

Strategic Timing of Charitable Giving*

Sara LaLumia
Williams College

December 3, 2016

DRAFT: Preliminary and incomplete.

Abstract

Gifts to charity are tax deductible for filers who itemize but not for filers who take the standard deduction. This paper investigates whether households that are likely switching from taking the standard deduction to itemizing change the timing of gifts to charity, postponing gifts from December of the year in which they take the standard deduction to January of the year in which they itemize. I use the initiation of mortgage payments as a proxy for switching into itemizing. I find evidence that households in the control group concentrate their charitable giving in the month of December, but households with first mortgage payments at the start of a new year do not concentrate their giving in the previous December. This pattern is distinctive to charitable giving. The non-deductible expenses of cash gifts to individuals and clothing purchases are concentrated in the month of December to an equal extent for those who are likely consistent itemizers and those who are likely switching into itemizing.

*I am grateful for comments from Leah Brooks; conference participants at the National Tax Association; and seminar participants at University of Michigan and Oberlin College. Nahomy Alvarez provided excellent research assistance. All errors are my own.

If a taxpayer anticipates a tax change in the near future, she may change the timing of a transaction. Pre-announced tax changes have caused corporate executives to realize unusually high amounts of income just prior to a tax increase (Goolsbee 2000) and have caused Danish taxpayers to postpone receipt of wage income just prior to a tax cut (Kreiner, Leth-Petersen and Skov 2016). Actions other than receiving income can also be strategically re-timed to minimize taxes. When the IRS announced that it was tightening the rules regarding the valuation of cars donated to charity, effective January 1, 2005, vehicle donations surged in late 2004 (Ackerman and Auten 2011). In order for taxpayers to shift the timing of their economic activity in a way that takes advantage of a scheduled tax change, they need to be aware of upcoming tax changes. For legislated tax changes, this may involve paying attention to Congressional activity or reading IRS publications in advance of tax-filing season. In cases where a tax change is a result of some action taken by the taxpayer herself, it may be more likely that the taxpayer can anticipate the tax change. In this paper I study whether individuals adjust the timing of their charitable contributions in the months just before and after purchasing a home, an event that is likely to lower the net-of-tax price of gifts to charity in a predictable way.

Filers who take the standard deduction do not receive preferred tax treatment of any charitable giving. For these taxpayers, giving \$1 to charity involves giving up \$1. In contrast, itemizers can deduct the value of charitable giving from their taxable income. This means that, for an itemizer, giving \$1 to charity involves giving up only one minus the marginal tax rate. If a taxpayer can predict that she will switch from taking the standard deduction in one year to itemizing deductions in the following year, she may postpone charitable giving into the second year when its net price is lower. Beginning to make mortgage payments is a common trigger for moving from taking the standard deduction to itemizing. Spending on mortgage interest and on property taxes is deductible, and for many households the amount spent on these two items will exceed the standard deduction, making itemization the tax-minimizing choice.

This paper uses monthly data on charitable giving, drawn from the Consumer Expenditure Survey (CEX), to investigate the temporal pattern in charitable giving. The CEX collects up to twelve consecutive months of detailed spending data from interviewed households, including information on charitable giving and mortgage payments. The rolling nature of the survey means that new households are entering the CEX in every month, and most households have interview data that fall within two consecutive calendar years. I identify households that make a first mortgage payment in the second calendar year of CEX coverage as those that are likely facing a predictable decline in the tax price of charitable giving. I compare these “treated” households to a control group of households that have been making mortgage payments for a longer period of time and are likely to face a constant tax price of charitable giving. I test if the treated households shift charitable contributions out of the first year of CEX coverage and into the second, more tax-advantaged, year. I find that the control group displays a large spike in giving in December of the first observed calendar year, while the treatment group does not. This pattern is consistent with the treatment group postponing charitable gifts until a later time when they face a lower net-of-tax price.

1 Background on Relevant Tax Provisions

A tax filer can choose to take the standard deduction or to itemize deductions by completing a Schedule A. The standard deduction amount varies over time and depends on filing status, with the standard deduction for married filers equal to twice the amount for single filers and the amount for head of household filers approximately halfway between the two. Between 2004 and 2015, the amount of the standard deduction has ranged (in nominal terms) from \$4850 to \$6300 for single filers. Over the years that I study, approximately one-third of returns itemize deductions annually. High-income taxpayers are more likely to itemize than low-income taxpayers, but itemizing is not exclusively an activity of the rich. For tax year 2010, rates of itemizing were 16% in the 10 percent tax bracket, 37% in the 15 percent tax

bracket, 67% in the 25 percent tax bracket, and 70% or higher in subsequent brackets (Harris and Baneman 2011).

The types of expenses most commonly deducted by itemizers are state and local taxes, claimed by about 98% of itemizers; home mortgage interest, claimed by over 80% of itemizers at the beginning of my sample period and by about 75% at the end of my sample period; and gifts to charity, claimed by about 82% of filers in years since 2007 (Lu 2016). These tax deductions involve substantial losses of tax revenue. The total value of these tax expenditures, as of 2014, is estimated to be approximately \$60 billion for deductibility of state and local taxes, \$72 billion for the mortgage interest deduction, and \$51 billion for the charitable contribution deduction (Joint Committee on Taxation 2015).

The analysis in this paper rests on the assumption that commencing mortgage payments is a strong predictor of switching from taking the standard deduction to itemizing deductions. A back-of-the-envelope calculation suggests that, for the average homebuyer, expenses associated with the home will either exceed or be close to the threshold at which itemizing is advantageous. Consider a taxpayer buying a home for the average 2010 sales price of \$272,900. Suppose this taxpayer makes a 20% downpayment and borrows the remaining \$218,320 in a 30-year mortgage with a fixed interest rate of 3.5%. In the first year of the mortgage, the taxpayer will spend \$7572 on mortgage interest. The average annual property tax burden, based on American Community Survey data from 2007-2011, was \$2430 (Harris and Moore 2013).¹ Mortgage interest and property tax payments, totaling just over \$10,000, exceed the 2010 standard deduction amounts for single and head of household filers but fall somewhat short of the \$11,400 standard deduction amount for a married couple. It is plausible that many married couples buying a home would earn enough to pay \$1400 or more in annual state income tax, so even for married filers the average home purchase is likely to make itemizing the better choice.² Poterba and Sinai (2008) use data from the 2004 Survey

¹The distribution of property taxes has a great deal of variation and a long right tail. Approximately three-quarters of counties have average property tax burdens no greater than \$1500 per year.

²Not everyone with deductible expenses above the threshold will necessarily choose to itemize deductions. Benzarti (2016) finds that there is a “missing mass” in the density of taxpayers claiming itemized deduction

of Consumer Finances to estimate that 63% of homeowners itemize, well above the one-third of all returns with itemized deductions.

IRS Publication 936 describes the details of the mortgage interest deduction. The qualifying loan can be a first or second mortgage, a line of credit, or a home equity loan. The mortgage can be used for either a main home or a second home. For mortgages taken out after October 13, 1987, there are limits on the size of the deduction. For loans used to buy, build, or improve a home, interest is only deductible for loan amounts of \$1 million or less. For home equity loans, interest is only deductible for loan amounts of \$100,000 or less. These limits apply to the combined value of mortgages held on both a main and a second home.

Both cash and non-cash contributions to non-profit organizations with 501(c)(3) status can be deducted. The total amount of charitable giving deducted cannot exceed 50% of AGI. If a taxpayer gives more than this in a particular year, excess amounts can be carried forward. The 50% limit binds for many high-wealth individuals in the years shortly before death (Joulfaian 2001) but is unlikely to be binding for those in my sample.

Several previous papers have used tax return data, in which charitable giving is reported at an annual level, to investigate whether the timing of charitable giving is responsive to tax incentives. Although the estimated size of the effect varies, this work generally finds that current-year charitable giving is positively related to subsequent-year net-of-tax prices (Randolph 1995, Barrett, McGuirk and Steinberg 2011, Auten, Sieg and Clotfelter 2002, Bakija and Heim 2011). This is consistent with strategic re-timing of giving. Bakija and Heim find that the elasticity of giving with respect to future *federal* net-of-tax price changes is higher than the elasticity of giving with respect to future *state* net-of-tax price changes. As they point out, “This is suggestive evidence that people may increase their current charitable giving in response to future price changes that are large and obvious...But it is not clear whether they respond to future price changes that are subtle and complicated, which would

amounts just above the threshold. He attributes this to the inconvenience of record-keeping and other tasks associated with itemizing. He estimates that, on average, taxpayers are willing to forego \$644 to avoid the hassle of itemizing.

characterize most variation in the time path of state prices.” I make the claim here that the switch from taking the standard deduction to itemizing is associated with large and obvious changes in the tax incentive for giving.

2 Empirical Strategy

The main idea underlying my analysis is to study households that likely experienced a change in their itemization status, due to the purchase of a home (and the corresponding initiation of mortgage payments). I investigate whether they shift charitable giving out of the period when they were likely taking the standard deduction and into the period when they were likely itemizing. I compare their patterns of charitable giving to the patterns of households that were likely consistent itemizers.

I use panel data on households (indexed by i) interviewed in up to 12 consecutive months (indexed by m). Households enter the sample continuously, so the twelve months can be divided in various ways across two different calendar years, denoted by T and $T + 1$. I estimate equations of the following form:

$$Giving_{im} = \sum_m \gamma_m Month + \beta_1 (Dec * NewMortgage)_{im} + \beta_2 (Jan * NewMortgage)_{im} + \delta_i + \epsilon_{im} \quad (1)$$

The dependent variable is the amount of (real) charitable giving reported by household i in month m . I include a vector of eleven calendar month dummies, the *Month* terms, to capture any seasonal pattern in charitable giving that is common to all of those in the sample.³ If Christmas and other end-of-year holidays are times of substantial charitable activity, there will be a positive coefficient on the December month dummy.

I construct a variable, *NewMortgage*, that is equal to one for households that made a first mortgage payment in the second calendar year covered by their interviews ($T + 1$). Individuals with *NewMortgage* = 1 constitute the treatment group, in the sense that these

³In the regressions reported below, July is the omitted calendar month.

are the households who are likely facing a lower after-tax price of charitable giving in calendar year $T + 1$ than in calendar year T . Individuals with $NewMortgage = 0$ make mortgage payments in both T and $T + 1$ and constitute a control group that is likely not experiencing changes in the tax treatment of their charitable giving. If households newly entering into mortgage contracts engage in tax-motivated shifting of charitable giving across time, they will reduce charitable contributions towards the end of calendar year T and increase charitable contributions at the beginning of year $T + 1$. This would produce a negative coefficient on the $Dec * NewMortgage$ interaction term and a positive coefficient on the $Jan * NewMortgage$ term.

In the baseline specification, I include household fixed effects in the estimating equation. Because $NewMortgage$ status is defined as an unchanging characteristic, equal to one in all observed months for a household that makes a first mortgage payment in $T + 1$, it is absorbed in the household-level fixed effect. Many of the demographic characteristics known to affect charitable giving (educational attainment, gender, age) are either fixed characteristics or change so infrequently across the 12 months a household is in the sample that they too are absorbed by the household fixed effect. For the sake of completeness, I do estimate some versions of Equation 1 in which I drop the household fixed effect and replace it with a vector of household characteristics. This vector consists of monthly household income, the age of the household head, a dummy equal to one if the household head is white, a dummy equal to one if the head is married, a dummy equal to one if the head has educational attainment equivalent to a 4-year college degree or more, and dummies for whether the household contains anyone under the age of 18 or over the age of 64. In all cases, standard errors are clustered at the household level. Even though income can change from month to month, the CEX only collects income information in two out of the four interviews, with income information from the earliest interview carried over to the next two interviews. For this reason, I do not control for monthly income in specifications with household fixed effects.

The design of the CEX involves households entering in every calendar month of the

year. Any household that first reports expenditures for January will never be observed in any month of $T + 1$ and hence can never be included in the treatment group. Even if the household makes a first mortgage payment in January of $T + 1$, that payment occurs outside the temporal range covered by the CEX interviews. In order to ward off concerns that my treatment and control groups are selected from different samples, I drop any household that first reports expenditures for the month of January. Households first reporting expenditures in any other calendar month of the year can be included. This means that, for any household included in my analysis, its December spending precedes its January spending, but its February spending does not necessarily precede its March spending (if the household happens to first report spending in March) and so forth. This should be kept in mind when interpreting the month coefficients in my regressions.

While a negative coefficient on $Dec * NewMortgage$ would be consistent with tax-motivated shifting in the timing of charitable contributions, it could be explained in other ways. Typically the first mortgage payment is preceded by a downpayment, which can be many times larger than the monthly mortgage payments. As a household prepares to make that downpayment, it may temporarily cut many types of discretionary spending in order to ensure adequate cash-on-hand. A closely related possibility is that households face uncertainty about the costs associated with moving or with maintaining the new home. They may cut charitable giving (and other expenses) at the end of year T not because the tax benefits associated with giving will be greater in year $T + 1$ but because they want to be able to cover unexpected expenses that might arise in $T + 1$. If short-term saving for either a downpayment or for unexpected moving-related expenses explains a negative coefficient on $Dec * NewMortgage$, then there should also be a negative coefficient on $Dec * NewMortgage$ in a nearly-identical regression that uses some other type of discretionary spending as the dependent variable. Few other types of spending are tax deductible for itemizers, so a decline in, say, clothing expenditure in the December before initiating mortgage payments cannot be an example of tax-motivated shifting. Yet another possibility is that households re-evaluate

their financial decisions at the time of buying a house, with some deciding to spend less on charitable giving as homeowners than they had as renters. In this case, a negative coefficient on $Dec * NewMortgage$ could represent a shift to a new, permanently lower level of giving.

3 Data

I use data from the Quarterly Interview Survey portion of the Consumer Expenditure Survey (CEX), meant to provide a comprehensive accounting of the spending done by households. This source is well-suited to my analysis because it includes monthly information on charitable contributions and on mortgage payments. I have converted all nominal spending amounts to real 2015 dollars.

New households enter the CEX in every month. They are interviewed in four consecutive quarters, each time providing information on the amount spent on various categories in each of the previous three months.⁴ For example, a household that is first interviewed in April 2010 reports spending from January, February, and March of 2010. For households that participate in all four interviews for which they are eligible, 12 months of spending data are available. The earliest interviews included in my analysis took place in January of 2004, so the earliest expenditure data used corresponds to October 2003. The most recent spending data I use corresponds to February 2016.

Spending is divided into categories using the Universal Classification Code (UCC) system. I add together amounts spent on three UCC codes to arrive at my measure of monthly deductible charitable giving. These categories are cash contributions to charities (UCC = 800821), cash contributions to churches and religious organizations (UCC = 800831), and cash contributions to educational organizations (UCC = 800841). The CEX also collects information on cash contributions to political organizations (UCC = 800851), but these are

⁴For most of the time period that I consider, households participating in the CEX were actually interviewed five times. The first was a “bounding interview” which served as a reminder to respondents that any spending reported in the second interview should not have occurred before the first interview. Efforts to improve the design of the CEX while keeping costs low led to elimination of the bounding interview in 2015. The public-use microdata never include information from more than four interviews per household.

not tax deductible. Even though non-cash contributions to qualified charities are deductible, I do not include them in my measure of charitable giving. Non-cash contributions are not household expenses, and no information about them is collected in the CEX.

For households that report spending non-zero amounts on mortgage payments, additional information is collected. Importantly, for every mortgage on which a payment is made during the CEX reference period, respondents are asked to report the calendar month and year in which they *first* made any associated payment. This date can be, and in fact usually is, well before the beginning of the CEX reference period. Households can report information on multiple mortgages, which could correspond either to more than one distinct loan on the same property or to mortgages held on multiple properties. Because the tax code allows filers to deduct mortgage interest paid on a primary residence or on an additional property, such as a vacation home, I do not restrict attention to mortgages held on the consumer unit's main home. Instead, I use information on mortgages for the home in which the respondent currently lives, a home in which the respondent used to live, and vacation homes. I aggregate over all of the mortgages of these three types associated with a given consumer unit to find the earliest date on which any mortgage payment was made.

3.1 Description of the Analysis Sample

There are 107 households that make first mortgage payments in January of the second calendar year in which they are participating in the CEX. These households make up the primary treatment group in this analysis. There are 224 households that make first mortgage payments sometime in January, February, or March of $T + 1$. In one robustness check below I make use of this larger treatment group. All households in both treatment groups have in common the fact that they made no mortgage payments in calendar year T and I argue this makes it likely that they claimed the standard deduction for tax year T . The CEX does not ask respondents about whether they claimed the standard deduction or itemized.

All households in the treatment groups did make mortgage payments in $T + 1$. The

assumption that this change in homeowner status prompted them to begin itemizing is more plausible if the total amount of mortgage interest and property tax paid in $T + 1$ exceeds the standard deduction amount. It is difficult to know if this is so, because I observe fewer than 12 months of data from calendar year $T + 1$ for each household. Instead, I compare the sum of (nominal) mortgage interest and property tax paid over all observed months in $T + 1$ to a “scaled standard deduction.” This is equal to the relevant standard deduction amount for a particular household (which varies with filing status and year) multiplied by the ratio of $\frac{\text{Months Observed in } T+1}{12}$. It is important to note that the mortgage interest payments included in the CEX are not reported directly by respondents. Instead, CEX staff impute mortgage interest paid based on what respondents have reported about the terms of the mortgage (such as the original amount borrowed, the term length, and the interest rate). Of the 107 households in the January treatment group, 63 have mortgage interest and property tax payments in $T + 1$ that are greater than or equal to the scaled standard deduction amount. Of the 224 households in the first quarter treatment group, 131 have mortgage interest and property tax payments in $T + 1$ that are great than or equal to the scaled standard deduction amount.

I consider a few different control groups. What these groups have in common is that they likely made the same choice in years T and $T + 1$ about whether to take the standard deduction or to itemize. For most of the control groups considered, the assumption is that they were consistent itemizers, by virtue of having made mortgage payments in both T and $T + 1$. I consider control groups consisting of those who made first mortgage payments in January of any year from $T - 4$ through T ; and those who made first mortgage payments in any calendar month of $T - 1$. In one specification I consider a control group of households who rent throughout their entire time in the CEX. I predict that these households will take the standard deduction in both calendar years. When I expand the treatment group to households making first mortgage payments in the first quarter of $T + 1$, I use a control group of households making first mortgage payments in first quarters of earlier years.

3.2 Summary Statistics

Table 1 describes the characteristics of households in the treatment and control group. These groups are not statistically identical. The treatment group is younger, which is consistent with having purchased a home more recently. The treatment group has lower average monthly income, although this income is still high relative to national averages. Multiplying by 12 to scale up to an annual level, households in the treatment group have average income of approximately \$88,000. Although this is pre-tax income and after-tax income is needed to match filers with the marginal tax rates they face, single filers with this level of pre-tax income would likely be in the 28% tax bracket and married filers with this pre-tax income would likely be in the 25% tax bracket.⁵ Charitable giving is less prevalent in the treatment group. About 63% of households in the control group report charitable giving in at least one month, while only 45% of treatment households give. Some of this may be mechanical, as households in the treatment group are observed for an average of only 7.8 months as opposed to 9.6 months for the control group.

Next I consider graphical evidence on the temporal pattern in giving. Figure 1 plots average amounts of charitable giving by month, all for households that make a first mortgage payment in the month of January. Points to the left of the vertical line are from year T and points to the right of the vertical line are from $T + 1$. One household can contribute to the average giving amount in multiple different months.⁶ Two groups of households are considered: households with a first mortgage payment in January of $T + 1$, and households with a first mortgage payment in January of either $T - 4$, $T - 3$, $T - 2$, $T - 1$, or T . Households

⁵The way in which after-tax information is included in the CEX has changed over time. In future versions of the paper I will use TAXSIM to calculate after-tax income in a consistent way for all households in my sample.

⁶An example may be useful for understanding how the figure is constructed. If a household enters the CEX in April, its observations from June through December will be used in computing the average giving amounts to the left of the vertical line in the figure and its observations from January through March will be used in computing the average giving amounts to the right of the vertical line. Although in principle I could construct a figure that includes earlier months in year T and later months in year $T + 1$, in practice the number of observations used to construct the average giving amount becomes quite small towards the extremes. I have chosen the width of the figure such that every dollar amount of giving shown is an average over at least 10 observations.

with first mortgage payments in January of T or some prior year are likely to pay mortgage interest steadily throughout both T and $T + 1$ and, I argue, are likely to be itemizers in both years. They have no incentive to hold off charitable giving until $T + 1$ in order to receive favorable tax treatment, as they will receive equally favorable tax treatment for gifts made in T . The figure shows that this group concentrates charitable giving in December of year T . In contrast, households with first mortgage payments in January of $T + 1$ have an incentive to postpone their giving from the less-tax-favored T to the more-tax-favored $T + 1$. For these households there is no spike in giving in December of T . If these households are engaging in intertemporal shifting of charitable giving, we might have expected to see a corresponding spike in giving in January of $T + 1$ for these households. As the figure shows, there is no such January spike. It is possible that these households display a spike in giving in December of $T + 1$, but this falls outside of the scope of CEX coverage.

One other point worth noting about Figure 1 is that the households with first mortgage payments in January of the five years prior to $T + 1$ have two local spikes in charitable giving, one in December of year T and one in April of $T + 1$. It is possible that the tax filing deadline of April 15 reminds these households that their tax price of charitable giving is less than one, and that this in turn motivates additional giving.

4 Results

The first column of Table 2 shows the results of estimating Equation 1. The regression sample consists of households making first mortgage payments in January of $T + 1$ (the treatment group) and in January of any year between $T - 4$ and T (the control group). Giving is highest in the month of December. The coefficient on the December dummy indicates that average giving is \$119 higher in December than in the omitted month of July. This coefficient is significant at the 5% level. In no other month is giving statistically different from the omitted month. The coefficient on *December * NewMortgage* is -70 and not statistically

different from zero. Thus, I cannot reject the hypothesis that new mortgage payers and longer-term mortgage payments give equal amounts to charity in the month of December. I sum the coefficients on *Dec* and *Dec * NewMortgage* and test the hypothesis that this sum is equal to zero. The p-value for this test is 0.155. Thus, I also cannot reject the hypothesis that the December charitable giving of new mortgage payers is statistically equivalent to average charitable giving in the omitted month of July. Giving in the month of January is no different from giving in the omitted month, either for the control group of continuing mortgage payers or for the treatment group of new mortgage payers. This suggests that if there is any shifting of charitable giving out of year T , it is shifted by more than just one month and into some later time in year $T + 1$.

The remaining columns of Table 2 involve changes to the regression specification. Column 2 adds a linear time trend for the number of months a household has been reporting spending data to the CEX. If households become more careless in their reporting over time, neglecting to report small amounts of giving in later interviews that they would have diligently reported in early interviews, this linear trend will be negative.⁷ Adding this trend has little effect on any of the other estimated coefficients. Column 3 adds a set of calendar year dummies. This is important because my sample includes observations from before, during, and after the Great Recession. Business cycle fluctuations are likely to affect the aggregate level of charitable giving, and are also likely to affect the composition of new homeowners. In practice, the addition of year fixed effects does very little to the results. Column 4 drops the household fixed effects and instead includes several household characteristics. In this specification, the coefficient of \$114 on the *December* term indicates that continuing mortgage payers give significantly more to charity in December than in the omitted month. The \$-65 coefficient on *Dec * NewMortgage* is not significant. I cannot reject the hypothesis that individuals in the treatment and control group increase their December charitable giving by the same amount. At the same time, as shown by the p-value at the bottom of the table, I cannot

⁷Although not shown in the table, the coefficient on the months-in-CEX time trend is negative but not statistically different from zero.

reject that hypothesis that those in the treatment group experience no change in their giving in December relative to other months.

The general conclusion from this table is very consistent with the figures described earlier. Those who likely experienced no change in the tax price of charitable giving bunch their giving at the end of the tax year. Those who will likely face a lower tax price of giving in $T + 1$ than in T do not increase their giving in December of T . This could be consistent with tax-motivated shifting of charitable giving, but is not necessarily indicative of shifting.

Table 3 uses alternative types of spending as the dependent variable. For simplicity, the table shows only the coefficients on the December and January month dummies and on the interaction terms $Dec * NewMortgage$ and $Jan * NewMortgage$, but all of the regressors that were in column 2 of Table 2 are included here. In the first two columns, I divide charitable giving into contributions to churches and other religious organizations (column 2) and contributions to non-religious organizations (column 1). The factors motivating religious and non-religious giving may be different. If religious piety at least partially motivates religious giving, then charitable contributions to churches may be less likely to be shifted into tax-advantaged periods. I find some differences across these two types of giving. Non-religious giving is significantly higher in December than in other calendar months. Religious giving is fairly equally distributed across calendar months, with no significant peak in December. Turning to the $Dec * NewMortgage$ terms, this term is negative for non-religious giving. It is not quite significant at conventional levels (with a p-value of 0.108) but this is suggestive that the treatment group gives less to non-religious charities just before switching into itemization.

The next three columns are all types of spending that are not tax deductible. For these types of spending, there is no tax-related reason to expect the temporal spending patterns of the treatment group to diverge from the temporal spending patterns of the control group. If I were to find that the $Dec * NewMortgage$ coefficients were significant in these regressions, it would be less believable that any patterns in the timing of charitable giving were actually tax-

induced. Column 3 considers giving to political organizations. Both the $Dec * NewMortgage$ and $Jan * NewMortgage$ coefficients are extremely small, indicating that around the turn of the year there is no meaningful difference in the political contribution patterns of the treatment and control groups. Column 4 considers gifts of cash to individuals, excluding gifts to family members who are college students temporarily living outside the household. Here, there is evidence of a holiday effect. Cash gifts to individuals are significantly higher in December than in any other month. There is no statistically discernable difference in the cash gifts made in December by members of the treatment group relative to the control group. Column 5 considers monthly spending on clothing. There is a seasonal pattern in this type of expenditure, with the highest spending of the year occurring in December. (Although not shown in the table, spending on clothing is also particularly high in August, possibly explained by back-to-school shopping, and in November.) The insignificant coefficients on the two interaction terms show that patterns of spending on clothing around the turn of the year are no different for members of the treatment group. Columns 4 and 5 of this table weigh against the hypothesis that people cut spending in many discretionary categories just before making a first mortgage payment. This makes it more plausible that the results for charitable giving shown in Table 2 can be explained by tax treatment.

Table 4 considers the robustness of the results to variations in the definition of treatment and control groups. In the first two columns, the treatment group consists of those who made first mortgage payments in the first quarter of year $T + 1$ and the control group consists of those making first mortgage payments in the first quarter of $T - 1$. The dependent variable is all deductible giving in column 1 and non-religious deductible giving in column 2. In both cases there is evidence of strategic timing, but the evidence is statistically stronger when considering non-religious giving. The control group gives more in December than in other months of the year. The treatment group does not give more in December (just before likely switching into itemizing). In the case of non-religious gifts, I can reject the hypothesis that the December giving of control and treatment groups is the same.

In the next four columns, the treatment group is once again defined as households making first mortgage payments in January of $T + 1$ and the dependent variable is non-religious deductible giving. First, I narrow in to consider subsets of the control group used previously. In column 3 the control group consists of only the 361 households that made first mortgage payments in January of year T . These households are likely making mortgage interest payments throughout year T that will put them in a position to itemize deductions on their year T tax return, although it is possible that they don't become aware of their status as itemizers until they complete year T tax returns in the early part of year $T + 1$. For this reason, they are not my preferred control group. In column 4 the control group is the households that made first mortgage payments in January of $T - 1$. This control group should be itemizing in year T and should have familiarity with the itemization process over the course of their time in the CEX. In column 5 the control group is households that initiated mortgage payments in any month within $T - 1$. Similarly, this group should be familiar with the process of itemizing. There is not much evidence of strategic timing of charitable giving in any of these regressions. The *December* coefficient is never statistically different from zero. The coefficient on *Dec * NewMortgage* is always negative, consistent with tax-motivated shifting, but it is only statistically different from zero in one out of three cases.

Column 6 of Table 4 uses a very different control group, households who rent their living quarters throughout their time in the CEX. I argue that these households are unlikely to itemize deductions in either T or $T + 1$. The charitable giving of these households is no different in December than in the omitted month of July. The *Dec * NewMortgage* term is not statistically different from zero. This result can be explained by recognizing that, in December of year T , the new mortgage payers and the consistent renters are likely both facing a net price of charitable giving of \$1. If the new mortgage payers had shifted charitable giving by just one month, into the beginning of year $T + 1$, there would be a positive coefficient on the *Jan * NewMortgage* interaction term. I find no evidence of this pattern.

Table 5 splits the sample into households more and less likely to be engaged in tax-minimizing shifts in the timing of charitable giving. In this table the dependent variable is non-religious deductible giving. In the first two columns, I consider differences on the basis of household income. Households facing a higher marginal tax rate, by virtue of having higher income, will experience a greater reduction in the net-of-tax price of giving when they move from taking the standard deduction to itemizing. Thus, households with higher income levels face a greater incentive to shift giving out of their last few months under the standard deduction and into the first year in which they itemize. Column 1 shows results for households with annualized income greater than or equal to the mean for the sample, while column 2 considers households with below-median income. For high-income households, there is a significant December spike in giving for the control group and the absence of such a spike for the treatment group. For the lower-income households shown in column 2, giving does not increase much in December and there is little difference in the December giving of the control and treatment groups. Columns 3 and 4 split the sample on the basis of their reported housing-related expenses. Households in which reported mortgage interest and property tax payments in year $T + 1$ exceed the scaled standard deduction amount appear in Column 3. These are the households for whom the assumption that mortgage initiation prompts a switch from the standard deduction to itemization is most plausible. For this set of households the patterns of giving in December are consistent with tax-motivated shifting. For households with low values of reported mortgage interest and property tax payments, shown in column 4, there is no evidence of intertemporal shifts in giving around the turn of the year.

5 Conclusion

The literature estimating permanent and transitory elasticities of charitable giving has previously established, using annual tax return data, that consumers are willing to shift con-

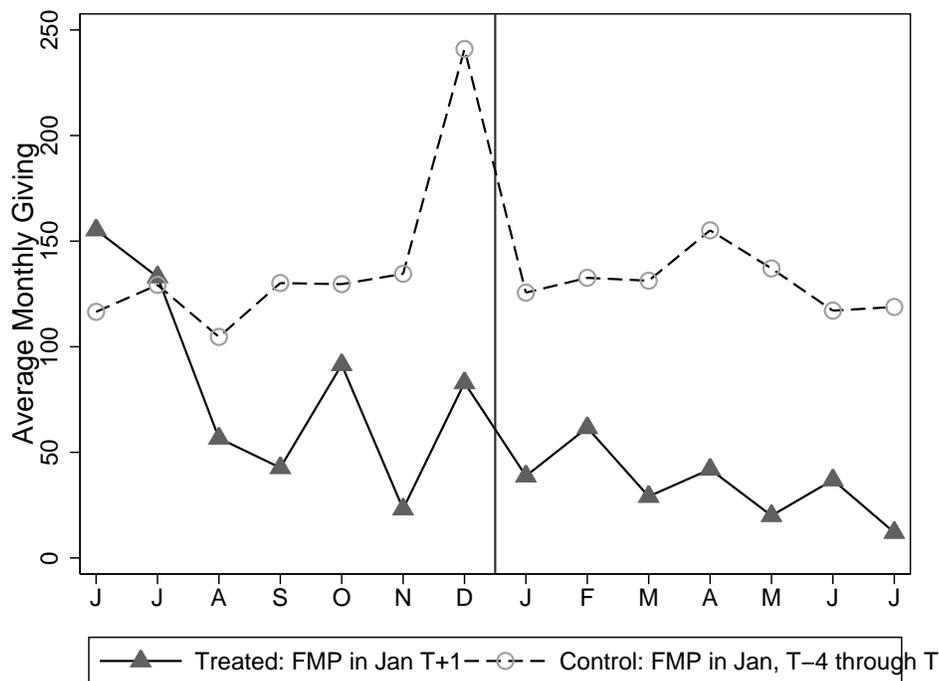
tributions from one year to another in response to statutory tax changes. This paper adds to an understanding of the tax-sensitivity of charitable giving, with two innovations. First, it uses monthly expenditure data rather than annual data. This permits documentation of a strong seasonal pattern in charitable giving. Second, this paper considers variation in tax treatment of charitable giving resulting from an action taken by the taxpayer, buying a home. A home purchase is likely to prompt a taxpayer to switch from taking the standard deduction to itemizing deductions, with substantial implications for the price of charitable giving. This change in tax price may be more predictable by those experiencing it than the legislated tax changes typically studied in the elasticity of charitable giving literature.

I find some evidence of different patterns in charitable giving between those who are likely consistent itemizers and those who are likely switching into itemizing. Households who are likely consistent itemizers concentrate their charitable giving in the month of December, but households with first mortgage payments at the start of a new year do not concentrate their giving in the previous December.

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Figure 1: Average Monthly Charitable Giving for Households with First Mortgage Payments in January



FMP denotes first mortgage payment. The solid line shows average giving, by month, of households making a first mortgage payment in January of $T+1$. The dotted line shows average giving, by month, of households making a first mortgage payment in January of $T-4, T-3, T-2, T-1$, or T . Points to the left of the vertical line represent giving in year T and points to the right represent giving in year $T+1$.

Table 1: Summary Statistics

	Baseline Control Group: 1st Mortgage Payment in Jan, $T - 4$ to T	Baseline Treatment Group: 1st Mortgage Payment in Jan $T + 1$
Characteristics at Entry into CEX		
Head's Age	44.6	41.5**
Any Members < 18	47.5	41.1
Any Members > 64	13.0	12.1
Head is White	87.4	81.3*
Head is Married	68.4	60.7*
Head has Some College	31.4	30.8
Head is College Grad	42.9	41.1
Monthly Income	8652	7368**
Charitable Giving		
Giving over All CEX Months	1349	360**
Ever Give	63.3	44.9***
Months Observed	9.6	7.8***
N of Households	1470	107

* signifies that the difference in means is significant at the 10% level, ** at the 5% level, and *** at the 1% level.

Table 2: Comparing Real Monthly Giving of Households with New Mortgages in $T + 1$ vs. Households with Ongoing Mortgage Payments

	(1)	(2)	(3)	(4)
Dec	119.0**	118.6**	116.9**	114.2**
	(55.48)	(55.39)	(53.53)	(51.10)
Dec*NewMortgage	-70.07	-72.28	-75.93	-64.93
	(67.31)	(67.71)	(69.58)	(62.56)
Jan	-0.494	0.0216	4.246	-0.945
	(13.99)	(13.98)	(13.74)	(12.77)
Jan*NewMortgage	3.653	1.471	1.866	9.213
	(18.07)	(18.04)	(18.35)	(14.72)
Feb	3.451	3.477	6.935	3.479
	(13.24)	(13.24)	(12.79)	(14.92)
Mar	6.799	6.563	9.548	10.68
	(13.37)	(13.39)	(12.78)	(12.43)
Apr	17.14	16.95	19.40	20.63
	(13.63)	(13.65)	(13.21)	(12.66)
May	6.104	5.936	7.395	7.688
	(13.92)	(13.93)	(13.54)	(13.41)
June	-6.152	-6.294	-5.569	-7.520
	(12.71)	(12.72)	(12.53)	(11.78)
Aug	-1.572	-1.522	-2.387	-2.454
	(14.73)	(14.73)	(14.79)	(13.97)
Sept	7.260	7.312	5.709	5.989
	(8.594)	(8.591)	(9.034)	(9.702)
Oct	16.05	16.20	12.49	11.21
	(18.01)	(18.05)	(18.58)	(17.52)
Nov	15.35	15.09	12.34	12.48
	(15.70)	(15.68)	(16.55)	(17.87)
Household FE	Yes	Yes	Yes	
Linear Months-in-CEX Trend		Yes	Yes	
Year Dummies			Yes	
Demographics				Yes
p-value on Dec=0	0.032	0.033	0.029	0.026
p-value on Dec+Dec*NewMortgage=0	0.155	0.178	0.252	0.134
N of Households	1577	1577	1577	1577
N of Observations	14994	14994	14994	14994

Table 3: Spending on Other Goods

	Non-Relig Giving (1)	Religious Giving (2)	Political Giving (3)	Cash to Individuals (4)	Clothes (5)
Dec	95.42*	23.14	-0.784	76.68**	134.2***
	(51.00)	(21.04)	(0.482)	(30.40)	(12.50)
Dec*NewMortgage	-84.85	12.56	0.797*	6.210	-10.46
	(52.78)	(38.03)	(0.466)	(60.95)	(36.48)
Jan	1.470	-1.449	2.309	-12.84	-22.13***
	(10.37)	(10.09)	(2.920)	(14.81)	(7.718)
Jan*NewMortgage	-0.703	2.175	0.0322	0.130	-5.697
	(7.070)	(17.12)	(3.535)	(9.830)	(13.55)
p-value on Dec=0	0.062	0.272	0.104	0.012	0.0001
p-value on Dec+Dec*NewMortgage=0	0.381	0.276	0.984	0.137	0.0004
N of Households	1577	1577	1577	1577	1577
N of Observations	14994	14994	14994	14994	14994

Table 4: Alternative Treatment and Control Groups

	All					
	Deductible Giving	(2)	(3)	(4)	(5)	(6)
Dec	242.0** (117.1)	202.5* (111.1)	125.3 (113.7)	221.5 (180.0)	49.46 (40.48)	3.748 (5.637)
Dec*NewMortgage	-167.3 (132.8)	-195.8* (111.5)	-97.14 (110.8)	-244.6 (186.9)	-57.08** (28.02)	2.679 (6.763)
Jan	-10.22 (17.62)	-4.215 (15.68)	15.86** (6.775)	-17.78 (38.01)	-29.07 (31.01)	-1.792 (5.555)
Jan*NewMortgage	-0.581 (15.59)	-0.152 (9.181)	0.345 (10.41)	-13.55 (12.87)	9.369 (7.960)	-1.865 (5.427)
Treatment Group = First Mortgage Payment in First Quarter of T+1	X	X				
Jan T+1			X	X	X	X
Control Group = First Mortgage Payment in First Quarter of T-1	X	X				
Jan T			X			
Jan T-1				X		
Any Month of T-1					X	
Never, Always Rent						X
p-value on Dec=0	0.039	0.069	0.271	0.219	0.222	0.506
p-value on Dec+Dec*NewMortgage=0	0.255	0.757	0.006	0.536	0.770	0.419
N of Households	1100	1100	468	458	3968	36618
N of Observations	10173	10173	4191	4215	37404	276585

Table 5: Heterogeneity by Household Characteristics, Non-Religious Deductible Contributions

	High Income (1)	Low Income (2)	Expenses Above SD (3)	Expenses Below SD (4)
Dec	167.3*	19.42**	150.3*	7.407*
	(98.68)	(7.922)	(82.87)	(3.771)
Dec*NewMortgage	-166.4	-0.638	-144.4*	9.637
	(101.6)	(12.70)	(85.60)	(12.45)
Jan	0.0971	2.354	-1.347	4.684
	(19.79)	(2.150)	(16.08)	(3.363)
Jan*NewMortgage	0.262	-0.326	2.900	-4.968
	(14.54)	(2.853)	(11.60)	(4.022)
p-value on Dec=0	0.090	0.014	0.070	0.050
p-value on Dec+Dec*NewMortgage=0	0.962	0.067	0.732	0.166
N of Households	791	786	1066	511
N of Observations	7725	7269	9639	5355