Communicating Tax Penalties to Delinquent Taxpayers: Evidence from a Field Experiment

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Abstract

Tax authorities must make many decisions about how to present payment incentives to taxpayers. We analyze a large field experiment conducted in partnership with the Colorado Department of Revenue to study the effect of varying the presentation of financial and non-financial incentives in tax delinquency notices. We find that making salient the specifics of a financial penalty for nonpayment can modestly raise the payment rate among delinquent taxpayers. We find suggestive evidence that describing the existence of a penalty (but not its details) can also raise payments, but to a lesser degree. In contrast, emphasizing social norms for timely payment yields a point estimate that is near zero and statistically insignificant. The effects we observe are concentrated among taxpayers with low balances due. Our results suggest that attention to seemingly minor decisions about the wording of notices sent by tax authorities can reduce administrative costs associated with taxpayer delinquency.

Introduction

Delinquent tax payments represent a central problem for tax authorities. In the United States, such payments represent approximately 25 percent of uncollected federal tax revenue (Perez-Truglia

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and Troiano, 2015). Virtually all government bodies that collect taxes – whether at the municipal, state, or federal level – send notices to those taxpayers who owe an outstanding tax liability. These notices typically include information on the taxpayer's balance due as well as information on the financial consequences of failing to make the required payment.

Traditional models of tax avoidance assume that individuals decide whether to pay their balance due by weighing the cost of payment against the penalties for non-compliance (Allingham and Sandmo, 1972). Such models suggest that varying the financial incentives for payment can affect taxpayer behavior but that variations in *how* those incentives are communicated to taxpayers are irrelevant to whether taxpayers decide to pay. In contrast, a growing literature in behavioral economics suggests that how the costs and benefits of payment are presented to taxpayers shapes how taxpayers respond (Krishna and Slemrod, 2003; Slemrod, 2018). If correct, this literature suggests that modifying the presentation of incentives described in delinquent tax notices can improve compliance for essentially no cost.

This article experimentally evaluates the effectiveness of a range of small modifications to a state's tax delinquency notice that varied the presentation of the incentives for timely tax payment. Specifically, we report results from a field experiment conducted in collaboration with the Colorado Department of Revenue (DOR). Our sample consists of the approximately 90,000 households that comprise the universe of delinquent taxpayers for the state of Colorado for tax year 2015. Collectively, these households represent approximately 3.5% of Colorado income tax returns and collectively owe over $85 million in state income taxes.

The taxpayers in our sample were randomly assigned to receive one of several versions of a delinquency notice sent to taxpayers by DOR. The first treatment group emphasized the financial penalty for non-compliance. Taxpayers assigned to this penalty group received one of two notice variants: a detailed version listed the interest rate penalty associated with delayed payment and a generic version emphasized the existence of a financial incentive for timely payment but did not provide details. The second experimental treatment focused on social norms: it emphasized the high fraction of Colorado taxpayers who pay their tax bill on time. The third experimental group served as the control group. Taxpayers in the control received the version of the notice sent in prior years. The notices associated with different treatment groups differed only with respect to a single sentence.

Despite the seemingly minor differences between the notices, we document non-trivial differences in their effect on taxpayer behavior. Our strongest evidence comes from the detailed penalty notice, which increased the fraction of taxpayers making a full payment before the statutory deadline or creating a payment plan by 1.6 percentage points (a 4.1 percent increase) relative to the control notice. The estimated effect of the generic penalty notice relative to the control was approximately half as large, but was not statistically distinguishable from zero. We find no evidence that the social norms notice was more effective than the control; we estimate its effect to be near zero and statistically insignificant. This last result is striking because it contrasts with an influential line of recent studies finding that drawing on social norms is an effective strategy for improving tax compliance (Perez-Truglia and Troiano, 2015; Hallsworth et al., 2017).

Interpreting the economic significance of our estimates requires understanding whether the additional taxpayers induced to pay by the treatment represent new non-delinquent taxpayers or simply a speeding up of payments by taxpayers who would have eventually paid (even had they not received the treatment message). The notices themselves emphasize the imporance of taking action by the statutory deadline (30 days from the notice's receipt). To investigate the persistence of our observed treatment effects, we collected data on taxpayer payments for several months after the statutory deadline. Focusing on payments made within 100 days, we find the effect of the penalty notice declines only slightly (by approximately one-third of its size for payments made by the statutory deadline). This persistence suggests that the treatment induces new payments rather than simply speeding up the timing of payments that would have otherwise been made within this timeframe.

Our results described so far suggest that improving notice design can reduce the number of delinquent taxpayer accounts. This is valuable for taxing authorities because it reduces costs associated with further outreach to delinquent taxpayers such as additional mailings, phone calls, or enforcement actions. However, to understand the effect of our intervention on total revenue, one must understand how the treatment effect varies by taxpayer balance due. Specifically, how changes in taxpayer behavior map to changes in revenue depends on whether the notices predominantly affect the payment decisions of taxpayers with high or low balances due. We find striking differences in how the notices affect payment decisions along this margin: in response to the penalty notices, the effect was mostly limited to taxpayers in the first and second tertiles of balances due. In contrast, taxpayers in the top tertile of balances due (those owing at least $433) were no more likely to make

a full payment after receiving one of the penalty notices. Consistent with our earlier results, we observe no effect of the social norms notice in any of the balance due categories. These findings suggest that a primary fiscal benefit to tax authorities of interventions like the one we study is to reduce the number of outstanding delinquent accounts – thereby reducing the costs of pursuing delinquent taxpayers – rather than solely generating additional collected revenue.

We contribute to a growing literature that experimentally evaluates communications sent by tax authorities with the goal of raising compliance. We do so by investigating the effectiveness of alternative delinquency notice designs in a previously unexplored but policy-relevant context: notices sent by U.S. state taxing authorities. Studying this issue in the context of state tax deliquency notices is important because insights from research on similar interventions conducted in other countries (Castro and Scartascini, 2015; Del Carpio, 2013; Hallsworth et al., 2017; Kettle et al., 2016; Gemmell and Ratto, 2018) or at other levels of government in the U.S. (Chirico et al., 2017; Meiselman, 2018) may not generalize to this setting. First, the motivational force of social norms may be quite different across countries and across levels of government. Indeed, we find social norms to be a much less effective driver of behavior than what has been found in other countries (Del Carpio, 2013; Hallsworth et al., 2017; Kettle et al., 2016). Similarly, with respect to interventions that emphasize financial penalties, the effect of such interventions is likely to differ between U.S. states and other jurisidctions (either cities or other countries) based on the system of tax payment (e.g., near-exact withholding with reconciliation in the U.K. versus frequent refunds and balances due in the U.S.), base level of compliance, and what type of penalties are legally available or used in practice by the taxing authority. Finally, the effect of notice design is likely to differ based on the population of taxpayers receiving the notice (e.g., non-filers in Meiselman (2018) versus delinquent filers in our study), or the type of tax that notice recipients owe (e.g., municipal property taxes in Chirico et al. (2017) versus state income taxes in our study).[1]

Our paper also builds on the existing literature by focusing on heterogeneity in the effects of the treatments on taxpayers based on the amount of tax liability they owe. As described above, the revenue effects of an intervention like the one we study depend crucially on this question. An important advantage of our study in this respect is that it is the first experimental evaluation of

[1] A separate related literature investigates the effects of communications from a tax authority that manipulate taxpayers' perceptions about the likelihood of an audit (Blumenthal, Christian and Slemrod, 1998; Kleven et al., 2011; Dwenger et al., 2016; Castro and Scartascini, 2015; Gangl et al., 2014; Bérgolo et al., 2017).

penalty-emphasizing notice designs that is adequately powered to identify heterogeneous effects based on taxpayer balance due.[2] And as we note above, the theoretical possibility of heterogeneous taxpayer behavior along this dimension turns out to be quite significant in practice, with our estimated effect being entirely driven by taxpayers with low and moderate balances due. These results thus connect to a recent line of research that focuses on how heterogeneity in an intervention's treatment effect shapes its overall contribution to social welfare (Finkelstein and Notowidigdo, 2018; Deshpande and Li, 2017).

Our third contribution is to investigate how information about delinquent taxpayer penalties should be presented to most effectively promote payment. Both the detailed penalty and the generic penalty notices make the existence of a penalty for non-payment more salient, but the former also makes salient the specific financial costs of non-payment. The potential downside to this approach is that simply emphasizing the penalty's existence may be sufficient to motivate taxpayers, whereas providing extra details may contribute to information overload (e.g., Bhargava and Manoli, 2015). Our finding that the detailed penalty notice was more effective thus sheds light on the source of the penalty's motivational force, although we cannot statistically distinguish between the effects of the two penalty treatments.

Lastly, our paper contributes to a broader literature on the effectiveness of informational messages from government agencies at increasing civic responsibility and engagement with government programs. For example, communications from the Internal Revenue Service sent to low-income non-filers emphasizing the availability of the Earned Income Tax Credit (EITC) significantly increase tax filing and EITC take-up (Bhargava and Manoli, 2015; Guyton et al., 2016; Manoli and Turner, 2014). Similarly, communications aimed at increasing take-up of government benefit programs have been shown to be effective in a variety of policy areas such as Disability Insurance (Armour, 2018), post-secondary education (Barr and Turner, 2018), and retirement savings (Goldin, Homonoff and Tucker-Ray, 2017).

The remainder of the paper proceeds as follows. Section 1 describes the institutional setting in which our experiment occurred. Section 2 provides details on our experimental design. Section 3 describes our administrative data. Section 4 provides the results of the experiment. Section 5

[2] Hallsworth et al. (2017) also studies heterogeneity by balance due, but in the context of an intervention focused only on social norms, rather than on penalties.

discusses our findings in relation to the literature and concludes.

1. Institutional Background

Like other tax authorities for states and cities, the Colorado Department of Revenue (DOR) sends letters to taxpayers who owe additional taxes beyond what they paid when filing their tax return. These "Notice of Deficiency" (NOD) letters inform taxpayers that they have an additional unpaid tax liability or that they are not entitled to the full refund they claimed on their return. The letters instruct taxpayers to pay the additional amount due, create a payment plan, or challenge the determination of additional liability. A copy of the letter sent to taxpayers is included as Appendix Figure 1.

Colorado law creates several incentives for taxpayers receiving a NOD to pay the additional tax liability. First, unpaid tax liability accrues interest at a statutorily provided interest rate. The applicable rate of interest increases by three percentage points if payment is not made within 30 days of the NOD's receipt. At the time of our study, the interest rate was 3% for payments made within 30 days of the NOD's receipt and 6% for tax liability that remained unpaid as of that date.[3] The standard NOD letter states that "The Statement of Account reflects a 3% interest discount if paid within 30 days."

The second incentive for taxpayers to pay the tax liability reported on the NOD is that Colorado law imposes financial penalties on delinquent taxpayers. This penalty kicks in for taxpayers who have not paid by 30 days after the NOD is received. The magnitude of the penalty is initially set at 5% of the outstanding tax liability, and increases by 0.5 percentage points each month, up to a maximum penalty rate of 12%. Setting up a payment plan does not erase previously imposed penalties but stops the penalty rate from increasing.[4] The standard NOD letter states that "Penalty and interest have been charged in accordance with Colorado tax law," but does not provide details about the existence of the delinquent taxpayer penalty other than a brief reference to the DOR's website.[5] In our sample (described further below), approximately 34% of those who receive the standard NOD letter pay off their balance due prior to the statutory deadline, whereas only approximately 4% set

[3] Colorado Revised Statutes § 39-21-110.5.

[4] Colorado Revised Statutes § 39-22-621(2)(b).

[5] Specifically, the notice states: "For more information regarding penalties and interest, please see FYI General 11 at www.TaxColorado.com."

up a payment plan during the same time period.

Finally, taxpayers whose tax liability remains unpaid may face additional financial consequences such as garnishment of wages or bank accounts, referral to a collection agency, a lien or judgment against personal property, and even the sale or seizure of real property. These additional consequences are not mentioned in the NOD but are included in a subsequent "Notice of Final Determination and Demand for Payment" that taxpayers may receive if they have not paid their liability after receiving the NOD.

Approximately 100,000 NOD letters are mailed by DOR each year. The letter population includes both Colorado taxpayers as well as out-of-state taxpayers who owe Colorado income taxes. As of July 2016, the total amount owed to the state by on-time filers was approximately $85 million. For context, the state budget office estimates that it will collect $220.9 million in taxes owed after one year (whether from delinquent taxpayers or from individuals owing tax who fail to file a return) (Office of the State Controller, 2016).

2. Experimental Design

In July 2016, DOR conducted a randomized controlled trial to assess whether minor modifications to the NOD letters were associated with an increase in the fraction of taxpayers paying off their liability in full or creating payment plans. The study population consisted of 90,349 Colorado taxpayers who were identified by DOR as delinquent and were slated to be mailed the NOD letter in July of 2016. The taxpayers included in the sample had each filed a return for tax year 2015 but had failed to fully pay the amount reported due on the return.

To implement the experiment, taxpayers were randomly assigned to receive one of four versions of the NOD letter. Taxpayers in the control group received the same version of the letter that had been sent to all taxpayers in prior years. As described in the prior section, the control version of the letter references the existence of a financial incentive for timely payment with the following sentence: "The Statement of Account reflects a 3% interest discount if paid within 30 days."

The "detailed penalty" treatment reflected three modifications to the sentence of the letter that describes the incentive. First, motivated by the literature on loss aversion (Kahneman and Tversky, 1979), the incentive was reframed as a penalty for non-payment as opposed to a benefit for early

payment. Second, the information about the incentive was made more detailed, with more specific information about the interest rate added. Third, the sentence was bolded to further emphasize it (the sentence appeared in the middle of a paragraph – see Appendix A). The key sentence read: "By law, if you do not pay within 30 days, the interest rate on your account will double from 3% to 6%."

To distinguish the importance of emphasizing the existence of the penalty as opposed to the specific information about the penalty, the "generic penalty" treatment was bolded, but contained less detailed information about the incentive. The key sentence read: "By law, if you do not pay within 30 days, any penalty associated with your account will increase for each month you do not pay (until the statutory maximum is reached)." On the one hand, the detailed penalty may have a larger motivational force than the generic penalty because providing specific information about the penalty makes it more concrete and easier for the taxpayer to understand. On the other hand, it may be that taxpayers are equally averse to paying any penalty (at least within a broad range of amounts), in which case the specific information may contribute little extra motivational force. In addition, the extra information contained in the detailed penalty notice may contribute to information overload (e.g., Bhargava and Manoli, 2015), dampening the notice's motivational force relative to the generic penalty treatment.

Finally, the "social norm" treatment was motivated by recent studies suggesting that information about the prevalence of tax compliance can increase payment rates among delinquent taxpayers, and that such information is most effective when the norm is descriptive (versus injunctive), tailored to the recipient's local area, and referencing the fact that the taxpayer was in the minority composed of non-compliant taxpayers (Hallsworth et al., 2017). Along these lines, the letter associated with this treatment included the following statement: "Nine out of ten people in Colorado pay their tax on time. You are currently in the very small minority of people who have not yet paid."

Taxpayers were assigned to each of the four treatment groups with equal probabilities. To improve the precision of the analysis, randomization was stratified based on the taxpayer's age, balance due, whether the taxpayer's return was filed before the due date, and whether the taxpayer was a Colorado resident.

3. Data

To analyze the results of the experiment, we utilized anonymized data on taxpayer payments and payment plan creation from the universe of delinquent taxpayers for the state of Colorado (101,068 taxpayers). This data was provided to us by DOR. In addition to these outcome variables, the data included information on taxpayer age, zip code of residence, tax balance due, and whether the taxpayer's return was filed on time. We supplement the DOR data in our analysis with zip code level information from the American Communities Survey (ACS) on income and educational attainment.

Our main outcome variables relate to whether taxpayers made a payment on their account. Specifically, we track whether a taxpayer fully pays off the outstanding balance on his or her account, as well as whether a taxpayer makes a partial payment by creating a payment plan with DOR. DOR categorizes taxpayers into three groups: those who paid off their balance in full by Final Determination (FD), the date corresponding (approximately) to the statutory deadline of 30 days from the taxpayer's receipt of the Notice of Deficiency[6]; those who created a payment plan by FD; and those who took no action before FD. For taxpayers who made multiple payments but did not create a payment plan, we add up the payment amounts and use the last date of payment to determine if and when the taxpayer successfully paid off their balance. Taxpayers who had bills from before the December 31, 2015 filing period or who had multiple bills were excluded from the sample. The final sample consisted of 90,349 taxpayers.

4. Results

Table 1 provides descriptive statistics of our sample population. Column 1 describes the characteristics of the delinquent taxpayers comprising our sample. The mean taxpayer is approximately 44 years old and owes a balance due of $515. Not surprisingly, the vast majority of our sample are Colorado residents. Columns 2 through 5 investigate the balance of taxpayer characteristics across treatment groups. Rows 1 through 4 show balance across the available taxpayer-level characteristics: age, balance due, whether the return was received by the filing deadline, and whether the taxpayer was a Colorado resident. We also investigate balance of local demographic characteristics of the

[6] In practice, DOR assigns the date of FD as 45 days from the date the letter was queued to be mailed.

taxpayer at the zip code level including median household income and bachelor's degree completion rates. In contrast to the taxpayer-level characteristics, we observe economically small but precisely estimated differences across treatment groups in these local demographic variables. To address this, we include either local demographics or zip code fixed effects in our preferred empirical specifications below.

Our baseline empirical specification is a linear probability model that takes the following form:

$$y_i = \alpha + \beta_{DP} DP_i + \beta_{GP} GP_i + \beta_{SN} SN_i + \gamma x_i + \varepsilon_i$$

for taxpayer i, where y indicates the binary outcome of interest (paying a bill or making a payment plan), DP_i, GP_i, and SN_i are indicators for being assigned to the detailed penalty, general penalty, or social norms treatment group, respectively, and x_i is a vector of taxpayer-specific characteristics.[7]

A. Main Results

i. Full Payments

Our first analysis considers the effect of the notice variants on payments by taxpayers. The outcome we consider is an indicator for whether the taxpayer has paid off his or her balance in full by the statutory deadline (30 days from receipt of the NOD letter).[8] Table 2 presents the results of this analysis. Among control group members, just over one-third of notified taxpayers made a full payment by the statutory deadline, suggesting substantial room for improvement in tax compliance. Column 1 presents our baseline specification, which includes indicators for treatment group assignments and no control variables. We estimate that receiving the detailed penalty treatment induces a 0.9 percentage point increase in the proportion of delinquent taxpayers who pay off their balance in full by the statutory deadline, relative to the control NOD letter. The estimated effect is statistically significant, and represents a 2.6 percent increase relative to mean payment rate under the control NOD letter. The estimated effect of the generic penalty is also positive, but the estimated coefficient is approximately half as large in magnitude as the detailed penalty and is not statistically different from zero. The estimated effect of the social norms penalty is near zero in

[7] The results are qualitatively similar when estimated with a probit model.

[8] Because we do not observe the exact date the letter was received, we follow DOR and use as our cutoff 45 days from the date the letter was queued to be mailed.

magnitude and is not statistically significant.

Column 2 adds controls for the individual characteristics described in Table 1: taxpayer age, state residency, late filing status, and balance due.[9] The addition of these controls does not appreciably change the estimated coefficients, consistent with the observed balance of individual characteristics across treatment groups. In contrast, controlling for the local demographic characteristics from Table 1 – median income and college completion rates – in Column 3 slightly raises the magnitude of the estimated coefficients. Finally, adding zip code level fixed effects (Column 4) yields our preferred specification. The estimated effect of the detailed penalty treatment on payments is 1.1 percentage points, representing a 3.2 percent increase over the control group. The estimated effect of the generic penalty treatment is 0.5 percentage points, and the estimated effect of the social norms treatment is approximately 0.2 percentage points, though neither of these effects are statistically significant. The analysis thus suggests that the specific penalty treatment is the most effective, and is associated with an economically modest increase in the fraction of delinquent taxpayers paying off their balance in full by the statutory deadline.

ii. Payment Plan Creation

Table 3 turns to our next outcome of interest, a taxpayer's partial payment of their outstanding balance through the creation of a payment plan. For reference, Column 1 replicates our preferred specification on the likelihood of making a full payment. Column 2 repeats that specification using payment plan creation as the outcome variable. We observe a similar pattern as with full payments. The results suggest that the detailed penalty treatment was the most effective at inducing taxpayers to create payment plans – it was associated with a statistically significant 0.5 percentage point increase in payment plans, representing approximately an 11 percent increase relative to the control group mean of 4.5 percent. The effect of the other two treatments were near zero and not statistically significant.

Finally, because the treatments might cause taxpayers to switch between paying off their balance and payment plan creation, Column 3 of Table 3 investigates the effect of the treatment on the likelihood of taxpayers either making a full payment or creating a payment plan. The results

[9]For age and balance due, controls include continuous measures of age and balance due, the age and balance categories used in randomization stratification, and the interaction of the continuous and categorical variables. The specification also includes an indicator for individuals for whom age is missing (2472 individuals).

suggest that the detailed penalty treatment increases the fraction of taxpayers making any payment by 1.6 percentage points, a 4.1 percent increase relative to the control group mean. The generic penalty version was associated with an increase relative to the control of approximately half of this magnitude. Again, we estimate the effect of the social norms letter to be near-zero.

B. Short versus Longer Term Outcomes

Interpreting the economic significance of our estimates in the prior subsection requires understanding whether the intervention induced payments by new, non-delinquent taxpayers, or simply sped up payments by taxpayers who would have eventually paid even had they not received the treatment intervention. For example, (Hallsworth et al., 2017) finds large effects of NOD letters emphasizing various types of social norms compared to the standard NOD on payments made within three weeks; however, these treatment effects fade and many are no longer significant when considering payment rates 70 days after the letter's mailing, suggesting that the treatment messages primarily increased the speed at which recipients paid their taxes rather than generating new payments. Our analyses thus far have focused on taxpayer actions taken by the statutory deadline using DOR's definition of Final Determination to be 45 days from the date the notice was queued to be mailed. This is the relevant cutoff for the imposition of financial penalties, but it is possible that the modifications to the NOD letter could have affected behavior apart from that specific margin as well, such as by inducing taxpayers to make their payments earlier than they would have otherwise.

Figure 1 presents the rate of full payments for each experimental group by day for the first 100 days after the letter's mailing. We focus only on full payments for this analysis because we lack data on the precise timing of payment plans created after the statutory deadline. Payment rates steadily increase over the first month for each group with roughly one third of taxpayers making a full payment by the statutory deadline of 45 days and increasing to roughly 40 percent by 100 days. The figure shows that deviations by experimental group emerge around 30 days after the notice was sent and remain through the end of the follow-up period.

Table 4 estimates the effects of the treatments on taxpayer payments up to 100 days from the letter's mailing, varying the cutoff date across different time windows. The results show the effect is largest at the NOD threshold but suggest that the effects persist (albeit with a smaller magnitude) as far as 100 days from letter's mailing. The results in the table thus provide suggestive evidence that

the treatments cause some delinquent taxpayers to pay off their balance when they would not have otherwise done so in the months following receipt of the notice. That the estimated effects of the treatments are smaller in magnitude when assessed at the later dates suggests that the treatments cause other taxpayers to move up the timing of the payments they would have otherwise made eventually.

C. Payment Effects by Balance Due

Our results so far suggest that the penalty-design notices affect the number of taxpayers who choose to pay off their balance due or set up a payment plan. However, understanding how this reduction in the number of delinquent taxpayer accounts maps into revenue requires understanding heterogeneity in the treatment effect by taxpayers' balance due.

We find strong evidence of heterogeneity along this margin. Table 5 considers our baseline specification separately by balance due tertile. For the first tertile (balances due of less than $95), we find that both penalty notices are effective. The detailed penalty increases the likelihood of full payment or payment plan creation by 1.8 percentage points (a 3.1 percent increase relative to the control) and the generic penalty increases payments or payment plans by 1.2 percentage points (a 2.1 percent relative increase). Because the balance due is relatively low, it is perhaps not surprising that the treatment effect for taxpayers in this tertile is driven by full payments rather than the creation of payment plans. For taxpayers in the second tertile (balances due between $95 and $433), the effect of the detailed penalty is similar in percentage point terms (a 1.9 percentage point increase) but somewhat larger in relative terms (a 6.1 percent increase relative to the control). In contrast, we estimate the effect of the generic penalty to be 0.3 percentage points, and statistically insignificant. Finally, neither penalty treatment is statistically significant for taxpayers in the third tertile (above $433), although we do observe a statistically significant increase in payment plan creation associated with the detailed penalty. In each tertile, the effect of the social norms treatment is economically small and statistically insignificant.[10]

[10]Other papers in this literature focus on a distribution of taxpayers with higher balances due (Hallsworth et al., 2017; Meiselman, 2018). If one were to extrapolate our observed effect to the distribution of balances due in those papers, it would imply a zero effect for both social norms and penalty treatments.

D. Demographic Heterogeneity in Treatment Effect

In this section we explore several other dimensions along which treatment effects might differ.

i. Age

One way that our treatment messages could affect taxpayer behavior is that the notices increase the salience of the penalties for delinquent payments. This may be particularly important for younger taxpayers who have less familiarity with the financial consequences of non-compliance.

Table 6 investigates heterogeneity in the treatment effects by age. For ease of interpretation, Table 6 divides the sample into taxpayers above and below the median age in the sample (43 years old), in columns 1 and 2, respectively, but the results are similar for other cuts of the data. The results show that the entire treatment effect appears driven by taxpayers below the median age in our sample, for whom receiving the detailed penalty notice increases the fraction of taxpayers taking action by almost 10 percent (2.7 percentage points). In contrast, the size of the effect for above median age taxpayers is close to zero. Again, we observe a similar pattern (of lesser magnitude) with respect to the generic penalty NOD.

ii. State Residence

While the majority of the delinquent taxpayers reside in the state of Colorado, 10 percent of our sample lives outside the state. This could be important for two reasons. In terms of the penalty treatment, out-of-state taxpayers may be less familiar with Colorado laws and, therefore, communications emphasizing the financial penalties may be more effective with this subgroup. With regards to the social norms, the treatment message describes the high compliance rate of Colorado residents, not taxpayers in general. Therefore, it is possible that non-Colorado residents may be less likely to alter their behavior in response to this information.

Columns 3 and 4 of Table 6 consider the effect of the treatment messages separately for Colorado residents and non-residents, respectively. We find that the size of the estimated treatment effect of the detailed penalty message is twice as large for non-residents, consistent with the hypothesis that out-of-state taxpayers may be less familiar with Colorado tax penalties; however, due to the small sample size of the non-resident population, the point estimate is not statistically significant, despite

its larger magnitude. We also find that the effect of the social norms treatment is near zero for both residents and non-residents suggesting that the null effect of this treatment arm in the main results section is not being driven by the non-response of out-of-state taxpayers.

iii. Income and Education

While our individual-level demographic data on taxpayers in our sample is limited, we do have data on the taxpayer's zip code of residence. In this section, we consider how our treatment effects differ by neighborhood demographic characteristics. Specifically, we focus on two demographic characteristics that are commonly associated with financial sophistication: median income and college attainment. If financially sophisticated taxpayers are already aware of penalties for non-compliance, we might expect that our treatment messages would have a larger effect in neighborhoods with lower incomes or levels of education.

Columns 5 through 8 of Table 6 find evidence consistent with this hypothesis: treatment effects are almost twice as large for taxpayers in higher-income areas and slightly higher in areas with higher college attainment, although the differences are not statistically significant.

Finally, the preceding analyses have focused on demographic characteristics individually, but it is likely that these characteristics are correlated with one another. For example, it could be that our observed differences in treatment effect by age could be driven by younger taxpayers having lower incomes. Table 7 investigates this by including interaction terms for balance due, age, income, education, and Colorado residency. The results suggest that age remains an important determinant for the effectiveness of the notice even after controlling for the other taxpayer characteristics we observe. Notably, for the subgroup of taxpayers who are below median age and whose balance due is in the lowest tertile, our results suggest that the detailed penalty raises payment rates by approximately 3.0 percentage points (7.8 percent) relative to the control.

5. Discussion

We document differences in the effectiveness of delinquency notices sent to taxpayers based on whether the notices make salient the details of financial incentives for timely payment. In contrast, we find that simply emphasizing the existence of a penalty, or emphasizing social norms against late

payment, exert smaller or near-zero effects. Because of our large sample, these effects are precisely estimated.

Our finding that small differences in notice wording can affect behavior underscores the importance of tax authorities paying attention to such issues when determining how to communicate with taxpayers. Reducing the total number of delinquent taxpayer accounts is valuable for taxing authorities because it reduces costs associated with further outreach to delinquent taxpayers such as additional mailings, phone calls, or enforcement actions. For many taxpayers, the effects of the presentational differences we study are modest – an increase in the payment rate of at most a few percent. However, delinquency notices of the type we study are already routinely sent to taxpayers; there is essentially *no additional cost* to designing the notice to have a more effective presentation rather than a less effective one. And to the extent a tax authority is focusing on reaching one of the groups of taxpayers we observe to be particularly responsive (such as younger taxpayers), the benefits of the more effective presentation is likely to be greater.

Comparing our results to prior findings from behavioral public finance, our results reinforce some lessons and are at odds with others. One example of divergence lies in the effectiveness of social norms messaging. For example, Hallsworth et al. (2017) studies delinquent taxpayers in the UK and finds that emphasizing social norms using messages similar to ours dramatically raises payments. Our finding of a zero effect may reflect differences in preexisting beliefs (UK citizens may have been less aware of the high payment rate than Colorado residents) or different degrees of importance attached to this type of social norm between citizens of the UK and Colorado.[11]

With respect to our finding on the effectiveness of financial penalties, here the results are, largely speaking, more in keeping with the other contemporary work on this topic. Chirico et al. (2017) and Meiselman (2018) investigate the effect of communications by tax authorities in U.S. municipalities on property tax payment and income tax filing, respectively, and find that notices that emphasize financial penalties result in higher payment rates than notices emphasizing social norms. Chirico et al. (2017) find effects of substantially larger magnitudes than ours, although for the most part the confidence interval for their estimated effects overlaps with ours.[12] One possible explanation for the smaller effect we observe could be that a larger number of taxpayers in our sample were

[11] Meiselman (2018) also finds that social norms are not effective in a different American context, suggesting the source of the difference may not simply be Colorado-specific.

[12] Meiselman (2018) also finds large effects, but the outcome he studies is tax filing, not delinquent payments.

already aware that the state could impose a penalty compared to fewer taxpayers aware of the financial consequences of nonpayment of property taxes to a municipality (such as a property tax lien). Alternatively, it could be that taxpayers were more concerned with avoiding the penalties for nonpayment of property taxes that Chirico et al. (2017) emphasized in their letters (such as imposition of a lien) relative to the relatively modest financial penalties described in the letter by DOR.

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Table 1: Descriptive Statistics

		Treatment Groups				
	Full Sample (1)	Detailed Penalty (2)	Generic Penalty (3)	Social Norms (4)	Control (5)	p value (6)
Individual Characteristics						
Age	43.9	43.9	43.9	43.8	43.9	0.8467
Balance Due ($)	515	514	518	515	514	0.9440
Return Received On-Time (%)	77.9	77.9	77.8	77.9	78.0	0.9839
Colorado Resident (%)	91.1	91.1	91.0	91.1	91.3	0.8137
Neighborhood Characteristics						
Median Household Income ($)	64,215	64,073	63,982	64,229	64,576	0.0171
Bachelor's Degree or Higher (%)	37.1	37.2	36.8	36.9	37.4	0.0008
N	90,349	22,571	22,625	22,613	22,540	

Source: Colorado Department of Revenue, 2016 (individual characteristics) & American Community Survey 2011-2015 (neighborhood characteristics).

Local demographic data reported at ZCTA-level and converted to zip-code level using UDS Mapper Cross-Walk, see https://www.udsmapper.org/zctacrosswalk.cfm.

P-value in column 6 associated with the F-test for equality across the four experimental groups.

Table 2: Effect of Notice on Payment Rate by Treatment

	(1)	(2)	(3)	(4)
Detailed Penalty	0.0089**	0.0086**	0.0096**	0.0110***
	(0.0045)	(0.0040)	(0.0040)	(0.0041)
Generic Penalty	0.0046	0.0046	0.0066*	0.0050
	(0.0043)	(0.0037)	(0.0036)	(0.0036)
Social Norms	-0.0020	0.0001	0.0015	0.0018
	(0.0046)	(0.0040)	(0.0041)	(0.0041)
Individual Characteristics	No	Yes	Yes	Yes
Neighborhood Characteristics	No	No	Yes	No
Zip Code Fixed Effects	No	No	No	Yes
Control Group Mean	0.3394	0.3394	0.3394	0.3394
N	90,349	90,349	90,349	90,349

Outcomes: indicator for making a full payment within 45 days of NOD.
Individual characteristics include age controls, balance controls, Colorado residency, and whether the return was filed on time. Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of, the balance due, dummies for six balance categories, and an interaction of the dummies with the continuous balance variable.
Neighborhood characteristics include ZCTA-level median household income and college. attainment.
Robust standard error in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 3: Effect of Notice on Payment and Payment Plans by Treatment

	Paid (1)	Plan (2)	Paid or Plan (3)
Detailed Penalty	0.0110***	0.0047***	0.0157***
	(0.0041)	(0.0018)	(0.0043)
Generic Penalty	0.0050	0.0015	0.0064
	(0.0036)	(0.0020)	(0.0041)
Social Norms	0.0018	-0.0025	-0.0007
	(0.0041)	(0.0017)	(0.0041)
Zip Code Fixed Effects	Yes	Yes	Yes
Individual Characteristics	Yes	Yes	Yes
Control Group Mean	0.3394	0.0447	0.3841
N	90,349	90,349	90,349

Outcomes: indicator for making a full payment by statutory deadline (Column 1); creating a payment plan (Column 2); and either making a full payment or creating a payment plan (Column 3).
All regressions include age controls, balance controls, whether the return was filed on time, and zip code fixed effects. Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of the balance due, dummies for six balance categories, and an interaction of the dummies with the continuous balance variable.
Robust standard error in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 4: Effect of Notice on Payment and Payment Plans by Treatment

	45 Days	60 Days	75 Days	100 Days
	(1)	(2)	(3)	(4)
Detailed Penalty	0.0110***	0.0062	0.0073*	0.0075*
	(0.0041)	(0.0042)	(0.0044)	(0.0044)
Generic Penalty	0.0050	0.0025	0.0039	0.0039
	(0.0036)	(0.0038)	(0.0037)	(0.0038)
Social Norms	0.0018	-0.0014	-0.0014	0.0006
	(0.0041)	(0.0043)	(0.0043)	(0.0044)
Control Group Mean	0.3394	0.3712	0.3894	0.3971
N	90,349	90,349	90,349	90,349

Outcomes: indicator for making a full payment within the specified number of days after NOD is sent. DOR implements the statutory deadline as 45 days after NOD is sent.

All regressions include age controls, balance controls, whether the return was filed on time, and zip code fixed effects. Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of the balance due, dummies for six balance categories, and an interaction of the dummies with the continuous balance variable.

Robust standard error in parentheses.

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

Table 5: Treatment Effect Heterogeneity by Balance Due

Panel A: Paid	Low Balance (1)	Medium Balance (2)	High Balance (3)
Detailed Penalty	0.0194**	0.0173**	-0.0043
	(0.0084)	(0.0078)	(0.0054)
Generic Penalty	0.0127*	0.0072	-0.0031
	(0.0076)	(0.0073)	(0.0057)
Social Norms	0.0053	0.0069	-0.0066
	(0.0075)	(0.0081)	(0.0055)
Control Group Mean	0.5819	0.2736	0.1605
N	30,261	30,020	30,068
Panel B: Plan			
Detailed Penalty	-0.0012	0.0017	0.0121**
	(0.0007)	(0.0031)	(0.0048)
Generic Penalty	-0.0003	-0.0047	0.0075
	(0.0008)	(0.0029)	(0.0052)
Social Norms	-0.0002	-0.0051	-0.0037
	(0.0008)	(0.0032)	(0.0044)
Control Group Mean	0.0021	0.0346	0.0979
N	30,261	30,020	30,068
Panel C: Paid or Plan			
Detailed Penalty	0.0182**	0.0190**	0.0077
	(0.0085)	(0.0076)	(0.0066)
Generic Penalty	0.0124	0.0025	0.0043
	(0.0076)	(0.0077)	(0.0076)
Social Norms	0.0051	0.0018	-0.0103
	(0.0076)	(0.0083)	(0.0067)
Control Group Mean	0.5841	0.3082	0.2584
N	30,261	30,020	30,068

Outcomes: indicator for making a full payment by statutory deadline (Panel A); creating a payment plan (Panel B); and either making a full payment or creating a payment plan (Panel C).
Columns 1-3 present results by the amount of the balance due, where low balance is less than $95, medium balance is between $95 and $433, and high balance is more than $433.
All regressions include age controls, balance controls, whether the return was filed on time, and zip code fixed effects. Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of the balance due, dummies for six balance categories, and an interaction of the dummies with the continuous balance variable.
Robust standard error in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 6: Treatment Effect Heterogeneity by Demographic Characteristics

	Individual Level				Zip Code Level			
	Median Age		CO Resident		Median Income		Median College Attainment	
	Above	Below	Yes	No	Above	Below	Above	Below
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Detailed Penalty	0.0069	0.0269***	0.0312	0.0150***	0.0113**	0.0210***	0.0137**	0.0174***
	(0.0062)	(0.0058)	(0.0206)	(0.0044)	(0.0056)	(0.0065)	(0.0064)	(0.0056)
Generic Penalty	-0.0020	0.0187***	-0.0054	0.0069*	0.0042	0.0093	0.0033	0.0091
	(0.0057)	(0.0061)	(0.0224)	(0.0042)	(0.0052)	(0.0064)	(0.0058)	(0.0058)
Social Norms	-0.0045	0.0065	-0.0001	-0.0006	-0.0026	0.0020	0.0033	-0.0046
	(0.0060)	(0.0061)	(0.0225)	(0.0042)	(0.0057)	(0.0060)	(0.0062)	(0.0054)
Control Group Mean	0.4856	0.2825	0.4297	0.3797	0.4339	0.3332	0.4456	0.3213
N	44,437	43,440	8,005	82,344	45,051	45,298	44,834	45,515

Outcome: indicator for making a full payment by statutory deadline or creating a payment plan.

All regressions include age controls, balance controls, whether the return was filed on time, and zip code fixed effects. Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of the balance due, dummies for six balance categories, snd an interaction of the dummies with the continuous balance variable.

Robust standard error in parentheses.

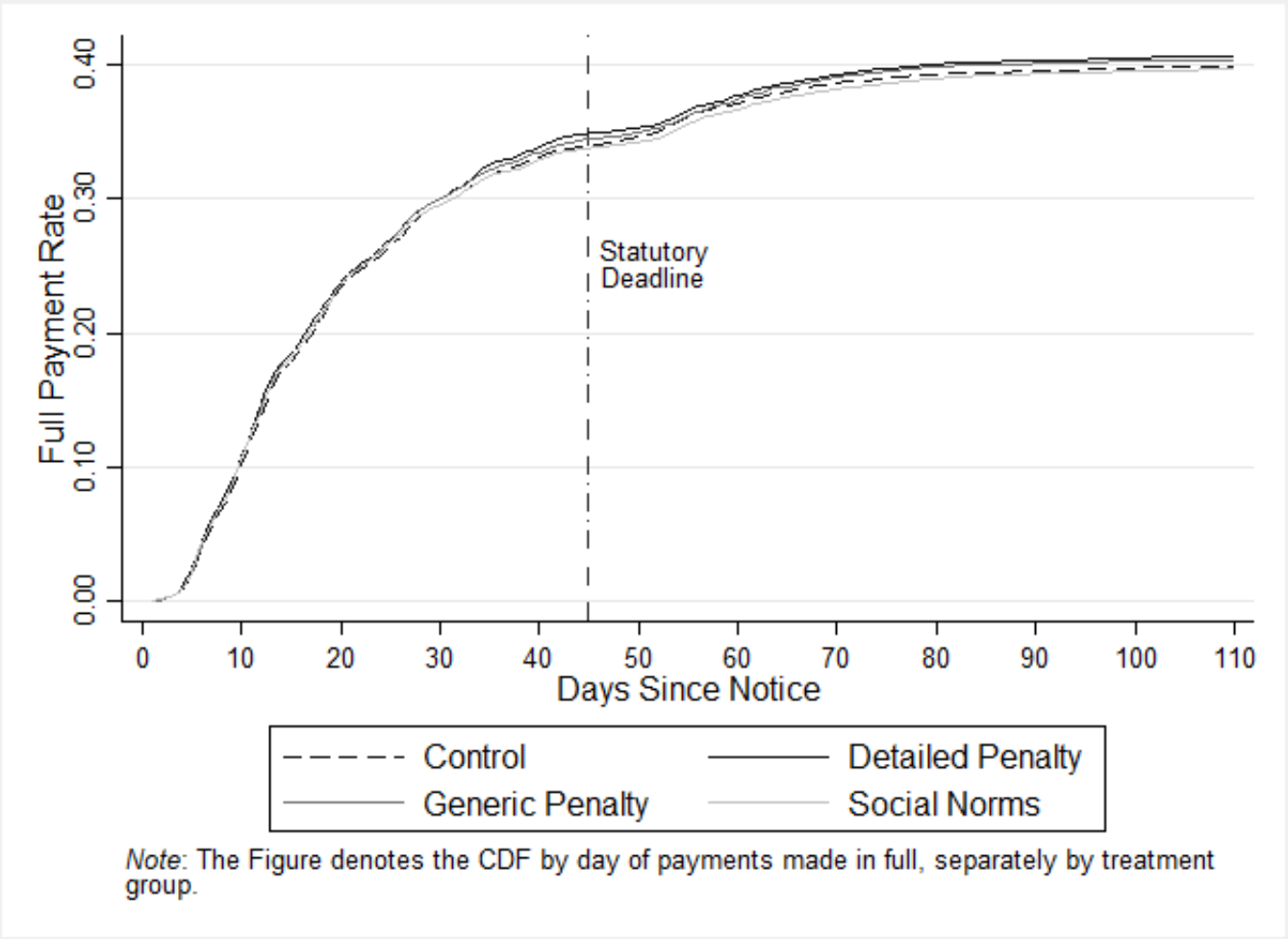
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table 7: Treatment Effect Heterogeneity with Multiple Interactions

	(1)
Detailed Penalty	0.0289***
	(0.0074)
Generic Penalty	0.0220***
	(0.0076)
Social Norms	0.0043
	(0.0073)
Detailed * Above Median Age	-0.0183**
	(0.0081)
Generic * Above Median Age	-0.0202**
	(0.0082)
Norms * Above Median Age	-0.0092
	(0.0085)
Detailed * Non-CO Resident	0.0193
	(0.0214)
Generic * Non-CO Resident	-0.0110
	(0.0235)
Norms * Non-CO Resident	0.0009
	(0.0238)
Detailed * Above Median Income	-0.0079
	(0.0104)
Generic * Above Median Income	-0.0019
	(0.0095)
Norms * Above Median Income	-0.0089
	(0.0092)
Detailed * Above Median Education	0.0002
	(0.0104)
Generic * Above Median Education	-0.0067
	(0.0097)
Norms * Above Median Education	0.0097
	(0.0092)
Control Group Mean	0.3841
N	87,877

Outcome: indicator for making a full payment by statutory deadline or creating a payment plan.
All regressions include age controls, balance controls, whether the return was filed on and zip code fixed effects.
Age controls include a continuous age variable, dummy variables for four age categories, and an interaction of the dummies with the continuous age variable. Similarly, the balance controls include a continuous variable for the log of the balance due, dummies for six balance categories, and an interaction of the dummies with the continuous balance variable.
Robust standard error in parentheses.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

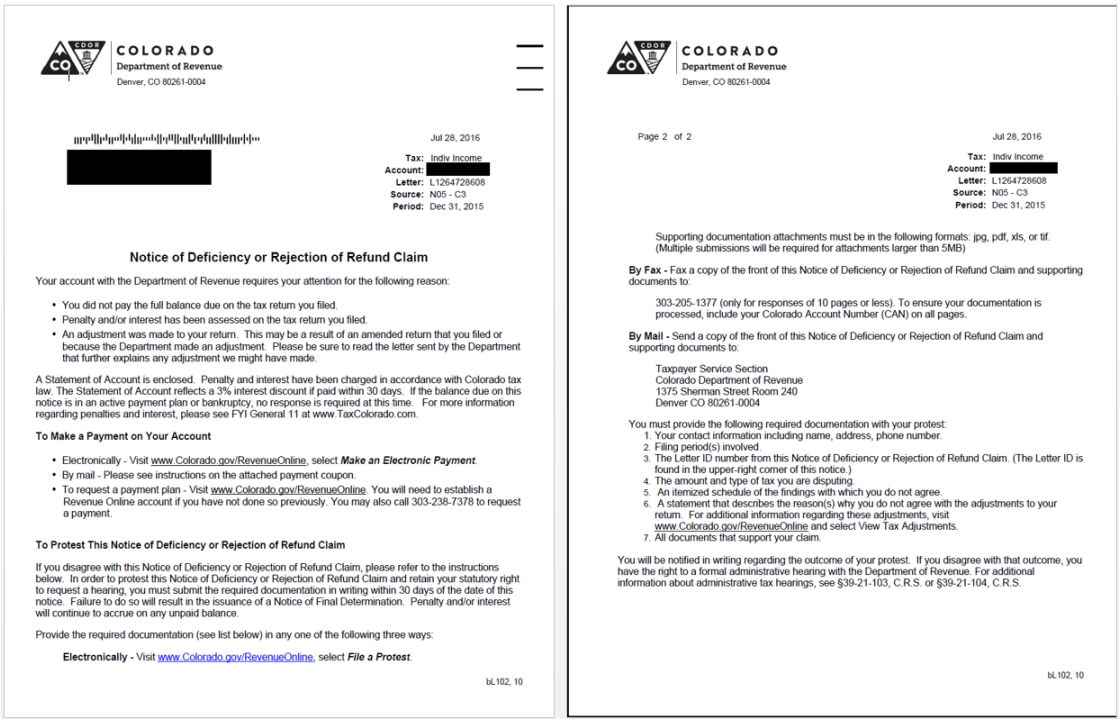
Figure 1: Payment Rate Over Time by Experimental Group



Note: The Figure denotes the CDF by day of payments made in full, separately by treatment group.

Appendix A. Notice of Deficiency Letters

Appendix Figure 1: Control Letter



COLORADO
Department of Revenue
Denver, CO 80261-0004

[redacted]

Jul 28, 2016

Tax: Indiv Income
Account: [redacted]
Letter: L1264728608
Source: N05 - C3
Period: Dec 31, 2015

Notice of Deficiency or Rejection of Refund Claim

Your account with the Department of Revenue requires your attention for the following reason:

- You did not pay the full balance due on the tax return you filed.
- Penalty and/or interest has been assessed on the tax return you filed.
- An adjustment was made to your return. This may be a result of an amended return that you filed or because the Department made an adjustment. Please be sure to read the letter sent by the Department that further explains any adjustment we might have made.

A Statement of Account is enclosed. Penalty and interest have been charged in accordance with Colorado tax law. The Statement of Account reflects a 3% interest discount if paid within 30 days. If the balance due on this notice is in an active payment plan or bankruptcy, no response is required at this time. For more information regarding penalties and interest, please see FYI General 11 at www.TaxColorado.com.

To Make a Payment on Your Account

- Electronically - Visit www.Colorado.gov/RevenueOnline, select ***Make an Electronic Payment***.
- By mail - Please see instructions on the attached payment coupon.
- To request a payment plan - Visit www.Colorado.gov/RevenueOnline. You will need to establish a Revenue Online account if you have not done so previously. You may also call 303-238-7378 to request a payment.

To Protest This Notice of Deficiency or Rejection of Refund Claim

If you disagree with this Notice of Deficiency or Rejection of Refund Claim, please refer to the instructions below. In order to protest this Notice of Deficiency or Rejection of Refund Claim and retain your statutory right to request a hearing, you must submit the required documentation in writing within 30 days of the date of this notice. Failure to do so will result in the issuance of a Notice of Final Determination. Penalty and/or interest will continue to accrue on any unpaid balance.

Provide the required documentation (see list below) in any one of the following three ways:

Electronically - Visit www.Colorado.gov/RevenueOnline, select ***File a Protest***.

bL102, 10

COLORADO
Department of Revenue
Denver, CO 80261-0004

Page 2 of 2

Jul 28, 2016

Tax: Indiv Income
Account: [redacted]
Letter: L1264728608
Source: N05 - C3
Period: Dec 31, 2015

Supporting documentation attachments must be in the following formats: jpg, pdf, xls, or tif. (Multiple submissions will be required for attachments larger than 5MB)

By Fax - Fax a copy of the front of this Notice of Deficiency or Rejection of Refund Claim and supporting documents to:

303-205-1377 (only for responses of 10 pages or less). To ensure your documentation is processed, include your Colorado Account Number (CAN) on all pages.

By Mail - Send a copy of the front of this Notice of Deficiency or Rejection of Refund Claim and supporting documents to:

Taxpayer Service Section
Colorado Department of Revenue
1375 Sherman Street Room 240
Denver CO 80261-0004

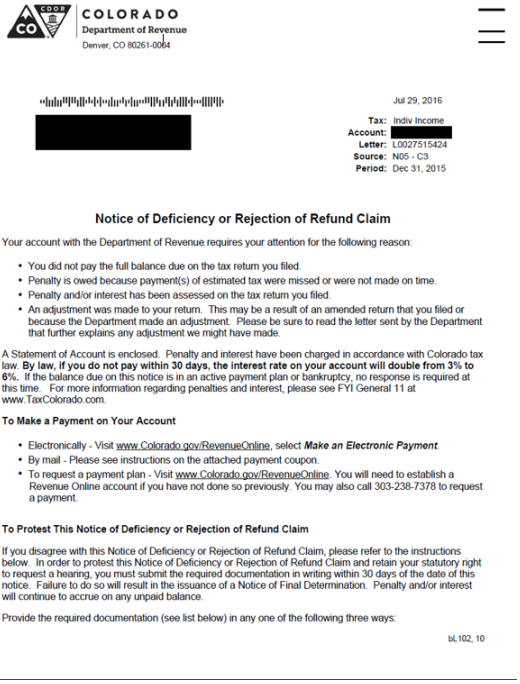
You must provide the following required documentation with your protest:

1. Your contact information including name, address, phone number.
2. Filing period(s) involved.
3. The Letter ID number from this Notice of Deficiency or Rejection of Refund Claim. (The Letter ID is found in the upper-right corner of this notice.)
4. The amount and type of tax you are disputing.
5. An itemized schedule of the findings with which you do not agree.
6. A statement that describes the reason(s) why you do not agree with the adjustments to your return. For additional information regarding these adjustments, visit www.Colorado.gov/RevenueOnline and select View Tax Adjustments.
7. All documents that support your claim.

You will be notified in writing regarding the outcome of your protest. If you disagree with that outcome, you have the right to a formal administrative hearing with the Department of Revenue. For additional information about administrative tax hearings, see §39-21-103, C.R.S. or §39-21-104, C.R.S.

bL102, 10

Appendix Figure 2: Detailed Penalty Letter



COLORADO
Department of Revenue
Denver, CO 80261-0004

[redacted]

Jul 29, 2016

Tax: Indiv Income
Account: [redacted]
Letter: L0027515424
Source: N05 - C3
Period: Dec 31, 2015

Notice of Deficiency or Rejection of Refund Claim

Your account with the Department of Revenue requires your attention for the following reason:

- You did not pay the full balance due on the tax return you filed.
- Penalty is owed because payment(s) of estimated tax were missed or were not made on time.
- Penalty and/or interest has been assessed on the tax return you filed.
- An adjustment was made to your return. This may be a result of an amended return that you filed or because the Department made an adjustment. Please be sure to read the letter sent by the Department that further explains any adjustment we might have made.

A Statement of Account is enclosed. Penalty and interest have been charged in accordance with Colorado tax law. **By law, if you do not pay within 30 days, the interest rate on your account will double from 3% to 6%.** If the balance due on this notice is in an active payment plan or bankruptcy, no response is required at this time. For more information regarding penalties and interest, please see FYI General 11 at www.TaxColorado.com.

To Make a Payment on Your Account

- Electronically - Visit www.Colorado.gov/RevenueOnline, select ***Make an Electronic Payment***.
- By mail - Please see instructions on the attached payment coupon.
- To request a payment plan - Visit www.Colorado.gov/RevenueOnline. You will need to establish a Revenue Online account if you have not done so previously. You may also call 303-238-7378 to request a payment.

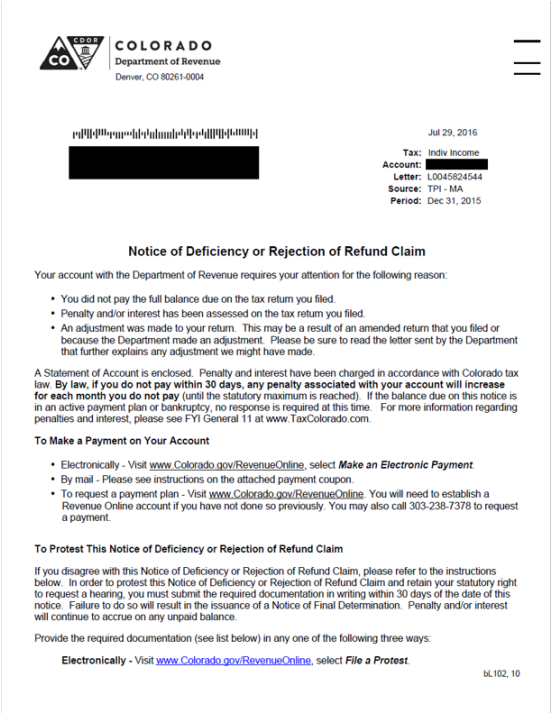
To Protest This Notice of Deficiency or Rejection of Refund Claim

If you disagree with this Notice of Deficiency or Rejection of Refund Claim, please refer to the instructions below. In order to protest this Notice of Deficiency or Rejection of Refund Claim and retain your statutory right to request a hearing, you must submit the required documentation in writing within 30 days of the date of this notice. Failure to do so will result in the issuance of a Notice of Final Determination. Penalty and/or interest will continue to accrue on any unpaid balance.

Provide the required documentation (see list below) in any one of the following three ways:

bL102, 10

Appendix Figure 3: Generic Penalty Letter



COLORADO
Department of Revenue
Denver, CO 80261-0004

[redacted]

Jul 29, 2016

Tax: Indiv Income
Account: [redacted]
Letter: L0045824544
Source: TPI - MA
Period: Dec 31, 2015

Notice of Deficiency or Rejection of Refund Claim

Your account with the Department of Revenue requires your attention for the following reason:

- You did not pay the full balance due on the tax return you filed.
- Penalty and/or interest has been assessed on the tax return you filed.
- An adjustment was made to your return. This may be a result of an amended return that you filed or because the Department made an adjustment. Please be sure to read the letter sent by the Department that further explains any adjustment we might have made.

A Statement of Account is enclosed. Penalty and interest have been charged in accordance with Colorado tax law. **By law, if you do not pay within 30 days, any penalty associated with your account will increase for each month you do not pay** (until the statutory maximum is reached). If the balance due on this notice is in an active payment plan or bankruptcy, no response is required at this time. For more information regarding penalties and interest, please see FYI General 11 at www.TaxColorado.com.

To Make a Payment on Your Account

- Electronically - Visit www.Colorado.gov/RevenueOnline, select ***Make an Electronic Payment***.
- By mail - Please see instructions on the attached payment coupon.
- To request a payment plan - Visit www.Colorado.gov/RevenueOnline. You will need to establish a Revenue Online account if you have not done so previously. You may also call 303-238-7378 to request a payment.

To Protest This Notice of Deficiency or Rejection of Refund Claim

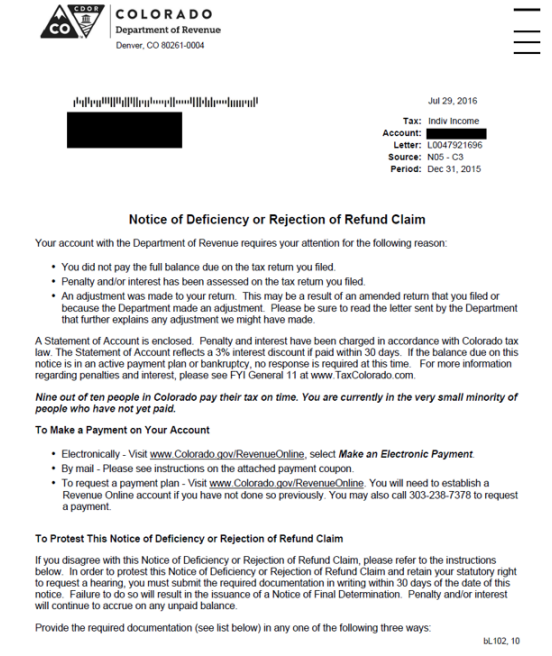
If you disagree with this Notice of Deficiency or Rejection of Refund Claim, please refer to the instructions below. In order to protest this Notice of Deficiency or Rejection of Refund Claim and retain your statutory right to request a hearing, you must submit the required documentation in writing within 30 days of the date of this notice. Failure to do so will result in the issuance of a Notice of Final Determination. Penalty and/or interest will continue to accrue on any unpaid balance.

Provide the required documentation (see list below) in any one of the following three ways:

Electronically - Visit www.Colorado.gov/RevenueOnline, select ***File a Protest***.

bL102, 10

Appendix Figure 4: Norms Letter



COLORADO
Department of Revenue
Denver, CO 80261-0004

[redacted]

Jul 29, 2016

Tax: Indiv Income
Account: [redacted]
Letter: L0047921696
Source: N05 - C3
Period: Dec 31, 2015

Notice of Deficiency or Rejection of Refund Claim

Your account with the Department of Revenue requires your attention for the following reason:

- You did not pay the full balance due on the tax return you filed.
- Penalty and/or interest has been assessed on the tax return you filed.
- An adjustment was made to your return. This may be a result of an amended return that you filed or because the Department made an adjustment. Please be sure to read the letter sent by the Department that further explains any adjustment we might have made.

A Statement of Account is enclosed. Penalty and interest have been charged in accordance with Colorado tax law. The Statement of Account reflects a 3% interest discount if paid within 30 days. If the balance due on this notice is in an active payment plan or bankruptcy, no response is required at this time. For more information regarding penalties and interest, please see FYI General 11 at www.TaxColorado.com.

Nine out of ten people in Colorado pay their tax on time. You are currently in the very small minority of people who have not yet paid.

To Make a Payment on Your Account

- Electronically - Visit www.Colorado.gov/RevenueOnline, select ***Make an Electronic Payment***.
- By mail - Please see instructions on the attached payment coupon.
- To request a payment plan - Visit www.Colorado.gov/RevenueOnline. You will need to establish a Revenue Online account if you have not done so previously. You may also call 303-238-7378 to request a payment.

To Protest This Notice of Deficiency or Rejection of Refund Claim

If you disagree with this Notice of Deficiency or Rejection of Refund Claim, please refer to the instructions below. In order to protest this Notice of Deficiency or Rejection of Refund Claim and retain your statutory right to request a hearing, you must submit the required documentation in writing within 30 days of the date of this notice. Failure to do so will result in the issuance of a Notice of Final Determination. Penalty and/or interest will continue to accrue on any unpaid balance.

Provide the required documentation (see list below) in any one of the following three ways:

bL102, 10