Estimating Tax Savings from Homestead Exemptions and Property Tax Credits

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Abstract

This paper details the methodology used to generate estimates of tax savings from statewide property tax exemption and credit programs in the United States. Estimates for each state are available for 2012 on the Lincoln Institute of Land Policy's Significant Features of the Property Tax website. For each program, there are estimates of the total amount of tax savings statewide, the share of homeowners that are eligible, the median level of tax relief, and an analysis of how eligibility and tax savings vary across the income distribution. This is the first time that this detailed data is available for most of these programs. The estimates were generated through a simulation exercise that combined information on the key features of each program with microdata from the American Community Survey on household characteristics that determine eligibility and tax savings from exemptions and credits.

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Estimating Tax Savings from Homestead Exemptions and Property Tax Credits

Introduction

The property tax, in part due to its unusually high salience, faces continual public controversy. States have responded to this controversy by enacting a wide range of tax relief policies for homeowners, including tax limits, property tax circuit breakers, and tax classification. This paper describes the methodology used to estimate tax savings from one of the most widely used set of policies: homestead exemptions and property tax credits.

Property tax exemptions and credits have been adopted in all but three states and these programs can make the distribution of property tax burdens significantly more progressive. Yet despite their importance, there has been remarkably little information available on exemptions and credits. Just comparing the key features of property tax exemptions and credits across states has been a challenge, in part because states use different assessment ratios when valuing properties for tax purposes. Very few states produce property tax expenditure reports that estimate the tax expenditures associated with exemptions and credits (Connolly and Bell 2011), and almost none analyze the distributional impacts of these programs. As a result, policymakers in most states have lacked basic information on the effects of these important property tax relief programs.

That critical information is now available for all 50 states and can be accessed via two new resources on the Lincoln Institute's *Significant Features of the Property Tax* website (See box below). These tables describe the key characteristics of property tax exemptions and credits and provide estimates of the tax savings generated by these programs in all 50 states.

State-Level Details on Exemptions and Credits

The *Significant Features of the Property Tax* sub-center on the Lincoln Institute's website provides three key resources with information on property tax exemptions and credits in all 50 states. It is accessible at <u>http://www.lincolninst.edu/subcenters/significant-features-property-tax/</u>.

Tax Savings from Property Tax Exemptions and Credits: This Excel file includes estimates of tax savings from these programs in all 50 states. The file includes separate tables with details for each state, plus overview tables that make it easy to compare across states. For each program there are estimates of the share of homeowners that are eligible, the median level of tax relief, and an analysis of how eligibility and tax savings vary across the income distribution. This is the first time that there is detailed data for most of these programs.

Summary Table on Exemptions and Credits: This Excel file includes a set of tables with data for 167 programs on the value of exemptions expressed in terms of market value; criteria related to age, disability, income, and veteran status; the type of taxes affected (i.e., school or county taxes); whether tax loss is borne by state or local governments; and more. The Summary Table makes it easy to conduct quantitative analysis of these programs or make quick state-by-state comparisons. The information in these tables was used to generate the tax savings estimates.

Residential Property Tax Relief: This section of the *Significant Features of the Property Tax* website includes detailed descriptions of property tax exemptions and credits, which were used to create the Summary Table on Exemptions and Credits. It also describes other types of property tax relief, such as circuit breakers and tax deferral programs.

(2015). That article provides the first national study of property tax exemptions and credits that includes estimates of actual tax savings, with the analysis based on the new tables described in the box on page 1.

In short, the tax savings estimates were generated by combining data on the key features of each program with household-level data on the characteristics that determine eligibility and tax savings from exemptions and credits. Data on the key features of these programs comes from the Lincoln Institute's Summary Table on Exemptions and Credits.

Data on household characteristics comes from the American Community Survey (ACS) Public Use Microdata Sample (Ruggles et al. 2010). The 2008-2012 ACS is a nationally-representative survey with data on over 6.5 million households and associated weights that allow researchers to produce totals for the entire U.S. population and individual states. The ACS includes data on household characteristics that determine eligibility for these programs (age, disability, income, veteran status, etc.) along with data on characteristics that determine the level of benefits received (home values and property tax bills).

Thus, it is possible to use the ACS data to simulate the effects of states' homestead exemptions and property tax credits. This simulation exercise is used to estimate the total amount of tax relief provided by each program, the share of homeowners who are eligible, and the median tax cut for eligible households. The estimates also include a distributional analysis that shows how eligibility and tax savings vary across income quintiles. It is important to note that these estimates are approximations for each program and not precise statistics.

The first section of this paper describes how property tax exemptions and credits work, focusing on the different formulas used to calculate tax savings under these programs. The second section looks at how these programs are funded, which can have a significant effect on the level of tax relief that is ultimately received by homeowners. The third section looks at different categories of exemptions and credits. The next two sections describe the methodology used to estimate tax savings from property tax exemptions and credits, including how the ACS is used to determine which households are eligible for each program and how tax savings are calculated. The final section concludes with a brief discussion of new resources.

How Property Tax Exemptions and Credits Work

States use several different approaches to determine property tax relief for homeowners. Exemptions work by reducing the amount of property value subject to taxation, either by a fixed dollar amount or a specified percentage of home value. Property tax credits reduce the tax bill directly rather than reducing taxable values, also by a fixed dollar amount or a certain percentage.

Table 1 illustrates how these four approaches work by comparing the property tax saving that would accrue to three homes with different property values located in a community with a 1 percent property tax rate. The four programs are defined so they provide identical tax savings for the \$200,000 home.

A flat dollar exemption is the first tax relief measure shown in Table 1. In this example, the exemption reduces the amount of home value subject to taxation by \$20,000 for each homeowner. With a 1 percent tax rate, a \$20,000 exemption will reduce property taxes by \$200 for each owner ($$20,000 \times 1\%$). Flat dollar exemptions have a progressive impact on the property tax distribution. Since lower-income homeowners tend to have less valuable homes a fixed dollar exemption will account for a larger share of their home value. In this example, the \$20,000 exemption reduces property taxes by 20 percent on the \$100,000 home, 10 percent on the \$200,000 home, and 5 percent on the \$400,000 home.

	\$100,000 Home	\$200,000 Home	\$400,000 Home
Tax before exemptions or credits	1,000	2,000	4,000
Flat Dollar Exemption (Ex: \$20,000)			
Taxable value after \$20,000 exemption	80,000	180,000	380,000
Tax after \$20,000 exemption	800	1,800	3,800
\$ Savings	200	200	200
% Savings	20%	10%	5%
Percentage Exemption (Ex: 10%)			
Taxable value after 10% exemption	90,000	180,000	360,000
Tax after 10% exemption	900	1,800	3,600
\$ Savings	100	200	400
% Savings	10%	10%	10%
Flat Dollar Credit (Ex: \$200)			
Tax <u>after</u> \$200 credit	800	1,800	3,800
\$ Savings	200	200	200
% Savings	20%	10%	5.0%
Percentage Credit (Ex: 10%)			
Tax after 10% credit	900	1,800	3,600
\$ Savings	100	200	400
% Savings	10%	10%	10%

Table 1: Property Tax Cuts Under Four Programs (With 1% Tax Rate)

Tax savings from a percentage exemption are shown next in Table 1. In this example, all three homeowners receive a 10 percent reduction in taxes. Percentage exemptions provide the largest dollar reduction in taxes to owners with higher valued homes. In this case, taxes drop by \$100 on the \$100,000 home versus \$400 for the \$400,000 home. Instead of changing the distribution of property taxes *among* homeowners, percentage exemptions are primarily a way to shift the tax burden away from homeowners *as a group* to businesses, renters, and owners of second homes.

The third panel of Table 1 illustrates that while a \$200 property tax credit provides identical dollar savings to all the three homeowners, in percentage terms, property tax reductions are

highest for the owners of lower valued homes. This contrasts with the 10 percent tax credit shown at the bottom of Table 1. As this credit is a fixed percentage of each homeowner's gross property tax bill, in dollar terms, the owner of the \$400,000 house receives the largest dollar tax cut. It should be noted, however, that some states with percentage credits place a ceiling on the size of the credit. For example, if the maximum credit was limited to \$300, the owner of the \$400,000 would receive a tax cut of 7.5 percent (\$300/\$4,000).

An important feature of property tax exemptions and percentage credits is that the dollar reduction in property taxes increases with property tax rates. For example, if the three homes in Table 1 were subject to a 2 percent tax rate, the dollar tax savings (although not the percentage savings) would double under the \$20,000 exemption, 10 percent exemption, and 10 percent credit. In contrast, dollar savings from flat dollar credits do not vary with tax rates, which also means that in percentage terms the size of property tax cuts decrease as tax rates increase.

In 2012, nearly three-fifths of state programs used flat dollar exemptions, while about a fifth used percentage exemptions, and another fifth used property tax credits or other more complicated formulas to determine the amount of tax relief for each homeowner (Langley 2015).

How Property Tax Exemptions and Credits Are Funded

The ultimate impact of exemptions and credits on property tax bills depends on how these programs are funded. Without any changes, these programs reduce the amount of property taxes flowing to local governments, and localities will need to bring their budgets into balance with some combination of state funds, local spending cuts, or higher tax rates. Some states provide aid to local governments to offset the loss in local tax revenues from these programs, with these funds intended to obviate the need for local spending cuts or higher tax rates. Without state funding, local governments need to rely on spending cuts and/or higher tax rates. If local governments raise property tax rates in response to the initial drop in property taxes from these programs, then the amount of property tax relief will be reduced. In fact, under flat dollar exemptions, owners with higher valued homes can actually end up paying more in property taxes if the drop in their taxable value is more than offset by the impact of higher tax rates. In some states, tax limits constrain the ability of local governments to fund these programs with higher tax rates, so there will be at least some reduction in local spending.

Without state funding, homestead exemptions are likely to shift the property tax burden away from homeowners and towards businesses, non-residents (i.e., owners of second homes), and renters, as these groups are typically not eligible for these programs. Without an exemption, these groups will face higher property tax bills if local governments raise property tax rates in response to a drop in their tax base. Shifting the tax burden to renters is a particular concern since renters generally have lower incomes than homeowners, but pay property taxes indirectly as part of their rent.

Both state- and locally-funded exemptions can create incentives for voters to increase property tax rates to support higher local expenditures, and these higher tax rates will offset some of the property tax relief provided from exemptions and credits (Duncombe and Yinger 2001). Under a

state-funded exemption, local voters can choose to increase local spending knowing that part of the cost of additional spending will be covered by the state government. For example, under a 20 percent exemption, each additional \$1 in spending only costs homeowners \$0.80 in higher property taxes. For example, a study of New York's School Tax Relief program (STAR) found that this state-funded exemption increased school property tax rates by an average of 14 percent (Eom et. al 2014). Locally-funded programs can also create incentives to raise spending since the median homeowner does not bear the full cost of higher local spending; instead, the cost of higher tax rates are borne more heavily by business and renters. Estimates of *net* tax savings, which account for changes in tax rates in response to property tax relief programs, will be lower than *gross* tax savings that assume a fixed tax rate. Note that the methodology described in this paper generates estimates of *gross* tax savings.

In 2012, only 28 percent of property tax exemption and credit programs included full state reimbursement to cover local revenue losses, while under 57 percent of programs the local government bore the revenue loss on their own and 15 percent of programs had state and local governments share the revenue loss in some way. Broad-based programs for all homeowners or all seniors are more likely to be state-funded than narrower programs like those for veterans and the disabled. In 2012, 43 percent of programs for all homeowners or seniors were state-funded, 48 percent were locally-funded, and the rest split the revenue loss (Langley 2015).

Categories of Exemptions and Credits

Most states have more than one property tax exemption or credit program, with different programs for different groups of taxpayers. To best understand how taxpayers are affected by these programs, it is helpful to divide the programs based on their intended beneficiaries. Most programs are either intended to benefit all homeowners, seniors, veterans, or the disabled. Table A.1 in the appendix shows which states have these different categories of exemptions and credits:

- **Homeowners:** These programs are for nearly all homeowners, with no criteria related to age or income. They are typically only available for owner-occupied primary residences, so owners of second homes would be ineligible. In 2012, 26 states had statewide programs and another four had local option programs.
- Seniors: These programs are typically only available for homeowners age 65 or older, although a few states have different age thresholds. In 2012, 18 states had statewide programs and another six had local option programs. Ten of these states provide exemptions or credits solely to seniors, while 14 states also cover younger homeowners but provide higher benefits for seniors. This means that 32 states plus the District of Columbia have statewide programs for either all homeowners or seniors, and another five states have local option programs for all homeowners and/or seniors.
- Veterans: These programs are the most common category across the United States, as 34 states have statewide programs and two more have local option programs. In most cases, they are only available for veterans with service-connected disabilities; 33 of the 36 states

have programs for disabled veterans. However, ten states cover all veterans regardless of whether they are disabled. In addition, ten states provide exemptions or credits for surviving spouses of service-members killed in action.

- **Disabled:** These programs actually target two distinct groups: disabled homeowners and blind homeowners. In 2012, 11 states had programs for disabled homeowners, seven states had programs for blind homeowners, and five states covered both groups. Programs for the disabled typically require beneficiaries to be permanently and totally disabled, but exact criteria vary across states.
- Other: This category includes any program that does not fall into the other four categories, with 16 states having other types of statewide programs and another four states allowing other types of programs as a local option. This category includes four programs for widows and widowers; three programs for low-income homeowners; and three programs for the surviving spouses of police, fire, or other emergency responders who died in the line of duty. Other states target narrower groups of homeowners, such as programs for owners of homes near Taconite mines (Minnesota), owners rebuilding homes destroyed by natural disasters (Illinois), and homeowners with Hansen's disease (Hawaii).

Estimating Eligibility Using the American Community Survey

The first step to estimate tax savings from property tax exemptions and credits was to identify the households eligible for each program. The American Community Survey (ACS) includes questions that cover almost all criteria that determine eligibility for states' exemption and credit programs. The ACS includes data on age, disability, income, and veteran status, which happen to be the household characteristics most commonly used to determine eligibility for these programs. For example, North Carolina provided an exemption for residents who are at least 65 years old with incomes below \$27,100 in 2012. Using ACS data for 2008-2012, it is possible to estimate the share of homeowners in North Carolina meeting this program's criteria: 9.97 percent.

This analysis uses information on state programs in one year (2012) and data on household characteristics from the ACS for a pooled five-year period (2008-2012). Using just one year from the ACS would have made estimates of the share of homeowners eligible for each program far less precise compared to using the five-year pooled sample, which is why the 2008-2012 ACS was used for this analysis. However, the five-year pooled sample does make interpretation of the estimates a bit more complicated since the 2008-2012 ACS sample most closely reflects characteristics of the population in 2010. Note that all dollar variables are adjusted for inflation using the consumer price index for all urban consumers (CPI-U), so they are expressed in 2012 dollars.

The ACS includes data at both the household-level (i.e., home value) and at the person-level (i.e., age or disability). One small challenge with using the ACS data is that many of the variables used to determine eligibility for property tax exemptions and credits are from the person-level survey. However, the majority of homes owned by married couples are owned

jointly, and thus a household would be eligible for one of these programs if either the head or spouse met the eligibility criteria. To deal with this issue, this analysis assumes that a homeowner is eligible for a program if either the household head or spouse meets the eligibility criteria. This approach will increase the number of households eligible for these programs compared to only using data on household heads. For example, 21.8 percent of household heads were 65 years of age or older in the 2008-2012 ACS, while 22.8 percent of households had either a household head *or* spouse that was at least 65 years old. While this approach will slightly overestimate the share of households eligible for these programs since homes are not always owned jointly, the alternative approach—basing eligibility solely on characteristics of the household head—would result in a larger underestimate. For the rest of this paper, references to the percent of homeowners eligible for programs means either the household head or spouse meets the eligibility criteria.

The appendix includes details on ten eligibility criteria for these programs and explains how ACS variables were used to approximate the share of households eligible for each program. For most eligibility criteria, the ACS variables report information on household characteristics with sufficient detail that it is possible to determine eligibility for these programs without having to make any assumptions. These criteria are based on age, income, veteran status, how long the homeowner has owned the home, property value, whether the homeowner is a widow or widower, whether a veteran was on active duty in the prior year, and several other criteria that determine eligibility for a single program. The ACS also includes variables describing respondents' disability or service-connected disability, but the way these variables are reported does not correspond directly with criteria specified in state statutes, so it was necessary to make some assumptions to estimate whether a homeowner met disability criteria. These assumptions are explained in the appendix.

There are also a few eligibility criteria that do have any corresponding variables in the ACS. In most cases, eligibility for these programs is estimated without accounting for these criteria, which will result in slight biases in the estimated share of homeowners eligible for each program. For a few small programs, it is impossible to determine eligibility using the ACS, so these programs are excluded from the analysis completely. The appendix lists these eligibility criteria and explains how their exclusion will bias the estimates. For almost all states, ignoring these eligibility criteria will have very little effect on estimates of total tax savings.

Estimating Tax Savings Using the American Community Survey

Once eligible households are identified, it is possible to estimate tax savings from property tax exemptions and credits by calculating how much each homeowner would owe in property taxes with and without these programs. The American Community Survey (ACS) provides fairly detailed data on respondents' home values and property taxes. These two variables make it possible to estimate tax savings from homestead exemptions and property tax credits. This section describes the five steps used to estimate tax savings from property tax exemptions and credits, using a hypothetical state with six homeowners to illustrate how tax savings are calculated (See Table A.2 in the appendix).

Before describing the five steps, it is important to note that the ACS reports *net* property tax payments. In other words, the tax bills reported in the ACS already account for any tax relief delivered via property tax exemptions and credits since those programs directly reduce homeowners' tax bills. Thus, it is necessary to estimate what each respondent would owe in property taxes if they did not benefit from any exemptions or credits, and then compare those hypothetical higher tax bills to the actual tax bills reported in the ACS. For example, consider a respondent who reports in the ACS that her home is worth \$200,000 and that she paid \$2,000 in property taxes. If that owner is eligible for a \$40,000 exemption, that means she paid \$2,000 / \$160,000). Without the exemption, her taxable value would have been the full \$200,000 value of her home, and with a 1.25 percent tax rate, she would have owed \$2,500 in taxes. Thus, the \$40,000 exemption reduced her property taxes by \$500.

Another thing to note is that the property tax bills reported by individual respondents in the ACS cannot be used as the basis to estimate tax savings.¹ Instead, this analysis estimates what each homeowner is likely to owe in property taxes based on their reported home value and the average effective property tax rate in their state. In reality, tax rates often vary substantially within a state, which means the *dollar* savings provided by an exemption can vary significantly for owners whose homes have identical home values. However, estimated *percentage* savings do not depend on tax rates. In addition, the focus of this analysis is on estimating average benefits and total tax savings, which should not be greatly affected by using an average tax rate.

Step 1: Start with Home Values and Property Taxes Reported in the ACS

The analysis starts with fairly detailed data on respondents' home values and property taxes reported in the ACS. Home values are reported as a continuous variable, with top-coding for 0.5 percent of homes with the highest values in each state. For the top-coded homes, this analysis uses the average home value for the top-coded homes in each state, which is provided in the ACS dataset. Property taxes are reported as a categorical variable (68 categories), with an open-ended top category for all property tax payments above \$10,000. This analysis assigns midpoints for each property tax category, and uses \$15,000 for all homeowners who fall in the \$10,000+ category based on guidance from tax and/or economic experts in states with high property tax burdens (Baer 2007).

Table A.2 shows home values and property taxes as they might appear in the ACS. Instead of using the property tax bills reported by each respondent as the basis for calculating tax savings, tax bills for each homeowner are estimated based on their home value and the average effective property tax rate in their state. In this example, the state collected \$6,000 total in property taxes based on \$500,000 total in home values, which would require an average tax rate of 1.2 percent.

¹ Since the ACS reports net property tax bills, it is necessary to inflate property taxes reported in the ACS to account for property tax exemptions and credits. However, this approach does not work well for a large share of homeowners, including those whose home values are relatively small compared to the value of exemptions they receive, report very small tax bills, or have very high effective tax rates in the ACS (which is likely due to payment of delinquent taxes from prior years). This approach also does not work for programs that provide full 100 percent exemptions, which are fairly common for veterans with severe disabilities. These veterans report \$0 in property taxes in the ACS, making it impossible to inflate their property tax bills.

Step 2: Determine Reductions in Taxable Value from Property Tax Exemptions

The next step is to estimate the taxable property value for each homeowner, which is equal to their home value reported in the ACS minus the value of exemptions they are eligible to receive. For example, if an owner's home is worth \$200,000 and he is eligible for a \$50,000 exemption, then his taxable property value is \$150,000. Note that many states have multiple exemption and credit programs, but place constraints on homeowners' ability to claim every exemption and credit that they are eligible to receive. For example, a state may have a modest benefit for all veterans and a separate program that provides much greater benefits for veterans with a service-connected disability, but with the restriction that anyone claiming the large benefit for disabled veterans cannot also claim the smaller benefit available to all veterans.

In Table A.2, Homeowners 1, 4, and 6 are eligible for Exemption #1 (\$15,000 exemption); only Homeowner 4 is eligible for Exemption #2 (\$25,000 exemption). Note that since Home 1 is only worth \$10,000, Exemption #1 reduces the taxable value on that home by only \$10,000 rather than the full \$15,000 value for the exemption. Also note that Homeowner 4 is eligible for both exemptions, but is only allowed to claim one of the exemptions, and thus taxable value on Home 4 falls by \$25,000 rather than by the \$40,000 combined value of the two exemptions. In this example, the two exemptions reduce total taxable value in the state to \$450,000, which would require an average tax rate of 1.33 percent to raise the \$6,000 total in property taxes reported in the ACS for the state.

Step 3: Determine Reductions in Tax Bills from Property Tax Credits

The next step is to determine reductions in tax bills from property tax credits. For individual homeowners, calculating savings from tax credits is easy—dollar credits are simply subtracted from the property tax bill (after accounting for exemptions). However, for the state as a whole, this step is more complicated. That is because the reduction in tax bills from credits depends on tax rates and taxable values (which determine the property tax bill before credits), but the statewide tax rate in turn depends on the total amount of tax credits. Due to the interdependence of tax rates and the total amount of tax credits, it was necessary to write a Stata program that solved for the tax rate in each state using an iterative process.

In Table A.2, Homeowners 2 and 5 are eligible for a \$350 credit. Based on the 1.33 percent tax rate from Step 2, it would only take a \$333 credit to completely eliminate the property tax liability for Homeowner 2 (1.33% x \$25,000 taxable value). However, the tax rate needs to rise in order for total property taxes *after* exemptions and credits to equal the \$6,000 in property taxes reported in the ACS. After accounting for the two exemption programs and the property tax credit, it takes a 1.49 percent tax rate to raise \$6,000 in property taxes. Note that at the 1.49 percent tax rate, Homeowner 2 now receives the full \$350 value of the credit.

Step 4: Determine Savings from Income Tax Credits and Rebate Checks

Calculating savings from programs that are administered as income tax credits or rebate checks is straightforward since there is no need to adjust the tax rate. These programs do not reduce property tax bills directly; instead, homeowners first pay their full property tax bill and later receive their benefit in the form of a rebate check or lower income tax bill. Thus tax savings from these programs are not included in the property tax bills reported in the ACS. As a result, savings from income tax credits and rebate checks are estimated simply by subtracting the benefit from the estimated tax bill for each homeowner after accounting for exemptions and credits.

In Table A.2, all six homeowners are eligible to receive a \$50 rebate check meant to offset property taxes. Homeowner 1 pays no taxes after accounting for exemptions and credits, and thus does not benefit from the rebate program. Homeowner 2 only pays \$22 in property taxes after exemptions and credits, and thus the rebate check completely eliminates her property tax liability. The other four homeowners all receive the full \$50 rebate check. Statewide, the six homeowners effectively pay \$5,778 in property taxes once the \$222 worth of rebate checks is subtracted from their combined \$6,000 property tax bill.

Step 5: Estimate Savings from All Programs

Estimating savings from these programs is simple once the first four steps are completed, but there are two things that should be pointed out. First, the savings are all calculated relative to each homeowner's estimated tax bill before exemptions and credits, not the tax bill they report in the ACS. In Table A.2, these estimated tax bills are the first row shown under Step 3, and are based on each respondent's home value reported in the ACS and the 1.49 percent tax rate needed to raise the total amount of property taxes reported in the ACS after accounting for exemptions and credits.

The second thing to note is how savings from these programs are calculated sequentially—first savings from property tax exemptions, then savings from property tax credits, and finally savings from income tax credits and rebate checks. This sequential process is necessary to calculate tax savings using the ACS and it reflects the actual process that is used to determine homeowner's final tax bills. However, this process also means that estimated tax savings from property tax credits, income tax credits, and rebate checks are smaller than they would be if homeowners did not benefit from property tax exemptions. For example, in Table A.2, Homeowner 1 is eligible to receive the \$50 rebate check, but does not actually benefit from this program since Exemption #1 has already completely eliminated his property tax burden. Among the 184 programs included in this analysis, 133 are administered as property tax exemptions, 32 as property tax credits, and 19 as income tax credits or rebate checks.

Other Notes on Estimating Tax Savings Using the ACS

It should also be noted that 26 programs only provide tax relief for specific types of taxes, such as school or county taxes. For these programs, this analysis uses data from the 2007 Census of Government Finances, which shows the share of total statewide property taxes received by six

different levels of government (i.e., school districts, counties, etc.). Instead of using the total amount of the exemption or percentage credit, this analysis accounts for the share of total statewide property taxes received by the level of government affected by the exemption or credit program. For example, Georgia provides a \$25,000 exemption for school taxes for elderly homeowners. Statewide, 66.3 percent of property taxes in Georgia were received by school districts in 2007. Thus, the exemption is approximately equal to a \$16,575 exemption (\$25,000 x 66.3%).

Finally, it was not possible to estimate tax savings for six programs that use formulas that depend on household characteristics that are not described in the ACS. Four of these programs provide a credit so that property taxes for the household do not increase above the level paid in the base year when they were first eligible for the program, similar to a tax freeze.² The ACS is not a panel dataset, so there is no data on property taxes paid by respondents in prior years.

Conclusion

Homestead exemptions and property tax credits are an important part of the property tax system. These programs are used in nearly all states and can make the distribution of property taxes significantly more progressive. Given their importance, it is critical that policymakers have good data on property tax relief provided by these programs.

New resources available on the Lincoln Institute's *Significant Features of the Property Tax* website make that data available for the first time. Policymakers can find estimates for their respective states on the share of homeowners eligible for each program, the level of property tax relief they receive, and see how property tax savings vary across the income distribution. In addition, Langley (2015) draws on these resources to provide the first national study of property tax exemptions and credits with estimates of tax savings from these programs. These data can help policymakers evaluate the effectiveness of property tax exemptions and credits in their states and provide ideas for reforms that would improve these programs.

² The four programs are Indiana's Over 65 Circuit Breaker Credit, New Jersey's Annual Property Tax Deduction for Senior Citizens and Disabled Persons, and Texas's Senior School Tax Freeze. The other programs for which benefits cannot be calculated using ACS data are Maryland's Exemption for Disabled Veterans and Michigan's Principal Residence Exemption for Local School Levy.

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Appendix

ACS Variables Used to Determine Eligibility for Property Tax Exemptions and Credits

Below is an explanation of how variables from the American Community Survey were used to determine eligibility for property tax exemption and credit programs.

The 2008-2012 ACS microdata that was used for this analysis was downloaded from IPUMS-USA at the University of Minnesota (Ruggles et al. 2010). Full documentation and variable descriptions are available on their website: <u>https://usa.ipums.org/usa/</u>.

Age

- *Criteria*: The minimum age for eligibility for a tax relief program.
- *ACS Variable*: Age is reported as a continuous variable measured in years.

Disability (Blindness)

- *Criteria*: Eligibility is restricted to blind individuals.
- *ACS Variable*: Dummy variable indicates whether the respondent is blind or has serious difficulty seeing even with corrective lenses

Disability (Totally and Permanently Disabled)

- *Criteria*: Eligibility is restricted to permanently and totally disabled individuals.
- *ACS Variable*: The ACS does not have a variable that specifically indicates whether a respondent is permanently and totally disabled. This analysis considers homeowners to be permanently and totally disabled if in the ACS they indicate that they receive Supplemental Security Income (SSI) and have at least one of six disabling conditions included in the ACS.
- Notes: SSI is available to low-income seniors (65+) and younger individuals who are blind or totally disabled and unable to work. SSI is not available for partially disabled individuals.¹ In 2013, 86 percent of SSI recipients and 90 percent of SSI benefits paid out were for disabled/blind individuals; only 14 percent of recipients were low-income seniors.² Low-income seniors who are not disabled will be excluded from this analysis since they will not have one of the disabling conditions included in the ACS.

¹ Disability Planner: What We Mean By Disability (Social Security Administration), http://www.soc.com/dihalan/doualifu/.htm

Administration): <u>http://www.ssa.gov/dibplan/dqualify4.htm</u>

² SSI Recipients by State and County, 2013: <u>http://www.ssa.gov/policy/docs/statcomps/ssi_sc/</u>

Disability (Other)

- *Criteria*: Seven programs in the summary table on exemptions and credits list other disability criteria; not blindness or total and permanent disability.
- *ACS Variable*: The ACS does not include variables that directly correspond with these specific disability criteria listed in state statutes. These criteria are usually very similar to requiring an individual to be permanently and totally disabled, so this analysis considers homeowners to be eligible for these programs if in the ACS they indicate that they receive SSI <u>and</u> have at least one of six disabling conditions included in the ACS.

• *Notes*: In most cases, the "other" disability criteria is that eligible homeowners receive Social Security disability benefits or are unable to engage in any substantial gainful activity due to physical or mental impairment. These "other" criteria are very similar to requiring applicants to be permanently and totally disabled.

Duration of Ownership

- *Criteria*: Homeowner must have owned home for a minimum number of years to be eligible for the program. For example, eligibility might be restricted to those who have owned their home for at least five years.
- *ACS Variable*: Categorical variable reports the number of years since the household head moved into their current home (seven categories).
- *Notes*: Fortunately, the cut-off points for the seven categories in the ACS almost always correspond perfectly with the required length of homeownership in state statutes.

Home Value

- *Criteria*: The maximum home value for eligibility under a tax relief program.
- *ACS Variable*: Home value is reported as a continuous variable.
- *Notes*: The ACS top-codes 0.5 percent of homes with the highest values in each state, but these top-codes do not affect the eligibility estimates since the maximum home values used to determine eligibility are far lower than the very high home values affected by top-coding.

Income Ceiling

- *Criteria*: The maximum household income for eligibility under a tax relief program. In some states, the income ceiling varies depending on household size, or on whether an applicant is married.
- *ACS Variable*: Income is reported as a continuous variable, rounded to the nearest \$100 (incomes of \$1,000-\$49,999) or \$1,000 (incomes of \$50,000 or more). The estimates in this paper use total family income rather than household income, so as to exclude income earned by household members who are unrelated to the household head.
- *Notes*: Eight programs vary income ceilings based on the number of family members, or whether the applicant is married or single; the estimates in this paper *do* account for these varying income ceilings. Note that household income equals family income for 94 percent of homeowners; household income exceeds family income for only 6 percent of homeowners.

Veteran Status

- *Criteria*: Eligibility is either for all veterans or all veterans who have served in a warzone.
- *ACS Variable*: Dummy variable indicates whether or not the respondent is a veteran.

Veterans' Service-Connected Disability Rating

- *Criteria*: These programs are for veterans with a service-connected disability. These programs often require a specific disability rating from the Department of Veterans Affairs, such as requiring a service-connected disability rating of at least 70 percent.
- *Benefit*: Programs for disabled veterans often vary the amount of property tax relief based on the severity of the veterans' disability, so that more severely disabled veterans receive

larger benefits than veterans with moderate disabilities. Thus, the service-connected disability rating often factors into estimated tax savings from exemptions and credits in this analysis.

- *ACS Variable*: The ACS uses four categories to describe veterans' service-connected disability ratings: 10 or 20%, 30 or 40%, 50 or 60%, and 70% or more. For the first three categories, this analysis assigns the lower disability rating to half of the group and the higher rating to the other half. For example, 0.42% of ACS respondents report a 10 or 20% disability rating; this analysis assigns a 10% rating to half of them and 20% rating to other half (0.21% each). For the fourth category, a 100% rating is assigned to half of the respondents and 70%, 80%, or 90% ratings to the other half (one-sixth of respondents for each disability level). Finally, 0.09% of ACS respondents reported that they had a disability rating, but did not disclose the level in the ACS. This analysis assigns a 10% rating to one-tenth of this group, a 20% rating to one-tenth of the group, a 30% rating to one-tenth, and so on.
- Notes: Splitting up the four ACS categories in this way is a better approach than using a midpoint value for each category. For example, consider Oregon's Disabled Veterans' Exemption, which requires that veterans have at least a 40% disability rating. About half of the respondents reporting a 30 or 40% disability rating should be eligible for Oregon's program; by splitting up the categories, exactly half of this group would be eligible. In contrast, if the midpoint for this category was used (35% disability), then none of these respondents would be eligible, which is clearly incorrect. Besides the ACS, I was unable to find any information on the share of disabled veterans with each disability rating. For the 70%+ category, I chose to assign a 100% rating to half of the respondents rather than a quarter of them, because the fact that the highest disability rating cannot exceed 100% suggests that a disproportionate share of respondents in the 70%+ group have a 100% disability rating. This decision might overestimate the number of veterans eligible for programs that require a 100% disability rating.

Veterans' Service-Connected Disability (Other Disabilities)

- *Criteria*: These programs are restricted to veterans with specific service-connected disabilities, such as loss of limbs, paralysis, or other specific disabilities listed in state statute.
- *ACS Variable*: The ACS does not list specific disabling conditions for veterans, so it is necessary to use the categorical variable that lists veterans' service-connected disabilities. For 17 of 20 programs listing specific disabilities, this analysis considers veterans to be eligible if they report a 100% disability rating in the ACS (which as described above is half of the ACS respondents reporting a 70-100% disability rating). For the 3 other programs, a veteran is considered eligible if they report a lower disability rating in the ACS.
- *Notes*: Title 38 Code of Federal Regulations Book C¹ provides the schedule for rating disabilities that should be assigned to a wide range of specific disabling conditions, such as loss of limbs or paralysis. The disabling conditions listed in state statutes all fall under Subpart B (Ratings for the Musculoskeletal System). Almost all conditions listed in state statute would be rated as 100% disabilities in Title 38 CFR, because Diagnostic Codes 5104-5111 state that there is a 100% rating assigned to veterans who have lost the use of two or more extremities. Veterans that are paraplegics, hemiplegics, or receive specially

adapted housing grants have also lost the use of two or more extremities, and thus would also receive a 100% rating from the VA. Blindness is also assigned a 100% disability rating in Title 38 CFR Book C (Diagnostic codes 6061-6062). Out of 20 programs for disabled veterans that have eligibility criteria in the summary table listed as loss of limbs, paralysis, or other disabilities, 17 of them list criteria that would receive a 100% disability rating from the VA. For two programs, the specific disabilities listed in state statute are superfluous since veterans only need a 10% disability rating to qualify (MA103a, TX103c). One program includes veterans who have lost the use of one or more limbs; this analysis used a 60% disability rating for this program, which is the rating assigned to veterans who have had an amputation in the middle or lower third of their thigh (diagnostic code 5162) (AR102).

¹<u>http://www.benefits.va.gov/warms/bookc.asp</u>

Eligibility Criteria That Do Not Have Corresponding Variables in the ACS

Eligibility for some programs is estimated without accounting for a few eligibility criteria. In particular, 72 programs allow for the continuation of tax relief for widows and widowers whose deceased spouse had previously met the program's criteria related to veteran-status, disability, or age. It is not possible to identify these surviving spouses using the ACS, so eligibility for these programs is based solely on individuals currently meeting criteria related to veteran-status, disability, or age. Excluding surviving spouses will result in an underestimate of the share of homeowners eligible for these programs. Nine programs require that homeowners have lived in the state for a certain number of years before they are eligible for tax relief. It is not possible to determine how long individuals have lived in a state using the ACS, and ignoring this criterion will result in a slight overestimate of the share of homeowners eligible for these programs.

In addition, it is impossible to determine eligibility for a few programs using the ACS. In particular, ten states have programs that provide property tax relief for un-remarried surviving spouses of members of the armed forces who were killed in active duty; three states have programs for surviving spouses of police, fire, or emergency responders who died in the line of duty. The ACS cannot be used to identify surviving spouses that would be eligible for these programs. Five states have other programs for very small groups of homeowners for which the ACS has no variables that could be used to determine eligibility.1 Presumably the number of homeowners eligible for these programs is very small, but their exclusion from this analysis will result in a slight underestimate of total tax savings from states' property tax exemption and credit programs.

¹ These programs are for DC government employees who are first time home-buyers in the District of Columbia, owners whose homes were destroyed by natural disasters (IL), owners whose home's appraised value increased by more than 75% (KS), owners who live near a taconite mine or plant (MN), and members of the clergy (NY).

Table A.1: States	with Property	Tax Exemption	and Credit Program	as (2012)

	General	Seniors	Veterans*	Disabled**	Other
Alabama	Yes	Yes	Dv	D, B	
Alaska	LO	Yes	Dv		
Arizona	Yes			D	Yes
Arkansas	Yes		Dv		
California	Yes		All, Dv		
Colorado			Dv		
Connecticut		Yes	All, Dv, Sp.	D, B	
Delaware		LO			
District of Columbia	Yes	Yes		D	Yes
Florida	Yes	LO	Dv, Sp.	D, B	Yes
Georgia	Yes	Yes	Dv, Sp.		Yes
Hawaii	LO	LO	LO		LO
Idaho	Yes				
Illinois	Yes	LO	LO	D	Yes
Indiana	Yes	Yes	Dv	D, B	Yes
Iowa	Yes		All		
Kansas	Yes	Yes			Yes
Kentucky					
Louisiana	Yes				LO
Maine	Yes		All, Dv	В	
Maryland		LO	Dv	В	LO
Massachusetts	LO	Yes	Dv, Sp.	В	Yes
Michigan	Yes		Dv, Sp.	В	Yes
Minnesota	Yes		Dv		Yes
Mississippi	Yes	Yes		D	
Missouri					
Montana					
Nebraska	Yes				
Nevada			All, Dv	В	Yes
New Hampshire		LO	All, Dv, Sp.	В	
New Jersey		Yes	All, Dv	D	
New Mexico	Yes		All, Dv		
New York	Yes	Yes	All, Dv		Yes
North Carolina		Yes	Dv	D	
North Dakota			Dv	D	
Ohio	Yes	Yes		D	
Oklahoma	Yes		Dv		Yes
Oregon			Dv, Sp.		Yes
Pennsylvania	LO		Dv		
Rhode Island				LO	LO
South Carolina	Yes	Yes	Dv	D, B	Yes
South Dakota			Dv		
Tennessee		Yes	Dv	D	
Texas	Yes	Yes	Dv, Sp.	D	
Utah	Yes	Yes	Dv, Sp.	В	
Vermont			Dv		
Virginia			Dv		
Washington			Sp.		
West Virginia		Yes		D	
Wisconsin	Yes				
Wyoming			All		Yes
Statewide Programs Local Option (LO)	26 4	18 6	34 0	23 1	16 4

*Programs are for all veterans (All), disabled veterans (D), or surviving spouses of service-members killed in duty (Sp.). States with programs listed for all veterans and disabled veterans provide larger benefits to disabled veterans.

**Programs are for disabled homeowners (D) or blind homeowners (B).

	1	2	3	4	5	6	Total
Step 1: Start with home values and property taxes reported in American Community Survey (ACS)							
Home Value (A)	10,000	25,000	50,000	100,000	140,000	175,000	500,000
Property Tax (B)	0	400	500	500	1,600	3,000	6,000
	Avera	age Tax Ra	ite <u>Before</u>	Exemption	s and Cred	its (B / A)	1.20%
Step 2: Determine reductions in taxable value from e	xemption	S					
Exemption $#1 = $15,000 (C_1)$	10,000			15,000		15,000	
Exemption $#2 = $25,000 (C_2)$				25,000			
Total Exemptions [C]	10,000			25,000		15,000	50,000
Taxable Value ($D = A - C$)	0	25,000	50,000	75,000	140,000	160,000	450,000
	Averag	e Tax Rate	<u>After</u> Exe	mptions, <u>B</u>	<u>efore</u> Cred	its (B / D)	1.33%
Stop 3. Determine reductions in tax hill from gradits							
Tay Before Exemptions and Credits: I – A y E	1/19	372	744	1 / 89	2 084	2 606	7 444
Tax After Examplions and Credits: $I = A \times I^2$	0	372	744	1,409	2,004	2,000	6 700
Credit = $\$350$ [F]	0	350	/44	1,117	2,004	2,362	700
$T_{av} \text{After Examptions and Credits: III = (D \times E)} E$	0	220	744	1 1 1 7	1 734	1 387	6 000
Tax After Exemptions and Credits. $III = (D \times T) - E$	0 maga Tax	22 Data Aftan	Franctio	1,117	1,754	2,302	1 40%
Note: Tax rate is solved for iteratively	ruge Tux	Kule <u>Ajler</u>	Елетрио	ns unu Cre	aus [I] = (I	(D+L)/D	1.4970
<u>Hote</u> . Tax face is solved for heralivery.							
Step 4: Determine savings from income tax credits an	nd rebate	checks					
Rebate = 50 (G)	0	22	50	50	50	50	222
Tax After Exemptions, Credits, & Rebates: IV = III - G	0	0	694	1,067	1,684	2,332	5,778
Step 5: Estimate Savings from All Programs							
\$ Savings: All Programs (I - IV)	149	372	50	422	400	273	1,667
Exemption 1 ($C_1 \times F$)	149			223		223	596
Exemption 2 ($C_2 \times F$)				372			372
Credit [E]		350			350		700
Rebate (G)	0	22	50	50	50	50	222
% Savings: All Programs [(I - IV) / I]	100.0%	100.0%	6.7%	28.4%	19.2%	10.5%	
Exemption 1 $[(C_1 \times F) / I]$	100.0%			15.0%		8.6%	
Exemption 2 [($C_2 \times F$) / I]				25.0%			
Credit (E / I)		94.0%			16.8%		
Rebate (G / I)	0.0%	6.0%	6.7%	3.4%	2.4%	1.9%	

Table A.2: Illustrating How Tax Savings Are Calculated