control (No Treatment)	310	347	366
Simple Letter	296	338	360
TY 2016 RD Notice Process	300	341	362
TY 2017 RD Notice Process	262	313	341
Tiered: Letter, Soft Notice, RD Notice	221	281	315





Penalty Overview

Failure to File

When you don't file your tax return by the return due date, April 15, or extended due date if an extension to file is requested and approved.

Internal Revenue Code §6651(a)(1)

- 5% of unpaid tax required to be reported
- Reduced by the "Failure to Pay" penalty amount where both penalties apply
- Charged each month (or part of) the return is late, up to 5 months
- Minimum penalty is the LESSER of two amounts – 100% of the tax required on return not paid on time, or a specific dollar amount that is adjusted annually for inflation.
 - \$435 if the return is due on or after 1/1/2020*
 - \$210 if the return is due between 1/1/2018 and 12/31/2019
 - \$205 if the return is due between 1/1/2017 and 12/31/2018
 - \$135 if the return is due between 1/1/2009 and 12/31/2015
 - \$100 if the return is due before 1/1/2009



Note: Provision 3201 of the Taxpayer First Act increased the minimum penalty for failure to file under Code Sec. 6651(a) from \$205 to \$330. However the SECURE Act was passed at the end of 2019 and increased the minimum again to \$435.

Failure to Pay

When you don't pay the taxes reported on your return in full by the due date, April 15. An extension to file doesn't extend the time to pay.

Internal Revenue Code §6651(a)(2)

- 0.5% of tax not paid by due date, April 15; 0.25% during approved installment agreement; 1% if tax is not paid within 10 days of a notice of intent to levy
- Recurring charge on the remaining unpaid tax each month or part of a month following due date, until the tax is fully paid or until 25% is reached
- Full monthly charge applies, even if the tax is paid before the month ends.



Impact on Penalties: Methods

Objective: Extend the time-to-file analyses to assess the impact of various treatment paths on penalties incurred.

- Penalties (2 types): Failure to File & Failure to Pay
- For each case where a positive penalty (P) was determined, we noted
 - the number of days over which the penalty was accrued (D)
 - the total balance due for the case (B) and
 - computed the rate as $R = P/(D * B)$
- From the distribution of R we computed a trimmed mean as the average penalty rate $E(R)$.
- We then computed the expected savings at different percentiles (10, 25, 50, 75, 90, 99) of the total balance due distribution for the most proactive treatment path:
 - Wave 1 reminder letter,
 - followed by Wave 2 soft notice (if not yet filed),
 - followed by a TY 2017 RD Notice in Wave 3 (if not yet filed)



Impact on Penalties: Results

Example of Expected Savings

- When the balance due is approximately around the 25th percentile of the observed balanced due distribution (\$1063) and
- The case belongs to the low-risk category (i.e., having a high filing score and a low balance due score),
- Then the expected savings from applying the most proactive treatment path over the control is \$95

Expected Dollar Savings from the Most Proactive Treatment Path

Failure to file				
	Low	Med	High	
Balance Due	Risk	Risk	Risk	
10%	\$30	\$23	\$17	
25%	\$95	\$71	\$54	
50%	\$294	\$219	\$168	
75%	\$776	\$578	\$445	
90%	\$1,799	\$1,340	\$1,030	
99%	\$11,745	\$8,749	\$6,724	

Failure to pay				
	Low	Med	High	
Balance Due	Risk	Risk	Risk	
10%	\$8	\$6	\$4	
25%	\$24	\$18	\$14	
50%	\$75	\$56	\$43	
75%	\$199	\$148	\$114	
90%	\$460	\$343	\$264	
99%	\$3,007	\$2,240	\$1,721	

Most proactive treatment path begins with a timely reminder, followed by a soft notice, and escalates to a Return Delinquency start within the same tax year



Impact on Penalties: Taxpayer First Act

- Taxpayer First Act (H.R.3151) was signed into law on July 1, 2019
(after the original pilot took place)
- Extended findings to account for new structure
- Penalty is now a nonlinear function of the balance due and number of days from tax date before filing
- See Appendix for method details

Expected Dollar Savings from the Most Proactive Treatment Path

Failure to file (prior to Taxpayer First Act)				Failure to file (after Taxpayer First Act)			
Balance Due	Low Risk	Med Risk	High Risk	Balance Due	Low Risk	Med Risk	High Risk
10%	\$30	\$23	\$17	10%	\$52	\$35	\$25
25%	\$95	\$71	\$54	25%	\$103	\$96	\$74
50%	\$294	\$219	\$168	50%	\$394	\$297	\$229
75%	\$776	\$578	\$445	75%	\$1,041	\$785	\$606
90%	\$1,799	\$1,340	\$1,030	90%	\$2,412	\$1,818	\$1,405
99%	\$11,745	\$8,749	\$6,724	99%	\$15,753	\$11,874	\$9,174

Most proactive treatment path begins with a timely reminder, followed by a soft notice, and escalates to a Return Delinquency start within the same tax year



Impact on Call Volume: Methods

Objective: Provide a descriptive overview of the impact of treatments on incoming calls.

- **Initial Low Costs.** The identification of nonfilers and the generation of typical notice treatments is generally automated, so the initial cost of such treatments is relatively small.
- **Treatment Costs.** However, if a large number of taxpayers calls the IRS upon receipt of such notices, then that would significantly increase the cost of treatment, either because of the additional dollars needed to hire more employees, or the lower level of IRS responsiveness to other taxpayer issues.
- Assess various treatment paths and track incoming calls:
 - Calls include those from taxpayers that progressed far enough in the call structure to provide their taxpayer identification number (TIN), thus making it possible to link call activity back to the pilot sample.
 - Average number of calls by treatment group for each wave and across the course of the study.
 - Percentage of taxpayers making at least one call by treatment group for each wave and across the course of the study.



Impact on Call Volume: Results

- The taxpayers in the control group called at a rate comparable to each of the treatment paths.
 - Taxpayers with underlying issues will call the IRS regardless of contact.
- Treatments 1 and 8, which included a start in the return delinquency notice process, increased the number of taxpayers making a call by more than one percentage point compared to the control group.
- The treatments limited to soft contacts (i.e., reminders and/or soft letters) had little impact on call volume.

Percentage of Taxpayer Making Calls by Treatment Group

Treatment Group	Wave 1	Wave 2	Wave 3	All Waves
1) Wave 1 TY16 RD Start	10.2%	4.3%	5.3%	15.7%
2) Wave 1: Reminder Only	8.5%	3.4%	4.1%	12.9%
3) Wave 2: Soft Letter Only	7.8%	3.7%	4.2%	12.8%
4) Wave 3: Soft Letter Only	7.4%	3.3%	4.2%	12.1%
5) Wave 3: TY17 RD Start	7.5%	3.3%	5.0%	12.8%
6) Reminder + Wv2 Soft Letter	7.8%	3.3%	4.6%	12.7%
7) Reminder + Wv2 Soft Letter + Wv3 Soft Letter	7.6%	3.6%	4.6%	12.7%
8) Reminder + Wv2 Soft Letter + Wv3 TY17 RD Start	8.6%	3.9%	5.2%	14.1%
9) Control	8.0%	3.2%	4.1%	12.4%



Impact on Call Volume: Methods

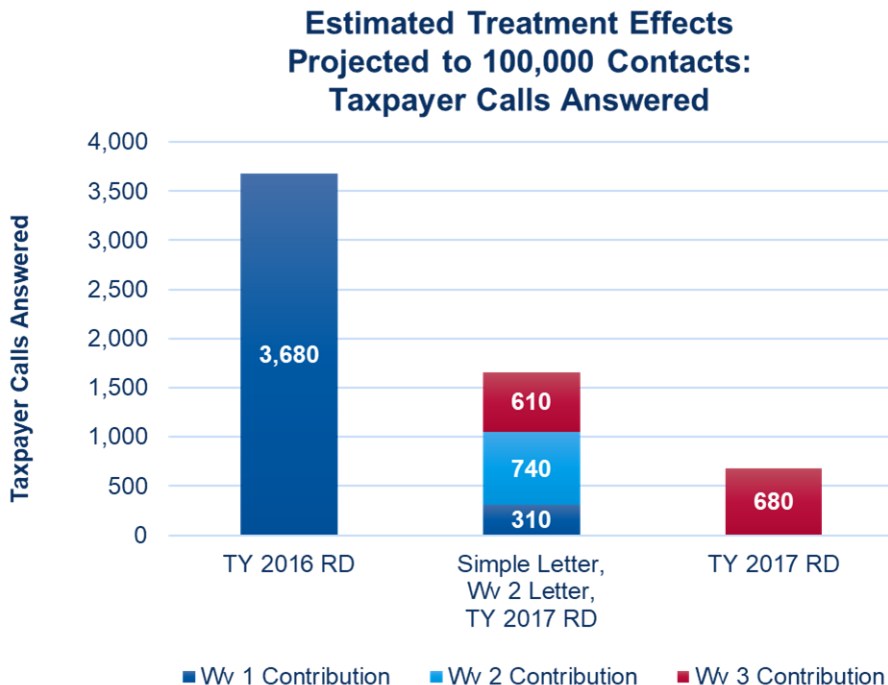
Objective: Develop a logistic regression model to predict if a taxpayer will call in response to a treatment.

- We further assess the impact of treatment on calls while controlling for taxpayer characteristics like income and prior IRS action.
- Logistic regression results estimate the effects of the eight nonfiler treatments on the likelihood of calling compared to the control group.
- The model controls for
 - whether the taxpayer has an existing outstanding balance (TDA) or return (TDI), or both;
 - whether the taxpayer called the IRS in the previous year;
 - the amount of income showing on information returns;
 - the presence of nonemployee compensation, retirement income and mortgage interest; and the number of information returns.



Impact on Call Volume: Marginal Effects

- Treatments with Return Delinquency notices have a relative small impact on taxpayers calling
 - Results suggest that for every 100,000 taxpayers sent a Return Delinquency notice, only about 3,700 additional taxpayers will call at least once during the subsequent year
- Reminder letters or soft notices had no appreciable impact on calling.
- The regression results also suggest that having an existing unpaid assessment with the IRS affects the call rate (see Appendix for details)





Conclusion

- **Earlier treatment reduces burden by helping taxpayers file earlier and avoid penalties.**
 - Especially for lower risk taxpayers.
 - This is particularly important since the taxpayer first act increased penalties for not filing.
- **Earlier soft contacts do not increase the taxpayer's likelihood to call the IRS.**
 - Studying the impact of different treatments on call volume is an important consideration for both taxpayers and tax administrations alike.
 - Taxpayers with existing issues (i.e. an unpaid assessment) are more likely to call the IRS
 - Low rate of taxpayers calling from traditional notices.

Earlier soft contact saves the taxpayer money in penalties while not prompting them to call the IRS.

Taxpayers can resolve their tax issues and avoid burdensome penalties and time spent in an IRS call system.



Perspectives on New Forms of Remote Identity Proofing and Authentication for IRS Online Services

Rebecca Scollan, Ronna ten Brink, Melanie Shere

June 18, 2020



MITRE IS SOLVING PROBLEMS FOR A SAFER WORLD

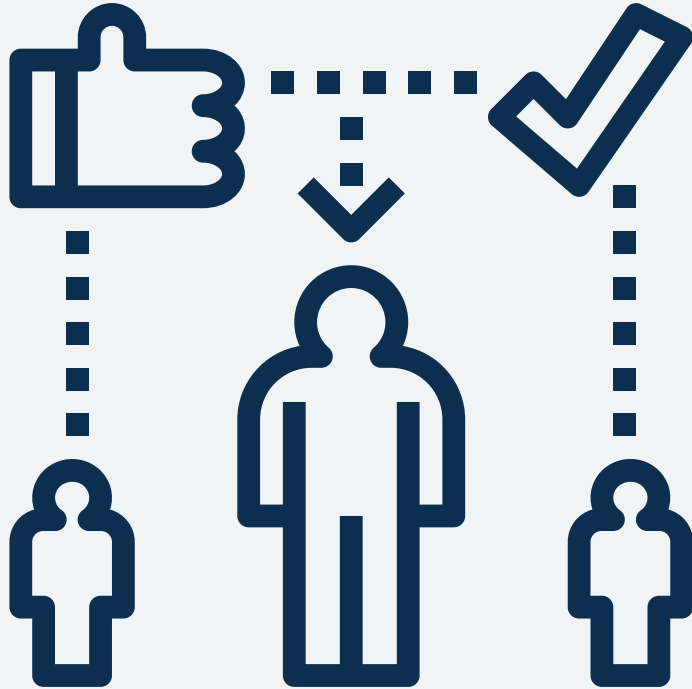
**MITRE is a not-for-profit
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interest.**

The IRS must work to provide secure services to taxpayers that meet the best practices for online services in the private sector.

The IRS must submit a “comprehensive customer service strategy...[that] shall include a plan to provide assistance to taxpayers that is secure, designed to meet reasonable taxpayer expectations, and adopts appropriate best practices of customer service provided in the private sector, including online services...”

[Taxpayer First Act, 2019](#)





The IRS is subject to the Digital Identity Guidelines ([SP 800-63-3](#)) developed by NIST which defines technical requirements in areas such as identity proofing, registration, authenticators, and federation.

The IRS offers services that enable taxpayers to access their personal and sensitive data. Such services come with risk to both the users and the Service.

In 2017, NIST 800-63 was updated and Agencies like the IRS began working to transform how they secure their services. The guidelines contain methods that may be new to many citizens.

Sections

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Thieves stole taxpayer data from IRS 'Get Transcript' service



Internal Revenue Service (IRS) 1040 individual income tax forms. Photographer: Michael Nagle/Bloomberg

By **Joe Davidson**
Columnist

September 12, 2016 at 7:00 a.m. EDT

Shortly after the Internal Revenue Service launched its "Get Transcript" service in 2014, IRS Commissioner John Koskinen lauded it as "another innovation...a secure online system that also known as a

<https://www.washingtonpost.com/news/powerpost/wp/2016/09/12/thieves-stole-taxpayer-data-from-irs-get-transcript-service/>

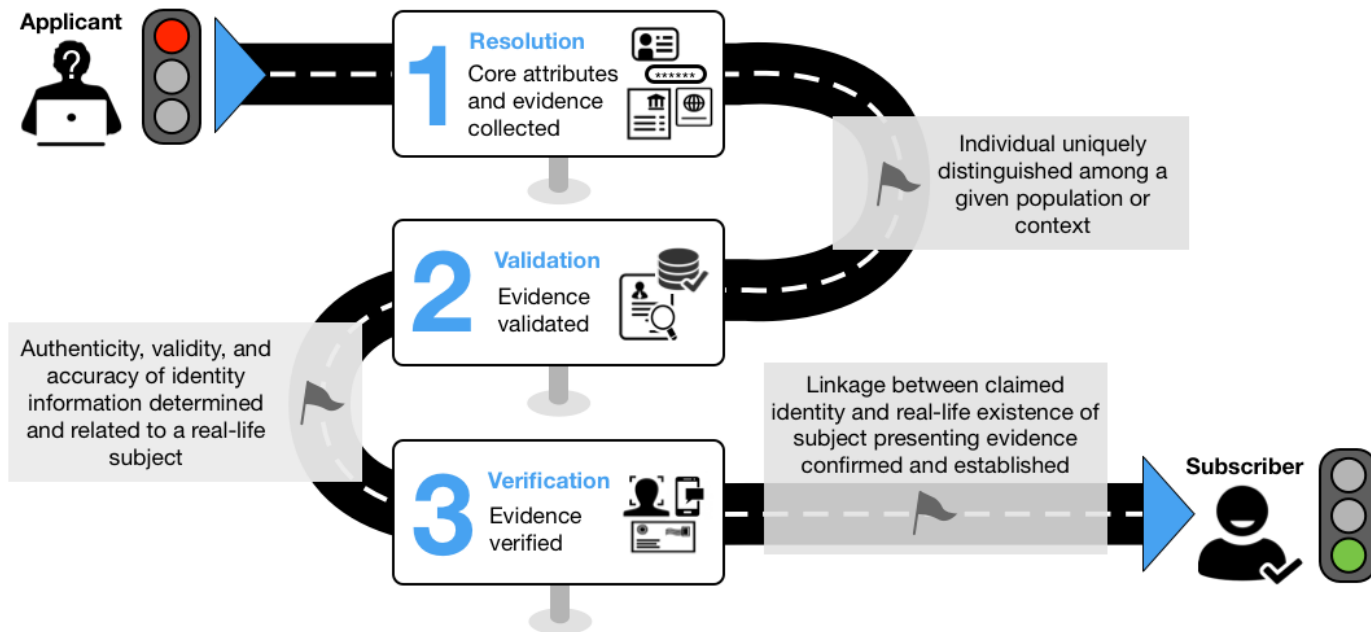
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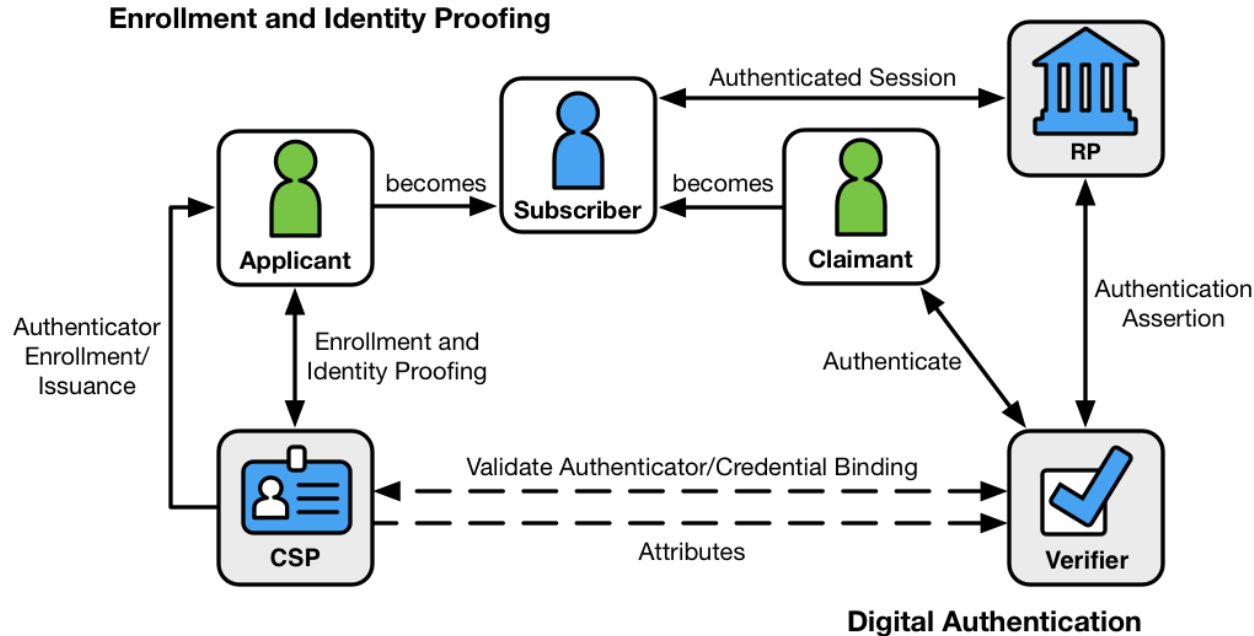
Identity Proofing



[800-63-3A Figure 4-1 The Identity Proofing User Journey](#)

We chose to look at Identity Assurance Level 2 (IAL2). “IAL2 allows for remote or in-person identity proofing” and at minimum “strong” evidence from applicants.

Credential Service Provider (CSP)

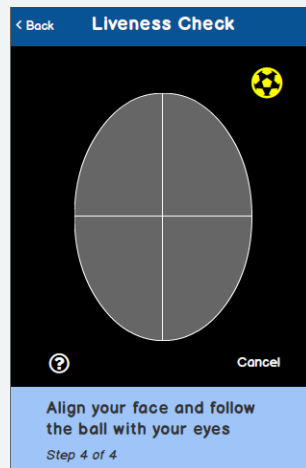


[800-63-3 Figure 4-1 Digital Identity Model](#)

A Credential Service Provider, or CSP, is a trusted entity that performs enrollment and identity proofing. A CSP identity proofs an applicant and issues a credential to the user after successful verification.

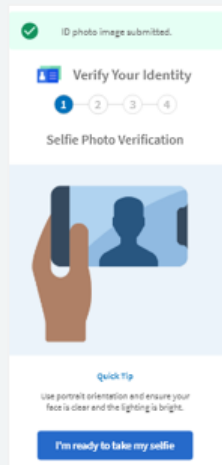
Addressing the problem

As the IRS continues to grow its online services that offer taxpayers access to their personal information, they face the challenge of offering a digital identity solution that is secure and usable. We conducted two qualitative user research studies to capture user feedback on these new digital identity concepts.



Secure Access Usability

In a combination of semi-structured interview and usability walk-through of a series of wireframes, we investigated tax professionals' willingness to remotely identity proof and the usability and accessibility of opportunities and concerns of the new process. N=13



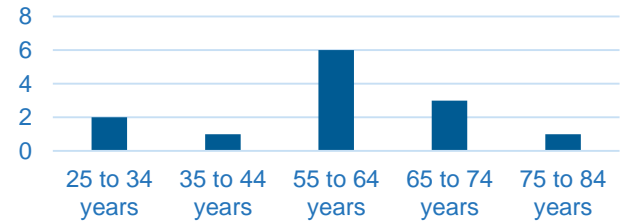
CSP Usability

Using semi-structured interview and a usability walk-through of a clickable prototype, we investigated individual taxpayer perceptions and comprehension of the CSP concept, including topics such as factors that affect willingness to choose to use a CSP and emotional responses to using a CSP. N=19

Secure Access Usability Study Method

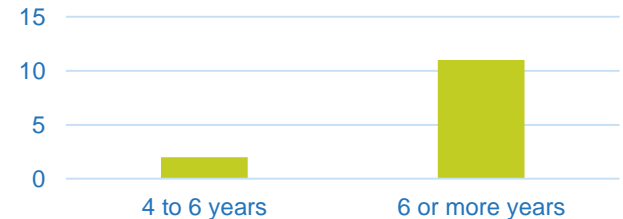
- Developed a research protocol for a semi-structured interview and prototype walk through
- Created a wireframe prototype with a flow modeled after a notional Information Assurance Level 2 (IAL2) customer journey
- Recruited 13 Tax Professionals via an IRS listserv and conducted interviews January 2019
- On each screen, participants were asked to “think aloud”
- All interviews were transcribed and coded for common themes and patterns

Age of Participants



Three of the thirteen participants are under 45 years of age, 10 are 55 or older.

Years as a Tax Professional



The majority have more than 6 years of experience as a tax professional.

Response to Remote Identity Proofing

- Despite some negative reactions, the majority were willing to use remote identity proofing
- Some said no assurance can persuade them a technology is secure
- Some had the mistaken assumption that the process captured their biometrics, and/or captured and stored their image
- Mixed opinions on the security and quality of facial recognition and financial data

“...Being a tax preparer it's something I've gotten used to...providing all that detailed information to the IRS.” (P05)

"The fact that I'd have to say a word out loud, blink, or smile, or move, believe that it would almost seem like a bio ... like it's going to be used as a biometric to log in later, which seems unnecessary.” (P02)

"There's no way. I'm not going to give you a drivers' license, a static picture, and then allow you to match that to my face, because now I'm in a database for sure.” (P01)

Potential Usability Issues of Remote Identity Proofing

- Participants discussed the accessibility of liveness testing and smartphones
- Concerns were expressed about the large number of older tax professionals who might be less familiar with technology
- Usability concerns such as the correct address, license quality, phone positioning and the utility bill came up

"Personally, I can't hold my phone and take a picture. I have a physical disability and I have muscle spasms, so I can't If I had to do this process, I would have to have someone else hold the phone for me." (P12)

"The problem you have is the average age of a tax professional is 65, so I think you're battling age more than anything...So I think as long as you're dealing with people that are millennials, you're fine. You're getting into gen-X, gen-Y, they should be okay. But the boomers are done. They're not willing to do a lot of this." (P01)

"In other words, did they truncate road to RD, or did they spell it out? Same thing with place, was that a PL or a P-L-A-C-E?." (P03)

Communications on Remote Identity Proofing

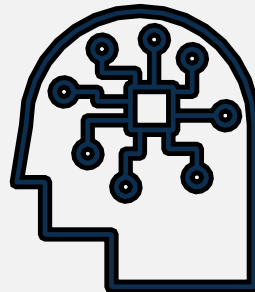
- Participants requested more information on:
 - What is being collected
 - Why it's needed
 - How it is secured
- Instructions before and within the process were rarely examined by participants, so an important opportunity to explore

“So I mean, apps are usually intuitive I find, so I don't know that I would need specific instructions on how to go through it but I did need instructions at the beginning that I didn't feel that I was getting as to what I need to do to obtain secure access. I didn't think it was ... I mean, [it] told me about what I could get with secure access but it really, I didn't think it was quite clear to me as how do I get it.” (P06)



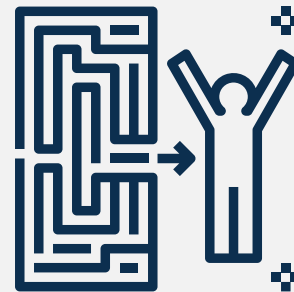
Communications

Increase workflow steps by displaying brief instructions as needed that must be dismissed by users to help ensure critical messages are seen. Participants asked for more, not less, information about the registration process.



Transparency

A better understanding of how personal data is handled will help to alleviate concerns we observed from our participants. Clearly identify what type of data is being analyzed, and if transmitted, where it goes and what happens to it.



Design









To address potential usability and accessibility challenges to uploading documents and remote identity verification, aim to provide as many options as possible, for example, provide a desktop and web camera option if available.

CSP Usability Study Method

- Developed a research protocol for a semi-structured interview and prototype walk through, including a short survey to capture perceptions of CSPs administered before and after using the prototype
- Created a prototype to offer participants a selection between two fictional CSPs (a commercial entity “identity.com” and a government entity “signin.gov”)
- Recruited 19 individual taxpayers (who had owed in last 3 years) via a professional recruitment company and conducted interviews January 2020
- On each screen, participants were asked to “think aloud”
- All interviews were transcribed and coded for common themes and patterns

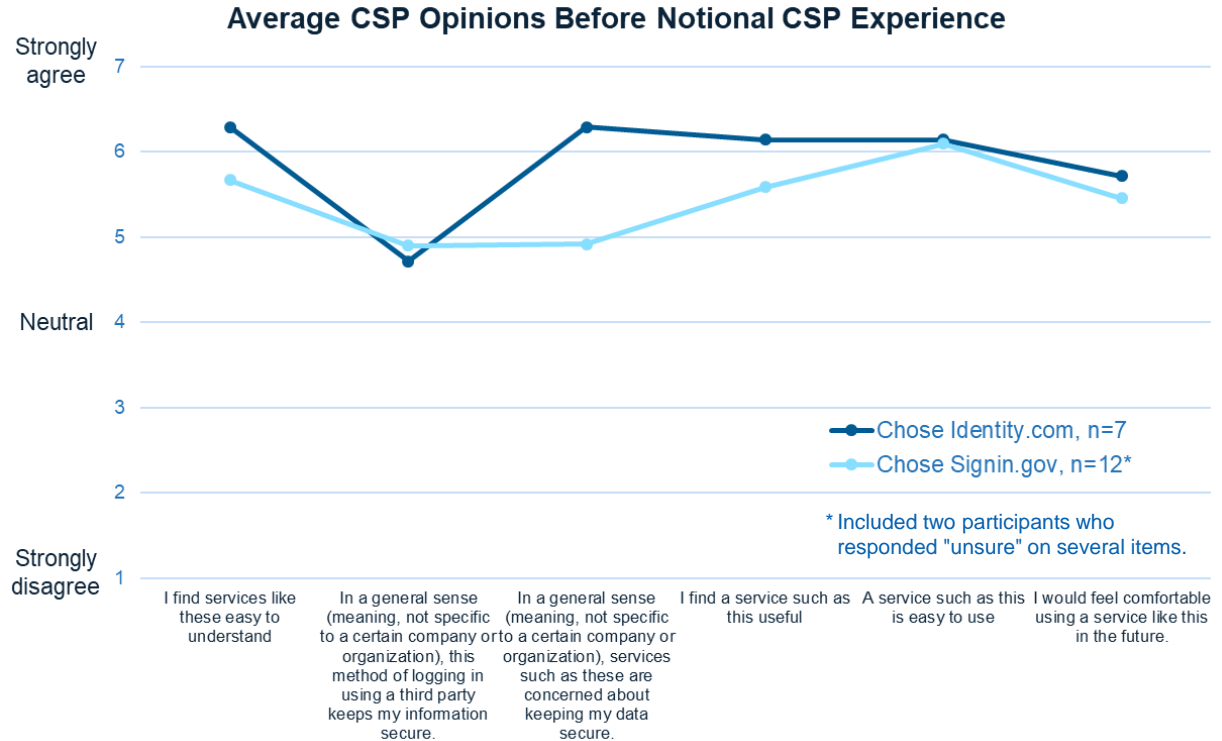


Study included 7 female and 12 male participants.

Income	Participants (#)
\$15,000 to less than \$20,000	
\$20,000 to less than \$25,000	
\$35,000 to less than \$50,000	
\$50,000 to less than \$75,000	
\$75,000 to less than \$100,000	
\$100,000 to less than \$150,000	
\$150,000 to less than \$200,000	
\$200,000 to less than \$1 million	

User Perceptions of a CSP

- A .gov is often considered more secure, but not necessarily understood as a third party to IRS
- Half of participants were confused by having to select one of two CSPs
- Nine participants expressed a preference to work directly with the IRS
- Less willing-to-use participants became more willing after interacting with the CSP prototype

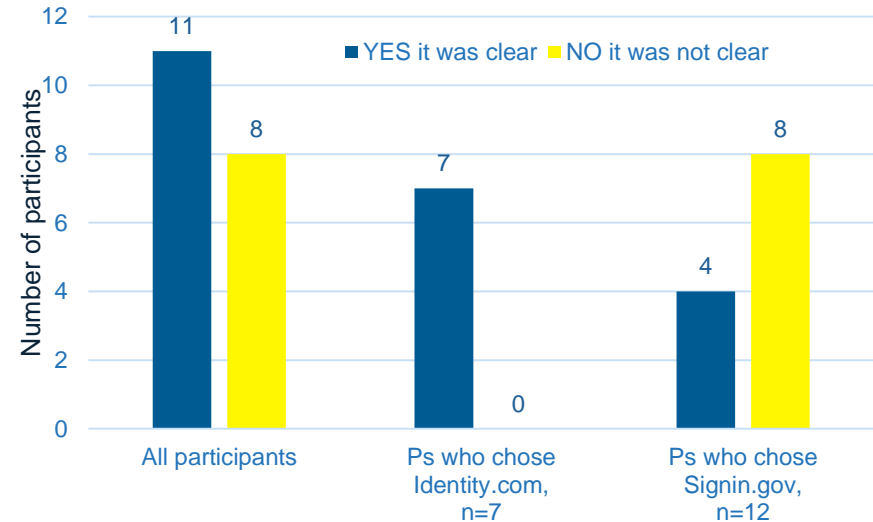


Participants' trust in a CSP service's "concern about keeping my data secure" may impact their selection of a .gov or .com.

Comprehension of CSPs

- Comprehension of what a CSP does is low, but improves after use
- Participants who selected *signin.gov* were less likely to understand the CSP was a third party, while all *identity.com* participants understood third-party status
- Most participants felt positively about using a 3rd party, but surfaced concerns that should be addressed to increase user adoption (like assurances of security and privacy, transparency on how personal information is handled)

Participants' understanding of whether the selected CSP was 3rd party to IRS

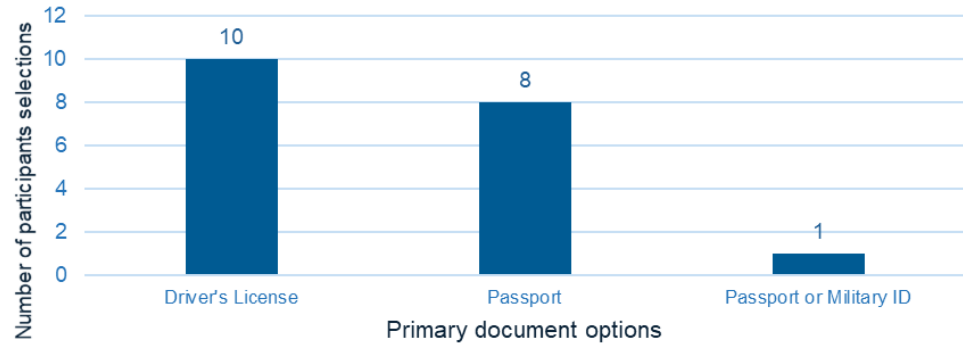


*Participants who selected *signin.gov* were less likely to understand the CSP was a third party.*

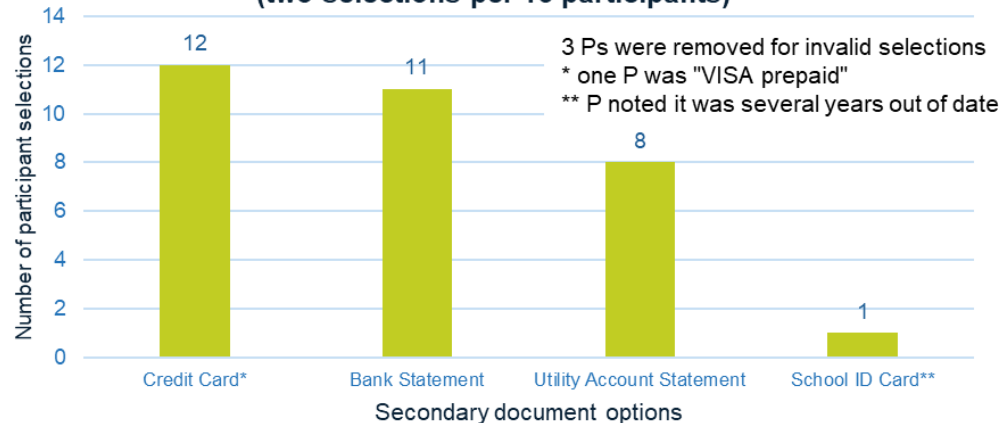
Usability of CSPs

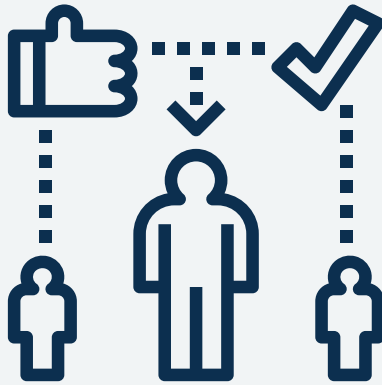
- Most participants expected a quick experience 5 minutes or less
- Most participants (14) selected text message as second factor authenticator
- Participants factored in access to documents, ease of fetching the document, perceived security, and ease of process.
- The majority (14) of participants chose to upload via phone (versus computer)
- Most participants (16) were comfortable with selfie verification – either approaching it in a matter of fact manner or making positive comments. The three participants who did make negative comments expressed willingness to use it despite their concerns.

First-level ID Verification Document Selections



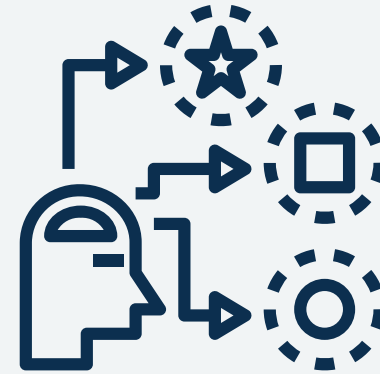
Second-level ID Verification Document Selections, n=32
(two selections per 16 participants)





Willing to work with a third party

Most participants did ultimately choose creating an account directly with the IRS over other options when asked in the post-walk-through interview, but due to the heightened average responses on trust, comprehension and satisfaction after viewing a notional CSP, as well as participants' stated willingness to use a third party, we feel that users will accept using a CSP with the IRS.



Choice degraded user experience

Half of the participants had a confused or negative reaction to being offered a choice between two CSPs. Some also decided based only on the CSP name or logo; for what should be an important decision for a sensitive online procedure. If the IRS were to ever provide a choice between two or more CSPs, the choice presentation would need to be very carefully designed to improve user acceptance and satisfaction and be understandable to users.

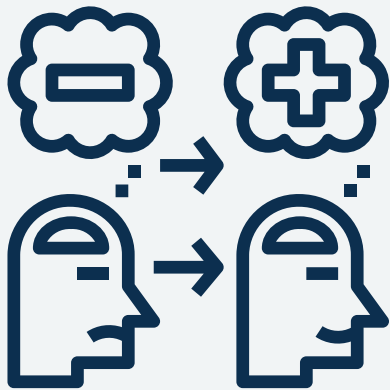


Image verification breeds confusion

Selfie verification was generally accepted and understood, but we believe there were enough questions and concerns to motivate the IRS to ensure the experience is well explained, makes use of usability best practices and offers technical support for errors and concerns. Understanding why failures happen may help prevent users from abandoning the task when they encounter issues.



Implications for Design

Whether the IRS chooses to partner with a CSP or develop its own remote identity proofing system, it will be important to clearly display the time it takes to register, the documents required and what the steps are in the process. We also found that key terms used in buttons and headers lead to some misperceptions. For example, “Selfie” implied a stored image to share with family and friends.

Discussion

- Both individual taxpayers and Tax Professionals were willing to use the prototypes they engaged with.
- The Tax Professional group prioritized security and expressed low trust in devices like smartphones.
- Most individuals selected a government run CSP, and those who selected the fictitious “.gov” option presented were both less trusting of CSPs and more likely to choose the “.gov” due to their perception of it being more secure.
- This suggests that Tax Professionals may also prefer a government run CSP. However both groups may also be willing to engage with a commercially run CSP if there are strong assurances of security, convenient identity evidence document selections and a high-quality user experience.

Discussion

- Individual participants were not familiar with “jargon” and technical concepts such as CSPs or code generators.
- Any system design will have to strike a balance between offering clear and thorough information about the process, while grappling with the likelihood that users will only quickly scan or even skip over most content, as observed in both studies.
- Both studies showed misunderstandings and potential usability issues with selfie verification, and the Secure Access study showed potential accessibility issues.
- Selfie verification and liveness testing are still very new concepts and may be met with skepticism and uncertainty from users.

Our work supports the IRS in offering a secure, usable and accessible digital identity solution. It suggests a need for more research into improving comprehension and awareness through the design of future versions of IRS Secure Access, and further user research on new digital identity concepts such as selfie verification and liveness testing.



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Research, Applied Analytics & Statistics

KNOWLEDGE DEVELOPMENT & APPLICATION

10th Annual IRS/TPC Joint Research Conference on Tax Administration

Session 3: Advances In Taxpayer Service

Discussant: Mary-Helen Risler

The content of this document is the opinion of the writer and does not necessarily represent the position of the Internal Revenue Service.

June 18, 2020



Session 3: Advances In Taxpayer Service

- **Free Assisted Tax Preparation Outreach Experiments**

Rizwan Javaid and Brenda Schafer (IRS, RAAS), Jacob Goldin (Stanford University), Tatiana Homonoff (New York University), Adam Isen (Department of the Treasury)

- **Enforcement versus Outreach – Impacts on Taxpayer Burden**

Anne Herlache, Stacy Orlett, Ishani Roy and **Alex Turk** (IRS, RAAS)

- **Perspectives on new forms of remote identity proofing and authentication for IRS online services**

Rebecca Scollan and Ronna Ten Brink (MITRE Corporation)



Free Assisted Tax Preparation Outreach Experiments

■ Study Conclusions

Sending a outreach letter near the beginning of the filing season to certain taxpayers who look like they will be eligible for VITA or Free file increases the numbers of taxpayers who use those options.

■ Remarks

- Revisit/explain math error statistics—are the rates comparable since processes differ?
- Find statistically significant effects but are those differences of practical relevance?
- One-time or permanent change in taxpayer filing mode?
- Any plans to look at reporting accuracy?
- Any forthcoming recommendations for a permanent program?



Enforcement versus Outreach – Impacts on Taxpayer Burden

■ Study Conclusions

Earlier notification from the IRS about filing can reduce nonfiling and speed up time-to-file thereby reducing penalty and interest owed by taxpayers.

■ Remarks

- Longer term effects on filing compliance?
- Telephone calls—is there information about whether there are difference across programs in the share of calls that reach the point where a TIN is provided so that can track the call?
- Telephone calls--Are taxpayers who call more likely to file or file sooner—so that for certain taxpayers calls are an important component on their path to becoming compliant?
- Any plans to look at reporting accuracy?
- Are there plans to implement any of the tested processes as a standard IRS process?



Perspectives on new forms of remote identity proofing and authentication for IRS online services

■ Study Conclusions

Usability interviews with likely users of IRS online services requiring identity proofing/authentication suggests general acceptance of the requirements and processes and provided insights to incorporate into development to avoid confusion and misunderstanding.

■ Remarks

- Two unique groups of participants: would expect others to have same perceptions/reactions?
- Clarity and Transparency: .gov versus .com third-party Credential Service Providers (CSP)
- For what purposes would going through these identity proofing/authentication processes to have access to online services really benefit taxpayers?



Session 3. Advances in Taxpayer Service

Moderator:

Fran Cappelletti
IRS, Taxpayer Advocate Service

Free Assisted Tax Preparation Outreach Experiments

Rizwan Javaid
IRS: RAAS

Enforcement versus Outreach - Impacts on Taxpayer Burden

Alex Turk
IRS: RAAS

Perspectives on New Forms of Remote Identity Proofing and Authentication for IRS Online Services

Rebecca Scollan
MITRE Corporation

Discussant:

Mary-Helen Risler
IRS: RAAS